Abstracts

Low-loss filters in rectangular waveguide with rigorous control of spurious responses through a smart modal filter

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Low-loss performance is one of the main drivers in the design of microwave input filters and diplexer, used on satellite communication transponders. In addition, a careful control of spurious responses is also required in order to guarantee an adequate protection from high-level input interfering signals, which may degrade the performance of the receiver. Both these requirements can be accomplished by a simple and cost-effective design approach, based on rectangular waveguide resonator. Fast and accurate simulation and measured response of a specific design are also compared, demonstrating that the proposed solution is practical and reliable.

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