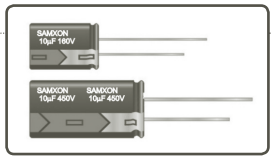
FEATURES

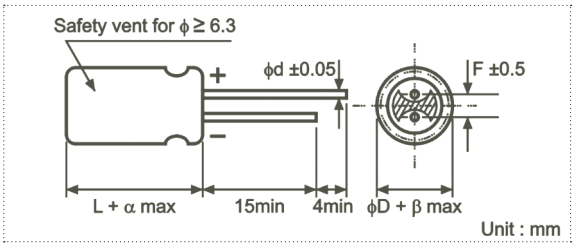


- Load life of 8,000~10,000 hours at 105˚C.
- For electronic ballast.

SPECIFICATIONS

Item	Performance Characteristics
Operating Temperature Range	-25 to +105˚C
Rated Working Voltage Range	160 to 450V
Nominal Capacitance Range	1 to 220μF
Capacitance Tolerance	±20% at 120Hz, +20˚C
Leakage Current	I ≤0.02CV +25 (μA) after 2 minutes application of rated working voltage at +20˚C
tan δ (120Hz, +20˚C)	Working Voltage (V): 160 / 200 / 250 / 350 / 400 / 450 tan δ (max.): 0.15 / 0.15 / 0.15 / 0.20 / 0.20 / 0.20
Low Temperature Characteristics	Impedance ratio max. at 120Hz Rated Voltage (V): 160 / 200 / 250 / 350 / 400 / 450 Z-25˚C / Z+20˚C: 3 / 3 / 3 / 6 / 6 / 6
High Temperature Loading	Test time : ΦD: 8~10 / 12.5~18; Load life: 8,000h / 10,000h 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 ±20% 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 ±20% 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	8 (L <20)	8 (L ≥20)	10	12.5	16	18
F	3.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5	0.6	0.6	0.6	0.8	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
1~5.6	0.20	0.40	0.80	1.00
6.8~180	0.40	0.75	0.90	1.00
≥220	0.50	0.85	0.94	1.00

PART NUMBER SYSTEM (EXAMPLE : 200V 220μF)

1	2 3	4 5 6	7	8 9	10	11 12	13 14
E	RE	227	M	2D	L	30	RR

- 13 14: Type (Radial Bulk)
- 11 12: Case Length (30mm)
- 10: Diameter (18mm)
- 8 9: Voltage (200V)
- 7: Tolerance (±20%)
- 4 5 6: Capacitance (220μF)
- 2 3: Series
- 1: E-CAP

STANDARD RATINGS

Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		350V (2V)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
6.8	685	8 x 12	160	8 x 12	160	8 x 12	150	10 x 16	220
10	106	10 x 16	250	10 x 16	250	10 x 20	280	10 x 20	280
22	226	10 x 20	500	10 x 20	500	12.5 x 20	600	12.5 x 20	350
33	336	10 x 20	500	12.5 x 20	600	12.5 x 20	600	16 x 20	500
47	476	12.5 x 20	660	12.5 x 20	660	12.5 x 25	720	16 x 25	660
						16 x 20		18 x 20	
68	686	12.5 x 25	760	12.5 x 25	760	16 x 25	920	16 x 30	850
		16 x 20		16 x 20		18 x 20		18 x 25	
100	107	16 x 25	1120	16 x 25	1120	16 x 30	1200		
		18 x 20		18 x 20		18 x 25			
150	157	16 x 30	1360	16 x 30	1360	18 x 30	1500		
		18 x 25		18 x 25					
220	227	16 x 30	1400	18 x 30	1700				
		18 x 25							

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

Voltage (Code)		400V (2G)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current
1	105	8 x 12	38		
1.5	155	8 x 12	72		
		10 x 12.5	80		
1.8	185	8 x 12	76		
		10 x 12.5	96		
2.2	225	8 x 12	76		
		10 x 12.5	112		
3.3	335	10 x 12.5	120		
4.7	475	10 x 16	176	10 x 20	120
5.6	565	10 x 16	200	10 x 20	135
6.8	685	10 x 16	220	10 x 20	150
10	106	10 x 20	280	12.5 x 20	320
22	226	12.5 x 25	430	16 x 25	560
		16 x 20		18 x 20	
33	336	16 x 25	640	16 x 30	700
		18 x 20		18 x 25	
47	476	16 x 30	840	18 x 30	880
		18 x 25			
68	686	18 x 30	1000		

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