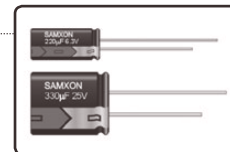


FEATURES

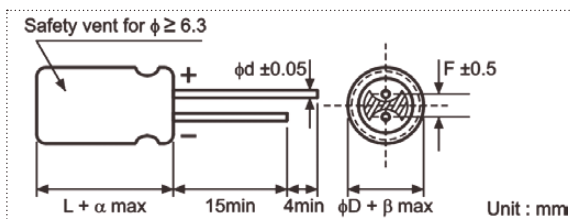
- Load life of 2,000~5,000 hours at 105°C.
- Enabled high ripple current by a reduction of impedance at high frequency range.
- Lowest impedance for personal computer and storage equipment.



SPECIFICATIONS

Item	Performance Characteristics					
Operating Temperature Range	-40 to +105°C					
Rated Working Voltage Range	6.3 to 25V					
Nominal Capacitance Range	100 to 3900µF					
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	
	tan δ (max.)	0.22	0.19	0.16	0.14	
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	
Z-25°C / Z+20°C						
High Temperature Loading	Test time	ΦD	6.3	8	10	12.5
	Load life		2,000h	3,000h	4,000h	5,000h
	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						
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						
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
F	2.5	3.5	3.5	5.0	5.0
φd	0.5	0.5	0.6	0.6	0.6
α	(L < 20) 1.5		(L ≥ 20) 2.0		
β	(D < 20) 0.5		(D ≥ 20) 1.0		

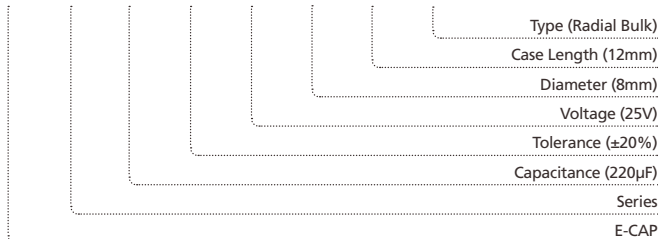
RIPPLE CURRENT MULTIPLIER

Frequency Coefficient

Coefficient	120	1k	10k	100k
Cap (µF)				
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

PART NUMBER SYSTEM (EXAMPLE : 25V 220µF)

1	23	456	7	89	10	11 12	13 14
E	GK	227	M	1E	F	12	RR



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
120	127							6.3 x 11	0.130	405
220	227	6.3 x 11	0.130	405	6.3 x 11	0.130	405	8 x 12	0.072	760
330	337	6.3 x 11	0.130	405	8 x 12	0.072	760	8 x 12	0.072	760
470	477	8 x 12	0.072	760	8 x 12	0.072	760	8 x 16	0.056	995
560	567	8 x 12	0.072	760				10 x 12.5	0.053	1030
680	687				8 x 16	0.056	995	8 x 20	0.041	1250
					10 x 12.5	0.053	1030	10 x 16	0.038	1430
820	827	8 x 16	0.056	995						
1000	108	10 x 12.5	0.053	1030	8 x 20	0.041	1250	10 x 20	0.023	1820
					10 x 16	0.038	1430			
1200	128	8 x 20	0.041	1250	10 x 20	0.023	1820	10 x 25	0.022	2150
		10 x 16	0.038	1430						
1500	158	10 x 20	0.023	1820	10 x 25	0.022	2150	12.5 X 20	0.021	2360
2200	228	10 x 25	0.022	2150	12.5 x 20	0.021	2360	12.5 X 25	0.018	2770
3300	338	12.5 x 20	0.021	2360	12.5 x 25	0.018	2770			
3900	398	12.5 x 25	0.018	2770						

Maximum Allowable Ripple Current (mArms) at 105°C 100kHz

Case Size Φ D x L (mm)

Maximum Impedance (Ω) at 20°C 100kHz

Voltage (Code)		25V (1E)		
Cap. (µF)	Code	Case Size	Impedance	Ripple Current
100	107	6.3 x 11	0.130	405
220	227	8 x 12	0.072	760
330	337	8 x 16	0.056	995
		10 x 12.5	0.053	1030
470	477	8 x 20	0.041	1250
		10 x 16	0.038	1430
680	687	10 x 20	0.023	1820
820	827	10 x 25	0.022	2150
1000	108	12.5 x 20	0.021	2360
1500	158	12.5 x 25	0.018	2770

Maximum Allowable Ripple Current (mArms) at 105°C 100kHz

Case Size Φ D x L (mm)

Maximum Impedance (Ω) at 20°C 100kHz

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.