



DATA SHEET

HIP High Reliability 125°C and 5000hrs for Automotive Equipmer

Serie: I15007

Voltage: 160Volt Range: 22 μ F

Impedance: no information Dimension 16x16,5mm

Ripple Current: 180mA

**CHIP High Reliability 125°C and
5000hrs for Automotive
Equipment**

Serie No.: **I15007**

| | | | | | | | | | | |
|-------|--------|------|--------|--------|--------|-----------|-----------|----------|------------|-----------|
| 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: | 160Volt |
| Range; | 22µF |
| Dimension; D x L mm | 16x16,5mm |
| Impedance (Ω) max., at20°C, 100kHz | no |
| Ripple Current (mA rms) at 105°C, 100kHz | 180mA |

| Ordering Code | | | |
|---------------|----------------|-----------|----------|
| 161 | Voltage | | |
| 220 | Range | | |
| D= | K | L= | 7 |

Operating Temperatur Range of -40°C ~ +125°C
Load Life of 1000~5000 hours

| | | | | | | | | | | | | | | | |
|---|----------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Leakage current max. | WV ≤ 100 | I= 0,03CV or 4µA whichever is greater (after 2 minutes) | | | | | | | | | | | | | |
| | WV ≥ 100 | I= 0,04CV or 100µA whichever is greater (after 2 minutes) | | | | | | | | | | | | | |
| Capacitance tolerance | ± 20% at 120Hz, 20°C | | | | | | | | | | | | | | |
| Dissipation factor max. (at 120Hz, 20°C) | WV | | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 400 | 450 | |
| | Tanδ | Ø6,3 ~ Ø10mm | 0,24 | 0,20 | 0,16 | 0,14 | 0,14 | 0,18 | 0,18 | | | | | | |
| | | Ø12,5 ~ Ø16mm | 0,22 | 0,18 | 0,16 | 0,14 | 0,12 | 0,14 | 0,10 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 | 0,20 |

| | | | | | | | | | | | | | | |
|--|---------------|-----------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| Low Temperatur characteristics (Impedance ratio at 120Hz) | WV | | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 400 | 450 |
| | Ø6,3 ~ Ø10mm | Z-25°C / Z+20°C | 4 | 3 | 2 | 2 | 2 | 2 | 2 | | | | | |
| | | Z-40°C / Z+20°C | 10 | 8 | 6 | 4 | 4 | 4 | 4 | | | | | |
| | Ø12,5 ~ Ø16mm | Z-25°C / Z+20°C | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 6 | 6 |
| Z-40°C / Z+20°C | | 8 | 6 | 4 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 10 | 10 | |

| | | |
|--|--|-----------------------------------|
| Load Life (after application of the rated voltage for 5000hrs at 125°C | Leakage current | Less than specified value |
| | Capacitance Change | Within ±30% of initial value |
| | Tanδ | Less than 300% of specified value |
| | Ø8x10,5 ~ Ø10 (10~100V) 2000hours , Ø8x6,2 ~ Ø6,3: 1000hours | |
| | Ø 12,5 ~ Ø16 (160~450V) : 2000hours | |

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Shell life (at 125°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 |

| FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT | | | | | |
|---|-----------|-------|------|-------|---------------|
| Capacitance μF | Frequency | | | | |
| | 50Hz | 120Hz | 1KHz | 10KHz | 100KHz \leq |
| 10 ~100 | 0,35 | 0,40 | 0,75 | 0,90 | 1,00 |
| 220 ~470 | 0,35 | 0,50 | 0,85 | 0,94 | 1,00 |
| 680 ~2200 | 0,40 | 0,60 | 0,85 | 0,95 | 1,00 |

| coefficient | Frequency | | | | | |
|-------------|-----------|-------|-------|------|-------|---------------|
| | 50Hz | 120Hz | 300Hz | 1KHz | 10KHz | 100KHz \leq |
| 160~450V | 0,75 | 1,00 | 1,25 | 1,50 | 1,75 | 1,80 |

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Technical Drawing

Dimension of Size $\varnothing 8 \times 10,5 \sim 16 \text{mm}$



Dimension of Size $\varnothing 4 \sim 8 \times 6,2 \text{mm}$



| D x L | $\varnothing 4 \times 5,8$ | $\varnothing 5 \times 5,8$ | $\varnothing 6,3 \times 5,8$ | $\varnothing 6,3 \times 7,7$ | $\varnothing 8 \times 6,2$ | $\varnothing 8 \times 10,5$ | $\varnothing 10 \times 10,5$ | $\varnothing 10 \times 13,5$ | $\varnothing 12,5 \times 13,5$ | $\varnothing 12,5 \times 16$ | $\varnothing 16 \times 16,5$ |
|----------|----------------------------|----------------------------|------------------------------|------------------------------|----------------------------|-----------------------------|------------------------------|------------------------------|--------------------------------|------------------------------|------------------------------|
| 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 $\varnothing 4 \sim 10 \text{mm}$

*3 (L +/- 0.5) is applicable to $\varnothing 8 \times 10,5 \sim \varnothing 10 \text{mm}$

*2 (L +/- 0.3) is applicable to $\varnothing 6,3 \sim 7,7$ and $\varnothing 8 + 6,2 \text{mm}$

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

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

| | | | | | | | | | | |
|---------------|------------|----------|------------|----------|----------|-----------|----------|-----------|--|--|
| I15007 | 161 | M | 220 | K | 7 | 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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