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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight V3050A

The Keysight V3050A is an unbanded, preselected frequency extender for the N9042B UXA. OEM data sheet 3122-2019 extends N9042B coverage from 50 GHz to 67, 90, or 110 GHz (catalog F06/F09/F11). Input is ruggedized 1.0 mm (m). Attenuator is 0 to 26 dB in 2 dB steps. Maximum input is +18 dBm (63 mW) CW or pulsed, 0 VDC. Image rejection is >60 dB nominal (50 to 88 GHz hardware preselector) and >30 dB nominal (88 to 110 GHz software). Residual responses are -100 dBm nominal. DANL is -150 dBm/Hz (50 to 80 GHz) degrading to -125 dBm/Hz above 107.4 GHz. USB-C PD requires 15 V, 1.75 A, 27 W minimum. Size is 93 mm × 81 mm × 36 mm without connectors; mass 0.42 kg. Operating temperature is 20 to 30 °C. Unbanded mmWave spectrum, IQ, and demodulation measurements to 110 GHz on N9042B UXA for 5G, SatCom, EW/radar, automotive, and early 6G. HP Agilent Keysight V3050A Signal Analyzer Frequency Extender The Keysight V3050A is an unbanded, preselected frequency extender for the N9042B UXA. OEM data sheet 3122-2019 extends N9042B coverage from 50 GHz to 67, 90, or 110 GHz (catalog F06/F09/F11). Input is ruggedized 1.0 mm (m). Attenuator is 0 to 26 dB in 2 dB steps. Maximum input is +18 dBm (63 mW) CW or pulsed, 0 VDC. Image rejection is >60 dB nominal (50 to 88 GHz hardware preselector) and >30 dB nominal (88 to 110 GHz software). Residual responses are -100 dBm nominal. DANL is -150 dBm/Hz (50 t



MODEL

**Agilent / Keysight
V3050A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

V3050A

LISTING

<https://aumictechlabs.com/products/v3050a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight V3050A is a signal analyzer frequency extender that extends the measurement capability of the N9042B UXA X-Series signal analyzer into the millimeter-wave spectrum. Operating from 50 GHz to 110 GHz, this remote head design brings high-frequency test capability closer to the device under test while delivering exceptional sensitivity and dynamic range for wideband signal analysis.

Technical Specifications

Frequency Coverage: 50 GHz to 110 GHz (with options for 50–67 GHz, 90 GHz, or 110 GHz bands)

Intermediate Frequency: 7.5225 GHz LO

Multiplication Factor: 8, 12, or 16

Input Power Handling: Up to 63 mW CW/pulsed; 18 dBm nominal

P1dB: –23 dBm to –10 dBm

Phase Noise: –125 dBc/Hz at 10 MHz offset (80 GHz reference)

Display Average Noise Level: –150 dBm/Hz (50–80 GHz)

Spurious Response: –70 dBc to 20 dBc

Attenuator: 0 to 26 dB in 2 dB steps, electronically switchable

Connectors: 1.0 mm and 3.5 mm

Power Supply: USB-C, 15 V DC at 1.75 A

Dimensions: 93 mm × 81 mm × 36 mm

Weight: 0.42 kg

Operating Temperature: 20 °C to 30 °C

Key Features

- Remote head architecture with compact form factor for proximate test point access
- Hardware pre-selector reduces or eliminates image response
- Unbanded and preselected frequency coverage options
- Electronic mixer level control defined as: $\text{Mixer Level (dBm)} = \text{RF Input Power (dBm)} - \text{Mechanical Attenuation (dB)} - \text{Electronic Attenuation (dB)}$
- Cable length compensation via N9042B UXA software GUI for amplitude and phase accuracy

Typical Applications

Wideband signal measurement in mmWave test environments, including 5G/6G component characterization, satellite communications analysis, and radar signal evaluation.

Compatibility & Integration

Designed exclusively for integration with the Keysight N9042B UXA X-Series signal analyzer. Note: Export restrictions may apply to frequencies above 90 GHz.

V3050A Characteristics / Specifications

PARAMETER	VALUE
Model	V3050A
Instrument Type	Signal analyzer frequency extender
Host Analyzer	N9042B UXA with N9042B-EXW
Frequency Catalog F	greater than 50 to 89.5 GHz class (bandwidth dependent)
Input Connector	ruggedized 1.0 mm male
Maximum Input Power	+18 dBm (63 mW) CW or pulsed, 0 VDC
Attenuator Range	0 to 26 dB in 2 dB steps, electronic, acts on signals greater than 50 GHz
Image Rejection	greater than 60 dB nominal 50 to 88 GHz; greater than 30 dB nominal 88 to 110 GHz
Spurious Responses	less than -60 dBm nominal for -20 dBm inputs anywhere in 50 to 110 GHz
Input Match	less than -10 dB RL (1.9 VSWR) 50 to 90 GHz at 10 dB atten; less than -5 dB RL (3.5 VSWR) 90 to 110 GHz at 10 dB atten
Residual Responses	-100 dBm nominal greater than 50 to 110 GHz, input terminated, 0 dB atten
Danl 50 To 80 Ghz	-150 dBm/Hz nominal
Danl 80 To 90 Ghz	-149 dBm/Hz nominal
Danl 90 To 95 Ghz	-147 dBm/Hz nominal
Danl 95 To 100 Ghz	-143 dBm/Hz nominal
Danl 100 To 105 Ghz	-138 dBm/Hz nominal
Danl 105 To 107.4 Ghz	-135 dBm/Hz nominal
Danl Above 107.4 Ghz	-125 dBm/Hz nominal
Gain Compression 50 To 60 Ghz	-10 dBm nominal (1 dB)
Gain Compression 60 To 80 Ghz	-15 dBm nominal (1 dB)
Gain Compression 80 To 110 Ghz	-23 dBm nominal (1 dB)
Phase Noise 55 Ghz	-104 dBc/Hz at 10 kHz, -108 dBc/Hz at 100 kHz, -120 dBc/Hz at 1 MHz, -125 dBc/Hz at 10 MHz (nominal)

PARAMETER	VALUE
Pass Thru Loss At 50 Ghz	12.0 dB nominal V3050A input to Pass-Thru output
Usb Power	USB Type-C PD, 15 V, 1.75 A, 27 W minimum
Dimensions	93 mmLwithout connectors (128 mm with), 81 mm H, 36 mmWWeight: 0.42 kg (0.92 lb)
Operating Temperature	20 to 30 °C
Manufacturer	HP Agilent Keysight
Literature	Keysight V3050A data sheet 3122-2019
Family	N9042B UXA mmWave extenders
Brand Lineage	Hewlett Packard Agilent Keysight
Form Factor	USBCmmWave frequency extender module
System Role	50 to 110 GHz preselected downconverter for N9042B
Bandwidth	dependent)

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	is 20 to 30 °C.
Operating Temperature	is 20 to 30 °C.
Model	V3050A
Instrument Type	Signal analyzer frequency extender
Host Analyzer	N9042B UXA with N9042B-EXW
Frequency Catalog F	greater than 50 to 89.5 GHz class (bandwidth dependent)
Input Connector	ruggedized 1.0 mm male
Maximum Input Power	+18 dBm (63 mW) CW or pulsed, 0 VDC
Attenuator Range	0 to 26 dB in 2 dB steps, electronic, acts on signals greater than 50 GHz
Image Rejection	greater than 60 dB nominal 50 to 88 GHz; greater than 30 dB nominal 88 to 110 GHz
Spurious Responses	less than -60 dBm nominal for -20 dBm inputs anywhere in 50 to 110 GHz
Input Match	less than -10 dB RL (1.9 VSWR) 50 to 90 GHz at 10 dB atten; less than -5 dB RL (3.5 VSWR) 90 to 110 GHz at 10 dB atten
Residual Responses	-100 dBm nominal greater than 50 to 110 GHz, input terminated, 0 dB atten
Danl 50 To 80 Ghz	-150 dBm/Hz nominal
Danl 80 To 90 Ghz	-149 dBm/Hz nominal
Danl 90 To 95 Ghz	-147 dBm/Hz nominal
Danl 95 To 100 Ghz	-143 dBm/Hz nominal
Danl 100 To 105 Ghz	-138 dBm/Hz nominal
Danl 105 To 107.4 Ghz	-135 dBm/Hz nominal
Danl Above 107.4 Ghz	-125 dBm/Hz nominal
Gain Compression 50 To 60 Ghz	-10 dBm nominal (1 dB)
Gain Compression 60 To 80 Ghz	-15 dBm nominal (1 dB)

PARAMETER	VALUE
Gain Compression 80 To 110 Ghz	-23 dBm nominal (1 dB)
Phase Noise 55 Ghz	-104 dBc/Hz at 10 kHz, -108 dBc/Hz at 100 kHz, -120 dBc/Hz at 1 MHz, -125 dBc/Hz at 10 MHz (nominal)
Pass Thru Loss At 50 Ghz	12.0 dB nominal V3050A input to Pass-Thru output
Usb Power	USB Type-C PD, 15 V, 1.75 A, 27 W minimum
Dimensions	93 mmLwithout connectors (128 mm with), 81 mm H, 36 mmWWeight: 0.42 kg (0.92 lb)
Manufacturer	HP Agilent Keysight
Literature	Keysight V3050A data sheet 3122-2019
Family	N9042B UXA mmWave extenders
Brand Lineage	Hewlett Packard Agilent Keysight
Form Factor	USBCmmWave frequency extender module
System Role	50 to 110 GHz preselected downconverter for N9042B Notes From Keysight V3050A data sheet 3122-2019 (F06/F09/F11 bands, +18 dBm max, 0–26 dB atten, DANL/compression/phase-noise tables, 93×81×36 mm, 0.42 kg, USB-C 15 V/1.75 A/27 W). Full IQ analyzer bandwidth tables are on pages 10 to 13 of that sheet.

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	V3050A
Instrument Type	Signal analyzer frequency extender
Host Analyzer	N9042B UXa with N9042B-EXW
Frequency Catalog F06	greater than 50 to 67 GHz
Frequency Catalog F09	greater than 50 to 89.5 GHz class (bandwidth dependent)
Frequency Catalog F11	greater than 50 to 110 GHz
Input Connector	ruggedized 1.0 mm male
Maximum Input Power	+18 dBm (63 mW) CW or pulsed, 0 VDC
Attenuator Range	0 to 26 dB in 2 dB steps, electronic, acts on signals greater than 50 GHz
Image Rejection	greater than 60 dB nominal 50 to 88 GHz; greater than 30 dB nominal 88 to 110 GHz
Spurious Responses	less than -60 dBm nominal for -20 dBm inputs anywhere in 50 to 110 GHz
Input Match	less than -10 dB RL (1.9 VSWR) 50 to 90 GHz at 10 dB atten; less than -5 dB RL (3.5 VSWR) 90 to 110 GHz at 10 dB atten
Residual Responses	-100 dBm nominal greater than 50 to 110 GHz, input terminated, 0 dB atten
Danl 50 To 80 Ghz	-150 dBm/Hz nominal
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Danl Above 107.4 Ghz	-125 dBm/Hz nominal
Gain Compression 50 To 60 Ghz	-10 dBm nominal (1 dB)
Gain Compression 60 To 80 Ghz	-15 dBm nominal (1 dB)
Gain Compression 80 To 110 Ghz	-23 dBm nominal (1 dB)

PARAMETER	VALUE
Phase Noise 55 Ghz	-104 dBc/Hz at 10 kHz, -108 dBc/Hz at 100 kHz, -120 dBc/Hz at 1 MHz, -125 dBc/Hz at 10 MHz (nominal)
Pass Thru Loss At 50 Ghz	12.0 dB nominal V3050A input to Pass-Thru output
Usb Power	USB Type-C PD, 15 V, 1.75 A, 27 W minimum
Dimensions	93 mm L without connectors (128 mm with), 81 mm H, 36 mm W
Weight	0.42 kg (0.92 lb)
Operating Temperature	20 to 30 °C
Manufacturer	HP Agilent Keysight
Literature	Keysight V3050A data sheet 3122-2019
Family	N9042B UXa mmWave extenders
Brand Lineage	Hewlett Packard Agilent Keysight
Form Factor	USB C mmWave frequency extender module
System Role	50 to 110 GHz preselected downconverter for N9042B

Specifications

PARAMETER	VALUE
Model	V3050A
Instrument Type	Signal analyzer frequency extender
Host Analyzer	N9042B UXa with N9042B-EXW
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Frequency Catalog F09	greater than 50 to 89.5 GHz class (bandwidth dependent)
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Danl 105 To 107.4 Ghz	-135 dBm/Hz nominal
Danl Above 107.4 Ghz	-125 dBm/Hz nominal
Gain Compression 50 To 60 Ghz	-10 dBm nominal (1 dB)
Gain Compression 60 To 80 Ghz	-15 dBm nominal (1 dB)
Gain Compression 80 To 110 Ghz	-23 dBm nominal (1 dB)
Phase Noise 55 Ghz	-104 dBc/Hz at 10 kHz, -108 dBc/Hz at 100 kHz, -120 dBc/Hz at 1 MHz, -125 dBc/Hz at 10 MHz (nominal)
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Notes

From Keysight V3050A data sheet 3122-2019 (F06/F09/F11 bands, +18 dBm max, 0-26 dB atten, DANL/compression/phase-noise tables, 93×81×36 mm, 0.42 kg, USB-C 15 V/1.75 A/27 W). Full IQ analyzer bandwidth tables are on pages 10 to 13 of that sheet.

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