



# Aluminum Electrolytic Capacitors **MR** Series

## Features

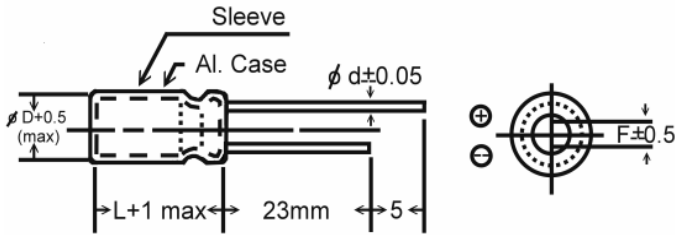
- 105°C with 7mm height

## Specification

Items	Performance																								
Capacitance Tolerance	±20 % <span style="float: right;">(at 120Hz, 25 °C)</span>																								
Rated Voltage Range	4 to 50 VDC																								
Capacitance Range	0.47 to 470 uF																								
Operating Temperature Range	-40 to + 105																								
Leakage Current (at 25°C)	$I \leq 0.02 CV$ 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="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Rate Voltage</td> <td style="width: 10%;">4</td> <td style="width: 10%;">6.3</td> <td style="width: 10%;">10</td> <td style="width: 10%;">16</td> <td style="width: 10%;">25</td> <td style="width: 10%;">35</td> <td style="width: 10%;">50</td> </tr> <tr> <td>Tan δ (max)</td> <td>0.35</td> <td>0.24</td> <td>0.2</td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.10</td> </tr> </table>	Rate Voltage	4	6.3	10	16	25	35	50	Tan δ (max)	0.35	0.24	0.2	0.17	0.15	0.12	0.10								
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Low Temperature characteristics (at 120Hz)	Impedance ration max.																								
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Load Life	<p>After 1000 hours application of W.V. at 105 °C, the capacitor shall meet the followin limits.</p> <p>Capacitance change : ±25% of initial value</p> <p>Dissipation factor : 200% of initial specified value</p> <p>Leakage Current : Initial specified value</p>																								
Shelf Life	After storage for 500 hours at 105°C, with no voltage applied and being stabilixed at + 25 °C, Capacitor shall meet the limit specifed in load life.																								
Ripple Current & Frequency Multipliers	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; text-align: center;">Freq.(Hz) Cap.(uF)</td> <td style="width: 15%;">60 (50)</td> <td style="width: 15%;">120</td> <td style="width: 15%;">1K</td> <td style="width: 15%;">10K</td> <td style="width: 15%;">100K</td> </tr> <tr> <td style="text-align: center;">Under 47</td> <td>0.70</td> <td>0.90</td> <td>1.00</td> <td>1.10</td> <td>1.10</td> </tr> <tr> <td style="text-align: center;">100 to 470</td> <td>0.80</td> <td>0.90</td> <td>1.00</td> <td>1.00</td> <td>1.00</td> </tr> </table>	Freq.(Hz) Cap.(uF)	60 (50)	120	1K	10K	100K	Under 47	0.70	0.90	1.00	1.10	1.10	100 to 470	0.80	0.90	1.00	1.00	1.00						
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Standards	Satisfied Characteristic W of JIS C																								

# Aluminum Electrolytic Capacitors

MR Series



D	4	5	6.3	8
F	1.5	2.0	2.5	3.5
d	0.45			0.5

Dimension : D x L (mm)

Ripple Current : mA/rms at 120Hz,105

## DIMENSION & PERMISSIBLE RIPPLE CURRENT

uF \ VDC	4V		6.3V		10V		16V		25V		35V		50V	
	DxL	mA	DxL	mA	DxL	mA	DxL	mA	DxL	mA	DxL	mA	DxL	mA
0.1													4x7	1
0.22													4x7	1
0.33													4x7	2
0.47													4x7	4
1													4x7	7
2.2													4x7	15
3.3													4x7	19
4.7													4x7	20
10									4x7	25	5x7	27	5x7	28
22							4x7	30	5x7	35	6.3x7	40	6.3x7	45
33					4x7	35	5x7	35	6.3x7	40	6.3x7	46	8x9	52
47					4x7	40	5x7	50	6.3x7	60	6.3x7	65	8x9	68
100			5x7	60	5x7	80	6.3x7	85	8x7 8x9	90	8x9	92		
220			6.3x7	110	6.3x7	115	8x7	120	8x9	120				
330			8x7	120	8x7 8x9	140	8x7	140						
470	8x7	120	8x7 8x9	120	8x9	140	8x9	140						