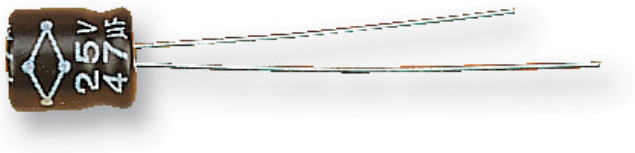
MCMR & MCMHR Series

Ultra - Miniaturized Radial Capacitors



Features:

- Ultra miniature radial electrolytic capacitors.
- Developed short body length to 7mm, 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.

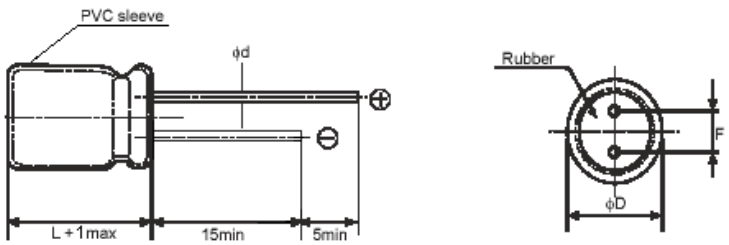
Specifications

Number	Item	Performance	
		MCMHR series	**MCMR series**
1	Operating temperature	-40°C to +105°C	-40°C to +85°C
2	Rated working voltage range	6.3 - 63V dc	10 - 63V dc
3	Nominal capacitance range	0.1 - 330μF	0.1 - 220μF
4	Capacitance tolerance	±20% (at 20°C, 120Hz)	
5	Leakage current	I = 0.01CV or 3μA whichever is greater after two minutes	
6	Dissipation factor (tanδ)(120Hz\+20°C)	Working voltage (V): 6.3 / 16 / 35 / 50 / 63 tanδ maximum: 0.24 / 0.16 / 0.12 / 0.1 / 0.08	Working voltage (V): 10 / 16 / 25 / 35 / 63 tanδ maximum: 0.2 / 0.16 / 0.14 / 0.12 / 0.08
7	Characteristics at low temperature (stability at 120Hz)	Working voltage (V): 6.3 / 16 / 35 / 50 / 63 -25°C/+20°C: 4 / 2 -40°C/+20°C: 8 / 4 / 3	Working voltage (V): 10 / 16 / 25 / 35 / 63 -25°C/+20°C: 3 / 2 -40°C/+20°C: 6 / 4 / 3

Specifications

Number	Item	Performance	
		MCMHR series	**MCMR series**
8	High temperature loading	After 1000 hours application of DC rated voltage at +105°C, The capacitor shall meet the following limits: Post test requirements at +20°C.	After 1000 hours application of DC rated voltage at +85°C, The capacitor shall meet the following limits: Post test requirements at +20°C.
		Leakage current: ≤ the initial specified value Capacitance change: ≤ ±20% of initial measured value Dissipation factor (tanδ): ≤ 200% of initial specified value	
9	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.	After storage for 500 hours at +85°C with no voltage applied. Post test requirements at +20°C. Same limits as high temperature loading.
10	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.	

Diagram of Dimensions



Dimensions: MCMR series

Dϕ (+0.5 maximum)	4	5	6.3
F (±0.5)	1.5	2	2.5
dϕ (±0.02)	0.45	0.45	0.45
Height (L)	7		

Dimensions : Millimetres

Dimensions: MCMHR series

Dϕ (+0.5 maximum)	4	5	6.3	8
F (±0.5)	1.5	2	2.5	3.5
dϕ (±0.02)	0.45	0.45	0.45	0.5
Height (L)	7			

Dimensions : Millimetres

Case Size Table: MCMR series

Diameter x Height

W.V / µF	10	16	25	35	63
0.1	-	-	-	-	4 x 7
0.22	-	-	-	-	
0.47	-	-	-	-	
1	-	-	-	-	
2.2	-	-	-	-	
4.7	-	-	-	-	
10	-	-	4 x 7		6.3 x 7
22	-	4 x 7	5 x 7	5 x 7	-
33	4 x 7	5 x 7		6.3 x 7	-
47			6.3 x 7		-
100	5 x 7	6.3 x 7	8 x 7 (8 x 9)		-
220	6.3 x 7	8 x 7 (8 x 9)	-	-	-

Dimensions : Millimetres

Case Size Table: MCMHR series

Diameter X Height

W.V / µF	6.3	16	35	50	63
0.1	-	-	-	4 x 7	
0.33	-	-	-		
1	-	-	-		
3.3	-	-	-		
4.7	-	-	4 x 7	5 x 7	
10	-	4 x 7	5 x 7	6.3 x 7	
22	4 x 7	5 x 7	6.3 x 7	6.3 x 7	-
33	5 x 7	6.3 x 7		8 x 7	-
47			8 x 7	8 x 9	-
100	6.3 x 7		-	-	-
220	8 x 7	8 x 9	-	-	-
330			-	-	-

Dimensions : Millimetres

Specification Table MCMR Series 7mm – 85°C

Working Voltage (V)	Capacitance (µF)	Ripple Current (A)	Lead Diameter	Lead Pitch	Part Number
10	33	43.0	0.45	1.5	MR10V336M4X7
	47	59.0			MR10V476M4X7
	100	87.0		2.0	MR10V107M5X7
	220	145.0		2.5	MR10V227M6.3X7
16	22	180.0		1.5	MR16V226M4X7
	47	65.0		2.0	MR16V476M5X7
	100	98.0		2.5	MR16V107M6.3X7
25	10	28.0		1.5	MR25V106M4X77
	22	48.0		2.0	MR25V226M5X7
	33	58.0			MR25V336M5X7
	47	71.0		2.5	MR25V476M6.3X7
35	10	31.0		1.5	MR35V106M4X7
	22	52.0		2.0	MR35V226M5X7
	33	65.0		2.5	MR35V336M6.3X7
	47	73.0			MR35V476M6.3X7
63	0.1	2.0		1.5	MR63V104M4X7
	0.22	4.5			MR63V224M4X7
	0.47	7.0			MR63V474M4X7
	01	13.0			MR63V105M4X7
	2.2	21.5			MR63V225M4X7
	4.7	32.4		2.0	MR63V475M5X7

Dimensions : Millimetres

Specification Table MCMHR Series 7mm – 105°C

Working Voltage (V)	Capacitance (µF)	Ripple Current (A)	Lead Diameter	Lead Pitch	Part Number
6.3	22	34.0	0.45	1.5	MR6V3226M4X7
	33	42.0		2.0	MR6V3336M5X7
	47	50.0			MR6V3476M5X7
	100	77.0		2.5	MR6V3107M6.3X7
	220	130.0	0.50	3.5	MR6V3227M8X7
	330	170.0			MHR6V3337M8X7
16	10	29.0	0.45	1.5	MHR16V106M4X7
	22	44.0		2.0	MHR16V226M5X7
	33	57.0		2.5	MHR16V336M6.3X7
	47	68.0			MHR16V476M6.3X7
	100	107.0			MHR16V107M6.3X7
35	10	36.0		2.0	MHR35V106M5X7
	22	57.0		2.5	MHR35V226M6.3X7
	33	72.0			MHR35V336M6.3X7
	47	81.0	0.50	3.5	MHR35V476M8X7
50	0.33	3.5	0.45	1.5	MHR50V334M4X7
	3.3	24.0			MHR50V335M4X7
	10	44.0		2.5	MHR50V106M6.3X7
	22	65.0			MHR50V226M6.3X7
63	0.1	2.0		1.5	MHR63V104M4X7
	0.33	5.8			MHR6V3334M4X7
	01	13.0			MHR63V105M4X7
	4.7	32.4		2.0	MHR63V475M5X7

Dimensions : Millimetres