Abstracts

A Six-Bit GMIC Phase Shifter for 6-18 GHz

T.A. Murphy, J.W. Gipprich, M.E. Hines and D. Kryger. "A Six-Bit GMIC Phase Shifter for 6-18 GHz." 1992 MTT-S International Microwave Symposium Digest 92.3 (1992 Vol. III [MWSYM]): 1171-1174.

A low-loss broad-band six-bit phase shifter has been developed in a form suitable for airborne phased array radar applications. A glass-based microwave circuit integration technology (GMIC, Glass Microwave Integrated Circuit) is used, in which thin-film. process-oriented photolithographic technology is used to realize all of the passive components on a glass surface. Hybrid-coupled reflection circuitry covers the frequency range 6-18 GHz with losses averaging about 3 dB at 6 GHz to about 8 dB at 18 GHz over the 64 phase states covering a 360° range.

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