

Abstracts

Variable-Permittivity Artificial Dielectrics

H.T. Buscher, R.M. McIntyre and S. Mikuteit. "Variable-Permittivity Artificial Dielectrics." 1971 G-MTT International Microwave Symposium Digest of Technical Papers 71.1 (1971 [MWSYM]): 192-194.

The use of liquid suspensions as a new class of microwave artificial dielectrics was explored. Liquid media were constructed with permittivities dependent on the strength of a low-frequency electric control field. Operating characteristics were measured for a 50 KW, 360° Ku-band waveguide phase shifter employing a practical liquid-suspension dielectric. Other applications are in electrically variable wideband lenses and in the analog control of phased arrays.

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