

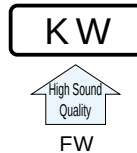
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

KW series Standard, For Audio Equipment



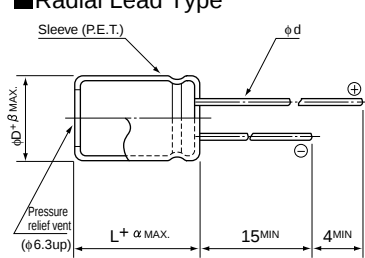
- Realization of a harmonious balance of sound quality, made possible by the development of new electrolyte.
- Most suited for AV equipment like DVD, MD.
- Compliant to the RoHS directive (2011/65/EU).



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, 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.																											
Tangent of loss angle (tan δ)	<table><tr><td>Rated voltage (V)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td>tan δ (MAX.)</td><td>0.28</td><td>0.24</td><td>0.20</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td></tr></table>									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	Measurement frequency : 120Hz at 20°C
	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	Measurement frequency : 120Hz																											
	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	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																				
						Leakage current		Less than or equal to 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.																											
Marking	Printed with gold color letter on black sleeve.																											

Radial Lead Type



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	1.0	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

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	

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

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

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	1.1	5×11
0.22	R22						5×11	2.4	5×11
0.33	R33						5×11	3.5	5×11
0.47	R47						5×11	5.0	5×11
1	010						5×11	10	5×11
2.2	2R2						5×11	23	5×11
3.3	3R3						5×11	35	5×11
4.7	4R7						5×11	40	5×11
10	100						5×11	65	5×11
22	220						5×11	95	5×11
33	330					5×11	105	120	6.3×11
47	470					5×11	120	150	6.3×11
100	101		5×11	145	5×11	155	6.3×11	185	6.3×11
220	221		6.3×11	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	420
470	471	6.3×11	310	6.3×11	330	8×11.5	420	10×12.5	530
1000	102	8×11.5	530	10×12.5	630	10×16	770	10×20	950
2200	222	10×20	980	10×20	1050	12.5×20	1250	12.5×25	1550
3300	332	10×20	1170	12.5×20	1420	12.5×25	1700	16×25	1950
4700	472	12.5×20	1350	12.5×25	1800	16×25	2100	16×31.5	2360
6800	682	12.5×25	1600	16×25	2150	16×35.5	2500	18×35.5	2590
10000	103	16×25	2000	16×35.5	2500	18×35.5	2640	20×40	3000
15000	153	16×35.5	2550	18×35.5	2720	20×40	3400	22×50	3800
22000	223	18×40	3200	20×40	3700	22×50	4200	25×50	4500
33000	333	22×50	3900	22×50	4500	25×50			

Case size φD × L (mm) ; Rated ripple

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 (mArms) 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.

CAT.8100C