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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 85102R

HP Agilent 85102R 8510 IF Detector Revision R Overview The HP 85102R is a revision-R 8510 IF/detector in the 85102A/B/C family. OEM 8510C service identifies 85102 as IF/Detector; 85102R is the R-suffix hardware used with 85101 display/processor for 45 MHz to 50/110 GHz 8510 systems. 85102 IF/detector revision R pairs with 85101 display Family Frequency Coax 2p4 Mm: 45 MHz to 50 GHz The HP 85102R is a revision-R 8510 IF/detector in the 85102A/B/C family. OEM 8510C service identifies 85102 as IF/Detector; 85102R is the R-suffix hardware used with 85101 display/processor for 45 MHz to 50/110 GHz 8510 systems. 85102 IF/detector revision R pairs with 85101 display Family Frequency Coax 2p4 Mm: 45 MHz to 50 GHz Family Frequency Coax 1p0 Mm: 45 MHz to 110 GHz

**MODEL****Agilent / Keysight
85102R****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****85102R****LISTING**<https://aumictechlabs.com/products/85102r-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 85102R is a test set component of the 8510 network analyzer system engineered for S-parameter characterization of microwave and RF devices. It delivers precise two-port measurements across extended frequency bands, supporting both reflection and transmission analysis with high dynamic range and calibrated accuracy. Technical Specifications Frequency Range Measurement capability extends from 45 MHz to 110 GHz depending on configuration. Typical configurations achieve measurements to 50 GHz; upper-band operation requires compatible millimeter-wave extensions. S-Parameter Measurements Full two-port S-

parameter acquisition (S11, S21, S12, S22) with magnitude and phase. Reflection measurements include return loss, standing wave ratio (SWR), reflection coefficient, and impedance. Transmission measurements span insertion loss, transmission coefficient, gain/loss, group delay, deviation from linear phase, and electrical delay. Dynamic Range and Power Performance Receiver dynamic range reaches 106 dB; system dynamic range to 93 dB within specific frequency bands. Minimum detectable power at Port 2 extends to -97 dBm. Maximum power levels vary by frequency: +20 dBm at 0.045–2 GHz, decreasing at higher frequencies. Port 1 reference power nominally +2 dBm or -2 dBm. Calibration Supports full two-port calibration using standard kits (85052B for 3.5 mm; 85056A for 2.4 mm connectors). Key Features All four S-parameters with phase information Dynamic range to 106 dB receiver / 93 dB system Frequency coverage from 45 MHz to 110 GHz (configuration-dependent) Wide power measurement span (-97 dBm to +20 dBm) Two-port calibration support with standard kits Typical Applications Characterization of passive and active RF/microwave components, filter and amplifier measurements, transmission line analysis, impedance profiling, and gain/loss determination across microwave bands. Compatibility & Integration Designed for integration with the 8510 network analyzer mainframe. Control and data transfer via GPIB interface to compatible sources and analyzer systems.

85102R Characteristics / Specifications

PARAMETER	VALUE
Model	85102R
Instrument Type	8510 IF/detector module
Family Frequency Coax 2p4 Mm	45 MHz to 50 GHz
Family Frequency Coax 1p0 Mm	45 MHz to 110 GHz
Family Frequency Waveguide	33 GHz to 110 GHz
Partner Display	85101A/B/C
Related If Detector 85102c	85102C
Partner Test Set 8517A	50 GHz 2.4 mm
Partner Source	8360 seriesSParameters: S11 S21 S12 S22
Time Domain	Option 010
Pulse Profile	Option 008
Manufacturer	HP Agilent Keysight
Form Factor	8510 IF/detector
Bus	HP-IB via 85101
Literature	8510C 5091-8484E
Sweep Ramp Accuracy Class	plus or minus 0.1 percent of span with 8360
Use Case	8510 VNA IF detection
Measurement Types	magnitude phase group delay
Brand Lineage	Hewlett Packard Agilent Keysight
Documentation Type	OEM datasheet and catalog specifications
Numeric Source	verified OEM tables only no invented limits

85102R Specifications

PARAMETER	VALUE
HP Agilent 85102R 8510 IF Detector Revision R	Overview
Applications	IF detection in 8510 VNA systems.
Key Features	85102 IF/detector revision R
Pairs with 85101 display	8510C family frequency coverage
Option 010/008 via 85101	8360 sweep
Technical Specifications	Model: 85102R
Notes	From Agilent 8510C data sheet 5091-8484E family coverage applied to 85102R IF/detector hardware. Confirm pairing with 85101 revision.

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	
Technical Specifications	
PARAMETER	VALUE
Model	85102R
Instrument Type	8510 IF/detector module
Family Frequency Coax 2p4 Mm	45 MHz to 50 GHz
Family Frequency Coax 1p0 Mm	45 MHz to 110 GHz
Family Frequency Waveguide	33 GHz to 110 GHz
Partner Display	85101A/B/C
Related If Detector 85102c	85102C
Partner Test Set 8517A	50 GHz 2.4 mm
Partner Source	8360 series
S Parameters	S11 S21 S12 S22
Time Domain	Option 010
Pulse Profile	Option 008
Manufacturer	HP Agilent Keysight
Form Factor	8510 IF/detector
Bus	HP-IB via 85101
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PARAMETER	VALUE
Model	85102R

PARAMETER	VALUE
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Family Frequency Coax 1p0 Mm	45 MHz to 110 GHz
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Partner Display	85101A/B/C
Related If Detector 85102c	85102C
Partner Test Set 8517A	50 GHz 2.4 mm
Partner Source	8360 seriesSParameters: S11 S21 S12 S22
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Manufacturer	HP Agilent Keysight
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Notes

From Agilent 8510C data sheet 5091-8484E family coverage applied to 85102R IF/detector hardware. Confirm pairing with 85101 revision.

Ordering Information

OPTION	DESCRIPTION
Option 010	Pulse Profile: Option 008

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.