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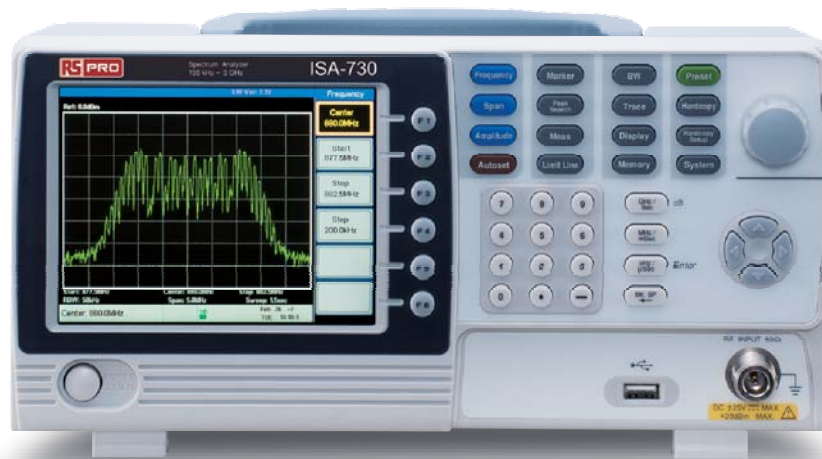
Datasheet

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

Stock No. : Model :

123-3568 **ISA-730**

123-3580 **ISG-LF44**



FEATURES

ISA-730 Spectrum Analyzer

- Frequency Range : 150kHz ~ 3GHz
- Autoset Function
- Noise level : $\leq -100\text{dBm}$
- 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-LF44 rational 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 Maintenance



SPECIFICATIONS			
ISA-730			
FREQUENCY	Frequency Range	Setting Range	150kHz ~ 3GHz
	Center Frequency	Setting Resolution	0.1MHz
AMPLITUDE	Frequency Span	Accuracy	within ± 50 kHz (frequency span : 0.3GHz ~ 2.6GHz, 20 $\pm 5^\circ$ C)
	Resolution Bandwidth	Setting range	1MHz ~ 3GHz
	SSB Phase Noise	Accuracy	within $\pm 3\%$ (frequency span : 0.3GHz ~ 2.6GHz, 20 $\pm 5^\circ$ C)
	Inherent Spurious Response	Setting Range	30kHz, 100kHz, 300kHz, 1MHz
SWEEP	Reference Level	Accuracy	-85dBc/Hz (typical, 500kHz offset, RBW : 30kHz, Sweep time : 1.5s, Span : 1MHz@1GHz)
	Average Noise Level	Input Range	+20 ~ -40dBm
	Frequency Characteristic	Accuracy	Within ± 2 dB (1GHz) ; SPAN : 5MHz
	Input	Unit	dBm, dBV, dB μ V
GENERAL	Display	Input Impedance	50 Ω
	Communication Interface	Input VSWR	less than 2.0@input att ≥ 10 dB
OTHER	VGA Output	Input damage level	+30dBm (CW average power), 25VDC
	Power Source	Input connector	N connector
DIMENSIONS & WEIGHT	Sweep Time	Setting Range	300ms ~ 8.4s, auto (not adjustable)
	Operating Temperature	Accuracy	within $\pm 2\%$ (frequency span : full span)
DIMENSIONS & WEIGHT	Operating Humidity	640 x 480 RGB color LCD	
	Storage Temperature	RS-232C	Sub-D female-D 9 pins
		USB Connector	USB Host/Device full speed supported
		Sub-D female 15 pins	
		AC 100~240V, 50/60Hz	
		5 ~ 45 $^\circ$ C (Guaranteed at 25 $\pm 5^\circ$ C, without soft carrying case)	
		Less than 45 $^\circ$ C / 90%RH	
		-20 ~ 60 $^\circ$ C, less than 60 $^\circ$ C / 70%RH	
		296(L) x 153(W) x 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
2ND HARMONICS (0 dB Attenuation)	$f_c = 1.0$ GHz < -97 dBc/Hz, typical -100 dBc/Hz < -107 dBc/Hz, typical -110 dBc/Hz
3rd HARMONICS (0 dB Attenuation)	≤ -15 dBc, typical 34.5MHz~2.0 GHz; ≤ -10 dBc, typical 2.0GHz~3.0 GHz; ≤ -25 dBc, typical 3.0GHz~4.4GHz
SPURIOUS RELATED TO RESOLUTION SETTINGS	≤ -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
SPURIOUS RELATED TO THE FUNDAMENTAL OUTPUT	≤ -30 dBc, typical, Resolution < 1 MHz ; ≤ -65 dBc, typical, Resolution ≥ 1 MHz
SUPPORTED OS	≤ -60 dBc, typical
INTERFACE	Windows/Linux/Mac/Android
USB CONNECTOR TYPE	USB 2.0
SUPPLY VOLTAGE	Mini B
CURRENT CONSUMPTION	5V nominal
RF CONNECTOR TYPE	200 mA
IMPEDANCE	N-type male
OUTPUT VSWR	50 Ω nominal
MAXIMUM PERMISSIBLE DC VOLTAGE	$< 1.5 : 1$, Output Level @ -30 dBm
MAXIMUM REVERSE POWER	± 25 V
ELECTROMAGNETIC COMPATIBILITY	+30dBm (1W)
DIMENSIONS & WEIGHT	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
	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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