

# CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

**PCZ** Chip Type, Higher Capacitance  
High Temperature Range



**NEW**

- High reliability.
- Low ESR, High ripple current.
- Long life of 2000 hours at 150°C.
- SMD type : Lead free reflow soldering condition at 260°C peak complete correspondence.
- Compliant to the RoHS directive (2011/65/EU).
- ESR after Endurance at -40°C.
- AEC-Q200 compliant. Please contact us for details.

**PCZ** ← High Temperature → **PCH**



## Specifications

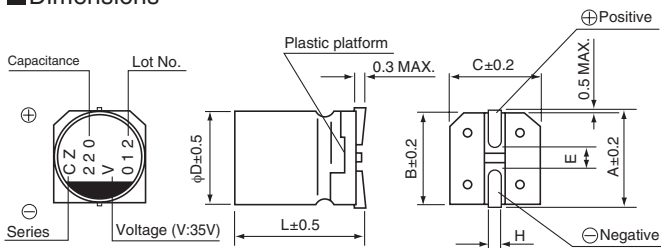
Item	Performance Characteristics									
Category Temperature Range	-55 to +150°C									
Rated Voltage Range	25 to 35V									
Rated Capacitance Range	100 to 330μF									
Capacitance Tolerance	±20% at 120Hz, 20°C									
Tangent of loss angle (tan δ)	Less than or equal to the specified value at 120Hz, 20°C									
ESR (※1)	Less than or equal to the specified value at 100kHz, 20°C									
Leakage Current (※2)	After 2 minutes' application of rated voltage, leakage current is not more than 0.03CV or 3(μA), whichever is greater.									
Temperature Characteristics (Max.Impedance Ratio)	Z-55°C / Z+20°C ≤ 1.25 (100kHz)									
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 150°C.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ± 20% of initial capacitance 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>200% or less of 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 initial capacitance value (※3)	tan δ	150% or less of the initial specified value	ESR (※1)	200% or less of the initial specified value	Leakage current (※2)	Less than or equal to the initial specified value
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ESR (※1)	200% or less of the initial specified value									
Leakage current (※2)	Less than or equal to the initial specified value									
ESR after Endurance (※1)	Less than or equal to the specified value at 100kHz, -40°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 2000 hours at 85°C, 85% RH.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ± 20% of initial capacitance 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>200% or less of 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 initial capacitance value (※3)	tan δ	150% or less of the initial specified value	ESR (※1)	200% or less of the initial specified value	Leakage current (※2)	Less than or equal to the initial specified value
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tan δ	150% or less of the initial specified value									
ESR (※1)	200% or less of 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 260°C or less, reflow soldering shall be two times maximum. Measurement for solder temperature profile shall be made at the capacitor top and the terminal.	<table border="1"> <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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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.

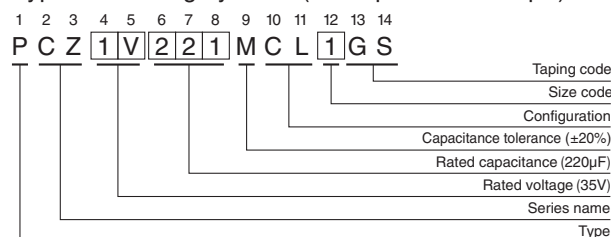
※3 Initial value : The value before test of examination of resistance to soldering.

## Dimensions



	(mm)		
Size	φ8 × 10L	φ10 × 10L	φ10 × 12.7L
φD	8.0	10.0	10.0
L	9.9	9.9	12.6
A	9.0	11.0	11.0
B	8.3	10.3	10.3
C	8.3	10.3	10.3
E	3.2	4.6	4.6
H	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

## Type numbering system (Example : 35V 220μF)



## Voltage

V	25	35
Code	E	V

## 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.

## CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

PCZ

## ■ Dimensions

Rated Voltage (V)(code)	Surge Voltage (V)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D $\times$ L (mm)	$\tan \delta$	Initial ESR (m $\Omega$ ) (20°C / 100kHz)	Low temp. ESR after Endurance (m $\Omega$ ) (-40°C / 100kHz)	Rated Ripple (mA <sub>rms</sub> ) (150°C / 100kHz)	Part Number
25 (1E)	31	150	▲ 8 $\times$ 10	0.08	20	40	1800	PCZ1E151MCL6GS
		270	10 $\times$ 10	0.08	20	40	1800	PCZ1E271MCL1GS
		330	10 $\times$ 12.7	0.08	15	30	2100	PCZ1E331MCL1GS
35 (1V)	43	100	▲ 8 $\times$ 10	0.08	22	44	1700	PCZ1V101MCL6GS
		180	10 $\times$ 10	0.08	20	40	1800	PCZ1V181MCL1GS
		220	10 $\times$ 12.7	0.08	16	32	2000	PCZ1V221MCL1GS

No marked, [1] will be put at 12th digit of type numbering system.  
 ▲: In this case, [6] will be put at 12th digit of type numbering system.

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[6R3AREP271M05X7E15P26](#) [250ARHA102M10A6T](#) [SPZ1VM221F11O00RAXXX](#) [SPZ1EM471E14O00RAXXX](#)  
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