

WXA SERIES
105°C Miniaturized low profile.
◆ FEATURES

- 9~25mm height.


◆ SPECIFICATIONS

Items	Characteristics																																																			
Operating Temperature Range	-55~+105°C	-40~+105°C	-25~+105°C																																																	
Rated Voltage Range	6.3~50V.DC	160~250V.DC	350~450V.DC																																																	
Capacitance Tolerance	±20%(20°C, 120Hz)																																																			
Leakage Current(MAX)	6.3~50V.DC		160~450V.DC																																																	
	I=0.01CV (After 2 minutes application of rated voltage)		I=0.04CV+100μA (1 minute) I=0.02CV+25μA (5minutes)																																																	
	I=Leakage Current(μA)	C=Nominal Capacitance(μF)	V=Rated Voltage(V)																																																	
Dissipation Factor(MAX)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>tanδ</td> <td>0.30</td> <td>0.26</td> <td>0.20</td> <td>0.18</td> <td>0.14</td> <td>0.12</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.25</td> </tr> <tr> <td></td> <td>0.26</td> <td>0.22</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.25</td> </tr> </tbody> </table>												Rated Voltage (V)	6.3	10	16	25	35	50	160	200	250	350	400	450	tanδ	0.30	0.26	0.20	0.18	0.14	0.12	0.20	0.20	0.20	0.20	0.20	0.25		0.26	0.22	0.18	0.16	0.14	0.12	0.20	0.20	0.20	0.20	0.20	0.25	(20°C, 120Hz)
	Rated Voltage (V)	6.3	10	16	25	35	50	160	200	250	350	400	450																																							
tanδ	0.30	0.26	0.20	0.18	0.14	0.12	0.20	0.20	0.20	0.20	0.20	0.25																																								
	0.26	0.22	0.18	0.16	0.14	0.12	0.20	0.20	0.20	0.20	0.20	0.25																																								
	When nominal capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.																																																			
Load Life	After applying rated voltage with max ripple current for 2000hrs at 105°C, 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)	<table border="1"> <thead> <tr> <th>Rated Voltage(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>3</td> <td>3</td> <td>6</td> <td>6</td> <td>6</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>												Rated Voltage(V)	6.3	10	16	25	35	50	160	200	250	350	400	450	Z(-25°C)/Z(20°C)	4	3	2	2	2	2	3	3	3	6	6	6	Z(-40°C)/Z(20°C)	8	6	4	4	3	3	-	-	-	-	-	-	(120Hz)
	Rated Voltage(V)	6.3	10	16	25	35	50	160	200	250	350	400	450																																							
	Z(-25°C)/Z(20°C)	4	3	2	2	2	2	3	3	3	6	6	6																																							
Z(-40°C)/Z(20°C)	8	6	4	4	3	3	-	-	-	-	-	-																																								

◆ MULTIPLIER FOR RIPPLE CURRENT

(1) Frequency coefficient

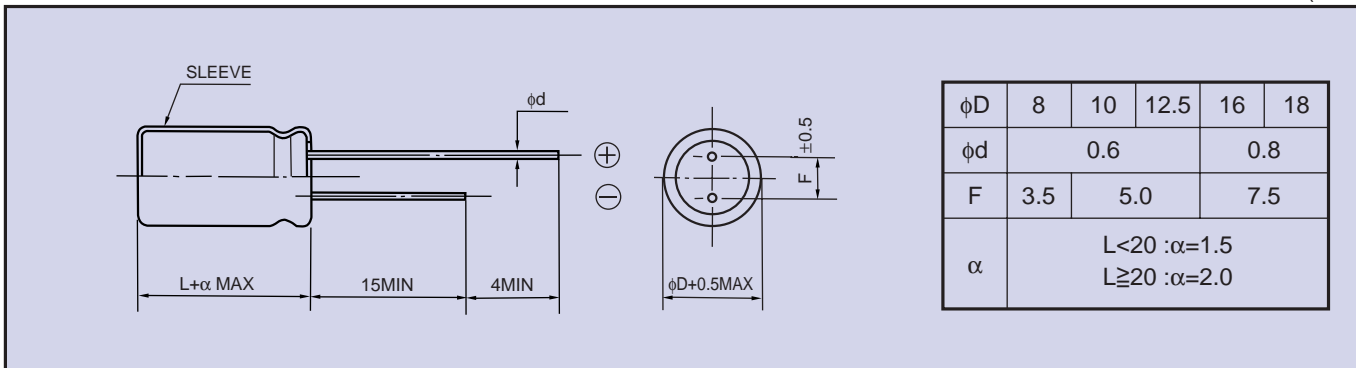
Frequency(Hz)		60(50)	120	500	1k	10k≤
Coefficient	1.5~68μF	0.8	1.0	1.20	1.30	1.50
	100~1000μF	0.8	1.0	1.10	1.15	1.20
	2200~10000μF	0.8	1.0	1.05	1.10	1.15

(2) Temperature coefficient

Ambient Temperature (°C)	105	85	65≥
Coefficient	1.0	1.7	2.1

◆ DIMENSIONS

(mm)


◆ STANDARD SIZE, MAX. PERMISSIBLE RIPPLE CURRENT

 Size $\phi D \times L$ (mm), Ripple Current (mA r.m.s./105°C, 120Hz)

WV(V.DC) Cap(μ F)	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											8x9	200
150									8x9	250	10x9	300
220							8x9	240	10x9	300		
330					8x9	270	10x9	310	10x9	360		
470	8x9	270	8x9	295	8x9	310	10x9	370			16x16 (12.5x16)	570 (570)
680	8x9	300	10x9	350	10x9	370	12.5x16	640	12.5x16	640	16x16	710
1000	10x9	460	10x9	460			12.5x16	670	16x16	850	16x20	890
2200	12.5x16	770	12.5x16	770	16x16	930	16x20	1100	18x20	1200	18x25	1320
3300	16x16	930	16x16	930	16x20	1200	18x20	1200	18x25	1490		
4700	18x16	1000	16x20	1200	18x20	1330	18x25	1490				
6800	16x20	1200	18x20	1330	18x25	1680						
10000	18x20	1430	18x25	1680								

WV(V.DC) Cap(μ F)	160 (2C)		200 (2D)		250 (2E)		350 (2V)		400 (2G)		450 (2W)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1.5											8x9	19
2.2									8x9	35	10x9	29
3.3							8x9	37	10x9	40		
4.7	8x9	54	8x9	54	8x9	54	10x9	49				
6.8	8x9	60	8x9	60	10x9	69	12.5x16	94	12.5x16	94	12.5x16	77
10	10x9	85	10x9	85			12.5x16	100	16x16 (12.5x16)	120 (100)	16x16	109
22			12.5x16	156	16x16 (12.5x16)	183 (156)	18x16	183	16x20 (18x16)	187 (183)	16x20	170
33	12.5x16	175	16x16 (12.5x16)	230 (175)	16x16	238	16x20	238	18x20 (16x20)	240 (238)	18x25	238
47	16x16	245	16x16	250	18x16	309	18x20	309	18x20	309	18x25	275
68	18x16	305	16x20	355	16x20	397	18x25	397				
100	16x20	381	18x20 (16x20)	417 (381)	18x25	451						
150	18x20	464	18x25	532								
220	18x25	602										

() shows compact size. We would like to recommend compact sizes in above table for new design.