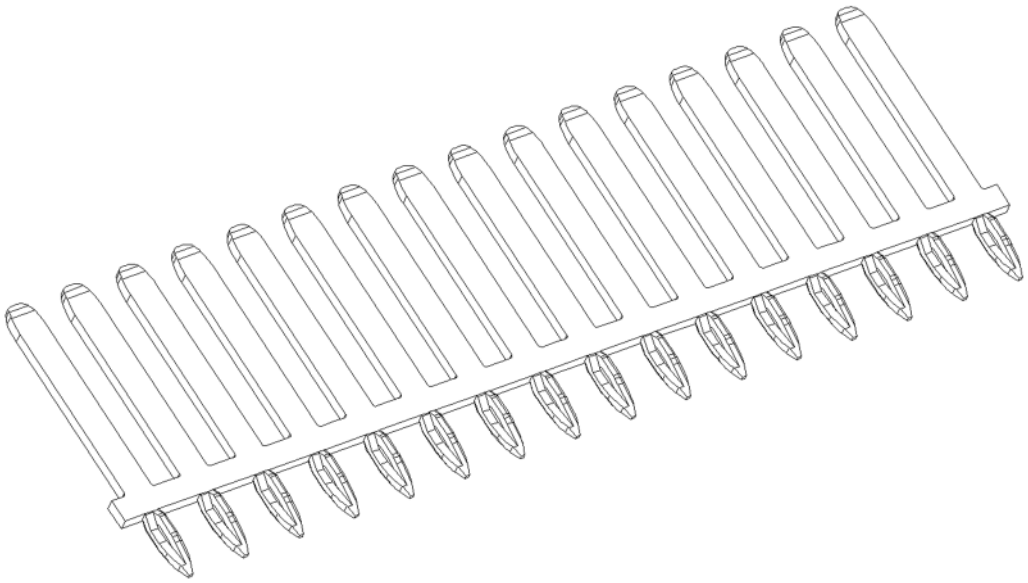
HARWIN SOLUTIONS

Component Specification

Press Fit Series



Harwin Asia Pte Ltd

PRODUCT SPECIFICATION

1.0 SCOPE

This Product Specification covers the design, characteristics, types of execution, tests and quality requirements of the "Contact Pin 1.5 x 0.6 with Press-Fit Area". The press-in area is designed for contacting with a metallized printed circuit board hole (hole diameter = 1.0 mm, thickness of printed circuit board = 1.6 mm). The push-on area (stud with a cross-section of 1.5 mm x 0.6 mm) must be used with a bushing contact

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

PRESS FIT TERMINAL 1.5 x 0.6 TYPE **MMP-PF-150-XXXX-T0-RX** series

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See appropriate sales drawings for details on dimensions, materials, plating and markings.

2.3 SAFETY AGENCY APPROVALS

See appropriate sales drawings

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Please refer to the Sales Drawings, and other sections of this Specification for specific references to applicable documents and specifications. In cases where the Product Specification differs from the Sales Drawings, the Sales Drawing will take precedence

4.0 GENERAL CONDITIONS

All tests which are implemented with the contact system must correspond with the test guidelines listed in this specification.

- Printed circuit board thickness: 1.6 ± 0.14 mm
- Material quality: min. FR4
- Circuit board hole design based on DIN EN 60 352-5; 2.4
- Storage temperature: -40°C to 125°C
- Maximum authorized voltage according to IEC 664 / IEC 664A (DIN VDE 0110)

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5.0 PERFORMANCE

Item	Test Items	Requirement	Procedures
1	Examination of Product	Meets requirements of product drawing. No physical damage.	Specimens shall be investigated by 10x (or higher) microscope. Based on IEC 512-2, tests 1a and 1b

Electrical Tests			
2	Current capacity, Max. current heating, Current heating based on environmental simulation	The different values depend on the application and execution. Therefore, please consider illustration 3.3 A. If no comparable examples are contained, the user must have the individual case tested or checked.	
~~3~~	**Contact Resistance (LLCR)**	0.5 milliohms Max (Initial)	Subject mated contacts assembled in housing to 20mV maximum open circuit at 10mA maximum.

Mechanical Tests			
4	Holding force of the Press-Fit in the circuit board in new condition	> = 50 N (contact surface Sn) (circuit board hole Sn)	Based on IEC 512-8, test 15a Test velocity: 25 mm/min
5	Holding forces of the Press-Fit in the circuit board based on environmental simulation	> = 40 N (contact surface Sn) (circuit board hole Sn)	Based on IEC 512-8, test 15a Test velocity: 25 mm/min
6	Press-in forces	60 - 180 N (contact surface Sn) (circuit board hole Sn)	Test velocity: 25 mm/min

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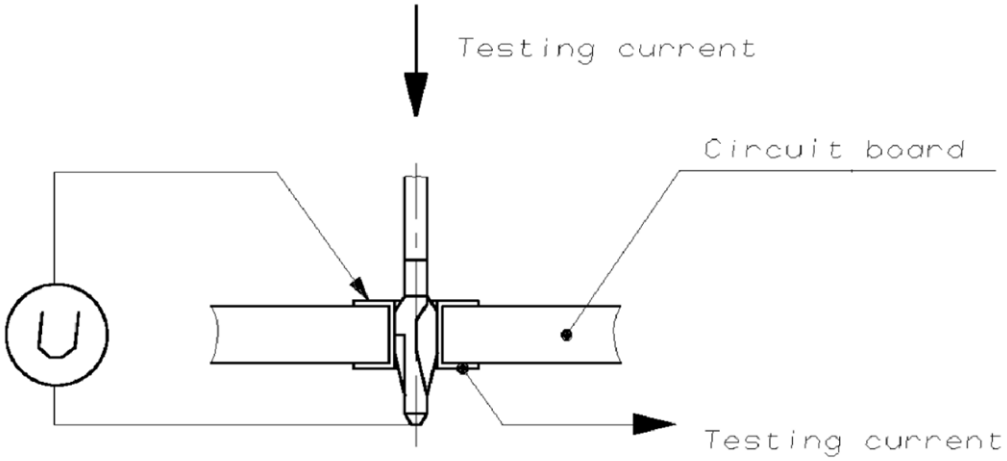
Environmental Simulation			
7	Temperature shock	The contact resistance must not exceed the following threshold: Resistance change > 1mOhm in any test If the contacts are loaded afterwards for at least 15 minutes with rated current, the current heating up may amount to 20° C more than with a new contact. In the contact area, no corrosion may occur. The mechanical function of the plug must be ensured.	Based on IEC 68 T.2-14 duration: 144 cycles temperature: -40°C / 140°C
8	Temperature change		Based on IEC 68 T.2-14 duration: 20 cycles temperature: -40°C / 140°C each 3 h
9	Storage with dry heat		Based on EN 60068-2-2 duration: 120 h temperature: 125°C
10	Industry climate		Based on DIN 41640 T.72 (0.02 ppm SO_2 0.01 ppm H_2S 0.2 ppm NO_2 0.01 ppm Cl_2, duration: 21 d / 75% RH. / 25°C) flow velocity: 1 m_3 /h
11	Humid warm cyclical		Based on IEC 68 T.2-30 duration: 21 cycles each 24 h Tu= 25° C, To = 55° C 95% r.F.
12	Vibration test in all 3-room axis		f: 15 – 1000 Hz, a = 10g duration: 6 h per each room axis
13	Mechanical shock in all 3-room axis		Based on EN 60068-2-27 a=30g, t=6ms half shaft sinus shaped 50 shocks per each room axis

6.0 PACKAGING

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

PRODUCT SPECIFICATION

7.0 MEASURING PRINCIPLE



8.0 TEST SEQUENCE

Test Items	Test Group							
	1	*2*	*3*	*4*	*5*	*6*	*7*	
	Test Sequence							
Examination of product	1	1,4	1,4	1,4	1,4	1,4	1,4	
Contact Resistance (LLCR)	2	2,5	2,5	2,5	2,5	2,5	2,5	
Holding force	3	6	6	6	6	6	6	
Vibration		3						
Mechanical Shock			3					
Temperature shock				3				
Humid warm cyclical					3			
Temperature change						3		
Industry climate							3	
Sample Size	5	5	5	5	5	5	5	