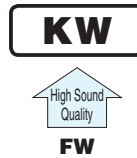


ALUMINUM ELECTROLYTIC CAPACITORS

KW series Standard, For Audio Equipment



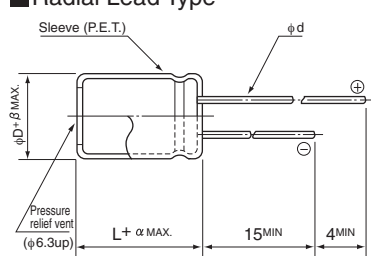
- Realization of a harmonious balance of sound quality, made possible by the development of new electrolyte.
- Most suited for AV equipment like DVD, MD.
- Compliant to the RoHS directive (2011/65/EU).



Specifications

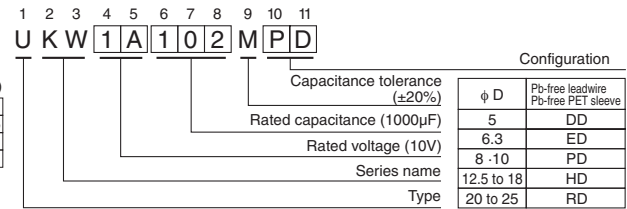
Item	Performance Characteristics									
Category Temperature Range	-40 to +85°C									
Rated Voltage Range	6.3 to 100V									
Rated Capacitance Range	0.1 to 33000μF									
Capacitance Tolerance	±20% at 120Hz, 20°C									
Leakage Current	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03 CV or 4 (μA), whichever is greater. After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA), whichever is greater.									
Tangent of loss angle (tan δ)	Rated voltage (V)	6.3	10	16	25	35	50	63	100	Measurement frequency : 120Hz at 20°C
	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	
For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.										
Stability at Low Temperature	Measurement frequency : 120Hz									
	Rated voltage (V)	6.3		10	16	25	35	50	63	100
Impedance ratio	Z-25°C / Z+20°C		5	4	3	2	2	2	2	2
ZT / Z20 (MAX.)	Z-40°C / Z+20°C		12	10	8	5	4	3	3	3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C.									
	Capacitance change	Within ±20% of the initial capacitance value								
	tan δ	200% or less than the initial specified value								
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.									
	Leakage current	Less than or equal to the initial specified value								
Marking	Printed with gold color letter on black sleeve.									

Radial Lead Type



	5	6.3	8	10	12.5	16	18	20	22	25
φD	5	6.3	8	10	12.5	16	18	20	22	25
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	10	12.5
φd	0.5	0.5	0.6	0.6	0.6	0.6	0.8	0.8	1.0	1.0
β	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0
α	(φD < 20) 1.5 (φD ≥ 20) 2.0									

Type numbering system (Example : 10V 1000μF)



• Please refer to page 20 about the end seal configuration.

Dimensions

V	6.3	10	16	25	35	50	63	100
Cap. (μF)	0J	1A	1C	1E	1V	1H	1J	2A
Code	0R1	R22	R33	R47	O10	2R2	3R3	4R7
0.1						5 × 11	1.1	5 × 11
0.22						5 × 11	2.4	5 × 11
0.33						5 × 11	3.5	5 × 11
0.47						5 × 11	5.0	5 × 11
1						5 × 11	10	5 × 11
2.2						5 × 11	23	5 × 11
3.3						5 × 11	35	5 × 11
4.7						5 × 11	40	5 × 11
10						5 × 11	65	5 × 11
22						5 × 11	95	5 × 11
33						5 × 11	120	6.3 × 11
47						5 × 11	150	6.3 × 11
100		5 × 11	145	5 × 11	155	6.3 × 11	185	6.3 × 11
220		5 × 11	230	6.3 × 11	250	8 × 11.5	320	10 × 12.5
330	331	6.3 × 11	265	6.3 × 11	270	8 × 11.5	360	10 × 12.5
470	471	6.3 × 11	310	6.3 × 11	330	8 × 11.5	420	10 × 12.5
1000	102	8 × 11.5	530	10 × 12.5	630	10 × 16	770	10 × 20
2200	222	10 × 20	980	10 × 20	1050	12.5 × 20	1250	12.5 × 20
3300	332	10 × 20	1170	12.5 × 20	1420	12.5 × 25	1700	16 × 25
4700	472	12.5 × 20	1350	12.5 × 25	1800	16 × 25	2100	16 × 31.5
6800	682	12.5 × 25	1600	16 × 25	2150	16 × 35.5	2500	18 × 35.5
10000	103	16 × 25	2000	16 × 35.5	2500	18 × 35.5	2640	20 × 40
15000	153	16 × 35.5	2550	18 × 35.5	2720	20 × 40	3400	22 × 50
22000	223	18 × 40	3200	20 × 40	3700	22 × 50	4200	25 × 50
33000	333	22 × 50	3900	22 × 50	4500	25 × 50	4800	

Frequency coefficient of rated ripple current

Cap. (μF)	Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
0.1 to 47		0.75	1.00	1.35	1.57	2.00
100 to 470		0.80	1.00	1.23	1.34	1.50
1000 to 33000		0.85	1.00	1.10	1.13	1.15

Rated ripple current (mA rms) at 85°C 120Hz

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.