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).

For Audio Use Anti-Solvent Feature

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.
Tangent of loss angle (tan δ)	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

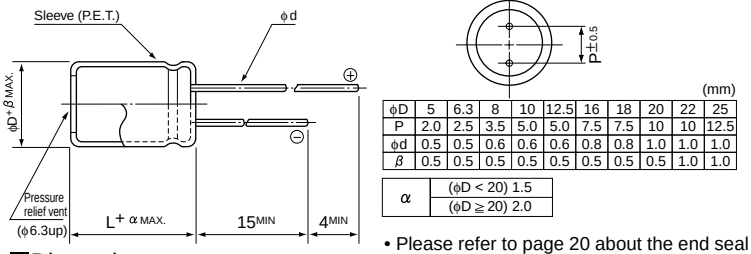
Rated voltage (V)		6.3	10	16	25	35	50	63	100
Impedance ratio ZT / Z20 (MAX.)	Z−25°C / Z+20°C	5	4	3	2	2	2	2	2
	Z−40°C / Z+20°C	12	10	8	5	4	3	3	3

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 sroring 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



(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

- 9–10: Capacitance tolerance (±20%)
- 6–8: Rated capacitance (1000μF)
- 5: Rated voltage (10V)
- 4: Series name
- 1–3: 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 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	2.1
0.22	R22										5×11	2.4			5×11	4.7
0.33	R33										5×11	3.5			5×11	7.0
0.47	R47										5×11	5.0			5×11	10
1	010										5×11	10			5×11	21
2.2	2R2										5×11	23			5×11	30
3.3	3R3										5×11	35			5×11	40
4.7	4R7										5×11	40			5×11	45
10	100										5×11	65	5×11	70	6.3×11	75
22	220										5×11	95	5×11	100	6.3×11	120
33	330								5×11	105	5×11	120	6.3×11	140	8×11.5	160
47	470							5×11	115	5×11	120	6.3×11	150	6.3×11	165	10×12.5	210
100	101			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
220	221			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
330	331	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
470	471	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
1000	102	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
2200	222	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
3300	332	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
4700	472	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		
6800	682	12.5×25	1600	16×25	2150	16×35.5	2500	18×35.5	2590	20×40	3000	22×50	3500	25×50	3500		
10000	103	16×25	2000	16×35.5	2500	18×35.5	2640	20×40	3000	22×50	3700	25×50	4000				
15000	153	16×35.5	2550	18×35.5	2720	20×40	3400	22×50	3800	25×50	4300						
22000	223	18×40	3200	20×40	3700	22×50	4200	25×50	4500								
33000	333	22×50	3900	22×50	4500	25×50	4800										

Case size φD x 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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Nichicon:

UKW0J102MPD UKW0J103MHD UKW0J153MHD UKW0J222MPD UKW0J223MHD UKW0J331MED UKW0J332MPD UKW0J333MRD UKW0J471MED UKW0J472MHD UKW0J682MHD UKW1A101MDD UKW1A102MPD UKW1A103MHD UKW1A153MHD UKW1A221MED UKW1A222MPD UKW1A223MRD UKW1A331MED UKW1A332MHD UKW1A333MRD UKW1A471MED UKW1A472MHD UKW1A682MHD UKW1C101MDD UKW1C102MPD UKW1C103MHD UKW1C153MRD UKW1C221MED UKW1C222MHD UKW1C223MRD UKW1C331MPD UKW1C332MHD UKW1C333MRD UKW1C471MPD UKW1C472MHD UKW1C682MHD UKW1E101MED UKW1E102MPD UKW1E103MRD UKW1E153MRD UKW1E221MPD UKW1E222MHD UKW1E223MRD UKW1E331MPD UKW1E332MHD UKW1E470MDD UKW1E471MPD UKW1E472MHD UKW1E682MHD UKW1H010MDD UKW1H0R1MDD UKW1H100MDD UKW1H101MPD UKW1H102MHD UKW1H103MRD UKW1H220MDD UKW1H221MPD UKW1H222MHD UKW1H2R2MDD UKW1H330MDD UKW1H331MPD UKW1H332MHD UKW1H3R3MDD UKW1H470MED UKW1H471MHD UKW1H472MRD UKW1H4R7MDD UKW1H682MRD UKW1HR22MDD UKW1HR33MDD UKW1HR47MDD UKW1J100MDD UKW1J101MPD UKW1J102MHD UKW1J220MDD UKW1J221MPD UKW1J222MHD UKW1J330MED UKW1J331MPD UKW1J332MRD UKW1J470MED UKW1J471MHD UKW1J472MRD UKW1J682MRD UKW1V101MED UKW1V102MHD UKW1V103MRD UKW1V153MRD UKW1V221MPD UKW1V222MHD UKW1V331MPD UKW1V332MHD UKW1V470MDD UKW1V471MPD UKW1V472MHD UKW1V682MRD UKW2A010MDD UKW2A0R1MDD UKW2A100MED