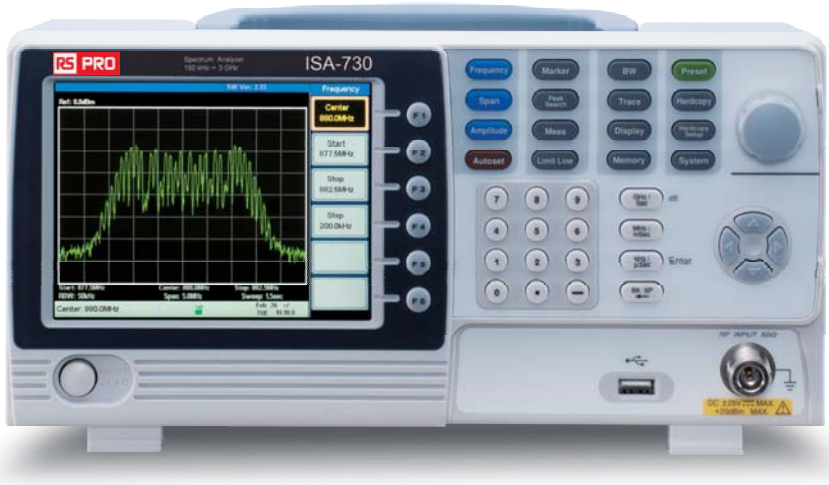
ENGLISH

Datasheet

ISA-730 3GHz Spectrum Analyzer
ISG-LF44 RF Signal Generator

Stock No. :	Model :
123-3568	ISA-730
123-3580	ISG-LF44



CE USB RS-232 VGA Output PC Software

FEATURES

ISA-730 Spectrum Analyzer

- Frequency Range : 150kHz ~ 3GHz
- Autoset Function
- Noise level : ≤-100dBm
- RBW Range : 30kHz,100kHz,300kHz,1MHz
- ACPR/CHPW/OCBW Measurement
- 3 Traces in Different Colors
- Split Window Function
- Limit Line Function
- Remote Control Software
- Presentation Material for Training Courses
- Support Interface : USB Device/Host,RS-232C
- 5.6" TFT LCD with VGA Output

ISG-LF44 RF Signal Generator

- 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

Turn-key Solution for RF and Communication Experiment Courses

ISA-730 is a 3 GHz Spectrum Analyzer developed mainly to fulfill the demands of RF Communications education. Budget constraint and inadequate teaching tools are normally the two hurdles for schools to provide high-quality courses for RF communications experiments. ISA-730, a spectrum analyzer of full functions, combines with the training kit to provide customer an economical turn-key solution for 3GHz RF and Communications Experiment Courses.

ISG-LF44 RF signal generator is a pocket-sized and USB interface compatible RF signal generator. It covers the frequency range from 35MHz ~ 4400MHz. The ISG-LF44 provides continuous wave (CW) signal outputs without any signal modulation function. The built-in electronic attenuator of the ISG-LF44rational modes including fixed frequency, frequency sweep, frequency hopping, and power sweep.

A ISG-LF44 CD-ROM provides dedicated PC application programs, which were developed under JAVA software structure. This ISG-LF44 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 ISG-LF44 APP to smart phone or tablet with Android 4.0 or above. To operate ISG-LF44, use USB-OTG connecting cable to connect tablet (or smart phone) and ISG-LF44. The Android APP application software for the ISG-LF44 signal generator is available on Google Play Store.

The ISG-LF44 signal generator can be designated as the tracking generator for ISA-730 spectrum analyzer to conduct measurement functions of scalar network analyzer. A ISG-LF44 CD-ROM provides PC application programs for the ISA-730 Primary RF software. Users can, using a Windows OS computer, control ISG-LF44 and ISA-730 via the Primary RF software. The combination of ISA-730, ISG-LF44 forms a fundamental training system for RF communications and telecommunications classes in the universities, colleges, vocational schools and the training center in military as well as the private companies. Instead of the tremendous cost of the installation of new training system, the conjunction of ISA-730, ISG-LF44 provides an economical solution to eliminate two obstacles, budget constraint and insufficiency of teaching tools.

APPLICATIONS

- **Education, Training**
- **Fourier Theory Investigation**
- **Motherboard Circuit Measurement**
- **Scalar Network Analyzer**
- **Wireless Communication Signal Measurements**
  - **GSM, 3G, 4G Mobile Phone**
  - **Bluetooth, Zigbee, Wi-Fi**
  - **AM/FM Modulation**
- **Remote Controller Mainteinance**

SPECIFICATIONS

ISA-730

FREQUENCY	**Frequency Range**	Setting Range	150kHz ~ 3GHz
	Center Frequency	Setting Resolution	0.1MHz
		Accuracy	within ±50kHz (frequency span : 0.3GHz ~ 2.6GHz, 20 ±5°C)
	Frequency Span	Setting range	1MHz ~ 3GHz
		Accuracy	within ±3% (frequency span : 0.3GHz ~ 2.6GHz, 20 ±5°C)
	Resolution Bandwidth	Setting Range	30KHz, 100KHz, 300KHz,1MHz
	SSB Phase Noise	-85dBc/Hz (typical, 500kHz offset, RBW : 30kHz, Sweep time : 1.5s, Span : 1MHz@1GHz)	
	Inherent Spurious Response	less than -45dBc@-40dBm Ref. Level (typical less than -50dBc)	
AMPLITUDE	**Reference Level**	Input Range	+20 ~ -40dBm
		Accuracy	Within ±2dB (1GHz) ; SPAN : 5MHz
		Unit	dBm, dBV, dBμV
	Average Noise Level	≤ -100dBm (typical, center frequency : 1GHz RBW : 30kHz)	
	Frequency Characteristic	within ±3.0dB@300MHz ~ 2.6GHz	
		within ±6.0dB@80 ~ 300MHz, 2.6 ~ 3GHz	
	Input	Input Impedance	50Ω
		Input VSWR	less than 2.0@input att≥10dB
		Input damage level	+30dBm (CW average power), 25VDC
		Input connector	N connector
SWEEP	**Sweep Time**	Setting Range	300ms ~ 8.4s, auto (not adjustable)
		Accuracy	within ±2% (frequency span : full span)
GENERAL	**Display**	640 x 480 RGB color LCD	
	Communication Interface	RS-232C	Sub-D female-D 9 pins
		USB Connector	USB Host/Device full speed supported
	VGA Output	Sub-D female 15 pins	
	Power Source	AC 100~240V, 50/60Hz	
OTHER	**Operating Temperature**	5 ~ 45°C (Guaranteed at 25 ±5°C, without soft carrying case)	
	Operating Humidity	Less than 45°C / 90%RH	
	Storage Temperature	-20 ~ 60°C, less than 60°C / 70%RH	
DIMENSIONS &WEIGHT		296(L) × 153(W) × 105(H) mm / 11.6(L) x 6(W) x 4.1(H) in, Approx. 2.2kg / 4.9lb	

ISG-LF44

FREQUENCY RANGE	34.5 MHz ~ 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)	± 100 Hz at 100MHz
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
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
2ND HARMONICS (0 dB Attenuation)	≦ -15dBc, typical 34.5MHz~2.0 GHz; ≦-10 dBc, typical 2.0GHz~3.0 GHz; ≦-25 dBc, typical 3.0GHz~4.4GHz
3rd HARMONICS (0 dB Attenuation)	≦-5dBc, typical 34.5 MHz~2 GHz; ≦-20 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
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.

ORDERING INFORMATION

ISA-730	3GHz Spectrum Analyzer
ISG-LF44	RF Signal Generator

ACCESSORIES

ISA-730 : Quick Start Manual x1, CD-ROM with User Manual x1, Power Cord x1
ISG-LF44 : USB cable x1, CD-ROM with ISG software, Primary RF Software and User Manual x1

FREE DOWNLOAD

PC Software Primary RF, Remote Control Software, ISG Java program

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