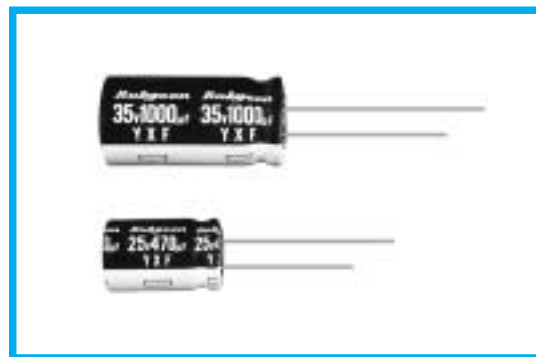


YXF SERIES

105°C Long Life. Low impedance.
(Rated Voltage 6.3~250V.DC)

◆ FEATURES

- Load Life : 105°C 2000~10000hours.
- Low impedance at 100kHz with selected materials.
- RoHS compliance.



◆ SPECIFICATIONS

Items	Characteristics																																															
Category Temperature Range	-40~+105℃																																															
Rated Voltage Range	6.3~250V.DC																																															
Capacitance Tolerance	±20% (20℃, 120Hz)																																															
Leakage Current(MAX)	6.3wv~100wv I=0.01CV or 3 μ A whichever is greater. (After 2 minutes) I=Leakage Current(μ A) 160wv~250wv I=0.04CV + 100 μ A (After 1 minute application of rated voltage) C=Rated Capacitance(μ F) I=0.02CV + 25 μ A (After 5 minutes application of rated voltage) V=Rated Voltage(V)																																															
Dissipation Factor(MAX) (tan δ)	<table><tr><td>Rated Voltage (V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160</td><td>200</td><td>250</td></tr><tr><td>tan δ</td><td>0.22</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.09</td><td>0.08</td><td>0.12</td><td>0.12</td><td>0.12</td></tr></table> (20℃, 120Hz) When rated capacitance is over 1000 μ F, tan δ shall be added 0.02 to the listed value with increase of every 1000 μ F.												Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.12	0.12	0.12												
Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250																																					
tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.12	0.12	0.12																																					
Endurance	After life test with rated ripple current at conditions stated in the table below, the capacitors shall meet the following requirements. <table><tr><td>Capacitance Change</td><td>Within ±25% of the initial value.(160wv to 250wv:±20%)</td></tr><tr><td>Dissipation Factor</td><td>Not more than 200% of the specified value.</td></tr><tr><td>Leakage Current</td><td>Not more than the specified value.</td></tr></table> <table><tr><td rowspan="2">Case Dia</td><td colspan="3">Life Time (hrs)</td></tr><tr><td>6.3~10WV</td><td>16~100WV</td><td>160~250WV</td></tr><tr><td>φ D≤6.3</td><td>4000</td><td>5000</td><td>—</td></tr><tr><td>φ D=8</td><td>6000</td><td>7000</td><td>—</td></tr><tr><td>φ D=10</td><td>6000</td><td>7000</td><td>2000</td></tr><tr><td>φ D≥12.5</td><td>8000</td><td>10000</td><td>2000</td></tr></table>												Capacitance Change	Within ±25% of the initial value.(160wv to 250wv:±20%)	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.	Case Dia	Life Time (hrs)			6.3~10WV	16~100WV	160~250WV	φ D≤6.3	4000	5000	—	φ D=8	6000	7000	—	φ D=10	6000	7000	2000	φ D≥12.5	8000	10000	2000							
Capacitance Change	Within ±25% of the initial value.(160wv to 250wv:±20%)																																															
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Case Dia	Life Time (hrs)																																															
	6.3~10WV	16~100WV	160~250WV																																													
φ D≤6.3	4000	5000	—																																													
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φ D≥12.5	8000	10000	2000																																													
Low Temperature Stability Impedance Ratio(MAX)	<table><tr><td>Rated Voltage (V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160</td><td>200</td><td>250</td></tr><tr><td>Z (-25℃)/Z (20℃)</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>3</td><td>3</td><td>3</td></tr><tr><td>Z (-40℃)/Z (20℃)</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>4</td><td>4</td><td>4</td></tr></table> (120Hz)												Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	Z (-25℃)/Z (20℃)	4	3	2	2	2	2	2	2	3	3	3	Z (-40℃)/Z (20℃)	8	6	4	3	3	3	3	3	4	4	4
Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250																																					
Z (-25℃)/Z (20℃)	4	3	2	2	2	2	2	2	3	3	3																																					
Z (-40℃)/Z (20℃)	8	6	4	3	3	3	3	3	4	4	4																																					

◆MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient
(6.3wv~100wv)

Frequency (Hz)		120	1k	10k	100k≤
Coefficient	0.47~10 μF	0.42	0.60	0.80	1.00
	22~33 μF	0.55	0.75	0.90	1.00
	47~330 μF	0.70	0.85	0.95	1.00
	470~1000 μF	0.75	0.90	0.98	1.00
	2200~15000 μF	0.80	0.95	1.00	1.00

(160wv~250wv)

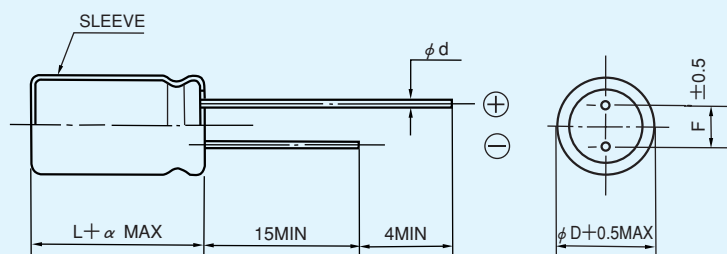
Frequency (Hz)	60(50)	120	1k	10k	100k≤
Coefficient	0.40	0.50	0.75	0.90	1.00

◆PART NUMBER

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

◆DIMENSIONS

(mm)



ϕD	5	6.3	8	10	12.5	16	18
ϕd	0.5		0.6			0.8	
F	2.0	2.5	3.5	5.0		7.5	
α	$L \leq 16 : \alpha = 1.5 \quad L \geq 20 : \alpha = 2.0$						

◆STANDARD SIZE

Rated voltage 6.3V(0J)				
Rated capacitance (μF)	Size $\phi D \times L$ (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)	
			20°C, 100kHz	-10°C, 100kHz
100	5×11	150	0.90	3.6
220	6.3×11	250	0.40	1.6
330	6.3×11	250	0.40	1.6
470	8×11.5	400	0.25	1.0
1000	10×12.5	580	0.16	0.65
2200	12.5×20	1300	0.062	0.21
3300	12.5×20	1300	0.062	0.21
4700	16×25	1850	0.034	0.096
6800	16×25	1850	0.034	0.096
10000	16×31.5	2000	0.029	0.087
15000	18×35.5	2200	0.025	0.058

Rated voltage 10V(1A)				
Rated capacitance (μF)	Size $\phi D \times L$ (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)	
			20°C, 100kHz	-10°C, 100kHz
100	5×11	150	0.90	3.6
220	6.3×11	250	0.40	1.6
330	8×11.5	400	0.25	1.0
470	8×11.5	400	0.25	1.0
1000	10×16	770	0.12	0.46
2200	12.5×20	1300	0.062	0.21
3300	12.5×25	1650	0.048	0.16
4700	16×25	1850	0.034	0.096
6800	16×31.5	2000	0.029	0.087
10000	18×35.5	2200	0.025	0.058

Rated voltage 16V(1C)				
Rated capacitance (μ F)	Size ϕ D $\times$ L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)	
			20°C, 100kHz	−10°C, 100kHz
47	5 $\times$ 11	150	0.90	3.6
100	6.3 $\times$ 11	250	0.40	1.6
220	8 $\times$ 11.5	400	0.25	1.0
330	8 $\times$ 11.5	400	0.25	1.0
470	10 $\times$ 12.5	580	0.16	0.65
1000	10 $\times$ 20	1050	0.078	0.30
2200	12.5 $\times$ 25	1650	0.048	0.16
3300	16 $\times$ 25	1850	0.034	0.096
4700	16 $\times$ 31.5	2000	0.029	0.087
6800	18 $\times$ 35.5	2200	0.025	0.058

Rated voltage 25V(1E)				
Rated capacitance (μ F)	Size ϕ D $\times$ L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)	
			20°C, 100kHz	−10°C, 100kHz
33	5 $\times$ 11	150	0.90	3.6
47	5 $\times$ 11	150	0.90	3.6
100	6.3 $\times$ 11	250	0.40	1.6
220	8 $\times$ 11.5	400	0.25	1.0
330	10 $\times$ 12.5	580	0.16	0.65
470	10 $\times$ 16	770	0.12	0.46
1000	12.5 $\times$ 20	1300	0.062	0.21
2200	16 $\times$ 25	1850	0.034	0.096
3300	16 $\times$ 31.5	2000	0.029	0.087
4700	18 $\times$ 35.5	2200	0.025	0.058

Rated voltage 35V(1V)				
Rated capacitance (μ F)	Size ϕ D $\times$ L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)	
			20°C, 100kHz	−10°C, 100kHz
33	5 $\times$ 11	150	0.90	3.6
47	6.3 $\times$ 11	250	0.40	1.6
100	8 $\times$ 11.5	400	0.25	1.0
220	10 $\times$ 12.5	580	0.16	0.65
330	10 $\times$ 16	770	0.12	0.46
470	10 $\times$ 20	1050	0.078	0.30
1000	12.5 $\times$ 25	1650	0.048	0.16
2200	16 $\times$ 31.5	2000	0.029	0.087
3300	18 $\times$ 35.5	2200	0.025	0.058

Rated voltage 50V(1H)				
Rated capacitance (μ F)	Size ϕ D×L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)	
			20°C, 100kHz	−10°C, 100kHz
0.47	5×11	17	5.5	12.0
1	5×11	30	4.0	8.0
2.2	5×11	43	2.5	6.0
3.3	5×11	53	2.2	5.6
4.7	5×11	88	1.9	5.0
10	5×11	100	1.5	4.0
22	5×11	150	0.90	3.6
33	6.3×11	250	0.40	1.6
47	6.3×11	250	0.40	1.6
100	8×11.5	400	0.25	1.0
220	10×16	770	0.12	0.46
330	10×20	1050	0.078	0.30
470	12.5×20	1300	0.062	0.21
1000	16×25	1850	0.034	0.096
2200	18×35.5	2200	0.025	0.058

Rated voltage 63V(1J)				
Rated capacitance (μ F)	Size ϕ D×L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)	
			20°C, 100kHz	−10°C, 100kHz
10	5×11	87	2.3	9.3
22	6.3×11	140	1.3	5.2
33	6.3×11	140	1.2	5.0
47	8×11.5	210	0.63	2.8
100	10×12.5	300	0.43	1.8
220	10×20	520	0.21	0.84
330	12.5×20	660	0.16	0.64
470	12.5×25	750	0.12	0.45
1000	16×31.5	1390	0.054	0.20

Rated voltage 100V(2A)				
Rated capacitance (μ F)	Size ϕ D×L(mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)	
			20°C, 100kHz	−10°C, 100kHz
0.47	5×11	15	6.0	17.0
1	5×11	20	4.5	15.0
2.2	5×11	30	3.0	13.0
3.3	5×11	40	2.7	11.0
4.7	5×11	65	2.5	10.0
10	6.3×11	140	1.2	5.0
22	8×11.5	160	0.63	2.8
33	10×12.5	230	0.43	1.8
47	10×16	290	0.31	1.5
100	12.5×20	430	0.16	0.64
220	16×25	900	0.073	0.27
330	16×25	900	0.073	0.27

Rated voltage 160V(2C)			
Rated capacitance (μ F)	Size ϕ D×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)
			20°C, 100kHz
22	10×20	350	1.0
33	12.5×20	450	0.70
47	12.5×25	600	0.45
68	12.5×25	600	0.45
100	16×25	950	0.24
150	16×31.5	1200	0.17
220	18×35.5	1400	0.14

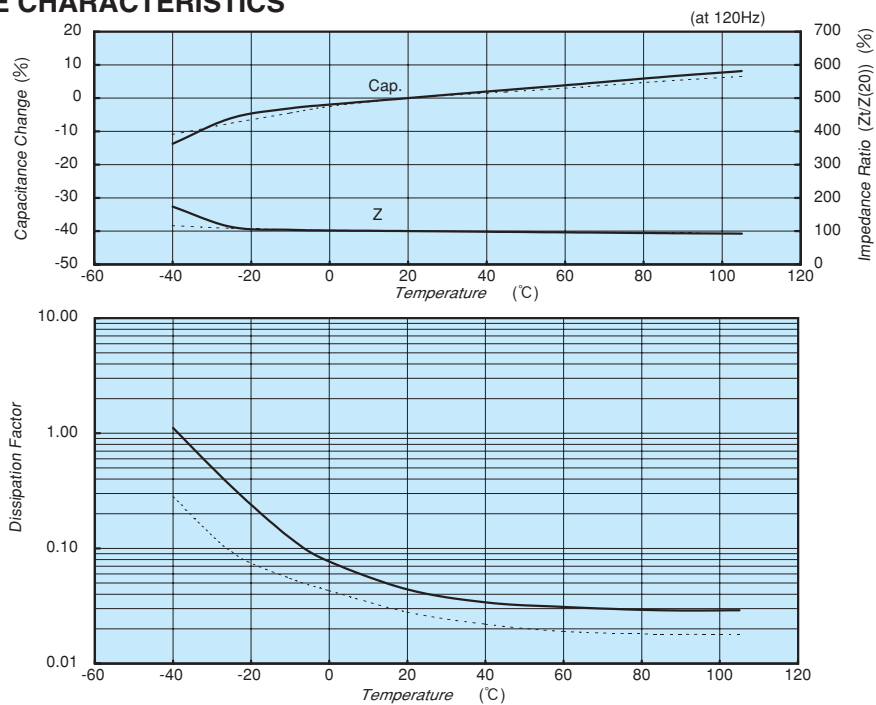
Rated voltage 200V(2D)			
Rated capacitance (μ F)	Size ϕ D×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)
			20°C, 100kHz
22	10×20	350	1.0
33	12.5×25	550	0.55
47	12.5×25	600	0.44
68	16×25	950	0.24
100	16×31.5	1200	0.17
150	16×35.5	1280	0.16
220	18×35.5	1400	0.14

Rated voltage 250V(2E)			
Rated capacitance (μ F)	Size ϕ D×L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)
			20°C, 100kHz
22	10×20	300	1.4
33	12.5×25	450	0.70
47	16×25	850	0.31
68	16×31.5	1050	0.22
100	18×35.5	1200	0.18

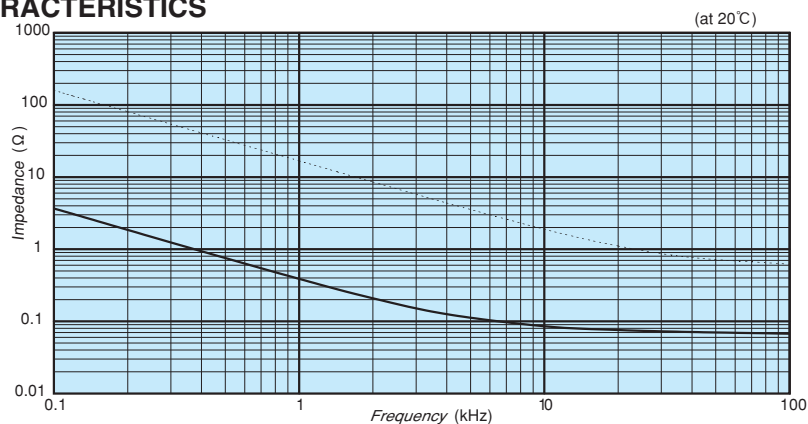
◆ CHARACTERISTIC DATA

———— 35 YXF 470 M 10×20
 - - - - - 50 YXF 10 M 5×11

・ TEMPERATURE CHARACTERISTICS



・ FREQUENCY CHARACTERISTICS



・ ENDURANCE

