Plated Copper On Thick Film Technology

Remtec Inc. has refined its patented process which combines patterned copper plated images with air-fireable thick films on ceramics for the manufacture of metalized ceramic substrates, chip carriers and packages. This PCTF&#153 technology allows circuit and package designers to develop a unique combination of features not previously available in a miniaturized microcircuit package.
Using PCTF technology, designers are now able to reduce package size, increase circuit density and improve thermal and electrical performance of mircoelectronic circuitry for a broad range of applications.
The special features of PCTF technology include thick plated copper (.001 to .010), fine thick film lines (.002), copper plated through holes and castellations, solid metal plugs (thermal vias), multi-layers, integrated resistors, capacitors and inductors.
PCTF technology is fully compatible with all common assembly methods including: surface mount devices (SMD reflow solder), chip scale packages (CSP), chip on board (COB), epoxy and eutectic die attach, gold and aluminum wire bonding, ball grid arrays and flip chip technology.
With PCTF technology, circuit and package designers can create products featuring thermal resistance below 2 &#176 C/W, expanding maximum operating temperature and power limits. In addition to its high thermal conductivity (200 W/oCxM), PCTF provides for line resistance less than 0.1 mΩ/sq, with very low 12R losses and high current capacity. Fully assembled PCTF substrates and packages can withstand thermal cycling from &#150 65 &#176 C to 150 &#176 C, and can operate at elevated temperatures up to 200 &#176 C.
Remtec's PCTF technology provides microelectronic packaging solutions for telecommunications, including wireless, broadband and fiberoptic data transfer devices, as well as sensors, power supplies, DC/DC converters, biomedical instrumentation and other electronics applications.

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