

isc Silicon NPN Power Transistor

BUX98C

DESCRIPTION

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

APPLICATIONS

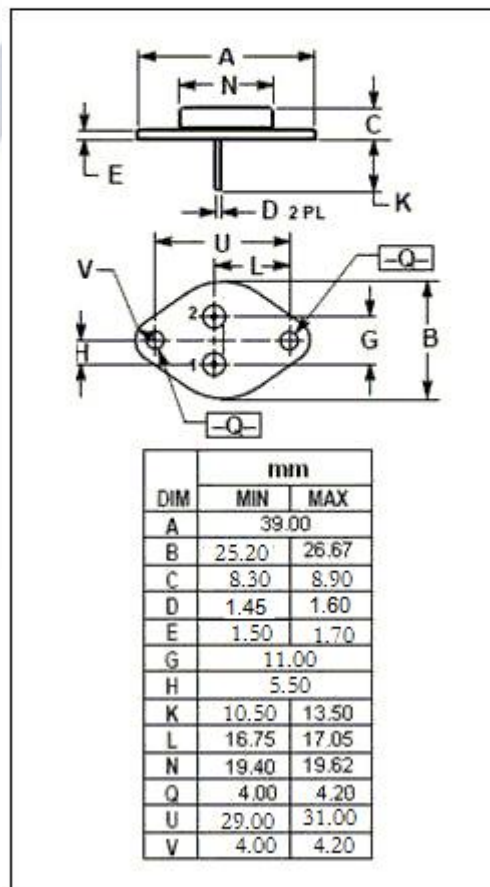
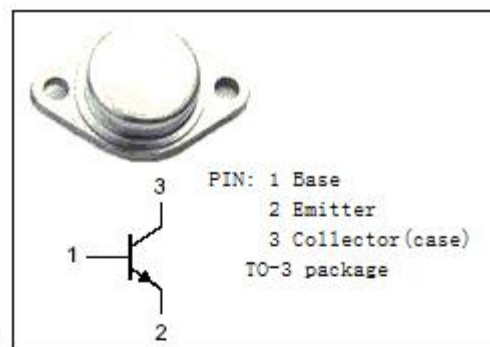
- High frequency and efficiency converters
- Linear and switching industrial equipment

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1200	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	30	A
I_{CM}	Collector Current-peak ($t_p < 5\text{ ms}$)	60	A
I_B	Base Current-Continuous	8	A
I_{BM}	Base Current-peak ($t_p < 5\text{ ms}$)	30	A
P_C	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	250	W
T_j	Junction Temperature	200	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\text{ j-c}}$	Thermal Resistance, Junction to Case	0.7	$^{\circ}\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
☆V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA ; I _B = 0	700			V
☆V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 12A ; I _B = 3.0A			1.5	V
☆V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 16A ; I _B = 5.0A			2.0	V
☆V _{CE(sat)-3}	Collector-Emitter Saturation Voltage	I _C = 20A ; I _B = 8.0A			3.0	V
☆V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 12A ; I _B = 3.0A			1.6	V
☆V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 20A ; I _B = 8.0A			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} =1200V; I _E = 0 V _{CB} =1200V; I _E = 0 T _C =125°C			1 6	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 700V; I _B = 0			2	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			2	mA
h _{FE}	DC Current Gain	I _C = 1A ; V _{CE} = 5V	15		50	

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

Switching Times

t _{on}	Turn-on Time	I _C = 12A ; I _{B1} =-I _{B2} = 3.0A; V _{CC} = 250V			1.0	μ s
t _s	Storage Time				3.0	μ s
t _f	Fall Time				0.8	μ s