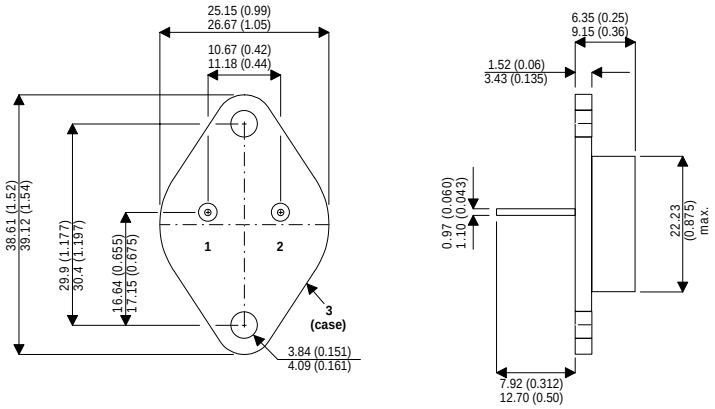
BUX80

MECHANICAL DATA
Dimensions in mm (inches)



HIGH CURRENT HIGH SPEED HIGH POWER SILICON NPN PLANAR TRANSISTOR

Applications

The BUX80 is an epitaxial silicon NPN planar transistor that has high current and high power handling capability and high switching speed.

This device is especially suitable for switching–control amplifiers, power gates, switching regulators, power-switching circuits converters, inverters and control circuits.

TO–204AA (TO–3)

PIN 1 — Base PIN 2 — Emitter Case is Collector.

ABSOLUTE MAXIMUM RATINGS (T_j = 25°C unless otherwise stated)

V_{CES}	Collector – Emitter Voltage	V_{BE} = 0	800V
V_{CER}	Collector – Emitter Voltage	R_{BE} = 50Ω	500V
V_{CEO}	Collector – Emitter Voltage	I_B = 0	400V
V_{EBO}	Emitter – Base Voltage	I_C = 0	10V
I_C	Collector Current		10A
I_{CM}	Peak Collector Current		15A
I_B	Base Current		5A
P_{tot}	Total Power Dissipation T_{case} = 40°C		100W
T_{STG}	Storage Temperature Range		-65 to +150°C
T_J	Maximum Junction Temperature		+150°C

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ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{CEO(BR)}$	Collector - Emitter Breakdown Voltage	I_C = 100mA	I_B = 0	400			V
$V_{CER(BR)}$	Collector - Emitter Breakdown Voltage	I_C = 100mA	R_{BE} = 50Ω	500			V
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 5A I_C = 8A	I_B = 1A I_B = 2.5A			1.5 3	V
$V_{BE(sat)}$*	Base – Emitter Saturation Voltage	I_C = 5A I_C = 8A	I_B = 1A I_B = 2.5A			1.4 1.8	
I_{EBO}	Emitter Cut-off Current	I_C = 0	V_{BE} = 10V			10	mA
h_{FE}	DC Current Gain	I_C = 1.2A	V_{CE} = 5V		30		—
t_{on} t_s	Turn–On Time Storage Time	I_C = 5A I_{B1} =1A	V_{CC} = 250V I_{B2} = -2A			0.5 3.5	µs
t_f	Fall Time	I_C = 5A I_{B1} =1A	V_{CC} =-250V I_{B2} = -2A			0.5	µs

THERMAL CHARACTERISTICS

$R_{th\ j\text{-}mb}$	Thermal Resistance Junction to Case				1.1	°C/W

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