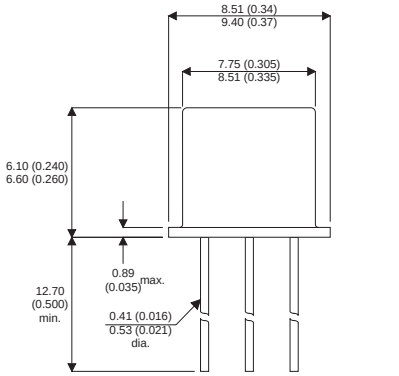
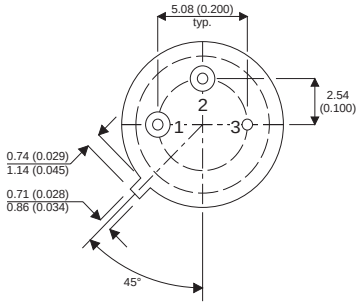
BUX34

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	120V
V_{CEO}	Collector – Emitter Voltage	60V
V_{EBO}	Emitter – Base Voltage	6V
I_C	Maximum Collector Current	5A
I_B	Maximum Base Current	2A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25°C$	20W
P_{tot}	Total Power Dissipation at $T_{amb} \leq 25°C$	0.87W
$R_{\theta JC}$	Thermal Resistance Junction to Case	7.5°C/W
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	172.4°C/W
T_j, T_{stg}	Maximum Junction And Storage Temperature Range	-65°C to +175°C

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Issue 1

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
V_{CEO}	Collector - Emitter Breakdown Voltage	I_C = 100mA		60			V
V_{CBO}	Collector - Base Breakdown Voltage	I_C = 5mA		120			
V_{EBO}	Emitter - Base Breakdown Voltage	I_E = 1.0mA		6			
I_{CES}	Collector - Emitter Cut-Off Current	V_{CE} = 60V				10	µA
I_{CBO}	Collector - Base Cut-Off Current	V_{CB} = 80V				10	
I_{EBO}	Emitter - Base Cut-Off Current	V_{EB} = 4V				10	
$V_{CE(sat)}$*	Collector – Emitter Saturation Voltage	I_C = 5A	I_B = 0.5A			1.0	V
$V_{BE(sat)}$*	Base – Emitter Saturation Voltage	I_C = 5A	I_B = 0.5A			1.6	
h_{FE}	DC Gain	V_{CE} = 2V	I_C = 2A	40		150	—
f_t	Transition Frequency	V_{CE} = 5V I_C = 0.5A	f = 20MHz	70			MHz
C_{obo}	Output Capcitance	V_{CB} = 10V	f = 1MHz			100	pF
C_{ibo}	Input Capcitance	V_{EB} = 0.5V	f = 1MHz			400	
t_{on}	Turn On Time	I_C = 5A	I_{B1} =0.5A			0.6	µs
t_{off}	Turn Off Time	I_C = 5A	I_{B1} = I_{B2} = 0.5A			1.2	

*Pulsed tp =300µs @< 1%

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