Abstracts

A novel on-wafer resistive noise source

P. Beland, S. Labonte, L. Roy and M. Stubbs. "A novel on-wafer resistive noise source." 1999 Microwave and Guided Wave Letters 9.6 (Jun. 1999 [MGWL]): 227-229.

We describe a novel on-wafer resistive noise source (ORNS) suitable for noise parameter characterization of microwave devices using the cold noise power measurement technique. The noise source can enhance measurement accuracy by providing a calibrated noise temperature directly at the device reference plane. A procedure to determine the excess noise ratio of the noise source is presented. Noise figure measurements performed up to 40 GHz with the on-wafer noise source and with a commercial coaxial noise source are in good agreement, thereby validating the technique. The novel source is effective as a noise standard up to millimeter-wave frequencies.

❑ Return to main document.