

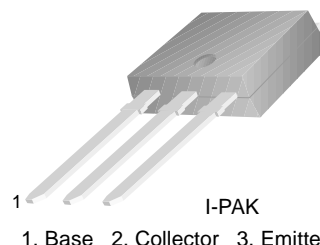


**THE DATASHEET OF
KSC3233DTF**



High Speed Switching

- Low Collector-Emitter Saturation Voltage
- High speed Switching : $t_F=1\mu s$ (Max.) @ $I_C=0.8A$
- Collector-Emitter Voltage : $V_{CE0}=400V$
- 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	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	μs
t_{STG}	Storage Time	$I_{B1} = -I_{B2} = 0.08A$		2.5	μs
t_F	Fall Time	$R_L = 250\Omega$		1	μs

Typical Characteristics

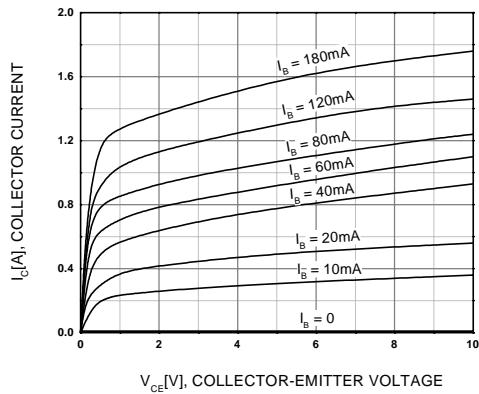


Figure 1. Static Characteristic

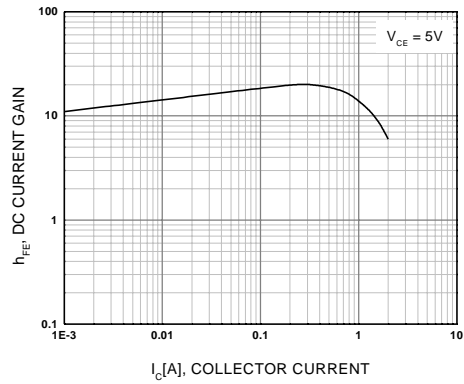


Figure 2. DC current Gain

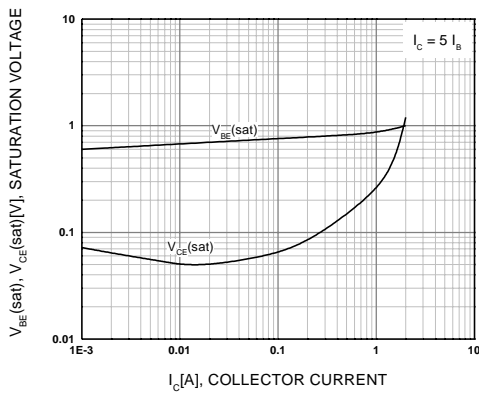


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

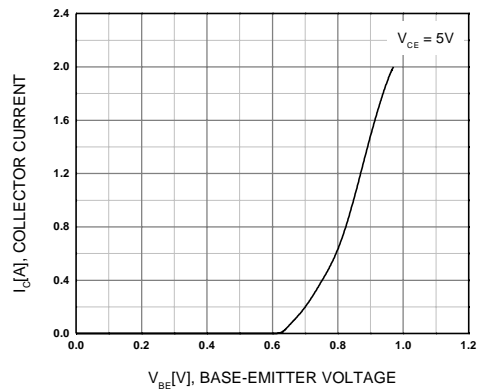


Figure 4. Base-Emitter on Voltage

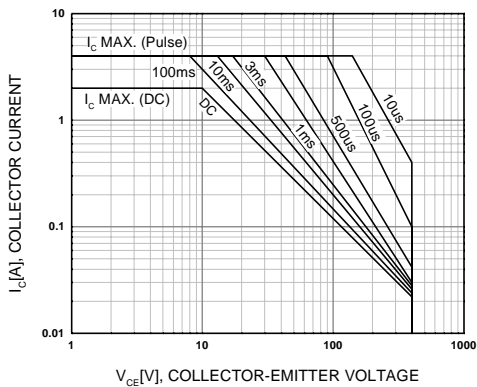


Figure 5. Safe Operating Area

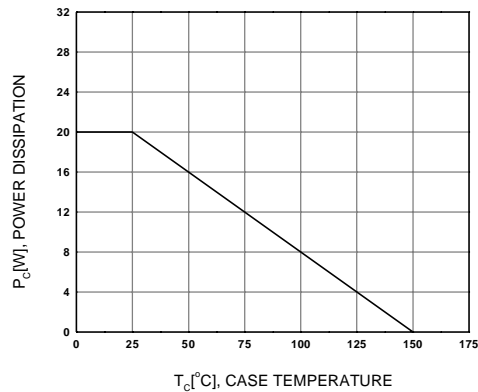
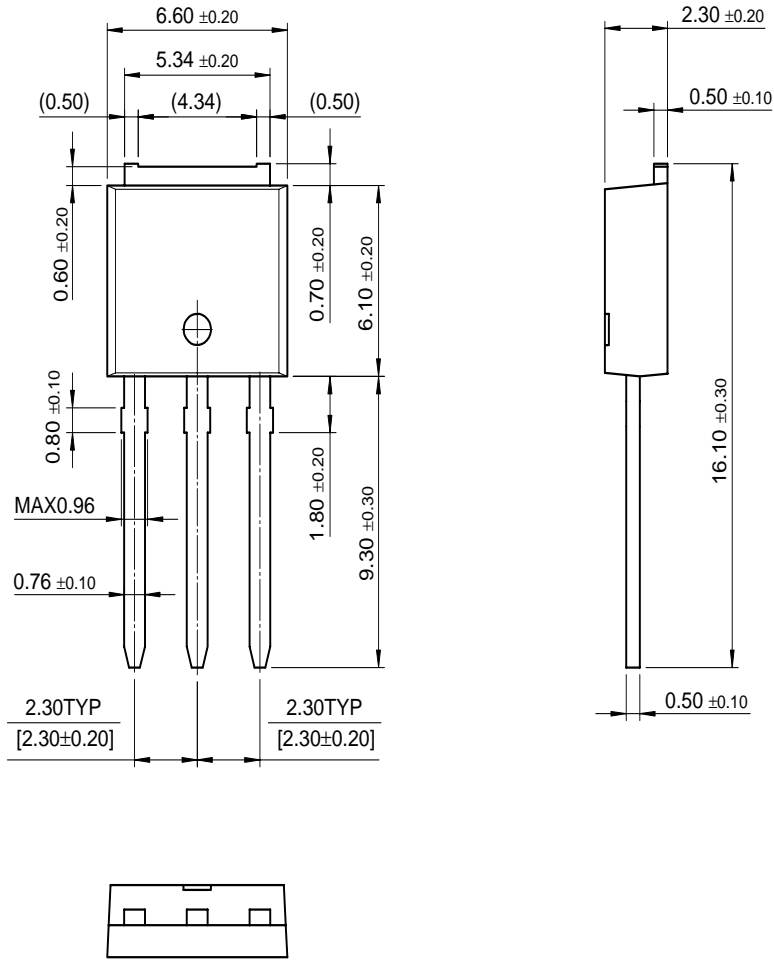


Figure 6. Power Derating

Package Dimensions

I-PAK



Dimensions in Millimeters

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