

Silicon NPN Power Transistor

BUX47A

DESCRIPTION

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

APPLICATIONS

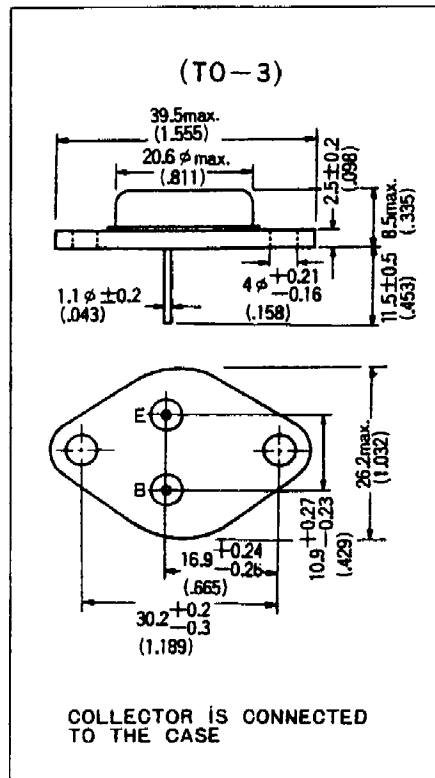
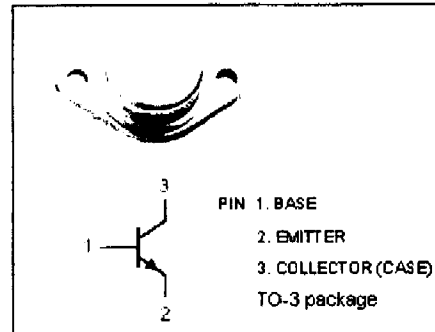
Designed for high voltage, fast switching applications.

Absolute maximum ratings(Ta=25°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_{sig}	Storage Temperature Range	-65-175	$^\circ C$

THERMAL CHARACTERISTICS

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



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Silicon NPN Power Transistor

BUX47A

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