

CALTRON PTE LTD



SIGLENT TECHNOLOGIES

Spectrum Analyzer

Spectrum & Vector Network Analyzer



SIGLENT TECHNOLOGIES CO., LTD.



SSA5000A

Spectrum Analyzer

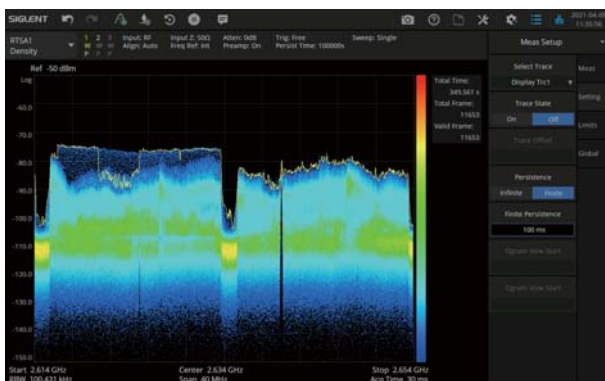
Features and Benefits

- Spectrum Analyzer Frequency Range from 9 kHz up to 13.6 GHz/26.5 GHz
- -165 dBm/Hz Displayed Average Noise Level (Typ.)
- -105 dBc/Hz@1 GHz, 10 kHz offset SSB Phase Noise (Typ.)
- 25 MHz/40 MHz Analysis Bandwidth
- 100% POI 7.20 μ s, Dynamic Range 60 dB, Multi-view for Density, Spectrogram and PVT
- Channel power, ACPR, OBW, Harmonic, TOI measurement etc.
- Analog Modulation Analysis and Vector Digital Modulation Analysis
- 12.1 inch Multi-Touch Screen, HDMI output
- Web Browser Remote Control on PC and Mobile Terminals and File Operation

Design features

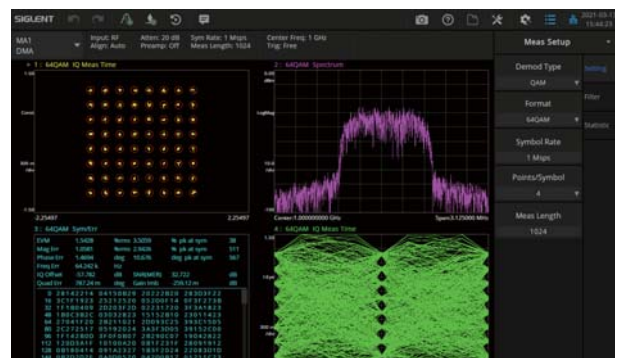
• Real Time Analysis Mode

Multi-view and dimensions to monitor complex signals



• Modulation Analysis Mode

AM/FM/PM analog modulation , and ASK/FSK/PSK/MSK/QAM vector modulation a nalysis



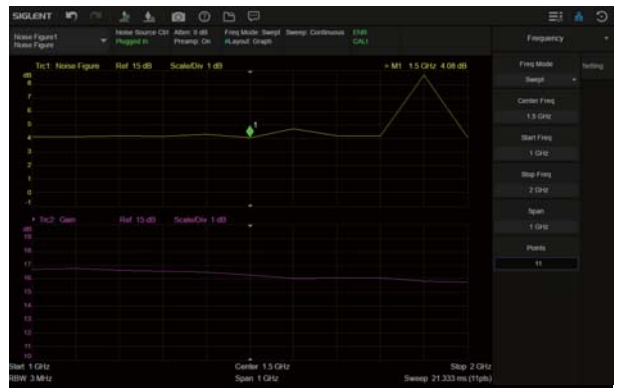
Bluetooth Signal Modulation Analysis

Provide transmitter tests of Low Energy, Basic Rate and Enhanced Data Rate Bluetooth standard



Noise Figure Mode

The noise figure of systems such as amplifiers and frequency converters



Phase Noise Analysis

One-sided band phase noise test analysis, jitter analysis, etc



Pulse Measurement Analysis

Measure the time and frequency parameters of the RF pulses



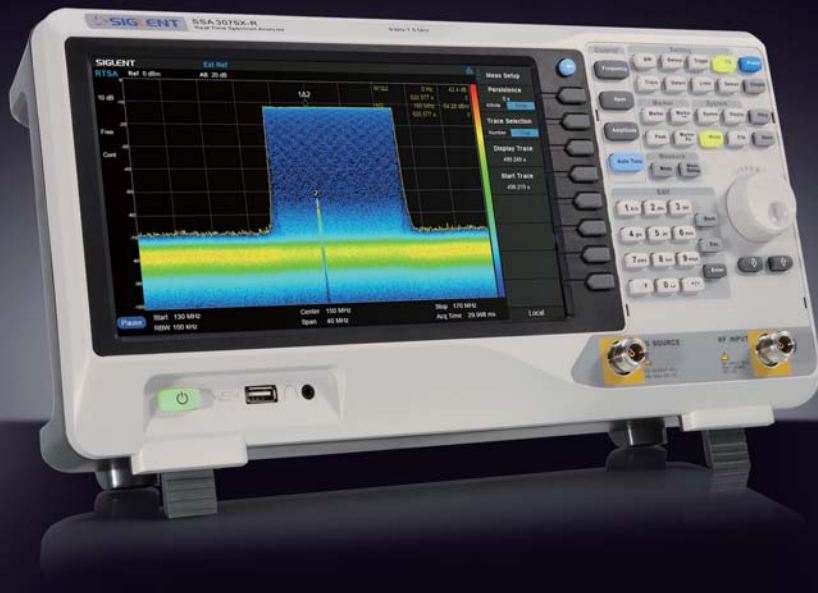
Model and Main index

Model	SSA5083A	SSA5085A
Frequency Range	9 kHz~13.6 GHz	9 kHz~26.5 GHz
Displayed Average Noise Level	-165 dBm/Hz	
SSB Phase Noise	<-105 dBc/Hz	
Analysis Bandwidth	25 MHz, 40 MHz (opt.)	



Ordering Information

Product	Description	Order Number
Product Code	Spectrum Analyzer, 9 kHz ~ 13.6 GHz	SSA5083A
	Spectrum Analyzer, 9 kHz ~ 26.5 GHz	SSA5085A
Standard	Quick Start, USB Cable, Power Cord, Wireless Mouse, 2.92F-2.92F-40A	
Options	SSA5083A upgrade to SSA5085A	SSA5000-F5
	Pre-Amplifier, 9 kHz ~ 13.6 GHz	SSA5000-P3
	Pre-Amplifier, 9 kHz ~ 26.5 GHz	SSA5000-P5
	40 MHz analysis bandwidth	SSA5000-B40
	Real-Time Spectrum Analysis	SSA5000-RTA1
	Advanced Measurement Kit	SSA5000-AMK
	IQ Data Acquisition	SSA5000-IQA
	Pulse Measurement	SSA5000-PU
	Phase Noise Measurement	SSA5000-PN
	Noise Figure Measurement	SSA5000-NF
	Analog Modulation Analysis	SSA5000-AMA
	Digital Modulation Analysis	SSA5000-DMA
	Bluetooth Analysis	SSA5000-BT
	EMI Measurement	SSA5000-EMI
	IF Output	SSA5000-IFO
Accessories	OCXO Precise Reference source, Factory installed	10M_OCXO_L
	2.92mm(F)-2.92mm(F) adaptor, DC ~ 40 GHz	2.92F-2.92F-40A
	N(M)-N(M) cable, DC ~ 18 GHz, 1000 mm	N-N-18L
	N(M)-SMA(M) cable, 18 GHz, 1000 mm	N-SMA-18L
	SMA(M)-SMA(M) cable, 18 GHz, 1000 mm	SMA-SMA-18L
	SMA(M)-SMA(M) cable, 26.5 GHz, 1000 mm	SMA-SMA-26L
	SMA(F)-SMA(M) cable, 26.5 GHz, 1000 mm	SMAF-SMA-26L
	USB-GPIB Adaptor	USB-GPIB
	300 kHz~3 GHz Near Field Probe Kit: 3 H-probes (20/10/5 mm), 1 E-probe (5 mm)	SRF5030T



SSA3000X-R

Real-Time
Spectrum Analyzer

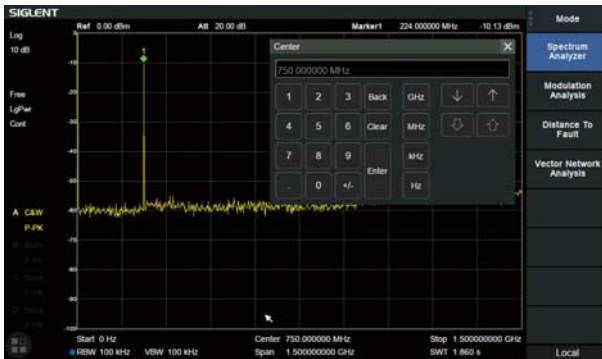


Features and Benefits

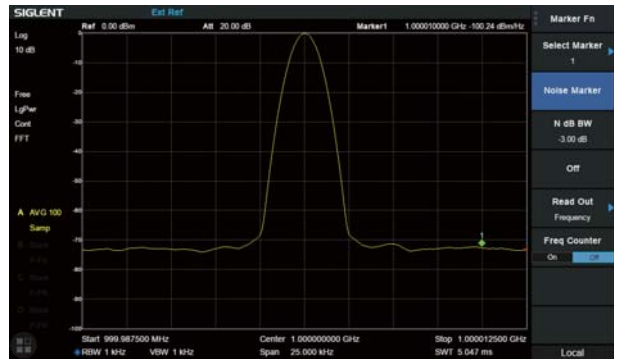
- Spectrum Analyzer Frequency Range from 9 kHz up to 7.5 GHz
- Vector Network Analyzer Frequency Range from 100 kHz up to 7.5 GHz
- -165 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.)
- Level Measurement Uncertainty < 0.7 dB (Typ.)
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Preamplifier and Tracking Generator Standard
- Up to 40 MHz Real Time Analysis Bandwidth (Opt.)
- 100% POI 7.20 μ s, Dynamic Range 60 dB, Multi-view for Density, Spectrogram, PVT and 3D
- Distance To Fault
- Advanced Measurement Kit (Opt.)
- Modulation Analysis Mode (Opt.)
- EMI Measurement Mode (Opt.)
- 10.1 inch Multi-Touch Screen , Mouse and Keyboard supported
- Web Browser Remote Control on PC and Mobile Terminals and File Operation

Design features

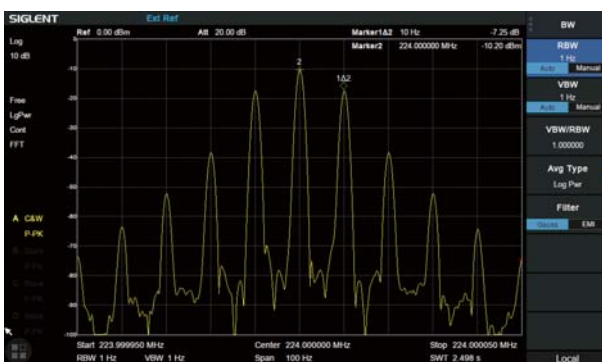
10.1 Inch Display with Multi-Touch Screen



Phase noise <math><-98\text{ dBc/Hz}</math>@1 GHz



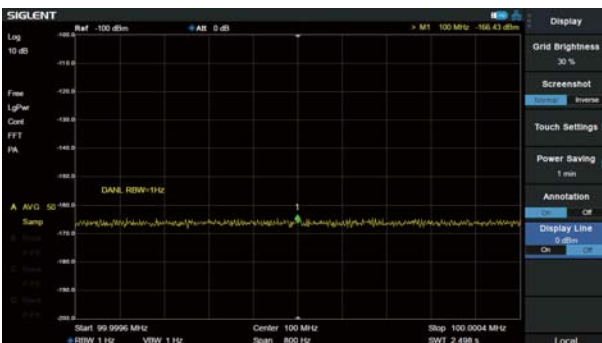
Minimum 1 Hz Resolution Bandwidth (RBW)



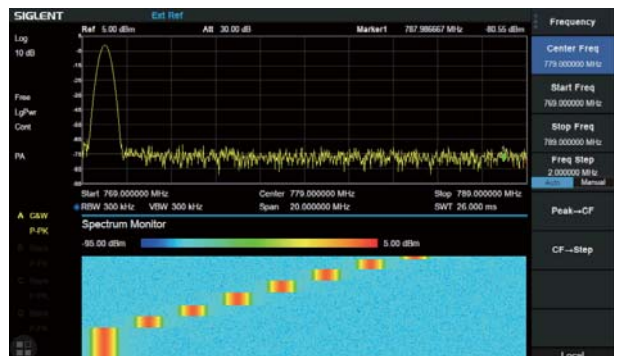
ACPR in Advanced Measurement Kit



-165 dBm/Hz Displayed Average Noise Level

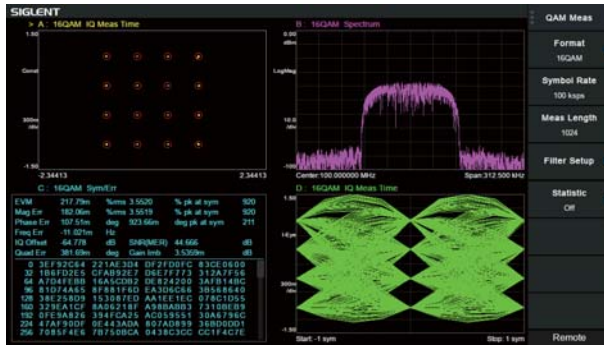


Monitor in Advanced Measurement Kit



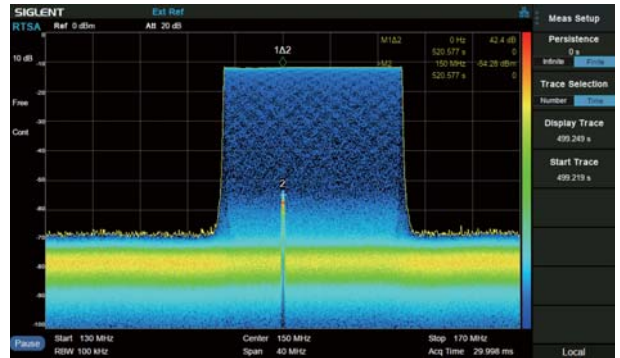
• Modulation Analysis Mode

AM/FM, ASK/FSK/PSK/MSK/QAM Vector Signal Modulation Analysis and EVM evaluation. The analysis BW is same with real-time BW in RTSA mode



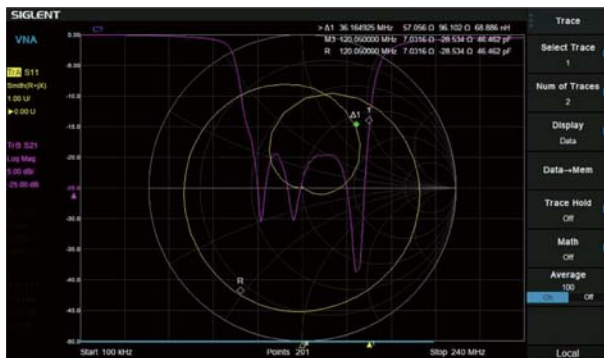
• Real Time Analysis Mode

Density, 3D, Spectrogram, PVT, Multi-view and dimensions to monitor complex signals



• Vector Network Analyzer Mode

100 kHz~7.5 GHz Vector S11 and S21 measurement, Multi Formats Overlay Display



• EMI Measurement Mode

EMI Measurement with CISPR 16-1-1 EMI filter, Quasi-peak Detector, and pre-stored standards



Model and Main index

Model	SSA3032X-R	SSA3050X-R	SSA3075X-R
Frequency Range	9 kHz~3.2 GHz	9 kHz~5.0 GHz	9 kHz~7.5 GHz
Resolution Bandwidth	1 Hz~3 MHz	1 Hz~3 MHz	1 Hz~3 MHz
Displayed Average Noise Level	-165 dBm/Hz	-165 dBm/Hz	-165 dBm/Hz
SSB Phase Noise	<-98 dBc/Hz	<-98 dBc/Hz	<-98 dBc/Hz
Third-order intercept(TOI)	+14 dbm	+14 dbm	+14 dbm
Total Amplitude Accuracy	< 0.7 dB	< 0.7 dB	< 0.7 dB
Tracking Generator	100 kHz~3.2 GHz	100 kHz~5.0 GHz	100 kHz~7.5 GHz
Real Time Band Width	25 MHz, 40 MHz (Option)		
RTSA SFDR	60 dB		
100% POI	7.20 µs		
RTSA Measurement	Density, Spectrogram, 3D, PVT		
VNA measurement	Vector S11, Vector S21		
VNA Dynamic Range	90 dB		
Distance to Fault	Timing Domain Analysis Locator		
Touch Screen	Multi Touch, Mouse and Keyboard supported		
Advanced Measurement	CHP, ACPR, OBW, CNR, Harmonic, TOI, Monitor		
Modulation Analysis	AM, FM, ASK, FSK, MSK, PSK, QAM		
EMI Measurement	EMI Filter and Quasi-Peak Detector, Log Scale and Limit Line		
Communication Interface	LAN, USB Device, USB Host (USB-GPIB)		
Remote Control Capability	SCPI/Labview/IVI based on USB-TMC/VXI-11/Socket/Telnet		
Remote Controller	NI-MAX, Web Browser, Easy Spectrum software, File Explorer		



Ordering Information

Product	Description	Order Number
Product Code	Real Time Spectrum Analyzer, 9 kHz~3.2 GHz, Preamp and TG standard, VNA standard	SSA3032X-R
	Real Time Spectrum Analyzer, 9 kHz~5.0 GHz, Preamp and TG standard, VNA standard	SSA3050X-R
	Real Time Spectrum Analyzer, 9 kHz~7.5 GHz, Preamp and TG standard, VNA standard	SSA3075X-R
Standard Accessories	Quick Start, USB Cable, Power Cord	
Common Options and Accessories	Advanced Measurement Kit	SSA3000XR-AMK
	40 MHz Analysis BandWidth	SSA3000XR-RT40
	Utility Kit: N(M)-SMA(M) cable(6 GHz), N(M)-N(M) cable(6 GHz), N(M)-BNC(F) adaptor x2, N(M)-SMA(F) adaptor x2, 10 dB 1W attenuator	UKitSSA3X
	N(M)-BNC(M) cable, 70 cm, 2 GHz	N-BNC-2L
	N(M)-SMA(M) cable, 70 cm, 6 GHz	N-SMA-6L
	N(M)-N(M) cable, 70 cm, 6 GHz	N-N-6L
	N(M)-SMA(M) cable, 100 cm, 18 GHz	N-SMA-18L
	N(M)-N(M) cable, 100 cm, 18 GHz	N-N-18L
	SMA(M)-SMA(M) cable, 100 cm, 18 GHz	SMA-SMA-18L
	USB-GPIB Adaptor	USB-GPIB
	Soft carrying bag	BAG-S2
	6U Rack Mount Kit	SSA-RMK
VNA Options	N type Economic Calibration Kit, DC~4.5 GHz, 50 Ω	F503ME
	N type Economic Calibration Kit, DC~4.5 GHz, 50 Ω	F503FE
	3.5 mm type Economic Calibration Kit, DC~4.5 GHz, 50 Ω	F603ME
	3.5 mm type Economic Calibration Kit, DC~4.5 GHz, 50 Ω	F603FE
	N type Standard Calibration Kit, DC~9 GHz, 50 Ω	F504MS
	N type Standard Calibration Kit, DC~9 GHz, 50 Ω	F504FS
	3.5 mm type Standard Calibration Kit, DC~9 GHz, 50 Ω	F604MS
	3.5 mm type Standard Calibration Kit, DC~9 GHz, 50 Ω	F604FS
EMI Measurement Options	EMI Measurement Mode	SSA3000XR-EMI
	300 kHz~3 GHz Near Field Probe Kit: 3 H-probes (20/10/5 mm), 1 E-probe (5 mm)	SRF5030T
Modulation Analysis Options	Analog Modulation Analysis: AM, FM	SSA3000XR-AMA
	Digital Modulation Analysis: ASK, FSK, MSK, PSK, QAM	SSA3000XR-WDMA



SSA3000X Plus

Spectrum Analyzer



Features and Benefits

- Frequency Range from 9 kHz up to 7.5 GHz
- -165 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.)
- Level Measurement Uncertainty < 0.7 dB (Typ.)
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Preamplifier Standard
- Tracking Generator included at no charge
- Vector Signal Modulation Analysis (Opt.)
- EMI Filter and Quasi-Peak Detector (Opt.)
- Advanced Measurement Kit (Opt.)
- 10.1 Inch Multi-Touch Screen , Mouse and Keyboard supported
- Web Browser Remote Control on PC and Mobile Terminals and File Operation

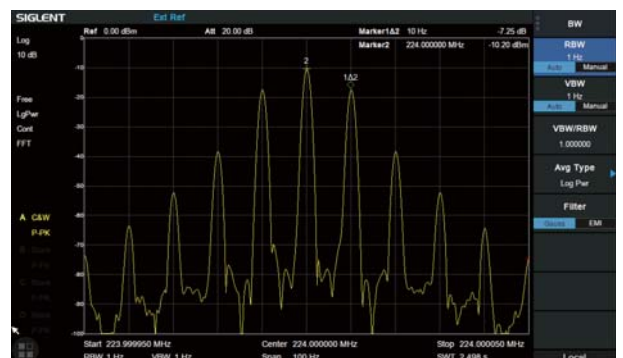


Design features

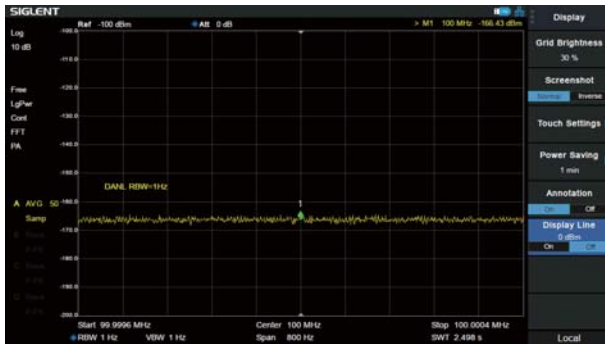
• 10.1 Inch (1024x600) Touch Screen



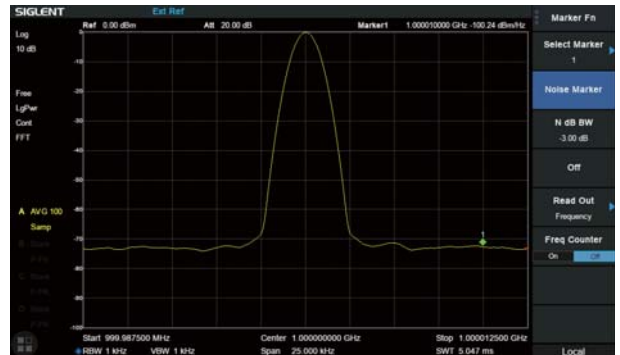
• Minimum 1 Hz Resolution Bandwidth (RBW)



• -165 dBm/Hz Displayed Average Noise Level



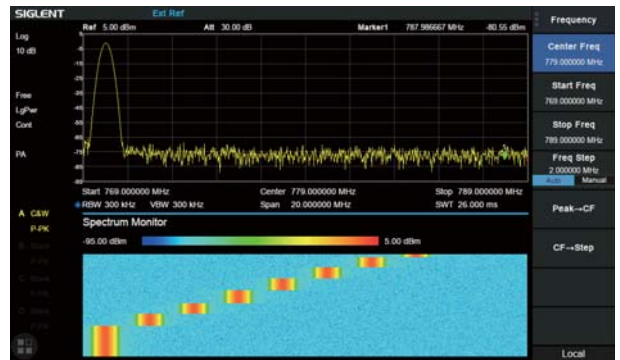
• Phase noise < -98 dBc/Hz@1 GHz



• Advanced Measurement Kit



• Spectrum Monitor in Advanced Measurement Kit



• Modulation Analysis Mode

AM/FM, ASK/FSK/PSK/MSK/QAM Vector Signal Modulation Analysis, EVM evaluation



• EMI Measurement Mode

EMI Measurement with CISPR 16-1-1 EMI filter, Quasi-peak Detector, and pre-stored standards





Model and Main index

Model	SSA3015X Plus	SSA3021X Plus	SSA3032X Plus	SSA3075X Plus
Frequency Range	9 kHz~1.5 GHz	9 kHz~2.1 GHz	9 kHz~3.2 GHz	9 kHz~7.5 GHz
Resolution Bandwidth	1 Hz~1 MHz	1 Hz~1 MHz	1 Hz~1 MHz	1 Hz~3 MHz
Displayed Average Noise Level	-156 dBm/Hz	-161 dBm/Hz	-161 dBm/Hz	-165 dBm/Hz
SSB Phase Noise	< -99 dBc/Hz	< -98 dBc/Hz	< -98 dBc/Hz	< -98 dBc/Hz
Third-order intercept	+10 dBm	+10 dBm	+10 dBm	+14 dBm
Total Amplitude Accuracy	< 1.2 dB	< 0.7 dB	< 0.7 dB	< 0.7 dB
Tracking Generator	100 kHz~1.5 GHz	100 kHz~2.1 GHz	100 kHz~3.2 GHz	100 kHz~7.5 GHz
Touch Screen	Multi Touch, Mouse and Keyboard supported			
Advanced Measurement	CHP, ACPR, OBW, CNR, Harmonic, TOI, Monitor			
Reflection Measurement	VSWR measurement using Reflection Bridge			
EMI Test	EMI Filter and Quasi-Peak Detector, Log Scale and Limit Line			
Modulation Analysis	AM, FM; ASK, FSK, MSK, PSK, QAM			
Communication Interface	LAN, USB Device, USB Host (USB-GPIB)			
Remote Control Capability	SCPI/Labview/IVI based on USB-TMC/VXI-11/Socket/Telnet			
Remote Controller	NI-MAX, Web Browser, Easy Spectrum software, File Explorer			



Ordering Information

Product	Description	Order Number
Product Code	Spectrum Analyzer, 9 kHz ~ 1.5 GHz	SSA3015X Plus
	Spectrum Analyzer, 9 kHz ~ 2.1 GHz	SSA3021X Plus
	Spectrum Analyzer, 9 kHz ~ 3.2 GHz	SSA3032X Plus
	Spectrum Analyzer, 9 kHz ~ 7.5 GHz	SSA3075X Plus
Standard Accessories	Quick Start, USB Cable, Power Cord	
Common Options and Accessories	Tracking Generator	SSA3000XP-TG
	Advanced Measurement Kit	SSA3000XP-AMK
	Utility Kit: N (M)-SMA (M) cable (6 GHz), N (M)-N (M) cable (6 GHz), N (M)-BNC (F) adaptor x2, N (M)-SMA (F) adaptor x2, 10 dB 1W attenuator	UKitSSA3X
	N (M)-BNC (M) cable, 70 cm, 2 GHz	N-BNC-2L
	N (M)-SMA (M) cable, 70 cm, 6 GHz	N-SMA-6L
	N (M)-N (M) cable, 70 cm, 6 GHz	N-N-6L
	N (M)-SMA (M) cable, 100 cm, 18 GHz	N-SMA-18L
	N (M)-N (M) cable, 100 cm, 18 GHz	N-N-18L
	SMA (M)-SMA (M) cable, 100 cm, 18 GHz	SMA-SMA-18L
	USB-GPIB Adaptor	USB-GPIB
	Soft carrying bag	BAG-S2
	6U Rack Mount Kit	SSA-RMK
	Reflection Measurement Options	Tracking Generator
Reflection Measurement		SSA3000-Refl
Reflection Bridge Kit: Reflection Bridge (1 MHz~2.5 GHz), N(M)-N(M) adaptors x2		RB3X25
50 Ω, N type Male, 4.5 GHz Economic Calibration Kit: Open(M), Short(M), Match(M), Through Adapter(F-F)		F503ME
EMI test Options	EMI Measurement Mode	SSA3000XP-EMI
	300 kHz~3 GHz Near Field Probe Kit: 3 H-probes (20/10/5 mm), 1 E-probe (5 mm)	SRF5030T
Modulation Analysis Options	Digital Modulation: ASK, FSK, MSK, PSK, QAM	SSA3000XP-DMA
	Analog Modulation: AM, FM	SSA3000XP-AMA



SSA3000X

Spectrum Analyzer



Features and Benefits

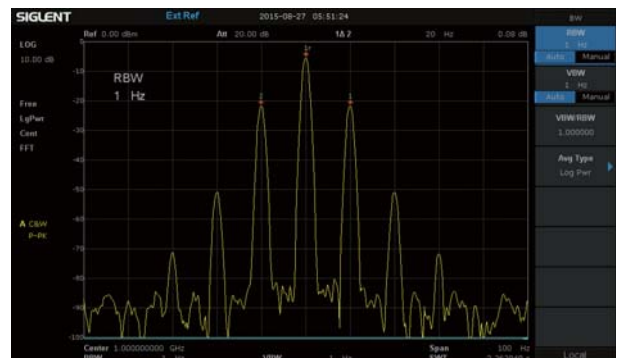
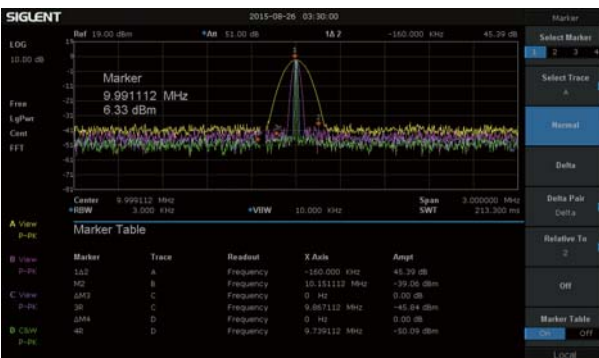
- All-Digital IF Technology
- Frequency Range from 9 kHz up to 3.2 GHz
- -161 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz @10 kHz Offset Phase Noise (1 GHz, Typ.)
- Total Amplitude Accuracy < 0.7 dB
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Preamplifier Standard
- Up to 3.2 GHz Tracking Generator Kit
- Reflection Measurement Kit (Opt.)
- Advanced Measurement Kit (Opt.)
- EMI Pre-compliance Measurements Kit (Opt.)
- 10.1 Inch WVGA (1024x600) Display



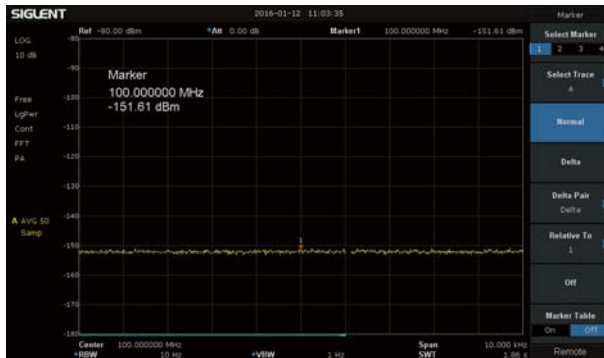
Design features

- Support four traces and cursors independently

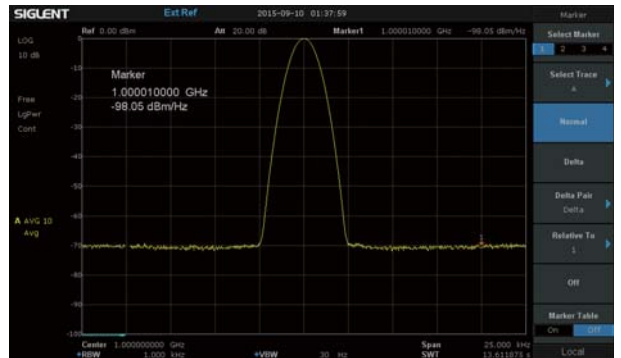
- 1 Hz Minimum Resolution Bandwidth (RBW)



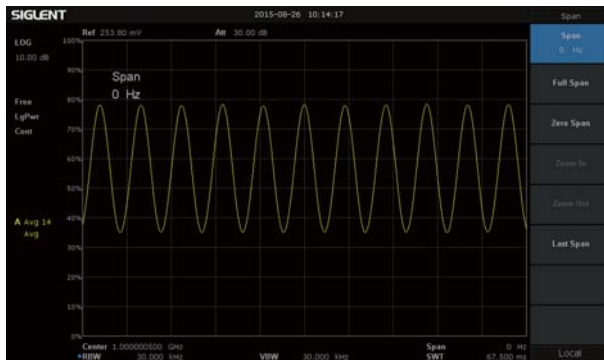
- 151 dBm Displayed Average Noise Level (RBW=10 Hz)



- Phase noise -98 dBc/Hz@1 GHz, offset 10 kHz



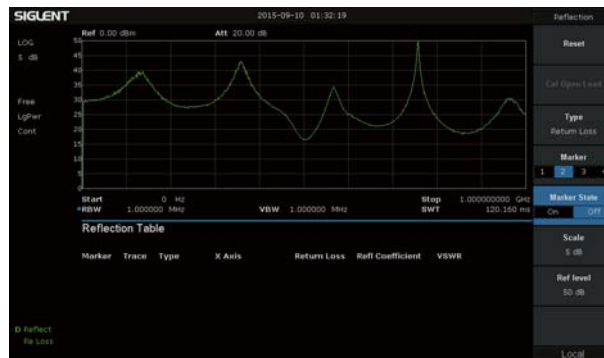
- Demodulation at the zero span



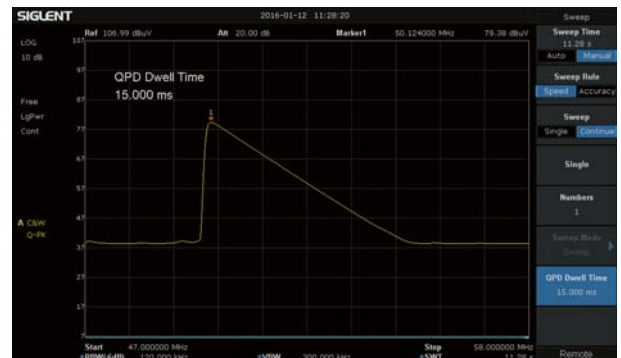
- Advanced power measurement, calculate the ACPR parameters



- Reflection measurement, acquire characteristic curve of the Return Loss



- EMI filter, Quasi-Peak detector following CISPR 16



Model and Main index

Model	SSA3021X	SSA3032X
Frequency Range	9 kHz~2.1 GHz	9 kHz~3.2 GHz
Resolution Bandwidth	1 Hz~1 MHz, in 1-3-10 sequence	1 Hz~1 MHz, in 1-3-10 sequence
Displayed Average Noise Level	-161 dBm/Hz, Normalize to 1 Hz (typ.)	-161 dBm/Hz, Normalize to 1 Hz (typ.)
Phase Noise	<-98 dBc/Hz@1 GHz, 10 kHz offset	<-98 dBc/Hz@1 GHz, 10 kHz offset
Amplitude Precision	< 0.7 dB	< 0.7 dB



Ordering Information

Product Description	SSA3000X Spectrum Analyzer	Order Number
Product code	Spectrum Analyzer, 9 kHz~3.2 GHz	SSA3032X
	Spectrum Analyzer, 9 kHz~2.1 GHz	SSA3021X
Standard configurations	A Quick Start, A USB Cable, A Power Cord, A Calibration Certificate	QG-SSA3000X
Utility Options	Tracking Generator Kit	TG-SSA3000X
	Advanced Measurement Kit	AMK-SSA3000X
	Utility Kit: N(M)-SMA(M) cable N(M)-N(M) cable N(M)-BNC(F) adaptor(2 pcs) N(M)-SMA(F) adaptor(2 pcs) 10 dB attenuator	UKitSSA3X
	N(M)-SMA(M) cable	N-SMA-6L
	N(M)-N(M) cable	N-N-6L
	N(M)-BNC(M) cable	N-BNC-2L
	Soft carrying bag	BAG-SCC
	Rack Mount Kit	SSA-RMK
	EMI Options	EMI Measurement Kit: EMI Filter and Quasi Peak Detector, EMI test option in EasySpectrum Software
Near Field Probe:H field probe sets(25 mm, 10 mm, 5 mm, 2mm), 30 MHz~3.0 GHz		SRF5030
Near Field Probe:H field probe sets(20 mm, 10 mm, 5 mm) , E field probe (5 mm), 300 kHz~3.0 GHz		SRF5030T
Reflect Measurement Options	Tracking Generator Kit	TG-SSA3000X
	Reflect Measurement Kit	Refl-SSA3000X
	VSWR Bridge Kit: including Refl-SSA3000X VSWR Bridge(1 MHz~2 GHz) N(M)-N(M) adaptor(2 pcs)	RBSSA3X20



SHA860A

Portable Signal Analyzer



Features and Benefits

- Frequency Range 9 kHz~3.6/7.5 GHz, 5 kHz usable
- Displayed Average Noise Level (DANL) -165 dBm/Hz
- SSB Phase Noise -104 dBc/Hz.@1 GHz, 10 kHz offset
- Analysis Bandwidth 40/110 MHz
- 5G NR OTA Measurement, multi-PCI and multi-beam analysis
- LTE FDD and TDD OTA Measurement, multi-PCI analysis
- Channel Power, Occupied Bandwidth, Adjacent Channel Power, SHI and TOI etc.
- IQ Data Acquisition in 110 MHz Band Width
- Real-Time Spectrum Analysis in 110 MHz Band Width, 100% POI time 3.51 μ s
- Pulse Profile Measurements
- Indoor and outdoor map for Coverage Mapping
- Trace Recording/Playback with GNSS location
- AM/FM/PM Analog Modulation Analysis, and ASK/FSK/PSK/MSK/QAM Digital Modulation Analysis
- AM/FM/PM Analog Modulation Audio Tune & Listening
- Field Strength (EMF) Measurements and EMI Measurements
- Independent Source to 7.5 GHz
- Vector Network Analyzer, 1-Path 2-Ports S11 and S21 Network Analysis, S11 directionality 40 dB, S21 dynamic 114 dB
- Cable and Antenna Test, Distance To Fault and Time Domain Analysis
- TTA test, bias out 12V to 32V DC
- Chargeable Battery working time 2.5 hours, 3.2 kg net weight
- 8.4 Inch Multi-Touch Screen, mouse and keyboard supported



Design features

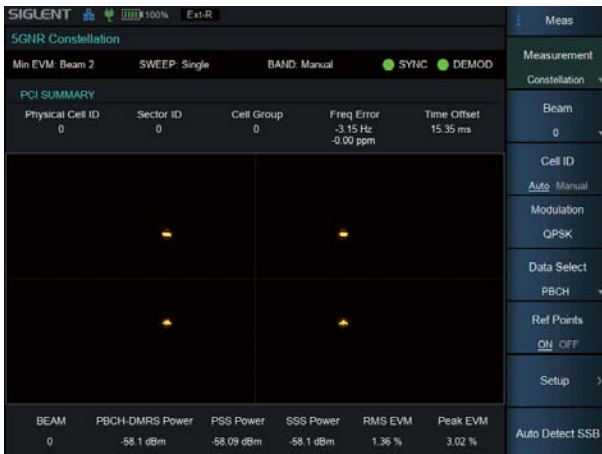
5G NR OTA Measurement



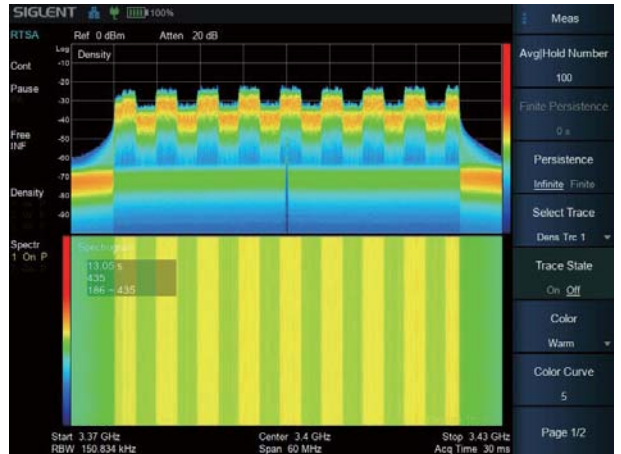
5G NR multi-PCI and multi-beam analysis



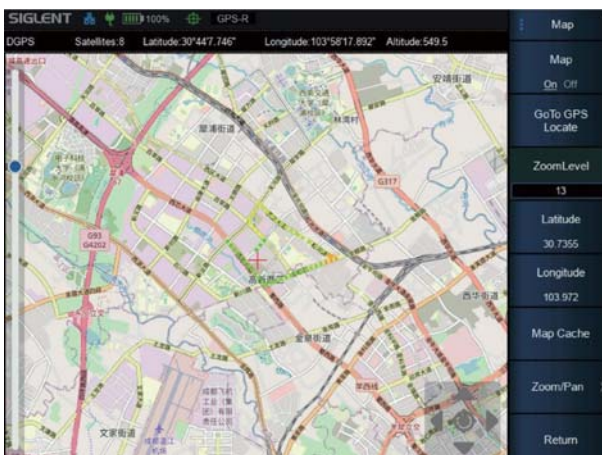
5G NR Constellation



Real-Time Spectrum Analysis



Outdoor and Indoor map, GPS logging



Pulse Profile Measurements



Model and Main index

Model	SHA861A	SHA862A
Frequency range	9 kHz~3.6 GHz (5 kHz usable)	9 kHz~7.5 GHz (5 kHz usable)
Frequency resolution	1 Hz	



Ordering Information

Product	Description	Order Number
Product code	Spectrum Analyzer 9 kHz~3.6 GHz, BW 40 MHz	SHA861A
	Spectrum Analyzer 9 kHz~7.5 GHz, BW 40 MHz	SHA862A
Standard Accessories	Quick Start, USB type-C cable, Power cord, AC-DC adapter, Rechargeable lithium battery, Portable bag	
Options	SHA861A to SHA862A	SHA860-F2
	Analysis Bandwidth 110 MHz	SHA860-B1A
	Advanced Measurement Kit	SHA860-AMK
	EMI Measurement	SHA860-EMI
	5G NR OTA Measurement	SHA860-NR
	LTE TDD/FDD OTA Measurement	SHA860-LTE
	Real-Time Spectrum Analysis	SHA860-RTA
	IQ Data Acquisition	SHA860-IQA
	Pulse Profile Analysis	SHA860-PU
	Digital Modulation Analysis	SHA860-DMA
	Analog Modulation Analysis	SHA860-AMA
	Source	SHA860-SOR
	Cable and Antenna Test	SHA860-CAT
	Vector Network Analysis	SHA860-VNA
	Bias Out	SHA860-BIAS
	GPS Receiver	SHA860-GPS
	Outdoor/Indoor Map	SHA860-MAP
	Outdoor/Indoor Map Tile Download PC Software	EasyMap
General Accessories	Rechargeable lithium battery, 10.8 V	10V8-BAT
	AC-DC adapter, 12 V, 4 A	12V-AP-4A
	Portable bag	BAG-H2
	GPS antenna, SMA(M), 1000 mm	ANT-GPS1
	Directional Antenna Suit: Antennas (10 MHz~200 MHz, 200 MHz~500 MHz, 500 MHz~8 GHz), Handler with preamplifier (10 dB, 9 kHz~8 GHz)	ANT-DA1
	Near field probe kit: H-field probes (20 mm, 10 mm, 5 mm), E-field probe (5 mm), 300 kHz~3 GHz	SRF5030T
	Utility Kit: N(M)-SMA(M) cable (6 GHz), N(M)-N(M) cable (6 GHz), N(M)-BNC(F) adaptor x2, N(M)-SMA(F) adaptor x2, 10 dB 1W attenuator	UKitSSA3X
	N(M)-BNC(M) cable, DC~2 GHz, 700 mm	N-BNC-2L
	N(M)-SMA(M) cable, DC~6 GHz, 700 mm	N-SMA-6L
	N(M)-N(M) cable, DC~6 GHz, 700 mm	N-N-6L
	N(M)-N(M) cable, DC~18 GHz, 1000 mm	N-N-18L
	N(M)-SMA(M) cable, DC~18 GHz, 1000 mm	N-SMA-18L
	SMA(M)-SMA(M) cable, DC~18 GHz, 1000 mm	SMA-SMA-18L
	CAT&VNA Accessories	Integrated N type Calibration Kit, Male, DC~9 GHz, 50 Ω
Integrated N type Calibration Kit, Female, DC~9 GHz, 50 Ω		Y504FS
Integrated 3.5mm type Calibration Kit, Male, DC~26.5 GHz, 50 Ω		Y606MS
Integrated 3.5mm type Calibration Kit, Female, DC~26.5 GHz, 50 Ω		Y606FS
N type Standard Calibration Kit, Male & Female, DC~9 GHz, 50 Ω		F504TS
3.5mm type Standard Calibration Kit, Male & Female, DC~9 GHz, 50 Ω		F604TS
N type Economic Calibration Kit, Male, DC~4.5 GHz, 50 Ω		F503ME
N type Economic Calibration Kit, Female, DC~4.5 GHz, 50 Ω		F503FE
N type Standard Calibration Kit, Male, DC~9 GHz, 50 Ω		F504MS
N type Standard Calibration Kit, Female, DC~9 GHz, 50 Ω		F504FS
3.5mm type Economic Calibration Kit, Male, DC~4.5 GHz, 50 Ω		F603ME
3.5mm type Economic Calibration Kit, Female, DC~4.5 GHz, 50 Ω		F603FE
3.5mm type Standard Calibration Kit, Male, DC~9 GHz, 50 Ω		F604MS
3.5mm type Standard Calibration Kit, Female, DC~9 GHz, 50 Ω		F604FS



SHA850A

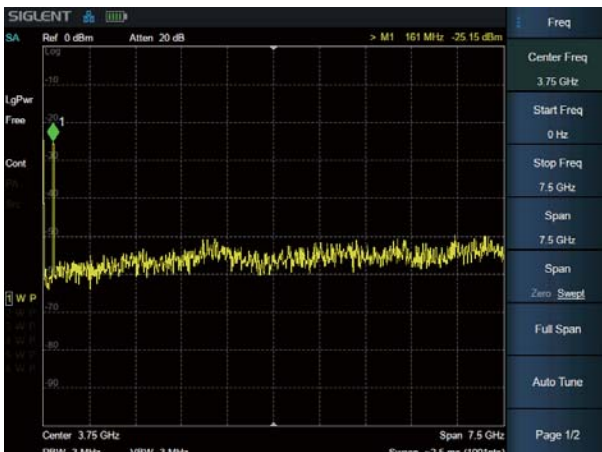
Portable Spectrum Analyzer

Features and Benefits

- Spectrum Analyzer Frequency Range from 9 kHz up to 7.5 GHz, -165 dBm/Hz Displayed Average Noise Level (Typ.), -104 dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.), 1 Hz up to 10 MHz Minimum Resolution Bandwidth (RBW), Pre-amplifier and independent signal source up to 7.5 GHz, GPS positioning and logging
- Cable and Antenna Test Frequency Range from 100 kHz up to 7.5 GHz, Distance To Fault and Time Domain Analysis
- Vector Network Analyzer, Bias out up to 32VDC
- Typical working time 4 hours, 3.2 kg net weight, 8.4 Inch Multi-Touch Screen , Mouse and Keyboard supported

Design features

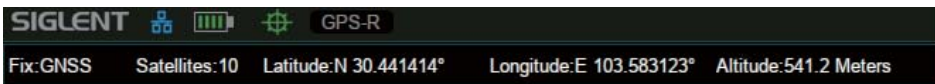
• Spectrum Analyzer 8.4 inch multi-touch screen and full keyboard control



• Channel Power and ACPR measurement



● **GPS Location and trace log recorder, sync 10MHz reference clock**

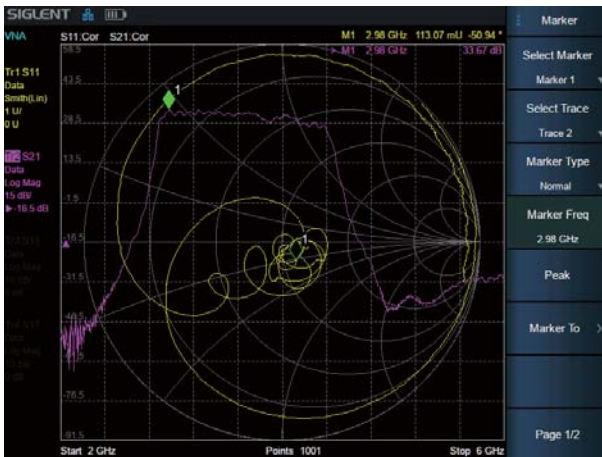


● **Interference analysis with directional antenna**



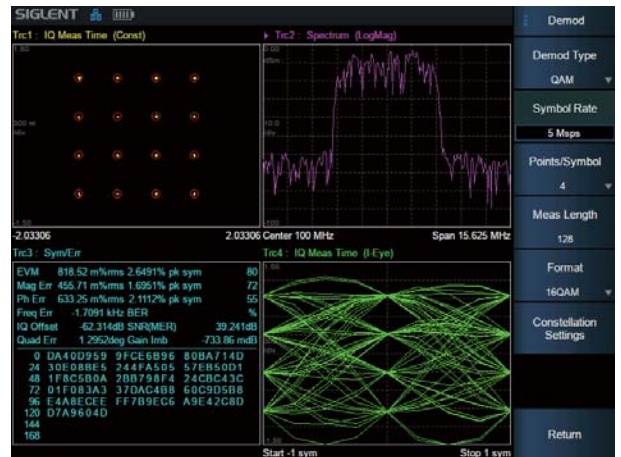
● **Vector Network Analyzer**

100 kHz-7.5 GHz Vector S11 and S21 measurement, Multi Formats Overlay Display



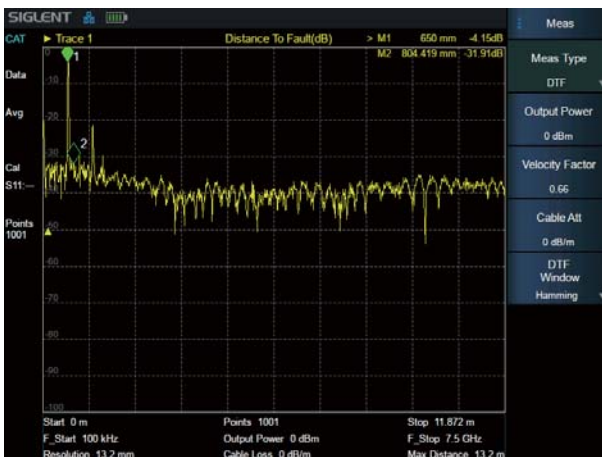
● **Modulation Analysis**

AM/FM/PM analog modulation, and ASK/FSK/PSK/MSK/QAM digital modulation analysis



● **Cable and Antenna Test**

Cable and Antenna Test based on Timing Domain Analysis





Model and Main index

Model	SHA851A	SHA852A
Spectrum Analyzer	9 kHz~3.6 GHz	9 kHz~7.5 GHz
Cable and Antenna Test	100 kHz~3.6 GHz	100 kHz~7.5 GHz



Ordering Information

Product	Description	Order Number
Product code	Spectrum & Vector Network Analyzer, 9 kHz~3.6 GHz	SHA851A
	Spectrum & Vector Network Analyzer, 9 kHz~7.5 GHz	SHA852A
Standard Accessories	Quick Start, USB type-C cable, Power cord, AC-DC adapter, Rechargeable lithium battery, Portable bag	
Options	SHA851A to SHA852A	SHA850-F2
	Source	SHA850-SOR
	Vector Network Analysis	SHA850-VNA
	Advanced Measurement Kit	SHA850-AMK
	Analog Modulation Analysis	SHA850-AMA
	Digital Modulation Analysis	SHA850-DMA
	DC Bias Out	SHA850-BIAS
	GPS Receiver	SHA850-GPS
	GPS Logging(need GPS Receiver)	SHA850-GPSM
General Accessories	Rechargeable lithium battery	10V8_BAT
	AC-DC adapter	12V_AP_4A
	Portable bag	BAG-H2
	GPS antenna, SMA(M), 100 cm	ANT-GPS1
	S5000 Directional Antenna Suit: S5001-VHF (10 MHz~200 MHz), S5001-UHF (200 MHz~500 MHz), S5001-LP (500 MHz~8 GHz), Preamp (10 dB, 9 kHz~8 GHz)	ANT-DA1
	Near field probe kit: 300 kHz~3 GHz, H-field probes (20 mm,10 mm,5 mm), E-field probe (5 mm)	SRF5030T
	Utility Kit: N(M)-SMA(M) cable(6 GHz), N(M)-N(M) cable(6 GHz), N(M)-BNC(F) adaptor x2, N(M)-SMA(F) adaptor x2, 10 dB 1W attenuator	UKitSSA3X
	N(M)-BNC(M) cable, DC~2 GHz, 700 mm	N-BNC-2L
	N(M)-SMA(M) cable, DC~6 GHz, 700 mm	N-SMA-6L
	N(M)-N(M) cable, DC~6 GHz, 700 mm	N-N-6L
	N(M)-N(M) cable ,DC~18 GHz, 1000 mm	N-N-18L
	N(M)-SMA(M) cable ,DC~18 GHz, 1000 mm	N-SMA-18L
	SMA(M)-SMA(M) cable ,DC~18 GHz, 1000 mm	SMA-SMA-18L
	CAT&VNA Accessories	N type Integrated Calibration Kit, Male, DC~9 GHz,50 Ω
N type Integrated Calibration Kit, Female, DC~9 GHz,50 Ω		Y504FS
N type Precision Calibration Kit, DC~9 GHz, 50 Ω		F504TS
3.5 mm type Precision Calibration Kit, DC~9 GHz, 50 Ω		F604TS
VNA Options	2 ports, 9 kHz ~ 4.5 GHz, SMA female	SEM5002A
	2 ports, 9 kHz ~ 9 GHz, SMA female	SEM5012A
	2 ports, 100 kHz ~ 13.5 GHz, 3.5 mm female	SEM5022A
	2 ports, 100 kHz ~ 26.5 GHz, 3.5 mm female	SEM5032A
	4 ports, 9 kHz ~ 4.5 GHz, SMA female	SEM5004A
	4 ports, 9 kHz ~ 9 GHz, SMA female	SEM5014A
	4 ports, 100 kHz ~ 13.5 GHz, 3.5 mm female	SEM5024A
	4 ports, 100 kHz ~ 26.5 GHz, 3.5 mm female	SEM5034A



SVA1000X

Spectrum & Vector Network Analyzer



Features and Benefits

- Spectrum Analyzer Frequency Range from 9 kHz up to 7.5 GHz
- Vector Network Analyzer Frequency Range from 100 kHz up to 7.5 GHz
- -165 dBm/Hz Displayed Average Noise Level (Typ.)
- -98 dBc/Hz.@10 kHz Offset Phase Noise (1 GHz, Typ.)
- Level Measurement Uncertainty < 0.7 dB (Typ.)
- 1 Hz Minimum Resolution Bandwidth (RBW)
- Preamplifier Standard
- Tracking Generator Standard
- Distance To Fault (Opt.)
- Vector Signal Modulation Analysis (Opt.)
- EMI Filter and Quasi-Peak Detector Kit (Opt.)
- Advanced Measurement Kit (Opt.)
- 10.1 Inch Multi-Touch Screen , Mouse and Keyboard supported
- Web Browser Remote Control on PC and Mobile Terminals and File Operation

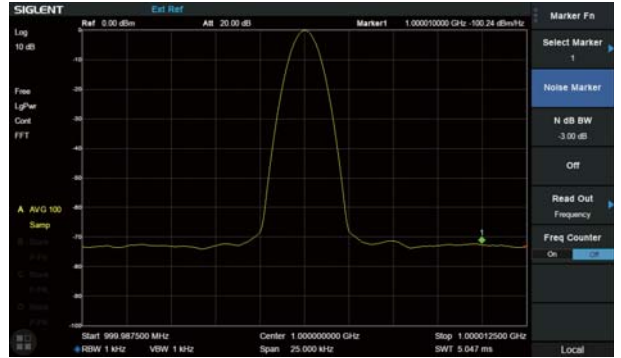


Design features

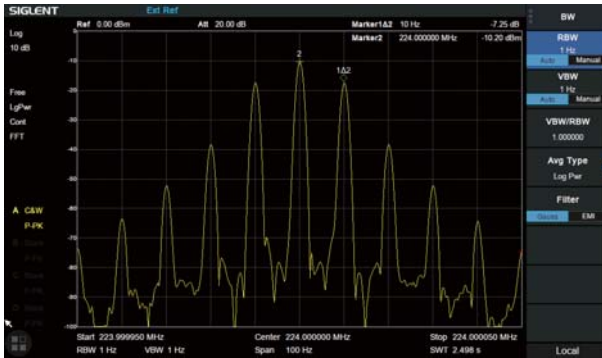
10.1 Inch Display with Multi-Touch Screen



Phase noise -98 dBc/Hz@1 GHz, offset 10 kHz



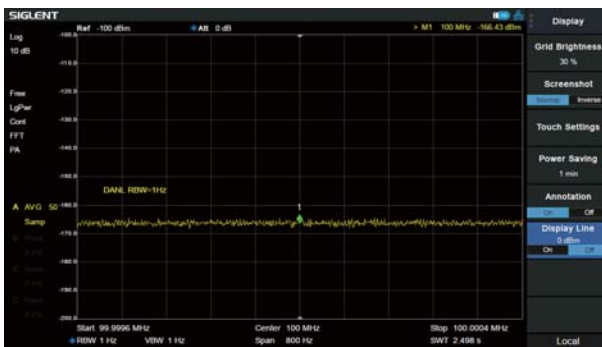
Minimum 1 Hz Resolution Bandwidth (RBW)



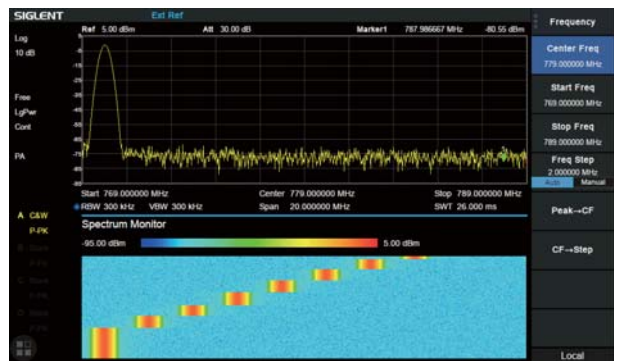
ACPR in Advanced Measurement Kit



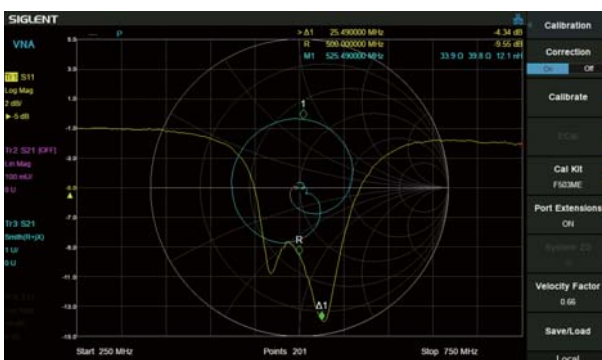
-165 dBm/Hz Displayed Average Noise Level



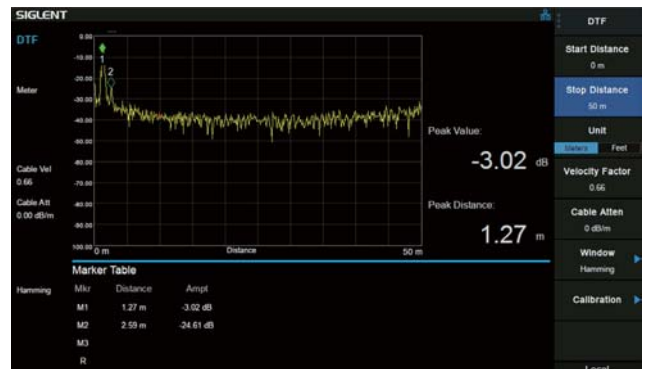
Monitor in Advanced Measurement Kit



100 k-7.5 GHz Vector S11 and S21 measurement, Multi Formats Overlay Display

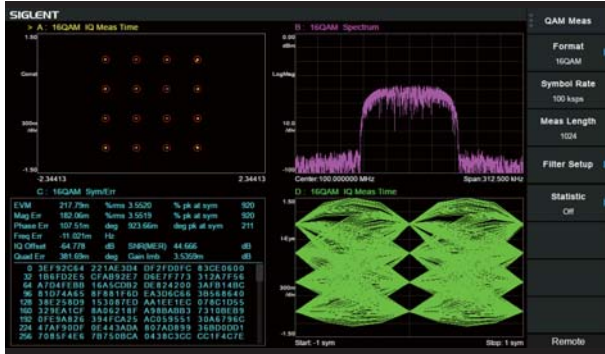


Cable and Antenna Test based on Timing Domain Analysis



• Modulation Analysis Mode

AM/FM, ASK/FSK/PSK/MSK/QAM Vector Signal Modulation Analysis, EVM evaluation



• EMI Measurement Mode

EMI Measurement with CISPR 16-1-1 EMI filter, Quasi-peak Detector, and pre-stored standards



Model and Main index

Model	SVA1015X	SVA1032X	SVA1075X
Spectrum Analyzer Frequency Range	9 kHz~1.5 GHz	9 kHz~3.2 GHz	9 kHz~7.5 GHz
Vector Network Analyzer Frequency Range	100 kHz~1.5 GHz	100 kHz~3.2 GHz	100 kHz~7.5 GHz
Resolution Bandwidth	1 Hz~1 MHz	1 Hz~1 MHz	1 Hz~3 MHz
Displayed Average Noise Level	-156 dBm/Hz	-161 dBm/Hz	-165 dBm/Hz
SSB Phase Noise	<-99 dBc/Hz	<-98 dBc/Hz	<-98 dBc/Hz
Total Amplitude Accuracy	< 1.2 dB	< 0.7 dB	< 0.7 dB
Tracking Generator	100 kHz~1.5 GHz	100 kHz~3.2 GHz	100 kHz~7.5 GHz
VNA measurement	Vector S11, Vector S21		
Distance to Fault	VNA Timing Domain Analysis Locator		
Touch Screen	Multi Touch, Mouse and Keyboard supported		
Advanced Measurement	CHP, ACPR, OBW, CNR, Harmonic, TOI, Monitor		
Reflection Measurement	VSWR measurement using Reflection Bridge		
EMI Test	EMI Filter and Quasi-Peak Detector, Log Scale and Limit Line		
Modulation Analysis	AM, FM; ASK, FSK, MSK, PSK, QAM		
Communication Interface	LAN, USB Device, USB Host (USB-GPIB)		
Remote Control Capability	SCPI/Labview/IVI based on USB-TMC/VXI-11/Socket/Telnet		
Remote Controller	NI-MAX, Web Browser, Easy Spectrum software, File Explorer		



Ordering Information

Product	Description	Order Number
Product Code	Spectrum & Vector Network Analyzer, 1.5 GHz	SVA1015X
	Spectrum & Vector Network Analyzer, 3.2 GHz	SVA1032X
	Spectrum & Vector Network Analyzer, 7.5 GHz	SVA1075X
Standard Accessories	Quick Start, USB Cable, Power Cord	
Common Options and Accessories	Advanced Measurement Kit	SVA1000X-AMK
	Utility Kit: N (M)-SMA (M) cable (6 GHz), N (M)-N (M) cable (6 GHz), N (M)-BNC (F) adaptor x 2, N (M)-SMA (F) adaptor x 2, 10 dB 1W attenuator	UKitSSA3X
	N (M)-SMA (M) cable, 70 cm, 6 GHz	N-SMA-6L
	N (M)-N (M) cable, 70 cm, 6 GHz	N-N-6L
	N (M)-BNC (M) cable, 70 cm, 2 GHz	N-BNC-2L
	N (M)-N (M) cable, 100 cm, 18 GHz	N-N-18L
	N (M)-SMA (M) cable, 100 cm, 18 GHz	N-SMA-18L
	SMA(M)-SMA(M) cable, 100 cm, 18 GHz	SMA-SMA-18L
	USB-GPIB Adaptor	USB-GPIB
	Soft carrying bag	BAG-S2
	6U Rack Mount Kit	SSA-RMK
VNA Options	Distance To Fault	SVA1000X-DTF
	Mechanical Calibration Kit: Open (M), Short (M), Match (M,50), Through (F-F), 4.5 GHz, N-Male connector	F503ME
	Mechanical Calibration Kit: OSLT, DC - 4.5 GHz, N-Female connector	F503FE
	Mechanical Calibration Kit: OSLT, DC - 4.5 GHz, 3.5mm SMA-Male connector	F603ME
	Mechanical Calibration Kit: Open (M), Short (M), Match (M,50), Through (F-F), 4.5 GHz, SMA-Female connector	F603FE
	Mechanical Calibration Kit: OSLT, DC - 9 GHz, N-Male connector	F504MS
	Mechanical Calibration Kit: OSLT, DC - 9 GHz, N-Female connector	F504FS
	Mechanical Calibration Kit: OSLT, DC - 9 GHz, 3.5 mm SMA-Male connector	F604MS
	Mechanical Calibration Kit: OSLT, DC - 9 GHz, 3.5 mm SMA-Female connector	F604FS
	N-type, Male and Female, 50 Ω Calibration Kit, 0~9 GHz	F504TS
	3.5 mm, Male and Female, 50 Ω Calibration Kit, 0~9 GHz	F604TS
EMI test Options	EMI Measurement Kit: EMI Filter and Quasi Peak Detector, EMI Receiver Mode in EasySpectrum Software	SVA1000X-EMI
	300 kHz~3 GHz Near Field Probe Kit: 3 H-probes (20/10/5 mm), 1 E-probe (5 mm)	SRF5030T
Modulation Analysis Options	Digital Modulation: ASK, FSK, MSK, PSK, QAM	SVA1000X-DMA
	Analog Modulation: AM, FM	SVA1000X-AMA
VNA Options	2 ports, 9 kHz ~ 4.5 GHz, SMA female	SEM5002A
	2 ports, 9 kHz ~ 9 GHz, SMA female	SEM5012A
	2 ports, 100 kHz ~ 13.5 GHz, 3.5 mm female	SEM5022A
	2 ports, 100 kHz ~ 26.5 GHz, 3.5 mm female	SEM5032A
	4 ports, 9 kHz ~ 4.5 GHz, SMA female	SEM5004A
	4 ports, 9 kHz ~ 9 GHz, SMA female	SEM5014A
	4 ports, 100 kHz ~ 13.5 GHz, 3.5 mm female	SEM5024A
	4 ports, 100 kHz ~ 26.5 GHz, 3.5 mm female	SEM5034A

CALTRON PTE LTD
email: caltron@caltron.sg
www.caltron.sg



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SiglentTech

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Headquarters:

SIGLENT Technologies Co., Ltd
Add: Bldg No.5, Antongda Industrial
Zone, 3rd Liuxian Road, Bao'an
District, Shenzhen, 518101, China
Tel: + 86 755 3688 7876
Fax: + 86 755 3359 1582
Email: sales@siglent.com
Website: int.siglent.com

North America:

SIGLENT Technologies NA, Inc
Add: 6557 Cochran Rd Solon, Ohio
44139
Tel: 440-398-5800
Toll Free: 877-515-5551
Fax: 440-399-1211
Email: support@siglentna.com
Website: www.siglentna.com

Europe:

SIGLENT Technologies Germany
GmbH
Add: Staetzlinger Str. 70
86165 Augsburg, Germany
Tel: +49(0)-821-666 0 111 0
Fax: +49(0)-821-666 0 111 22
Email: info-eu@siglent.com
Website: www.siglenteu.com

Malaysia:

SIGLENT Technologies (M)
Sdn.Bhd
Add: NO.6 Lorong Jelawat 4
Kawasan Perusahaan Seberang
Jaya 13700, Perai Pulau Pinang
Tel: 006-04-3998964
Email: sales@siglent.com
Website: int.siglent.com

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