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KSH3055

KSH3055

General Purpose Amplifier
Low Speed Switching Applications
D-PAK for Surface Mount Applications

- Lead Formed for Surface Mount Applications (No Suffix)
- Straight Lead (I-PAK, "-I" Suffix)
- Electrically Similar to Popular KSE3055T
- DC Current Gain Specified to 10A
- High Current Gain - Bandwidth Product:
 $f_T = 2\text{MHz (MIN)}, I_C = 500\text{mA}$



NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	10	A
I_B	Base Current	6	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 ~ 150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
$V_{CEO(sus)}$	* Collector-Emitter Sustaining Voltage	$I_C = 30\text{mA}, I_B = 0$	60		V
I_{CEO}	Collector Cut-off Current	$V_{CE} = 30\text{V}, I_E = 0$		50	μA
I_{CBO}	Collector Cut-off Current	$V_{CB} = 70\text{V}, I_E = 0$		2	mA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$		0.5	mA
h_{FE}	*DC Current Gain	$V_{CE} = 4\text{V}, I_C = 4\text{A}$	20	100	
		$V_{CE} = 4\text{V}, I_C = 10\text{A}$	5		
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = 4\text{A}, I_B = 0.4\text{A}$		1.1	V
		$I_C = 10\text{A}, I_B = 3.3\text{A}$		8	V
$V_{BE(on)}$	* Base-Emitter On Voltage	$V_{CE} = 4\text{V}, I_C = 4\text{A}$		1.8	V
f_T	Current Gain Bandwidth Product	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$	2		MHz

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

Typical Characteristics

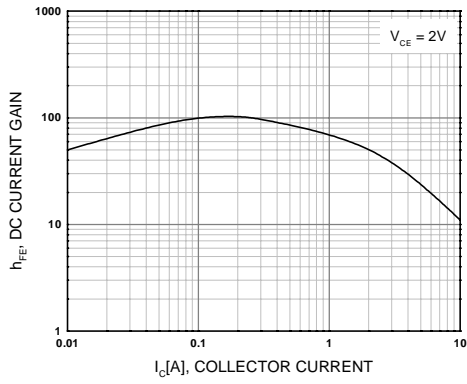


Figure 1. DC current Gain

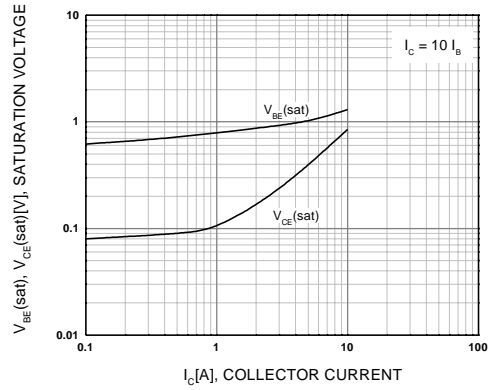


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

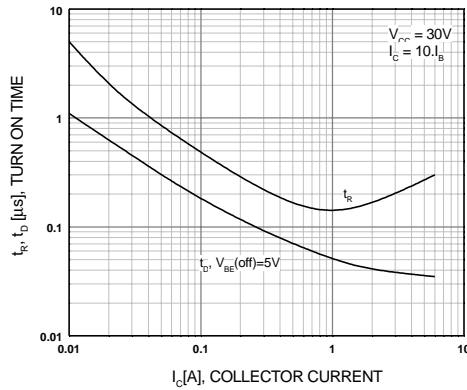


Figure 3. Turn On Time

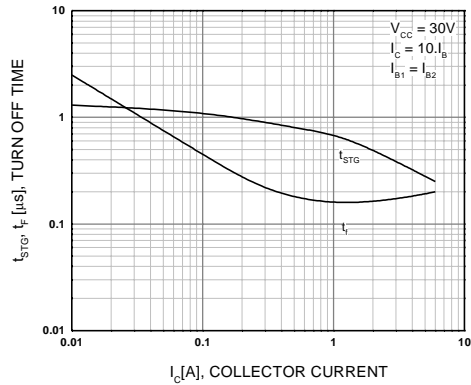


Figure 4. Turn Off Time

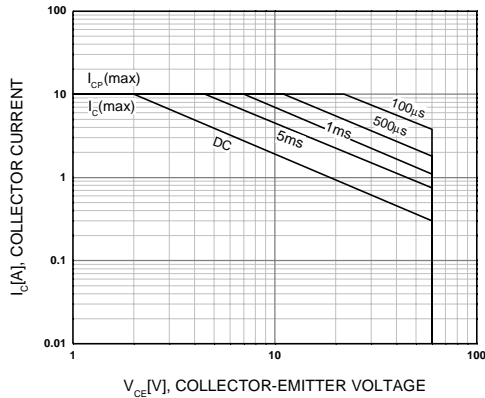


Figure 5. Safe Operating Area

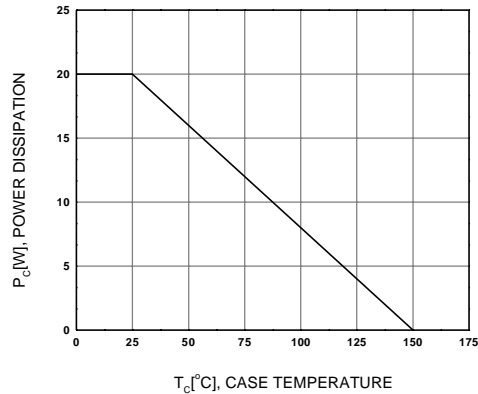
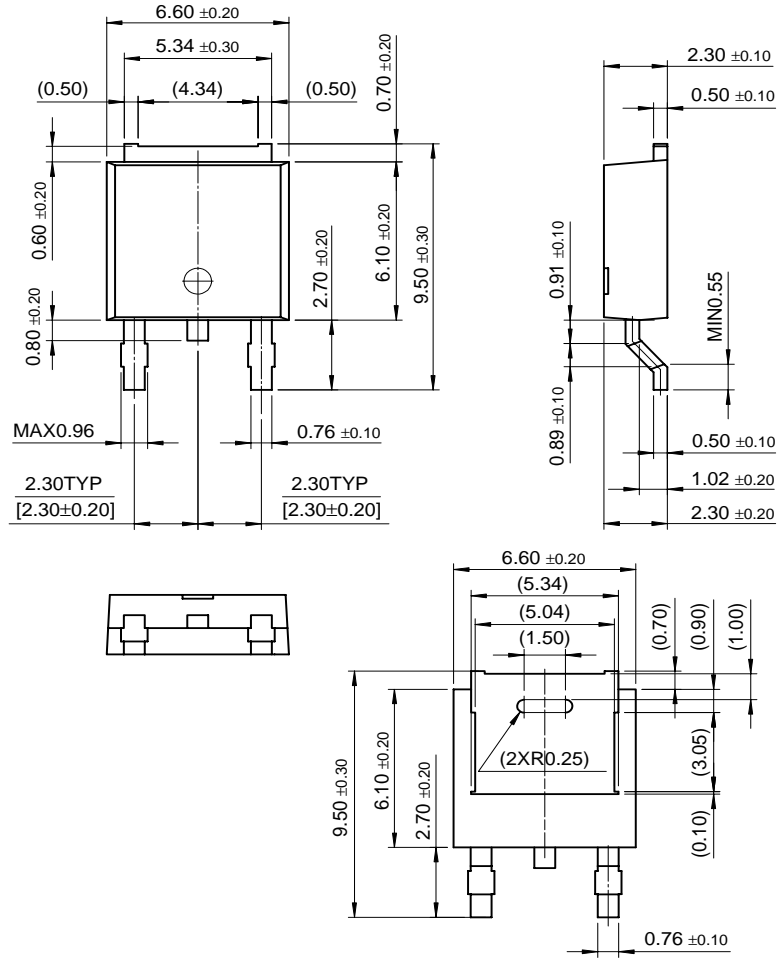


Figure 6. Power Derating

Package Dimensions

D-PAK



Dimensions in Millimeters

Package Dimensions (Continued)

I-PAK



Dimensions in Millimeters

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