



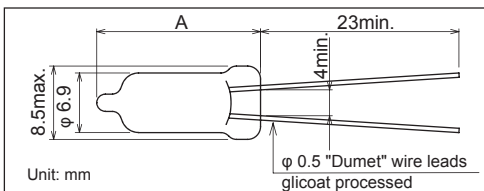
Features

- 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.

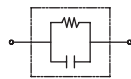
Applications

- 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



Circuit

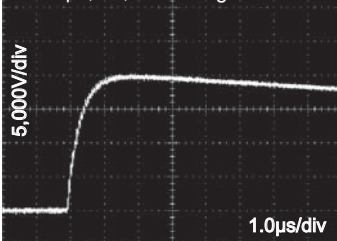


Dimensions max. (mm)

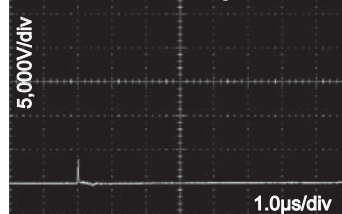
	A
RA-M-V7	19
RA-MS-V7	16

Impulse Absorption Characteristics

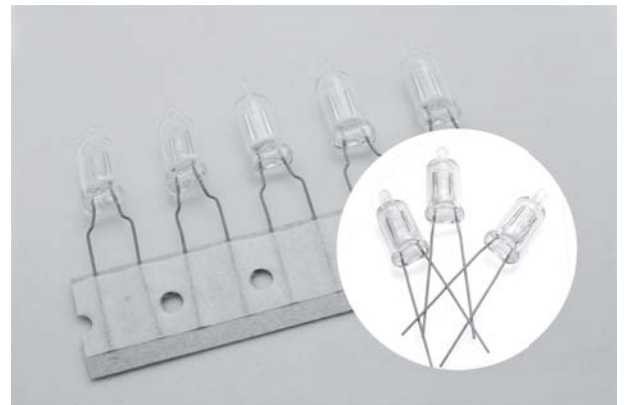
1.2/50 μ s, 20,000V Surge waveform



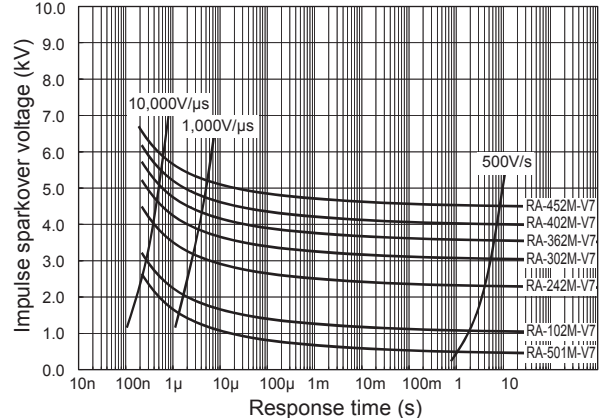
RA-242M-V7
Absorbed surge waveform



Safety Standard		File No.
UL	:UL1449 :UL1414	E332107 E47474
CSA	:C22.2 No.1	LR105073
TÜV	:EN60065 :EN60950-1	J50114145
SEMKO	:IEC-61643-1 :EN61643-11	SE-66249 No.1115778



V-t Characteristics



Electrical Specifications

Safety Standard					Model Number	DC Sparkover Voltage (V)	Capacitance 1MHz (pF)	Peak Surge Current 8/20 μ s (A)	Impulse Life test 8/20 μ s 100A	Withstand Voltage Test
UL 1449	UL 1414	CSA	TÜV	SEMKO						
○*1	-	-	-	○	RA-501M/MS-V7	500 (400 ~ 600)	2.0 max.	3,500	300 times	-
○*1	-	-	-	○	RA-601M/MS-V7	600 (480 ~ 720)				
○*1	-	-	-	○	RA-102M/MS-V7	1,000 (800 ~ 1,200)				
○*1	-	-	-	○	RA-152M/MS-V7	1,500 (1,200 ~ 1,800)				
○*1	○*1	○*1	-	○	RA-242M-V7	2,400 (1,920 ~ 2,880)*6				
○*1	○*1	○*3	○*3	○	RA-302M-V7	3,000 (2,400 ~ 3,600)*6				
○*1	○*1	○*3	○*3	○	RA-362M-V7	3,600 (2,880 ~ 4,320)*6				
○*2	○*5	○*3	○*4	○	RA-402M-V7	4,000 (3,200 ~ 4,800)*6				
○*2	○*5	○*3	○*4	○	RA-452M-V7	4,500 (3,600 ~ 5,400)*6				
○*1	○*1	○*1	-	○	RA-242MS-V7	2,400 (1,920 ~ 2,880)*6				
○*1	○*1	○*3	○*3	○	RA-302MS-V7	3,000 (2,400 ~ 3,600)*6				
○*1	○*1	○*3	○*3	○	RA-362MS-V7	3,600 (2,880 ~ 4,320)*6				
○*2	○*5	○*3	○*3	○	RA-402MS-V7	4,000 (3,200 ~ 4,800)*6				
○*2	○*5	○*3	○*3	○	RA-452MS-V7	4,500 (3,600 ~ 5,400)*6				

*1 Rated voltage AC125V: Approved if it is connected to UL approved varistor (V1.0mA \geq 270V, D \geq φ 5mm).

*2 Rated voltage AC250V: Approved if it is connected to UL approved varistor (V1.0mA \geq 390V, D \geq φ 7mm).

*3 Rated voltage AC250V: Approved if it is connected to UL approved varistor (V1.0mA \geq 390V, D \geq φ 5mm).

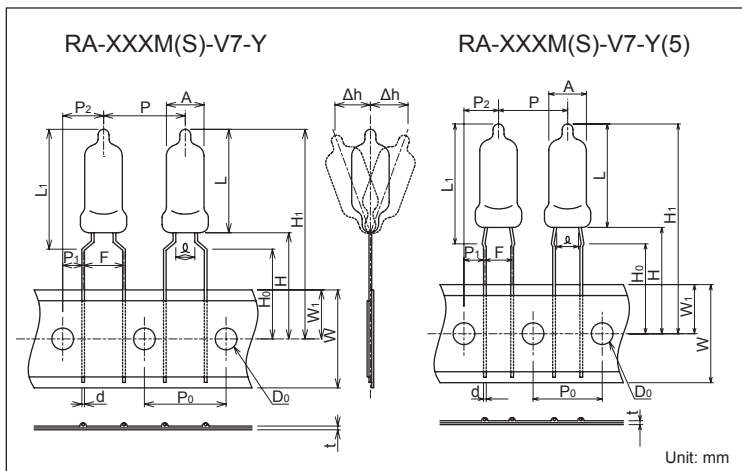
*4 Rated voltage AC250V: Approved if it is connected to UL approved varistor (V1.0mA \geq 390V, D \geq φ 10mm).

*5 Rated voltage AC250V: Approved if it is connected to UL approved varistor (V1.0mA \geq 390V, D \geq φ 5mm).

*6 Reference Value

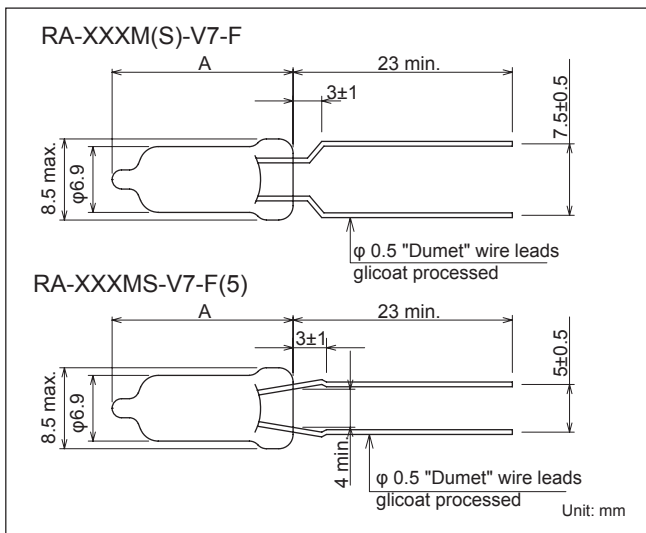


● Taping Dimensions



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	
Width between leads	Q	4.0 min.	
Product height from board	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
Pitch between leads	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)	
Lead length	H	19.5 max.	
Hole diameter	D ₀	φ 4.0±0.2	
Paper thickness	t	0.7±0.2	

● Forming Dimensions

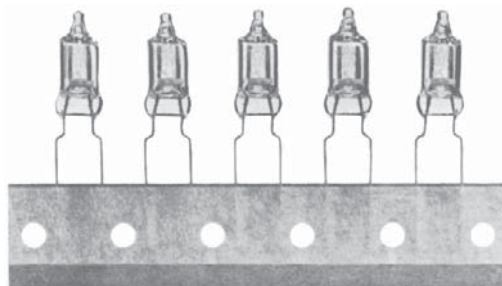


*2 Nominal value

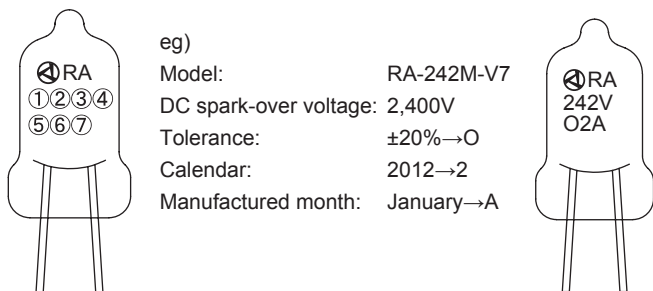
*1 Accumulative pitch error:

	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

RA-XXXM(S)-V7-Y



● Marking



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

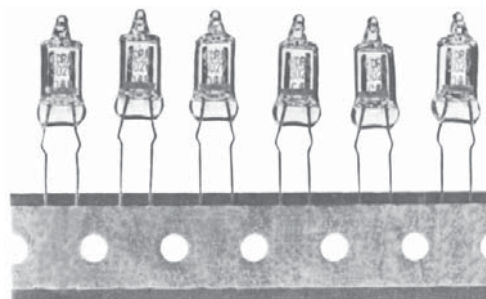
Tolerance	±20%	^{+30%} ₋₁₀	Other
Symbol	O	R	-

⑥..... Last digit of the calendar year eg.) 2012→2

⑦..... The month manufactured (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

RA-XXXM(S)-V7-Y(5)



● Packing Quantity per Carton

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

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