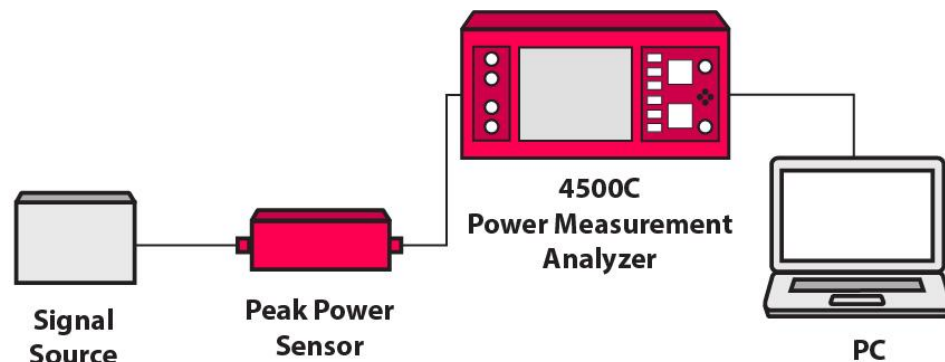


RF Power Measurements: Pulsed & Wideband Signal Analysis

Modern systems use pulsed and modulated signals with rapid transitions, high crest factors, and dynamic envelopes. These signals exhibit intermittent signal phenomena, such as transients, dropouts, and interference that traditional instrumentation often miss due to factors such as acquisition gaps while processing takes place and insufficient time resolution. Test equipment must provide the performance necessary to characterize pulse power behavior accurately, capture transient events, and verify signal integrity across wide bandwidths.

This demonstration highlights the advanced capabilities of the Maury Microwave 4500C for precise power analysis of complex, wideband pulsed waveforms in both the time and statistical domains. Leveraging Maury wideband peak power sensors along with the real-time power processing, advanced triggering, and 100-ps time resolution of the 4500C, the system delivers unmatched visibility into pulsed signal behavior. These capabilities ensure engineers can capture envelope behavior, peak and average power, rise and fall times, pulse width, and crest factor with superior accuracy.

Demo Setup



Target Users

Target users include design and test engineers working in radar, electronic warfare, satellite, and wireless communications systems who need to accurately characterize the behavior of pulsed and wideband RF signals.

Product Overview

4500C Power Measurement Analyzer

The 4500C is the instrument of choice for capturing, displaying, analyzing, and characterizing microwave and RF power in both the time and statistical domains. It is ideal for design, verification, and troubleshooting of pulsed and noise-like signals used in commercial and military radar, electronic warfare (EW), wireless communications (e.g., LTE, LTE-A, and 5G), and consumer electronics (WLAN), as well as education and research applications.

The 4500C features 100-ps time base resolution, video bandwidth up to 125 MHz, flexible triggering, and greater than 80 dB dynamic range without any range switching to cover the most demanding peak power measurement applications. The 4500C also features continuous statistical analysis of power at acquisition rates up to 100 MegaSamples per second (MS/s), a text display of up to 15 automatic measurements per channel, as well as envelope and persistence views to provide fast, in-depth signal analysis. The instrument incorporates convenient I/O, including USB ports for storing data such as instrument setups, trace waveforms, and bitmap image files.

KEY SPECIFICATIONS AND FEATURES:

- Real-Time Power Processing™
- Ultrafast trace acquisition and refresh rate
- One button push for 15 automated power and time measurements
- Automatic peak-to-peak, delay-by-time and delay-by-events triggering
- Multi-level, multi-function calibrator
- Continuous statistical analysis (optional)
- Includes gated PDF, CDF, and CCDF
- Displays up to 4 measurement, 2 memory, and 1 math channel simultaneously

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