Abstracts

X-Band Ferrite-Varactor Limiter (Correspondence)

J.L. Carter and J.W. McGowan. "X-Band Ferrite-Varactor Limiter (Correspondence)." 1969 Transactions on Microwave Theory and Techniques 17.4 (Apr. 1969 [T-MTT]): 231-232.

A ferrite-varactor limiter combination operating at X band has been investigated. The ferrite limiter employs a combination of polycrystalline YIG for dynamic range and single-crystal YIG for reduced threshold. Various design techniques employing ridge waveguide and dielectric loaded ferrite limiters were studied. The ferrite-varactor package has a threshold of about 30 mW and a dynamic range up to 10 kW. The overall insertion loss is less than 1.0 dB in the frequency range of 8.9 to 9.5 GHz. The flat leakage is about 30 mW and the spike leakage energy is less than 0.3 erg at 10 kW of peak power input.

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