ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

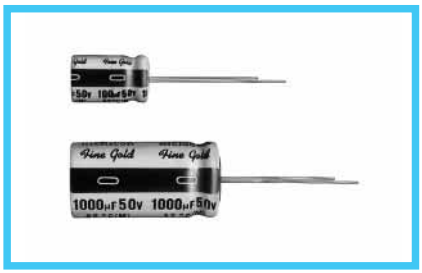
FG series

High Grade Standard Type, For Audio Equipment

For Audio Use Anti-Solvent Feature

- "Fine Gold" MUSE acoustic series suited for high grade audio equipment, using state of the art etching techniques.
- Rich sound in the bass register and clearer high end, most suited for AV equipment like DVD, MD.
- Adapted to the RoHS directive (2002/95/EC).

KZ ← High Grade | **FG** | High Grade → FW



■Specifications

Item	Performance Characteristics
Category Temperature Range	–40 ~ +85°C
Rated Voltage Range	6.3 ~ 100V
Rated Capacitance Range	0.1 ~ 10000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.01CV or 3 (μA) , whichever is greater.
tan δ	For capacitance of more than 1000μF add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz, Temperature : 20°C

Rated voltage (V)	6.3	10	16	25	35	50	63	80	100
tan δ (MAX.)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.09	0.08

Stability at Low Temperature — Measurement frequency : 120Hz

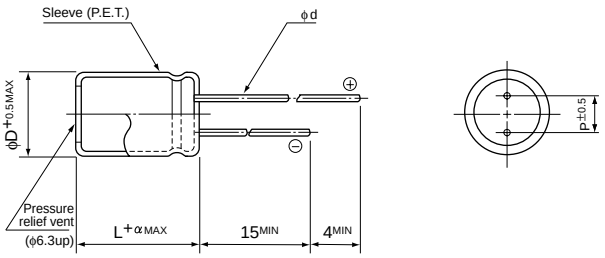
Rated voltage (V)		6.3	10	16	25	35	50	63	80	100
Impedance ratio ZT / Z20 (MAX.)	Z–25°C / Z+20°C	4	3	2	2	2	2	2	2	2
	Z–40°C / Z+20°C	8	6	4	4	3	3	3	3	3

Endurance — After 1000 hours' application of rated voltage at 85°C, capacitors meet the characteristic requirements listed at right.

Capacitance change	Within ±20% of the initial measurement for units of not more than 16V or φ6.3 Within ±15% of the initial measurement for units of not less than 25V or above φ6.3
tan δ	150% or less of initial specified value
Leakage current	Initial specified value or less

Shelf Life	After leaving capacitors under no load at 85°C for 1000 hours, they meet the specified value for endurance characteristics listed above.
Marking	Printed with black color letter on gold sleeve.

■Radial Lead Type



(mm)

φD	5	6.3	8	10	12.5	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
φd	0.6	0.6	0.6	0.6	0.8	0.8	0.8

α	(L < 20) 1.5
	(L ≧ 20) 2.0

Type numbering system (Example : 10V 47μF)

1	2	3	4	5	6	7	8	9	10	11
U	F	G	1	A	4	7	0	M	D	M

Configuration

Capacitance tolerance (±20%)

Rated Capacitance (47μF)

Rated voltage (10V)

Series name

Type

φD	Code
5	DM
6.3	EM
8 · 10	PM
12.5 ~ 18	HM

Please refer to page 21, 22, 23 about the formed or taped product spec.
Please refer to page 3 for the minimum order quantity.

● Dimension table in next page.

FG series

■Dimensions

φD×L (mm)

Cap.(μF) \ V	6.3		10		16		25		35		50	
Code	0J		1A		1C		1E		1V		1H	
0.1	0R1										5×11	1.1
0.22	R22										5×11	2.4
0.33	R33										5×11	3.6
0.47	R47										5×11	5.0
1	010										5×11	9.0
2.2	2R2										5×11	18
3.3	3R3										5×11	22
4.7	4R7										5×11	27
10	100										5×11	39
22	220						5×11	50	6.3×11	60	6.3×11	65
33	330				5×11	57	6.3×11	70	6.3×11	75	8×11.5	93
47	470			5×11	60	6.3×11	74	6.3×11	85	8×11.5	101	8×11.5	111
100	101			6.3×11	99	8×11.5	128	8×11.5	140	10×12.5	176	10×16	215
220	221			8×11.5	170	10×12.5	226	10×16	260	10×20	320	12.5×20	390
330	331			10×12.5	247	10×16	309	10×20	351	12.5×20	446	12.5×20	488
470	471	10×12.5	270	10×16	330	10×20	406	12.5×20	476	12.5×25	590	16×25	650
1000	102	10×20	485	12.5×20	601	12.5×25	723	16×25	854	16×25	1060	16×31.5	1143
2200	222	12.5×25	867	16×25	1047	16×25	1290	16×35.5	1570	18×35.5	1840		
3300	332	16×25	1135	16×31.5	1520	16×35.5	1720	18×40	1794				
4700	472	16×31.5	1431	16×35.5	1840	18×35.5	2140						
6800	682	18×35.5	1810	18×40	2049								
10000	103	18×40	2100										

Cap.(μF) \ V	63		80		100	
Code	1J		1K		2A	
0.1	0R1				5×11	2.3
0.22	R22				5×11	5.5
0.33	R33				5×11	8.0
0.47	R47				5×11	10
1	010				5×11	15
2.2	2R2				5×11	22
3.3	3R3				5×11	27
4.7	4R7				5×11	36
10	100	6.3×11	50	6.3×11	55	8×11.5	65
22	220	8×11.5	85	8×11.5	100	10×12.5	110
33	330	8×11.5	105	10×12.5	130	10×16	150
47	470	10×12.5	140	10×16	170	10×20	190
100	101	10×20	255	12.5×20	270	12.5×20	300
220	221	12.5×20	420	12.5×25	490	16×25	549
330	331	12.5×25	541	16×31.5	650	16×31.5	734
470	471	16×25	840	16×35.5	920	18×35.5	980
1000	102	18×35.5	1400			Case size	Rated ripple

Rated Ripple (mA rms) at 85°C 120Hz

●Frequency coefficient of rated ripple current

Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz ~
~ 47	0.75	1.00	1.35	1.57	2.00
100 ~ 470	0.80	1.00	1.23	1.34	1.50
1000 ~ 10000	0.85	1.00	1.10	1.13	1.15