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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 85107A

HP Agilent 85107A 45 MHz to 50 GHz 8510C Network Analyzer System The HP/Agilent 85107A is the 45 MHz to 50 GHz 8510C vector network analyzer system configuration. OEM 8510C data sheet performance for the published 50 GHz 85107B-005 column (8517B test set, 83651B source, 85056A 2.4 mm kit, full two-port sliding-load calibration) lists receiver dynamic range 93/105/95/87 dB and system dynamic range 77/89/72/60 dB across 0.045-2 / 2-20 / 20-40 / 40-50 GHz. Coaxial 2.4 mm S-parameter characterization of two-port devices to 50 GHz. The HP/Agilent 85107A is the 45 MHz to 50 GHz 8510C vector network analyzer system configuration. OEM 8510C data sheet performance for the published 50 GHz 85107B-005 column (8517B test set, 83651B source, 85056A 2.4 mm kit, full two-port sliding-load calibration) lists receiver dynamic range 93/105/95/87 dB and system dynamic range 77/89/72/60 dB across 0.045-2 / 2-20 / 20-40 / 40-50 GHz. Coaxial 2.4 mm S-parameter characterization of two-port devices to 50 GHz. 8510C display/processor with 8517-class 50 GHz test set



MODEL

**Agilent / Keysight
85107A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

85107A

LISTING

<https://aumictechlabs.com/products/85107a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 85107A is a precision component within the 8510 network analyzer system that extends measurement capability into the microwave and millimeter-wave spectrum. Operating from 45 MHz to 50 GHz, it delivers S-parameter characterization of active and passive

networks. Typically integrated with an 8510C vector network analyzer, synthesized sweeper, and test set, the 85107A provides the dynamic range and measurement fidelity required for demanding RF/microwave applications.

Technical Specifications

- # Frequency Range 45 MHz to 50 GHz
- # Measurement Performance Receiver Dynamic Range: up to 106 dB (frequency dependent; 86 dB for 0.045–2 GHz, 106 dB for 2–8 GHz)
- System Dynamic Range: up to 93 dB (frequency dependent; 68 dB for 0.045–2 GHz, 93 dB for 2–8 GHz)
- Typical Residuals (85107B system components): Directivity 48 dB, Source Match 40 dB, Load Match 48 dB
- # Connectors & Interfaces 2.4 mm connectors for millimeter-wave frequencies 3.5 mm male connector available for related reference modules HP 8510 system interface integration

Key Features

- Configurable with step attenuators and bias tees (Option 005)
- High power and high dynamic range capability (Option 007)
- Port 2 coupler reversal option enabling up to 1 Watt input (Option 003)
- 3.5 mm measurement accessories available (Option 001)
- Time domain measurement capability (Option 010)
- Mountable in 1.6 m system racks with 110 V AC or 220/240 V AC input (Options 030, 031, 230)

Typical Applications

- Linear S-parameter characterization of microwave and millimeter-wave networks
- Component and subsystem validation in RF/microwave design
- Manufacturing test and quality assurance in systems integration environments

Compatibility & Integration

The 85107A operates as an integral component of the 8510 network analyzer series and is frequently deployed with the 8510C vector network analyzer. System configurations include a 50 GHz synthesized sweeper, 50 GHz S-parameter test set, and 2.4 mm measurement accessories.

85107A Characteristics / Specifications

PARAMETER	VALUE
Model	85107A
Instrument Type	50 GHz 8510C vector network analyzer system
Frequency Range	45 MHz to 50 GHz
Test Set Class	8517B S-parameter test set (85107B-005 published column)
Rf Source Class	83651B synthesized sweeper
Calibration Kit Class	85056A 2.4 mm
Calibration Technique	full two-port with sliding loads
Receiver Dynamic Range 0p045 To 2 Ghz	93 dB
Receiver Dynamic Range 2 To 20 Ghz	105 dB
Receiver Dynamic Range 20 To 40 Ghz	95 dB
Receiver Dynamic Range 40 To 50 Ghz	87 dB
System Dynamic Range 0p045 To 2 Ghz	77 dB
System Dynamic Range 2 To 20 Ghz	89 dB
System Dynamic Range 20 To 40 Ghz	72 dB
System Dynamic Range 40 To 50 Ghz	60 dB
Max Power Port2 0p045 To 2 Ghz	plus 17 dBm
Max Power Port2 2 To 20 Ghz	plus 8 dBm
Max Power Port2 20 To 40 Ghz	plus 4 dBm
Max Power Port2 40 To 50 Ghz	minus 3 dBm
Residual Directivity 0p045 To 2 Ghz	42 dB
Residual Directivity 2 To 20 Ghz	42 dB
Residual Directivity 20 To 40 Ghz	38 dB
Residual Directivity 40 To 50 Ghz	36 dB
Residual Source Match 0p045 To 2 Ghz	41 dB
Crosstalk 0p045 To 2 Ghz	99 dB

PARAMETER	VALUE
Crosstalk 2 To 20 Ghz	110 dB
Specification Temperature	23 C plus or minus 3 C
Connector Class	2.4 mm coax

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.

performance for the published 50 GHz 85107B-005 column (8517B test set, 83651B source, 85056A 2.4 mm kit, full two-port sliding-load calibration) lists receiver dynamic range 93/105/95/87 dB and system dynamic range 77/89/72/60 dB across 0.045-2 / 2-20 / 20-40 / 40-50 GHz.

Applications
Coaxial 2.4 mm S-parameter characterization of two-port devices to 50 GHz.

Key Features
8510C display/processor with 8517-class 50 GHz test set
83651-class synthesized sweeper to 50 GHz
Full two-port sliding-load calibration with 85056A
Step-attenuator and bias-tee 005 configuration in the published table
Time-domain and pulse options on the 8510C processor

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	85107A
Instrument Type	50 GHz 8510C vector network analyzer system
Frequency Range	45 MHz to 50 GHz
Test Set Class	8517B S-parameter test set (85107B-005 published column)
Rf Source Class	83651B synthesized sweeper
Calibration Kit Class	85056A 2.4 mm
Calibration Technique	full two-port with sliding loads
Receiver Dynamic Range 0p045 To 2 Ghz	93 dB
Receiver Dynamic Range 2 To 20 Ghz	105 dB
Receiver Dynamic Range 20 To 40 Ghz	95 dB
Receiver Dynamic Range 40 To 50 Ghz	87 dB
System Dynamic Range 0p045 To 2 Ghz	77 dB
System Dynamic Range 2 To 20 Ghz	89 dB
System Dynamic Range 20 To 40 Ghz	72 dB
System Dynamic Range 40 To 50 Ghz	60 dB
Max Power Port2 0p045 To 2 Ghz	plus 17 dBm
Max Power Port2 2 To 20 Ghz	plus 8 dBm
Max Power Port2 20 To 40 Ghz	plus 4 dBm
Max Power Port2 40 To 50 Ghz	minus 3 dBm
Residual Directivity 0p045 To 2 Ghz	42 dB

PARAMETER	VALUE
Residual Directivity 2 To 20 Ghz	42 dB
Residual Directivity 20 To 40 Ghz	38 dB
Residual Directivity 40 To 50 Ghz	36 dB
Residual Source Match 0p045 To 2 Ghz	41 dB
Crosstalk 0p045 To 2 Ghz	99 dB
Crosstalk 2 To 20 Ghz	110 dB
Specification Temperature	23 C plus or minus 3 C
Connector Class	2.4 mm coax

Notes

From Agilent 8510C Network Analyzer data sheet 50 GHz system table (85107B Option 005 column). 85107A is the 45 MHz to 50 GHz 8510C system; confirm 8517A versus 8517B test-set revision on the system nameplate.

Ordering Information

OPTION	DESCRIPTION
Option 005	column). 85107A is the 45 MHz to 50 GHz 8510C system; confirm 8517A versus 8517B test-set revision on the system nameplate.

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

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NIST-traceable calibration · SAM registered ·
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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.