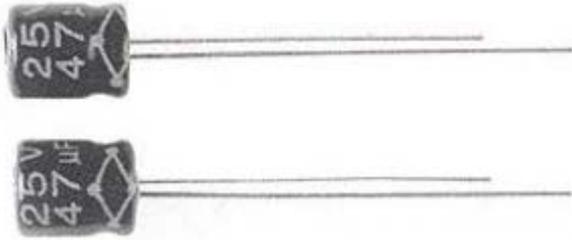


7mm 85°C MCMR Series



Features:

- Developed short body length to 7 mm, 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

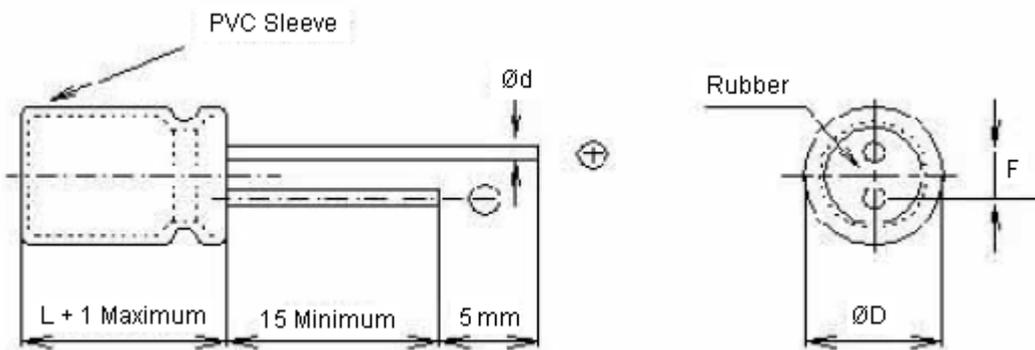
Specifications:

Item	Performance																								
Operating temperature range	-40°C to + 85°C																								
Rated working voltage range	6.3 to 63 V dc																								
Nominal capacitance range	0.1 to 470 µF																								
Capacitance tolerance	±20% (at +20°C, 120 Hz)																								
Leakage current	I = 0.01 C V or 3 (µA) after two minutes																								
Dissipation factor (tan δ) (120 Hz / +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>Maximum tan δ</td> <td>0.24</td> <td>0.2</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.1</td> <td>0.08</td> </tr> </tbody> </table>	Working voltage (V)	6.3	10	16	25	35	50	63	Maximum tan δ	0.24	0.2	0.16	0.14	0.12	0.1	0.08								
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Characteristics at high and low temperature (stability at 120 Hz)	<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
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High temperature loading	<p>After 1,000 hours application of DC rated working voltage at +85°C, The capacitor shall meet the following limits : Post test requirements at +20°C</p> <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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Shelf life	<p>After storage for 500 hours at +85°C with no voltage applied Post test requirements at +20°C same limits as high temperature loading</p>																								
Sol vent proof	<p>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</p>																								

7mm 85°C MCMR Series



Diagram of Dimensions



Dimensions : Millimetres

ØD (+0.5 Maximum)	3	4	5	6.3	8
F (±0.5)	1	1.5	2	2.5	3.5
Ød (±0.02)	0.4	0.45	0.45	0.45	0.5

Case Size Table ØD x L (mm)

W.V. (SV) / µF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	
0.1	-	-	-	-	R	4 × 7	4 × 7	
0.22	-	-	-	-				
0.33	-	-	-	-				
0.47	-	-	-	-				
1	-	-	-	-				
2.2	-	-	-	-				
3.3	-	-	-	-				
4.7	-	-	-	-				5 × 7
10	-	-	R	4 × 7	4 × 7	5 × 7	6.3 × 7	
22	-	R	4 × 7	5 × 7	5 × 7	6.3 × 7	-	
33	R	4 × 7	5 × 7		6.3 × 7	6.3 × 7	8 × 7 (8 × 9)	-
47				-				
100		5 × 7	6.3 × 7	8 × 7 (8 × 9)	8 × 7 (8 × 9)	-	-	
220		6.3 × 7	8 × 7 (8 × 9)	-	-	-	-	
330		8 × 7 (8 × 9)		-	-	-	-	
470		8 × 7 (8 × 9)	8 × 9	8 × 9	-	-	-	-

All blank voltage on sleeve marking is the same voltage as "R" point to



7mm 85°C MCMR Series



Part Number Table

Description	Part Number
CAPACITOR, 33 μ F, 10 V	MCMR10 V336M4X7
CAPACITOR, 47 μ F, 10 V	MCMR10 V476M4X7
CAPACITOR, 100 μ F, 10 V	MCMR10 V107M5X7
CAPACITOR, 220 μ F, 10 V	MCMR10 V227M6.3X7
CAPACITOR, 330 μ F, 10 V	MCMR10 V337M8X7
CAPACITOR, 470 μ F, 10 V	MCMR10 V477M8X9
CAPACITOR, 22 μ F, 16 V	MCMR16 V226M4X7
CAPACITOR, 33 μ F, 16 V	MCMR16 V336M5X7
CAPACITOR, 47 μ F, 16 V	MCMR16 V476M5X7
CAPACITOR, 100 μ F, 16 V	MCMR16 V107M6.3X7
CAPACITOR, 220 μ F, 16 V	MCMR16 V227M8X7
CAPACITOR, 330 μ F, 16 V	MCMR16 V337M8X7
CAPACITOR, 470 μ F, 16 V	MCMR16 V477M8X9
CAPACITOR, 10 μ F, 25 V	MCMR25 V106M4X7
CAPACITOR, 22 μ F, 25 V	MCMR25 V226M5X7
CAPACITOR, 33 μ F, 25 V	MCMR25 V336M5X7
CAPACITOR, 47 μ F, 25 V	MCMR25 V476M6.3X7
CAPACITOR, 100 μ F, 25 V	MCMR25 V107M8X7
CAPACITOR, 10 μ F, 35 V	MCMR35 V106M4X7
CAPACITOR, 22 μ F, 35 V	MCMR35 V226M5X7
CAPACITOR, 33 μ F, 35 V	MCMR35 V336M6.3X7
CAPACITOR, 47 μ F, 35 V	MCMR35 V476M6.3X7
CAPACITOR, 100 μ F, 35 V	MCMR35 V107M8X7
CAPACITOR, 0.1 μ F, 50 V	MCMR50 V104M4X7
CAPACITOR, 0.22 μ F, 50 V	MCMR50 V224M4X7
CAPACITOR, 0.33 μ F, 50 V	MCMR50 V334M4X7
CAPACITOR, 0.47 μ F, 50 V	MCMR50 V474M4X7
CAPACITOR, 1 μ F, 50 V	MCMR50 V105M4X7
CAPACITOR, 2.2 μ F, 50 V	MCMR50 V225M4X7
CAPACITOR, 3.3 μ F, 50 V	MCMR50 V335M4X7

CAPACITOR, 4.7 μ F, 50 V	MCMR50 V475M4X7
CAPACITOR, 10 μ F, 50 V	MCMR50 V106M5X7
CAPACITOR, 22 μ F, 50 V	MCMR50 V226M5X7
CAPACITOR, 33 μ F, 50 V	MCMR50 V336M8X7
CAPACITOR, 47 μ F, 50 V	MCMR50 V476M8X7
CAPACITOR, 0.1 μ F, 63 V	MCMR63 V104M4X7
CAPACITOR, 0.22 μ F, 63 V	MCMR63 V224M4X7
CAPACITOR, 0.33 μ F, 63 V	MCMR63 V334M4X7
CAPACITOR, 0.47 μ F, 63 V	MCMR63 V474M4X7
CAPACITOR, 1 μ F, 63 V	MCMR63 V105M4X7
CAPACITOR, 2.2 μ F, 63 V	MCMR63 V225M4X7
CAPACITOR, 3.3 μ F, 63 V	MCMR63 V335M4X7
CAPACITOR, 4.7 μ F, 63 V	MCMR63 V475M5X7
CAPACITOR, 10 μ F, 63 V	MCMR63 V106M6.3X7

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