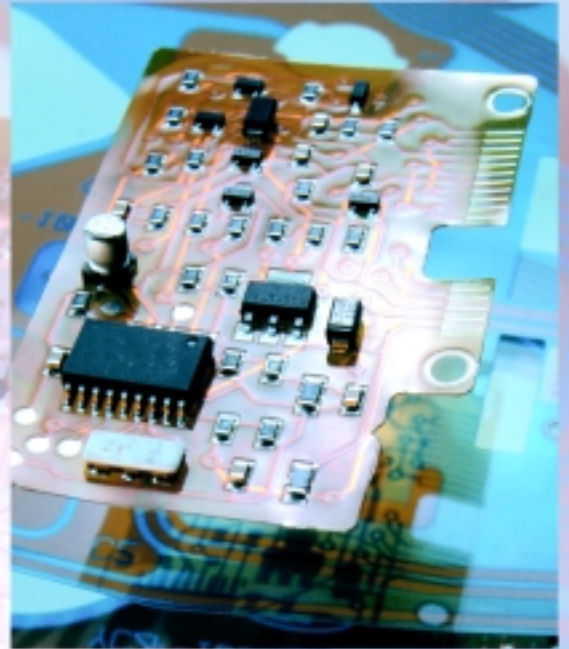


Localized Higher Density Adding Functionality At A Lower Cost

Cost effective electronics integration.

Until now, turning a lower density circuit into a high performance assembly was inefficient and expensive. *Density Patch*[™] solves this, providing a low cost alternative for localized higher density requirements.



Density Patch[™]

Design In Functionality

Increasing electrical function, where a small number of electrical components is required, can be done effectively using Sheldahl's *Density Patch*.

Density Patch circuits grant engineers greater design freedoms and provide localized higher density, adding high performance functionality at a lower cost.

Density Patch offers cost savings through efficient population of electrical components onto a small high density circuit. This small pre-tested assembly is then attached to a lower density circuit through a highly reliable permanent lap solder connection. Thus, your engineers can achieve higher performance characteristics in otherwise lower performance circuitry. This unique combination lends itself to specialized functionality ideal for applications such as instrumentation, ECU's, consoles and "infotainment" applications.

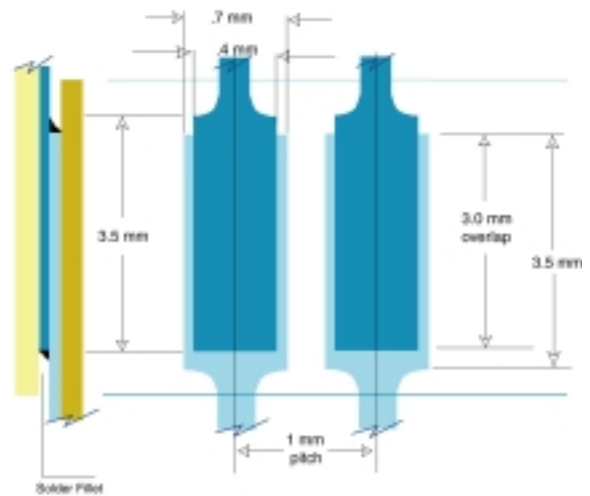
Density Patch™ assemblies meet rigorous environmental conditions.

Sheldahl's circuitry is designed to meet the demands of high tolerance conditions. *Density Patch* circuits provide solutions that have passed standard automotive testing conditions while delivering proven reliability for unique, high performance applications. Sheldahl's state-of-the-art process control systems, automated optical inspection and functional electrical test facilities all provide the quality assurance needed to meet the quality standards of its customers.

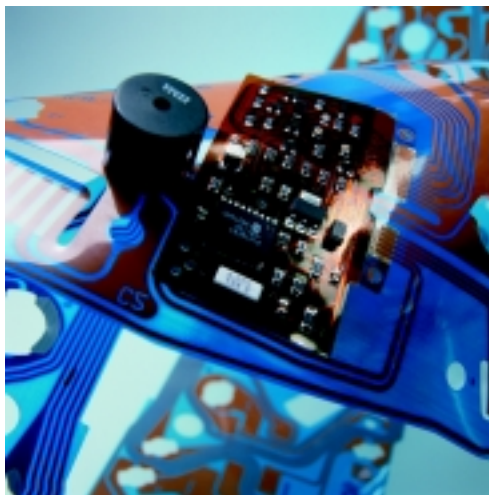
High Temperature & Humidity	75°C at 95% RH for 24 Hours
Extended Humidity	38° C at 98% RH for 100 Hours
Temperature Cycling	25 Temperature Cycles
	1 hour at -30° C
	1 hour at 22° C
	1 hour at 80° C

Lap Solder Interface

The diagram to the right demonstrates a typical layout of the lap solder interface. This design increases the overall strength of the joint preventing the chance of mechanical failure over time.



Engineering and sales support



Sheldahl is a high volume circuit manufacturer processing over 15 million square feet of single and double-sided circuits annually. For more than 4 decades, Sheldahl has been producing flexible circuits for automotive systems such as instrument clusters, radios, sensors, electronic control units and power distribution.

Sheldahl's flexible circuit product line is supported by a wide range of assembly capability including: surface mount on flex, wave soldering, hand soldering, assembly, bare board and functional electrical testing, and a variety of connector attachments. Prototype product is also delivered within compressed lead times.



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