

# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

## I14060 (SHJ)

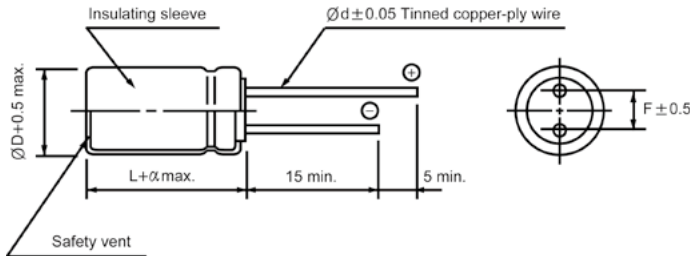
### Low Impedance Long Life Series

- High reliability withstanding 12000 hours load life at 105°C  
(7000/9000 hours for as specified below)
- Complied to the RoHS directive

Items	Performance characteristics						
<b>Operating temperature range</b>	-40 ~ +105°C						
<b>Leakage current max.</b>	I=0.01CV or 3μA whichever is greater (after 2 minutes) I=0.03CV or 4μA whichever is greater (after 1 minute)						
<b>Capacitance tolerance</b>	±20% at 120Hz, 20°C						
<b>Dissipation factor max. (at 120Hz, 20°C )</b>	Capacitance > 1000μF:tanδ increases by 0.02 for each 1000μF from below value.						
	WV	6.3	10	16	25	35	50
	Tanδ	0.22	0.19	0.16	0.14	0.12	0.10
<b>Low temperature characteristics (Impedance ratio at 120Hz)</b>	Z-40°C /Z+20°C			Z-25°C /Z+20°C			
	3			2			
<b>Load life (after application of the rated voltage for 12000 hours at 105°C )</b>	Leakage current			Less than specified value			
	Capacitance change			Within ±25% of initial value			
	Tanδ			Less than 200% of specified value			
	Φ5, Φ6.3 :7000 hours; Φ8 :9000 hours; ≥Φ10: 12000 hours.						
<b>Shelf life (at 105°C )</b>	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	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5		0.6		0.8		
α	1.5		2.0				

#### ● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Frequency	120Hz	1kHz	10kHz	50kHz	100kHz≤
~ 33	0.42	0.70	0.90	0.95	1.00
47 ~ 270	0.50	0.73	0.92	0.96	1.00
330 ~ 680	0.55	0.77	0.94	0.97	1.00
820 ~ 1800	0.60	0.80	0.96	0.98	1.00
2200 ~	0.70	0.85	0.98	0.99	1.00

# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

## I14060 (SHJ) Series

### ● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV μF	6.3			10			16		
	10								
22	5×11	0.35	250	5×11	0.35	250	5×11	0.35	250
33	5×11	0.35	250	5×11	0.35	250	5×11	0.35	250
47	5×11	0.30	250	5×11	0.30	250	5×11	0.30	250
100	5×11	0.30	250	5×11	0.30	250	6.3×11	0.25	405
150	6.3×11	0.15	405	6.3×11	0.15	405	6.3×11	0.20	405
220	6.3×11	0.15	405	6.3×11	0.15	405	8×11.5	0.15	760
330	6.3×11	0.15	405	8×11.5	0.13	760	8×11.5	0.10	760
390	6.3×11	0.15	405	8×11.5	0.11	760	8×11.5	0.10	760
470	8×11.5	0.11	630	8×11.5	0.11	760	10×12.5	0.053	1030
560	8×11.5	0.11	760	10×12.5	0.053	760	10×12.5	0.053	1100
680	10×12.5	0.053	1030	10×12.5	0.053	1030	10×16	0.038	1430
1000	10×12.5	0.053	1030	10×12.5	0.053	1330	10×16	0.038	1760
1500	10×20	0.027	1820	10×20	0.030	1820	10×20	0.030	1960
2200	12.5×20	0.025	2360	12.5×20	0.027	2360	12.5×25	0.023	2770
3300	12.5×20	0.025	2360	12.5×20	0.027	2480	16×20	0.020	3250
4700	16×25	0.015	3460	16×25	0.022	3250	16×25	0.018	3630
6800	16×25	0.015	3460	16×25	0.018	3630			
10000	16×31.5	0.015	3680	18×31.5	0.015	3700			

WV μF	25			35			50		
	10	5×11	0.35	250	5×11	0.55	250	5×11	0.60
22	5×11	0.35	250	5×11	0.50	250	5×11	0.45	250
33	5×11	0.35	250	5×11	0.45	250	6.3×11	0.25	405
47	5×11	0.30	250	6.3×11	0.30	405	6.3×11	0.20	405
56	6.3×11	0.27	405	6.3×11	0.20	405	6.3×11	0.20	405
68	6.3×11	0.27	405	8×11.5	0.10	540	8×11.5	0.15	540
100	6.3×11	0.20	405	8×11.5	0.10	760	8×11.5	0.12	760
150	8×11.5	0.14	760	8×11.5	0.10	760	10×12.5	0.061	1030
220	8×11.5	0.12	760	10×12.5	0.053	1030	10×16	0.038	1430
330	10×12.5	0.053	1030	10×12.5	0.053	1330	10×20	0.032	1820
390	10×12.5	0.053	1250	10×16	0.048	1550	12.5×20	0.031	2000
470	10×12.5	0.050	1330	10×16	0.041	1760	12.5×20	0.030	2360
560	10×16	0.050	1760	10×20	0.037	2100	12.5×25	0.027	2450
680	10×16	0.040	1800	12.5×20	0.026	2360	12.5×25	0.022	2770
1000	10×20	0.033	1960	12.5×20	0.026	2480	16×25	0.018	3460
1500	12.5×20	0.029	2550	16×20	0.022	3250	16×31.5	0.015	3680
2200	16×20	0.022	3250	16×25	0.018	3630			
3300	16×25	0.018	3630						

Ripple current (mA rms) at 105°C , 100kHz

Impedance (Ω) max. at 20°C , 100kHz

Case size ΦD×L(mm)