Abstracts

A 3-D broadband dual-layer multiaperture microstrip directional coupler

Chunlei Wang and Kai Chang. "A 3-D broadband dual-layer multiaperture microstrip directional coupler." 2002 Microwave and Wireless Components Letters 12.5 (May 2002 [MWCL]): 160-162.

A three-dimensional (3-D) broadband dual-layer multiaperature microstrip directional coupler is presented in this paper. The dual-layer, multiaperature directional coupler consists of two-layer back-to-back substrates with 15 small coupling apertures on the center ground plane. A novel rectangular multiaperature coupling structure with very small width is used to greatly extend the bandwidth and operating frequency of the coupler. The /spl plusmn/2.4 dB coupling variation bandwidth of the couplers is more than 1.5 octaves from 9.79 to 29.55 GHz. The insertion losses, return losses at all ports and directivities, are better than 1.7 dB, 10.26 dB, and 10.3 dB over the bandwidth, respectively. The measurements agree well with the simulations.

❑ Return to main document.