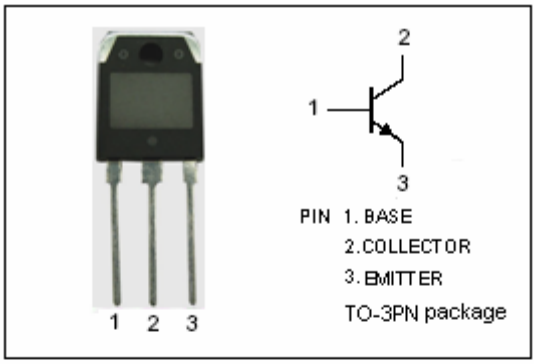
isc Silicon NPN Power Transistor BUV48B

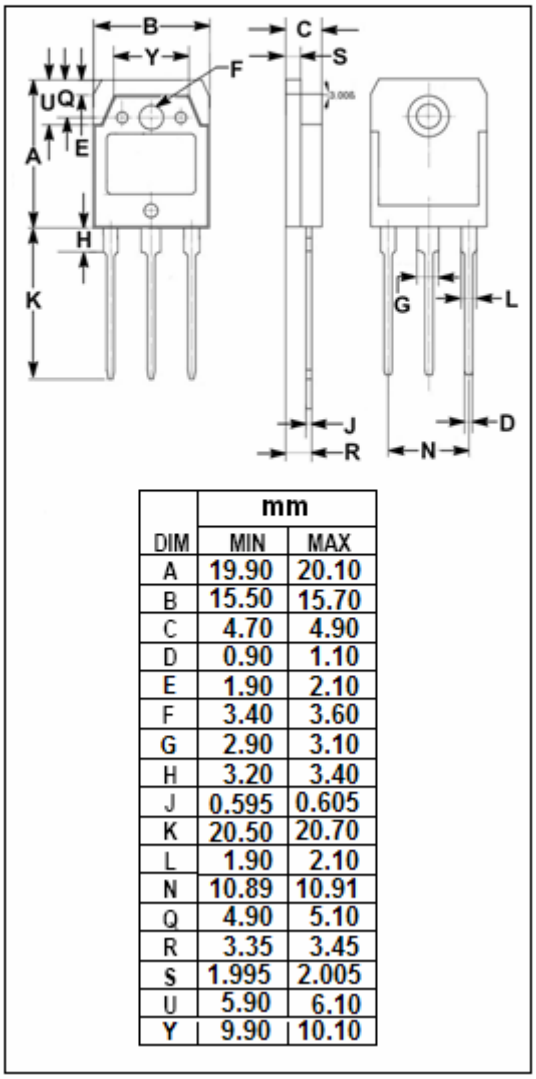
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 600V (Min)
- High Current Capability
- Fast Switching Speed



APPLICATIONS

- Designed for switching and industrial applications from single and three-phase mains.



DIM	mm MIN	MAX
A	19.90	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CER}	Collector-Emitter Voltage (R_{BE}= 10Ω)	1200	V
V_{CES}	Collector-Emitter Voltage (V_{BE}= 0)	1200	V
V_{CEO}	Collector-Emitter Voltage	600	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak t_p< 5ms	30	A
I_B	Base Current-Continuous	4	A
I_{BM}	Base Current-peak t_p< 5ms	20	A
P_C	Collector Power Dissipation @T_C=25℃	125	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	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 100mA; I_B= 0	600		V
$V_{CER(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 0.5A; L= 2mH; V_{clamp}= 1200V R_{BE}= 10Ω	1200		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 6A; I_B= 1.5A		1.5	V
$V_{CE\ (sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 4A		3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 6A; I_B= 1.5A		1.5	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 10A; I_B= 4A		2.0	V
I_{CER}	Collector Cutoff Current	V_{CE}= 1200V; R_{BE}= 10Ω V_{CE}= 1200V; R_{BE}= 10Ω; T_C=125℃		0.5 4.0	mA
I_{CES}	Collector Cutoff Current	V_{CE}= 1200V; V_{BE}= 0 V_{CE}= 1200V; V_{BE}= 0; T_C=125℃		0.5 3.0	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 600V; I_B= 0		1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0		1.0	mA
Switching times Resistive Load					
t_{on}	Turn-on Time	I_C= 6A; I_{B1}=-I_{B2}= 1.5A; V_{CC}= 250V		1.0	μs
t_s	Storage Time			3.0	μs
t_f	Fall Time			0.7	μs