

1. Scope

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

Applicable Product Models:FRJ45259 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 oncontact area and matte tinplated on tails area

Shield: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% V AC for 1minute 0.5mA 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
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7	Resistance to Soldering Heat	Will pin/shielding shell immersed in to the solder groove iron foot, 260±5°C 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)	2.04kgf Max.
9	Durability	Operation Speed: 10 to 20 cycle/min. Durability Cycles: 750 Cycles. (EIA-364-09)	Appearance: Nodamage
			Contact Resistance: 50 mΩ MAX
10	vibration test	Amplitude: 1.52mm P-P or 147 m/s (15G) Sweep time: 50-2000-50 Hz in 20minutes.Duration: 12 times in each (total 36times) X.Y.Z.axes.Electrical load: DC 100 mA currentshall be followed during the test. (EIA-364-28, Condition III)	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

11	Humidity	Test the product in the box with temperature 25°C to 85°C, 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
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12	Temperature Life	Firstly put it in the tester with a temperature of $105^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 250 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
13	Thermal Shock Test	10 cycles of: a) -40°C for 30 minutes b) $+85^{\circ}\text{C}$ for 30 minutes (EIA-364-32)	Meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification Test Sequence
14	Salt Spray	Tested as below: Temperature: $(35\pm 2)^{\circ}\text{C}$ Humidity: $(95\text{---}98)\%$ (R.H.) PH: 6.5—7.2 Duration: $X\leq 1\text{u}''$:8H; $1\text{u}'' < X < 3\text{u}''$:12H; $3\text{u}'' \leq X < 15\text{u}''$:24H; $15\text{u}'' \leq X < 30\text{u}''$: 48H $X = 30\text{u}''$: 72H $X = 50\text{u}''$: 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: $(35\pm 2)^{\circ}\text{C}$ Salt-solution $(5\pm 1)\%$. (EIA-364-26B)	Meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification Test Sequence