

ADVANTEST

R3465

The Advantest R3465 is a modulation spectrum analyzer designed for evaluating digital mobile communication systems. Operating across a frequency range from 9 kHz to 8 GHz, it integrates standard spectrum analyzer capabilities with digital transmission test functions, including modulation accuracy and transmission speed measurements. Utilizing Direct Digital Synthesizer (DDS) technology and a high-speed settling synthesizer, it supports standard preset modes for PHS, PDC, and NADC systems, alongside optional analysis for GSM, DECT, and CDMA.

SPECIFICATIONS

General

Interfaces	GPIB, RS-232
Display	6.5-inch TFT color LCD

Physical

Power Supply	100 to 120 VAC / 220 to 240 VAC (automatic selection), 50/60 Hz, ≤ 300 VA
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	424 mm × 177 mm × 450 mm mm
Weight	17 kg kg

Frequency Specifications

Frequency Range	9 kHz to 8 GHz
Frequency Span Range	1 kHz to 8 GHz, Zero Span
Reference Frequency Aging Rate	$\pm 2 \times 10^{-6}$ / year (standard)
Phase Noise at 10 kHz Offset	≤ -100 dBc/Hz (carrier frequency ≤ 3.0 GHz)

Amplitude Specifications

Maximum Safe Input Level	+30 dBm (with ≥ 10 dB RF attenuation)
Maximum DC Input Voltage	0 VDC
Input Attenuator Range	0 to 70 dB
Input Attenuator Step	10 dB

Resolution and Bandwidth

Resolution Bandwidth (RBW) Range	300 Hz to 3 MHz, 5 MHz
Resolution Bandwidth (RBW) Steps	1, 3 sequence
Video Bandwidth (VBW) Range	1 Hz to 3 MHz, 5 MHz

Signal Processing and Measurements

Analysis Modes	Spectrum Analyzer Mode, Digital Transmission Tester Mode
Preset Standard Parameters (STD Mode)	PHS, PDC, NADC
Optional Communication Standards	GSM, DCS1800, DCS1900, DECT, CDMA
Built-In Measurements	Occupied Bandwidth (OBW), Adjacent Channel Power (ACP), Harmonic Distortion, Modulation Accuracy

Inputs and Outputs

RF Input Connector	N-type (female)
RF Input Impedance	50 Ω (nominal)
Memory Card Interface	2 slots (PCMCIA Type II)

Display and User Interface

Display Type	TFT Color LCD
Display Size	6.5 inch

Physical and Power

AC Input Voltage Range	100 to 120 VAC / 220 to 240 VAC
AC Input Frequency	50 Hz / 60 Hz
Power Consumption	$\leq$ 300 VA

Environmental and Compliance

Storage Temperature Range	-20 $^{\circ}$ C to +60 $^{\circ}$ C
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Sweep

Sweep Time (Span > 0 Hz)	50 ms to 1000 s
Sweep Time (Zero Span)	50 μ s to 1000 s

Inputs & Outputs

External Reference Input	10 MHz, -10 dBm to +10 dBm (BNC female)
Reference Output	10 MHz, $\geq$ 0 dBm (BNC female)
External Trigger Input	BNC female, TTL level
Gate Input	BNC female, TTL level
Audio Output	Internal speaker and 3.5 mm headphone jack

Performance

Demodulation Modes	AM, FM
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Receiver Performance

Displayed Average Noise Level (10 MHz - 3.6 GHz)	-115 dBm (at 1 kHz RBW, 0 dB attenuation)
Displayed Average Noise Level (3.6 GHz - 8 GHz)	-115 dBm (at 1 kHz RBW, 0 dB attenuation)

RF Input

Input VSWR (100 kHz to 3.6 GHz)	< 1.5:1 (with ≥ 10 dB input attenuation)
Input VSWR (3.6 GHz to 8 GHz)	< 2.0:1 (with ≥ 10 dB input attenuation)

Spurious Responses

Second Harmonic Distortion	<-70 dBc (for 10 MHz to 1.8 GHz input at -30 dBm mixer level)
Third-Order Intermodulation Distortion	<-75 dBc (for two -30 dBm tones at mixer, carrier >10 MHz, separation >1 MHz)

Display & Amplitude Scale

Scale Selection (Log)	1, 2, 5, 10 dB/div
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Options

Option 01 High Stability Reference Aging Rate	$\pm 5 \times 10^{-9}$ / day
Option 16 Tracking Generator Frequency Range	9 kHz to 3.6 GHz
Option 16 Tracking Generator Output Level	0 dBm to -31 dBm (0.1 dB resolution)

TECHNOLOGY

Direct Digital Synthesizer (DDS)

APPLICATIONS

Digital mobile communication system testing and RF spectrum analysis

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