

isc Silicon NPN Power Transistor

BUX87

DESCRIPTION

- High Voltage capability
: $V_{CE(sus)} = 450V(\text{Min})$
- Minimum lot-to-lot spread for reliable operation
- High DC current gain
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

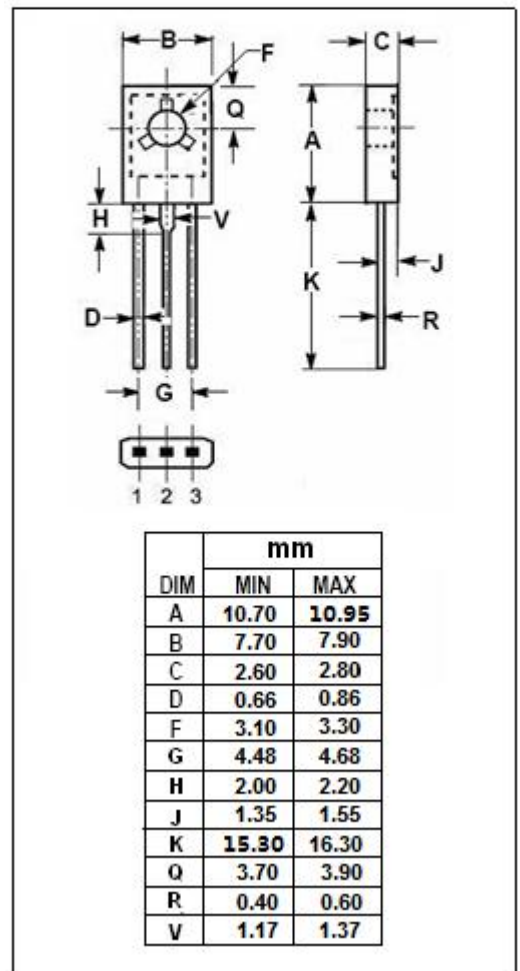
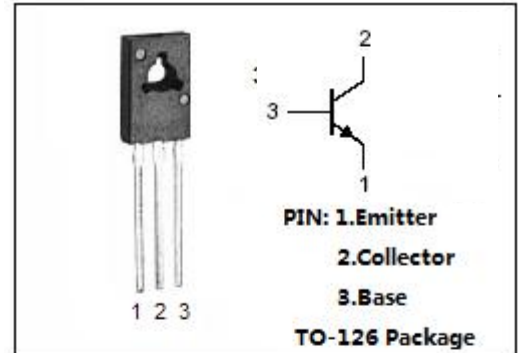
- Fly back and Forward single transistor low Power converters

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEO}	Collector-Emitter Voltage	450	V
V_{CEX}	Collector-Emitter Voltage	1000	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	0.5	A
I_{cm}	Collector Current-Pulse	1	A
P_{tot}	Total Dissipation at $T_c = 25^\circ\text{C}$	40	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	3.12	$^\circ\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	100	$^\circ\text{C}/\text{W}$



isc Silicon NPN Power Transistor**BUX87****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CEO}	Collector-Emitter Voltage	$I_C=100\text{mA}$	450			V
V_{BE0}	Emitter-Base Voltage	$I_C=10\text{mA}$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=0.1\text{A}; I_B=0.01\text{A}$ $I_C=0.2\text{A}; I_B=0.02\text{A}$			0.8 1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=0.2\text{A}; I_B=0.02\text{A}$			1.0	V
I_{CEV}	Collector Cutoff Current	$V_{CE}=1000\text{V}$ $V_{CE}=1000\text{V}$ $T_J=125^{\circ}\text{C}$			100 1	μA mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}$			1.0	mA
h_{FE}	DC Current Gain	$I_C=50\text{mA}, V_{CE}=5\text{V}$ $I_C=40\text{mA}, V_{CE}=5\text{V}$	12	50		
f_T	Transition Frequency	$I_C=0.05\text{A}; V_{CE}=10\text{V}, f=1\text{MHz}$		20		MHz

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