FLUKE

6071A

The Fluke 6071A is a synthesized RF signal generator designed for high-performance testing of VHF and UHF receivers. It combines the resolution and stability of a premium synthesizer with the exceptionally low spectral noise of a top-tier signal generator, making it ideal for both manual benchtop work and automated test equipment (ATE) systems.

SPECIFICATIONS

General

Interfaces	IEEE-488 (GPIB)
Display	7-segment LED display
Setup Storage	50 non-volatile registers
Sweep Modes	Digital frequency sweep (Auto, Single, Manual)

Physical

Power Supply	100 / 120 / 220 / 240 V AC (±10%), 47 to 440 Hz
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	432 mm × 133 mm × 546 mm mm

Frequency Specifications

Frequency Range	200 kHz to 1040 MHz
Frequency Resolution	1 Hz (to 520 MHz), 2 Hz (520 to 1040 MHz)
Internal Reference Frequency	10 MHz

Output Power & Amplitude

Output Power Range (to 520 MHz)	-140 dBm to +19 dBm
Output Power Range (above 520 MHz)	-140 dBm to +13 dBm

Spectral Purity

Non-harmonic Spurious (to 520 MHz)	-90 dBc to -100 dBc
Non-harmonic Spurious (above 520 MHz)	-84 dBc
Harmonics	< -30 dBc (for output levels ≤ +13 dBm)
Subharmonics	None (below 520 MHz), < -35 dBc (520 to 1040 MHz)
SSB Phase Noise (260 to 520 MHz)	< -138 dBc/Hz (at 20 kHz offset)
SSB Phase Noise (520 to 1040 MHz)	< -132 dBc/Hz (at 20 kHz offset)
Residual FM (300 Hz to 3 kHz BW, 200 kHz to 520 MHz)	< 0.2 Hz RMS
Residual FM (300 Hz to 3 kHz BW, 520 to 1040 MHz)	< 0.4 Hz RMS

Modulation Capabilities

Modulation Capabilities	AM, FM, ØM (Phase), Pulse

Connectivity & Remote Control

RF Output Connector	Type-N female (front panel)

Physical Characteristics

Form Factor	Benchtop / Rackmount
Rack Unit Height	3U

RF Output

RF Output Impedance	50 Ω nominal
RF Output VSWR	< 1.5:1 (for output levels ≤ +13 dBm)
Level Accuracy	±1.0 dB (from -127 dBm to +13 dBm)
Level Resolution	0.1 dB

Modulation

AM Depth Range	0% to 99.5%
FM Distortion	< 1% (at 1 kHz rate, deviations up to 100 kHz)
Internal Modulation Oscillator Frequency Range	400 Hz and 1 kHz
External Modulation Input Impedance	600 Ω
External Modulation Sensitivity	1 V peak for indicated deviation
Pulse Modulation Rise/Fall Time	< 15 ns (with Option 130)
Pulse Modulation On/Off Ratio	> 80 dB (with Option 130)

Frequency

Reference Output Frequency	10 MHz
External Reference Input	1, 2, 5, or 10 MHz
Internal Reference Aging Rate	< 5 × 10^-10 per day

Options

Option 120	Rear Panel RF Output and Modulation Inputs
Option 130	Pulse Modulation

TECHNOLOGY

Synthesized RF Signal Generator

APPLICATIONS

VHF and UHF receiver testing, including selectivity, sensitivity, intermodulation, AGC response, and SINAD measurements