

WISCONN TECHNOLOGY CO.,LTD

Data Specification and Testing Report

Item Number : WDC-03BDR-5A-16V-x
Description : DC JACK CONNECTOR
(The diameter of the center pin is shown on the drawing)

A. General Scope

This specification covers the requirement for the direct circuit power supply for all audio systems and similar equipments.

B. Mating Plug

The Mating plug shall be in 5.5mm diameter.

C. Components and Materials

CENTRE PIN : PHOSPHOR BRONZE
TERMINAL 1 : BRASS
TERMINAL 2 : PHOSPHOR BRONZE
TERMINAL 3 : BRASS
HOUSING : PBT
COVER : PBT

D. Electrical Requirements

Dielectric Strength

The socket shall withstand without failure, a potential of 500 volts r.m.s. 50/60 Hz applied between mutually insulated metal parts for one minute.

Insulation Resistance

Insulation resistance between insulated metal parts shall be 100 Megohm or more at initial and 50 Megohm or more after cold test, hot test, and humidity test when measured with a 500 volts D.C. insulation resistance meter.

Contact Resistance

Contact resistance shall be less than 50 Milliohms at initial and 100 Milliohms after life test between a terminal of the socket and that of the mating plug; less than 30 Milliohms at initial and 60 Milliohms after life test between terminal of the socket in a closed circuited, when measured at a current of less than 100 Milliampere 1 KHz. The Mating plug use shall be cleaned and free from oxidation file the surface.

Rating

5A/16V DC Max.

E. Mechanical Requirement

Insertion and Withdrawal Force

The insertion and withdrawal force shall be 0.3 – 3Kgs at initial and 0.2 – 2Kgs after life test with the gauge plug.

Terminal Strength

The terminal shall be capable of withstanding a force of 500 Gram applied in any directions for 10 second without loosing and breakdown.

F. Soldering Test

Solderability Test

a) Test Condition

Solder Time : 2 Sec
Solder Temperature : 255 °C ± 5°C
Flux : Neutral flux

b) Requirement : 95 % coverage of solder on lead

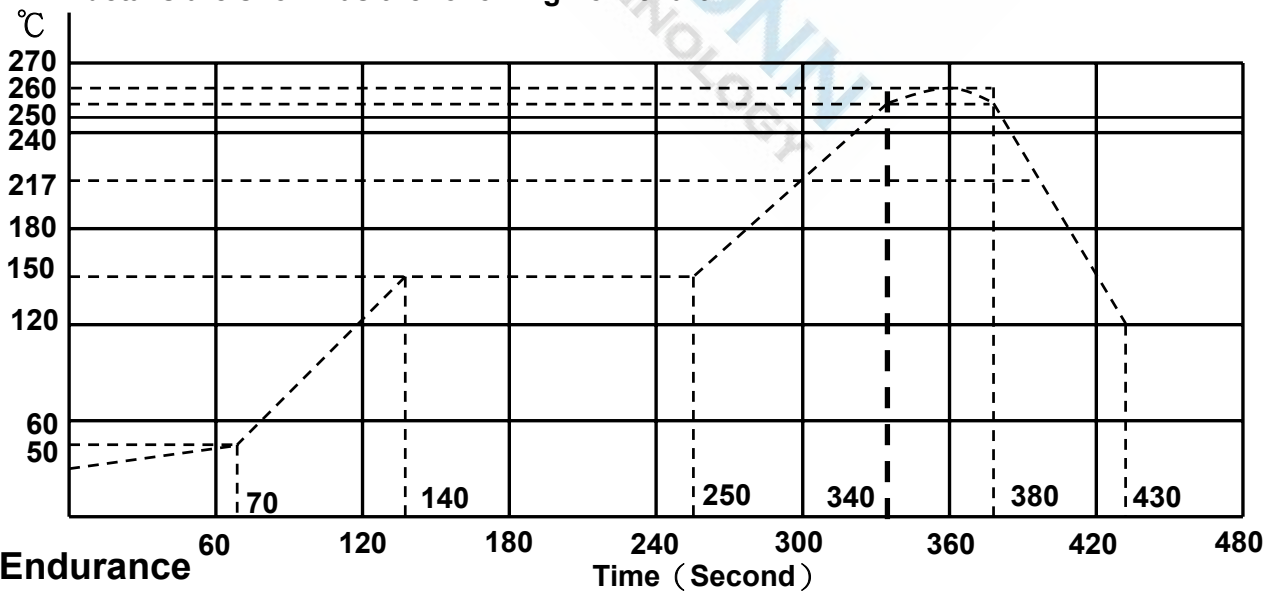
Resistance to Soldering Heat Test

a) Wave Soldering (For DIP Type Products)

The Terminal of the socket shall be dipped in Molten solder for 5 ± 0.5 second at temperature of 260°C ± 5°C between the tip of the terminal and the copper surface of 0.8 Millimeter thickness PC Board used. At the conclusion of this test, the socket shall be shown remarkable failure.

b) Reflow Soldering (For SMD Type Products)

The socket shall be placed in a reflow solder furnace with the temperature starting from the normal room temperature at around 25°C and up to 260°C ± 5°C over 360 second. The details are shown as the following flow chart.



G. Endurance

Life Test

The Life Test shall be consisted of 5,000 cycles of insertion and withdrawal with the mating plug covered with a thin coat of grease in order to prevent from heating of wearing, at a rate of 24 cycles per minutes under no or rated load.

H. Environmental

Heat Test

The socket shall be placed in the testing chamber at a temperature of $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and the relative humidity of less than 50% RH for 96 hours and then placed in ambient temperature for more than 30 minutes recover period. The relative test before and after test should be complied with Insulation Resistances shown on Paragraph D.2.

Cold Test

The socket shall be placed in the testing chamber at a temperature of $-35^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and the relative humidity of less than 50% RH for 96 hours and then placed in ambient temperature for more than 30 minutes recovery period. The relative test before and after test should be complied with Insulation Resistance shown on Paragraph D.2.

Humidity Test

The socket shall be placed in the testing chamber at a temperature of $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and the relative humidity of 90% to 95% RH for 96 hours the dew drops on the surface of socket shall be blown off and removed from the surface of the socket and then placed in ambient temperature for more than 30 minutes recovery period. The relative test before and after this test should be complied with Insulation Resistance shown on Paragraph D.2.

I. Measuring Condition

All measurements and test shall be made at a temperature 10°C to 35°C with a relative humidity of 45% RH to 85% RH under the standard atmosphere pressure unless the specified conditions.

J. Operating Temperature

-25°C to $+85^{\circ}\text{C}$