

To our customers,

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## Old Company Name in Catalogs and Other Documents

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April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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**Information**

# **Semiconductor Failure Rate**

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[MEMO]

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- Product release schedule
- Availability of related technical literature
- Development environment specifications (for example, specifications for third-party tools and components, host computers, power plugs, AC supply voltages, and so forth)
- Network requirements

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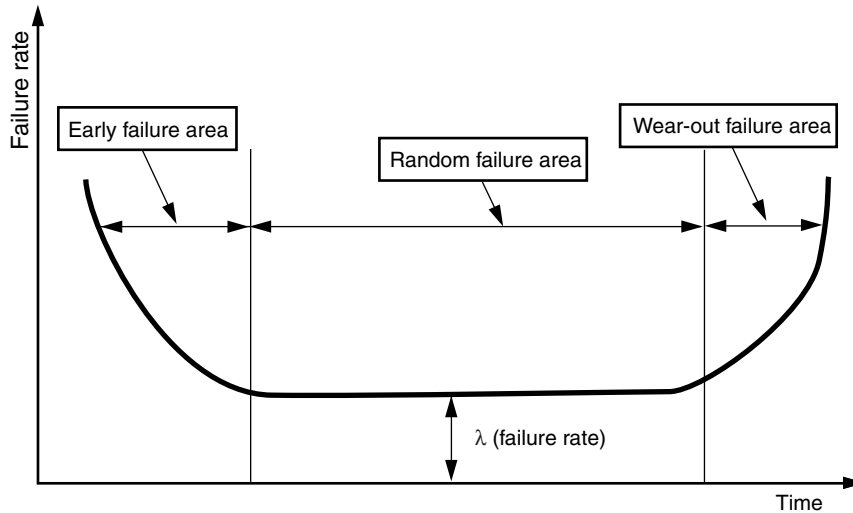
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## CHAPTER 1 CONCEPT OF FAILURE RATE

The failure rate is generally used as an indicator of semiconductor reliability. The failure rate is the proportion of failures that occur within a specific time. The failure rate also changes over time, as shown in Figure 1-1.

Figure 1-1. Changes in Failure Rate over Time



### (1) Early failure area

In this area, failure occurs relatively soon after the semiconductor device starts operating. Early failures include latent failures that cannot be screened for and become manifest a short time after the semiconductor starts being used. These failures are mainly caused by defects in manufacturing or by defective materials, and decrease over time.

### (2) Random failure area

In this area, various failures that were not picked up in screening occur randomly. Because these failures are random and are caused by complex factors such as design quality and the operating environment, the failure rate in this area remains basically stable.

### (3) Wear-out failure area

In this area, failure occurs due to product wear-out or fatigue. These failures therefore increase over time.

**Remark** The failure rate for each product described in this document is the failure rate in the random failure area ( $\lambda$ ) estimated from life test results and commercial data.

## CHAPTER 2 PROCEDURE FOR CALCULATING FAILURE RATE

The semiconductor failure rate ( $\lambda$ ) is determined by the reliability specific to each device, which is based on that device's design, and the conditions under which the device is being used by the customer.

The parameter used to indicate the reliability specific to each device is the "basic failure rate" ( $\lambda_b$ ). The basic failure rate for each device is shown in **CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT**.

The parameter used for the operating conditions is temperature, and in the case of transistors and FETs, supply voltage is also used as a parameter.

All other conditions comply with the conditions recommended by NEC Electronics (as described in data sheets, data books, and specification documents).

### 2.1 Calculation Procedure

Calculate the failure rate as follows.

- (1) Find out the basic failure rate of the relevant product from the product list in **CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT**.
- (2) Calculate the condition parameters ( $\pi_T$ ,  $\pi_V$ ) from your operating conditions.
- (3) Substitute these values into the failure rate estimation formula and calculate the failure rate ( $\lambda$ ).

## 2.2 Formulas

A device's failure rate is calculated based on the basic failure rate of that device and the customer's operating conditions.

The failure rate of each device can therefore be calculated using the following procedure under the following conditions.

- Confidence level: 60%
- Reference temperature: 55°C
- Device used under NEC Electronics recommended conditions

Failure rate estimation formula ( $\lambda$ )

$$\lambda = \lambda_b \times \pi T \times \pi V \text{ (FIT)}$$

$\lambda_b$ : Basic failure rate

$\pi T$ : Temperature parameter

$\pi V$ : Supply voltage parameter

Applies only to silicon transistors, FETs, and transistors with built-in resistors ( $\pi V = 1$  is assumed in all other cases)

(1) Temperature parameter ( $\pi T$ )

$$\pi T = \exp \left\{ 11600 \times E_a \times \left[ \frac{1}{273+55} - \frac{1}{273+T_a(j)} \right] \right\}$$

$E_a$ : Activation energy

$T_a$ : Ambient temperature (in the case of an integrated circuit)

$T_j$ : Junction temperature (in the case of a discrete device)

} Expressed as  $T_a(j)$

< $\pi T$  quick reference table (when  $E_a = 0.7$  eV)>

|          |      |      |      |    |      |      |      |      |      |      |       |       |       |       |
|----------|------|------|------|----|------|------|------|------|------|------|-------|-------|-------|-------|
| $T_a(j)$ | 40   | 45   | 50   | 55 | 60   | 65   | 70   | 75   | 80   | 85   | 90    | 95    | 100   | 110   |
| $\pi T$  | 0.31 | 0.46 | 0.68 | 1  | 1.45 | 2.08 | 2.95 | 4.14 | 5.77 | 7.96 | 10.88 | 14.74 | 19.85 | 34.99 |

(2) Supply voltage parameter ( $\pi V$ ) (Si-type transistors, FETs, and transistors with built-in resistors only)

$$S = \frac{\text{Supply voltage used (} V_{CE} \text{ or } V_{DS} \text{)}}{\text{Absolute maximum rated voltage (} V_{CE0} \text{ or } V_{DSS} \text{)}} ,$$

When  $S > 0.2$ :  $\pi V = \exp(2.86 \times S - 2.29)$

When  $S \leq 0.2$ :  $\pi V = 0.18$

## CHAPTER 3 BASIS FOR CALCULATING BASIC FAILURE RATE ( $\lambda_b$ ) FOR EACH PRODUCT (REFERENCE)

This chapter explains the basis for calculating the basic failure rate for each product, shown in the tables in **CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT**.

NEC Electronics calculates the basic failure rate for each product type using the following methods.

### Estimated basic failure rate based on life test

This method is basically used for MOS LSI products (products whose part number starts with  $\mu$ PD).

With MOS LSI products, even if different products have different functions, as long as the process (design rule) is the same, the design quality is basically the same.

The failure rate can therefore be estimated by aggregating the results of life tests performed on product types manufactured using the same process.

The following formula is basically used to calculate the basic failure rate.

$$\lambda_b = (\text{Total number of failures}) / (\text{Total number of test samples} \times \text{Test time} \times \text{Acceleration rate})$$

The failure rate is then calculated by applying a confidence level factor of 60% to this value.

### Estimated basic failure rate based on prediction method

This method is basically used for discrete components (transistors, diodes, etc.), bipolar ICs (products whose part number starts with  $\mu$ PC or  $\mu$ PB), and MOS LSI products manufactured using a new process.

The design quality differs according to the product group in the case of discrete components and bipolar ICs, so the failure rate must be estimated separately for each product. It can be difficult to use the life test method to estimate the basic failure rate for these products because the test time in a normal life test can be up to 2000 hours and the number of samples is small.

It is also difficult to obtain sufficient results from life tests of MOS LSI products manufactured using a new process, so a prediction method is used to calculate the basic failure rate in this case also.

The prediction method is set for each product group based on commercial data and life test results (in the case of MOS LSI products). The basic failure rate is calculated by inserting parameters such as the number of elements in the IC and the power consumption into this prediction method.

## CHAPTER 4 PREDICTION USING MIL-HDBK-217 (REFERENCE)

MIL-HDBK-217 Reliability Prediction of Electronic Equipment is a reliability prediction standard developed in the United States by the Department of Defence with the aid of the United States Army and defence and aerospace related organizations, as well as commercial and industrial companies.

The MIL-HDBK-217 standard was established to set a uniform method for predicting the reliability of electronic equipment and systems used in military applications. MIL-HDBK-217 provides a common basis for predicting reliability in the acquisition program stage of military equipment and systems. It also provides a common basis for comparing and evaluating reliability prediction of related and competing designs.

The data in MIL-HDBK-217 is aggregated from the field data of a large number of military electronic components procured according to the MIL standard. Moreover, because the Department of Defence minatorily uses the MIL-HDBK-217 standard when procuring military electronic equipment, sufficient allowances have been made for the safety coefficients with regard to each factor.

The calculated failure rate therefore has a tendency to be larger than the rate calculated by other methods. In fact, the rate calculated using the MIL standard can be 10 to 100 times higher than the rate calculated by NEC Electronics for the same product.

## CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

### 5.1 Integrated Circuits

<Notes>

- Read UPB, UPC, and UPD as  $\mu$ PB,  $\mu$ PC, and  $\mu$ PD.
- “\*\*\*” in a part number indicates a wildcard (number).
- Part numbers for Pb-free products are not included in the table; however, the basic failure rate for these products is the same as for the equivalent Pb-inclusive products in the table.

| Part Number | Ea  | $\lambda$ b (FIT) |
|-------------|-----|-------------------|
| UPB1504GR   | 0.7 | 15                |
| UPB551C     | 0.7 | 20                |
| UPB552C     | 0.7 | 15                |
| UPB553AC    | 0.7 | 15                |
| UPB554C     | 0.7 | 15                |
| UPB555C     | 0.7 | 15                |
| UPB556C     | 0.7 | 15                |
| UPB597CX    | 0.7 | 15                |
| UPB6101C    | 0.7 | 25                |
| UPB6102R    | 0.7 | 20                |
| UPB63020RK  | 0.7 | 20                |
| UPB63040L8R | 0.7 | 25                |
| UPB63100RM  | 0.7 | 50                |
| UPB6311R    | 0.7 | 28                |
| UPB6312R    | 0.7 | 30                |
| UPB6320R    | 0.7 | 26                |
| UPB6323R    | 0.7 | 25                |
| UPB8287C    | 0.7 | 20                |
| UPC1037HA   | 0.7 | 10                |
| UPC1060C    | 0.7 | 15                |
| UPC1060D    | 0.7 | 15                |
| UPC1093G    | 0.7 | 15                |
| UPC1093J    | 0.7 | 15                |
| UPC1093T    | 0.7 | 15                |
| UPC1093TA   | 0.7 | 15                |
| UPC1094C    | 0.7 | 15                |
| UPC1094G    | 0.7 | 15                |
| UPC1099CX   | 0.7 | 20                |
| UPC1099GS   | 0.7 | 20                |
| UPC1100C    | 0.7 | 15                |
| UPC1100GS   | 0.7 | 15                |

| Part Number | Ea  | $\lambda$ b (FIT) |
|-------------|-----|-------------------|
| UPC1242H    | 0.7 | 15                |
| UPC1246C    | 0.7 | 15                |
| UPC1246G    | 0.7 | 15                |
| UPC1251C    | 0.7 | 15                |
| UPC1251D    | 0.7 | 15                |
| UPC1251G2   | 0.7 | 15                |
| UPC1252HA2  | 0.7 | 15                |
| UPC1253HA2  | 0.7 | 15                |
| UPC1297CA   | 0.7 | 15                |
| UPC1308V    | 0.7 | 15                |
| UPC1316C    | 0.7 | 15                |
| UPC1377C    | 0.7 | 20                |
| UPC141C     | 0.7 | 15                |
| UPC141D     | 0.7 | 15                |
| UPC141G2    | 0.7 | 35                |
| UPC143**H   | 0.7 | 15                |
| UPC143**HF  | 0.7 | 15                |
| UPC1458C    | 0.7 | 15                |
| UPC1458G2   | 0.7 | 15                |
| UPC151C     | 0.7 | 15                |
| UPC151D     | 0.7 | 15                |
| UPC151G2    | 0.7 | 15                |
| UPC1555C    | 0.7 | 15                |
| UPC1555G2   | 0.7 | 15                |
| UPC156D     | 0.7 | 15                |
| UPC1571C    | 0.7 | 15                |
| UPC157C     | 0.7 | 15                |
| UPC159C     | 0.7 | 15                |
| UPC159D     | 0.7 | 15                |
| UPC163**H   | 0.7 | 15                |
| UPC163**HF  | 0.7 | 15                |

CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPC1702GR   | 0.7 | 15                |
| UPC1702HA   | 0.7 | 15                |
| UPC177C     | 0.7 | 15                |
| UPC177D     | 0.7 | 15                |
| UPC177ED    | 0.7 | 15                |
| UPC177G     | 0.7 | 15                |
| UPC177G2    | 0.7 | 15                |
| UPC1830GT   | 0.7 | 15                |
| UPC1854ACT  | 0.7 | 30                |
| UPC1854AGT  | 0.7 | 30                |
| UPC1854CT   | 0.7 | 35                |
| UPC1860GS   | 0.7 | 25                |
| UPC1862GS   | 0.7 | 15                |
| UPC1876GT   | 0.7 | 20                |
| UPC1883CT   | 0.7 | 60                |
| UPC1905GS   | 0.7 | 20                |
| UPC1933GR   | 0.7 | 15                |
| UPC1943T    | 0.7 | 15                |
| UPC1944J    | 0.7 | 15                |
| UPC1944T    | 0.7 | 15                |
| UPC1945TA   | 0.7 | 15                |
| UPC2253H    | 0.7 | 15                |
| UPC2255H    | 0.7 | 15                |
| UPC2260V    | 0.7 | 20                |
| UPC2270AGR  | 0.7 | 15                |
| UPC2270AHA  | 0.7 | 30                |
| UPC2270CX   | 0.7 | 15                |
| UPC2270GR   | 0.7 | 15                |
| UPC2270HA   | 0.7 | 15                |
| UPC24**AHF  | 0.7 | 15                |
| UPC24**HF   | 0.7 | 20                |
| UPC24A**HF  | 0.7 | 20                |
| UPC24M**AHF | 0.7 | 15                |
| UPC24M**HF  | 0.7 | 20                |
| UPC251C     | 0.7 | 15                |
| UPC251D     | 0.7 | 15                |
| UPC251G2    | 0.7 | 15                |
| UPC2532CT   | 0.7 | 20                |
| UPC254D     | 0.7 | 15                |
| UPC2572AGS  | 0.7 | 15                |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPC2572GS   | 0.7 | 15                |
| UPC2574AGS  | 0.7 | 15                |
| UPC2574BGS  | 0.7 | 15                |
| UPC2575GS   | 0.7 | 15                |
| UPC2576AGS  | 0.7 | 25                |
| UPC2576GS   | 0.7 | 25                |
| UPC258C     | 0.7 | 15                |
| UPC258D     | 0.7 | 15                |
| UPC258G2    | 0.7 | 15                |
| UPC259C     | 0.7 | 15                |
| UPC259G2    | 0.7 | 15                |
| UPC2605H    | 0.7 | 15                |
| UPC271C     | 0.7 | 15                |
| UPC271D     | 0.7 | 15                |
| UPC271G2    | 0.7 | 15                |
| UPC272C     | 0.7 | 15                |
| UPC272D     | 0.7 | 15                |
| UPC272G2    | 0.7 | 15                |
| UPC2742BGT  | 0.7 | 30                |
| UPC2742CGT  | 0.7 | 30                |
| UPC2742DGT  | 0.7 | 30                |
| UPC277C     | 0.7 | 15                |
| UPC277D     | 0.7 | 15                |
| UPC277G2    | 0.7 | 15                |
| UPC2800AGR  | 0.7 | 15                |
| UPC29**AHF  | 0.7 | 15                |
| UPC29**AT   | 0.7 | 15                |
| UPC29**HB   | 0.7 | 15                |
| UPC29**HF   | 0.7 | 15                |
| UPC29**T    | 0.7 | 15                |
| UPC29L**J   | 0.7 | 15                |
| UPC29L**T   | 0.7 | 15                |
| UPC29M**AHB | 0.7 | 15                |
| UPC29M**AHF | 0.7 | 15                |
| UPC29M**AT  | 0.7 | 15                |
| UPC29M**HB  | 0.7 | 15                |
| UPC29M**HF  | 0.7 | 15                |
| UPC29M**T   | 0.7 | 15                |
| UPC29S**GR  | 0.7 | 15                |
| UPC29S**TA  | 0.7 | 15                |

CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPC3018TJ   | 0.7 | 15                |
| UPC301AC    | 0.7 | 15                |
| UPC3025TJ   | 0.7 | 15                |
| UPC305C     | 0.7 | 15                |
| UPC311C     | 0.7 | 15                |
| UPC311G2    | 0.7 | 15                |
| UPC317H     | 0.7 | 15                |
| UPC317HF    | 0.7 | 15                |
| UPC318C     | 0.7 | 15                |
| UPC319C     | 0.7 | 15                |
| UPC319G2    | 0.7 | 15                |
| UPC324C     | 0.7 | 15                |
| UPC324G2    | 0.7 | 15                |
| UPC3320GC   | 0.7 | 75                |
| UPC337H     | 0.7 | 15                |
| UPC339C     | 0.7 | 15                |
| UPC339G2    | 0.7 | 15                |
| UPC3403C    | 0.7 | 15                |
| UPC3403G2   | 0.7 | 15                |
| UPC3533HF   | 0.7 | 15                |
| UPC354D     | 0.7 | 15                |
| UPC358C     | 0.7 | 15                |
| UPC358G2    | 0.7 | 15                |
| UPC358GR    | 0.7 | 15                |
| UPC358HA    | 0.7 | 15                |
| UPC3621GC   | 0.7 | 15                |
| UPC3623GB   | 0.7 | 15                |
| UPC37M**TJ  | 0.7 | 15                |
| UPC393C     | 0.7 | 15                |
| UPC393G2    | 0.7 | 15                |
| UPC393HA    | 0.7 | 15                |
| UPC398C     | 0.7 | 20                |
| UPC4061C    | 0.7 | 15                |
| UPC4061G2   | 0.7 | 15                |
| UPC4062C    | 0.7 | 15                |
| UPC4062G2   | 0.7 | 15                |
| UPC4064C    | 0.7 | 15                |
| UPC4064G2   | 0.7 | 15                |
| UPC4071C    | 0.7 | 15                |
| UPC4071G2   | 0.7 | 15                |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPC4072C    | 0.7 | 15                |
| UPC4072G2   | 0.7 | 15                |
| UPC4072HA   | 0.7 | 15                |
| UPC4074C    | 0.7 | 15                |
| UPC4074G2   | 0.7 | 15                |
| UPC4081C    | 0.7 | 15                |
| UPC4081G2   | 0.7 | 15                |
| UPC4082C    | 0.7 | 15                |
| UPC4082G2   | 0.7 | 15                |
| UPC4084C    | 0.7 | 15                |
| UPC4091G2   | 0.7 | 15                |
| UPC4092G2   | 0.7 | 15                |
| UPC4094G2   | 0.7 | 15                |
| UPC4250C    | 0.7 | 15                |
| UPC4250G2   | 0.7 | 15                |
| UPC4359C    | 0.7 | 15                |
| UPC451C     | 0.7 | 15                |
| UPC451D     | 0.7 | 15                |
| UPC451G2    | 0.7 | 15                |
| UPC452C     | 0.7 | 15                |
| UPC452G2    | 0.7 | 15                |
| UPC454D     | 0.7 | 15                |
| UPC4556C    | 0.7 | 15                |
| UPC4556G2   | 0.7 | 15                |
| UPC4557C    | 0.7 | 15                |
| UPC4558C    | 0.7 | 15                |
| UPC4558G2   | 0.7 | 15                |
| UPC4558GR   | 0.7 | 15                |
| UPC4559C    | 0.7 | 15                |
| UPC4560C    | 0.7 | 15                |
| UPC4560G2   | 0.7 | 15                |
| UPC4570C    | 0.7 | 15                |
| UPC4570G2   | 0.7 | 15                |
| UPC4570HA   | 0.7 | 15                |
| UPC4572C    | 0.7 | 15                |
| UPC4572G2   | 0.7 | 15                |
| UPC4572HA   | 0.7 | 15                |
| UPC4574C    | 0.7 | 15                |
| UPC4574G2   | 0.7 | 20                |
| UPC458C     | 0.7 | 15                |



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| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPC458D      | 0.7 | 15                |
| UPC458G2     | 0.7 | 15                |
| UPC4741C     | 0.7 | 15                |
| UPC4741G2    | 0.7 | 15                |
| UPC4742G2    | 0.7 | 15                |
| UPC4744G2    | 0.7 | 15                |
| UPC494C      | 0.7 | 15                |
| UPC494G      | 0.7 | 20                |
| UPC494GS     | 0.7 | 20                |
| UPC574J      | 0.7 | 15                |
| UPC610D      | 0.7 | 15                |
| UPC617C      | 0.7 | 15                |
| UPC617G2     | 0.7 | 15                |
| UPC624C      | 0.7 | 15                |
| UPC624D      | 0.7 | 15                |
| UPC648C      | 0.7 | 20                |
| UPC648D      | 0.7 | 15                |
| UPC649C      | 0.7 | 20                |
| UPC649D      | 0.7 | 15                |
| UPC650D      | 0.7 | 25                |
| UPC659AGS    | 0.7 | 30                |
| UPC661G      | 0.7 | 30                |
| UPC662GH     | 0.7 | 15                |
| UPC664GS     | 0.7 | 15                |
| UPC665GS     | 0.7 | 15                |
| UPC666GS     | 0.7 | 15                |
| UPC667CT     | 0.7 | 20                |
| UPC6708GF    | 0.7 | 25                |
| UPC6718GC    | 0.7 | 25                |
| UPC6758GA    | 0.7 | 5                 |
| UPC6760GH    | 0.7 | 30                |
| UPC6761GR    | 0.7 | 30                |
| UPC6768GH    | 0.7 | 25                |
| UPC6769GR    | 0.7 | 20                |
| UPC6770GS    | 0.7 | 10                |
| UPC7002CT    | 0.7 | 15                |
| UPC7063L     | 0.7 | 15                |
| UPC7071LY    | 0.7 | 20                |
| UPC7073GT    | 0.7 | 15                |
| UPC70F3274GC | 0.7 | 29                |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPC7133GT   | 0.7 | 35                |
| UPC7151L    | 0.7 | 15                |
| UPC7161L    | 0.7 | 15                |
| UPC71D      | 0.7 | 15                |
| UPC7303D    | 0.7 | 20                |
| UPC7304D    | 0.7 | 15                |
| UPC7305K    | 0.7 | 20                |
| UPC741C     | 0.7 | 15                |
| UPC741G2    | 0.7 | 15                |
| UPC78**AHF  | 0.7 | 15                |
| UPC78**H    | 0.7 | 15                |
| UPC78**HF   | 0.7 | 15                |
| UPC78L**J   | 0.7 | 15                |
| UPC78L**T   | 0.7 | 15                |
| UPC78M**AHF | 0.7 | 15                |
| UPC78M**H   | 0.7 | 15                |
| UPC78M**HF  | 0.7 | 15                |
| UPC78N**H   | 0.7 | 15                |
| UPC79**AHF  | 0.7 | 15                |
| UPC79**H    | 0.7 | 15                |
| UPC79**HF   | 0.7 | 15                |
| UPC79L**J   | 0.7 | 15                |
| UPC79M**H   | 0.7 | 15                |
| UPC79M**HF  | 0.7 | 15                |
| UPC79N**H   | 0.7 | 15                |
| UPC8001GR   | 0.7 | 15                |
| UPC8002GR   | 0.7 | 15                |
| UPC801C     | 0.7 | 15                |
| UPC802C     | 0.7 | 15                |
| UPC802G     | 0.7 | 15                |
| UPC802G2    | 0.7 | 15                |
| UPC803C     | 0.7 | 15                |
| UPC803G     | 0.7 | 25                |
| UPC803G2    | 0.7 | 15                |
| UPC804C     | 0.7 | 15                |
| UPC811C     | 0.7 | 15                |
| UPC811G2    | 0.7 | 15                |
| UPC812C     | 0.7 | 15                |
| UPC812G2    | 0.7 | 15                |
| UPC813C     | 0.7 | 15                |

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| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPC813G2      | 0.7 | 15                |
| UPC814C       | 0.7 | 15                |
| UPC814G2      | 0.7 | 15                |
| UPC815C       | 0.7 | 15                |
| UPC815D       | 0.7 | 15                |
| UPC816C       | 0.7 | 15                |
| UPC816D       | 0.7 | 15                |
| UPC821C       | 0.7 | 15                |
| UPC821G2      | 0.7 | 15                |
| UPC822C       | 0.7 | 15                |
| UPC822G2      | 0.7 | 15                |
| UPC824C       | 0.7 | 15                |
| UPC824G2      | 0.7 | 15                |
| UPC831C       | 0.7 | 15                |
| UPC831G2      | 0.7 | 15                |
| UPC832C       | 0.7 | 15                |
| UPC832G2      | 0.7 | 15                |
| UPC834C       | 0.7 | 15                |
| UPC834G2      | 0.7 | 15                |
| UPC842C       | 0.7 | 15                |
| UPC842G2      | 0.7 | 15                |
| UPC844C       | 0.7 | 20                |
| UPC844G       | 0.7 | 15                |
| UPC844G2      | 0.7 | 15                |
| UPD100500D    | 0.7 | 75                |
| UPD100509RRLN | 0.7 | 75                |
| UPD101504BH   | 0.7 | 25                |
| UPD10500D     | 0.7 | 85                |
| UPD15100AW    | 0.7 | 20                |
| UPD1550CT     | 0.7 | 8                 |
| UPD1552GC     | 0.7 | 6                 |
| UPD1600GC     | 0.7 | 10                |
| UPD1604GC     | 0.7 | 10                |
| UPD1607GC     | 0.7 | 8                 |
| UPD160905AN   | 0.7 | 35                |
| UPD160905N    | 0.7 | 35                |
| UPD160970MA   | 0.7 | 10                |
| UPD1609GS     | 0.7 | 15                |
| UPD1612GC     | 0.7 | 8                 |
| UPD161911FC   | 0.7 | 10                |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD16251C   | 0.7 | 15                |
| UPD16254CX  | 0.7 | 90                |
| UPD16261GS  | 0.7 | 5                 |
| UPD16302GF  | 0.7 | 30                |
| UPD16305GF  | 0.7 | 35                |
| UPD16306AGF | 0.7 | 30                |
| UPD16306BGF | 0.7 | 50                |
| UPD16306GF  | 0.7 | 35                |
| UPD16307GF  | 0.7 | 30                |
| UPD16309GF  | 0.7 | 35                |
| UPD16310GF  | 0.7 | 30                |
| UPD16311GC  | 0.7 | 120               |
| UPD16312GB  | 0.7 | 50                |
| UPD16315GB  | 0.7 | 25                |
| UPD16320AGF | 0.7 | 30                |
| UPD16326GB  | 0.7 | 30                |
| UPD16327GF  | 0.7 | 55                |
| UPD16331GF  | 0.7 | 35                |
| UPD16340W   | 0.7 | 10                |
| UPD16348AN  | 0.7 | 50                |
| UPD16357GT  | 0.7 | 15                |
| UPD16373N   | 0.7 | 20                |
| UPD16380GY  | 0.7 | 43.3              |
| UPD16408N   | 0.7 | 30                |
| UPD16430AGF | 0.7 | 10                |
| UPD16430GF  | 0.7 | 10                |
| UPD16431AGC | 0.7 | 40                |
| UPD16431GC  | 0.7 | 40                |
| UPD16432AGC | 0.7 | 10                |
| UPD16432BGC | 0.7 | 10                |
| UPD16434G   | 0.7 | 10                |
| UPD16435AN  | 0.7 | 15                |
| UPD16446N   | 0.7 | 10                |
| UPD16448AN  | 0.7 | 10                |
| UPD16502GS  | 0.7 | 5                 |
| UPD16506GR  | 0.7 | 5                 |
| UPD16510GR  | 0.7 | 10                |
| UPD16520GS  | 0.7 | 20                |
| UPD166101GR | 0.7 | 20                |
| UPD166104GS | 0.7 | 10                |

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| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD16620N    | 0.7 | 30                |
| UPD16633BN   | 0.7 | 20                |
| UPD16644N    | 0.7 | 20                |
| UPD16655N    | 0.7 | 10                |
| UPD16662N    | 0.7 | 15                |
| UPD16663N    | 0.7 | 20                |
| UPD16667N    | 0.7 | 10                |
| UPD16732AN   | 0.7 | 15                |
| UPD168002GA  | 0.7 | 25                |
| UPD16802GS   | 0.7 | 10                |
| UPD16803GS   | 0.7 | 10                |
| UPD16805GS   | 0.7 | 35                |
| UPD16805MA   | 0.7 | 20                |
| UPD16808GS   | 0.7 | 100               |
| UPD168101MA  | 0.7 | 25                |
| UPD16810GS   | 0.7 | 25                |
| UPD168116AK9 | 0.7 | 30                |
| UPD16812HF   | 0.7 | 20                |
| UPD16823GS   | 0.7 | 15                |
| UPD16828AGB  | 0.7 | 20                |
| UPD16828GB   | 0.7 | 20                |
| UPD16855AG   | 0.7 | 20                |
| UPD16855BG   | 0.7 | 10                |
| UPD16855CG   | 0.7 | 20                |
| UPD16856GS   | 0.7 | 20                |
| UPD16857GS   | 0.7 | 25                |
| UPD16875G    | 0.7 | 20                |
| UPD16876G    | 0.7 | 10                |
| UPD16878GS   | 0.7 | 35                |
| UPD16886MA   | 0.7 | 20                |
| UPD16954F1   | 0.7 | 85                |
| UPD16954S1   | 0.7 | 85                |
| UPD17001GH   | 0.7 | 6                 |
| UPD17006GF   | 0.7 | 6                 |
| UPD17008CW   | 0.7 | 3                 |
| UPD17010GF   | 0.7 | 6                 |
| UPD17012GF   | 0.7 | 6                 |
| UPD17017GF   | 0.7 | 6                 |
| UPD17103CX   | 0.7 | 6                 |
| UPD17103LGS  | 0.7 | 6                 |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD17104CS  | 0.7 | 6                 |
| UPD17107CX  | 0.7 | 6                 |
| UPD17107GS  | 0.7 | 6                 |
| UPD17107LGS | 0.7 | 6                 |
| UPD17108GS  | 0.7 | 6                 |
| UPD17120GT  | 0.7 | 3                 |
| UPD17121CS  | 0.7 | 3                 |
| UPD17132CS  | 0.7 | 3                 |
| UPD17132GT  | 0.7 | 3                 |
| UPD17133CS  | 0.7 | 3                 |
| UPD17134ACT | 0.7 | 3                 |
| UPD17134AGT | 0.7 | 3                 |
| UPD17135ACT | 0.7 | 3                 |
| UPD17136ACT | 0.7 | 3                 |
| UPD17136AGT | 0.7 | 3                 |
| UPD17136BGT | 0.7 | 3                 |
| UPD17137ACT | 0.7 | 3                 |
| UPD17137AGT | 0.7 | 3                 |
| UPD17145GT  | 0.7 | 3                 |
| UPD17147GT  | 0.7 | 3                 |
| UPD17149GT  | 0.7 | 3                 |
| UPD1714G    | 0.7 | 8                 |
| UPD17202AGF | 0.7 | 3                 |
| UPD17203AGC | 0.7 | 3                 |
| UPD17215GT  | 0.7 | 3                 |
| UPD17216GT  | 0.7 | 3                 |
| UPD17217GT  | 0.7 | 3                 |
| UPD17218GT  | 0.7 | 3                 |
| UPD17225GT  | 0.7 | 12                |
| UPD17225MC  | 0.7 | 12                |
| UPD17226GT  | 0.7 | 12                |
| UPD17226MC  | 0.7 | 12                |
| UPD17227GT  | 0.7 | 12                |
| UPD17227MC  | 0.7 | 12                |
| UPD17228GT  | 0.7 | 12                |
| UPD17228MC  | 0.7 | 12                |
| UPD17230MC  | 0.7 | 12                |
| UPD17231MC  | 0.7 | 12                |
| UPD17232MC  | 0.7 | 12                |
| UPD17233MC  | 0.7 | 12                |

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| Part Number   | Ea  | $\lambda b$ (FIT) |
|---------------|-----|-------------------|
| UPD17234MC    | 0.7 | 12                |
| UPD17235MC    | 0.7 | 12                |
| UPD17236MC    | 0.7 | 12                |
| UPD1723GF     | 0.7 | 6                 |
| UPD17240MC    | 0.7 | 12                |
| UPD17241MC    | 0.7 | 12                |
| UPD17242MC    | 0.7 | 12                |
| UPD17243MC    | 0.7 | 12                |
| UPD17244MC    | 0.7 | 12                |
| UPD17245MC    | 0.7 | 12                |
| UPD17246MC    | 0.7 | 12                |
| UPD17705GC    | 0.7 | 10                |
| UPD17708GC    | 0.7 | 10                |
| UPD1771C      | 0.7 | 14                |
| UPD178004AGC  | 0.7 | 10                |
| UPD178016AGC  | 0.7 | 10                |
| UPD178016BGC  | 0.7 | 10                |
| UPD178018AGC  | 0.7 | 10                |
| UPD178018BGC  | 0.7 | 10                |
| UPD178054GC   | 0.7 | 8                 |
| UPD178076GF   | 0.7 | 8                 |
| UPD178078GF   | 0.7 | 8                 |
| UPD178F054GC  | 0.7 | 8                 |
| UPD178F098GF  | 0.7 | 8                 |
| UPD178P018AGC | 0.7 | 10                |
| UPD17P010GF   | 0.7 | 6                 |
| UPD17P107GS   | 0.7 | 6                 |
| UPD17P136ACT  | 0.7 | 6                 |
| UPD17P137ACT  | 0.7 | 6                 |
| UPD17P149GT   | 0.7 | 3                 |
| UPD17P207GF   | 0.7 | 6                 |
| UPD17P218GT   | 0.7 | 3                 |
| UPD17P246M1MC | 0.7 | 10                |
| UPD17P246MC   | 0.7 | 10                |
| UPD17P709GC   | 0.7 | 10                |
| UPD18001GC    | 0.7 | 3                 |
| UPD18007GC    | 0.7 | 3                 |
| UPD18014GF    | 0.7 | 10                |
| UPD22100C     | 0.7 | 5                 |
| UPD22100GS    | 0.7 | 10                |

| Part Number      | Ea  | $\lambda b$ (FIT) |
|------------------|-----|-------------------|
| UPD22148CA       | 0.7 | 10                |
| UPD23C128000ALGY | 0.7 | 43.3              |
| UPD23C128000BLGX | 0.7 | 43.3              |
| UPD23C128000BLGY | 0.7 | 43.3              |
| UPD23C128040ALGY | 0.7 | 43.3              |
| UPD23C128040BLGX | 0.7 | 43.3              |
| UPD23C128040BLGY | 0.7 | 43.3              |
| UPD23C128080BLGX | 0.7 | 43.3              |
| UPD23C128080BLGY | 0.7 | 43.3              |
| UPD23C16000BLGX  | 0.7 | 43.3              |
| UPD23C16000BLGY  | 0.7 | 43.3              |
| UPD23C16000WCZ   | 0.7 | 22.7              |
| UPD23C16000WGX   | 0.7 | 22.7              |
| UPD23C16003BLGY  | 0.7 | 43.3              |
| UPD23C16040ACZ   | 0.7 | 22.7              |
| UPD23C16040AG5   | 0.7 | 22.7              |
| UPD23C16040BLGX  | 0.7 | 43.3              |
| UPD23C16040BLGY  | 0.7 | 43.3              |
| UPD23C16043BLGY  | 0.7 | 43.3              |
| UPD23C16080BLGX  | 0.7 | 43.3              |
| UPD23C16080BLGY  | 0.7 | 43.3              |
| UPD23C16083BLGY  | 0.7 | 43.3              |
| UPD23C16300F9    | 0.7 | 43.3              |
| UPD23C16300GY    | 0.7 | 43.3              |
| UPD23C16300GZ    | 0.7 | 43.3              |
| UPD23C16303F9    | 0.7 | 43.3              |
| UPD23C16303GY    | 0.7 | 43.3              |
| UPD23C16303GZ    | 0.7 | 43.3              |
| UPD23C16340F9    | 0.7 | 43.3              |
| UPD23C16340GY    | 0.7 | 43.3              |
| UPD23C16340GZ    | 0.7 | 43.3              |
| UPD23C16343F9    | 0.7 | 43.3              |
| UPD23C16343GY    | 0.7 | 43.3              |
| UPD23C16343GZ    | 0.7 | 43.3              |
| UPD23C16380F9    | 0.7 | 43.3              |
| UPD23C16380GZ    | 0.7 | 43.3              |
| UPD23C16383F9    | 0.7 | 43.3              |
| UPD23C16383GY    | 0.7 | 43.3              |
| UPD23C16383GZ    | 0.7 | 43.3              |
| UPD23C256112AGY  | 0.7 | 77                |

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| Part Number     | Ea  | $\lambda b$ (FIT) |
|-----------------|-----|-------------------|
| UPD23C32000AGX  | 0.7 | 15                |
| UPD23C32000ALGX | 0.7 | 43.3              |
| UPD23C32000ALGY | 0.7 | 43.3              |
| UPD23C32000GX   | 0.7 | 22.7              |
| UPD23C32000LGX  | 0.7 | 38                |
| UPD23C32000LGY  | 0.7 | 38                |
| UPD23C32040ALGX | 0.7 | 43.3              |
| UPD23C32040ALGY | 0.7 | 43.3              |
| UPD23C32040LGX  | 0.7 | 38                |
| UPD23C32080ALGX | 0.7 | 43.3              |
| UPD23C32080ALGY | 0.7 | 43.3              |
| UPD23C32300F9   | 0.7 | 43.3              |
| UPD23C32300GY   | 0.7 | 43.3              |
| UPD23C32300GZ   | 0.7 | 43.3              |
| UPD23C32303F9   | 0.7 | 43.3              |
| UPD23C32303GY   | 0.7 | 43.3              |
| UPD23C32340F9   | 0.7 | 43.3              |
| UPD23C32340GY   | 0.7 | 43.3              |
| UPD23C32343F9   | 0.7 | 43.3              |
| UPD23C32343GY   | 0.7 | 43.3              |
| UPD23C32380F9   | 0.7 | 43.3              |
| UPD23C32380GY   | 0.7 | 43.3              |
| UPD23C32383F9   | 0.7 | 43.3              |
| UPD23C32383GY   | 0.7 | 43.3              |
| UPD23C4000SCZ   | 0.7 | 34.7              |
| UPD23C4000SGW   | 0.7 | 34.7              |
| UPD23C4000U     | 0.7 | 30.6              |
| UPD23C4001EJGW  | 0.7 | 30.6              |
| UPD23C4001EJGZ  | 0.7 | 30.6              |
| UPD23C64000BLGY | 0.7 | 39                |
| UPD23C64000JLF9 | 0.7 | 43.3              |
| UPD23C64000JLGX | 0.7 | 43.3              |
| UPD23C64000JLGY | 0.7 | 43.3              |
| UPD23C64040BLGY | 0.7 | 39                |
| UPD23C64040JLF9 | 0.7 | 43.3              |
| UPD23C64040JLGX | 0.7 | 43.3              |
| UPD23C64040JLGY | 0.7 | 43.3              |
| UPD23C64080JLF9 | 0.7 | 43.3              |
| UPD23C64080JLGX | 0.7 | 43.3              |
| UPD23C64080JLGY | 0.7 | 43.3              |

| Part Number      | Ea  | $\lambda b$ (FIT) |
|------------------|-----|-------------------|
| UPD23C64112GY    | 0.7 | 77                |
| UPD23C64300F9    | 0.7 | 43.3              |
| UPD23C64300GZ    | 0.7 | 43.3              |
| UPD23C64340F9    | 0.7 | 43.3              |
| UPD23C64340GZ    | 0.7 | 43.3              |
| UPD23C64380F9    | 0.7 | 43.3              |
| UPD23C64380GZ    | 0.7 | 43.3              |
| UPD23C8000LXGY   | 0.7 | 22.7              |
| UPD23C8000WG5    | 0.7 | 30.6              |
| UPD23C8000WGX    | 0.7 | 30.6              |
| UPD23C8000X      | 0.7 | 22.7              |
| UPD23C8000XCZ    | 0.7 | 22.7              |
| UPD23C8000XGX    | 0.7 | 22.7              |
| UPD23C8001EJCZ   | 0.7 | 30.6              |
| UPD23C8001EJGW   | 0.7 | 30.6              |
| UPD2844GS        | 0.7 | 6                 |
| UPD29F016202     | 0.7 | 40.6              |
| UPD29F016202F9   | 0.7 | 40.6              |
| UPD29F032202ALGZ | 0.7 | 101.8             |
| UPD29F032204ALGZ | 0.7 | 101.8             |
| UPD29F800ALGZ    | 0.7 | 174               |
| UPD3000N         | 0.7 | 20                |
| UPD30102GM       | 0.7 | 12                |
| UPD30111S1       | 0.7 | 29                |
| UPD30121F1       | 0.7 | 29                |
| UPD30122F1       | 0.7 | 75                |
| UPD30131F1       | 0.7 | 27                |
| UPD30133F1       | 0.7 | 27                |
| UPD30181AYF1     | 0.7 | 90                |
| UPD30181BYF1     | 0.7 | 90                |
| UPD30200GD       | 0.7 | 12                |
| UPD30210GD       | 0.7 | 12                |
| UPD30310R        | 0.7 | 10                |
| UPD30380GD       | 0.7 | 10                |
| UPD30410LRJ      | 0.7 | 12                |
| UPD30411LRJ      | 0.7 | 12                |
| UPD30412LRJ      | 0.7 | 12                |
| UPD30412LRP      | 0.7 | 12                |
| UPD30412RJ       | 0.7 | 8                 |
| UPD30450GD       | 0.7 | 8                 |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD30450R   | 0.7 | 8                 |
| UPD30500AS2 | 0.7 | 29                |
| UPD30500S2  | 0.7 | 12                |
| UPD30541GD  | 0.7 | 29                |
| UPD30550AF2 | 0.7 | 12                |
| UPD30550F2  | 0.7 | 12                |
| UPD30571F2  | 0.7 | 27                |
| UPD3064AGC  | 0.7 | 10                |
| UPD30671F2  | 0.7 | 25                |
| UPD30700RS  | 0.7 | 12                |
| UPD30710AF5 | 0.7 | 55                |
| UPD3071F1   | 0.7 | 12                |
| UPD30720F5  | 0.7 | 35                |
| UPD3072F1   | 0.7 | 29                |
| UPD3100GS   | 0.7 | 6                 |
| UPD3102GS   | 0.7 | 6                 |
| UPD3105GS   | 0.7 | 6                 |
| UPD31172F1  | 0.7 | 12                |
| UPD31173F1  | 0.7 | 12                |
| UPD3121GS   | 0.7 | 6                 |
| UPD31311R   | 0.7 | 10                |
| UPD3150GS   | 0.7 | 3                 |
| UPD3303D    | 0.7 | 14                |
| UPD3341C    | 0.7 | 14                |
| UPD3371GC   | 0.7 | 6                 |
| UPD3373CF   | 0.7 | 6                 |
| UPD3374GB   | 0.7 | 8                 |
| UPD3381D    | 0.7 | 14                |
| UPD3383D    | 0.7 | 14                |
| UPD3385R    | 0.7 | 8                 |
| UPD33900F2  | 0.7 | 40                |
| UPD33910S1  | 0.7 | 27                |
| UPD33C41CX  | 0.7 | 10                |
| UPD33C82C   | 0.7 | 8                 |
| UPD33C82D   | 0.7 | 8                 |
| UPD3571D    | 0.7 | 10                |
| UPD3573D    | 0.7 | 5                 |
| UPD3574D    | 0.7 | 10                |
| UPD3594D    | 0.7 | 25                |
| UPD35H71AD  | 0.7 | 15                |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD35H71D   | 0.7 | 10                |
| UPD35H73D   | 0.7 | 10                |
| UPD3626D    | 0.7 | 130               |
| UPD3636D    | 0.7 | 50                |
| UPD3723CY   | 0.7 | 10                |
| UPD3724CY   | 0.7 | 55                |
| UPD3725D    | 0.7 | 10                |
| UPD3727D    | 0.7 | 15                |
| UPD3728DZ   | 0.7 | 50                |
| UPD3729D    | 0.7 | 40                |
| UPD3732CY   | 0.7 | 25                |
| UPD3732D    | 0.7 | 10                |
| UPD3733D    | 0.7 | 10                |
| UPD3734ACY  | 0.7 | 30                |
| UPD3735AD   | 0.7 | 20                |
| UPD3737CY   | 0.7 | 15                |
| UPD3737D    | 0.7 | 10                |
| UPD3739D    | 0.7 | 20                |
| UPD3743D    | 0.7 | 10                |
| UPD3753CY   | 0.7 | 15                |
| UPD3768D    | 0.7 | 50                |
| UPD3788D    | 0.7 | 40                |
| UPD3850D    | 0.7 | 4                 |
| UPD3851D    | 0.7 | 4                 |
| UPD3853D    | 0.7 | 4                 |
| UPD3860BCW  | 0.7 | 6                 |
| UPD3860R    | 0.7 | 6                 |
| UPD4001BC   | 0.7 | 5                 |
| UPD4001BG   | 0.7 | 10                |
| UPD4002BC   | 0.7 | 5                 |
| UPD4002BG   | 0.7 | 10                |
| UPD4006BC   | 0.7 | 5                 |
| UPD4006BG   | 0.7 | 10                |
| UPD4011BC   | 0.7 | 5                 |
| UPD4011BG   | 0.7 | 10                |
| UPD4012BC   | 0.7 | 5                 |
| UPD4012BG   | 0.7 | 10                |
| UPD4013BC   | 0.7 | 10                |
| UPD4013BG   | 0.7 | 10                |
| UPD4014BC   | 0.7 | 5                 |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD4015BC   | 0.7 | 5                 |
| UPD4015BG   | 0.7 | 5                 |
| UPD4017BC   | 0.7 | 10                |
| UPD4017BG   | 0.7 | 10                |
| UPD4019BC   | 0.7 | 5                 |
| UPD4019BG   | 0.7 | 10                |
| UPD4020BC   | 0.7 | 10                |
| UPD4020BG   | 0.7 | 10                |
| UPD4021BC   | 0.7 | 5                 |
| UPD4023BC   | 0.7 | 5                 |
| UPD4023BG   | 0.7 | 10                |
| UPD4024BC   | 0.7 | 10                |
| UPD4024BG   | 0.7 | 10                |
| UPD4025BC   | 0.7 | 5                 |
| UPD4025BG   | 0.7 | 10                |
| UPD4027BC   | 0.7 | 5                 |
| UPD4027BG   | 0.7 | 10                |
| UPD4028BC   | 0.7 | 5                 |
| UPD4028BG   | 0.7 | 10                |
| UPD4029BC   | 0.7 | 10                |
| UPD4029BG   | 0.7 | 10                |
| UPD4030BC   | 0.7 | 5                 |
| UPD4030BG   | 0.7 | 10                |
| UPD4034BC   | 0.7 | 5                 |
| UPD4035BC   | 0.7 | 5                 |
| UPD4035BG   | 0.7 | 5                 |
| UPD4040BC   | 0.7 | 10                |
| UPD4040BG   | 0.7 | 10                |
| UPD4040C    | 0.7 | 10                |
| UPD4042BC   | 0.7 | 5                 |
| UPD4042BG   | 0.7 | 10                |
| UPD4043BC   | 0.7 | 5                 |
| UPD4043BG   | 0.7 | 10                |
| UPD4044BC   | 0.7 | 5                 |
| UPD4044BG   | 0.7 | 10                |
| UPD4049UBC  | 0.7 | 5                 |
| UPD4049UBG  | 0.7 | 10                |
| UPD4050BC   | 0.7 | 5                 |
| UPD4050BG   | 0.7 | 10                |
| UPD4051BC   | 0.7 | 10                |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD4051BG   | 0.7 | 10                |
| UPD4052BC   | 0.7 | 10                |
| UPD4052BG   | 0.7 | 10                |
| UPD4053BC   | 0.7 | 10                |
| UPD4053BG   | 0.7 | 10                |
| UPD4063BC   | 0.7 | 5                 |
| UPD4063BG   | 0.7 | 10                |
| UPD4066BC   | 0.7 | 5                 |
| UPD4066BG   | 0.7 | 10                |
| UPD4066C    | 0.7 | 10                |
| UPD4068BC   | 0.7 | 5                 |
| UPD4068BG   | 0.7 | 10                |
| UPD4069C    | 0.7 | 5                 |
| UPD4069UBC  | 0.7 | 5                 |
| UPD4069UBG  | 0.7 | 5                 |
| UPD4071BC   | 0.7 | 5                 |
| UPD4071BG   | 0.7 | 10                |
| UPD4072BC   | 0.7 | 5                 |
| UPD4072BG   | 0.7 | 10                |
| UPD4073BC   | 0.7 | 5                 |
| UPD4073BG   | 0.7 | 10                |
| UPD4075BC   | 0.7 | 5                 |
| UPD4075BG   | 0.7 | 10                |
| UPD4078BC   | 0.7 | 5                 |
| UPD4078BG   | 0.7 | 10                |
| UPD4081BC   | 0.7 | 5                 |
| UPD4081BG   | 0.7 | 10                |
| UPD4082BC   | 0.7 | 5                 |
| UPD4082BG   | 0.7 | 10                |
| UPD4093BC   | 0.7 | 5                 |
| UPD4093BG   | 0.7 | 10                |
| UPD4094BC   | 0.7 | 10                |
| UPD4094BG   | 0.7 | 10                |
| UPD4099BC   | 0.7 | 10                |
| UPD4160BC   | 0.7 | 10                |
| UPD4161BC   | 0.7 | 10                |
| UPD4162BC   | 0.7 | 10                |
| UPD4163BC   | 0.7 | 10                |
| UPD4174BC   | 0.7 | 10                |
| UPD4174BG   | 0.7 | 10                |

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| Part Number   | Ea  | $\lambda b$ (FIT) |
|---------------|-----|-------------------|
| UPD4175BC     | 0.7 | 10                |
| UPD4175BG     | 0.7 | 10                |
| UPD4192BC     | 0.7 | 10                |
| UPD4193BC     | 0.7 | 10                |
| UPD422D       | 0.7 | 11                |
| UPD431000ACZ  | 0.7 | 84.9              |
| UPD431000AGU  | 0.7 | 90.8              |
| UPD431000AGW  | 0.7 | 48.4              |
| UPD431000AGZ  | 0.7 | 90.8              |
| UPD432232LGF  | 0.7 | 153.6             |
| UPD43256BCZ   | 0.7 | 44                |
| UPD43256BGU   | 0.7 | 33.3              |
| UPD43256BGW   | 0.7 | 64.9              |
| UPD43256BGX   | 0.7 | 30.6              |
| UPD43257BCZ   | 0.7 | 44                |
| UPD43257BGU   | 0.7 | 33.3              |
| UPD4382361GF  | 0.7 | 61.1              |
| UPD4383362GF  | 0.7 | 94.2              |
| UPD441000LGW  | 0.7 | 37.4              |
| UPD441000LGZ  | 0.7 | 45.9              |
| UPD4416001G5  | 0.7 | 41.6              |
| UPD4416004G5  | 0.7 | 44.9              |
| UPD4416008G5  | 0.7 | 46                |
| UPD4416016G5  | 0.7 | 47.3              |
| UPD44164XXXF5 | 0.7 | 78.7              |
| UPD442000AGU  | 0.7 | 31.8              |
| UPD442000LGU  | 0.7 | 56.4              |
| UPD442000LGZ  | 0.7 | 45.9              |
| UPD442002F9   | 0.7 | 30.55             |
| UPD442012AGY  | 0.7 | 30.37             |
| UPD442012LGY  | 0.7 | 43.2              |
| UPD442013LGY  | 0.7 | 30.37             |
| UPD44321XX1GF | 0.7 | 13                |
| UPD44321XX2GF | 0.7 | 18.1              |
| UPD44323XX2F1 | 0.7 | 20.5              |
| UPD444001LE   | 0.7 | 29.7              |
| UPD444004LE   | 0.7 | 34                |
| UPD444004LLE  | 0.7 | 26.7              |
| UPD444008G5   | 0.7 | 41.5              |
| UPD444008LE   | 0.7 | 31.2              |

| Part Number  | Ea  | $\lambda b$ (FIT) |
|--------------|-----|-------------------|
| UPD444008LG5 | 0.7 | 31.5              |
| UPD444008LLE | 0.7 | 25.4              |
| UPD444010AGY | 0.7 | 27.6              |
| UPD444010LGY | 0.7 | 51.6              |
| UPD444012AGY | 0.7 | 27.6              |
| UPD444012LF9 | 0.7 | 51.6              |
| UPD444012LGY | 0.7 | 51.6              |
| UPD444016G5  | 0.7 | 41                |
| UPD444016LE  | 0.7 | 31.7              |
| UPD444016LG5 | 0.7 | 60.4              |
| UPD444016LLE | 0.7 | 23.7              |
| UPD4442161GF | 0.7 | 124.6             |
| UPD4442162GF | 0.7 | 388.8             |
| UPD4442181GF | 0.7 | 124.6             |
| UPD4442182GF | 0.7 | 388.8             |
| UPD4442321GF | 0.7 | 142.9             |
| UPD4442322GF | 0.7 | 478               |
| UPD4442361GF | 0.7 | 142.9             |
| UPD4442362GF | 0.7 | 478               |
| UPD4443362GF | 0.7 | 105.3             |
| UPD448010GY  | 0.7 | 29.7              |
| UPD448012GY  | 0.7 | 29.7              |
| UPD4483362GF | 0.7 | 54.3              |
| UPD4501BC    | 0.7 | 15                |
| UPD4503BC    | 0.7 | 15                |
| UPD4512BC    | 0.7 | 15                |
| UPD4516BC    | 0.7 | 20                |
| UPD4517BC    | 0.7 | 5                 |
| UPD4520BC    | 0.7 | 10                |
| UPD4520BG    | 0.7 | 15                |
| UPD4522BC    | 0.7 | 20                |
| UPD4528BC    | 0.7 | 5                 |
| UPD4528BG    | 0.7 | 10                |
| UPD4530BC    | 0.7 | 15                |
| UPD4538BC    | 0.7 | 10                |
| UPD4538BG    | 0.7 | 10                |
| UPD4555BC    | 0.7 | 5                 |
| UPD4555BG    | 0.7 | 10                |
| UPD4584BC    | 0.7 | 5                 |
| UPD4584BG    | 0.7 | 10                |



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| Part Number  | Ea  | $\lambda b$ (FIT) |
|--------------|-----|-------------------|
| UPD4590BC    | 0.7 | 10                |
| UPD4590BG    | 0.7 | 10                |
| UPD4616112F9 | 0.7 | 50.8              |
| UPD46710ALN  | 0.7 | 30                |
| UPD4701AC    | 0.7 | 5                 |
| UPD4701AGT   | 0.7 | 10                |
| UPD4702C     | 0.7 | 25                |
| UPD4702G     | 0.7 | 10                |
| UPD4704C     | 0.7 | 25                |
| UPD4704G     | 0.7 | 10                |
| UPD4711ACX   | 0.7 | 10                |
| UPD4711AGS   | 0.7 | 10                |
| UPD4711BCX   | 0.7 | 10                |
| UPD4711BGS   | 0.7 | 10                |
| UPD4711CX    | 0.7 | 15                |
| UPD4711GS    | 0.7 | 20                |
| UPD4712ACY   | 0.7 | 20                |
| UPD4712AGT   | 0.7 | 15                |
| UPD4712BCY   | 0.7 | 25                |
| UPD4712BGT   | 0.7 | 20                |
| UPD4712CCY   | 0.7 | 10                |
| UPD4712CGT   | 0.7 | 15                |
| UPD4712CY    | 0.7 | 20                |
| UPD4712DGT   | 0.7 | 15                |
| UPD4712GT    | 0.7 | 20                |
| UPD4713AGT   | 0.7 | 15                |
| UPD4713CX    | 0.7 | 10                |
| UPD4713GT    | 0.7 | 15                |
| UPD4714AGT   | 0.7 | 15                |
| UPD4714CY    | 0.7 | 10                |
| UPD4714GT    | 0.7 | 10                |
| UPD4715AGT   | 0.7 | 10                |
| UPD4715CY    | 0.7 | 20                |
| UPD4715GT    | 0.7 | 25                |
| UPD4721GS    | 0.7 | 15                |
| UPD4722GS    | 0.7 | 20                |
| UPD4723GS    | 0.7 | 20                |
| UPD4724GS    | 0.7 | 20                |
| UPD4726GS    | 0.7 | 15                |
| UPD4751GT    | 0.7 | 20                |

| Part Number  | Ea  | $\lambda b$ (FIT) |
|--------------|-----|-------------------|
| UPD485505G   | 0.7 | 58                |
| UPD485506G5  | 0.7 | 79.2              |
| UPD488170LG6 | 0.7 | 3.29              |
| UPD4881726G6 | 0.7 | 99.4              |
| UPD488172G6  | 0.7 | 99.4              |
| UPD4990AC    | 0.7 | 15                |
| UPD4990AG    | 0.7 | 35                |
| UPD4991ACX   | 0.7 | 10                |
| UPD4991AGS   | 0.7 | 10                |
| UPD4991G     | 0.7 | 15                |
| UPD4992GS    | 0.7 | 10                |
| UPD4993GS    | 0.7 | 10                |
| UPD50HC      | 0.7 | 15                |
| UPD50HGB     | 0.7 | 6                 |
| UPD5200C     | 0.7 | 5                 |
| UPD5200G     | 0.7 | 5                 |
| UPD5201C     | 0.7 | 10                |
| UPD5201D     | 0.7 | 5                 |
| UPD5201G     | 0.7 | 15                |
| UPD5202CU    | 0.7 | 20                |
| UPD5205CA    | 0.7 | 20                |
| UPD5205G     | 0.7 | 25                |
| UPD5555C     | 0.7 | 5                 |
| UPD5555G     | 0.7 | 5                 |
| UPD5556C     | 0.7 | 5                 |
| UPD5556G     | 0.7 | 5                 |
| UPD56303D    | 0.7 | 4                 |
| UPD60001GJ   | 0.7 | 6                 |
| UPD60002GJ   | 0.7 | 6                 |
| UPD60310     | 0.7 | 0.87              |
| UPD60311     | 0.7 | 0.87              |
| UPD60312     | 0.7 | 0.87              |
| UPD61002GC   | 0.7 | 29                |
| UPD61003GC   | 0.7 | 29                |
| UPD61010GD   | 0.7 | 10                |
| UPD61011GM   | 0.7 | 25                |
| UPD61012GC   | 0.7 | 12                |
| UPD61021GD   | 0.7 | 8                 |
| UPD61030AGL  | 0.7 | 29                |
| UPD61030BGL  | 0.7 | 29                |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD61030GL  | 0.7 | 29                |
| UPD61032AGL | 0.7 | 29                |
| UPD61032GL  | 0.7 | 29                |
| UPD61033AGL | 0.7 | 29                |
| UPD61035AGL | 0.7 | 29                |
| UPD61035GL  | 0.7 | 29                |
| UPD61050GD  | 0.7 | 29                |
| UPD61051GD  | 0.7 | 29                |
| UPD61052GD  | 0.7 | 29                |
| UPD61060S1  | 0.7 | 29                |
| UPD61120AF1 | 0.7 | 27                |
| UPD61120F1  | 0.7 | 27                |
| UPD61122AF1 | 0.7 | 27                |
| UPD61130AS1 | 0.7 | 27                |
| UPD61130S1  | 0.7 | 27                |
| UPD61132AS1 | 0.7 | 27                |
| UPD61133S1  | 0.7 | 27                |
| UPD61134S1  | 0.7 | 27                |
| UPD61135S1  | 0.7 | 27                |
| UPD61151F1  | 0.7 | 27                |
| UPD61152F1  | 0.7 | 27                |
| UPD61153F1  | 0.7 | 27                |
| UPD61171F1  | 0.7 | 27                |
| UPD61175F1  | 0.7 | 27                |
| UPD61176F1  | 0.7 | 27                |
| UPD61177F1  | 0.7 | 27                |
| UPD61181F1  | 0.7 | 27                |
| UPD61187F1  | 0.7 | 27                |
| UPD6121G    | 0.7 | 6                 |
| UPD6122G    | 0.7 | 6                 |
| UPD6124AGS  | 0.7 | 6                 |
| UPD6125AG   | 0.7 | 6                 |
| UPD6126AG   | 0.7 | 6                 |
| UPD6132MC   | 0.7 | 3                 |
| UPD6133GS   | 0.7 | 3                 |
| UPD6134GS   | 0.7 | 3                 |
| UPD61520AGC | 0.7 | 29                |
| UPD61520GC  | 0.7 | 29                |
| UPD61521GC  | 0.7 | 27                |
| UPD61522GB  | 0.7 | 27                |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD61P24GS  | 0.7 | 3                 |
| UPD61P34BGS | 0.7 | 10                |
| UPD61P34GS  | 0.7 | 10                |
| UPD6221GS   | 0.7 | 10                |
| UPD6252C    | 0.7 | 6                 |
| UPD6252GS   | 0.7 | 6                 |
| UPD6253CX   | 0.7 | 6                 |
| UPD6253GS   | 0.7 | 6                 |
| UPD6254CX   | 0.7 | 6                 |
| UPD6254GS   | 0.7 | 6                 |
| UPD6255GS   | 0.7 | 3                 |
| UPD6258CX   | 0.7 | 3                 |
| UPD6258GS   | 0.7 | 3                 |
| UPD6263CX   | 0.7 | 6                 |
| UPD6272CX   | 0.7 | 6                 |
| UPD6272GS   | 0.7 | 6                 |
| UPD6273CX   | 0.7 | 6                 |
| UPD62AMC    | 0.7 | 12                |
| UPD62MC     | 0.7 | 3                 |
| UPD6300C    | 0.7 | 5                 |
| UPD6302CA   | 0.7 | 10                |
| UPD6307AG   | 0.7 | 5                 |
| UPD6308AG   | 0.7 | 5                 |
| UPD6316GS   | 0.7 | 6                 |
| UPD63200GS  | 0.7 | 3                 |
| UPD63210GT  | 0.7 | 10                |
| UPD6321G    | 0.7 | 10                |
| UPD6323AC   | 0.7 | 15                |
| UPD6323BC   | 0.7 | 15                |
| UPD6325C    | 0.7 | 10                |
| UPD6325G    | 0.7 | 15                |
| UPD6326C    | 0.7 | 10                |
| UPD6327C    | 0.7 | 10                |
| UPD63310GK  | 0.7 | 10                |
| UPD63335GA  | 0.7 | 12                |
| UPD63352GD  | 0.7 | 65                |
| UPD6335C    | 0.7 | 10                |
| UPD6335G    | 0.7 | 15                |
| UPD6336C    | 0.7 | 10                |
| UPD6337GC   | 0.7 | 30                |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD6340GC   | 0.7 | 25                |
| UPD6345C    | 0.7 | 15                |
| UPD6345GS   | 0.7 | 20                |
| UPD6346C    | 0.7 | 25                |
| UPD6347C    | 0.7 | 20                |
| UPD6360C    | 0.7 | 5                 |
| UPD63620GM  | 0.7 | 29                |
| UPD63701GF  | 0.7 | 10                |
| UPD63702AGF | 0.7 | 8                 |
| UPD63702GF  | 0.7 | 10                |
| UPD63703GF  | 0.7 | 10                |
| UPD63710GC  | 0.7 | 8                 |
| UPD63711AGC | 0.7 | 8                 |
| UPD63711GC  | 0.7 | 8                 |
| UPD63712GC  | 0.7 | 12                |
| UPD63722GD  | 0.7 | 10                |
| UPD63723AGM | 0.7 | 8                 |
| UPD63724AGM | 0.7 | 8                 |
| UPD63724BGM | 0.7 | 8                 |
| UPD63724C   | 0.7 | 30                |
| UPD63724CGM | 0.7 | 8                 |
| UPD63724GM  | 0.7 | 8                 |
| UPD63725AGJ | 0.7 | 12                |
| UPD63725BGJ | 0.7 | 12                |
| UPD6372CX   | 0.7 | 6                 |
| UPD63760GJ  | 0.7 | 12                |
| UPD63761GJ  | 0.7 | 27                |
| UPD63763AGJ | 0.7 | 27                |
| UPD6376CX   | 0.7 | 6                 |
| UPD6376GS   | 0.7 | 6                 |
| UPD6378GF   | 0.7 | 3                 |
| UPD6379AGR  | 0.7 | 3                 |
| UPD6379ALGR | 0.7 | 3                 |
| UPD6379GR   | 0.7 | 3                 |
| UPD6379LGR  | 0.7 | 3                 |
| UPD6380GC   | 0.7 | 10                |
| UPD6381GF   | 0.7 | 6                 |
| UPD6382GF   | 0.7 | 3                 |
| UPD6383GF   | 0.7 | 10                |
| UPD6390GF   | 0.7 | 6                 |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD6395BGH  | 0.7 | 3                 |
| UPD6396YGC  | 0.7 | 10                |
| UPD6397GC   | 0.7 | 10                |
| UPD63AGS    | 0.7 | 3                 |
| UPD63GS     | 0.7 | 3                 |
| UPD64011AGM | 0.7 | 27                |
| UPD64011BGM | 0.7 | 27                |
| UPD64011GM  | 0.7 | 27                |
| UPD64012GJ  | 0.7 | 27                |
| UPD64031AGJ | 0.7 | 29                |
| UPD64031GJ  | 0.7 | 29                |
| UPD64032GK  | 0.7 | 27                |
| UPD64081AGF | 0.7 | 12                |
| UPD64081BGF | 0.7 | 12                |
| UPD64082GF  | 0.7 | 12                |
| UPD64083GF  | 0.7 | 12                |
| UPD64084GC  | 0.7 | 12                |
| UPD6430GF   | 0.7 | 3                 |
| UPD6431GF   | 0.7 | 3                 |
| UPD6432GD   | 0.7 | 10                |
| UPD6450GT   | 0.7 | 6                 |
| UPD6451AGT  | 0.7 | 6                 |
| UPD6453GT   | 0.7 | 6                 |
| UPD6458GT   | 0.7 | 15                |
| UPD6460GT   | 0.7 | 6                 |
| UPD6461GS   | 0.7 | 15                |
| UPD6462GS   | 0.7 | 15                |
| UPD6464AGT  | 0.7 | 10                |
| UPD6465GT   | 0.7 | 10                |
| UPD6466GS   | 0.7 | 10                |
| UPD6467GR   | 0.7 | 10                |
| UPD6470DU   | 0.7 | 6                 |
| UPD6471DU   | 0.7 | 6                 |
| UPD6472DU   | 0.7 | 6                 |
| UPD6475GD   | 0.7 | 10                |
| UPD6476GD   | 0.7 | 10                |
| UPD6477GD   | 0.7 | 10                |
| UPD6480GF   | 0.7 | 10                |
| UPD6481GC   | 0.7 | 10                |
| UPD6483GD   | 0.7 | 10                |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD6485GF   | 0.7 | 10                |
| UPD6486GF   | 0.7 | 10                |
| UPD64AMC    | 0.7 | 12                |
| UPD64GS     | 0.7 | 3                 |
| UPD64MC     | 0.7 | 3                 |
| UPD65004    | 0.7 | 55                |
| UPD65005CF  | 0.7 | 20                |
| UPD65006    | 0.7 | 20                |
| UPD65007    | 0.7 | 20                |
| UPD65011    | 0.7 | 55                |
| UPD65012    | 0.7 | 20                |
| UPD65013GF  | 0.7 | 20                |
| UPD65014    | 0.7 | 20                |
| UPD65015    | 0.7 | 34                |
| UPD65015GF  | 0.7 | 34                |
| UPD65016    | 0.7 | 34                |
| UPD65021    | 0.7 | 55                |
| UPD65022    | 0.7 | 20                |
| UPD65023    | 0.7 | 20                |
| UPD65024    | 0.7 | 20                |
| UPD65025GC  | 0.7 | 34                |
| UPD65027    | 0.7 | 34                |
| UPD65029    | 0.7 | 34                |
| UPD65030    | 0.7 | 55                |
| UPD65031    | 0.7 | 20                |
| UPD65032    | 0.7 | 34                |
| UPD65034    | 0.7 | 34                |
| UPD65040    | 0.7 | 55                |
| UPD65042    | 0.7 | 20                |
| UPD65043    | 0.7 | 20                |
| UPD65044    | 0.7 | 34                |
| UPD65046    | 0.7 | 34                |
| UPD65050    | 0.7 | 20                |
| UPD65051GD  | 0.7 | 34                |
| UPD65052    | 0.7 | 20                |
| UPD65053    | 0.7 | 34                |
| UPD65060    | 0.7 | 55                |
| UPD65061    | 0.7 | 34                |
| UPD65062    | 0.7 | 34                |
| UPD65070    | 0.7 | 20                |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD65071    | 0.7 | 34                |
| UPD65072    | 0.7 | 34                |
| UPD65080    | 0.7 | 55                |
| UPD65081    | 0.7 | 20                |
| UPD65082    | 0.7 | 34                |
| UPD65082GD  | 0.7 | 34                |
| UPD65100    | 0.7 | 55                |
| UPD65101    | 0.7 | 20                |
| UPD65102    | 0.7 | 20                |
| UPD65103    | 0.7 | 34                |
| UPD65140    | 0.7 | 34                |
| UPD65150    | 0.7 | 20                |
| UPD65180    | 0.7 | 34                |
| UPD65200    | 0.7 | 20                |
| UPD65240    | 0.7 | 34                |
| UPD6529C    | 0.7 | 5                 |
| UPD65300    | 0.7 | 34                |
| UPD65301GA  | 0.7 | 3                 |
| UPD65341F1  | 0.7 | 3                 |
| UPD65348F1  | 0.7 | 3                 |
| UPD65349F1  | 0.7 | 3                 |
| UPD65349GN  | 0.7 | 3                 |
| UPD65349S1  | 0.7 | 3                 |
| UPD65363GC  | 0.7 | 3                 |
| UPD65367N7  | 0.7 | 3                 |
| UPD65370FF  | 0.7 | 3                 |
| UPD65421MC  | 0.7 | 5.78              |
| UPD65427S1  | 0.7 | 5.78              |
| UPD65428GD  | 0.7 | 5.78              |
| UPD65429GD  | 0.7 | 5.78              |
| UPD65430N7  | 0.7 | 5.78              |
| UPD65431N7  | 0.7 | 5.78              |
| UPD65433N7  | 0.7 | 5.78              |
| UPD65435N7  | 0.7 | 5.78              |
| UPD65441GA  | 0.7 | 4.74              |
| UPD65443F9  | 0.7 | 5.78              |
| UPD65443GB  | 0.7 | 5.78              |
| UPD65445GD  | 0.7 | 5.78              |
| UPD65446GD  | 0.7 | 5.78              |
| UPD65446GJ  | 0.7 | 5.78              |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD65448GJ  | 0.7 | 5.78              |
| UPD65448GN  | 0.7 | 5.78              |
| UPD65448S1  | 0.7 | 5.78              |
| UPD65449GD  | 0.7 | 5.78              |
| UPD65449GJ  | 0.7 | 5.78              |
| UPD65449GM  | 0.7 | 5.78              |
| UPD65449GN  | 0.7 | 5.78              |
| UPD65449S1  | 0.7 | 5.78              |
| UPD65451S1  | 0.7 | 5.78              |
| UPD65454GD  | 0.7 | 5.78              |
| UPD65454GL  | 0.7 | 5.78              |
| UPD65456GD  | 0.7 | 5.78              |
| UPD65456N7  | 0.7 | 5.78              |
| UPD65458GD  | 0.7 | 5.78              |
| UPD65458GL  | 0.7 | 5.78              |
| UPD65464GN  | 0.7 | 5.78              |
| UPD65466GD  | 0.7 | 5.78              |
| UPD65468GD  | 0.7 | 5.78              |
| UPD6546N7   | 0.7 | 5.78              |
| UPD65473GC  | 0.7 | 4.74              |
| UPD65476GD  | 0.7 | 4.74              |
| UPD65545S1  | 0.7 | 29                |
| UPD65567N7  | 0.7 | 29                |
| UPD65568N7  | 0.7 | 29                |
| UPD65569N7  | 0.7 | 3                 |
| UPD65570FF  | 0.7 | 29                |
| UPD65570N7  | 0.7 | 3                 |
| UPD65571N7  | 0.7 | 3                 |
| UPD65611GA  | 0.7 | 11.23             |
| UPD65611GB  | 0.7 | 11.23             |
| UPD65612GB  | 0.7 | 2.49              |
| UPD65621GB  | 0.7 | 11.23             |
| UPD65622GB  | 0.7 | 2.49              |
| UPD65622GF  | 0.7 | 2.49              |
| UPD65622GK  | 0.7 | 2.49              |
| UPD65625GB  | 0.7 | 11.23             |
| UPD65626GB  | 0.7 | 2.49              |
| UPD65626GF  | 0.7 | 2.49              |
| UPD65626GK  | 0.7 | 2.49              |
| UPD65630GB  | 0.7 | 2.49              |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD65631GD  | 0.7 | 2.49              |
| UPD65632GB  | 0.7 | 2.49              |
| UPD65636GB  | 0.7 | 2.49              |
| UPD65636GC  | 0.7 | 2.49              |
| UPD65636GK  | 0.7 | 2.49              |
| UPD65640GB  | 0.7 | 2.49              |
| UPD65640GC  | 0.7 | 2.49              |
| UPD65640GD  | 0.7 | 2.49              |
| UPD65640GF  | 0.7 | 2.49              |
| UPD65640GJ  | 0.7 | 2.49              |
| UPD65641GJ  | 0.7 | 2.49              |
| UPD65643GD  | 0.7 | 11.23             |
| UPD65643GJ  | 0.7 | 11.23             |
| UPD65644GD  | 0.7 | 2.49              |
| UPD65646GD  | 0.7 | 2.49              |
| UPD65646GF  | 0.7 | 2.49              |
| UPD65646GJ  | 0.7 | 2.49              |
| UPD65647GD  | 0.7 | 2.49              |
| UPD65648GD  | 0.7 | 2.49              |
| UPD65650GC  | 0.7 | 2.49              |
| UPD65650GD  | 0.7 | 2.49              |
| UPD65650GM  | 0.7 | 2.49              |
| UPD65651GD  | 0.7 | 2.49              |
| UPD65652GM  | 0.7 | 2.49              |
| UPD65652GN  | 0.7 | 2.49              |
| UPD65653GM  | 0.7 | 11.23             |
| UPD65654GC  | 0.7 | 1.6               |
| UPD65654GD  | 0.7 | 1.6               |
| UPD65654GF  | 0.7 | 1.6               |
| UPD65654GJ  | 0.7 | 1.6               |
| UPD65654GM  | 0.7 | 1.6               |
| UPD65655GD  | 0.7 | 2.49              |
| UPD65656GD  | 0.7 | 2.49              |
| UPD65658GD  | 0.7 | 1.6               |
| UPD65658L   | 0.7 | 1.6               |
| UPD65662GD  | 0.7 | 2.49              |
| UPD65664GD  | 0.7 | 1.6               |
| UPD65672GD  | 0.7 | 1.6               |
| UPD65672GJ  | 0.7 | 1.6               |
| UPD65676GD  | 0.7 | 1.6               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD65762GD  | 0.7 | 11                |
| UPD65770GD  | 0.7 | 11                |
| UPD65776GD  | 0.7 | 11                |
| UPD65782GD  | 0.7 | 11                |
| UPD65800GF  | 0.7 | 1.83              |
| UPD65801GD  | 0.7 | 1.83              |
| UPD65801GM  | 0.7 | 1.83              |
| UPD65802GC  | 0.7 | 1.83              |
| UPD65802GD  | 0.7 | 1.83              |
| UPD65802GJ  | 0.7 | 1.83              |
| UPD65802GN  | 0.7 | 1.83              |
| UPD65803GD  | 0.7 | 1.83              |
| UPD65803GJ  | 0.7 | 1.83              |
| UPD65803GM  | 0.7 | 1.83              |
| UPD65804GC  | 0.7 | 1.83              |
| UPD65804GD  | 0.7 | 1.83              |
| UPD65804GJ  | 0.7 | 1.83              |
| UPD65804GN  | 0.7 | 1.83              |
| UPD65806GD  | 0.7 | 1.83              |
| UPD65806GM  | 0.7 | 1.83              |
| UPD65808GD  | 0.7 | 1.83              |
| UPD65808GJ  | 0.7 | 1.83              |
| UPD65808GN  | 0.7 | 1.83              |
| UPD65810GD  | 0.7 | 1.83              |
| UPD65810GJ  | 0.7 | 1.83              |
| UPD65811GC  | 0.7 | 1.83              |
| UPD65811GD  | 0.7 | 1.83              |
| UPD65811GN  | 0.7 | 1.83              |
| UPD65812GD  | 0.7 | 1.83              |
| UPD65813GD  | 0.7 | 1.83              |
| UPD65813GL  | 0.7 | 1.83              |
| UPD65833GD  | 0.7 | 0.75              |
| UPD65837GA  | 0.7 | 1.83              |
| UPD65837GB  | 0.7 | 1.83              |
| UPD65839GC  | 0.7 | 1.83              |
| UPD65840GB  | 0.7 | 0.75              |
| UPD65840GM  | 0.7 | 0.75              |
| UPD65841GC  | 0.7 | 0.75              |
| UPD65841GJ  | 0.7 | 0.75              |
| UPD65841GM  | 0.7 | 0.75              |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD65842GC  | 0.7 | 0.75              |
| UPD65842GD  | 0.7 | 0.75              |
| UPD65843GD  | 0.7 | 0.75              |
| UPD65845GD  | 0.7 | 0.75              |
| UPD65845GN  | 0.7 | 0.75              |
| UPD65846GC  | 0.7 | 0.75              |
| UPD65846GD  | 0.7 | 0.75              |
| UPD65848GJ  | 0.7 | 0.75              |
| UPD65849GL  | 0.7 | 0.75              |
| UPD65849GM  | 0.7 | 0.75              |
| UPD65849GN  | 0.7 | 0.75              |
| UPD65850GD  | 0.7 | 0.75              |
| UPD65851GD  | 0.7 | 0.75              |
| UPD65851GL  | 0.7 | 0.75              |
| UPD65852GD  | 0.7 | 0.75              |
| UPD65853GD  | 0.7 | 0.75              |
| UPD65855GD  | 0.7 | 0.75              |
| UPD65858GL  | 0.7 | 0.75              |
| UPD65859GM  | 0.7 | 0.75              |
| UPD65860GB  | 0.7 | 0.75              |
| UPD65860GM  | 0.7 | 0.75              |
| UPD65861GM  | 0.7 | 0.75              |
| UPD65862GC  | 0.7 | 0.75              |
| UPD65863GD  | 0.7 | 0.75              |
| UPD65865GJ  | 0.7 | 0.75              |
| UPD65866GC  | 0.7 | 0.75              |
| UPD65868GD  | 0.7 | 0.75              |
| UPD65869GD  | 0.7 | 0.75              |
| UPD65870GD  | 0.7 | 0.75              |
| UPD65871GD  | 0.7 | 0.75              |
| UPD65872GD  | 0.7 | 0.75              |
| UPD65873GD  | 0.7 | 0.75              |
| UPD65875GD  | 0.7 | 0.75              |
| UPD65875GL  | 0.7 | 0.75              |
| UPD65878GL  | 0.7 | 0.75              |
| UPD65879GD  | 0.7 | 0.75              |
| UPD65880GA  | 0.7 | 0.75              |
| UPD65880GB  | 0.7 | 0.75              |
| UPD65880MC  | 0.7 | 0.75              |
| UPD65881GA  | 0.7 | 0.75              |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD65881GB  | 0.7 | 0.75              |
| UPD65881GK  | 0.7 | 0.75              |
| UPD65882GB  | 0.7 | 0.75              |
| UPD65882GC  | 0.7 | 0.75              |
| UPD65882GK  | 0.7 | 0.75              |
| UPD65883GB  | 0.7 | 0.75              |
| UPD65883GC  | 0.7 | 0.75              |
| UPD65883GJ  | 0.7 | 0.75              |
| UPD65883GK  | 0.7 | 0.75              |
| UPD65884GC  | 0.7 | 0.75              |
| UPD65884GM  | 0.7 | 0.75              |
| UPD65885GC  | 0.7 | 0.75              |
| UPD65885GD  | 0.7 | 0.75              |
| UPD65887GC  | 0.7 | 0.75              |
| UPD65887GD  | 0.7 | 0.75              |
| UPD65887GN  | 0.7 | 0.75              |
| UPD65889GM  | 0.7 | 0.75              |
| UPD65893GN  | 0.7 | 0.75              |
| UPD65907GM  | 0.7 | 5.78              |
| UPD65908N7  | 0.7 | 5.78              |
| UPD65909GL  | 0.7 | 5.78              |
| UPD65911GD  | 0.7 | 5.78              |
| UPD65913N7  | 0.7 | 5.78              |
| UPD65926GM  | 0.7 | 5.78              |
| UPD65926N7  | 0.7 | 5.78              |
| UPD65927GM  | 0.7 | 5.78              |
| UPD65927N7  | 0.7 | 5.78              |
| UPD65928GM  | 0.7 | 5.78              |
| UPD65930GD  | 0.7 | 5.78              |
| UPD65930N7  | 0.7 | 5.78              |
| UPD65931GL  | 0.7 | 5.78              |
| UPD65933N7  | 0.7 | 5.78              |
| UPD65935GL  | 0.7 | 5.78              |
| UPD65935N7  | 0.7 | 5.78              |
| UPD65942GA  | 0.7 | 4.74              |
| UPD65942GC  | 0.7 | 4.74              |
| UPD65942GK  | 0.7 | 4.74              |
| UPD65943F1  | 0.7 | 4.74              |
| UPD65943GA  | 0.7 | 4.74              |
| UPD65943GB  | 0.7 | 4.74              |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD65943GC  | 0.7 | 4.74              |
| UPD65943GJ  | 0.7 | 4.74              |
| UPD65943GK  | 0.7 | 4.74              |
| UPD65943GM  | 0.7 | 4.74              |
| UPD65944GC  | 0.7 | 4.74              |
| UPD65944GJ  | 0.7 | 4.74              |
| UPD65944GM  | 0.7 | 4.74              |
| UPD65944S1  | 0.7 | 4.74              |
| UPD65945GC  | 0.7 | 4.74              |
| UPD65945GD  | 0.7 | 4.74              |
| UPD65945GJ  | 0.7 | 4.74              |
| UPD65945GM  | 0.7 | 4.74              |
| UPD65945S1  | 0.7 | 4.74              |
| UPD65946F1  | 0.7 | 4.74              |
| UPD65946GC  | 0.7 | 4.74              |
| UPD65946GD  | 0.7 | 4.74              |
| UPD65946GJ  | 0.7 | 4.74              |
| UPD65946GM  | 0.7 | 4.74              |
| UPD65946GN  | 0.7 | 4.74              |
| UPD65946N7  | 0.7 | 4.74              |
| UPD65946S1  | 0.7 | 4.74              |
| UPD65948GC  | 0.7 | 4.74              |
| UPD65948GD  | 0.7 | 4.74              |
| UPD65948GJ  | 0.7 | 4.74              |
| UPD65948GL  | 0.7 | 4.74              |
| UPD65948GN  | 0.7 | 4.74              |
| UPD65948N7  | 0.7 | 4.74              |
| UPD65948S1  | 0.7 | 4.74              |
| UPD65949GC  | 0.7 | 4.74              |
| UPD65949GJ  | 0.7 | 4.74              |
| UPD65949GL  | 0.7 | 4.74              |
| UPD65949GN  | 0.7 | 4.74              |
| UPD65949N7  | 0.7 | 4.74              |
| UPD65949S1  | 0.7 | 4.74              |
| UPD65951F1  | 0.7 | 4.74              |
| UPD65951GD  | 0.7 | 4.74              |
| UPD65951GL  | 0.7 | 4.74              |
| UPD65951GM  | 0.7 | 4.74              |
| UPD65951N7  | 0.7 | 4.74              |
| UPD65951S1  | 0.7 | 4.74              |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD65954GD  | 0.7 | 4.74              |
| UPD65954GL  | 0.7 | 4.74              |
| UPD65954GN  | 0.7 | 4.74              |
| UPD65954N7  | 0.7 | 4.74              |
| UPD65954S1  | 0.7 | 4.74              |
| UPD65956GD  | 0.7 | 4.74              |
| UPD65956GL  | 0.7 | 4.74              |
| UPD65956GM  | 0.7 | 4.74              |
| UPD65956N7  | 0.7 | 4.74              |
| UPD65956S1  | 0.7 | 4.74              |
| UPD65958GD  | 0.7 | 4.74              |
| UPD65958N7  | 0.7 | 4.74              |
| UPD65958S9  | 0.7 | 4.74              |
| UPD65961GD  | 0.7 | 4.74              |
| UPD65966N7  | 0.7 | 4.74              |
| UPD65MC     | 0.7 | 12                |
| UPD6600AGS  | 0.7 | 6                 |
| UPD66044GD  | 0.7 | 1.83              |
| UPD6604GS   | 0.7 | 3                 |
| UPD66071GD  | 0.7 | 1.83              |
| UPD66345GD  | 0.7 | 31.8              |
| UPD66346GD  | 0.7 | 31.8              |
| UPD66350GD  | 0.7 | 31.8              |
| UPD66352GL  | 0.7 | 31.8              |
| UPD66372GD  | 0.7 | 31.8              |
| UPD66375GD  | 0.7 | 31.8              |
| UPD66562GC  | 0.7 | 5.74              |
| UPD66565GD  | 0.7 | 1.83              |
| UPD67001    | 0.7 | 25                |
| UPD6700GH   | 0.7 | 10                |
| UPD67010    | 0.7 | 25                |
| UPD67020    | 0.7 | 25                |
| UPD67021    | 0.7 | 93                |
| UPD6702GT   | 0.7 | 6                 |
| UPD67030    | 0.7 | 25                |
| UPD67031    | 0.7 | 93                |
| UPD6703GT   | 0.7 | 6                 |
| UPD67050    | 0.7 | 93                |
| UPD67070    | 0.7 | 93                |
| UPD6708CX   | 0.7 | 10                |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD6708GS   | 0.7 | 6                 |
| UPD6709GC   | 0.7 | 3                 |
| UPD6715GC   | 0.7 | 6                 |
| UPD6716GR   | 0.7 | 6                 |
| UPD67240    | 0.7 | 93                |
| UPD67401N7  | 0.7 | 70                |
| UPD6741     | 0.7 | 12                |
| UPD6750GC   | 0.7 | 12                |
| UPD67821GJ  | 0.7 | 80                |
| UPD67823GD  | 0.7 | 85                |
| UPD67827GL  | 0.7 | 140               |
| UPD67828GD  | 0.7 | 110               |
| UPD67829GD  | 0.7 | 110               |
| UPD67829GN  | 0.7 | 110               |
| UPD67830GD  | 0.7 | 120               |
| UPD67AMC    | 0.7 | 12                |
| UPD67BMC    | 0.7 | 12                |
| UPD67MC     | 0.7 | 12                |
| UPD68000    | 0.7 | 25                |
| UPD68001SS  | 0.7 | 10                |
| UPD68010GC  | 0.7 | 35                |
| UPD68070GF  | 0.7 | 45                |
| UPD68101F1  | 0.7 | 15                |
| UPD68104F1  | 0.7 | 15                |
| UPD68801SS  | 0.7 | 10                |
| UPD68802GC  | 0.7 | 50                |
| UPD68809FC  | 0.7 | 65                |
| UPD68816GC  | 0.7 | 45                |
| UPD68817FC  | 0.7 | 5                 |
| UPD68823F1  | 0.7 | 50                |
| UPD68837F9  | 0.7 | 10                |
| UPD68838F9  | 0.7 | 10                |
| UPD68842    | 0.7 | 45                |
| UPD68901GC  | 0.7 | 10                |
| UPD68970GD  | 0.7 | 45                |
| UPD68AMC    | 0.7 | 12                |
| UPD68BMC    | 0.7 | 12                |
| UPD6900C    | 0.7 | 4                 |
| UPD6900G    | 0.7 | 4                 |
| UPD6902C    | 0.7 | 6                 |



CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD6950C    | 0.7 | 4                 |
| UPD6951G    | 0.7 | 10                |
| UPD69525N7  | 0.7 | 29                |
| UPD69547N7  | 0.7 | 29                |
| UPD69647N7  | 0.7 | 29                |
| UPD69727S9  | 0.7 | 3                 |
| UPD6P9M1MC  | 0.7 | 10                |
| UPD70008AC  | 0.7 | 6                 |
| UPD70008AG  | 0.7 | 6                 |
| UPD70008AGB | 0.7 | 6                 |
| UPD70008AL  | 0.7 | 6                 |
| UPD70008C   | 0.7 | 8                 |
| UPD7001C    | 0.7 | 4                 |
| UPD7002C    | 0.7 | 4                 |
| UPD7003C    | 0.7 | 4                 |
| UPD7003D    | 0.7 | 4                 |
| UPD7004C    | 0.7 | 4                 |
| UPD70108C   | 0.7 | 6                 |
| UPD70108D   | 0.7 | 6                 |
| UPD70108G   | 0.7 | 6                 |
| UPD70108GC  | 0.7 | 6                 |
| UPD70108HCZ | 0.7 | 10                |
| UPD70108HGC | 0.7 | 10                |
| UPD70108HLM | 0.7 | 10                |
| UPD70108L   | 0.7 | 6                 |
| UPD70116C   | 0.7 | 6                 |
| UPD70116D   | 0.7 | 6                 |
| UPD70116G   | 0.7 | 6                 |
| UPD70116GC  | 0.7 | 6                 |
| UPD70116HCZ | 0.7 | 10                |
| UPD70116HG  | 0.7 | 10                |
| UPD70116HGC | 0.7 | 10                |
| UPD70116HLM | 0.7 | 10                |
| UPD70116L   | 0.7 | 6                 |
| UPD7011C    | 0.7 | 11                |
| UPD70136AL  | 0.7 | 3                 |
| UPD70136AR  | 0.7 | 3                 |
| UPD70136GJ  | 0.7 | 3                 |
| UPD70136L   | 0.7 | 3                 |
| UPD70136R   | 0.7 | 3                 |

| Part Number   | Ea  | $\lambda b$ (FIT) |
|---------------|-----|-------------------|
| UPD70208G     | 0.7 | 3                 |
| UPD70208GF    | 0.7 | 3                 |
| UPD70208HGF   | 0.7 | 10                |
| UPD70208HGK   | 0.7 | 10                |
| UPD70208HLP   | 0.7 | 10                |
| UPD70208L     | 0.7 | 3                 |
| UPD70208R     | 0.7 | 3                 |
| UPD70216G     | 0.7 | 3                 |
| UPD70216GF    | 0.7 | 3                 |
| UPD70216HGF   | 0.7 | 10                |
| UPD70216HL    | 0.7 | 10                |
| UPD70216HLP   | 0.7 | 10                |
| UPD70216L     | 0.7 | 3                 |
| UPD70216R     | 0.7 | 3                 |
| UPD70236AGC   | 0.7 | 10                |
| UPD70236AGD   | 0.7 | 10                |
| UPD70236AGJ   | 0.7 | 10                |
| UPD70236ARB   | 0.7 | 10                |
| UPD70236GD    | 0.7 | 3                 |
| UPD70236R     | 0.7 | 3                 |
| UPD70270GD    | 0.7 | 10                |
| UPD70280GD    | 0.7 | 10                |
| UPD703000GC   | 0.7 | 10                |
| UPD703001GC   | 0.7 | 10                |
| UPD703002     | 0.7 | 12                |
| UPD703003AGC  | 0.7 | 12                |
| UPD703003GC   | 0.7 | 8                 |
| UPD703006GJ   | 0.7 | 3                 |
| UPD703008YGJ  | 0.7 | 3                 |
| UPD703014AGC  | 0.7 | 12                |
| UPD703014AYGC | 0.7 | 12                |
| UPD703014BGC  | 0.7 | 12                |
| UPD703015BGC  | 0.7 | 12                |
| UPD703017AGC  | 0.7 | 12                |
| UPD703017AYGC | 0.7 | 12                |
| UPD703025AGC  | 0.7 | 12                |
| UPD703030BGC  | 0.7 | 12                |
| UPD703030BGF  | 0.7 | 12                |
| UPD703030BYGC | 0.7 | 12                |
| UPD703030BYGF | 0.7 | 12                |

| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD703031AGC  | 0.7 | 12                |
| UPD703031BGC  | 0.7 | 12                |
| UPD703032AGF  | 0.7 | 12                |
| UPD703032BGF  | 0.7 | 12                |
| UPD703032BYGF | 0.7 | 12                |
| UPD703033AGC  | 0.7 | 12                |
| UPD703033AGF  | 0.7 | 12                |
| UPD703033AYGC | 0.7 | 12                |
| UPD703033BGC  | 0.7 | 12                |
| UPD703033BYGC | 0.7 | 12                |
| UPD703034AYGF | 0.7 | 12                |
| UPD703034BYGC | 0.7 | 12                |
| UPD703035AGC  | 0.7 | 12                |
| UPD703035AYGC | 0.7 | 12                |
| UPD703035BYGC | 0.7 | 12                |
| UPD703036HGF  | 0.7 | 12                |
| UPD703036HYGC | 0.7 | 12                |
| UPD703037AYGF | 0.7 | 12                |
| UPD703037HYGF | 0.7 | 12                |
| UPD703038F1   | 0.7 | 12                |
| UPD703068YGJ  | 0.7 | 12                |
| UPD703069YGJ  | 0.7 | 12                |
| UPD703075AYGC | 0.7 | 12                |
| UPD703078AYGC | 0.7 | 12                |
| UPD703078YGC  | 0.7 | 12                |
| UPD703079AYGC | 0.7 | 12                |
| UPD703081GJ   | 0.7 | 12                |
| UPD703088YGJ  | 0.7 | 12                |
| UPD703089YGJ  | 0.7 | 12                |
| UPD703100AGJ  | 0.7 | 12                |
| UPD703100GJ   | 0.7 | 12                |
| UPD703101GJ   | 0.7 | 12                |
| UPD703102AGJ  | 0.7 | 12                |
| UPD703102GJ   | 0.7 | 12                |
| UPD703103AGJ  | 0.7 | 12                |
| UPD703105AGJ  | 0.7 | 12                |
| UPD703106AGJ  | 0.7 | 12                |
| UPD703107AF1  | 0.7 | 12                |
| UPD703107AGJ  | 0.7 | 12                |
| UPD703107GJ   | 0.7 | 12                |

| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD703108GC   | 0.7 | 12                |
| UPD703111AGM  | 0.7 | 27                |
| UPD703111GM   | 0.7 | 27                |
| UPD703114GC   | 0.7 | 12                |
| UPD703114GF   | 0.7 | 12                |
| UPD703116GJ   | 0.7 | 12                |
| UPD703128GJ   | 0.7 | 12                |
| UPD703132GJ   | 0.7 | 29                |
| UPD703133AYGJ | 0.7 | 29                |
| UPD703134AGJ  | 0.7 | 29                |
| UPD703134AYGJ | 0.7 | 29                |
| UPD703165F1   | 0.7 | 29                |
| UPD703185GC   | 0.7 | 29                |
| UPD703186GC   | 0.7 | 29                |
| UPD703186GF   | 0.7 | 29                |
| UPD703201GC   | 0.7 | 29                |
| UPD703209YGK  | 0.7 | 8                 |
| UPD70320GJ    | 0.7 | 3                 |
| UPD70320L     | 0.7 | 3                 |
| UPD703212GC   | 0.7 | 12                |
| UPD703213GC   | 0.7 | 12                |
| UPD703214GC   | 0.7 | 8                 |
| UPD703224GC   | 0.7 | 12                |
| UPD70322G     | 0.7 | 3                 |
| UPD70322GJ    | 0.7 | 3                 |
| UPD70322L     | 0.7 | 3                 |
| UPD703231GB   | 0.7 | 29                |
| UPD70325GF    | 0.7 | 3                 |
| UPD70325GJ    | 0.7 | 3                 |
| UPD70325L     | 0.7 | 3                 |
| UPD703260GC   | 0.7 | 29                |
| UPD703260GF   | 0.7 | 29                |
| UPD703260YGC  | 0.7 | 29                |
| UPD703261GF   | 0.7 | 29                |
| UPD703261YGC  | 0.7 | 29                |
| UPD703263YGC  | 0.7 | 29                |
| UPD703271GC   | 0.7 | 29                |
| UPD703272YGC  | 0.7 | 29                |
| UPD703274GC   | 0.7 | 29                |
| UPD703275GC   | 0.7 | 29                |

| Part Number    | Ea  | $\lambda_b$ (FIT) |
|----------------|-----|-------------------|
| UPD703275YGJ   | 0.7 | 29                |
| UPD703276GJ    | 0.7 | 29                |
| UPD703276YGJ   | 0.7 | 29                |
| UPD703280GC    | 0.7 | 29                |
| UPD703281GC    | 0.7 | 29                |
| UPD70329L      | 0.7 | 3                 |
| UPD70330GJ     | 0.7 | 3                 |
| UPD70330L      | 0.7 | 3                 |
| UPD70332GJ     | 0.7 | 3                 |
| UPD70332L      | 0.7 | 3                 |
| UPD70335GJ     | 0.7 | 3                 |
| UPD70335L      | 0.7 | 3                 |
| UPD70339L      | 0.7 | 3                 |
| UPD70423GD     | 0.7 | 10                |
| UPD70433GD     | 0.7 | 10                |
| UPD70433GJ     | 0.7 | 10                |
| UPD705100GJ    | 0.7 | 12                |
| UPD705101GM    | 0.7 | 12                |
| UPD705102GM    | 0.7 | 12                |
| UPD705103GM    | 0.7 | 12                |
| UPD70616R      | 0.7 | 3                 |
| UPD70632GD     | 0.7 | 10                |
| UPD70632R      | 0.7 | 10                |
| UPD70732GC     | 0.7 | 10                |
| UPD70732GD     | 0.7 | 10                |
| UPD70741GC     | 0.7 | 8                 |
| UPD70742GD     | 0.7 | 10                |
| UPD7080AGR     | 0.7 | 10                |
| UPD70F3003AGC  | 0.7 | 12                |
| UPD70F3015BGC  | 0.7 | 12                |
| UPD70F3017AGC  | 0.7 | 12                |
| UPD70F3017AYGC | 0.7 | 12                |
| UPD70F3021GF   | 0.7 | 12                |
| UPD70F3025AGC  | 0.7 | 12                |
| UPD70F3030BGC  | 0.7 | 12                |
| UPD70F3030BGF  | 0.7 | 12                |
| UPD70F3030BYGC | 0.7 | 12                |
| UPD70F3032AYGF | 0.7 | 12                |
| UPD70F3032BGF  | 0.7 | 12                |
| UPD70F3032BYGF | 0.7 | 12                |

| Part Number    | Ea  | $\lambda_b$ (FIT) |
|----------------|-----|-------------------|
| UPD70F3033AGC  | 0.7 | 12                |
| UPD70F3033AYGC | 0.7 | 12                |
| UPD70F3033BGC  | 0.7 | 12                |
| UPD70F3033BYGC | 0.7 | 12                |
| UPD70F3033BYGF | 0.7 | 12                |
| UPD70F3033GC   | 0.7 | 12                |
| UPD70F3035AGF  | 0.7 | 12                |
| UPD70F3035AYGC | 0.7 | 12                |
| UPD70F3035BYGC | 0.7 | 12                |
| UPD70F3036HYGC | 0.7 | 12                |
| UPD70F3037AYGF | 0.7 | 12                |
| UPD70F3037BGF  | 0.7 | 12                |
| UPD70F3040YGM  | 0.7 | 12                |
| UPD70F3079AYGC | 0.7 | 12                |
| UPD70F3079YGC  | 0.7 | 12                |
| UPD70F3080GC   | 0.7 | 12                |
| UPD70F3080GJ   | 0.7 | 12                |
| UPD70F3089YGJ  | 0.7 | 12                |
| UPD70F3102AGJ  | 0.7 | 12                |
| UPD70F3102GJ   | 0.7 | 12                |
| UPD70F3107AF1  | 0.7 | 12                |
| UPD70F3107AGJ  | 0.7 | 12                |
| UPD70F3107GJ   | 0.7 | 12                |
| UPD70F3114GC   | 0.7 | 12                |
| UPD70F3114GF   | 0.7 | 12                |
| UPD70F3116GJ   | 0.7 | 12                |
| UPD70F3134AYGJ | 0.7 | 29                |
| UPD70F3134GJ   | 0.7 | 29                |
| UPD70F3134YGJ  | 0.7 | 29                |
| UPD70F3165F1   | 0.7 | 29                |
| UPD70F3186GC   | 0.7 | 29                |
| UPD70F3186GF   | 0.7 | 29                |
| UPD70F3201YGC  | 0.7 | 29                |
| UPD70F3210GC   | 0.7 | 12                |
| UPD70F3210GK   | 0.7 | 8                 |
| UPD70F3210YGK  | 0.7 | 8                 |
| UPD70F3214GC   | 0.7 | 8                 |
| UPD70F3214YGC  | 0.7 | 8                 |
| UPD70F3224GC   | 0.7 | 12                |
| UPD70F3231GB   | 0.7 | 29                |

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| Part Number    | Ea  | $\lambda_b$ (FIT) |
|----------------|-----|-------------------|
| UPD70F3231M1GB | 0.7 | 29                |
| UPD70F3261GC   | 0.7 | 29                |
| UPD70F3261GF   | 0.7 | 29                |
| UPD70F3261YGC  | 0.7 | 29                |
| UPD70F3263YGJ  | 0.7 | 29                |
| UPD70F3266YGJ  | 0.7 | 29                |
| UPD70F3271GC   | 0.7 | 29                |
| UPD70F3271YGC  | 0.7 | 29                |
| UPD70F3273YGC  | 0.7 | 29                |
| UPD70F3274GC   | 0.7 | 29                |
| UPD70F3276GJ   | 0.7 | 29                |
| UPD70F3276YGJ  | 0.7 | 29                |
| UPD70F3281GC   | 0.7 | 29                |
| UPD70F3284YGJ  | 0.7 | 29                |
| UPD70F3286YGJ  | 0.7 | 29                |
| UPD70P3000GC   | 0.7 | 10                |
| UPD70P3002GC   | 0.7 | 10                |
| UPD70P322KE    | 0.7 | 3                 |
| UPD71011C      | 0.7 | 20                |
| UPD71011G      | 0.7 | 10                |
| UPD71037CZ     | 0.7 | 3                 |
| UPD71037GB     | 0.7 | 3                 |
| UPD71037LM     | 0.7 | 3                 |
| UPD71051C      | 0.7 | 6                 |
| UPD71051GB     | 0.7 | 6                 |
| UPD71051GU     | 0.7 | 6                 |
| UPD71051L      | 0.7 | 6                 |
| UPD71054C      | 0.7 | 6                 |
| UPD71054G      | 0.7 | 6                 |
| UPD71054GB     | 0.7 | 6                 |
| UPD71054L      | 0.7 | 6                 |
| UPD71055C      | 0.7 | 6                 |
| UPD71055GB     | 0.7 | 6                 |
| UPD71055GU     | 0.7 | 6                 |
| UPD71055L      | 0.7 | 6                 |
| UPD71059C      | 0.7 | 6                 |
| UPD71059GB     | 0.7 | 6                 |
| UPD71059GU     | 0.7 | 6                 |
| UPD71059L      | 0.7 | 6                 |
| UPD71065G      | 0.7 | 6                 |

| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD71071C    | 0.7 | 6                 |
| UPD71071GC   | 0.7 | 6                 |
| UPD71071L    | 0.7 | 6                 |
| UPD71082C    | 0.7 | 10                |
| UPD71082G    | 0.7 | 10                |
| UPD71083C    | 0.7 | 10                |
| UPD71083G    | 0.7 | 10                |
| UPD71084C    | 0.7 | 15                |
| UPD71084G    | 0.7 | 15                |
| UPD71086C    | 0.7 | 15                |
| UPD71086G    | 0.7 | 15                |
| UPD71087C    | 0.7 | 15                |
| UPD71088C    | 0.7 | 10                |
| UPD71088G    | 0.7 | 5                 |
| UPD71101GD   | 0.7 | 3                 |
| UPD71611C    | 0.7 | 10                |
| UPD71613C    | 0.7 | 10                |
| UPD71621C    | 0.7 | 5                 |
| UPD71641R    | 0.7 | 3                 |
| UPD72001C    | 0.7 | 6                 |
| UPD72001G    | 0.7 | 3                 |
| UPD72001GC   | 0.7 | 6                 |
| UPD72001L    | 0.7 | 6                 |
| UPD72002CZ   | 0.7 | 3                 |
| UPD72002G    | 0.7 | 10                |
| UPD72002GB   | 0.7 | 3                 |
| UPD72002LM   | 0.7 | 3                 |
| UPD72005GC   | 0.7 | 10                |
| UPD72005LN   | 0.7 | 10                |
| UPD720100A   | 0.7 | 2.93              |
| UPD720100AGM | 0.7 | 2.93              |
| UPD720100AS1 | 0.7 | 2.93              |
| UPD720101F1  | 0.7 | 2.93              |
| UPD720101GJ  | 0.7 | 2.93              |
| UPD720110AGC | 0.7 | 2.93              |
| UPD720110AS1 | 0.7 | 2.93              |
| UPD720110GC  | 0.7 | 2.93              |
| UPD720112GK  | 0.7 | 29                |
| UPD720113GK  | 0.7 | 29                |
| UPD72011GB   | 0.7 | 12                |

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| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD72012GB  | 0.7 | 12                |
| UPD720130GC | 0.7 | 29                |
| UPD720133GB | 0.7 | 29                |
| UPD7201AC   | 0.7 | 16                |
| UPD7201AD   | 0.7 | 16                |
| UPD72020C   | 0.7 | 6                 |
| UPD72020GC  | 0.7 | 6                 |
| UPD72020GF  | 0.7 | 6                 |
| UPD72030G   | 0.7 | 10                |
| UPD72042BGT | 0.7 | 10                |
| UPD72053AGJ | 0.7 | 8                 |
| UPD72053GJ  | 0.7 | 8                 |
| UPD72061C   | 0.7 | 3                 |
| UPD72061GC  | 0.7 | 3                 |
| UPD72061LN  | 0.7 | 3                 |
| UPD72064GC  | 0.7 | 3                 |
| UPD72065BC  | 0.7 | 6                 |
| UPD72065BGC | 0.7 | 6                 |
| UPD72065GC  | 0.7 | 6                 |
| UPD72068FGF | 0.7 | 6                 |
| UPD72068GF  | 0.7 | 6                 |
| UPD72068L   | 0.7 | 6                 |
| UPD72069GF  | 0.7 | 3                 |
| UPD72069L   | 0.7 | 3                 |
| UPD72070GF  | 0.7 | 10                |
| UPD72071GC  | 0.7 | 10                |
| UPD72101GJ  | 0.7 | 2.93              |
| UPD72103ACW | 0.7 | 10                |
| UPD72103AGC | 0.7 | 10                |
| UPD72103ALP | 0.7 | 10                |
| UPD72103CW  | 0.7 | 3                 |
| UPD72103GC  | 0.7 | 3                 |
| UPD72103LP  | 0.7 | 3                 |
| UPD72105C   | 0.7 | 6                 |
| UPD72105L   | 0.7 | 6                 |
| UPD72107CW  | 0.7 | 6                 |
| UPD72107GC  | 0.7 | 3                 |
| UPD72107L   | 0.7 | 6                 |
| UPD72111CW  | 0.7 | 10                |
| UPD72111GJ  | 0.7 | 10                |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD72111L   | 0.7 | 10                |
| UPD72120GJ  | 0.7 | 3                 |
| UPD72120L   | 0.7 | 3                 |
| UPD72120R   | 0.7 | 3                 |
| UPD72123GJ  | 0.7 | 3                 |
| UPD72123LQ  | 0.7 | 3                 |
| UPD72171GD  | 0.7 | 25                |
| UPD72181C   | 0.7 | 3                 |
| UPD72181GF  | 0.7 | 3                 |
| UPD72185CW  | 0.7 | 3                 |
| UPD72185GF  | 0.7 | 3                 |
| UPD72185L   | 0.7 | 3                 |
| UPD72186GF  | 0.7 | 10                |
| UPD72187AGF | 0.7 | 10                |
| UPD7220AD   | 0.7 | 11                |
| UPD72251GM  | 0.7 | 25                |
| UPD72252GM  | 0.7 | 20                |
| UPD7225G    | 0.7 | 10                |
| UPD7225G00  | 0.7 | 5                 |
| UPD7225GB   | 0.7 | 10                |
| UPD7228AG   | 0.7 | 10                |
| UPD7228AGF  | 0.7 | 10                |
| UPD72291R   | 0.7 | 70                |
| UPD72305CW  | 0.7 | 30                |
| UPD72305GC  | 0.7 | 6                 |
| UPD72305L   | 0.7 | 30                |
| UPD7260D    | 0.7 | 11                |
| UPD72611GF  | 0.7 | 10                |
| UPD7261AD   | 0.7 | 11                |
| UPD7261BD   | 0.7 | 11                |
| UPD72850AGK | 0.7 | 12                |
| UPD72850BGK | 0.7 | 12                |
| UPD72852AGB | 0.7 | 12                |
| UPD72852GB  | 0.7 | 40                |
| UPD72862GC  | 0.7 | 12                |
| UPD72870AGM | 0.7 | 12                |
| UPD72872GC  | 0.7 | 12                |
| UPD72873AGC | 0.7 | 12                |
| UPD72874GC  | 0.7 | 12                |
| UPD72891BGD | 0.7 | 29                |

| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD72893AGD   | 0.7 | 29                |
| UPD72893BGD   | 0.7 | 29                |
| UPD72893GD    | 0.7 | 29                |
| UPD72902AV    | 0.7 | 16                |
| UPD72902AVLJ  | 0.7 | 9                 |
| UPD72934CVUL  | 0.7 | 6                 |
| UPD74AC00C    | 0.7 | 5                 |
| UPD74AC00GS   | 0.7 | 5                 |
| UPD74AC240C   | 0.7 | 5                 |
| UPD74AC240GS  | 0.7 | 10                |
| UPD74AC244C   | 0.7 | 5                 |
| UPD74AC244GS  | 0.7 | 10                |
| UPD74AC245C   | 0.7 | 10                |
| UPD74AC245GS  | 0.7 | 10                |
| UPD74AC74C    | 0.7 | 10                |
| UPD74AC74GS   | 0.7 | 10                |
| UPD74ACT245C  | 0.7 | 10                |
| UPD74ACT245GS | 0.7 | 10                |
| UPD74HC00C    | 0.7 | 5                 |
| UPD74HC00G    | 0.7 | 10                |
| UPD74HC00GS   | 0.7 | 5                 |
| UPD74HC02C    | 0.7 | 5                 |
| UPD74HC02G    | 0.7 | 10                |
| UPD74HC02GS   | 0.7 | 5                 |
| UPD74HC03C    | 0.7 | 5                 |
| UPD74HC03G    | 0.7 | 10                |
| UPD74HC03GS   | 0.7 | 5                 |
| UPD74HC04C    | 0.7 | 5                 |
| UPD74HC04G    | 0.7 | 10                |
| UPD74HC04GS   | 0.7 | 5                 |
| UPD74HC08C    | 0.7 | 5                 |
| UPD74HC08G    | 0.7 | 10                |
| UPD74HC08GS   | 0.7 | 5                 |
| UPD74HC107C   | 0.7 | 5                 |
| UPD74HC107G   | 0.7 | 10                |
| UPD74HC109C   | 0.7 | 5                 |
| UPD74HC109G   | 0.7 | 10                |
| UPD74HC10C    | 0.7 | 5                 |
| UPD74HC10G    | 0.7 | 10                |
| UPD74HC10GS   | 0.7 | 10                |

| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD74HC112C   | 0.7 | 5                 |
| UPD74HC112G   | 0.7 | 10                |
| UPD74HC11C    | 0.7 | 5                 |
| UPD74HC11G    | 0.7 | 10                |
| UPD74HC11GS   | 0.7 | 10                |
| UPD74HC123AC  | 0.7 | 10                |
| UPD74HC123AG  | 0.7 | 10                |
| UPD74HC123AGS | 0.7 | 10                |
| UPD74HC123GS  | 0.7 | 10                |
| UPD74HC125C   | 0.7 | 5                 |
| UPD74HC125G   | 0.7 | 10                |
| UPD74HC125GS  | 0.7 | 10                |
| UPD74HC126C   | 0.7 | 5                 |
| UPD74HC126G   | 0.7 | 10                |
| UPD74HC132C   | 0.7 | 5                 |
| UPD74HC132G   | 0.7 | 10                |
| UPD74HC132GS  | 0.7 | 10                |
| UPD74HC133C   | 0.7 | 5                 |
| UPD74HC133G   | 0.7 | 10                |
| UPD74HC137C   | 0.7 | 5                 |
| UPD74HC137G   | 0.7 | 10                |
| UPD74HC137GS  | 0.7 | 10                |
| UPD74HC138C   | 0.7 | 10                |
| UPD74HC138G   | 0.7 | 10                |
| UPD74HC138GS  | 0.7 | 10                |
| UPD74HC139C   | 0.7 | 5                 |
| UPD74HC139G   | 0.7 | 10                |
| UPD74HC139GS  | 0.7 | 10                |
| UPD74HC13C    | 0.7 | 5                 |
| UPD74HC147C   | 0.7 | 5                 |
| UPD74HC147G   | 0.7 | 10                |
| UPD74HC148C   | 0.7 | 5                 |
| UPD74HC148G   | 0.7 | 10                |
| UPD74HC14C    | 0.7 | 5                 |
| UPD74HC14G    | 0.7 | 10                |
| UPD74HC14GS   | 0.7 | 10                |
| UPD74HC151C   | 0.7 | 5                 |
| UPD74HC151G   | 0.7 | 10                |
| UPD74HC151GS  | 0.7 | 10                |
| UPD74HC153C   | 0.7 | 5                 |

| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD74HC153G  | 0.7 | 10                |
| UPD74HC153GS | 0.7 | 10                |
| UPD74HC157C  | 0.7 | 5                 |
| UPD74HC157G  | 0.7 | 10                |
| UPD74HC157GS | 0.7 | 10                |
| UPD74HC158C  | 0.7 | 5                 |
| UPD74HC158G  | 0.7 | 10                |
| UPD74HC158GS | 0.7 | 10                |
| UPD74HC160C  | 0.7 | 10                |
| UPD74HC160G  | 0.7 | 10                |
| UPD74HC161C  | 0.7 | 10                |
| UPD74HC161G  | 0.7 | 10                |
| UPD74HC161GS | 0.7 | 10                |
| UPD74HC162C  | 0.7 | 10                |
| UPD74HC162G  | 0.7 | 10                |
| UPD74HC163C  | 0.7 | 10                |
| UPD74HC163G  | 0.7 | 10                |
| UPD74HC163GS | 0.7 | 10                |
| UPD74HC164C  | 0.7 | 10                |
| UPD74HC164G  | 0.7 | 10                |
| UPD74HC164GS | 0.7 | 10                |
| UPD74HC165C  | 0.7 | 10                |
| UPD74HC165G  | 0.7 | 10                |
| UPD74HC165GS | 0.7 | 10                |
| UPD74HC166C  | 0.7 | 10                |
| UPD74HC166G  | 0.7 | 10                |
| UPD74HC166GS | 0.7 | 10                |
| UPD74HC173C  | 0.7 | 10                |
| UPD74HC173GS | 0.7 | 10                |
| UPD74HC174C  | 0.7 | 5                 |
| UPD74HC174G  | 0.7 | 10                |
| UPD74HC174GS | 0.7 | 10                |
| UPD74HC175C  | 0.7 | 5                 |
| UPD74HC175G  | 0.7 | 10                |
| UPD74HC175GS | 0.7 | 10                |
| UPD74HC190C  | 0.7 | 10                |
| UPD74HC190GS | 0.7 | 10                |
| UPD74HC191C  | 0.7 | 10                |
| UPD74HC191GS | 0.7 | 10                |
| UPD74HC192C  | 0.7 | 10                |

| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD74HC192G   | 0.7 | 10                |
| UPD74HC192GS  | 0.7 | 10                |
| UPD74HC193C   | 0.7 | 10                |
| UPD74HC193G   | 0.7 | 10                |
| UPD74HC193GS  | 0.7 | 10                |
| UPD74HC194C   | 0.7 | 10                |
| UPD74HC194GS  | 0.7 | 10                |
| UPD74HC195C   | 0.7 | 5                 |
| UPD74HC195GS  | 0.7 | 10                |
| UPD74HC20C    | 0.7 | 5                 |
| UPD74HC20G    | 0.7 | 10                |
| UPD74HC20GS   | 0.7 | 10                |
| UPD74HC21C    | 0.7 | 5                 |
| UPD74HC21G    | 0.7 | 10                |
| UPD74HC21GS   | 0.7 | 10                |
| UPD74HC221AC  | 0.7 | 10                |
| UPD74HC221AG  | 0.7 | 10                |
| UPD74HC221AGS | 0.7 | 10                |
| UPD74HC237C   | 0.7 | 5                 |
| UPD74HC237G   | 0.7 | 10                |
| UPD74HC237GS  | 0.7 | 10                |
| UPD74HC238C   | 0.7 | 5                 |
| UPD74HC238G   | 0.7 | 10                |
| UPD74HC238GS  | 0.7 | 5                 |
| UPD74HC239C   | 0.7 | 5                 |
| UPD74HC239G   | 0.7 | 10                |
| UPD74HC239GS  | 0.7 | 10                |
| UPD74HC240C   | 0.7 | 5                 |
| UPD74HC240G   | 0.7 | 10                |
| UPD74HC240GS  | 0.7 | 10                |
| UPD74HC241C   | 0.7 | 5                 |
| UPD74HC241G   | 0.7 | 10                |
| UPD74HC241GS  | 0.7 | 10                |
| UPD74HC242C   | 0.7 | 5                 |
| UPD74HC243C   | 0.7 | 5                 |
| UPD74HC244C   | 0.7 | 5                 |
| UPD74HC244GS  | 0.7 | 10                |
| UPD74HC245C   | 0.7 | 10                |
| UPD74HC245GS  | 0.7 | 10                |
| UPD74HC251C   | 0.7 | 5                 |

| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD74HC251G  | 0.7 | 10                |
| UPD74HC251GS | 0.7 | 10                |
| UPD74HC253C  | 0.7 | 5                 |
| UPD74HC253G  | 0.7 | 10                |
| UPD74HC257C  | 0.7 | 5                 |
| UPD74HC257GS | 0.7 | 10                |
| UPD74HC258C  | 0.7 | 5                 |
| UPD74HC258GS | 0.7 | 10                |
| UPD74HC259C  | 0.7 | 10                |
| UPD74HC259GS | 0.7 | 10                |
| UPD74HC273C  | 0.7 | 10                |
| UPD74HC273GS | 0.7 | 10                |
| UPD74HC27C   | 0.7 | 5                 |
| UPD74HC27G   | 0.7 | 10                |
| UPD74HC27GS  | 0.7 | 5                 |
| UPD74HC280C  | 0.7 | 10                |
| UPD74HC280G  | 0.7 | 10                |
| UPD74HC299C  | 0.7 | 10                |
| UPD74HC30C   | 0.7 | 5                 |
| UPD74HC30G   | 0.7 | 10                |
| UPD74HC30GS  | 0.7 | 10                |
| UPD74HC32C   | 0.7 | 5                 |
| UPD74HC32G   | 0.7 | 10                |
| UPD74HC32GS  | 0.7 | 5                 |
| UPD74HC365C  | 0.7 | 5                 |
| UPD74HC365G  | 0.7 | 10                |
| UPD74HC366C  | 0.7 | 5                 |
| UPD74HC366G  | 0.7 | 10                |
| UPD74HC367C  | 0.7 | 5                 |
| UPD74HC367G  | 0.7 | 10                |
| UPD74HC367GS | 0.7 | 10                |
| UPD74HC368C  | 0.7 | 5                 |
| UPD74HC368G  | 0.7 | 10                |
| UPD74HC368GS | 0.7 | 5                 |
| UPD74HC373C  | 0.7 | 5                 |
| UPD74HC373G  | 0.7 | 10                |
| UPD74HC373GS | 0.7 | 10                |
| UPD74HC374C  | 0.7 | 10                |
| UPD74HC374GS | 0.7 | 10                |
| UPD74HC375C  | 0.7 | 5                 |

| Part Number    | Ea  | $\lambda_b$ (FIT) |
|----------------|-----|-------------------|
| UPD74HC375G    | 0.7 | 10                |
| UPD74HC375GS   | 0.7 | 10                |
| UPD74HC377C    | 0.7 | 10                |
| UPD74HC377GS   | 0.7 | 10                |
| UPD74HC390C    | 0.7 | 10                |
| UPD74HC390G    | 0.7 | 10                |
| UPD74HC393C    | 0.7 | 5                 |
| UPD74HC393G    | 0.7 | 10                |
| UPD74HC393GS   | 0.7 | 10                |
| UPD74HC4002C   | 0.7 | 5                 |
| UPD74HC4002G   | 0.7 | 10                |
| UPD74HC4017C   | 0.7 | 10                |
| UPD74HC4017GS  | 0.7 | 10                |
| UPD74HC4020C   | 0.7 | 10                |
| UPD74HC4020G   | 0.7 | 10                |
| UPD74HC4020GS  | 0.7 | 10                |
| UPD74HC4024C   | 0.7 | 5                 |
| UPD74HC4024G   | 0.7 | 10                |
| UPD74HC4024GS  | 0.7 | 10                |
| UPD74HC4040C   | 0.7 | 10                |
| UPD74HC4040G   | 0.7 | 10                |
| UPD74HC4040GS  | 0.7 | 10                |
| UPD74HC4049C   | 0.7 | 5                 |
| UPD74HC4049G   | 0.7 | 10                |
| UPD74HC4050C   | 0.7 | 5                 |
| UPD74HC4050G   | 0.7 | 10                |
| UPD74HC4050GS  | 0.7 | 5                 |
| UPD74HC4051C   | 0.7 | 10                |
| UPD74HC4051G   | 0.7 | 10                |
| UPD74HC4051GS  | 0.7 | 10                |
| UPD74HC4052C   | 0.7 | 10                |
| UPD74HC4052G   | 0.7 | 10                |
| UPD74HC4052GS  | 0.7 | 10                |
| UPD74HC4053C   | 0.7 | 10                |
| UPD74HC4053G   | 0.7 | 10                |
| UPD74HC4053GS  | 0.7 | 10                |
| UPD74HC4066AC  | 0.7 | 5                 |
| UPD74HC4066AG  | 0.7 | 10                |
| UPD74HC4066AGS | 0.7 | 10                |
| UPD74HC4066C   | 0.7 | 5                 |



| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD74HC4066G  | 0.7 | 10                |
| UPD74HC4066GS | 0.7 | 10                |
| UPD74HC4075C  | 0.7 | 5                 |
| UPD74HC4075G  | 0.7 | 10                |
| UPD74HC4075GS | 0.7 | 10                |
| UPD74HC4078C  | 0.7 | 5                 |
| UPD74HC4078G  | 0.7 | 10                |
| UPD74HC4078GS | 0.7 | 5                 |
| UPD74HC4094C  | 0.7 | 10                |
| UPD74HC4094G  | 0.7 | 10                |
| UPD74HC4094GS | 0.7 | 25                |
| UPD74HC42C    | 0.7 | 5                 |
| UPD74HC42G    | 0.7 | 10                |
| UPD74HC4538C  | 0.7 | 10                |
| UPD74HC4538G  | 0.7 | 10                |
| UPD74HC4538GS | 0.7 | 10                |
| UPD74HC51C    | 0.7 | 5                 |
| UPD74HC51G    | 0.7 | 10                |
| UPD74HC533C   | 0.7 | 10                |
| UPD74HC533GS  | 0.7 | 10                |
| UPD74HC534C   | 0.7 | 10                |
| UPD74HC534GS  | 0.7 | 10                |
| UPD74HC540C   | 0.7 | 5                 |
| UPD74HC540GS  | 0.7 | 10                |
| UPD74HC541C   | 0.7 | 5                 |
| UPD74HC541GS  | 0.7 | 10                |
| UPD74HC563C   | 0.7 | 10                |
| UPD74HC563GS  | 0.7 | 10                |
| UPD74HC564C   | 0.7 | 10                |
| UPD74HC564GS  | 0.7 | 10                |
| UPD74HC573C   | 0.7 | 10                |
| UPD74HC573GS  | 0.7 | 10                |
| UPD74HC574C   | 0.7 | 10                |
| UPD74HC574GS  | 0.7 | 10                |
| UPD74HC58C    | 0.7 | 5                 |
| UPD74HC58G    | 0.7 | 10                |
| UPD74HC595C   | 0.7 | 10                |
| UPD74HC595GS  | 0.7 | 10                |
| UPD74HC640C   | 0.7 | 10                |
| UPD74HC640GS  | 0.7 | 10                |

| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD74HC643C   | 0.7 | 10                |
| UPD74HC643GS  | 0.7 | 10                |
| UPD74HC670C   | 0.7 | 10                |
| UPD74HC670GS  | 0.7 | 10                |
| UPD74HC688C   | 0.7 | 5                 |
| UPD74HC688GS  | 0.7 | 10                |
| UPD74HC7266C  | 0.7 | 5                 |
| UPD74HC7266G  | 0.7 | 10                |
| UPD74HC74C    | 0.7 | 5                 |
| UPD74HC74G    | 0.7 | 10                |
| UPD74HC74GS   | 0.7 | 10                |
| UPD74HC85C    | 0.7 | 10                |
| UPD74HC85GS   | 0.7 | 10                |
| UPD74HC86C    | 0.7 | 5                 |
| UPD74HC86G    | 0.7 | 10                |
| UPD74HC86GS   | 0.7 | 10                |
| UPD74HCT00C   | 0.7 | 5                 |
| UPD74HCT00G   | 0.7 | 10                |
| UPD74HCT00GS  | 0.7 | 10                |
| UPD74HCT04C   | 0.7 | 5                 |
| UPD74HCT04G   | 0.7 | 10                |
| UPD74HCT04GS  | 0.7 | 5                 |
| UPD74HCT08C   | 0.7 | 5                 |
| UPD74HCT08G   | 0.7 | 10                |
| UPD74HCT08GS  | 0.7 | 10                |
| UPD74HCT138C  | 0.7 | 10                |
| UPD74HCT138G  | 0.7 | 10                |
| UPD74HCT138GS | 0.7 | 10                |
| UPD74HCT139C  | 0.7 | 5                 |
| UPD74HCT139G  | 0.7 | 10                |
| UPD74HCT139GS | 0.7 | 10                |
| UPD74HCT240C  | 0.7 | 5                 |
| UPD74HCT240GS | 0.7 | 10                |
| UPD74HCT241C  | 0.7 | 5                 |
| UPD74HCT241GS | 0.7 | 10                |
| UPD74HCT244C  | 0.7 | 5                 |
| UPD74HCT244GS | 0.7 | 10                |
| UPD74HCT245C  | 0.7 | 10                |
| UPD74HCT245GS | 0.7 | 10                |
| UPD74HCT373C  | 0.7 | 10                |

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| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD74HCT373GS | 0.7 | 10                |
| UPD74HCT374C  | 0.7 | 10                |
| UPD74HCT374GS | 0.7 | 10                |
| UPD74HCT640C  | 0.7 | 10                |
| UPD74HCT640GS | 0.7 | 10                |
| UPD74HCT643C  | 0.7 | 10                |
| UPD74HCT643GS | 0.7 | 10                |
| UPD74HCT688C  | 0.7 | 5                 |
| UPD74HCT688GS | 0.7 | 10                |
| UPD74HCU04C   | 0.7 | 5                 |
| UPD74HCU04G   | 0.7 | 5                 |
| UPD74HCU04GS  | 0.7 | 5                 |
| UPD750004CU   | 0.7 | 10                |
| UPD750004GB   | 0.7 | 10                |
| UPD750006GB   | 0.7 | 10                |
| UPD750008GB   | 0.7 | 10                |
| UPD75004CU    | 0.7 | 6                 |
| UPD75004GB    | 0.7 | 6                 |
| UPD750064CU   | 0.7 | 10                |
| UPD750064GB   | 0.7 | 10                |
| UPD750064GT   | 0.7 | 10                |
| UPD750066GT   | 0.7 | 10                |
| UPD750068GT   | 0.7 | 10                |
| UPD75006CU    | 0.7 | 6                 |
| UPD75006GB    | 0.7 | 6                 |
| UPD75008BGB   | 0.7 | 6                 |
| UPD75008CU    | 0.7 | 6                 |
| UPD75008GB    | 0.7 | 6                 |
| UPD75028CW    | 0.7 | 3                 |
| UPD75028GC    | 0.7 | 3                 |
| UPD7502CF     | 0.7 | 4                 |
| UPD7502G      | 0.7 | 4                 |
| UPD7502GF     | 0.7 | 4                 |
| UPD7502R      | 0.7 | 4                 |
| UPD75036CW    | 0.7 | 10                |
| UPD7503AG     | 0.7 | 10                |
| UPD7503AGF    | 0.7 | 6                 |
| UPD7503CF     | 0.7 | 4                 |
| UPD7503G      | 0.7 | 4                 |
| UPD7503GF     | 0.7 | 4                 |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD75048CW  | 0.7 | 3                 |
| UPD75048GW  | 0.7 | 3                 |
| UPD75064CU  | 0.7 | 10                |
| UPD75064GB  | 0.7 | 10                |
| UPD75066CU  | 0.7 | 10                |
| UPD75066GB  | 0.7 | 10                |
| UPD75068CU  | 0.7 | 10                |
| UPD75068GB  | 0.7 | 10                |
| UPD7506C    | 0.7 | 4                 |
| UPD7506CT   | 0.7 | 4                 |
| UPD7506HC   | 0.7 | 8                 |
| UPD7507C    | 0.7 | 4                 |
| UPD7507CU   | 0.7 | 4                 |
| UPD7507G    | 0.7 | 4                 |
| UPD7507GC   | 0.7 | 4                 |
| UPD7507HC   | 0.7 | 8                 |
| UPD7507HCU  | 0.7 | 8                 |
| UPD7507HG   | 0.7 | 8                 |
| UPD7507HGB  | 0.7 | 8                 |
| UPD7507SC   | 0.7 | 4                 |
| UPD7507SCT  | 0.7 | 4                 |
| UPD7508AC   | 0.7 | 4                 |
| UPD7508BCU  | 0.7 | 6                 |
| UPD7508BGB  | 0.7 | 6                 |
| UPD7508C    | 0.7 | 4                 |
| UPD7508CU   | 0.7 | 4                 |
| UPD7508G    | 0.7 | 4                 |
| UPD7508GC   | 0.7 | 4                 |
| UPD7508HC   | 0.7 | 4                 |
| UPD7508HCU  | 0.7 | 4                 |
| UPD7508HG   | 0.7 | 4                 |
| UPD7508HGB  | 0.7 | 4                 |
| UPD75104AGC | 0.7 | 6                 |
| UPD75104CW  | 0.7 | 6                 |
| UPD75104G   | 0.7 | 6                 |
| UPD75104GF  | 0.7 | 6                 |
| UPD75106CW  | 0.7 | 6                 |
| UPD75106G   | 0.7 | 6                 |
| UPD75106GF  | 0.7 | 6                 |
| UPD75108AG  | 0.7 | 6                 |

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| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD75108AGC  | 0.7 | 6                 |
| UPD75108CW   | 0.7 | 6                 |
| UPD75108FGF  | 0.7 | 6                 |
| UPD75108G    | 0.7 | 6                 |
| UPD75108GF   | 0.7 | 6                 |
| UPD75112CW   | 0.7 | 6                 |
| UPD75112FGF  | 0.7 | 6                 |
| UPD75112GF   | 0.7 | 6                 |
| UPD75116CW   | 0.7 | 6                 |
| UPD75116FGF  | 0.7 | 6                 |
| UPD75116GF   | 0.7 | 6                 |
| UPD75116HGC  | 0.7 | 3                 |
| UPD75117HGC  | 0.7 | 3                 |
| UPD7514G     | 0.7 | 4                 |
| UPD7519G     | 0.7 | 4                 |
| UPD7519HG    | 0.7 | 4                 |
| UPD75206CW   | 0.7 | 6                 |
| UPD75206G    | 0.7 | 6                 |
| UPD75206GF   | 0.7 | 6                 |
| UPD75208CW   | 0.7 | 6                 |
| UPD75208GF   | 0.7 | 6                 |
| UPD75212ACW  | 0.7 | 6                 |
| UPD75212AGF  | 0.7 | 6                 |
| UPD75216ACW  | 0.7 | 6                 |
| UPD75216AGF  | 0.7 | 6                 |
| UPD75217CW   | 0.7 | 3                 |
| UPD75217GF   | 0.7 | 3                 |
| UPD75218GF   | 0.7 | 3                 |
| UPD75237GJ   | 0.7 | 3                 |
| UPD75238GJ   | 0.7 | 3                 |
| UPD7528ACU   | 0.7 | 8                 |
| UPD75291R    | 0.7 | 6                 |
| UPD753012AGC | 0.7 | 10                |
| UPD753012AGK | 0.7 | 10                |
| UPD753016AGC | 0.7 | 10                |
| UPD753016AGK | 0.7 | 10                |
| UPD753017AGC | 0.7 | 10                |
| UPD753017GK  | 0.7 | 10                |
| UPD753036GC  | 0.7 | 10                |
| UPD75304BGC  | 0.7 | 6                 |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD75304BGF | 0.7 | 6                 |
| UPD75304BGK | 0.7 | 6                 |
| UPD75304GF  | 0.7 | 6                 |
| UPD75306BGC | 0.7 | 6                 |
| UPD75306BGF | 0.7 | 6                 |
| UPD75306BGK | 0.7 | 6                 |
| UPD75306GF  | 0.7 | 6                 |
| UPD75308BGC | 0.7 | 6                 |
| UPD75308BGF | 0.7 | 6                 |
| UPD75308BGK | 0.7 | 6                 |
| UPD75308G   | 0.7 | 6                 |
| UPD75308GF  | 0.7 | 6                 |
| UPD753104GC | 0.7 | 10                |
| UPD753106GC | 0.7 | 10                |
| UPD753106GK | 0.7 | 10                |
| UPD753108GC | 0.7 | 10                |
| UPD75312BGK | 0.7 | 10                |
| UPD75312GF  | 0.7 | 6                 |
| UPD75316BGC | 0.7 | 10                |
| UPD75316BGK | 0.7 | 10                |
| UPD75316GF  | 0.7 | 6                 |
| UPD753204GT | 0.7 | 10                |
| UPD75328GC  | 0.7 | 6                 |
| UPD75336GC  | 0.7 | 3                 |
| UPD75336GK  | 0.7 | 3                 |
| UPD7533C    | 0.7 | 8                 |
| UPD7533CU   | 0.7 | 8                 |
| UPD7533G    | 0.7 | 8                 |
| UPD7533GB   | 0.7 | 8                 |
| UPD7538AC   | 0.7 | 8                 |
| UPD7538ACU  | 0.7 | 8                 |
| UPD7538C    | 0.7 | 4                 |
| UPD7538CU   | 0.7 | 4                 |
| UPD75402AC  | 0.7 | 3                 |
| UPD75402ACT | 0.7 | 3                 |
| UPD75402AGB | 0.7 | 3                 |
| UPD754144GS | 0.7 | 10                |
| UPD754202GS | 0.7 | 10                |
| UPD754244GS | 0.7 | 10                |
| UPD754264GS | 0.7 | 10                |

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| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD754302GS   | 0.7 | 10                |
| UPD754304GS   | 0.7 | 10                |
| UPD75512GF    | 0.7 | 6                 |
| UPD75516GF    | 0.7 | 6                 |
| UPD75517GF    | 0.7 | 3                 |
| UPD75518GF    | 0.7 | 3                 |
| UPD7554AG     | 0.7 | 6                 |
| UPD7556AG     | 0.7 | 6                 |
| UPD7564CS     | 0.7 | 6                 |
| UPD7566CS     | 0.7 | 6                 |
| UPD75CG16HE   | 0.7 | 4                 |
| UPD75CG216AE  | 0.7 | 6                 |
| UPD75CG216AEA | 0.7 | 6                 |
| UPD75CG33E    | 0.7 | 8                 |
| UPD75P0016CU  | 0.7 | 10                |
| UPD75P0016GB  | 0.7 | 10                |
| UPD75P0076CU  | 0.7 | 10                |
| UPD75P0076GT  | 0.7 | 10                |
| UPD75P008CU   | 0.7 | 6                 |
| UPD75P008GB   | 0.7 | 6                 |
| UPD75P036GC   | 0.7 | 6                 |
| UPD75P068GB   | 0.7 | 3                 |
| UPD75P108BCW  | 0.7 | 6                 |
| UPD75P108BGF  | 0.7 | 6                 |
| UPD75P116CW   | 0.7 | 6                 |
| UPD75P116GF   | 0.7 | 6                 |
| UPD75P117HGC  | 0.7 | 3                 |
| UPD75P216ACW  | 0.7 | 6                 |
| UPD75P3018AGC | 0.7 | 10                |
| UPD75P3018AGK | 0.7 | 10                |
| UPD75P308GF   | 0.7 | 6                 |
| UPD75P308K    | 0.7 | 6                 |
| UPD75P3116GC  | 0.7 | 10                |
| UPD75P316AGF  | 0.7 | 3                 |
| UPD75P316GF   | 0.7 | 6                 |
| UPD75P328GC   | 0.7 | 6                 |
| UPD75P402C    | 0.7 | 6                 |
| UPD75P402CT   | 0.7 | 6                 |
| UPD75P402GB   | 0.7 | 6                 |
| UPD75P4308GS  | 0.7 | 10                |

| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD75P516GF  | 0.7 | 6                 |
| UPD75P518GF  | 0.7 | 3                 |
| UPD75P64CS   | 0.7 | 6                 |
| UPD760007GC  | 0.7 | 8                 |
| UPD760021GC  | 0.7 | 12                |
| UPD760025GF  | 0.7 | 12                |
| UPD765AC     | 0.7 | 100               |
| UPD765BC     | 0.7 | 40                |
| UPD769BC     | 0.7 | 40                |
| UPD76F0003GD | 0.7 | 12                |
| UPD76F0011GD | 0.7 | 12                |
| UPD76F0014GD | 0.7 | 12                |
| UPD76F0022GD | 0.7 | 12                |
| UPD76F0027GF | 0.7 | 12                |
| UPD76F0040GD | 0.7 | 29                |
| UPD77015GC   | 0.7 | 8                 |
| UPD77016GM   | 0.7 | 10                |
| UPD77017GC   | 0.7 | 8                 |
| UPD77018AGC  | 0.7 | 45                |
| UPD77018GC   | 0.7 | 35                |
| UPD77019GC   | 0.7 | 12                |
| UPD77110GC   | 0.7 | 29                |
| UPD77111GK   | 0.7 | 29                |
| UPD77113F1   | 0.7 | 29                |
| UPD77115AF1  | 0.7 | 29                |
| UPD77115F1   | 0.7 | 29                |
| UPD77115GK   | 0.7 | 29                |
| UPD77200R    | 0.7 | 3                 |
| UPD7720AC    | 0.7 | 11                |
| UPD77214F1   | 0.7 | 40                |
| UPD77220R    | 0.7 | 3                 |
| UPD77230AR   | 0.7 | 3                 |
| UPD77230R    | 0.7 | 6                 |
| UPD77240R    | 0.7 | 10                |
| UPD77502GF   | 0.7 | 10                |
| UPD77522GU   | 0.7 | 10                |
| UPD77523GC   | 0.7 | 8                 |
| UPD77529GC   | 0.7 | 8                 |
| UPD77533S1   | 0.7 | 25                |
| UPD7755C     | 0.7 | 6                 |

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| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD7755G      | 0.7 | 6                 |
| UPD7755GT     | 0.7 | 6                 |
| UPD7756AC     | 0.7 | 6                 |
| UPD7756AG     | 0.7 | 6                 |
| UPD7756AGT    | 0.7 | 6                 |
| UPD7756G      | 0.7 | 8                 |
| UPD7757C      | 0.7 | 6                 |
| UPD7757G      | 0.7 | 6                 |
| UPD7757GT     | 0.7 | 6                 |
| UPD7758ACR    | 0.7 | 3                 |
| UPD7758AG     | 0.7 | 3                 |
| UPD7758AGT    | 0.7 | 3                 |
| UPD7759C      | 0.7 | 6                 |
| UPD7759GC     | 0.7 | 6                 |
| UPD77810GJ    | 0.7 | 3                 |
| UPD77811LM    | 0.7 | 8                 |
| UPD77812L     | 0.7 | 3                 |
| UPD77C20AC    | 0.7 | 6                 |
| UPD77C25C     | 0.7 | 6                 |
| UPD77C25GW    | 0.7 | 6                 |
| UPD77C25L     | 0.7 | 6                 |
| UPD77C26R     | 0.7 | 6                 |
| UPD77C30C     | 0.7 | 6                 |
| UPD77P20D     | 0.7 | 11                |
| UPD77P220R    | 0.7 | 3                 |
| UPD77P230R    | 0.7 | 6                 |
| UPD77P25C     | 0.7 | 6                 |
| UPD77P56G     | 0.7 | 6                 |
| UPD78001BGC   | 0.7 | 10                |
| UPD78001BYGC  | 0.7 | 10                |
| UPD78001CW    | 0.7 | 10                |
| UPD78001GC    | 0.7 | 10                |
| UPD780021AGB  | 0.7 | 8                 |
| UPD780021AGC  | 0.7 | 8                 |
| UPD780021AGK  | 0.7 | 8                 |
| UPD780021CW   | 0.7 | 8                 |
| UPD780022ACW  | 0.7 | 8                 |
| UPD780022AGC  | 0.7 | 8                 |
| UPD780022AGK  | 0.7 | 8                 |
| UPD780022ASGB | 0.7 | 8                 |

| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD780022AYGC | 0.7 | 8                 |
| UPD780022GC   | 0.7 | 8                 |
| UPD780023AGC  | 0.7 | 8                 |
| UPD780023AGK  | 0.7 | 8                 |
| UPD780023ASGB | 0.7 | 8                 |
| UPD780023AYGK | 0.7 | 8                 |
| UPD780024A    | 0.7 | 8                 |
| UPD780024AGB  | 0.7 | 8                 |
| UPD780024AGC  | 0.7 | 8                 |
| UPD780024AGK  | 0.7 | 8                 |
| UPD780024ASGB | 0.7 | 8                 |
| UPD780024AYGK | 0.7 | 8                 |
| UPD78002BGC   | 0.7 | 10                |
| UPD78002GC    | 0.7 | 10                |
| UPD780033AGC  | 0.7 | 8                 |
| UPD780033GC   | 0.7 | 8                 |
| UPD780034AGC  | 0.7 | 8                 |
| UPD780034AGK  | 0.7 | 8                 |
| UPD780034AYGK | 0.7 | 8                 |
| UPD780053GC   | 0.7 | 8                 |
| UPD780053GK   | 0.7 | 8                 |
| UPD780054GC   | 0.7 | 8                 |
| UPD780054GK   | 0.7 | 8                 |
| UPD780055GC   | 0.7 | 8                 |
| UPD780056GC   | 0.7 | 8                 |
| UPD780058BGC  | 0.7 | 8                 |
| UPD780058BGK  | 0.7 | 8                 |
| UPD780058GC   | 0.7 | 8                 |
| UPD780058YGC  | 0.7 | 8                 |
| UPD780076GC   | 0.7 | 8                 |
| UPD780076GK   | 0.7 | 8                 |
| UPD780076YGK  | 0.7 | 8                 |
| UPD780078GC   | 0.7 | 8                 |
| UPD780078GF   | 0.7 | 8                 |
| UPD780078GK   | 0.7 | 8                 |
| UPD780078YGK  | 0.7 | 8                 |
| UPD780101MC   | 0.7 | 8                 |
| UPD780102MC   | 0.7 | 10                |
| UPD780111GB   | 0.7 | 8                 |
| UPD780112GB   | 0.7 | 8                 |

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| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD780114GB  | 0.7 | 8                 |
| UPD78011BCW  | 0.7 | 10                |
| UPD78011BGC  | 0.7 | 10                |
| UPD78011CW   | 0.7 | 10                |
| UPD78011FCW  | 0.7 | 10                |
| UPD78011FGC  | 0.7 | 10                |
| UPD78011GC   | 0.7 | 10                |
| UPD78011HGC  | 0.7 | 10                |
| UPD780123GB  | 0.7 | 8                 |
| UPD78012B    | 0.7 | 10                |
| UPD78012BCW  | 0.7 | 10                |
| UPD78012BGC  | 0.7 | 10                |
| UPD78012CW   | 0.7 | 10                |
| UPD78012FCW  | 0.7 | 10                |
| UPD78012FGC  | 0.7 | 10                |
| UPD78012FGK  | 0.7 | 10                |
| UPD78012GC   | 0.7 | 10                |
| UPD78012HGC  | 0.7 | 10                |
| UPD780132GC  | 0.7 | 8                 |
| UPD780133FGC | 0.7 | 10                |
| UPD780133GB  | 0.7 | 8                 |
| UPD780133GC  | 0.7 | 8                 |
| UPD780134GB  | 0.7 | 8                 |
| UPD780134GK  | 0.7 | 8                 |
| UPD780136GB  | 0.7 | 8                 |
| UPD780138GB  | 0.7 | 8                 |
| UPD78013CW   | 0.7 | 10                |
| UPD78013F    | 0.7 | 10                |
| UPD78013FCW  | 0.7 | 10                |
| UPD78013FGC  | 0.7 | 10                |
| UPD78013FGK  | 0.7 | 10                |
| UPD78013FYGC | 0.7 | 10                |
| UPD78013FYGK | 0.7 | 10                |
| UPD78013GC   | 0.7 | 10                |
| UPD78013GF   | 0.7 | 10                |
| UPD78013HGC  | 0.7 | 10                |
| UPD780146GK  | 0.7 | 8                 |
| UPD780148GK  | 0.7 | 8                 |
| UPD78014CW   | 0.7 | 10                |
| UPD78014FGC  | 0.7 | 10                |

| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD78014FYGC | 0.7 | 10                |
| UPD78014GC   | 0.7 | 10                |
| UPD78014HGC  | 0.7 | 10                |
| UPD78014YCW  | 0.7 | 10                |
| UPD78014YGC  | 0.7 | 10                |
| UPD78015FGC  | 0.7 | 10                |
| UPD78015FGK  | 0.7 | 10                |
| UPD78015FYGC | 0.7 | 10                |
| UPD78018FGC  | 0.7 | 10                |
| UPD78018FGK  | 0.7 | 10                |
| UPD78018GC   | 0.7 | 10                |
| UPD780204AGF | 0.7 | 8                 |
| UPD780204GF  | 0.7 | 10                |
| UPD780205AGF | 0.7 | 8                 |
| UPD780205GF  | 0.7 | 10                |
| UPD78022AGK  | 0.7 | 10                |
| UPD78022GC   | 0.7 | 10                |
| UPD780232GC  | 0.7 | 8                 |
| UPD78023CW   | 0.7 | 10                |
| UPD78024CW   | 0.7 | 10                |
| UPD78024GF   | 0.7 | 10                |
| UPD780306GC  | 0.7 | 8                 |
| UPD780306GF  | 0.7 | 8                 |
| UPD780306YF1 | 0.7 | 8                 |
| UPD780306YGC | 0.7 | 8                 |
| UPD780308GC  | 0.7 | 8                 |
| UPD780308GF  | 0.7 | 8                 |
| UPD780308YGC | 0.7 | 8                 |
| UPD78042AGF  | 0.7 | 10                |
| UPD78043F    | 0.7 | 10                |
| UPD78044FGF  | 0.7 | 10                |
| UPD78045FGF  | 0.7 | 10                |
| UPD78052GC   | 0.7 | 10                |
| UPD78053GC   | 0.7 | 10                |
| UPD78054GC   | 0.7 | 10                |
| UPD78054GK   | 0.7 | 10                |
| UPD78054YGC  | 0.7 | 10                |
| UPD78055GC   | 0.7 | 10                |
| UPD78056FGC  | 0.7 | 10                |
| UPD78056GC   | 0.7 | 10                |

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| Part Number  | Ea  | $\lambda b$ (FIT) |
|--------------|-----|-------------------|
| UPD78058FGC  | 0.7 | 10                |
| UPD78058FYGC | 0.7 | 10                |
| UPD78058GC   | 0.7 | 10                |
| UPD78058GK   | 0.7 | 10                |
| UPD78058YGC  | 0.7 | 10                |
| UPD78062GC   | 0.7 | 10                |
| UPD78062GF   | 0.7 | 10                |
| UPD78063GC   | 0.7 | 10                |
| UPD78063GF   | 0.7 | 10                |
| UPD78064BGC  | 0.7 | 10                |
| UPD78064BGF  | 0.7 | 10                |
| UPD78064GC   | 0.7 | 10                |
| UPD78064GF   | 0.7 | 10                |
| UPD78070AGC  | 0.7 | 10                |
| UPD78070AGF  | 0.7 | 10                |
| UPD78074BGC  | 0.7 | 8                 |
| UPD78076GC   | 0.7 | 10                |
| UPD78076GF   | 0.7 | 10                |
| UPD78078GC   | 0.7 | 10                |
| UPD78078GF   | 0.7 | 10                |
| UPD780816AGK | 0.7 | 8                 |
| UPD78081CU   | 0.7 | 10                |
| UPD78081GB   | 0.7 | 10                |
| UPD78082     | 0.7 | 10                |
| UPD78082GB   | 0.7 | 10                |
| UPD780833YGC | 0.7 | 8                 |
| UPD780851AGC | 0.7 | 8                 |
| UPD780861MC  | 0.7 | 8                 |
| UPD780948GC  | 0.7 | 8                 |
| UPD780948GF  | 0.7 | 8                 |
| UPD780955GF  | 0.7 | 20                |
| UPD780957GC  | 0.7 | 12                |
| UPD780958GC  | 0.7 | 12                |
| UPD78095GC   | 0.7 | 10                |
| UPD780973BGF | 0.7 | 8                 |
| UPD780983GC  | 0.7 | 8                 |
| UPD780984GC  | 0.7 | 8                 |
| UPD78098AGC  | 0.7 | 10                |
| UPD780993GK  | 0.7 | 8                 |
| UPD7810CW    | 0.7 | 11                |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD7810G    | 0.7 | 11                |
| UPD7810HCW  | 0.7 | 11                |
| UPD7810HG   | 0.7 | 11                |
| UPD78112CW  | 0.7 | 6                 |
| UPD78112GF  | 0.7 | 6                 |
| UPD7811G    | 0.7 | 11                |
| UPD78134GF  | 0.7 | 3                 |
| UPD78210CW  | 0.7 | 3                 |
| UPD78210GG  | 0.7 | 3                 |
| UPD78210GJ  | 0.7 | 3                 |
| UPD78210GQ  | 0.7 | 3                 |
| UPD78210L   | 0.7 | 3                 |
| UPD78212CW  | 0.7 | 3                 |
| UPD78212GC  | 0.7 | 3                 |
| UPD78212GJ  | 0.7 | 3                 |
| UPD78213CW  | 0.7 | 3                 |
| UPD78213GC  | 0.7 | 3                 |
| UPD78213GJ  | 0.7 | 3                 |
| UPD78213GQ  | 0.7 | 3                 |
| UPD78213L   | 0.7 | 3                 |
| UPD78214    | 0.7 | 3                 |
| UPD78214CW  | 0.7 | 3                 |
| UPD78214GC  | 0.7 | 3                 |
| UPD78214GJ  | 0.7 | 3                 |
| UPD78214GQ  | 0.7 | 3                 |
| UPD78214L   | 0.7 | 3                 |
| UPD78217ACW | 0.7 | 3                 |
| UPD78217AGC | 0.7 | 3                 |
| UPD78218ACG | 0.7 | 3                 |
| UPD78218ACW | 0.7 | 3                 |
| UPD78218AGC | 0.7 | 3                 |
| UPD78220GJ  | 0.7 | 3                 |
| UPD78220L   | 0.7 | 3                 |
| UPD78224GF  | 0.7 | 3                 |
| UPD78224GJ  | 0.7 | 3                 |
| UPD78224L   | 0.7 | 3                 |
| UPD78233GC  | 0.7 | 3                 |
| UPD78234GC  | 0.7 | 3                 |
| UPD78234GJ  | 0.7 | 3                 |
| UPD78234LQ  | 0.7 | 3                 |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD78237GC  | 0.7 | 3                 |
| UPD78237GJ  | 0.7 | 3                 |
| UPD78237LQ  | 0.7 | 3                 |
| UPD78238GC  | 0.7 | 3                 |
| UPD78238GJ  | 0.7 | 3                 |
| UPD78238LQ  | 0.7 | 3                 |
| UPD78243CW  | 0.7 | 3                 |
| UPD78243GC  | 0.7 | 3                 |
| UPD78244CW  | 0.7 | 3                 |
| UPD78244GC  | 0.7 | 3                 |
| UPD78310ACW | 0.7 | 3                 |
| UPD78310AGF | 0.7 | 3                 |
| UPD78310AGQ | 0.7 | 3                 |
| UPD78310AL  | 0.7 | 3                 |
| UPD78310CW  | 0.7 | 3                 |
| UPD78310G   | 0.7 | 3                 |
| UPD78310L   | 0.7 | 3                 |
| UPD78312ACW | 0.7 | 3                 |
| UPD78312AG  | 0.7 | 3                 |
| UPD78312AGF | 0.7 | 3                 |
| UPD78312AGQ | 0.7 | 3                 |
| UPD78312AL  | 0.7 | 3                 |
| UPD78312CW  | 0.7 | 3                 |
| UPD78312G   | 0.7 | 3                 |
| UPD78312L   | 0.7 | 3                 |
| UPD78320GF  | 0.7 | 3                 |
| UPD78320GJ  | 0.7 | 3                 |
| UPD78320L   | 0.7 | 3                 |
| UPD78322GF  | 0.7 | 3                 |
| UPD78322GJ  | 0.7 | 3                 |
| UPD78322L   | 0.7 | 3                 |
| UPD78323GJ  | 0.7 | 3                 |
| UPD78323LP  | 0.7 | 3                 |
| UPD78324GJ  | 0.7 | 3                 |
| UPD78324LP  | 0.7 | 3                 |
| UPD78327GF  | 0.7 | 3                 |
| UPD78327GJ  | 0.7 | 3                 |
| UPD78327LP  | 0.7 | 3                 |
| UPD78328CW  | 0.7 | 3                 |
| UPD78328GF  | 0.7 | 3                 |

| Part Number   | Ea  | $\lambda b$ (FIT) |
|---------------|-----|-------------------|
| UPD78330GJ    | 0.7 | 3                 |
| UPD78330LQ    | 0.7 | 3                 |
| UPD78334GJ    | 0.7 | 3                 |
| UPD78334LQ    | 0.7 | 3                 |
| UPD78350GC    | 0.7 | 10                |
| UPD78355GC    | 0.7 | 10                |
| UPD78356GC    | 0.7 | 10                |
| UPD78356GD    | 0.7 | 10                |
| UPD78365AGF   | 0.7 | 10                |
| UPD78372GC    | 0.7 | 10                |
| UPD78372GF    | 0.7 | 10                |
| UPD784020GC   | 0.7 | 10                |
| UPD784021GC   | 0.7 | 10                |
| UPD784025GC   | 0.7 | 10                |
| UPD784026GC   | 0.7 | 10                |
| UPD784031GC   | 0.7 | 8                 |
| UPD784031GK   | 0.7 | 8                 |
| UPD784035GC   | 0.7 | 8                 |
| UPD784035YGC  | 0.7 | 8                 |
| UPD784036GC   | 0.7 | 8                 |
| UPD784037GC   | 0.7 | 8                 |
| UPD784038GK   | 0.7 | 8                 |
| UPD784044GC   | 0.7 | 8                 |
| UPD784046GC   | 0.7 | 8                 |
| UPD784054GC   | 0.7 | 8                 |
| UPD784214AGC  | 0.7 | 8                 |
| UPD784214AGF  | 0.7 | 8                 |
| UPD784214AYGC | 0.7 | 8                 |
| UPD784214GC   | 0.7 | 12                |
| UPD784214YGC  | 0.7 | 12                |
| UPD784215AGC  | 0.7 | 12                |
| UPD784215GC   | 0.7 | 12                |
| UPD784215GF   | 0.7 | 12                |
| UPD784215YGC  | 0.7 | 12                |
| UPD784216AGC  | 0.7 | 8                 |
| UPD784216AGF  | 0.7 | 8                 |
| UPD784216AYGC | 0.7 | 8                 |
| UPD784216AYGF | 0.7 | 8                 |
| UPD784216GC   | 0.7 | 8                 |
| UPD784216GF   | 0.7 | 8                 |



CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number   | Ea  | $\lambda b$ (FIT) |
|---------------|-----|-------------------|
| UPD784216YGF  | 0.7 | 8                 |
| UPD784217AGC  | 0.7 | 8                 |
| UPD784217AGF  | 0.7 | 8                 |
| UPD784218AGC  | 0.7 | 8                 |
| UPD784218AGF  | 0.7 | 8                 |
| UPD784218AYGC | 0.7 | 8                 |
| UPD784218GC   | 0.7 | 8                 |
| UPD784224GC   | 0.7 | 8                 |
| UPD784224YGC  | 0.7 | 8                 |
| UPD784225GC   | 0.7 | 8                 |
| UPD784225GK   | 0.7 | 8                 |
| UPD784225YGC  | 0.7 | 8                 |
| UPD784908GF   | 0.7 | 8                 |
| UPD784935AGF  | 0.7 | 8                 |
| UPD784936AGF  | 0.7 | 8                 |
| UPD784937AGF  | 0.7 | 8                 |
| UPD784938AGF  | 0.7 | 8                 |
| UPD788001MC   | 0.7 | 8                 |
| UPD788002MC   | 0.7 | 8                 |
| UPD788006GB   | 0.7 | 8                 |
| UPD789011GT   | 0.7 | 8                 |
| UPD789012GT   | 0.7 | 8                 |
| UPD789022GB   | 0.7 | 8                 |
| UPD789024GB   | 0.7 | 8                 |
| UPD789025GB   | 0.7 | 8                 |
| UPD789026GB   | 0.7 | 8                 |
| UPD789046GB   | 0.7 | 8                 |
| UPD789071MC   | 0.7 | 8                 |
| UPD789072MC   | 0.7 | 8                 |
| UPD789074MC   | 0.7 | 8                 |
| UPD789086MC   | 0.7 | 8                 |
| UPD789101AMC  | 0.7 | 8                 |
| UPD789101GS   | 0.7 | 8                 |
| UPD789101MC   | 0.7 | 8                 |
| UPD789102AMC  | 0.7 | 8                 |
| UPD789102MC   | 0.7 | 8                 |
| UPD789104AMC  | 0.7 | 8                 |
| UPD789104MC   | 0.7 | 8                 |
| UPD789111AMC  | 0.7 | 8                 |
| UPD789112AMC  | 0.7 | 8                 |

| Part Number  | Ea  | $\lambda b$ (FIT) |
|--------------|-----|-------------------|
| UPD789114AMC | 0.7 | 8                 |
| UPD789114MC  | 0.7 | 8                 |
| UPD789121AMC | 0.7 | 8                 |
| UPD789121MC  | 0.7 | 8                 |
| UPD789124AMC | 0.7 | 8                 |
| UPD789132AMC | 0.7 | 8                 |
| UPD789134AMC | 0.7 | 8                 |
| UPD789166GB  | 0.7 | 8                 |
| UPD789166YGB | 0.7 | 8                 |
| UPD789167GB  | 0.7 | 8                 |
| UPD789176GB  | 0.7 | 8                 |
| UPD789176YGA | 0.7 | 8                 |
| UPD789177GB  | 0.7 | 8                 |
| UPD789177YGA | 0.7 | 8                 |
| UPD789306GK  | 0.7 | 8                 |
| UPD789316GK  | 0.7 | 8                 |
| UPD789322GB  | 0.7 | 8                 |
| UPD789324GB  | 0.7 | 8                 |
| UPD789326GB  | 0.7 | 8                 |
| UPD789327GB  | 0.7 | 8                 |
| UPD789405AGK | 0.7 | 8                 |
| UPD789406AGK | 0.7 | 8                 |
| UPD789406GC  | 0.7 | 8                 |
| UPD789407AGK | 0.7 | 8                 |
| UPD789417AGC | 0.7 | 8                 |
| UPD789426GK  | 0.7 | 8                 |
| UPD789446GK  | 0.7 | 8                 |
| UPD789464GB  | 0.7 | 8                 |
| UPD789479GK  | 0.7 | 8                 |
| UPD789488GK  | 0.7 | 8                 |
| UPD789800GB  | 0.7 | 8                 |
| UPD789850AMC | 0.7 | 8                 |
| UPD789850MC  | 0.7 | 8                 |
| UPD789851GB  | 0.7 | 8                 |
| UPD789852GB  | 0.7 | 8                 |
| UPD789860MC  | 0.7 | 8                 |
| UPD789861MC  | 0.7 | 8                 |
| UPD789862MC  | 0.7 | 8                 |
| UPD78C05AG   | 0.7 | 8                 |
| UPD78C05G    | 0.7 | 4                 |

CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD78C06AB  | 0.7 | 8                 |
| UPD78C06AG  | 0.7 | 8                 |
| UPD78C06AGF | 0.7 | 8                 |
| UPD78C06AGG | 0.7 | 8                 |
| UPD78C06B   | 0.7 | 4                 |
| UPD78C06G   | 0.7 | 4                 |
| UPD78C10ACW | 0.7 | 3                 |
| UPD78C10AGF | 0.7 | 3                 |
| UPD78C10AGQ | 0.7 | 3                 |
| UPD78C10AL  | 0.7 | 3                 |
| UPD78C10CW  | 0.7 | 6                 |
| UPD78C10G   | 0.7 | 6                 |
| UPD78C10GF  | 0.7 | 6                 |
| UPD78C11ACW | 0.7 | 3                 |
| UPD78C11AGF | 0.7 | 3                 |
| UPD78C11AGQ | 0.7 | 3                 |
| UPD78C11AL  | 0.7 | 3                 |
| UPD78C11G   | 0.7 | 6                 |
| UPD78C11GF  | 0.7 | 6                 |
| UPD78C11L   | 0.7 | 6                 |
| UPD78C12A   | 0.7 | 3                 |
| UPD78C12ACW | 0.7 | 3                 |
| UPD78C12AGF | 0.7 | 3                 |
| UPD78C12AGQ | 0.7 | 3                 |
| UPD78C12AL  | 0.7 | 3                 |
| UPD78C14AG  | 0.7 | 6                 |
| UPD78C14AGC | 0.7 | 6                 |
| UPD78C14CW  | 0.7 | 6                 |
| UPD78C14G   | 0.7 | 6                 |
| UPD78C14GF  | 0.7 | 6                 |
| UPD78C14GG  | 0.7 | 6                 |
| UPD78C14L   | 0.7 | 6                 |
| UPD78C18GF  | 0.7 | 3                 |
| UPD78C18GQ  | 0.7 | 3                 |
| UPD78CG14E  | 0.7 | 6                 |
| UPD78CP14CW | 0.7 | 6                 |
| UPD78CP14DW | 0.7 | 6                 |
| UPD78CP14G  | 0.7 | 6                 |
| UPD78CP14GF | 0.7 | 6                 |
| UPD78CP14GQ | 0.7 | 6                 |

| Part Number    | Ea  | $\lambda_b$ (FIT) |
|----------------|-----|-------------------|
| UPD78CP14L     | 0.7 | 6                 |
| UPD78CP14R     | 0.7 | 6                 |
| UPD78E9860AMC  | 0.7 | 8                 |
| UPD78E9860MC   | 0.7 | 8                 |
| UPD78F0034A    | 0.7 | 8                 |
| UPD78F0034AGB  | 0.7 | 8                 |
| UPD78F0034AGC  | 0.7 | 8                 |
| UPD78F0034AGK  | 0.7 | 8                 |
| UPD78F0034AYGB | 0.7 | 8                 |
| UPD78F0034AYGC | 0.7 | 8                 |
| UPD78F0034AYGK | 0.7 | 8                 |
| UPD78F0034B    | 0.7 | 8                 |
| UPD78F0034BGC  | 0.7 | 8                 |
| UPD78F0034BGK  | 0.7 | 8                 |
| UPD78F0034BSGB | 0.7 | 8                 |
| UPD78F0034BYGK | 0.7 | 8                 |
| UPD78F0034GC   | 0.7 | 8                 |
| UPD78F0058GC   | 0.7 | 8                 |
| UPD78F0058GK   | 0.7 | 8                 |
| UPD78F0058GT   | 0.7 | 8                 |
| UPD78F0078GC   | 0.7 | 8                 |
| UPD78F0078GK   | 0.7 | 8                 |
| UPD78F0078YGC  | 0.7 | 8                 |
| UPD78F0078YGJ  | 0.7 | 8                 |
| UPD78F0078YGK  | 0.7 | 8                 |
| UPD78F0103M5MC | 0.7 | 8                 |
| UPD78F0103M6MC | 0.7 | 8                 |
| UPD78F0114GB   | 0.7 | 8                 |
| UPD78F0114M2GB | 0.7 | 8                 |
| UPD78F0114M3GB | 0.7 | 8                 |
| UPD78F0114M4GB | 0.7 | 8                 |
| UPD78F0114M5GB | 0.7 | 8                 |
| UPD78F0114M6GB | 0.7 | 8                 |
| UPD78F0124M6GB | 0.7 | 8                 |
| UPD78F0134M2GB | 0.7 | 8                 |
| UPD78F0134M5GB | 0.7 | 8                 |
| UPD78F0138M1GB | 0.7 | 8                 |
| UPD78F0138M2GB | 0.7 | 8                 |
| UPD78F0138M5GB | 0.7 | 8                 |
| UPD78F0138M5GK | 0.7 | 8                 |

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| Part Number    | Ea  | $\lambda b$ (FIT) |
|----------------|-----|-------------------|
| UPD78F0148M5GC | 0.7 | 8                 |
| UPD78F0148M6GK | 0.7 | 8                 |
| UPD78F0233GC   | 0.7 | 8                 |
| UPD78F0703YGC  | 0.7 | 8                 |
| UPD78F0818GK   | 0.7 | 8                 |
| UPD78F0852GC   | 0.7 | 8                 |
| UPD78F0862MC   | 0.7 | 8                 |
| UPD78F0948GF   | 0.7 | 8                 |
| UPD78F0988GC   | 0.7 | 8                 |
| UPD78F0994GK   | 0.7 | 8                 |
| UPD78F3210GK   | 0.7 | 8                 |
| UPD78F4046GC   | 0.7 | 8                 |
| UPD78F4216AGC  | 0.7 | 8                 |
| UPD78F4216AGF  | 0.7 | 8                 |
| UPD78F4216AYGC | 0.7 | 8                 |
| UPD78F4216GC   | 0.7 | 8                 |
| UPD78F4216YGC  | 0.7 | 8                 |
| UPD78F4216YGF  | 0.7 | 8                 |
| UPD78F4218AGC  | 0.7 | 8                 |
| UPD78F4218AGF  | 0.7 | 8                 |
| UPD78F4218AYGC | 0.7 | 8                 |
| UPD78F4218GC   | 0.7 | 8                 |
| UPD78F4225GC   | 0.7 | 8                 |
| UPD78F4225YGC  | 0.7 | 8                 |
| UPD78F4938AGF  | 0.7 | 8                 |
| UPD78F8002M5MC | 0.7 | 8                 |
| UPD78F8006M5GB | 0.7 | 8                 |
| UPD78F9026AGB  | 0.7 | 8                 |
| UPD78F9046GB   | 0.7 | 8                 |
| UPD78F9076MC   | 0.7 | 8                 |
| UPD78F9116AMC  | 0.7 | 8                 |
| UPD78F9116BMC  | 0.7 | 8                 |
| UPD78F9116GS   | 0.7 | 8                 |
| UPD78F9116MC   | 0.7 | 8                 |
| UPD78F9136AMC  | 0.7 | 8                 |
| UPD78F9136BMC  | 0.7 | 8                 |
| UPD78F9177AGB  | 0.7 | 8                 |
| UPD78F9177AYGA | 0.7 | 8                 |
| UPD78F9177GB   | 0.7 | 8                 |
| UPD78F9177YGA  | 0.7 | 8                 |

| Part Number   | Ea  | $\lambda b$ (FIT) |
|---------------|-----|-------------------|
| UPD78F9316GK  | 0.7 | 8                 |
| UPD78F9328GB  | 0.7 | 8                 |
| UPD78F9418AGC | 0.7 | 8                 |
| UPD78F9418AGK | 0.7 | 8                 |
| UPD78F9418GC  | 0.7 | 8                 |
| UPD78F9456GK  | 0.7 | 8                 |
| UPD78F9468GB  | 0.7 | 8                 |
| UPD78F9488GK  | 0.7 | 8                 |
| UPD78F9800GB  | 0.7 | 8                 |
| UPD78F9801GB  | 0.7 | 8                 |
| UPD78F9850AMC | 0.7 | 8                 |
| UPD78F9850MC  | 0.7 | 8                 |
| UPD78P014CW   | 0.7 | 3                 |
| UPD78P014GC   | 0.7 | 3                 |
| UPD78P014YGC  | 0.7 | 3                 |
| UPD78P018FCW  | 0.7 | 10                |
| UPD78P018FGC  | 0.7 | 10                |
| UPD78P018FYCW | 0.7 | 10                |
| UPD78P018FYGC | 0.7 | 10                |
| UPD78P0208GF  | 0.7 | 10                |
| UPD78P0308GC  | 0.7 | 10                |
| UPD78P0308GF  | 0.7 | 10                |
| UPD78P0308YGC | 0.7 | 10                |
| UPD78P0308YGF | 0.7 | 10                |
| UPD78P048AGF  | 0.7 | 10                |
| UPD78P054GC   | 0.7 | 10                |
| UPD78P054GK   | 0.7 | 10                |
| UPD78P058FGC  | 0.7 | 10                |
| UPD78P058GC   | 0.7 | 10                |
| UPD78P058YGC  | 0.7 | 10                |
| UPD78P064BGC  | 0.7 | 10                |
| UPD78P064GC   | 0.7 | 10                |
| UPD78P064GF   | 0.7 | 10                |
| UPD78P078GC   | 0.7 | 10                |
| UPD78P078GF   | 0.7 | 10                |
| UPD78P083CU   | 0.7 | 10                |
| UPD78P083GB   | 0.7 | 10                |
| UPD78P098AGC  | 0.7 | 10                |
| UPD78P112GF   | 0.7 | 6                 |
| UPD78P134GF   | 0.7 | 3                 |

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| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| UPD78P214CW  | 0.7 | 6                 |
| UPD78P214DW  | 0.7 | 6                 |
| UPD78P214GC  | 0.7 | 6                 |
| UPD78P214GJ  | 0.7 | 6                 |
| UPD78P214GQ  | 0.7 | 6                 |
| UPD78P218ACW | 0.7 | 3                 |
| UPD78P218AGC | 0.7 | 3                 |
| UPD78P224GJ  | 0.7 | 6                 |
| UPD78P224L   | 0.7 | 6                 |
| UPD78P238GC  | 0.7 | 6                 |
| UPD78P238GJ  | 0.7 | 6                 |
| UPD78P238LQ  | 0.7 | 6                 |
| UPD78P312ACW | 0.7 | 6                 |
| UPD78P312ADW | 0.7 | 6                 |
| UPD78P312AGF | 0.7 | 6                 |
| UPD78P312AGQ | 0.7 | 6                 |
| UPD78P312AL  | 0.7 | 6                 |
| UPD78P312AR  | 0.7 | 6                 |
| UPD78P312CW  | 0.7 | 6                 |
| UPD78P312DW  | 0.7 | 6                 |
| UPD78P312R   | 0.7 | 6                 |
| UPD78P322GF  | 0.7 | 3                 |
| UPD78P322GJ  | 0.7 | 3                 |
| UPD78P322L   | 0.7 | 3                 |
| UPD78P324GJ  | 0.7 | 3                 |
| UPD78P324LP  | 0.7 | 3                 |
| UPD78P334GJ  | 0.7 | 3                 |
| UPD78P334KW  | 0.7 | 3                 |
| UPD78P334LQ  | 0.7 | 3                 |
| UPD78P356GC  | 0.7 | 10                |
| UPD78P356GD  | 0.7 | 10                |
| UPD78P364CW  | 0.7 | 10                |
| UPD78P364DW  | 0.7 | 10                |
| UPD78P368AGF | 0.7 | 10                |
| UPD78P368GF  | 0.7 | 10                |
| UPD78P368KL  | 0.7 | 10                |
| UPD78P372GF  | 0.7 | 10                |
| UPD78P4026GC | 0.7 | 10                |
| UPD78P4026KK | 0.7 | 10                |
| UPD78P4038GC | 0.7 | 8                 |

| Part Number   | Ea  | $\lambda_b$ (FIT) |
|---------------|-----|-------------------|
| UPD78P4038YGC | 0.7 | 8                 |
| UPD78P4908GF  | 0.7 | 8                 |
| UPD78P9014GT  | 0.7 | 8                 |
| UPD790005GC   | 0.7 | 8                 |
| UPD790011MC   | 0.7 | 8                 |
| UPD790016GB   | 0.7 | 8                 |
| UPD79011L     | 0.7 | 3                 |
| UPD800004S1   | 0.7 | 54                |
| UPD800034F1   | 0.7 | 27                |
| UPD800038F5   | 0.7 | 54                |
| UPD800038F5   | 0.7 | 54                |
| UPD800040N7   | 0.7 | 27                |
| UPD800055FF   | 0.7 | 27                |
| UPD800203FF   | 0.7 | 27                |
| UPD800223S1   | 0.7 | 27                |
| UPD800240FF   | 0.7 | 27                |
| UPD800268F1   | 0.7 | 27                |
| UPD800279F1   | 0.7 | 27                |
| UPD80038      | 0.7 | 34                |
| UPD800603     | 0.7 | 27                |
| UPD800605     | 0.7 | 27                |
| UPD800609F5   | 0.7 | 27                |
| UPD800611F5   | 0.7 | 27                |
| UPD800800F1   | 0.7 | 27                |
| UPD800903F1   | 0.7 | 27                |
| UPD8041AC     | 0.7 | 14                |
| UPD8041AHC    | 0.7 | 16                |
| UPD8049HC     | 0.7 | 16                |
| UPD8085AC     | 0.7 | 14                |
| UPD8085AHC    | 0.7 | 16                |
| UPD8085AHD    | 0.7 | 16                |
| UPD80C42GB    | 0.7 | 4                 |
| UPD80C50HC    | 0.7 | 6                 |
| UPD80C50HD    | 0.7 | 6                 |
| UPD80C50HG    | 0.7 | 6                 |
| UPD81028      | 0.7 | 34                |
| UPD81031GD    | 0.7 | 50                |
| UPD81043R     | 0.7 | 50                |
| UPD81815GF    | 0.7 | 11                |
| UPD81833GD    | 0.7 | 11                |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD82021    | 0.7 | 2.93              |
| UPD82025    | 0.7 | 2.93              |
| UPD82027GC  | 0.7 | 2.93              |
| UPD82077    | 0.7 | 2.93              |
| UPD82128Q2  | 0.7 | 2.93              |
| UPD82135    | 0.7 | 2.93              |
| UPD82147GL  | 0.7 | 2.93              |
| UPD82225GD  | 0.7 | 2.93              |
| UPD82249    | 0.7 | 2.93              |
| UPD82277N7  | 0.7 | 2.93              |
| UPD82280GD  | 0.7 | 2.93              |
| UPD8237AC   | 0.7 | 16                |
| UPD82403GD  | 0.7 | 2.93              |
| UPD82418N7  | 0.7 | 2.93              |
| UPD82419GN  | 0.7 | 2.93              |
| UPD82420GL  | 0.7 | 2.93              |
| UPD82423GM  | 0.7 | 2.93              |
| UPD82431GD  | 0.7 | 2.93              |
| UPD82432GM  | 0.7 | 2.93              |
| UPD82452GD  | 0.7 | 2.93              |
| UPD82486GD  | 0.7 | 2.93              |
| UPD82501GM  | 0.7 | 2.93              |
| UPD82505GL  | 0.7 | 2.93              |
| UPD82512GM  | 0.7 | 2.93              |
| UPD82513GD  | 0.7 | 2.93              |
| UPD8251AFC  | 0.7 | 16                |
| UPD82525GC  | 0.7 | 2.93              |
| UPD82534S9  | 0.7 | 2.93              |
| UPD8253C    | 0.7 | 16                |
| UPD82552N7  | 0.7 | 2.93              |
| UPD82555GC  | 0.7 | 2.93              |
| UPD8255AC   | 0.7 | 16                |
| UPD8255AD   | 0.7 | 16                |
| UPD82564GD  | 0.7 | 2.93              |
| UPD82566GC  | 0.7 | 2.93              |
| UPD8257C-5  | 0.7 | 14                |
| UPD82584N7  | 0.7 | 2.93              |
| UPD82586S1  | 0.7 | 2.93              |
| UPD8259AC   | 0.7 | 14                |
| UPD82629N7  | 0.7 | 2.93              |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD82660GC  | 0.7 | 2.93              |
| UPD82676GJ  | 0.7 | 2.93              |
| UPD82676S1  | 0.7 | 2.93              |
| UPD82678GM  | 0.7 | 2.93              |
| UPD82682GJ  | 0.7 | 2.93              |
| UPD82682S1  | 0.7 | 2.93              |
| UPD82691GM  | 0.7 | 2.93              |
| UPD82691N7  | 0.7 | 2.93              |
| UPD82692GN  | 0.7 | 2.93              |
| UPD82693S1  | 0.7 | 2.93              |
| UPD82702GC  | 0.7 | 2.93              |
| UPD82712GJ  | 0.7 | 2.93              |
| UPD8279C-5  | 0.7 | 14                |
| UPD82811GB  | 0.7 | 2.93              |
| UPD82823N7  | 0.7 | 2.93              |
| UPD82833GM  | 0.7 | 2.93              |
| UPD82836S1  | 0.7 | 2.93              |
| UPD82838GB  | 0.7 | 2.93              |
| UPD82840N7  | 0.7 | 2.93              |
| UPD82848GL  | 0.7 | 2.93              |
| UPD82851GM  | 0.7 | 2.93              |
| UPD82860GD  | 0.7 | 2.93              |
| UPD82867S1  | 0.7 | 2.93              |
| UPD82870GD  | 0.7 | 2.93              |
| UPD82880S1  | 0.7 | 2.93              |
| UPD82882GN  | 0.7 | 2.93              |
| UPD82884GB  | 0.7 | 2.93              |
| UPD82885N7  | 0.7 | 2.93              |
| UPD82891N7  | 0.7 | 2.93              |
| UPD82892S9  | 0.7 | 2.93              |
| UPD82898GD  | 0.7 | 2.93              |
| UPD83158GD  | 0.7 | 3                 |
| UPD83165GD  | 0.7 | 3                 |
| UPD83172N7  | 0.7 | 3                 |
| UPD83913FC  | 0.7 | 3                 |
| UPD84008FC  | 0.7 | 3                 |
| UPD84009S1  | 0.7 | 3                 |
| UPD84014F1  | 0.7 | 3                 |
| UPD84015FC  | 0.7 | 3                 |
| UPD84022F1  | 0.7 | 3                 |

CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD84023    | 0.7 | 3                 |
| UPD84025FC  | 0.7 | 3                 |
| UPD84333S9  | 0.7 | 3                 |
| UPD84334F2  | 0.7 | 3                 |
| UPD84338S9  | 0.7 | 3                 |
| UPD84339S9  | 0.7 | 3                 |
| UPD84709F1  | 0.7 | 3                 |
| UPD84722S1  | 0.7 | 3                 |
| UPD84724F1  | 0.7 | 3                 |
| UPD84734GB  | 0.7 | 29                |
| UPD85000S1  | 0.7 | 3                 |
| UPD85008GD  | 0.7 | 3                 |
| UPD85009S1  | 0.7 | 3                 |
| UPD85020F1  | 0.7 | 3                 |
| UPD85024S1  | 0.7 | 3                 |
| UPD85025F1  | 0.7 | 3                 |
| UPD85037S9  | 0.7 | 3                 |
| UPD85038S1  | 0.7 | 3                 |
| UPD85040N7  | 0.7 | 3                 |
| UPD85060GD  | 0.7 | 3                 |
| UPD85325S9  | 0.7 | 3                 |
| UPD85330N7  | 0.7 | 3                 |
| UPD85607N7  | 0.7 | 3                 |
| UPD85611N7  | 0.7 | 3                 |
| UPD85619S1  | 0.7 | 3                 |
| UPD85624S1  | 0.7 | 3                 |
| UPD85647S9  | 0.7 | 3                 |
| UPD85661S1  | 0.7 | 3                 |
| UPD85664S1  | 0.7 | 3                 |
| UPD85671GC  | 0.7 | 3                 |
| UPD85673S1  | 0.7 | 3                 |
| UPD85800N7  | 0.7 | 3                 |
| UPD85802N7  | 0.7 | 3                 |
| UPD86330F2  | 0.7 | 80                |
| UPD86346N7  | 0.7 | 85                |
| UPD86603N7  | 0.7 | 200               |
| UPD8670CY   | 0.7 | 40                |
| UPD8823D    | 0.7 | 50                |
| UPD8826D    | 0.7 | 45                |
| UPD8861CY   | 0.7 | 45                |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD89012F1  | 0.7 | 2.93              |
| UPD89012GB  | 0.7 | 2.93              |
| UPD89017GC  | 0.7 | 2.93              |
| UPD89042GN  | 0.7 | 2.93              |
| UPD89043F1  | 0.7 | 2.93              |
| UPD89045N7  | 0.7 | 2.93              |
| UPD89053GK  | 0.7 | 2.93              |
| UPD89058S1  | 0.7 | 2.93              |
| UPD89065F1  | 0.7 | 2.93              |
| UPD89070GJ  | 0.7 | 2.93              |
| UPD89078GM  | 0.7 | 2.93              |
| UPD89081GB  | 0.7 | 2.93              |
| UPD89093GJ  | 0.7 | 2.93              |
| UPD89203F2  | 0.7 | 2.93              |
| UPD89204F2  | 0.7 | 2.93              |
| UPD8927GC   | 0.7 | 29                |
| UPD89403S   | 0.7 | 2.93              |
| UPD89415S9  | 0.7 | 2.93              |
| UPD89428S1  | 0.7 | 2.93              |
| UPD89458S1  | 0.7 | 2.93              |
| UPD89464GC  | 0.7 | 2.93              |
| UPD89470GB  | 0.7 | 2.93              |
| UPD9015     | 0.7 | 20                |
| UPD9065GC   | 0.7 | 12                |
| UPD91020GF  | 0.7 | 20                |
| UPD91070    | 0.7 | 20                |
| UPD91071    | 0.7 | 20                |
| UPD91076    | 0.7 | 20                |
| UPD91077    | 0.7 | 20                |
| UPD91100    | 0.7 | 20                |
| UPD91217    | 0.7 | 34                |
| UPD91229    | 0.7 | 34                |
| UPD91250    | 0.7 | 34                |
| UPD91254    | 0.7 | 34                |
| UPD91275    | 0.7 | 34                |
| UPD91291    | 0.7 | 34                |
| UPD91329LQ  | 0.7 | 34                |
| UPD913GF    | 0.7 | 8                 |
| UPD914AGM   | 0.7 | 12                |
| UPD915GF    | 0.7 | 12                |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD92277    | 0.7 | 34                |
| UPD92300GD  | 0.7 | 0.87              |
| UPD92342    | 0.7 | 34                |
| UPD93050    | 0.7 | 0.87              |
| UPD93064    | 0.7 | 0.87              |
| UPD93089    | 0.7 | 0.87              |
| UPD93094    | 0.7 | 0.87              |
| UPD93143    | 0.7 | 0.87              |
| UPD93161    | 0.7 | 0.87              |
| UPD93163    | 0.7 | 0.87              |
| UPD93173    | 0.7 | 0.87              |
| UPD93174    | 0.7 | 0.87              |
| UPD93176GC  | 0.7 | 0.87              |
| UPD93178    | 0.7 | 0.87              |
| UPD93205    | 0.7 | 0.87              |
| UPD93213    | 0.7 | 0.87              |
| UPD93227    | 0.7 | 0.87              |
| UPD93237    | 0.7 | 0.87              |
| UPD93256GC  | 0.7 | 0.87              |
| UPD93263    | 0.7 | 0.87              |
| UPD93275    | 0.7 | 0.87              |
| UPD93276    | 0.7 | 0.87              |
| UPD93279LQ  | 0.7 | 0.87              |
| UPD93284    | 0.7 | 0.87              |
| UPD93286    | 0.7 | 0.87              |
| UPD93288GC  | 0.7 | 0.87              |
| UPD93292    | 0.7 | 0.87              |
| UPD93294    | 0.7 | 0.87              |
| UPD93295    | 0.7 | 0.87              |
| UPD93296    | 0.7 | 0.87              |
| UPD93605    | 0.7 | 1.2               |
| UPD93653    | 0.7 | 1.2               |
| UPD93716    | 0.7 | 0.87              |
| UPD94144    | 0.7 | 0.87              |
| UPD94236    | 0.7 | 0.87              |
| UPD94249    | 0.7 | 0.87              |
| UPD94251CX  | 0.7 | 0.87              |
| UPD94268    | 0.7 | 0.87              |
| UPD94269    | 0.7 | 0.87              |
| UPD94694    | 0.7 | 1.2               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPD94704    | 0.7 | 1.2               |
| UPD95001    | 0.7 | 34                |
| UPD95003    | 0.7 | 34                |
| UPD95006    | 0.7 | 34                |
| UPD95101    | 0.7 | 0.87              |
| UPD95102    | 0.7 | 0.87              |
| UPD95128    | 0.7 | 0.87              |
| UPD95129    | 0.7 | 0.87              |
| UPD95134    | 0.7 | 0.87              |
| UPD95136    | 0.7 | 0.87              |
| UPD9513AD   | 0.7 | 15                |
| UPD95159    | 0.7 | 0.87              |
| UPD95177    | 0.7 | 0.87              |
| UPD96007    | 0.7 | 34                |
| UPD9601AD   | 0.7 | 10                |
| UPD9602AD   | 0.7 | 10                |
| UPD9603AD   | 0.7 | 10                |
| UPD9604AD   | 0.7 | 10                |
| UPD9605AD   | 0.7 | 10                |
| UPD9606AD   | 0.7 | 10                |
| UPD96074CU  | 0.7 | 55                |
| UPD96075CW  | 0.7 | 75                |
| UPD96077CW  | 0.7 | 95                |
| UPD9611GT   | 0.7 | 10                |
| UPD96124    | 0.7 | 0.87              |
| UPD96135GJ  | 0.7 | 0.87              |
| UPD96136    | 0.7 | 0.87              |
| UPD96151    | 0.7 | 0.87              |
| UPD9621CX   | 0.7 | 8                 |
| UPD9621L    | 0.7 | 8                 |
| UPD9622CX   | 0.7 | 8                 |
| UPD9622L    | 0.7 | 8                 |
| UPD9624L    | 0.7 | 8                 |
| UPD9625L    | 0.7 | 8                 |
| UPD97016    | 0.7 | 1.2               |
| UPD97019    | 0.7 | 1.2               |
| UPD97021    | 0.7 | 1.2               |
| UPD97030    | 0.7 | 1.2               |
| UPD97207    | 0.7 | 1.2               |
| UPD97214    | 0.7 | 1.2               |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD97223    | 0.7 | 1.2               |
| UPD97234GC  | 0.7 | 1.2               |
| UPD97238GN  | 0.7 | 1.2               |
| UPD97240    | 0.7 | 1.2               |
| UPD97266GD  | 0.7 | 1.2               |
| UPD97311GM  | 0.7 | 1.2               |
| UPD97319GF  | 0.7 | 1.2               |
| UPD98001CW  | 0.7 | 6                 |
| UPD98201GF  | 0.7 | 6                 |
| UPD98203CR  | 0.7 | 6                 |
| UPD98303GC  | 0.7 | 8                 |
| UPD98311AGC | 0.7 | 12                |
| UPD98311GC  | 0.7 | 12                |
| UPD98312AGC | 0.7 | 12                |
| UPD98322F9  | 0.7 | 60                |
| UPD98340F9  | 0.7 | 40                |
| UPD98401AGD | 0.7 | 8                 |
| UPD98401GD  | 0.7 | 10                |
| UPD98402AGM | 0.7 | 10                |
| UPD98404GJ  | 0.7 | 12                |
| UPD98405GL  | 0.7 | 12                |
| UPD98405S1  | 0.7 | 12                |
| UPD98408GD  | 0.7 | 12                |
| UPD98409GN  | 0.7 | 12                |
| UPD98410S   | 0.7 | 12                |
| UPD98410S2  | 0.7 | 12                |
| UPD98411GN  | 0.7 | 12                |
| UPD98412N7  | 0.7 | 12                |
| UPD98414F2  | 0.7 | 12                |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPD98421F1  | 0.7 | 12                |
| UPD98421GN  | 0.7 | 12                |
| UPD98431S1  | 0.7 | 12                |
| UPD98501N7  | 0.7 | 29                |
| UPD9901LK   | 0.7 | 6                 |
| UPD99031    | 0.7 | 1.2               |
| UPD99038GD  | 0.7 | 1.2               |
| UPD9903GT   | 0.7 | 10                |
| UPD99222    | 0.7 | 1.2               |
| UPD99225    | 0.7 | 1.2               |
| UPD99226    | 0.7 | 1.2               |
| UPD99248GC  | 0.7 | 1.2               |
| UPD99250    | 0.7 | 1.2               |
| UPD99261GD  | 0.7 | 1.2               |
| UPD99264GD  | 0.7 | 1.2               |
| UPD99274GC  | 0.7 | 1.2               |
| UPD9930G    | 0.7 | 10                |
| UPD9934K9   | 0.7 | 8                 |
| UPD9935GT   | 0.7 | 10                |
| UPD9950GC   | 0.7 | 3                 |
| UPD9951GC   | 0.7 | 3                 |
| UPD9965FC   | 0.7 | 12                |
| UPD9966F1   | 0.7 | 35                |
| UPD9993F9   | 0.7 | 27                |



5.2 Transistors, FETs, Diodes

<Notes>

- Read UPA as  $\mu\text{PA}$ .
- “\*\*\*” in a part number indicates a wildcard (number).
- “[ ]” in a part number is a number that is added to indicate the characteristics of that product.
- Part numbers for Pb-free products are not included in the table; however, the basic failure rate for these products is the same as for the equivalent Pb-inclusive products in the table.

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| 03P2M       | 0.7 | 0.4               |
| 03P4J       | 0.7 | 0.4               |
| 03P4M       | 0.7 | 0.4               |
| 03P4MF      | 0.7 | 0.4               |
| 03P4MG      | 0.7 | 0.4               |
| 03P5J       | 0.7 | 0.4               |
| 03P5MG      | 0.7 | 0.4               |
| 03P6MG      | 0.7 | 0.4               |
| 1S135       | 0.7 | 0.2               |
| 1S1544A     | 0.7 | 0.1               |
| 1S2135      | 0.7 | 0.2               |
| 1S2191      | 0.7 | 0.2               |
| 1S2192      | 0.7 | 0.2               |
| 1S2392      | 0.7 | 0.3               |
| 1S2394      | 0.7 | 0.3               |
| 1S2396      | 0.7 | 0.3               |
| 1S2398      | 0.7 | 0.3               |
| 1S2606      | 0.7 | 0.3               |
| 1S2608      | 0.7 | 0.3               |
| 1S2610      | 0.7 | 0.3               |
| 1S2762      | 0.7 | 0.4               |
| 1S2764      | 0.7 | 0.4               |
| 1S2766      | 0.7 | 0.4               |
| 1S2766A     | 0.7 | 0.4               |
| 1S2768      | 0.7 | 0.4               |
| 1S2768A     | 0.7 | 0.4               |
| 1S2835      | 0.7 | 0.1               |
| 1S2836      | 0.7 | 0.1               |
| 1S2837      | 0.7 | 0.1               |
| 1S2838      | 0.7 | 0.1               |
| 1S953       | 0.7 | 0.1               |
| 1S954       | 0.7 | 0.1               |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| 1S955       | 0.7 | 0.1               |
| 1SS123      | 0.7 | 0.1               |
| 1SS153      | 0.7 | 0.1               |
| 1SS202      | 0.7 | 0.1               |
| 1SS205      | 0.7 | 0.1               |
| 1SS206      | 0.7 | 0.1               |
| 1SS207      | 0.7 | 0.1               |
| 1SS220      | 0.7 | 0.1               |
| 1SS221      | 0.7 | 0.1               |
| 1SS222      | 0.7 | 0.1               |
| 1SS223      | 0.7 | 0.1               |
| 1SS23*      | 0.7 | 0.2               |
| 1SS303      | 0.7 | 0.1               |
| 1SS304      | 0.7 | 0.1               |
| 1SS305      | 0.7 | 0.1               |
| 1SS317      | 0.7 | 0.1               |
| 1SS342      | 0.7 | 0.1               |
| 1SS53       | 0.7 | 0.1               |
| 1SS54       | 0.7 | 0.1               |
| 1SS55       | 0.7 | 0.1               |
| 1SZ45A      | 0.7 | 0.3               |
| 1SZ46A      | 0.7 | 0.3               |
| 1SZ47       | 0.7 | 0.3               |
| 1SZ47A      | 0.7 | 0.3               |
| 1SZ48       | 0.7 | 0.3               |
| 1SZ48A      | 0.7 | 0.3               |
| 1SZ50       | 0.7 | 0.3               |
| 1SZ51       | 0.7 | 0.3               |
| 1SZ52       | 0.7 | 0.3               |
| 1SZ53       | 0.7 | 0.3               |
| 2N4392      | 0.7 | 0.6               |
| 2N4393      | 0.7 | 0.6               |

CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2P4M        | 0.7 | 0.8               |
| 2P5M        | 0.7 | 0.8               |
| 2P6M        | 0.7 | 0.8               |
| 2S2M        | 0.7 | 0.8               |
| 2S4M        | 0.7 | 0.8               |
| 2SA1005     | 0.7 | 0.4               |
| 2SA1006     | 0.7 | 0.9               |
| 2SA1006A    | 0.7 | 0.9               |
| 2SA1006B    | 0.7 | 0.9               |
| 2SA1008     | 0.7 | 0.8               |
| 2SA1009     | 0.7 | 0.8               |
| 2SA1009A    | 0.7 | 0.8               |
| 2SA1010     | 0.7 | 1                 |
| 2SA1069     | 0.7 | 0.9               |
| 2SA1069A    | 0.7 | 0.9               |
| 2SA1129     | 0.7 | 1                 |
| 2SA1138     | 0.7 | 0.4               |
| 2SA1141     | 0.7 | 1.2               |
| 2SA1142     | 0.7 | 0.7               |
| 2SA1151     | 0.7 | 0.4               |
| 2SA1152     | 0.7 | 0.4               |
| 2SA1153     | 0.7 | 0.4               |
| 2SA1154     | 0.7 | 0.4               |
| 2SA1156     | 0.7 | 0.7               |
| 2SA1173     | 0.7 | 0.5               |
| 2SA1174     | 0.7 | 0.4               |
| 2SA1175     | 0.7 | 0.4               |
| 2SA1206     | 0.7 | 0.4               |
| 2SA1218     | 0.7 | 0.3               |
| 2SA1220     | 0.7 | 0.8               |
| 2SA1220A    | 0.7 | 0.8               |
| 2SA1221     | 0.7 | 0.4               |
| 2SA1222     | 0.7 | 0.4               |
| 2SA1226     | 0.7 | 0.4               |
| 2SA1227     | 0.7 | 1.2               |
| 2SA1227A    | 0.7 | 1.2               |
| 2SA1232     | 0.7 | 1.2               |
| 2SA1247     | 0.7 | 0.4               |
| 2SA1261     | 0.7 | 1.1               |
| 2SA1330     | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SA1376     | 0.7 | 0.4               |
| 2SA1376A    | 0.7 | 0.4               |
| 2SA1383     | 0.7 | 0.7               |
| 2SA1385     | 0.7 | 0.7               |
| 2SA1394     | 0.7 | 0.9               |
| 2SA1395     | 0.7 | 0.8               |
| 2SA1396     | 0.7 | 0.9               |
| 2SA1400     | 0.7 | 0.7               |
| 2SA1409     | 0.7 | 0.4               |
| 2SA1410     | 0.7 | 0.4               |
| 2SA1411     | 0.7 | 0.4               |
| 2SA1412     | 0.7 | 0.7               |
| 2SA1413     | 0.7 | 0.7               |
| 2SA1441     | 0.7 | 0.9               |
| 2SA1442     | 0.7 | 0.9               |
| 2SA1443     | 0.7 | 0.9               |
| 2SA1444     | 0.7 | 0.9               |
| 2SA1458     | 0.7 | 0.4               |
| 2SA1459     | 0.7 | 0.4               |
| 2SA1460     | 0.7 | 0.4               |
| 2SA1461     | 0.7 | 0.4               |
| 2SA1462     | 0.7 | 0.4               |
| 2SA1463     | 0.7 | 0.5               |
| 2SA1464     | 0.7 | 0.4               |
| 2SA1465     | 0.7 | 0.4               |
| 2SA1466     | 0.7 | 0.4               |
| 2SA1467     | 0.7 | 0.4               |
| 2SA1486     | 0.7 | 0.8               |
| 2SA1544     | 0.7 | 0.4               |
| 2SA1545     | 0.7 | 0.4               |
| 2SA1546     | 0.7 | 0.6               |
| 2SA1608     | 0.7 | 0.4               |
| 2SA1609     | 0.7 | 0.4               |
| 2SA1610     | 0.7 | 0.4               |
| 2SA1611     | 0.7 | 0.4               |
| 2SA1612     | 0.7 | 0.4               |
| 2SA1613     | 0.7 | 0.4               |
| 2SA1615     | 0.7 | 0.8               |
| 2SA1625     | 0.7 | 0.4               |
| 2SA1626     | 0.7 | 0.4               |

CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SA1627     | 0.7 | 0.4               |
| 2SA1645     | 0.7 | 0.9               |
| 2SA1646     | 0.7 | 1                 |
| 2SA1647     | 0.7 | 0.8               |
| 2SA1648     | 0.7 | 0.8               |
| 2SA1650     | 0.7 | 0.9               |
| 2SA1652     | 0.7 | 0.9               |
| 2SA1684     | 0.7 | 0.8               |
| 2SA1718     | 0.7 | 0.8               |
| 2SA1719     | 0.7 | 0.9               |
| 2SA1720     | 0.7 | 0.9               |
| 2SA1741     | 0.7 | 0.9               |
| 2SA1742     | 0.7 | 0.9               |
| 2SA1743     | 0.7 | 0.9               |
| 2SA1744     | 0.7 | 0.9               |
| 2SA1836     | 0.7 | 0.4               |
| 2SA1840     | 0.7 | 0.5               |
| 2SA1843     | 0.7 | 0.5               |
| 2SA1847     | 0.7 | 0.5               |
| 2SA1871     | 0.7 | 0.5               |
| 2SA1977     | 0.7 | 0.4               |
| 2SA1978     | 0.7 | 0.4               |
| 2SA544      | 0.7 | 0.3               |
| 2SA571      | 0.7 | 0.3               |
| 2SA578      | 0.7 | 0.3               |
| 2SA579      | 0.7 | 0.3               |
| 2SA603      | 0.7 | 0.3               |
| 2SA638(S)   | 0.7 | 0.4               |
| 2SA639(S)   | 0.7 | 0.4               |
| 2SA675      | 0.7 | 0.4               |
| 2SA675(A)   | 0.7 | 0.4               |
| 2SA708      | 0.7 | 0.3               |
| 2SA708A     | 0.7 | 0.3               |
| 2SA711      | 0.7 | 0.3               |
| 2SA712      | 0.7 | 0.3               |
| 2SA717      | 0.7 | 0.3               |
| 2SA718      | 0.7 | 0.3               |
| 2SA733      | 0.7 | 0.4               |
| 2SA811A     | 0.7 | 0.4               |
| 2SA812      | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SA915      | 0.7 | 0.4               |
| 2SA916      | 0.7 | 0.4               |
| 2SA952      | 0.7 | 0.4               |
| 2SA953      | 0.7 | 0.4               |
| 2SA954      | 0.7 | 0.4               |
| 2SA985      | 0.7 | 0.9               |
| 2SA985A     | 0.7 | 0.9               |
| 2SA987      | 0.7 | 0.4               |
| 2SA988      | 0.7 | 0.4               |
| 2SA990      | 0.7 | 0.4               |
| 2SA991      | 0.7 | 0.4               |
| 2SA992      | 0.7 | 0.4               |
| 2SB1038     | 0.7 | 0.9               |
| 2SB1039     | 0.7 | 1                 |
| 2SB1061     | 0.7 | 0.8               |
| 2SB1068     | 0.7 | 0.4               |
| 2SB1087     | 0.7 | 0.9               |
| 2SB1089     | 0.7 | 0.9               |
| 2SB1090     | 0.7 | 1                 |
| 2SB1093     | 0.7 | 0.4               |
| 2SB1094     | 0.7 | 0.8               |
| 2SB1095     | 0.7 | 0.8               |
| 2SB1096     | 0.7 | 0.9               |
| 2SB1097     | 0.7 | 0.9               |
| 2SB1098     | 0.7 | 0.8               |
| 2SB1099     | 0.7 | 0.9               |
| 2SB1100     | 0.7 | 0.9               |
| 2SB1111     | 0.7 | 0.7               |
| 2SB1114     | 0.7 | 0.5               |
| 2SB1115     | 0.7 | 0.5               |
| 2SB1115A    | 0.7 | 0.5               |
| 2SB1116     | 0.7 | 0.4               |
| 2SB1116A    | 0.7 | 0.4               |
| 2SB1117     | 0.7 | 0.4               |
| 2SB1137     | 0.7 | 1.1               |
| 2SB1149     | 0.7 | 0.8               |
| 2SB1150     | 0.7 | 0.8               |
| 2SB1151     | 0.7 | 0.8               |
| 2SB1217     | 0.7 | 0.7               |
| 2SB1261     | 0.7 | 0.7               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SB1300     | 0.7 | 0.4               |
| 2SB1301     | 0.7 | 0.5               |
| 2SB1315     | 0.7 | 1.1               |
| 2SB1318     | 0.7 | 0.4               |
| 2SB1430     | 0.7 | 0.8               |
| 2SB1431     | 0.7 | 0.9               |
| 2SB1432     | 0.7 | 0.9               |
| 2SB1453     | 0.7 | 0.9               |
| 2SB1465     | 0.7 | 0.9               |
| 2SB1475     | 0.7 | 0.4               |
| 2SB1483     | 0.7 | 0.4               |
| 2SB1497     | 0.7 | 0.4               |
| 2SB1571     | 0.7 | 0.5               |
| 2SB1572     | 0.7 | 0.5               |
| 2SB1578     | 0.7 | 0.5               |
| 2SB1628     | 0.7 | 0.5               |
| 2SB505      | 0.7 | 0.3               |
| 2SB506      | 0.7 | 0.8               |
| 2SB506A     | 0.7 | 0.8               |
| 2SB536      | 0.7 | 0.8               |
| 2SB537      | 0.7 | 0.8               |
| 2SB546A     | 0.7 | 0.9               |
| 2SB547A     | 0.7 | 0.9               |
| 2SB548      | 0.7 | 0.7               |
| 2SB549      | 0.7 | 0.7               |
| 2SB564      | 0.7 | 0.4               |
| 2SB601      | 0.7 | 0.9               |
| 2SB603      | 0.7 | 0.6               |
| 2SB605      | 0.7 | 0.4               |
| 2SB624      | 0.7 | 0.4               |
| 2SB703      | 0.7 | 1                 |
| 2SB703A     | 0.7 | 1                 |
| 2SB707      | 0.7 | 1                 |
| 2SB708      | 0.7 | 1                 |
| 2SB731      | 0.7 | 0.7               |
| 2SB733      | 0.7 | 0.4               |
| 2SB734      | 0.7 | 0.4               |
| 2SB736      | 0.7 | 0.4               |
| 2SB736A     | 0.7 | 0.4               |
| 2SB744      | 0.7 | 0.7               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SB744A     | 0.7 | 0.7               |
| 2SB768      | 0.7 | 0.8               |
| 2SB772      | 0.7 | 0.7               |
| 2SB794      | 0.7 | 0.7               |
| 2SB795      | 0.7 | 0.7               |
| 2SB798      | 0.7 | 0.5               |
| 2SB799      | 0.7 | 0.5               |
| 2SB800      | 0.7 | 0.5               |
| 2SB804      | 0.7 | 0.5               |
| 2SB805      | 0.7 | 0.5               |
| 2SB806      | 0.7 | 0.5               |
| 2SB810      | 0.7 | 0.4               |
| 2SB811      | 0.7 | 0.4               |
| 2SB849      | 0.7 | 1.1               |
| 2SB849A     | 0.7 | 1.1               |
| 2SB897      | 0.7 | 1.1               |
| 2SB962      | 0.7 | 0.7               |
| 2SB963      | 0.7 | 0.7               |
| 2SB965      | 0.7 | 0.7               |
| 2SB966      | 0.7 | 1.1               |
| 2SB974      | 0.7 | 0.9               |
| 2SB975      | 0.7 | 1                 |
| 2SB984      | 0.7 | 0.4               |
| 2SC1006     | 0.7 | 0.3               |
| 2SC1007     | 0.7 | 0.3               |
| 2SC1008     | 0.7 | 0.3               |
| 2SC1008A    | 0.7 | 0.3               |
| 2SC1009A    | 0.7 | 0.4               |
| 2SC1010     | 0.7 | 0.3               |
| 2SC1031     | 0.7 | 0.7               |
| 2SC1071     | 0.7 | 0.3               |
| 2SC1216     | 0.7 | 0.3               |
| 2SC1217     | 0.7 | 0.3               |
| 2SC1274     | 0.7 | 0.3               |
| 2SC1278(S)  | 0.7 | 0.4               |
| 2SC1279(S)  | 0.7 | 0.4               |
| 2SC1280(S)  | 0.7 | 0.4               |
| 2SC1280A(S) | 0.7 | 0.4               |
| 2SC1449     | 0.7 | 0.7               |
| 2SC1505     | 0.7 | 0.8               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SC1506     | 0.7 | 0.8               |
| 2SC1507     | 0.7 | 0.8               |
| 2SC1590     | 0.7 | 0.7               |
| 2SC1610     | 0.7 | 0.3               |
| 2SC1621     | 0.7 | 0.4               |
| 2SC1622A    | 0.7 | 0.4               |
| 2SC1623     | 0.7 | 0.4               |
| 2SC1653     | 0.7 | 0.4               |
| 2SC1654     | 0.7 | 0.4               |
| 2SC1674     | 0.7 | 0.4               |
| 2SC1675     | 0.7 | 0.4               |
| 2SC1748     | 0.7 | 0.3               |
| 2SC1840     | 0.7 | 0.4               |
| 2SC1841     | 0.7 | 0.4               |
| 2SC1842     | 0.7 | 0.4               |
| 2SC1843     | 0.7 | 0.4               |
| 2SC1844     | 0.7 | 0.4               |
| 2SC1845     | 0.7 | 0.4               |
| 2SC1860     | 0.7 | 0.6               |
| 2SC1862     | 0.7 | 0.6               |
| 2SC1864A    | 0.7 | 0.7               |
| 2SC1865     | 0.7 | 0.7               |
| 2SC1867     | 0.7 | 0.9               |
| 2SC1867A    | 0.7 | 0.9               |
| 2SC1868     | 0.7 | 0.9               |
| 2SC1869     | 0.7 | 0.9               |
| 2SC1871     | 0.7 | 0.9               |
| 2SC1940     | 0.7 | 0.4               |
| 2SC1941     | 0.7 | 0.4               |
| 2SC2000     | 0.7 | 0.4               |
| 2SC2001     | 0.7 | 0.4               |
| 2SC2002     | 0.7 | 0.4               |
| 2SC2003     | 0.7 | 0.4               |
| 2SC2223     | 0.7 | 0.4               |
| 2SC2275     | 0.7 | 0.9               |
| 2SC2275A    | 0.7 | 0.9               |
| 2SC2331     | 0.7 | 0.8               |
| 2SC2333     | 0.7 | 0.8               |
| 2SC2334     | 0.7 | 1                 |
| 2SC2335     | 0.7 | 1                 |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SC2336     | 0.7 | 0.9               |
| 2SC2336A    | 0.7 | 0.9               |
| 2SC2336B    | 0.7 | 0.9               |
| 2SC2371     | 0.7 | 0.7               |
| 2SC2373     | 0.7 | 1                 |
| 2SC2407(A)  | 0.7 | 0.4               |
| 2SC2516     | 0.7 | 0.9               |
| 2SC2516A    | 0.7 | 0.9               |
| 2SC2517     | 0.7 | 0.9               |
| 2SC2518     | 0.7 | 1                 |
| 2SC2654     | 0.7 | 1                 |
| 2SC2676     | 0.7 | 0.4               |
| 2SC2676(1)  | 0.7 | 0.4               |
| 2SC2681     | 0.7 | 1.2               |
| 2SC2682     | 0.7 | 0.7               |
| 2SC2688     | 0.7 | 0.7               |
| 2SC2690     | 0.7 | 0.8               |
| 2SC2690A    | 0.7 | 0.8               |
| 2SC2718     | 0.7 | 0.4               |
| 2SC2719     | 0.7 | 0.4               |
| 2SC2720     | 0.7 | 0.4               |
| 2SC2721     | 0.7 | 0.4               |
| 2SC2749     | 0.7 | 1.2               |
| 2SC2750     | 0.7 | 1.2               |
| 2SC2751     | 0.7 | 1.2               |
| 2SC2752     | 0.7 | 0.7               |
| 2SC2780     | 0.7 | 0.5               |
| 2SC2784     | 0.7 | 0.4               |
| 2SC2785     | 0.7 | 0.4               |
| 2SC2786     | 0.7 | 0.4               |
| 2SC2787     | 0.7 | 0.4               |
| 2SC2802     | 0.7 | 0.7               |
| 2SC2885     | 0.7 | 0.8               |
| 2SC2901     | 0.7 | 0.4               |
| 2SC2908     | 0.7 | 1                 |
| 2SC2946     | 0.7 | 0.8               |
| 2SC2946(1)  | 0.7 | 0.8               |
| 2SC2958     | 0.7 | 0.4               |
| 2SC2959     | 0.7 | 0.4               |
| 2SC2966     | 0.7 | 1.1               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SC2987     | 0.7 | 1.2               |
| 2SC2987A    | 0.7 | 1.2               |
| 2SC3012     | 0.7 | 1.2               |
| 2SC3115     | 0.7 | 0.4               |
| 2SC3157     | 0.7 | 1.1               |
| 2SC3158     | 0.7 | 1.1               |
| 2SC3159     | 0.7 | 1.1               |
| 2SC3209     | 0.7 | 0.4               |
| 2SC3360     | 0.7 | 0.4               |
| 2SC3431     | 0.7 | 1                 |
| 2SC3432     | 0.7 | 1.1               |
| 2SC3434     | 0.7 | 1.2               |
| 2SC3435     | 0.7 | 1.2               |
| 2SC3478     | 0.7 | 0.4               |
| 2SC3478A    | 0.7 | 0.4               |
| 2SC3514     | 0.7 | 0.7               |
| 2SC3518     | 0.7 | 0.7               |
| 2SC3531     | 0.7 | 1                 |
| 2SC3532     | 0.7 | 1.1               |
| 2SC3533     | 0.7 | 1.1               |
| 2SC3534     | 0.7 | 1.1               |
| 2SC3535     | 0.7 | 1.2               |
| 2SC3536     | 0.7 | 1.2               |
| 2SC3554     | 0.7 | 0.5               |
| 2SC356      | 0.7 | 0.3               |
| 2SC3566     | 0.7 | 0.9               |
| 2SC3567     | 0.7 | 0.8               |
| 2SC3568     | 0.7 | 0.9               |
| 2SC3569     | 0.7 | 0.8               |
| 2SC3570     | 0.7 | 0.9               |
| 2SC3571     | 0.7 | 0.9               |
| 2SC3572     | 0.7 | 0.9               |
| 2SC3588     | 0.7 | 0.7               |
| 2SC3615     | 0.7 | 0.4               |
| 2SC3616     | 0.7 | 0.4               |
| 2SC3617     | 0.7 | 0.5               |
| 2SC3618     | 0.7 | 0.5               |
| 2SC3622     | 0.7 | 0.4               |
| 2SC3622A    | 0.7 | 0.4               |
| 2SC3623     | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SC3623A    | 0.7 | 0.4               |
| 2SC3624     | 0.7 | 0.4               |
| 2SC3624A    | 0.7 | 0.4               |
| 2SC3631     | 0.7 | 0.7               |
| 2SC3632     | 0.7 | 0.7               |
| 2SC3691     | 0.7 | 0.9               |
| 2SC3692     | 0.7 | 0.9               |
| 2SC3693     | 0.7 | 0.9               |
| 2SC3694     | 0.7 | 0.9               |
| 2SC3731     | 0.7 | 0.4               |
| 2SC3732     | 0.7 | 0.4               |
| 2SC3733     | 0.7 | 0.4               |
| 2SC3734     | 0.7 | 0.4               |
| 2SC3735     | 0.7 | 0.4               |
| 2SC3736     | 0.7 | 0.5               |
| 2SC3739     | 0.7 | 0.4               |
| 2SC3740     | 0.7 | 0.4               |
| 2SC3741     | 0.7 | 0.4               |
| 2SC3742     | 0.7 | 0.4               |
| 2SC3762     | 0.7 | 1.1               |
| 2SC3840     | 0.7 | 0.8               |
| 2SC3999     | 0.7 | 0.4               |
| 2SC4000     | 0.7 | 0.4               |
| 2SC4001     | 0.7 | 0.6               |
| 2SC4062     | 0.7 | 0.9               |
| 2SC4063     | 0.7 | 0.9               |
| 2SC4173     | 0.7 | 0.4               |
| 2SC4175     | 0.7 | 0.4               |
| 2SC4176     | 0.7 | 0.4               |
| 2SC4177     | 0.7 | 0.4               |
| 2SC4178     | 0.7 | 0.4               |
| 2SC4179     | 0.7 | 0.4               |
| 2SC4180     | 0.7 | 0.4               |
| 2SC4181     | 0.7 | 0.4               |
| 2SC4182     | 0.7 | 0.4               |
| 2SC4328     | 0.7 | 0.9               |
| 2SC4331     | 0.7 | 0.8               |
| 2SC4332     | 0.7 | 0.8               |
| 2SC4334     | 0.7 | 0.9               |
| 2SC4336     | 0.7 | 0.9               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SC4337     | 0.7 | 0.6               |
| 2SC4338     | 0.7 | 0.7               |
| 2SC4339     | 0.7 | 0.7               |
| 2SC4340     | 0.7 | 0.7               |
| 2SC4341     | 0.7 | 0.7               |
| 2SC4342     | 0.7 | 0.7               |
| 2SC4343     | 0.7 | 0.8               |
| 2SC4344     | 0.7 | 0.8               |
| 2SC4346     | 0.7 | 0.4               |
| 2SC4347     | 0.7 | 0.9               |
| 2SC4348     | 0.7 | 0.9               |
| 2SC4349     | 0.7 | 0.9               |
| 2SC4350     | 0.7 | 1                 |
| 2SC4351     | 0.7 | 0.8               |
| 2SC4352     | 0.7 | 0.8               |
| 2SC4353     | 0.7 | 0.9               |
| 2SC4496     | 0.7 | 0.9               |
| 2SC4549     | 0.7 | 0.9               |
| 2SC4550     | 0.7 | 0.9               |
| 2SC4551     | 0.7 | 0.9               |
| 2SC4552     | 0.7 | 0.9               |
| 2SC4553     | 0.7 | 0.9               |
| 2SC4554     | 0.7 | 0.9               |
| 2SC4569     | 0.7 | 0.4               |
| 2SC4783     | 0.7 | 0.4               |
| 2SC4810     | 0.7 | 0.5               |
| 2SC4811     | 0.7 | 0.5               |
| 2SC4813     | 0.7 | 0.5               |
| 2SC4815     | 0.7 | 0.5               |
| 2SC4817     | 0.7 | 0.5               |
| 2SC4942     | 0.7 | 0.5               |
| 2SC5010     | 0.7 | 0.4               |
| 2SC5293     | 0.7 | 0.5               |
| 2SC5651     | 0.7 | 0.4               |
| 2SC5652     | 0.7 | 0.4               |
| 2SC5664     | 0.7 | 0.5               |
| 2SC639      | 0.7 | 0.3               |
| 2SC67       | 0.7 | 0.3               |
| 2SC923      | 0.7 | 0.4               |
| 2SC943      | 0.7 | 0.3               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SC944(S)   | 0.7 | 0.4               |
| 2SC945      | 0.7 | 0.4               |
| 2SC945A     | 0.7 | 0.4               |
| 2SD1000     | 0.7 | 0.5               |
| 2SD1001     | 0.7 | 0.5               |
| 2SD1005     | 0.7 | 0.5               |
| 2SD1006     | 0.7 | 0.5               |
| 2SD1007     | 0.7 | 0.5               |
| 2SD1017     | 0.7 | 1                 |
| 2SD1018     | 0.7 | 1.1               |
| 2SD1020     | 0.7 | 0.4               |
| 2SD1021     | 0.7 | 0.4               |
| 2SD1033     | 0.7 | 0.8               |
| 2SD1070     | 0.7 | 1.1               |
| 2SD1110     | 0.7 | 1.1               |
| 2SD1110A    | 0.7 | 1.1               |
| 2SD1162     | 0.7 | 1                 |
| 2SD1164     | 0.7 | 0.7               |
| 2SD1210     | 0.7 | 1.1               |
| 2SD1286     | 0.7 | 0.7               |
| 2SD1288     | 0.7 | 1.1               |
| 2SD1289     | 0.7 | 1.1               |
| 2SD1296     | 0.7 | 1.2               |
| 2SD1297     | 0.7 | 1.2               |
| 2SD1298     | 0.7 | 1.2               |
| 2SD1308     | 0.7 | 0.9               |
| 2SD1309     | 0.7 | 1                 |
| 2SD1310     | 0.7 | 0.9               |
| 2SD1311     | 0.7 | 1                 |
| 2SD1312     | 0.7 | 0.4               |
| 2SD132      | 0.7 | 0.3               |
| 2SD1392     | 0.7 | 0.9               |
| 2SD1448     | 0.7 | 0.7               |
| 2SD1481     | 0.7 | 0.8               |
| 2SD1491     | 0.7 | 0.7               |
| 2SD1502     | 0.7 | 0.8               |
| 2SD1513     | 0.7 | 0.4               |
| 2SD1557     | 0.7 | 0.8               |
| 2SD1564     | 0.7 | 0.9               |
| 2SD1565     | 0.7 | 0.9               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SD1567     | 0.7 | 0.9               |
| 2SD1568     | 0.7 | 1                 |
| 2SD1569     | 0.7 | 0.9               |
| 2SD1579     | 0.7 | 0.4               |
| 2SD1581     | 0.7 | 0.4               |
| 2SD1582     | 0.7 | 0.4               |
| 2SD1583     | 0.7 | 0.7               |
| 2SD1584     | 0.7 | 0.7               |
| 2SD1585     | 0.7 | 0.8               |
| 2SD1586     | 0.7 | 0.8               |
| 2SD1587     | 0.7 | 0.9               |
| 2SD1588     | 0.7 | 0.9               |
| 2SD1589     | 0.7 | 0.8               |
| 2SD1590     | 0.7 | 0.9               |
| 2SD1591     | 0.7 | 0.9               |
| 2SD1592     | 0.7 | 0.9               |
| 2SD1593     | 0.7 | 0.8               |
| 2SD1594     | 0.7 | 0.9               |
| 2SD1595     | 0.7 | 0.8               |
| 2SD1614     | 0.7 | 0.5               |
| 2SD1615     | 0.7 | 0.5               |
| 2SD1615A    | 0.7 | 0.5               |
| 2SD1616     | 0.7 | 0.4               |
| 2SD1616A    | 0.7 | 0.4               |
| 2SD1617     | 0.7 | 0.4               |
| 2SD1629     | 0.7 | 0.7               |
| 2SD1630     | 0.7 | 0.7               |
| 2SD1670     | 0.7 | 1.1               |
| 2SD1671     | 0.7 | 1.1               |
| 2SD1672     | 0.7 | 1.1               |
| 2SD1691     | 0.7 | 0.8               |
| 2SD1692     | 0.7 | 0.8               |
| 2SD1693     | 0.7 | 0.8               |
| 2SD1694     | 0.7 | 0.8               |
| 2SD1695     | 0.7 | 0.7               |
| 2SD1697     | 0.7 | 0.4               |
| 2SD1698     | 0.7 | 0.4               |
| 2SD1699     | 0.7 | 0.5               |
| 2SD1700     | 0.7 | 0.4               |
| 2SD1701     | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SD1702     | 0.7 | 0.5               |
| 2SD1779     | 0.7 | 0.4               |
| 2SD1780     | 0.7 | 0.4               |
| 2SD1818     | 0.7 | 0.7               |
| 2SD1843     | 0.7 | 0.4               |
| 2SD1899     | 0.7 | 0.7               |
| 2SD1928     | 0.7 | 0.9               |
| 2SD1939     | 0.7 | 0.4               |
| 2SD1950     | 0.7 | 0.5               |
| 2SD1951     | 0.7 | 0.4               |
| 2SD1952     | 0.7 | 0.5               |
| 2SD1977     | 0.7 | 1.1               |
| 2SD2161     | 0.7 | 0.8               |
| 2SD2162     | 0.7 | 0.9               |
| 2SD2163     | 0.7 | 0.9               |
| 2SD2164     | 0.7 | 0.8               |
| 2SD2165     | 0.7 | 0.9               |
| 2SD2217     | 0.7 | 0.9               |
| 2SD2228     | 0.7 | 0.4               |
| 2SD2243     | 0.7 | 0.4               |
| 2SD2402     | 0.7 | 0.5               |
| 2SD2403     | 0.7 | 0.5               |
| 2SD2425     | 0.7 | 0.5               |
| 2SD288      | 0.7 | 0.8               |
| 2SD289      | 0.7 | 0.8               |
| 2SD297      | 0.7 | 0.7               |
| 2SD362      | 0.7 | 0.7               |
| 2SD372      | 0.7 | 1.1               |
| 2SD373      | 0.7 | 1.1               |
| 2SD373A     | 0.7 | 1.1               |
| 2SD374      | 0.7 | 1.1               |
| 2SD375      | 0.7 | 0.9               |
| 2SD376      | 0.7 | 0.9               |
| 2SD381      | 0.7 | 0.8               |
| 2SD382      | 0.7 | 0.8               |
| 2SD401A     | 0.7 | 0.9               |
| 2SD402A     | 0.7 | 0.9               |
| 2SD405      | 0.7 | 0.6               |
| 2SD406      | 0.7 | 0.6               |
| 2SD411      | 0.7 | 0.9               |



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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SD414      | 0.7 | 0.7               |
| 2SD415      | 0.7 | 0.7               |
| 2SD469      | 0.7 | 0.9               |
| 2SD471      | 0.7 | 0.4               |
| 2SD535      | 0.7 | 1                 |
| 2SD560      | 0.7 | 0.9               |
| 2SD568      | 0.7 | 1                 |
| 2SD569      | 0.7 | 1                 |
| 2SD571      | 0.7 | 0.4               |
| 2SD596      | 0.7 | 0.4               |
| 2SD73       | 0.7 | 0.8               |
| 2SD74       | 0.7 | 0.8               |
| 2SD741      | 0.7 | 0.8               |
| 2SD743      | 0.7 | 1                 |
| 2SD743A     | 0.7 | 1                 |
| 2SD773      | 0.7 | 0.4               |
| 2SD774      | 0.7 | 0.4               |
| 2SD78       | 0.7 | 0.6               |
| 2SD780      | 0.7 | 0.4               |
| 2SD780A     | 0.7 | 0.4               |
| 2SD78A      | 0.7 | 0.6               |
| 2SD79       | 0.7 | 0.6               |
| 2SD794      | 0.7 | 0.7               |
| 2SD794A     | 0.7 | 0.7               |
| 2SD795      | 0.7 | 0.8               |
| 2SD809(1)   | 0.7 | 0.7               |
| 2SD882      | 0.7 | 0.7               |
| 2SD985      | 0.7 | 0.7               |
| 2SD986      | 0.7 | 0.7               |
| 2SD987      | 0.7 | 1                 |
| 2SD992      | 0.7 | 0.7               |
| 2SD999      | 0.7 | 0.5               |
| 2SF101      | 0.7 | 0.3               |
| 2SF102      | 0.7 | 0.3               |
| 2SF104      | 0.7 | 0.3               |
| 2SF106      | 0.7 | 0.3               |
| 2SF108      | 0.7 | 0.3               |
| 2SH23       | 0.7 | 0.3               |
| 2SH24       | 0.7 | 0.3               |
| 2SH25       | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SJ128      | 0.7 | 1.5               |
| 2SJ132      | 0.7 | 1.5               |
| 2SJ133      | 0.7 | 1.5               |
| 2SJ134      | 0.7 | 1.8               |
| 2SJ135      | 0.7 | 1.7               |
| 2SJ136      | 0.7 | 1.8               |
| 2SJ137      | 0.7 | 1.7               |
| 2SJ138      | 0.7 | 2                 |
| 2SJ139      | 0.7 | 1.8               |
| 2SJ140      | 0.7 | 2                 |
| 2SJ141      | 0.7 | 1.8               |
| 2SJ142      | 0.7 | 1.8               |
| 2SJ143      | 0.7 | 1.8               |
| 2SJ151      | 0.7 | 1.8               |
| 2SJ152      | 0.7 | 1.7               |
| 2SJ153      | 0.7 | 1.8               |
| 2SJ154      | 0.7 | 1.7               |
| 2SJ165      | 0.7 | 0.8               |
| 2SJ166      | 0.7 | 0.8               |
| 2SJ178      | 0.7 | 0.8               |
| 2SJ179      | 0.7 | 0.9               |
| 2SJ180      | 0.7 | 0.8               |
| 2SJ184      | 0.7 | 0.8               |
| 2SJ185      | 0.7 | 0.8               |
| 2SJ196      | 0.7 | 0.8               |
| 2SJ197      | 0.7 | 0.9               |
| 2SJ198      | 0.7 | 0.8               |
| 2SJ199      | 0.7 | 0.9               |
| 2SJ202      | 0.7 | 0.8               |
| 2SJ203      | 0.7 | 0.8               |
| 2SJ204      | 0.7 | 0.8               |
| 2SJ205      | 0.7 | 0.9               |
| 2SJ206      | 0.7 | 0.9               |
| 2SJ207      | 0.7 | 0.9               |
| 2SJ208      | 0.7 | 0.9               |
| 2SJ209      | 0.7 | 0.8               |
| 2SJ210      | 0.7 | 0.8               |
| 2SJ211      | 0.7 | 0.8               |
| 2SJ212      | 0.7 | 0.9               |
| 2SJ213      | 0.7 | 0.9               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SJ243      | 0.7 | 0.8               |
| 2SJ302      | 0.7 | 2.1               |
| 2SJ303      | 0.7 | 1.8               |
| 2SJ324      | 0.7 | 1.5               |
| 2SJ325      | 0.7 | 1.5               |
| 2SJ326      | 0.7 | 1.5               |
| 2SJ327      | 0.7 | 1.5               |
| 2SJ328      | 0.7 | 2.1               |
| 2SJ329      | 0.7 | 1.8               |
| 2SJ330      | 0.7 | 1.8               |
| 2SJ331      | 0.7 | 2.5               |
| 2SJ353      | 0.7 | 0.8               |
| 2SJ355      | 0.7 | 0.9               |
| 2SJ356      | 0.7 | 0.9               |
| 2SJ357      | 0.7 | 0.9               |
| 2SJ358      | 0.7 | 0.9               |
| 2SJ411      | 0.7 | 1.1               |
| 2SJ44       | 0.7 | 0.8               |
| 2SJ448      | 0.7 | 1.7               |
| 2SJ449      | 0.7 | 1.8               |
| 2SJ45       | 0.7 | 0.8               |
| 2SJ461      | 0.7 | 0.8               |
| 2SJ462      | 0.7 | 0.8               |
| 2SJ463      | 0.7 | 0.8               |
| 2SJ463A     | 0.7 | 0.8               |
| 2SJ493      | 0.7 | 1.7               |
| 2SJ494      | 0.7 | 1.8               |
| 2SJ495      | 0.7 | 1.8               |
| 2SJ557      | 0.7 | 0.8               |
| 2SJ559      | 0.7 | 0.8               |
| 2SJ598      | 0.7 | 1.6               |
| 2SJ599      | 0.7 | 1.8               |
| 2SJ600      | 0.7 | 1.8               |
| 2SJ601      | 0.7 | 2                 |
| 2SJ602      | 0.7 | 1.7               |
| 2SJ603      | 0.7 | 1.8               |
| 2SJ604      | 0.7 | 2.1               |
| 2SJ605      | 0.7 | 2.3               |
| 2SJ606      | 0.7 | 2.4               |
| 2SJ607      | 0.7 | 2.5               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SJ621      | 0.7 | 0.8               |
| 2SJ624      | 0.7 | 0.8               |
| 2SJ626      | 0.7 | 0.8               |
| 2SJ648      | 0.7 | 0.8               |
| 2SJ673      | 0.7 | 1.7               |
| 2SK1001     | 0.7 | 0.8               |
| 2SK104      | 0.7 | 0.8               |
| 2SK105      | 0.7 | 0.8               |
| 2SK1059     | 0.7 | 1.5               |
| 2SK1060     | 0.7 | 1.5               |
| 2SK1109     | 0.7 | 0.8               |
| 2SK1122     | 0.7 | 2.3               |
| 2SK1123     | 0.7 | 2.3               |
| 2SK1132     | 0.7 | 0.8               |
| 2SK1133     | 0.7 | 0.8               |
| 2SK1149     | 0.7 | 2.1               |
| 2SK1150     | 0.7 | 2.1               |
| 2SK119      | 0.7 | 0.6               |
| 2SK1198     | 0.7 | 1.8               |
| 2SK1271     | 0.7 | 2.8               |
| 2SK1272     | 0.7 | 0.8               |
| 2SK1273     | 0.7 | 0.9               |
| 2SK1281     | 0.7 | 2.4               |
| 2SK1282     | 0.7 | 1.5               |
| 2SK1283     | 0.7 | 1.5               |
| 2SK1284     | 0.7 | 1.5               |
| 2SK1285     | 0.7 | 1.5               |
| 2SK1286     | 0.7 | 1.7               |
| 2SK1287     | 0.7 | 2                 |
| 2SK1288     | 0.7 | 1.7               |
| 2SK1289     | 0.7 | 2                 |
| 2SK1290     | 0.7 | 1.8               |
| 2SK1292     | 0.7 | 1.8               |
| 2SK1294     | 0.7 | 1.8               |
| 2SK1295     | 0.7 | 1.8               |
| 2SK1398     | 0.7 | 0.8               |
| 2SK1399     | 0.7 | 0.8               |
| 2SK141      | 0.7 | 0.6               |
| 2SK141A     | 0.7 | 0.6               |
| 2SK1482     | 0.7 | 0.8               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK1483     | 0.7 | 0.9               |
| 2SK1484     | 0.7 | 0.8               |
| 2SK1485     | 0.7 | 0.9               |
| 2SK149      | 0.7 | 0.6               |
| 2SK1491     | 0.7 | 2.4               |
| 2SK1492     | 0.7 | 2.5               |
| 2SK1493     | 0.7 | 1.9               |
| 2SK1494     | 0.7 | 1.9               |
| 2SK1497     | 0.7 | 2.4               |
| 2SK1498     | 0.7 | 2.4               |
| 2SK1500     | 0.7 | 2.5               |
| 2SK1501     | 0.7 | 2.1               |
| 2SK1580     | 0.7 | 0.8               |
| 2SK1581     | 0.7 | 0.8               |
| 2SK1582     | 0.7 | 0.8               |
| 2SK1583     | 0.7 | 0.9               |
| 2SK1584     | 0.7 | 0.9               |
| 2SK1585     | 0.7 | 0.9               |
| 2SK1586     | 0.7 | 0.9               |
| 2SK1587     | 0.7 | 0.9               |
| 2SK1588     | 0.7 | 0.9               |
| 2SK1589     | 0.7 | 0.8               |
| 2SK1590     | 0.7 | 0.8               |
| 2SK1591     | 0.7 | 0.8               |
| 2SK1592     | 0.7 | 0.9               |
| 2SK1593     | 0.7 | 0.9               |
| 2SK1594     | 0.7 | 1.7               |
| 2SK1596     | 0.7 | 1.8               |
| 2SK160      | 0.7 | 0.8               |
| 2SK160A     | 0.7 | 0.8               |
| 2SK162      | 0.7 | 0.8               |
| 2SK163      | 0.7 | 0.8               |
| 2SK1658     | 0.7 | 0.8               |
| 2SK1664     | 0.7 | 1.7               |
| 2SK1748     | 0.7 | 1.5               |
| 2SK1749     | 0.7 | 2.5               |
| 2SK1752     | 0.7 | 2.3               |
| 2SK1753     | 0.7 | 2.3               |
| 2SK1760     | 0.7 | 2.3               |
| 2SK1795     | 0.7 | 2.5               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK1796     | 0.7 | 2.5               |
| 2SK1824     | 0.7 | 0.8               |
| 2SK1850     | 0.7 | 0.9               |
| 2SK1851     | 0.7 | 0.9               |
| 2SK1852     | 0.7 | 0.9               |
| 2SK1853     | 0.7 | 0.9               |
| 2SK1871     | 0.7 | 0.9               |
| 2SK193      | 0.7 | 0.8               |
| 2SK194      | 0.7 | 0.8               |
| 2SK195      | 0.7 | 0.8               |
| 2SK1953     | 0.7 | 1.6               |
| 2SK1954     | 0.7 | 1.5               |
| 2SK1958     | 0.7 | 0.8               |
| 2SK1959     | 0.7 | 0.9               |
| 2SK1960     | 0.7 | 0.9               |
| 2SK1988     | 0.7 | 1.7               |
| 2SK1989     | 0.7 | 1.7               |
| 2SK1990     | 0.7 | 1.7               |
| 2SK1991     | 0.7 | 1.7               |
| 2SK1994     | 0.7 | 1.7               |
| 2SK1995     | 0.7 | 1.8               |
| 2SK2040     | 0.7 | 1.5               |
| 2SK2053     | 0.7 | 0.9               |
| 2SK2054     | 0.7 | 0.9               |
| 2SK2055     | 0.7 | 0.9               |
| 2SK2070     | 0.7 | 0.8               |
| 2SK2090     | 0.7 | 0.8               |
| 2SK2109     | 0.7 | 0.9               |
| 2SK2110     | 0.7 | 0.9               |
| 2SK2111     | 0.7 | 0.9               |
| 2SK2112     | 0.7 | 0.9               |
| 2SK2131     | 0.7 | 1.8               |
| 2SK2133     | 0.7 | 2.1               |
| 2SK2134     | 0.7 | 2.1               |
| 2SK2135     | 0.7 | 1.8               |
| 2SK2139     | 0.7 | 1.8               |
| 2SK2141     | 0.7 | 1.8               |
| 2SK2157     | 0.7 | 0.9               |
| 2SK2158     | 0.7 | 0.8               |
| 2SK2159     | 0.7 | 0.9               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK2275     | 0.7 | 1.8               |
| 2SK2341     | 0.7 | 1.8               |
| 2SK2353     | 0.7 | 1.7               |
| 2SK2354     | 0.7 | 1.7               |
| 2SK2355     | 0.7 | 1.9               |
| 2SK2356     | 0.7 | 1.9               |
| 2SK2358     | 0.7 | 1.8               |
| 2SK2361     | 0.7 | 2.3               |
| 2SK2362     | 0.7 | 2.3               |
| 2SK2363     | 0.7 | 1.8               |
| 2SK2365     | 0.7 | 2.1               |
| 2SK2366     | 0.7 | 2.1               |
| 2SK2367     | 0.7 | 0.8               |
| 2SK2368     | 0.7 | 0.8               |
| 2SK2369     | 0.7 | 2.5               |
| 2SK2370     | 0.7 | 2.5               |
| 2SK2371     | 0.7 | 2.5               |
| 2SK2372     | 0.7 | 2.5               |
| 2SK238      | 0.7 | 0.8               |
| 2SK2409     | 0.7 | 1.8               |
| 2SK2410     | 0.7 | 1.8               |
| 2SK2411     | 0.7 | 2.1               |
| 2SK2412     | 0.7 | 1.7               |
| 2SK2414     | 0.7 | 1.5               |
| 2SK2415     | 0.7 | 1.5               |
| 2SK2461     | 0.7 | 1.8               |
| 2SK2462     | 0.7 | 1.7               |
| 2SK2476     | 0.7 | 1.8               |
| 2SK2477     | 0.7 | 2.5               |
| 2SK2478     | 0.7 | 1.7               |
| 2SK2479     | 0.7 | 2.1               |
| 2SK2480     | 0.7 | 1.8               |
| 2SK2482     | 0.7 | 2.3               |
| 2SK2483     | 0.7 | 1.8               |
| 2SK2485     | 0.7 | 2.3               |
| 2SK2487     | 0.7 | 2.5               |
| 2SK2488     | 0.7 | 2.5               |
| 2SK2498     | 0.7 | 1.8               |
| 2SK2499     | 0.7 | 2.1               |
| 2SK2500     | 0.7 | 2.5               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK2510     | 0.7 | 1.8               |
| 2SK2511     | 0.7 | 2.1               |
| 2SK2512     | 0.7 | 1.8               |
| 2SK2513     | 0.7 | 2.1               |
| 2SK2515     | 0.7 | 2.5               |
| 2SK2541     | 0.7 | 0.8               |
| 2SK2552     | 0.7 | 0.8               |
| 2SK2724     | 0.7 | 1.7               |
| 2SK277      | 0.7 | 1.7               |
| 2SK278      | 0.7 | 1.7               |
| 2SK2826     | 0.7 | 2.3               |
| 2SK2857     | 0.7 | 0.9               |
| 2SK2858     | 0.7 | 0.8               |
| 2SK293      | 0.7 | 1.7               |
| 2SK293A     | 0.7 | 1.7               |
| 2SK2941     | 0.7 | 2                 |
| 2SK2981     | 0.7 | 1.5               |
| 2SK2982     | 0.7 | 1.7               |
| 2SK2983     | 0.7 | 1.9               |
| 2SK3054     | 0.7 | 0.8               |
| 2SK3055     | 0.7 | 1.6               |
| 2SK3056     | 0.7 | 1.7               |
| 2SK3057     | 0.7 | 1.7               |
| 2SK3058     | 0.7 | 2                 |
| 2SK3059     | 0.7 | 1.7               |
| 2SK3060     | 0.7 | 2.1               |
| 2SK3061     | 0.7 | 1.8               |
| 2SK3062     | 0.7 | 2.3               |
| 2SK3105     | 0.7 | 0.8               |
| 2SK3105(1)  | 0.7 | 0.8               |
| 2SK3107     | 0.7 | 0.8               |
| 2SK3108     | 0.7 | 1.6               |
| 2SK3109     | 0.7 | 1.9               |
| 2SK3110     | 0.7 | 1.7               |
| 2SK3111     | 0.7 | 2                 |
| 2SK3113     | 0.7 | 1.5               |
| 2SK3114     | 0.7 | 1.7               |
| 2SK3115     | 0.7 | 1.8               |
| 2SK3116     | 0.7 | 2.1               |
| 2SK314      | 0.7 | 0.6               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK3224     | 0.7 | 1.6               |
| 2SK3225     | 0.7 | 1.8               |
| 2SK3230     | 0.7 | 0.8               |
| 2SK3298     | 0.7 | 1.8               |
| 2SK3299     | 0.7 | 2.1               |
| 2SK3304     | 0.7 | 2.4               |
| 2SK3305     | 0.7 | 2.1               |
| 2SK3306     | 0.7 | 1.8               |
| 2SK3322     | 0.7 | 2                 |
| 2SK3324     | 0.7 | 2.4               |
| 2SK3326     | 0.7 | 1.8               |
| 2SK3353     | 0.7 | 2.2               |
| 2SK3354     | 0.7 | 2.3               |
| 2SK3355     | 0.7 | 2.3               |
| 2SK3357     | 0.7 | 2.5               |
| 2SK3366     | 0.7 | 1.7               |
| 2SK3367     | 0.7 | 1.8               |
| 2SK3377     | 0.7 | 1.4               |
| 2SK338      | 0.7 | 1.8               |
| 2SK3385     | 0.7 | 1.8               |
| 2SK3386     | 0.7 | 1.8               |
| 2SK339      | 0.7 | 1.8               |
| 2SK3402     | 0.7 | 1.8               |
| 2SK3404     | 0.7 | 1.8               |
| 2SK3408     | 0.7 | 0.8               |
| 2SK3424     | 0.7 | 1.9               |
| 2SK3430     | 0.7 | 2.2               |
| 2SK3431     | 0.7 | 2.3               |
| 2SK3432     | 0.7 | 2.3               |
| 2SK3433     | 0.7 | 1.9               |
| 2SK3434     | 0.7 | 2                 |
| 2SK3435     | 0.7 | 2.2               |
| 2SK3455     | 0.7 | 1.8               |
| 2SK3457     | 0.7 | 1.9               |
| 2SK3479     | 0.7 | 2.4               |
| 2SK3480     | 0.7 | 2.2               |
| 2SK3481     | 0.7 | 2                 |
| 2SK3482     | 0.7 | 1.9               |
| 2SK3483     | 0.7 | 1.8               |
| 2SK3484     | 0.7 | 1.7               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK3503     | 0.7 | 0.8               |
| 2SK3510     | 0.7 | 2.4               |
| 2SK3571     | 0.7 | 1.8               |
| 2SK3634     | 0.7 | 1.5               |
| 2SK3664     | 0.7 | 0.8               |
| 2SK3715     | 0.7 | 1.8               |
| 2SK3716     | 0.7 | 2.2               |
| 2SK3717     | 0.7 | 0.8               |
| 2SK3749     | 0.7 | 0.8               |
| 2SK3794     | 0.7 | 1.7               |
| 2SK3811     | 0.7 | 2.7               |
| 2SK3812     | 0.7 | 2.7               |
| 2SK3813     | 0.7 | 2.2               |
| 2SK3900     | 0.7 | 2.3               |
| 2SK3943     | 0.7 | 2.3               |
| 2SK425      | 0.7 | 0.8               |
| 2SK426      | 0.7 | 0.8               |
| 2SK432      | 0.7 | 1.8               |
| 2SK446      | 0.7 | 1.5               |
| 2SK448      | 0.7 | 1.8               |
| 2SK449      | 0.7 | 1.8               |
| 2SK458      | 0.7 | 1.1               |
| 2SK459      | 0.7 | 2                 |
| 2SK462      | 0.7 | 1.5               |
| 2SK463      | 0.7 | 1.8               |
| 2SK464      | 0.7 | 1.9               |
| 2SK468      | 0.7 | 1.5               |
| 2SK470      | 0.7 | 1.9               |
| 2SK477      | 0.7 | 2                 |
| 2SK479      | 0.7 | 2.3               |
| 2SK482      | 0.7 | 1.9               |
| 2SK484      | 0.7 | 2.3               |
| 2SK490      | 0.7 | 2.3               |
| 2SK505      | 0.7 | 0.8               |
| 2SK507      | 0.7 | 0.8               |
| 2SK508      | 0.7 | 0.8               |
| 2SK514      | 0.7 | 0.8               |
| 2SK515      | 0.7 | 0.8               |
| 2SK518      | 0.7 | 0.8               |
| 2SK519      | 0.7 | 0.8               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK520      | 0.7 | 0.8               |
| 2SK523      | 0.7 | 0.8               |
| 2SK533      | 0.7 | 0.8               |
| 2SK542      | 0.7 | 1.6               |
| 2SK591      | 0.7 | 1.8               |
| 2SK611      | 0.7 | 1.3               |
| 2SK612      | 0.7 | 1.5               |
| 2SK654      | 0.7 | 1.3               |
| 2SK659      | 0.7 | 1.8               |
| 2SK659A     | 0.7 | 1.8               |
| 2SK679      | 0.7 | 0.8               |
| 2SK679A     | 0.7 | 0.8               |
| 2SK67A      | 0.7 | 0.8               |
| 2SK680      | 0.7 | 0.8               |
| 2SK680A     | 0.7 | 0.9               |
| 2SK681      | 0.7 | 0.8               |
| 2SK681A     | 0.7 | 0.8               |
| 2SK699      | 0.7 | 1.4               |
| 2SK700      | 0.7 | 1.4               |
| 2SK701      | 0.7 | 1.4               |
| 2SK702      | 0.7 | 1.9               |
| 2SK703      | 0.7 | 1.8               |
| 2SK704      | 0.7 | 1.9               |
| 2SK705      | 0.7 | 1.8               |
| 2SK707      | 0.7 | 2.4               |
| 2SK719      | 0.7 | 2.4               |
| 2SK720A     | 0.7 | 2.4               |
| 2SK735      | 0.7 | 2.3               |
| 2SK736      | 0.7 | 1.8               |
| 2SK737      | 0.7 | 1.8               |
| 2SK738      | 0.7 | 1.5               |
| 2SK739      | 0.7 | 1.5               |
| 2SK773      | 0.7 | 2.4               |
| 2SK774      | 0.7 | 2.4               |
| 2SK784      | 0.7 | 2.5               |
| 2SK785      | 0.7 | 2.5               |
| 2SK786      | 0.7 | 2                 |
| 2SK787      | 0.7 | 2.5               |
| 2SK797      | 0.7 | 2.5               |
| 2SK798      | 0.7 | 2.5               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK799      | 0.7 | 2.4               |
| 2SK800      | 0.7 | 2.4               |
| 2SK801      | 0.7 | 1.4               |
| 2SK802      | 0.7 | 1.4               |
| 2SK810      | 0.7 | 2                 |
| 2SK811      | 0.7 | 1.8               |
| 2SK812      | 0.7 | 2                 |
| 2SK813      | 0.7 | 1.8               |
| 2SK815      | 0.7 | 1.8               |
| 2SK817      | 0.7 | 1.8               |
| 2SK819      | 0.7 | 2.3               |
| 2SK820      | 0.7 | 2.1               |
| 2SK821      | 0.7 | 2.5               |
| 2SK822      | 0.7 | 2.2               |
| 2SK823      | 0.7 | 2.5               |
| 2SK824      | 0.7 | 2.2               |
| 2SK825      | 0.7 | 2.5               |
| 2SK826      | 0.7 | 2.2               |
| 2SK827      | 0.7 | 2.5               |
| 2SK828      | 0.7 | 2.2               |
| 2SK829      | 0.7 | 2.5               |
| 2SK830      | 0.7 | 2.2               |
| 2SK831      | 0.7 | 2.5               |
| 2SK832      | 0.7 | 2.2               |
| 2SK833      | 0.7 | 2.5               |
| 2SK852      | 0.7 | 0.8               |
| 2SK853      | 0.7 | 0.8               |
| 2SK853A     | 0.7 | 0.8               |
| 2SK854      | 0.7 | 1.9               |
| 2SK855      | 0.7 | 1.9               |
| 2SK871      | 0.7 | 2.4               |
| 2SK872      | 0.7 | 2.5               |
| 2SK873      | 0.7 | 2.3               |
| 2SK874      | 0.7 | 2.3               |
| 2SK875      | 0.7 | 2.4               |
| 2SK876      | 0.7 | 2.4               |
| 2SK926      | 0.7 | 2                 |
| 2SK927      | 0.7 | 2.5               |
| 2SK928      | 0.7 | 1.8               |
| 2SK929      | 0.7 | 1.8               |

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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| 2SK94       | 0.7 | 0.8               |
| 2SK946      | 0.7 | 1.8               |
| 2SK992      | 0.7 | 1.7               |
| 2SK993      | 0.7 | 1.8               |
| 2SK994      | 0.7 | 1.7               |
| 2SK998      | 0.7 | 0.8               |
| 2V5P4M      | 0.7 | 0.9               |
| 3P4J        | 0.7 | 1                 |
| 3P4MH       | 0.7 | 1                 |
| 3P5MH       | 0.7 | 1                 |
| 3P6MH       | 0.7 | 1                 |
| 3S4M        | 0.7 | 1                 |
| 3SK14       | 0.7 | 0.3               |
| 3SK230      | 0.7 | 0.8               |
| 3SK29       | 0.7 | 0.3               |
| 3SK47       | 0.7 | 0.9               |
| 5P4J        | 0.7 | 1.3               |
| 5P4M        | 0.7 | 1.3               |
| 5P4SM       | 0.7 | 1.3               |
| 5P4SMA      | 0.7 | 1.3               |
| 5P5M        | 0.7 | 1.3               |
| 5P6J        | 0.7 | 1.3               |
| 5P6M        | 0.7 | 1.3               |
| 5P6SM       | 0.7 | 1.3               |
| 5P6SMA      | 0.7 | 1.3               |
| 8P2M        | 0.7 | 1.6               |
| 8P2SM       | 0.7 | 1.6               |
| 8P2SMA      | 0.7 | 1.6               |
| 8P4J        | 0.7 | 1.6               |
| 8P4M        | 0.7 | 1.6               |
| 8P4SM       | 0.7 | 1.6               |
| 8P4SMA      | 0.7 | 1.6               |
| AA1A3Q      | 0.7 | 0.4               |
| AA1A4M      | 0.7 | 0.4               |
| AA1A4P      | 0.7 | 0.4               |
| AA1A4Z      | 0.7 | 0.4               |
| AA1F4M      | 0.7 | 0.4               |
| AA1F4N      | 0.7 | 0.4               |
| AA1F4Z      | 0.7 | 0.4               |
| AA1L3M      | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| AA1L3N      | 0.7 | 0.4               |
| AA1L3Z      | 0.7 | 0.4               |
| AA1L4L      | 0.7 | 0.4               |
| AA1L4M      | 0.7 | 0.4               |
| AA1L4Z      | 0.7 | 0.4               |
| AB1A3M      | 0.7 | 0.4               |
| AB1A4A      | 0.7 | 0.4               |
| AB1A4M      | 0.7 | 0.4               |
| AB1F3P      | 0.7 | 0.4               |
| AB1J3P      | 0.7 | 0.4               |
| AB1L2Q      | 0.7 | 0.4               |
| AB1L3N      | 0.7 | 0.4               |
| AC01DGM     | 0.7 | 0.6               |
| AC01DJM     | 0.7 | 0.6               |
| AC03DGM     | 0.7 | 1                 |
| AC03DJM     | 0.7 | 1                 |
| AC03DSM     | 0.7 | 1                 |
| AC03DSMA    | 0.7 | 1                 |
| AC03EGM     | 0.7 | 1                 |
| AC03FGM     | 0.7 | 1                 |
| AC03FJM     | 0.7 | 1                 |
| AC03FSM     | 0.7 | 1                 |
| AC03FSMA    | 0.7 | 1                 |
| AC05DGM     | 0.7 | 1.3               |
| AC05DJM     | 0.7 | 1.3               |
| AC05DSM     | 0.7 | 1.3               |
| AC05DSMA    | 0.7 | 1.3               |
| AC05EGM     | 0.7 | 1.3               |
| AC05ESM     | 0.7 | 1.3               |
| AC05FGM     | 0.7 | 1.3               |
| AC05FJM     | 0.7 | 1.3               |
| AC05FSM     | 0.7 | 1.3               |
| AC05FSMA    | 0.7 | 1.3               |
| AC08DGM     | 0.7 | 0.6               |
| AC08DSM     | 0.7 | 1.6               |
| AC08EGM     | 0.7 | 1.6               |
| AC08ESM     | 0.7 | 1.6               |
| AC08FGM     | 0.7 | 1.6               |
| AC08FSM     | 0.7 | 1.6               |
| AC10DGM     | 0.7 | 1.8               |

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| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| AC10DSM     | 0.7 | 1.8               |
| AC10EGM     | 0.7 | 1.8               |
| AC10ESM     | 0.7 | 1.8               |
| AC10FGM     | 0.7 | 1.8               |
| AC10FSM     | 0.7 | 1.8               |
| AC12DGM     | 0.7 | 2                 |
| AC12DSM     | 0.7 | 2                 |
| AC12DSMA    | 0.7 | 2                 |
| AC12EGM     | 0.7 | 2                 |
| AC12ESM     | 0.7 | 2                 |
| AC12FGM     | 0.7 | 2                 |
| AC12FSM     | 0.7 | 2                 |
| AC12FSMA    | 0.7 | 2                 |
| AC16DGM     | 0.7 | 2.3               |
| AC16DIFL    | 0.7 | 2.3               |
| AC16DSM     | 0.7 | 2.3               |
| AC16DSMA    | 0.7 | 2.3               |
| AC16EGM     | 0.7 | 2.3               |
| AC16FGM     | 0.7 | 2.3               |
| AC16FIFL    | 0.7 | 2.3               |
| AC16FSM     | 0.7 | 2.3               |
| AC16FSMA    | 0.7 | 2.3               |
| AC1A3M      | 0.7 | 0.4               |
| AC1A4A      | 0.7 | 0.4               |
| AC1F2Q      | 0.7 | 0.4               |
| AC1F3M      | 0.7 | 0.4               |
| AC1F3P      | 0.7 | 0.4               |
| AC1L2N      | 0.7 | 0.4               |
| AC1L2Q      | 0.7 | 0.4               |
| AD1A3M      | 0.7 | 0.4               |
| AD1A4A      | 0.7 | 0.4               |
| AD1A4M      | 0.7 | 0.4               |
| AD1F2Q      | 0.7 | 0.4               |
| AD1F3P      | 0.7 | 0.4               |
| AD1L2Q      | 0.7 | 0.4               |
| AD1L3N      | 0.7 | 0.4               |
| AD2A3M      | 0.7 | 0.4               |
| AD2A4A      | 0.7 | 0.4               |
| AD2A4M      | 0.7 | 0.4               |
| AD2F2Q      | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| AD2F3P      | 0.7 | 0.4               |
| AD2L2Q      | 0.7 | 0.4               |
| AD2L3N      | 0.7 | 0.4               |
| AN1A3Q      | 0.7 | 0.4               |
| AN1A4M      | 0.7 | 0.4               |
| AN1A4P      | 0.7 | 0.4               |
| AN1A4Z      | 0.7 | 0.4               |
| AN1F4M      | 0.7 | 0.4               |
| AN1F4N      | 0.7 | 0.4               |
| AN1F4Z      | 0.7 | 0.4               |
| AN1L3M      | 0.7 | 0.4               |
| AN1L3N      | 0.7 | 0.4               |
| AN1L3Z      | 0.7 | 0.4               |
| AN1L4L      | 0.7 | 0.4               |
| AN1L4M      | 0.7 | 0.4               |
| AN1L4Z      | 0.7 | 0.4               |
| AP1A3M      | 0.7 | 0.4               |
| AP1A4A      | 0.7 | 0.4               |
| AP1A4M      | 0.7 | 0.4               |
| AP1F3P      | 0.7 | 0.4               |
| AP1J3P      | 0.7 | 0.4               |
| AP1L2Q      | 0.7 | 0.4               |
| AP1L3N      | 0.7 | 0.4               |
| AQ1A3M      | 0.7 | 0.4               |
| AQ1A4A      | 0.7 | 0.4               |
| AQ1F2Q      | 0.7 | 0.4               |
| AQ1F3M      | 0.7 | 0.4               |
| AQ1F3P      | 0.7 | 0.4               |
| AQ1L2N      | 0.7 | 0.4               |
| AQ1L2Q      | 0.7 | 0.4               |
| AR1A3M      | 0.7 | 0.4               |
| AR1A4A      | 0.7 | 0.4               |
| AR1A4M      | 0.7 | 0.4               |
| AR1F2Q      | 0.7 | 0.4               |
| AR1F3P      | 0.7 | 0.4               |
| AR1L2Q      | 0.7 | 0.4               |
| AR1L3N      | 0.7 | 0.4               |
| BA1A3Q      | 0.7 | 0.4               |
| BA1A4M      | 0.7 | 0.4               |
| BA1A4P      | 0.7 | 0.4               |



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| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| BA1A4Z      | 0.7 | 0.4               |
| BA1F4M      | 0.7 | 0.4               |
| BA1F4N      | 0.7 | 0.4               |
| BA1F4Z      | 0.7 | 0.4               |
| BA1L3M      | 0.7 | 0.4               |
| BA1L3N      | 0.7 | 0.4               |
| BA1L3Z      | 0.7 | 0.4               |
| BA1L4L      | 0.7 | 0.4               |
| BA1L4M      | 0.7 | 0.4               |
| BA1L4Z      | 0.7 | 0.4               |
| BA2A3Q      | 0.7 | 0.4               |
| BA2A4M      | 0.7 | 0.4               |
| BA2A4P      | 0.7 | 0.4               |
| BA2A4Z      | 0.7 | 0.4               |
| BA2F4M      | 0.7 | 0.4               |
| BA2F4N      | 0.7 | 0.4               |
| BA2F4Z      | 0.7 | 0.4               |
| BA2L3M      | 0.7 | 0.4               |
| BA2L3N      | 0.7 | 0.4               |
| BA2L3Z      | 0.7 | 0.4               |
| BA2L4L      | 0.7 | 0.4               |
| BA2L4M      | 0.7 | 0.4               |
| BA2L4Z      | 0.7 | 0.4               |
| BA3L4Z      | 0.7 | 0.4               |
| BB1A3M      | 0.7 | 0.4               |
| BB1A4A      | 0.7 | 0.4               |
| BB1A4M      | 0.7 | 0.4               |
| BB1F3P      | 0.7 | 0.4               |
| BB1J3P      | 0.7 | 0.4               |
| BB1L2Q      | 0.7 | 0.4               |
| BB1L3N      | 0.7 | 0.4               |
| BN1A3Q      | 0.7 | 0.4               |
| BN1A4M      | 0.7 | 0.4               |
| BN1A4P      | 0.7 | 0.4               |
| BN1A4Z      | 0.7 | 0.4               |
| BN1F4M      | 0.7 | 0.4               |
| BN1F4N      | 0.7 | 0.4               |
| BN1F4Z      | 0.7 | 0.4               |
| BN1L3M      | 0.7 | 0.4               |
| BN1L3N      | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| BN1L3Z      | 0.7 | 0.4               |
| BN1L4L      | 0.7 | 0.4               |
| BN1L4M      | 0.7 | 0.4               |
| BN1L4Z      | 0.7 | 0.4               |
| BN2A3Q      | 0.7 | 0.4               |
| BN2A4M      | 0.7 | 0.4               |
| BN2A4P      | 0.7 | 0.4               |
| BN2A4Z      | 0.7 | 0.4               |
| BN2F4M      | 0.7 | 0.4               |
| BN2F4N      | 0.7 | 0.4               |
| BN2F4Z      | 0.7 | 0.4               |
| BN2L3M      | 0.7 | 0.4               |
| BN2L3N      | 0.7 | 0.4               |
| BN2L3Z      | 0.7 | 0.4               |
| BN2L4L      | 0.7 | 0.4               |
| BN2L4M      | 0.7 | 0.4               |
| BN2L4Z      | 0.7 | 0.4               |
| BN3L4Z      | 0.7 | 0.4               |
| BP1A3M      | 0.7 | 0.4               |
| BP1A4A      | 0.7 | 0.4               |
| BP1A4M      | 0.7 | 0.4               |
| BP1F3P      | 0.7 | 0.4               |
| BP1J3P      | 0.7 | 0.4               |
| BP1L2Q      | 0.7 | 0.4               |
| BP1L3N      | 0.7 | 0.4               |
| CE1A3Q      | 0.7 | 0.4               |
| CE1F3P      | 0.7 | 0.4               |
| CE1N2R      | 0.7 | 0.4               |
| CE2A3Q      | 0.7 | 0.4               |
| CE2F3P      | 0.7 | 0.4               |
| F14A        | 0.7 | 0.3               |
| F14B        | 0.7 | 0.3               |
| F14C        | 0.7 | 0.3               |
| F14D        | 0.7 | 0.3               |
| F14E        | 0.7 | 0.3               |
| F14F        | 0.7 | 0.3               |
| F14H        | 0.7 | 0.3               |
| F14J        | 0.7 | 0.3               |
| FA1A3Q      | 0.7 | 0.4               |
| FA1A4M      | 0.7 | 0.4               |

| Part Number  | Ea  | $\lambda_b$ (FIT) |
|--------------|-----|-------------------|
| FA1A4P       | 0.7 | 0.4               |
| FA1A4Z       | 0.7 | 0.4               |
| FA1F4M       | 0.7 | 0.4               |
| FA1F4N       | 0.7 | 0.4               |
| FA1F4Z       | 0.7 | 0.4               |
| FA1L3M       | 0.7 | 0.4               |
| FA1L3N       | 0.7 | 0.4               |
| FA1L3Z       | 0.7 | 0.4               |
| FA1L4L       | 0.7 | 0.4               |
| FA1L4M       | 0.7 | 0.4               |
| FA1L4Z       | 0.7 | 0.4               |
| FA1LAL       | 0.7 | 0.4               |
| FB1A3M       | 0.7 | 0.4               |
| FB1A4A       | 0.7 | 0.4               |
| FB1A4M       | 0.7 | 0.4               |
| FB1F3P       | 0.7 | 0.4               |
| FB1J3P       | 0.7 | 0.4               |
| FB1L2Q       | 0.7 | 0.4               |
| FB1L3N       | 0.7 | 0.4               |
| FN1A3Q       | 0.7 | 0.4               |
| FN1A4M       | 0.7 | 0.4               |
| FN1A4P       | 0.7 | 0.4               |
| FN1A4Z       | 0.7 | 0.4               |
| FN1F4M       | 0.7 | 0.4               |
| FN1F4N       | 0.7 | 0.4               |
| FN1F4Z       | 0.7 | 0.4               |
| FN1L3M       | 0.7 | 0.4               |
| FN1L3N       | 0.7 | 0.4               |
| FN1L3Z       | 0.7 | 0.4               |
| FN1L4L       | 0.7 | 0.4               |
| FN1L4M       | 0.7 | 0.4               |
| FN1L4Z       | 0.7 | 0.4               |
| FP1A3M       | 0.7 | 0.4               |
| FP1A4A       | 0.7 | 0.4               |
| FP1A4M       | 0.7 | 0.4               |
| FP1F3P       | 0.7 | 0.4               |
| FP1J3P       | 0.7 | 0.4               |
| FP1L2Q       | 0.7 | 0.4               |
| FP1L3N       | 0.7 | 0.4               |
| GA1***Series | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| GA1A3Q      | 0.7 | 0.4               |
| GA1A4M      | 0.7 | 0.4               |
| GA1A4P      | 0.7 | 0.4               |
| GA1A4Z      | 0.7 | 0.4               |
| GA1F4M      | 0.7 | 0.4               |
| GA1F4N      | 0.7 | 0.4               |
| GA1F4Z      | 0.7 | 0.4               |
| GA1L3M      | 0.7 | 0.4               |
| GA1L3N      | 0.7 | 0.4               |
| GA1L3Z      | 0.7 | 0.4               |
| GA1L4L      | 0.7 | 0.4               |
| GA1L4M      | 0.7 | 0.4               |
| GA1L4Z      | 0.7 | 0.4               |
| GA4***      | 0.7 | 0.4               |
| GN1A3M      | 0.7 | 0.4               |
| GN1A3Q      | 0.7 | 0.4               |
| GN1A4M      | 0.7 | 0.4               |
| GN1A4P      | 0.7 | 0.4               |
| GN1A4Z      | 0.7 | 0.4               |
| GN1F4M      | 0.7 | 0.4               |
| GN1F4N      | 0.7 | 0.4               |
| GN1F4Z      | 0.7 | 0.4               |
| GN1L3M      | 0.7 | 0.4               |
| GN1L3N      | 0.7 | 0.4               |
| GN1L3Z      | 0.7 | 0.4               |
| GN1L4L      | 0.7 | 0.4               |
| GN1L4M      | 0.7 | 0.4               |
| GN1L4Z      | 0.7 | 0.4               |
| GN4***      | 0.7 | 0.4               |
| HC1A3M      | 0.7 | 0.4               |
| HC1A4A      | 0.7 | 0.4               |
| HC1F2Q      | 0.7 | 0.4               |
| HC1F3M      | 0.7 | 0.4               |
| HC1F3P      | 0.7 | 0.4               |
| HC1L2N      | 0.7 | 0.4               |
| HC1L2Q      | 0.7 | 0.4               |
| HC2A4A      | 0.7 | 0.5               |
| HD1A3M      | 0.7 | 0.5               |
| HD1A4A      | 0.7 | 0.5               |
| HD1A4M      | 0.7 | 0.5               |

| Part Number  | Ea  | $\lambda b$ (FIT) |
|--------------|-----|-------------------|
| HD1F2Q       | 0.7 | 0.5               |
| HD1F3P       | 0.7 | 0.5               |
| HD1L2Q       | 0.7 | 0.5               |
| HD1L3N       | 0.7 | 0.5               |
| HD2A3M       | 0.7 | 0.5               |
| HD2A4A       | 0.7 | 0.5               |
| HD2A4M       | 0.7 | 0.5               |
| HD2F2Q       | 0.7 | 0.5               |
| HD2F3P       | 0.7 | 0.5               |
| HD2L2Q       | 0.7 | 0.5               |
| HD2L3N       | 0.7 | 0.5               |
| HQ1A3M       | 0.7 | 0.5               |
| HQ1A4A       | 0.7 | 0.5               |
| HQ1F2Q       | 0.7 | 0.5               |
| HQ1F3M       | 0.7 | 0.5               |
| HQ1F3P       | 0.7 | 0.5               |
| HQ1L2N       | 0.7 | 0.5               |
| HQ1L2Q       | 0.7 | 0.5               |
| HR1A3M       | 0.7 | 0.5               |
| HR1A4A       | 0.7 | 0.5               |
| HR1A4M       | 0.7 | 0.5               |
| HR1F2Q       | 0.7 | 0.5               |
| HR1F3P       | 0.7 | 0.5               |
| HR1L2Q       | 0.7 | 0.5               |
| HR1L3N       | 0.7 | 0.5               |
| LS53         | 0.7 | 0.1               |
| LS953        | 0.7 | 0.1               |
| LS954        | 0.7 | 0.1               |
| LS955        | 0.7 | 0.1               |
| N13T1        | 0.7 | 0.4               |
| N13T2        | 0.7 | 0.4               |
| N213         | 0.7 | 0.3               |
| N313         | 0.7 | 0.3               |
| N413         | 0.7 | 0.4               |
| N413*        | 0.7 | 0.4               |
| ND487R1T     | 0.7 | 0.8               |
| NFD15        | 0.7 | 1.8               |
| NL****Series | 0.7 | 10                |
| NNCD[ ]A     | 0.7 | 0.4               |
| NNCD[ ]B     | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| NNCD[ ]C    | 0.7 | 0.3               |
| NNCD[ ]D    | 0.7 | 0.3               |
| NNCD[ ]E    | 0.7 | 0.3               |
| NNCD[ ]F    | 0.7 | 0.4               |
| NNCD[ ]G    | 0.7 | 0.6               |
| NNCD[ ]H    | 0.7 | 0.3               |
| NNCD[ ]J    | 0.7 | 0.3               |
| NNCD[ ]LG   | 0.7 | 0.6               |
| NNCD[ ]LH   | 0.7 | 0.6               |
| NNCD[ ]MF   | 0.7 | 0.3               |
| NNCD[ ]MG   | 0.7 | 0.3               |
| NNCD[ ]PG   | 0.7 | 0.3               |
| NNCD[ ]PH   | 0.7 | 0.3               |
| NNCD[ ]PL   | 0.7 | 0.3               |
| NNCD[ ]RG   | 0.7 | 0.3               |
| NNCD[ ]RH   | 0.7 | 0.3               |
| NNCD[ ]RL   | 0.7 | 0.3               |
| NP32N055IDE | 0.7 | 0.8               |
| NP32N055ILE | 0.7 | 1.8               |
| NP55N10CLD  | 0.7 | 0.8               |
| NP80N03CLE  | 0.7 | 0.8               |
| NP80N03KDE  | 0.7 | 0.9               |
| NP80N03KLE  | 0.7 | 2.4               |
| NP80N055DLE | 0.7 | 2.4               |
| NP88N04EHE  | 0.7 | 2.9               |
| NSAD[ ]F    | 0.7 | 0.3               |
| NSAD[ ]H    | 0.7 | 0.3               |
| NSAD[ ]S    | 0.7 | 0.3               |
| RD[ ]A      | 0.7 | 0.3               |
| RD[ ]B      | 0.7 | 0.5               |
| RD[ ]D      | 0.7 | 1.8               |
| RD[ ]E      | 0.7 | 0.3               |
| RD[ ]ES     | 0.7 | 0.3               |
| RD[ ]EW     | 0.7 | 0.3               |
| RD[ ]F      | 0.7 | 0.5               |
| RD[ ]FM     | 0.7 | 0.6               |
| RD[ ]HS     | 0.7 | 0.3               |
| RD[ ]JS     | 0.7 | 0.3               |
| RD[ ]K      | 0.7 | 0.3               |
| RD[ ]L      | 0.7 | 0.3               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| RD[ ]M      | 0.7 | 0.3               |
| RD[ ]MW     | 0.7 | 0.3               |
| RD[ ]P      | 0.7 | 0.6               |
| RD[ ]S      | 0.7 | 0.3               |
| RD[ ]SL     | 0.7 | 0.2               |
| RD[ ]UH     | 0.7 | 0.3               |
| RD[ ]UJ     | 0.7 | 0.3               |
| RD[ ]UM     | 0.7 | 0.3               |
| RD[ ]Z      | 0.7 | 0.3               |
| RD12FM      | 0.7 | 0.6               |
| UPA1424     | 0.7 | 0.9               |
| UPA1426H    | 0.7 | 1.7               |
| UPA1427H    | 0.7 | 1.7               |
| UPA1428AH   | 0.7 | 1.7               |
| UPA1428H    | 0.7 | 1.7               |
| UPA1434H    | 0.7 | 1.7               |
| UPA1436H    | 0.7 | 1.7               |
| UPA1437H    | 0.7 | 1.7               |
| UPA1438H    | 0.7 | 1.7               |
| UPA1453H    | 0.7 | 1.7               |
| UPA1454H    | 0.7 | 1.7               |
| UPA1456H    | 0.7 | 1                 |
| UPA1457H    | 0.7 | 0.5               |
| UPA1458H    | 0.7 | 0.9               |
| UPA1478H    | 0.7 | 0.9               |
| UPA1500B    | 0.7 | 3.3               |
| UPA1500BH   | 0.7 | 3.3               |
| UPA1501H    | 0.7 | 2                 |
| UPA1520BH   | 0.7 | 1.7               |
| UPA1520H    | 0.7 | 3.3               |
| UPA1522H    | 0.7 | 1.7               |
| UPA1523BH   | 0.7 | 1.7               |
| UPA1523H    | 0.7 | 2                 |
| UPA1524H    | 0.7 | 3.3               |
| UPA1527H    | 0.7 | 3.3               |
| UPA1552AH   | 0.7 | 3.3               |
| UPA1552BH   | 0.7 | 3.3               |
| UPA1552H    | 0.7 | 3.3               |
| UPA1556A    | 0.7 | 1.7               |
| UPA1556H    | 0.7 | 1.7               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPA1570H    | 0.7 | 1                 |
| UPA1572BH   | 0.7 | 1.9               |
| UPA1572H    | 0.7 | 1                 |
| UPA1600CX   | 0.7 | 2.1               |
| UPA1600GS   | 0.7 | 2.1               |
| UPA1601CX   | 0.7 | 2                 |
| UPA1601GS   | 0.7 | 2                 |
| UPA1602GS   | 0.7 | 0.8               |
| UPA1603CX   | 0.7 | 1.5               |
| UPA1604CX   | 0.7 | 1.5               |
| UPA1700A    | 0.7 | 0.9               |
| UPA1700AG   | 0.7 | 0.9               |
| UPA1700G    | 0.7 | 0.9               |
| UPA1701AG   | 0.7 | 0.9               |
| UPA1701G    | 0.7 | 0.9               |
| UPA1702G    | 0.7 | 0.9               |
| UPA1703     | 0.7 | 0.9               |
| UPA1703G    | 0.7 | 0.9               |
| UPA1704G    | 0.7 | 0.9               |
| UPA1705G    | 0.7 | 0.9               |
| UPA1706G    | 0.7 | 0.9               |
| UPA1707G    | 0.7 | 0.8               |
| UPA1710AG   | 0.7 | 0.9               |
| UPA1710G    | 0.7 | 0.9               |
| UPA1711G    | 0.7 | 0.9               |
| UPA1712G    | 0.7 | 0.9               |
| UPA1713G    | 0.7 | 0.9               |
| UPA1714G    | 0.7 | 0.9               |
| UPA1716G    | 0.7 | 0.8               |
| UPA1717G    | 0.7 | 0.9               |
| UPA1720G    | 0.7 | 0.9               |
| UPA1721G    | 0.7 | 0.9               |
| UPA1722     | 0.7 | 0.9               |
| UPA1722G    | 0.7 | 0.9               |
| UPA1723G    | 0.7 | 0.9               |
| UPA1725G    | 0.7 | 0.9               |
| UPA1726G    | 0.7 | 0.9               |
| UPA1727G    | 0.7 | 0.9               |
| UPA1728G    | 0.7 | 0.9               |
| UPA1730G    | 0.7 | 0.9               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPA1731G    | 0.7 | 0.9               |
| UPA1740TP   | 0.7 | 1.6               |
| UPA1743TP   | 0.7 | 1.6               |
| UPA1750G    | 0.7 | 0.9               |
| UPA1751     | 0.7 | 0.9               |
| UPA1751G    | 0.7 | 0.9               |
| UPA1752     | 0.7 | 0.9               |
| UPA1752G    | 0.7 | 0.9               |
| UPA1753AG   | 0.7 | 0.9               |
| UPA1754G    | 0.7 | 0.9               |
| UPA1755G    | 0.7 | 0.9               |
| UPA1756G    | 0.7 | 0.9               |
| UPA1757G    | 0.7 | 0.9               |
| UPA1758G    | 0.7 | 0.9               |
| UPA1759G    | 0.7 | 1.2               |
| UPA1760G    | 0.7 | 1.2               |
| UPA1763G    | 0.7 | 1.2               |
| UPA1764G    | 0.7 | 1.2               |
| UPA1770G    | 0.7 | 1.2               |
| UPA1772G    | 0.7 | 0.9               |
| UPA1774G    | 0.7 | 1.1               |
| UPA1790G    | 0.7 | 0.9               |
| UPA1792G    | 0.7 | 1.2               |
| UPA1793     | 0.7 | 1.2               |
| UPA1800G    | 0.7 | 0.9               |
| UPA1801G    | 0.7 | 0.9               |
| UPA1801GR   | 0.7 | 0.8               |
| UPA1802G    | 0.7 | 0.9               |
| UPA1802GR   | 0.7 | 0.9               |
| UPA1803GR   | 0.7 | 0.9               |
| UPA1805G    | 0.7 | 0.9               |
| UPA1807GR   | 0.7 | 0.9               |
| UPA1809GR   | 0.7 | 0.9               |
| UPA1810GR   | 0.7 | 0.8               |
| UPA1814GR   | 0.7 | 0.9               |
| UPA1815GR   | 0.7 | 0.9               |
| UPA1816GR   | 0.7 | 0.9               |
| UPA1817GR   | 0.7 | 0.9               |
| UPA1830GR   | 0.7 | 0.9               |
| UPA1840GR   | 0.7 | 0.9               |

| Part Number | Ea  | $\lambda b$ (FIT) |
|-------------|-----|-------------------|
| UPA1850G    | 0.7 | 0.9               |
| UPA1850GR   | 0.7 | 0.9               |
| UPA1851G    | 0.7 | 0.9               |
| UPA1852G    | 0.7 | 0.9               |
| UPA1852GR   | 0.7 | 0.9               |
| UPA1853GR   | 0.7 | 1.2               |
| UPA1855G    | 0.7 | 0.9               |
| UPA1855GR   | 0.7 | 0.9               |
| UPA1856GR   | 0.7 | 0.9               |
| UPA1857GR   | 0.7 | 1.1               |
| UPA1870GR   | 0.7 | 1.2               |
| UPA1871GR   | 0.7 | 1.2               |
| UPA1872GR   | 0.7 | 1.2               |
| UPA1873     | 0.7 | 1.2               |
| UPA1873GR   | 0.7 | 1.2               |
| UPA1874GR   | 0.7 | 1.2               |
| UPA1890GR   | 0.7 | 0.9               |
| UPA1900TE   | 0.7 | 0.9               |
| UPA1910TE   | 0.7 | 0.9               |
| UPA1911ATE  | 0.7 | 0.9               |
| UPA1911TE   | 0.7 | 0.9               |
| UPA1912TE   | 0.7 | 0.9               |
| UPA1913TE   | 0.7 | 0.9               |
| UPA1914TE   | 0.7 | 0.9               |
| UPA1915TE   | 0.7 | 0.8               |
| UPA1916TE   | 0.7 | 0.9               |
| UPA1917TE   | 0.7 | 0.9               |
| UPA1918TE   | 0.7 | 0.9               |
| UPA1919TE   | 0.7 | 0.9               |
| UPA1950TE   | 0.7 | 1.1               |
| UPA1951TE   | 0.7 | 1.1               |
| UPA1970TE   | 0.7 | 1.1               |
| UPA2001C    | 0.7 | 15                |
| UPA2001GR   | 0.7 | 15                |
| UPA2002C    | 0.7 | 15                |
| UPA2002GR   | 0.7 | 15                |
| UPA2003C    | 0.7 | 15                |
| UPA2003GR   | 0.7 | 15                |
| UPA2004C    | 0.7 | 15                |
| UPA2004GR   | 0.7 | 15                |

CHAPTER 5 BASIC FAILURE RATES FOR EACH PRODUCT

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPA2450TL   | 0.7 | 1.3               |
| UPA2451TL   | 0.7 | 1.3               |
| UPA2452TL   | 0.7 | 1.3               |
| UPA2502TM   | 0.7 | 0.9               |
| UPA2503TM   | 0.7 | 0.9               |
| UPA2700GR   | 0.7 | 0.9               |
| UPA2700TP   | 0.7 | 0.9               |
| UPA2701G    | 0.7 | 0.9               |
| UPA2701GR   | 0.7 | 0.9               |
| UPA2701TP   | 0.7 | 0.9               |
| UPA2702GR   | 0.7 | 0.9               |
| UPA2702TP   | 0.7 | 0.9               |
| UPA2706GR   | 0.7 | 0.9               |
| UPA2708TP   | 0.7 | 1.7               |
| UPA2712GR   | 0.7 | 0.9               |
| UPA2714GR   | 0.7 | 0.9               |
| UPA2716GR   | 0.7 | 0.9               |
| UPA2730TP   | 0.7 | 1.8               |
| UPA2750GR   | 0.7 | 1.2               |
| UPA2751GR   | 0.7 | 1.2               |
| UPA2752GR   | 0.7 | 1.4               |
| UPA2753GR   | 0.7 | 1.2               |
| UPA2754GR   | 0.7 | 1.2               |
| UPA2755GR   | 0.7 | 1.2               |
| UPA2800AGR  | 0.7 | 15                |
| UPA2981C    | 0.7 | 15                |
| UPA2982C    | 0.7 | 15                |
| UPA2987GS   | 0.7 | 15                |
| UPA38A      | 0.7 | 0.4               |
| UPA500T     | 0.7 | 0.6               |
| UPA501T     | 0.7 | 0.6               |
| UPA502T     | 0.7 | 0.8               |
| UPA503T     | 0.7 | 0.8               |
| UPA504T     | 0.7 | 0.4               |
| UPA505T     | 0.7 | 0.8               |
| UPA508TE    | 0.7 | 0.4               |
| UPA53C      | 0.7 | 15                |
| UPA54HA     | 0.7 | 15                |
| UPA56C      | 0.7 | 15                |
| UPA570T     | 0.7 | 0.4               |

| Part Number | Ea  | $\lambda_b$ (FIT) |
|-------------|-----|-------------------|
| UPA571T     | 0.7 | 0.4               |
| UPA572T     | 0.7 | 1                 |
| UPA573T     | 0.7 | 0.8               |
| UPA57C      | 0.7 | 15                |
| UPA600T     | 0.7 | 0.4               |
| UPA602T     | 0.7 | 0.8               |
| UPA603T     | 0.7 | 0.8               |
| UPA604T     | 0.7 | 0.6               |
| UPA605T     | 0.7 | 0.4               |
| UPA606T     | 0.7 | 0.8               |
| UPA607T     | 0.7 | 0.8               |
| UPA608T     | 0.7 | 0.4               |
| UPA609T     | 0.7 | 0.4               |
| UPA60A      | 0.7 | 0.3               |
| UPA610TA    | 0.7 | 0.8               |
| UPA6118C    | 0.7 | 15                |
| UPA611TA    | 0.7 | 0.8               |
| UPA622TT    | 0.7 | 0.8               |
| UPA64       | 0.7 | 15                |
| UPA64HA     | 0.7 | 15                |
| UPA650TT    | 0.7 | 0.8               |
| UPA651TT    | 0.7 | 0.8               |
| UPA670T     | 0.7 | 0.6               |
| UPA671T     | 0.7 | 0.6               |
| UPA672T     | 0.7 | 0.8               |
| UPA673T     | 0.7 | 0.4               |
| UPA674T     | 0.7 | 0.6               |
| UPA679TB    | 0.7 | 1                 |
| UPA67C      | 0.7 | 15                |
| UPA79C      | 0.7 | 15                |
| UPA80C      | 0.7 | 15                |
| UPA81C      | 0.7 | 15                |
| UPA841TC    | 0.7 | 0.6               |

## APPENDIX SUPPLEMENTARY EXPLANATIONS

### 1. The meaning of “FIT”

“FIT” stands for “failure in time” and is one of the measures of reliability.

1 FIT corresponds to the following failure rates.

Failure of 1 in 1,000,000,000 products in 1 hour

Failure of 1 ppm in 1,000 hours

Failure of 1 in 100,000 products in 10,000 hours (about 1 year)

### 2. Reference temperature

This document shows the basic failure rate ( $\lambda_b$ ) at an ambient or junction temperature of 55°C. If a product is used in an environment with a temperature other than this reference temperature of 55°C, the basic failure rate will have to be adjusted via the temperature parameter in **CHAPTER 2 PROCEDURE FOR CALCULATING FAILURE RATE**.

Because most equipment is generally handled under an internal temperature condition of  $T_A = 55^\circ\text{C}$ , semiconductor devices also have a uniform reference temperature of 55°C.

### 3. Concept of activation energy

Activation energy is the minimum amount of externally applied energy required to shift matter from a physically and chemically normal state to a deteriorated state.

Activation energy is derived from the result of executing a life test under multiple stress conditions, and depends on the failure mode.

However, defects rarely occur in life tests executed on individual products because these tests are terminated after a certain time. In this case, a typical activation energy value of 0.7 eV is used.

| Failure Mode        | Mechanism                      | Activation Energy (eV) |
|---------------------|--------------------------------|------------------------|
| Short circuit, leak | Oxide film damage              | 0.3                    |
| Open wiring         | Corrosion of aluminum          | 0.6 to 0.9             |
| Open wiring         | Damage due to electromigration | 0.6                    |
| Functional defect   | $V_T$ shift                    | 1.0 to 1.4             |

### 4. Recommended conditions

The recommended conditions indicate the range within which a product should be used, as prescribed in NEC Electronics' data books and specification documents. These conditions include:

- (1) Electrical specifications
- (2) Operating environment, such as operating temperature and humidity
- (3) Mechanical stress

**5. FIT and MTTF**

In addition to FIT, MTTF and MTBF are also used as measures of reliability.

MTTF stands for “mean time to failure”, and is used for products that cannot be repaired. MTTF is used for semiconductor devices because they fall into this “unreparable” category.

MTBF stands for “mean time between failures”, and is used for products that can be repaired.

In the random failure area, MTTF is expressed as the inverse of the failure rate, as follows.

$$MTTF = \frac{1}{\lambda} \times 10^9 \text{ (time)}$$

For a set that consists of multiple components, the reliability is generally predicted by aggregating the failure rates for each of the components used.

The MTBF or MTTF of a set consisting of “n” components (with failure rates of λ1, λ2, λ3, ..., λn) can therefore be calculated as follows (assuming that the failure of even one component leads directly to the failure of the whole set).

$$MTTF \text{ (or MTBF)} = \frac{1}{(\lambda_1 + \lambda_2 + \dots + \lambda_n)} \times 10^9 \text{ (time)}$$

For this reason, NEC Electronics provides customers with the failure rate value rather than the MTTF value.

**6. Relationship between failure rate provided by NEC Electronics and failure rate estimated using MIL-HDBK-217**

The failure rate provided by NEC Electronics is derived from life test results and commercial data, using the MIL-HDBK-217 standard as a reference.

MIL-HDBK-217 is based on commercial data from military electronic equipment. With this model, because the Department of Defence minorly uses the MIL-HDBK-217 standard when procuring military electronic equipment from equipment manufacturers, sufficient allowances have been made for the safety coefficients with regard to each factor.

The calculated failure rate therefore has a tendency to be larger than the rate calculated by other methods.

The rate calculated using the MIL standard is 10 to 100 times higher than the rate calculated by NEC Electronics for the same product.

| Product Type                | NEC Electronics' Failure Rate (FIT) | MIL-HDBK-217 (FIT) |
|-----------------------------|-------------------------------------|--------------------|
| CMOS LSI (100,000 elements) | 20                                  | 1200               |
| Bipolar IC (100 elements)   | 5                                   | 230                |
| Transistor                  | 0.4                                 | 4                  |

**7. Guarantee of failure rate**

The failure rates provided by NEC Electronics are estimated values and cannot be guaranteed.

In order to guarantee the failure rate, it would be necessary to obtain more exact data by conducting life tests for each individual product over a long period of time and using a large number of samples.

Conducting such tests would be very difficult in terms of time, facilities, and cost.