ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

KW series

Standard, For Audio Equipment

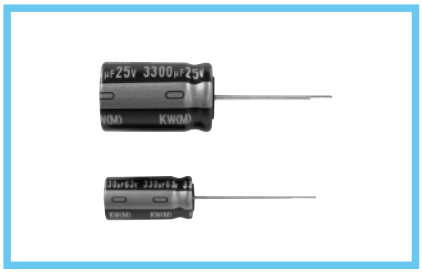
Smaller | For Audio Use | Anti-Solvent Feature

- Realization of a harmonious balance of sound quality, made possible by the development of new electrolyte.
- Most suited for AV equipment like DVD, MD.
- Adapted to the RoHS directive (2002/95/EC).

KW

High Sound Quality

FW



■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, leakage current is not more than 0.03 CV or 4 (μA) , whichever is greater. After 2 minutes' application of rated voltage, leakage current is not more than 0.01 CV or 3 (μA) , whichever is greater.
tan δ	See table below. Measurement frequency : 120Hz, Temperature : 20°C
Stability at Low Temperature	See table below. Measurement frequency : 120Hz
Endurance	After 2000 hours' application of voltage at 85°C, capacitors meet the characteristic requirements listed at right.
Shelf Life	After sroring the capacitors under no load at 85°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.
Marking	Printed with gold color letter on black sleeve.

tan δ

Rated voltage (V)	6.3	10	16	25	35	50	63	100
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.

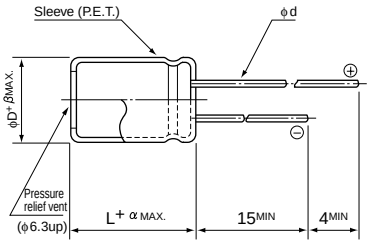
Stability at Low Temperature

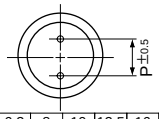
Rated voltage (V)		6.3	10	16	25	35	50	63	100
Impedance ratio ZT / Z20 (MAX.)	Z–25°C / Z+20°C	5	4	3	2	2	2	2	2
	Z–40°C / Z+20°C	12	10	8	5	4	3	3	3

Endurance

Capacitance change	Within ±20% of initial value
tan δ	200% or less of initial specified value
Leakage current	Initial specified value or less

■Radial Lead Type





(mm)

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	0.8	0.8	1.0	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)

1	2	3	4	5	6	7	8	9	10	11
U	K	W	1	A	1	0	2	M	P	D

- Capacitance tolerance (±20%)
- Rated Capacitance (1000μF)
- Rated voltage (10V)
- Series name
- Type

Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 ·10	PD
12.5 to 18	HD
20 to 25	RD

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

■Dimensions

Cap. (μF) \ V	6.3		10		16		25		35		50		63		100	
Code	0J		1A		1C		1E		1V		1H		1J		2A	
0.1	0R1														5×11	2.1
0.22	R22														5×11	4.7
0.33	R33														5×11	7.0
0.47	R47														5×11	10
1	010														5×11	21
2.2	2R2														5×11	30
3.3	3R3														5×11	40
4.7	4R7														5×11	45
10	100														6.3×11	75
22	220														6.3×11	120
33	330														8×11.5	160
47	470														10×12.5	210
100	101														10×20	350
220	221														12.5×25	600
330	331														12.5×25	750
470	471														16×25	1000
1000	102														18×40	1370
2200	222														22×50	2400
3300	332														25×50	2900
4700	472															
6800	682															
10000	103															
15000	153															
22000	223															
33000	333															

6.3		10		16		25		35		50		63		100	
0J		1A		1C		1E		1V		1H		1J		2A	
										5×11	1.1			5×11	2.1
										5×11	2.4			5×11	4.7
										5×11	3.5			5×11	7.0
										5×11	5.0			5×11	10
										5×11	10			5×11	21
										5×11	23			5×11	30
										5×11	35			5×11	40
										5×11	40			5×11	45
										5×11	65	5×11	70	6.3×11	75
										5×11	95	5×11	100	6.3×11	120
								5×11	105	5×11	120	6.3×11	140	8×11.5	160
						5×11	115	5×11	120	6.3×11	150	6.3×11	165	10×12.5	210
		5×11	145	5×11	155	6.3×11	185	6.3×11	200	8×11.5	250	10×12.5	300	10×20	350
		6.3×11	230	6.3×11	250	8×11.5	320	10×12.5	370	10×12.5	410	10×16	470	12.5×25	600
6.3×11	265	6.3×11	270	8×11.5	360	10×12.5	420	10×12.5	470	10×16	570	10×20	650	12.5×25	750
6.3×11	310	6.3×11	330	8×11.5	420	10×12.5	530	10×16	630	12.5×20	760	12.5×20	880	16×25	1000
8×11.5	530	10×12.5	630	10×16	770	10×20	950	12.5×20	1100	12.5×25	1300	16×25	1300	18×40	1370
10×20	980	10×20	1050	12.5×20	1250	12.5×25	1550	16×25	1800	16×35.5	2090	18×35.5	2200	22×50	2400
10×20	1170	12.5×20	1420	12.5×25	1700	16×25	1950	16×35.5	2220	18×35.5	2360	20×40	2700	25×50	2900
12.5×20	1350	12.5×25	1800	16×25	2100	16×31.5	2360	18×35.5	2490	20×40	2900	22×50	3400		
12.5×25	1600	16×25	2150	16×35.5	2500	18×35.5	2590	20×40	3000	22×50	3500	25×50	3500		
16×25	2000	16×35.5	2500	18×35.5	2640	20×40	3000	22×50	3700	25×50	4000				
16×35.5	2550	18×35.5	2720	20×40	3400	22×50	3800	25×50	4300						
18×40	3200	20×40	3700	22×50	4200	25×50	4500								
22×50	3900	22×50	4500	25×50	4800									Case size φD x L (mm)	Rated ripple

Rated Ripple (mArms) at 85°C 120Hz

●Frequency coefficient of rated ripple current

Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Less than 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

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