

## **Mesuro Active Load Pull Breaks Nonlinear Barriers**

### ***UHF Frequencies, Improved Large Signal Model Accuracy and Record 90% Efficiencies***

Anaheim, Calif., May 24, 2010 – Mesuro Limited, based in Cardiff, UK, announced today frequency extensions of their MB series active load pull solutions during the IMS 2010 International Microwave Symposium. Additionally, Mesuro shared their results of working with industry leaders to design harmonically tuned, near theoretically efficient power amplifiers (PAs). Mesuro's solutions are meeting the needs of both commercial and military applications for obtaining highly efficient, high power PAs. These designs will extend battery life, lower operating temperatures, improve reliability and offer smaller overall footprints. At IMS, Mesuro will be demonstrating high power measurements on a Cree Device in the Tektronix booth #1033.

#### **Active Source/Load Pull from UHF to Millimeter Wave**

The MB series now offers all electronic active load pull capability from 200 MHz to 67 GHz. While traditional passive tuning is physically limited by long wavelengths at UHF frequencies, Mesuro's electronic solution is not affected by wavelength. Additionally, active tuning for fundamental or harmonic frequencies up to 67 GHz is now available.

"Our customers are requiring active tuning for a wider range of applications," said Dr. Richard Emsley, CEO, Mesuro. "Whether it is designing new wireless applications in the now available analog TV bands or measuring the harmonics of military PAs, active load pull enables engineers to optimize their design in less iteration."

#### **Validating the Accuracy of Large Signal Models**

The Mesuro MB150 150W solution, combined with waveform engineering techniques, is enabling high power PA designers to calibrate their large signal models for different classes of operation. For example, the system allows for quick evaluation of devices in Class F, inverse Class F and class J modes of operation for both ET and Doherty configurations.

"By comparing the measured impedances at the fundamental, 2<sup>nd</sup>, and 3<sup>rd</sup> harmonics, as well as the voltage and current waveforms at the transistor current generator we have been able to confirm the accuracy of our large signal models for our GaN HEMT transistor portfolio," said Ray Pengelly, Strategic Business Development Manager, Cree.

#### **Achieving Record Efficiencies on Existing Technologies**

The ability to achieve near theoretical efficiencies requires accurate harmonic tuning. Mesuro's active tuning capability can be applied to both the source and load side of device and allows for complete control of all in-band and out-of-band impedances. Mesuro, in association with TriQuint Semiconductor



and Cardiff University, will be presenting results at IMS showing a commercial GaAs pHEMT device achieving efficiencies in-excess of 90% at  $P_{1dB}$  in a class-B bias.

“Our customers are able to more accurately perform harmonic tuning on their PA designs, with a 100% success rate for improving their efficiencies and performance,” added Emsley.

#### **About Mesuro Ltd**

Headquartered in Cardiff, UK Mesuro Ltd focuses on commercializing RF test and measurement technologies resulting from Cardiff University’s world-renowned Centre for High Frequency Engineering. In addition to offering turnkey active load pull solutions, Mesuro also offers a wide range of testing services.