

isc Silicon NPN Power Transistor

BUR21

DESCRIPTION

- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.0V$ (Max.) @ $I_C = 25A$
- High Switching Speed
- High DC Current Gain-
: $h_{FE} = 10$ (Min.) @ $I_C = 25A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

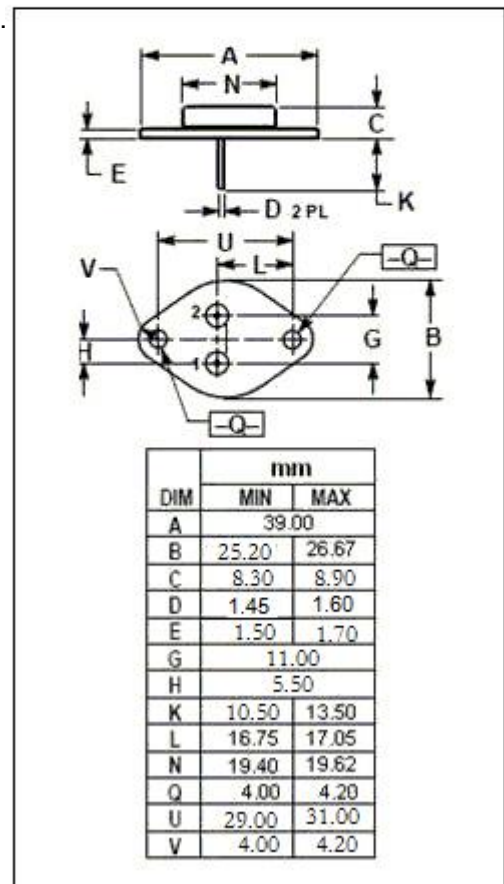
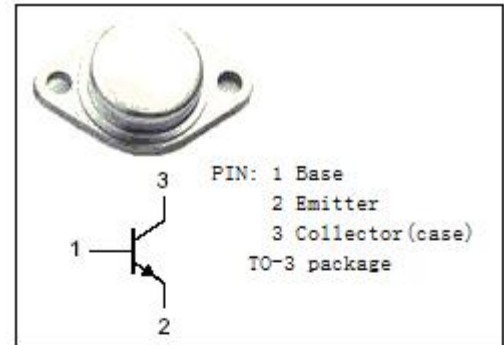
- Designed for high current, high speed, high power applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	40	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current-Continuous	8	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ C$	250	W
T_j	Junction Temperature	200	$^\circ C$
T_{stg}	Storage Temperature Range	-65~200	$^\circ C$

THERMAL CHARACTERISTICS

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



isc Silicon NPN Power Transistor**BUR21****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	200			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	7			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 25A; I _B =2.5A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 40A ;I _B = 10A			3.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 25A; I _B =2.5A			2.0	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 200V; I _B = 0			0.5	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 300V; I _C =0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			0.1	mA
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 4V	60		200	
h _{FE-2}	DC Current Gain	I _C = 10A ; V _{CE} = 4V	20			
h _{FE-3}	DC Current Gain	I _C = 25A ; V _{CE} = 4V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A;V _{CE} = 10V, f _{test} = 1MHz	10			MHz

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