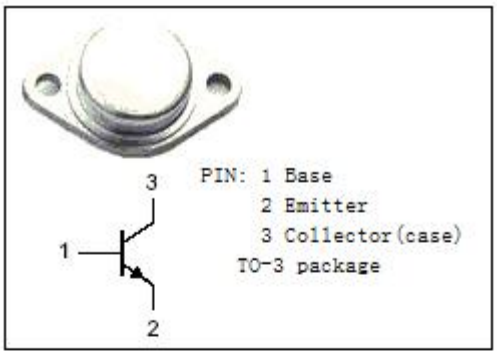
isc Silicon NPN Power Transistor — BUR51

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 200V(Min)
- High Current Capability
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

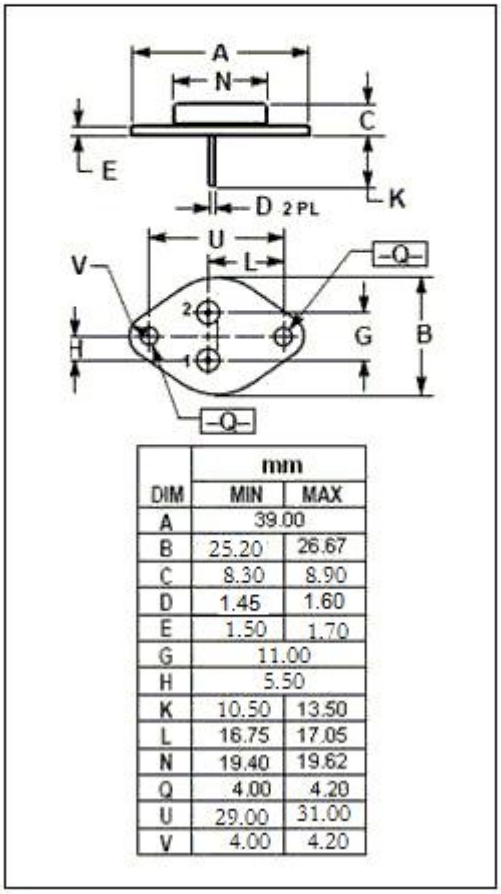
- Designed for low voltage ,high speed,power switching and linear in military and industrial equipment.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	60	A
I_{CM}	Collector Current-Peak	80	A
I_B	Base Current-Continuous	16	A
P_C	Collector Power Dissipation @T_C=25℃	350	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.5	℃/W



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

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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	200			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 30A; I_B= 2A			1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 50A; I_B= 5A			1.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 30A; I_B= 2A			1.8	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 50A; I_B= 5A			2.0	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 200V;I_B= 0			1.0	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 300V; I_E= 0 V_{CB}= 300V; I_E= 0; T_C= 125℃			0.2 2	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C=0			0.2	mA
h_{FE-1}	DC Current Gain	I_C= 5A ; V_{CE}= 4V	20		100	
h_{FE-2}	DC Current Gain	I_C= 50A ; V_{CE}= 4V	15			
f_T	Current-Gain—Bandwidth Product	I_C= 1A;V_{CE}= 5V, f_{test}= 1MHz	10			MHz

Switching Times; Resistive Load

t_{on}	Turn-on Time	I_C= 50A; V_{CC}= 100V; I_{B1}= I_{B2}= 5A			1.0	μs
t_s	Storage Time				2.0	μs
t_f	Fall Time				0.6	μs

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