Abstracts

Analysis and design of H-plane waveguide bends with compact size, wide-band and low return loss characteristics

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Accurate and efficient characterization method of compensated H-plane waveguide bends is developed by combining the port reflection coefficient method and the mode-matching method. Convergence properties and reliabilities of the obtained numerical results are verified. Variations of the return loss of three types of compensated bends are investigated with various compensation dimensions. Wide-band and low return loss bends with the obtained optimal compensation dimensions are fabricated and tested, and the measured results agree well with the theoretical predictions.

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