

# isc Silicon NPN Power Transistor

# BUV47A

## DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 450V(\text{Min.})$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)} = 1.5V(\text{Max.}) @ I_C = 5A$
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

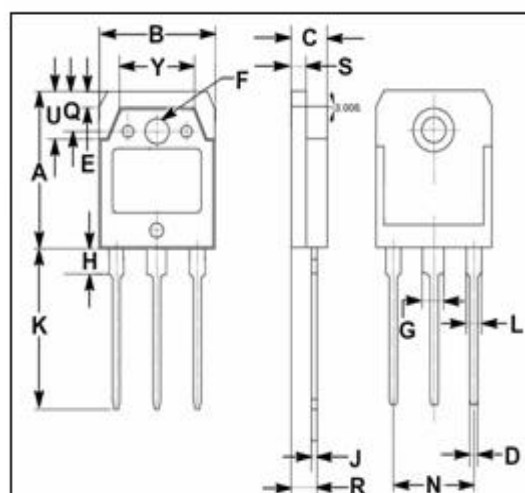
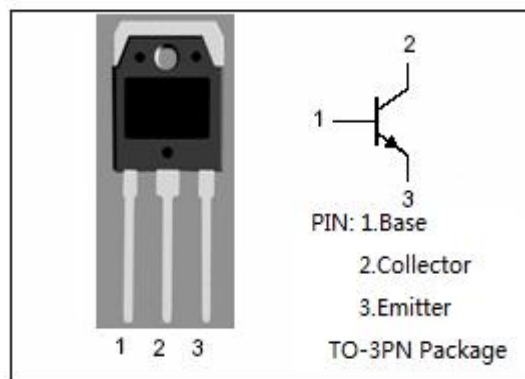
- Designed for 220V switchmode power supply, DC and AC motor control applications.

## ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1000	V
$V_{CEO}$	Collector-Emitter Voltage	450	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	9	A
$I_{CM}$	Collector Current-Peak	15	A
$I_B$	Base Current-Continuous	8	A
$I_{BM}$	Base Current-Peak	10	A
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	100	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	19.60	20.30
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	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 50mA; I <sub>B</sub> = 0	450			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 50mA; I <sub>C</sub> = 0	7			V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 1A			1.5	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 8A; I <sub>B</sub> = 2.5A			3.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 5A; I <sub>B</sub> = 1A			1.6	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 1000V ; I <sub>B</sub> = 0			0.15	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			1.0	mA

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