



Aluminum Electrolytic Capacitors

Radial High Reliability and Temperature 105°C

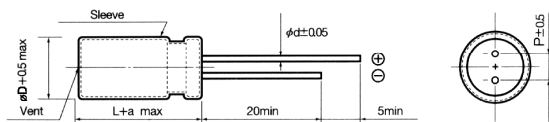
HRHT, HRHTHV Series

- High reliability at high temperature.
- Suitable for switching power for TV sets, monitor, or terminals and communication equipment.

SPECIFICATION

ITEM	SPECIFICATION															
Capacitance Tolerance (120Hz 20°C)	± 20%(M)															
Rated Working Voltage	6.3WV~100WV										160WV~450WV					
Operation Temperature Range	(HRHT) -40 ~ +105°C										(HRHTHV) -25 ~ +105 C					
Surge Voltage (V) (20°C)	WV	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	
	SV	8	13	20	32	44	63	79	125	200	250	300	400	450	500	
Leakage Current (20°C)	I ≤ 0.01CV or 3 Whichever is greater										I ≤ 0.03CV + 10					
	After rated voltage applied for 3 minutes Where I : Leakage Current (μA) C : Capacitance (μF) V : Rated Voltage (V)															
Dissipation Factor(tan δ) (120Hz 20°C)	WV	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	
	DF	0.24	0.20	0.17	0.15	0.12	0.10	0.10	0.10	0.15	0.15	0.15	0.20	0.20	0.20	
Add 0.02 per 1000 μF for more than 1000 μF																
Low Temperature Characteristics	Impedance ratio at 120Hz															
	Comparison Z/WV		6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
	-25°C / 20°C		4	3	2	2	2	2	2	2	3	3	3	4	4	4
-40°C / 20°C		8	6	4	4	4	3	3	3	-	-	-	-	-	-	
Load Life	After 2000 hours application of W.V. at 105°C, the capacitor shall meet the following limits.															
	Capacitance Change										≤ ±20% of Initial Value					
	Dissipation Factor										≤ 200% of Initial Specified Value					
Leakage Current										≤ Initial Specified Value						
Shelf Life	After 500 hours to place at 105°C without rated voltage applied, the capacitor shall meet the limits as same as load life.															
Others	Satisfied JIS C-5141															

DIMENSIONS (unit:mm)



φD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8
a	1.0	1.0	1.0	1.0	2.0	2.0	2.0

RIPPLE CURRENT COEFFICIENTS

Frequency Multipliers

WV	Freq.(Hz)	50	120	1K	10K ~
	Cap.(μF)				
6.3 ~ 100	0.1 ~ 47	0.75	1.00	1.57	2.00
	100 ~ 470	0.80	1.00	1.34	1.50
	1000 ~ 10000	0.85	1.00	1.13	1.15
160 ~ 450	0.47 ~ 220	0.80	1.00	1.40	1.60

Aluminum Electrolytic Capacitors



Radial High Reliability and High Temperature 105°C

CASE SIZE & MAX RIPPLE CURRENT

 CASE SIZE ØDxL (mm)
 MAX RIPPLE CURRENT (mA/105°C, 120Hz)

CAP Code	WV µF	6.3		10		16		25		35		50		63		100		160		200		250		350		400		450	
		ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA	ØDxL	mA
R47	0.47											5x11	9	5x11	9	5x11	11	6.3x11	11	6.3x11	11	6.3x11	11	8x11	12	8x11	12		
010	1.0											5x11	13	5x11	13	5x11	16	6.3x11	11	6.3x11	11	8x11	12	8x11	14	8x11	14	10x17	14
2R2	2.2											5x11	19	5x11	21	5x11	23	8x11	17	8x11	17	10x12.5	22	10x12.5	22	10x12.5	22	10x17	22
3R3	3.3											5x11	23	5x11	25	5x11	28	10x12.5	27	10x12.5	27	10x12.5	27	10x12.5	28	10x15	28	10x17	30
4R7	4.7											5x11	28	5x11	31	6.3x11	37	10x12.5	32	10x12.5	32	10x12.5	32	10x17	32	10x20	32	10x20	32
100	10											5x11	40	6.3x11	52	8x11	64	10x17	48	10x17	52	10x20	57	13x20	58	13x20	62	13x25	64
220	22							5x11	51	6.3x11	62	6.3x11	68	8x11	90	10x12.5	110	13x20	87	13x25	87	13x25	96	16x26	96	13x25	100	16x32	105
330	33					5x11	58	6.3x11	71	6.3x11	75	8x11	98	8x11	105	10x17	150	13x25	120	16x26	130	16x26	130	16x32	130				
470	47			5x11	63	6.3x11	79	6.3x11	90	8x11	110	8x11	120	10x12.5	155	10x20	190	16x26	155	16x26	155	16x32	165						
101	100	6.3x11	93	6.3x11	100	8x11	135	8x11	145	10x12.5	180	10x17	215	10x20	260	13x20	305	16x36	230	18x32	247								
221	220	8x11	95	8x11	180	10x12.5	230	10x17	270	10x20	315	13x20	380	13x20	420	16x26	545												
331	330	10x12.5	105	10x12.5	250	10x17	305	10x20	355	10x20	412	13x20	460	13x25	565	16x32	710												
471	470	10x12.5	230	10x17	325	10x20	395	13x20	465	13x25	545	16x26	660	16x26	740	18x36	900												
102	1000	10x20	470	10x17	474	13x25	690	16x26	815	16x26	875	16x32	1030	16x36	1217														
222	2200	13x25	800	13x25	875	13x30	1065	16x32	1175	18x36	1375																		
332	3300	16x26	1045	13x30	1187	13x36	1327	18x40	1580																				
472	4700	16x32	1290	16x36	1430	18x36	1605																						
682	6800	16x36	1540	18x40	1680																								
103	10000	18x40	2055																										