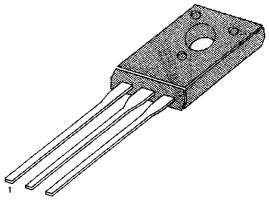
MJE200 NPN EPITAXIAL SILICON TRANSISTOR

LOW COLLECTOR-EMITTER SATURATION VOLTAGE
HIGH CURRENT GAIN-BANDWIDTH PRODUCT-MIN f_T=65MHz I_C=100mA

- Complement to MJE210

TO-126



1. Emitter 2. Collector 3. Base

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector- Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter- Base Voltage	V_{EBO}	8	V
Collector Current	I_C	5	A
Collector Dissipation (T_C=25°C)	P_C	15	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_C=25°C)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector Emitter Sustaining Voltage	V_{CEO}(sus)	I_C=10mA, I_B=0	25		V
Collector Cutoff Current	I_{CBO}	V_{CB}=40V, I_E=0		100	nA
		V_{CB}=40V, I_E=0, Tj=125°C		100	μA
Emitter Cutoff Current	I_{EBO}	V_{BE}=8V, I_c=0		100	nA
DC Current Gain	h_{FE}	V_{CE}=1V, I_C=500mA	70		
		V_{CE}=1V, I_C=2A	45	180	
		V_{CE}=2V, I_C=5A	10		
Collector- Emitter Saturation Voltage	V_{CE}(sat)	I_C=500mA, I_B=50mA		0.3	V
		I_C=2A, I_B=200mA		0.75	V
		I_C=5A, I_B=1A		1.8	V
Base- Emitter Saturation Voltage	V_{BE}(sat)	I_C=5A, I_B=1A		2.5	V
Base-Emitter On Voltage	V_{BE}(on)	V_{CE}=1V, I_C=2A		1.6	V
Current Gain- Bandwidth Product	f_T	V_{CE}=10V, I_C=100mA, f=10MHz	65		MHz
Output Capacitance	C_{OB}	V_{CB}=10V, I_E=0, f=0.1MHz		80	pF

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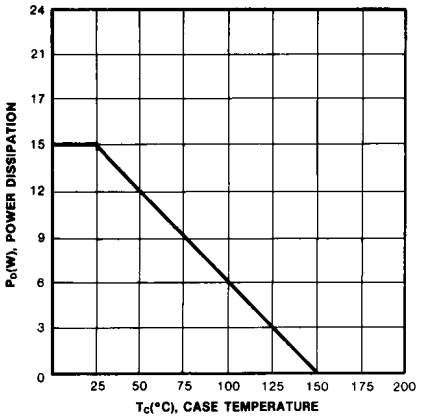
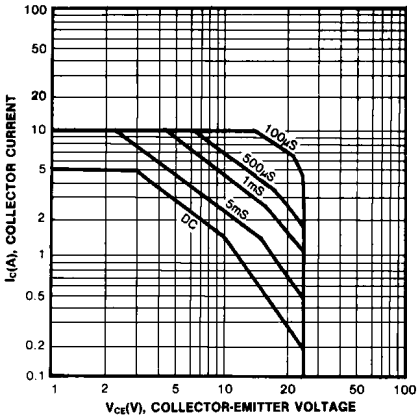
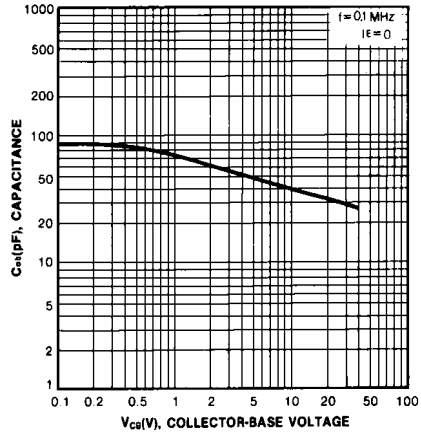
POWER DERATING



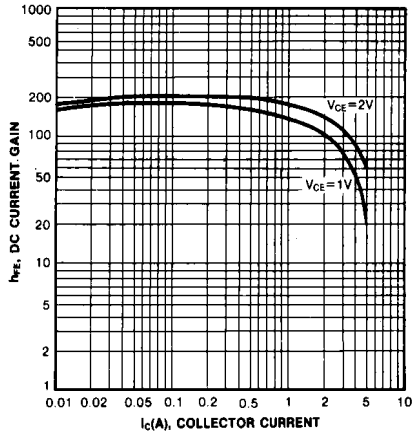
FORWARD BIAS SAFE OPERATING AREA



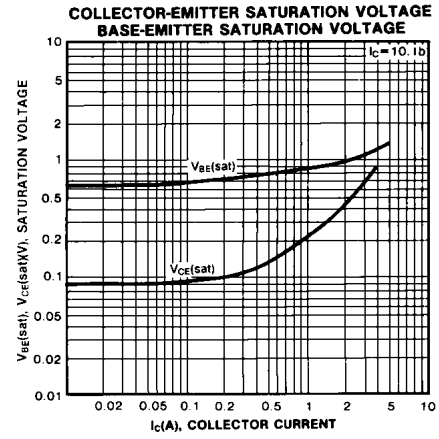
COLLECTOR OUTPUT CAPACITANCE



DC CURRENT GAIN



COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE



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