



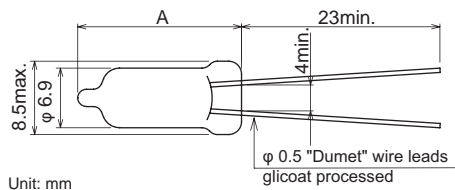
Features

- Fast response time.
- Bi-polar surge absorber, it will fail open if the surge withstand capacity is exceeded.
- Small inter-terminal capacitance.
- High insulation resistance ($10^9\Omega$. min).
- Excellent surge withstand capability (300 times at 100A, 8/20 μ s).
- Small size for compact circuit design.

Applications

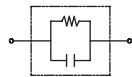
- Switching supply, Inverter power supplies, Refrigerator, Laundry machine, Air conditioner, DVD players, DVD recorders, Copiers, xDSL modems, Splitters, BS tuner, CRT, VCR, Telephone, Modems, Car audio and GPS.

Dimensions



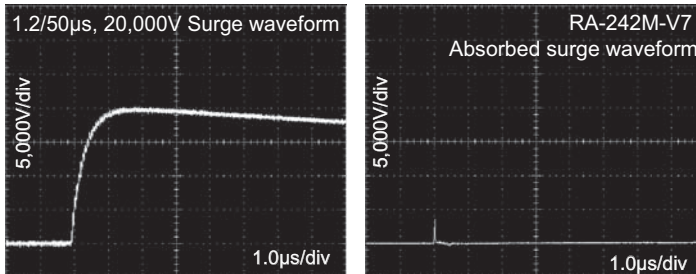
Unit: mm

Circuit

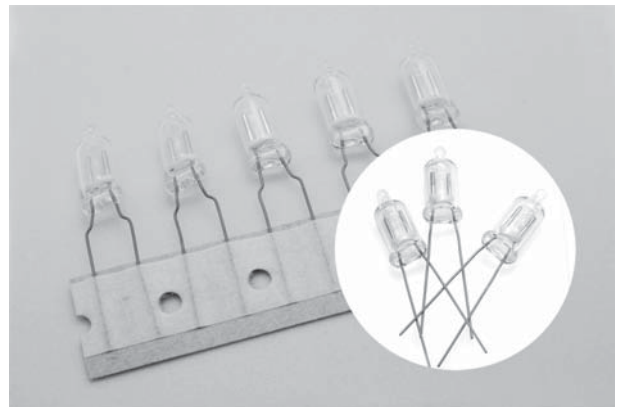


Dimensions max.(mm)	
A	
RA-M-V7	19
RA-MS-V7	16

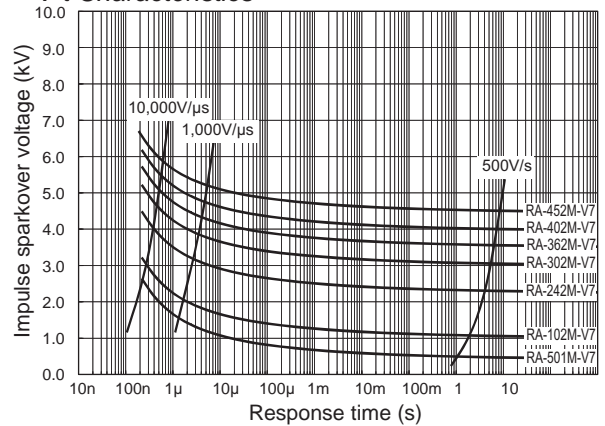
Impulse Absorption Characteristics



Safety Standard		File No.
UL	:UL1449 4th.	E332107
CSA	:C22.2 No.1	LR105073
TÜV	:EN60065 :EN60950-1	J50114145



V-t Characteristics



Electrical Specifications

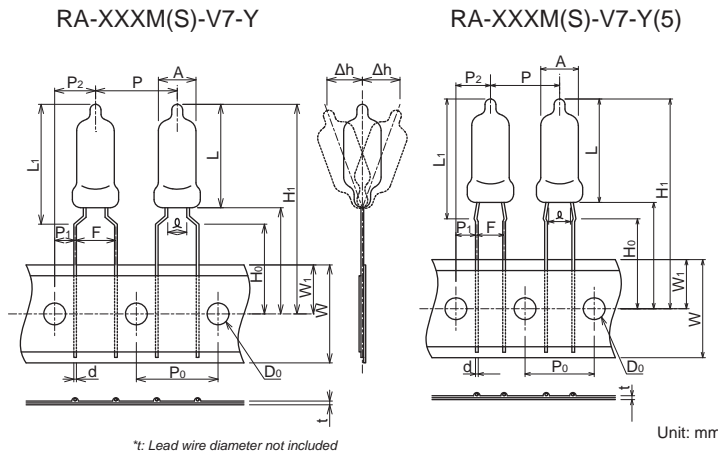
Model Number	DC Breakdown Voltage (V)	Impulse Sparkover Voltage 1.2/50 μ s (V) max.		Insulation Resistance (M Ω) min.	Capacitance 1MHz (pF) max.	Impulse Life test 8/20 μ s 100A	Impulse Current Capacity 8/20 μ s (A)	Withstanding Voltage
		Applied Voltage	Specification					
RA-501M/MS-V7	500(400~600)	-	-	1000(DC100V)	2.0	300 times	3,500	—
RA-601M/MS-V7	600(480~720)			1000(DC250V)				—
RA-102M/MS-V7	1,000(800~1,200)			—				—
RA-152M/MS-V7	1,500(1,200~1,800)			—				—
RA-242M-V7	2,400(1,920~2,880) *	5,000V	5,000V max.	1000(DC500V)	2.0	300 times	3,500	AC1,250V 3s
RA-302M-V7	3,000(2,400~3,600) *			AC1,500V 60s				
RA-362M-V7	3,600(2,880~4,320) *			AC1,800V 3s				
RA-402M-V7	4,000(3,200~4,800) *	7,500V	7,500V max.	1000(DC1000V)	2.0	300 times	3,500	AC2,000V 60s
RA-452M-V7	4,500(3,600~5,400) *			AC2,000V 60s				
RA-242MS-V7	2,400(1,920~2,880) *	5,000V	5,000V max.	1000(DC500V)	2.0	300 times	3,500	AC1,250V 3s
RA-302MS-V7	3,000(2,400~3,600) *			AC1,500V 60s				
RA-362MS-V7	3,600(2,880~4,320) *			AC1,800V 3s				
RA-402MS-V7	4,000(3,200~4,800) *	7,500V	7,500V max.	1000(DC1000V)	2.0	300 times	3,500	AC2,000V 60s
RA-452MS-V7	4,500(3,600~5,400) *			AC2,000V 60s				

* Reference Value

Operating Temperature: -20~+80°C

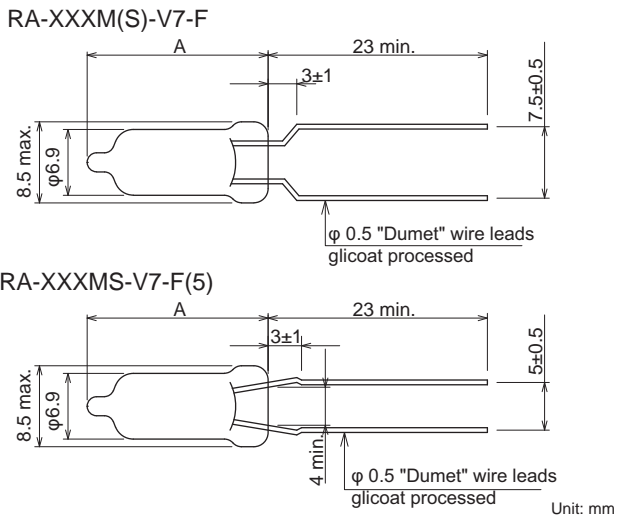


● Taping Dimensions



Description	Symbol	Dimension (mm)	
		RA-M(S)-V7-Y	RA-M(S)-V7-Y(5)
High	L	19.0 max. (16.0 max.)	
Lamp Diameter	A	φ 6.9±0.65	
Lead Diameter	d	φ 0.5±0.05	
Lead clearance	∅	4.0 min.	
Height from PCB top	L ₁	22.0 max. (19.0 max.)	
Lamp pitch	P	15.0±1.0	12.7±1.0
Hole pitch	P ₀	15.3±0.3 *1	12.7±0.3 *1
Hole position	P ₁	3.75±0.7	3.85±0.7
	P ₂	7.5±1.3	6.35±1.3
Lead pitch	F	7.5±0.5	5.0± ^{0.6} / _{0.2}
Declining	Δh	±2.0	
Paper width	W	18.0±0.5	
Hole position	W ₁	9.0±0.5	
Lead clinch height	H ₀	16.0±0.5	
Product height *2	H ₁	38.5 (35.5)	
Hole diameter	D ₀	φ 4.0±0.2	
Paper thickness	t	0.7±0.2	

● Forming Dimensions



*1 Accumulative pitch error:

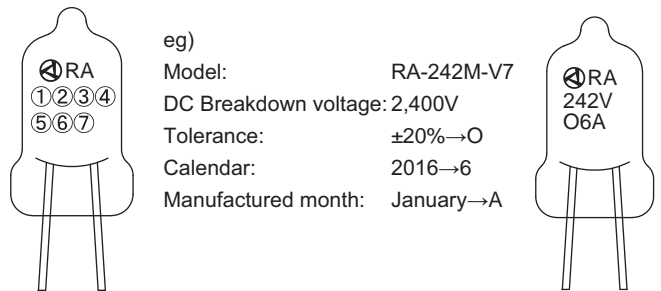
	4 pitch	20 pitch
RA-M(S)-V7-Y	60.0±0.6	300±1.5
RA-M(S)-V7-Y(5)	50.8±0.6	254±1.5

*2 Nominal value

● Packing Quantity per Carton

RA-XXXM(S)-V7-Y Series: 1,500 pcs
 RA-XXXM(S)-V7-Y(5) Series: 1,800 pcs

● Description of marking



- ①②③..... DC Breakdown Voltage ①②×10^③
- ④..... V (Radial)
- ⑤..... Tolerance

Tolerance	±20%	+30% -10%	Other
Symbol	O	R	-

- ⑥..... Identification of manufacture year eg.) 2015→8
- ⑦..... Manufacture month (see below)

Month	1	2	3	4	5	6	7	8	9	10	11	12
Symbol	A	B	D	E	F	G	H	J	K	L	M	N

Safety Standard

UL	CSA	TÜV	Model Number
○ ⁻¹	-	-	RA-501M/MS-V7
○ ⁻¹ / ₂	-	-	RA-601M/MS-V7
○ ⁻¹ / ₂	-	-	RA-102M/MS-V7
○ ⁻¹ / ₂	-	-	RA-152M/MS-V7
○ ⁻¹	○ ⁻¹	-	RA-242M-V7
○ ⁻¹ / ₂	○ ⁻³	○ ⁻⁴	RA-302M-V7
○ ⁻¹ / ₂	○ ⁻³	○ ⁻⁴	RA-362M-V7
○ ⁻² / ₂	○ ⁻³	○ ⁻⁴	RA-402M-V7
○ ⁻²	○ ⁻³	○ ⁻⁴	RA-452M-V7
○ ⁻¹	○ ⁻¹	-	RA-242MS-V7
○ ⁻¹ / ₂	○ ⁻³	○ ⁻⁴	RA-302MS-V7
○ ⁻¹ / ₂	○ ⁻³	○ ⁻⁴	RA-362MS-V7
○ ⁻² / ₂	○ ⁻³	○ ⁻⁴	RA-402MS-V7
○ ⁻²	○ ⁻³	○ ⁻⁴	RA-452MS-V7

Rated voltage <A>: Approved if it is connected to UL approved varistor .

	A	B
*1	AC125V	V1.0≥270V, D≥φ5mm
*2	AC250V	V1.0≥390V, D≥φ7mm
*3	AC250V	V1.0≥270V, D≥φ5mm
*4	AC125V / AC250V	V1.0≥470V, D≥φ5mm