



DATA SHEET

CHIP Extra Lower Impedance Life 105°C

Serie: I15011

Voltage: 10Volt Range: 680 μ F

Impedance: 0,09 Ω Dimension 10x10,5mm

Ripple Current: 670mA

CHIP Extra Lower Impedance
Life 105°C

Serie No.: I15011

| | | | | | | | | | | |
|-------|--------|------|--------|--------|--------|-----------|-----------|----------|------------|-----------|
| 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: | 10Volt |
| Range; | 680µF |
| Dimension; D x L mm | 10x10,5mm |
| Impedance (Ω) max., at20°C, 100hKz | 0,09Ω |
| Ripple Current (mA rms) at 105°C, 100kHz | 670mA |

| Ordering Code | | | |
|---------------|----------------|-----------|----------|
| 100 | Voltage | | |
| 681 | Range | | |
| D= | G | L= | 4 |

Impedance 40~60% less than I15008 Series
Extra Lower Impedance with Operating Temperatur Range of -55°C ~ +105°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 | | 6,3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | |
| | Tanδ | Ø4 ~ Ø10mm | 0,22 | 0,19 | 0,16 | 0,14 | 0,12 | 0,12 | | | | | | | | |
| | | Ø12,5 ~ Ø16mm | 0,26 | 0,22 | 0,18 | 0,16 | 0,14 | 0,12 | | | | | | | | |

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

| | | |
|--|---|-----------------------------------|
| Load Life (after application of the rated voltage for 3000hrs at 105°C | Leakage current | Less than specified value |
| | Capacitance Change | Within ±25% of initial value |
| | Tanδ | Less than 200% of specified value |
| | Ø4 ~ Ø6,3x5,8: 1000hours , Ø6,3x7,7 ~ Ø8,0: 2000hours | |

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

| | | |
|-------------------------------------|---|------------------------------------|
| Resistance to soldering heat | 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 δ | Less than specified value |

| Size | FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT | | | | | |
|---|---|-----------|-------|-------|------|--------------|
| | Capacitance μF | Frequency | | | | |
| | | 50Hz | 120Hz | 300Hz | 1KHz | 10KHz \leq |
| $\varnothing 4 \sim \varnothing 10\text{mm}$ | 4,7~ 68 | 0,35 | 0,50 | 0,64 | 0,83 | 1,00 |
| | 100~1500 | 0,40 | 0,55 | 0,70 | 0,85 | 1,00 |
| $\varnothing 12,5 \sim \varnothing 16\text{mm}$ | ~680 | 0,45 | 0,65 | 0,80 | 0,90 | 1,00 |
| | 1000 ~4700 | 0,65 | 0,85 | 0,95 | 1,00 | 1,00 |

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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 |
| | |
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| 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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Ordering Informations

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

| | | | | | | | | | | |
|---------------|------------|----------|------------|----------|----------|-----------|----------|-----------|--|--|
| I15011 | 100 | M | 681 | G | 4 | XX | R | TR | | |
|---------------|------------|----------|------------|----------|----------|-----------|----------|-----------|--|--|

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

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Soldering Profile Curve

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



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Customer: