CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

nichicon

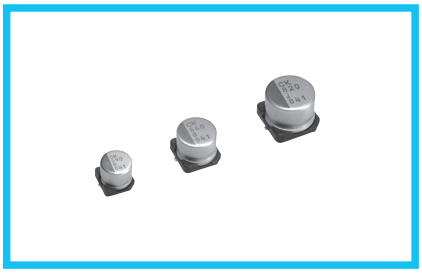
PCK

Chip Type, Ultra-low ESR

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

- Ultra-low ESR, Higher Capacitance, High ripple current.
- Load life of 2000 hours at 105°C.
- SMD type : Lead free reflow soldering condition at 260°C peak correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

PCJ → Low ESR → PCK



■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	2.5 to 6.3V
Rated Capacitance Range	220 to 2200μF
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 2000 hours at 105°C.
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.
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.
Marking	Navy blue print on the case top

Endurance

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)

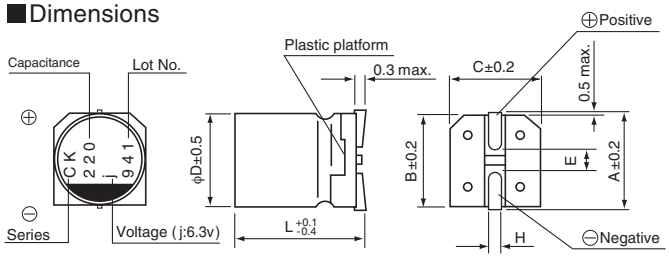
Capacitance change	Within ± 20% of the initial capacitance value (※3)
tan δ	150% or less than the initial specified value
ESR (※1)	150% or less than the initial specified value
Leakage current (※2)	Less than or equal to the initial specified value

Resistance to Soldering Heat

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

※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	φ6.3 × 6L	φ8 × 7L	φ10 × 8L	φ10 × 10L
φD	6.3	8.0	10.0	10.0
L	5.9	6.9	7.9	9.9
A	7.3	9.0	11.0	11.0
B	6.6	8.3	10.3	10.3
C	6.6	8.3	10.3	10.3
E	2.1	3.2	4.6	4.6
H	0.5 to 0.8	0.8 to 1.1	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 : 6.3V 220μF)

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

- 14: Taping code
- 11–12: Configuration
- 9–10: Capacitance tolerance (±20%)
- 6–8: Rated capacitance (220μF)
- 5: Rated voltage (6.3V)
- 4: Series name
- 1–3: Type

●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.

PCK

■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) (105°C/100kHz)	Part Number
2.5 (0E)	2.8	390	6.3 × 6	0.12	293	10	3900	PCK0E391MCO1GS
		560	8 × 7	0.12	420	9	4500	PCK0E561MCO1GS
		680	8 × 7	0.12	510	9	4500	PCK0E681MCO1GS
		1200	10 × 8	0.12	900	9	5000	PCK0E122MCO1GS
		2200	10 × 10	0.12	1650	8	6000	PCK0E222MCO1GS
4 (0G)	4.6	330	6.3 × 6	0.12	396	10	3900	PCK0G331MCO1GS
		470	8 × 7	0.12	564	9	4500	PCK0G471MCO1GS
		560	8 × 7	0.12	672	9	4500	PCK0G561MCO1GS
		1000	10 × 8	0.12	1200	9	5000	PCK0G102MCO1GS
		1800	10 × 10	0.12	2160	8	6000	PCK0G182MCO1GS
6.3 (0J)	7.2	220	6.3 × 6	0.12	416	10	3900	PCK0J221MCO1GS
		330	8 × 7	0.12	624	9	4500	PCK0J331MCO1GS
		390	8 × 7	0.12	737	9	4500	PCK0J391MCO1GS
		820	10 × 8	0.12	1550	9	5000	PCK0J821MCO1GS
		1500	10 × 10	0.12	2835	8	6000	PCK0J152MCO1GS

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