



# DATA SHEET

## CHIP 5000Hours Load Life 105°C

### Serie: I15009

Voltage: 6,3Volt Range: 680 $\mu$ F

Impedance: no specified Dimension 10x10,5mm

Ripple Current: 320mA

CHIP 5000Hours Load Life 105°C

Serie No.: I15009

|       |        |      |        |        |        |           |           |          |            |           |
|-------|--------|------|--------|--------|--------|-----------|-----------|----------|------------|-----------|
| DRW:  | Jason  | CHKD | Wilson | MATL:  | Wilson | TOLERANCE | Mason     | DATE     | 03.06.2014 | Customer: |
| APPD: | Schumi |      |        | FINISH | Jamy   |           | Sheet No. | 1 from 7 |            |           |

# EDCON-COMPONENTS



Designed for surface mounting on high density circuit board

Emboss carrier tape packing systems is available for automatic insertion



## Technical Informations

|  |                     |
|--|---------------------|
| Voltage:                                 | <b>6,3Volt</b>      |
| Range:                                   | <b>680µF</b>        |
| Dimension; D x L mm                      | <b>10x10,5mm</b>    |
| Impedance (Ω) max., at 20°C, 100kHz      | <b>no specified</b> |
| Ripple Current (mA rms) at 105°C, 100kHz | <b>320mA</b>        |

| Ordering Code |                |           |          |
|---------------|----------------|-----------|----------|
| <b>6V3</b>    | <b>Voltage</b> |           |          |
| <b>681</b>    | <b>Range</b>   |           |          |
| <b>D=</b>     | <b>G</b>       | <b>L=</b> | <b>4</b> |

Operating Temperatur Range of -55°C ~ +105°C

Load Life of 3000~5000 hours

|                             |               |   |
|-----------------------------|---------------|---|
| <b>Leakage current max.</b> | Ø4 ~ Ø10mm    | I = 0,01CV or 3µA whichever is greater ( after 2 minutes) |
|                             | Ø12,5 ~ Ø16mm | I = 0,03CV or 4µA whichever is greater ( after 1 minutes) |

**Capacitance tolerance** ± 20% at 120Hz, 20°C

|   |      |               |      |      |      |      |      |      |      |      |  |  |  |  |
|---|------|---------------|------|------|------|------|------|------|------|------|--|--|--|--|
| <b>Dissipation factor max. (at 120Hz, 20°C)</b> | WV   |               | 6,3  | 10   | 16   | 25   | 35   | 50   | 63   | 100  |  |  |  |  |
|   | Tanδ | Ø4 ~ Ø10mm    | 0,28 | 0,24 | 0,20 | 0,16 | 0,13 | 0,12 | 0,12 | 0,12 |  |  |  |  |
|   |      | Ø12,5 ~ Ø16mm | 0,38 | 0,34 | 0,30 | 0,26 | 0,22 | 0,18 | 0,18 | 0,18 |  |  |  |  |

|  |               |                 |     |    |    |    |    |    |    |     |  |  |  |  |
|--|---------------|-----------------|-----|----|----|----|----|----|----|-----|--|--|--|--|
| <b>Low Temperatur characteristics ( Impedance ratio at 120Hz )</b> | WV            |                 | 6,3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |  |  |  |  |
|  | Ø4 ~ Ø10mm    | Z-25°C / Z+20°C | 3   | 3  | 2  | 2  | 2  | 2  | 2  | 2   |  |  |  |  |
|  |               | Z-55°C / Z+20°C | 8   | 5  | 4  | 3  | 3  | 3  | 3  | 3   |  |  |  |  |
|  | Ø12,5 ~ Ø16mm | Z-25°C / Z+20°C | 5   | 4  | 3  | 2  | 2  | 2  | 2  | 2   |  |  |  |  |
| Z-55°C / Z+20°C  |               | 12              | 10  | 8  | 5  | 4  | 3  | 3  | 3  |     |  |  |  |  |

|  |  |                                   |
|--|--|-----------------------------------|
| <b>Load Life ( after application of the rated voltage for 5000hrs at 125°C</b> | Leakage current                          | Less than specified value         |
|  | Capacitance Change                       | Within ±30% of initial value      |
|  | Tanδ                                     | Less than 300% of specified value |
|  | Ø4 ~ Ø6,3x5,8 , Ø8x6,2 ~ Ø6,3: 3000hours |                                   |

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**Shell life (at 105°C)** After 1000hours no load test, leakage current, capacitance and tan $\delta$  are same as load life value.

|                                     |   |                                    |
|-------------------------------------|---|------------------------------------|
| <b>Resistance to soldering heat</b> | After reflow soldering and resistance at room temperature, they meet the characteristics requirements listed at underside |                                    |
|                                     | Leakage current   | Less than specified value          |
|                                     | Capacitance Change  | Within $\pm 10\%$ of initial value |
|                                     | Tan $\delta$  | Less than specified value          |

| Size  | Capacitance<br>$\mu\text{F}$ | FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT |       |       |      |              |
|---|------------------------------|---|-------|-------|------|--------------|
|   |                              | Frequency   |       |       |      |              |
|   |                              | 50Hz  | 120Hz | 300Hz | 1KHz | 10KHz $\leq$ |
| $\varnothing 4 \sim \varnothing 10\text{mm}$    |                              | 0,70  | 1,00  | 1,17  | 1,36 | 1,50         |
| $\varnothing 12,5 \sim \varnothing 16\text{mm}$ | <b>~68</b>                   | 0,75  | 1,00  | 1,35  | 1,57 | 2,00         |
|   | <b>100 ~470</b>              | 0,80  | 1,00  | 1,23  | 1,34 | 1,50         |
|   | <b>680 ~3300</b>             | 0,85  | 1,00  | 1,10  | 1,13 | 1,15         |

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## Technical Drawing

### Dimension of Size $\varnothing$ 8x10,5 ~ 16mm



### Dimension of Size $\varnothing$ 4~ 8x6,2mm



| D x L    | $\varnothing$ 4 x 5,8 | $\varnothing$ 5 x 5,8 | $\varnothing$ 6,3 x 5,8 | $\varnothing$ 6,3 x 7,7 | $\varnothing$ 8 x 6,2 | $\varnothing$ 8 x 10,5 | $\varnothing$ 10 x 10,5 | $\varnothing$ 10 x 13,5 | $\varnothing$ 12,5 x 13,5 | $\varnothing$ 12,5 x 16 | $\varnothing$ 16 x 16,5 |
|----------|-----------------------|-----------------------|-------------------------|-------------------------|-----------------------|------------------------|-------------------------|-------------------------|---------------------------|-------------------------|-------------------------|
| A        | 2,0                   | 2,2                   | 2,6                     | 2,6                     | 3,4                   | 3,0                    | 3,3                     | 3,3                     | 4,9                       | 4,9                     | 5,8                     |
| B        | 4,3                   | 5,3                   | 6,6                     | 6,6                     | 8,4                   | 8,4                    | 10,4                    | 10,4                    | 13,0                      | 13,0                    | 17,0                    |
| C        | 4,3                   | 5,3                   | 6,6                     | 6,6                     | 8,4                   | 8,4                    | 10,4                    | 10,4                    | 13,0                      | 13,0                    | 17,0                    |
| E +/-0.2 | 1,0                   | 1,3                   | 1,9                     | 1,9                     | 2,3                   | 3,1                    | 4,7                     | 4,7                     | 4,7                       | 4,7                     | 6,4                     |
| L        | 5,8                   | 5,8                   | 5,8                     | 7,7                     | 6,2                   | 10,5                   | 10,5                    | 13,5                    | 13,5                      | 16,0                    | 16,5                    |

\*1 Voltage mark (6V) represents 6,3V for  $\varnothing$  4 ~ 10mm

\*3 (L +/- 0.5) is applicable to  $\varnothing$  8x10,5 ~  $\varnothing$  10mm

\*2 (L +/- 0.3) is applicable to  $\varnothing$  6,3 ~ 7.7 and  $\varnothing$  8 + 6,2mm

\*4 (L +/- 1.0) is applicable to  $\varnothing$  12,5 ~  $\varnothing$  16mm

RE. Date code and seriew type -1st digit for Year 2nd digit for Quarter, 4 quarter codes in one year area 1,4,7,0

3rd character for Serie S

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| Voltage Ordering Code | Code |
|-----------------------|------|
| 4,0                   | 4V0  |
| 6,3                   | 6V3  |
| 10                    | 100  |
| 16                    | 160  |
| 25                    | 250  |
| 35                    | 350  |
| 50                    | 500  |
| 63                    | 630  |
| 80                    | 800  |
| 100                   | 101  |
|                       |      |
|                       |      |
|                       |      |
|                       |      |
|                       |      |
|                       |      |
|                       |      |
|                       |      |
|                       |      |
|                       |      |
|                       |      |

| Diameter ordering Code D | Code |
|--------------------------|------|
| 3mm                      | 3    |
| 4mm                      | A    |
| 5mm                      | B    |
| 6,3mm                    | C    |
| 8mm                      | E    |
| 10mm                     | G    |
| 12,5mm                   | I    |
| 16mm                     | K    |

| Height ordering Code L | Code |
|------------------------|------|
| 4mm                    | A    |
| 5,4mm                  | 0    |
| 5,8mm                  | 1    |
| 6,2mm                  | 2    |
| 7,7mm                  | 3    |
| 10,5mm                 | 4    |
| 13,5mm                 | 5    |
| 16mm                   | 6    |
| 16,5mm                 | 7    |

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Customer:  
 email: info@edcon-components.com

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## Ordering Informations

| Serie | Voltage Code | Tolerance Code | Range Code | Size Code D | Size Code L | Special function | ROHS | Packing Code |  |  |
|-------|--------------|----------------|------------|-------------|-------------|------------------|------|--------------|--|--|
|-------|--------------|----------------|------------|-------------|-------------|------------------|------|--------------|--|--|

|               |            |          |            |          |          |           |          |           |  |  |
|---------------|------------|----------|------------|----------|----------|-----------|----------|-----------|--|--|
| <b>I15009</b> | <b>6V3</b> | <b>M</b> | <b>681</b> | <b>G</b> | <b>4</b> | <b>XX</b> | <b>R</b> | <b>TR</b> |  |  |
|---------------|------------|----------|------------|----------|----------|-----------|----------|-----------|--|--|

|                         |                |                     |                   |                   |                        |  |  |  |  |
|-------------------------|----------------|---------------------|-------------------|-------------------|------------------------|--|--|--|--|
| look table Voltage Code | <b>M= ±20%</b> | Ordering Code Range | Look table Code D | Look table Code L | <b>XX= No function</b> | <b>R= ROHS Conform</b><br><b>N= NON ROHS Conform</b> | <b>TR= Tape Reel Packing</b><br><b>BU= Bulk-Ware</b> |  |  |
|-------------------------|----------------|---------------------|-------------------|-------------------|------------------------|--|--|--|--|

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## Soldering Profile Curve

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



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