

**FOR IMMEDIATE RELEASE****Remtec Introduces Hermetic, Leadless Ceramic SMT Packages for Direct PCB Mount**

Norwood, MA. June 10, 2006. Remtec Inc., a leader in custom and semi-standard ceramic packaging based on Plated Copper on Thick Film (PCTF<sup>®</sup>) technology, has introduced new, leadless ceramic SMT hermetic packages for direct PCB mount. Remtec leadless SMT chip carriers, with unique wrap-around interconnections, plugged via holes, hermetic-filled vias and integrated passives, are now available in their fully hermetic (to  $10^{-8}$ ) version.

The performance specifications of hermetic SMT packages are very similar to those of non-hermetic products. Plugged via holes with low resistance (less than 1 milliohm) provide for low RF losses below .1dB at 4 GHz. Wraparounds and plugged vias are excellent for ground and signal connections; the SMT packages can operate from DC to 32 GHz. High thermal conductivity of via (greater than 200 W/M x °C) results in a low thermal resistance path providing excellent thermal management. Depending on die size and ceramic base thickness, thermal resistance of 1-2 °C/W and lower can be achieved.

PCTF technology with its ductile structure of plated copper over thick film on ceramic, results in minimizing solder joint stresses during assembly of ceramic packages to PC boards. Therefore, Remtec leadless ceramic SMT packages with wraparounds for a direct PCB mount can be fabricated in sizes from .15 to .75 in. square.

In general, packages are available in the following configurations. Most common are SMT leadless ceramic substrates with hermetic via plugs and hermetically soldered (brazed) ring frames; after component assembly, customers may weld a lid. Also, a ceramic ring frame hermetically attached with a low temperature sealing glass is an option. In addition, some customers choose hermetic SMT substrates to which they solder either five-sided metal covers or open ring frames. The performance specifications of all configurations are the same. Integrated resistors, capacitors and inductors can often be incorporated into these packages to reduce size and increase integration levels.

In addition, Remtec packages are compatible with all standard interconnect assembly techniques including soldering, high temperature die attach, welding and wire bonding. Low upfront tooling costs and fast turnaround time permit microcircuit designers to bring custom SMT packages into production faster and with lower engineering costs. All packages are 100% pre-tested for hermeticity.

Remtec, a RoHS compliant and ISO 9001:2000 registered company, provides ceramic leadless SMT packages for LNA's, power amplifiers, MMIC modules, switches, transceivers, mixers, tuners, splitters, filters, resistors, attenuators and terminations as well as for other components in a broad frequency range.

