1.8 GHz SPECTRUM ANALYZER

CE USB LAN SVGA

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, Limit Line
- 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 general 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 functions to meet the requirements of general RF signal measurement.

In addition, the built-in Time Spec function of GSP-818 can simultaneously view the correlation between display power, frequency and time. The Bandwidth Zoom function can be used to view the spectrum performance of signals under different Span. The Limit Line function provides two different Limit Line settings: Windows Measure and Limit Line Measure. Users can use these functions for a wider range of measurement applications.

To achieve clearer signal observation, GSP-818 utilizes a 10.4” large screen with SVGA (800 * 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: TG and EMI 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

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

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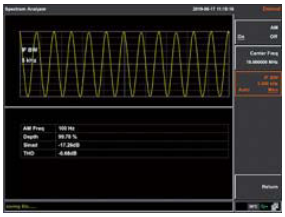
A. TRACE AND MARKER FUNCTIONS

Five traces are provided, and the Marker function can be assigned to different traces.

B. 10HZ RBW

GSP-818 provides a minimum 10Hz RBW resolution and provides a 1-10 steps setting below the 500kHz RBW to allow a flexible signal detection.

C. AM AND FM DEMODULATION



GSP-818 provides AM and FM demodulation and supports demodulated audio output.

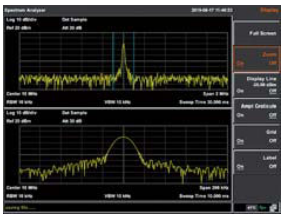
D. ACPR, OCBW, CHPW

The ACPR function can set up to three sets of adjacent channel tests.

The power density of the signal can be measured through the OCBW function.

CHPW is used to measure the power strength of the signal in a user-defined

E. BANDWIDTH ZOOM



The Bandwidth Zoom function is used to view the spectral performance of the signal under different Span.

F. TIME SPEC

This function can simultaneously view the correlation between display power, frequency and time, and it can also track frequency and power with the variation of time

G. LIMIT LINE

It can directly judge whether the test result of the DUT is qualified according to the preset test qualification conditions. GSP-818 offers two Limit Line measurements: Windows Measure and Limit Line Measure.

SPECIFICATIONS

FREQUENCY		
Frequency Span	Range	9 kHz to 1.8 GHz
	Resolution	1 Hz
Frequency Span	Span Range	0 Hz, 100 Hz to max. frequency of instrument
	Span Uncertainty	± span/(sweep points-1)
Internal Frequency Reference	Span Range	10.000000 MHz
	Reference Frequency Accuracy	± [(days from last calibrate × freq aging rate) + temperature stability + initial accuracy]
	Temperature Stability	< 2.5ppm (15°C to 35°C)
	Aging rate	< 1ppm/year
SSB Phase Noise	10 kHz	< -82 dBc/Hz
	100 kHz	< -98 dBc/Hz(Typical)
	1 MHz	< -110 dBc/Hz(Typical)
Bandwidth	Resolution Bandwidth	10Hz to 500kHz (1-10 steps by sequence), 1MHz, 3MHz (Option) 200 Hz, 9 kHz, 120 kHz, 1 MHz for EMI(-6dB)
	RBW Uncertainty	< 5%, typical (RBW≤1 MHz); Dedicated Remote Control PC Software
	Resolution Filter Shape Factor(60dB:3dB)	< 5:1 typical (digital and close to Gaussian shape)
	Video Bandwidth(VBW)	10 Hz to 3 MHz
AMPLITUDE		
Amplitude and Level	Amplitude Measurement Range	DANL to +10 dBm, 100 kHz to 1 MHz, Preamp Off; DANL to +20 dBm, 1 MHz to1.8 GHz, Preamp Off
	Reference Level	-80 dBm to +30 dBm, 0.01dB by step
	Preamp	20 dB, nominal, 100 kHz to 1.8 GHz
	Input Attenuation	0 to 40 dB, in 1 dB step
	Max Input DC Current	50 VDC
Display Average Noise Level	Max Continuous Power	+30dBm, average continuous power

	Preamp Off	Preamp On
100 kHz ~ 1 MHz	-117 dBm (Typical)	-140 dBm (Typical)
1 MHz ~ 10 MHz	-130 dBm (Typical)	-150 dBm (Typical)
10 MHz ~ 1 GHz	-130 dBm (Typical)	-150 dBm (Typical)
1 GHz ~ 1.8 GHz	-128 dBm (Typical)	-148 dBm (Typical)

Frequency Response	Preamp Off(fc≥100 kHz)	±0.8 dB:±0.4 dB, Typical
	Preamp On(fc≥100 MHz)	±0.9 dB:±0.5 dB, Typical
Uncertainty and Accuracy	RBW Switch Uncertainty	Reference: 10 kHz RBW at 50 MHZ; Log resolution=±0.2 dB, Lin resolution=±0.01 Nominal
	Input Attenuation Uncertainty	20°C~30°C, fc=50 MHz, Preamplifier Off, 10 dB RF attenuation, input signal 0~40 dB ±0.5 dB
	Absolute Amplitude Uncertainty	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
	Preamp Off	±0.4 dB, input signal level -20 dBm
	Preamp On	±0.5 dB, input signal level -40 dBm
	Uncertainty	Input signal range 0 dBm to -50 dBm; ±1.5 dB
	VSWR	Input 10 dB RF attenuation, 1MHz to 1.8GHz; <1.5, Nominal
Distortion and Spurious Response	Second Harmonic Distortion	fc≥50 MHz, Preamp off, signal input -20 dBm, 0 dB RF attenuation, 20°C to 30°C; -65 dBc
	Third-order Intermodulation	fc ≥ 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
	1 dB Gain Compression	fc≥50 MHz, 0 dB RF attenuation, Preamp off , 20°C to 30°C ; >+2 dBm, Nominal
	Residual Response	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
	Input Related Spurious	-30 dBm signal at input mixer, 20°C to 30°C; <-60 dBc
SWEEP		
	Time None-zero Span	10 ms to 3000 s
	Zero Span	1 ms to 3000 s
	Span Mode	Continue, Single
TRACKING GENERATOR (OPTION 01)		
Tracking Generator Output	Frequency Range	100 kHz to 1.8GHz
	Output Power Level Range	-30 dBm to 0 dBm
	Output Power Level Resolution	1 dB
	Output Flatness	± 3 dB
	Maximum Safe Reverse Level	Average total power: 30 dBm, DC : ±50 VDC
DEMODULATION		
Audio Demodulation	Frequency Range	100 kHz to 1.8 GHz
	Demodulation Type	FM/AM/USB/LSB
AM Measurement	Frequency Range	10MHz to 1.8GHz
	Modulation Rate	20Hz to 100kHz
	Modulation Rate Accuracy	1Hz, nominal(Modulation rate < 1 kHz); <0.1% modulation rate, nominal(Modulation rate≥1 kHz)
	Depth	5% to 95%
	Depth Accuracy	±4%, nominal
FM Measurement	Frequency Range	10 MHz to 1.8 GHz
	Modulation Rate	20 Hz to 100 kHz
	Modulation Rate Accuracy	1Hz, nominal(Modulation rate < 1 kHz); <0.1% modulation rate, nominal(Modulation rate≥1 kHz)
	Deviation	20 Hz to 200 kHz
	Deviation Accuracy	±4%, nominal
FREQUENCY COUNTER		
	Counter Resolution	1Hz, 10Hz, 100Hz, 1kHz
	Accuracy	±(frequency indication × frequency reference accuracy+ counter resolution
INPUTS AND OUTPUTS		
RF Input	Impedance	50 Ω, Typical
	Connector	N Type Female
Tracking Generator Output	Impedance	50 Ω, Typical
	Connector	N Type Female
Reference Input	Connector	BNC Female
	10MHz Reference Amplitude	0 dBm to +10 dBm
USB	USB Host	A Plug, USB 2.0 (Host End)
	USB Device	B Plug, 2.0 Version
VGA	Connector	15-pins, D-SUB(female)
	Resolution	800*600, 60 Hz
GENERAL SPECIFICATION		
Display	Type	10.4 inches, TFT LCD, 800*600 (SVGA), 65536 colors
Remote Control	USB	USB TMC
	LAN	10/100Base, RJ-45
Mass Memory	Internal Memory	256M Bytes
Temperature	Operating Temperature	0 °C to 40°C
	Storage Temperature	-20°C to 70°C
Appearance	Dimensions & Weight	421mm(W) × 221mm(H) × 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**
Opt. 01	**Tracking Generator (Factory Installed)**
Opt. 02	**EMI Filter and EMI Detector (Factory Installed)**

ACCESSORIES

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

FIELD UPGRADE FOR GSP-818 OPTIONS

Opt.01	Tracking Generator for GSP-818 (License key upgrade, field installed)
Opt.02	EMI Filter and EMI Detector for GSP-818(License key upgrade, field installed)

FREE DOWNLOAD

Dedicated Remote Control PC Software

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