

It's New / Fast / Compact / Cost Effective

ELITE RF Introduces the S-SERIES a Fully Integrated RF Test System

It's a 12.4 GHz Spectrum Analyzer
It's a 12.4 GHz RF Tracking Generator
It's a 13.6 GHz Dual Signal Generator
It's a 18 GHz Dual RF Power Amplifier
It's a 200 MHz 4 Channel Scope
It's a 20 GHz RF Power Meter

Features :

7" inch display
RF power relay
Remote control

HDMI output
RF power attenuator
Internet access

LAN
USB 2.0 ports
Wireless keyboard/mouse



ELITE RF

RF Pallets
RF Modules
RF Amplifiers
RF Lab Amps
RF Systems
Test Equipment
Custom Products

2 Year Warranty



S - Series		Model	Model
Description		SA1241	SPA1241
Spectrum Analyzer	100 KHZ - 12.4 GHz	X	X
Dual Signal Generator	54 MHZ - 13.6 GHz	X	X
Four Channel Scope	4 CH - 200 MHz	X	X
Tracking Generator	100 KHZ - 12.4 GHz	X	X
RF Power Meter - CW/Pulse	50 MHz - 20 GHz		X
Power Amplifier - 1	3 Watts / 2 GHz - 8 GHz		X
Power Amplifier - 2	3 Watts / 5.9 GHz - 18 GHz		X
RF Relay - SPDT	35 Watts / DC - 18 GHz		X
RF Attenuator	10 Watts / DC - 18 GHz		X

Other Models

4.4 GHz system
Model SA441
Model SPA441

Custom Models
available upon
request.

Independent control of each RF system allows for maximum test flexibility

The S - Series multi-purpose RF test system can be used in many applications such as R&D lab, ATE factory testing, EMC testing, field testing, and general purpose RF design. The S - Series is a flexible alternative to expensive and bulky RF test equipment. As shown in the setup in the upper right the S-Series system can be utilized to simultaneously provide all RF functions using its 7 inch front panel display or can be connected to a larger monitor for ease of viewing multiple windows at the same time. For more information and specifications on the S-Series please visit our website or contact us at 847-592-6350.

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S-Series Test System Specifications



Spectrum Analyzer and Measuring Receiver

FREQUENCY

Frequency Range: 100 kHz to 12.4 GHz
Timebase: 10 MHz reference in and out
Internal Frequency Reference Accuracy: ± 1 ppm
Resolution Bandwidth: 1 Hz to 250 kHz and 6 MHz

AMPLITUDE (RBW ≤ 100 KHZ)

Range: +10 dBm to Displayed Average Noise Level (DANL)
Absolute Accuracy (0dB to DANL):
 ± 1.5 dB (100 kHz to 6 GHz)
 ± 2.5 dB (6 GHz to 12.4 GHz)

DISPLAYED AVERAGE NOISE LEVEL (DBM/HZ)

100 kHz to 10 MHz -147 dBm
10 MHz to 100 MHz -151 dBm
100 MHz to 3.0 GHz -152 dBm
3.0 GHz to 5.5 GHz -145 dBm
5.5 GHz to 7.0 GHz -149 dBm
7.0 GHz to 8.0 GHz -147 dBm
8.0 GHz to 11.0 GHz -134 dBm
11.0 GHz to 12.4 GHz -129 dBm

RESIDUAL RESPONSES (RBW = 6.5KHZ)

100 kHz to 10 MHz -100 dBm
10 MHz to 8.0 GHz -93 dBm
8.0 GHz to 11.0 GHz -82 dBm
11.0 GHz to 12.4 GHz -85 dBm

SSB PHASE NOISE AT 10 GHZ (TYPICAL)

Frequency Offset	dBc/Hz
100 Hz	-72
1 kHz	-80
10 kHz	-87
100 kHz	-87
1 MHz	-110

IF OUTPUT

63 MHz with 6 MHz bandwidth for down conversion of NTSC, PAL,

SECAM, ATSC, and DTV formatted signals

MEASURING RECEIVER (TYPICAL AFTER 30 MIN WARM-UP AND $\pm 3^\circ\text{C}$ OF REF. START TEMP.)

Operating Frequency: 100 kHz to 12.4 GHz
Modulation Measurement Accuracy: $\pm 1\%$ for AM & FM
Synchronous Level Detector

Average, peak & pulse power sensor

Specifications:

Frequency: 50 MHz to 20 GHz
Dynamic Range: -40 dBm to +20 dBm
Total Error 2.8%
VSWR: 1.20:1
Internal Video Bandwidth Time Base: 10 MHz
Effective Sample Rate Measurements: ± 50 PPM
Pulse (Modulation) Power Measurements: 48 MS/second
Average Power Measurements: 2000/second
Pulse (Modulation) Power Measurements: Duty Cycle, Measured Pulse Power,
Peak Power, Crest Factor (Peak-to-Average Ratio)
Average Power Measurements: Average Power, Duty Cycle-Corrected Pulse Power, Data
Logging

Amplifier 1

Specifications:

Frequency: 2 GHz to 8 GHz
Power Output: 3 watts
Gain: 35

Amplifier 2

Specifications:

Frequency: 5.9GHz to 18 GHz
Power Output: 3 watts
Gain: 35

Dual Channel RF Signal Generator

54 MHz – 13.6 GHz

Features

Open source Labview GUI software control via USB
96MHz 32 bit ARM processor on board
Two channel frequency, phase and amplitude control
Quadrature (or other phase) LO signal generation
0.1Hz or less frequency resolution
2.5ppm generator frequency accuracy
01 degree phase control on each channel
4mS RF lock time standard
70uS RF lock time (TBD) (subject to export control)
Up to +20dBm output power
16 bit 0.01dB amplitude resolution
Over 50dB of power control
Absolute power display on Software GUI
Calibration option
10MHz – 100MHz external reference input
Selectable 10 or 27 MHz internal reference output
Internal and external FM, AM, Pulse Modulation
Pulsed FMCW Chirp
External Sweep, Step and modulation Trigger
100 point Frequency and Amplitude Hop Table
Dual Channel Frequency and Amplitude Lock
Daughter card expandability (custom applications)
Channel enable / disable saves energy

Tracking Generator

FREQUENCY

Frequency range: 100 kHz to 12.4 GHz
Frequency Accuracy: ± 1 ppm
Frequency steps: 19 selectable step sizes from 10 Hz to 10 MHz (100 kHz to 4 GHz range) and 16 selectable step sizes from 100 Hz to 10 MHz (4 GHz to 12.4 GHz range)

AMPLITUDE

Amplitude range: -30 dBm to -12 dBm
Absolute Amplitude accuracy ± 2 dB
Amplitude steps: 1 dB

Four Channel Digital Oscilloscope

Features:

Bandwidth	100MHz
Channel	4 CH
Real-time Sampling Rate	1GSa/s
Memory Depth	64K
Time Base Precision	± 50 ppm
Time Base Range	2ns/div-1000s/div (1-2-4 sequences)
Input Impedance	1M Ω 25pF
Input Sensitivity	2mV/div~10V/div
Vertical Displacement	2mV~10V/div @ x1 probe;
20mV~100V/div	@ x10 probe ;
200mV~1000V/div	@ x100 probe;
2V~10000V/div	@ x1000 probe
Trigger Source	CH1, CH2, CH3, CH4
Waveform Frequency	DC~25MHz
DAC	2K~200MHz adjustable
Frequency Resolution	0.10%
Channel	1CH waveform output
Waveform Depth	2KSa
Vertical Resolution	12 bit
Frequency Stability	<30ppm
Wave Amplitude	± 3.5 V Max.
Output Impedance	50 Ω
System BW	25M
Harmonic Distortion	-50dBc(1KHz), -40dBc(10KHz)
Trigger Mode	Edge, Pulse, Video, Alternative
Positive Width, Negative Width, Duty Cycle	
Arbitrary Waveform Generator Mode	