

WM

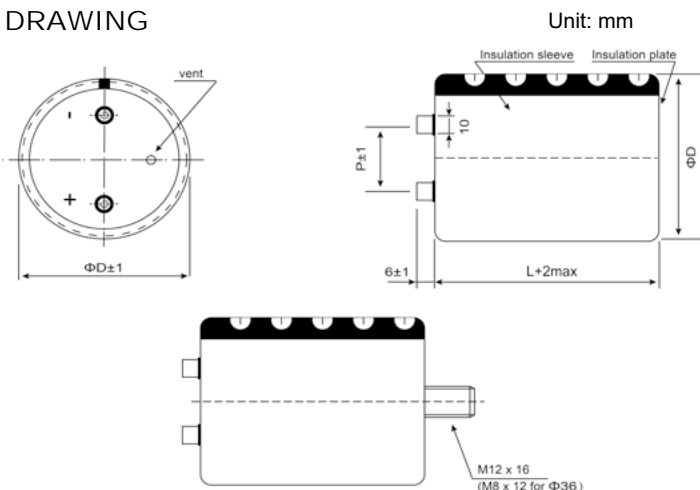
Screw Terminal Type, Long Life Series

- High Reliability at High Voltage
- Long Life at Compact Size
- Professional Inverters and Power Supplies
- Complied to the RoHS directive

Items	Performance characteristics					
Operating temperature range	-40 ~ +85°C (400V~550V); -25 ~ +85°C (600V)					
Leakage current max.	I=0.01CV or 5mA whichever is smaller (after 5 minutes)					
Capacitance tolerance	±20% at 120Hz, 20°C					
Dissipation factor max. (at 120Hz, 20°C)	WV	400	450	500	550	600
	Tanδ	0.15	0.15	0.20	0.20	0.25

	Useful Life		Load Life	Endurance Test	Shelf Life
Life Time	>10000h	>100000h	5000h	5000h	1000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacitance Change	Within ±30% of initial value		Within ±20% of initial value	Within ±10% of initial value	Within ±20% of initial value
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value
Condition:					
Applied Voltage	U _R	U _R	U _R	U _R	U _R =0 U _R to be applied for 60min>24h before measurement
Applied Current	I _R	1.2×I _R	I _R	I _R =0	I _R =0
Applied Temperature	85°C	40°C	85°C	85°C	85°C

DRAWING



ΦD/mm	51	64	77	90	101
P/mm	22.0	28.2	31.4	31.4	41.5

- *Hex head screw M5×10 and M6×12 are standard screws. Longer screws are available on request.
- *Max tightening torque for screw terminal M5:3Nm, M6:4Nm. Max torque for bolt mounting M12:12.5Nm.
- *Screws, Bracket and cap nut will be delivered separately if necessary.

Ripple Current Coefficient

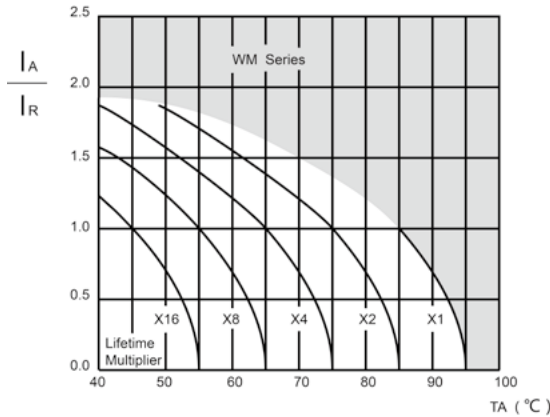
Frequency(Hz)	50/60	120	300	1k	>10k
Coefficient	0.80	1.00	1.10	1.30	1.40

Ambient Temp(°C)	40	60	85
Coefficient	1.89	1.67	1.00

The useful life can be prolonged by operating capacitor at loads below the rated values (e.g.lower operating voltage, Rms ripple current or ambient temperature) and by appropriate cooling measures. It is advisable not to apply a ripple current exceeding the rated ripple current without any cooling measures as this will shorten capacitor's life.

WM Series

Lifetime Diagram

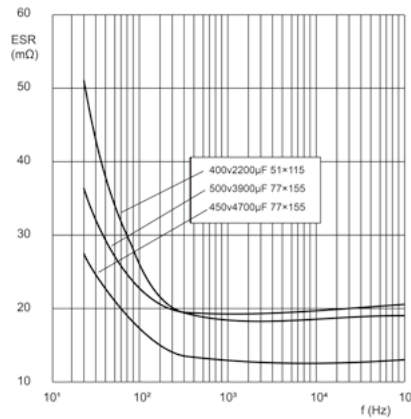


I_A =actual ripple current at 120Hz, I_R =rated ripple current at 120Hz, 85°C

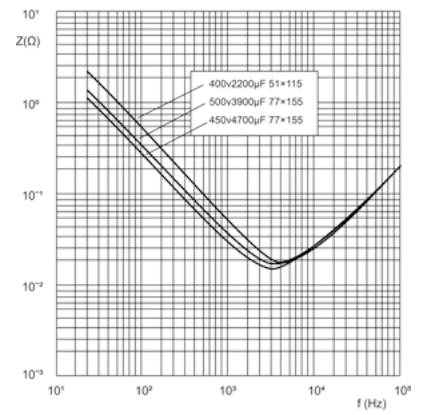
Multiplier of Useful Life as a function of ambient temperature and ripple current load.

Typical Curves

ESR ~ Frequency at 20°C



Impedance Z ~ Frequency at 20°C



● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

µF \ WV(SV)	400 (450)				450 (500)				500 (550)			
	Case Size	Typ ESR (mΩ)	Max. ESR (mΩ)	TA (°C)	Case Size	Typ ESR (mΩ)	Max. ESR (mΩ)	TA (°C)	Case Size	Typ ESR (mΩ)	Max. ESR (mΩ)	TA (°C)
1200									51x115	215	94	6.2
									64x96	215	94	6.3
1500									51x130	172	72	7.3
									64x96	172	72	7.1
1800					51x115	119	45	7.6	64x115	143	51	8.3
2200	51x115	98	28	8.8	51x130	98	35	8.8	64x130	117	40	9.6
2700	51x130	80	24	10.2	64x96	80	30	9.5	77x115	96	35	10.7
3300	64x96	65	21	11.0	64x115	65	24	11.2	77x130	78	35	12.4
3900	64x115	55	19	12.8	64x130	55	20	12.8	77x155	66	25	14.4
4700	64x130	46	15	14.8	77x115	46	16	14.1	77x171	55	24	16.5
									90x131	55	24	15.8
5600	77x115	38	14	16.2	77x130	38	13	16.2	77x195	46	22	19.0
									90x157	46	22	18.6
6800	77x130	32	13	18.7	77x155	32	11	19.1	90x171	38	19	21.2
8200	77x155	26	12	22.0	77x195	26	10	23.0	90x196	31	14	24.5
					90x131	26	10	21.0	101x175	31	14	24.2
10000	77x195	22	10	26.7	90x171	22	9	25.7	90x236	26	12	29.3
	90x131	22	10	24.2					101x195	26	12	27.9
12000	90x157	18	8	28.5	90x196	18	8	29.7	101x237	22	11	33.1
					101x175	18	8	29.3				
15000	90x196	14	6	34.8	90x236	14	7	35.9	↑ Case size Φ D×L (mm)			
					101x195	14	7	34.2	← Ripple current (A rms) at 85°C, 120Hz			
18000	90x236	12	5	41.2	101x237	12	6	40.5	← Typ ESR (mΩ) at 20°C, 120Hz			
22000	101x237	10	5	47.0					← Max. ESR (mΩ) at 20°C, 120Hz			

µF \ WV(SV)	550 (600)				600 (650)			
	Case Size	Typ ESR (mΩ)	Max. ESR (mΩ)	TA (°C)	Case Size	Typ ESR (mΩ)	Max. ESR (mΩ)	TA (°C)
1000	51x130	258	110	5.9	64x130	210	105	5.4
1200	64x115	215	95	6.8	77x115	188	94	6.1
1500	64x130	172	74	8.0	77x130	150	75	7.3
1800	77x115	143	72	8.7	77x150	124	62	8.9
2200	77x130	117	50	10.1	90x131	102	51	9.7
2700	77x155	96	40	12.0	90x157	90	45	11.6
3300	77x155	78	36	13.3	90x171	76	38	13.4
3900	90x157	66	30	15.5	90x196	66	33	16.2
4700	90x171	55	24	17.6	90x196	56	28	19.5
5600	90x196	46	20	20.3	101x220	50	25	22.5
6800	90x236	38	16	24.1				