

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

Load Formed for Surface Mount Application(No Suffix)

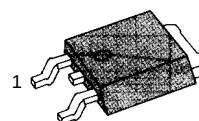
Straight Lead (I.ACK, "- I " Suffix)

Electrically Similar to Popular TIP30 and TIP30C

ABSOLUTE MAXIMUM RATINGS

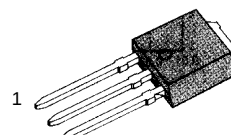
Characteristic	Symbol	Rating	Unit
Collector Base Voltage : KSH30	V_{CBO}	- 40	V
: KSH30C		- 100	V
Collector Emitter Voltage : KSH30	V_{CEO}	- 40	V
: KSH30C		- 100	V
Emitter Base Voltage	V_{EBO}	- 5	V
Collector Current (DC)	I_C	- 3	A
Collector Current (Pulse)	I_C	- 1	A
Base Current	I_B	- 1	A
Collector 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	$^{\circ}\text{C}$

D-PAK



1. Base 2. Collector 3. Emitter

I-PAK



1. Base 2. Collector 3. Emitter

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

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector Emitter Sustaining Voltage : KSH30	$V_{CEO} \text{ (sus)}$	$I_C = - 30\text{mA}, I_B = 0$	- 40		V
: KSH30C			- 100		V
Collector Cutoff Current : KSH30	I_{CEO}	$V_{CE} = - 40\text{V}, I_B = 0$		- 50	μA
: KSH30C		$V_{CE} = - 60\text{V}, I_B = 0$		- 50	μA
Collector Cutoff Current : KSH30	I_{CES}	$V_{CE} = - 40\text{V}, V_{BE} = 0$		- 20	μA
: KSH30C		$V_{CE} = 100\text{V}, V_{BE} = 0$		- 20	μA
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 $\leq 2\%$