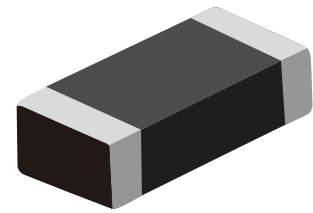


FEATURES

- | Wide operating voltages ranging from 4.0 Vrms to 35 Vrms
(5.5 Vdc to 45 Vdc)
- | Fast response, instantly clamping the transient over voltage
- | High surge current handling capability
- | High energy absorption capability
- | Low clamping voltages, providing better surge protection
- | Low capacitance values, providing digital switching circuitry protection
- | High insulation resistance, preventing electric arcing to the adjacent devices or circuits



0805

APPLICATIONS

- | Universal Serial Bus (USB)
- | Mobile communication
- | Computer/DSP product
Video and audio ports
- | Portable/Hand- Held Products
- | Portable/Hand- Held Products

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

GENERAL CHARACTERISTICS DEFINITION

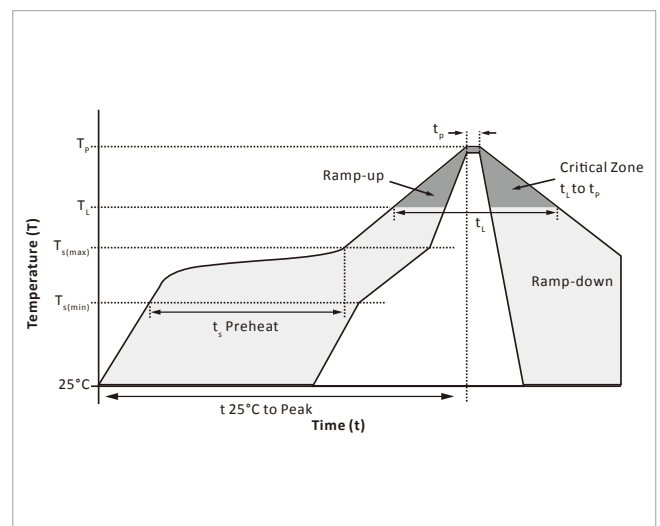
- | Operating Temperature Range :-40°C ~ +85°C
- | Storage Temperature Range :-40°C ~ +125°C

ELECTRICAL CHARACTERISTICS

Part Number	Max Allowable Voltage		Varistor Voltage $V_B@1mA$	Energy 10/1000us J	Withstanding Surge Current $I_{pp}(8/20\mu s)$	Max Clamping Voltage V_C		Typical Capacitance (Reference) (pF)
	$V_{RMS}(V)$	$V_{DC}(V)$				V(V)	I(A)	
SMV0805B8.0A	4.0	5.5	8(6.6-9.9)	0.2	80	18	2	1100
SMV0805B12A	7.0	9.0	12(10.2-13.8)	0.2	100	24	2	750
SMV0805B18A	11.0	14.0	18(15.3-21.7)	0.2	100	30	2	600
SMV0805B22A	12.0	16.0	22(19.8-24.2)	0.2	100	36	2	580
SMV0805B24A	14.0	18.0	24(21.6-26.4)	0.2	100	38	2	480
SMV0805B27A	17.0	22.0	27(24.3-29.7)	0.2	100	44	2	400
SMV0805B30A	19.0	24.0	30(27.2-33.0)	0.2	100	48	2	400
SMV0805B33A	20.0	26.0	33(29.7-36.3)	0.2	100	54	2	380
SMV0805B36A	22.0	28.0	36(32.7-39.6)	0.2	100	59	2	350
SMV0805B39A	25.0	30.0	39(35.1-42.9)	0.2	100	65	2	350
SMV0805B42A	26.0	33.0	42(38.1-46.2)	0.2	80	72	2	350
SMV0805B47A	30.0	38.0	47(42.3-51.7)	0.2	80	77	2	280
SMV0805B56A	35.0	45.0	56(50.4-61.6)	0.2	80	90	2	280

SOLDERING PARAMETERS

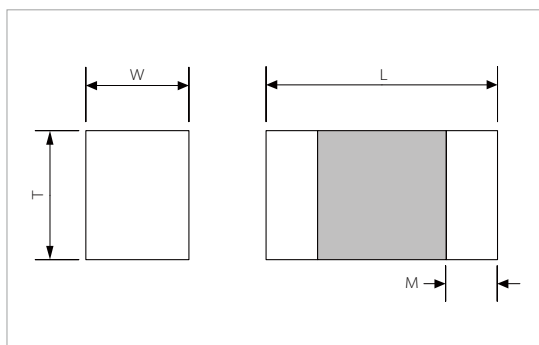
Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_p)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C



CHARACTERISTIC CURVES

Items	Test condition/Description	Specifications								
Dry Heat Loading	The specimen shall be applied continuously the maximum allowable voltage at the specified conditions for specified period and then stored at room temperature and normal humidity over 2 hours . Thereafter, the change of V_b and mechanical damage shall be examined . Ambient temp: $85\pm 2^\circ\text{C}$ / Period: 1000 ± 24 hours	$\Delta V_b / V_b \leq 10\%$								
High Temp Storage	In a dry oven without load . Ambient temp: $125\pm 2^\circ\text{C}$ / Period: 1000 ± 24 hours	$\Delta V_b / V_b \leq 10\%$								
Damp Heat/ Humidity Loading	The specimen shall be applied continuously the maximum allowable voltage at the specified conditions for specified period and then stored at room temperature and normal humidity over 2 hours . Thereafter, the change of V_b and mechanical damage shall be examined . Ambient temp: $40\pm 2^\circ\text{C}$, $90\sim 95\%$ RH/Period: 1000 ± 24 hours	$\Delta V_b / V_b \leq 10\%$								
Temperature Cycle	Condition the specimen to each temperature from step 1 to step 4 in this order for the period shown in the table of specifications . The change of V_b and mechanical damage shall be examined after 2 hours <table border="1" data-bbox="587 965 1145 1111"> <tbody> <tr> <td>Step 1</td> <td>$-40\pm 3^\circ\text{C}$ / 30 min</td> </tr> <tr> <td>Step 2</td> <td>$-40\pm 3^\circ\text{C}$ / 30 min</td> </tr> <tr> <td>Step 3</td> <td>$85\pm 2^\circ\text{C}$ / 30 min</td> </tr> <tr> <td>Step 4</td> <td>Room temp / 15 min</td> </tr> </tbody> </table>	Step 1	$-40\pm 3^\circ\text{C}$ / 30 min	Step 2	$-40\pm 3^\circ\text{C}$ / 30 min	Step 3	$85\pm 2^\circ\text{C}$ / 30 min	Step 4	Room temp / 15 min	No visible damage $\Delta V_b / V_b \leq 10\%$
Step 1	$-40\pm 3^\circ\text{C}$ / 30 min									
Step 2	$-40\pm 3^\circ\text{C}$ / 30 min									
Step 3	$85\pm 2^\circ\text{C}$ / 30 min									
Step 4	Room temp / 15 min									
Low Temp Storage	In a cooling chamber without load . Ambient temp: $-40\pm 2^\circ\text{C}$ / Period: 1000 ± 24 hours	$\Delta V_b / V_b \leq 10\%$								

DIMENSION SPECIFICATION



Size	L(mm)	W(mm)	T(mm)	M(mm)
0805	2.00 ± 0.20	1.25 ± 0.20	0.85 ± 0.20	0.50 ± 0.30

DRDERING INF ORMATIOON

Part Number	Component Package	QTY/Reel	Reel Size
SMV0805 Series	0805	4000PCS	7"

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