1. Scope

This specification covers the performance, tests and quality requirements for the RJ45 Connector

Applicable Product Models:FRJ45181 series.

2. Applicable documents

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

3. Ordering information

Refer to the drawing.

4. Connector dimensions

Refer to the drawing.

5. Material

Housing： Thermoplastic (UL94V-0)

Terminal: Copper Alloy

Plating:Selective gold plated on contact area and matte tin plated on tails area

Shell: Brass /Nickel plated

6. Accommodated P.C.B layout

Refer to the drawing.

7. Rating

Operating voltage(Max.):125V AC

Current rating(Max.) :1.5A allowable current to be applied

Temperature range-operating: -40°C -- +85°C

8. Performance

Serial Number	Test item	Procedure	Requirement
1	Examination Of Product	Visual inspection. (EIA-364-18)	Meets requirements of product Drawing. No physical damage.
2	Plating Thickness Measurement	Inspect plating thickness using X-ray evaluation. (EIA-364-48A)	Meet plating requirements defined in customer drawing.

ELECTRICAL REQUIREMENT

3	Contact Resistance	Maximum voltage 20mV, maximum current 100mA applied to the assembled terminals to test contact resistance (EIA-364-23)	20 mΩ MAX (Initial)
4	Insulation Resistance	Mated connectors with 500±10% VDC between adjacent contacts or ground. (EIA-364-21)	Minimum initial resistance: 500 MΩ
5	Dielectric withstanding Voltage	Apply 2250VDC 1mA current for 6s between assembled independent terminals or grounding objects。 (EIA-364-20)	No Breakdown

MECHANICAL REQUIREMENT

6	vibration test	Pack the product in a carton and place it on a vibrating table for vibration. The vibration frequency varies between 10～55HZ, the amplitude is 1.52mm, 10-55-10HZ is a cycle, and one cycle lasts for 1 minute. Do 3 mutually perpendicular axes for 90 minutes each. (EIA-364-52)	Appearance: Nodamage

7	Mating and Un-mating Force	Mating connectors at maximum rate 25.4millimeters/minute and measure the Insertion and Extraction force . (EIA -364-13D)	23N Max.
8	Durability	Operation Speed：10 to 20 cycle/min. Durability Cycles：750 Cycles. (EIA-364-09)	Appearance: Nodamage Contact Resistance：30 mΩ MAX
9	Single PIN elastic force	The pressing height is 1/2 of the terminal bounce height, and the terminal force position is the thick gold area of the contact terminal. (EIA-364-04)	100 gram force minimum
10	Drop Test	Drop onto a horizontal marble floor surface from a height of 90CM,test for 6 faces、3sides、1pointedness.3times in each cycle。	1. Loosen, crack and breakage of the plastic part and other detrimental damage shall not be observed. 2. No electrical fail.

ENVIRONMENT PERFORMANCE AND OTHERS

11	Humidity	At a temperature of 40±2℃ and relative humidity of 90% - 95% for 96 hours. Then, be left alone for 1 to 2 hours in a room ambient and test in the time.	Appearance: Nodamage

		(EIA-364-31)	20mΩ MAX (Begin) 50mΩ MAX (Finish)
12	Temperature life (preconditioning)	Mated connectors and expose to 85 ℃ for 500 hours, Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (EIA-364-17)	Appearance: Nodamage 20mΩ MAX (Begin) 50mΩ MAX (Finish)
13	Salt Spray	Tested as below: Temperature: (35±2)℃ Humidity:(95-98)%(R.H.) PH: 6.5-7.2 Duration:X≤1u" :8H; 1u" <X<3u" :12H; 3u" ≤X<15u" :24H;15u≤X<30u" :36H;X=30u" :48H;X=50u" :72H;It shall be subjected to standard atmospheric condition 1 hour after removing the salt deposits. It should meet the contact resistance. Object non-contact area: Temperature:(35±2)℃ Salt-solution (5±1)% . (EIA-364-26B)	Appearance: Nodamage 20mΩ MAX (Begin) 50mΩ MAX (Finish)
14	Cold resistance	Put it in an environment with a temperature of -40±3 ℃ for 96 hours, then take it out and place it in normal humidity and room temperature for 1 to 2 hours and then test the contact impedance (excluding the resistance of the Crystal head and RJ45 jack).	Appearance: Nodamage 20mΩ MAX

Figure 1

NOTE: (a): The test result does not include the resistance of cable and internal resistance of contact wire,

(b): Do not perform "IR reflow soldering test" for wave soldering product.