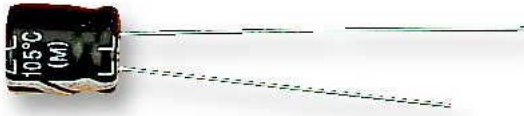


MHR Series

Radial Electrolytic Capacitors



Features:

- Ultra miniature radial electrolytic capacitors.
- Developed short body length to 7mm, for the demand of smaller and thinner electronic equipment.
- Most suitable for high-density electronic equipment, such as: automatic office machines, pocket calculators, car stereos and mini-audio sets, VCR, camera, CD-ROM, notebook , etc.

Specifications

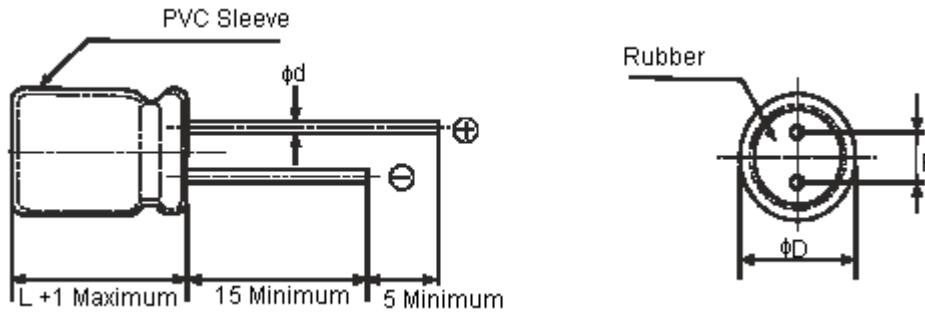
Item	Performance																								
Operating temperature range	-40°C to +105°C																								
Rated working voltage range	6.3 - 63V dc																								
Nominal capacitance range	0.1 - 470μF																								
Capacitance tolerance	±20% (at +20°C, 120Hz)																								
Leakage current	I = 0.01CV or 3 (μA) after two minutes																								
Dissipation factor (tan δ) (120Hz/+20°C)	<table border="1"> <thead> <tr> <th>Working 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> </tr> </thead> <tbody> <tr> <td>Tan δ Maximum</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> </tr> </tbody> </table>	Working Voltage (V)	6.3	10	16	25	35	50	63	Tan δ Maximum	0.24	0.20	0.16	0.14	0.12	0.10	0.08								
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Tan δ Maximum	0.24	0.20	0.16	0.14	0.12	0.10	0.08																		
Characteristics at low temperature (stability at 120Hz)	<table border="1"> <thead> <tr> <th>Working 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> </tr> </thead> <tbody> <tr> <td>-25°C/+20°C</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>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	Working Voltage (V)	6.3	10	16	25	35	50	63	-25°C/+20°C	4	3	2	2	2	2	2	-40°C/+20°C	8	6	4	4	3	3	3
	Working Voltage (V)	6.3	10	16	25	35	50	63																	
	-25°C/+20°C	4	3	2	2	2	2	2																	
-40°C/+20°C	8	6	4	4	3	3	3																		
High temperature loading	After 1000 hours application of DC rated working voltage at +105°C, The capacitor shall meet the following limits: Post test requirements at +20°C.																								
	<table border="1"> <tbody> <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 (tan δ)</td> <td>≤ 200% of initial specified value</td> </tr> </tbody> </table>	Leakage Current	≤ the initial specified value	Capacitance Change	≤ ±20% of initial measured value	Dissipation Factor (tan δ)	≤ 200% of initial specified value																		
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Dissipation Factor (tan δ)	≤ 200% of initial specified value																								
Shelf life	After storage for 500 hours at +105°C with no voltage applied. Post test requirements at +20°C. Same limits as high temperature loading.																								
Solvent proof	This capacitor can withstand circuit-board cleaning within 5 minutes dipped in Freon TE, TES, at 40°C (ultrasonic also permitted) or in the steam of these cleaners.																								

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Radial Electrolytic Capacitors



Diagram of Dimensions



Dφ (+0.5 maximum)	3	4	5	6.3	8
F (±0.5)	1.0	1.5	2	2.5	3.5
dφ (±0.02)	0.4	0.45	0.45	0.45	0.5

Dimensions : Millimetres

Case Size Table: MHR series

W.V (S.V)	φD x L						
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	35 (63)	63 (79)
0.1	-	-	-	-	-	4 x 7	4 x 7
0.22	-	-	-	-	-		
0.33	-	-	-	-	-		
0.47	-	-	-	-	-		
1.0	-	-	-	-	-		
2.2	-	-	-	-	-		
3.3	-	-	-	-	-	5 x 7	5 x 7
4.7	-	-	-	4 x 7	4 x 7		
10	-	-	4 x 7	5 x 7	5 x 7	6.3 x 7	6.3 x 7
22	4 x 7	5 x 7	5 x 7	6.3 x 7	6.3 x 7		-
33	5 x 7		6.3 x 7			6.3 x 7	8 x 7
47		6.3 x 7		6.3 x 7	8 x 9		
100	6.3 x 7		6.3 x 7			8 x 9	-
220	8 x 7	8 x 7	8 x 9	-	-	-	-
330				-	-	-	-
470	8 x 9	8 x 9	-	-	-	-	-

Dimensions : Millimetres



MHR Series

Radial Electrolytic Capacitors

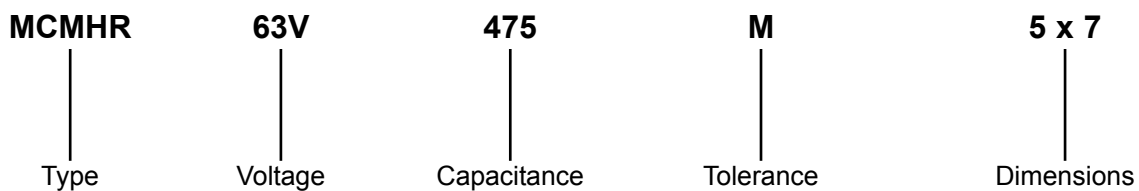


Part Number Table

Working Voltage (V)	Capacitance (µF)	Ripple Current (A)	Lead Diameter	Lead Pitch	Part Number
6.3	330	170	0.5	3.5	MCMHR6V3337M8X7
16	10	29	0.45	1.5	MCMHR16V106M4X7
	22	44		2	MCMHR16V226M5X7
	33	57		2.5	MCMHR16V336M6.3X7
	47	68			MCMHR16V476M6.3X7
	100	107			MCMHR16V107M6.3X7
35	10	36		2	MCMHR35V106M5X7
	22	57			MCMHR35V226M6.3X7
	33	72		2.5	MCMHR35V336M6.3X7
	47	81			MCMHR35V476M8X7
50	3.3	24		0.45	1.5
	10	44	2.5		MCMHR50V106M6.3X7
	22	65	2.5		MCMHR50V226M6.3X7
63	0.1	2	1.5		MCMHR63V104M4X7
	1	13			MCMHR63V105M4X7
	4.7	32.4			2

Dimensions : Millimetres

Part Number Explanation



Voltage : 6.3, 16, 35, 50 and 63V.

Capacitance : 0.1, 1, 3.3, 4.7, 10, 22, 33, 47, 100, and 330µF.

Capacitance code (µF): First two digits are the base value and last digit represents the conversion factor. Last digit 5 represents decimal in base value. Ex: in code 335, Capacitance is 3.3, similarly for 475 capacitance is 4.7
 Last digit 6 represents no change in base value, Ex: in code 336, Capacitance value is 33. Similarly for code 476, capacitance value is 47. Last digit 7 represents one zero is added to the base value, ex in code 107, Capacitance value is 100, similarly for 337 capacitance value is 330.

Tolerance : M = ±20%.

Dimensions : Diameter x Length = 4 x 7, 5 x 7, 6.3 x 7 and 8 x 7.



MHR Series

Radial Electrolytic Capacitors



Notes:

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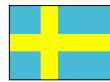
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