

MJD45H11

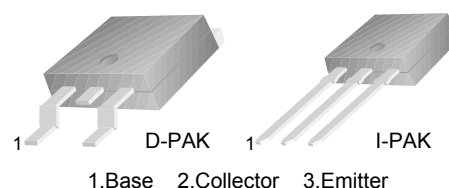
PNP Epitaxial Silicon Transistor

Applications

- General Purpose Power and Switching Such as Output or Driver Stages in Applications
- D-PAK for Surface Mount Applications

Features

- Load Formed for Surface Mount Application (No Suffix)
- Straight Lead (I-PAK: “-I” Suffix)
- Electrically Similar to Popular MJE45H
- Fast Switching Speeds
- Low Collector Emitter Saturation Voltage



Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	- 80	V
V_{EBO}	Emitter-Base Voltage	- 5	V
I_C	Collector Current (DC)	- 8	A
I_{CP}	Collector Current (Pulse)	- 16	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	20	W
	Collector Dissipation ($T_A=25^\circ\text{C}$)	1.75	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 to +150	$^\circ\text{C}$

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$V_{CEO(sus)}$	*Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}$, $I_B = 0$	- 80			V
I_{CEO}	Collector Cut-off Current	$V_{CE} = -80\text{V}$, $I_B = 0$			- 10	μA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = -5\text{V}$, $I_C = 0$			- 50	μA
h_{FE}	*DC Current Gain	$V_{CE} = -1\text{V}$, $I_C = -2\text{A}$ $V_{CE} = -1\text{V}$, $I_C = -4\text{A}$	60 40			
$V_{CE(sat)}$	*Collector-Emitter Saturation Voltage	$I_C = -8\text{A}$, $I_B = -0.4\text{A}$			- 1	V
$V_{BE(on)}$	*Base-Emitter Saturation Voltage	$I_C = -8\text{A}$, $I_B = -0.8\text{A}$			- 1.5	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -10\text{A}$, $I_C = -0.5\text{A}$		40		MHz
C_{ob}	Collector Capacitance	$V_{CB} = -10\text{V}$, $f = 1\text{MHz}$		230		pF
t_{ON}	Turn On Time	$I_C = -5\text{A}$ $I_{B1} = -I_{B2} = -0.5\text{A}$		135		ns
t_{STG}	Storage Time			500		ns
t_F	Fall Time			100		ns

* Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

Typical Performance Characteristics

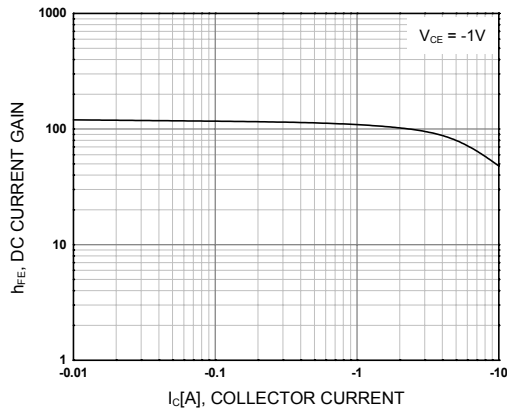


Figure 1. DC current Gain

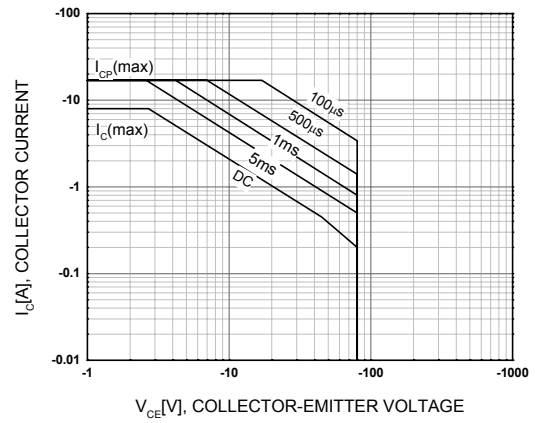


Figure 2. Safe Operating Area

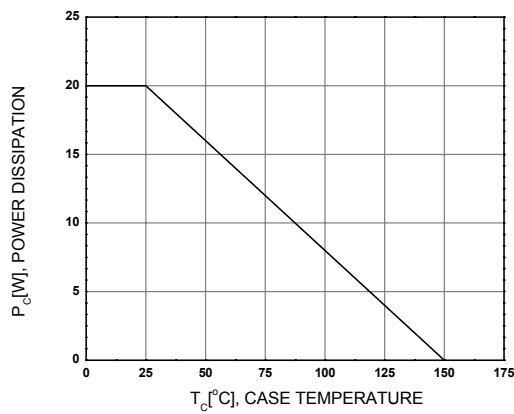


Figure 3. Power Derating vs T_C

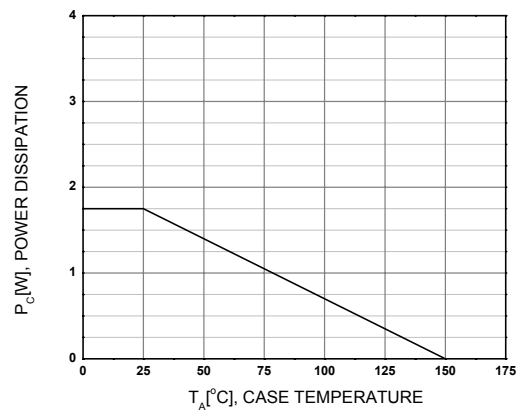
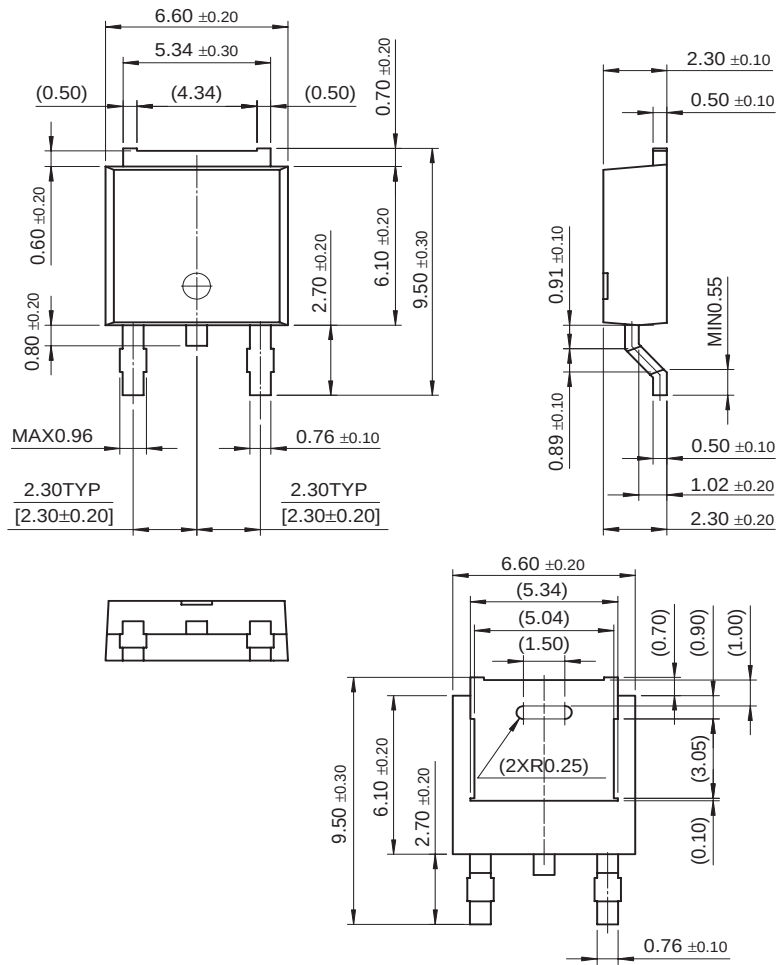


Figure 4. Power Derating vs T_A

Physical Dimension

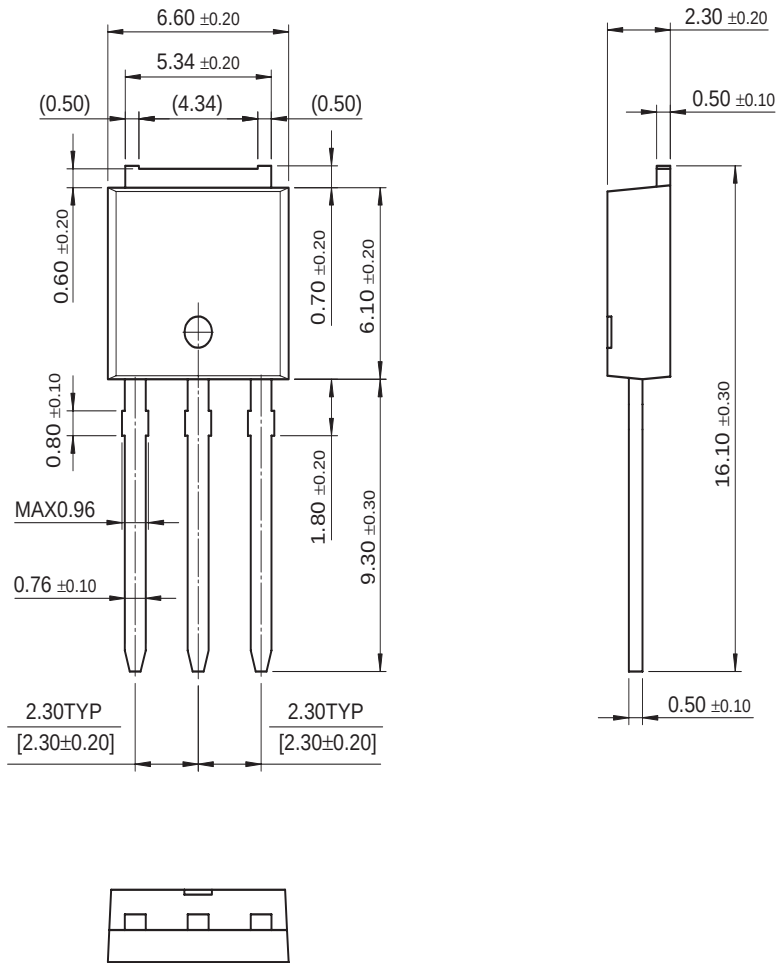
D-PAK



Dimensions in Millimeters

Physical Dimension (Continued)

I-PAK

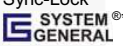


Dimensions in Millimeters



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