PRODUCT SPECIFICATION

Title	Mini PCI Express Connector, .8 mm Pitch

1.0 SCOPE

This Product Specification covers the 0.8 mm (0.0315 inch) centerline (pitch) printed circuit board (PCB) connector series with Gold plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME : MINI PCI EXPRESS CONNECTOR+METAL LATCH

2.2 SERIES NUMBER(S) : 67910-**(CONNECTOR), 48099-****(LATCH)**

2.3 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

REFERENCE TO RESPECTIVE SALES DRAWING SD-67910-***, SD-48099-***

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

REFERENCE TO EIA-364-1000.01

4.0 RATINGS

4.1 VOLTAGE RATING

50 Volts AC (RMS)

4.2 CURRENT RATING

1.1 Amps

4.3 OPERATING TEMPERATURE

- 40°C to + 85°C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Contact Resistance (Low Level)**	Mate connectors: apply a maximum voltage of **20** mV and a current of **100** mA. **Per EIA-364-23**	**55** milliohms ,[initial] MAX. PER CONTACT
2	**Insulation Resistance**	Unmate & unmount connectors: apply a voltage of **500** VDC between adjacent terminals. **Per EIA-364-21**	**500** Megohms MIN.
3	**Dielectric Withstanding Voltage**	Unmate connectors: apply a voltage of **300** VAC (rms) for **1** minute between adjacent terminals . **Per EIA-364-20**	No Breakdown; current leakage < **1** mA
4	**Current Rating**	Mate connectors: measure the temperature rise at the rated current after: **1.1** A /Power Contact The temperature rise above ambient shall not exceed **30**°C The ambient condition is still air at **25**°C. **Per EIA-364-70 method 2**	Temperature rise: **+30**°C MAX.

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Total Mate and Un-mate Forces**	Card mating/un-mating sequence: a.) Insert the card at the angle specified by the manufacturer. b.) Rotate the card into position. c.) Reverse the installation sequence to unmate. Per **EIA-364-13**	**2.3** Kg-f MAX.
2	**Durability**	**50** cycles. Per **EIA-364-09**	**20** milliohms MAX. (change from initial)
3	**Vibration (Random)**	Mate connectors and vibrate per **EIA 364-28**, test condition **VII** .test condition letter D (**15** minutes in each of **3** mutually perpendicular directions. Both mating halves should be rigidly fixed so as not to contribute to the relative motion of one contact against another.)	**20** milliohms MAX. (change from initial) & Discontinuity < **1** microsecond
4	**Shock (Mechanical)**	Mate connectors and shock at **50** g's with ½ sine wave (**11** milliseconds) shocks in the ±X,±Y,±Z axes (**18** shocks total). Per **EIA-364-27**, Test condition **A**.	**20** milliohms MAX. (change from initial) & Discontinuity < **1** microsecond

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Thermal Shock**	Mate P.C.B. Module and subject to follow condition for **10** cycles. 1 cycles a). **–55 +0/-3 °C**, **30** minutes b). **85 +3/-0** °C , **30** minutes Per **EIA-364-32**, Test condition **I**	**20** milliohms MAX. (change from initial) & Visual: No Damage
2	**Cyclic temperature and Humidity**	Mate P.C.B. Module and subject to cycle the connector between **25 °C±3 °**C at **80 % ± 3 %** RH and **65 °C ± 3 °C** at **50 % ± 3 %** RH. dwell time of **1.0** hour; ramp time of **0.5** hours. 24 cycles Per **EIA-364-31**	**20** milliohms MAX. (change from initial) & Visual: No Damage
3	**Temperature life**	Mate P.C.B. Module and subject to expose to 85 **± 3 °C** for **96** hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shal be performed. Per **EIA-364-17**, Test condition **A**	**20** milliohms MAX. (change from initial) & Visual: No Damage
4	**Flowing Mixed Gas (FMG)**	Mate connectors, **7** Day exposure. Per **EIA-364-65**, method **2A**	**20** milliohms MAX. (change from initial) & Visual: No Damage
5	**Thermal Distubance**	Cycle the connector between **15 °C ± 3 °C** and **85 °C ± 3 °C**, as measured on the part. Ramps should be a Minimum of **2 °C** per minutes, and dwell times should insure that the contactc reach the temperature extremes (a minimum of 5 minutes). Humidity is not controlled. **10** cycles.	**20** milliohms MAX. (change from initial) & Visual: No Damage
6	**Solder Heat for Rework/Repair**	Connector to withstand PCB solder/re-solder operation with hand held solder iron at temperature of 350°C minimum for a dwell time of at least 3sec	No mechanical degradation

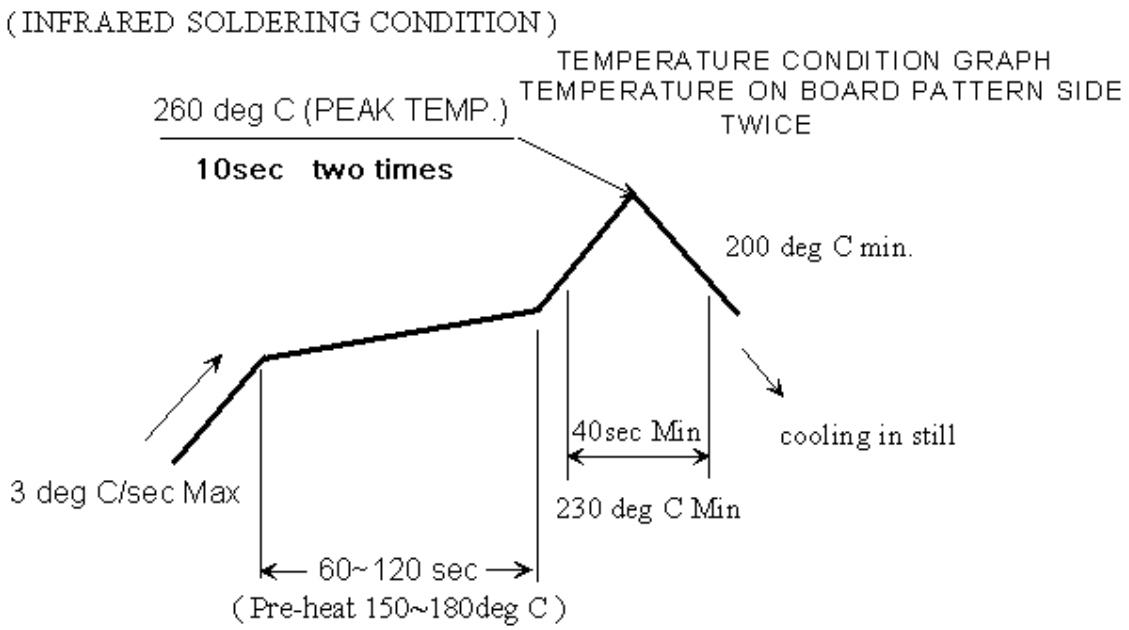
5.4 TEST SEQUENCE DIAGRAM BY VERTICAL

	Group 1 Temperature Life	Group 2 Thermal Shock/ Cyclic Temperature	Group 3 Mechanical Shock/ Vibration	Group 4 Mixed Flowing Gas
Step	Samples **5**	Samples **5**	Samples **5**	Samples **5**
1	LLCR	LLCR	LLCR	LLCR
2	*Durability (Precondition)	*Durability (Precondition)	*Durability (Precondition)	*Durability (Precondition)
3	Temperature Life	Thermal Shock	Temperature Life (Precondition)	Temperature Life (Precondition)
4	LLCR	LLCR	LLCR	LLCR
5	Reseating	Cyclic Temperature And Humidity	Mechanical Shock	Mixed Flowing Gas
6	LLCR	LLCR	LLCR	LLCR
7		Reseating	Vibration	Thermal Disturbance
8		LLCR	LLCR	LLCR
9				Reseating
10				LLCR

LLCR : Low Level Contact Resistance

* Durability (Precondition): 20 unplug/plug cycles.
* Use metal latch to fix the modular mated with connector, after condition, the test metal latch should be passed by appearance check and function is ok.

6.0 RECOMMENDED INFORARED REFLOW CONDITION



(NOTE)
1. Please check the reflow soldering condition by your own devices beforehand
   Because the condition changes by the soldering devices, P.C.Boards, and so on.
2. Thickness of the cream solder shall be maintained 0.12mm MIN.
   After reflow process.

7.0 Document Record

Revision	Revision Record	Date	ECN No.	Writter	Checker
A	Release	2005/03/28	SH2005-0289	WFDENG	
B	Release	2005/10/10	SH2005-0334	DAVID HU	
C	Release	2005/12/30	SH2006-0239	DAVID HU	
D	Release	2007/03/12	SH2007-0644	DAVID HU	
E	Release	2010/05/13	SH2010/05/12	RZHANG	