

# CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

nichicon

**CJ** series Higher Capacitance, Low ESR



For SMD



Low Impedance



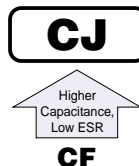
For High Frequency



Anti-Solvent Feature

**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 ~ +105°C									
Rated Voltage Range	2.5 ~ 16V									
Rated Capacitance Range	39 ~ 2700μF									
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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Leakage current (*2)	Initial specified value or less									
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	<p>To comply with recommended conditions for reflow soldering. Pre-heating shall be done at 150 ~ 200°C and for 60 ~ 180 sec.</p> <p>In the case of peak temp, less than 250°C, reflow soldering shall be within two times.</p> <p>In the case of peak temp, less than 260°C, reflow soldering shall be once.</p> <p>Measurement for solder temperature profile shall be made at the capacitor top and the terminal.</p>	<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.

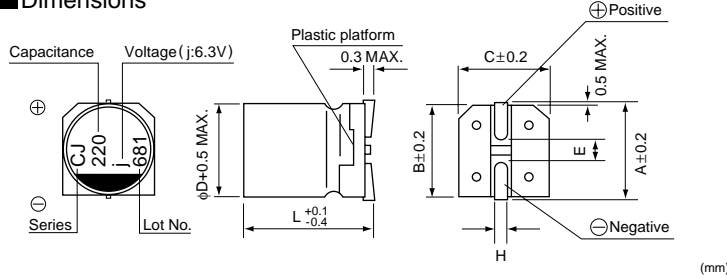
\*2 Conditioning : If there is doubt about the measured result, measurement should be made again after the rated voltage is applied for 120 minutes at the temperature of 105°C.

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

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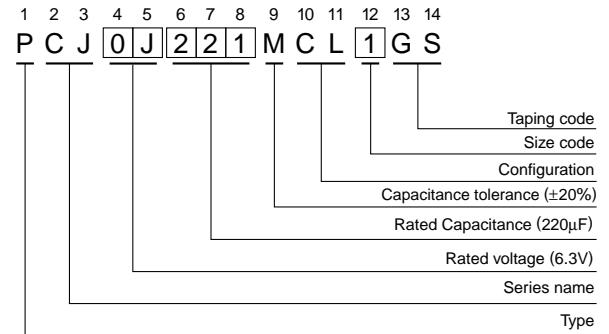


## ■ Dimensions



Size	φ5 × 6L	φ6.3 × 6L	φ8 × 7L	φ8 × 12L	φ10 × 8L	φ10 × 10L	φ10 × 12.7L
φD	5.0	6.3	8.0	8.0	10.0	10.0	10.0
L	5.9	5.9	6.9	11.9	7.9	9.9	12.6
A	6.0	7.3	9.0	9.0	11.0	11.0	11.0
B	5.3	6.6	8.3	8.3	10.3	10.3	10.3
C	5.3	6.6	8.3	8.3	10.3	10.3	10.3
E	1.2	2.1	3.2	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	0.8 ~ 1.1

## Type numbering system (Example : 6.3V 220μF)



## Voltage

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

## ■ Standard ratings

Rated 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	180	5 × 6	0.12	90	21	2500	PCJ0E181MCL1GS
	390	6.3 × 6	0.12	195	15	3400	PCJ0E391MCL1GS
	560	8 × 7	0.12	280	13	4000	PCJ0E561MCL1GS
	680	8 × 7	0.12	340	13	4100	PCJ0E681MCL1GS
	820	8 × 12	0.12	410	9	5300	PCJ0E821MCL1GS
	1200	10 × 8	0.12	600	12	4800	PCJ0E122MCL1GS
	1500	8 × 12	0.12	750	9	5300	PCJ0E152MCL1GS
	2200	10 × 10	0.12	1100	10	5400	PCJ0E222MCL1GS
4	2700	10 × 12.7	0.12	1350	9	5800	PCJ0E272MCL1GS
	150	5 × 6	0.12	120	22	2400	PCJ0G151MCL1GS
	330	6.3 × 6	0.12	264	15	3300	PCJ0G331MCL1GS
	560	8 × 7	0.12	448	14	4000	PCJ0G561MCL1GS
	△ 560	8 × 12	0.12	448	9	5200	PCJ0G561MCL9GS
	1000	10 × 8	0.12	800	13	4600	PCJ0G102MCL1GS
	1200	8 × 12	0.12	960	9	5200	PCJ0G122MCL1GS
	■ 1500	8 × 12	0.12	1200	9	5200	PCJ0G152MCL4GS
6.3	1500	10 × 10	0.12	1200	10	5000	PCJ0G152MCL1GS
	1800	10 × 10	0.12	1440	10	5300	PCJ0G182MCL1GS
	2200	10 × 12.7	0.12	1760	9	5700	PCJ0G222MCL1GS
	100	5 × 6	0.12	126	24	2300	PCJ0J101MCL1GS
	120	5 × 6	0.12	151	24	2300	PCJ0J121MCL1GS
	220	6.3 × 6	0.12	277	15	3200	PCJ0J221MCL1GS
	390	8 × 7	0.12	491	14	3900	PCJ0J391MCL1GS
	■ 820	8 × 12	0.12	1033	10	5000	PCJ0J821MCL4GS
10	820	10 × 8	0.12	1033	13	4500	PCJ0J821MCL1GS
	1500	10 × 10	0.12	1890	12	4800	PCJ0J152MCL1GS
	1800	10 × 12.7	0.12	2268	11	5200	PCJ0J182MCL1GS
	68	5 × 6	0.12	136	28	2100	PCJ1A680MCL1GS
	120	6.3 × 6	0.12	240	25	2500	PCJ1A121MCL1GS
	270	8 × 7	0.12	540	21	3200	PCJ1A271MCL1GS
16	470	10 × 8	0.12	940	19	3700	PCJ1A471MCL1GS
	680	10 × 10	0.12	1360	13	4600	PCJ1A681MCL1GS
	39	5 × 6	0.12	124	35	1900	PCJ1C390MCL1GS
	68	6.3 × 6	0.12	217	28	2300	PCJ1C680MCL1GS
	120	8 × 7	0.12	384	24	3000	PCJ1C121MCL1GS
16	220	10 × 8	0.12	704	22	3400	PCJ1C221MCL1GS
	330	10 × 10	0.12	1056	16	4100	PCJ1C331MCL1GS

△ : In this case, [9] will be put at 12th digit of type numbering system.

■ : In this case, [4] will be put at 12th digit of type numbering system.

Design, Specifications are subject to change without notice.