



SPECIFICATION

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SPEC. NO.: PS-31570-XXXXX-XXX REVISION: A

PRODUCT NAME: 1X1 RJ45 CONNECTOR

PRODUCT NO: 31570 SERIES

PREPARED: DENG JIAN XIANG DATE: 2020/7/15	CHECKED: TENG CHANG HO DATE: 2020/7/15	APPROVED: KUO JUNG HSUN DATE: 2020/7/15
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Aces P/N: **31570 series**

TITLE: **RJ45 CONNECTOR**

RELEASE DATE: **2020.7.15**

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1 REVISION HISTORY

Rev.	ECN #	Revision Description	Prepared	Date
A	ECN-2007308	NEW RELEASE	Deng Jian Xing	2020/7/15

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2 SCOPE

This specification covers performance, tests and quality requirements for 1X1 RJ45 connector.

3 APPLICABLE DOCUMENTS

EIA-364: ELECTRONICS INDUSTRIES ASSOCIATION

4 REQUIREMENTS

4.1 Design and Construction

- 4.1.1 Product shall be of design, construction and physical dimensions specified on applicable product drawing.
- 4.1.2 All materials conform to RoHS. and the standard depends on TQ-WI-140101.

4.2 Materials and Finish

- 4.2.1 Contact: High performance copper alloy.
Finish: (a) Contact Area: Refer to the drawing.
(b) Under plate: Refer to the drawing.
(c) Solder area: Refer to the drawing.
- 4.2.2 Housing: Refer to the drawing

4.3 Ratings

- 4.3.1 Voltage Rating: 150 Volts AC Max.
Current Rating: 1.5A Max.
- 4.3.2 Operating Temperature : -40 °C to +85 °C
- 4.3.3 Storage Temperature : -40 °C to +85 °C

5 Performance

5.1. Test Requirements and Procedures Summary

Item	Requirement	Standard
Examination of Product	Product shall meet requirements of applicable product drawing and specification.	Visual, dimensional and functional per applicable quality inspection plan.
ELECTRICAL		
Item	Requirement	Standard
Contact Resistance	30 mΩ Max. (initial) 40 mΩ Max. (after test)	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max. (EIA-364-23)
Insulation Resistance	500 MΩ Min.	Unmated connectors, apply 500 VDC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	No discharge, flashover or breakdown. Current leakage: 1 mA max.	1000 VAC Min. at sea level for 1 minute. Test between adjacent contacts of unmated connectors. (EIA-364-20)
MECHANICAL		
Item	Requirement	Standard
Durability (test with cable plug w/o latch)	750 cycles.	The sample should be mounted in the tester and fully mated and unmated the number of cycles specified at the rate of 25.4 ± 3mm/min.
Mating / Un-mating Forces (test with RJ45 plug latch depressed)	Mating Force: 22N Max. Un-mating Force: 44N Max.	Operation Speed : 25.4±3 mm per minute. Measure the force required to mate/un-mate connector. (EIA-364-13)
ENVIRONMENTAL		
Item	Requirement	Standard
Humidity	See Product Qualification and Test Sequence Group 2	Mated Connector 40 °C, 90~95% RH, 96 hours. (EIA-364-31, Condition A, Method II)



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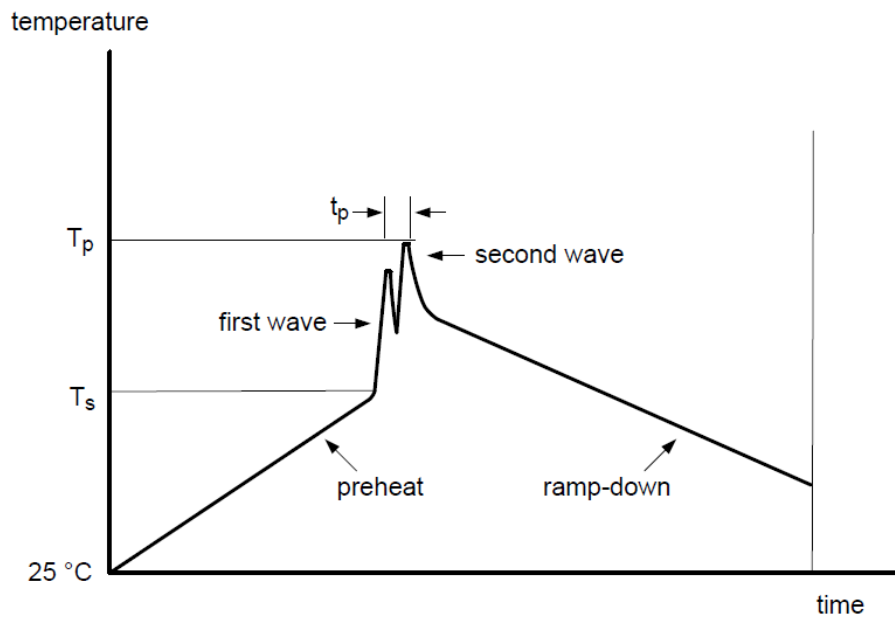
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Thermal Shock	See Product Qualification and Test Sequence Group 3	-40°C for 30 minutes ,+85°C for 30 minutes 10 cycles, last cycle is to be finished at hot temperature,1hour recovery time (EIA-364-32, Test condition I)
Salt Spray	See Product Qualification and Test Sequence Group 4	Subject mated/unmated connectors to 5% salt-solution concentration, 35 °C for 16 hours (EIA-364-26)
Solder ability	Tin plating: Solder able area shall have minimum of 95% solder coverage. Gold plating: Solder able area shall have minimum of 75% solder coverage	And then into solder bath, Temperature at 245 ±5 °C, for 4-5 sec. (EIA-364-52)

6 RECOMMENDED WAVE SOLDERING CONDITION

Profile Feature	SnPb eutectic assembly	Pb-free assembly
Average ramp-up rate	~ 200 °C/s	~ 200 °C/s
Heating rate during preheat	typical 1-2, max 4 °C/s	typical 1-2, max 4 °C/s
Final preheat temperature T_s	~ 130 °C	~ 130 °C
Peak temperature T_p	235 °C	260 °C
Time within peak temperature t_p	10 s	10 s
Ramp-down rate	5 °C/s maximum	5 °C/s maximum

Wave Soldering Profile





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7 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group									
	1	2	3	4	5	6	7			
	Test Sequence									
Examination of Product	1,8	1,7	1,5	1,5	1,3					
Contact Resistance	3,5,7		2,4	2,4						
Insulation Resistance		2,5								
Dielectric Withstanding Voltage		3,6								
Mating / Un-mating Force	2									
Durability	4									
Humidity	6	4								
Thermal Shock			3							
Salt Spray				3						
Solder ability (Board Side)					2					
Sample Size	4	4	4	4	4					