# Abstracts

## A 500 kW X-Band Air-Cooled Ferrite Latching Switch (Dec. 1968 [T-MTT])

*R.A. Stern and J.P. Agrios. "A 500 kW X-Band Air-Cooled Ferrite Latching Switch (Dec. 1968 [T-MTT])." 1968 Transactions on Microwave Theory and Techniques 16.12 (Dec. 1968 [T-MTT]): 1034-1037.*

The design of a high-power air-cooled microwave SPDT switch which is capable of operation at peak and average power levels of 500 kW and 666 watts, respectively, is described. The unit is of a differential phase shift circulator design employing 90° nonreciprocal phase shift elements which are forced air cooled. The phase shifter design employs dual ferrite toroids, "floating" in reduced height RG-51 waveguide. Two approaches are compared for heat sinking the phase shifter; namely the "H-beam" and the "I-beam" configurations. The results obtained indicate that the I-beam configuration is superior to the "H-beam" configuration. The switch exhibits an insertion loss of 0.6 dB maximum and isolation greater than 20 dB over a 100 MHz bandwidth centered at 9.375 GHz. The input VSWR of the switch over the frequency band is less than 1.28:1.

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