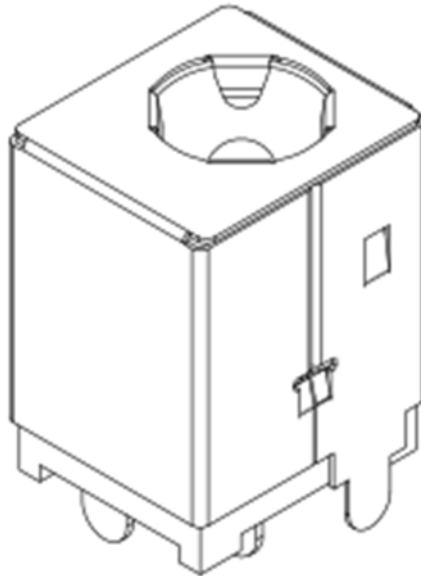


# PRODUCT SPECIFICATION

|                            |   |                 |           |                |             |                 |           |
|----------------------------|---|-----------------|-----------|----------------|-------------|-----------------|-----------|
| <b>Part Number</b>         | DCJ250-15   | <b>Rev</b>      | A         | <b>Date</b>    | 28/10/15    |                 |           |
| <b>Product Description</b> | DC Power Jack, Thru-Hole, Vertical, Shielded, Ø2.50mm |                 |           |                | <b>Page</b> | 1               |           |
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# PRODUCT SPECIFICATION

|                            |   |                 |           |                |           |                 |           |
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| <b>Part Number</b>         | DCJ250-15   | <b>Rev</b>      | A         | <b>Date</b>    | 28/10/15  |                 |           |
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## 1.0 SCOPE.

DC Power Jack, Thru-Hole, Vertical, Shielded, Ø2.50mm.

## 2.0 PRODUCT NAME AND PART NUMBER.

DC Power Jack, Ø2.50mm: DCJ250-15.

## 3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL.

Please refer to drawings.

## 4.0 RATINGS.

- Current rating ..... 7 Amp Max
- Voltage rating ..... DC 20 Volts Max.
- Operating Temperature Range ..... -20°C to +70°C
- Storage Temperature..... -25°C to +80°C
- Storage Humidity..... Relative Humidity: ≤80%

## 5.0 TEST AND MEASUREMENT CONDITIONS.

Product is designed to meet electrical, mechanical and environmental performance requirements specified in Paragraph 6.0. All tests are performed at ambient environmental conditions unless otherwise specified.

## 6.0 PERFORMANCE.

| Item                   | Test Condition   | Requirement   |
|------------------------|--|---|
| Examination of Product | Visual, dimensional and functional inspection as per quality plan. | Product shall meet requirements of product drawing and specification. |

# PRODUCT SPECIFICATION

|                            |   |                 |           |                |           |                 |           |
|----------------------------|---|-----------------|-----------|----------------|-----------|-----------------|-----------|
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## 6.1 Electrical Performance.

| Item                  | Test Condition   | Requirement                             |
|-----------------------|--|---|
| Contact Resistance    | Measure contact resistance of mated connector using test current of 10mA max and 20 mV open circuit voltage.<br><br>In accordance with EIA-364-23. | 30mΩ max initial                        |
| Insulation Resistance | Measure by applying test potential between the adjacent contacts, and between the contacts and frame.<br><br>In accordance with EIA-364-21.        | 100 MΩ minimum<br>@250V DC for 1 minute |
| Dielectric Strength   | Measure by applying AC 500V between the adjacent contacts, and between the contacts and frame for 1minute.<br><br>In accordance with EIA-364-20.   | There shall be no breakdown.            |

## 6.2 Mechanical Performance.

| Item                           | Test Condition   | Requirement   |
|--------------------------------|--|---|
| Durability                     | 5,000 cycles of operation at a rate of 20~30 cycles per minute.<br><br>In accordance with EIA-364-09.                | (1). Contact resistance: 50mΩmax.<br><br>(2). Insertion and withdraw force: 3~30N.<br><br>(3). Electrical characteristics and mechanical characteristics shall be satisfied. Without distinct damage. |
| Insertion and Extraction force | Operation Speed: 25.4 mm/min.<br>Measure the force required to mate connector.<br><br>In accordance with EIA-364-13. | Insertion and extraction force: 3~30N   |
| Terminal Strength              | A static force of 20N being applied to the centre pin in the X axis direction for 10sec.                             | There shall be no sign of damage mechanically and electrically.   |

# PRODUCT SPECIFICATION

|                            |   |                 |           |                |           |                 |           |
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|                  |  |   |
|------------------|--|---|
| Random Vibration | Mate connectors and subject to:<br>5.35 Gs RMS.<br>For a period of 15 minutes in each of 3 mutually perpendicular axes.<br><br>In accordance with EIA-364-28D.   | No electrical discontinuity greater than 1 µsec. shall occur. No damage to product.<br>Contact resistance: 50mΩ Max |
| Mechanical Shock | Accelerate Velocity: 30Gs<br>Waveform: Half-sine shock plus<br>Duration: 11msec<br>Three shocks in each direction applied along three mutually perpendicular planes for a total of 18 shocks.<br><br>In accordance with EIA-364-27 | No electrical discontinuity greater than 1 µsec. shall occur. No damage to product.<br>Contact resistance:50mΩ Max  |

### 6.3 Environmental Performance and Others.

| Item                    | Test Condition  | Requirement   |
|-------------------------|---|---|
| Salt Water Spray        | Air pressure of salt spray: 0.07 0.17Mpa;<br>Salt Concentration: 5%; PH value:6.5-7.2;<br>Temperature of salt-bath: 35±2°C;<br>Test time: 24H(continuous).<br><br>In accordance with EIA-364-26 | Without excessive Corrosion or crack in appearance  |
| Temperature Life (High) | Subject Jack to 80±2°C for 96 hours, after test in normal condition for 30mins.<br><br>In accordance with EIA-364-17  | (1). Contact resistance: 50mΩmax.<br><br>(2). Insulation resistance: 50MΩmin.<br><br>(3). There shall be no sign of damage mechanically and electrically. |
| Humidity Test           | Subject Jack to 40±2°C and humidity 90-95% for 96 hours, after test keep in normal condition for 30 minutes.<br><br>In accordance with EIA-364-31.  |   |
| Temperature Life (Low)  | Subject Jack to -25±2°C for 96 hours, after test in normal condition for 30mins.<br><br>In accordance with EIA-364-59   |   |
| Temperature Rise        | Measure the temperature rise of pin, when rated current is passed<br>Mated with plug: CUI PP3-002BH.<br>In accordance with EIA-364-70 Method 1.   | 30°C Max  |

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|                            |   |                 |           |                |           |                 |           |
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|                                   |  |  |
|-----------------------------------|--|--|
| Solderability                     | The tip of the terminals shall be dipped 2mm in the solder bath at a temperature of 240±5°C for 3±0.5sec.      | A new uniform coating of solder shall cover a minimum of 95% of the surface being immersed.            |
| Resistance to Hand Soldering Heat | The jack shall be hand soldered at the temperature of 350±5°C in 3±1sec after which measurement shall be made. | Electrical characteristics and mechanical characteristics shall be satisfied. Without distinct damage. |
| Resistance to Soldering Heat.     | The jack shall be placed into the temperature of 260±5°C in 5±1sec(Automatic soldering)                        | Electrical characteristics and mechanical characteristics shall be satisfied. Without distinct damage. |

## 7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

# PRODUCT SPECIFICATION

|                            |   |                 |           |                |           |                 |           |
|----------------------------|---|-----------------|-----------|----------------|-----------|-----------------|-----------|
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| Test Item                         | Group |     |     |     |     |     |     |     |     |   |  |
|-----------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|---|--|
|                                   | A     | B   | C   | D   | E   | F   | G   | H   | I   | J |  |
| Examination of Product            | 1,12  | 1,3 | 1,9 | 1,6 | 1,8 | 1,3 | 1,3 | 1,5 | 1,6 |   |  |
| Contact Resistance                | 2,9   |     | 2,6 | 2,5 | 2,6 |     |     | 2,4 | 2,5 |   |  |
| Insulation Resistance             | 3,10  |     | 3,7 |     | 3,7 |     |     |     |     |   |  |
| Dielectric Withstanding Voltage   | 4,11  |     | 4,8 |     | 4   |     |     |     |     |   |  |
| Durability                        | 6     |     |     |     |     |     |     |     |     |   |  |
| Temperature Rise                  | 7     |     |     |     |     |     |     |     |     |   |  |
| Insertion and Extraction force    | 5,8   |     |     |     |     |     |     |     |     |   |  |
| Terminal Strength                 |       | 2   |     |     |     |     |     |     |     |   |  |
| Humidity                          |       |     | 5   |     | 5   |     |     |     |     |   |  |
| Solderability                     |       |     |     |     |     | 2   |     |     |     |   |  |
| Resistance to Soldering Heat      |       |     |     |     |     |     | 2   |     |     |   |  |
| Resistance to Hand Soldering Heat |       |     |     |     |     |     |     |     |     |   |  |
| Salt Spray                        |       |     |     |     |     |     |     | 3   |     |   |  |
| Temperature (Heat)                |       |     |     |     |     |     |     |     | 3   |   |  |
| Temperature (Cold)                |       |     |     |     |     |     |     |     | 4   |   |  |
| Random Vibration                  |       |     |     | 3   |     |     |     |     |     |   |  |
| Mechanical Shock                  |       |     |     | 4   |     |     |     |     |     |   |  |

Revision details

# PRODUCT SPECIFICATION

|                            |   |                 |           |                |           |                 |           |
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| Revision | Information            | Page | Release Date |
|----------|------------------------|------|--------------|
| A        | Specification Released | -    | 28/10/2015   |
|          |                        |      |              |
|          |                        |      |              |

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