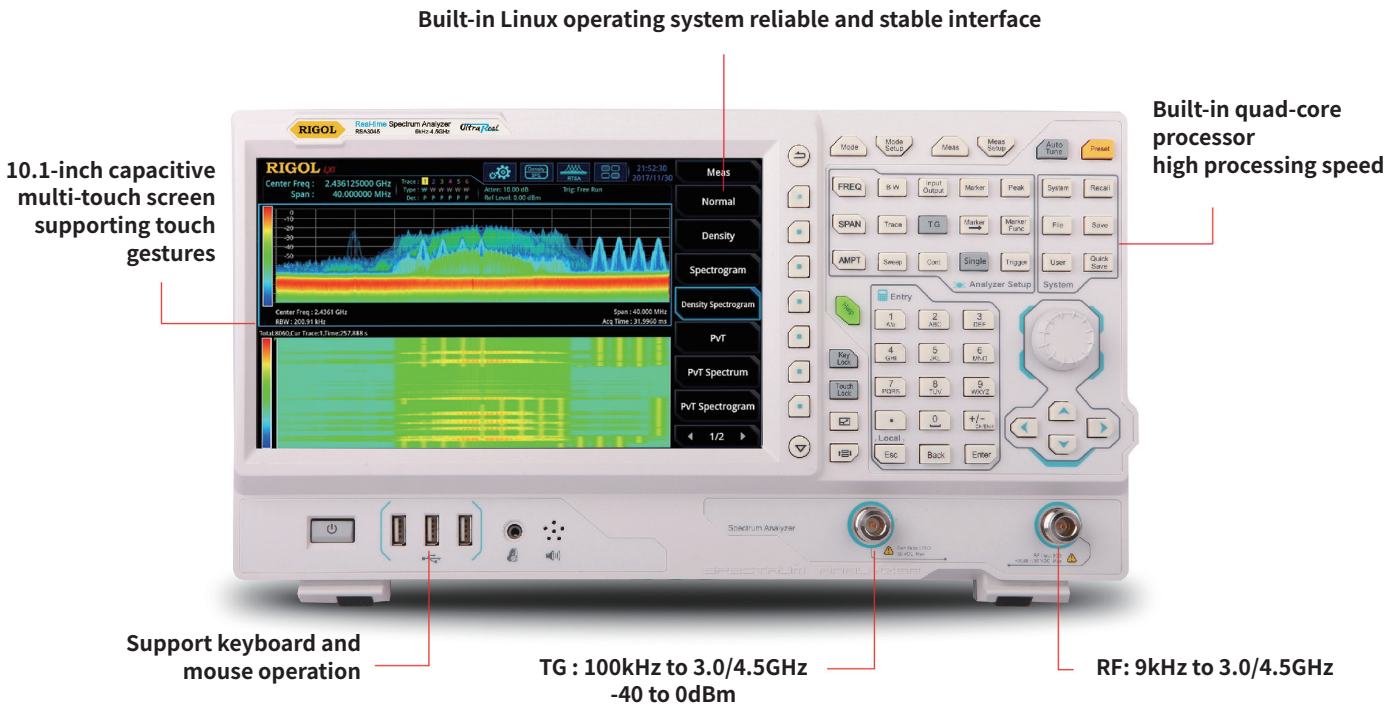
RIGOL
Innovation or nothing


# RSA3000 Series

## Real-time Spectrum Analyzer

- Ultra-Real technology
- Frequency: up to 4.5 GHz
- Displayed average noise level (DANL): <-161 dBm (typical)
- Phase noise: <-102 dBc/Hz (typical)
- Level measurement uncertainty: <1.0 dB
- 4.5 GHz tracking generator
- Min. RBW 1 Hz
- Up to 40 MHz real-time analysis bandwidth
- Multiple measurement modes
- Various advanced measurement functions
- EMI measurement application (option)
- Multiple trigger modes and trigger masks
- Density, spectrogram, and other display modes
- PC software options
- 10.1" capacitive multi-touch screen; supporting touch gestures
- USB, LAN, HDMI and other communication and display interfaces

# RSA3000 Series Real-time Spectrum Analyzer




*Product Dimensions: Width × Height × Depth = 410 mm × 224 mm × 135 mm*

UltraReal

Based on the Ultra-Real technology, the high-speed real-time measurement mode allows you to acquire the signals in the analysis bandwidth seamlessly and make data analysis. It also provides various display modes, such as Spectrogram, Density, and PVT. Besides, FMT function is also available.

**The Ultra-Real technology has the following features:**

- **Seamless analysis**
  - Seamless I/Q data acquisition in the analysis bandwidth
  - Seamless spectrum analysis
- **FMT**
  - Frequency mask trigger (FMT) to trigger the measurement by sporadic or transient events in the spectrum
- **Composite displays**
  - Spectrogram for gap-free display of the spectrum
  - Density for you to visualize how frequently signals occur

## ➤ Specifications

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

**Typical:** characteristic performance, which 80 percent of the measurement results will meet at room temperature (approximately 25℃). This data is not warranted and does not include the measurement uncertainty.

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

**Measured:** an attribute measured during the design phase which can be compared to the expected performance, such as the amplitude drift variation with time. This data is not warranted and is 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. The specifications (except the tracking generator specifications) listed in this manual are those when the tracking generator is off.

## Measurement Mode

| Measurement Mode |
|---|
| General-Purpose Spectrum Analyzer (GPSA) |
| Real-time Spectrum Analyzer (RTSA) |
| EMI Measurement Application (EMI) Option RSA3000-EMI |

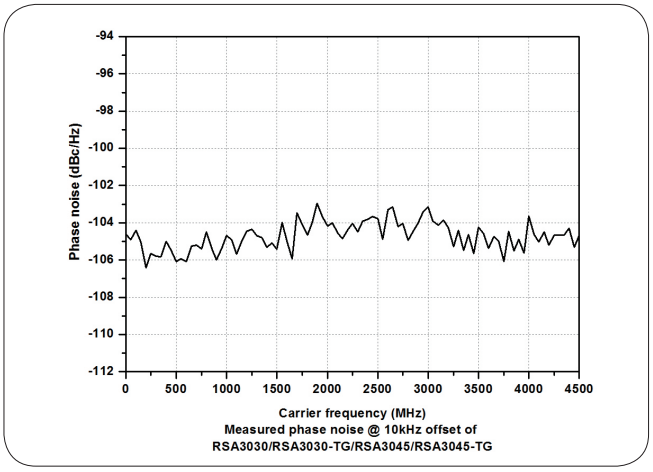
## All Measurement Modes

| Frequency | | | | | |
|---|---|---|---|---|---|
| | | RSA3030 | RSA3030-TG | RSA3045 | RSA3045-TG |
| Frequency Range | | 9 kHz to 3.0 GHz | | 9 kHz to 4.5 GHz | |
| Internal Reference Frequency | | | | | |
| Reference Frequency | | 10 MHz | | | |
| Accuracy | | ±[(time since last calibration × aging rate) + temperature stability + calibration accuracy] | | | |
| Initial Calibration Accuracy | Standard | <1 ppm | | | |
| | Option OCXO-C08 | <0.1 ppm | | | |
| Temperature Stability | 0℃ to 50℃ , with the reference 25℃ | | | | |
| | Standard | <0.5 ppm | | | |
| | Option OCXO-C08 | <0.005 ppm | | | |
| Aging Rate | Standard | <1 ppm/year | | | |
| | Option OCXO-C08 | <0.03 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 | | |
| Resolution | | 1 Hz |
| Uncertainty | | ±(marker frequency readout × reference frequency accuracy + counter resolution) |
| Frequency Span | | |
| Range | Standard | 0 Hz, 100 Hz to maximum frequency |
| | Option RSA3000-BW1 | 0 Hz, 10 Hz to maximum frequency |
| Resolution | | 2 Hz |
| Uncertainty | | ±span/(number of sweep points - 1) |
| SSB Phase Noise | | |
| | | 20℃ to 30℃， $f_C$ = 500 MHz |
| Carrier Offset | 1 kHz | <-90 dBc/Hz (typical) |
| | 10 kHz | <-100 dBc/Hz, <-102 dBc/Hz (typical) |
| | 100 kHz | <-100 dBc/Hz, <-102 dBc/Hz (typical) |
| | 1 MHz | <-110 dBc/Hz, <-112 dBc/Hz (typical) |

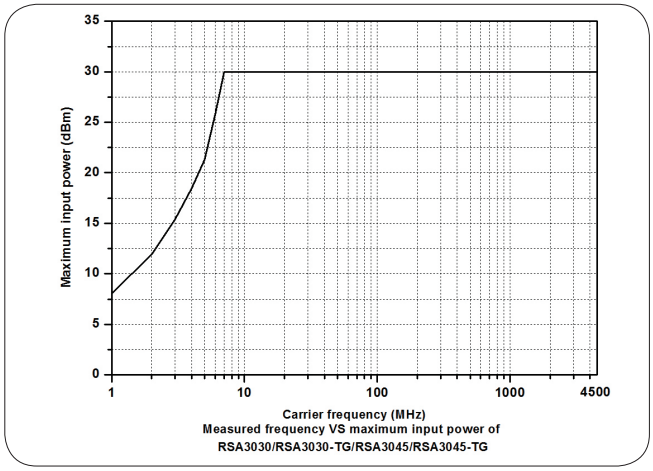


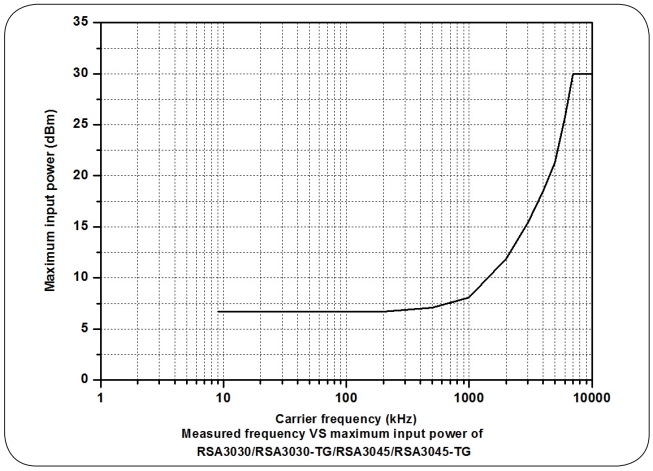

| | | |
|---|---|---|
| **Residual FM** | | |
| | | 20℃ to 30℃ , RBW = VBW = 1 kHz |
| Residual FM | | <10 Hz (nominal) |
| **Bandwidth** | | |
| | | Set "Sweep Time Rule" to "Accy" |
| Resolution Bandwidth (-3 dB)[1] | Standard | 10 Hz to 3 MHz, in 1-3-10 sequence |
| | Option RSA3000-BW1 | 1 Hz to 10 MHz, in 1-3-10 sequence |
| RBW Accuracy | | <5% (nominal) |
| Resolution Filter Shape Factor (60 dB: 3 dB) | | <5 (nominal) |
| Video Bandwidth (-3 dB) | | 1 Hz to 10 MHz, in 1-3-10 sequence |
| Resolution Bandwidth (-6 dB) (Option RSA3000-EMC) | | 200 Hz, 9 kHz, 120 kHz, 1 MHz |

Note: [1] When the tracking generator is enabled or in zero span mode, the available range of RBW is from 1 kHz to 10 MHz.

## Amplitude

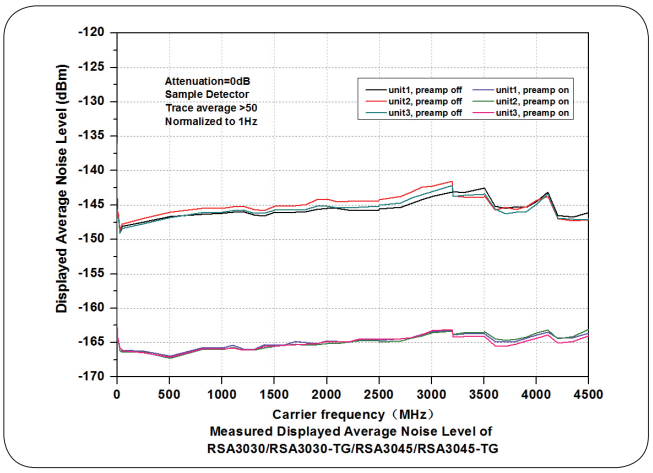
| Measurement Range | |
|---|---|
| Range | $f_C$ ≥ 10 MHz |
| | DANL to +30 dBm |
| **Maximum Safe Input Level[1]** | |
| DC Voltage | 50 V |
| CW RF Power | +30 dBm, attenuation ≥ 40 dB, preamp off. |
| | -10 dBm, attenuation = 20 dB, preamp on. |
| **Maximum Damage Level** | |
| CW RF Power | +33 dBm (2 W) |



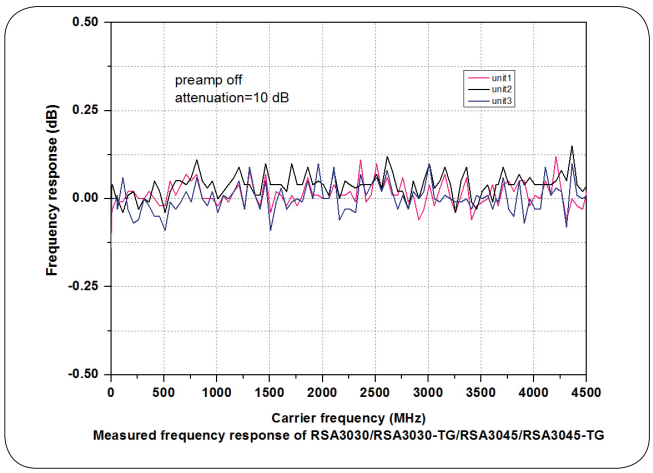



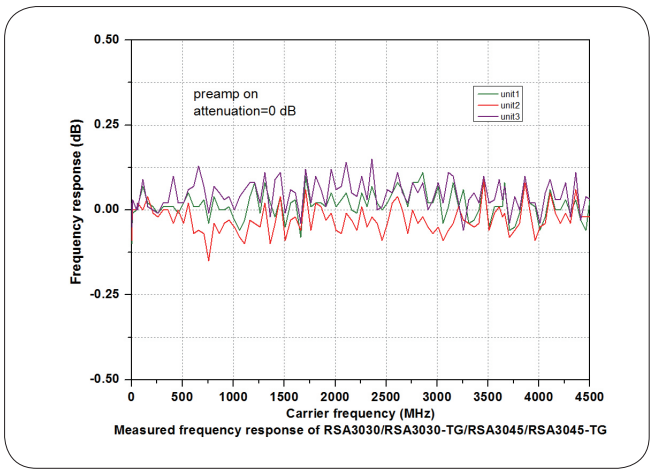

| Displayed Average Noise Level (DANL) | | | | | |
|---|---|---|---|---|---|
| | | RSA3030 | RSA3030-TG | RSA3045 | RSA3045-TG |
| | | attenuation = 0 dB, sample detector, trace averages ≥ 50, tracking generator off, normalized to 1 Hz, 20℃ to 30℃, input impedance = 50 Ω. | | | |
| Preamp off | 9 kHz to 100 kHz | <-120 dBm (typical) | | <-120 dBm (typical) | |
| | 100 kHz to 20 MHz | <-135 dBm, <-140 dBm (typical) | | <-135 dBm, <-140 dBm (typical) | |
| | 20 MHz to 2.7 GHz | <-138 dBm, <-141 dBm (typical) | | <-138 dBm, <-141 dBm (typical) | |
| | 2.7 GHz to 3.0 GHz | <-136 dBm, <-141 dBm (typical) | | <-136 dBm, <-141 dBm (typical) | |
| | 3.0 GHz to 4.5 GHz | | | <-136 dBm, <-140 dBm (typical) | |
| Preamp on | 100 kHz to 20 MHz | <-152 dBm, <-160 dBm (typical) | | <-152 dBm, <-160 dBm (typical) | |
| | 20 MHz to 2.7 GHz | <-158 dBm, <-161 dBm (typical) | | <-158 dBm, <-161 dBm (typical) | |
| | 2.7 GHz to 3.0 GHz | <-156 dBm, <-161 dBm (typical) | | <-156 dBm, <-161 dBm (typical) | |
| | 3.0 GHz to 4.5 GHz | | | <-154 dBm, <-159 dBm (typical) | |

Note: [1] When $f_C$ < 10 MHz, the maximum safe input level is decreased.

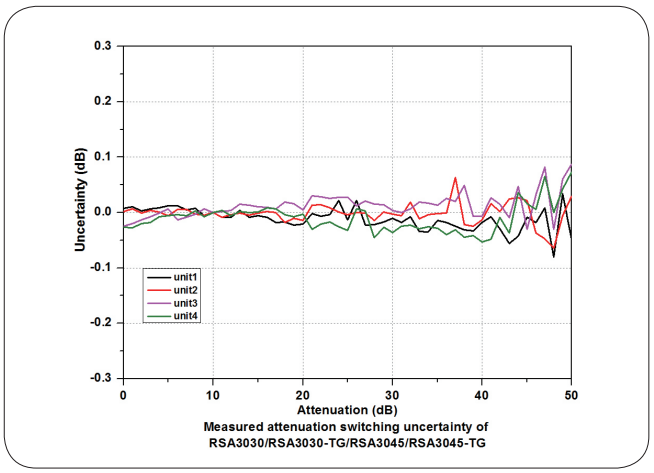


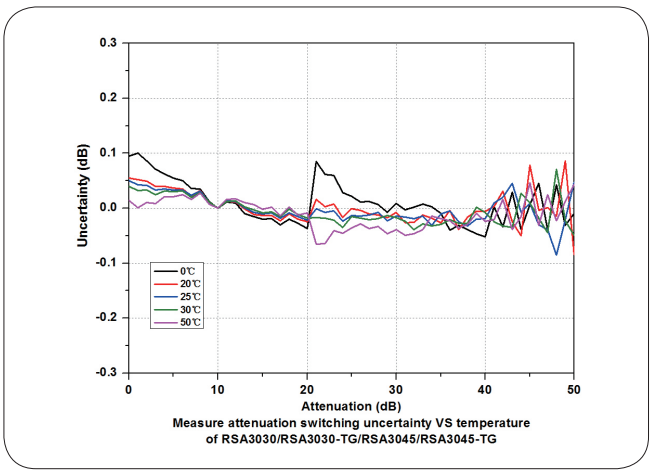

| Level Display | | | | | |
|---|---|---|---|---|---|
| Logarithmic Scale | | 1 dB to 200 dB | | | |
| Linear Scale | | 0 to reference level | | | |
| Number of Display Points | | 801 | | | |
| Number of Traces | | 6 | | | |
| Trace Detector | | normal, pos-peak, neg-peak, sample, RMS average, voltage average, and quasi-peak (Option RSA3000-EMC) | | | |
| Trace Function | | clear write, max hold, min hold, average, view, blank | | | |
| Scale Unit | | dBm, dBmV, dBμV, nV, μV, mV, V, nW, μW, mW, W | | | |
| Frequency Response | | | | | |
| | | RSA3030 | RSA3030-TG | RSA3045 | RSA3045-TG |
| | | attenuation = 10 dB, relative to 50 MHz, 20℃ to 30℃ | | | |
| Preamp off | 100 kHz to 3.0 GHz | <0.7 dB, <0.5 dB (typical) | | <0.7 dB, <0.5 dB (typical) | |
| | 3.0 GHz to 4.5 GHz | | | <0.9 dB, <0.5 dB (typical) | |
| | | attenuation = 0 dB, relative to 50 MHz, 20℃ to 30℃ | | | |
| Preamp on | 100 kHz to 3.0 GHz | <1.0 dB, <0.5 dB (typical) | | <1.0 dB, <0.5 dB (typical) | |
| | 3.0 GHz to 4.5 GHz | | | <1.2 dB, <0.5 dB (typical) | |



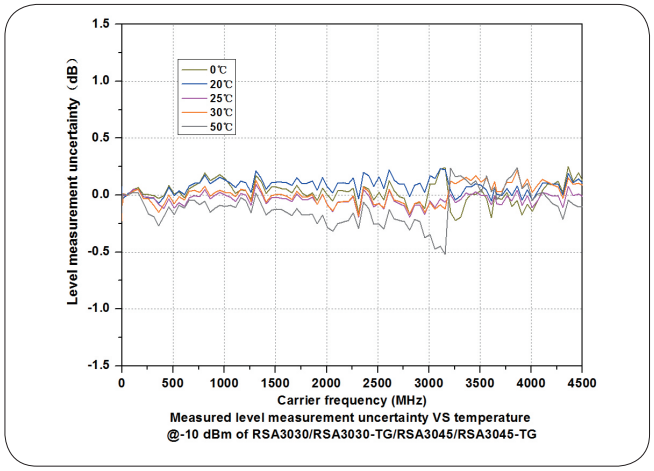



| Input Attenuation Switching Uncertainty | |
|---|---|
| Setting Range | 0 dB to 50 dB, in 1 dB step |
| Switching Uncertainty | $f_C$ = 50 MHz, relative to 10 dB, preamp off, 20℃ to 30℃ |
| | <0.3 dB |

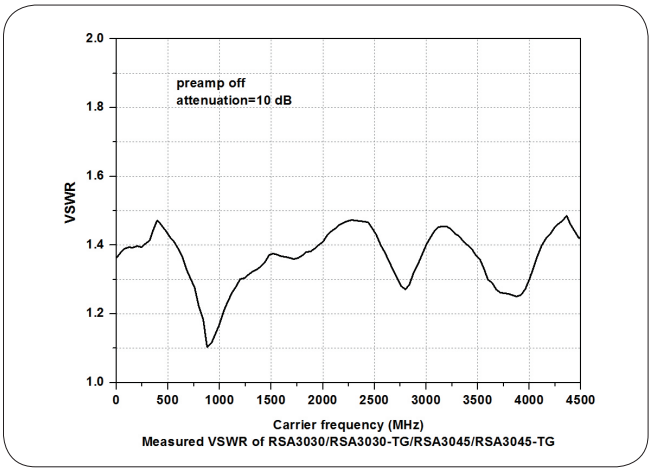



| Absolute Amplitude Accuracy | | | | | |
|---|---|---|---|---|---|
| Uncertainty | | $f_C$ = 50 MHz, peak detector, preamp off, attenuation = 10 dB, input signal level = -10 dBm, 20℃ to 30℃ | | | |
| | | <0.3 dB | | | |
| Reference Level | | | | | |
| Range | Logarithmic Scale | -170 dBm to +30 dBm, in 0.01 dB step | | | |
| | Linear Scale | 707 pV to 7.07 V, 0.11% (0.01 dB) resolution | | | |
| RBW Switching | | | | | |
| Uncertainty | | Set "Sweep Time Rule" to "Accy", relative to 30 kHz RBW | | | |
| | | 1 Hz to 1 MHz | | <0.1 dB | |
| | | 3 MHz, 10 MHz | | <0.3 dB | |
| Preamp (Option RSA3000-PA) | | | | | |
| | | RSA3030 | RSA3030-TG | RSA3045 | RSA3045-TG |
| Frequency Range | | 100 kHz to 3.0 GHz | | 100 kHz to 4.5 GHz | |
| Gain | | 20 dB (nominal) | | | |
| Level Measurement Uncertainty | | | | | |
| | | 95% confidence level, S/N > 20 dB, RBW = VBW = 1 kHz, preamp off, attenuation = 10 dB, -50 dBm < input level ≤ 0 dBm, $f_C$ > 10 MHz, 20℃ to 30℃ | | | |
| Level Measurement Uncertainty | | 1.0 dB (nominal) | | | |

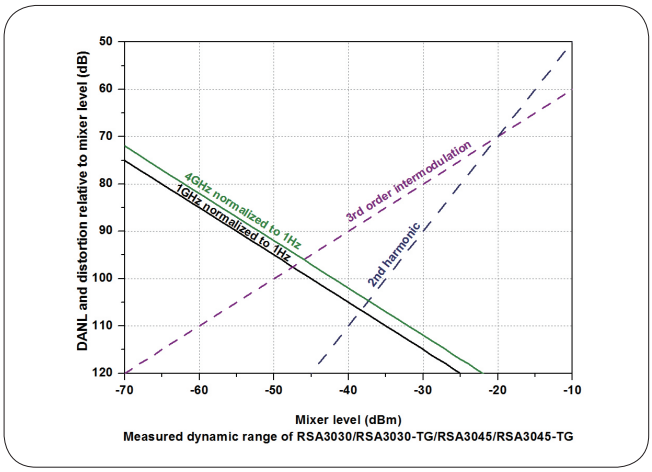


| RF Input VSWR | | | | | |
|---|---|---|---|---|---|
| | | RSA3030 | RSA3030-TG | RSA3045 | RSA3045-TG |
| | | attenuation ≥10 dB, preamp off | | | |
| VSWR | 300 kHz to 3.0 GHz | <1.6 (nominal) | | <1.6 (nominal) | |
| | 3.0 GHz to 4.5 GHz | | | <1.8 (nominal) | |



Measured VSWR of RSA3030/RSA3030-TG/RSA3045/RSA3045-TG

| Distortion | |
|---|---|
| Second Harmonic Intercept (SHI) | fc ≥ 50 MHz, input signal level = -20 dBm, attenuation = 0 dB, preamp off. |
| | +45 dBm |
| Third-order Intercept (TOI) | $f_C$ ≥ 50 MHz, two -20 dBm tones at input mixer spaced by 200 kHz, attenuation = 0 dB, preamp off. |
| | +10 dBm, +15 dBm (typical) |
| 1 dB Gain Compression ($P_{1dB}$)[1] | fc ≥ 50 MHz, attenuation = 0 dB, preamp off |
| | 0 dBm (norminal) |



Measured dynamic range of RSA3030/RSA3030-TG/RSA3045/RSA3045-TG

| Spurious Response | |
|---|---|
| Residual Response | input terminated with a 50 Ω load, attenuation = 0 dB, 20℃ to 30℃ |
| | <-90 dBm, <-100 dBm (typical) |
| Intermediate Frequency | <-60 dBc |
| System-related Sideband | referenced to local oscillators, referenced to A/D conversion, referenced to subharmonic of first LO, referenced to harmonic of first LO |
| | <-60 dBc |
| Input-related Spurious | mixer level = -30 dBm |
| | <-60 dBc |

Note: [1] The frequency interval of the two-tone signals should be greater than 10 MHz.

## Sweep

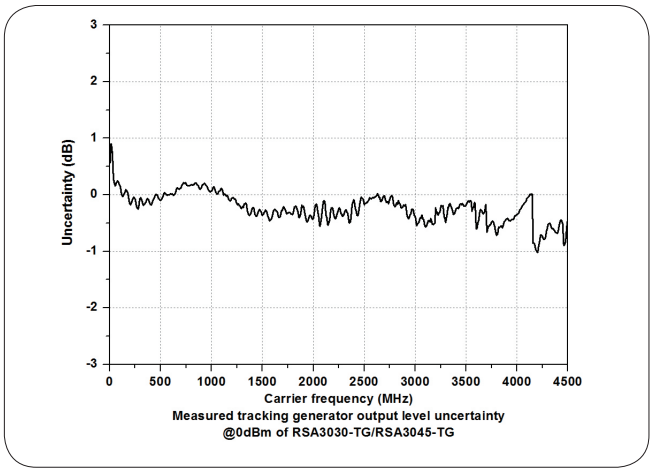
| Sweep | | |
|---|---|---|
| Sweep Time | span ≥ 10 Hz | 1 ms to 4,000 s |
| | zero span | 1 μs to 6,000 s |
| Sweep Time Uncertainty | span ≥ 10 Hz, RBW ≥ 1 kHz | 5% (nominal) |
| | zero span (sweep time > 1 ms) | 5% (nominal) |
| Sweep Mode | | continue, single |

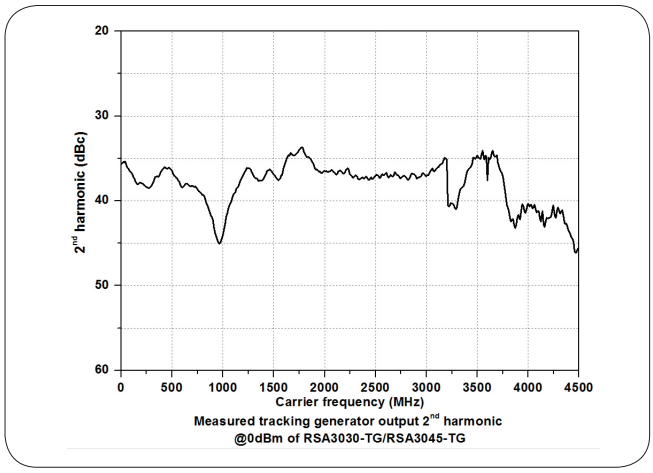
## Trigger

| Trigger | | |
|---|---|---|
| Trigger Source | | free run, external 1, external 2, video |
| Trigger Delay | span ≥ 10 Hz | 0 to 500 ms |
| | zero span | 0 to 500 ms |

## Tracking Generator

| Tracking Generator Output | | | | |
|---|---|---|---|---|
| | RSA3030 | RSA3030-TG | RSA3045 | RSA3045-TG |
| Frequency Range | - | 100 kHz to 3.0 GHz | - | 100 kHz to 4.5 GHz |
| Output Level Range | - | -40 dBm to 0 dBm | - | -40 dBm to 0 dBm |
| Output Level Resolution | - | 1 dB | - | 1 dB |
| Output Flatness | relative to 50 MHz | | | |
| | - | ±3 dB (nominal) | - | ±3 dB (nominal) |



## RTSA Mode

| | | | | | | |
|---|---|---|---|---|---|---|
| Real-time Analysis Bandwidth | 10 MHz | | | | | |
| | 25 MHz (Option RSA3000-B25) | | | | | |
| | 40 MHz (Option RSA3000-B40) | | | | | |
| Min. Signal Duration for 100% POI at the Full-Scale Accuracy | maximum span, default Kaiser Window | | | | | |
| | 9.3 μs | | | | | |
| | 7.82 μs (Option RSA3000-B25) | | | | | |
| | 7.45 μs (Option RSA3000-B40) | | | | | |
| Trace Detector | pos-peak, neg-peak, sample, average | | | | | |
| Number of Traces | 6 | | | | | |
| Window Type | Hanning, Blackman-Harris, Rectangular, Flattop, Kaiser, and Gaussian | | | | | |
| Resolution Bandwidth | provides 6 RBWs for each window, except the Rectangular; for Kaiser window | | | | | |
| | Span | | Min. bandwidth | | Max. bandwidth | |
| | 40 MHz | | 100 kHz | | 3.21 MHz | |
| | 25 MHz | | 62.8 kHz | | 2.01 MHz | |
| | 10 MHz | | 25.1 kHz | | 804 kHz | |
| | 1 MHz | | 2.51 kHz | | 80.4 kHz | |
| | 100 kHz | | 251 Hz | | 8.04 kHz | |
| Max. Sample Rate | 51.2 Msa/s | | | | | |
| FFT Rate | 146,484/s (norminal) | | | | | |
| Number of Markers | 8 | | | | | |
| Amplitude Resolution | 0.01 dB | | | | | |
| Frequency Point | 801 | | | | | |
| Acquisition Time | Max. sample rate | | | | | |
| | >156.5 μs | | | | | |
| Min. Signal Duration for 100% POI at Different RBWs | | | | | | |
| | Duration Time (μs) | | | | | |
| Span | RBW1 | RBW2 | RBW3 | RBW4 | RBW5 | RBW6 |
| 40 GHz | 26.9 | 16.9 | 11.9 | 9.32 | 8.07 | 7.45 |
| 25 MHz | 38.9 | 22.9 | 14.9 | 10.9 | 8.82 | 7.82 |
| 10 MHz | 86.8 | 46.8 | 26.8 | 16.8 | 11.8 | 9.30 |
| 1 MHz | 807 | 407 | 207 | 107 | 56.3 | 31.3 |
| Amplitude | | | | | | |
| Amplitude Flatness | ±0.5 dB[1] (nominal) | | | | | |
| SFDR | <-50 dBc/Hz (typical) | | | | | |
| UltraReal Density | | | | | | |
| Probability Range | 0 to 100% (with a step of 0.1%) | | | | | |
| Min. Span | 5 kHz | | | | | |
| Persistence Duration | 32 ms to 10 s | | | | | |
| UltraReal Spectrogram | | | | | | |
| History Depth | 8,192 | | | | | |
| Dynamic Range Covered by Bitmap Color | 200 dB | | | | | |
| UltraReal PVT | | | | | | |
| Min. Acquisition Time | 187.9 μs | | | | | |
| Max. Acquisition Time | 40 s | | | | | |
| Trigger | | | | | | |
| Trigger Source | free run, external 1, external 2, power(time), FMT | | | | | |
| UltraReal FMT | | | | | | |
| Trigger Diagram | density, spectrogram, normal, PVT | | | | | |
| Trigger Resolution | 0.5 dB (nominal) | | | | | |
| Trigger Criteria | enter, leave, inside, outside, enter-leave, leave-enter | | | | | |

Note:[1] Only applicable to the Normal measurement.

## EMI Mode (Option RSA3000-EMI)

| | |
|---|---|
| **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, CISPR average, RMS average |
| **EMI Key Feature** | |
| Key Feature | CISPR 16-1-1 detectors |
| | CISPR 16-1-1 bandwidths |
| | log and linear display |
| | signal table |
| | scan table |
| | simultaneous detectors |
| | automatic limit testing |
| | measure at marker |
| | delta to limit |
| | step and swept scans |
| | report generation |

## General Specifications

| | | |
|---|---|---|
| **Display** | | |
| Type | | capacitive multi-touch screen |
| Resolution | | 1024 × 600 pixels |
| Size | | 10.1" |
| Color | | 24-bit color |
| **Printer Supported** | | |
| Protocol | | network printer |
| **Mass Memory** | | |
| Mass Memory | Internal Storage | 512 MB (nominal) |
| | External Storage | USB storage device (not supplied) |
| **Power** | | |
| Input Voltage Range, AC | | 100 V to 240 V (nominal) |
| AC Frequency | | 45 Hz to 440 Hz |
| Power Consumption | | 55 W (typical), max. 90 W with all options |
| **Environment** | | |
| Temperature | Operating Temperature Range | 0℃ to 50℃ |
| | Storage Temperature Range | -20℃ to 70℃ |
| Humidity | 0℃ to 30℃ | ≤95% RH |
| | 30℃ to 40℃ | ≤75% RH |
| Altitude | Operating Height | below 3,048 m (10,000 feet) |
| **Electromagnetic Compatibility and Safety** | | |
| EMC | complies with EMC Directive 2014/30/EU,<br>complies with or above the standard specified in IEC61326-1:2013/EN61326-1:2013 Group 1 Class A | |
| | CISPR 11/EN 55011 | |
| | IEC 61000-4-2:2008/EN 61000-4-2 | ±4.0 kV (contact discharge), ±8.0 kV (air discharge) |
| | IEC 61000-4-3:2002/EN 61000-4-3 | 3V/m (80 MHz to 1 GHz); 3V/m (1.4 GHz to 2 GHz); 1V/m (2.0 GHz to 2.7 GHz) |
| | IEC 61000-4-4:2004/EN 61000-4-4 | 1 kV power |
| | IEC 61000-4-5:2001/EN 61000-4-5 | 0.5 kV (phase-to-neutral voltage); 1 kV (phase-to-earth voltage);<br>1 kV (neutral-to-earth voltage) |
| | IEC 61000-4-6:2003/EN 61000-4-6 | 3 V, 0.15 to 80 MHz |
| | IEC 61000-4-11:2004/EN 61000-4-11 | voltage dip: 0% UT during half cycle; 0% UT during 1 cycle; 70% UT during 25 cycles<br>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 |
| Environmental Stress | | 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/T6587 Class 2 and MILPRF-28800F Class 3. |
| **Size** | | |
| (W x H x D) | | 410 mm × 224 mm × 135 mm<br>(16.14" × 8.82" × 5.32") |
| **Weight** | | |
| Without Tracking Generator | | 4.65 kg (10.25 lb) |
| With Tracking Generator | | 4.95 kg (10.91 lb) |
| **Calibration Interval** | | |
| Recommended Calibration Interval | | 18 months |

## Input/Output

| | | | |
|---|---|---|---|
| Front Panel Connector | | | |
| RF Input | Impedance | | 50 Ω (nominal) |
| | Connector | | N-type female |
| TG Output | Impedance | | 50 Ω (nominal) |
| | Connector | | N-type female |
| Internal/External Reference | | | |
| Internal Reference | Frequency | | 10 MHz |
| | Output Level | | +3 dBm to +10 dBm, +7 dBm (typical) |
| | Impedance | | 50 Ω (nominal) |
| | Connector | | BNC female |
| External Reference | Frequency | | 10 MHz ± 5 ppm |
| | Input Level | | 0 dBm to +10 dBm |
| | Impedance | | 50 Ω (nominal) |
| | Connector | | BNC female |
| External Trigger Input/Output | | | |
| External Trigger Input 1 | Impedance | | ≥1 kΩ (nominal) |
| | Connector | | BNC female |
| | Level | | 5 V TTL level |
| External Trigger Input 2/Trigger Output | Impedance | on trigger input | ≥1 kΩ (nominal) |
| | | on trigger output | 50 Ω (nominal) |
| | Connector | | BNC female |
| | Level | | 5 V TTL level |
| IF Output | | | |
| IF Output | Frequency | | 430 MHz ± 20 MHz (nominal) |
| | Amplitude | | RF input power ($P_{RFin}$) ≤ -10 dBm, attenuation = 0, preamp off. |
| | | | 50MHz, $P_{RFin}$ ± 4 dB (nominal)<br>other frequency, $P_{RFin}$ ± 4 dB + RF frequency response (nominal) |
| | Impedance | | 50 Ω (nominal) |
| | Connector | | SMB male |
| Communication Interface | | | |
| USB Host (4 ports) | Connector | | A plug |
| | Protocol | | version 2.0 |
| USB Device | Connector | | B plug |
| | Protocol | | version 2.0 |
| LAN | Connector | | 100/1000Base, RJ-45 |
| | Protocol | | LXI Core 2011 Device |
| HDMI | Connector | | A plug |
| | Protocol | | HDMI 1.4b |

## ▶ Order Information

| | Description | Order No. |
|---|---|---|
| Model | Real-time Spectrum Analyzer, 9 kHz to 3.0 GHz | RSA3030 |
| | Real-time Spectrum Analyzer, 9 kHz to 4.5 GHz | RSA3045 |
| | Real-time Spectrum Analyzer, 9 kHz to 3.0 GHz (with TG installed when leaving the factory) | RSA3030-TG |
| | Real-time Spectrum Analyzer, 9 kHz to 4.5 GHz (with TG installed when leaving the factory) | RSA3045-TG |
| Standard Accessories | Quick Guide (hard copy) | - |
| | Power Cord | - |
| Option | EMI Measurement Application (includes RSA3000-EMC) | RSA3000-EMI |
| | Preamplifier (PA) | RSA3000-PA |
| | High Stability Clock | OCXO-C08 |
| | RBW 1 Hz to 10 MHz | RSA3000-BW1 |
| | Real-time Analysis Bandwidth 25 MHz | RSA3000-B25 |
| | Real-time Analysis Bandwidth 40 MHz | RSA3000-B40 |
| | Advanced Measurement Kit | RSA3000-AMK |
| | EMC Filter and Quasi-Peak Detector Kit | RSA3000-EMC |
| | Spectrum Analyzer PC Software | Ultra Spectrum |
| | EMI Pre-compliance Test Software | S1210 EMI Pre-compliance Software |
| Optional Accessories | Include: 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) | DSA Utility Kit |
| | Include: 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) | RF Adaptor Kit |
| | Include: 50 Ω to 75 Ω adaptor (2pcs) | RF CATV Kit |
| | Include: 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 |
| | VSWR Bridge, 1 MHz to 3.2 GHz | VB1032 |
| | VSWR Bridge, 2 GHz to 8 GHz | VB1080 |
| | Near-field Probe | NFP-3 |
| | Rack Mount Kit | RM6041 |
| | USB Cable | CB-USBA-USBB-FF-150 |

# Warranty

Three years for the mainframe

**Официальный дистрибьютор в России**

**Техника-М**

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