

WH

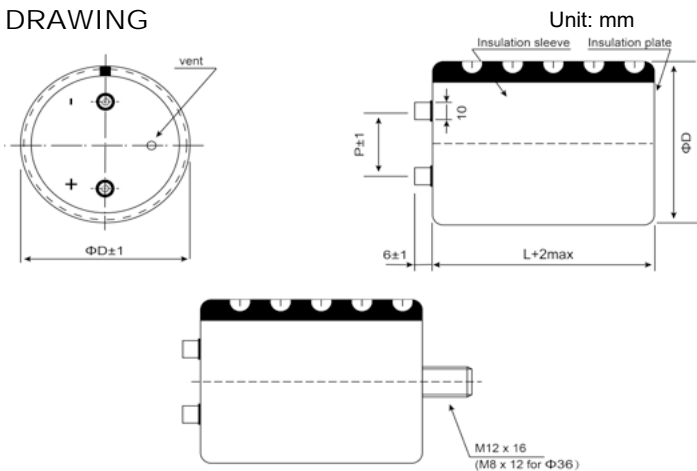
Screw Terminal Type, High Reliability Long Life Series

- Higher ripple current
- Long useful life & High Reliability
- For Professional Power application and Inverters
- Complied to the RoHS directive

Items	Performance characteristics				
Operating temperature range	-40 ~ +85°C				
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	350	400	450	500
	Tanδ	0.15	0.15	0.15	0.15
Low temperature characteristics (Capacitance ratio at 120Hz)	WV	350	400	450	500
	C-25°C /C+20°C	≥0.7	≥0.7	≥0.7	≥0.7

	Useful Life		Load Life	Endurance Test	Shelf Life
Life Time	>15000h	>250000h	10000h	12000h	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:					<div style="border: 1px solid black; padding: 5px;">                     After test                      U<sub>R</sub> to be applied                      for 60min&gt;24h                      before measurement                 </div>
Applied Voltage	U <sub>R</sub>	U <sub>R</sub>	U <sub>R</sub>	U <sub>R</sub>	
Applied Current	I <sub>R</sub>	1.2×I <sub>R</sub>	I <sub>R</sub>	I <sub>R</sub> =0	
Applied Temperature	85°C	40°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

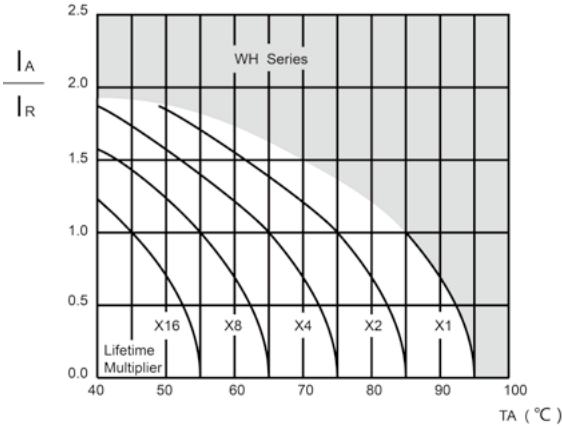
Frequency(Hz)	50/60	120	300	1k	>10k
Coefficient	0.80	1.00	1.10	1.30	1.40

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.

# WH Series

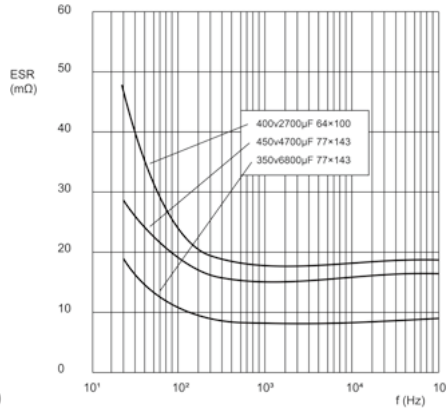
### Lifetime Diagram



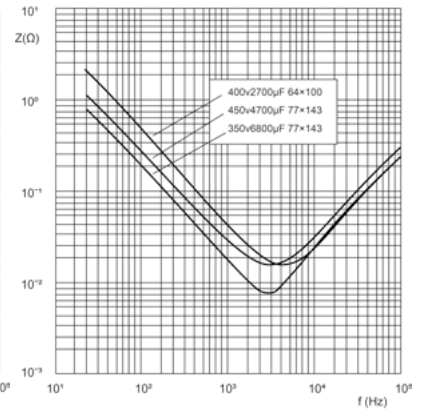
$I_A$ =actual ripple current at 120Hz,  $I_R$ =rated ripple current at 120Hz, 85°C  
Multiplier of Useful Life as a function of ambient temperature and ripple current load.

### Typical Curves

ESR ~ Frequency at 20°C



Impedance Z ~ Frequency at 20°C



### ● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

WV(SV) μF	350 (400)				400 (450)				450 (500)			
	2200									64×96	92	46
2700					64×96	76	38	11.5	64×115	76	38	12.8
3300					64×115	60	30	14.2	64×130	60	30	15.2
					77×105	60	30	15.8	77×105	60	30	15.8
3900	64×96	50	25	14.6	64×115	52	26	16.5	64×130	54	27	16.5
					77×105	52	26	17.2	77×115	54	27	18.0
4700	64×115	40	20	16.9	64×130	42	21	18.1	77×143	42	21	20.8
					77×115	42	21	20.8	90×105	42	21	21.8
5600	64×130	34	17	19.8	77×130	36	18	22.7	77×143	36	18	24.2
	77×115	34	17	21.6	90×105	36	18	23.8	90×130	36	18	24.9
6800	77×143	28	14	25.0	77×155	30	15	26.6	90×157	30	15	29.4
	90×105	28	14	26.2	90×130	30	15	27.4				
8200	77×143	24	12	29.3	90×157	24	12	32.2	90×157	24	12	32.2
	77×155	24	12	30.1								
10000	90×157	18	9	35.7	90×157	20	10	35.7	90×171	20	10	36.9
12000	90×157	16	8	39.1								

WV(SV) μF	500 (550)			
	1500	64×96	148	74
1800	64×115	132	62	10.0
2200	64×130	102	51	11.7
2700	77×115	82	41	15.0
3300	77×130	68	34	17.5
3900	77×143	58	29	20.2
4700	90×130	48	24	21.8
5600	90×157	40	20	25.3
6800	90×171	32	16	29.0

↑ Ripple current (A rms) at 85°C , 120Hz  
 ↑ Typ ESR (mΩ) at 20°C , 120Hz  
 ↑ Max. ESR (mΩ) at 20°C , 120Hz  
 ↑ Case size Φ D×L (mm)