

1.8 GHz SPECTRUM ANALYZER



NEW



GSP-818

FEATURES

- Frequency Range: 9kHz ~ 1.8GHz
- RBW: 10Hz ~ 3MHz, 10Hz ~ 500kHz in 1-10 steps
- Sensitivity: -148dBm/Hz Typical@PreAmp On
- Built-in AM/FM Demodulation
- Bandwidth Zoom Function
- Measurement Function: ACPR/OCBW/CHPW, NdB Bandwidth, Freq. Counter, Noise Marker
- Built-in 20dB Preamplifier Standard
- Interface: Lan, USB
- Screen: 10.4" SVGA Output (800x600)
- Options: Tracking Generator, EMI Filter & Detector (via software keycode)

GSP-818 is a new basic spectrum analyzer, which supports a frequency range of 1.8 GHz and provides testing requirements for RF products during the development/production phases. GSP-818 has a built-in 20dB amplifier and provides an adjustable range of resolution bandwidth (RBW) from 10Hz to 3MHz. In addition, it has the AM/FM signal demodulation function and the ACPR/OCBW/CHPW test function to meet the requirements of general RF signal measurement.

To achieve clearer signal observation, GSP-818 utilizes a 10.4" large screen with SVGA (800 x 600) resolution. Pertaining to the communications interface, GSP-818 provides both USB and LAN interfaces. Via the USB Host, users can quickly retrieve the files saved after measurements. The USB Device and LAN interface allow users to control through the dedicated PC software or to use the required program designed by the corresponding commands.

GSP-818 also offers two options: Tracking Generator and EMI Filter & Detector. It is different from the previous models. If customers require options, there is no need to send the equipment back. Customers only need to purchase the corresponding software license (Software Keycode) to activate the purchased option, which greatly improves the operational efficiency.



Front



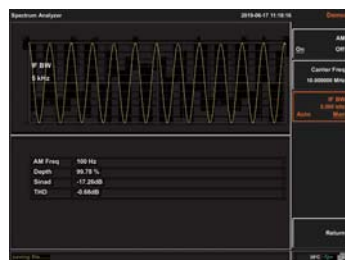
Rear Panel



Zoom In/Out



ACPR



AM Demodulation



FM Demodulation

APPLICATIONS

- Checking and Analysis of Spectrum Characteristics
- Analyze AM and FM Signal Characteristics
- Monitor the Signal Uploaded by SNG Vehicle
- For a Compact Test System
- Measuring the Frequency Response of RF Cables, Attenuators, Filters and Amplifiers

GSP-818

GW INSTEK
Simply Reliable

SPECIFICATIONS

FREQUENCY

Frequency Span	Range Resolution	9 kHz to 1.8 GHz 1 Hz
Frequency Span	Span Range Span Uncertainty	0 Hz, 100 Hz to max. frequency of instrument \pm span/(sweep points-1)
Internal Frequency Reference	Span Range Reference Frequency Accuracy Temperature Stability Aging rate	10.000000 MHz \pm [(days from last calibrate \times freq aging rate) + temperature stability + initial accuracy] < 2.5ppm (15°C to 35°C) < 1ppm/year
SSB Phase Noise	10 kHz 100 kHz 1 MHz	< -82 dBc/Hz < -98 dBc/Hz(Typical) < -110 dBc/Hz(Typical)
Bandwidth	Resolution Bandwidth RBW Uncertainty Resolution Filter Shape Factor ^(60dB@3dB) Video Bandwidth(VBW)	10Hz to 500kHz (1-10 steps by sequence), 1MHz, 3MHz (Option) 200 Hz, 9 kHz, 120 kHz, 1 MHz for EMI(-6dB) < 5%, typical (RBW \leq 1 MHz) < 5:1 typical (digital and close to Gaussian shape) 10 Hz to 3 MHz

AMPLITUDE

Amplitude and Level	Amplitude Measurement Range Reference Level Preamp Input Attenuation Max Input DC Current Max Continuous Power	DANL to +10 dBm, 100 kHz to 1 MHz, Preamp Off; DANL to +20 dBm, 1 MHz to 1.5 GHz, Preamp Off -80 dBm to +30 dBm, 0.01dB by step 20 dB, nominal, 9 kHz to 1.8 GHz 0 to 40 dB, in 1 dB step 50 VDC +30dBm, average continuous power
Display Average Noise Level		Preamp Off Preamp On
Frequency Response	1 MHz ~ 10 MHz 10 MHz ~ 1 GHz 1 GHz ~ 1.8 GHz	-130 dBm (Typical) -130 dBm (Typical) -128 dBm (Typical)
Difference and Accuracy	Preamp Off(fc \geq 100 kHz) Preamp On(fc \geq 100 MHz) RBW Switch Difference Input Attenuation Difference Absolute Amplitude Uncertainty	\pm 0.8 dB; \pm 0.4 dB, Typical \pm 0.9 dB; \pm 0.5 dB, Typical Reference: 10 kHz RBW at 50 MHz; Log resolution= \pm 0.2 dB, Lin resolution= \pm 0.01 Nominal 20°C~30°C, fc=50 MHz, Preamplifier Off, 10 dB RF attenuation, input signal 0~40 dB \pm 0.5 dB 20°C to 30°C, fc=50 MHz, Span=200 kHz, RBW=10 kHz, VBW=10 kHz, peak detector, 10 dB RF attenuation, 95% confidence level \pm 0.4 dB, input signal level -20 dBm \pm 0.5 dB, input signal level -40 dBm
Distortion and Spurious Response	Uncertainty VSWR Second Harmonic Distortion Third-order Intermodulation 1 dB Gain Compression Residual Response Input Related Spurious	Input signal range 0 dBm to -50 dBm; \pm 1.5 dB Input 10 dB RF attenuation, 1MHz to 1.8GHz; <1.5, Nominal fc \geq 50 MHz, Preamp off, signal input -20 dBm, 0 dB RF attenuation, 20°C to 30°C; -65 dBc fc \geq 50 MHz, Input double tone level -20 dBm, frequency interval 100 kHz, input attenuation 0 dB, preamplifier off, 20°C to 30°C; +10 dBm fc \geq 50 MHz, 0 dB RF attenuation, Preamp off, 20°C to 30°C; >+2 dBm, Nominal connect 50 Ω load at input port, 0 dB input attenuation, 20°C to 30°C; <-85 dBm, from 100 kHz to 1.5 GHz; <-80 dBm, from 1.5 GHz to 1.8 GHz -30 dBm signal at input mixer, 20°C to 30°C; <-60 dBc

SWEEP

Time	None-zero Span	10 ms to 3000 s
Span Mode	Zero Span	1 ms to 3000 s Continue, Single

TRACKING GENERATOR (OPTION 01)

Tracking Generator Output	Frequency Range Output Power Level Range Output Power Level Resolution Output Flatness Maximum Safe Reverse Level	100 kHz to 1.8GHz -30 dBm to 0 dBm 1 dB \pm 3 dB Average total power: 30 dBm, DC : \pm 50 VDC
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DEMODULATION

Audio Demodulation	Frequency Range Demodulation Type	100 kHz to 1.8 GHz FM/AM/USB/LSB
AM Measurement	Frequency Range Modulation Rate Modulation Rate Accuracy Depth Depth Accuracy	10MHz to 1.8GHz 20Hz to 100kHz 1Hz, nominal (Modulation rate < 1 kHz); <0.1% modulation rate, nominal (Modulation rate \geq 1 kHz) 5% to 95% \pm 4%, nominal
FM Measurement	Frequency Range Modulation Rate Modulation Rate Accuracy Deviation Deviation Accuracy	10 MHz to 1.8 GHz 20 Hz to 100 kHz 1Hz, nominal (Modulation rate < 1 kHz); <0.1% modulation rate, nominal (Modulation rate \geq 1 kHz) 20 Hz to 200 kHz \pm 4%, nominal

FREQUENCY COUNTER

Counter Resolution Accuracy	1Hz, 10Hz, 100Hz, 1kHz \pm (frequency indication \times frequency reference accuracy+ counter resolution)
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INPUTS AND OUTPUTS

RF Input	Impedance Connector	50 Ω , Typical N Type Female
Tracking Generator Output	Impedance Connector	50 Ω , Typical N Type Female
Reference Input	Connector	BNC Female
USB	10MHz Reference Amplitude USB Host USB Device	0 dBm to +10 dBm A Plug, USB 2.0 (Host End) B Plug, 2.0 Version
VGA	Connector Resolution	15-pins, D-SUB (female) 800*600, 60 Hz

GENERAL SPECIFICATION

Display	Type	10.4 inches, TFT LCD, 800*600 (SVGA), 65536 colors
Remote Control	USB LAN	USB TMC 10/100Base, RJ-45
Mass Memory	Internal Memory	256M Bytes
Temperature	Operating Temperature Storage Temperature	0 °C to 40°C -20°C to 70°C
Appearance	Dimensions & Weight	421mm(W) \times 221mm(H) \times 115mm(D)/Approx. 5.0 kg(without package)

Specifications subject to change without notice. GSP-818GD1DH

ORDERING INFORMATION

GSP-818 1.8 GHz Spectrum Analyzer

ACCESSORIES

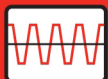
Power cord, Calibration Certificate
CD (including quick start guide, user manual, programming manual, PC software)

OPTIONAL ASSESSORIES

Opt.01 Tracking Generator (via software cacatua)
Opt.02 EMI Filter & EMI Detector (via software keycode)

FREE DOWNLOAD

PC Software



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