Abstracts

A Ferroelectric Microwave Switch (1965 [MWSYM])

J.W. Amoss, L.J. Lavedan, M.R. Donaldson and A.L. Stanford. "A Ferroelectric Microwave Switch (1965 [MWSYM])." 1965 G-MTT Symposium Program and Digest 65.1 (1965 [MWSYM]): 169-174.

The rapid variation of an impedance shunting a transmission line is a well known technique for switching microwave power. The application of a switching voltage to a ferroelectric material provides a convenient means for rapidly varying an impedance between significantly different states. A multistub transmission-reflection type switch actuated by a switching voltage of 1000 volts has been studied. The operation of the switch depends upon the ability of a ferroelectric variable capacitor to change its capacitance upon application of a switching voltage. A change in capacitance represented by a ratio of two to one results in substantial change in the input admittance (Y/sub n/) of the prototype network shunting the transmission line.

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