

Abstracts

On the Design of Dielectric Loaded Waveguides (Comments)

F.E. Gardiol. "On the Design of Dielectric Loaded Waveguides (Comments)." 1977 Transactions on Microwave Theory and Techniques 25.7 (Jul. 1977 [T-MTT]): 624-625.

In the above paper, the authors show that, by loading a rectangular waveguide with an E-plane dielectric slab, its theoretical power-handling capacity can be significantly increased. Their conclusion may come as a surprise to experimenters designing high-power E-plane devices such as ferrite isolators or phase shifters. It is a well-known fact that such structures tend to exhibit breakdown at power levels well below those of the empty waveguide.

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