ADVANTEST

U3641

The Advantest U3641 is a highly portable, lightweight 3 GHz spectrum analyzer optimized for field installation and maintenance of communication equipment. Featuring a three-way power supply system (AC, external DC, and optional battery pack), it is designed for maximum mobility. It incorporates a synthesized local oscillator for high-precision measurements, a 6-inch TFT color LCD display, a switchable preamplifier, and options for resolution bandwidths down to 100 Hz and an internal tracking generator.

SPECIFICATIONS

General

Interfaces	Two PCMCIA memory card slots (Type I/II), RS-232, GPIB (optional)
Display	6-inch TFT color LCD

Physical

Power Supply	AC Line (100 to 240 VAC, 50/60 Hz), External DC (11 to 17 VDC), or Optional Battery Pack; Power consumption <= 60 VA (AC) / <= 45 W (DC)
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	291 mm × 148 mm × 330 mm mm

Frequency

Frequency Range	9 kHz to 3 GHz
Frequency Span Range	50 kHz to 3 GHz, and Zero Span
Frequency Reference Stability	±2 ppm/year
Frequency Reference Temperature Stability	±5 ppm (0 °C to 50 °C)
Residual FM	≤ 20 Hz p-p / 100 ms (span zero)
Internal Reference Frequency	10 MHz

Bandwidth

Resolution Bandwidth (RBW) Range	1 kHz to 1 MHz (in 1-3 sequence); 100 Hz and 300 Hz (optional)
Video Bandwidth (VBW) Range	10 Hz to 1 MHz (in 1-3 sequence)

Sweep

Sweep Time (Span > 0)	50 ms to 1000 s
Sweep Time (Zero Span)	50 µs to 1000 s
Sweep Trigger Modes	Free Run, Single, Video, External, TV-V

Amplitude

Measurement Range	Preamp OFF: -117 dBm to +30 dBm; Preamp ON: -135 dBm to +30 dBm
Maximum Safe Input Level	+30 dBm (with >= 10 dB attenuation)
Displayed Average Noise Level (Preamp OFF)	-117 dBm @ 1 GHz (1 kHz RBW)
Displayed Average Noise Level (Preamp ON)	-135 dBm @ 1 GHz (1 kHz RBW)
Input Attenuator Range	0 to 50 dB in 10 dB steps
Third-Order Intermodulation	<= -75 dBc (10 MHz to 3 GHz, input -30 dBm, 100 kHz separation)

Inputs & Outputs

RF Input Impedance	50 Ω
RF Input Connector	N-type (female)
Input VSWR	<= 1.5 (for frequency <= 2 GHz, attenuation >= 10 dB)
External Trigger Input	BNC female, TTL level
Gate Input	BNC female, TTL level
Reference I/O	BNC female, 10 MHz
Audio Output	Internal speaker and 3.5 mm monaural headphone jack
Maximum DC Input Voltage	0 VDC

Built-in Measurements

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

Physical & Environmental

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

Tracking Generator Option

Optional Tracking Generator Frequency Range	100 kHz to 3 GHz
Optional Tracking Generator Output Level	0 to -31 dBm in 1 dB steps
Optional Tracking Generator Output Flatness	±1.5 dB (at 100 kHz to 3 GHz, reference to 100 MHz, output -10 dBm)

Amplitude Accuracy

Calibration Output	20 MHz, -20 dBm ±0.3 dB
Frequency Response	±0.5 dB (100 kHz to 2 GHz), ±1.0 dB (9 kHz to 3 GHz)
Resolution Bandwidth Switching Uncertainty	±0.3 dB (after calibration, reference RBW 300 kHz)
Log Scale Fidelity	±0.2 dB / 1 dB, ±1.0 dB / 10 dB, ±1.5 dB / 80 dB

Storage & Connectivity

PC Card Slot	Type I/II, 1 slot (PCMCIA Ver. 2.0 / JEIDA Ver. 4.1)

Performance

Detector Modes	Normal, Positive Peak, Negative Peak, Sample, QP (with option 04)

Features

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

TECHNOLOGY

Superheterodyne Spectrum Analyzer

APPLICATIONS

Field installation, maintenance, and compliance measurements for wireless communications