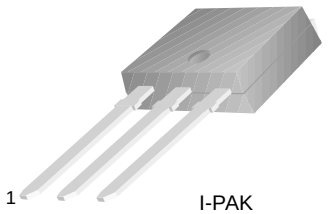
FAIRCHILD
SEMICONDUCTOR®

KSC3233

High Speed Switching

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



I-PAK

1. Base 2. Collector 3. Emitter

NPN Triple Diffused Planar Silicon Transistor

Absolute Maximum Ratings T_C=25°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°C)	20	W
P_C	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.	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	μA
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_{B1} = -I_{B2} = 0.08A R_L = 250Ω		1	μs
t_{STG}	Storage Time			2.5	μs
t_F	Fall Time			1	μs

Typical Characteristics

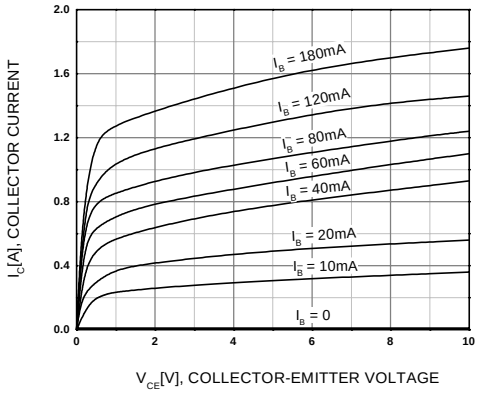


Figure 1. Static Characteristic

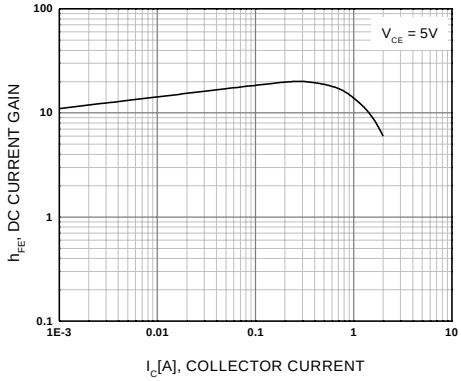


Figure 2. DC current Gain

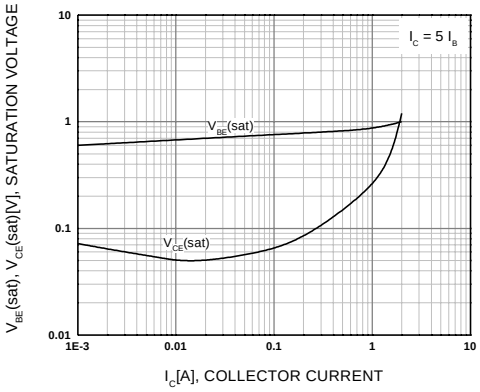


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

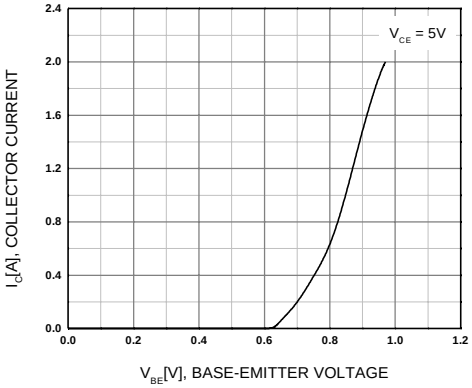


Figure 4. Base-Emitter on Voltage

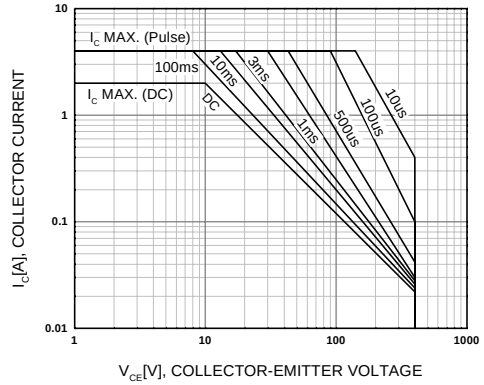


Figure 5. Safe Operating Area

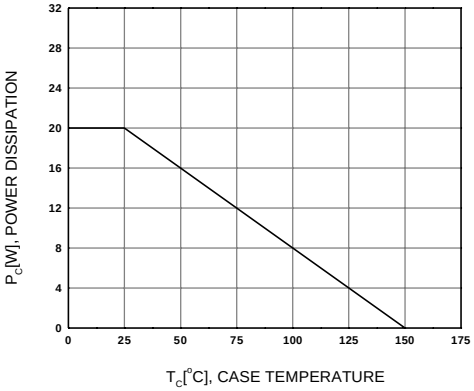
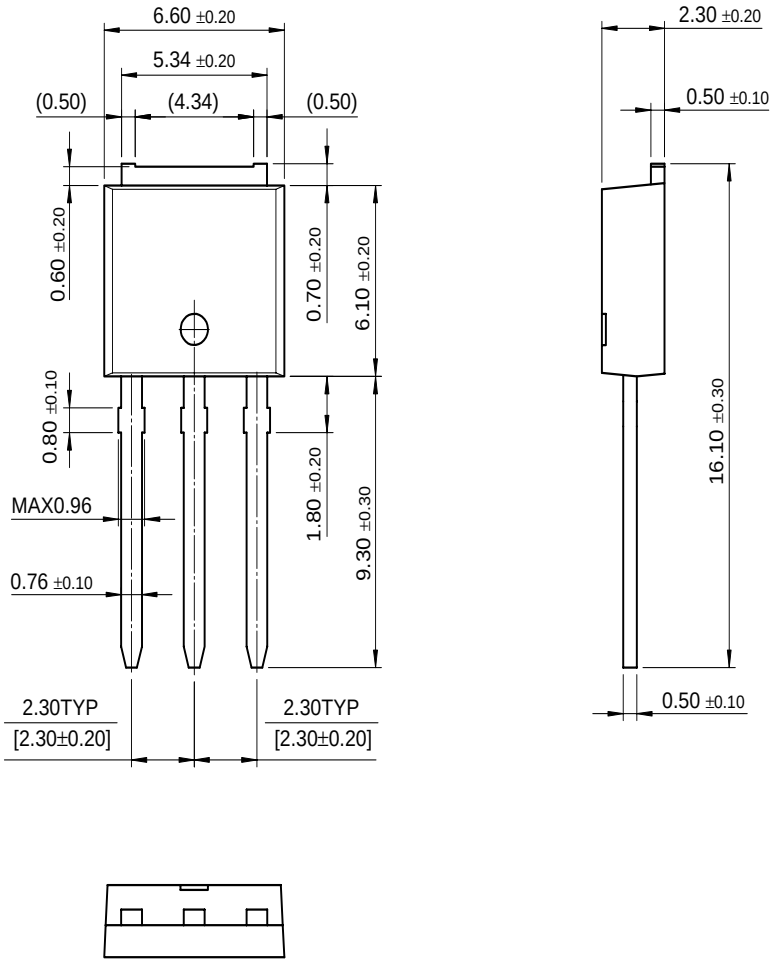


Figure 6. Power Derating

Package Demensions

I-PAK



Dimensions in Millimeters

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