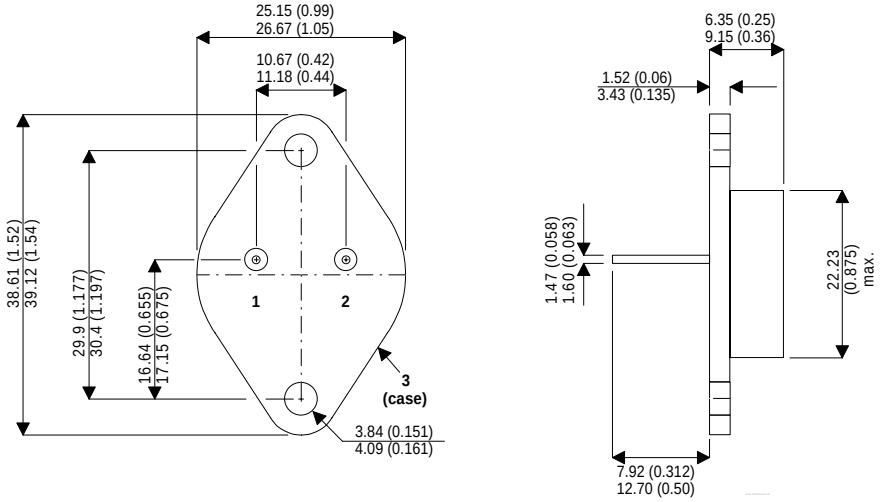
BUR52

MECHANICAL DATA
Dimensions in mm(inches)

HIGH CURRENT NPN SILICON TRANSISTOR



TO3 (TO204AE)

Pin 1 = Base Pin 2 = Emitter Case = Collector

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 (I_E= 0V)	350V
V_{CEO}	Collector – Emitter Voltage (I_B= 0V)	250V
V_{EBO}	Collector – Emitter Voltage (I_C= 0V)	10V
I_C	Collector Current	60A
I_{CM}	Peak Collector Current (t_p = 10 ms)	80A
I_B	Base Current	16A
P_{tot}	Total Power Dissipation at $T_{case} \leq$ 25°C	350W
T_{stg},	Storage Temperature	-65°C to +200°C
T_j	Max. Operating Junction Temperature	200°C
$R_{\theta JC}$	Junction to Case Thermal Resistance	0.5°C/W

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SEME LAB

BUR52

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CEO}$*	Collector - Emitter Breakdown Voltage	I_C = 200mA	I_B = 0	250			V
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	I_C = 0	I_E = 10mA	10			V
I_{CEO}	Collector Emitter Cut-off Current	V_{CE} = 250V	I_B = 0			1.0	mA
I_{CBO}	Collector -Base Cut-off Current	V_{CE} = 350V	I_E = 0			0.2	mA
			T_C = 125°C			2	
I_{EBO}	Emitter–Base Cut-off Current	I_C = 0	V_{EB} = 7V			0.2	mA
$V_{CE(sat)}$*	Collector – Emitter Saturation Voltage	I_C = 25A	I_B = 2A			1.0	V
		I_C = 40A	I_B = 4A		0.7	1.5	
$V_{BE(sat)}$*	Base – Emitter Saturation Voltage	I_C = 25A	I_B = 2A			1.8	V
		I_C = 40A	I_B = 4A		1.5	2	
h_{FE}	DC Current Gain	I_C = 5A	V_{CE} = 4V	20		100	—
		I_C = 40A	V_{CE} = 4V	15			
$I_{S/b}$	Second Breakdown Collector Current	V_{CE} = 20V	t = 1s	17.5			A
f_t	Transition Frequency	I_C = 1.0A f = 1MHz	V_{CE} = 5V		10	16	MHz
t_{on}	Turn–On Time	I_C = 40A V_{CC} = 100V	I_B = 4A		0.3	1.0	µs
t_f	Fall Time	I_C = 40A I_{B2} - 4A	I_{B1} =4A V_{CC} = 100V		0.2	0.6	
t_s	Storage Time	I_C = 40A I_{B2} - 4A	I_{B1} =4A V_{CC} = 100V		1.2	2	

*Pulsed tp =300µs @< 1%

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