

# KSH45H11

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## General Purpose Power and Switching Such as Output or Driver Stages in 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 KSE45H
- Fast Switching Speeds
- Low Collector Emitter Saturation Voltage



## PNP Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
$V_{CEO}$	Collector-Emitter Voltage	- 80	V
$V_{EBO}$	Emitter-Base Voltage	- 5	V
$I_C$	Collector Current (DC)	- 8	A
$I_{CP}$	Collector Current (Pulse)	- 16	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.	Typ.	Max.	Units
$V_{CEO(sus)}$	Collector-Emitter Sustaining Voltage	$I_C = - 30\text{mA}$ , $I_B = 0$	- 80			V
$I_{CEO}$	Collector Cut-off Current	$V_{CE} = - 80\text{V}$ , $I_B = 0$			- 10	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{BE} = - 5\text{V}$ , $I_C = 0$			- 50	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$V_{CE} = - 1\text{V}$ , $I_C = - 2\text{A}$	60			
		$V_{CE} = - 1\text{V}$ , $I_C = - 4\text{A}$	40			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = - 8\text{A}$ , $I_B = - 0.4\text{A}$			- 1	V
$V_{BE(on)}$	Base-Emitter Saturation Voltage	$I_C = - 8\text{A}$ , $I_B = - 0.8\text{A}$			- 1.5	V
$f_T$	Current Gain Bandwidth Product	$V_{CE} = - 10\text{A}$ , $I_C = - 0.5\text{A}$		40		MHz
$C_{ob}$	Collector Capacitance	$V_{CB} = - 10\text{V}$ , $f = 1\text{MHz}$		230		pF
$t_{ON}$	Turn On Time	$I_C = - 5\text{A}$ $I_{B1} = - I_{B2} = - 0.5\text{A}$		135		ns
$t_{STG}$	Storage Time			500		ns
$t_F$	Fall Time			100		ns

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

# Typical Characteristics

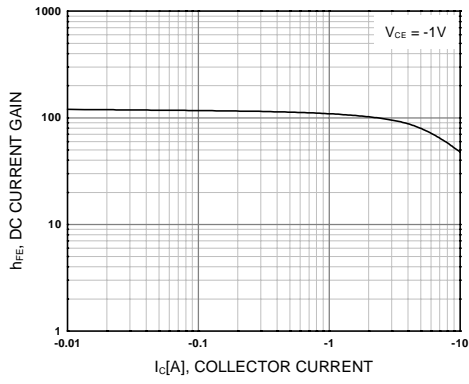


Figure 1. DC current Gain

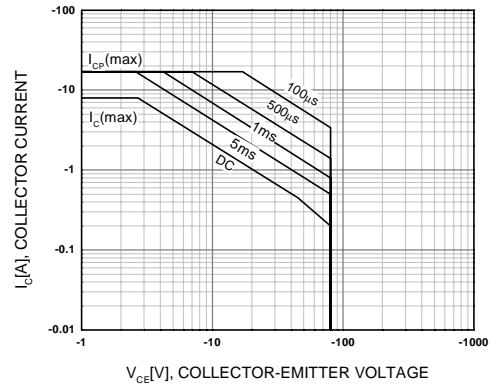


Figure 2. Safe Operating Area

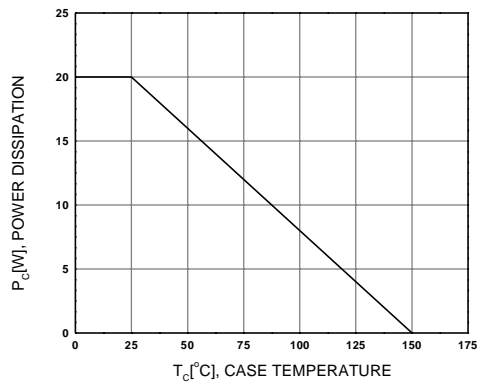


Figure 3. Power Derating

# Package Dimensions

KSH45H11

## D-PAK



Dimensions in Millimeters

Package Dimensions (Continued)

I-PAK



Dimensions in Millimeters

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