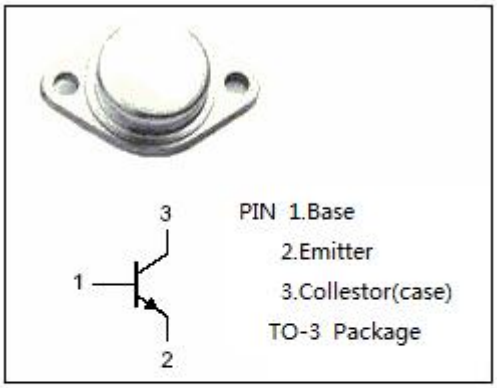
isc Silicon NPN Power Transistor — 2SD1038

DESCRIPTION

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



APPLICATIONS

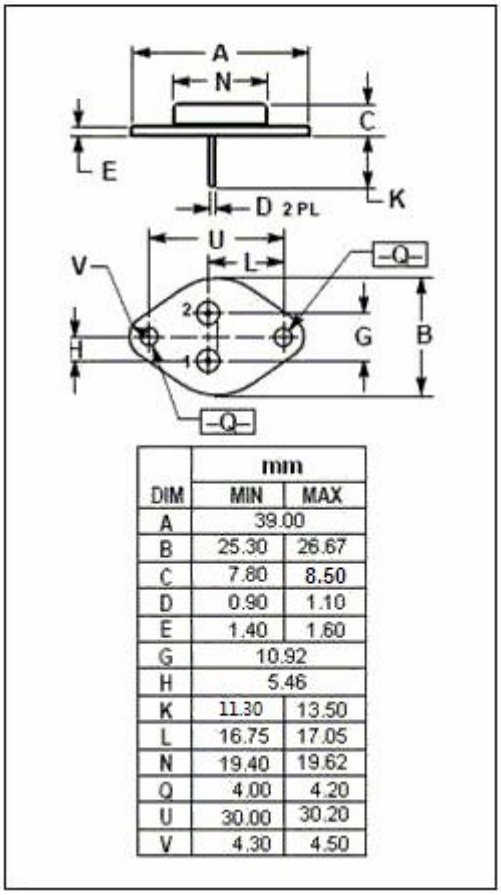
- Designed for switching and linear applications in military and industrial equipment.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector- Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	40	A
I_{CM}	Collector Current-Peak	60	A
P_C	Collector Power Dissipation @T_C=25℃	180	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	0.7	℃/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

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA ; I_B= 0	100		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 20A; I_B= 2A		1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 20A; I_B= 0.2A		1.5	V
I_{CBO}	Collector Base Cutoff Current	V_{CB}=150V; I_E= 0		0.1	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 100V;I_B= 0		0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7.0V; I_C= 0		0.1	mA
h_{FE-1}	DC Current Gain	I_C= 1A ; V_{CE}= 2V	60	200	
h_{FE-2}	DC Current Gain	I_C= 20A ; V_{CE}= 2V	20		
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 10V; f_{test}= 1MHz	10		MHz