



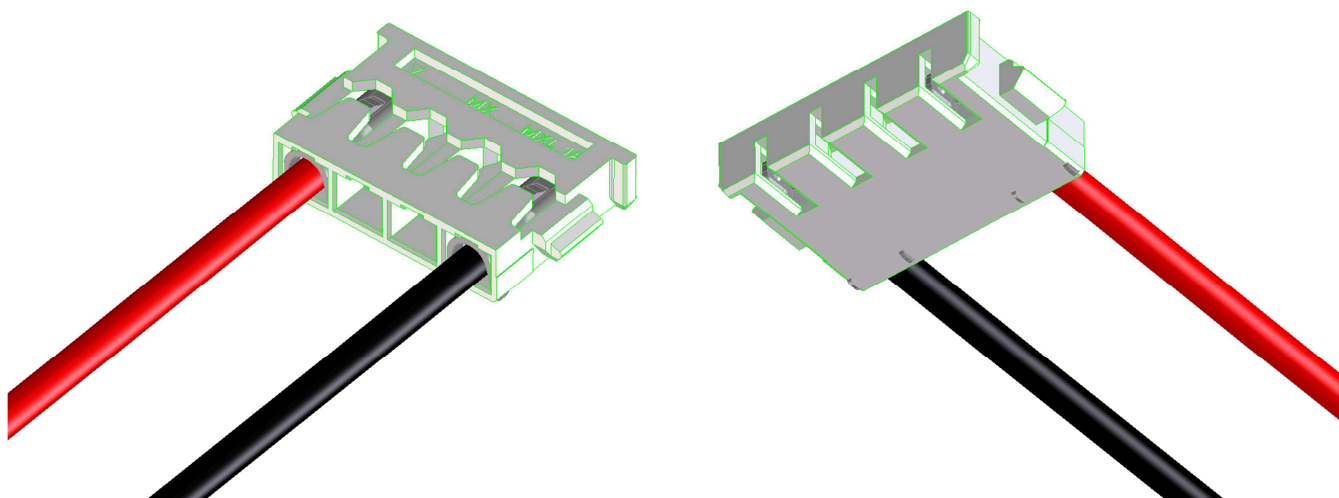
PRODUCT SPECIFICATION

1.20MM PITCH, WIRE-TO-BOARD, PLUG AND RECEPTACLE PSI CONNECTOR

1.0 SCOPE

This Product Specification covers the performance requirements for 1.20mm pitch, wire-to-board connector to be used with Molex Plastic Substrate Interconnect (PSI) product line.

2.0 PRODUCT DESCRIPTION:



2.1 PRODUCT NAME AND SERIES NUMBER (S)

Product Name: 1.20MM PITCH, WIRE-TO-BOARD CONNECTOR

Part Numbers: Plug: 68801-4084, 68801-4085, 68801-4146, 68801-4147, 68801-4225, 68801-4226, 68801-4227, 68801-4228, 68801-4229, 68801-4897, 68801-5372; Receptacle: See Molex Plastic Substrate Interconnect product line.

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Refer to the sales drawing for information on dimensions, material plating and marking.

Wire size: 28 AWG Stranded (UL1371) solder spliced (not shown) to 18 or 20 AWG Stranded (UL1569)

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

The following documents are part of this specification to the extent specified herewith. In the event of conflict between the requirements of this specification and the product drawings, the product drawings shall take precedence. In the event of conflict between the requirements of this specification and reference documents, this specification shall take precedence.

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| REVISION: | ECR/ECN INFORMATION: | TITLE: | SHEET No. |
| A | EC No: 10646425 DATE: 2014/07/01 | 1.20MM PITCH, W-T-B CONNECTOR FOR PSI | 1 of 5 |
| DOCUMENT NUMBER: | CREATED / REVISED BY: | CHECKED BY: | APPROVED BY: |
| PS-68801-002 | G.MEYER | D.RIOS | D.MCGOWAN |



PRODUCT SPECIFICATION

4.0 RATINGS

4.1 VOLTAGE

130 Volts AC(50Hz/60Hz)/DC (MAXIMUM)

4.2 CURRENT

2.8A (MAXIMUM)

4.3 OPERATING TEMPERATURE

-25°C to + 105°C

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|-------|--|--|------------------------------|
| 5.1.1 | Contact Resistance (Low Level) | Measure contact resistance by 100mA DC. Max open circuit voltage 20mV (EIA-364-23) | 20 milli-ohms Max. (Initial) |
| 5.1.2 | Insulation Resistance | Measurement taken between adjacent contacts where 500V DC is applied (EIA-364-21) | 100 Mega-ohms Min. |
| 5.1.3 | Dielectric Withstanding Voltage | Receptacle subjected to 1300V AC for 1 minute between adjacent contacts (EIA-364-20) | No breakdown |
| 5.1.4 | Temperature Rise (via Current Cycling) | Rated as per followed, after 1 hours (EIA-364-70) | 30°C temp rise Max. |

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PRODUCT SPECIFICATION

5.2 MECHANICAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT |
|-------|------------------------|--|--|
| 5.2.1 | Mate/Unmate Force | Mate plug and receptacle vertically at a rate of 25.4 mm/minute . Unmate plug and receptacle vertically at a rate of 12.7 mm/minute . (EIA-364-13) | Mate Force: 18N Max. Unmate Force: 1st Mating Cycle: 4.0N Min. 3rd Mating Cycles: 1.5N Min. 5th Mating Cycles: 1.2N Min. |
| 5.2.2 | Durability | Mate connectors up to 5 cycles vertically at a maximum rate of 5 cycles per minute. (EIA-364-09) | Contact Resistance: 20 milli-ohms Max. (Change from initial) |
| 5.2.3 | Vibration | Mate connectors and vibrate in 3 mutually perpendicular planes, for 15 minutes per axis. Test condition VII-D (EIA-364-28) | Contact Resistance: 20 milli-ohms Max. (Change from initial) |
| 5.2.4 | Terminal Pull Strength | Pull terminal axially from housing at a rate of 12.7mm per minute. | 4N Minimum |
| 5.2.5 | Mechanical Shock | Method H (EIA-364-27) | Contact Resistance: 20 milli-ohms Max. (Change from initial) |

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PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL REQUIREMENTS

| ITEM | DESCRIPTION | TEST CONDITION | REQUIREMENT | | | | | | |
|-------------------------|-------------------------------|--|---|-----------------------|-----|----|------|----|---|
| 5.3.1 | Thermal Shock | Expose to 2000 cycles of: <table><tr><td><u>Temperature (°C)</u></td><td><u>Duration (Min)</u></td></tr><tr><td>-40</td><td>15</td></tr><tr><td>+125</td><td>15</td></tr></table> (EIA-364-32) | <u>Temperature (°C)</u> | <u>Duration (Min)</u> | -40 | 15 | +125 | 15 | 1) Contact Resistance: 20 milli-ohms Max. (Change from initial) 2) Insulation Resistance: 100 mega-ohms Min. 3) Dielectric Strength: No Breakdown |
| <u>Temperature (°C)</u> | <u>Duration (Min)</u> | | | | | | | | |
| -40 | 15 | | | | | | | | |
| +125 | 15 | | | | | | | | |
| 5.3.2 | Thermal Aging | Mate connectors; expose to : 900 hours at 115°C+/-2°C (EIA-364-17) | Contact Resistance: 20 milli-ohms Max. (Change from initial) | | | | | | |
| 5.3.3 | Cyclic Temperature & Humidity | Test per EIA-364-1000, Table 2, Step #5. Cycle between 25°C/80%RH and 65°C/50%RH. Ramp 0.5 hours. Dwell 1.0 hours. 24 cycles. (EIA-364-31) | 1) Contact Resistance: 20 milli-ohms Max. (Change from initial) 2) Insulation Resistance: 100 mega-ohms Min. 3) Dielectric Strength: No Breakdown | | | | | | |
| 5.3.4 | Solderability | Parts shall be tested as per J-STD-002, Test E. | Solder coverage: 95% Min (Per SMES-152) | | | | | | |
| 5.3.5 | Mixed Flowing Gas | Class IIA, 7 days unmated, followed by 3 days mated (EIA-364-65) | Contact Resistance: 20 milli-ohms Max. (Change from initial) | | | | | | |

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PRODUCT SPECIFICATION

6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

7.0 OTHER INFORMATION

None

8.0 NOTES

- ELV and RoHS compliant.
- Don't mate & unmate connector with electrical circuit charged. This may lead to arcing, which will cause poor connector performance.
- In a situation where connector gets wet, dry before use. A wet connector may cause shorting due to water between circuits.
- Do not drive connector above the rated current.
- When connector is used in an application where the connector moves, affix the wire in relation to the connector at a point close to the connector.

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