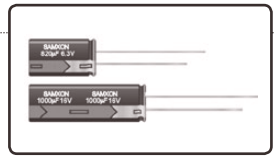
+105˚C, Highest Ripple Current (更高紋波), Lowest Impedance (更低阻抗品), Long Life (長壽命)

FEATURES

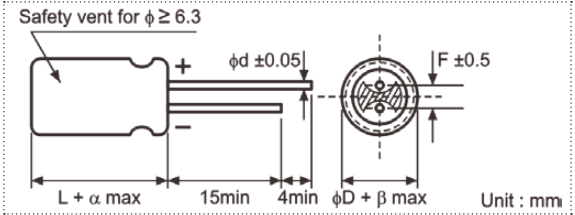


- Load life of 5,000~6,000 hours at 105˚C.
- Enabled high ripple current by a reduction of impedance at high frequency range.
- Lowest impedance for personal computer and storage equipment.

SPECIFICATIONS

Item	Performance Characteristics
Operating Temperature Range	-40 to +105˚C
Rated Working Voltage Range	6.3 to 50V
Nominal Capacitance Range	100 to 8200μF
Capacitance Tolerance	±20% at 120Hz, +20˚C
Leakage Current	I ≤0.01CV or 3 (μA) whichever is greater measured after 2 minutes application of rated working voltage at +20˚C
tan δ (120Hz, +20˚C)	Working Voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.22 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 For capacitance value >1000μF, add 0.02 per another 1000μF
Low Temperature Characteristics	Impedance ratio max. at 120Hz Working Voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Z-25˚C / Z+20˚C: 2 / 2 / 2 / 2 / 2 / 2
High Temperature Loading	Test time : ΦD 6.3 8~16; Load life 5,000h 6,000h Test temperature : +105˚C Test conditions : Rated DC working voltage with rated ripple current Post test requirements at +20˚C Leakage current : ≤Initial specified value Cap. change : within ±25% of the initial measured value (6.3, 10V: within ±30%) tan δ : ≤200% of the initial specified value
Shelf Life	At +105˚C no voltage applied after 1,000 hours and then being stabilized at +20˚C the capacitors shall meet the following limits Leakage current : ≤Initial specified value Cap. change : within ±25% of the initial measured value (6.3, 10V: within ±30%) tan δ : ≤200% of the initial specified value
Industrial Standard	JIS C - 5101-4 (IEC 60384-4)

CASE SIZE TABLE



ΦD	6.3	8 (L <20)	8 (L ≥20)	10	12.5	16
F	2.5	3.5	3.5	5.0	5.0	7.5
Φd	0.5	0.5	0.6	0.6	0.6	0.8
α	(L <20) 1.5			(L ≥20) 2.0		
β	(D <20) 0.5			(D ≥20) 1.0		

RIPPLE CURRENT MULTIPLIER

Frequency Coefficient

Coefficient / Freq. (Hz) / Cap (μF)	120	1k	10k	100k
100~180	0.40	0.75	0.90	1.00
220~560	0.50	0.85	0.94	1.00
680~1800	0.60	0.87	0.95	1.00
2200~3900	0.75	0.90	0.95	1.00
4700~8200	0.85	0.95	0.98	1.00

PART NUMBER SYSTEM (EXAMPLE : 16V 1000μF)

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	SH	108	M	1C	G	16	RR

- 13 14: Type (Radial Bulk)
- 11 12: Case Length (16mm)
- 10: Diameter (10mm)
- 8 9: Voltage (16V)
- 7: Tolerance (±20%)
- 4 5 6: Capacitance (1000μF)
- 2 3: Series
- 1: E-CAP

STANDARD RATINGS

Voltage (Code)		6.3V (0J)			10V (1A)			16V (1C)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current
220	227							6.3 x 11	0.110	500
330	337				6.3 x 11	0.110	500			
470	477	6.3 x 11	0.110	500				8 x 12	0.062	900
680	687				8 x 12	0.062	900	8 x 16	0.048	1210
								10 x 12.5	0.045	1240
820	827	8 x 12	0.062	900						
1000	108				8 x 16	0.048	1210	8 x 20	0.033	1410
					10 x 12.5	0.045	1240	10 x 16	0.032	1650
1200	128	8 x 16	0.048	1210						
		10 x 12.5	0.045	1240						
1500	158	8 x 20	0.033	1410	8 x 20	0.033	1410	10 x 20	0.020	1960
					10 x 16	0.032	1650			
						0.032	1760*		0.028	2500*
1800	188	10 x 16	0.032	1650	10 x 20	0.020	1960	10 x 25	0.018	2250
2200	228	10 x 20	0.020	1960	10 x 25	0.018	2250	12.5 x 20	0.017	2480
2700	278	10 x 25	0.018	2250				12.5 x 25	0.015	2900
3300	338				12.5 x 20	0.017	2480	12.5 x 30	0.013	3450
								16 x 20	0.015	3250
3900	398	12.5 x 20	0.017	2480	12.5 x 25	0.015	2900	12.5 x 35	0.012	3570
4700	478	12.5 x 25	0.015	2900	12.5 x 30	0.013	3450	16 x 25	0.013	3630
					16 x 20	0.015	3250			
5600	568	12.5 x 30	0.013	3450	12.5 x 35	0.012	3570			
6800	688	12.5 x 35	0.012	3570	16 x 25	0.013	3630			
		16 x 20	0.015	3250						
8200	828	16 x 25	0.013	3630						

Maximum Allowable Ripple Current (mArms) at 105˚C 100kHz
Maximum Impedance (Ω) at 20˚C 100kHz
Case Size ΦD x L (mm)

Voltage (Code)		25V (1E)			35V (1V)			50V (1H)		
Cap. (μF)	Code	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current
100	107	6.3 x 11	0.110	500	6.3 x 11	0.110	500	8 x 12	0.074	724
150	157	6.3 x 11	0.110	500				10 x 12.5	0.061	979
220	227				8 x 12	0.062	900	10 x 16	0.042	1370
330	337	8 x 12	0.062	900	10 x 12.5	0.045	1240	10 x 20	0.028	1870
390	397	8 x 16	0.048	1210	8 x 20	0.033	1410			
470	477	10 x 12.5	0.045	1240	10 x 16	0.032	1650	12.5 x 20	0.027	2050
560	567	8 x 20	0.033	1410	10 x 20	0.020	1960	12.5 x 25	0.023	2410
680	687	10 x 16	0.032	1650	10 x 20	0.020	1960	12.5 x 30	0.021	2860
			0.032	1760*						
820	827	10 x 20	0.020	1960*						
1000	108	10 x 25	0.018	2250	12.5 x 20	0.017	2480	16 x 25	0.021	3010
1200	128				12.5 x 25	0.015	2900			
1500	158	12.5 x 20	0.017	2480						
1800	188	12.5 x 25	0.015	2900						
2200	228	12.5 x 30	0.013	3450	16 x 25	0.013	3630			
		16 x 20	0.015	3250						
2700	278	12.5 x 35	0.012	3570						
3300	338	16 x 25	0.013	3630						

Maximum Allowable Ripple Current (mArms) at 105˚C 100kHz
Maximum Impedance (Ω) at 20˚C 100kHz
Case Size ΦD x L (mm)

* Special item with higher ripple current & longer life of 10,000 hrs.

Specifications are subject to change without notice. Should a safety or technical concern arise regarding the product, please be sure to contact our sales offices or agents immediately.