RF SIGNAL GENERATOR

CE USB PC Software

USG-Series

FEATURES

- Frequency Range : 34.5MHz ~ 4400MHz
- Output Power Range : -30dBm ~ 0dBm
- Continuous Wave Signal Without any Modulation
- Support Fixed Frequency, Frequency Sweep, Frequency Hopping & Power Sweep Mode
- -107dBc/Hz Phase Noise@100kHz Offset
- Frequency Resolution : 10kHz
- PC USB Interface Powered and Controlled
- External PC Software Support Different Operating System

The GWInstek USG-Series RF signal generator is a pocket-sized and USB interface compatible RF signal generator. It covers the frequency range from 35MHz ~ 4400MHz. The USG-Series provides continuous wave (CW) signal outputs without any signal modulation function. The built-in electronic attenuator of the USG-Series allows an adjustable power range between -30dBm to 0dBm. The USG-Series has several operational modes including fixed frequency, frequency sweep, frequency hopping, and power sweep.

A USG CD-ROM provides dedicated PC application programs, which were developed under JAVA software structure. This USG PC application program supports operating systems such as Windows 2000 /XP/Vista/7/8, Linux & Mac OS X through the USB interface.

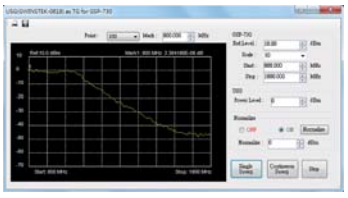
Users can download USG APP to smart phone or tablet with Android 4.0 or above. To operate USG, use USB-OTG connecting cable to connect tablet (or smart phone) and USG. The Android APP application software for the USG signal generator is available on Google Play Store.

The USG signal generator can be designated as the tracking generator for GSP-730 spectrum analyzer to conduct measurement functions of scalar network analyzer. A USG CD-ROM provides PC application programs for the GSP-730 Primary RF software. Users can, using a Windows OS computer, control USG and GSP-730 via the Primary RF software.

Test Result of Simultaneous Power Sweep and Frequency Sweep

Easy to Use Graphical Interface with Numeric Setting

USG Android APP



Test Result of Low Pass Filter with PrimaryRF Software

APPLICATIONS

- Reference Source for PLL and ADC
- LO Source for Frequency Converter and IQ Modulator
- Two-tone Inter-modulation for Amplifier Test
- Tracking Generator for Spectrum Analyzer

SPECIFICATIONS

MODEL	USG-LF44	USG-0103	USG-0818	USG-2030	USG-3044
FREQUENCY RANGE	34.5 MHz ~ 4.4 GHz	100 MHz ~ 300 MHz	800 MHz ~ 1.8 GHz	2.0 GHz ~ 3.0 GHz	3.0 GHz ~ 4.4 GHz
OUTPUT POWER	-30 dBm ~ 0 dBm, in 1 dB steps				
INTERNAL REFERENCE FREQUENCY	25 MHz, aging ±1 ppm at first year				
FREQUENCY ACCURACY (0 dBm Output Level)	±150 Hz at 100 MHz	±150 Hz at 100 MHz	±1.2 kHz at 800 MHz	±3 kHz at 2 GHz	±4.5 kHz at 3 GHz
FREQUENCY RESOLUTION	10 kHz				
OUTPUT ISOLATION	≦ -75 dBc , Output Control On/Off				
MODE CONTROL	Fixed Frequency / Single Sweep / CW Sweep / Hopping / Power Sweep				
STEP DWELL	≦1000 ms in 1 ms steps				
FREQUENCY OFFSET	-50 kHz ~ 50 kHz in 10 kHz steps				
OUTPUT FLATNESS (0 dBm Output Level)	-1 dBm ~ 3.5 dBm, typical	-1 dBm ~ -2 dBm, typical	-1 dBm ~ -0.5 dBm, typical	-1 dBm ~ -0.5 dBm, typical	-1 dBm ~ 3.5 dBm, typical
PHASE NOISE Carrier Frequency at 10kHz Offset Frequency at 100kHz Offset Frequency	 fc = 1.0 GHz < -97 dBc/Hz, typical -100 dBc/Hz < -107 dBc/Hz, typical -110 dBc/Hz	 fc = 200 MHz <-100 dBc/Hz, typical <-110 dBc/Hz, typical	 fc = 1.3 GHz < -97 dBc/Hz, typical <-102 dBc/Hz, typical	 fc = 1.5 GHz <- 93 dBc/Hz, typical <- 100 dBc/Hz, typical	 fc = 3.7 GHz <- 88 dBc/Hz, typical <- 94 dBc/Hz, typical
2ND HARMONICS (0 dB Attenuation)	≦ -15 dBc, typical 34.5 MHz ~ 2.0 GHz ≦ -10 dBc, typical 2.0 GHz ~ 3.0 GHz ≦ -25 dBc, typical 3.0 GHz ~ 4.4 GHz	≦ -45 dBc, typical > 100 MHz	≦ -25 dBc, typical > 800 MHz	≦ -30 dBc, typical 2.0 GHz ~ 3.0 GHz	≦ -25 dBc, typical 3.0 GHz ~ 4.4 GHz
3rd HARMONICS (0 dB Attenuation)	≦ -5 dBc, typical 34.5 MHz ~ 2 GHz ≦ -20 dBc, typical 2.0 GHz ~ 3.0 GHz ≦ -40 dBc, typical 3.0 GHz ~ 4.4 GHz	≦ -7 dBc typical ≦ 150 MHz ≦ -35 dBc, typical > 150 MHz	≦ -25 dBc, typical ≦ 900 MHz ≦ -35 dBc, typical > 900 MHz	≦ -55 dBc, typical 2.0 GHz ~ 3.0 GHz	≦ -40 dBc, typical 3.0 GHz ~ 4.4 GHz
SPURIOUS RELATED TO RESOLUTION SETTINGS	≦ -30 dBc, typical, Resolution < 1MHz ≦ -65 dBc, typical, Resolution ≧ 1MHz				
SPURIOUS RELATED TO THE FUNDAMENTAL OUTPUT	≦ -60 dBc, typical	≦ -60 dBc, typical	≦ -65 dBc, typical	≦ -65 dBc, typical	≦ -65 dBc, typical
SUPPORTED OS	Windows/Linux/Mac/Android				
INTERFACE	USB 2.0				
USB CONNECTOR TYPE	Mini B				
SUPPLY VOLTAGE	5V nominal				
CURRENT CONSUMPTION	200 mA				
RF CONNECTOR TYPE	N-type male				
IMPEDANCE	50 Ω nominal				
OUTPUT VSWR	< 1.5 : 1 , Output Level @ -30 dBm				
MAXIMUM PERMISSIBLE DC VOLTAGE	±25V				
MAXIMUM REVERSE POWER	+30dBm (1W)				
ELECTROMAGNETIC COMPATIBILITY	EN 55011 class A, EN 61326-1 (industrial environment), EN 61326-2-1, EN 61000-4-2, EN 61000-4-3 EN 61000-4-11				
DIMENSIONS & WEIGHT	30(W) x 103(H) x 30(D)mm; Approx. 100g				

Specifications subject to change without notice. USGGD2DH

ORDERING INFORMATION

USG-LF44	35MHz ~ 4400MHz RF Signal Generator
USG-0103	100MHz ~ 300MHz RF Signal Generator
USG-0818	800MHz ~ 1800MHz RF Signal Generator
USG-2030	2000MHz ~ 3000MHz RF Signal Generator
USG-3044	3000MHz ~ 4400MHz RF Signal Generator

ACCESSORIES

USB cable, CD-ROM with USG software, GSP-730 PrimaryRF software and User manual

OPTIONAL ACCESSORIES

ADP-003	50Ω N type (female) to SMA (female) Adapter
GTL-303	50Ω SMA RF cable (600mm)

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