MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

I14070 (SHW)

High Temperature, For 125℃ Use Long Life Series

· Load life of 5000 hours at 125℃
· Low impedance at high frequency
· For Electronic Control Unit and other high temperature applications
· Complied to the RoHS directive

Items	Performance characteristics
Operating temperature range	-40 ~ +125℃
Leakage current max.	I = 0.03CV or 3μA whichever is greater (after 2 minutes)
Capacitance tolerance	±20% at 120Hz, 20℃
Dissipation factor max. (at 120Hz,20℃)	Capacitance > 1000μF:tanδ increases by 0.02 for each 1000μF from below value.

WV	6.3	10	16	25	35	50	63	100
Tanδ	0.22	0.20	0.16	0.14	0.12	0.10	0.10	0.08

Low temperature characteristics (Impedance ratio at 120Hz)

WV	6.3	10	16	25	35	50	63	100
Z-25℃ /Z+20℃	3	3	3	2	2	2	2	2
Z-40℃ /Z+20℃	6	6	4	3	3	3	3	3

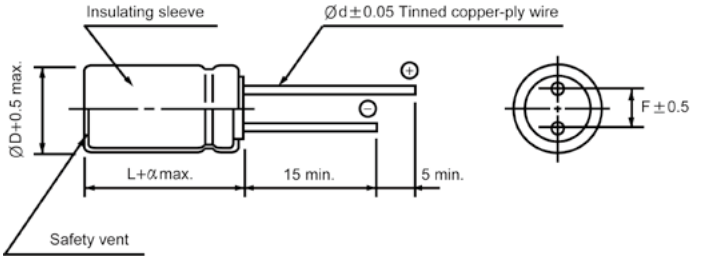
Load life (after application of the rated voltage for 5000 hours at 125℃)

Leakage current	Less than specified value
Capacitance change	Within ±30% of initial value
Tanδ	Less than 300% of specified value
Φ5,Φ6.3:2000 hours; Φ8:3000 hours; ≥Φ10: 5000 hours.	

Shelf life (at 125℃)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value.

● DRAWING

Unit : mm



ΦD	5	6.3	8	10	12.5	16
F	2.0	2.5	3.5	5.0	5.0	7.5
Φd	0.5			0.6		0.8
α	1.5			2.0		

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Frequency / μF	120Hz	1kHz	10kHz	50kHz	100kHz≤
~ 33	0.20	0.50	0.80	0.90	1.00
47 ~ 100	0.25	0.60	0.90	0.95	1.00
150 ~ 220	0.35	0.70	0.92	0.96	1.00
330 ~ 680	0.45	0.75	0.95	0.97	1.00
1000 ~ 1500	0.50	0.80	0.96	0.98	1.00
2200 ~	0.55	0.85	0.98	0.99	1.00

I14070 (SHW) Series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV / μF	6.3			10			16			25		
47										5×11	0.80	250
68				5×11	0.80	250	5×11	0.80	250	6.3×11	0.34	405
100	5×11	0.80	250	6.3×11	0.34	405	6.3×11	0.34	405	6.3×11	0.34	405
150	6.3×11	0.34	405	6.3×11	0.34	405	6.3×11	0.34	405	8×11.5	0.28	760
220	6.3×11	0.34	405	8×11.5	0.30	760	8×11.5	0.28	760	10×12.5	0.14	1030
330	8×11.5	0.28	760	8×11.5	0.28	760	10×12.5	0.14	1030	10×16	0.10	1430
470	10×12.5	0.14	1030	10×12.5	0.14	1030	10×16	0.10	1430	10×20	0.08	1500
680	10×16	0.10	1430	10×16	0.10	1430	10×20	0.06	1500	12.5×20	0.06	1720
1000	10×20	0.06	1500	10×20	0.06	1500	12.5×20	0.06	1720	12.5×25	0.05	1900
1500	10×25	0.06	1620	12.5×20	0.06	1720	12.5×25	0.05	1900			
2200	12.5×20	0.06	1720	12.5×25	0.05	1900						
3300	12.5×25	0.05	1900									

WV / μF	35			50			63			100		
22	5×11	0.80	250							10×12.5	0.80	480
33	6.3×11	0.34	405	8×11.5	0.70	300	8×11.5	1.50	150	10×12.5	0.80	480
47	6.3×11	0.34	405	8×11.5	0.70	440	10×12.5	0.59	530	10×16	0.65	630
68	8×11.5	0.28	760									
100	8×11.5	0.19	760	10×12.5	0.40	555	10×16	0.41	690	12.5×20	0.25	990
150	10×12.5	0.14	1030									
220	10×16	0.10	1430	10×20	0.15	930	12.5×20	0.16	1050	16×25	0.11	1500
330	10×25	0.06	1620	12.5×20	0.13	1330	12.5×25	0.12	1290	16×31.5	0.08	1790
470	12.5×20	0.06	1720	12.5×25	0.10	1650	12.5×35.5	0.10	1460			
680	12.5×25	0.05	1900	16×31.5	0.05	2430						

Ripple current (mA rms) at 125℃ , 100kHz
Impedance (Ω) max. at 20℃ , 100kHz
Case size ΦD×L(mm)