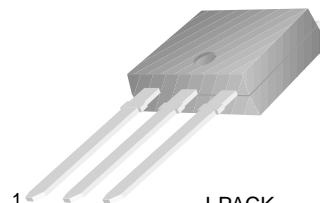


KSA1244

High Current Switching

- Low Collector-Emitter Saturation Voltage
- Complement to KSC3074



I-PACK
1. Base 2. Collector 3. Emitter

PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Ratings	Units
V_{CB0}	Collector-Base Voltage	- 60	V
V_{CEO}	Collector-Emitter Voltage	- 50	V
V_{EBO}	Emitter-Base Voltage	- 5	V
I_B	Base Current	- 1	A
I_C	Collector Current	- 5	A
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$)	1	W
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	20	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}, I_B = 0$	- 50			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -50\text{V}, I_E = 0$			-1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -5\text{V}, I_C = 0$			-1	μA
h_{FE1} h_{FE2}	DC Current Gain	$V_{CE} = -1\text{V}, I_C = -1\text{A}$ $V_{CE} = -1\text{V}, I_C = -3\text{A}$	70 30		240	
$V_{CE(Sat)}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}, I_B = -0.15\text{A}$			-0.5	V
$V_{BE(Sat)}$	Base-Emitter Saturation Voltage	$I_C = -3\text{A}, I_B = -0.15\text{A}$		- 0.9	-1.2	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -4\text{V}, I_C = -1\text{A}$		60		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		170		pF
t_{ON}	Turn ON Time	$V_{CC} = -30\text{V}, I_C = -3\text{A}$ $I_{B1} = -I_{B2} = -0.15\text{A}$ $R_L = 10\Omega$		0.1		μs
t_{STG}	Storage Time			1		μs
t_F	Fall Time			0.1		μs

h_{FE} Classification

Classification	O	Y
h_{FE1}	70 ~ 140	120 ~ 240

Typical Characteristics

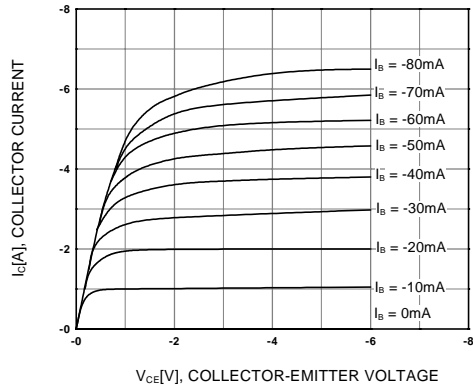


Figure 1. Static Characteristic

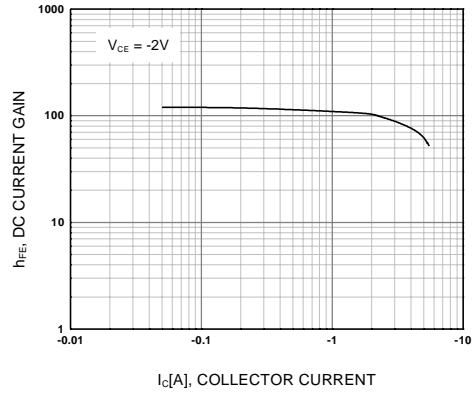


Figure 2. DC current Gain

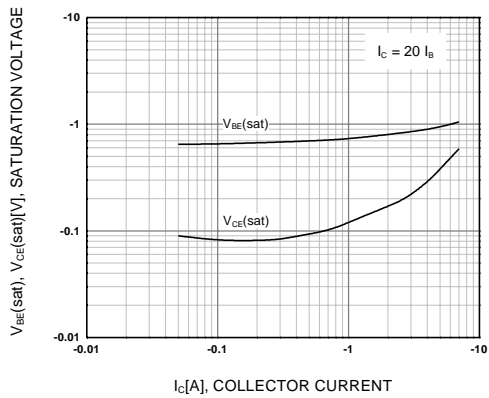


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

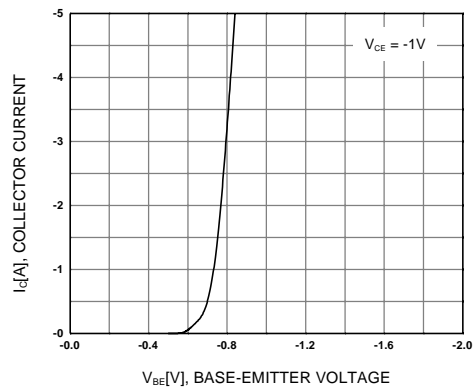


Figure 4. Base-Emitter Saturation Voltage

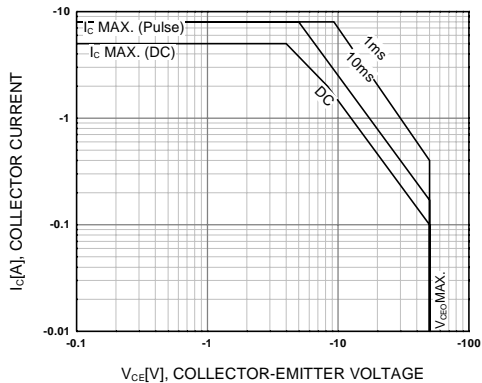


Figure 5. Safe Operating Area

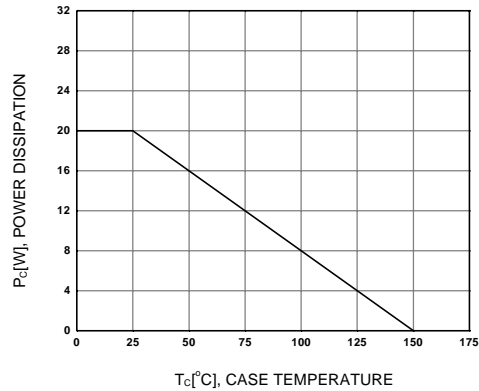
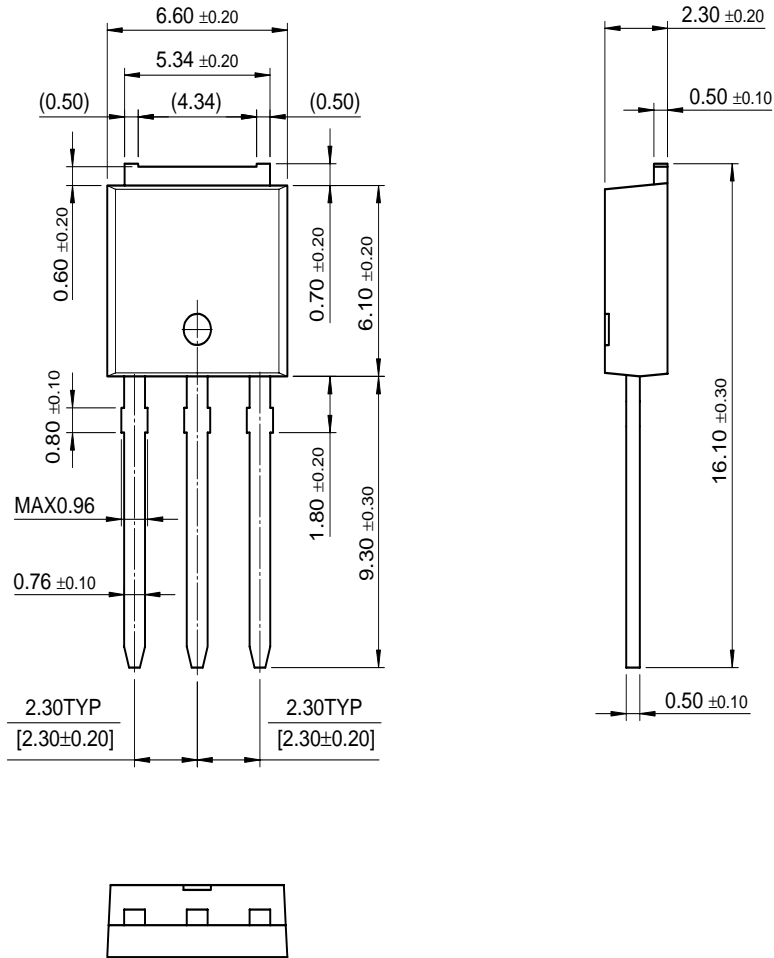


Figure 6. Power Derating

Package Dimensions

I-PAK



Dimensions in Millimeters

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