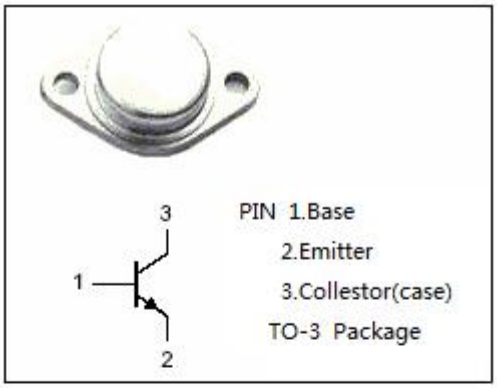
isc Silicon NPN Power Transistor — BUY94

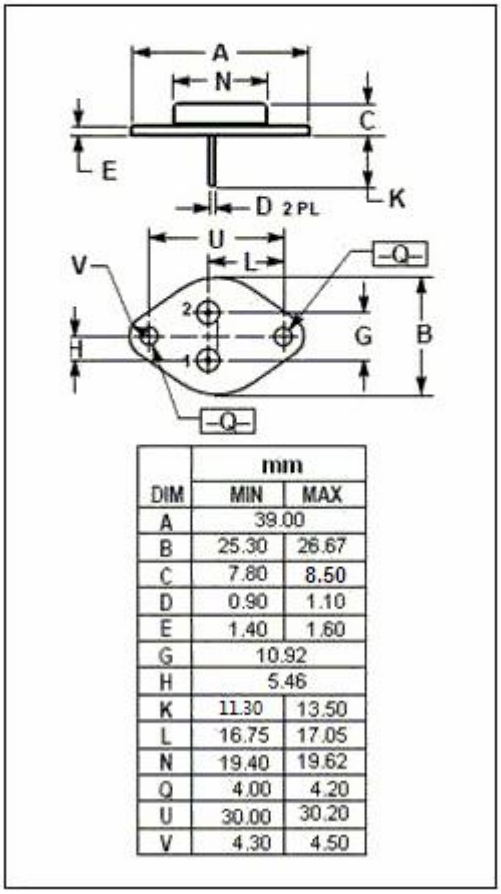
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 300V(Min)
- High Switching Speed
- Excellent Safe Operating Area
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for use in converters, inverters, switching regulators, motor control systems etc.



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	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	750	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	5.0	A
P_C	Collector Power Dissipation @ T_C=25℃	100	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

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	I_C= 50mA ;I_B= 0	300			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= 8A; I_B= 1.6A			1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 12A; I_B= 2.4A			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 8A; I_B= 1.6A			1.6	V
I_{CBO}	Collector-Base Cutoff Current	V_{CB}= V_{CBO} ;I_E= 0 V_{CB}= V_{CBO} ;I_E= 0; T_J= 150℃			0.5 2	mA
I_{EBO}	Emitter Cutoff current	V_{EB}=6V; I_C=0			0.1	mA
h_{FE}	DC Current Gain	I_C= 8A; V_{CE}= 5V	8			
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 10V;f_{test}= 1MHz		8		MHz