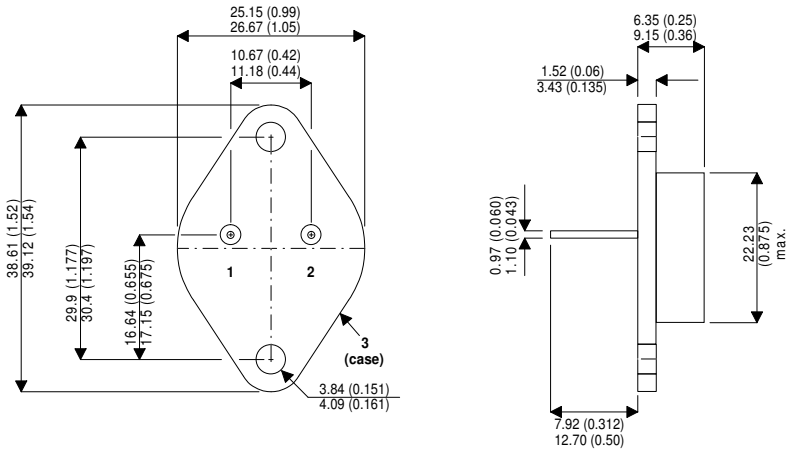
BUV42A

MECHANICAL DATA

Dimensions in mm (inches)



TO3 (TO204AA)

Pin 1 = Base Pin 2 = Emitter Case = Collector

Bipolar NPN Device in a Hermetically Sealed TO3 Metal Package

FEATURES

- **Low $V_{CE(sat)}$**
- **Fast Switching**
- **Low On-State Voltage Drop**

APPLICATIONS

Power Switching Circuits.

ABSOLUTE MAXIMUM RATINGS

T_{CASE} = 25°C unless otherwise stated		
V_{CEX}	Collector - Emitter Voltage (V_{BE} = -1.5V)	400V
V_{CEO}	Collector - Emitter Voltage	300V
V_{EBO}	Emitter – Base Voltage	7V
I_C	Continuous Collector Current	12A
I_B	Base Current	2.5A
P_{tot}	Total Power Dissipation at T_{case} = 25°C	120W
T_{stg}	Storage Temperature	-65 to 200°C

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk

BUV42A

THERMAL CHARACTERISTICS

		Max.	Unit
R_{th} j-case	Thermal resistance to case	1.46	℃/W

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

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CER}	Collector Cutoff Current	V_{CE} = 400V	R_{BE} = 10Ω			0.5	mA
			T_j = 100℃			2.5	
I_{CEV}	Collector Cut-Off Current	V_{CE} = 400V	V_{BE} = -1.5V			0.5	
			T_j = 100℃			2	
I_{EBO}	Emitter Cut-Off Current	V_{EB} = 5V	I_C = 0			1	
$V_{(BR)CEO}$*	Collector to Emitter Breakdown Voltage	I_C = 0.2A	L = 25mH	300			V
$V_{(BR)EBO}$	Emitter to Base Breakdown Voltage	I_E = 50mA	I_C = 0	7			
$V_{CE(sat)}$*	Collector to Emitter Saturation Voltage	I_C = 4A	I_B = 0.4A			0.9	
			T_j = 100℃			1.9	
$V_{BE(sat)}$*	Base to Emitter Saturation Voltage	I_C = 4A	I_B = 0.4A			1.3	
			T_j = 100℃			1.5	

DYNAMIC CHARACTERISTICS (T_{case}=25℃ unless otherwise stated)

C_{obo}	Output Capacitance	I_E = 0A f = 1.0MHz	V_{CB} = 10V			100	pF
t_r	Rise Time	V_{CC} = 250V	I_C=6A			0.4	μs
t_s	Storage Time	I_{B1}=-I_{B2}=0.75A				1.6	
t_f	Fall Time					0.3	

* Pulse test t_p = 300μs, δ < 2%

Semelab plc. Telephone +44(0)1455 556565. Fax +44(0)1455 552612.
E-mail: sales@semelab.co.uk Website: http://www.semelab.co.uk