

W-band flip-chip interconnects on thin-film substrate

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A flip-chip approach is presented using a thin-film microstrip line (TFMSL) on silicon as the carrier substrate. Thin-film technology allows one to employ cheap low-resistivity Si wafers without degrading MM-wave performance. By means of 3D EM simulation, an optimized interconnect is designed for the 77 GHz band. Measurements of test structures up to 100 GHz demonstrate the potential of this approach.

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