

isc Silicon NPN Power Transistor

BUX47A

DESCRIPTION

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

APPLICATIONS

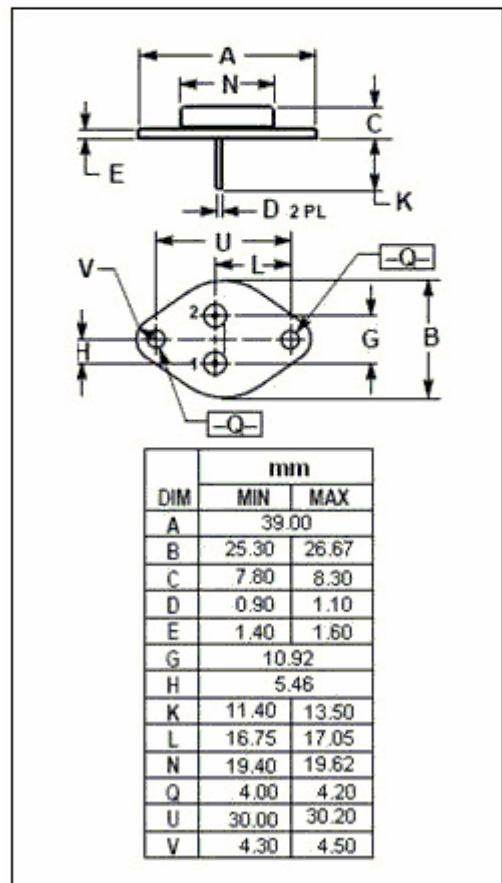
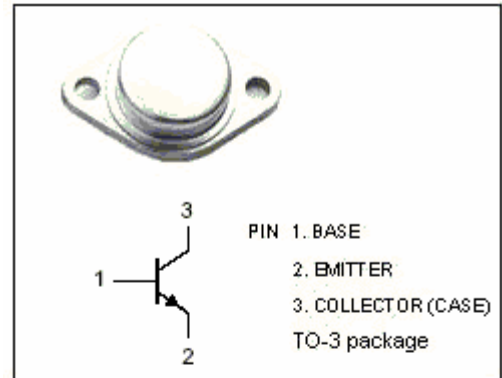
Designed for high voltage, fast switching applications.

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	μs
t_s	Storage Time			3.0	μs
t_f	Fall Time			0.8	μs