



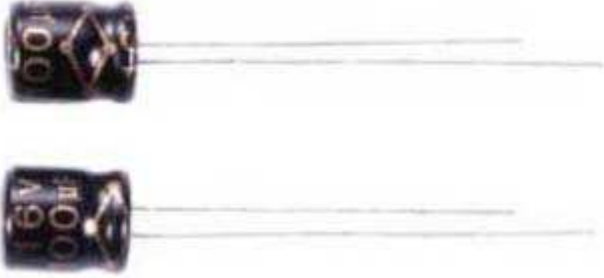
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**EN:** This Datasheet is presented by the manufacturer.

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# 7mm 105°C MCMHR Series



## Features:

- Developed short body length to 7 m/m, 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:

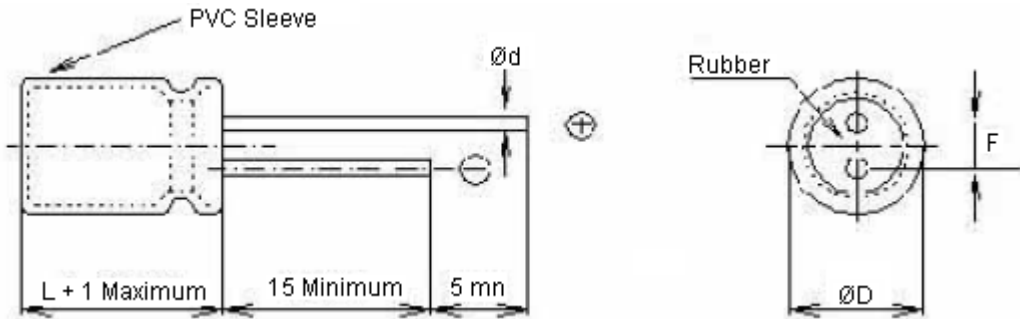
Item	Performance																								
Operating temperature range	-40°C to +105°C																								
Rated working voltage range	6.3 to 63 V dc																								
Nominal capacitance range	0.1 to 470 $\mu$ F																								
Capacitance tolerance	$\pm$ 20% (at+20°C,120 Hz)																								
Leakage current	I = 0.01 CV or 3 ( $\mu$ A) after two minutes																								
Dissipation factor (Tan $\delta$ ) (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 <math>\delta</math></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 $\delta$	0.24	0.2	0.16	0.14	0.12	0.1	0.08								
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Characteristics at 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	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																								
	<table border="1"> <tbody> <tr> <td>Leakage current</td> <td>£ the initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>£ <math>\pm</math>20% of initial measured value</td> </tr> <tr> <td>Dissipation factor (tan <math>\delta</math>)</td> <td>£ 200% of initial specified value</td> </tr> </tbody> </table>	Leakage current	£ the initial specified value	Capacitance change	£ $\pm$ 20% of initial measured value	Dissipation factor (tan $\delta$ )	£ 200% of initial specified value																		
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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 min dipped in Freon TE, TES at 40°C (ultrasonic also permitted) or in the steam of these cleaners																								



# 7mm 105°C MCMHR 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	-	-	-	-			
1.0	-	-	-	-			
2.2	-	-	-	-			
3.3	-	-	-	-			
4.7	-	-	R	4 × 7	4 × 7	5 × 7	5 × 7
10	-	R	4 × 7	5 × 7	5 × 7	6.3 × 7	6.3 × 7
22	4 × 7	5 × 7	5 × 7	6.3 × 7	6.3 × 7		8 × 7
33	5 × 7		6.3 × 7			6.3 × 7	
47		6.3 × 7		6.3 × 7	8 × 9		-
100	6.3 × 7		6.3 × 7			8 × 9	
220	8 × 7	8 × 7	8 × 9	-	-	-	-
330				-	-	-	-
470	8 × 9	8 × 9	-	-	-	-	-

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



## Part Number Table

Description	Part Number
CAPACITOR, 22UF, 6.3V	MCMHR6V3226M4X7
CAPACITOR, 33UF, 6.3V	MCMHR6V3336M5X7
CAPACITOR, 47UF, 6.3V	MCMHR6V3476M5X7
CAPACITOR, 100UF, 6.3V	MCMHR6V3107M6.3X7
CAPACITOR, 220UF, 6.3V	MCMHR6V3227M8X7
CAPACITOR, 470UF, 6.3V	MCMHR6V3477M8X7
CAPACITOR, 22UF, 10V	MCMHR10V226M5X7
CAPACITOR, 33UF, 10V	MCMHR10V336M5X7
CAPACITOR, 47UF, 10V	MCMHR10V476M5X7
CAPACITOR, 100UF, 10V	MCMHR10V107M5X7
CAPACITOR, 220UF, 10V	MCMHR10V227M8X7
CAPACITOR, 330UF, 10V	MCMHR10V337M8X7
CAPACITOR, 470UF, 10V	MCMHR10V477M8X7
CAPACITOR, 220UF, 16V	MCMHR16V227M8X7
CAPACITOR, 330UF, 16V	MCMHR16V337M8X7
CAPACITOR, 4.7UF, 25V	MCMHR25V475M4X7
CAPACITOR, 10UF, 25V	MCMHR25V106M5X7
CAPACITOR, 22UF, 25V	MCMHR25V226M6.3X7
CAPACITOR, 33UF, 25V	MCMHR25V336M6.3X7
CAPACITOR, 47UF, 25V	MCMHR25V476M6.3X7
CAPACITOR, 100UF, 25V	MCMHR25V107M8X7
CAPACITOR, 4.7UF, 35V	MCMHR35V475M4X7
CAPACITOR, 0.1UF, 50V	MCMHR50V104M4X7
CAPACITOR, 0.22UF, 50V	MCMHR50V224M4X7
CAPACITOR, 0.33UF, 50V	MCMHR50V334M4X7
CAPACITOR, 0.47UF, 50V	MCMHR50V474M4X7
CAPACITOR, 1UF, 50V	MCMHR50V105M4X7
CAPACITOR, 2.2UF, 50V	MCMHR50V225M4X7
CAPACITOR, 4.7UF, 50V	MCMHR50V475M5X7
CAPACITOR, 33UF, 50V	MCMHR50V336M8X7

Description	Part Number
CAPACITOR, 47UF, 50V	MCMHR50V476M8X7
CAPACITOR, 0.22UF, 63V	MCMHR63V224M4X7
CAPACITOR, 0.33UF, 63V	MCMHR63V334M4X7
CAPACITOR, 0.47UF, 63V	MCMHR63V474M4X7
CAPACITOR, 2.2UF, 63V	MCMHR63V225M4X7
CAPACITOR, 3.3UF, 63V	MCMHR63V335M4X7
CAPACITOR, 10UF, 63V	MCMHR63V106M6.3X7
CAPACITOR, 330UF, 6.3V	MCMHR6V3337M8X7
CAPACITOR, 10UF, 16V	MCMHR16V106M4X7
CAPACITOR, 22UF, 16V	MCMHR16V226M5X7
CAPACITOR, 33UF, 16V	MCMHR16V336M6.3X7
CAPACITOR, 47UF, 16V	MCMHR16V476M6.3X7
CAPACITOR, 100UF, 16V	MCMHR16V107M6.3X7
CAPACITOR, 10UF, 35V	MCMHR35V106M5X7
CAPACITOR, 22UF, 35V	MCMHR35V226M6.3X7
CAPACITOR, 33UF, 35V	MCMHR35V336M6.3X7
CAPACITOR, 47UF, 35V	MCMHR35V476M8X7
CAPACITOR, 3.3UF, 50V	MCMHR50V335M4X7
CAPACITOR, 10UF, 50V	MCMHR50V106M6.3X7
CAPACITOR, 22UF, 50V	MCMHR50V226M6.3X7
CAPACITOR, 0.1UF, 63V	MCMHR63V104M4X7
CAPACITOR, 1UF, 63V	MCMHR63V105M4X7
CAPACITOR, 4.7UF, 63V	MCMHR63V475M5X7