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ELECTRONIC PACKAGE WITH HIGH DENSITY INTERCONNECT LAYER

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Abstract

An electronic package (10), and method of manufacture, is provided. The package includes a semiconductor chip (12) and a multi-layered interconnect structure (18) having a high density interconnect layer. The semiconductor chip (12) includes a plurality of contact members on one surface that are connected to the multi-layered interconnect structure (18) by a plurality of solder connections. The multi-layered interconnect structure (18) is adapted for electrically interconnecting the semiconductor chip (12) to a circuitized substrate with another plurality of solder connections and includes a thermally conductive layer (22) comprised of a material having a selected thickness and coefficient of thermal expansion to substantially prevent failure of the solder connections. The electronic package (10) includes a dielectric material having an effective modulus to assure sufficient compliancy of the multi-layered interconnect structure (18) during operation. The high density interconnect layer is able to withstand thermal stresses during thermal cycling operation of the electronic package (10).

Fig 1