Abstracts

Low-cost flip-chip alternatives for millimeter wave applications

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This paper discusses alternative flip-chip approaches in the millimeter wave frequency range. In comparison to common stud bumping or gold plating techniques at these frequencies, this contribution deals with bump formation by micro balls and conductive adhesives (polymeric bumps). In the latter process special bump shaping is supported by introducing an additional photoresist process. The photoresist also serves as an underfill for the flip-chip device. Utilizing these bumping techniques, flip-chip test systems in coplanar waveguide (CPW) design were fabricated and then characterized via S-parameter measurements at W-band.

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