precisionWave Corporation
p1411A RF Vector Signal Generator

Technical Data

$9,990 RF Vector Signal Generator



The precisionWave p1411A is an economical, focused performance modulated or CW RF vector signal generator. The source covers the primary cellular bands, 800 MHz – 1000 MHz and 1700 MHz – 2200 MHz. The instrument has a wide power output range, -100 dBm to +20 dBm, coupled with excellent phase noise performance. The p1411A is a highly accurate source of quality EDGE, GSM, IS-95 (CDMA One), NADC, PHS, WCDMA, etc. signals.

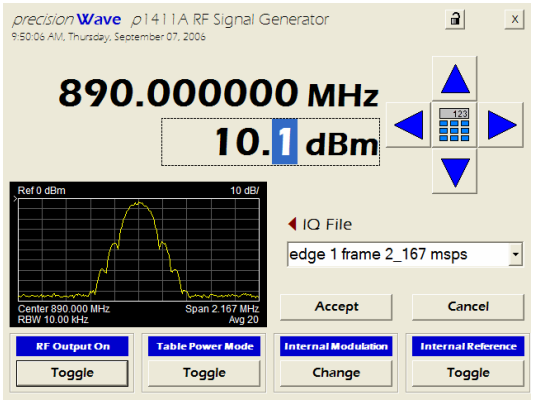
The p1411A can be internally or externally modulated, and includes a powerful internal I and Q waveform generator.

With a highly stable 10 MHz internal frequency reference, the source can also accept an external 10 MHz reference signal for synchronization with other devices and test equipment.

The source can be used on a bench or mounted in a standard19" rack using only 3U (5 ¼") of vertical rack space. The p1411A measures 17" in depth.

A crystal clear 7" TFT display includes a touch panel for easy instrument control without mouse, stylus or keyboard requirements, though these may be used if desired.

precisionWave's exclusive Spectrum Analyzer display (patent-pending) gives constant visibility of the signal being generated without tying up an expensive spectrum analyzer! Used in preview mode, the Spectrum Analyzer feature assures that the proper IQ waveform is selected for output.



A standard LAN programming interface with a robust and intuitive API speeds and simplifies development of automated R&D or Manufacturing software applications within Microsoft Visual Studio or Visual Studio .NET environments.

The p1411A is completely interchangeable with the precisionWave p1211X ATE RF Signal Generator for applications making use of external modulation. This results in an economical leverage strategy for software cross-development and maintenance between R&D and manufacturing.

Typical Characteristics

Frequency

Range,
800 MHz – 1000 MHz
1700 MHz – 2200 MHz

Resolution, 1 Hz
Settling time,

800 MHz – 1000 MHz
<12 ms within 100 Hz
1700 MHz – 2200 MHz
<15 ms within 100 Hz

Frequency (continued)

Harmonics,
800 MHz – 1000 MHz
< -45 dBc at +20 dBm output
< -65 dBc at +10 dBm output
1700 MHz – 2200 MHz
< -35 dBc at +20 dBm output
< -50 dBc at +10 dBm output
Spurious, < -80 dBc

Phase Noise

-90 dBc/Hz at 20 kHz offset
-115 dBc/Hz at 100 kHz offset

Power

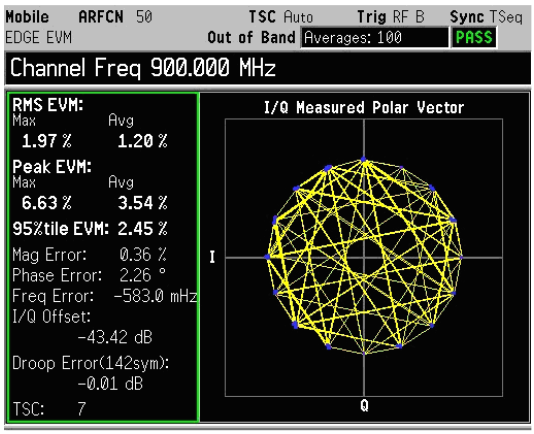
Range, -100 dBm to +20 dBm
Resolution, 0.1 dB
Accuracy, ± 0.2 dB after cal.
Settling time, 2.5 ms within 0.1 dB
Attenuation, Fully electronic

Internal IQ Generator

Channels, 2
Resolution, 16 bit
Depth, 1 MSample/channel
Over-sampling, 8x – 64x
Clocking, DDS-generated

Modulation Accuracy

EDGE EVM, 1.5%
GSM Phase Error, 1°
WCDMA EVM, 2%



Typical EDGE performance at 900 MHz.

Quadrature-phase and in-phase modulated external input signals

Level, 0.125 V peak
Impedance, 50 Ω
Frequency, 40 MHz max. for a total modulated bandwidth of 80 MHz.

Reference Input

Frequency, 10 MHz
Level, 0.1 V rms to 2 V rms
Type, bipolar sinusoid
Impedance, 200 Ω

Reference Output

Frequency, 10 MHz
Level, 0.1 V rms to 0.5 V rms
Type, bipolar sinusoid
Impedance, 50 Ω

Warranty

The *p*1411A is fully warranted for one year from the initial service date of the instrument.

Ordering Information

Price ..... $9,990 USD

Stop by and see the *p*1411A for yourself at AUTOTESTCON 2006.

We value your opinions, so please take our short RF Signal Generator Survey at www.precisionwave.com. You just might win an iPod!

CE The *p*1211B RF Signal Generator is compliant with CE Council Directives 73/23/EEC and 89/336/EEC as amended by Council Directive 93/68/EEC. The instrument conforms to Safety Standard EN 61010-1 and numerous EMC standards.

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