

# isc Silicon NPN Power Transistor

## BUX98AP

### DESCRIPTION

- High Voltage Capability
- High Current Capability
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

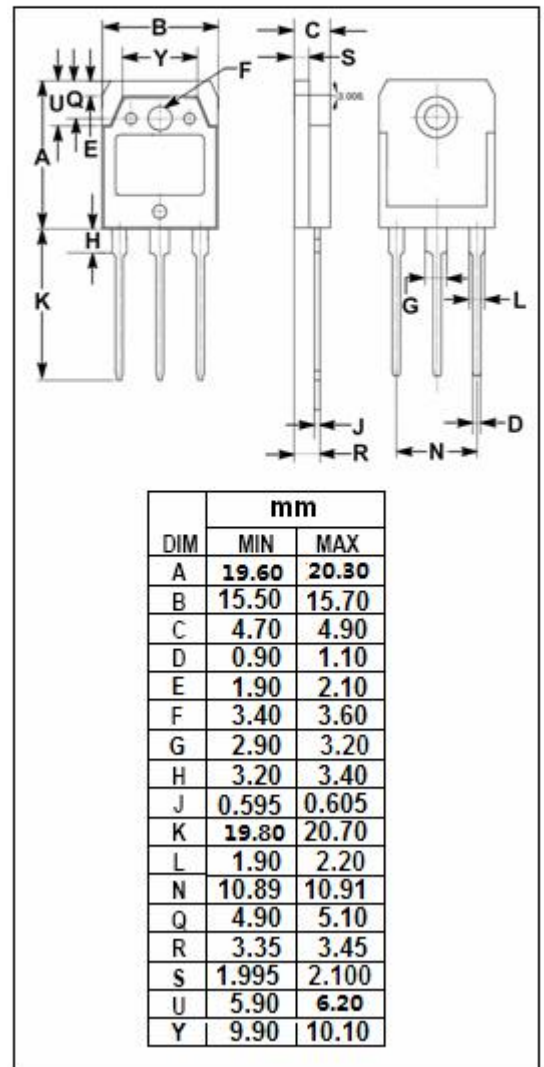
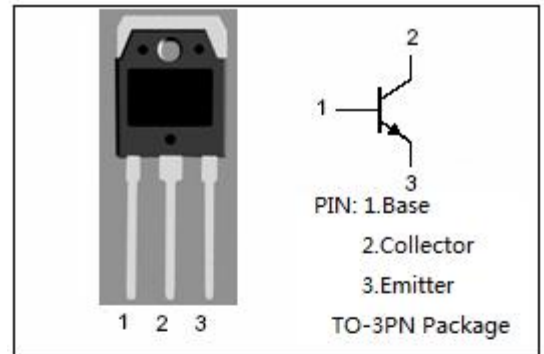
- High frequency and efficiency converters
- Linear and switching industrial equipment

### 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	24	A
$I_{CM}$	Collector Current-peak ( $t_p < 5\text{ ms}$ )	36	A
$I_B$	Base Current-Continuous	5	A
$I_{BM}$	Base Current-peak ( $t_p < 5\text{ ms}$ )	8	A
$P_C$	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	200	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	0.63	$^{\circ}\text{C/W}$



**isc Silicon NPN Power Transistor****BUX98AP****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>CER(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 1mA	1000			V
☆V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 16A ; I <sub>B</sub> = 3.2A			1.2	V
☆V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 16A ; I <sub>B</sub> = 3.2A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =1000V; I <sub>E</sub> = 0 V <sub>CB</sub> =1000V; I <sub>E</sub> = 0 T <sub>C</sub> =125°C			0.4 4	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 450V; I <sub>B</sub> = 0			2	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			2	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V	15		50	

☆ Pulsed: Pulse duration = 300 ms, duty cycle = 1.5 %

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