

EDCON-COMPONENTS



Specifications

Standard Tantalum Solid Electrolytic Capacitors Chip Type

Operating temperature Range $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (85°C with rated voltage derating).

Capacitance tolerance: $\pm 20\%$.

DC leakage, dissipation factor and ESR at 25°C .

Taping and reeling per EIA481-1 Specification.

General purpose surface mount type.

Compact size & wide CV range.

High Solderability & stabler characteristics for soldering.

Compatible with all popular automatic pick and place equipment.

Technical Drawing



| Technical | Performance Characteristics |
|-----------|-----------------------------|
|-----------|-----------------------------|

| | |
|------------------------------|--|
| Operating Temperature Range: | $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$ |
| Rated Working Voltage: | 4 to 50VDC |
| Nominal Capacitance Range: | 0,1 to 1500 μF |
| Capacitance Tolerance: | $\pm 20\%$ / $\pm 10\%$ (120Hz $\pm 20^{\circ}\text{C}$) |
| Leakage Current: | Not more than 0,01CV (μA) or 0,5 μA whichever is greater |

Dimensions

| Case Size | L= $\pm 0,2$ | W1= $\pm 7-0,2$ | H= $\pm 0,2$ | S= $\pm 0,2$ | W2= $\pm 0,2$ |
|-----------|--------------|-----------------|--------------|--------------|---------------|
| S | 2,0 | 1,2 | 1,2 | 0,5 | 1,2 |
| A | 3,2 | 1,6 | 1,6 | 0,8 | 1,2 |
| B | 3,5 | 2,8 | 1,9 | 0,8 | 2,2 |
| C | 6,0 | 3,2 | 2,5 | 1,3 | 2,2 |
| D | 7,3 | 4,3 | 2,8 | 1,3 | 2,4 |
| E | 7,3 | 4,3 | 4,0 | 1,3 | 2,4 |
| V | 7,3 | 6,1 | 3,5 | 1,4 | 3,1 |

| Characteristics at High and Low Temperature | capacitance (μF) | Capacitance Change (%) | | | DF Max. (%) | | | | DCL Max. (μF) | |
|---|-------------------------------------|------------------------|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|------------------------|----------------------------|------------------------|
| | | -55°C | $+85^{\circ}\text{C}$ | $+125^{\circ}\text{C}$ | -55°C | $+20^{\circ}\text{C}$ | $+55^{\circ}\text{C}$ | $+125^{\circ}\text{C}$ | $+85^{\circ}\text{C}$ | $+125^{\circ}\text{C}$ |
| 1 | 1,5 ~ 68 100 ~ 680 680 ~ 1500 | -10 | +10 | +12 | 6 | 4 | 6 | 6 | 10lo | 20lo |
| 10 | | | | | 6 | 10 | 10 | | | |
| 12 | | | | | 8 | 12 | 12 | | | |
| 14 | | | | | 10 | 14 | 14 | | | |

**Standard Tantalum Capacitor
Alternate to KEMET**

Part No.: **I17001**

| | | | | | | | | | | |
|-------|--------|------|--------|--------|--------|-----------|-----------|----------|------------|-----------|
| DRW: | Jason | CHKD | Wilson | MATL: | Wilson | TOLERANCE | Mason | DATE | 20.05.2010 | Customer: |
| APPD: | Schumi | | | FINISH | Jamy | | Sheet No. | 1 from 5 | | |

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Moisture Resistance

Test conditions:

| | |
|-------------------------------|-----------------------------------|
| Relative Humidity: | 90 to 95% without load |
| Ambient Temperature: | .+ 40°C |
| Duration: | 500 hours |
| Post rest requirement at 20°C | |
| Leakage current: | ≤ Initial specified value. |
| Capacitance change: | +/- 10% of initial measured value |
| tan | ≤ Initial specified value. |

Shell Life

| | | |
|----------------------|------------|---------------------------------|
| Test conditions | | Post test requirements at +20°C |
| Duration: | 2000 hours | Same limits for Endurance. |
| Ambient temperature: | . +125°C | |
| Applied Voltage: | (none) | |

Solder Heat Resistance

The Capacitor shall withstand dipping into solder bath for 5 +/-1 seconds at 260 +/-5°C

Endurance

Test conditions

| Conditions Item | Derating | Rating |
|---------------------|--------------------------|-----------------------|
| Duration | 2000 hours | 2000 hours |
| Ambient temperature | . +125°C | . +85°C |
| Applied Voltage | Derating working voltage | Rated working voltage |
| Source impedance | 1Ω/V | 1Ω/V |

Derating Voltage +125°C for 10~50V working

| | | | | | | | | |
|---------------------|-----|-----|------|------|------|------|------|------|
| Rated Voltage | 4,0 | 6,3 | 10,0 | 16,0 | 20,0 | 25,0 | 35,0 | 50,0 |
| Voltage Derating | 2,5 | 4,0 | 6,3 | 10,0 | 13,0 | 16,0 | 23,0 | 33,0 |
| Surge Voltage +85°C | 5,0 | 8,0 | 13,0 | 20,0 | 26,0 | 32,0 | 46,0 | 65,0 |
| Surge Voltage +0°C | 3,4 | 5,0 | 9,0 | 12,0 | 16,0 | 20,0 | 26,0 | 38,0 |

Post test requirements 5.0 at +20°C

| | |
|--------------------|-------------------------------------|
| Leakage Current | ≤ 125% of initial specified value |
| Capacitance Change | .+/- 10% of initial measured value. |
| tan | ≤ initial specified value |

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Packing Specification

Dimensions of the carrier tape and standards parts quantity per reel



| Case Size | A +/- 0,1 | B +/- 0,1 | C +/- 0,1 | D +/- 0,1 | E +/- 0,1 | F +/- 0,1 | G +/- 0,1 | H +/- 0,1 | J +/- 0,1 | K max. | t | Quantity |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|-----|----------|
| S | 1,6 | 2,4 | 8 | 3,5 | 1,75 | 4 | 2 | 4 | 1,5 | 2,5 | 0,2 | 2000 |
| A | 1,9 | 3,5 | 8 | 3,5 | 1,75 | 4 | 2 | 4 | 1,5 | 2,5 | 0,2 | 2000 |
| B | 3,1 | 3,8 | 8 | 3,5 | 1,75 | 4 | 2 | 4 | 1,5 | 2,5 | 0,2 | 2000 |
| C | 3,6 | 6,4 | 12 | 5,5 | 1,75 | 8 | 2 | 4 | 1,5 | 3 | 0,3 | 500 |
| D | 4,7 | 7,7 | 12 | 5,5 | 1,75 | 8 | 2 | 4 | 1,5 | 3,4 | 0,3 | 500 |
| E | 4,6 | 7,6 | 12 | 5,5 | 1,75 | 8 | 2 | 4 | 1,5 | 4,6 | 0,3 | 400 |
| V | 6,4 | 7,4 | 12 | 5,5 | 1,75 | 8 | 2 | 4 | 1,5 | 3,8 | 0,3 | 400 |

| Tape width | 8 | 12 |
|------------|-------|------|
| A | Ø 180 | ← |
| B | Ø 60 | ← |
| C +/-0.2 | Ø 13 | ← |
| D +/-0.2 | Ø 21 | ← |
| E +/-0.5 | 2,0 | ← |
| W +/-0.3 | 9,0 | 13,0 |
| t +/-0.4 | 1,3 | ← |
| R +/-0.4 | 10,5 | ← |

Reel Dimensions Unit (mm)



Tape Leader and Tailer



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Ordering Informations

| Serie | Voltage | Tol. | Range Cod. | Case Code | ROHS | Package | | | | |
|--------|---------|------|------------|-----------|------|---------|--|--|--|--|
| I17001 | 100 | M | 157 | C | R | TR | | | | |

| | | | | | |
|-------------|-------------|------------|--------------|---------------------|-----------------|
| 100= 10Volt | M= Tol. 20% | 157= 150µF | C= Size Code | R= ROHS Conform | TR= Tape / Reel |
| | K= Tol. 10% | | | N= NON ROHS Conform | |

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Soldering Profile Curve

Classification Reflow Profile (JEDEC J-STD-020C)



| | |
|---|---------------|
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| | | | | | | | | | |
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