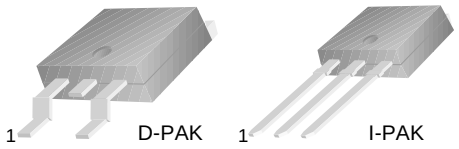
FAIRCHILD
SEMICONDUCTOR®

MJD200

D-PAK for Surface Mount Applications

- High DC Current Gain
- Built-in a Damper Diode at E-C
- Lead Formed for Surface Mount Applications (No Suffix)
- Straight Lead (I-PAK, " - I " Suffix)



1.Base 2.Collector 3.Emitter

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_B	Base Current	1	A
I_C	Collector Current (DC)	5	A
I_{CP}	Collector Current (Pulse)	10	A
P_C	Collector Dissipation (T_C = 25°C)	12.5	W
	Collector Dissipation (T_a = 25°C)	1.4	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
V_{CBO}(sus)	* Collector Emitter Sustaining Voltage	I_C=100mA, I_B=0	25		V
I_{CEO}	Collector Cut-off Current	V_{CB}=40V, I_E=0		100	nA
I_{CBO}	Collector Cut-off Current	V_{EBO}=8V, I_C=0		100	nA
I_{EBO}	Emitter Cut-off Current	V_{CE}=1V, I_C=500mA	70		
h_{FE}	* DC Current Gain	V_{CE}=1V, I_C=2A V_{CE}=2V, I_C=5A	45 10	180	
V_{CE} (sat)	* Collector-Emitter Saturation Voltage	I_C=500mA, I_B=50mA I_C=2A, I_B=200mA I_C=5A, I_B=1A		0.3 0.75 1.8	V V V
V_{BE} (sat)	* Base-Emitter Saturation Voltage	I_C=5A, I_B=2A		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

* Pulse Test: PW≤300μs, Duty Cycle≤2%

Typical Characteristics

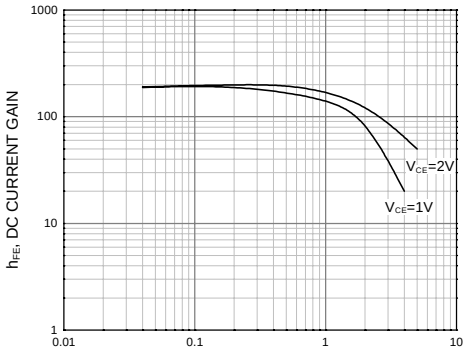


Figure 1. DC current Gain

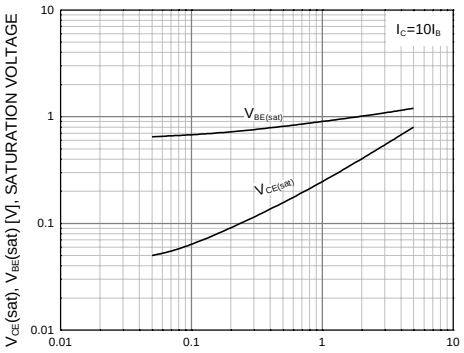


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

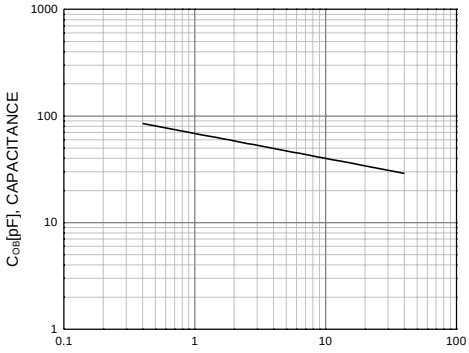


Figure 3. Collector Output Capacitance

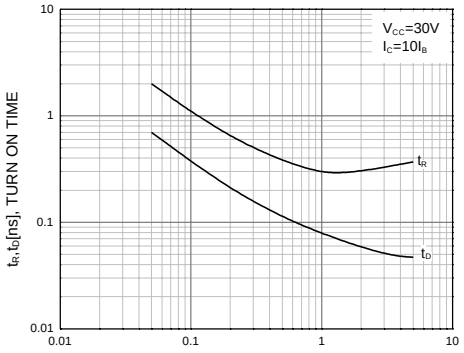


Figure 4. Turn On Time

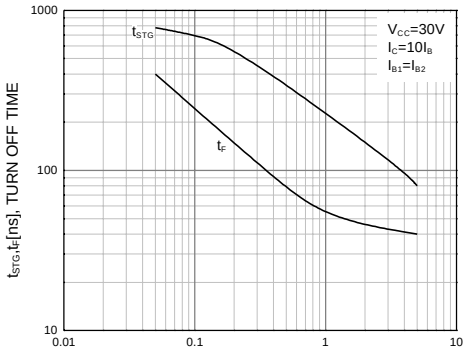


Figure 5. Turn Off Time

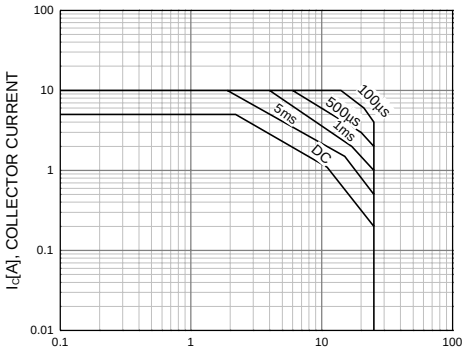


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

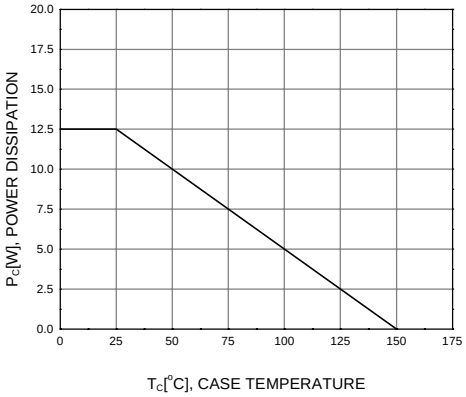
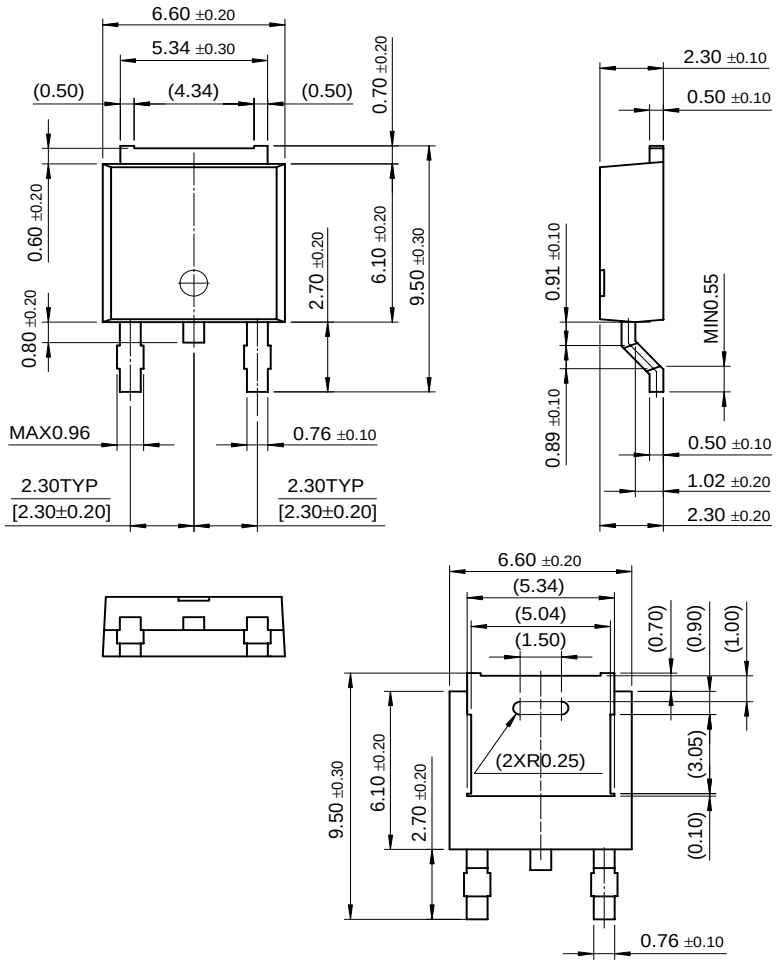


Figure 7. Power Derating

Package Demensions

D-PAK



Dimensions in Millimeters

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Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

MJD200
NPN Epitaxial Silicon Transistor

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Features

D-PAK for Surface Mount Applications

- High DC Current Gain
- Built-in a Damper Diode at E-C
- Lead Formed for Surface Mount Applications (No Suffix)
- Straight Lead (I-PAK, "-I" Suffix)

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
MJD200TF	Full Production	$0.28	TO-252(DPAK)	2	TAPE REEL

* 1,000 piece Budgetary Pricing

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