

WP

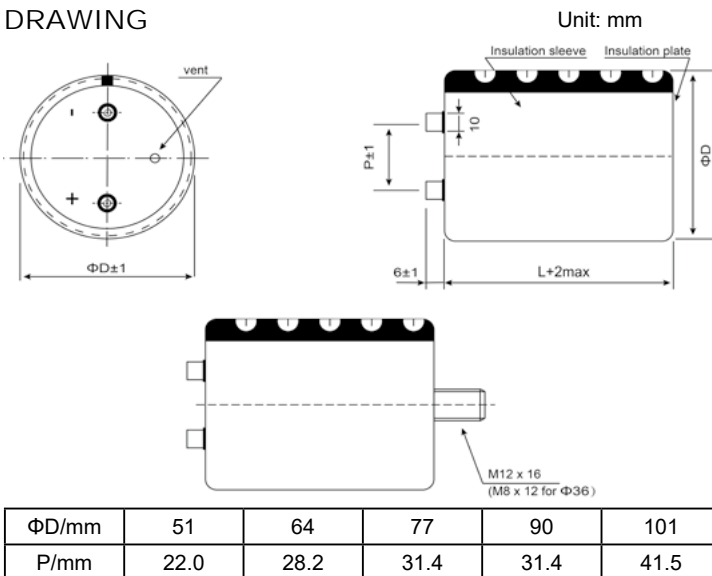
Screw Terminal Type, Long Useful Life Series

- Long Useful Life at 105°C
- Highest Professional Power
- Complied to the RoHS directive

Items	Performance characteristics			
Operating temperature range	-40 ~ +105°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
	Tanδ	0.15	0.15	0.15
Low temperature characteristics (Capacitance ratio at 120Hz)	WV	350	400	450
	C-25°C /C+20°C	≥0.7	≥0.7	≥0.7

	Useful Life		Load Life	Endurance Test	Shelf Life
Life Time	>9000h	>200000h	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
Applied Current	I _R	1.2×I _R	I _R	I _R =0	I _R =0
Applied Temperature	105°C	40°C	105°C	105°C	105°C
					After test U _R to be applied for 60min>24h before measurement

DRAWING



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	105
Coefficient	2.44	2.16	2.00	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.

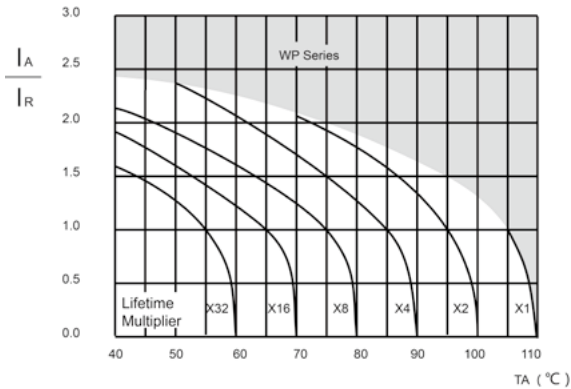
It is advisable not to apply a ripple current exceeding the rated ripple current without any cooling measures as this will shorten capacitor's life.

- *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.

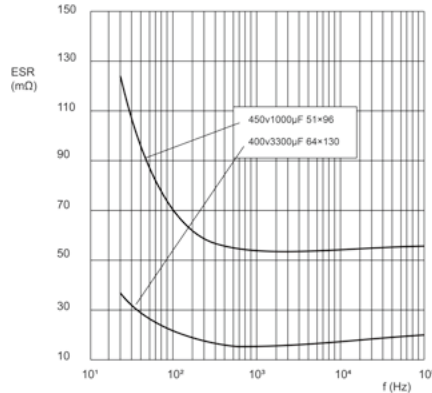
WP Series

Typical Curves

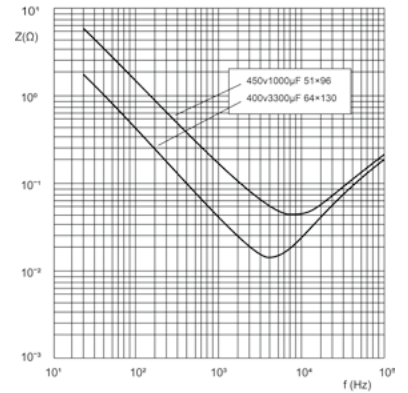
Lifetime Diagram



ESR ~ Frequency at 20°C



Impedance Z ~ Frequency at 20°C



I_A =actual ripple current at 120Hz, I_R =rated ripple current at 120Hz, 105°C

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

● DIMENSIONS & MAXIMUM PERMISSIBLE RIPPLE CURRENT

VV(SV) μF	350 (400)				400 (450)				450 (500)			
	1000	51×75	259	69	3.9	51×75	215	70	3.9	51×96	215	70
1200	51×75	215	65	4.2	51×96	179	64	4.6	51×115	179	66	5.0
1500	51×96	172	55	5.2	51×115	143	54	5.6	51×130	143	54	5.9
1800	51×96	143	43	5.7	51×130	119	43	6.4	64×96	119	44	6.3
2200	51×130	117	30	7.1	64×96	98	41	6.9	64×115	98	42	7.4
2700	64×96	96	27	7.7	64×115	80	38	8.2	64×130	80	40	8.6
									77×115	80	42	8.7
3300	64×115	78	23	9.1	64×130	65	29	9.5	64×155	65	31	10.2
									77×130	65	35	10.1
3900	64×130	66	19	10.4	64×155	55	26	11.1	64×195	55	28	12.3
					77×115	55	28	10.4				
4700	64×155	55	15	12.2	64×195	46	20	13.4	77×155	46	25	12.9
	77×115	55	16	11.5	77×130	46	22	12.0				
5600	64×195	46	13	14.6	64×195	39	19	14.6	77×195	38	22	15.4
	77×130	46	14	13.1	77×155	39	19	14.0	90×157	38	24	14.9
6800	77×155	38	13	15.5	90×157	32	17	16.5	90×196	32	21	18.0
8200	90×157	31	11	18.1	90×157	26	15	18.1	90×196	27	18	19.8
10000	90×157	26	10	19.9	90×196	22	12	21.7	90×236	22	16	23.6
12000	90×196	22	8	23.8	90×236	18	8	25.8				
15000	90×236	17	6	28.8								

↑ Ripple current (A rms) at 105°C , 120Hz
 ↑ Typ ESR(mΩ)at 20°C , 120Hz
 ↑ Max.ESR(mΩ)at 20°C , 120Hz
 ↑ Case size Φ D×L (mm)