Abstracts

RF and mechanical characterization of flip-chip interconnects in CPW circuits with underfill (Dec. 1998, Part II [T-MTT])

Zhiping Feng, Wemge Zhang, Bingzhi Su, K.C. Gupta and Y.C. Lee. "RF and mechanical characterization of flip-chip interconnects in CPW circuits with underfill (Dec. 1998, Part II [T-MTT])." 1998 Transactions on Microwave Theory and Techniques 46.12 (Dec. 1998, Part II [T-MTT] (1998 Symposium Issue)): 2269-2275.

RF characterization of flip-chip interconnects in coplanar waveguide (CPW) circuits with underfill is reported. The scattering-parameters have been measured up to 40 GHz for GaAs CPW through-line chips flip-chip mounted on an alumina substrate with and without an underfill epoxy. A lumped-element model of flip-chip interconnect has been developed for flip-chip assemblies with and without epoxy. Fatigue life of flip-chip assemblies has been computed for different chip sizes and substrates. The results show feasibility of using underfill encapsulant in microwave/millimeter-wave frequency range.

❑ Return to main document.