



Features

- Meets IEC 61000-4-5 standard
- Compact EIA 0805 size
- Quick response time (< 0.5 ns)
- High transient current capability
- Lead free
- AEC-Q200 compliant
- RoHS compliant*

Applications

- Power supplies
- Entertainment electronics
- Circuit board level protection against transient events
- CAN, LIN, FLEXRAY based modules
- Module load dump protection
- Motor/inductive load transient suppression

BVRA0805 Automotive Grade SMD Low Voltage Varistor Series

Description

The Bourns® Model BVRA0805 Low Voltage Multilayered Varistor Series is designed specifically for use in automotive circuits requiring surge protection. This series offers excellent transient energy absorption due to improved energy volume distribution and power dissipation. The Model BVRA0805 Series is available with working voltages from 5.5 to 45 V_{DC}.

Model BVRA Series varistors are typically applied to protect integrated circuits and other components at the circuit board level.

Additional Information

Click these links for more information:



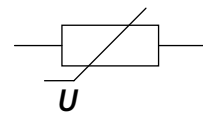
Electrical Characteristics @ 25 °C (unless otherwise noted)

Model	V _{rms} (V)	V _{DC} (V)	V _n Min. (V)	V _n Max. (V)	V _c (V)	I _{max} (A)	W _{max} (J)	C _p Typ. (pF)
	<10 μA		1 mA DC		1 A @ 8/20 μs	@ 8/20 μs	@ 10/1000 μs	@ 1 KHz
BVRA0805-04PF	4	5.5	7.8	12	22	80	0.1	800
BVRA0805-06PF	6	9	11	18	30	80	0.2	650
BVRA0805-08PF	8	11	14	20	45	100	0.3	440
BVRA0805-11PF	11	14	17	21	38	100	0.1	500
BVRA0805-14PF	14	18	20	26	44	120	0.3	350
BVRA0805-17PF	17	22	25	34	54	30	0.1	160
BVRA0805-20PF	20	26	30	38	56	100	0.4	250
BVRA0805-25PF	25	31	36	44	71	100	0.3	220
BVRA0805-30PF	30	38	45	55	81	100	0.3	200
BVRA0805-35PF	35	45	54	66	93	80	0.1	130

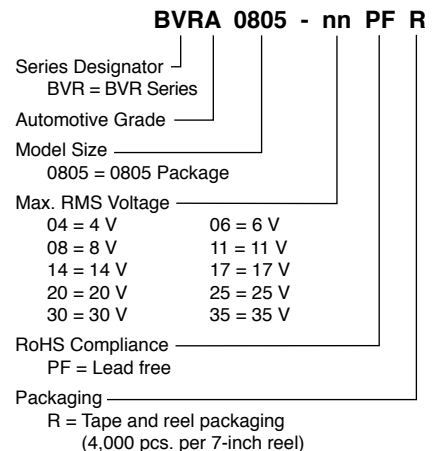
Environmental Characteristics

Operating Temperature..... -40 °C to +125 °C
 Storage Temperature..... -40 °C to +125 °C
 Standard..... IEC 61000-4-5

Device Symbol



How to Order



Americas: Tel: +1 951-781-5500 • Email: americus@bourns.com

Mexico: Tel: +52-614-478-0400 • Email: mexicus@bourns.com

Asia: Tel: +886-2-2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 885 877 • Email: euocus@bourns.com

www.bourns.com



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

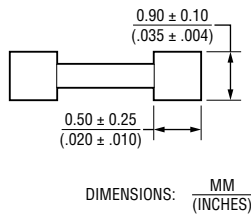
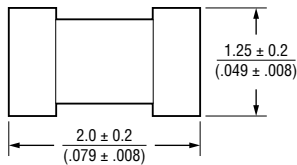
Users should verify actual device performance in their specific applications.

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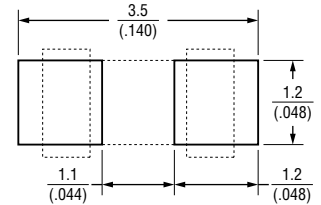


Product Dimensions



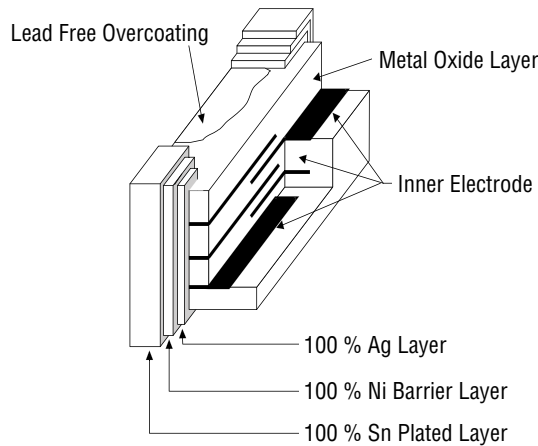
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Recommended Pad Layout

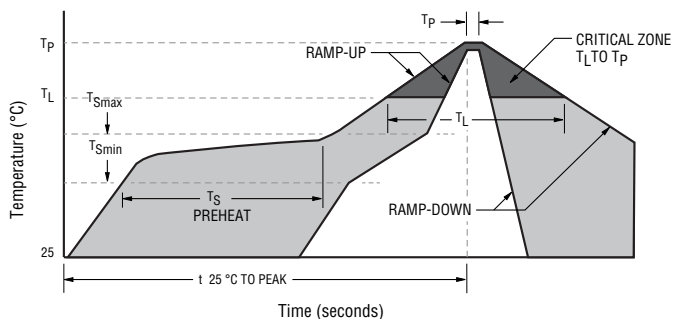


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Construction



Solder Reflow Recommendations



A	Stage 1 Preheat Ramp	Ambient to Preheating Temperature	3 °C/s max.
B	Stage 2 Preheat	Preheat min./max. Temperature Range	150 °C to 200 °C 60 s to 180 s
C	Stage 3 Preheat to Main Heating	Max. Time Above Stated Temperature	217 °C 60 s to 150 s
D	Main Heating	Max Time Within 5 °C of Peak Temperature (260 °C)	255 °C 20 s to 40 s
E	Cool Down	Rate from Peak Temperature	6 °C/s max.

CAUTION:

- This product can be damaged by rapid heating, cooling or localized heating.
- Heat shocks should be avoided. Preheating and gradual cooling recommended.
- Solder gun tip temperature should be kept below 280 °C and should not touch the device directly. Contact should be less than 3 seconds. A solder gun under 30 watts is recommended.
- Excess solder volume can damage the body of the product.

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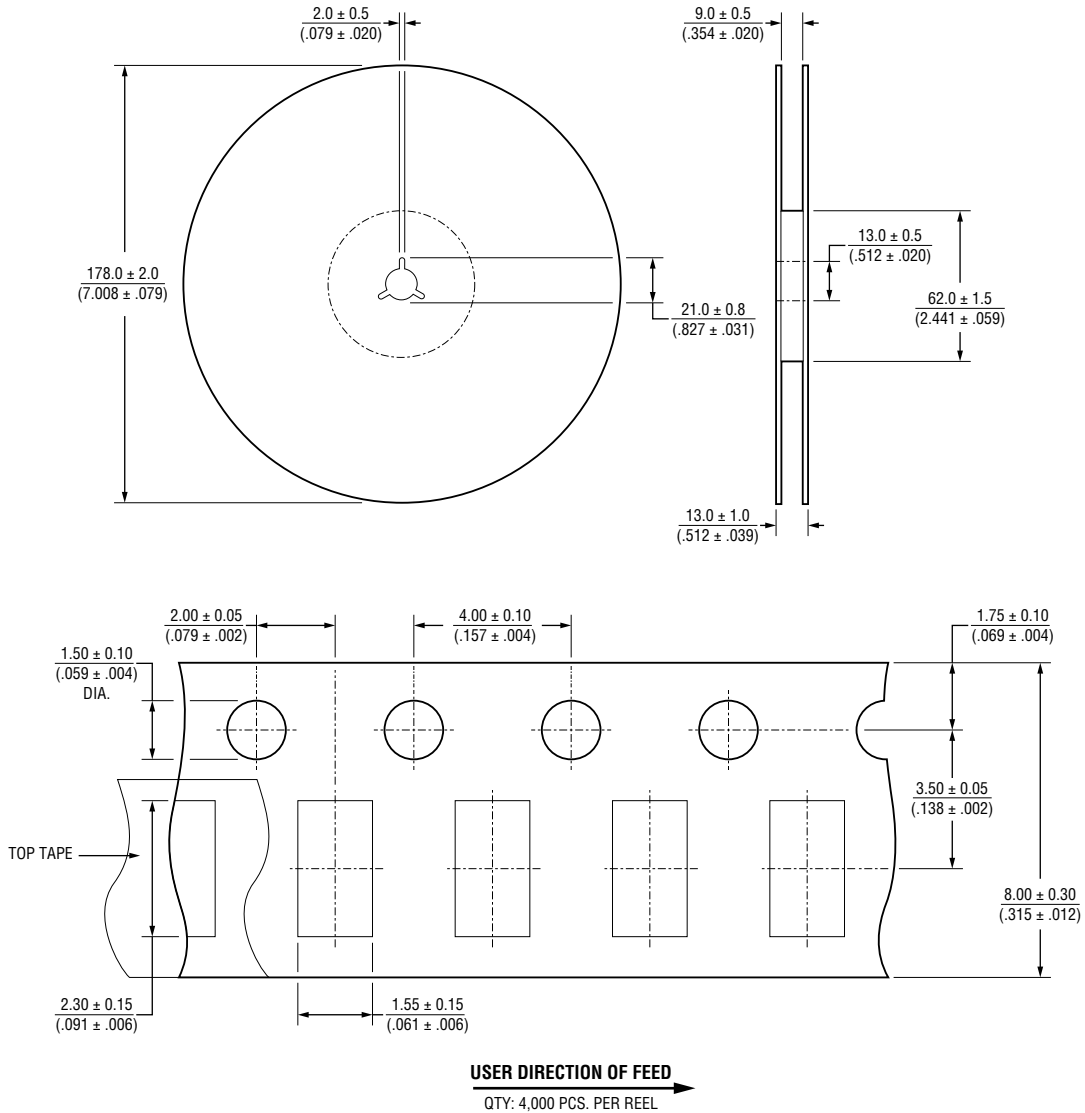
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BVRA0805 Automotive Grade SMD Low Voltage Varistor Series



Packaging Dimensions



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

REV. 09/24

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