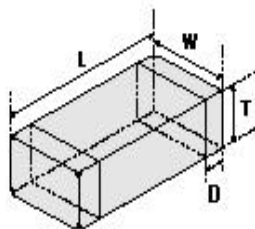


Shape And Dimensions




unit: mm(inch)

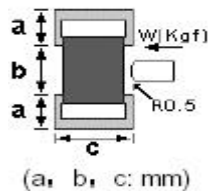
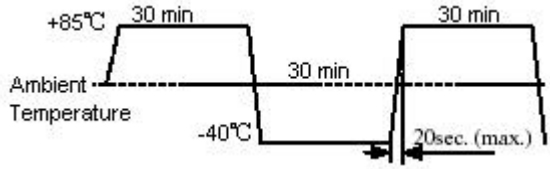
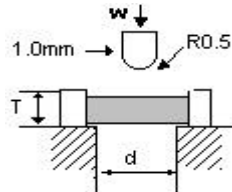
L	W	T	D
1.6 ± 0.2 (0.063 \pm 0.008)	0.8 ± 0.2 (0.031 \pm 0.008)	0.8 ± 0.2 (0.031 \pm 0.008)	0.3 ± 0.2 (0.01 \pm 0.008)

1608 (0603) TYPE

PART Number	Working voltage		Varistor voltage @1mA DC		Maximum Clamping Voltage 8/20 μ s 1A	Energy Absorb 10/1000 μ s	Peak Current 8/20 μ s	Typical Capacitance @1MHz
	DC	AC						
	Volts	Volts	V_B	ΔV_B	Volts	Joules	Volts	pF
WA S3005.0k	3.3	2.5	5	$\pm 20\%$	10	0.1	30	1230
WA S3008.0k	5.6	4	8	$\pm 20\%$	15.5	0.1	30	825
WA S3012.0k	8	5.7	12	$\pm 20\%$	20	0.1	30	600
WA S3013.0k	9	6.4	13	$\pm 15\%$	20	0.1	30	550
WA S3016.0k	11	7.8	16	$\pm 15\%$	25	0.1	30	500
WA S3018.0k	12	8.5	18	$\pm 15\%$	25	0.1	30	480
WA S3020.0k	14	10	20	$\pm 15\%$	30	0.1	30	430
WA S3022.0k	16	11.3	22	$\pm 10\%$	35	0.1	30	300
WA S3025.0k	18	12.7	25	$\pm 10\%$	40	0.1	30	230
WA S3030.0k	22	15.6	30	$\pm 10\%$	50	0.1	30	180
WA S3033.0k	24	17	33	$\pm 10\%$	54	0.1	30	170
WA S3036.0k	26	18.4	36	$\pm 10\%$	58	0.1	30	160
WA S3042.0k	30	21.2	42	$\pm 10\%$	65	0.1	30	150

Reliability And Test Conditions

Type	Item	Specified value				Test methods
		1005	1608	2012	3216	
1	Operating temperature range	-55 to +125 °C				-
2	Storage temperature range	-55 to +125 °C				-
3	Solderability	At least 90% of terminal electrode is covered by new solder				Solder temperature: 230 ± 10 °C Duration: 3 ± 1 S Preheating temperature: 100 to 150 °C Preheating time: 60S Flux: immersion into methanol solution with colophony for 3 to 5 sec.
4	Resistance to soldering	No damage such as cracks should be caused in chip element. At least 75% of terminal electrode is covered by new solder Varistor voltage change within $\pm 10\%$				Solder temperature: 260 ± 5 °C Duration: 10 ± 0.5 S Preheating temperature: 100 to 150 °C Preheating time: 60S Flux: immersion into methanol solution with colophony for 3 to 5 sec.
5	Terminal Strength	The terminal electrode shall not be broken off nor the chip element.				 W (Kgf) min
		W	0.4	0.5	0.6	1

6	Flextrue strength	No mechanical damage.					 <p>(a, b, c: mm)</p>
		A	0.45	1.0	1.0	1.3	
		B	0.5	0.8	1.0	1.5	
		C	0.5	1.3	1.3	3.0	
		D	0.8	1.0	1.2	2.0	
7	Drop	1、 No mechanical damage. 2、 Varistor voltage change within $\pm 5\%$					Dropped 10 times on a concrete floor from a height of 1m.
8	Thermal shock	1、 No mechanical damage. 2、 Varistor voltage change within $\pm 5\%$					Temperature: -40 ± 3 min $+85 \pm 3$ min Transforming interval :max 20 sec Number of cycles: 32 
9	Loading at low temperature	1、 No mechanical damage. 2、 Varistor voltage change within $\pm 5\%$.					Temperature: $-40 \pm 2 \text{ }^{\circ}\text{C}$ Duration: 500 hrs
10	Loading at high temperature	1、 No mechanical damage. 2、 Varistor voltage change within $\pm 5\%$.					Temperature: $85 \pm 2 \text{ }^{\circ}\text{C}$ Duration: 1000 ± 12 hrs Applied voltage: Working voltage
11	Loading under Damp Heat	1、 No mechanical damage. 2、 Varistor voltage change within $\pm 5\%$.					Temperature: $55 \pm 2 \text{ }^{\circ}\text{C}$ Duration: 500 ± 12 hrs Humidity: 90 to 95%RH Applied voltage: Working voltage
12	Humidity resistance	1、 No mechanical damage. 2、 Varistor voltage change within $\pm 5\%$.					Temperature: $55 \pm 2 \text{ }^{\circ}\text{C}$ Duration: 500 ± 12 hrs Humidity: 90 to 95%RH
13	Vibration	1、 No mechanical damage. 2、 Varistor voltage change within $\pm 5\%$.					Amplitude: 1.5mm Directions: 2hrs each in X Y Z direction Frequency range: 10 to 55 to 10Hz (min)
14	Resistance to pressure of substrate	The body shall not be damaged by forces applied on the right.					
		d	1.3	1.3	1.3	2.0	
		w	1.0	2.0	3.0	4.0	
15	Solvent resistance	1、 No mechanical damage. 2、 Varistor voltage change within $\pm 5\%$.					Solvent : Trichloroethane Washer : ultrasonic washer Wash time : 3min