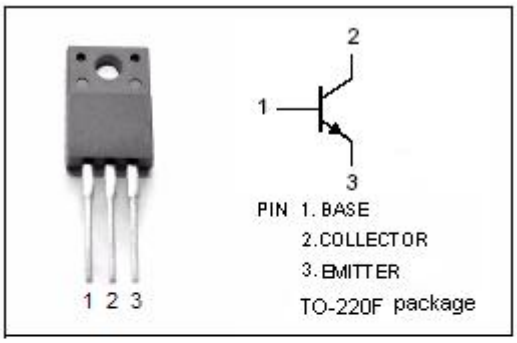
isc Silicon NPN Power Transistor — KSD1408

DESCRIPTION

- Low Collector Saturation Voltage
  : $V_{CE(sat)}$= 1.5V(Max)@ I_C= 3A
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 80V (Min)
- Complement to Type KSB1017
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

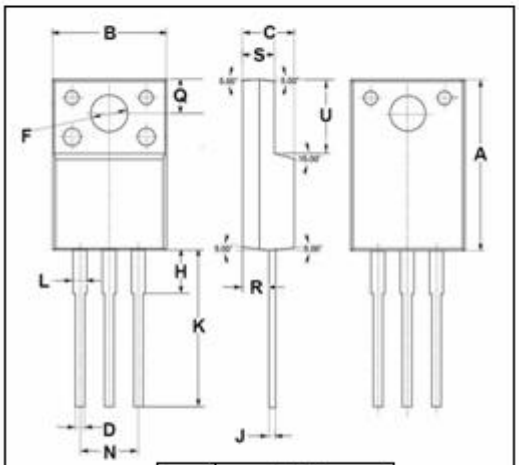


APPLICATIONS

- Designed for power amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_B	Base Current-Continuous	0.4	A
P_C	Collector Power Dissipation @ T_C=25℃	25	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 50mA ; I_B= 0	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.3A			1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 3A; V_{CE}= 5V			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 80V; I_E= 0			30	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			0.1	mA
h_{FE-1}	DC Current Gain	I_C= 0.5A; V_{CE}= 5V	40		240	
h_{FE-2}	DC Current Gain	I_C= 3A; V_{CE}= 5V	15			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V, f_{test}= 1MHz		90		pF
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A; V_{CE}= 5V		8		MHz

◆ **h_{FE} classifications**

R	O	Y
40-80	70-140	120-240