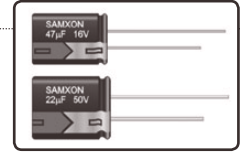


## FEATURES

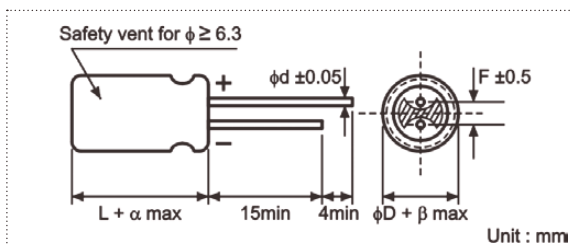
- Wide operating temperature range, it as long load life product at 125°C.
- Suitable for use in DC or pulse circuits in various electronic and industrial.



## SPECIFICATIONS

Item	Performance Characteristics					
Operating Temperature Range	-40 to +125°C					
Rated Working Voltage Range	10 to 50V					
Nominal Capacitance Range	3.3 to 3900µF					
Capacitance Tolerance	±20% at 120Hz, +20°C					
Leakage Current	I ≤ 0.03CV or 4 (µA) whichever is greater measured after 1 minute application of rated working voltage at +20°C					
tan δ (120Hz, +20°C)	Working Voltage (V)	10	16	25	35	50
	tan δ (max.)	0.22	0.18	0.16	0.14	0.12
For capacitance value >1000µF, add 0.02 per another 1000µF						
Low Temperature Characteristics	Impedance ratio max. at 120Hz					
	Working Voltage (V)	10	16	25	35	50
	Z-25°C / Z+20°C	3	2	2	2	2
Z-40°C / Z+20°C		6	4	4	4	4
High Temperature Loading	Test time	ΦD	<8	≥8	Post test requirements at +20	
	Load life		1,000h	2,000h	Leakage current : ≤Initial specified value	
	Test temperature		+125°C		Cap. change : within ±20% of the initial measured value	
Test conditions		Rated DC working voltage with rated ripple current		tan δ : ≤200% of the initial specified value		
Shelf Life	At +125°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



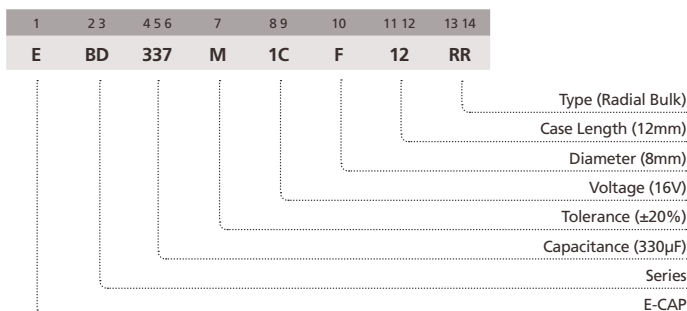
ΦD	5	6.3	8 (L < 20)	8 (L ≥ 20)	10	12.5	16	18
F	2.0	2.5	3.5	3.5	5.0	5.0	7.5	7.5
φd	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8
α	(L < 20) 1.5			(L ≥ 20) 2.0				
β	(D < 20) 0.5			(D ≥ 20) 1.0				

## RIPPLE CURRENT MULTIPLIER

### Frequency Coefficient

Rated Voltage	Coefficient Cap (µF)	Freq. (Hz)				
		50	120	300	1k	10k~100k
10~50V	≤47	0.75	1.00	1.35	1.57	2.00
	100~470	0.80	1.00	1.23	1.34	1.50
	≥560	0.85	1.00	1.10	1.13	1.15

## PART NUMBER SYSTEM (EXAMPLE : 16V 330µF)



**STANDARD RATINGS**

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1E)		50V (1H)	
Cap. (µF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
3.3	335									5 x 11	21
4.7	475									5 x 11	26
10	106									5 x 11	38
22	226							5 x 11	47	5 x 11	55
33	336					5 x 11	53	5 x 11	56	6.3 x 11	81
47	476			5 x 11	56	5 x 11	59	6.3 x 11	84	6.3 x 11	93
100	107	5 x 11	74	5 x 11	88	6.3 x 11	111	6.3 x 11	118	8 x 12	160
220	227	6.3 x 11	135	6.3 x 11	149	8 x 12	200	10 x 12.5	240		
330	337	6.3 x 11	167	8 x 12	221	8 x 12	238				
470	477	8 x 12	237	8 x 12	256	10 x 16	366				
1000	108					10 x 20	575				
2200	228					12.5 x 25	908				
3900	398					16 x 30	1356				

Maximum Allowable Ripple Current (mArms) at 125°C 120Hz

Case Size  $\Phi$ D x L (mm)

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.