

THERMALFLOW™

The high-quality, affordable choice for electronics heat dissipation packages.

ThermalFlow™ is an innovative, patent-pending technology for embedding copper conduits into integrated circuit (IC) housings for the most efficient — and cost-effective — heat dissipation.

TAKING THE HEAT

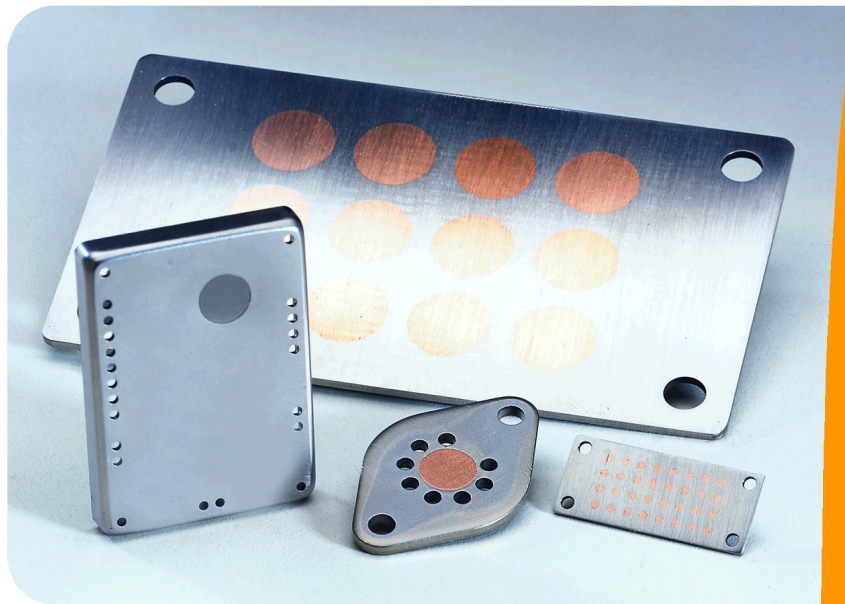
The solid copper elements, known as “thermal pipes,” are integrated seamlessly into base plates made from kovar and other metals. The array of pipes is customized to concentrate heat dissipation where it is needed most. With superior thermal conductivity, the copper produces an unmatched rate of heat transfer and, consequently, less risk of heat damage to the microelectronics circuitry inside the housing.

The ThermalFlow™ process also meets the strictest specifications for hermeticity and the coefficient of thermal expansion, as required in most IC packages.

MATERIAL ADVANTAGE

To even come close to the high thermal conductivity and low coefficient of thermal expansion achieved by ThermalFlow™ technology, competing processes rely on materials such as pure molybdenum, copper-molybdenum, copper-tungsten, and AlSiC that require powdered metallurgy techniques to fabricate. These materials are difficult to plate, susceptible to excessive porosity, and are relatively expensive.

In contrast, the ThermalFlow™ process employs two common, ductile, easily fabricated materials: copper and Kovar. Both materials can be easily coined, stamped, machined, and plated. As a result, ThermalFlow™ packages can generally be manufactured at a fraction of the cost of competing products.



ABOUT COINING TECHNOLOGIES, INC.

Coining is an ISO 9001:2000-certified company with a 50-year history of innovation in the metal forming industry. Coining provides comprehensive design engineering and customer support services as well as the highest-quality precision metal parts.

Coining's products are utilized in a broad range of high-technology applications, from aerospace and automotive to medical and telecommunications.

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Toll-Free 1.866.897.2304

400 Kuller Road, Clifton, New Jersey 07011

Tel. 973.253.0500 Fax. 973.253.9611

www.coining.com