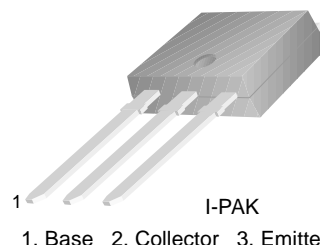


**High Speed Switching**

- Low Collector-Emitter Saturation Voltage
- High speed Switching :  $t_F=1\mu s$  (Max.) @  $I_C=0.8A$
- Collector-Emitter Voltage :  $V_{CEO}=400V$
- Lead formed for Surface Mount Applications (D-PAK, " -D " Suffix)



**NPN Triple Diffused Planar Silicon Transistor**

**Absolute Maximum Ratings**  $T_C=25^\circ C$  unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current	2	A
$I_B$	Base Current	0.5	A
$P_C$	Collector Dissipation ( $T_C=25^\circ C$ )	20	W
$P_C$	Collector Dissipation ( $T_a=25^\circ C$ )	1	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{STG}$	Storage Temperature	- 55 ~ 150	$^\circ C$

**Electrical Characteristics**  $T_C=25^\circ C$  unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
$BV_{CEO}$	Collector-Base Breakdown Voltage	$I_C = 1mA, I_E = 0$	500		V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10mA, I_B = 0$	400		V
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = 400V, I_E = 0$		100	$\mu A$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = 7V, I_C = 0$		1	mA
$h_{FE1}$ $h_{FE2}$	DC Current Gain	$V_{CE} = 5V, I_C = 0.1A$ $V_{CE} = 5V, I_C = 1A$	20 8		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1A, I_B = 0.2A$		1	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 1A, I_B = 0.2A$		1.5	V
$t_{ON}$	Turn ON Time	$V_{CC} = 200V, I_C = 0.8A$		1	$\mu s$
$t_{STG}$	Storage Time	$I_{B1} = -I_{B2} = 0.08A$		2.5	$\mu s$
$t_F$	Fall Time	$R_L = 250\Omega$		1	$\mu s$

# Typical Characteristics

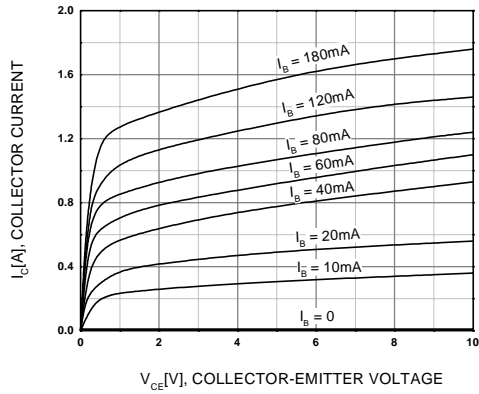


Figure 1. Static Characteristic

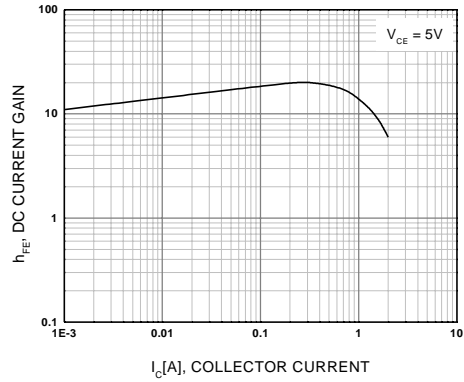


Figure 2. DC current Gain

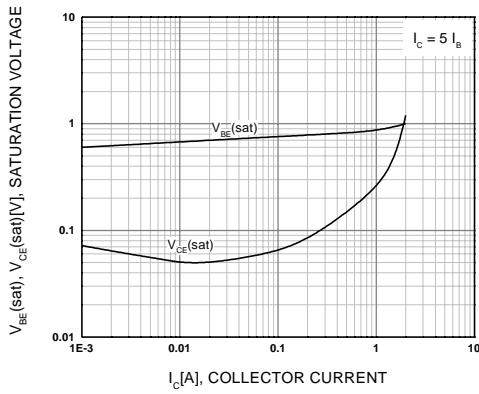


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

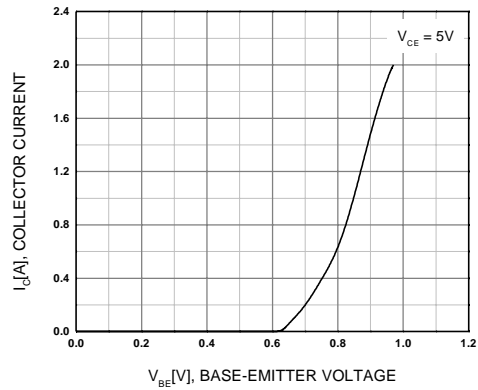


Figure 4. Base-Emitter on Voltage

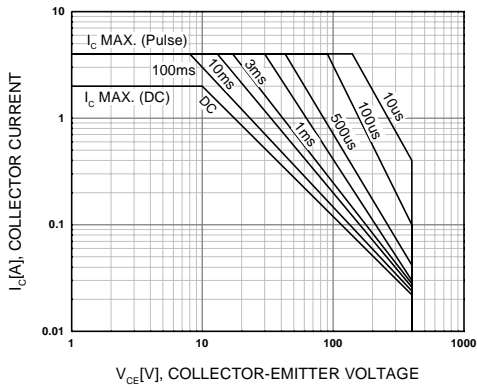


Figure 5. Safe Operating Area

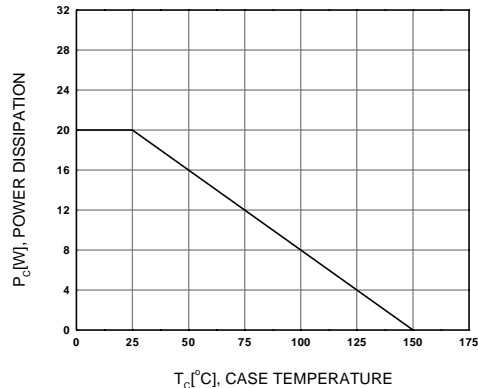
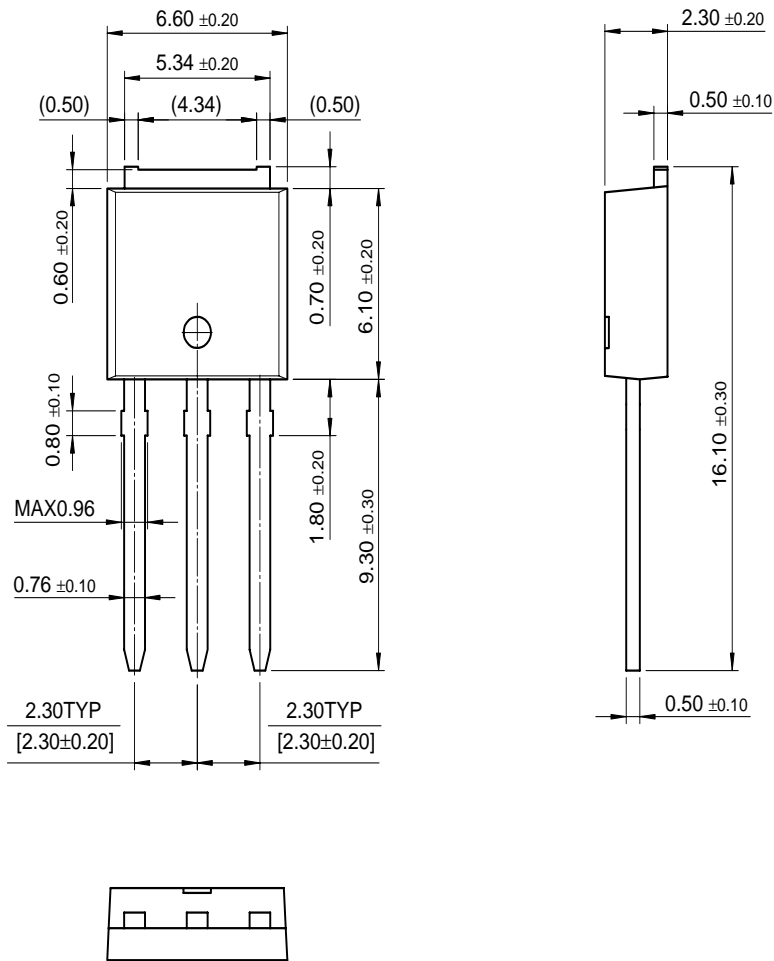


Figure 6. Power Derating

# Package Dimensions

## I-PAK



Dimensions in Millimeters

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