## CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

# nichicon



Radial Lead Type, Long Life Assurance



•Ultra-low ESR, High ripple current.

- •Load life of 5000 hours at 105°C.
- Radial lead type :
- Lead free flow soldering condition correspondence.
- •Compliant to the RoHS directive (2011/65/EU).





#### Specifications

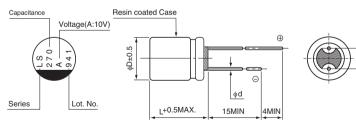
| Item   | Performance Characteristics  |   |   |  |  |  |  |  |
|--|--|---|---|--|--|--|--|--|
| Category Temperature Range                           | -55 to +105°C  |   |   |  |  |  |  |  |
| Rated Voltage Range                                  | 2.5 to 16V   |   |   |  |  |  |  |  |
| Rated Capacitance Range                              | 100 to 1500µF  |   |   |  |  |  |  |  |
| Capacitance Tolerance                                | ±20% at 120Hz, 20°C  |   |   |  |  |  |  |  |
| Tangent of loss angle (tan $\delta$ )                | 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' app  | lication of rated voltage   | at 20°C   |  |  |  |  |  |
| Temperature Characteristics<br>(Max.Impedance Ratio) | Z+105°C / Z+20°C ≤ 1.25 (100kHz)<br>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 5000 hours at 105°C.   | Capacitance change<br>tan δ<br>ESR (% 1)<br>Leakage current (% 2) | Within ± 20% of the initial capacitance value (* 3)<br>150% or less than the initial specified value<br>150% or less than the initial specified value<br>Less than or equal to the initial specified value              |  |  |  |  |  |
| Damp Heat<br>(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<br>tan δ<br>ESR (※ 1)<br>Leakage current (※ 2) | Within ± 20% of the initial capacitance value (**3)<br>150% or less than the initial specified value<br>150% or less than the initial specified value<br>Less than or equal to the initial specified value              |  |  |  |  |  |
| Resistance to<br>Soldering Heat                      | After soldering the capacitor under the soldering conditions prescribed here as preheat at 150 to 200°C for 60 to 180 seconds and peak temperature at 265°C for 10 seconds or less, the capacitor shall meet the specifications listed at right, provided that its temperature profile is measured at both of terminal ends facing the soldering side. | Capacitance change<br>tan ð<br>ESR (* 1)<br>Leakage current (* 2) | Within $\pm$ 10% of the initial capacitance value ( $\approx$ 3)<br>130% or less than the initial specified value<br>130% or less than the initial specified value<br>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 to the capacitor body.

\*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 × 9L | φ6.3 × 10.5L | φ8 × 7L | φ8 × 9L | φ8 × 12L | φ10 × 13L |
| φD   | 6.3       | 6.3          | 8.0     | 8.0     | 8.0      | 10.0      |
| Ľ    | 8.5       | 10.0         | 6.5     | 8.5     | 11.5     | 12.5      |
| Р    | 2.5       | 2.5          | 3.5     | 3.5     | 3.5      | 5.0       |
| φd   | 0.6       | 0.5          | 0.6     | 0.6     | 0.6      | 0.6       |

Please refer to page 20 about the end seal configuration.

|                              | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | 7 8 9<br>7 1 N | 5 6 7<br>A 2 7 | · . | $\stackrel{1}{\overset{2}{\overset{P}{}}}$ |
|------------------------------|---|----------------|----------------|-----|--|
| Size code                    |   |                |                |     |  |
| Configuration                |   |                |                |     |  |
| Capacitance tolerance (±20%) |   |                |                |     |  |
| Rated capacitance (270µF)    |   |                |                |     |  |
| Rated voltage (10V)          |   |                |                |     |  |
| Series name                  |   |                |                |     |  |
| Туре                         |   |                |                |     |  |

Type numbering system (Example : 10V 270µF)

| Voltage |     |   |     |    |    |
|---------|-----|---|-----|----|----|
| V       | 2.5 | 4 | 6.3 | 10 | 16 |
| Code    | е   | g | j   | А  | С  |

Frequency coefficient of rated ripple current
Frequency 120Hz 1kHz 10kHz 100kHz or more
Coefficient 0.05 0.30 0.70 1.00

## CAT.8100H

# CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS



### Dimensions

| Rated Voltage<br>(V)<br>code | Surge Voltage<br>(V) | Rated Capacitance<br>(µF) | Case Size<br><sub>\$\$\$</sub> D × L (mm) | tan δ | Leakage Current<br>(µA) | ESR (mΩ)<br>(at 100kHz 20°C) | Rated Ripple<br>(mArms) | Part Number  |
|------------------------------|----------------------|---------------------------|---|-------|-------------------------|------------------------------|-------------------------|--------------|
|                              | 2.8                  | 330                       | ○ 6.3×9                                   | 0.08  | 500                     | 8                            | 4800                    | PLS0E331MCO8 |
|                              |                      | 680                       | $\triangle$ 8 × 7                         | 0.08  | 340                     | 15                           | 3900                    | PLS0E681MCL2 |
| 2.5                          |                      | 820                       | ○ 6.3×9                                   | 0.08  | 500                     | 8                            | 4800                    | PLS0E821MCO8 |
| (0E)                         | 2.0                  | 820                       | ▲ 8×9                                     | 0.08  | 410                     | 7                            | 5200                    | PLS0E821MCO6 |
|                              |                      | 820                       | 8 × 12                                    | 0.08  | 410                     | 7                            | 5800                    | PLS0E821MDO1 |
|                              |                      | 1500                      | 10 × 13                                   | 0.08  | 750                     | 8                            | 5500                    | PLS0E152MDO1 |
|                              |                      | 270                       | ○ 6.3×9                                   | 0.08  | 500                     | 8                            | 4800                    | PLS0G271MCO8 |
|                              |                      | 560                       | $\triangle$ 8 × 7                         | 0.08  | 448                     | 15                           | 3900                    | PLS0G561MCL2 |
| 4<br>(0G)                    | 4.6                  | 560                       | ▲ 8×9                                     | 0.08  | 448                     | 7                            | 5200                    | PLS0G561MCO6 |
| (00)                         |                      | 680                       | 8 × 12                                    | 0.08  | 544                     | 7                            | 5800                    | PLS0G681MDO1 |
|                              |                      | 1200                      | 10 × 13                                   | 0.08  | 960                     | 8                            | 5500                    | PLS0G122MDO1 |
|                              | 7.2                  | 330                       | ■ 6.3 × 10.5                              | 0.08  | 416                     | 20                           | 3000                    | PLS0J331MDL4 |
|                              |                      | 390                       | $\triangle$ 8 × 7                         | 0.08  | 491                     | 15                           | 3900                    | PLS0J391MCL2 |
| 6.3                          |                      | 470                       | 8 × 12                                    | 0.08  | 592                     | 7                            | 5500                    | PLS0J471MDO1 |
| (U)                          |                      | 560                       | ○ 6.3×9                                   | 0.08  | 706                     | 9                            | 4300                    | PLS0J561MCO8 |
|                              |                      | 560                       | ▲ 8×9                                     | 0.08  | 706                     | 8                            | 5000                    | PLS0J561MCO6 |
|                              |                      | 820                       | 10 × 13                                   | 0.08  | 1033                    | 8                            | 5500                    | PLS0J821MDO1 |
|                              | 11.5                 | 150                       | ■ 6.3 × 10.5                              | 0.08  | 300                     | 20                           | 3000                    | PLS1A151MDL4 |
| 10<br>(1A)                   |                      | 270                       | 8 × 12                                    | 0.08  | 540                     | 8                            | 4900                    | PLS1A271MDO1 |
|                              |                      | 470                       | 10 × 13                                   | 0.08  | 940                     | 8                            | 5500                    | PLS1A471MDO1 |
|                              | 18.4                 | 100                       | ■ 6.3 × 10.5                              | 0.08  | 320                     | 24                           | 2800                    | PLS1C101MDL4 |
| 16                           |                      | 270                       | 8 × 12                                    | 0.08  | 864                     | 9                            | 4500                    | PLS1C271MDO1 |
| (1C)                         |                      | 330                       | 10 × 13                                   | 0.08  | 1056                    | 9                            | 4700                    | PLS1C331MDO1 |
|                              |                      | 470                       | 10 × 13                                   | 0.08  | 1504                    | 9                            | 4700                    | PLS1C471MDO1 |

Rated ripple current (mArms) at 105°C 100kHz

No marked, 1 will be put at 12th digit of type numbering system. △: In this case, 2 will be put at 12th digit of type numbering system. ■: In this case, 4 will be put at 12th digit of type numbering system.

▲: In this case, 6 will be put at 12th digit of type numbering system. o: In this case, 8 will be put at 12th digit of type numbering system.

• Please refer to page 20, 21, 22 about the formed or taped product spec. • Please refer to page 3 for the minimum order quantity.

# **Mouser Electronics**

Authorized Distributor

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Nichicon:

PLS1C101MDL4TD PLS1A471MDO1TD PLS1A271MDO1TD PLS0J561MCO6TD PLS0J471MDO1TD PLS0J331MDL4TD PLS0G561MCL2TD PLS0E821MDO1TD PLS0E821MCO6TD PLS1C331MDO1TD PLS0E821MCO8TD PLS0G122MDO1TD PLS1C471MDO1TD PLS0G681MDO1TD PLS0E331MCO8TD PLS0E152MDO1TD PLS1C271MDO1TD PLS0E681MCL2TD PLS0G561MCO6TD PLS0J561MCO8TD PLS0J821MDO1TD PLS0G271MCO8TD PLS1A151MDL4TD PLS0J391MCL2TD PLS0J391MCL2 PLS0G561MCO6 PLS0G561MCL2 PLS1C271MDO1 PLS0E821MDO1 PLS0G122MDO1 PLS0E821MCO6 PLS1C331MDO1 PLS1A471MDO1 PLS1C471MDO1 PLS0G681MDO1 PLS0G271MCO8 PLS0J331MDL4 PLS0J561MCO6 PLS1C101MDL4 PLS1A151MDL4 PLS0E331MCO8 PLS0E821MCO8 PLS0J821MDO1 PLS0J471MDO1 PLS0E152MDO1 PLS0E681MCL2 PLS1A271MDO1 PLS0E821MCO8 PLS0J821MDO1 PLS0J471MDO1