ADVANTEST

U3661

The Advantest U3661 is a highly portable microwave spectrum analyzer covering a wide frequency range from 9 kHz to 26.5 GHz. Designed for field and laboratory use, it features exceptional sideband noise performance, high-speed sweep capability down to 50 µs in zero span mode, and versatile power options including AC, DC, and battery operation. It is optimized for analyzing narrow-band radio communications and TDMA burst waveforms.

SPECIFICATIONS

General

Interfaces	GPIB, RS-232, PCMCIA Memory Card Slot
Display	6-inch active matrix color TFT LCD
Warm-Up Time	30 minutes

Physical

Power Supply	100 to 120 VAC / 220 to 240 VAC (50/60 Hz), +10 to +16 VDC external, or Battery Pack
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	291 mm × 177 mm × 331 mm (without handle and feet) mm
Weight	8.5 kg (without battery pack) kg

Frequency Specifications

Frequency Range	9 kHz to 26.5 GHz
Sideband Noise / Phase Noise	-100 dBc/Hz or less (at 10 kHz offset)
Frequency Span Range	50 kHz to 26.5 GHz, and Zero Span
Frequency Reference Aging Rate	±2 ppm per year
Frequency Reference Temperature Stability	±5 ppm (0 to 50 °C)

Resolution Bandwidth (RBW) & Video Bandwidth (VBW)

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

Amplitude Specifications

Input Attenuator Range	0 to 50 dB (10 dB steps)
Reference Level Range	-64 dBm to +30 dBm

Sweep & Trigger Specifications

Sweep Time Range (Zero Span)	50 µs to 1000 s
Sweep Time Range (Span > 0 Hz)	20 ms to 1000 s

Inputs & Outputs (Interfaces)

RF Input Connector	3.5 mm female
RF Input Impedance	50 Ω nominal
External Reference Input	10 MHz

Measurement Functions & Software

Measurement Functions	Adjacent Channel Power (ACP), Occupied Bandwidth (OBW), Channel Power

Power & Physical Specifications

Power Consumption	60 VA or less (AC) / 40 W or less (DC)

Amplitude

Displayed Average Noise Level (DANL)	-117 dBm (100 kHz - 3.1 GHz), -115 dBm (3.1 - 8 GHz), -110 dBm (8 - 15.5 GHz), -105 dBm (15.5 - 26.5 GHz) @ 1 kHz RBW, 0 dB attenuation
Maximum Safe RF Input Power	+30 dBm (1 W) with >= 10 dB attenuation
Maximum Input DC Voltage	0 VDC
Frequency Response	±1.0 dB (9 kHz - 3.1 GHz), ±1.5 dB (3.1 - 8 GHz), ±2.5 dB (8 - 15.5 GHz), ±3.5 dB (15.5 - 26.5 GHz)
Amplitude Measurement Range	DANL to +30 dBm
Display Scale	Log: 10, 5, 2, 1 dB/div; Linear: 10% of reference level/div

Spurious Responses

Third-Order Intermodulation Distortion (TOI)	<-75 dBc (100 MHz - 3.1 GHz), <-70 dBc (3.1 - 26.5 GHz) with two -30 dBm tones at input mixer
Second Harmonic Distortion	<-70 dBc (10 MHz - 3.1 GHz), <-80 dBc (3.1 - 26.5 GHz) with -30 dBm tone at input mixer

Triggering

Sweep Trigger Modes	Free Run, Single, Video, External
External Trigger Input	TTL level, BNC female
Gate Trigger Input	TTL level, BNC female

Storage

Expansion Slots	PCMCIA Type II (1 slot)

Storage & Interfaces

Memory Card Slots	PCMCIA Type II (1 slot)

Inputs & Outputs

Audio Monitor	Internal speaker and 3.5 mm phone jack (AM/FM demodulated audio)
Printer Interface	Centronics (D-sub 25-pin)
Serial Interface	RS-232 (D-sub 9-pin)
GPIB Interface	IEEE-488 standard

Performance

1 dB Gain Compression	> -5 dBm (at mixer input, > 10 MHz)

Options

Option 20 (High Stability Reference)	Aging rate of +/- 2 x 10^-8 / day, +/- 1 x 10^-7 / year
Option 70 (Low RBW)	Adds 100 Hz and 300 Hz Resolution Bandwidth (RBW) filters
Option 74 (Tracking Generator)	100 kHz to 2.2 GHz tracking generator

Power

Battery Operation	Approx. 1.5 hours of operation with optional battery pack

TECHNOLOGY

Superheterodyne Spectrum Analyzer

APPLICATIONS

Microwave and RF field testing, TDMA burst waveform analysis, and transmission characteristics measurement

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