

WA SERIES

85°C Miniaturized low profile.

◆ FEATURES

- 9~25mm height.
- RoHS compliance.

WA

105°C Version

WXA



◆ SPECIFICATIONS

Items	Characteristics												
Category Temperature Range	-40~+85℃								-25~+85℃				
Rated Voltage Range	6.3~250V.DC								350~450V.DC				
Capacitance Tolerance	±20%(20℃, 120Hz)												
Leakage Current(MAX)	6.3~50V.DC								160~450V.DC				
	I=0.01CV or 3 μA whichever is greater. (After 2 minutes application of rated voltage)								CV≤1000			CV>1000	
									I=0.1CV+40μA (1minute) I=0.03CV+15μA (5minutes)			I=0.04CV+100μA (1minute) I=0.02CV+25μA (5minutes)	
	I=Leakage Current(μA)				C=Rated Capacitance(μF)				V=Rated Voltage(V)				
Dissipation Factor(MAX) (tan δ)	Rated Voltage (V) 6.3 10 16 25 35 50 160 200 250 350 400 450 (20℃, 120Hz)												
	tan δ 0.26 0.22 0.18 0.16 0.14 0.12 0.20 0.20 0.20 0.20 0.20 0.20												
	When rated capacitance is over 1000 μF, tan δ shall be added 0.02 to the listed value with increase of every 1000 μF.												
Endurance	After applying rated voltage with rated ripple current for 2000hrs at 85℃, the capacitors shall meet the following requirements.												
	Capacitance Change				Within ±25% of the initial value.								
	Dissipation Factor				Not more than 200% of the specified value.								
	Leakage Current				Not more than the specified value.								
Low Temperature Stability Impedance Ratio(MAX)	Rated Voltage (V) 6.3 10 16 25 35 50 160 200 250 350 400 450 (120Hz)												
	Z(-25℃)/Z(20℃) 6 4 4 3 2 2 3 3 3 5 5 7												
	Z(-40℃)/Z(20℃) 12 10 8 6 4 3 — — — — —												

◆MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient

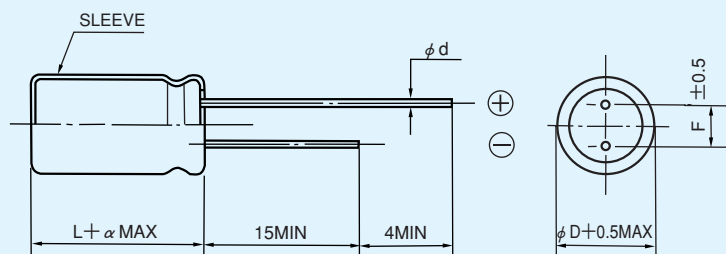
Frequency (Hz)		60(50)	120	500	1k	10k $\leq$
Coefficient	1.5 $\sim$ 6.8 μ F	0.65	1.0	1.20	1.30	1.50
	10 $\sim$ 68 μ F	0.8	1.0	1.20	1.30	1.50
	100 $\sim$ 1000 μ F	0.8	1.0	1.10	1.15	1.20
	2200 $\sim$ 10000 μ F	0.8	1.0	1.05	1.10	1.15

◆PART NUMBER

Rated Voltage	Series	Rated Capacitance	Capacitance Tolerance	Option	Lead Forming	Case Size

◆ DIMENSIONS

(mm)



ϕD	8	10	12.5	16	18
ϕd	0.6			0.8	
F	3.5	5.0		7.5	
α	$L \leq 16 : \alpha = 1.5$ $L \geq 20 : \alpha = 2.0$				

◆STANDARD SIZE, RATED RIPPLE CURRENT

Size ϕ D×L(mm), Ripple Current (mA r.m.s./85°C, 120Hz)

WV(V.DC) Cap(μF)	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
100											8×9	240
150									8×9	260	10×9	320
220							8×9	320	10×9	360		
330					8×9	350	10×9	410	10×9	420		
470	8×9	380	8×9	380	8×9	380	10×9	460			12.5×16	700
680	8×9	420	10×9	510	10×9	510	12.5×16	760	12.5×16	760	16×16	810
1000	10×9	550	10×9	550			12.5×16	940	16×16	950	16×20	1050
2200	12.5×16	1080	12.5×16	1080	16×16	1100	16×20	1400	18×20	1500	18×25	1650
3300	12.5×16	1100	16×16	1120	16×20	1500	18×20	1550	18×25	1850		
4700	18×16	1200	16×20	1550	18×20	1600	18×25	2000				
6800	16×20	1550	18×20	1650	18×25	2050						
10000	18×20	1700	18×25	2150								

[illegible]