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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 8714ES

HP Agilent 8714ES S-Parameter Vector Network Analyzer The Agilent 8714ES is an RF vector network analyzer in the 8712E series covering 300 kHz to 3.0 GHz with full S-parameter two-port capability. OEM technical specifications detail 1 Hz frequency resolution, synthesized source purity, and corrected system performance with Type-N 50 ohm and other calibration kits. Two-port RF component characterization to 3 GHz, filter and amplifier S-parameter production test, and 50/75 ohm cable and antenna measurements with appropriate options. The Agilent 8714ES is an RF vector network analyzer in the 8712E series covering 300 kHz to 3.0 GHz with full S-parameter two-port capability. OEM technical specifications detail 1 Hz frequency resolution, synthesized source purity, and corrected system performance with Type-N 50 ohm and other calibration kits. Two-port RF component characterization to 3 GHz, filter and amplifier S-parameter production test, and 50/75 ohm cable and antenna measurements with appropriate options. Full S-parameter measurements (S11, S21, S12, S22)



MODEL

**Agilent / Keysight
8714ES**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8714ES

LISTING

<https://aumictechlabs.com/products/8714es-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8714ES is a compact RF network analyzer that measures S-parameters, transmission, reflection, and related device characteristics across 300 kHz to 3 GHz. It integrates a synthesized source, dual-channel S-parameter test set with full two-port vector-error correction, three independent receivers, and an internal display - all optimized for production test

environments. Technical Specifications Frequency & Power Frequency range: 300 kHz to 3 GHz Frequency resolution: 1 Hz Output power: -60 dBm to +13 dBm (60 dB step attenuator + 70 dB control range) Sweep time: 40 ms or faster System impedance: 50 Ω (standard) or 75 Ω (Option 1EC) Measurement Performance Dynamic range: 100 dB Error correction: Full two-port vector error correction Independent channels: Two Independent receivers: Three Detection modes: Narrowband (high-rejection) and broadband (frequency-translating devices) Measurement Parameters S-parameters (S_{11} , S_{21}), transmission and reflection characteristics, gain, insertion loss, isolation, insertion phase, electrical length, linear group delay, return loss, standing wave ratio (SWR), reflection coefficient, impedance, gain compression, AM-to-PM conversion, absolute power. Display Formats Rectangular, polar, Smith chart, delay, SWR, linear and log magnitude, phase, real and imaginary, dBW, dBm, dB μ W, dBV, dBmV, dB μ V. Key Features Synthesized RF source with 1 Hz resolution and fast 40 ms sweeps Integrated two-port S-parameter test set with vector error correction Three sensitive, independent receiver channels Selectable narrowband or broadband detection Optional 2-, 6-, and 12-port switching test sets 9-inch internal color display 3.5-inch floppy disk for data and calibration storage Typical Applications Production testing of two-port RF and microwave devices Transmission line and filter characterization Amplifier gain and stability assessment Insertion loss and return loss measurements Power sweep and compression analysis Frequency-dependent device behavior analysis Compatibility & Integration LAN: 10Base-T TCP/IP (Ethernut) with NFS client support GPIB: IEEE 488.2 programming and control Serial: RS-232C interface Parallel: Centronics printer/plotter Video: VGA external monitor output Input/Output: User-defined TTL open-collector signals Programming: Keysight Instrument BASIC (IBASIC)

8714ES Characteristics / Specifications

PARAMETER	VALUE
Frequency Range	300 kHz to 3.0 GHz
Frequency Resolution	1 Hz
Frequency Stability Typical	+/-5 ppm, 0 to 55 C
CW Accuracy	+/-5 ppm at 25 C +/-5 C
Harmonics	less than -30 dBc
Phase Noise at 10 kHz Offset Characteristic	less than -67 dBc/Hz
Residual FM 30 Hz to 15 kHz Nominal	less than 1.5 kHz peak
Level Accuracy 50 Ohm	+/-2.0 dB
Level Accuracy 75 Ohm less than 2 GHz	+/-3.0 dB
Maximum Power 50 Ohm less than 1 GHz	9 dBm
Maximum Power 50 Ohm greater than 1 GHz	7 dBm
Minimum Power 50 Ohm Nominal	-60 dBm
Power Resolution	0.01 dBm
Corrected Directivity Type N 50 Ohm to 1.3 GHz	50 dB
Corrected Directivity Type N 50 Ohm 1.3 to 3 GHz	47 dB
Corrected Source Match Type N 50 Ohm to 1.3 GHz	42 dB
Corrected Source Match Type N 50 Ohm 1.3 to 3 GHz	36 dB
Net Weight Nominal	24.4 kg (54 lb)
Shipping Weight Nominal	40 kg (88 lb)
Warm Up For Specs	60 minutes
Analyzer Type	S-parameter VNA
Residual AM in 100 kHz BW Nominal	less than -50 dBc

PARAMETER	VALUE
Corrected Load Match Type N 50 Ohm to 1.3 GHz	50 dB
Corrected Load Match Type N 50 Ohm 1.3 to 3 GHz	47 dB
Reflection Tracking Type N 50 Ohm	+/-0.02 dB
Transmission Tracking Type N 50 Ohm to 1.3 GHz	+/-0.04 dB

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

specifications detail 1 Hz frequency resolution, synthesized source purity, and corrected system performance with Type-N 50 ohm and other calibration kits.

Applications

Two-port RF component characterization to 3 GHz, filter and amplifier S-parameter production test, and 50/75 ohm cable and antenna measurements with appropriate options.

Key Features

Full S-parameter measurements (S11, S21, S12, S22)

300 kHz to 3.0 GHz synthesized coverage

1 Hz frequency resolution

50 ohm and 75 ohm Option 1EC configurations

User 2-port calibration with multiple connector kits

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Frequency Range	300 kHz to 3.0 GHz
Frequency Resolution	1 Hz
Frequency Stability Typical	+/-5 ppm, 0 to 55 C
CW Accuracy	+/-5 ppm at 25 C +/-5 C
Harmonics	less than -30 dBc
Phase Noise at 10 kHz Offset Characteristic	less than -67 dBc/Hz

Residual FM 30 Hz to 15 kHz Nominal: less than 1.5 kHz peak

Level Accuracy 50 Ohm: +/-2.0 dB

Level Accuracy 75 Ohm less than 2 GHz: +/-3.0 dB

Maximum Power 50 Ohm less than 1 GHz: 9 dBm

Maximum Power 50 Ohm greater than 1 GHz: 7 dBm

Minimum Power 50 Ohm Nominal: -60 dBm

Power Resolution: 0.01 dBm

Corrected Directivity Type N 50 Ohm to 1.3 GHz: 50 dB

Corrected Directivity Type N 50 Ohm 1.3 to 3 GHz: 47 dB

Corrected Source Match Type N 50 Ohm to 1.3 GHz: 42 dB

Corrected Source Match Type N 50 Ohm 1.3 to 3 GHz: 36 dB

Specifications

PARAMETER	VALUE
Net Weight Nominal	24.4 kg (54 lb)
Shipping Weight Nominal	40 kg (88 lb)
Warm Up For Specs	60 minutes
Analyzer Type	S-parameter VNA

PARAMETER	VALUE
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Residual AM in 100 kHz BW Nominal	less than -50 dBc
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Corrected Load Match Type N 50 Ohm to 1.3 GHz: 50 dB
 Corrected Load Match Type N 50 Ohm 1.3 to 3 GHz: 47 dB
 Reflection Tracking Type N 50 Ohm: +/-0.02 dB
 Transmission Tracking Type N 50 Ohm to 1.3 GHz: +/-0.04 dB

Notes
 From Agilent 8712E Series RF Vector Network Analyzers technical specifications (8714ES columns). Corrected residuals depend on calibration kit and IF bandwidth; fine 15 Hz BW assumed for corrected tables.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.