

MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS



Upgrade

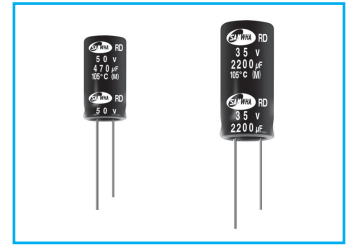
RD

Wide Temperature Range Series

- Standard series for general purpose
- High CV value
- Wide operating temperature range of -55 ~ +105°C
- Complied to the RoHS directive


Solvent Proof
WV ≤ 100V

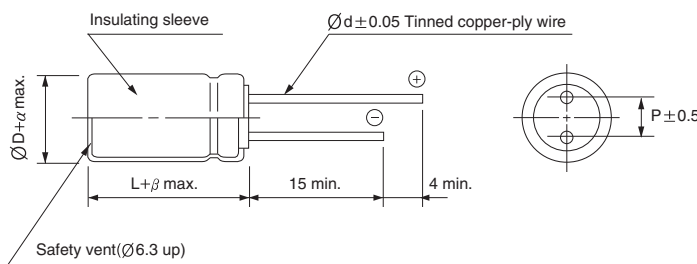
SD → **RD**
Wide temp.



Item	Characteristics											
Operating temperature range	WV	6.3 ~ 100				160 ~ 450				500		
	Temperature range	-55 ~ +105°C				-40 ~ +105°C				-25 ~ +105°C		
Leakage current max.	WV ≤ 100						WV > 100					
	I = 0.01CV or 3µA whichever is greater (after 2 min) I = 0.03CV or 4µA whichever is greater (after 1 min)						I = 0.02CV + 15µA (after 5 min)					
Capacitance tolerance	±20% at 120Hz, 20°C											
Dissipation factor max. (at 120Hz, 20°C)	Capacitance > 1000µF : tanδ increases by 0.02 for each 1000µF from below value.											
	WV	6.3	10	16	25	35	50	63	100	160~250	350~500	
tanδ	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.15	0.20		
Low temperature characteristics (Impedance ratio at 120Hz)	WV	6.3	10	16	25	35	50~100	160	200~350	400~450	500	
	Z-25°C/Z+20°C	5	4	3	2	2	2	4	6	10	12	
	Z-40°C/Z+20°C	12	10	8	5	4	3	6	8	12	—	
Load life (after application of the rated voltage for 2000 hours at 105°C)	Leakage current		Less than specified value									
	Capacitance change		Within ±20% of initial value									
	tanδ		Less than 200% of specified value									
	∅D		∅D ≤ 8				∅D ≥ 10					
Life time		1000 hours				2000 hours						
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4											

● DRAWING

Unit : mm



∅D	5	6.3	8	10	12.5	16	18	22	
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	
∅d	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	
α	0.5							1.0	
β	1.5		2.0						3.0

MINIATURE TYPES

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

WV	µF	Frequency					
		60Hz	120Hz	1kHz	10kHz	50kHz	100kHz ≤
6.3~100	~ 47	0.75	1.00	1.55	2.00	2.00	2.00
	68 ~ 680	0.80	1.00	1.35	1.50	1.62	1.75
	820 ~	0.85	1.00	1.15	1.15	1.32	1.50
160~500	~ 220	0.80	1.00	1.40	1.60	1.70	1.80
	330 ~	0.90	1.00	1.13	1.15	1.32	1.50

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RD series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

μF \diagdown WV	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	500
1.0														6.3 × 11 13	
2.2												6.3 × 11 23	8 × 11.5 28	8 × 11.5 23	
3.3											6.3 × 11 30	8 × 11.5 34	8 × 11.5 34	10 × 12.5 33	
4.7										6.3 × 11 34	8 × 11.5 40	8 × 11.5 40	10 × 12.5 47	10 × 12.5 39	10 × 16 59
6.8										8 × 11.5 49	10 × 12.5 56	10 × 12.5 56	10 × 16 62	10 × 16 52	10 × 16 72
10									8 × 11.5 59	8 × 11.5 59	10 × 12.5 68	10 × 16 75	10 × 16 75	10 × 20 68	12.5 × 25 88
15									10 × 12.5 84	10 × 12.5 84	10 × 16 92	10 × 16 92	12.5 × 20 115	12.5 × 20 96	12.5 × 30 115
22									10 × 12.5 102	10 × 16 111	10 × 16 111	12.5 × 20 139	12.5 × 20 140	12.5 × 25 127	16 × 25 159
33								8 × 11.5 139	10 × 16 136	10 × 20 149	10 × 20 149	12.5 × 25 180	16 × 25 211	16 × 25 177	16 × 31.5 207
47								10 × 12.5 190	10 × 20 177	12.5 × 20 203	12.5 × 20 203	16 × 25 252	16 × 25 252	16 × 31.5 231	18 × 31.5 261
68								10 × 12.5 229	12.5 × 25 267	16 × 20 279	12.5 × 25 267	16 × 31.5 303	16 × 31.5 332	16 × 35.5 291	18 × 35.5 335
100						8 × 11.5 218	8 × 11.5 239	10 × 16 304	12.5 × 25 324	16 × 25 368	16 × 25 368	18 × 31.5 432	18 × 35.5 453	18 × 40 397	
150						8 × 11.5 267	10 × 12.5 293	10 × 20 372	16 × 25 450	16 × 25 450	16 × 31.5 450	18 × 35.5 554			
220				6.3 × 11 224	8 × 11.5 280	10 × 12.5 376	10 × 16 451	12.5 × 20 564	16 × 31.5 596	18 × 31.5 641	18 × 35.5 671				
330			6.3 × 11 248	8 × 11.5 324	10 × 12.5 400	10 × 16 504	10 × 20 603	16 × 25 856	18 × 31.5 784	18 × 40 863					
470		6.3 × 11 272	8 × 11.5 349	8 × 11.5 386	10 × 16 521	10 × 20 657	12.5 × 20 824	16 × 25 1021	18 × 40 1030						
680	8 × 11.5 348	8 × 11.5 386	8 × 11.5 420	10 × 12.5 540	10 × 16 627	12.5 × 20 905	12.5 × 25 1082	16 × 31.5 1344							
1000	8 × 11.5 422	8 × 11.5 469	10 × 12.5 592	10 × 16 717	12.5 × 20 974	12.5 × 25 1197	16 × 25 1490	18 × 35.5 1835							
1500	10 × 16 621	10 × 16 680	10 × 20 797	12.5 × 20 993	12.5 × 25 1136	16 × 31.5 1578	18 × 31.5 1812								
2200	10 × 16 713	10 × 16 774	10 × 20 898	12.5 × 25 1206	16 × 25 1426	16 × 31.5 1709									
3300	10 × 20 909	10 × 20 978	12.5 × 20 1184	16 × 25 1562	18 × 31.5 1900	18 × 35.5 2152									
4700	12.5 × 20 1189	12.5 × 20 1272	12.5 × 25 1459	16 × 25 1752	16 × 35.5 2073										
6800	12.5 × 25 1445	16 × 25 1529	16 × 25 1811	16 × 35.5 2176	18 × 40 2510	← Case size $\varnothing D \times L$ (mm) ← Ripple current (mA rms) at 105°C, 120Hz									
10000	16 × 25 1807	16 × 25 1892	16 × 31.5 2140	18 × 35.5 2497											
15000	16 × 31.5 2128	16 × 35.5 2313	18 × 35.5 2545												
22000	18 × 31.5 2411	18 × 35.5 2595													