

isc Silicon NPN Power Transistor

BUX47A

DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 450V$  (Min)
- Fast Switching Speed

APPLICATIONS

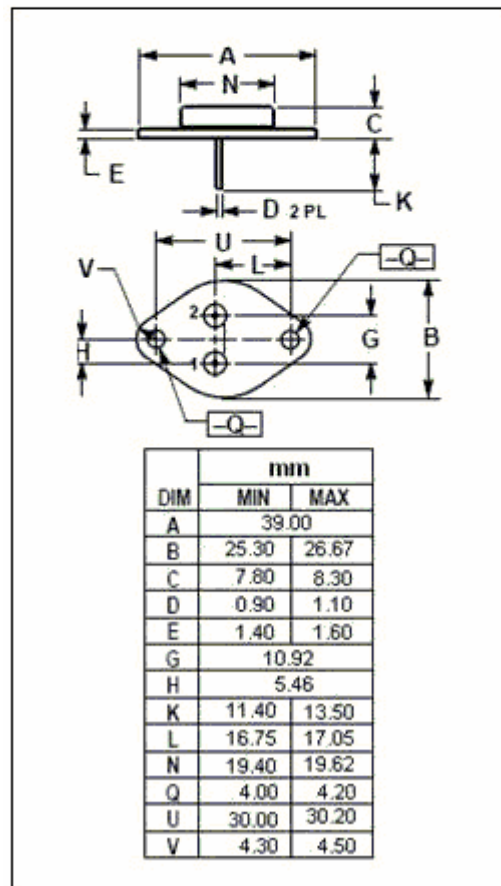
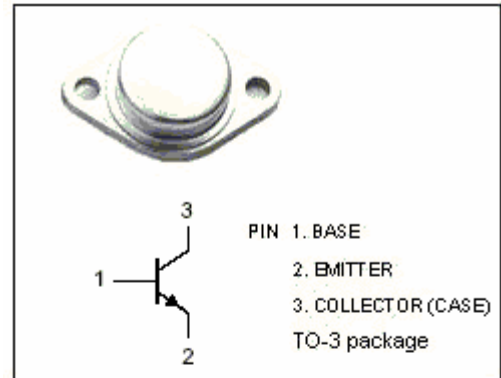
Designed for high voltage, fast switching applications.

Absolute maximum ratings( $T_a=25^{\circ}C$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CER}$	Collector-Emitter Voltage ( $R_{BE} = 10 \Omega$ )	1000	V
$V_{CES}$	Collector-Emitter Voltage ( $V_{BE} = 0$ )	900	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 $t_p < 5ms$	15	A
$I_B$	Base Current-Continuous	8	A
$I_{BM}$	Base Current-peak $t_p < 5ms$	10	A
$P_C$	Collector Power Dissipation @ $T_C = 25^{\circ}C$	125	W
$T_j$	Junction Temperature	175	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-65~175	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.2	$^{\circ}C/W$



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.2\text{A}; I_B=0; L=25\text{mH}$	450		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\text{mA}; I_C=0$	7	30	V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$		1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=8\text{A}; I_B=2.5\text{A}$		3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$		1.6	V
$I_{CER}$	Collector Cutoff Current	$V_{CE}=850\text{V}; R_{BE}=10\Omega$ $V_{CE}=850\text{V}; R_{BE}=10\Omega; T_C=125^{\circ}\text{C}$		0.4 3	mA
$I_{CEV}$	Collector Cutoff Current	$V_{CE}=850\text{V}; V_{BE}=-2.5\text{V}$ $V_{CE}=850\text{V}; V_{BE}=-2.5\text{V}; T_C=125^{\circ}\text{C}$		0.15 1.5	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		1.0	mA

## Switching times Resistive Load

$t_{on}$	Turn-on Time	$I_C=5\text{A}; I_{B1}=-I_{B2}=1\text{A}; V_{CC}=150\text{V}$		0.7	$\mu\text{s}$
$t_s$	Storage Time			3.0	$\mu\text{s}$
$t_f$	Fall Time			0.8	$\mu\text{s}$