# Abstracts

## A Rotary Joint for Two Microwave Transmission Channels of the Same Frequency Band (Abstract)

*H.P. Raabe. "A Rotary Joint for Two Microwave Transmission Channels of the Same Frequency Band (Abstract)." 1953 Transactions on Microwave Theory and Techniques 1.1 (Mar. 1953 [T-MTT]): 48-48.*

This dual-channel rotary joint consists of two pairs of rectangular waveguide terminals, a circular waveguide which transmits both channels and coupling elements between the rectangular waveguide terminals and the circular waveguide which convert the rectangular H/sub 10/ mode into the circular H/sub 01/ and E/sub 01/ modes. If pure H/sub 01/ and E/sub 01/ modes can be excited, perfect separation of the channels as well as constant amplitudes and phases can be obtained when the joint rotates. While the conversion into the circular E/sub 01/ mode is performed by a conventional method, a new method had to be developed for the conversion of the rectangular H/sub 10/ mode into the circular H/sub 01/ mode.

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