

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

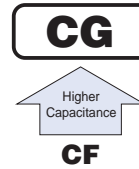
nichicon

CG series Chip Type, Higher Capacitance



NEW

- Higher Capacitance, Low ESR, High ripple current.
- Load life of 2000 hours at 105°C.
- SMD type : Lead free reflow soldering condition at 260°C peak correspondence.
- Adapted to the RoHS directive (2002/95/EC).



Specifications

Item	Performance Characteristics									
Category Temperature Range	-55 to +105°C									
Rated Voltage Range	2.5 to 16V									
Rated Capacitance Range	47 to 3300μF									
Capacitance Tolerance	± 20% at 120Hz, 20°C									
tan δ	Not more than value of Standard ratings at 120Hz, 20°C									
ESR (*1)	Not more than value of Standard ratings at 100kHz, 20°C									
Leakage Current (*2)	Not more than value of Standard ratings. After 2 minute's application of rated voltage. 20°C									
Characteristics of Temperature Impedance Ratio	$Z+105^{\circ}\text{C} / Z+20^{\circ}\text{C} \leq 1.25$ (100kHz) $Z-55^{\circ}\text{C} / Z+20^{\circ}\text{C} \leq 1.25$									
Endurance	After 2000 hours' application of rated voltage at 105°C, capacitors meet the specified value for life characteristics listed at right.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ± 20% of initial value (*3)</td> </tr> <tr> <td>tan δ</td> <td>150% or less of the initial specified value</td> </tr> <tr> <td>ESR (*1)</td> <td>150% or less of the initial specified value</td> </tr> <tr> <td>Leakage current (*2)</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance change	Within ± 20% of initial value (*3)	tan δ	150% or less of the initial specified value	ESR (*1)	150% or less of the initial specified value	Leakage current (*2)	Initial specified value or less
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Damp Heat	After 1000 hours' application of rated voltage at 60°C 90%RH, capacitors meet the specified value for life characteristics listed at right.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ± 20% of initial value (*3)</td> </tr> <tr> <td>tan δ</td> <td>150% or less of the initial specified value</td> </tr> <tr> <td>ESR (*1)</td> <td>150% or less of the initial specified value</td> </tr> <tr> <td>Leakage current (*2)</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance change	Within ± 20% of initial value (*3)	tan δ	150% or less of the initial specified value	ESR (*1)	150% or less of the initial specified value	Leakage current (*2)	Initial specified value or less
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Leakage current (*2)	Initial specified value or less									
Resistance to Soldering Heat	To comply with recommended conditions for reflow soldering. Pre-heating shall be done at 150 to 200°C and for 60 to 180 sec. In the case of peak temp, less than 250°C, reflow soldering shall be within two times. In the case of peak temp, less than 260°C, reflow soldering shall be once. Measurement for solder temperature profile shall be made at the capacitor top and the terminal.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ± 10% of initial value (*3)</td> </tr> <tr> <td>tan δ</td> <td>130% or less of the initial specified value</td> </tr> <tr> <td>ESR (*1)</td> <td>130% or less of the initial specified value</td> </tr> <tr> <td>Leakage current (*2)</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance change	Within ± 10% of initial value (*3)	tan δ	130% or less of the initial specified value	ESR (*1)	130% or less of the initial specified value	Leakage current (*2)	Initial specified value or less
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ESR (*1)	130% or less of the initial specified value									
Leakage current (*2)	Initial specified value or less									
Marking	Navy blue print on the case top.									

* 1 ESR measurements should be made at a point on the terminal nearest where the terminals protrude through the plastic platform.

* 2 Conditioning : If there is doubt about the measured result, measurement should be made again after the rated voltage is applied for 120 minutes at the temperature of 105°C.

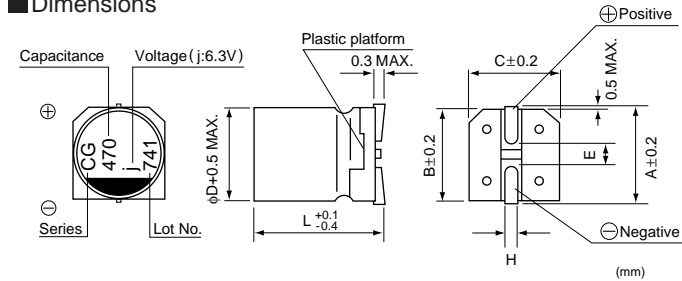
* 3 Initial value : The value before test of examination of resistance to soldering.

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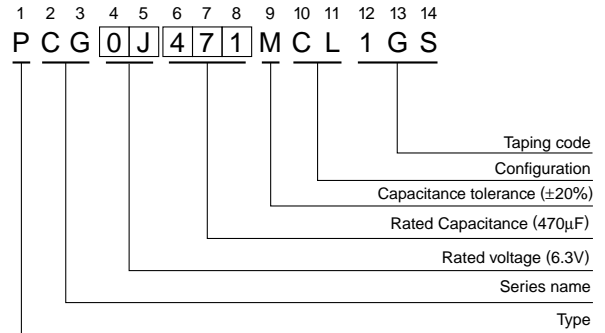
CG series

Dimensions



Size	φ5 × 6L	φ6.3 × 6L	φ8 × 7L	φ10 × 8L	φ10 × 10L	φ10 × 12.7L
φD	5.0	6.3	8.0	10.0	10.0	10.0
L	5.9	5.9	6.9	7.9	9.9	12.6
A	6.0	7.3	9.0	11.0	11.0	11.0
B	5.3	6.6	8.3	10.3	10.3	10.3
C	5.3	6.6	8.3	10.3	10.3	10.3
E	1.2	2.1	3.2	4.6	4.6	4.6
H	0.5 - 0.8	0.5 - 0.8	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1	0.8 - 1.1

Type numbering system (Example : 6.3V 470μF)



Voltage

V	2.5	4	6.3	10	16
Code	e	g	j	A	C

Standard ratings

Rated Voltage (V) Code	Surge Voltage (V)	Rated Capacitance (μF)	Case Size φD × L (mm)	tan δ	Leakage Current (μA)	ESR (mΩ) (20°C / 100kHz)	Rated ripple (mArms) (105°C / 100kHz)	Code
2.5 (0E)	2.8	220	5 × 6	0.12	110	30	2100	PCG0E221MCL1GS
		470	6.3 × 6	0.12	235	20	2900	PCG0E471MCL1GS
		560	6.3 × 6	0.12	280	20	3000	PCG0E561MCL1GS
		820	8 × 7	0.12	410	20	3300	PCG0E821MCL1GS
		1500	10 × 8	0.12	750	17	4100	PCG0E152MCL1GS
		2700	10 × 10	0.12	1350	12	4700	PCG0E272MCL1GS
4 (0G)	4.6	3300	10 × 12.7	0.12	1650	10	5500	PCG0E332MCL1GS
		180	5 × 6	0.12	144	32	1900	PCG0G181MCL1GS
		390	6.3 × 6	0.12	312	22	2700	PCG0G391MCL1GS
		680	8 × 7	0.12	544	21	3200	PCG0G681MCL1GS
		1200	10 × 8	0.12	960	17	4000	PCG0G122MCL1GS
		2200	10 × 10	0.12	1760	13	4600	PCG0G222MCL1GS
6.3 (0J)	7.2	2700	10 × 12.7	0.12	2160	11	5300	PCG0G272MCL1GS
		150	5 × 6	0.12	189	33	1800	PCG0J151MCL1GS
		270	6.3 × 6	0.12	340	23	2600	PCG0J271MCL1GS
		330	6.3 × 6	0.12	416	23	2700	PCG0J331MCL1GS
		470	8 × 7	0.12	592	22	3100	PCG0J471MCL1GS
		1000	10 × 8	0.12	1260	18	3800	PCG0J102MCL1GS
10 (1A)	11.5	1800	10 × 10	0.12	2268	14	4400	PCG0J182MCL1GS
		2200	10 × 12.7	0.12	2772	12	5000	PCG0J222MCL1GS
		82	5 × 6	0.12	164	35	1700	PCG1A820MCL1GS
		150	6.3 × 6	0.12	300	25	2500	PCG1A151MCL1GS
		330	8 × 7	0.12	660	23	3100	PCG1A331MCL1GS
		560	10 × 8	0.12	1120	20	3600	PCG1A561MCL1GS
16 (1C)	18.4	820	10 × 10	0.12	1640	15	4300	PCG1A821MCL1GS
		1000	10 × 12.7	0.12	2000	13	4800	PCG1A102MCL1GS
		47	5 × 6	0.12	150	40	1500	PCG1C470MCL1GS
		82	6.3 × 6	0.12	262	30	2300	PCG1C820MCL1GS
		150	8 × 7	0.12	480	28	2800	PCG1C151MCL1GS
		270	10 × 8	0.12	864	25	3300	PCG1C271MCL1GS
		470	10 × 10	0.12	1504	20	3700	PCG1C471MCL1GS
		680	10 × 12.7	0.12	2176	18	4100	PCG1C681MCL1GS

Design, Specifications are subject to change without notice.