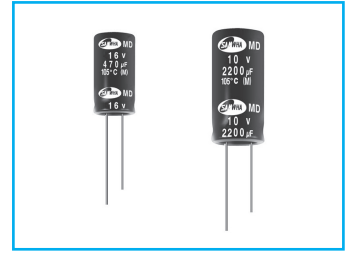
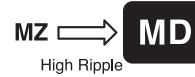


MD High Ripple Current, Ultra Low Impedance Series

- High ripple current compared with MZ series
- Enabled ripple current with extremely low impedance at high frequency range
- High reliability withstanding 2000 hours load life at 105°C
- Complied to the RoHS directive



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"> <thead> <tr> <th>WV</th> <th>6.3</th> <th>10</th> <th>16</th> </tr> </thead> <tbody> <tr> <td>tanδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> </tr> </tbody> </table>	WV	6.3	10	16	tanδ	0.22	0.19	0.16
WV	6.3	10	16						
tanδ	0.22	0.19	0.16						
Low temperature characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>WV</th> <th>6.3</th> <th>10</th> <th>16</th> </tr> </thead> <tbody> <tr> <td>Z-40°C / Z+20°C</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	WV	6.3	10	16	Z-40°C / Z+20°C	3	3	3
	WV	6.3	10	16					
Z-40°C / Z+20°C	3	3	3						
Load life	After an application of DC bias voltage plus the rated AC ripple current for 2000 hours at 105°C. The measurement shall meet the following limits. The DC voltage plus the peak AC voltage combined must not exceed the rated voltage. <table border="1"> <tbody> <tr> <td>Leakage current</td> <td>Less than specified value</td> </tr> <tr> <td>Capacitance change</td> <td>Within ±25% of initial value</td> </tr> <tr> <td>tanδ</td> <td>Less than 200% of specified value</td> </tr> </tbody> </table>	Leakage current	Less than specified value	Capacitance change	Within ±25% of initial value	tanδ	Less than 200% of specified value		
Leakage current	Less than specified value								
Capacitance change	Within ±25% of initial value								
tanδ	Less than 200% of specified value								
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 (See page 91)

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

Item µF	6.3			10			16		
	WV ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	WV ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz	WV ØD×L (mm)	Impedance (Ω)max. 20°C 100kHz	Ripple current (mA rms) 105°C 100kHz
470							8 × 11.5	0.021	1340
680				8 × 11.5	0.021	1340	8 × 15	0.020	1850
820	8 × 11.5	0.021	1340				10 × 12.5	0.020	1960
1000				8 × 15	0.020	1850	8 × 20	0.016	2350
				10 × 12.5	0.016	1960	10 × 16	0.016	2460
1500	10 × 12.5	0.016	1960	8 × 20	0.013	2350	10 × 20	0.014	2805
				10 × 16	0.013	2460			
1800	10 × 16	0.013	2460	10 × 20	0.011	2805	10 × 25	0.013	3230
2200	10 × 20	0.011	2805	10 × 25	0.009	3230			
3300	10 × 25	0.009	3230						

● FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Item µF	Frequency	120Hz	1kHz	10kHz	50kHz	100kHz ≤
~ 820		0.55	0.77	0.94	0.97	1.00
1000 ~ 1800		0.60	0.80	0.96	0.98	1.00
2200 ~		0.70	0.85	0.98	0.99	1.00

MINIATURE TYPES