

Ferrite Rotary-Field Phase Shifters with Reduced Cross-Section

C.R. Boyd, Jr. and C.M. Oness. "Ferrite Rotary-Field Phase Shifters with Reduced Cross-Section." 1990 MTT-S International Microwave Symposium Digest 90.3 (1990 Vol. III [MWSYM]): 1003-1006.

Practical ferrite Rotary-Field phase shifters can be built for the 1.3 GHz frequency region by using a reduced-diameter circular waveguide in which disks of high dielectric constant material and ferrite-filled sections alternate. This approach permits reduction of the guide diameter to about half that needed for uniform filling with garnet material only. Experimental results for feasibility-study units at 2.5 GHz. and 1.3 GHz confirm that the reduced-diameter configuration can produce high phase setting accuracy, but with increased insertion loss.

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