1. Scope

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

Applicable Product Models:FRJ45252 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 20 mV maximum 100 mA .Measured from plug side to PCB side. (EIA-364-23)	20 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 1500±5% VAC for 6 seconds 1.0mA between adjacent contacts or ground. (EIA-364-20)	No Breakdown
6	LED Functional Test	Activate LEDs at application current and voltage.	When LEDs are present, all LED colors illuminate and meet visual requirements.

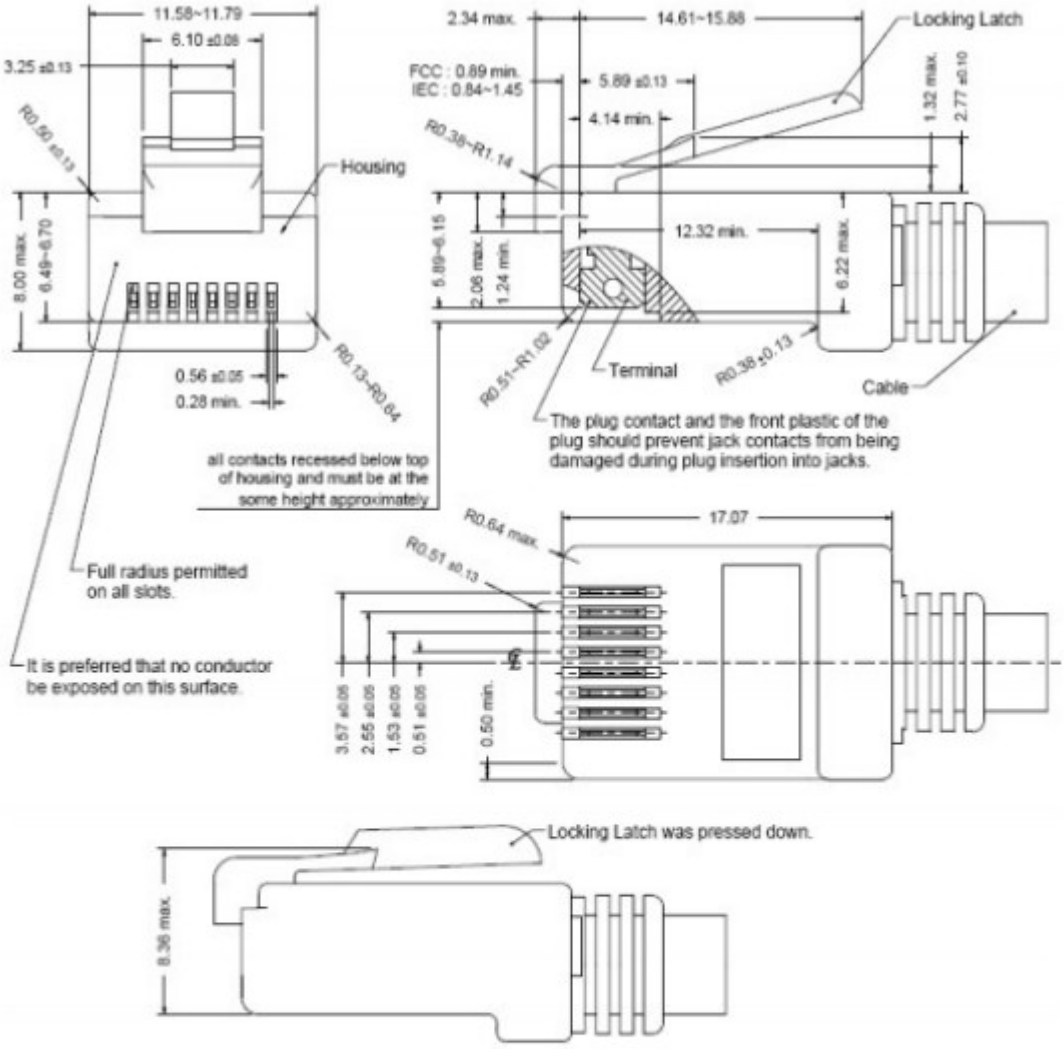
MECHANICAL REQUIREMENT

7	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
8	Resistance to Soldering Heat	Will pin/shielding shell immersed in to the solder groove iron foot，260±5℃ temoeratur，time for 10±0.5s.	Pin/iron feet more than 95% tin, no bubble,virtual welding phenomenon, glossiness is good
9	Mating and Un-mating Force	Insert connector (male to female) at a rate of 25.4mm per minute. (EIA -364-13)	23N Max
10	Durability	Operation Speed：10 to 20 cycle/min. Durability Cycles：750 Cycles. (EIA-364-09)	Appearance: Nodamage
			Contact Resistance：50 mΩ MAX
11	Normal Force	Mating connectors and measure the force of the contact area, using an FCC compliant modular plug. EIA-364-04 (EIA-364-04)	100 gram force minimum
12	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

13	Humidity	The samples were subjected to conditions of -40~85℃ temperature and 90% relative humidity for 3 hours per cycle, repeated for a total of 10 cycles. They were then allowed to rest at room temperature for 1 to 2 hours before undergoing the final test. (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	Samples are exposed to an environment with a temperature of 40℃ and relative humidity of 90~95% for 96 hours, followed by removal and subsequent exposure to ambient temperature and humidity conditions for 12 hours. Afterward, the contact impedance is tested. (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	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

9. Recommended RJ Plug Specification (FCC)



- All dimensions follow :
  FCC subpart F, 68,500, Figure (C)(2)(i) & (C)(2)(ii) & (C)(3)(i)
  IEC 60603-7
- All plugs must be meeting the requirements of plug Go & No-Go gauge.
  Gauge follow : FCC subpart F, 68,500, Figure (C)(4)(i) & (C)(5)(i)
- There must be no damage to Housing and Locking Latch.
- There must be no nicks and cuts in cable.
- Durability : 750 cycles generally