

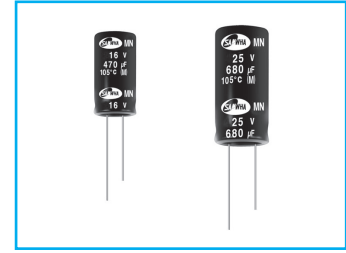
MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

MN High Ripple Current,
Ultra Low Impedance Series

IZI Low Impedance **S** Solvent Proof

- High ripple current compared with MZ series
- Enabled high ripple current by a reduction of impedance at high frequency range
- High reliability withstanding 5000 hours load life at 105°C (3000 hours for smaller case sizes as specified below)
- Complied to the RoHS directive

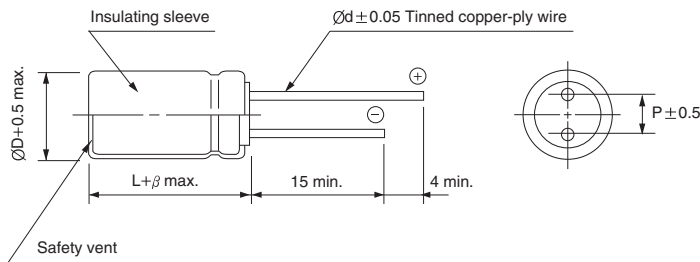
MZ → **MN**
High Ripple



Item	Characteristics													
Operating temperature range	-40 ~ +105°C													
Leakage current max.	I = 0.01CV or 3μA whichever is greater (after 2 minutes) I = 0.03CV or 4μA whichever is greater (after 1 minute)													
Capacitance tolerance	±20% at 120Hz, 20°C													
Dissipation factor max. (at 120Hz, 20°C)	Capacitance > 1000μF : tanδ increases by 0.02 for each 1000μF from below value.													
	<table border="1"> <tr> <td>WV</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>tanδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table>	WV	6.3	10	16	25	35	50	tanδ	0.22	0.19	0.16	0.14	0.12
WV	6.3	10	16	25	35	50								
tanδ	0.22	0.19	0.16	0.14	0.12	0.10								
Low temperature characteristics (Impedance ratio at 120Hz)	Z-40°C / Z+20°C													
	Z-25°C / Z+20°C													
Load life (after application of the rated voltage for 5000 hours at 105°C)	Leakage current	Less than specified value												
	Capacitance change	Within ±25% of initial value												
	tanδ	Less than 200% of specified value												
	<table border="1"> <tr> <td>∅D</td> <td>∅D = 8</td> <td>∅D = 10</td> </tr> <tr> <td>Life time</td> <td>3000 hours</td> <td>5000 hours</td> </tr> </table>	∅D	∅D = 8	∅D = 10	Life time	3000 hours	5000 hours							
∅D	∅D = 8	∅D = 10												
Life time	3000 hours	5000 hours												
Shelf life (at 105°C)	After 1000 hours no load test, leakage current, capacitance and tanδ are same as load life value. The measurement shall be performed at 20°C by the KS C IEC 60384 - 4													

● DRAWING

Unit : mm



∅D	8	10
P	3.5	5.0
∅d	0.6	0.6
β	1.5	2.0

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

μF \ Frequency	120Hz	1kHz	10kHz	50kHz	100kHz ≤
~ 270	0.50	0.73	0.92	0.96	1.00
330 ~ 680	0.55	0.77	0.94	0.97	1.00
820 ~ 1800	0.60	0.80	0.96	0.98	1.00
2200 ~	0.70	0.85	0.98	0.99	1.00

MN series

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV Item μF	6.3			10			16		
	$\text{ØD} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	$\text{ØD} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	$\text{ØD} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
470							8 × 11.5	0.036	1260
680				8 × 11.5	0.036	1449	8 × 15	0.028	1655
							10 × 12.5	0.026	1710
820	8 × 11.5	0.036	1318						
1000				8 × 15	0.028	1895	8 × 20	0.021	2070
				10 × 12.5	0.026	1958	10 × 16	0.019	2215
1500	8 × 20	0.016	2048	8 × 20	0.021	2158	10 × 20	0.015	2820
	10 × 12.5	0.026	1780	10 × 16	0.019	2310			
1800	10 × 16	0.019	2310	10 × 20	0.013	2945	10 × 25	0.014	3095
2200	10 × 20	0.013	2945	10 × 25	0.012	3234			
3300	10 × 25	0.012	3234						

WV Item μF	25			35			50		
	$\text{ØD} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	$\text{ØD} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	$\text{ØD} \times \text{L}$ (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
100							8 × 11.5	0.096	1195
120							8 × 15	0.080	1714
150							10 × 12.5	0.083	1773
180							8 × 20	0.065	2077
220	8 × 11.5	0.036	1255	8 × 11.5	0.073	1559	10 × 16	0.057	2184
270				8 × 15	0.059	2255	10 × 20	0.042	2554
330				10 × 12.5	0.053	2409	10 × 25	0.037	2889
390	8 × 15	0.028	1640	8 × 20	0.041	2618			
470	10 × 12.5	0.026	1695	10 × 16	0.038	2805			
560	8 × 20	0.019	2055	10 × 20	0.028	2880			
680	10 × 16	0.019	2400	10 × 25	0.024	3150			
820	10 × 20	0.016	2805						
1000	10 × 25	0.015	3080						