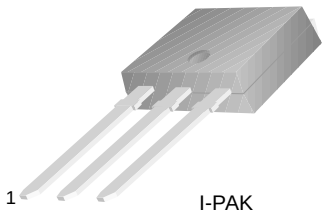
FAIRCHILD
SEMICONDUCTOR®

MJD1222

Power Amplifier Applications

- High DC Current Gain
- Low Collector-Emitter Saturation Voltage
- Built in a Damper Diode at E-C
- Darlington TR
- Complement to MJD907



I-PAK

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	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	3	A
I_B	Base Current	0.3	A
P_C	Collector Dissipation (T_C=25°C)	15	W
	Collector Dissipation (T_a=25°C)	1	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.	Typ.	Max.	Units
BV_{CEO}	*Collector-Emitter Breakdown Voltage	I_C = 25mA, I_B = 0	40			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 60V, I_E = 0			20	µA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V, I_C = 0			2.5	mA
h_{FE1} h_{FE2}	*DC Current Gain	V_{CE} = 2V, I_C = 1A V_{CE} = 2V, I_C = 3A	2000 1000			
V_{CE}(sat)	*Collector-Emitter Saturation Voltage	I_C = 2A, I_B = 4mA			1.5	V
V_{BE}(sat)	*Base-Emitter Saturation Voltage	I_C = 2A, I_B = 4mA			2	V
t_{ON}	Turn ON Time	V_{CC} = 30V, I_C = 3A I_{B1} = -I_{B2} = 6mA R_L = 10Ω		0.1		µs
t_{STG}	Storage Time			1		µs
t_F	Fall Time			0.2		µs

* Pulse Test: PW ≤ 300ms, Duty Cycle ≤ 2%

Typical Characteristics

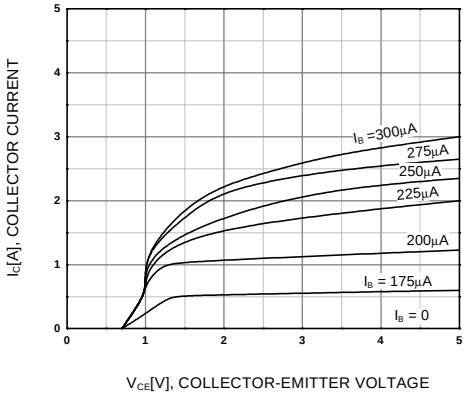


Figure 1. Static Characteristic

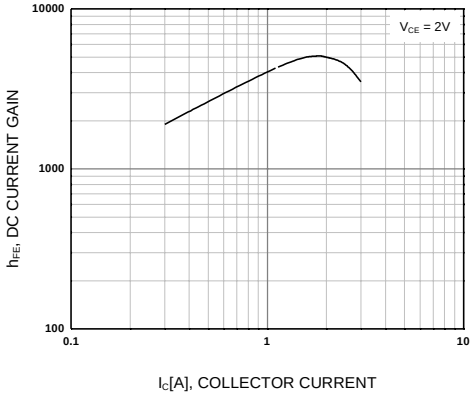


Figure 2. DC current Gain

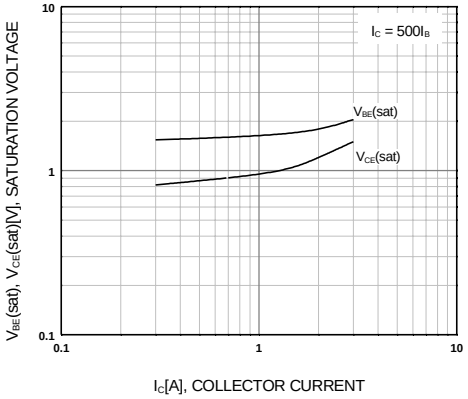


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

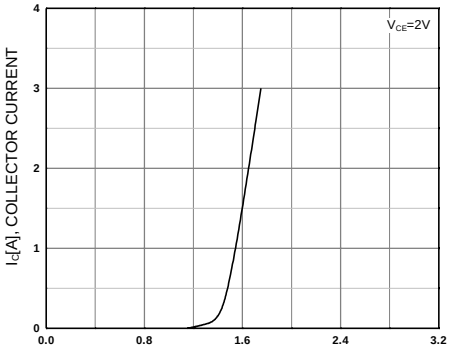


Figure 4. Base-Emitter On Voltage

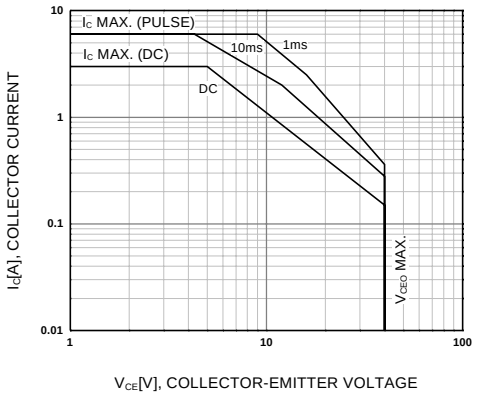


Figure 5. Safe Operating Area

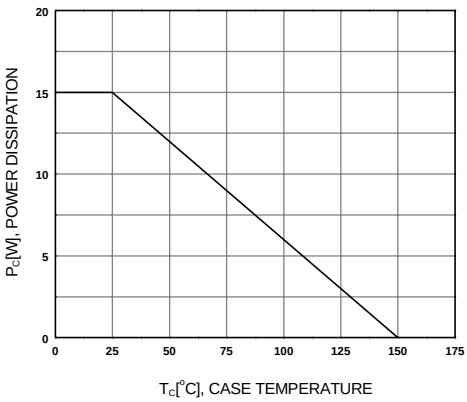
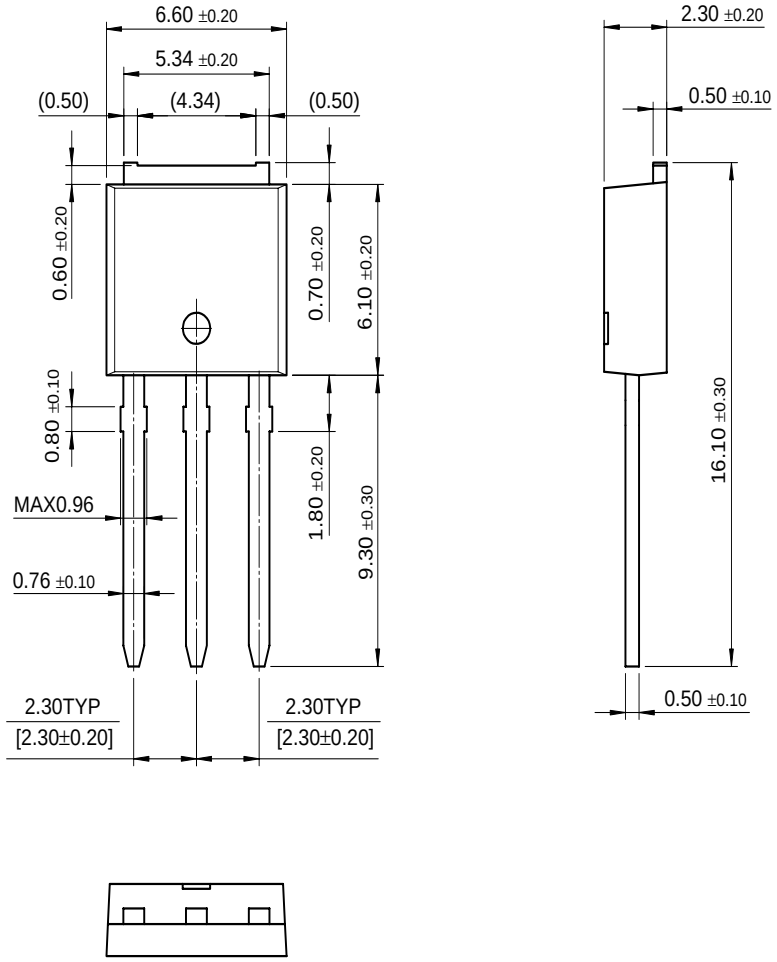


Figure 6. Power Derating

Package Demensions

I-PAK



Dimensions in Millimeters

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