Abstracts

Vector Corrected On-Wafer Power Measurements of Frequency Converting Two-Ports

B. Roth, D. Kother, T. Sporkmann, W. Lutke and I. Wolff. "Vector Corrected On-Wafer Power Measurements of Frequency Converting Two-Ports." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1281-1284.

In this paper a universal nonlinear measurement system is presented. The On-Wafer approach described here is commercially available and utilizes a modified vectorial network analyzer (Wiltron 360 B) and a special software package developed at the IMST. The system determines the complex quantities of all power waves at all ports of the DUT. Since measurements are carried out at all interesting harmonics, the system is ideal for the complete electrical characterization of a frequency multiplier for instance. In contrast to other power and harmonic measurement approaches using VNAs, the technique proposed here does not need an additional microwave synthesizer for locking the receiver to the harmonics. The described system exhibits a power sweep range of more than 80 dB.

❑ Return to main document.