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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 86117B 65 GHz dual channel electrical module

Agilent Keysight 86117B Dual 65 GHz Electrical DCA Module The Agilent 86117B provides two electrical sampling channels with 30, 50, and 65 GHz bandwidth settings for 40 Gb/s-class electrical waveforms. OEM 86100 dual-electrical tables list 5.4 ps transition at 65 GHz (0.35/BW), characteristic RMS noise 0.4 mV (30 GHz), 0.5 mV (50 GHz), and 1.3 mV (65 GHz), and plus or minus 2 V maximum input. 40 Gb/s electrical device and transmitter waveform analysis on 86100 DCA mainframes. Pairs with 86107A Option 040 precision timebase The Agilent 86117B provides two electrical sampling channels with 30, 50, and 65 GHz bandwidth settings for 40 Gb/s-class electrical waveforms. OEM 86100 dual-electrical tables list 5.4 ps transition at 65 GHz (0.35/BW), characteristic RMS noise 0.4 mV (30 GHz), 0.5 mV (50 GHz), and 1.3 mV (65 GHz), and plus or minus 2 V maximum input. 40 Gb/s electrical device and transmitter waveform analysis on 86100 DCA mainframes. Pairs with 86107A Option 040 precision timebase Instrument Type: Dual electrical sampling plug-in



MODEL

**Agilent / Keysight
86117B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

86117B

LISTING

<https://aumictechlabs.com/products/86117b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 86117B is a dual-channel electrical module delivering precise signal analysis up to 65 GHz. It performs accurate eye diagram analysis, jitter evaluation, and waveform integrity

assessment for high-speed electrical signals in telecom, datacom, and semiconductor applications. This module integrates directly with Agilent 86100A/B and Keysight 86100C/D Infiniium Digital Communications Analyzer mainframes to enable comprehensive characterization of advanced modulation formats and 40 Gb/s digital designs.

Technical Specifications

Bandwidth Options 65 GHz, 50 GHz, or 30 GHz per channel - selectable based on measurement requirements.

Risetime (Electrical) 5.3 ps at 65 GHz bandwidth 7.0 ps at 50 GHz bandwidth 11.7 ps at 30 GHz bandwidth

RMS Noise (Characteristic) 0.4 mV at 30 GHz bandwidth 0.6 mV at 50 GHz bandwidth 1.0 mV at 65 GHz bandwidth

Input Specification Maximum input signal: ± 2 Vdc Connector type: 1.85 mm male

Key Features

- Dual-channel architecture for simultaneous two-channel measurements
- Sub-6 ps risetime at maximum bandwidth ensures capture of fast signal transitions
- Low noise floor across all bandwidth settings enables detection of small-amplitude phenomena
- Flexible bandwidth selection optimizes signal-to-noise ratio for specific test requirements

Typical Applications

- Eye diagram analysis on high-speed serial links
- Jitter decomposition and characterization
- Waveform fidelity validation in 40 Gb/s systems
- Electrical signal integrity testing in advanced semiconductor designs

Compatibility & Integration

The 86117B operates as a plug-in module within three Infiniium mainframe generations:

- Agilent 86100A/B Infiniium Digital Communications Analyzer
- Keysight 86100C Infiniium DCA-J
- Keysight 86100D Infiniium DCA-X

86117B Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Dual electrical sampling plug-in
Series Family	Agilent 86100 DCA modules
Channel Count	2 electrical
Electrical Bandwidth	30 GHz, 50 GHz, and 65 GHz
Transition Time 30 Ghz	11.7 ps (10-90 percent, 0.35/BW)
Transition Time 50 Ghz	7 ps (10-90 percent, 0.35/BW)
Transition Time 65 Ghz	5.4 ps (10-90 percent, 0.35/BW)
Rms Noise Characteristic 30 Ghz	0.4 mV characteristic
Rms Noise Characteristic 50 Ghz	0.5 mV characteristic
Rms Noise Characteristic 65 Ghz	1.3 mV characteristic
Rms Noise Maximum 30 Ghz	0.7 mV maximum
Rms Noise Maximum 50 Ghz	0.9 mV maximum
Rms Noise Maximum 65 Ghz	2.2 mV maximum
Scale Factor 65 Ghz Note	plus or minus 0.4 percent of full scale plus or minus 2 mV plus or minus 2 percent of (reading-channel offset) at 65 GHz
Scale Factor Minimum	1 mV per division
Scale Factor Maximum	100 mV per division
Cw Offset Range	plus or minus 500 mV referenced to screen center
Input Dynamic Range	plus or minus 400 mV relative to channel offset
Electrical Input	2.4 mm male
Reflections For 30 Ps	5 percent
Maximum Input Signal	plus or minus 2 V (plus 16 dBm)
Nominal Impedance	50 ohm
Target Symbol Rate	up to 40 Gb/s (OEM dual-electrical guide)
Predecessor	86117A dual 50 GHz (no 65 GHz setting)
Host Mainframe	86100A/B/C/D Infiniium DCA family (see notes for exceptions)

PARAMETER	VALUE
Form Factor	86100 plug-in module
Specified Temperature Family	plus 10 C to plus 40 C class of 86100 modules unless noted
Bandwidth	30 GHz, 50 GHz, and 65 GHz

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	
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PARAMETER	VALUE
Instrument Type	Dual electrical sampling plug-in
Series Family	Agilent 86100 DCA modules
Channel Count	2 electrical
Electrical Bandwidth	30 GHz, 50 GHz, and 65 GHz
Transition Time 30 Ghz	11.7 ps (10-90 percent, 0.35/BW)
Transition Time 50 Ghz	7 ps (10-90 percent, 0.35/BW)
Transition Time 65 Ghz	5.4 ps (10-90 percent, 0.35/BW)
Rms Noise Characteristic 30 Ghz	0.4 mV characteristic
Rms Noise Characteristic 50 Ghz	0.5 mV characteristic
Rms Noise Characteristic 65 Ghz	1.3 mV characteristic
Rms Noise Maximum 30 Ghz	0.7 mV maximum
Rms Noise Maximum 50 Ghz	0.9 mV maximum
Rms Noise Maximum 65 Ghz	2.2 mV maximum
Scale Factor 65 Ghz Note	plus or minus 0.4 percent of full scale plus or minus 2 mV plus or minus 2 percent of (reading-channel offset) at 65 GHz
Scale Factor Minimum	1 mV per division
Scale Factor Maximum	100 mV per division
Cw Offset Range	plus or minus 500 mV referenced to screen center
Input Dynamic Range	plus or minus 400 mV relative to channel offset
Electrical Input	2.4 mm male
Reflections For 30 Ps	5 percent
Maximum Input Signal	plus or minus 2 V (plus 16 dBm)
Nominal Impedance	50 ohm
Target Symbol Rate	up to 40 Gb/s (OEM dual-electrical guide)
Predecessor	86117A dual 50 GHz (no 65 GHz setting)
Host Mainframe	86100A/B/C/D Infiniium DCA family (see notes for exceptions)

PARAMETER	VALUE
Form Factor	86100 plug-in module
Specified Temperature Family	plus 10 C to plus 40 C class of 86100 modules unless noted

Notes

Numeric rows from Agilent/Keysight 86100 dual electrical channel module specification table (86117B: 30/50/65 GHz, transition, RMS noise). 86118A remote-head 70 GHz module is a different product.

Ordering Information

OPTION	DESCRIPTION
Option 040	precision timebase

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

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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.