

Mesuro again demonstrates first pass design success Device data to MMIC in one step!

Mesuro demonstrates how Active Harmonic Load-Pull and Waveform Engineering can produce a multi-harmonically matched MMIC PA

Cardiff, UK, 24th May 2011 – Mesuro has again proved how its Waveform Engineering approach to power amplifier design yields major reductions in design costs and improves product time to market, through 'right-first-time' design.

Using a commercially available GaAs pHEMT, TQPED, a 0.5um commercial foundry process from TriQuint Semiconductor, with data from characterization performed on Mesuro's active harmonic load pull solution, the completed design produced a first pass MMIC power amplifier with an efficiency performance of >80%.

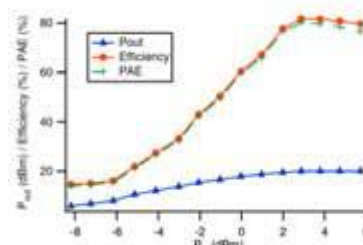
The use of the original device measurement data meant that the designer was able to produce the design without the need for a non linear I-Q device model.

For this reason it is often necessary for the designer to rely on experimental investigations. This build and test approach is often frustrating since it can be very time consuming and does not usually allow the flexibility or the quantity of investigations to be undertaken.

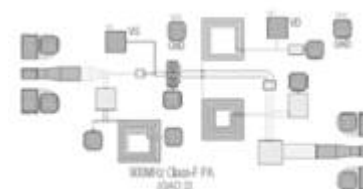
The design process allowed the designer to understand accurately how component sensitivities would affect the proposed performance of the amplifier at the investigation phase prior to any expensive fabrication being undertaken.

This meant that the designer could better understand the trade-offs that could be made in the impedance matches to increase the probability of a first time success after fabrication.

The ability to get close to the optimum performance first time provides designers the opportunity to hugely reduce design costs, by reducing the number of design iterations required and allows them to get a product to market quicker.



Measured PA power sweep at the designed frequency of 900 MHz



Layout of the 900 MHz, class-F, MMIC power amplifier

Ends... (Ref: PRM3)

About Mesuro Limited

Headquartered in Cardiff, UK, Mesuro focuses on commercialising RF test and measurement technologies resulting from Cardiff University's world-renowned Centre for High Frequency Engineering. Mesuro's measurement solutions overcome many of the limitations inherent in traditional design and testing processes by providing complete information and control of high frequency signals of the circuits under test. This allows for the development of an integrated development process that streamlines the development and testing cycle and reduces time to market. In addition to offering turnkey active load pull solutions, Mesuro also offers a wide range of testing services.

For more information, please see: www.mesuro.com

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