

isc Silicon NPN Power Transistor
BUX84
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V(\text{Min.})$
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

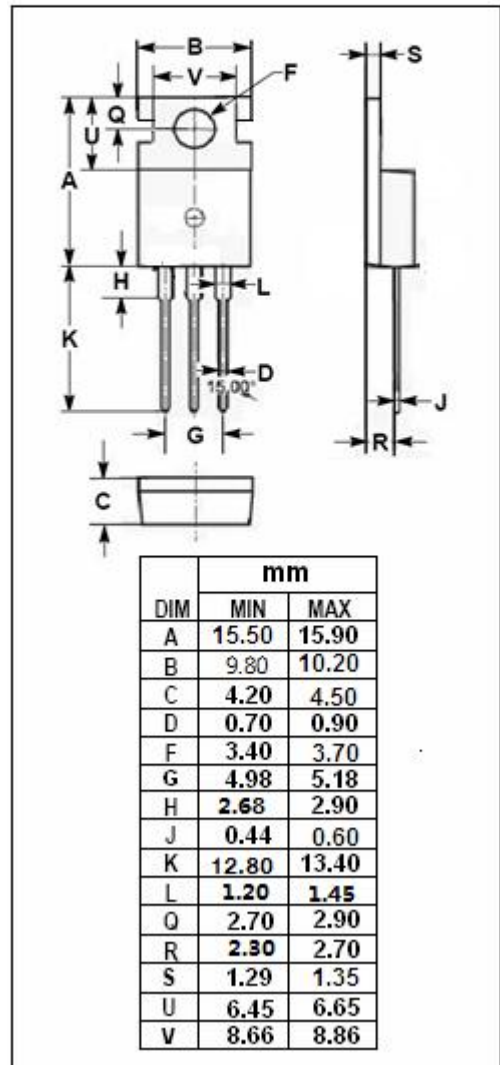
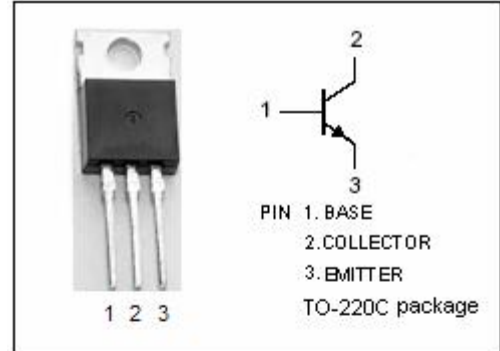
- Designed for use in high-voltage, high-speed, power switching regulators, converters, inverters, motor control system.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	3	A
I_B	Base Current	0.75	A
I_{BM}	Base Current-Peak	1	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	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	2.5	$^\circ\text{C/W}$




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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	400			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 0.3A; I _B = 0.03A			0.8	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 0.2A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage 	I _C = 1A; I _B = 0.2A			1.1	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 800V; I _E = 0 V _{CB} = 800V; I _E = 0; T _C =125°C			0.2 1.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA
h _{FE-1}	DC Current Gain	I _C = 0.1A; V _{CE} = 5V	20		100	
h _{FE-2}	DC Current Gain	I _C = 0.5A; V _{CE} = 5V	15			
f _T	Current-Gain—Bandwidth Product	I _C = 0.2A; V _{CE} = 10V, f _{test} = 1MHz		20		MHz

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