



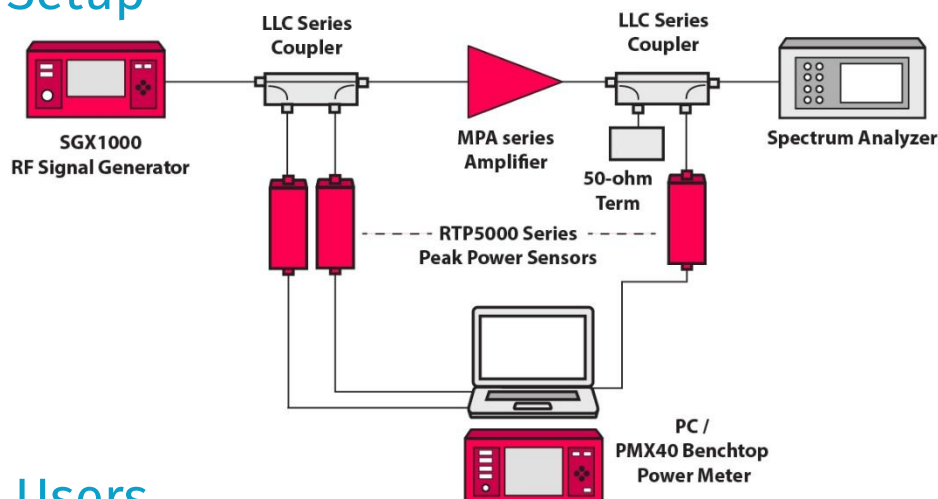
High-Power RF Solutions: GaN SSPA for EMC & Test Labs

Electromagnetic compatibility (EMC) and RF test labs require high-power, broadband amplifiers that maintain linearity, stability, and repeatability. This demonstration highlights how Maury Microwave state-of-the-art GaN-based solid-state power amplifiers (SSPAs) are optimized for these test environments. Users will observe key performance metrics, including output power, gain, gain flatness, spurious behavior, and linearity, as well as the advantages of GaN architectures, from wide bandwidth and high efficiency to compact size and rugged reliability.

In this test setup, the high-performance SGX1000 signal generator provides the RF signal, where a portion is sampled by the LLC directional coupler. Two RTP5000 series real-time power sensors, which connect to a PC or PMX40 power meter for benchtop use, measure input forward power and reflected power to verify drive level, linearity at the input, and proper loading. At the amplifier output, an additional RTP5000 sensor is used to measure output power, gain, and gain flatness across operation frequencies. A spectrum analyzer observes harmonics, spurs, and overall spectral behavior.

The performance displayed in this configuration demonstrates how Maury next-generation amplifiers deliver high RF power with precision and stability across a broad frequency range.

Demo Setup



Target Users

Target users include modeling, test and verification, reliability and quality, and R&D engineers who require wideband, high-power, and high-performance signal amplification in EMC and RF test labs.

2900 Inland Empire Blvd., Ontario, CA 91764 USA

+1 909 987 4715 +1 909 987 1112 sales@maurymw.com maurymw.com

Product Overview

MPA Series Test & Measurement Instrument Amplifiers

The MPA-series of T&M instrument amplifiers ensure EMC immunity testing and RF test labs meet industry standards, offering high reliability, outstanding wideband ranges, and linear performance. All units support full CW, pulsed, AM, PM, FM, or complex modulation such as OFDM. The user-friendly remote-control features, integrated couplers, and power detection enable close positioning to the radiating object for minimal cable insertion loss.

KEY SPECIFICATIONS AND FEATURES:

- State-of-the-art solid-state GaN PAs
- Broadband design for modulated signals
- Psat from 10W to KW
- Integrated protection circuitry and coupler
- Remote control; TTL and LVTTTL options

RTP5000 Series Real-Time USB Peak Power Sensors

The RTP5000 Real-Time Peak USB Power Sensors address challenges faced by engineers and technicians who design, verify, and maintain systems utilizing pulsed signals. Sensors incorporate Real-Time Power Processing™ and offer faster rise times; better time resolution; the fastest measurements; and a complementary, simple, intuitive, and powerful GUI.

KEY SPECIFICATIONS AND FEATURES:

- Accurate automated pulse measurements
- Crest factor, CCDF, and statistical measurements
- Industry-leading video bandwidth (195 MHz), rise time (3 ns), measurement speed (100,000 per second), and time resolution (100 ps)
- Synchronized multi-channel measurements

PMX40 RF Power Meter

The PMX40, compatible with RTP5000 and RTP4000 series power sensors, provides design engineers and technicians the utility of traditional benchtop instrument, the flexibility and performance of modern USB RF power sensors, and the simplicity of a multi-touch display.

More Resources

Visit maurymw.com/info/mapcon-2025 to learn more about Maury solutions.

2900 Inland Empire Blvd., Ontario, CA 91764 USA

 +1 909 987 4715  +1 909 987 1112  sales@maurymw.com  maurymw.com