

YXF SERIES

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

◆ FEATURES

- Load Life : 105°C2000 ~10000hours.
- Low impedance at 100kHz with selected materials.
- RoHS compliance.


◆ SPECIFICATIONS

Items	Characteristics																																				
Category Temperature Range	-40 ~ +105°C																																				
Rated Voltage Range	6.3 ~ 250V.DC																																				
Capacitance Tolerance	± 20%(20°C, 120Hz)																																				
Leakage Current(MAX)	<p>6.3V ~ 100V $I=0.01CV$ or $3 \mu A$ whichever is greater. (After 2 minutes) I=Leakage Current(μA)</p> <p>160V ~ 250V $I=0.04CV + 100 \mu A$ (After 1 minute application of rated voltage) C=Rated Capacitance(μF)</p> <p>$I=0.02CV + 25 \mu A$ (After 5 minutes application of rated voltage) V=Rated Voltage(V)</p>																																				
Dissipation Factor(MAX) ($\tan \delta$)	<table border="1" style="display: inline-table; margin-right: 20px;"> <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>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> </tr> </thead> <tbody> <tr> <td>$\tan \delta$</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> </tbody> </table> (20°C, 120Hz) When rated capacitance is over 1000 μF , $\tan \delta$ shall be added 0.02 to the listed value with increase of every 1000 μF .	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	$\tan \delta$	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.12	0.12	0.12												
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Endurance	<p>After life test with rated ripple current at conditions stated in the table below, the capacitors shall meet the following requirements.</p> <table border="1" style="display: inline-table; margin-right: 20px;"> <tr> <td>Capacitance Change</td> <td>Within ± 25% of the initial value.(160V to 250V: ±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 border="1" style="display: inline-table;"> <thead> <tr> <th rowspan="2">Case Dia</th> <th colspan="3">Life Time (hrs)</th> </tr> <tr> <th>6.3 ~ 10VV</th> <th>16 ~ 100VV</th> <th>160 ~ 250VV</th> </tr> </thead> <tbody> <tr> <td>$\phi D \leq 6.3$</td> <td>4000</td> <td>5000</td> <td>—</td> </tr> <tr> <td>$\phi D = 8$</td> <td>6000</td> <td>7000</td> <td>—</td> </tr> <tr> <td>$\phi D = 10$</td> <td>6000</td> <td>7000</td> <td>2000</td> </tr> <tr> <td>$\phi D \geq 12.5$</td> <td>8000</td> <td>10000</td> <td>2000</td> </tr> </tbody> </table>	Capacitance Change	Within ± 25% of the initial value.(160V to 250V: ±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 ~ 10VV	16 ~ 100VV	160 ~ 250VV	$\phi D \leq 6.3$	4000	5000	—	$\phi D = 8$	6000	7000	—	$\phi D = 10$	6000	7000	2000	$\phi D \geq 12.5$	8000	10000	2000							
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Low Temperature Stability Impedance Ratio(MAX)	<table border="1" style="display: inline-table; margin-right: 20px;"> <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>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> </tr> </thead> <tbody> <tr> <td>$Z(-25^\circ C)/Z(20^\circ C)$</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>$Z(-40^\circ C)/Z(20^\circ C)$</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> </tbody> </table> (120Hz)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	$Z(-25^\circ C)/Z(20^\circ C)$	4	3	2	2	2	2	2	2	3	3	3	$Z(-40^\circ C)/Z(20^\circ C)$	8	6	4	3	3	3	3	3	4	4	4
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$Z(-40^\circ C)/Z(20^\circ C)$	8	6	4	3	3	3	3	3	4	4	4																										

◆ MULTIPLIER FOR RIPPLE CURRENT

Frequency coefficient
 (6.3V ~ 100V)

Frequency (Hz)	120	1k	10k	100k ≤
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

(160V ~ 250V)

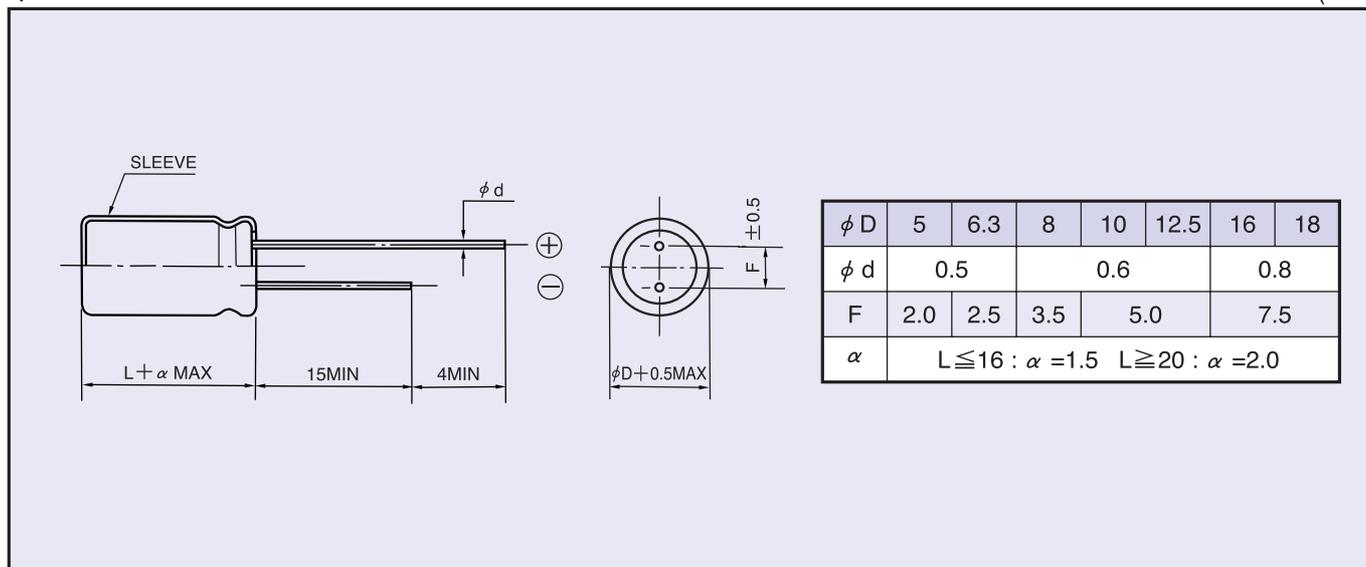
Frequency (Hz)	60(50)	120	1k	10k	100k ≤
Coefficient	0.40	0.50	0.75	0.90	1.00

◆ PART NUMBER

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YXF
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□□
D X L
 Rated Voltage Series Rated Capacitance Capacitance Tolerance Option Lead Forming Case Size

◆ DIMENSIONS

(mm)


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

Rated voltage 63V(1J)				
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
10	5 \times 11	87	2.3	9.3
22	6.3 \times 11	140	1.3	5.2
33	6.3 \times 11	140	1.2	5.0
47	8 \times 11.5	210	0.63	2.8
100	10 \times 12.5	300	0.43	1.8
220	10 \times 20	520	0.21	0.84
330	12.5 \times 20	660	0.16	0.64
470	12.5 \times 25	750	0.12	0.45
1000	16 \times 31.5	1390	0.054	0.20

Rated voltage 100V(2A)				
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
0.47	5 \times 11	15	6.0	17.0
1	5 \times 11	20	4.5	15.0
2.2	5 \times 11	30	3.0	13.0
3.3	5 \times 11	40	2.7	11.0
4.7	5 \times 11	65	2.5	10.0
10	6.3 \times 11	140	1.2	5.0
22	8 \times 11.5	160	0.63	2.8
33	10 \times 12.5	230	0.43	1.8
47	10 \times 16	290	0.31	1.5
100	12.5 \times 20	430	0.16	0.64
220	16 \times 25	900	0.073	0.27
330	16 \times 25	900	0.073	0.27

Rated voltage 160V(2C)			
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
22	10 \times 20	350	1.0
33	12.5 \times 20	450	0.70
47	12.5 \times 25	600	0.45
68	12.5 \times 25	600	0.45
100	16 \times 25	950	0.24
150	16 \times 31.5	1200	0.17
220	18 \times 35.5	1400	0.14

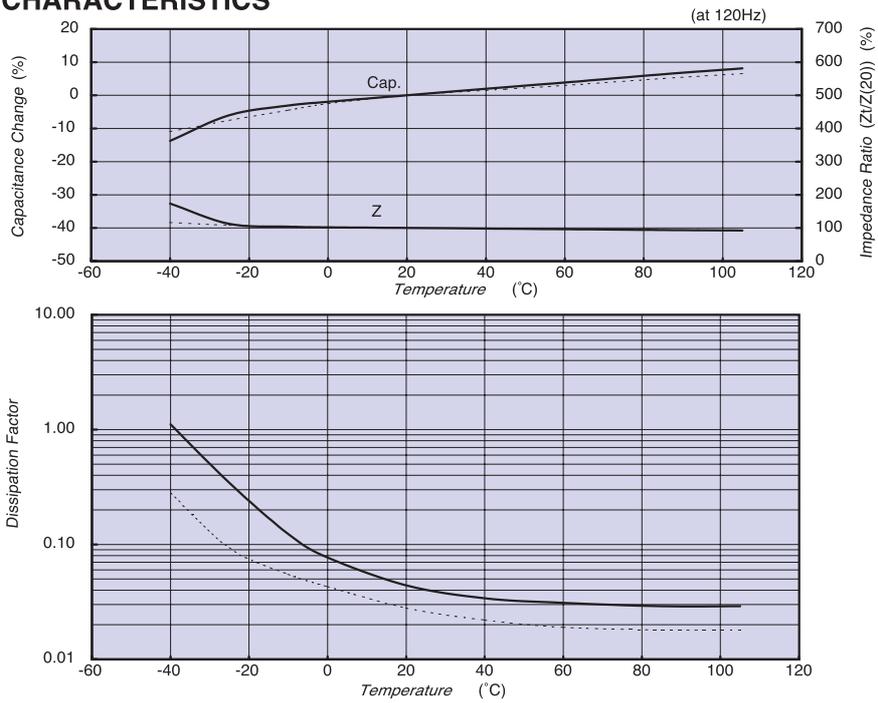
Rated voltage 200V(2D)			
Rated capacitance (μ F)	Size ϕ D \times L (mm)	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance (Ω MAX)
			20°C, 100kHz
22	10 \times 20	350	1.0
33	12.5 \times 25	550	0.55
47	12.5 \times 25	600	0.44
68	16 \times 25	950	0.24
100	16 \times 31.5	1200	0.17
150	16 \times 35.5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

Rated voltage 250V(2E)			
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
22	10 \times 20	300	1.4
33	12.5 \times 25	450	0.70
47	16 \times 25	850	0.31
68	16 \times 31.5	1050	0.22
100	18 \times 35.5	1200	0.18

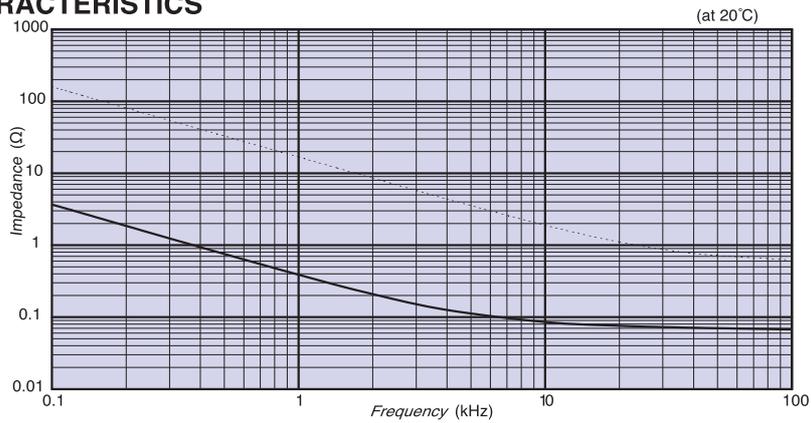
◆ **CHARACTERISTIC DATA**

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

• **TEMPERATURE CHARACTERISTICS**



• **FREQUENCY CHARACTERISTICS**



• **ENDURANCE**

