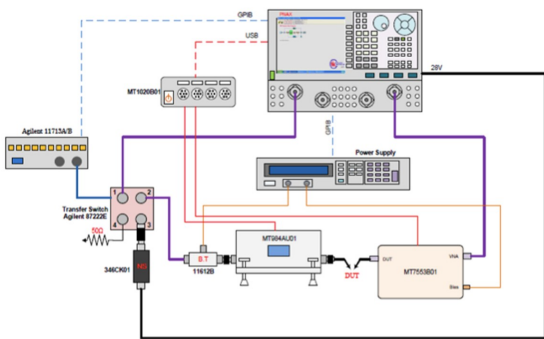


50GHz High Frequency Noise Parameter Measurements

Modelithics Noise Parameter Measurements through 50GHz

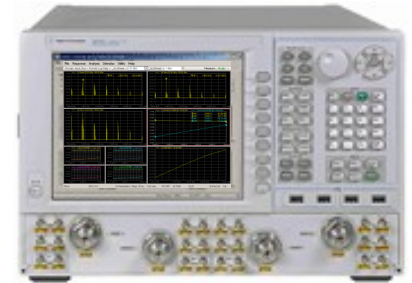
Modelithics offers precision noise parameter device measurement services, with capability of measuring to 50GHz, using noise parameter measurement equipment from Keysight Technologies and Maury Microwave.

- The Modelithics noise parameter device characterization service is now a faster and more robust measurement process, and is available to an extended frequency range (over legacy capabilities) from 250MHz up to 50GHz. Modelithics currently provides the PNAX/Maury solution for noise parameter device characterization to customers.
- Noise parameter measurements are important for characterization of HEMT devices and HEMT model validation.
- The PNA-X non-linear vector network analyzer from Keysight, and noise receiver module, switch box, tuner and power distribution hub from Maury Microwave, along with Modelithics in-house supporting equipment, produces smooth, accurate noise parameter data. The setup allows for two attenuation levels for best noise performance vs. device and system gain.



Test Setup Block Diagram

- Keysight PNA-X
- Maury Tuner
- Maury Noise Receiver Module
- Maury Switch Box
- Maury Power Distribution Hub
- Noise Source
- Attenuator/Switch Driver
- Power Supply
- Bias Tee, Cables, Connectors, Probe Equipment



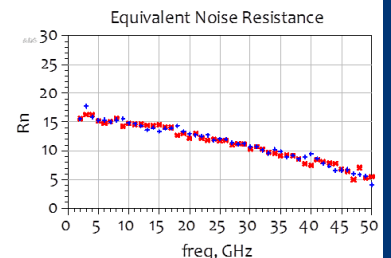
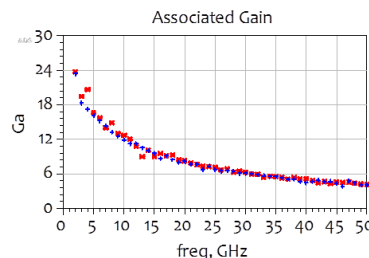
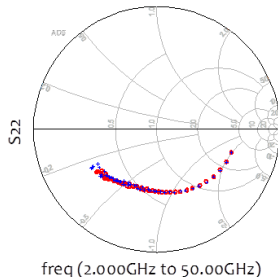
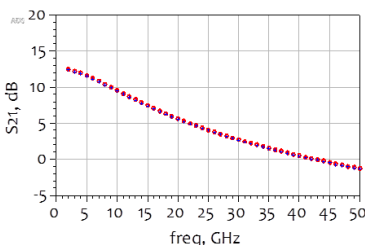
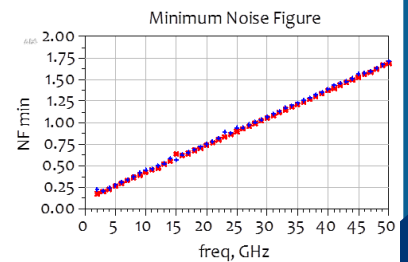
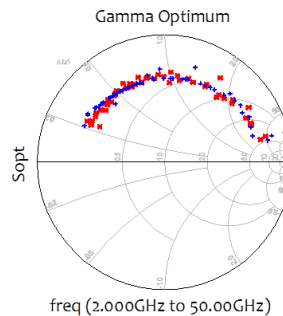
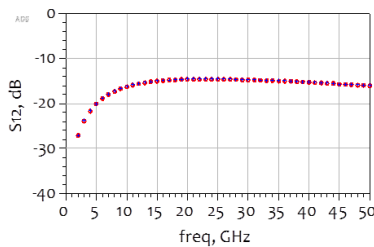
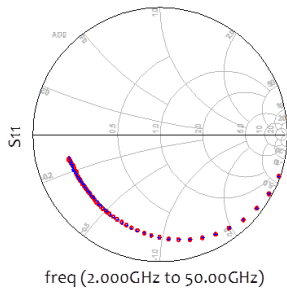
Keysight Technologies' PNA-X Series Nonlinear Vector Network Analyzer (NVNA)



Maury Microwave MT7553 Noise Receiver Module and MT7553N50 Switch Box

S-Parameters

Noise Parameters



Comparison of two samples of scattering and noise parameter data of a 4x50um GaN HEMT from 2 -50GHz using new Keysight/Maury Microwave PNA-X solution 50GHz measurement process. Left: S-parameters, Right: Noise Parameters