

FOXCONN

HON HAI PRECISION INDUSTRY CO., LTD.

文件名稱 DOCUMENT NAME: REGULAR QUALIFICATION TEST SPECIFICATION	主題 SUBJECT: Foxtral 1000 Series 5Row	文件編號 DOCUMENT NO: EB5-AS1F-010	PAGE	1 OF 8	REV	B
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	APPROVED	CHECKED	PREPARED	ISSUED BY :
By	L.C.Wu	Camvard	Carlos Pan	
Date	10/08'07	10/08'07	10/08'07	

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***** 修 訂 履 歷 *****

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A	BC06737889	初次發行	
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1. SCOPE

1.1 Content

This specification covers qualification, test and performance requirements for **FOXCONN's Foxtral 1000 5row CONNECTOR.**

1.2 Qualification

Tests are to be performed per the procedures stated in this specification. All inspections shall be conducted using the inspection plan for this product and the product drawing.

2. APPLICABLE DOCUMENTS

The documents are to be considered as part of this specification:

EIA 616

EIA 364

BELLCORE GR1217

TEST REPORT

INSPECTION PLAN: JIS Z9002, C=0, SAMPLE PLAN 0.25%.

3. REQUIREMENT

3.1 Design

The product shall be as specified by the product drawing.

3.2 Materials

3.2.1 Plastic Parts: LCP, UL 94V-0, IVORY WHITE.

3.2.2 Contact: Copper Alloy

3.2.3 Shield: Phosphor Bronze

3.2.4 Contact Plating: Plating in contact area shall be gold over Pd/Ni underplate. Plating used in the solder/press-fit tail area is Tin/Lead over Nickel.

3.2.5 Harmful material control follow Doc. No. "EPI12".

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3.3 Ratings

- 3.3.1 Voltage: 750 VAC.
- 3.3.2 Current at 70 1Amp max.
- 3.3.3 Operating Temperature -55 to 85 .

3.4 Markings

The product is designed to meet the requirements specified in section 3.6. All tests are to be performed at ambient temperature unless otherwise specified.

3.4.1 LOGO

The "FOXCONN" logo shall be molded on the surface of product, and the marking orientation is located in FOXCONN's customer drawing.

3.4.2 Lot Traceability

The connectors will be marked with a lot identification code which can allow the traceability of all components in making up the headers and receptacles, date of manufacture and assembly location.

3.5 Performance and Test Description

The product is designed to meet the requirements specified in section 3.6. Unless otherwise specified, all tests and measurements are to be performed at the following conditions:

- Temperature: 25 +/- 10 .
- Relative Humidity: 45% to 75%.
- Barometric Pressure: 86 to 106 Kpa.

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3.6 Test Requirements and Methods

Description of Test Measurement or Examination	Requirement	Method
Visual Examination of Product	Product meets all requirements of product drawings	All Form Fit and Function criteria is met per applicable Quality Inspection Plan.

3.6.1 Electrical Requirements

Low Level Contact Resistance	Signal contact: 12 milliohms maximum initial, 22 milliohms maximum after test. Top shield: 30 milliohms maximum initial, 40 milliohms maximum after test Bottom, vertical shield: 15 milliohms maximum initial, 25 milliohms maximum after test	EIA-364-23
Dielectric Withstanding Voltage	500VDC or 500VAC peak 1 minute hold	EIA-364-20
Propagation Delay	Propagation delay: 225 p sec. max. Skew between adjacent rows: 35 p sec. max. Skew total: 100 p sec. max. 35 p sec. rise time 10-90%	EIA-616
Characteristic Impedance	Columns 1~5: 50±7 ohms Column 6 without shield: 56±7 ohms 500 p sec. rise time 10-90% Includes footprint effects from 62-mil thick PCB	EIA-364-108
Crosstalk	12% max. NEXT 500 p sec. rise time 10-90%	EIA-616
Compliant Pin/PCB LLCR	1 milliohms max.initial, R = 1 milliohms max. 10 milli Amps max., 50 milli Volts max., open circuit voltage	EIA-364-23

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3.6.2 Mechanical Requirements

Mating Force	0.55N max. per contact. 21.5N max. per conn. (6X6 module) Speed: 25mm/min rate	EIA-364-13
Unmating Force	0.15N min. per contact. 5.9N min. per conn. (6X6 module) Speed: 25mm/min rate	EIA-364-13
Durability	No physical damage after 100 mating cycles(each interval 50 cycles) at a rate of 100 cycles per hour(maximum)	EIA -364-09
Mechanical Shock	Half-sine 30G, 11m-second duration , 3 drops in each of 3 directions	EIA-364-46
Vibration	10G acceleration. 10~500Hz. 8 hours, in each of 3 directions. 10ns max. interruption for signal contact. 1ms max. interruption for ground contact	EIA-364-28
Compliant Pin Push In Force	100N(Header) and 32N(Rec.) max. per contact 3900N(Header) and 1312N(Rec.) max. per conn. Speed: 25-50 mm/min	EIA-364-05
Compliant Pin Push Out Force	20N(Header) and 7N(Rec.) min. Speed: 25-50 mm/min	EIA-364-05
PCB/Compliant Pin Hole Deformation	After two rework cycles and with the third virgin pin inserted the drill hole radius shall not increase more than 0.051mm at any point	Bellcore GR-1217

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3.6.3 Environmental Requirements		
MFG	10 days mated parallel with 10days unmated, each interval 5 days	EIA-364-65 Condition IIA
Temperature Life	Mated connectors were subjected to 85 temperature for 500 hours.	EIA-364-17 Condition III
Temperature/Humidity Cycling	Mated connectors were subjected to temperature ranging from 25 to 65 and humidity 90-95%(RH) for 50 cycles, 500hours min.	EIA-364-31 Method A
Thermal Shock	Mated connectors were subjected to 5 thermal shock cycles ranging from -55 to +85 for a duration of 60 minutes at each extreme temperature and the transition time was 5 minutes maximum between extreme temperature.	EIA-364-32 Condition I
Disturbance	Mated connectors were subjected to disturbance test.	
Dust	The unmated connectors were subjected to the dust flow rate at 300m/min. ±10% for 1hour.	EIA-364-91

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3.7 Test Group and Sequence

TEST DESCRIPTION	TEST GROUP AND SEQUENCE						
	A	B	C	D	E	F	G
EXAMINATION OF PRODUCT	1 20	1 8	1 19	1 11	1 17	1 7	1 14
LOW LEVEL CONTACT RESISTANCE	4 7 9 11 13 15 18		4 7 9 11 13 15	4 7	4 7 9 11 13 15		
INSULATION RESISTANCE		2 6					
DWV		3 7					
CAPACITANCE						2	
INDUCTANCE						3	
PROPAGATION DELAY						4	
CHARACTERISTIC IMPEDANCE						5	
CROSSTALK						6	
COMPLIANT PIN / PCB LLCR	5 19		5 16	5 8	5 16		3 8 10
MATING FORCE	2 16		2 17	2 9	2		
UNMATING FORCE	3 17		3 18	3 10	3		
DURABILITY	6 14		6 14		6 14		
MECHANICAL SHOCK	12						
VIBRATION	10						
COMPLIANT PIN PUSH IN FORCE							2 5 7
COMPLIANT PIN PUSH OUT FORCE							4 6 11
PCB / COMPLIANT PIN HOLE DEFORMATION							12
PCB / COMPLIANT PIN PLATED THROUGH HOLE WALL DAMAGE							13
MFG					8 10		
TEMPERATURE LIFE				6			9
TEMPERATURE-HUMIDITY CYCLING		5	12				
THERMAL SHOCK		4	10				
DISTURBANCE					12		
DUST	8		8				
SAMPLE SIZE PER TEST GROUP	3	3	3	3	6	3	75pins