

Abstracts

Full Wave Analysis of 94 GHz Patch Coupler

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This paper presents a full three-dimensional wave analysis of a patch microwave coupler operating at 94 GHz. The method of solution is a matched TLM numerical simulation of the inhomogeneous wave equation. Amplitude and phase responses for the coupler are given for the frequency range 80-110 GHz. The effects of the package dimensions on coupler isolation and bandcentre are presented. The computed results are compared with published experimental results obtained for an empirically designed coupler. Field plots are presented for flux distribution on the patch. Radiation plots for the coupler are presented also.

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