Abstracts

Crossed-Cylinder Microwave Resonator (Correspondence)

B.M. Schiffman. "Crossed-Cylinder Microwave Resonator (Correspondence)." 1970 Transactions on Microwave Theory and Techniques 18.8 (Aug. 1970 [T-MTT]): 509-510.

An open-type X-band resonator was constructed of two cylindrical reflectors with crossed axes, separated by half the radius of curvature. The diffraction loss of this structure was found to be several orders of magnitude less than when the axes of the cylinders were made parallel, while the otherwise equivalent flat-flat resonator had the highest loss of all. A formula for the resonant frequencies of spherical confocal resonators, suitably modified, was found to predict the lowest mode resonances of the crossed-cylinder resonator with good accnracy.

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