



S8050

NPN SILICON TRANSISTOR

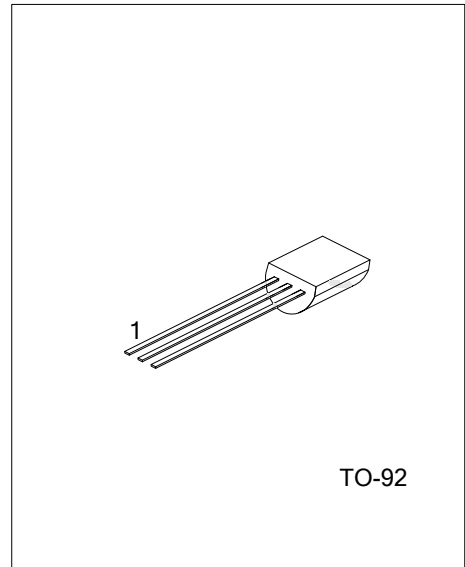
LOW VOLTAGE HIGH
CURRENT SMALL SIGNAL
NPN TRANSISTOR

DESCRIPTION

The UTC **S8050** is a low voltage high current small signal NPN transistor, designed for Class B push-pull audio amplifier and general purpose applications.

FEATURES

- * Collector current up to 700mA
- * Collector-Emitter voltage up to 20 V
- * Complementary to S8550



Lead-free: S8050L
Halogen-free: S8050G

ORDERING INFORMATION

Order Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
S8050-xx-T92-B	S8050L-xx-T92-B	S8050G-xx-T92-B	TO-92	E	B	C	Tape Box
S8050-xx-T92-K	S8050L-xx-T92-K	S8050G-xx-T92-K	TO-92	E	B	C	Bulk

<p>S8050L-xx-T92-B</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Plating</p>	<p>(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) xx: refer to Classification of h_{FE2} (4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATING (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V _{CBO}	30	V
Collector-Emitter Voltage	V _{CEO}	20	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	700	mA
Collector Dissipation(Ta=25°C)	P _C	1	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-65 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

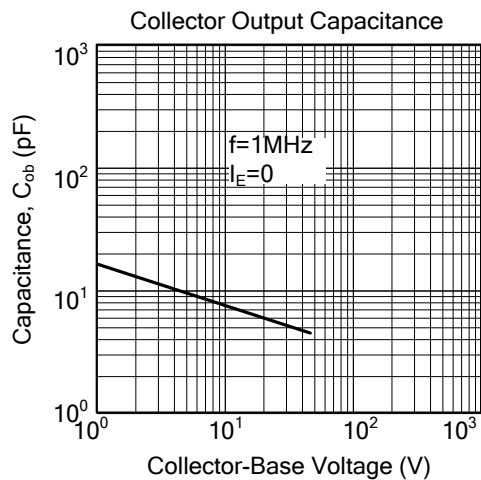
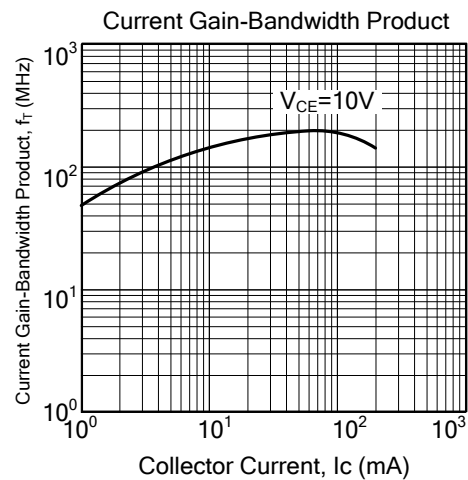
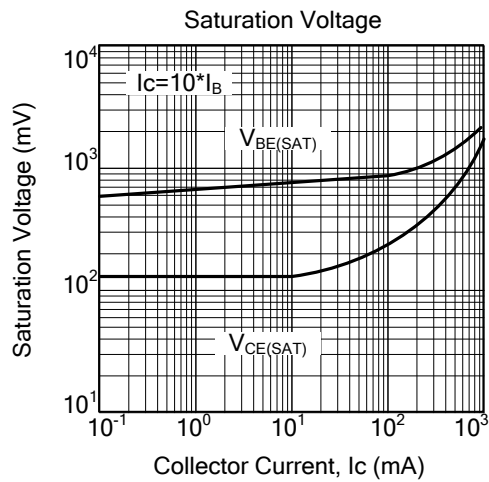
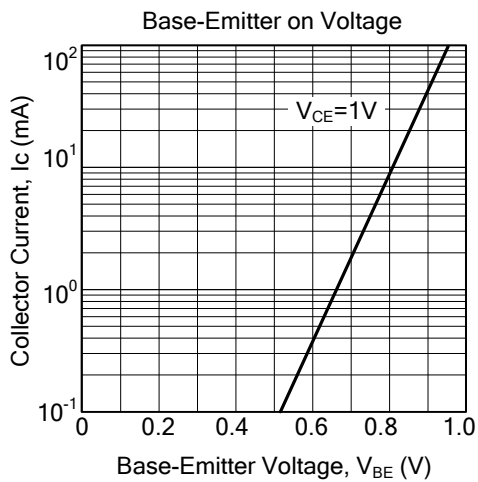
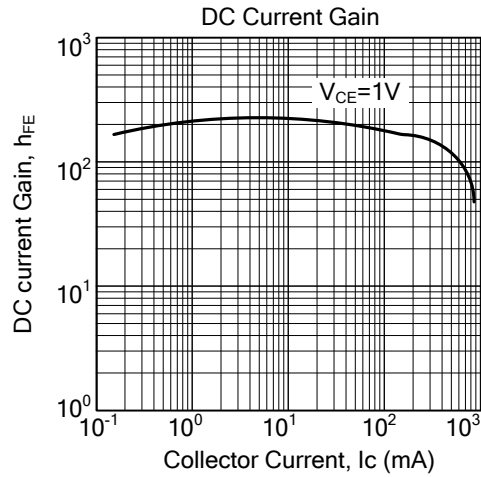
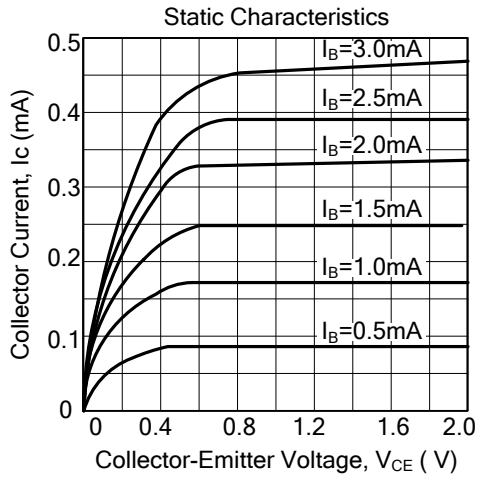
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CBO}	I _C =100μA, I _E =0	30			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =1mA, I _B =0	20			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =100μA, I _C =0	5			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =30V, I _E =0			1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =5V, I _C =0			100	nA
DC Current Gain	h _{FE1}	V _{CE} =1V, I _C =1mA	100			
	h _{FE2}	V _{CE} =1V, I _C =150 mA	120	110	400	
	h _{FE3}	V _{CE} =1V, I _C =500mA	40			
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =500mA, I _B =50mA			0.5	V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C =500mA, I _B =50mA			1.2	V
Base-Emitter Saturation Voltage	V _{BE}	V _{CE} =1V, I _C =10mA			1.0	V
Current Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =50mA	100			MHz
Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		9.0		pF

■ CLASSIFICATION OF h_{FE2}

RANK	C	D	E
RANGE	120-200	160-300	280-400

■ TYPICAL CHARACTERISTICS



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