

# Abstracts

## 4:1 Bandwidth Digital Five Bit MMIC Phase Shifters

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*D.C. Boire, G.S. Onge, C. Barratt, G.B. Norris and A. Moysenko. "4:1 Bandwidth Digital Five Bit MMIC Phase Shifters." 1989 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 89.1 (1989 [MCS]): 69-73.*

Five bit MMIC phase shifters that cover over two octaves of bandwidth have been demonstrated. The phase shifters maintain low phase error, insertion loss, insertion loss variation with phase state, and VSWR, over their entire operational bandwidths.

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