Abstracts

Measurement of Time-Quadrature Components of Microwave Signals

J.H. Richmond. "Measurement of Time-Quadrature Components of Microwave Signals." 1955 Transactions on Microwave Theory and Techniques 3.3 (Apr. 1955 [T-MTT]): 13-15.

A phase-sensitive coherent detector used for microwave laboratory measurements is described. The receiver measures the real (|E| cos alpha) and imaginary (|E| sin alpha) components of a signal E with equipment which is less elaborate than that required for measuring the amplitude |E| and phase alpha. Furthermore, many calculations are more convenient if E is presented in rectangular rather than polar form. Measurements made with the receiver on known fields in waveguides are included to demonstrate its accuracy. The receiver has a sensitivity of -125 dbw at 9,375 mc.

❑ Return to main document.