

isc Silicon NPN Power Transistors
BUX31/A/B
DESCRIPTION

High Switching Speed

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V$ (Min)-BUX31
= 450V (Min)-BUX31A
= 500V (Min)-BUX31B
- Low Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

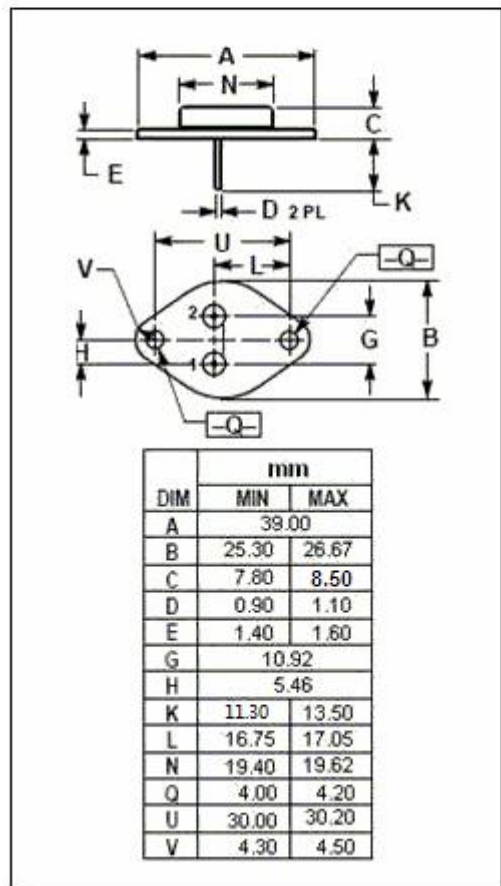
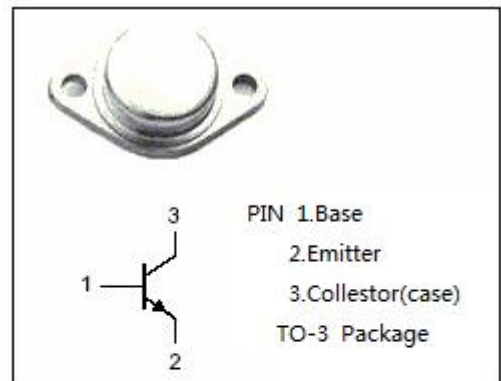
- Designed for off-line power supplies and are also well suited for use in a wide range of inverter or converter circuits and pulse-width-modulated regulators.

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

SYMBOL	PARAMETER	MAX	UNIT	
V_{CES}	Collector- Emitter Voltage($V_{BE} = 0$)	BUX31	800	V
		BUX31A	900	
		BUX31B	1000	
V_{CEO}	Collector-Emitter Voltage	BUX31	400	V
		BUX31A	450	
		BUX31B	500	
V_{EBO}	Emitter-Base Voltage	8	V	
I_C	Collector Current-Continuous	8	A	
I_{CM}	Collector Current-Peak	10	A	
I_B	Base Current-Continuous	5	A	
P_C	Collector Power Dissipation @ $T_C=25^\circ C$	150	W	
T_j	Junction Temperature	200	$^\circ C$	
T_{stg}	Storage Temperature Range	-65~200	$^\circ C$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	1.0	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	BUX31	I _c = 50mA ; I _B = 0	400			V
		BUX31A		450			
		BUX31B		500			
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage		I _c = 4A; I _B = 0.8A			1.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage		I _c = 8A; I _B = 2A			2.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage		I _c = 4A; I _B = 0.8A			1.3	V
I _{CBO}	Collector Cutoff Current	BUX31	V _{CB} = 800V; I _B = 0 V _{CB} = 800V; I _B = 0, T _c =125°C			0.1 1.0	mA
		BUX31A	V _{CB} = 900V; I _B = 0 V _{CB} = 900V; I _B = 0, T _c =125°C			0.1 1.0	
		BUX31B	V _{CB} = 1000V; I _E = 0 V _{CB} = 1000V; I _E = 0, T _c =125°C			0.1 1.0	
I _{EBO}	Emitter Cutoff Current		V _{EB} = 8V; I _c = 0			2	mA
h _{FE}	DC Current Gain		I _c = 4A ; V _{CE} = 3V	8			

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