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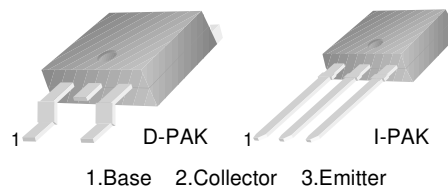
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KSH29/29C

KSH29/29C

General Purpose Amplifier Low Speed Switching Applications

- Lead Formed for Surface Mount Application (No Suffix)
- Straight Lead (I-PAK, "- I" Suffix)
- Electrically Similar to Popular TIP29 and TIP29C



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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage		
	: KSH29	40	V
	: KSH29C	100	V
V_{CEO}	Collector-Emitter Voltage		
	: KSH29	40	V
	: KSH29C	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	1	A
I_{CP}	Collector Current (Pulse)	3	A
I_B	Base Current	0.4	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	15	W
	Collector Dissipation ($T_a=25^\circ\text{C}$)	1.56	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 65 ~ 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				
	: KSH29	$I_C = 30\text{mA}, I_B = 0$	40		V
	: KSH29C		100		V
I_{CEO}	Collector Cut-off Current				
	: KSH29	$V_{CE} = 40\text{V}, I_B = 0$		50	μA
	: KSH29C	$V_{CE} = 60\text{V}, I_B = 0$		50	μA
I_{CES}	Collector Cut-off Current				
	: KSH29	$V_{CE} = 40\text{V}, V_{BE} = 0$		20	μA
	: KSH29C	$V_{CE} = 100\text{V}, V_{BE} = 0$		20	μA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = 5\text{V}, I_C = 0$		1	mA
h_{FE}	DC Current Gain	$V_{CE} = 4\text{V}, I_C = 0.2\text{A}$	40		
		$V_{CE} = 4\text{V}, I_C = 1\text{A}$	15	75	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1\text{A}, I_B = 125\text{mA}$		0.7	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = 4\text{A}, I_C = 1\text{A}$		1.3	V
f_T	Current Gain Bandwidth Product	$V_{CE} = 10\text{V}, I_C = 200\text{mA}$	3		MHz

Typical Characteristics

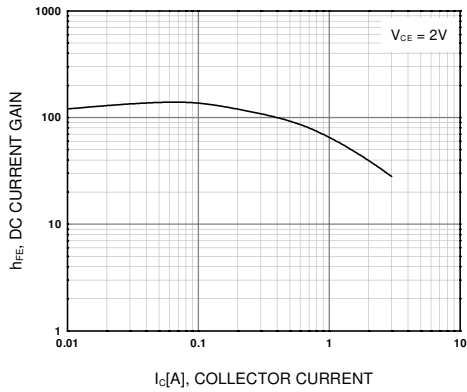


Figure 1. DC current Gain

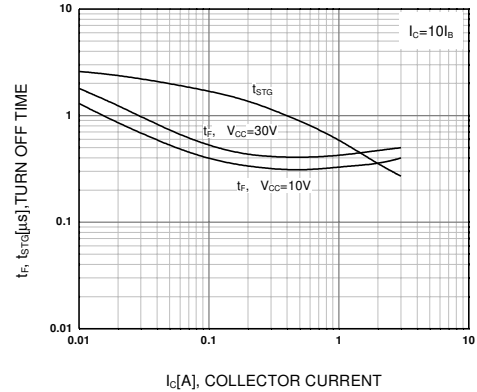


Figure 2. Turn Off Time

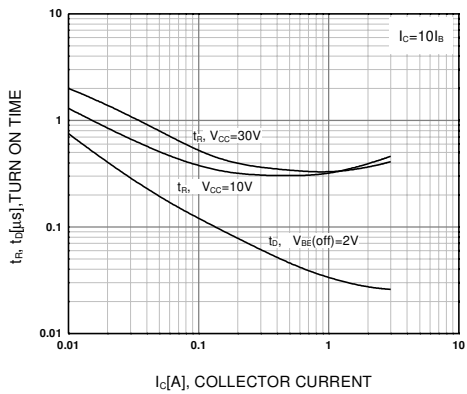


Figure 3. Turn On Time

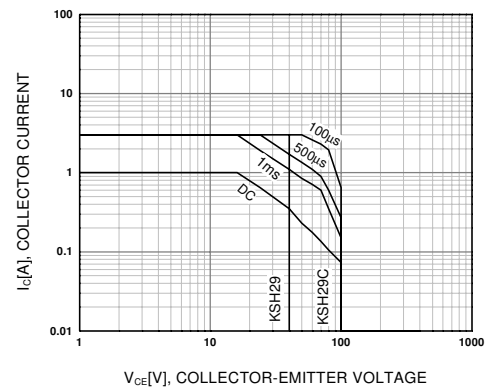


Figure 4. Safe Operating Area

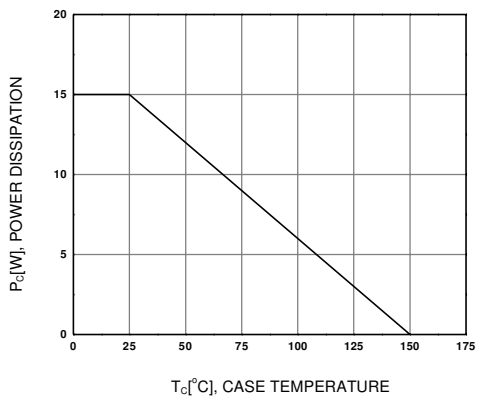
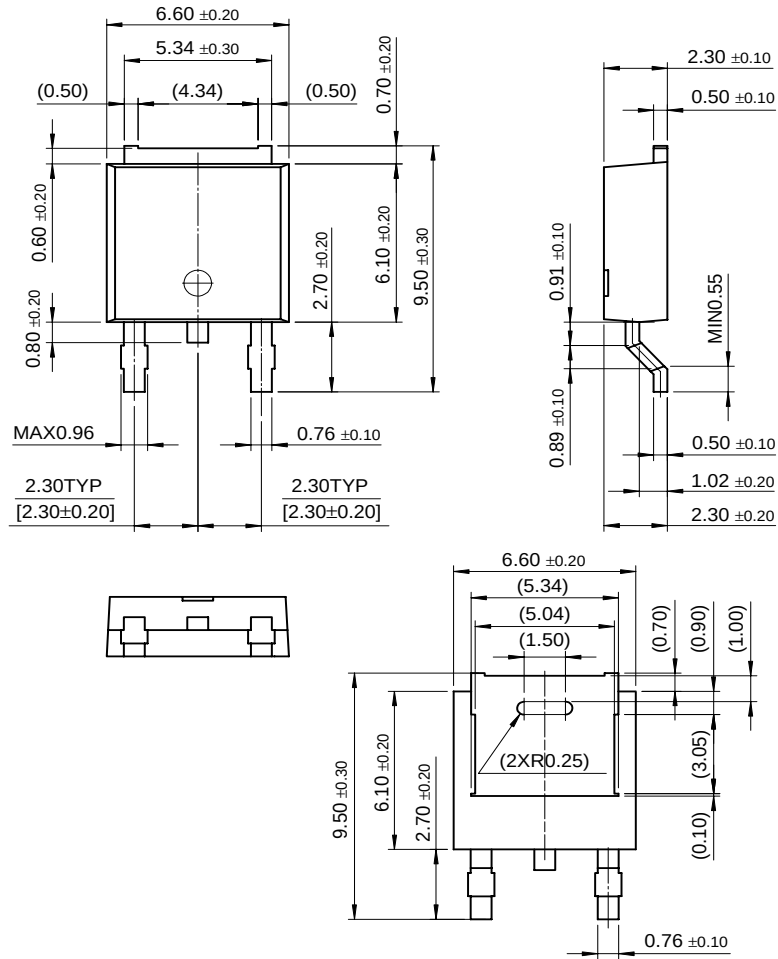


Figure 5. Power Derating

D-PAK



Dimensions in Millimeters

Technical drawing of a 2.30TYP component, showing three views: front, side, and top.

Front View Dimensions:

- Overall width: 6.60 ± 0.20
- Inner width: 5.34 ± 0.20
- Left margin: (0.50)
- Right margin: (0.50)
- Top flange height: 0.60 ± 0.20
- Main body height: 0.70 ± 0.20
- Total height: 6.10 ± 0.20
- Pin height: 0.80 ± 0.10
- Pin diameter: $\text{MAX} 0.96$
- Pin width: 0.76 ± 0.10
- Pin length: 1.80 ± 0.20
- Total length: 9.30 ± 0.30
- Pin diameter: 2.30TYP
- Pin diameter tolerance: $[2.30 \pm 0.20]$

Side View Dimensions:

- Top flange width: 2.30 ± 0.20
- Top flange thickness: 0.50 ± 0.10
- Main body height: 16.10 ± 0.30
- Pin width: 0.50 ± 0.10

Top View:

- Shows the top surface of the component with three pins.

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