

Designing and Building Microwave Circuits in LTCC

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ABSTRACT

This paper provides a short review of Low Temperature Co-Fired Ceramic (LTCC) in the design and development of Millimeter, Microwave and RF Circuits. The review is not intended to be comprehensive, but rather to provide information to capture the interest of current designers who have not been exposed to this substrate technology. The potential advantages and disadvantages of LTCC for microwave applications are discussed together with the characteristics of this medium and design rules. Recent advances in tape technology and the use of Laser ablation to obtain finer lines and spacings are presented. The later technology demonstrates significant potential in decreasing circuit size and extending the frequency range of operation for microwave and millimeter wave circuits and devices.

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