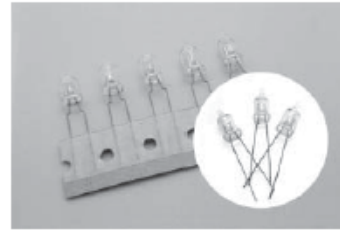


RA-MX-V7-Y,Y(5)



RA-C6

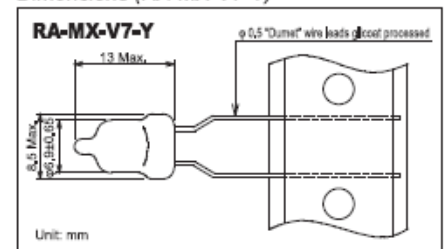
■ GAS DISCHARGE TUBE RA-MX-V7-Y,Y(5) Series

The RA-MX series is a radial type high voltage surge absorber that can tolerate withstand voltage tests.

Model Number	DC Breakdown Voltage (V)	Impulse Sparkover Voltage 1.2/50 μ s		Insulation Resistance (M Ω) min.	Capacitance 1MHz (pF) max.	Impulse Life Test 8/20 μ s 100A (Times)	Impulse Current Capacity 8/20 μ s (A)	Withstand Voltage Test	Safety Standard					
		Applied Voltage	Specification						UL 1449	CSA C22.2 No.60065	TÜV EN 60950-1 EN 60065	JQA J60065 (H26)		
RA-501MX-V7-Y/Y(5)	500(400-600)	-	-	10 ³ (DC100V)	1.0	300	3,500	-	O ¹ 1 ³	O ¹ 4 ⁵	-	-		
RA-601MX-V7-Y/Y(5)	600(480-720)			O ¹ 1 ³				O ¹ 4 ⁵	-	-				
RA-102MX-V7-Y/Y(5)	1,000(800-1,200)			O ² 1 ³				O ¹ 4 ⁵	-	-				
RA-152MX-V7-Y/Y(5)	1,500(1,200-1,800)			O ² 1 ³				O ¹ 4 ⁵	-	-				
RA-242MX-V7-Y/Y(5)	2,400(1,920-2,880) ⁷			AC1,250V 3s				O ² 1 ³	O ¹ 4 ⁵	O ¹ 6	-			
RA-302MX-V7-Y/Y(5)	3,000(2,400-3,600) ⁷			5,000V				5,000V max.	10 ³ (DC500V)	AC1,500V 60s	O ¹ 1 ³	O ¹ 4 ⁵	O ¹ 6	-
RA-362MX-V7-Y/Y(5)	3,600(2,880-4,320) ⁷			AC1,800V 3s				O ¹ 1 ³	O ¹ 4 ⁵	O ¹ 6	-			
RA-402MX-V7-Y/Y(5)	4,000(3,200-4,800) ⁷			7,500V				7,500V max.	10 ³ (DC1000V)	AC2,000V 60s	O ¹ 1 ³	O ¹ 4 ⁵	O ¹ 6	-
RA-452MX-V7-Y/Y(5)	4,500(3,600-5,400) ⁷			8,000V				8,000V max.	10 ³ (DC1000V)	AC2,000V 60s	O ¹ 1 ³	O ¹ 4 ⁵	O ¹ 6	-
RA-402MX-V7-Y(SJQ)	4,000(3,200-4,800) ⁷			7,500V				7,500V max.	10 ³ (DC500V)	AC2,000V 60s	O ¹ 1 ³	O ¹ 4 ⁵	O ¹ 6	O
RA-452MX-V7-Y(SJQ)	4,500(3,600-5,400) ⁷	8,000V	8,000V max.	10 ³ (DC1000V)	AC2,000V 60s	O ¹ 1 ³	O ¹ 4 ⁵	O ¹ 6	O					

- *1 Rated voltage AC125V: Approved if it is connected to UL approved varistor (V1.0mA \geq 270V, D \geq 7mm)
 *2 Rated voltage AC125V: Approved if it is connected to UL approved varistor (V1.0mA \geq 270V, D \geq 5mm)
 *3 Rated voltage AC250V: Approved if it is connected to UL approved varistor (V1.0mA \geq 390V, D \geq 7mm)
 *4 Rated voltage AC125V: Approved if it is connected to UL approved varistor (V1.0mA \geq 270V, D \geq 14mm)
 *5 Rated voltage AC250V: Approved if it is connected to UL approved varistor (V1.0mA \geq 470V, D \geq 14mm)
 *6 Rated voltage AC125V/AC250V: Approved if it is connected to UL approved varistor (V1.0mA \geq 470V, D \geq 5mm)
 *7 Reference value

Dimensions (RA-MX-V7-Y)

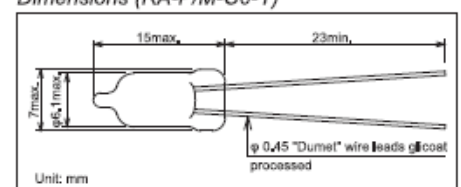


■ GAS DISCHARGE TUBE RA-C6 Series

Model Number P: No markings M: Markings	DC Breakdown Voltage (V)	Impulse Sparkover Voltage		Insulation Resistance (M Ω) min.	Capacitance 1MHz (pF) max.	Impulse Life Test 8/20 μ s 100A (Times)	Impulse Current Capacity 8/20 μ s (A)	Withstand Voltage Test	Safety Standard				
		Applied Voltage	Specification						UL 497B	UL 1449	cUL C22.2 No.8	TÜV EN 60950-1 EN 60065	
RA-800P/M-C6	80(64-96)	-	-	10 ³ (DC50V)	1.0	300	2,000	-	O	-	-	-	
RA-151P/M-C6	150(120-180)			O				-	-	-			
RA-201P/M-C6	200(160-240)			O				-	-	-			
RA-231P/M-C6	230(184-276)			O				-	-	-			
RA-311P/M-C6	310(264-356)			1kV/10 μ s				600V max.	10 ³ (DC100V)	O	O ¹	-	-
RA-351P/M-C6	350(280-420)			O				O ¹	-	-			
RA-391P/M-C6	390(312-468)			O				O ¹	-	-			
RA-501P/M-C6	500(400-600)			O				O ¹	-	-			
RA-601P/M-C6	600(480-720)			O				O ¹	-	-			
RA-102P/M-C6	1,000(800-1,200)			O				O ¹	-	-			
RA-152P/M-C6	1,500(1,200-1,800)	O	O ¹	-	-								
RA-272M-C6	2,700(2,160-3,240) ⁴	1.2/50 μ s 5kV	5,000V max.	10 ³ (DC500V)	AC1,250V 3s	-	O ¹	O ¹	O ³				
RA-302M-C6	3,000(2,400-3,600) ⁴			AC1,500V 60s	-	O ¹ 1 ²	O ¹ 1 ²	O ³					
RA-302M-C6(AC)	3,000(2,700-3,900) ⁴			AC1,800V 3s	-	O ¹ 1 ²	O ¹ 1 ²	O ³					

- *1 Rated voltage AC125V: Approved if it is connected to UL approved varistor (V1.0mA \geq 270V, D \geq 5mm)
 *2 Rated voltage AC250V: Approved if it is connected to UL approved varistor (V1.0mA \geq 390V, D \geq 7mm)
 *3 Rated voltage AC125V: Approved if it is connected to UL approved varistor (V1.0mA \geq 470V, D \geq 5mm)
 *4 Reference value

Dimensions (RA-P/M-C6-Y)





■ SURGE PROTECTIVE DEVICE LV Series

Model Number	Max. Continuous Operating Voltage 50/60Hz		DC Operating Voltage (V) ±25%	Voltage Protection Level (V)	Nominal Discharge Current 8/20µs (A)	Max. Discharge Current 8/20µs (A)	Impulse Life Test 8/20µs 1,000A (times)	Safety Standard			
	UL 1449	cUL C22.2 No.8						SENKO IEC 61643-1	SENKO EN 61643-11		
LV150DI-Q4	1 Phase	AC150V	450	1,200	2,500	5,000	Approx. 500	○	○	○	○
LV275DI-Q4	1 Phase	AC275V	800	1,500				○	○	○	○
LV275DI-U4	3 Phase	AC275V						○	○	○	○
LV480DI-Q4	1 Phase	AC480V	1,400	2,000				○	○	○	○
LV480DI-U4	3 Phase	AC480V						○	○	○	○
LV550DI-U4	3 Phase	AC550V	1,600	2,500				○	○	○	○

■ SURGE PROTECTIVE DEVICE LVF Series

Model Number	Max. Continuous Operating Voltage 50/60Hz		DC Operating Voltage (V) ±25%	Voltage Protection Level (V)	Nominal Discharge Current 8/20µs (A)	Max. Discharge Current 8/20µs (A)	Impulse Life Test 8/20µs 1,000A (times)	Safety Standard			
	UL 1449	cUL C22.2 No.8						SENKO IEC 61643-1	SENKO EN 61643-11		
LVF150DI-Q4	1 Phase	AC150V	450	1,200	5,000	10,000	Approx. 500	-	-	-	-
LVF250DI-Q4	1 Phase	AC250V	700	1,500				-	-	-	-
LVF250DI-U4	3 Phase	AC250V						-	-	-	-
LVF300DI-Q4	1 Phase	AC300V	1,000	2,000				-	-	-	-
LVF300DI-U4	3 Phase	AC300V						-	-	-	-
LVF480DI-Q4	1 Phase	AC480V	1,400	2,500				-	-	-	-
LVF480DI-U4	3 Phase	AC480V			-	-	-	-			

■ SURGE PROTECTIVE DEVICE SV Series

Model Number	Max. Continuous Operating Voltage 50/60Hz		DC Operating Voltage (V) ±25%	Voltage Protection Level (V)	Nominal Discharge Current 8/20µs (A)	Max. Discharge Current 8/20µs (A)	Impulse Life Test 8/20µs 1,000A (times)	Safety Standard			
	UL 1449	cUL C22.2 No.8						SENKO IEC 61643-1	SENKO EN 61643-11		
SV150DA-Q4	1 Phase	AC150V	450	1,200	2,500	5,000	Approx. 500	-	-	-	-
SV275DA-Q4	1 Phase	AC275V	800	1,500				-	-	-	-
SV275DA-U4	3 Phase	AC275V						○	○	○	○
SV480DA-Q4	1 Phase	AC480V	1,400	2,000				-	-	-	-
SV480DA-U4	3 Phase	AC480V						-	-	-	-
SV550DA-U4	3 Phase	AC550V	1,600	2,500				-	-	-	-

■ SURGE PROTECTIVE DEVICE RSPD Series

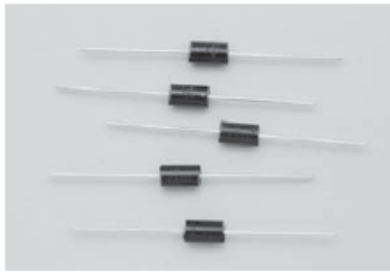
Model Number	Max. Continuous Operating Voltage 50/60Hz		DC Operating Voltage (V) ±25%	Voltage Protection Level (V)	Nominal Discharge Current 8/20µs (A)	Max. Discharge Current 8/20µs (A)	Impulse Life Test 8/20µs 1,000A (times)	Safety Standard			
	UL 1449	cUL C22.2 No.8						SENKO IEC 61643-1	TUV EN 60950-1 EN 60065		
RSPD-150-Q-4/5	1 Phase	AC150V	400	800	2,500	5,000	Approx. 300	○	○	○	○
RSPD-250-Q-4/5	1 Phase	AC250V	700	1,300				○	○	○	○
RSPD-250-U-4/5	3 Phase	AC250V						○	○	○	○
RSPD-420-Q-4/5	1 Phase	AC420V	1,100	1,500				○	○	○	○
RSPD-420-U-4/5	3 Phase	AC420V						○	○	○	○
RSPD-500-Q-4/5	1 Phase	AC500V	1,300	2,000				○	○	○	○
RSPD-500-U-4/5	3 Phase	AC500V			○	○	○	○			
RSPD-600-Q-4/5	1 Phase	AC600V	1,500	2,500	○	○	○	○			
RSPD-600-U-4/5	3 Phase	AC600V			○	○	○	○			

■ SURGE PROTECTIVE DEVICE RGF Series

Model Number	Rated Voltage (Vac) 50/60Hz	Max. Line Voltage (Vac)	Varistor Voltage (V)±10%	DC Breakdown Voltage Ez(V)+30/-20%	Impulse Discharge Current 8/20µs(A)	Impulse Life Test 8/20µs 1,000A (times)	Nominal Discharge Current 8/20µs (A)	Max. Discharge Current 8/20µs (A)	Voltage Protection Level (V)	Safety Standard	
										UL1449	cUL C22.2 No.8
RGF-152-Q4	1-2	250	300	470	5,000	Approx. 300	-	-	-	-	-
	1,2-±	-	-	-							
RGF10-152-Q4	1-2	250	300	470	-	Approx. 500	5,000	10,000	1,500	○	○
	1,2-±	-	-	-							

■ SURGE PROTECTIVE DEVICE GFA Series

Model Number	Rated Voltage (Vac) 50/60Hz	Max. Continuous Operating Voltage 50/60Hz	Varistor Voltage (V)±10%	DC Breakdown Voltage Ez(V)+30/-20%	Impulse Life Test 8/20µs 1,000A (times)	Nominal Discharge Current 8/20µs (A)	Max. Discharge Current 8/20µs (A)	Voltage Protection Level (V)	Safety Standard			
									UL 1449	cUL C22.2 No.8	UL-EU EN61643-11 EN61643-11	
GFA-300-Q4	L-N	250	300	480	-	Approx. 300	2,500	5,000	1,400	○	○	○*
	L, N-G	-	-	-								



B, U

AVALANCHE BREAKDOWN DIODE 2000 Series

Rated Peak Impulse Power Dissipation 18,000W (8/20μs)

Model Number	Nominal Breakdown Voltage V _{BR} (V)	Maximum Working Voltage V _{WM} (V)
U2007	7,5	6,05
B2008	8,2	6,63
B2010	10,0	8,10
B2012	12,0	9,72
□2018	18,0	14,50
□2022	22,0	17,80
B2027	27,0	21,80
□2033	33,0	26,80
□2039	39,0	31,60
□2047	47,0	38,10
B2056	56,0	45,50
B2068	68,0	55,10
B2082	82,0	66,40
B2100	100,0	81,00
B2150	150,0	121,00
□2180	180,0	146,00
B2220	220,0	175,00
B2250	250,0	202,00
B2300	300,0	243,00
B2400	400,0	324,00

* U: Uni-Polar type, B: Bi-Polar Type, □: Both U and B
*Please feel free to inquire about any other request.

AVALANCHE BREAKDOWN DIODE 3000 Series

Rated Peak Impulse Power Dissipation 34,000W (8/20μs)

Model Number	Nominal Breakdown Voltage V _{BR} (V)	Maximum Working Voltage V _{WM} (V)
B3008	8,2	6,63
B3010	10,0	8,10
□3015	15,0	12,10
□3018	18,0	14,50
U3022	22,0	17,80
□3033	33,0	26,80
B3036	36,0	29,16
U3039	39,0	31,60
B3056	56,0	45,50
□3068	68,0	55,10
B3082	82,0	66,40
U3180	180,0	146,00

* U: Uni-Polar type, B: Bi-Polar Type, □: Both U and B

AVALANCHE BREAKDOWN DIODE 5000 Series

Rated Peak Impulse Power Dissipation 44,000W (8/20μs)

Model Number	Nominal Breakdown Voltage V _{BR} (V)	Maximum Working Voltage V _{WM} (V)
B5008	8,2	6,63
B5010	10,0	8,10
□5015	15,0	12,10
□5018	18,0	14,50
U5022	22,0	17,80
□5033	33,0	26,80
B5036	36,0	29,16
U5039	39,0	31,60
B5056	56,0	45,50
□5068	68,0	55,10
B5082	82,0	66,40
U5180	180,0	146,00

* U: Uni-Polar type, B: Bi-Polar Type, □: Both U and B

SURGE PROTECTIVE DEVICE R-A-M-LED Series

Model Number	Rated Voltage (Vac) 50/60Hz	Max. Line Voltage (Vac)	Varistor Voltage (V) ±10%	DC Breakdown Voltage Ez (V) +30/-20%	Impulse Discharge Current 8/20μs(A)	Insulation Resistance IR (MΩ) min. DC500V	Withstand Voltage Test (Vac)	Safety Standard	
								TÜV	
R-A-M-242BWZ(LED)	1-2	125	140	540	2,000	1,000	-	-	
	1,2- $\frac{1}{2}$	-	-	-			2,400	AC1,000V 60s AC1,250V 3s	-
R-A-M-302BWZ(LED)	1-2	250	300	940			-	-	○
	1,2- $\frac{1}{2}$	-	-	-			3,000	AC1,500V 60s	-
R-A-M-362BWZ(LED)	1-2	250	300	940			-	-	○
	1,2- $\frac{1}{2}$	-	-	-			3,600	AC1,500V 60s AC1,800V 3s	-
R-A-M-362BXZ(LED)	1-2-3-1	250	300	940			-	-	○
	1,2,3- $\frac{1}{2}$	-	-	-			3,600	AC1,500V 60s AC1,800V 3s	-
R-A-M-302BUZ-N(LED)	1-2-3-1	250	300	470			-	-	-
	1,2,3- $\frac{1}{2}$	-	-	-			3,000	AC1,500V 60s	-
R-A-M-152BQZ(LED)	1-2	250	300	470			-	-	-
	1,2- $\frac{1}{2}$	-	-	-			1,200±30%	-	-

SURGE PROTECTIVE DEVICE

RSP-485
PCB mounting type

RSP-485M
DIN rail box type
*DIN rail is optional.

RSP-TEL-B
For telephone line,
Box with modular jack type

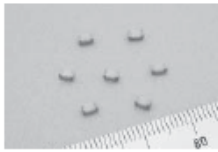
RSD5-485
For RS-485 and RS-422
signal circuit
*DIN rail is optional.

RSP-485-PT
Terminal block type

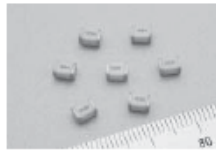
RSP-232-9
For RS(EIA)-232,
9 pin type(D-sub)

R-S-M-GL-PT
For data signal line
and control line

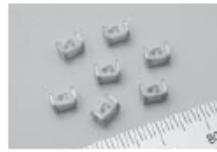
RLAN2
Surge Protective Device
For LAN



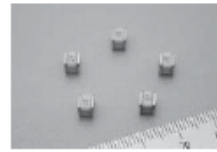
RHCA3216



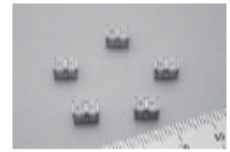
RHCA4532



RHCA5639



R5K



R5K3

■ GAS DISCHARGE TUBE RHCA3216 Series

Model Number *1	DC Breakdown Voltage (V)	Insulation Resistance (MΩ) min.	Capacitance 1MHz (pF) max.	Impulse Life Test 8/20μs 100A (times)	Impulse Current Capacity *2 8/20μs Positive/Negative 5 times (A)	Impulse Withstanding Voltage Capacity *2 10/700μs Positive/ Negative 5times (V)	Safety Standard
RHCA-900□31U	90	10 ³ (DC50V)	0,3	300	500(R=2Ω)	4,000(R=40Ω)	UL497B
RHCA-201□31U	200						○
RHCA-301□31U	300	○					
RHCA-401□31U	400	○					
RHCA-501□31U	500	○					

*1 □:Tolerance ±20%=P, ±30%=Q *2 Comforms to ITU-T K,20, K,21 Enhanced Test

■ GAS DISCHARGE TUBE RHCA4532 Series

Model Number *1	DC Breakdown Voltage (V)	Insulation Resistance (MΩ) min.	Capacitance 1MHz (pF) max.	Impulse Life Test 8/20μs 100A (times)	Impulse Current Capacity *2 8/20μs Positive/Negative 5 times (A)	Impulse Withstanding Voltage Capacity 10/700μs Positive/ Negative 5times (V)	Safety Standard
RHCA-900□43U	90	10 ³ (DC50V)	0,6	300	2,000 (R=2Ω)	4,000(R=40Ω)	UL497B
RHCA-201□43U	200						○
RHCA-301□43U	300	○					
RHCA-351□43U	350	○					
RHCA-401□43U	400	○					
RHCA-401R43U	400 ±3%	○					
RHCA-501□43U	500	○					
RHCA-601□43U	600	○					

*1 □:Tolerance ±20%=P, ±30%=Q *2 Comforms to ITU-T K,20, K,21 Enhanced Test

■ GAS DISCHARGE TUBE RHCA5639 Series

Model Number	Impulse Sparkover Voltage 1.2/50μs		Withstand Voltage Test	Insulation Resistance (MΩ) min.	Capacitance 1MHz (pF) max.	Impulse Life Test 8/20μs 100A (times)	Impulse Current Capacity 8/20μs (A)	DC Breakdown Voltage (V) ±20%	Safety Standard		
	Applied Voltage	Specification							UL1449	cUL C22,2 No.8	UL-EU ECH(143-21) EN(143-21)
RHCA-102P53U(335)	5,000V	-	-	10 ³ (DC50V)	0,6	300	2,000	1,000 ±20%	○	○	○
RHCA-102Q53U(335)								1,000 ±30%	○	○	○
RHCA-202H53U(335)								2,000 ±20% ³	○ ¹	○ ¹	○
RHCA-242H53U(335)								2,400 ±20% ³	○ ¹	○ ¹	○
RHCA-272H53U(335)								2,700 ±20% ³	○ ¹	○ ¹	○
RHCA-302H53U(335)								3,000 ±20% ³	○ ¹ 2	○ ¹ 2	○
RHCA-362H53U(335)								3,600 ±20% ³	○ ¹ 2	○ ¹ 2	○
RHCA-402H53U(335)								4,000 ±20% ³	○ ¹ 2	○ ¹ 2	○
RHCA-452H53U(335)								4,500 ±20% ³	○ ¹ 2	○ ¹ 2	○

*1 Rated voltage AC125V: Approved if it is connected to UL approved varistor (V1.0mA±270V, D≥φ 7mm)
*2 Rated voltage AC250V: Approved if it is connected to UL approved varistor (V1.0mA±470V, D≥φ 7mm)

³ Reference value

■ GAS DISCHARGE TUBE R5K Series

Model Number*1	DC Breakdown Voltage (V)	Insulation Resistance (MΩ) min.	Capacitance 1MHz (pF) max.	Impulse Life Test 8/20μs 100A (times)	Impulse Current Capacity*2 8/20μs Positive/Negative 5 times (A)	Impulse Withstanding Voltage Capacity*2 10/700μs Positive/Negative 5 times (V)
R5K-750□45U	75	10 ³ (DC50V)	1.0	300	5,000 (R=2Ω)	15,000(R=40Ω)
R5K-900□45U	90					
R5K-231□45U	230					
R5K-251□45U	250					
R5K-351□45U	350					
R5K-421□45U	420					
R5K-501□45U	500					
R5K-601□45U	600					

*1 □:Tolerance ±20%=P, ±30%=Q *2 Comforms to ITU-T K,20, K,21 Enhanced Test

■ GAS DISCHARGE TUBE R5K3 Series

Model Number*1	DC Breakdown Voltage (V)	Insulation Resistance (MΩ) min.	Capacitance 1MHz (pF) max.	Impulse Life Test 8/20μs 100A (times)	Impulse Current Capacity*2 8/20μs Positive/Negative 5 times (A)	Impulse Withstanding Voltage Capacity*2 10/700μs Positive/Negative 5 times (V)
R5K3-750□65U	75	10 ³ (DC50V)	1.0	300	5,000 (R=2Ω)	15,000(R=40Ω)
R5K3-900□65U	90					
R5K3-231□65U	230					
R5K3-251□65U	250					
R5K3-351□65U	350					
R5K3-421□65U	420					
R5K3-501□65U	500					
R5K3-601□65U	600					

*1 □:Tolerance ±20%=P, ±30%=Q *2 Comforms to ITU-T K,20, K,21 Enhanced Test