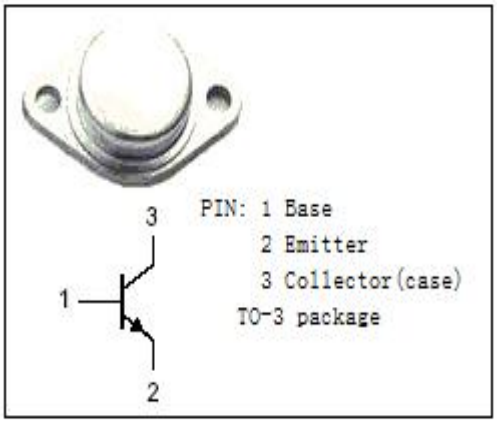
isc Silicon NPN Power Transistor — BUW38

DESCRIPTION

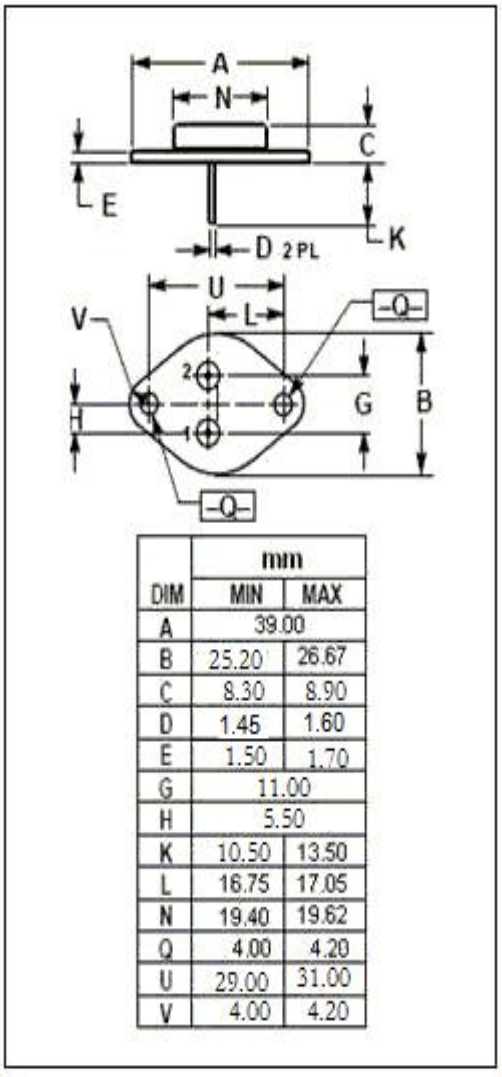
- High Current Capability
- Fast Switching Speed
- Low Saturation Voltage and High Gain
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

Designed for use in high frequency and efficiency converters such as motor controllers and industrial equipment such as:

- Switching regulators
- Motor control
- High frequency and efficiency converters



DIM	mm MIN	MAX
A	39.00	
B	25.20	26.67
C	8.30	8.90
D	1.45	1.60
E	1.50	1.70
G	11.00	
H	5.50	
K	10.50	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	29.00	31.00
V	4.00	4.20

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	30	A
I_{CM}	Collector Current-Peak	45	A
I_B	Base Current-Continuous	8	A
I_{BM}	Base Current-peak	20	A
P_C	Collector Power Dissipation @T_C=25℃	150	W
T_j	Junction Temperature	200	℃
T_{stg}	Storage Temperature Range	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.17	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA; I_B= 0	60			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 50mA; I_C= 0	7			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 20A; I_B= 2A			0.6	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 40A; I_B= 4A			1.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 40A; I_B= 4A			2.1	V
I_{CEX}	Collector Cutoff Current	V_{CE}= V_{CEX}; V_{BE}= -1.5V V_{CE}= V_{CEX}; V_{BE}= -1.5V;T_C=100℃			1.0 3.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1.0	mA
h_{FE}	DC Current Gain	I_C= 5A; V_{CE}= 5V	40			