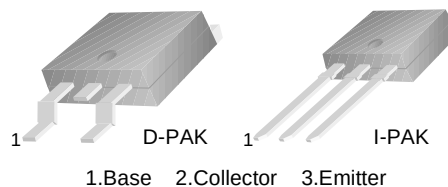


KSH32/32C

KSH32/32C

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

- Lead Formed for Surface Mount Application (No Suffix)
- Straight Lead (I-PAK, "- I" Suffix)
- Electrically Similar to Popular TIP32 and TIP32C



PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage : KSH32	- 40	V
	: KSH32C	- 100	V
V_{CEO}	Collector-Emitter Voltage : KSH32	- 40	V
	: KSH32C	- 100	V
V_{EBO}	Emitter-Base Voltage	- 5	V
I_C	Collector Current (DC)	- 3	A
I_{CP}	Collector Current (Pulse)	- 5	A
I_B	Base Current	- 1	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 : KSH32 : KSH32C	$I_C = - 30\text{mA}$, $I_B = 0$	-40 -100		V V
I_{CEO}	Collector Cut-off Current : KSH32 : KSH32C	$V_{CE} = - 40\text{V}$, $I_B = 0$ $V_{CE} = - 60\text{V}$, $I_B = 0$		-50 -50	μA μA
I_{CES}	Collector Cut-off Current : KSH32 : KSH32C	$V_{CE} = - 40\text{V}$, $V_{BE} = 0$ $V_{CE} = - 100\text{V}$, $V_{BE} = 0$		-20 -20	μA μA
I_{EBO}	Emitter Cut-off Current	$V_{BE} = - 5\text{V}$, $I_C = 0$		-1	mA
h_{FE}	* DC Current Gain	$V_{CE} = - 4\text{V}$, $I_C = - 1\text{A}$ $V_{CE} = - 4\text{V}$, $I_C = - 3\text{A}$	25 10	50	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = - 3$, $I_B = - 375\text{mA}$		-1.2	V
$V_{BE(on)}$	* Base-Emitter On Voltage	$V_{CE} = - 4\text{A}$, $I_C = - 3\text{A}$		-1.8	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -10\text{V}$, $I_C = - 500\text{mA}$	3		MHz

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

Typical Characteristics

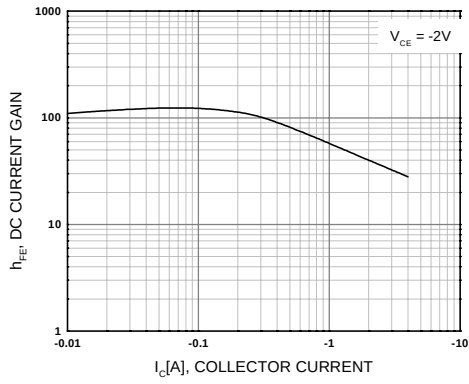


Figure 1. DC current Gain

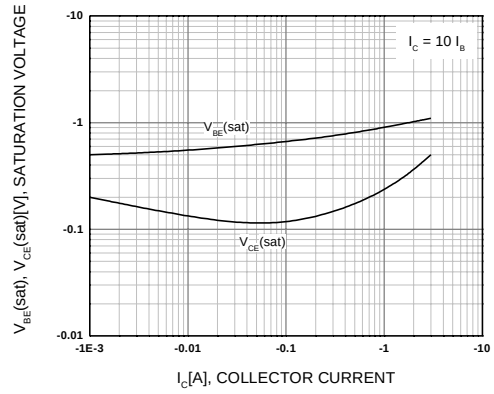


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

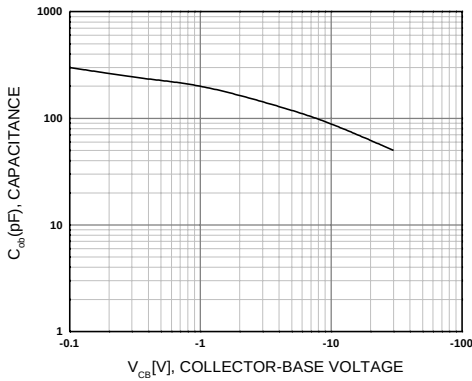


Figure 3. Collector Capacitance

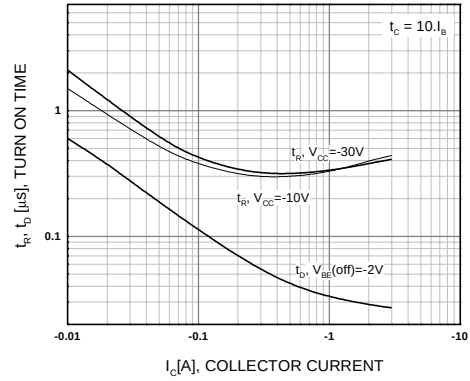


Figure 4. Turn On Time

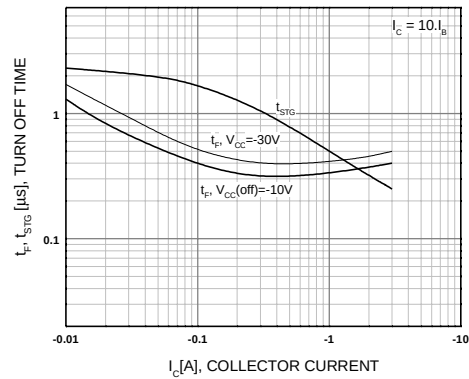


Figure 5. Turn Off Time

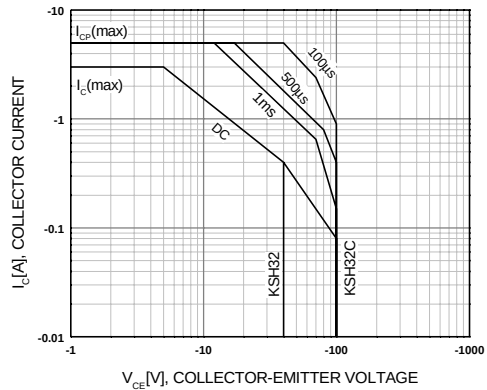


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

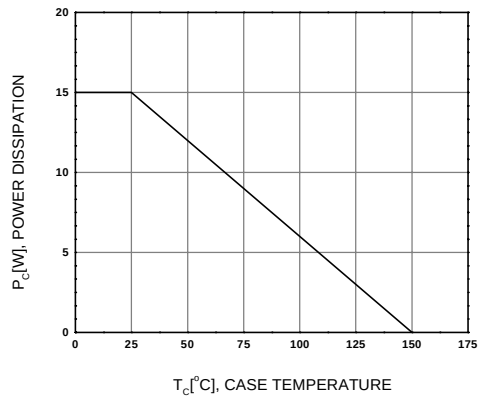


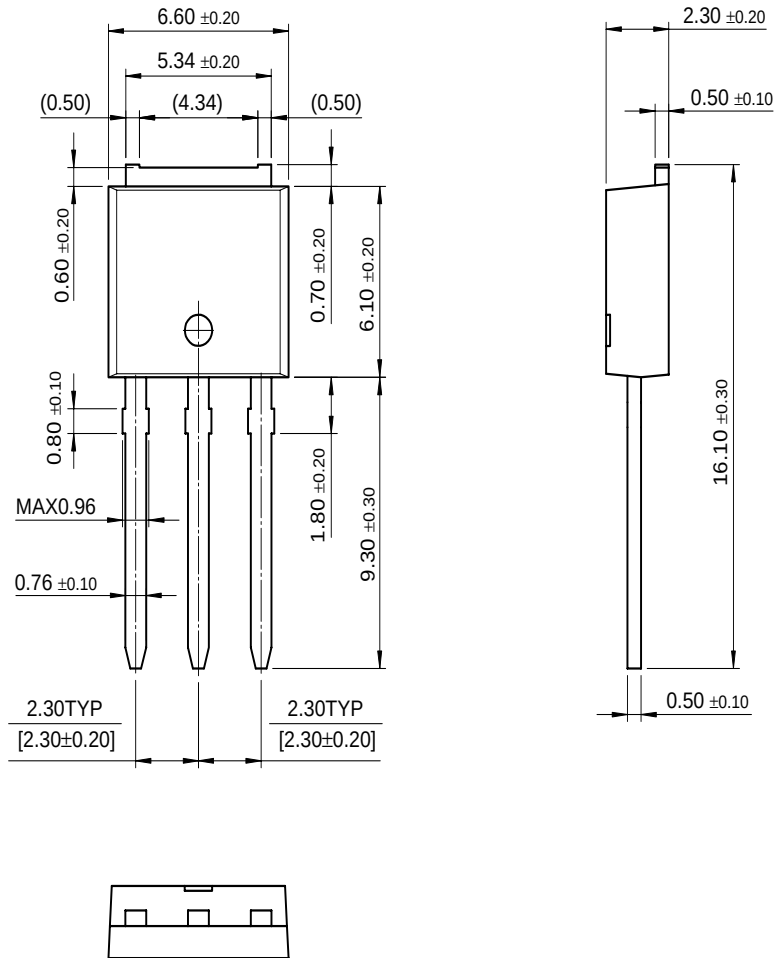
Figure 7. Power Derating

[illegible]

Rev. A4, October 2002

Package Dimensions (Continued)

I-PAK



Dimensions in Millimeters

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