Abstracts

Low Loss Flexible Helix Waveguide

T. Hayakawa, I. Takashima, K. Inada and M. Miyauchi. "Low Loss Flexible Helix Waveguide." 1978 MTT-S International Microwave Symposium Digest 78.1 (1978 [MWSYM]): 156-159.

We have found the optimum wall structure of small inner diameter flexible helix waveguides which scarcely cause TE/sub 01/ mode conversion despite a bending or elliptical deformations. TE/sub 01/ mode loss is below 0.25dB for a wide millimeter wave range. The attenuation is lower than that of a single corner waveguide which has been generally used at the severe curved segment of waveguide line. Moreover, there is no generation of unwanted hiqher order TE/sub on/ modes. These low loss flexible helix waveguides will be useful for the wide frequency range of the millimetric waveguide communication systems.

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