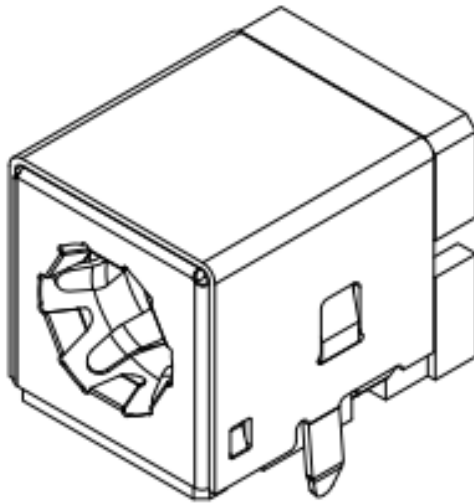


# PRODUCT SPECIFICATION

<b>Part Number</b>	DCJ250-20	<b>Rev</b>	A1	<b>Date</b>	05/12/23		
<b>Product Description</b>	DC Power Jack, Thru-Hole, Horizontal, Shielded, w/Locating Peg, Ø2.50mm			<b>Page</b>	1		
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## 1.0 SCOPE

DC Power Jack, Thru-Hole, Horizontal, Shielded, w/Locating Peg, Ø2.50mm.

## 2.0 PRODUCT NAME AND PART NUMBER

DC Power Jack, Ø2.50mm: DCJ250-20.

## 3.0 PRODUCT SHAPE, DIMENSIONS AND MATERIAL

Please refer to drawing.

## 4.0 RATINGS

Voltage rating .....	30V DC
Current rating .....	8A
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.

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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.  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.  In accordance with EIA-364-21.	100 MΩ minimum @250V DC for 1 minute
Dielectric Strength	Measure by applying AC 500V between the adjacent contacts, and between the contacts and frame for 1minute.  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.  In accordance with EIA-364-09.	(1). Contact resistance: 50mΩmax. (2). Insertion and withdraw force: 3~30N. (3). Electrical characteristics and mechanical characteristics shall be satisfied. Without distinct damage.
Insertion and Extraction force	Operation Speed: 25.4 mm/min. Measure the force required to mate connector.  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.

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Random Vibration	Mate connectors and subject to: 5.35 Gs RMS. For a period of 15 minutes in each of 3 mutually perpendicular axes.  In accordance with EIA-364-28D.	No electrical discontinuity greater than 1 µsec. shall occur. No damage to product. Contact resistance: 50mΩ Max
Mechanical Shock	Accelerate Velocity: 30Gs Waveform: Half-sine shock plus Duration: 11msec Three shocks in each direction applied along three mutually perpendicular planes for a total of 18 shocks.  In accordance with EIA-364-27	No electrical discontinuity greater than 1 µsec. shall occur. No damage to product. 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; Salt Concentration: 5%; PH value: 6.5-7.2; Temperature of salt-bath: 35±2°C; Test time: 24H(continuous).  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.  In accordance with EIA-364-17	(1). Contact resistance: 50mΩmax.  (2). Insulation resistance: 50MΩmin.  (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.  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. In accordance with EIA-364-59	
Temperature Rise	Measure the temperature rise of pin, when rated current is passed. Mated with plug: CUI PP03-002BH In accordance with EIA-364-70 Method 1.	30°C Max

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Solderability	The tip of the terminals shall be dipped 2mm in the solder bath at a temperature of $240\pm 5^{\circ}\text{C}$ for $3\pm 0.5\text{sec}$ .	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 $350\pm 5^{\circ}\text{C}$ in $3\pm 1\text{sec}$ 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 $260\pm 5^{\circ}\text{C}$ in $5\pm 1\text{sec}$ (Automatic soldering)	Electrical characteristics and mechanical characteristics shall be satisfied. Without distinct damage.

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## 7.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

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							

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<b>Part Number</b>	DCJ250-20	<b>Rev</b>	A1	<b>Date</b>	05/12/23		
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Revision details

Revision	Information	Page	Release Date
A	Specification Released	-	28/10/2015
A1	Voltage rating increased to 30Vdc Sundry changes	2	05/12/2023