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CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

nichicon

PCW

Chip Type,
125°C Reliability

For SMD | HR High Ripple Current | Z Low Impedance | F 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.

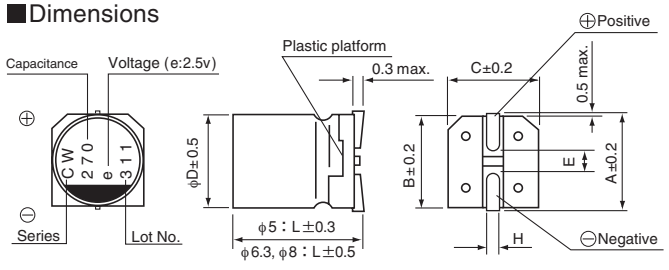
PCW → High temperature, Ripple current superimposition → PCJ

■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°C) / Z(+20°C) ≦ 1.25 (100kHz) Z(−40°C) / Z(+20°C) ≦ 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. 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 85°C, 85% 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. The temperature profile measurement shall be the temperature at the top of the capacitor. 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
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

● Dimension table in next page.

Type numbering system (Example : 2.5V 270µF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
P	C	W	0	E	2	7	1	M	C	O	1	G	S

- Taping code
- Size code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (270µF)
- Rated voltage (2.5V)
- Type, Series name

Voltage

V	2.5	4	6.3
Code	e	g	j

● Frequency coefficient of rated ripple current

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

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PCW

■Dimensions

Rated Voltage (V) (code)	Surge Voltage (V)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	ESR (mΩ) (20℃ /100kHz)	Rated Ripple (mArms) (125℃ /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.