



Aluminum Electrolytic Capacitors **XL** Series

Features

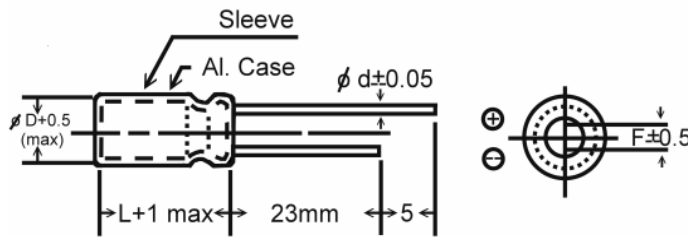
- Low Impedance, High Ripple Current
- Long Life of 2000 ~ 3000 Hours at 105°C.

Specification

Items	Performance																									
Capacitance Tolerance	±20% (at 120Hz, 25°C)																									
Rated Voltage Range	6.3 to 50 VDC																									
Capacitance Range	100 to 4700uF																									
Operating Temperature Range	-40 to + 105																									
Leakage Current (at 25°C)	$I \leq 0.01 CV$ or 3 (uA), whichever is greater.																									
	After 3 minutes application of working voltage. I= Leakage current (uA), C= Rated capacitance (uF), V= Rated voltage (V)																									
Dissipation Factor (Tan δ at 120Hz, 25°C)	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Rate Voltage</th> <th style="width: 10%;">6.3</th> <th style="width: 10%;">10</th> <th style="width: 10%;">16</th> <th style="width: 10%;">25</th> <th style="width: 10%;">35</th> <th style="width: 10%;">50</th> </tr> </thead> <tbody> <tr> <td>Tan δ (max)</td> <td style="text-align: center;">0.22</td> <td style="text-align: center;">0.19</td> <td style="text-align: center;">0.16</td> <td style="text-align: center;">0.14</td> <td style="text-align: center;">0.12</td> <td style="text-align: center;">0.1</td> </tr> </tbody> </table>	Rate Voltage	6.3	10	16	25	35	50	Tan δ (max)	0.22	0.19	0.16	0.14	0.12	0.1											
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For capacitance > 1000uF, add 0.02 per 1000uF increase.																										
Low Temperature characteristics (at 120Hz)	Impedance ration max.																									
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	Rate Voltage	6.3	10	16	25	35	50																			
-25°C/25°C	3	3	2	2	2	2																				
-40°C/25°C	6	6	4	4	3	3																				
Load Life	Application of W.V. at +105 , the capacitor shall meet the following limits.																									
	Capacitance change : ±25% of initial value																									
	Dissipation factor : 200% of initial specified value																									
	Leakage Current : Initial specified value																									
Life Time	3000 hours for $\phi D > 10$																									
	2000 hours for $\phi D = 10$, 1500 hours for $\phi D = 8$																									
Shelf Life	After storage for 500 hours at 105°C, with no voltage applied and being stabilised at + 25 , Capacitor shall meet the limit specified in load life.																									
Ripple Current & Frequency Multipliers	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Freq.(Hz)</th> <th style="width: 15%;">120</th> <th style="width: 15%;">1K</th> <th style="width: 15%;">10K</th> <th style="width: 15%;">100Kup</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">W.V.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">6.3 to 10</td> <td style="text-align: center;">0.60</td> <td style="text-align: center;">0.70</td> <td style="text-align: center;">0.90</td> <td style="text-align: center;">0.90</td> </tr> <tr> <td style="text-align: center;">16 to 25</td> <td style="text-align: center;">0.50</td> <td style="text-align: center;">0.70</td> <td style="text-align: center;">0.80</td> <td style="text-align: center;">0.90</td> </tr> <tr> <td style="text-align: center;">35 up</td> <td style="text-align: center;">0.40</td> <td style="text-align: center;">0.60</td> <td style="text-align: center;">0.80</td> <td style="text-align: center;">0.90</td> </tr> </tbody> </table>	Freq.(Hz)	120	1K	10K	100Kup	W.V.					6.3 to 10	0.60	0.70	0.90	0.90	16 to 25	0.50	0.70	0.80	0.90	35 up	0.40	0.60	0.80	0.90
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Ripple Current & Temperature Multipliers	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Temperature (°C)</th> <th style="width: 35%;">85</th> <th style="width: 35%;">105</th> </tr> </thead> <tbody> <tr> <td>Multiplier</td> <td style="text-align: center;">1.10</td> <td style="text-align: center;">0.90</td> </tr> </tbody> </table>	Temperature (°C)	85	105	Multiplier	1.10	0.90																			
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Standards	Satisfied Characteristic W of JIS C																									

Aluminum Electrolytic Capacitors

XL Series



D	8	10	13
P	3.5	5.0	5.0
d	0.5	0.6	

DIMENSION & PERMISSIBLE RIPPLE CURRENT

VDC uF	6.3V			VDC uF	10V		
	DxL (mm)	Ripple Current (mA/rms,105)	Impedance (Ωmax.) 25 ,100KHz		DxL (mm)	Ripple Current (mA/rms,105)	Impedance (Ωmax.) 25 ,100KHz
1000	8x12	610	0.085	470	8x11	610	0.085
	8x14	840	0.065		8x20	1100	0.050
	8x20	1100	0.050		10x13	900	0.045
1200	10x16	1250	0.050	10x16	1200	0.045	
1500	10x20	1700	0.030	1200	10x20	1650	0.030
2200	10x20	1700	0.030	1500	10x20	1650	0.030
	10x25	2000	0.030		10x25	2000	0.030
2700	10x25	2000	0.030	2200	10x25	2000	0.030
3300	13x21	2100	0.028	3300	13x21	2100	0.030
3900	13x26	2500	0.028		13x26	2500	0.030
4700	13x30	3000	0.028	3900	13x30	3000	0.030
				4700	13x36	3100	0.030

VDC uF	16V			VDC uF	25V		
	DxL (mm)	Ripple Current (mA/rms,105)	Impedance (Ωmax.) 25 ,100KHz		DxL (mm)	Ripple Current (mA/rms,105)	Impedance (Ωmax.) 25 ,100KHz
330	8x12	610	0.085	220	8x12	600	0.085
470	8x20	840	0.05		8x14	840	0.065
	10x13	900	0.06		10x13	900	0.060
1000	10x20	1650	0.03	10x16	1100	0.055	
1200	10x25	2000	0.03	470	8x20	1100	0.050
1500	13x21	2100	0.03		10x16	1250	0.050
2200	10x25	2000	0.03	1000	10x25	2000	0.030
	13x26	2500	0.03		13x21	2100	0.030
2700	13x30	3000	0.03	1500	13x26	2500	0.030
3300	13x36	3100	0.025	2200	13x36	3100	0.030

VDC uF	35V			VDC uF	50V		
	DxL (mm)	Ripple Current (mA/rms,105)	Impedance (Ωmax.) 25 ,100KHz		DxL (mm)	Ripple Current (mA/rms,105)	Impedance (Ωmax.) 25 ,100KHz
220	8x14	840	0.065	100	8x12	450	0.250
	10x13	900	0.065		10x16	850	0.050
330	10x16	1250	0.05	220	10x20	1100	0.050
470	10x20	1650	0.03	330	10x25	1650	0.035
1000	13x26	2500	0.03		10x30	1650	0.035
	13x30	3000	0.03		13x21	1900	0.035
1200	13x30	3000	0.03				
1500	13x36	3100	0.025				