FAIRCHILD
SEMICONDUCTOR®

MJE200

Feature
- Low Collector-Emitter Saturation Voltage
- High Current Gain Bandwidth Product : f_T=65MHz @ I_C=100mA (Min.)
- Complement to MJE210

TO-126

1. Emitter   2.Collector   3.Base

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

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

Electrical Characteristics T_C=25°C unless otherwise noted

| Symbol	Parameter	Test Condition	Min.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=10mA, I_B=0	25		V
I_{CBO}	Collector Cut-off Current	V_{CB}=40V, I_E=0		100	nA
		V_{CB}=40V, I_E=0 @ T_J=125°C		100	μA
I_{EBO}	Emitter Cut-off Current	V_{BE}=8V, I_C=0		100	nA
h_{FE}	DC Current Gain	V_{CE}=1V, I_C=500mA	70		
		V_{CE}=1V, I_C=2A	45	180	
		V_{CE}=2V, I_C=5A	10		
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C=500mA, I_B=50mA		0.3	V
		I_C=2A, I_C=200mA		0.75	V
		I_C=5A, I_B=1A		1.8	V
V_{BE}(sat)	Base- Emitter Saturation Voltage	I_C=5A, I_B=1A		2.5	V
V_{BE}(on)	Base-Emitter ON Voltage	V_{CE}=1V, I_C=2A		1.6	V
f_T	Current Gain Bandwidth Product	V_{CE}=10V, I_C=100mA	65		MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=0.1MHz		80	pF

Typical Characteristics
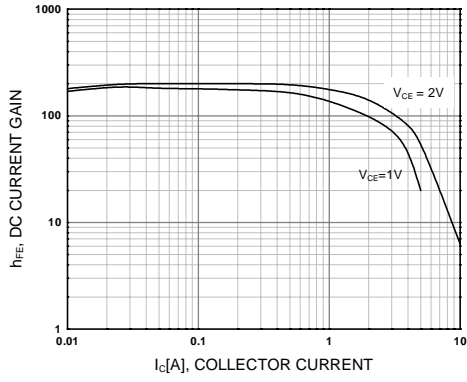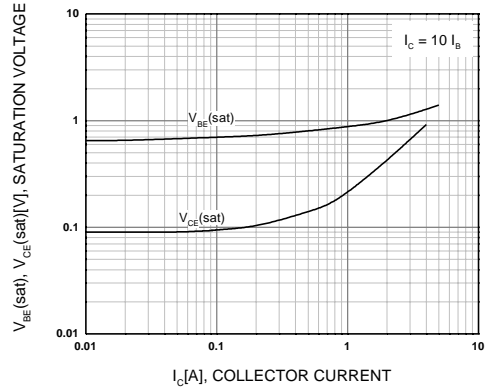
Figure 1. DC current Gain

**Figure 2. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage**
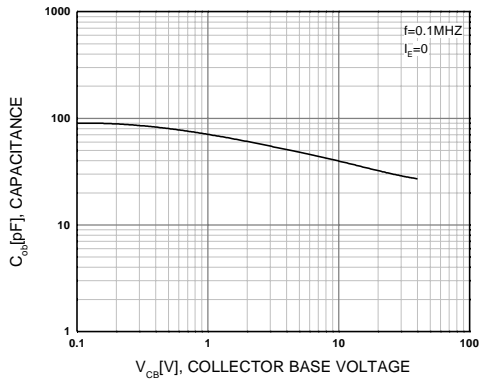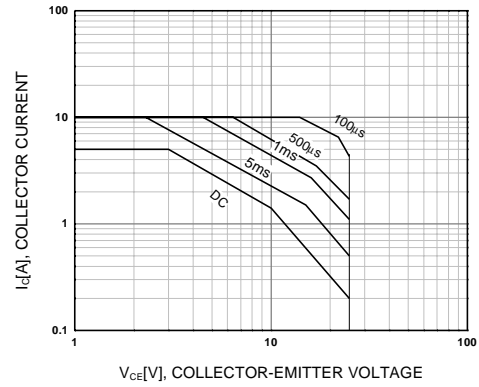
Figure 3. Collector Output Capacitance
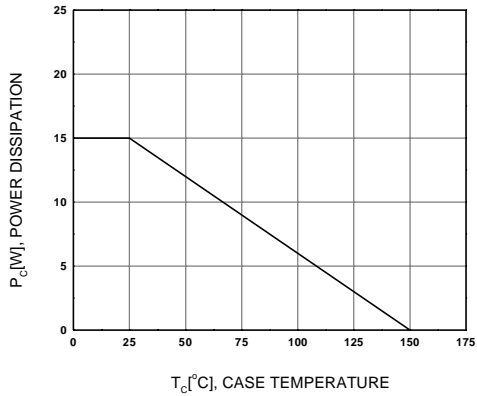
Figure 4. Safe Operating Area

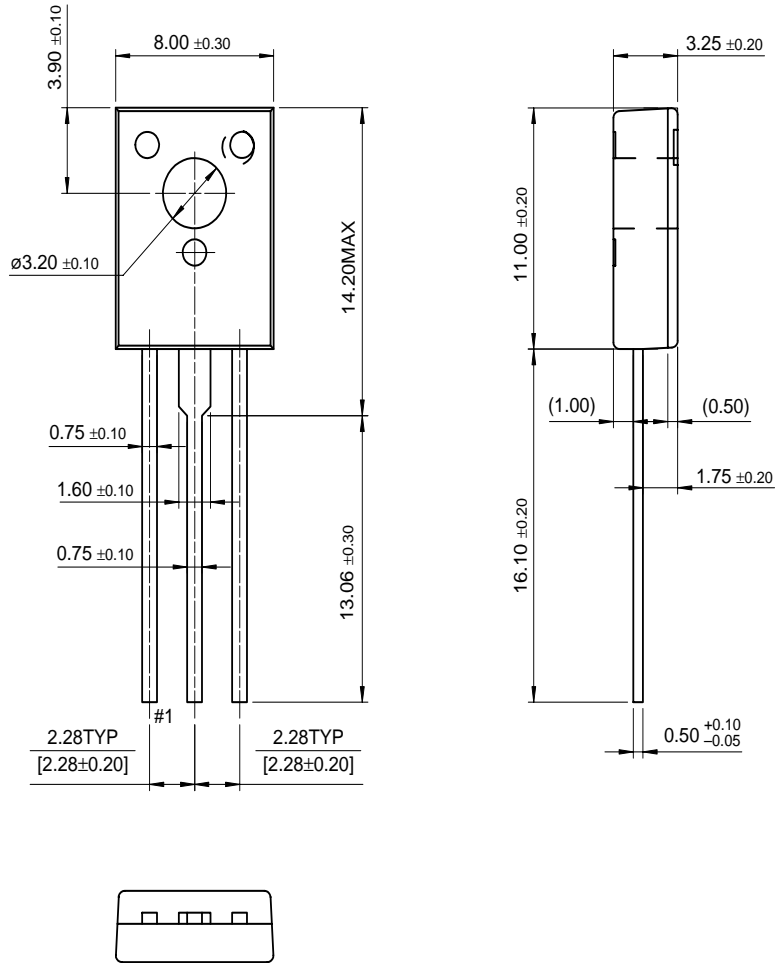**Figure 5. Power Derating**

Package Demensions

TO-126

3.90 ±0.10

8.00 ±0.30

3.25 ±0.20

ø3.20 ±0.10

14.20MAX

11.00 ±0.20

0.75 ±0.10

1.60 ±0.10

0.75 ±0.10

13.06 ±0.30

16.10 ±0.20

(1.00)

(0.50)

1.75 ±0.20

#1

2.28TYP
[2.28±0.20]

2.28TYP
[2.28±0.20]

0.50 +0.10 −0.05

Dimensions in Millimeters

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Definition of Terms

Datasheet Identification	Product Status	Definition
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MJE200
NPN Epitaxial Silicon Transistor

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Features

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
MJE200TSTU	Full Production	N/A	TO-126	3	RAIL
MJE200STU	Full Production	$0.159	TO-126	3	RAIL

* 1,000 piece Budgetary Pricing

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