

Load-Pull Measurements

Important design and test parameters for high power transistors and modules are e.g. output power, 1dB compression level, efficiency and distortion (IMD, ACPR, etc.). The performance of such devices on these parameters depends strongly on the impedance of the load and to a lesser extend also on the source impedance. A typical load-pull (or source-pull) measurement setup utilizes this dependency by measuring device power behavior at various, known load and source impedance's. Adjusting the load and/or source reflection coefficient is done with a so-called 'tuner' or variable impedance matching network.



Tuner Systems

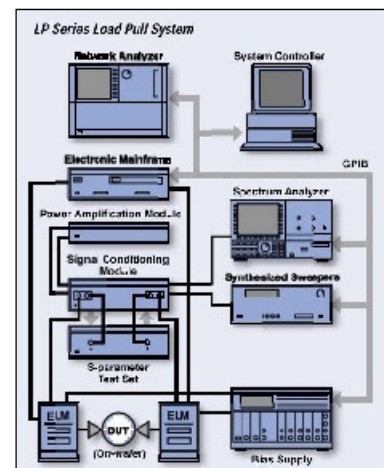
Maury Microwave Corp. offers different types of tuner systems for your load-pull measurement setup.

The electronic tuners (0.8-9GHz) are ideally suited for on-wafer device measurements because they are light and small or for functional tests because they are very fast. With the use of e.g. the SCM, Signal Conditioning Module, you can establish an interface between tuners, device and the other instruments like generators, network and spectrum analyzer. This interface pulls the most out of the entire measurement setup when it concerns speed and accuracy, so ideally suited for functional tests.

A series of mechanical tuners (coaxial and waveguide), cover an extremely broad frequency range (0.25-110GHz) and have high impedance transformation range (VSWR 1:> 30). They are very versatile components for packaged device load-pull measurements and also for noise parameter characterization.

Advanced load-pull features are available with either standard or special tuners: pre-matching and harmonic tuning.

A measurement software package controls all tuners. This program guides the user through calibration of the setup, directs the measurement and displays data in various graphical representations. A list of examples and templates helps you customize the software in case its long list of features and supported instruments are not complete.



Load-Pull Measurement Setup

A typical load-pull measurement setup consists of the following major components:

1. Tuner system and Measurement software.

These are the key-components, determined by your application: Frequency and matching range, weight/size, flexibility, low and/or harmonic impedance control

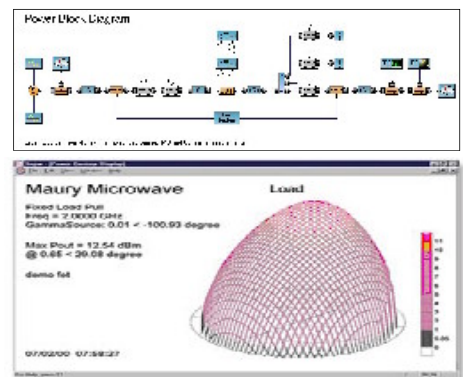
2. Contacting solution.

Ask us for on-wafer probing and characterizable fixtures for packaged devices.

3. Equipment

We help you specify new equipment and integrate your existing equipment.

Our service also includes on-site installation and training of end-users (classroom and hands-on).



BSW TestSystems & Consulting AG and Maury Microwave Corp. are both



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