Abstracts

A Dual-Channel Rotary Joint for High Average Power Operation (Dec. 1970 [T-MTT])

O.M. Woodward. "A Dual-Channel Rotary Joint for High Average Power Operation (Dec. 1970 [T-MTT])." 1970 Transactions on Microwave Theory and Techniques 18.12 (Dec. 1970 [T-MTT] (1970 Symposium Issue)): 1072-1077.

A new type of dual-channel rotary joint combining the TM/sub 01/ mode and the circularly polarixed TE/sub 11/ modes in circular waveguide has been developed for an X-band antenna employed in a satellite communications link. Low losses are obtained in the high average power transmit channel (12.5 kW, CW) to avoid excessive temperature rise and in the receive channel to reduce the noise temperature of the system. High isolation between channels is achieved with the compact multimode exciters.

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