ANRITSU

MS2601A

The Anritsu MS2601A is a legacy, high-performance synthesized spectrum analyzer covering the 9 kHz to 2.2 GHz frequency range. Highly accurate and reliable, it is designed for precise RF spectral analysis, offering a wide dynamic range, excellent resolution bandwidth flexibility, and automated measurement functions such as occupied bandwidth and adjacent channel power calculations.

SPECIFICATIONS

General

Interfaces	GP-IB (IEEE-488)
Display	5.5-inch green monochrome CRT

Physical

Power Supply	100 to 120 V AC / 200 to 240 V AC (selectable), 50/60 Hz, <= 130 VA
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	320 mm x 177 mm x 450 mm mm
Weight	16 kg kg

Frequency Specifications

Frequency Range	9 kHz - 2.2 GHz
Frequency Tuning Resolution	1 Hz
Frequency Span Range	0 Hz (zero span), 10 kHz - 2.2 GHz
Frequency Reference Accuracy	±2 ppm
Frequency Reference Aging Rate	±2 x 10^-8 per day, ±2 x 10^-6 per year
Temperature Stability	±5 x 10^-6 (0 to 50 °C)
Phase Noise	≤ -90 dBc/Hz (at 10 kHz offset, 1 GHz carrier)
Residual FM	≤ 20 Hz p-p (in 100 ms, span ≤ 2 MHz)

Resolution and Video Bandwidths

Resolution Bandwidth (RBW) Range	30 Hz - 1 MHz
Resolution Bandwidth (RBW) Steps	1, 3 sequence (30 Hz, 100 Hz, 300 Hz, 1 kHz, 3 kHz, 10 kHz, 30 kHz, 100 kHz, 300 kHz, 1 MHz)
Resolution Bandwidth (RBW) Accuracy	±15% (100 Hz - 1 MHz), ±30% (30 Hz)
Selectivity (Shape Factor)	≤ 15:1 (30 Hz - 100 Hz), ≤ 12:1 (300 Hz - 1 MHz) @ -60 dB to -3 dB ratio
Video Bandwidth (VBW) Range	1 Hz - 100 kHz
Video Bandwidth (VBW) Steps	1, 10 sequence (1 Hz, 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz)

Amplitude and Dynamic Range

Amplitude Measurement Range	-120 dBm to +30 dBm
Maximum Safe RF Input Level	+30 dBm (with ≥ 10 dB input attenuation)
Displayed Average Noise Level (DANL)	≤ -120 dBm (1 MHz - 2.2 GHz, 30 Hz RBW, VBW 1 Hz, 0 dB attenuation)
Gain Compression (1 dB)	≥ -5 dBm (at mixer, ≥ 10 MHz)
Second Harmonic Distortion	≤ -75 dBc (-30 dBm input at mixer, ≥ 10 MHz)
Third-Order Intermodulation (TOI)	≤ -75 dBc (-30 dBm input at mixer, ≥ 10 MHz, 100 kHz separation)
Display Scale Range	10, 5, 2, 1 dB/div, Linear (10% of reference level/div)
Input Attenuator Range	0 to 70 dB
Input Attenuator Steps	10 dB

Measurement Accuracy

Frequency Response (Flatness)	±0.5 dB (100 kHz - 1.5 GHz), ±1.0 dB (9 kHz - 2.2 GHz)
Calibration Signal Output Level	-20 dBm
Calibration Signal Output Frequency	100 MHz

Sweep and Triggering

Sweep Time Range	50 ms - 1000 s
Sweep Modes	Continuous, Single, Manual
Trigger Types	Free Run, Line, Video, External

Inputs and Outputs

RF Input Connector Type	N-type (female)
RF Input Impedance	50 Ω
External Reference Input Frequency	10 MHz
Internal Reference Output Frequency	10 MHz

Instrument Functions and Software

Marker Functions	Peak Search, Next Peak, Marker to Center, Marker to Ref Level, Delta Marker
Number of Traces	2 (A, B)
Occupied Bandwidth (OBW) Measurement	Supported
Adjacent Channel Power (ACP) Measurement	Supported

Internal Memory

Save/Recall Capacity (Internal)	10 panel setups, 10 waveforms

Options & Accessories

Option 01 Tracking Generator Frequency Range	100 kHz to 2.2 GHz
Option 02 PTA Programming Language	PTA BASIC
Option 04 QP Detector Bandwidths (6 dB)	200 Hz, 9 kHz, 120 kHz
Option 04 QP Detector Standard Compliance	CISPR Pub. 16

TECHNOLOGY

RF Spectrum Analyzer

APPLICATIONS

Spectral measurements, RF transmitter testing, and general-purpose laboratory analysis