

PCW

Chip Type,
125°C Reliability



For SMD



High Ripple Current

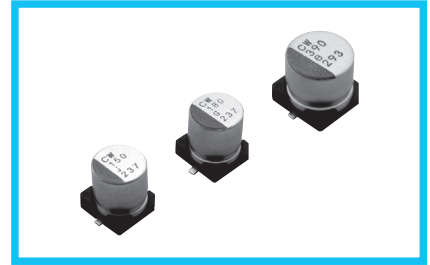


Low Impedance

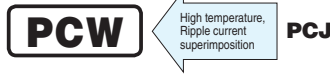


For High Frequency

Expanded



- Ripple Load Life of 2000h at 125°C.
- High reliability, Low ESR, High ripple current.
- SMD type : Lead free reflow soldering condition at 260°C peak complete correspondence.
- Compliant to the RoHS directive (2011/65/EU),(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

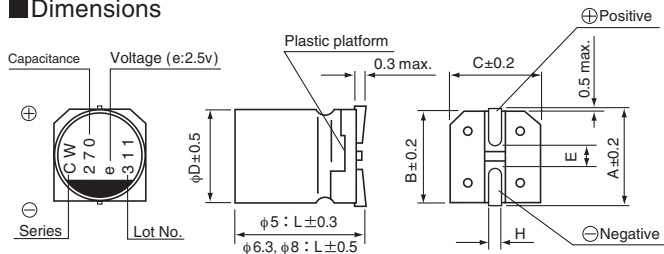


■ Specifications

Item	Performance Characteristics								
Category Temperature Range	-55 to +125°C								
Rated Voltage Range	2.5 to 6.3V								
Rated Capacitance Range	150 to 1800μF								
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)	$Z(+125^{\circ}\text{C}) / Z(+20^{\circ}\text{C}) \leq 1.25$ (100kHz) $Z(-40^{\circ}\text{C}) / Z(+20^{\circ}\text{C}) \leq 1.25$								
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 2000 hours at 125°C, the peak voltage shall not exceed the rated voltage. <table border="1" style="float: right;"> <tr><td>Capacitance change</td><td>Within ± 20% of the initial capacitance value (※ 3)</td></tr> <tr><td>tan δ</td><td>150% or less than the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>150% or less than the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Less than or equal to the initial specified value</td></tr> </table>	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
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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 85°C, 85% RH. <table border="1" style="float: right;"> <tr><td>Capacitance change</td><td>Within ± 20% of the initial capacitance value (※ 3)</td></tr> <tr><td>tan δ</td><td>150% or less than the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>150% or less than the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Less than or equal to the initial specified value</td></tr> </table>	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
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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. The temperature profile measurement shall be the temperature at the top of the capacitor. <table border="1" style="float: right;"> <tr><td>Capacitance change</td><td>Within ± 10% of the initial capacitance value (※ 3)</td></tr> <tr><td>tan δ</td><td>130% or less than the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>130% or less than the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Less than or equal to the initial specified value</td></tr> </table>	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
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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.

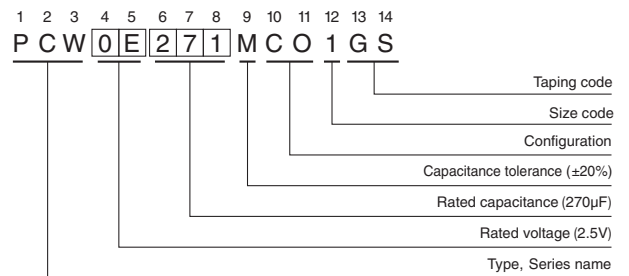
■ Dimensions



	(mm)			
Size	φ5 × 6L	φ6.3 × 6L	φ8 × 7L	φ8 × 10L
φD	5.0	6.3	8.0	8.0
L	5.9	6.0	7.0	10.0
A	6.0	7.3	9.0	9.0
B	5.3	6.6	8.3	8.3
C	5.3	6.6	8.3	8.3
E	1.6	2.1	3.2	3.2
H	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage	
V	2.5, 4, 6.3
Code	e, g, j

Type numbering system (Example : 2.5V 270μF)



● Frequency coefficient of rated ripple current

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

● Dimension table in next page.

PCW

■ Dimensions

Rated Voltage (V) (code)	Surge Voltage (V)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	ESR (mΩ) (20°C /100kHz)	Rated Ripple (mArms) (125°C /100kHz)	Part Number
2.5 (0E)	2.8	270	5×6	0.08	270	16	1800	PCW0E271MCO1GS
		390	6.3×6	0.08	292	15	1890	PCW0E391MCO1GS
		820	8×7	0.08	615	14	2100	PCW0E821MCO1GS
		1800	8×10	0.08	1350	13	2200	PCW0E182MCO1GS
4 (0G)	4.6	180	5×6	0.08	288	17	1720	PCW0G181MCO1GS
		330	6.3×6	0.08	396	16	1800	PCW0G331MCO1GS
		560	8×7	0.08	672	15	2150	PCW0G561MCO1GS
		1200	8×10	0.08	1440	14	2300	PCW0G122MCO1GS
6.3 (0J)	7.2	150	5×6	0.08	378	18	1580	PCW0J151MCO1GS
		220	6.3×6	0.08	415	16	1800	PCW0J221MCO1GS
		470	8×7	0.08	888	15	2200	PCW0J471MCO1GS
		1000	8×10	0.08	1890	14	2500	PCW0J102MCO1GS

Blue : New product (as of October 2024)

• For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.