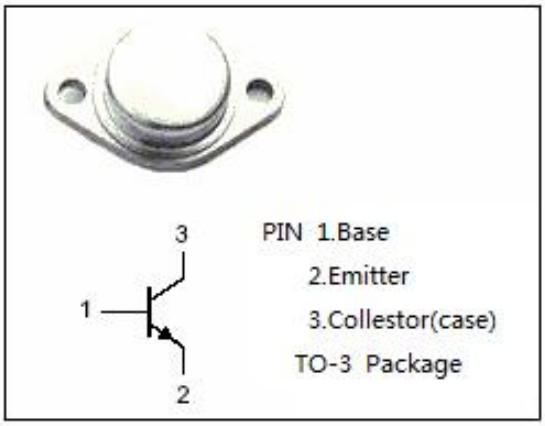
isc Silicon NPN Power Transistor — 2SD1094



DESCRIPTION

- High Voltage Capability
- High Current Capability
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

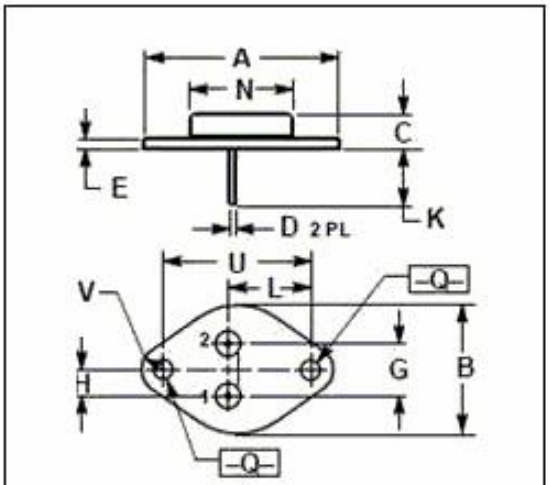
- Designed for switching and general purpose power amplifiers applications .

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1000	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation @T_C=25℃	50	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.0	℃/W



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
☆$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA; I_B= 0	700		V
$V_{CBO(SUS)}$	Collector-Emitter Sustaining Voltage	I_E= 1mA; I_B= 0	1000		V
☆$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 6A; I_B= 1.5A		1.5	V
☆$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10A ;I_B= 4A		3.0	V
☆$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 6A; I_B= 1.5A		1.5	V
☆$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 10A ;I_B= 4A		2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 1000V; I_E= 0 V_{CB}= 1000V; I_E= 0; T_C=125℃		0.5 3	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 700V; I_B= 0		0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0		0.1	mA
h_{FE}	DC Current Gain	I_C= 2.5A ; V_{CE}= 5V	8		

☆ Pulsed: Pulse duration = 300 ms, duty cycle = 1.5 %

Switching times; Resistive Load

t_{on}	Turn-on Time	I_C= 6A ;I_{B1}=-I_{B2}= 1.5A; V_{CC}= 250V;		3.0	μs
t_s	Storage Time			5.0	μs
t_f	Fall Time			1.0	μs

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