

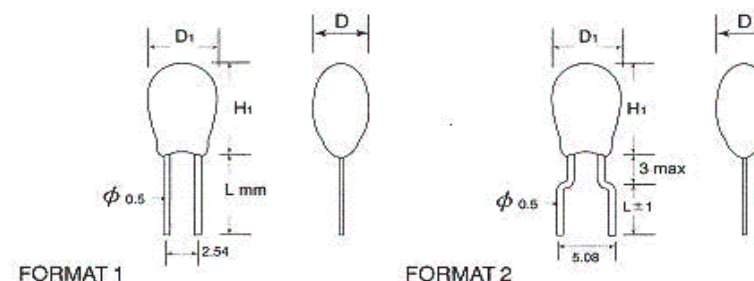
# EDCON-COMPONENTS



## Specifications

Radial Solid Tantalum Electrolytic Capacitor THT Type  
 Rated Voltage from 6,3 ~ 50Volt  
 Capacitance Range from 0,1 $\mu$ F ~ 470 $\mu$ F  
 Tolerance 10% or 20%  
 Highly reliable resin dipped type  
 Excellent frequency and temperature characteristics  
 Non flammable epoxy resin

## Technical Drawing



## Technical

## Performance Characteristics

Operating Temperature Range . -55 to +125°C ( -55 to +85° for 4 & 6,3 V)  
 Rated Working Voltage Range 6,3 ~ 50 VDC  
 Nominal Capacitance Range 0,1 ~ 33 $\mu$ F  
 Capacitance Tolerance .+/-20% ( +/-10% is available) ( 120Hz +/-20%)  
 Leakage Current Not more than 0,008CV ( $\mu$ A) or 0,5 $\mu$ A whichever is greater

| Characteristics at high and low Temperature | Cap. $\mu$ F | Capacit. Change (%) |          |           | DF max. % |        |        |         | DCL max. ( $\mu$ F) |         |         |
|---|--------------|---------------------|----------|-----------|-----------|--------|--------|---------|---------------------|---------|---------|
|   |              | -.50% °C            | +.85% °C | +.125% °C | -.50°C    | +.20°C | +.85°C | +.125°C | +.20°C              | +.85°C  | +.125°C |
| $\leq 1.0$                                  | . +10        | . +15               | . +25    | 6         | 4         | 6      | 6      | 10 lo   | 10 lo               | 12,5 lo |         |
| 1,5-68                                      |              |                     |          | 8         | 6         | 8      | 8      |         |                     |         |         |
| 100-330                                     |              |                     |          | 10        | 8         | 10     | 10     |         |                     |         |         |

## Dimensions (mm)

| Case Size           | A   | B   | C   | D   | E    | F    |
|---------------------|-----|-----|-----|-----|------|------|
| Formats 1/2/H1 max. | 7   | 8   | 9,5 | 11  | 13,5 | 16,5 |
| D1 max.             | 4,5 | 5,0 | 5,5 | 6,5 | 8,5  | 9,5  |
| D max.              | 4,2 | 4,7 | 5,5 | 6,5 | 8,5  | 9,5  |

|                 |          |            |
|-----------------|----------|------------|
| Wire length (L) | 5,7 +/-1 | 16,18 +/-1 |
| Code            | A        | B          |

**Standard Radial Tantalum Capacitor 16V**

Part No.: **I16001**

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

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## Moisture Resistance

|                                |   |
|--------------------------------|---|
| Test conditions                |   |
| Relative humidity              | : 90 to 95% without load                    |
| Ambient Temperature:           | : + 40°C                                    |
| Duration:                      | : 500hours                                  |
| Post test requirements at 20°C |   |
| Leakager current               | : ≤ 0,012CV or 0,75(µF) wichever is greater |
| Capacitance Change             | : +/-10% of initial measured value          |
| tan                            | : ≤ 150% of initial spevified value         |

## Shelf Life

|                     |             |                                 |
|---------------------|-------------|---------------------------------|
| Test conditions     |             | Post test requirements at +20°C |
| Duration            | :2000 hours | Same limits for "Endurance"     |
| Ambient temperature | : +85°C     |                                 |
| Applied Voltage     | : none      |                                 |

## Tinned radial leads Ø 0,5min.

## Temperature: 260°C

|   |  |
|---|--|
| Time of immersions: 3s                    | Time of immersions: 3S                   |
| Standard lead spacing :2,54/5,08 +/-0,5mm | The tin should cover 95% of wire surface |
| Solderability                             | Permissible pull test: 10N               |
| Recommended soldering bath                |  |

## Endurance

|                     |                              |                       |
|---------------------|------------------------------|-----------------------|
| Test conditions     |                              |                       |
| Conditions Item     | Derating (for 10 to 50V only | Rating                |
| Duration            | 1000hours                    | 2000 hours            |
| Ambient Temperature | .+105°C                      | .+ 85°C               |
| Applied voltage     | Derated working voltage      | Rated working voltage |
| Source impedance    | 1 Ω/V                        | 1 Ω/V                 |

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

|                     |     |     |      |      |      |      |      |      |
|---------------------|-----|-----|------|------|------|------|------|------|
| Rated Voltage       | 4,0 | 6,3 | 10,0 | 16   | 20   | 25   | 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 | 36,0 | 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 at +20°C

|                    |   |
|--------------------|---|
| Leakage current    | ≤ 0,01% CV or 0,0625 (µA), whichever is greater |
| Capacitance change | .+10% of inital measured value                  |
| tan                | ≤ initial specified value                       |

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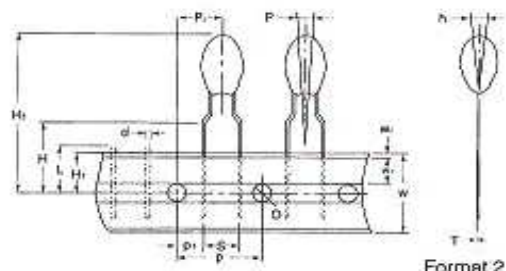
Customer:

|       |        |      |        |        |        |           |           |      |            |
|-------|--------|------|--------|--------|--------|-----------|-----------|------|------------|
| DRW:  | Jason  | CHKD | Wilson | MATL:  | Wilson | TOLERANCE | Mason     | DATE | 20.05.2010 |
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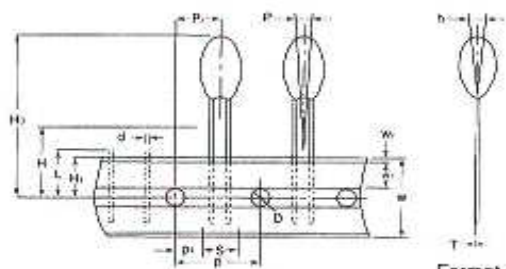
# EDCON-COMPONENTS



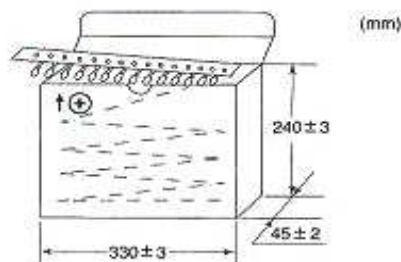
## Packing Specification Tape & Ammo Packing (conform to IEC288-2)



Format 2



Format 1



(mm)

| Item                            | Code       | Dimension (mm)        |
|---------------------------------|------------|-----------------------|
| Carrier tape width              | W          | 18,0                  |
| Hold down tape width            | W          | 6,0 +/-0,5            |
| Hold down tape position         | W          | 1,0max.               |
| Feed hold diameter              | D          | 4,0 +/-0,2            |
| Feed hole pitch                 | P          | 12,7 +/-0,3           |
| Hold center to lead             | P          | Format 1: 5,05 +/-0.7 |
|                                 |            | Format 2: 3,85 +/-0.7 |
| Hole center to component center | P          | 6,35 +/-1.0           |
| Lead wire clench height         | H          | 16,0 +/-0,5           |
| Hole position                   | H1         | 9,0 +/-0,5            |
| Base of component height        | H          | 0,8 min.              |
| Component height                | H          | 32,2max.              |
| Components alignment            | $\Delta P$ | 0 +/-1.3              |
|                                 | $\Delta h$ | 0 +/-2.0              |
| Lead spacing                    | S          | 'S' wires 2.5         |
|                                 |            | 'B' wires 5.0         |
| Lead diameter                   | d          | 0,5 +/-0,05           |
| length of snipping lead         | L          | 11,0 max.             |
| Carrier tape thickness          | T          | 0,5 +/-0,1            |

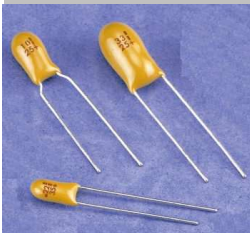
| Quantity of Tape Ammo Packing type |      |      |      |
|------------------------------------|------|------|------|
| Case Code                          | A~B  | C~D  | E~F  |
| QTY (PCS/box)                      | 2500 | 2000 | 1000 |

| CASE Size FORMAT | Qty per bag (cut ≤7mm) | CASE Size FORMAT | Qty per bag (cut ≤18mm) |
|------------------|------------------------|------------------|-------------------------|
| from A to B      | 1000                   | from A to B      | 1000                    |
| from C to D      | 1000                   | from C to D      | 500                     |
| from E to F      | 500                    | from E to F      | 500                     |

|   |               |
|---|---------------|
| <b>Standard Radial Tantalum Capacitor 16V</b> |               |
| Part No.:                                     | <b>I16001</b> |
| Customer:                                     |               |

|       |        |      |        |        |        |           |           |      |            |
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| Capacitance | DCL (µA) max. | DF % max. | ESR max. (Ω)<br>@ 100KHz |
|-------------|---------------|-----------|--------------------------|
| 33µF        | 4,2µA         | 8%        | 1,6Ω                     |

## Ordering Informations

| Serie         | Voltage Code | Tol. Code | Range Code | Case Code | Lead function | ROHS     | Package   |  |  |  |
|---------------|--------------|-----------|------------|-----------|---------------|----------|-----------|--|--|--|
| <b>I16001</b> | <b>160</b>   | <b>M</b>  | <b>336</b> | <b>D</b>  | <b>LL</b>     | <b>R</b> | <b>BU</b> |  |  |  |

|                    |                    |                  |                     |                                    |                            |                        |
|--------------------|--------------------|------------------|---------------------|------------------------------------|----------------------------|------------------------|
| <b>160=</b> 16Volt | <b>M=</b> Tol. 20% | <b>336=</b> 33µF | <b>D=</b> Size Code | <b>LL=</b> Long Lead               | <b>R=</b> ROHS Conform     | <b>BU=</b> Bulk / Ware |
|                    | <b>K=</b> Tol. 10% |                  |                     | <b>L6=</b> Lead length 5,7 +/- 1mm | <b>N=</b> NON ROHS Conform | <b>TR=</b> Tape / Reel |

**Standard Radial Tantalum Capacitor 16V**

Part No.: **I16001**

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Customer:



Soldering Profile Curve

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



|   |               |
|---|---------------|
| <b>Standard Radial Tantalum Capacitor 16V</b> |               |
| Part No.:                                     | <b>I16001</b> |
| Customer:                                     |               |

|       |        |      |        |        |        |           |           |          |            |
|-------|--------|------|--------|--------|--------|-----------|-----------|----------|------------|
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| APPD: | Schumi |      |        | FINISH | Jamy   |           | Sheet No. | 5 from 5 |            |