Abstracts

Flexible Circular Waveguides at Millimeter Wavelengths from Metallized Teflon Tubing (Short Papers)

J. Obrzut and P.F. Goldsmith. "Flexible Circular Waveguides at Millimeter Wavelengths from Metallized Teflon Tubing (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.3 (Mar. 1990 [T-MTT]): 324-327.

Flexible waveguides for use at millimeter wavelengths have been fabricated by deposition of a metallic film onto the composite-modified inside surface of Teflon tubing. The attenuation characteristics in the range 80 to 115 GHz show losses of the order of 0.1 dB/cm. Bending, twisting, and rotating to the limit of plastic mechanical stability (curvature radius typically >8 cm) have negligible effect on the attenuation, and bend angles <=45° produce relatively small changes in the insertion phase.

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