New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

Silicon NPN Power Transistor

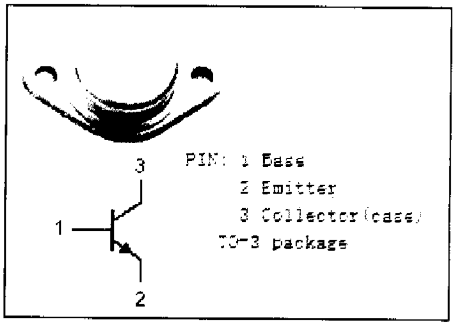
BUX348

DESCRIPTION

- High Voltage Capability
- High Current Capability
- Fast Switching Speed
- Off-line applications to 380V

APPLICATIONS

- Switch mode power supplies
- Uninterruptable power supply
- DC and AC motor control

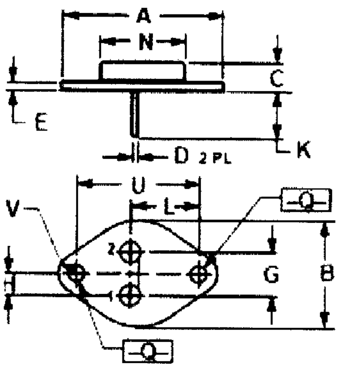


ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	850	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	45	A
I_{CM}	Collector Current-peak (tp <5 ms)	60	A
I_B	Base Current-Continuous	9	A
I_{BM}	Base Current-peak (tp <5 ms)	15	A
P_C	Collector Power Dissipation @T_C=25℃	300	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	0.58	℃/W



DIM	mm MIN	mm MAX
A	39.00	
B	25.20	26.67
C	8.30	8.90
D	1.46	1.60
E	1.30	1.70
G	11.00	
H	3.30	
K	10.30	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

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	450			V
V_{EBO}	Emitter-Base Voltage	IE = 10 mA	7			V
☆$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 30A ;I_B= 6A I_C= 30A ;I_B= 6A; Tj = 100 °C			0.9 2	V
☆$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 30A ;I_B= 6A I_C= 30A ;I_B= 6A; Tj = 100 °C			1.5 1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}=850V; I_E= 0 V_{CB}=850V; I_E= 0 T_C=100℃			0.4 2	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			2	mA

☆ Pulsed: Pulse duration = 300 ms, duty cycle = 2 %

Switching Times

t_s	Storage Time	V_{CC} = 50 V V_{Clamp} = 450 V I_C = 30 A I_{B1} = 6 A V_{BB} = -5 V L_C = 80 μH R_{BB} = 0.4 Ω Tj = 100 °C			4.5	μ s
t_f	Fall Time				0.4	μ s
t_c	Crossover Time				0.7	μ s