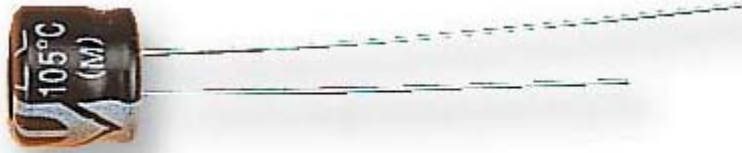


# Ultra Miniature Radial Capacitors

## MCUMHR Series

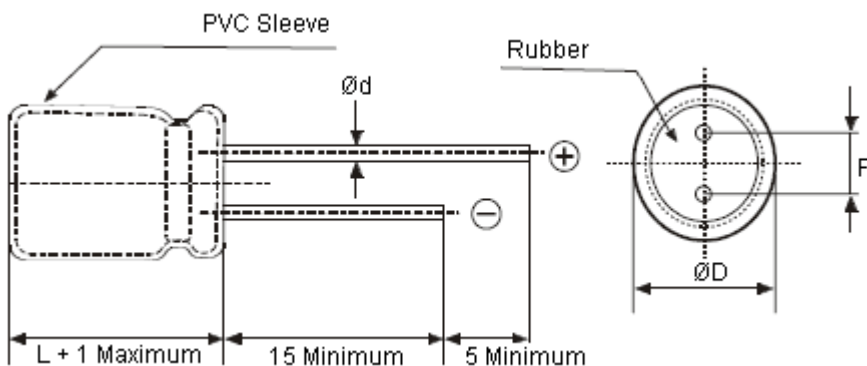
### Features:

- Ultra miniature radial electrolytic capacitors, Short body length to 5 mm for the demand of smaller and thinner electronic equipment
- 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

### Specification Table :

Parameter	Performance															
Operating Temperature Range	-40°C to +105°C															
Rated Working Voltage Range	6.3 to 50 V dc															
Nominal Capacitance Range	1 to 100 $\mu$ F															
Capacitance Tolerance	$\pm$ 20% (at +20°C, 120 Hz)															
DC Leakage Current	$I = 0.01 CV$ or 3 $\mu$ A after two minutes															
Dissipation Factor ( $\tan\delta$ ) (120 Hz / +20°C)	<table border="1"> <tr> <th>Working voltage (V)</th> <td>6.3</td> <td>16</td> <td>35</td> <td>50</td> </tr> <tr> <th><math>\tan\delta</math> (maximum)</th> <td>0.24</td> <td>0.16</td> <td>0.12</td> <td>0.1</td> </tr> </table>	Working voltage (V)	6.3	16	35	50	$\tan\delta$ (maximum)	0.24	0.16	0.12	0.1					
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Characteristics at Low Temperature (Stability at 120 Hz)	<table border="1"> <tr> <th>Working voltage (V)</th> <td>6.3</td> <td>16</td> <td>35</td> <td>50</td> </tr> <tr> <th>-25°C / +20°C</th> <td>4</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <th>-40°C / +20°C</th> <td>8</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Working voltage (V)	6.3	16	35	50	-25°C / +20°C	4	2	2	2	-40°C / +20°C	8	4	3	3
	Working voltage (V)	6.3	16	35	50											
	-25°C / +20°C	4	2	2	2											
-40°C / +20°C	8	4	3	3												
High Temperature Loading	<p>After 1,000 hours application of DC rated working voltage at +105°C The capacitor shall meet the following limits: Post test requirements at +20°C</p> <table border="1"> <tr> <td>Leakage current</td> <td><math>\leq</math>the initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td><math>\leq\pm</math>20% of initial measured value</td> </tr> <tr> <td>Dissipation factor (<math>\tan\delta</math>)</td> <td><math>\leq</math>200% of initial specified value</td> </tr> </table>	Leakage current	$\leq$ the initial specified value	Capacitance change	$\leq\pm$ 20% of initial measured value	Dissipation factor ( $\tan\delta$ )	$\leq$ 200% of initial specified value									
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	Capacitance change	$\leq\pm$ 20% of initial measured value														
Dissipation factor ( $\tan\delta$ )	$\leq$ 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 for high temperature loading															
Solvent Proof	This capacitor can withstand circuit-board cleaning of 5 minutes dipped in Freon TE, TES, at 40°C (ultrasonic also permitted) or in the steam of these cleaners															

### Diagram of Dimensions



DØ (+0.5 Maximum)	4	5	6.3
F ( $\pm$ 0.5)	1.5	2	2.5
dØ ( $\pm$ 0.02)	0.45	0.45	0.45

Dimensions : Millimetres

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## MCUMHR Series

Case Size Table

ØDiameter × Height

WV (SV) µF	6.3 (8)	16 (20)	35 (44)	50 (63)
1	-	-	-	4 × 5
2.2	-	-	-	4 × 5
4.7	-	-	4 × 5	5 × 5
10	-	-	5 × 5	-
22	-	-	6.3 × 5	-
47	-	6.3 × 5	-	-
100	5 × 5	-	-	-

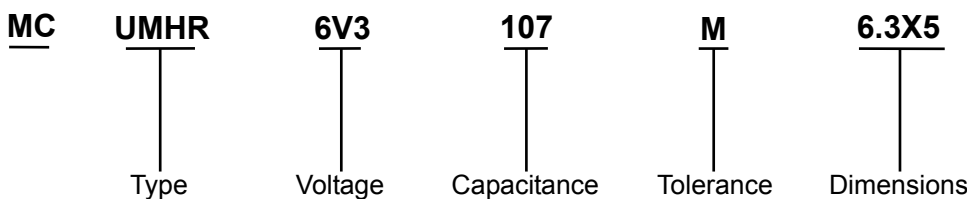
Dimensions : Millimetres

Specification Table

Capacitance (µF)	Voltage (V dc)	Ripple Current at 120 Hz, 105°C (mA)	Height	Diameter	Lead Diameter	Lead Pitch	Part Number
100	6.3	60	5	5	0.45	2	MCUMHR6V3107M6.3X5
47	16	50		6.3		2.5	MCUMHR16V476M6.3X5
4.7	35	15		4		1.5	MCUMHR35V475M4X5
10		25		5		2	MCUMHR35V106M5X5
22		42		6.3		2.5	MCUMHR35V226M6.3X5
1	50	6.2		4		1.5	MCUMHR50V105M4X5
2.2		11					MCUMHR50V225M4X5

Dimensions : Millimetres

### Part Number Explanation:



**Voltage (V dc)** : 6V3 = 6.3 V dc, 16V = 16 V dc, 35 = 35 V dc and 50 = 50 V dc

**Capacitance code (µF)** : First two digits are the base value and last digit which denotes the number of zeros at the end of the value Eg : 107 = 100,000,000 µF  
Eg : 476 = 47,000,000 µF

**Tolerance** : M = ±20%

**Dimensions** : Diameter × Height

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