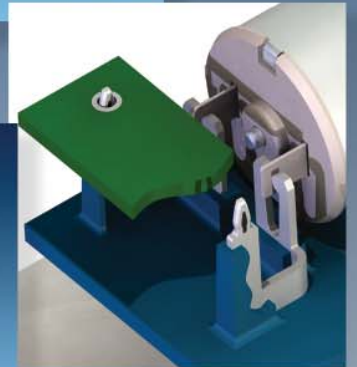
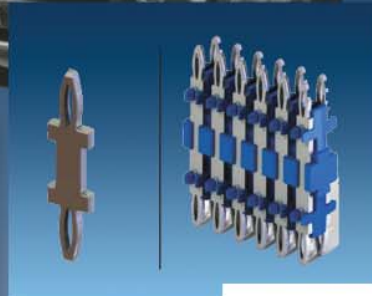


汽车电子行业 *Press-Fit* 技术 无焊接解决方案 *Automotive Press-Fit Technology* *Solderless Solutions*



连接器及堆栈应用
Connectors and Stacking Applications

传感器及控制模块
Molded Sensor & Control Modules

马达及开关控制
Motor & Flapper Controls

总线连接及保险盒
Bus Bar Interconnects & Fuse Receptacles

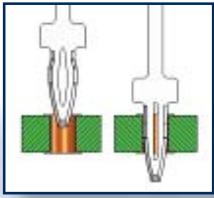
轮胎压力监控
Tire Pressure Monitors

连接盒
Junction Boxes

引擎及变速器控制
Engine & Transmission Controllers

Interplex
Electronic (HZ) Co., Ltd.

提供全球性精密零部件生产和组装服务
Global Solutions for Complex Parts and Assemblies



怡得乐的Press-fit技术是一种无焊接连接Pin技术。它的设计及测试能够达到汽车电子的各项测试要求（基于IEC, EIA和SAE等国际标标准），其中包括振动，机械性能及热冲击（温度高达125°C）测试。Interplex's Press-Fit, Solderless Interconnect Technology is designed and tested to meet standard automotive requirements for vibration, mechanical & thermal shock for temperatures up to 125° C, as defined by the IEC, EIA and SAE.

这种技术允许组装端子与印刷电路板（PCB）电镀通孔进行连接，通过这种技术可以实现一种机械式电导通与维护而无需使用焊接技术。This technology allows for the assembly of a terminal or electrical lead to a printed circuit board's (PCB) plated-through hole in such a way that an electrical mechanical connection is created and maintained without the application of solder.

怡得乐电子Press-Fit无焊接技术特性 Interplex's Press-Fit Solderless Technology Features:

- 无焊接技术设计和测试满足汽车电子要求
Solderless Technology design & tested to meet automotive requirements
- 采用“针眼”设计 Proven “Eye of the Needle” design
- 已通过125°C操作温度的认证, 选用合适的合金材料可满足150°C要求
Qualified to 125° C operational temperatures with optional 150° C alloys available
- 符合IEC, EIA和SAE标准 Requirements defined by IEC, EIA and SAE
- 已经拥有0.64mm与0.8mm两种厚度规格Press-fit的产品设计
Designs available for both .64mm and .80mm thick press-fit sections
- 采用高导电性能材料 High conductive material options
- 兼容各种PCB电镀形式 Compatible with various PCB plating types



规格参数 Press-Fit Sizes and Technology

厚度 Press-Fit Thickness	材料 Alloy Options	导电率 Conductivity (IACS)	PCB板孔 Nominal PCB Hole Size
 .64mm - Thick	磷青铜 Phosphor Bronze 锡黄铜 Tinned Brass	13% to 15% 25% to 30%	* 1.020 mm
 .80mm - Thick	磷青铜 Phosphor Bronze 锡黄铜 Tinned Brass 高导电合金 High Conductivity Alloy	13% to 15% 25% to 30% 75% to 80%	* 1.486 mm

* “应用图纸” 定义详细PCB板孔的结构及公差要求 Request “Application Drawings” for details and tolerances on PCB hole construction.



Press-Fit Technology

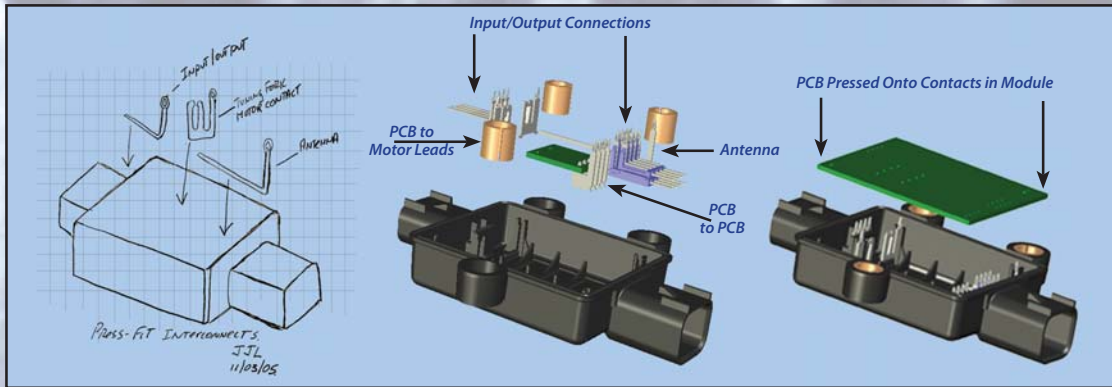
Automotive Products

汽车电子产品

先进的Press-Fit方案 Advanced Engineered Press-Fit Solutions

公司先期工程技术小组与客户协作，共同开发Press-fit应用方案，如：非连续端子、连接组装、以及客户注塑件包装与特殊要求的组装。此外，怡得乐还致力于产品设计、工程应用、生产制造与自动化研究，帮助客户开发适合于任一特殊应用领域的技术解决方案。

The company's Advanced Engineering team works with customers to develop press-fit solutions for applications such as discrete terminals and connect or assemblies, as well as custom-molded packages and specialized assemblies. In addition, Interplex leverages its expertise in product design, applications engineering, manufacturing and automation to help customers create the proper turnkey solution for any particular application.



概念 **Concept** → 设计 **Design** → 制样 **Prototype** → 产品 **Production**

此外，公司还可以利用其全球生产制造资源来满足任一区域生产制造或自动化要求。In addition, the company can leverage its global manufacturing resources to meet any regional manufacturing or automation requirements.

机械和环境测试总结 Summary Results of Mechanical and Environmental Tests

测试项目 Test Item	规格 Acceptance Criteria	测试内容 Testing for:	结果 Result
0.64mm插入力和保持力 .64mm Insertion & Retention Force	97N-最大插入力 97N-Insertion-Max. 20N-最小保持力 20N-Retention-Min.	• PCB板孔径在上限和下限值时的插拔力 Forces in Upper & Lower Limit Hole Sizes	通过 Pass
0.80mm插入力和保持力 .80mm Insertion & Retention Force	178N-最大插入力 178N-Insertion-Max. 62N-最小保持力 62N-Retention-Min.	• PCB板孔径在上限和下限值时的插拔力 Forces in Upper & Lower Limit Hole Sizes	通过 Pass
电镀通孔 PTH Integrity	根据IEC 60352-5 Per IEC 60352-5	• 电镀通孔的变形 Deformation of Plated Through Hole	通过 Pass
随机振动 Random Vibration	接触电阻增加值< 3.0 mΩ 根据IEC, EIA,SAE Increase of Contact Resistance < 3.0 mΩ Per IEC, EIA, SAE	• 接触点的移动 Movement of Contact Points	通过 Pass
热冲击 Thermal Shock		• 接触点的移动 Movement of Contact Points	通过 Pass
热老化 Thermal Aging		• 端子和PCB板的应力释放 Stress Relaxation of Terminal and PCB • 氧化膜的生长 Growth of Oxide Film	通过 Pass
温湿度循环 Temp/Humidity Cycle		• 氧化膜的生长 Growth of Oxide Film	通过 Pass
混入流动气体 Mixing Flowing Gas		• 滚镀影响 Effectiveness of Barrier Plating	通过 Pass

详细测试结果请参阅“测试总结报告” Detail Test **“Summary Reports”** Available on Request

怡得乐是一家全球多方位集成制造商，专业提供小型高精密产品及组装件，共有29家工厂分布在全球11个国家。怡得乐为客户提供从概念到开发以及大批量生产的服务，可用于各个领域。Press-Fit 技术可设计用于单个金属件冲压，注塑及镶嵌式注塑和组装件，可用于生产电子和机械半成品。

Interplex is a vertically integrated global manufacturer of small precision parts and assemblies with over 29 worldwide locations in 11 Countries. Interplex offers complete solutions from concept through development and into scalable high volume production for almost any application requirement. Press-Fit sections can be designed into discrete metals stampings, molded and overmolded shrouds, housings and assemblies and/or incorporated into complete electronic and mechanical sub-assemblies.





怡得乐全球分布 Interplex Global Locations



Americas

-  California: Interplex Nascal
- Connecticut: Interplex Technologies
- Florida: Interplex Proto-Stamp
- Florida: Interplex Sunbelt
- Illinois: Interplex Daystar
- Kentucky: Interplex Plastics
- Massachusetts: Interplex Etch Logic
- Massachusetts: Interplex Metal Logic
- Michigan: Interplex Engineering Center
- New Jersey: Interplex NAS
- New Jersey: Interplex Precision Machining
- New York: Interplex Industries, Inc.
- Ohio: Interplex Medical
- Rhode Island: Interplex Automation
- Rhode Island: Interplex Engineered Products
- Rhode Island: Interplex Metals
-  Mexico: Interplex Mexico

Europe

-  France: Interplex Soprec
- France: Interplex Microtech
-  Germany: Interplex NAS GmbH
-  Hungary: Interplex Hungary
-  Scotland: Interplex PMP

Asia

-  China: Interplex Electronics (Dalian)
- China: Interplex Electronics (Hangzhou)
- China: Interplex Stewart EFI
-  India: Interplex Electronics India
-  Korea: Interplex Quantum
-  Malaysia: Interplex Electronics Malaysia
-  Singapore: Interplex Singapore