

ADVANTEST

R3132N

The Advantest R3132N is a high-performance 75-ohm spectrum analyzer covering a frequency range from 9 kHz to 3 GHz. Designed with a Direct Digital Synthesizer (DDS) local oscillator, it offers excellent level accuracy, rapid sweep times of up to 20 traces per second, and a wide 117 dB dynamic range. It is ideal for RF testing, telecommunications, and cable TV (CATV) applications where 75-ohm characteristic impedance is required.

SPECIFICATIONS

General

Interfaces	GPIB, RS-232
Display	6.5-inch color TFT LCD (640 x 480)
Maximum Power Consumption	200 VA or less

Physical

Power Supply	100 to 240 VAC, 50/60 Hz
Operating Temperature	0 °C to +50 °C °C
Dimensions (W×H×D)	424 mm × 177 mm × 420 mm mm
Weight	14 kg or less (without options) kg

Frequency Specifications

Frequency Range	9 kHz to 3 GHz
Frequency Span Accuracy	±1% or less
Synthesized Local Oscillator	Direct Digital Synthesizer (DDS)

Amplitude Specifications

Over-all Level Accuracy	±1.5 dB (with auto-calibration)
1 dB Gain Compression Point	>+105 dBμV (for >= 20 MHz)

Dynamic Range and Distortion

Second-Order Harmonic Distortion	<= -70 dBc
Third-Order Intermodulation Distortion	<= -75 dBc (two-signal)

Sweep and Trigger Specifications

Trace Update Rate	Up to 20 traces per second
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Inputs and Outputs

RF Input Impedance	75 Ω
RF Input Connector	N-type female (75 Ω)

Resolution and Bandwidth

Resolution Bandwidth (RBW) Range	300 Hz to 3 MHz (1-3 sequence)
Video Bandwidth (VBW) Range	10 Hz to 3 MHz (1-3 sequence)

Frequency

Frequency Reference Aging Rate	$\pm 2 \times 10^{-6}$ / year
Frequency Reference Temperature Stability	$\pm 5 \times 10^{-6}$ (0°C to 50°C)
Frequency Readout Accuracy	$\pm(\text{Readout Frequency} \times \text{Frequency Reference Accuracy} + \text{Span} \times \text{Span Accuracy} + \text{LSB})$
SSB Phase Noise	-100 dBc/Hz @ 20 kHz offset
Frequency Span Range	50 kHz to 3 GHz, zero span

Sweep

Sweep Time Range	20 ms to 1000 s (spectrum mode), 50 μ s to 1000 s (zero span)
Sweep Trigger Source	Free Run, Single, Video, External, Line

Amplitude

Maximum Input Level	+135 dB μ V (at RF attenuation $\geq$ 10 dB), ± 10 VDC
Displayed Average Noise Level (DANL)	-6 dB μ V (at 1 GHz, 300 Hz RBW, 10 Hz VBW, 0 dB attenuation)
Scale Settings	Log: 10, 5, 2, 1 dB/div; Linear: 10% of reference level/div
Dynamic Range Displayed	100 dB (10 divisions)
Amplitude Units	dBm, dB μ V, dBmV, dB μ V/m

Storage

Removable Storage	3.5-inch Floppy Disk Drive (2DD/2HD)
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Input Characteristics

Input VSWR	1.5 or less (100 kHz to 2 GHz, attenuation $\geq$ 10 dB), 2.0 or less (2 GHz to 3 GHz, attenuation $\geq$ 10 dB)
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Resolution Bandwidth

RBW Shape Factor (60 dB / 3 dB)	15:1 or less
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Inputs & Outputs

Calibrator Output Frequency	30 MHz
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Demodulation

Demodulation Types	AM and FM (with built-in speaker and phone jack)
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Environmental

Storage Temperature Range	-20 °C to +60 °C
Operating Humidity	85% RH or less (non-condensing)

Options

Tracking Generator Option	Option 74 (100 kHz - 3 GHz, 75 Ohm)
High Stability Reference Option	Option 20 ($\pm 2 \times 10^{-8}$ / day)

TECHNOLOGY

Superheterodyne Spectrum Analyzer

APPLICATIONS

CATV testing, broadcast analysis, and telecommunications RF measurements

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.