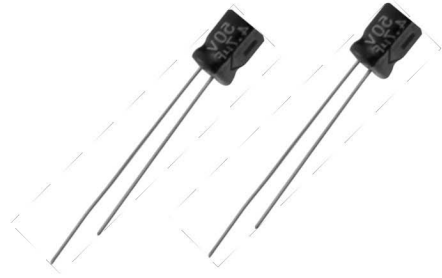


## MNR Series 7 mm Non-polar(BP) 無極性小型品

### Features

- Non-polarized with 7 mm height for crossover networks of high-pitched, mean and low-pitched sounds in high-fidelity sound systems.
- The series offers excellent frequency characteristics and minimal capacitance deviation with frequency.



### Specifications

No	Item	Performance Characteristics																					
1	使用温度範囲 Operating Temperature Range	-40 to +85°C																					
2	定格電圧範囲 Rated Voltage Range	6.3 to 50 VDC																					
3	静電容量範囲 Capacitance Range	0.1 to 220 μF																					
4	静電容量容許差 Capacitance Tolerance	±20%(120Hz,+20°C)																					
5	漏電電流 Leakage Current(+20°C, max)	$I \leq 0.05CV$ or $10(\mu A)$ After 1 minutes, whichever is greater measured with rated working voltage applied.																					
6	損失角 Dissipation Factor(tanδ)	<table border="1"> <tr> <td>Working Voltage (VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>D.F. (%)Max</td> <td>24</td> <td>20</td> <td>16</td> <td>16</td> <td>14</td> <td>12</td> </tr> </table> (+20°C, at 120Hz)	Working Voltage (VDC)	6.3	10	16	25	35	50	D.F. (%)Max	24	20	16	16	14	12							
Working Voltage (VDC)	6.3	10	16	25	35	50																	
D.F. (%)Max	24	20	16	16	14	12																	
7	温度特性 Low Temperature Characteristics (120Hz)	Impedance ratio max. <table border="1"> <tr> <td>Working Voltage (VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Working Voltage (VDC)	6.3	10	16	25	35	50	Z-25°C/Z+20°C	4	3	2	2	2	2	Z-40°C/Z+20°C	8	6	4	4	3	3
Working Voltage (VDC)	6.3	10	16	25	35	50																	
Z-25°C/Z+20°C	4	3	2	2	2	2																	
Z-40°C/Z+20°C	8	6	4	4	3	3																	
8	高温負荷特性 Load Life	Test conditions Duration time :1000Hrs Ambient temperature :+85°C Applied voltage :Rated DC working voltage to each polarity for 500 Hrs After test requirements at+20°C Capacitance change :≤ ±20% of the initial measured value Dissipation factor :≤200% of the initial specified value Leakage current :≤The initial specified value																					
9	高温無負荷特性 Shelf Life	Test conditions Duration time :500Hrs Ambient temperature :+85°C Applied voltage :None After test requirements at +20°C : Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																					

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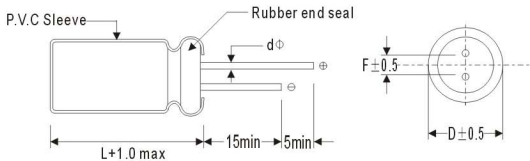
### Multiplier for Ripple Current vs. Frequency

CAP(μF)/Hz	50(60)	120	400	1K	10K	50K-100K	
CAP≤10	0.8	1	1.30	1.45	1.65	1.70	
Multiplier	10<CAP≤100	0.8	1	1.23	1.36	1.48	1.53
	100<CAP≤1000	0.8	1	1.16	1.25	1.35	1.38

### Multiplier for Ripple Current vs. Temperature

Temperature°C	45	60	70	85
Multiplier	1.8	1.5	1.3	1.0

### Outline drawing : (Unit:mm)



Dφ	4	5	6.3	8
F	1.5	2.0	2.5	3.5
dφ	0.45		0.5	

### Case Size

WV(sv) μF	φD×L(mm)					
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1						4×7
0.22						4×7
0.33						4×7
0.47						4×7
1						4×7
2.2					4×7	4×7
3.3					5×7	5×7
4.7				4×7	5×7	6.3×7
10	4×7	4×7	5×7	6.3×7	6.3×7	8×7
22	5×7	5×7	6.3×7	6.3×7	8×7	8×7
33	5×7	6.3×7	6.3×7	8×7	8×7	-
47	6.3×7	6.3×7	6.3×7	8×7	-	-
100	8×7	8×7	8×7	-	-	-
220	8×7	-	-	-	-	-

### Maximum Ripple Current

(MA,rms,120Hz at 85°C)

WV(sv) μF	Maximum Ripple Current (MA,rms,120Hz at 85°C)					
	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1						1.0
0.22						2.0
0.33						3.5
0.47						5.0
1						10
2.2						14
3.3						20
4.7				14	16	22
10	24	24	30	35	37	44
22	30	40	51	53	58	60
33	40	55	63	70	70	-
47	56	65	75	85	-	-
100	92	105	120	-	-	-
220	135	-	-	-	-	-