# Koshin

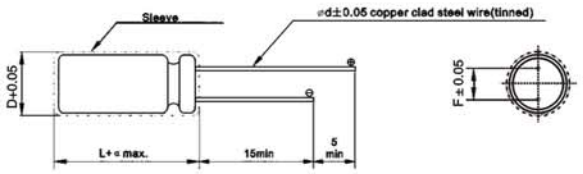
## K3S Miniature Aluminium Electrolytic Capacitors

### 5mm L,105℃ Use Capacitors, Series K3S.

Diameters from Φ3 to Φ8mm and a height of 5mm
Guaranteed 1000 hours at 105℃

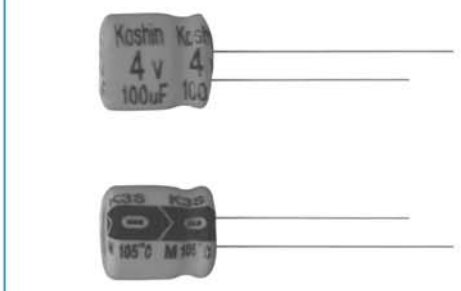
RoHS

Outline Drawing Unit: mm




| øD | 3 | 4 | 5 | 6.3 | 8 |
|---|---|---|---|---|---|
| F | 1.0 | 1.5 | 2.0 | 2.5 | 2.5 |
| ød | 0.4 | 0.45 | 0.45 | 0.45 | 0.45 |
| α | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |

Photo




Marking color: black print on yellow sleeve

### Specifications

| No. | Item | Performance | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Temperature range (℃) | –55 to +105 | | | | | | | | |
| 2 | Leakage current ( μ A) | Less than 0.01CV or 3 whichever is larger (after two minutes) C: Rated Capacitance( μ F); V: Rated voltage(V) 20℃ | | | | | | | | |
| 3 | Capacitance tolerance (%) | ± 20 (20℃,120Hz) | | | | | | | | |
| 4 | Tangent of the loss angle (Tan δ ) | Rated voltage (V) | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | (20℃,120Hz) |
| | | Tan δ (max) | | 0.35 | 0.28 | 0.24 | 0.20 | 0.14 | 0.12 | 0.10 | |
| 5 | Low temperature characteristics | Rated voltage (V) | | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | (120Hz) |
| | | Impedance ratio (max) | $Z_{(-25℃)}/Z_{(+20℃)}$ | 7 | 4 | 3 | 2 | 2 | 2 | 2 | |
| | | | $Z_{(-40℃)}/Z_{(+20℃)}$ | 15 | 8 | 6 | 4 | 4 | 3 | 3 | |
| 6 | Endurance (105℃) (Applied ripple current) | Test time | | 1000hours | | | | | | | |
| | | Leakage current | | The initial specified value or less | | | | | | | |
| | | Percentage of capacitance change | | Within ± 20% of initial value | | | | | | | |
| | | Tangent of the loss angle | | 200% or less of the initial specified value | | | | | | | |
| 7 | Shelf life (105℃) | Test time: 500 hours; other items are the same as those for the endurance. Voltage application treatment: According to JIS–C–5102 | | | | | | | | |
| 8 | Applicable standards | JIS–C–5102 and JIS–C–5141 | | | | | | | | |

Coefficient of Frequency for Ripple Current

| Frequency (Hz) / Rated voltage (v) | 50 · 60 | 120 | 1K | 10K · 100K |
|---|---|---|---|---|
| 4 to 16 | 0.80 | 1.00 | 1.15 | 1.25 |
| 25 to 35 | 0.80 | 1.00 | 1.25 | 1.41 |
| 50 | 0.80 | 1.00 | 1.35 | 1.50 |

Coefficient of Temperature for Ripple Current

| Temperature(℃) | 60 | 85 | 105 |
|---|---|---|---|
| Coefficient | 1.90 | 1.40 | 1.00 |

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## K3S Miniature Aluminium Electrolytic Capacitors

### DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension:ΦDXL(mm)
Ripple Current: mA/rms at 120Hz,105℃

| V.DC / Contents μF | 4V | | 6.3V | | 10V | | 16V | | 25V | | 35V | | 50V | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ΦD×L | mA | ΦD×L | mA | ΦD×L | mA | ΦD×L | mA | ΦD×L | mA | ΦD×L | mA | ΦD×L | mA |
| 0.1 | → | | → | | → | | → | | → | | → | | 4X5(3X5) | 1.0 |
| 0.22 | → | | → | | → | | → | | → | | → | | 4X5(3X5) | 2.6 |
| 0.33 | → | | → | | → | | → | | → | | → | | 4X5(3X5) | 3.2 |
| 0.47 | → | | → | | → | | → | | → | | → | | 4X5(3X5) | 3.8 |
| 1 | → | | → | | → | | → | | → | | → | | 4X5(3X5) | 6.2 |
| 2.2 | → | | → | | → | | → | | 3X5 | 7.5 | 4X5 | 8.7 | 4X5 | 10 |
| 3.3 | → | | → | | → | | → | | 4X5 | 11 | 4X5 | 12 | 4X5 | 13 |
| 4.7 | → | | → | | 4X5 | 13 | 4X5 | 14 | 4X5 | 15 | 4X5 | 17 | 5X5 | 20 |
| 10 | → | | 4X5 | 18 | 4X5 | 14 | 4X5 | 23 | 5X5 | 27 | 5X5 | 27 | 6.3X5 | 31 |
| 22 | 4X5 | 20 | 4X5 | 21 | 5X5 | 27 | 5X5 | 30 | 6.3X5 | 42 | 6.3X5 | 46 | 6.3X5 | 46 |
| 33 | 4X5(5X5) | 27 | 5X5 | 30 | 5X5 | 34 | 6.3X5 | 40 | 6.3X5 | 52 | 6.3X5 | 52 | 8X5 | 55 |
| 47 | 4X5(5X5) | 34 | 5X5 | 36 | 6.3X5 | 43 | 6.3X5 | 48 | 6.3X5 | 58 | 8X5 | 68 | | |
| 100 | 5X5(6.3X5) | 50 | 6.3X5 | 56 | 6.3X5 | 70 | 8X5 | 80 | 8X5 | 85 | | | | |
| 220 | 6.3X5 | 74 | 8X5 | 80 | 8X5 | 95 | | | | | | | | |