isc Silicon NPN Power Transistors — BUX31/A/B

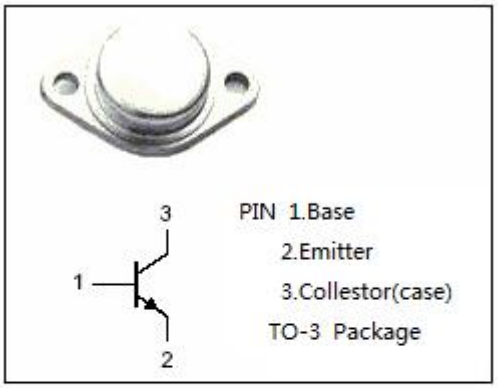
DESCRIPTION

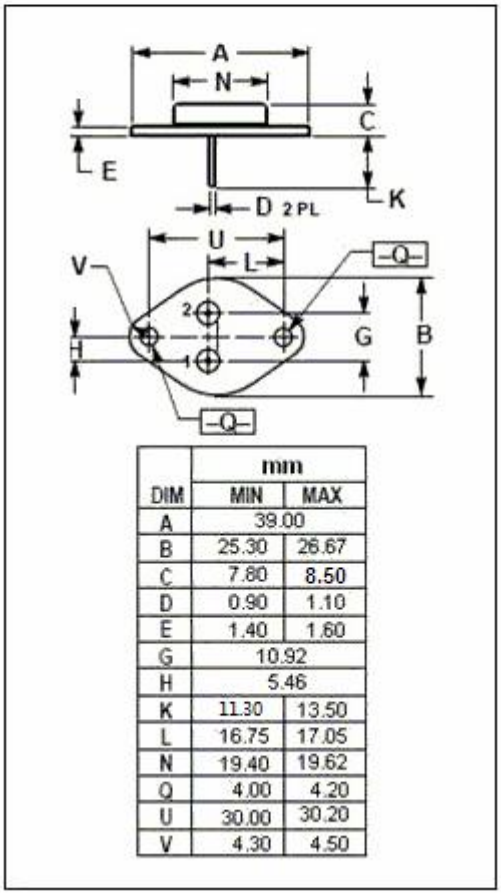
High Switching Speed

- 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.





DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃		150	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	1.0	℃/W

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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	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℃			0.1 1.0	mA
		BUX31A	V_{CB}= 900V; I_B= 0 V_{CB}= 900V; I_B= 0,T_C=125℃			0.1 1.0	
		BUX31B	V_{CB}= 1000V; I_E= 0 V_{CB}= 1000V; I_E= 0,T_C=125℃			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			