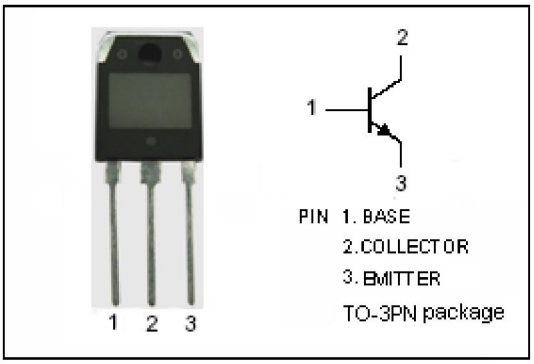
isc Silicon NPN Power Transistor BUV48T

DESCRIPTION

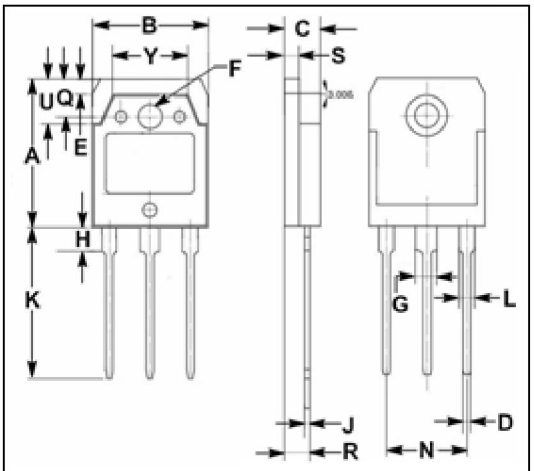
- High Voltage Capability
- High Current Capability
- Fast Switching Speed



APPLICATIONS

Designed for high-voltage,high-speed, power switching in inductive circuits where fall time is critical. They are particularly suited for line-operated swtchmode applications such as:

- Switching regulators
- Inverters
- Solenoid and relay drivers
- Motor controls



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_{CES}	Collector-Emitter Voltage	850	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	5	A
I_{BM}	Base Current-peak	20	A
P_C	Collector Power Dissipation @T_C=25℃	150	W
T_j	Junction Temperature	175	℃
T_{stg}	Storage Temperature Range	-65~175	℃

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
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 0.1A; I_B= 0; L= 125mH	400			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E=1mA; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 2A			0.9	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 10A; I_B= 2A			1.6	V
I_{CES}	Collector Cutoff Current	V_{CE}= 850V;V_{BE}=-1.5V V_{CE}= 850V;V_{BE}=-1.5V;T_C=125℃			0.5 2.0	mA
h_{FE}	DC Current Gain	I_C= 15A; V_{CE}= 5V	6			
f_T	Current-Gain—Bandwidth Product	I_C= 1A; V_{CE}= 10V		5		MHz
C_{OB}	Collector Output Capacitance	I_E= 0; V_{CB}= 10V, f_{test}= 1MHz		250		pF
Switching times; Resistive Load						
t_{on}	Turn-on Time	I_C= 10A; I_{B1}=-I_{B2}= 2A; V_{CE}= 150V			0.5	μs
t_s	Storage Time				3.0	μs
t_f	Fall Time				0.5	μs