


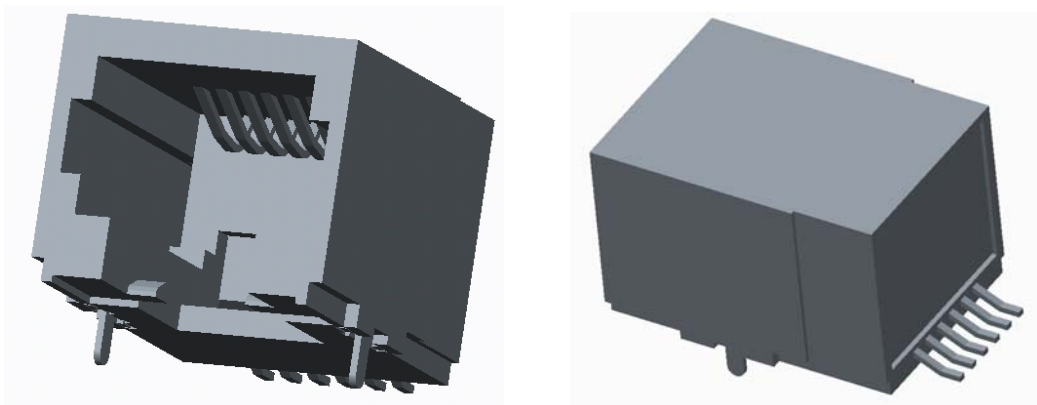
NUMBER <b>GS-12-1220</b>	TYPE <b>PRODUCT SPECIFICATION</b>		
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		AUTHORIZED BY <b>Kenny Tai</b>	DATE <b>2015-03-25</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

## 1.0 SCOPE

This specification defines the performance, test and reliability requirements of FCI Modular Jack connectors.

## 2.0 MATERIALS

The materials and plating was specified in individual product drawing.




Reference Photo Only  
Detail Refer to FCI Drawing 10122975  
FCI Part Number: 10122975-XXXLF

## 3.0 SPECIFICATIONS AND REQUIREMENTS


### 3.1 General Requirements

No#	Item	Specifications
3.1.1	Operation Temperature	-40~85°C
3.1.2	Rated Current	AC/DC 1.5A Max.
3.1.3	Rated Voltage	150 Vrms Max.
3.1.4	Recommended Storage Condition, for 1 Year Shelf Life	1) Temperature: <30°C 2) Relative Humidity: 60% * Customer should evaluate solderability per GS-19-037, after long-term storage under the recommended condition.

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### 3.2 Characteristics and Requirements

No#	Item	Requirement	Test Condition and Reference Specification
3.2.1	Visual & Mechanical Examination	See drawing	Mechanical Structure & Appearance & Cosmetics inspection.
<b>Electrical Characteristics</b>			
3.2.2	Low Level Contact Resistance	20m $\Omega$ max. initial, 30m $\Omega$ max. final ( $\Delta R < 10$ m $\Omega$ )	1. Test Voltage: 20mV max, 2. Test Current: 100 mA. 3. EIA-364-23B
3.2.3	Dielectric Withstanding Voltage	No Breakdown, arc-over, or leakage current	1. Test Voltage: 1K Vrms@60Hz between adjacent contacts 1.5K Vrms@60Hz between shield and contacts. 3. Test Period: 1 minute 4. EIA-364-20B
3.2.4	Insulation Resistance	500M $\Omega$ Initial 200M $\Omega$ Final	1. Test Voltage 500V DC 2. Test between adjacent terminal or ground. 3. EIA 364 TP21C
<b>Mechanical Characteristics</b>			
3.2.5	Contact Normal Force	0.1kgf Min	1. Test individual pin of contact area. 2. Operation speed 25mm/min 3. EIA-364-04A,
3.2.6	Durability	750 cycles	1. Mated & Unmated connectors for 750 cycles. 2. Operation speed 25mm/min. 3. No physical damage. 4. EIA-364-09C
3.2.7	Mating Force / Unmating Force	Mating Force: 1.6 Kgf Max@2 contacts 1.8 Kgf Max@4 contacts 2.1 Kgf Max@6 contacts 2.3 Kgf Max@8 contacts Unmating Force: 0.3Kgf Min.	1. Measure the force required to mate / unmate connectors (with latch depressed or removed). 2. Operation speed 25mm/min. 3. EIA-364-13B
3.2.8	Retention; Effectiveness of connector coupling device	No evidence of mechanical damage to the jack, plug or latching mechanism. No separation of the plug from the jack.	1. Apply a static load 50 N between the jack and plug in the direction of normal removal. 2. Duration: 60 seconds
<b>Environmental Characteristics</b>			
3.2.9	Humidity Test	No physical damage, No detrimental Condition	1. Testing Temperature: 40 +/- 2 $^{\circ}$ C 2. Relative Humidity: 90~95% 3. Test period: 96 hours 4. EIA-364-31B
3.2.10	Temperature Life	No physical damage, No detrimental Condition	1. Testing Temperature: 65 +/- 2 $^{\circ}$ C 2. Test period: 96 hours 3. EIA-364-17B

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3.2.11	Salt Spray	No physical damage, No detrimental condition	1. Testing Temperature: 35 +/- 2°C 2. Salty condition: 5 +/- 1 % 3. Test period: 48 hours 4. Rinse the sample with water and recondition to room temperature for 1 hour. 5. EIA-364-26B
3.2.12	Solderability	The inspected area of each lead must 95% solder coverage minimum	1. Solder pot temperature: 245+/-5 °C 2. Solder Immersion time: 5+/- 0.5 seconds. 3. JESD22-B102D

#### 4.0 QUALITY ASSURANCE PROVISIONS

##### 4.1 Equipment Calibration

All test equipment and inspection facilities used in the performance of any test shall be maintained in a calibration system in accordance with ANSI Z-540 and ISO 9000.

##### 4.2 Inspection Conditions

Unless otherwise specified herein, all inspections shall be performed under the following ambient conditions:

- a. Temperature: 25 +/- 5 deg C
- b. Relative Humidity: 30% to 60%
- c. Barometric Pressure: Local ambient

##### 4.3 Acceptance


Electrical and mechanical requirements placed on test samples as indicated in paragraphs 3.0 shall be established from test data using appropriate statistical techniques or shall otherwise be customer specified, and all samples tested in accordance with this product specification shall meet the stated requirements.

Failures attributed to equipment, test setup, or operator error shall not disqualify the product. If product failure occurs, corrective action shall be taken and samples resubmitted for qualification.

##### 4.4 Re-Qualification Testing

If any of the following conditions occur, the responsible product engineer shall initiate requalification testing consisting of all applicable parts of the qualification test matrix.

- a. A significant design change is made to the existing product which impacts the product form, fit or function. Examples of significant changes shall include, but not be limited to, changes in the plating material composition or thickness, contact force, contact surface geometry, insulator design, contact base material, or contact lubrication requirements.
- b. A significant change is made to the manufacturing process which impacts the product form, fit or function.

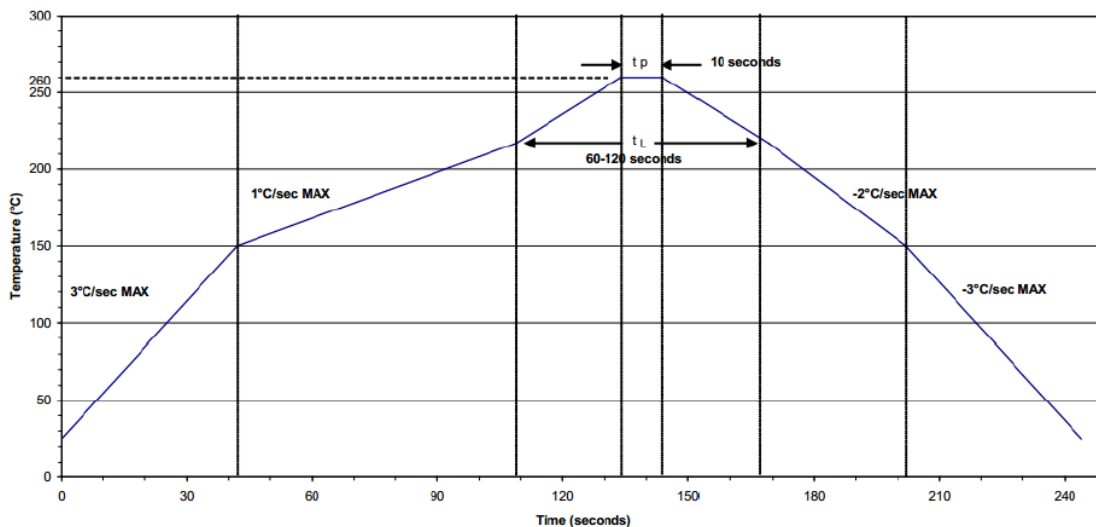
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c. A significant event occurs during production or end use requiring corrective action to be taken relative to the product design or manufacturing process.

## 5.0 QUALIFICATION TESTING TABLE

TEST	PARA	Test Group					
		A	B	C	D	E	F
		Test Sequence					
Product Inspection	3.2.1	1,7	1,5	1,7	1,7	1,4	1,3
Low Level Contact Resistance	3.2.2	2,6	2,4	2,6	2,6		
Dielectric Withstanding Voltage	3.2.3			3,5			
Insulation Resistance	3.2.4				3,5		
Contact Normal Force	3.2.5					2	
Durability	3.2.6	4					
Mating Force / Unmating Force	3.2.7	3,5					
Retention	3.2.8						2
Humidity Test	3.2.9		3				
Temperature Life	3.2.10			4			
Salt Spray	3.2.11				4		
Solderability	3.2.12					3	
Sample Q'ty (PCS)		5	5	5	5	5	5

## 6.0 RECOMMENDED LEAD-FREE REFLOW SOLDERING TEMPERATURE PROFILE



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**REVISION RECORD**

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A	All	New Release	-	2015-03-25