ADVANTEST

R3261A

The Advantest R3261A is a high-performance RF Spectrum Analyzer covering a frequency range of 9 kHz to 2.6 GHz. It is designed for analyzing RF signals with high accuracy, featuring a 1 Hz tuning resolution, built-in frequency counter, and a wide dynamic range. With standard GPIB connectivity, it is well-suited for automated test environments and manual laboratory measurements.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488) standard
Display	CRT display (green monochrome)
Warm-up Time	30 minutes

Physical

Power Supply	100 to 120 VAC / 220 to 240 VAC (switchable), 50/60 Hz, ≤ 150 VA
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	355 mm × 177 mm × 450 mm mm
Weight	15 kg

Frequency

Frequency Range	9 kHz to 2.6 GHz
Tuning Resolution	1 Hz
Frequency Span Range	1 kHz to 2.6 GHz, and 0 Hz (zero span)
Reference Frequency Stability (Aging)	±2 × 10^-6 / year
Reference Frequency Stability (Temperature)	±5 × 10^-6 (0 °C to 50 °C)
Residual FM	< 20 Hz p-p / 0.1 s
SSB Phase Noise	≤ -105 dBc/Hz @ 20 kHz offset
Frequency Counter Resolution	1 Hz to 1 kHz

Amplitude

Amplitude Measuring Range	-130 dBm to +25 dBm
Maximum Safe RF Input Level	+25 dBm (with ≥ 10 dB attenuation)
Maximum DC Input Voltage	0 VDC
RF Input Attenuator Range	0 dB to 70 dB (10 dB steps)
Log Display Range	100 dB, 50 dB, 20 dB, 10 dB
Linear Display Range	10% of reference level / division
Amplitude Units	dBm, dBµV, dBmV, V, W
Reference Level Range (Log)	-109.9 dBm to +40.0 dBm
Display Scale Fidelity (Log)	+/- 1.5 dB over 0 to -70 dB, +/- 1.0 dB over 0 to -50 dB, +/- 0.2 dB over 0 to -10 dB
Display Scale Fidelity (Linear)	+/- 5% of full scale

Bandwidth

Resolution Bandwidth (RBW) Range	30 Hz to 1 MHz (1-3 sequence)
Video Bandwidth (VBW) Range	1 Hz to 1 MHz (1-3 sequence)

Sweep

Sweep Time Range	50 ms to 1000 s
Sweep Trigger Sources	Free Run, Line, Single, Video, External

Signal Processing

Trace Detectors	Positive Peak, Negative Peak, Sample
Trace Storage Capacity	2 traces (Trace A, Trace B)

Inputs & Outputs

RF Input Connector Type	Type-N female
RF Input Impedance	50 Ω
RF Input VSWR	≤ 1.5 (for ≥ 10 dB input attenuation)
External Reference Input	10 MHz, -10 dBm to +5 dBm, 50 Ω
Calibration Output Signal	20 MHz, -20 dBm
Probe Power Output	±15 V, max 100 mA
Headphone Output	8 Ω minimum impedance, mini-jack
Direct Plotter Output	Supported via GPIB
External Trigger Input	BNC female, TTL level
Gate Input	BNC female, TTL level
Monitor Output	BNC, composite video signal

Display & System

Memory Card Slot	JEIDA memory card slot (for state and trace storage)
Marker Functions	Peak Search, Next Peak, Delta Marker, Signal Track

Physical & Environmental

Storage Temperature Range	-20 °C to +60 °C
Relative Humidity	≤ 85% (non-condensing)

Power & Electrical

AC Power Input Voltage Range	90 to 132 VAC / 198 to 250 VAC (automatic selection)
AC Power Frequency Range	50 / 60 Hz

Spurious Responses

Second Harmonic Distortion	<= -70 dBc (for input level <= -30 dBm, frequency >= 10 MHz)
Third-Order Intermodulation Distortion	<= -70 dBc (for two -30 dBm inputs, separation > 100 kHz, frequency >= 10 MHz)
Residual Responses	<= -100 dBm (with 50 ohm termination, 0 dB input attenuation, frequency >= 10 MHz)

Receiver & Demodulation

Demodulation	AM and FM (built-in speaker and headphone jack)

Power Requirements

Power Consumption	<= 150 VA

Options

Option 21 Reference Aging Rate	±2 × 10^-8 / day
Option 21 Reference Temperature Stability	±5 × 10^-8 (0°C to 50°C)
Option 11 QP Detector Bandwidths	200 Hz, 9 kHz, 120 kHz (CISPR compliant)

Performance

Built-in Measurement Functions	Occupied Bandwidth (OBW), Adjacent Channel Power (ACP), 3rd Order Intermodulation, dB Down Bandwidth
1 dB Gain Compression	≥ -10 dBm (at mixer input)
Sweep Modes	Single, Continuous, Manual

TECHNOLOGY

Analog & Digital RF Synthesis / Heterodyne Spectrum Analysis

APPLICATIONS

RF Signal Analysis, Spectral Measurements, and Transmitter Testing