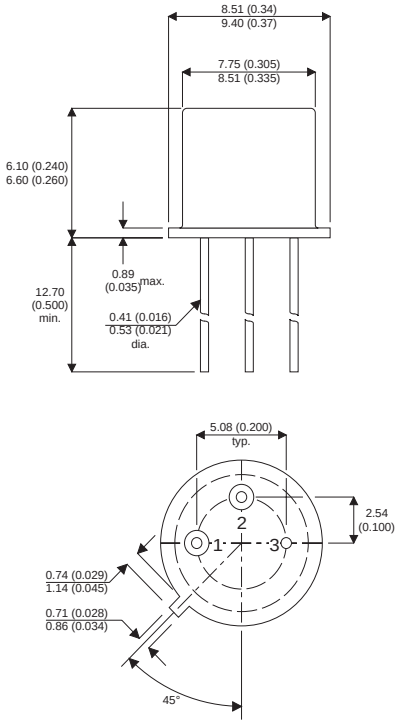
BUX54

MECHANICAL DATA
Dimensions in mm(inches)



TO39 (TO-205AD)

Pin 1 = Emitter Pin 2 = Base Pin 3 = Collector

NPN SILICON TRANSISTOR

FEATURES
- **FAST SWITCHING**
- **HIGH PULSE POWER**

APPLICATIONS
- **POWER SWITCHING CIRCUITS**
- **MOTOR CONTROL**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage	450V
V_{CEX}	Collector – Emitter Voltage (V_{BE}= -1.5V)	450V
V_{CEO}	Collector – Emitter Voltage	400V
V_{EBO}	Emitter – Base Voltage	7V
I_C	Collector Current	2A
I_{CM}	Peak Collector Current (t_p = 10 ms)	5A
I_B	Base Current	0.375A
P_{tot}	Total Power Dissipation at $T_{case} \leq$ 25°C	10W
T_j, T_{stg}	Maximum Junction And Storage Temperature Range	-65°C to +200°C

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BUX54

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{CEO(sus)}$	Collector - Emitter Sustaining Voltage	I_C = 200mA L = 25mH	I_B = 0A	400			V
I_{CEX}	Collector Emitter Cut-off Current	V_{CE} = 450V	V_{BE} = –1.5V			0.1	mA
			T_C = 125°C			0.5	
$V_{CE(sat)}$*	Collector – Emitter Saturation Voltage	I_C = 0.6A	I_B = 0.06A			0.5	V
		I_C = 1.2A	I_B = 0.15A			1.3	
$V_{BE(sat)}$*	Base – Emitter Saturation Voltage	I_C = 1.2A	I_B = 0.15A			1.5	V
f_t	Transition Frequency	V_{CE} = 10V I_C = 0.2A	f = 5MHz	8			MHz
$t_{d + tr}$	Turn–On Time	I_C = 1.2A I_B = 0.15A				0.25	µs
t_f	Fall Time	I_C = 1.2A I_{B2} - 0.15A	I_{B1} =0.15A			1.2	
t_S	Carrier Storage Time	I_C = 1.2A I_{B2} - 0.15A	I_{B1} =0.15A			3.5	

*Pulsed tp =300µs @< 1%

THERMAL CHARACTERISTICS

$R_{\theta JC}$ Junction to Case Thermal Resistance			17.5	°C/W

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