Abstracts

Mode Conversion in Short Conical and Asymmetrical-Rectangular Waveguide Tapers (Correspondence)

K. Tomiyasu. "Mode Conversion in Short Conical and Asymmetrical-Rectangular Waveguide Tapers (Correspondence)." 1968 Transactions on Microwave Theory and Techniques 16.3 (Mar. 1968 [T-MTT]): 197-199.

Many tapers have been designed and built in circular waveguides transmitting the T°/sub 01/ mode. Generally, the requirement has been very low mode conversion over a wide bandwidth. Tapers which meet this requirement have a continuously variable taper angle, and the taper lengths are quite long. Where relatively short tapers and narrow bandwidths are required, a multiconical approach has been proposed. Theoretical design information is available; however, no experimental data are available. This correspondence describes some results on short circular and asymmetrical-rectangular waveguide experimental tapers, with dimensions chosen so as to deliberately generate mode conversion of sufficient amplitude to facilitate its measurement.

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