1. Scope

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

Applicable Product Models:FRJ45028 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 plating on contact areas and bright tin plating on tail areas.

Shell:Copper alloy/Nickel plating

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	Subject mated contacts assembled housing to 30 mV maximum 100 mA .Measured from plug side to PCB side. (EIA-364-23)	30 mΩ MAX (Initial) 50 mΩ MAX (Final) See notese
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	Mated connectors with 1000±5% VAC for 6 seconds 1.0mA between adjacent contacts or ground. (EIA-364-20)	No Breakdown

MECHANICAL REQUIREMENT

6	Solder ability	Place the connector on the P.C.Board,then immerse the solder pin up to the surface of the borard in the solder bath at Solder Temp (EIA-364-52)	Solderable area shall have a minimum of 95% solder coverage

7	Resistance to Soldering Heat	Will pin/shielding shell immersed in to the solder grooveiron foot，260±5℃ temoeratur，time for 10±0.5s.	Pin/iron feet more than 95% tin, no bubble,virtual welding phenomenon, glossiness is good
8	Mating and Un-mating Force	Insert connector (male to female) at a rate of 25.4 mm per minute. (EIA -364-13)	23N Max
9	Durability	Operation Speed：10 to 20 cycle/min. Durability Cycles：750 Cycles. (EIA-364-09)	Appearance: Nodamage
			Contact Resistance：50 m Ω MAX
10	Normal 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
11	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.
12	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.	Meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification Test Sequence.

ENVIRONMENT PERFORMANCE AND OTHERS

13	Humidity	Test the product in the box with temperature 40±2℃, humidity 90%-95%, run for 96 hours,and then put it at room temperature for 1~2 hours to test contact resistance and adjacent PIN voltage (EIA-364-31)	Meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification Test Sequence
14	Temperature Life	Firstly put it in the tester with a temperature of 85℃±2℃ for 500 hours, take it out and place it in normal humidity and room temperature for 1~2 hours, then test the contact impedance. (EIA-364-17)	Meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification Test Sequence .
15	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). (EIA-364-32)	Meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification Test Sequence

16	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" : 48H X = 30u" : 72H X = 50u" : 96H 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)	Meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification Test Sequence