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LOW CTE POWER AND GROUND PLANES

ABSTRACT

Conductive materials that have low coefficients of thermal expansion (CTEs) and that are used for power and grounds planes are disclosed. Fibrous materials with low CTEs are metallized to provide a resultant conductive materials with a low CTE. Such fibers may be metallized in their individual state and then formed into a fabric, or may be formed into a fabric and then metallized or a combination of both metallizations may be used. Furthermore, a graphite or carbon sheet may be metallized on one or both sides to provide a material that has a low CTE and high conductivity. These metallized, low CTE power and ground planes (304, 322, 325) may be laminated with other planes/cores (324) into a composite (320), or laminated into a core which is then laminated with other planes/cores (302, 305) into a composite (300). The resultant composite (300,320) may be used for printed circuit boards (PCBs) or PCBs used as laminate chip barriers.

FIG 1