Abstracts

A New Reciprocal Phaser for Use at Millimeter Wavelengths

L.R. Whicker and C.R. Boyd, Jr.. "A New Reciprocal Phaser for Use at Millimeter Wavelengths." 1971 G-MTT International Microwave Symposium Digest of Technical Papers 71.1 (1971 [MWSYM]): 102-103.

High performance millimeter wavelength phase shifters are needed for electronically scanned phased array antenna applications. Some work has been reported on toroidal, latching, nonreciprocal phasers to operate at 35 GHz and above. However, the critical nature of the tolerances inherent in such designs makes fabrication extremely difficult above 50 GHz and leads to cost and reproducibility problems even at 35 GHz. This paper describes a new reciprocal ferrite phaser which is suited for use in the 35-100 GHz region. The phaser is simple to fabricate and exhibits electrical characteristics which compare favorably with its nonreciprocal counterpart. These phasers may be fabricated individually or in groups to form a portion of a phased array aperture.

❑ Return to main document.