ALUMINUM ELECTROLYTIC CAPACITORS

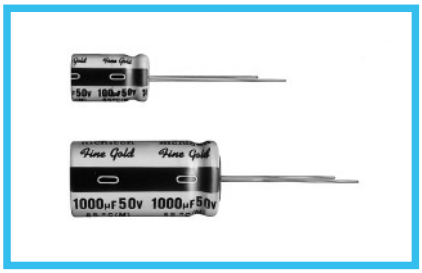
nichicon

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.
- Compliant to the RoHS directive (2002/95/EC).



KZ ← High Grade | FG | High Grade → 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 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.
Tangent of loss angle (tan δ)	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

For capacitance of more than 1000μF add 0.02 for every increase of 1000μF.

Stability at Low Temperature — Measurement frequency : 120Hz

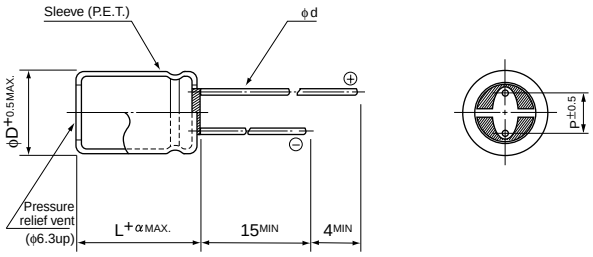
Rated voltage (V)		6.3	10	16	25	35	50	63	80	100
Impedance ratio ZT / Z20 (MAX.)	Z−25°C / Z+20°C	4	3	2	2	2	2	2	2	2
	Z−40°C / Z+20°C	8	6	4	4	3	3	3	3	3

Endurance — The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 85°C.

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 than the initial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life	After storimg 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 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

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

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 to 18	HM

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

● Dimension table in next page.

FG series

■Dimensions

Cap.(μF) \ V	Code	6.3		10		16		25		35		50	
		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	Code	63		80		100	
		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 φD×L (mm)	Rated ripple

Rated ripple current (mArms) at 85°C 120Hz

●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 10000	0.85	1.00	1.10	1.13	1.15