

isc Silicon NPN Power Transistor**KSH200****DESCRIPTION**

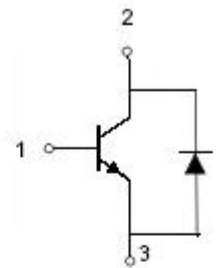
- High DC current gain
- Built-in a damper diode at E-C
- Lead formed for surface mount applications(NO suffix)
- Straight lead(IPAK, “-I” suffix)
- DPAK for surface mount applications
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

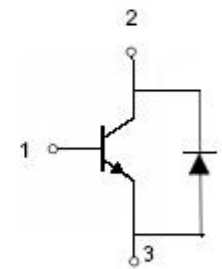
- Low frequency power amplifier

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	5	A
P_C	Total Power Dissipation @ $T_a=25^\circ\text{C}$	1.4	W
P_C	Total Power Dissipation @ $T_C=25^\circ\text{C}$	12.5	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



PIN : 1 Base
2 Collector
3 Emitter
TO-251 Package



PIN : 1 Base
2 Collector
3 Emitter
TO-252 Package

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ELECTRICAL CHARACTERISTICS

 $T_c=25^{\circ}\text{C}$ unless otherwise specified

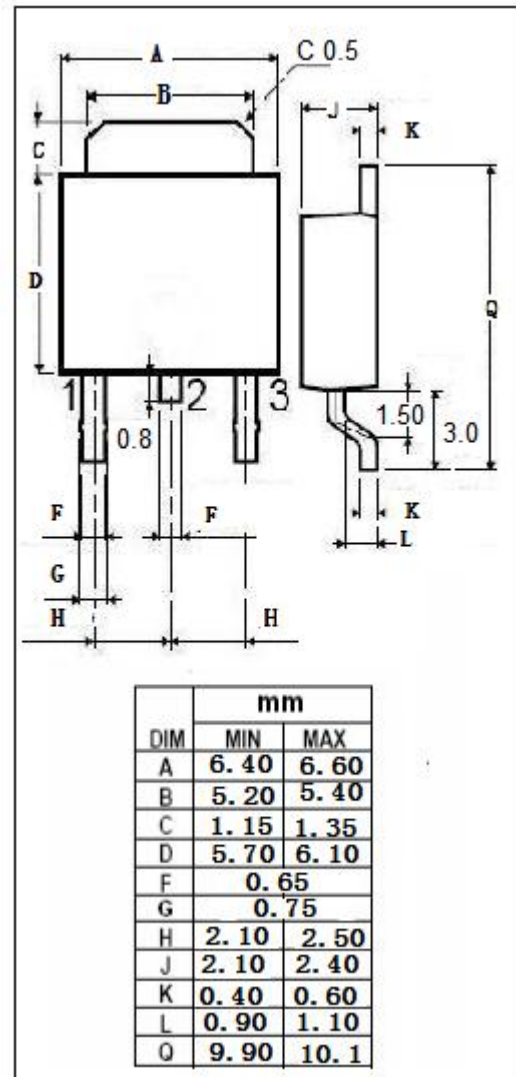
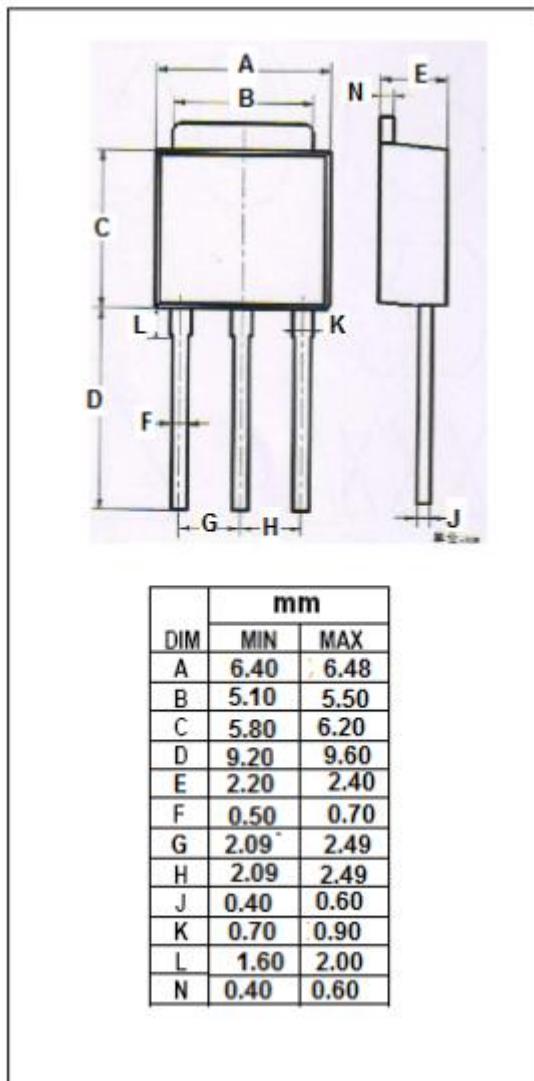
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=100\text{mA}; I_B=0$	25			V
$V_{CE(sat)-1^*}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=50\text{mA}$			0.3	V
$V_{CE(sat)-2^*}$	Collector-Emitter Saturation Voltage	$I_C=2.0\text{A}; I_B=200\text{mA}$			0.75	V
$V_{CE(sat)-3^*}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$			1.8	V
$V_{BE(sat)^*}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$			2.5	V
$V_{BE(on)^*}$	Base-Emitter On Voltage	$I_C=2\text{A}; V_{CE}=1\text{V}$			1.6	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=40\text{V}; I_E=0$			100	nA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=8\text{V}; I_C=0$			100	nA
h_{FE1^*}	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=1\text{V}$	70			
h_{FE2^*}	DC Current Gain	$I_C=2\text{A}; V_{CE}=1\text{V}$	45		180	
h_{FE3^*}	DC Current Gain	$I_C=5\text{A}; V_{CE}=2\text{V}$	10			
f_T	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}; V_{CE}=10\text{V}$		65		MHz
Cob	Collector output capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		80		pF

*:Pulse test $PW \leq 300\mu\text{s}$, duty cycles $\leq 2\%$

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Outline Drawing



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