

# Aluminum Electrolytic Capacitors

## MR Series – Miniature Size 7mm Height



### Specifications

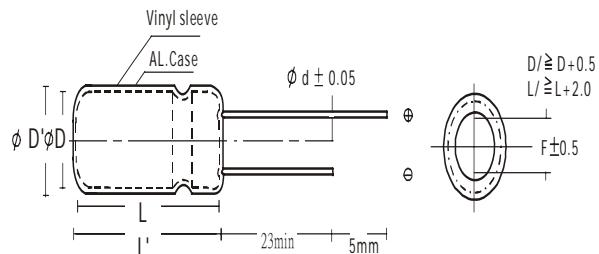
Item	Performance																																		
Operating Temperature Range	-40 to +85°C																																		
Rated Working Voltage Range	6.3 – 63VDC																																		
Nominal Capacitance Range	0.1 - 330μ F																																		
Capacitance Tolerance	± 20% (at +20°C , 120Hz)																																		
Leakage Current	$I \leq 0.01CV$ or $3(\mu A)$ max, Whichever is greater after 3 minutes																																		
Dissipation Factor (tanδ) (120Hz\+20°C)	<table border="1"> <tr> <td>Working Vol.</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>Tan δ (%) max</td> <td>25</td> <td>22</td> <td>20</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>9</td> </tr> </table>								Working Vol.	4	6.3	10	16	25	35	50	63	Tan δ (%) max	25	22	20	16	14	12	10	9									
Working Vol.	4	6.3	10	16	25	35	50	63																											
Tan δ (%) max	25	22	20	16	14	12	10	9																											
Characteristics at Low Temperature (stability at 120 Hz)	<table border="1"> <tr> <td>Working Vol VDC</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>-25°C/+20°C</td> <td>7</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>-40°C/+20°C</td> <td>15</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>								Working Vol VDC	4	6.3	10	16	25	35	50	63	-25°C/+20°C	7	4	3	2	2	2	2	2	-40°C/+20°C	15	8	6	4	4	3	3	3
Working Vol VDC	4	6.3	10	16	25	35	50	63																											
-25°C/+20°C	7	4	3	2	2	2	2	2																											
-40°C/+20°C	15	8	6	4	4	3	3	3																											
Load life	<p>After 1000hrs. application of DC rated working voltage at +85°C, The capacitor shall meet the following limits: Post test requirements at +20°C . Load life: 1000hrs.</p> <table border="1"> <tr> <td>Leakage current</td> <td>the initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>±20% of initial measured value</td> </tr> <tr> <td>Dissipation Factor(tanδ)</td> <td>200% of initial specified value</td> </tr> </table>								Leakage current	the initial specified value	Capacitance change	±20% of initial measured value	Dissipation Factor(tanδ)	200% of initial specified value																					
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Shelf Life	<p>After storage for 1000hrs. at +85°C with no voltage applied. Post test requirements at +20°C, same limits as high temperature loading.</p>																																		

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**CINETECH**  
SYMBOL OF QUALITY

### Diagram of Dimensions



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

### Case Size

Max ripple current: mA rms at 85°C. 120Hz (DxL mm)

W.V	6.3		10		16		25		35		50		63	
µF	Size	Ripple												
0.1											4x7	1.3	4x7	1.3
0.22											4x7	3.0	4x7	3.0
0.33											4x7	3.5	4x7	4.0
0.47											4x7	5.0	4x7	6.3
1											4x7	10	4x7	12
2.2											4x7	17	4x7	18
3.3									4x7	18	4x7	23	5x7	25
4.7									4x7	22	4x7	24	5x7	30
10					4x7	28	4x7	30	4x7	31	5x7	35	6.3x7	48
22	4x7	35	4x7	36	4x7	40	4x7	46	5x7	47	6.3x7	59	8x7	65
33	4x7	40	4x7	43	4x7	45	5x7	52	6.3x7	65	8x7	75		
47	4x7	46	4x7	50	5x7	65	6.3x7	71	8x7	85	8x7	88		
100	5x7	75	5x7	82	6.3x7	98	8x7	113	8x7	119				
220	6.3x7	120	6.3x7	136	8x7	152								
330	8x7	160	8x7	182										