CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

PCL

Chip Type, Higher Capacitance
LongLife Assurance

For SMD | High Ripple Current | Low Impedance | For High Frequency | Long Life | Anti-Solvent Feature

NEW



- Long life of 20000 hours at 105°C.
- High reliability, Low ESR.
- SMD type : Lead free reflow soldering condition at 260°C peak correspondence.
- Compliant to the RoHS directive (2011/65/EU).
- AEC-Q200 compliant. Please contact us for details.

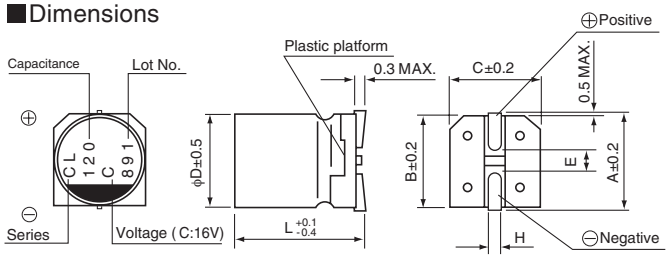
PCL — Long Life — PCS

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	4 to 16V
Rated Capacitance Range	22 to 2700µF
Capacitance Tolerance	±20% at 120Hz, 20°C
Tangent of loss angle (tan δ)	Less than or equal to the specified value at 120Hz, 20°C
ESR (※1)	Less than or equal to the specified value at 100kHz, 20°C
Leakage Current (※2)	Less than or equal to the specified value . After 2 minutes' application of rated voltage at 20°C
Temperature Characteristics (Max.Impedance Ratio)	Z+105°C / Z+20°C ≦ 1.25 (100kHz) Z−55°C / Z+20°C ≦ 1.25
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 20000 hours at 105°C. Capacitance change: Within ± 20% of the initial capacitance value (※3) tan δ: 150% or less than the initial specified value ESR (※1): 150% or less than the initial specified value Leakage current (※2): Less than or equal to the initial specified value
Damp Heat (Steady State)	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 60°C, 90% RH. Capacitance change: Within ± 20% of the initial capacitance value (※3) tan δ: 150% or less than the initial specified value ESR (※1): 150% or less than the initial specified value Leakage current (※2): Less than or equal to the initial specified value
Resistance to Soldering Heat	After soldering the capacitor under the soldering conditions prescribed here, the capacitor shall meet the specifications listed at right. Pre-heating shall be done at 150 to 200°C and for 60 to 180 sec. The duration for over +230°C temperature at capacitor surface shall not exceed 60 seconds. In case peak temperature is 250°C or less, reflow soldering shall be two times maximum. In case peak temperature is 260°C or less, reflow soldering shall be once. Measurement for solder temperature profile shall be made at the capacitor top and the terminal. Capacitance change: Within ± 10% of the initial capacitance value (※3) tan δ: 130% or less than the initial specified value ESR (※1): 130% or less than the initial specified value Leakage current (※2): Less than or equal to the initial specified value
Marking	Navy blue print on the case top

※1 ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.
※2 Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.
※3 Initial value : The value before test of examination of resistance to soldering.

■Dimensions



(mm)

Size	φ5 × 6L	φ6.3 × 6L	φ8 × 7L	φ8 × 10L	φ8 × 12L	φ10 × 10L	φ10 × 12.7L
φD	5.0	6.3	8.0	8.0	8.0	10.0	10.0
L	5.9	5.9	6.9	9.9	11.9	9.9	12.6
A	6.0	7.3	9.0	9.0	9.0	11.0	11.0
B	5.3	6.6	8.3	8.3	8.3	10.3	10.3
C	5.3	6.6	8.3	8.3	8.3	10.3	10.3
E	1.6	2.1	3.2	3.2	3.2	4.6	4.6
H	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

Type numbering system (Example : 16V 120µF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
P	C	L	1	C	1	2	1	M	C	L	1	G	S

- 1 2 3 : Type
- 4 5 : Series name
- 6 7 8 : Rated voltage (16V)
- 9 : Rated capacitance (120µF)
- 10 : Capacitance tolerance (±20%)
- 11 : Configuration
- 12 : Size code
- 13 14 : Taping code

Voltage

V	4	6.3	10	16
Code	g	j	A	C

●Frequency coefficient of rated ripple current

Frequency	120Hz	1kHz	10kHz	100kHz or more
Coefficient	0.05	0.30	0.70	1.00

Design, Specifications are subject to change without notice.

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■Dimensions

Rated Voltage (V) (code)	Surge Voltage (V)	Rated Capacitance (μF)	Case Size φD × L (mm)	tan δ	Leakage Current (μA)	ESR (mΩ) (at 100kHz 20°C)	Rated Ripple (mArms) (105°C / 100kHz)	Part Number
4 (0G)	4.6	150	5×6	0.12	300	25	2100	PCL0G151MCL1GS
		180	5×6	0.12	360	25	2300	PCL0G181MCL1GS
		390	6.3×6	0.12	312	24	2700	PCL0G391MCL1GS
		560	8×7	0.12	448	22	3200	PCL0G561MCL1GS
		1200	8×10	0.12	960	15	5400	PCL0G122MCL1GS
		1800	8×12	0.12	1440	14	5500	PCL0G182MCL1GS
		2200	10×10	0.12	1760	12	5400	PCL0G222MCL1GS
		2700	10×12.7	0.12	2160	11	5600	PCL0G272MCL1GS
6.3 (0J)	7.2	47	5×6	0.12	148	30	1900	PCL0J470MCL1GS
		220	6.3×6	0.12	277	22	2500	PCL0J221MCL1GS
		330	8×7	0.12	415	14	3900	PCL0J331MCL1GS
		680	8×10	0.12	856	12	4600	PCL0J681MCL1GS
		1000	8×12	0.12	1260	11	4800	PCL0J102MCL1GS
		1800	10×12.7	0.12	2268	10	5500	PCL0J182MCL1GS
10 (1A)	11.5	33	5×6	0.12	165	70	1100	PCL1A330MCL1GS
		68	5×6	0.12	340	30	1900	PCL1A680MCL1GS
		120	6.3×6	0.12	240	30	2700	PCL1A121MCL1GS
		150	8×7	0.12	300	21	2880	PCL1A151MCL1GS
		470	8×10	0.12	940	17	3800	PCL1A471MCL1GS
		820	10×10	0.12	1640	15	4300	PCL1A821MCL1GS
		1200	10×12.7	0.12	2400	13	4800	PCL1A122MCL1GS
16 (1C)	18.4	22	5×6	0.12	176	90	1000	PCL1C220MCL1GS
		39	6.3×6	0.12	124	37	2000	PCL1C390MCL1GS
		82	6.3×6	0.12	262	30	2700	PCL1C820MCL1GS
		120	8×7	0.12	384	27	2900	PCL1C121MCL1GS
		270	8×10	0.12	864	20	3600	PCL1C271MCL1GS
		390	8×12	0.12	1248	18	3900	PCL1C391MCL1GS
		470	10×10	0.12	1504	16	4200	PCL1C471MCL1GS
		680	10×12.7	0.12	2176	14	4700	PCL1C681MCL1GS

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