



# DATA SHEET

## CHIP Wide Temperature Range 105°C

### Serie: I15005

Voltage: 25Volt Range: 47 $\mu$ F

Impedance: no specified Dimension 6,3x5,4mm

Ripple Current: 48mA

**CHIP Wide Temperature  
Range 105°C**

Serie No.: **I15005**

|       |        |      |        |        |        |           |           |          |            |           |
|-------|--------|------|--------|--------|--------|-----------|-----------|----------|------------|-----------|
| 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:                                 | 25Volt       |
| Range:                                   | 47µF         |
| Dimension; D x L mm                      | 6,3x5,4mm    |
| Impedance (Ω) max., at20°C, 100kHz       | no specified |
| Ripple Current (mA rms) at 105°C, 100kHz | 48mA         |

| Ordering Code |         |    |   |
|---------------|---------|----|---|
| 250           | Voltage |    |   |
| 470           | Range   |    |   |
| D=            | C       | L= | 0 |

Operating Temperatur Range of -40°C ~ +85°C  
Load Life of 1000~2000 hours at 85°C

|  |                      |  |      |      |      |      |      |      |      |      |      |
|--|----------------------|--|------|------|------|------|------|------|------|------|------|
| Leakage current max.                     | 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 |  |      |      |      |      |      |      |      |      |      |
| Dissipation factor max. (at 120Hz, 20°C) | WV                   |  | 4,0  | 6,3  | 10   | 16   | 25   | 35   | 50   | 63   | 100  |
|  | Tanδ                 | Ø4 ~ Ø10mm   | 0,42 | 0,30 | 0,26 | 0,22 | 0,16 | 0,14 | 0,21 | 0,12 | 0,12 |
|  |                      | Ø12,5 ~ Ø16mm  | 0,45 | 0,38 | 0,34 | 0,30 | 0,26 | 0,22 | 0,18 | 0,14 | 0,12 |

|   |               |                 |     |     |    |    |    |    |    |    |     |
|---|---------------|-----------------|-----|-----|----|----|----|----|----|----|-----|
| Low Temperatur characteristics ( Impedance ratio at 120Hz ) | WV            |                 | 4,0 | 6,3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
|   | Ø4 ~ Ø10mm    | Z-25°C / Z+20°C | 7   | 4   | 3  | 2  | 2  | 2  | 2  | 2  | 2   |
|   |               | Z-40°C / Z+20°C | 15  | 8   | 6  | 4  | 4  | 3  | 3  | 3  | 4   |
|   | Ø12,5 ~ Ø16mm | Z-25°C / Z+20°C | 7   | 5   | 4  | 3  | 2  | 2  | 2  | 2  | 2   |
| Z-40°C / Z+20°C   |               | 17              | 12  | 10  | 8  | 5  | 4  | 3  | 3  | 3  |     |

|   |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|
| Load Life ( after application of the rated voltage for 1000hrs at 105°C | Leakage current  | Less than specified value                  |  |  |  |  |  |  |  |  |  |
|   | Capacitance Change   | Within ±20% of initial value               |  |  |  |  |  |  |  |  |  |
|   |  | Within ±30% of initial value for 4V & 6,3V |  |  |  |  |  |  |  |  |  |
|   | Tanδ   | Less than 200% of specified value          |  |  |  |  |  |  |  |  |  |
| Shell life (at 85°C)  | Ø4 ~ , Ø6,3x5,4: 1000hours   |  |  |  |  |  |  |  |  |  |  |
|   | After 1000hours no load test, leakage current, capacitance and tanδ are same as load life value. |  |  |  |  |  |  |  |  |  |  |

**CHIP Wide Temperature Range 105°C**

Part No.: **I15005**

|       |        |      |        |        |        |           |           |      |            |
|-------|--------|------|--------|--------|--------|-----------|-----------|------|------------|
| DRW:  | Jason  | CHKD | Wilson | MATL:  | Wilson | TOLERANCE | Mason     | DATE | 03.06.2014 |
| APPD: | Schumi |      |        | FINISH | Jamy   |           | Sheet No. |      | 2 from 7   |

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|                                     |   |                                    |
|-------------------------------------|---|------------------------------------|
| <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          |

| FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT |               |           |       |       |      |              |
|---|---------------|-----------|-------|-------|------|--------------|
| Diameter  | Capacitance   | Frequency |       |       |      |              |
|   | $\mu\text{F}$ | 50Hz      | 120Hz | 300Hz | 1KHz | 10KHz $\leq$ |
| $\varnothing 4 \sim \varnothing 10\text{mm}$        | 0,1 ~68       | 0,70      | 1,00  | 1,17  | 1,36 | 1,50         |
|   | 100 ~3300     | 0,85      | 1,00  | 1,08  | 1,20 | 1,30         |
| $\varnothing 12,5 \sim \varnothing 16\text{mm}$     | ~68           | 0,75      | 1,00  | 1,35  | 1,57 | 2,00         |
|   | 100 ~680      | 0,80      | 1,00  | 1,23  | 1,34 | 1,50         |
|   | 1000 ~6800    | 0,85      | 1,00  | 1,10  | 1,13 | 1,15         |

|  |               |
|--|---------------|
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| Part No.:                                    | <b>I15005</b> |
| Customer:                                    |               |

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## Technical Drawing

### Dimension of Size Ø 8x10,5 ~ 16mm



### Dimension of Size Ø 4~ 8x6,2mm



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

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

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

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

\*4 (L +/- 1.0) is applicable to Ø 12,5 ~ Ø 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

**CHIP Wide Temperature  
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Part No.: **I15005**

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# EDCON-COMPONENTS



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

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

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

**CHIP Wide Temperature  
Range 105°C**

Part No.: **115005**

|       |        |      |        |        |        |           |           |      |            |
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| DRW:  | Jason  | CHKD | Wilson | MATL:  | Wilson | TOLERANCE | Mason     | DATE | 03.06.2014 |
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Customer:

# EDCON-COMPONENTS



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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>I15005</b> | <b>250</b>   | <b>M</b>       | <b>470</b> | <b>C</b>    | <b>0</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> |  |  |
|-------------------------|----------------|---------------------|-------------------|-------------------|------------------------|--|--|--|--|

|  |               |
|--|---------------|
| <b>CHIP Wide Temperature Range 105°C</b> |               |
| Part No.:                                | <b>I15005</b> |
| Customer:                                |               |

|       |        |      |        |        |        |           |           |      |            |
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# EDCON-COMPONENTS

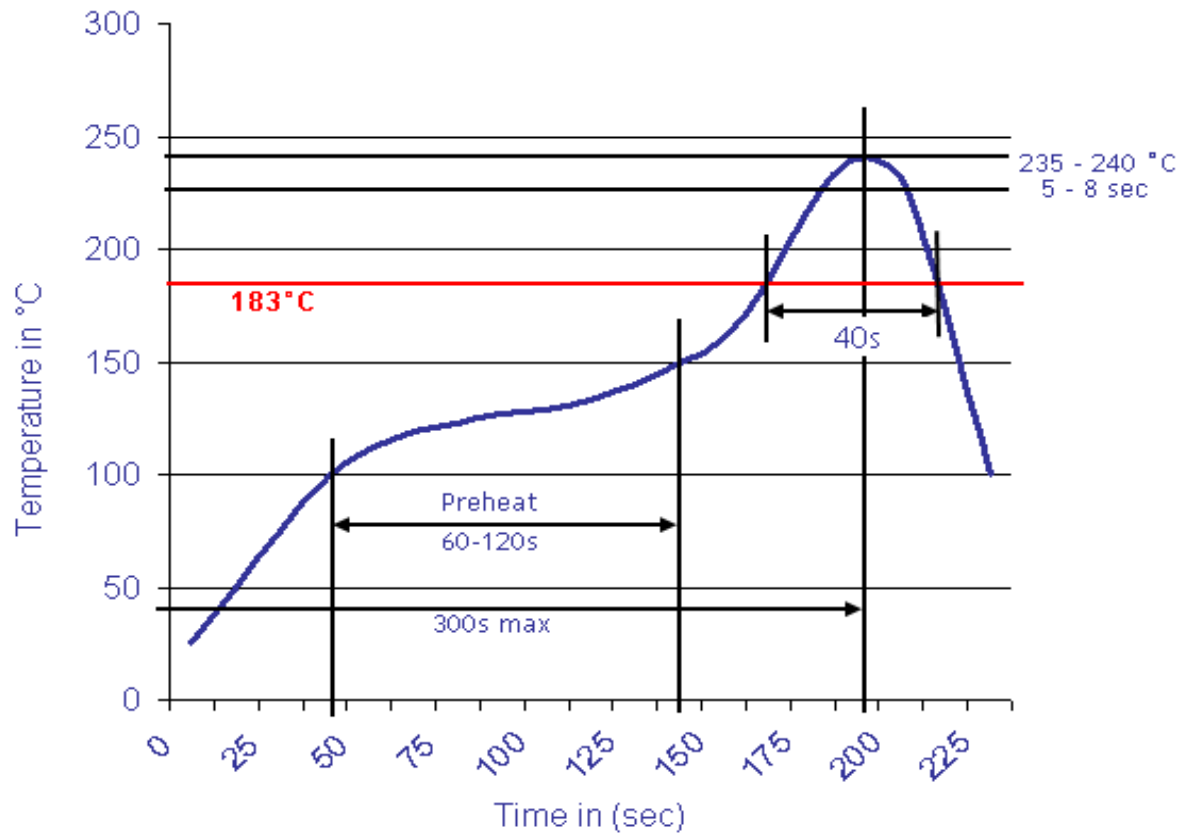


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## Soldering Profile Curve

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



|  |               |
|--|---------------|
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| Part No.:                                | <b>I15005</b> |
| Customer:                                |               |

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