Abstracts

A New Type of Fast Switching Dual-Mode Ferrite Phase Shifter

W.E. Hord, C.R. Boyd, Jr. and D. Diaz. "A New Type of Fast Switching Dual-Mode Ferrite Phase Shifter." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 985-988.

This paper describes a new type of dual-mode phase shifter which uses a variable transverse magnetic field. The device retains the features of the conventional longitudinal field dual-mode phase shifter - low insertion loss, moderate amplitude modulation, moderate frequency bandwidth, simple physical geometry - which allow it to be considered for use in two-dimensional scanning phased-array antennas. However, the transverse magnetic field configuration yields a smaller shorted-turn damping time constant, which results in either reduced switching time or reduced switching energy when compared with the conventional longitudinal field dual-mode arrangement.

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