PRODUCT SPECIFICATION

MODULAR JACK WITH LED & INTEGRATED MAGNETICS SMT TYPE

1.0 SCOPE

This Product Specification covers the modular jack connector series with selective gold and tin plating for IR reflow application.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

Modular Jack SMT With Integrated Magnetics with LED SMT;
P/N: 48074-1101/9101 /9103.

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings (SD-48074-101/102/103) for information on dimensions, materials, plating and markings.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

3.1 INDUSTRY DOCUMENTS

FCC Rules and Regulations, Part 68, Subpart F
IEC-60603-7

3.2 MOLEX DOCUMENTS

See the appropriate sales drawing for the necessary referenced documents and specifications

Note that in terms of conflicting info, the Molex Sales Drawing takes precedence followed by Molex PS.

4.0 RATINGS OF CONNECTOR

1. Current rating: 1.5 Amps @ 25°C
   Voltage rating: 5.5 VDC Max

2. Operating temperature:
   -40°C to + 85°C

5.0 PERFORMANCE

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Examination of product	Visual, dimensional and functional per applicable quality inspection plan.	Product shall meet requirements of applicable product drawing and specification.

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
2	**DC Resistance(LLCR)**	Apply a maximum voltage of **20** mV and a current of **100** mA. (Measure J6 to J3 , J2 to J1)	**1.2** Ω MAXIMUM
3	**Insulation Resistance**	Unmated connector, apply a voltage of **100** VDC± 15V DC between adjacent terminals(J1~J8) and between terminals to ground(J1~J8 TO Shell).	**500** Megohms MINIMUM
4	**Current Temperature Rating**	Mate connector, and apply the maintenance current **1.5A** and measure the temperature rise when thermal stability is achieved.	**30**℃ rise MAXIMUM from initial.
5	**Dielectric Withstanding Voltage**	**1500** VAC rms (**1.5**mA cutoff current) for **60** seconds(See Schematic 7).	No Breakdown
		2250 VDC rms (**1.5**mA cutoff current) for **60** seconds(See Schematic 7).	

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
6	**Connector Mate Force**	Mate connector at a rate of **25 ± 6** mm (**1 ± ¼** inch) per minute.	**22** N (**5** lbf) unshielded MAXIMUM insertion force **35** N (**8** lbf) shielded MAXIMUM insertion force
7	**Durability**	Mate connectors up to **750** cycles at a maximum rate of **10** cycles per minute prior to Environmental Tests.	1. **1.2** Ω MAXIMUM 2. show no physical damage 3. LED function not to fail.

8	**Vibration (Random)**	Amplitude: 1.50mm (.060") peak to peak Sweep: 10-55-10 Hz in one minute Duration: 15 minutes Direction: X, Y,Z axis (45 minutes total)	1.Discontinue ≦ 1microsecond 2. **1.2** Ω MAXIMUM
9	**Plug Retention Force**	Apply an axial pullout force on the plug at a rate of **25 ± 6** mm (**1 ± ¼** inch).	**98** N (**22** lbf) MINIMUM retention force Test instruction attached at section 8.
10	**Shock (Mechanical)**	Mate connectors and shock at **50 G** Half-sine,**11ms** form shocks in the X, Y, Z axis (9 shocks total).	1.Discontinue ≦ 1microsecond 2. **1.2** Ω MAXIMUM
11	**Solderability**	Dip solder tails into the molten solder (held at **245 ± 5**℃) up to 1.0mm from the bottom of the housing for **5 ± 1** second	Solderable area shall have minimum of **95**% solder coverage

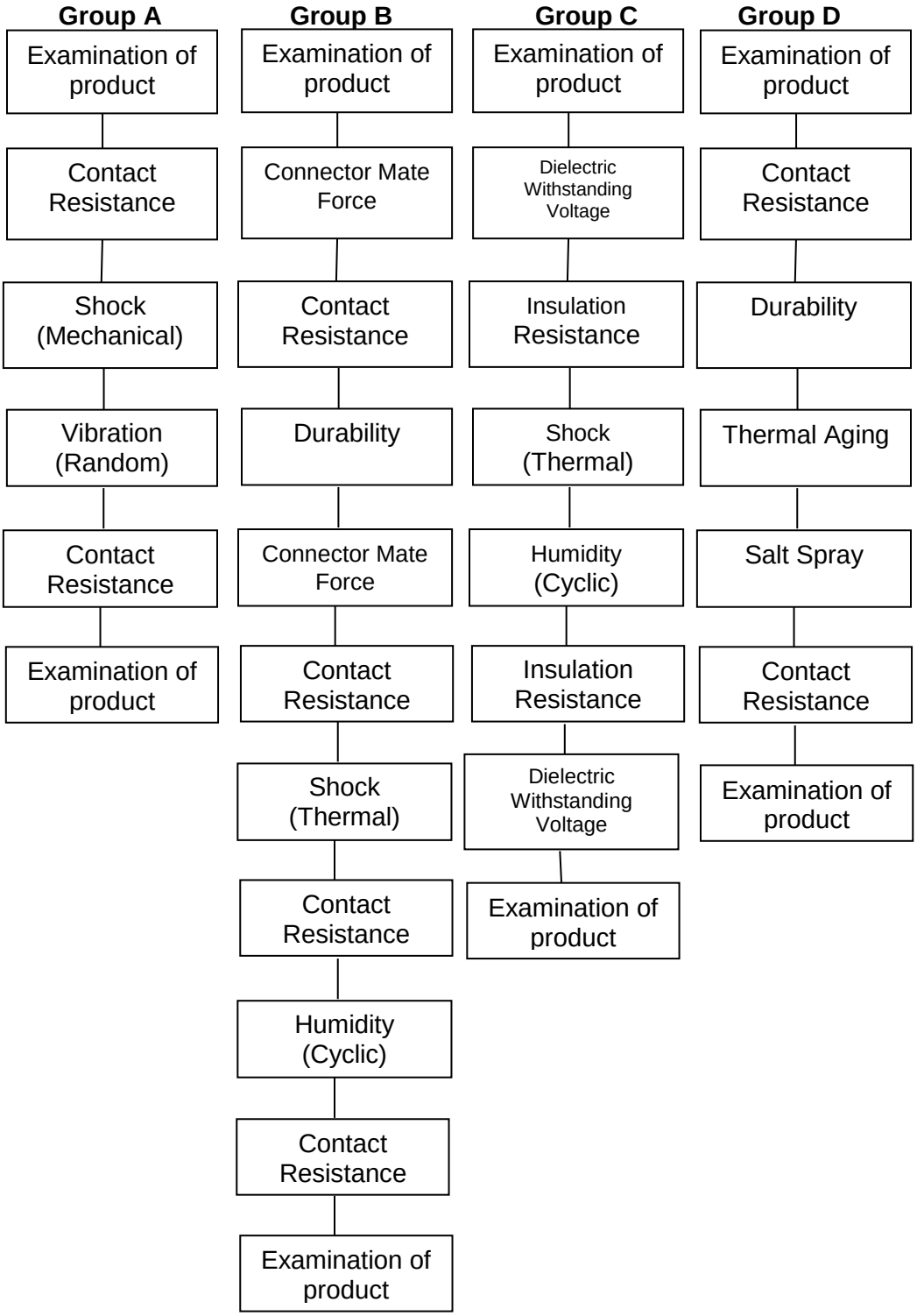
5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
12	**Shock (Thermal)**	Mate connectors, expose to **10** cycles of: **-40**°C to +**85**°C **30** minutes dwell. Contact resistance test pin pairs: J1 to J2 , J3 to J6;	1. Visual: No Damage 2. **1.2** Ω MAXIMUM on initial, △R：20mΩ Max(change from initial) 3. LED function not to fail.
13	**Thermal Aging**	Mate connectors; expose to:**48** hours at **85±2**°C contact resistance test pin pairs: J1 to J2 , J3 to J6;	1. Visual: No Damage 2. **1.2** Ω MAXIMUM on initial, △R：20mΩ Max(change from initial) 3. LED function not to fail.
14	**Humidity (Cyclic)**	Mate connectors; expose to **10** cycles at **90-95**% relative humidity with temperatures at +**25**°C and +**65**°C per MIL-STD-202F method 106F (without -10°C dip)contact resistance test pin pairs: J1 to J2 , J3 to J6;	1. Visual: No Damage 2. **1.2** Ω MAXIMUM on initial, △R：20mΩ Max(change from initial) 3. LED function not to fail.
15	**IR Reflow**	See appendix "A"	1. Visual: No Damage 2. **1.2** Ω MAXIMUM on initial, △R：20mΩ Max(change from initial) 3. LED function not to fail.
16	**Salt Spray**	**5±1**% salt solution Duration **48** hrs	1. Visual: No Damage 2. **1.2** Ω MAXIMUM on initial, △R：20mΩ Max(change from initial) 3. LED function not to fail.

Note:

All tests shall meet visual requirements, show no physical damage and meet requirements of following additional 5.4 tests group. The test group shows the test sequences and shall completely test 5 pcs samples in each group. There are another four test items (Current Temperature Rating, Plug Retention Force, Solderability, IR Reflow) should be done by individual test condition and requirement shown above.

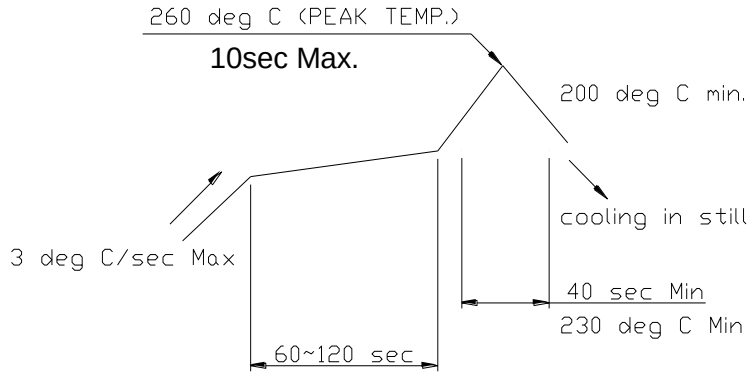
5.4 TEST GROUP / TEST SEQUENCE



5.5 APPENDIX "A" (Pls review with Rockwell spec.)

(INFRARED SOLDERING CONDITION)

TEMPERATURE CONDITION GRAPH
TEMPERATURE ON BOARD PATTERN SIDE
TWICE



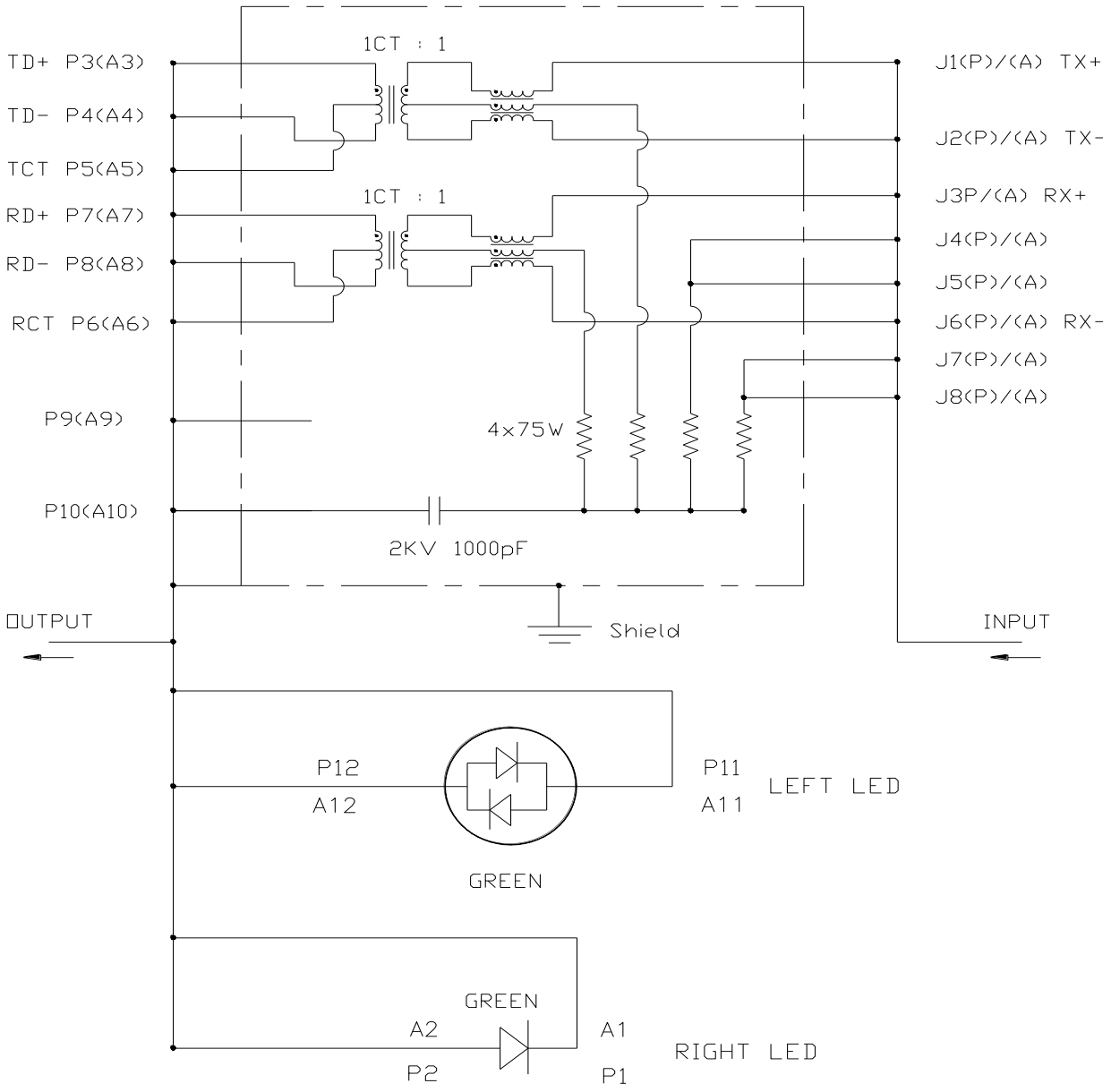
(NOTE)
1.Please check the reflow soldering condition by your own devices beforehand
Because the condition changes by the soldering devices, P.C.Boards, and so on.
2.Thickness of the cream solder shall be maintained 0.12mm MIN.
After reflow process.
3.260℃ peak temperature shall last for 10 seconds.

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. See appropriate sales drawings.

7.0 SCHEMATIC:

Hi-Post Test: 1500 VAC rms (1.5mA cutoff current) for 60 seconds Between Input And Output.
2250 VDC rms (1.5mA cutoff current) for 60 seconds Between Input And Output.



8.0 OTHER INFORMATION

Plug retention force test instruction