

RF Device Characterization System Integration

DATA SHEET / 5A-039



RF Device Characterization System Integration

FULLY INTEGRATED COAXIAL AND MILLIMETER-WAVE DEVICE CHARACTERIZATION SYSTEMS, 250 MHz TO 110 GHz

Features

- > Power and noise parameter measurements
- > Packaged and On-Wafer measurements
- > Modulated, pulsed and CW signals
- > Automated in-situ calibration
- > Fewer connections
- > Reliable and fast RF switching
- > Saves time and money
- > Turnkey systems available – Works “out of the box”

Description

Maury's mission is to meet its customers' device characterization needs regardless of the level of complexity. Maury has and continues to provide solutions covering the entire measurement spectrum; from the simplest stand-alone tuner to fully integrated turnkey systems.

Integrated systems are offered between 250 MHz and 110 GHz, in-fixture and on-wafer, and are capable of measuring the following:

- > S-Parameters
- > X-Parameters
- > DC-IV and Pulsed-IV measurements
- > Power Measurements: Pout, Pin-delivered, Gain, Compression, Efficiency, Harmonic Powers...
- > Multi-Tone Measurements: IMD, TOI...
- > Modulated Measurements: ACPR, EVM, CCDF...
- > Noise Parameters: NFmin, Γ_{opt} , Rn, Noise and Gain contours
- > Time-domain Analysis: A-B waves, I-V waves, load lines...
- > Thermal Microscopic load pull

Maury will integrate these features into an easily assembled and calibrated system that is straightforward to use, saving time as well as money. Furthermore, the results will display greater accuracy and repeatability. Less time and less money means a more profitable design cycle.

In-situ Calibration

The power of a Maury integrated system begins with its proprietary in-situ calibration method, which allows for a complete system-level calibration without disconnecting any of the core system components. The majority of calibration and measurement errors occur for the following reasons; multiple VNA calibrations with improper reference-plane shifting, probes that are connected/disconnected multiple times or measured on their own, and multiple small measurement errors that cascade into very large errors. Unlike the above situations, in-situ calibration requires only one single connection, makes use of highly-repeatable and reliable RF switches and automates the calibration procedure through the use of a graphic wizard. Overall system level verification procedures built into the ATS software result in average deltaGT values of less than 0.2 dB at all magnitudes and phases, when performing an in-situ calibration.



MT900N Series Fully Integrated 2.4mm 50 GHz LSNA Measurement System.

Turnkey Measurement Systems

Maury works very closely with instrument and component manufacturers to offer complete turnkey noise parameters as well as large-signal test systems for both on-wafer and packaged device measurements. Recognized as the global leader in microwave and millimeter-wave tuners and DC systems, Maury has partnered with numerous multinational companies who are also leaders in their respective fields. Examples include Keysight Technologies for RF Instruments (Network Analyzers, Spectrum Analyzers, Power meters, Power supplies), Cascade Microtech (on-wafer probe stations, probes and positioners), Intercontinental Microwave (test fixtures and jigs), Quantum Focus Instruments (Thermal IR cameras), Auriga Measurement Systems (Pulsed IV), as well as component and cabling manufacturers. Turnkey measurement systems are available for sign-off and acceptance at Maury's corporate office.

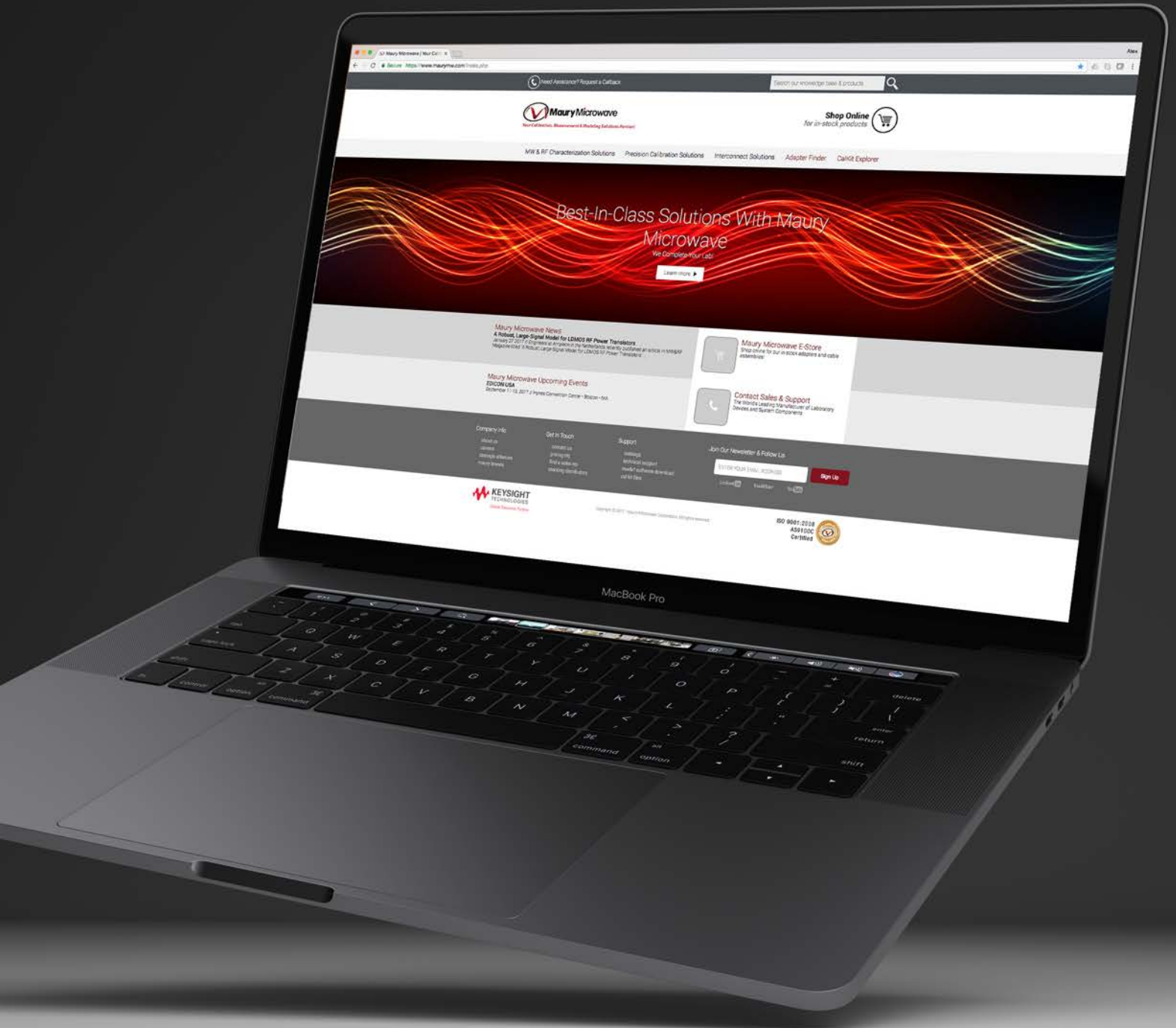
MT900-series integrated on-wafer millimeter-wave s-parameters, noise parameters and load pull system, including swept two-tone measurements.



MT900-series integrated on-wafer millimeter-wave s-parameters, noise parameters and load pull measurement system.



VISIT OUR WEB STORE
TO LEARN MORE ABOUT
OUR PRODUCTS



www.maurymw.com



CONTACT US:

W / maurymw.com

E / maury@maurymw.com

P / +1-909-987-4715

F / +1-909-987-1112

2900 Inland Empire Blvd

Ontario, CA 91764

