

XF

Series

STANDARD RATINGS

WV(vdc) <div>Parameter</div>		6.3			WV(vdc) <div>Parameter</div>		10		
Cap.(μF)	ΦDxL (mm)	Ripple Current (mArms) 105°C ,100KHz	Impedance		Cap.(μF)	ΦDxL (mm)	Ripple Current (mArms) 105°C ,100KHz	Impedance	
			20°C100K Hz	- 10°C100K Hz				20°C100K Hz	- 10°C100K Hz
100	5x11	150	0.9	3.6	100	5x11	150	0.9	3.6
220	6.3x11	250	0.4	1.6	220	6.3x11	250	0.4	1.6
330	6.3x11	250	0.4	1.6	330	8x11.5	400	0.25	1
470	8x11.5	400	0.25	1	470	10x12.5	400	0.25	1
1000	10x12.5	580	0.16	0.65	1000	10x16	770	0.12	0.46
2200	13x20	1300	0.062	0.21	2200	13x20	1300	0.062	0.21
3300	13x20	1300	0.062	0.21	3300	13x25	1650	0.048	0.16
4700	16x25	1850	0.034	0.096	4700	16x25	1850	0.034	0.096
6800	16x25	1850	0.034	0.096	6800	16x31	2000	0.029	0.087
10000	16x31	2000	0.029	0.087	10000	18x36	2200	0.025	0.058
15000	18x36	2200	0.025	0.058					

WV(vdc) <div>Parameter</div>		16			WV(vdc) <div>Parameter</div>		25		
Cap.(μF)	ΦDxL (mm)	Ripple Current (mArms) 105°C ,100KHz	Impedance		Cap.(μF)	ΦDxL (mm)	Ripple Current (mArms) 105°C ,100KHz	Impedance	
			20°C100K Hz	- 10°C100K Hz				20°C100K Hz	- 10°C100K Hz
47	5x11	150	0.9	3.6	33	5x11	150	0.9	3.6
100	6.3x11	250	0.43	1.6	47	5x11	150	0.9	3.6
220	8x11.5	400	0.25	1	100	6.3x11	250	0.4	1.6
330	8x11.5	400	0.25	1	220	8x11.5	400	0.25	1
470	10x12.5	580	0.16	0.65	330	10x12.5	580	0.16	0.65
1000	10x20	1050	0.078	0.3	470	10x16	770	0.12	0.46
2200	13x25	1650	0.048	0.16	1000	13x20	1300	0.062	0.21
3300	16x25	1850	0.034	0.096	2200	16x25	1850	0.034	0.096
4700	16x31	2000	0.029	0.087	3300	16X31	2000	0.029	0.087
6800	18x36	2200	0.025	0.058	4700	18x36	2200	0.025	0.058

WV(vdc) <div>Parameter</div>		35			WV(vdc) <div>Parameter</div>		50		
Cap.(μF)	ΦDxL (mm)	Ripple Current (mArms) 105°C ,100KHz	Impedance		Cap.(μF)	ΦDxL (mm)	Ripple Current (mArms) 105°C ,100KHz	Impedance	
			20°C100K Hz	- 10°C100K Hz				20°C100K Hz	- 10°C100K Hz
33	5x11	150	0.9	3.6	0.47	5x11	17	5.5	12
47	6.3x11	250	0.4	1.6	1	5x11	30	4	8
100	8x11.5	400	0.25	1	2.2	5x11	43	2.5	6
220	10x12.5	580	0.025	1	3.3	5x11	53	2.2	5.6
330	10x16	770	0.16	0.65	4.7	5x11	88	1.9	5
470	10x20	1050	0.078	0.3	10	5x11	100	1.5	4
1000	13x25	1650	0.048	0.16	22	5x11	150	0.9	3.6
2200	16x31	2000	0.034	0.087	33	6.3x11	250	0.4	1.6
3300	18x36	2200	0.029	0.058	47	6.3x11	250	0.4	1.6
					100	8x11.5	400	0.25	1
					220	10x16	770	0.12	0.46
					330	10x120	1050	0.078	0.3
					470	13x25	1300	0.062	0.21
					1000	16x25	1850	0.034	0.096
					2200	18x36	2200	0.025	0.058

■ STANDARD RATINGS

WV(vdc)		63				WV(vdc)		100			
Cap.(μF)	Parameter	ΦDxL (mm)	Ripple Current (mArms) 105°C, 100kHz	Impedance		Cap.(μF)	Parameter	ΦDxL (mm)	Ripple Current (mArms) 105°C, 100kHz	Impedance	
				20°C100K Hz	- 10°C100K Hz					20°C100K Hz	- 10°C100K Hz
10		5x11	87	2.3	9.3	1.0		5x11	20	4.5	15
22		6.3x11	140	1.3	5.2	2.2		5x11	30	3	13
33		6.3x11	140	1.2	5	3.3		5x11	40	2.7	11
47		8x11.5	210	0.63	2.8	4.7		5x11	65	2.5	10
100		10x12.5	300	0.43	1.8	10		6.3x11	140	1.2	5
220		10x20	520	0.21	0.84	22		8x11.5	160	0.63	2.8
330		13x20	660	0.16	0.64	33		10x12.5	230	0.43	1.8
470		13x25	750	0.12	0.45	47		10x16	290	0.31	1.8
1000		16x31	1390	0.054	0.2	100		13x20	430	0.16	0.64
						220		16x25	900	0.073	0.27

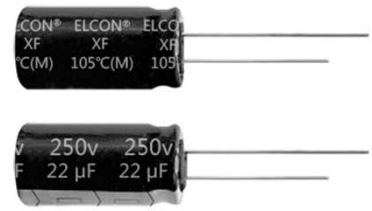
WV(vdc)		160				WV(vdc)		200			
Cap.(μF)	Parameter	ΦDxL (mm)	Ripple Current (mArms) 105°C, 100kHz	Impedance		Cap.(μF)	Parameter	ΦDxL (mm)	Ripple Current (mArms) 105°C, 100kHz	Impedance	
				20°C100K Hz	- 10°C100K Hz					20°C100K Hz	- 10°C100K Hz
22		10x20	350	1	--	22		10x20	350	1	--
33		13x20	450	0.7	--	33		13x25	550	0.55	--
47		13x25	600	0.45	--	47		13x25	600	0.44	--
68		13x25	600	0.45	--	68		16x25	950	0.24	--
100		16x25	950	0.24	--	100		16x31	1200	0.17	--
150		16x31	1200	0.17	--	150		16x36	1280	0.16	--
220		18x36	1400	0.14	--	220		18x36	1400	0.14	--

WV(vdc)		250			
Cap.(μF)	Parameter	ΦDxL (mm)	Ripple Current (mArms) 105°C, 100kHz	Impedance	
				20°C100K Hz	- 10°C100K Hz
22		10x20	300	1.4	--
33		13x25	450	0.7	--
47		16x25	850	0.31	--
68		16x31	1050	0.33	--
100		18x36	1200	0.18	--

XF

Series

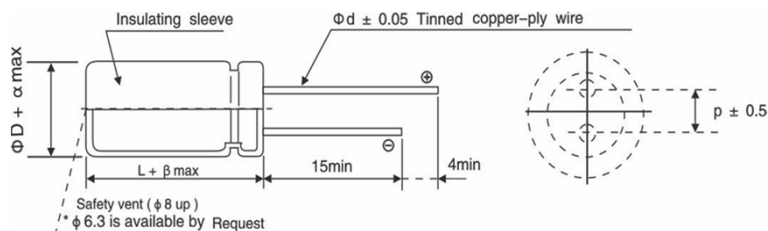
- 105°C, Low Impedance, Long life
- 4000~ 8000 hours guaranteed for WV≤ 10V
- 5000~10000 hours guaranteed for WV=16~100V
- 2000 hours guaranteed for WV=160~250V



■ SPECIFICATIONS

Item	Characteristics											
Category Temperature Range	-40 ~ +105℃											
Voltage Range	6.3 ~ 250VDC											
Nominal Cap. Range	0.47 ~ 15000μF											
Capacitance Tolerance	± 20 % (at 120Hz , 20℃)											
Leakage Current	I=0.01CV or 3 (μA), whichever is greater (After 2 minutes) (6.3WV~100WV). I=0.02CV+25 (μA) (After 5 minutes) (160WV~250WV). where, I: max leakage current(μA), C:Nominal capacitance (μF), V:Rated voltage (V) (at 20℃)											
Dissipation Factor (MAX) (tanδ) (at 120Hz ,20℃)	W.V.	6.3	10	16	25	35	50	63	100	160	250	
	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.12	0.12	
Low Temp.Impedance Stability at 120Hz	W.V.		6.3	10	16	25~100		160~250				
	Z-25℃ /		4	3	2	2		3				
	Z-40℃ /		8	6	4	3		4				
Endurance	After the following life time application of DC rated working voltage hours at 105℃ the capacitor shall meet the following requirements.											
	Capacitance change			≤ ±25% of the initial value					Size	Life time(hours)		
	Dissipation Factor			≤ 200% of the initial specified value						6.3~10V	16~100V	160~250V
	Leakage Current			≤ the initial specified value					ΦD≤6.3	4000	5000	2000
									ΦD=8&10	6000	7000	
Shelf Life												
	After storage for 1000 hours at 105℃ with no voltage applied, voltage treatment of JIS-C-5102 article 4-4 is to be given and then measurement shall be made, at which time requirement specified in the table "High Temperature Loading" can be met.											

■ DRAWING



Unit:(mm)

ΦD	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Φd	0.5			0.6		0.8	
β	1.0			1.5		2.0	
α	0.5						

■ MULTIPLIER FOR RIPPLE CURRENT

(1) Frequency Coefficient

Freq.(Hz)	120	1K	10K	100K
Cap.(μF)				
0.47~330	0.42	0.60	0.80	1.00
470~1000	0.75	0.90	0.98	1.00
2200~15000	0.80	0.95	1.00	1.00

(2) Temperature Coefficient

Ambient Temperature(°C)	40	60	70	85	105
Coefficient	2.40	2.10	1.78	1.65	1.00