

IDITECH CORPORATION	P/N. DCP-101A
TITLE: DC PLUG 5.5x2.1 (Assembly type)	
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1. Scope

This document specific electrical, mechanical and environmental requirement for this part to insure functionality and reliability.

2. Application

The plug for an external low voltage power supply to electronic products.

3. Material Requirement

- 3-1. Insulator Material: PBT, Black
- 3-2. Center contact: P-Bronze C5191.
- 3-3. Outer sleeve: Brass C3603
- 3-4. COVER: PVC, Black

4. Electrical Requirements

- 4-1. Dielectric Strength: AC 500V at 1 minute.
- 4-2. Insulation Resistance: DC 500V /100M Ω .
- 4-3. Contact resistance: 30m Ω or less between plug and jack.
- 4-4 Rated voltage: 24V DC.
- 4-5 Rated current: 5A.

5. Mechanical Requirements

- 5-1. Insertion force: 0.5~3kgf when mating with a standard jack.
- 5-2 Withdrawal force: 0.5~3kgf when mating with a standard jack.
- 5-3 Durability: Mated with a standard jack for 5000 times and still meet below requirement.
 - 1. Insertion force: 0.3~2kgf.
 - 2. Withdrawal force: 0.3~2kgf.
 - 3. Contact resistance: 100m Ω or less between plug and jack.

6. Environmental requirement

- 6-1. Damp test:
 - 6-2-1. Test Condition:
 - Temp 40°C ,RH 90-100% for 96 hrs; then cool to ambient.
 - Recovery: 2 hours at ambient atmosphere.
 - 6-2-2. Specification:
 - Dielectric strength: AC500V at 1 minute.
 - Insulation resistance: DC500V/50M Ω min.
 - Contact resistance: 100m Ω or less.

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6-2. Dry Test:

6-2-1 Test Condition:

Temp 70°C, RH 70~85% for 96 hrs; then cool to ambient.

Recovery: 2 hours at ambient atmosphere.

6-2-2. Specification:

1. Without looseness or deformation.
2. Contact resistance after test 100mΩ or less.
3. Insulation resistance: DC500V/50MΩ min.

6-3. Salt spray test:

6-3-1. Test Condition:

24 hrs spray, at temp. 35±2°C, RH 90-95%, Salt NaCl mist 5%.

After test, wash parts and return to room.

6-3-2. Specification:

Satisfied with electrical and mechanical requirement.

Contact resistance: 80mΩ max.

7. Operating temperature and humidity range

The plug shall be operated at a temperature range of -25°C to 70°C, and a related humidity of 85% or less.

8. Appearance and construction

There shall be no looseness, deformation or delamination of plating, when examined by visual inspection.