**Description**

**CPE23S-3.9A1-W50R:**

**Challenge Piezo Element** 23mm diameter, Stainless steel disc – 3.9 KHz resonant frequency, type A1 (without feedback, supser thin disc), Wire length 50mm, RoHS compliant.

**Picture**

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**Specification**

- **Resonant Frequency**: 3900±500Hz
- **Resonant Impedance**: 1200 Max. ohm
- **Capacitance at 100Hz**: 15,000±30% pF at 100Hz 25 °C
- **Input Voltage**: 30V Max.
- **Insulated Resistance**: 100M ohm Min.
- **Operating Temperature**: -20 °C to +70 °C
- **Storage Temperature**: -30 °C to +80 °C
- **Termination Description**: No
- **Construction Materials Case**: Stainless Steel Disc 304
- **Weight (Typical)**: 0.8g
- **Test Point**
- **Reliability**
- **High Temperature**: No function at +80+/-2 °C for 240 hours; function at +70+/-2 °C for 240 hours
- **Low Temperature**: No function at -30+/-2 °C for 240 hours; function at -20+/-2 °C for 240 hours
- **Humidity**: +25+/-2 °C 0.5 hr → +25+/-2 °C 0.25 hr → +70+/-2 °C 0.5 hr → +25+/-2 °C 0.25 hr
- **Thermal Shock**: -20+/-2 °C 0.5 hr → +25+/-2 °C 0.25 hr → +70+/-2 °C 0.5 hr → +25+/-2 °C 0.25 hr
- **Vibration**: 1.5mm with 10 to 50Hz of vibration frequency to each of 3 perpendicular directions for 2 hours
- **Shock**: 980m/s² (=100g) shock for each mutually perpendicular directions, half sine wave, 3 times each
- **Drop Test**: Dropped naturally from 750mm height onto the surface of 10mm wooden board. 2 directions – upper and side of the part are applied
- **Soldering Heat Resistance**: Soldering Temperature: 200 °C for 3 seconds

**Warranty**

For a period of one (1) year from date of manufacture under normal operations

*All specifications must be satisfied after the test (Recovery:2 to 4 hrs of recovery under the standard condition after the removal from test chamber).*

**Dimensions (Unit:mm)**

- **UL1571-30#**
- **50±5**
- **Ø15±0.3**
- **0.15±0.03**
- **0.3±0.05**
- **Ø23±0.1**
<table>
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<th>Version Number</th>
<th>Description</th>
<th>Name</th>
<th>Date</th>
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<tr>
<td>SP.1.11.071-A0</td>
<td>Original, CPE23S-3.9A1-W50R</td>
<td>David Z</td>
<td>2014-07-07</td>
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<td>SP.1.11.071-A1</td>
<td>Change the resonant impedance to 1200Max ohm.</td>
<td>David Z</td>
<td>2014-07-10</td>
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