Abstracts

Using Miniaturized 90 Degree Hybrid Coupler Using High Dielectric Substrate for QPSK Modulator

H. Tanaka, Y. Sasaki, T. Hashimoto, Y. Yagi and Y. Ishikawa. "Using Miniaturized 90 Degree Hybrid Coupler Using High Dielectric Substrate for QPSK Modulator." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 793-796.

This paper describes miniaturized 90 degree hybrid coupler using edge-coupled microstriplines. A high dielectric constant substrate (K=38) and high-dense coupled-line configuration are adopted to realize small chip size. A conventional meandered coupled-line type and a new spiral coupled-line type were discussed for high-dense configuration. A bandwidth from 1.8 GHz to 3.6 GHz with ±0.5 dB power dividing balance and 90±3 degrees phase difference were achieved with chip size of 1.5 x 1.5 mm.

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