

Complete 3-port measurement of microwave mixers using a non-linear vectorial network analyser

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The microwave vectorial network analyser for nonlinear devices has been extended to allow full 3-port calibrated characterisation of microwave devices with 2-ports operating up to 50 GHz and 1 port up to 4 MHz. The new setup uses 6 synchronised digitizers to simultaneously measure the incident and reflected waves impinging the device, both in amplitude and phase. Measurements of the complex spectra of the conversion products of a mixer excited by a variable power LO at 4 GHz and IF at 1 MHz are proposed.

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