RIGOL

RSA6000 Series

Real-Time Spectrum Analyzer

Data Sheet

DSD27100-1110

Aug. 2025

RSA6000 Series Spectrum Analyzer

Feature

5 kHz ~ 26.5 GHz Frequency Range	**200MHz** Real-Time / Analysis BW	**4THz/s** Sweep Speed
–163 dBm(typ.) DANL(1GHz)	**-108dBc/Hz(typ.)** Phase Noise(1GHz, 10kHz)	**±0.7dB** Amplitude Accuracy

The Power Tool for Engineers Breaking Boundaries in Spectrum Analysis

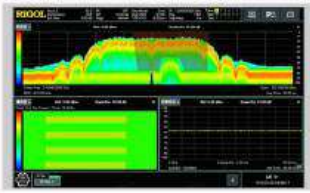
RIGOL RSA6000 Series Real-Time Spectrum Analyzer, built on the upgraded UltraReal platform, combines high-performance signal capture, advanced analysis, and portable design—breaking free from traditional lab constraints.
With one-click mode switching, remote Web Control, and a lightweight form factor, it's a core platform for R&D, validation, and troubleshooting—delivering high-end performance in a truly portable form.

Benefits

- **5 kHz to 26.5 GHz frequency range** — from low-frequency comms to microwave radar.
- **200 MHz real-time bandwidth, 4 THz/s sweep speed** — capture fast, transient signals with precision.
- **Rich signal analysis & demodulation** within 200 MHz bandwidth.
- **Five modes in one device**: GPSA, RTSA, VSA, EMI, ADM — ideal for R&D, production, and compliance.
- **Built-in preamp and tracking generator** — ready to use, no external modules required.
- **Compact and portable**, easy to deploy in the field.
- **Touch + key operation**, supports **Web Control** for remote access.
- **USB, LAN, HDMI interfaces**, SCPI compatible — ready for integration and automation.

All-in-One Platform · Five Modes in One

Next-Level Performance · Real-Time Transient Capture



Reveal the Full Truth of Every Signal
Up to **200MHz** real-time bandwidth, RSA6000 captures every burst, hop, and anomaly—without loss or delay.

Full Spectrum Visibility in Milliseconds
With up to 4THz/s scan speed and FMT trigger, RSA6000 captures dense, wideband signals in seconds—so no transient is missed, even in interference-heavy environments.

Ultra-Portable Design · Deploy Anywhere, Anytime

Small in size, light in weight—the A Series fits seamlessly into lab benches, factory setups.

Application

- Real-time signal detection
- Frequency occupancy & compliance
- Illegal transmission tracking

- Gain, loss, harmonics, spurs, IMD
- Spectrum & interference analysis
- EVM and constellation validation

- RF performance validation
- Noise/interference troubleshooting
- Fast production line verification

- RF teaching & lab experiments
- Academic research & innovation

- Conducted/radiated tests
- PCB emission localization
- Pre-compliance diagnostics

Product Features

Product Features

- Five working modes: GPSA, RTSA, VSA, EMI, and ADM
- Frequency range: 5 kHz to 26.5 GHz
- Excellent DANL (Displayed Average Noise Level)
- Good phase noise performance
- High-precision amplitude measurement error
- Multiple analysis bandwidth options
- Excellent SFDR
- Powerful real-time spectrum analysis function
- Display different types of measurement values in multi-pane windowing form
- Support USB, LAN, and HDMI interfaces
- Support standard SCPI instruction sets

RSA6000 series is RIGOL's newly launched spectrum analyzer product. Its excellent performance in SFDR, phase noise, amplitude accuracy and test speed makes it applicable in various test scenarios such as spectrum analysis, real-time spectrum analysis, vector signal analysis, pulse analysis. RSA6000 series real-time spectrum analyzer has a strong expansion capability, allowing you to build the test system or perform user-defined development via various digital and analog output interfaces. With its excellent performance and flexible configuration, it can meet your test demands in various application scenarios such as wireless communication, automobile electronics, Internet of Things (IoT), and etc.

RSA6000 Series Technical Specifications

Model	RSA6085	RSA6140	RSA6265
Frequency Range	5 kHz to 8.5 GHz	5 kHz to 14 GHz	5 kHz to 26.5 GHz
Max. Analysis Bandwidth	80 MHz (Std.), 200 MHz (Opt.)		
Max. Real-Time Bandwidth	80 MHz (Std.), 200 MHz (Opt.)		
1 GHz Phase Noise	10 kHz offset, <-108 dBc/Hz (typ.)		
Displayed Average Noise Level (DANL), Normalized from 1 GHz to 1 Hz	-143 dBm (typ.), with PA off -163 dBm (typ.), with PA on		
RBW	1 Hz to 10 MHz		
VBW	1 Hz to 10 MHz		
Third-order Intercept (TOI) 1GHz	+15 dBm (typ.)		

Model	RSA6085	RSA6140	RSA6265
Amplitude Range	DANL to +25 dBm (single-tone)		
I/O	LAN, USB, and HDMI		
Screen	10.1'' capacitive multi-touch screen		
Programming Control Instruction Sets	Supports SCPI commands control, compatible with Keysight PXA series commands		

Specifications

Specifications are valid under the following conditions: the instrument is within the calibration period; stored for at least two hours at 0℃ to 50℃ temperature; 40-minute warm-up. Unless otherwise noted, the specifications in the manual include the measurement uncertainty.

Typical (typ.): typical performance, which 80 percent of the measurement results will meet at room temperature (approximately 25℃). The data are not warranted and do not include the measurement uncertainty.

Nominal (nom.): the expected mean or average performance or a designed attribute (such as the 50Ω connector). The data are not warranted and are measured at room temperature (approximately 25℃).

Measured (meas.): an attribute measured during the design phase and can be compared with the expected performance, e.g. the amplitude drift varies with time. The data are not warranted and are measured at room temperature (approximately 25℃).

NOTE:

All charts in this manual are the measurement results of multiple instruments at room temperature unless otherwise noted. All the specifications (except tracking generator specifications) listed in this manual are obtained with tracking generator off.

Measurement Mode and Product Model Adaptation Table

	RSA6085	RSA6140	RSA6265
GPSA	√	√	√
RTSA	√	√	√
VSA	○	○	○
EMI	○	○	○
ADM	○	○	○

NOTE:

√ indicates standard configuration; ○ indicates optional configuration.

All Measurement Modes

Model	RSA6085	RSA6140	RSA6265
Frequency Range	5 kHz to 8.5 GHz	5 kHz to 14 GHz	5 kHz to 26.5 GHz
Internal Reference Frequency			
Reference Frequency	10 MHz		

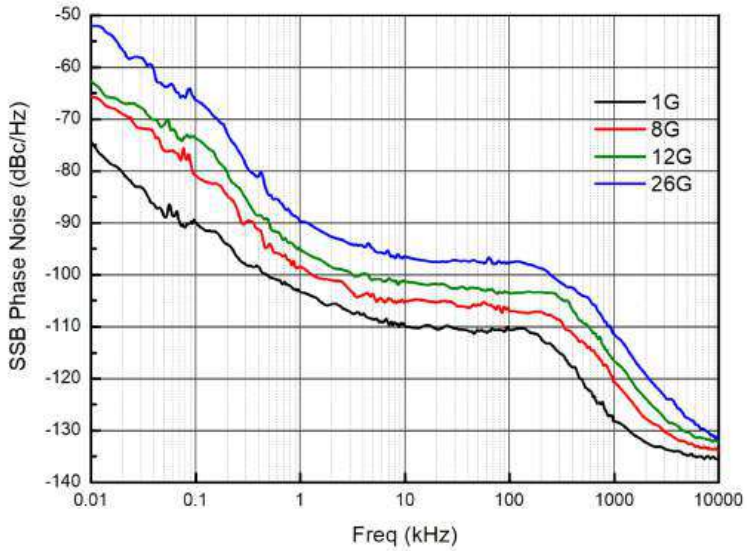
Internal Reference Frequency	
Accuracy	±[(time since last calibration × aging rate) + temperature stability + calibration accuracy]
Initial Calibration Accuracy	1 ppm
Temperature Stability	0℃ to 50℃, with the reference 25℃
	<0.5 ppm
Aging Rate	<1 ppm/year

GPSA Mode

Frequency

Frequency Readout Accuracy	
Marker Frequency Resolution	span/(number of sweep points - 1)
Marker Frequency Uncertainty	±(marker frequency readout × reference frequency accuracy + 1% × span + 10% × resolution bandwidth + marker frequency resolution)
Frequency counter (RBW = 1 kHz, Freq = 1 GHz)	
Resolution	1 Hz (Max.)
Uncertainty	±(marker frequency readout × reference frequency accuracy + counter resolution)
Frequency Span	
Range	0 Hz, 10 Hz to maximum frequency
Resolution	2 Hz
Uncertainty	±[0.1% x span RBW + span/(number of sweep points - 1)]
SSB Phase Noise	
20℃ to 30℃, f_c = 1000 MHz, sample detector	

SSB Phase Noise		
Carrier Offset	1 kHz	<-95 dBc/Hz (typ.)
	10 kHz	<-105 dBc/Hz, <-108 dBc/Hz (typ.)
	100 kHz	<-105 dBc/Hz, <-108 dBc/Hz (typ.)
	1 MHz	<-120 dBc/Hz, <-125 dBc/Hz (typ.)
	10 MHz	<-130 dBc/Hz (typ.)



SSB Phase Noise

Residual FM	
20℃ to 30℃, RBW = VBW = 1 kHz	
Residual FM	<10 Hz (nom.)

Bandwidth	
Set "Sweep Type" to "Accurate"	
Resolution Bandwidth (-3 dB)	1 Hz to 10 MHz, in 1-3-10 sequence
RBW Accuracy	10 MHz, <10%
	1 Hz to 3 MHz, <3%
Resolution Filter Shape Factor (60 dB: 3 dB) [1]	≤5 (nom.)
Video Bandwidth (-3 dB)	1 Hz to 10 MHz, in 1-3-10 sequence
Resolution Bandwidth (-6 dB)	200 Hz, 9 kHz, 120 kHz, 1 MHz

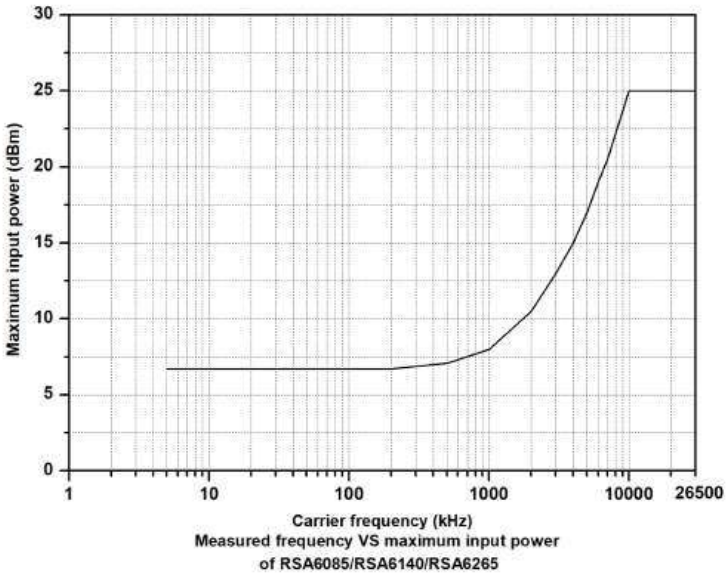
Amplitude

Measurement Range	
Range	f_c ≥ 10 MHz
	DANL to +25 dBm
Maximum Safe Input Level[2]	
DC Voltage	50 V
CW RF Power	+25 dBm, attenuation > 35 dB, preamp off
	0 dBm, attenuation > 35 dB, preamp on
Maximum Damage Level	
CW RF Power	+27 dBm (0.5 W)

NOTE:

[1]: When RBW is greater than 100 kHz, the filter characteristics near -60 dB cannot be directly obtained with measurement.

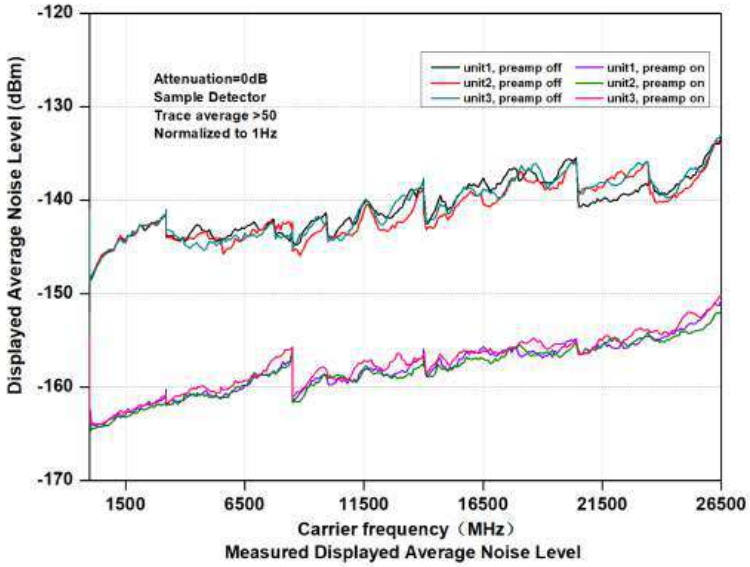
[2]: When f_c is smaller than 10 MHz, the maximum safe input level is decreased.



Maximum Damage Level

Displayed Average Noise Level (DANL)
Attenuation = 0 dB, sample detector, trace averages ≥ 50, tracking generator off, normalized to 1 Hz, 20℃ to 30℃, input impedance = 50 Ω.

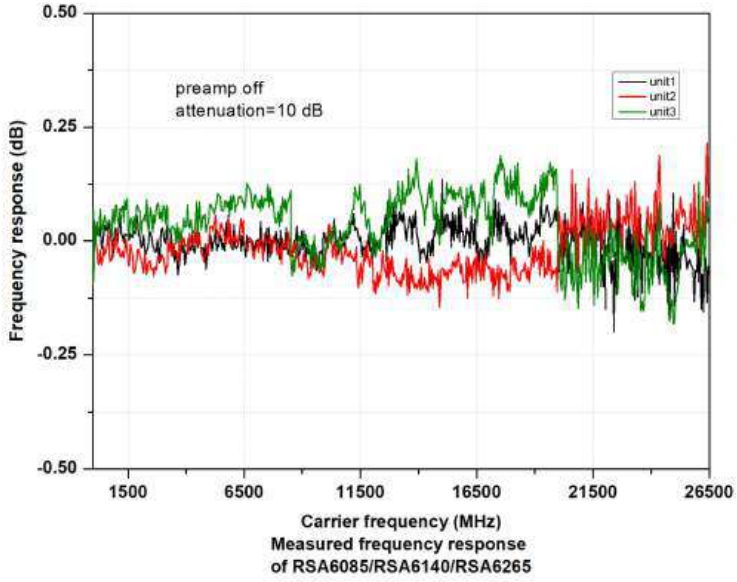
Displayed Average Noise Level (DANL)		
PA Off	5 kHz < f ≤ 100 kHz	<-120 dBm (typ.)
	100 kHz < f ≤ 20 MHz	<-135 dBm, <-138 dBm (typ.)
	20 MHz < f ≤ 1.5 GHz	<-140 dBm, <-143 dBm (typ.)
	1.5 GHz < f ≤ 3.2 GHz	<-138 dBm, <-141 dBm (typ.)
	3.2 GHz < f ≤ 8.5 GHz	<-136 dBm, <-140 dBm (typ.)
	8.5 GHz < f ≤ 14 GHz	<-133 dBm, <-136 dBm (typ.)
	14 GHz < f ≤ 18 GHz	<-130 dBm, <-133 dBm (typ.)
	18 GHz < f ≤ 23 GHz	<-127 dBm, <-131 dBm (typ.)
	23 GHz < f ≤ 26.5 GHz	<-122 dBm, <-125 dBm (typ.)
PA On	100 kHz < f ≤ 500 kHz	<-149 dBm, <-152 dBm (typ.)
	500 kHz < f ≤ 20 MHz	<-152 dBm, <-155 dBm (typ.)
	20 MHz < f ≤ 1.5 GHz	<-160 dBm, <-163 dBm (typ.)
	1.5 GHz < f ≤ 3.2 GHz	<-157 dBm, <-160 dBm (typ.)
	3.2 GHz < f ≤ 8.5 GHz	<-154 dBm, <-157 dBm (typ.)
	8.5 GHz < f ≤ 14 GHz	<-151 dBm, <-154 dBm (typ.)
	14 GHz < f ≤ 18 GHz	<-148 dBm, <-151 dBm (typ.)
	18 GHz < f ≤ 23 GHz	<-145 dBm, <-148 dBm (typ.)
	23 GHz < f ≤ 26.5 GHz	<-140 dBm, <-143 dBm (typ.)



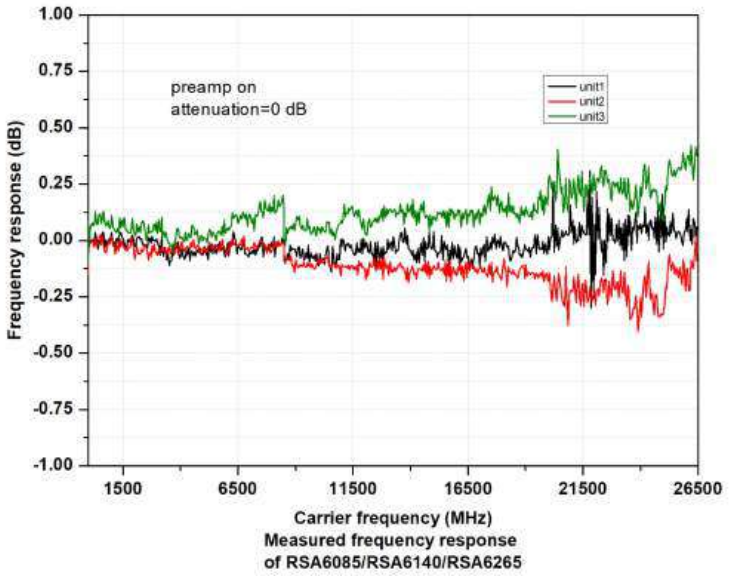
DANL

Level Display		
Logarithmic Scale	1 dB to 200 dB	
Linear Scale	0 to reference level	
Number of display points	801	
Number of traces	6	
Detector Type	Normal, pos-peak, neg-peak, sample, RMS average, voltage average, Quasi-peak, C-RMS average	
Trace Type	Clear write, max hold, min hold, average, view, blank	
Scale Unit	dBm, dBmV, dBuV, nV, uV, mV, V, pW, nW, uW, mW, W, mA, uA, and A	
Frequency Response		
PA Off	attenuation = 10 dB, relative to 50 MHz, 20℃ to 30℃	
	5 kHz < f ≤ 100 kHz	<0.3 dB (typ.)
	100 kHz < f ≤ 3.2 GHz	<0.5 dB, <0.3 dB (typ.)
	3.2 GHz < f ≤ 8.5 GHz	<0.7 dB, <0.5 dB (typical)
	8.5 GHz < f ≤ 14 GHz	<1.5 dB, <1.3 dB (typ.)
	14 GHz < f ≤ 20 GHz	<1.7 dB, <1.5 dB (typ.)
	20 GHz < f ≤ 26.5 GHz	<2 dB, <1.8 dB (typ.)

Frequency Response		
PA On	attenuation = 0 dB, relative to 50 MHz, 20℃ to 30℃	
	100 kHz < f ≤ 3.2 GHz	<0.8 dB, <0.6 dB (typ.)
	3.2 GHz < f ≤ 8.5 GHz	<1 dB, <0.8 dB (typ.)
	8.5 GHz < f ≤ 14 GHz	<2.5 dB, <2.3 dB (typ.)
	14 GHz < f ≤ 20 GHz	<2.7 dB, <2.5 dB (typ.)
	20 GHz < f ≤ 26.5 GHz	<3 dB, <2.8 dB (typ.)

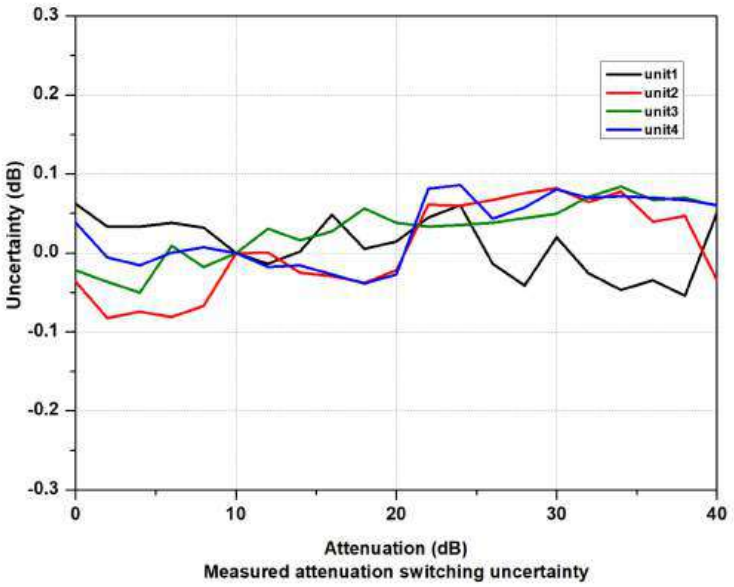


Frequency Response (attenuation = 10 dB, PA off)



Frequency Response (attenuation = 0 dB, PA on)

Input Attenuation Switching Uncertainty	
Setting Range	0 dB to 40 dB, in 2 dB step
Switching Uncertainty	f_c= 50 MHz, relative to 10 dB, preamp off, 20°C to 30°C
	<0.3 dB



Switching Uncertainty

Absolute Amplitude Accuracy	
Uncertainty	f_c= 50 MHz, peak detector, preamp off, attenuation = 10 dB, input signal level = -10 dBm, 20°C to 30°C
	<0.3 dB

Reference Level		
Range	Logarithmic Scale	-170 dBm +25 dBm, in 0.01 dB step
	Linear Scale	707 pV to 3.98 V, 0.11% (0.01 dB) resolution

RBW Switching		
Uncertainty	Set "Sweep Type" to "Accurate", relative to 30 kHz RBW	
	1 Hz to 1 MHz	<0.1 dB
	3 MHz, 10 MHz	<0.3 dB

PA (Option RSA6000-PA)			
	RSA6085	RSA6140	RSA6265
Frequency Range	100 kHz to 8.5 GHz	100 kHz to 14 GHz	100 kHz to 26.5 GHz

PA (Option RSA6000-PA)	
Gain	20 dB (nom.)

Level Measurement Uncertainty

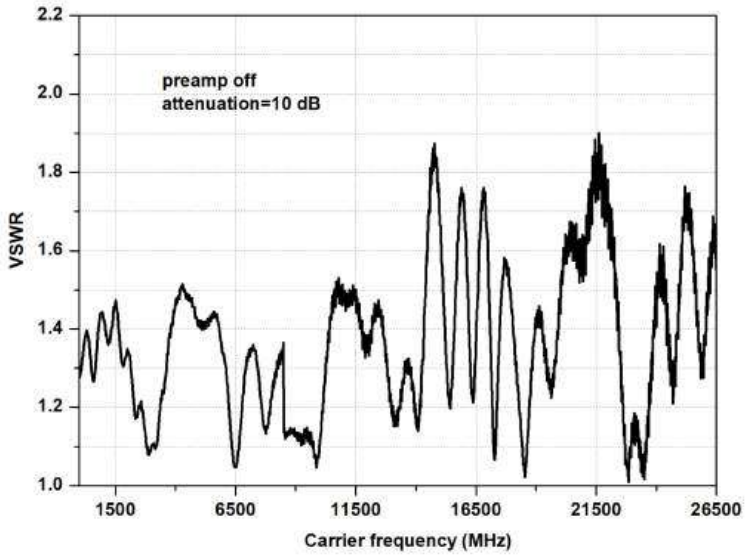
95% confidence level, S/N > 20 dB, RBW = VBW = 1 kHz, PA off, attenuation = 10 dB, -50 dBm < input level ≤ 0 dBm, f_c > 10 MHz, 20°C to 30°C

Level Measurement Uncertainty	10 MHz < f ≤3.2 GHz	<0.8 dB (nom.)
	3.2 GHz < f ≤ 8.5 GHz	<1 dB (nom.)
	8.5 GHz < f ≤ 14 GHz	<1.8 dB (nom.)
	14 GHz < f ≤ 20 GHz	<2 dB (nom.)
	20 GHz < f ≤ 26.5 GHz	<2.4 dB (nom.)

RF Input VSWR

Attenuation ≥ 10 dB, preamp off

VSWR	10 MHz ≤ f ≤ 3.2 GHz	<1.6 (nom.)
	3.2 GHz ≤ f ≤ 8.5 GHz	<1.6 (nom.)
	8.5 GHz ≤ f ≤ 14 GHz	<1.8 (nom.)
	14 GHz ≤ f ≤ 26.5 GHz	<2 (nom.)

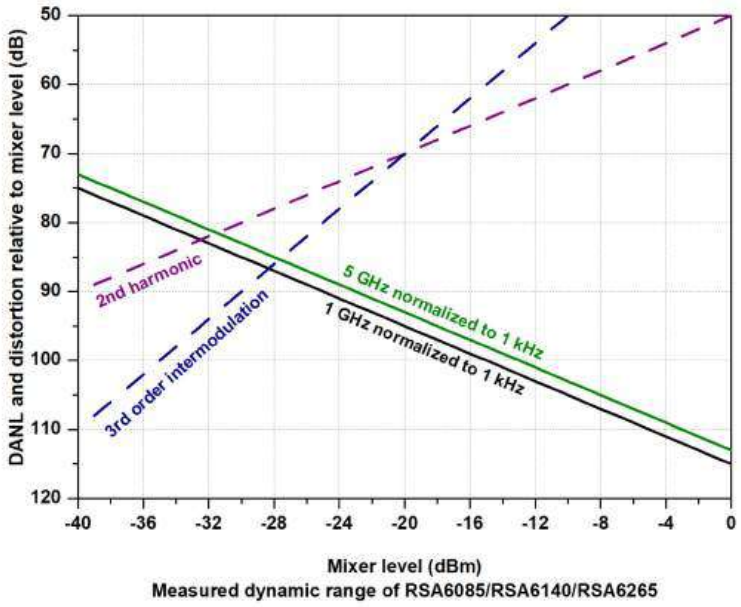


VSWR

Distortion		
Second Harmonic Intercept (SHI)	$f_c \geq$ 50 MHz, input signal level = -20 dBm, attenuation = 0, preamp off	
	+45 dBm	
Third-order Intercept (TOI)	$f_c \geq$ 50 MHz, two -20 dBm tones at input mixer spaced by >5 x IF filter BW (RBW), attenuation = 0 dB, preamp off	
	10 MHz to 8.5 GHz	+11 dBm, +15 dBm (typ.)
	8.5 GHz to 26.5 GHz	+10 dBm, +14 dBm (typ.)
1dB Gain Compression (P_{1dB})[1] Dual-tone Test	$f_c \geq$ 50 MHz, attenuation = 0 dB, preamp off	
	0 dBm (nom.)	

NOTE:

[1]: The frequency interval of the two-tone signals should be greater than 20 MHz.



Distortion

Spurious Response		
Residual Response	Input terminated with a 50 Ω load, attenuation = 0 dB, 20℃ to 30℃	
	<-90 dBm (typ.)	
LO Disturbing Signal	Input terminated with a 50 Ω load, attenuation = 0 dB, 600 MHz x N[1] or 600 MHz x N[1] ± 4178.6 MHz x 2, 20℃ to 30℃	
	<-80 dBm (typ.)	

Spurious Response			
Intermediate Frequency	<-60 dBc/Hz (typical)		
System-related Sideband	Carrier offset = 1 kHz		
	<-60 dBc/Hz (typical)		
Input-related Spurious	mixer level -30 dBm		
	<-60 dBc/Hz (typical)		
Image spurious mixer level -10 dBm	Tuned Freq	Excitation Freq	
	10 MHz ≤ f ≤ 3.2 GHz	f + 2 x 4178.6 MHz(1st IF)	<-80 dBc/Hz (typical)
	3.2 GHz ≤ f ≤ 8.5 GHz	f + 2 x 2378.6 MHz(1st IF)	<-60 dBc/Hz (typical)
	8.5 GHz ≤ f ≤ 14 GHz	f + 2 x 4178.6 MHz(1st IF)	<-80 dBc/Hz (typical)
	14 GHz ≤ f ≤ 18 GHz	f + 2 x 4178.6 MHz(1st IF)	<-50 dBc/Hz (typical)
	18 GHz ≤ f ≤ 26.5 GHz	f - 2 x 4178.6 MHz(1st IF)	
	10 MHz ≤ f ≤ 18 GHz	f - 2 x 21.4 MHz(3rd IF)	<-70 dBc/Hz (typical)
	18 GHz ≤ f ≤ 26.5 GHz	f + 2 x 21.4 MHz(3rd IF)	
	10 MHz ≤ f ≤ 18 GHz	f + 2 x 578.6 MHz(2nd IF)	<-60 dBc/Hz (typical)
	18 GHz ≤ f ≤ 26.5 GHz	f - 2 x 578.6 MHz(3rd IF)	

NOTE:

N is an integer。

Sweep

Sweep		
Sweep Time	Span ≥ 10 Hz	1 ms to 4,000 s
	zero span	1 us to 6,000 s
Sweep Time Uncertainty	Span ≥ 10 Hz, RBW ≥ 1 kHz	5% (nom.)
	zero span (sweep time > 1ms)	5% (nom.)

Sweep	
Sweep Mode	Continuous, single
Sweep Points	EMI mode: 101 to 100,001, default 801 Other modes: 101 to 100,001, default 801

Trigger

Trigger		
Trigger Source	Free fun, external trigger, video	
Trig Delay	Span ≥ 10 Hz	0 ms to 500 ms
	zero span	-150 ms to 500 ms
Trigger Delay Resolution	0.1 μs	

Tracking Generator (RSA6000-T08)

TG Output[1]			
	RSA6085	RSA6140	RSA6265
Frequency Range	100 kHz to 8.5 GHz		
Output Level Range	-40 dBm to 0 dBm		
Output Level Resolution	1 dB		
Output Flatness	Relative to 50 MHz		
	±3 dB (nominal)		

NOTE:

[1]: The TG and FFT sweep mode are mutually exclusive. When the TG is enabled, the sweep mode will be affected.

RTSA Mode

RTSA Mode	
Real-Time Bandwidth	80 MHz (std.)
	200 MHz (Option RSA6000-RB200)

RTSA Mode			
Min. Signal Duration for 100% POI at the Full-Scale Accuracy	maximum span; default Kaiser Window		
	3.83 µs		
Detector Type	Pos-peak, neg-peak, sample, average		
Number of Traces	6		
Window Type	Hanning, Blackman-Harris, Rectangular, Flattop, Kaiser, and Gaussian		
RBW	Provides 6 RBWs for each window, except the Rectangular; for Kaiser window,		
	Span	Min. bandwidth	Max. bandwidth
	200 MHz	502.29 kHz	16.07 MHz
	80 MHz	200.91 kHz	6.43 MHz
	40 MHz	100.46 kHz	3.21 MHz
	10 MHz	25.11 kHz	803.66 kHz
Max. Sample Rate	102.3 MSa/s		
Quick Sweep	4,000 GHz/s		
FFT Rate	300000/s		
Number of Markers	8		
Amplitude Resolution	0.01 dB		
Frequency Point	801		
Acquisition Time	Max. sample rate		
	>133.3 µs		

Min. signal duration for 100% POI at different RBWs, with the unit µs						
Span	RBW1	RBW2	RBW3	RBW4	RBW5	RBW6
200 MHz	7.710	5.708	4.708	4.207	3.957	3.832
80 MHz	15.004	10.000	7.498	6.246	5.621	5.308
40 MHz	25.005	14.995	9.990	7.488	6.237	5.611
20 MHz	45.005	24.985	14.976	9.971	7.468	6.217

Amplitude	
Amplitude Flatness	Only applicable to the Normal measurement.
	80 MHz, BW ±0.7 dB (nom.) 200 MHz, BW ±1.2 dB (nom.)
SFDR	<-60 dBc (typ.)
Density	
Probability Range	0 to 100% (with a step of 0.1%)
Min. Span	5 kHz
Duration	32 ms to 10 s
Spectrogram	
Maximum Acquisition Volume	10,000
Dynamic Range Covered with Color	200 dB
PvT	
Min. Capture Time	100 µs
Max. Capture Time	40 s
Trigger	
Trigger Source	Free run, external, IF power (time), FMT
FMT	
Trigger Diagram	density, spectrogram, normal
Trigger Resolution	0.5 dB
Trigger Condition	Enter, Leave, Inside, Outside, Enter-Leave, Leave-Enter

VSA Mode

Analysis Bandwidth	
Analysis Bandwidth	80 MHz
	200 MHz (Option RSA6000-B200)
Capture Oversampling	
Capture Oversampling	4, 8, 16

Capture Length	
Capture Length	Max. 4,096
Sample Rate	
Max. Sample Rate	256 MSa/s
Symbol Rate	
Symbol Rate	Related to Capture Oversampling
	= Sample Rate/Capture Oversampling, ≥ 1 kHz
Available I/Q Bandwidth	
Available I/Q Bandwidth	Symbol Rate x Capture Oversampling/1.28
Trig Mode	
Trigger Mode	Free run, external, IF power (time)
Modulation Format	
FSK	2FSK, 4FSK, 8FSK
MSK	Enables or disables the differential encoding for MSK
PSK	BPSK, QPSK, OQPSK, DQPSK, π/4-DQPSK, 8PSK, D8PSK, and π/8-D8PSK
QAM	16QAM, 32QAM, 64QAM、128QAM、256QAM、512QAM、1024QAM
ASK	2ASK, 4ASK
Filter Type	
Measurement Filter Type	No Filter, RRC, Gaussian, Rectangular, user-defined
Reference Filter Type	Raised Cosine, RRC, Gaussian, Rectangular, Half Sine, user-defined
Preset Standard	
Cellular	GSM, NADC, WCDMA, PDC, PHP (PHS)
Wireless Networking	Bluetooth, WLAN (802.11b), ZIGBEE 868M, ZIGBEE 915M, ZIGBEE 2450M
Others	TETRA, DECT, APCO-25

Measurement Uncertainty		
Applicable Conditions		Temperature at +20°C to +30°C Signal level ≥ -25 dBm Select the proper amplitude range Deviation between the instrument's center frequency and the signal's center frequency less than 5% of symbol rate Random data sequence Capture oversampling 4
Residual Error for QPSK		
Test Signal		The reference filter is RC, measurement filter RRC, with rolloff factor 0.35. The result lengths are 150 symbols. The center frequency is 1 GHz, and the capture oversampling is 4.
Residual EVM (EVM) RMS		
Symbol Rate	100 ksps	<0.7% (nom.)
	1 Msps	<0.7% (nom.)
	10 Msps	<1.0% (nom.)
	20 Msps	<2.0% (nom.)
Residual Error for FSK		
Test Signal		The reference filter is RC, measurement filter RRC, with rolloff factor 0.35. The FSK frequency deviation is a quarter of the symbol rate. The result lengths are 150 symbols. The center frequency is 1 GHz, and the capture oversampling is 4.
FSK Error		
Symbol Rate	10 Msps	<1.5% (nom.)
	64 Msps	<4% (nom.)

EMI Mode

EMI Resolution Bandwidth	
Resolution Bandwidth (-3 dB)	100 Hz to 10 MHz, in 1-3-10 sequence
Resolution Bandwidth (-6 dB)	200 Hz, 9 kHz, 120 kHz, 1 MHz

EMI Detector	
Detector	Pos-peak, neg-peak, average, quasi-peak, EMI average, and RMS average
EMI Key Features	
Key Features	CISPR 16-1-1 detectors CISPR 16-1-1 bandwidths log and linear display signal list scan table simultaneous detectors automatic limit testing measure at marker delta to limit report generation

ADM Mode

General Specifications				
		RSA6085	RSA6140	RSA6265
Carrier Power		-30 dBm to 20 dBm		
Carrier Power Accuracy		±1.8 dB (nom.)		
Amplitude Modulation (AM)				
Modulation Rate		20 Hz to 100 KHz		
Modulation Rate Accuracy	Modulation Rate < 1 kHz	1 Hz (nom.)		
	Modulation Rate ≥ 1 kHz	<0.1% of the Modulation Rate (nom.)		
Modulation Depth		5% to 95%		
Modulation Depth Accuracy		±4% (nom.)		
Frequency Modulation (FM)				
Modulation Rate[1]		20 Hz to 200 KHz		

Frequency Modulation (FM)		
Modulation Rate Accuracy	Modulation Rate < 1 kHz	1 Hz (nom.)
	Modulation Rate ≥ 1 kHz	<0.1% of the Modulation Rate (nom.)
Freq Deviation		20 Hz to 400 kHz
FM Deviation Accuracy[1]		±4% (nom.)
Phase Modulation (PM)		
Modulation Rate		50 Hz to 50 kHz
Modulation Rate Accuracy	Modulation Rate < 1 kHz	1 Hz (nom.)
	Modulation Rate ≥ 1 kHz	<0.1% of the Modulation Rate (nom.)
PM Deviation		0.2 rad to 100 rad
PM Deviation Accuracy		±4% (nom.)

NOTE:

[1]: Modulation Index = Modulation Frequency Deviation/Modulation Rate. The range of the modulation index is from 0.2 to 1,000.

General Specifications

Display		
Type	capacitive multi-touch screen	
Resolution	1280X800	
Dimensions	10.1-inch	
Color	24-bit color	
Mass Memory		
Mass Memory	Internal Storage	Flash non-volatile memory
	External Storage	USB storage device (not supplied)
Power		
Input Voltage Range, AC	100 V to 240 V	

Power		
AC Frequency	50 Hz/60 Hz	
AC Current	4A	
Power Consumption	90W (typ.)	
Environment		
Temperature	Operating Temperature Range	0℃ to 50℃
	Storage Temperature Range	-20℃ to +70℃
Humidity	Operating	0℃ to 30℃: ≤95%RH 30℃ to 40℃: ≤75% RH 40℃ to 50℃: ≤45%RH
	Non-operating	<+40℃: 5% to 90%RH, without condensation ≥+40℃ to <+60℃: 5% to 80%RH, without condensation >+60℃ to <+70℃: 5% to 45%RH, without condensation
Altitude	Operating Height	Below 3,000 m (9,842 feet)

Electromagnetic Compatibility and Safety		
EMC	Complies with EMC Directive 2014/30/EU, complies with or above the standard specified in IEC61326-1:2013/EN61326-1:2013 Group 1 Class A	
	CISPR11/EN 55011	
	IEC61000-4-2:2008/EN61000-4-2	± 4.0 kV (contact discharge) ±8.0 kV (air discharge)
	IEC61000-4-3:2002/EN61000-4-3	3 V/m (80 MHz to 1 GHz); 3 V/m (1.4 GHz to 2 GHz); 1 V/m (2.0 GHz to 2.7 GHz)
	IEC61000-4-4:2004/EN61000-4-4	1 kV power line
	IEC61000-4-5:2001/EN61000-4-5	0.5 kV (phase-to-neutral voltage) 1 kV (phase-to-earth voltage) 1 kV (neutral-to-earth voltage)
	IEC61000-4-6:2003/EN61000-4-6	3 V, 0.15 MHz to 80 MHz
	IEC61000-4-11:2004/EN61000-4-11	Voltage dip: 0% UT during half cycle 0% UT during 1 cycle 70% UT during 25 cycles Short interruption: 0% UT during 250 cycles
Safety	Complies with IEC 61010-1:2010 (Third Edition)/EN 61010-1:2010, UL 61010-1:2012 R4.16 and CAN/CSA-C22.2 No. 61010-1-12+ GI1+ GI2	
Environment	Samples of this product have been type tested in accordance with RIGOL's reliability test regulations and verified to be robust against the environmental stresses of storage, transportation, and end-use; those stresses include, but are not limited to, temperature, humidity, shock, and vibration. The test methods are compliant with standards specified in GB/T65872 Class 2 and MIL-PRF-28800F Class 3.	
Appearance and Dimensions		
W x H x D	358.1 mm x 214.8 mm x 121.4 mm	
Weight		
Weight	5 kg	

Calibration Interval	
Recommended Calibration Interval	18 months

Input/Output

Front Panel Connector		
RF Input	Impedance	50 Ω (nom.)
	Connector	N-type female (only available for RSA6085/RSA6140)
		3.5mm male (only available for RSA6265)
Tracking Generator Output	Impedance	50 Ω (nom.)
	Connector	N-type female
Internal/External Reference		
Internal Reference	Frequency	10 MHz
	Output Level	+3 dBm to +10 dBm, +7 dBm (typ.)
	Impedance	50 Ω (nom.)
	Connector	BNC female
External Reference	Frequency	10 MHz ± 10 ppm
	Input Level	0 dBm to +10 dBm
	Impedance	50 Ω (nom.)
	Connector	BNC female
External Trigger Input/Output		
Trig Input	Impedance	≥ 1 kΩ (nom.)
	Connector	BNC female
	Level	3.3 V TTL Level
Trig Output	Impedance	50 Ω (nom.)
	Connector	BNC female
	Level	3.3 V TTL Level

Communication Interface		
USB Host	Connector	USB Type-A (Standard)
	Protocol	Version 2.0
USB Device	Connector	USB Type- B (Standard)
	Protocol	Version 2.0
LAN	Connector	100/1000 Base-T, RJ-45
	Protocol	LXI Core 2011 Device
HDMI	Connector	A plug
	Protocol	HDMI 1.4b

Order Information and Warranty Period

Order Information

	Description	Order No.
Model	Real-time Spectrum Analyzer, 5 kHz to 8.5 GHz	RSA6085
	Real-time Spectrum Analyzer, 5 kHz to 14 GHz	RSA6140
	Real-time Spectrum Analyzer, 5 kHz to 26.5 GHz	RSA6265
Standard Accessory	Power Cord	-
Options	Vector Signal Analysis Application Software	RSA6000-VSA
	EMI Measurement Application Software	RSA6000-EMI
	Analog Demodulation Application Software	RSA6000-ADM
	Preamplifier (PA), 8.5 GHz	RSA6000-P08
	Preamplifier (PA), 14 GHz	RSA6000-P14
	Preamplifier (PA), 26.5 GHz	RSA6000-P26
	200 MHz Analysis Bandwidth	RSA6000-B200
	200 MHz Real-time Bandwidth	RSA6000-RB200
	Advanced Measurement Kit	RSA6000-AMK
	8.5 GHz Tracking Generator Output	RSA6000-T08
Optional Accessories	DSA utility kit. Refer to *Note[1]* for details.	DSA Utility Kit
	RF adaptor kit. Refer to *Note[2]* for details.	RF Adaptor Kit
	Includes: 50 Ω to 75 Ω adaptor (2pcs)	RF CATV Kit
	Includes: 6 dB attenuator (1pcs), 10 dB attenuator (2pcs)	RF Attenuator Kit
	30 dB high-power attenuator, with the max. power of 100 W	ATT03301H
	N(M)-N(M) RF Cable	CB-NM-NM-75-L-12G
	N(M)-SMA(M) RF Cable	CB-NM-SMAM-75-L-12G
	Near-field Probe	NFP-3
	Rack Mount Kit	RM3031
	USB Cable x1	CB-USBA-USBB-FF-150

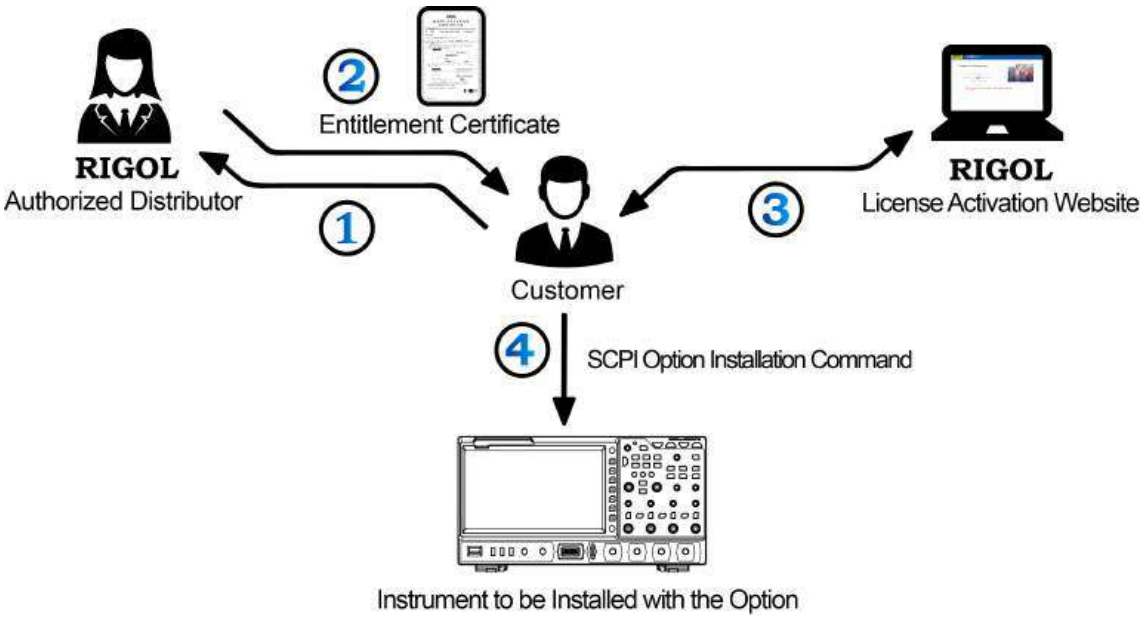
NOTE:

- For all the mainframes, accessories, and options, please contact the local office of RIGOL.
- [1]: Includes N-SMA cable, BNC-BNC cable, N-BNC adaptor, N-SMA adaptor, 75 Ω-50 Ω adaptor, 900 MHz/1.8 GHz antenna (2pcs), 2.4 GHz antenna (2pcs)
- [2]: Includes: N(F)-N(F) adaptor (1pcs), N(M)-N(M) adaptor (1pcs), N(M)-SMA(F) adaptor (2pcs), N(M)-BNC(F) adaptor (2pcs), SMA(F)-SMA(F) adaptor (1pcs), SMA(M)-SMA(M) adaptor (1pcs), BNC T type adaptor (1pcs), 50 Ω SMA load (1pcs), 50 Ω BNC impedance adaptor (1pcs)

Warranty Period

Three years for the mainframe, excluding the accessories.

Option Ordering and Installation Process



1. According to the usage requirements, please purchase the specified options from **RIGOL Sales Personnel**, and provide the serial number of the instrument that needs to install the option.
2. After receiving the option order, the **RIGOL** factory will mail the paper software product license certificate to the address provided in the order.
3. Log in to **RIGOL** official website for registration. Use the software key and instruments serial number provided in the license certificate to obtain the option license code and the option license file.
4. Install the option with the license installation command.

NOTE:

If you encounter any problems in the option installation, please contact **RIGOL** technical team.

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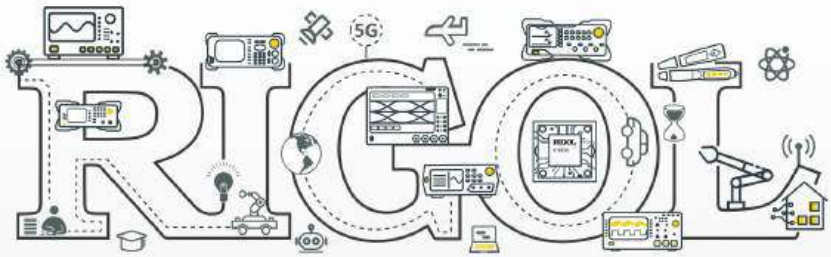

Communication

System Integration

New Energy

- Cellular-5G/WIFI
- UWB/RFID/ ZIGBEE
- Digital Bus/Ethernet
- Optical Communication

- Digital/Analog/RF Chip
- Memory and MCU Chip
- Third-Generation Semiconductor
- Solar Photovoltaic Cells

- New Energy Automobile
- PV/Inverter
- Power Test
- Automotive Electronics

Provide Testing and Measuring Products and Solutions for Industry Customers

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