

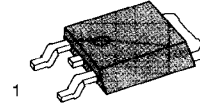
# KSH30/30C

# PNP EPITAXIAL SILICON TRANSISTOR

**GENERAL PURPOSE AMPLIFIER  
LOW SPEED SWITCHING APPLICATIONS  
D-PACK FOR SURFACE MOUNT  
APPLICATIONS**

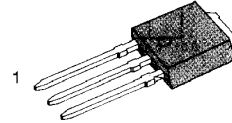
Lead Formed for Surface Mount Application (No Suffix)  
Straight Lead (I.ACK, "I" Suffix)  
Electrically Similar to Popular TIP30 and TIP30C

D-PAK



1. Base 2. Collector 3. Emitter

I-PAK



1. Base 2. Collector 3. Emitter

**ABSOLUTE MAXIMUM RATINGS**

Characteristic	Symbol	Rating	Unit
Collector Base Voltage : KSH30	$V_{CBO}$	- 40	V
: KSH30C		- 100	V
Collector Emitter Voltage : KSH30	$V_{CEO}$	- 40	V
: KSH30C		- 100	V
Emitter Base Voltage	$V_{EBO}$	- 5	V
Collector Current (DC)	$I_C$	- 3	A
Collector Current (Pulse)	$I_C$	- 1	A
Base Current	$I_B$	- 1	A
Collector Dissipation ( $T_C=25^\circ\text{C}$ )	$P_C$	- 15	W
Collector Dissipation ( $T_A=25^\circ\text{C}$ )	$P_C$	- 1.56	W
Junction Temperature	$T_J$	- 150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-65 ~ 150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$ )**

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector Emitter Sustaining Voltage : KSH30	$V_{CEO(sus)}$	$I_C = - 30\text{mA}, I_B = 0$	- 40		V
: KSH30C			- 100		V
Collector Cutoff Current : KSH30	$I_{CEO}$	$V_{CE} = - 40\text{V}, I_B = 0$		- 50	$\mu\text{A}$
: KSH30C		$V_{CE} = - 60\text{V}, I_B = 0$		- 20	$\mu\text{A}$
Collector Cutoff Current : KSH30	$I_{CES}$	$V_{CE} = - 40\text{V}, V_{BE} = 0$		- 20	$\mu\text{A}$
: KSH30C		$V_{CE} = 100\text{V}, V_{BE} = 0$		- 20	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{BE} = - 5\text{V}, I_C = 0$		- 1	mA
* DC Current Gain	$h_{FE}$	$V_{CE} = - 4\text{V}, I_C = - 0.2\text{A}$	25		
		$V_{CE} = - 4\text{V}, I_C = - 1\text{A}$	10	70	
* Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = - 1\text{A}, I_B = - 125\text{mA}$		- 0.7	V
* Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = - 4\text{A}, I_C = - 1\text{A}$		- 1.3	V
Current Gain Bandwidth Product	$f_T$	$V_{CE} = - 10\text{V}, I_C = - 200\text{mA}$	3		MHz
		$f = 1\text{MHz}$			

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

Rev. B

