

Abstracts

CAD of multipactor-free waveguide components for communication satellites

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Power handling capabilities of satellite waveguide components are limited by multipactor discharge which, so far, has received scarce attention in terms of a model for design purposes. We describe a procedure, based on the knowledge of the field distribution inside the considered component, for calculating the minimum power above which the multipactor risk becomes significant. It is shown that the proposed technique allows to avoid over-restrictive specifications and is useful for quantitative evaluation of multipaction prevention techniques. Experimental results and examples confirm the procedure validity.

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