

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E5071B

The Keysight (formerly Agilent) E5071B is an ENA Series RF Vector Network Analyzer designed to deliver fast and accurate multi-port measurements for RF components. Covering a frequency range of 300 kHz to 8.5 GHz, the E5071B features integrated 2-, 3-, and 4-port configurations, extensive fixture simulation capabilities, and a built-in VBA environment for automated testing.

SPECIFICATIONS

General

Interfaces	GPIB, LAN (10/100 Base-T), USB, VGA, Parallel
Display	10.4-inch color LCD touch screen
Mass Storage	Built-in Hard Disk Drive (HDD) and 3.5-inch Floppy Disk Drive (FDD)

Physical

Power Supply	90-132 V / 198-264 V, 47-63 Hz, 350 VA max
Operating Temperature	5 to 40 °C °C

General Characteristics

Instrument Type	RF Vector Network Analyzer
Number of Test Ports	2, 3, or 4 ports (integrated, configuration dependent)
System Impedance	50 Ω
Supported Connector Types	Type-N (female)

Frequency Characteristics

Frequency Range	300 kHz to 8.5 GHz
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Test Port Input (Receiver) Characteristics

Trace Noise (Magnitude)	0.001 dB rms
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Dynamic Range and System Performance

System Dynamic Range	125 dB at test port (typical)
Measurement Speed (Per Point)	9.6 μ s/point
IF Bandwidth Settings	10 Hz to 100 kHz

Measurement Capabilities

Frequency-Offset Mode	Supported (for frequency translated devices)
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Calibration and Error Correction

ECal Support	Yes (USB)
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Data Processing and Analysis

Fixture Simulator	Fixture embedding/de-embedding and port characteristic impedance conversion
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Programming / Automation	Built-in Visual Basic for Applications (VBA)
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Options and Configurations

Companion Software	Measurement Wizard Assistant software
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Frequency

Frequency Resolution	1 Hz
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Test Port Output

Output Power Range	-50 to +10 dBm
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Output Power Resolution	0.05 dB
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Measurement

Data Points per Trace	2 to 20,001
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Number of Channels	Up to 16 independent channels
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Number of Traces	Up to 16 traces per channel
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Sweep

Sweep Types	Linear frequency, log frequency, segment sweep, power sweep
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Trigger Sources	Internal, External, Manual, Bus
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Display & Analysis

Data Formats	Log magnitude, linear magnitude, phase, group delay, SWR, polar, Smith chart, real, imaginary
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Configuration

Hardware Port Options	2-port, 3-port, or 4-port (configuration dependent)
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Analysis & Features

Time Domain Analysis	Supported (requires Option 010)
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Programming & Control

Built-in Macro Language	Visual Basic for Applications (VBA)
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Inputs & Outputs

External Reference Input Frequency	10 MHz
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Internal Reference Output Frequency	10 MHz
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TECHNOLOGY

RF Vector Network Analysis

APPLICATIONS

RF Component Testing

