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Find the *Marvin Test Sets / Geotest GX2002* at our website: *Click HERE*

GX2002 SERIES

3U PXI RF POWER ANALYZER

- CW and pulse RF power measurements
- Frequency counter
- Pulse interval analyzer
- 100 MHz to 3 GHz
- External input and output synchronization
- Compatible with PXI Express hybrid slots



DESCRIPTION

The GX2002 PXI RF Power Analyzer module performs multiple measurements on both CW and pulsed RF waveforms including power, frequency, and pulse interval measurements. Flexible triggering and a programmable gate measurement window allow the module to acquire and measure RF pulse power and the RF waveform's frequency.

The GX2002 can analyze RF signals from 100 MHz to 3 GHz with an input range from –34 dBm to +16 dBm. The RF input is processed in parallel using an RF counter that measures frequency, a calibrated envelope detector that measures CW or pulse power, and time-capture circuitry that measures the pulse width and pulse repetition interval. The GX2002 is ideally suited for performing RF power and signal measurements on a variety of modern day communication and radar products.

FEATURES

The GX2002 consists of two inputs, an SMA signal input and an SMB trigger input/output. The trigger input is TTL compatible and can be programmed to be positive or negative edge sensitive. Alternatively, triggering of a measurement or acquisition can be based on a trigger created by the RF input signal. A flexible data acquisition system allows the user to program the aperture acquisition window, the aperture delay, as well as the signal threshold level, providing flexibility to acquire and analyze RF bursts from 100 ns to 1.25 seconds in length. The module's on-board DSP provides that ability to perform all measurements including the input signal's pulse-width, PRI, frequency, and peak power in less than 100 microseconds.

SOFTWARE

The GX2002 is supplied with a virtual instrument panel, which includes 32-bit DLL driver libraries and documentation. The virtual panel can be used to interactively program and control the instrument from a window that displays the instrument's current settings and measurements.

In addition, various interface files provide access to the library for programming tools and languages such as ATEasy, Microsoft® and Borland® C/C++, Microsoft Visual Basic®, LabVIEW, Borland Delphi, and more.

APPLICATIONS

- ATE Systems
- Radar test systems
- Mobile and base radio test systems
- WLAN applications
- RF semiconductor test applications

ANALOG MEASUREMENT

GX2002 SERIES

SPECIFICATIONS

INPUT CHARACTERISTICS	
IMPEDANCE	50 Ω VSWR: < 1.2:1, 100 MHz to 2.5 GHz VSWR: < 1.4:1, 2.5 GHz to 3 GHz
COUPLING	AC
EXT TRIGGER	Positive or Negative edge, selectable Ext Input level: TTL compatible, +/- 5 volts max PXIbus TRG0-7 PXIbus STAR TRG
SIGNAL RANGE	-34 dBm to +16 dBm
INTERNAL TRIGGER (THRESHOLD) LEVEL	
RANGE	-39 dBm to +20 dBm
AUTO TRIGGER	Automatic threshold detection, level is automatically set approximately 6 dB below detected peak power
EXTERNAL TRIGGER OUTPUT	
OUTPUT SIGNAL CHARACTERISTICS	Ext output: DC Coupled, TTL compatible PXIbus TRG0 (Acquisition Window for Detected RF Envelope)

MEASUREMENT FUNCTIONS

FREQUENCY	
RANGE	100 MHz to 3 GHz
RESOLUTION	1 Hz
NUMBER OF SIGNIFICANT DIGITS	9 digits
ACCURACY	+/- 20 ppm for acquisition window ≥ 100 microseconds +/- 100 ppm for acquisition window ≥ 10 microseconds +/- 1000 ppm for acquisition window ≥ 1 microsecond
POWER MEASUREMENT	
RANGE	-34 dBm to + 16 dBm
RESOLUTION	.01 dBm
ACCURACY	+/- .25 dB, -20 dBm to +10 dBm +/- 1.00 dB, -34 dBm to +16 dBm Note: min. RF pulse width is 500 ns
PULSE REPETITION INTERVAL MEASUREMENT	
RANGE	1 microsecond to 100 milliseconds
RESOLUTION	1 nanosecond
ACCURACY	± 1 nanosecond
PULSE WIDTH	
RANGE	100 nanoseconds to 10 milliseconds
RESOLUTION	1 nanosecond
ACCURACY	± 1 nanosecond
TIME BASE	
STANDARD	10 MHz TCXO or PXIbus CLK10
ACCURACY	± 15 ppm
POWER REQUIREMENTS (TYPICAL)	+5 V @ 1.85 Amp +3.3 V @ .2 Amp
OPERATING TEMPERATURE RANGE	-20° C to +60° C
STORAGE TEMPERATURE RANGE	-40° C to +75° C
SIZE	3U PXI
WEIGHT	16 oz.

Note: Specifications subject to change without notice.

ORDERING INFORMATION

GX2002	RF Power Analyzer

ANALOG MEASUREMENT

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