

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 83554A Millimeter-Wave Source Module, 26.5 GHz to 40 GHz

HP 83554A Millimeter Wave Source Module 26.5 to 40.0 GHz The HP 83554A is an internally leveled millimeter-wave source module covering 26.5 to 40.0 GHz (WR-28). It multiplies an 13.25 to 20.00 GHz microwave driver (minimum +17 dBm into the RF cable, maximum +27 dBm) to provide waveguide-band output with the frequency accuracy and resolution of the driving source. Typical drivers include 8350B/83550A, 83590-series plus 8349B, or synthesized 8340/8341/8673 with 8349B. Ka-band swept and CW stimulus; scalar transmission/reflection to 40 GHz; mixer/LO drive; two-tone tracking sweeps with dual 8350-based sources. The HP 83554A is an internally leveled millimeter-wave source module covering 26.5 to 40.0 GHz (WR-28). It multiplies an 13.25 to 20.00 GHz microwave driver (minimum +17 dBm into the RF cable, maximum +27 dBm) to provide waveguide-band output with the frequency accuracy and resolution of the driving source. Typical drivers include 8350B/83550A, 83590-series plus 8349B, or synthesized 8340/8341/8673 with 8349B. Ka-band swept and CW stimulus; scalar transmission/reflection to 40 GHz; mixer/LO drive; two-tone tracking sweeps with dual 8350-based sources.



MODEL

**HP / Agilent
83554A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83554A

LISTING

<https://aumictechlabs.com/products/83554a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 83554A is a millimeter-wave source module that extends compatible microwave sources into the 26.5 GHz to 40 GHz band. It accepts a 13.25 to 20.00 GHz driving signal and delivers leveled output power at +8 dBm, enabling precise signal generation for radar development, satellite communications, and advanced RF testing. Frequency resolution and spectral purity scale directly with the driving source - systems using 8341B/8349B drivers achieve 6 Hz resolution and -70 dBc phase noise at 10 kHz offset (35 GHz carrier), while harmonic suppression exceeds 20 dBc across any band. The module supports FM deviations up to 16 MHz when driven by HP 8360 B-series synthesizers. Its WR 28 waveguide output (JAN UG-599 flange) integrates into HP 8350B sweep oscillators and works with 11 to 20 GHz microwave sources such as the Agilent 83623B, 83624B, or 8349B amplifier to reach frequencies up to 110 GHz. Applications include scalar network analysis, mixer LO duty, and dynamic range expansion in frequency response measurements. Includes operating manual, RF cable, synthesizer interface cable, and module base assembly.

Technical Specifications
Output Frequency: 26.5 GHz to 40 GHz
Input Frequency Range: 13.25 GHz to 20.00 GHz
Input Power: +17 dBm to +27 dBm (50 mW to 0.5 W)
Output Power: +8 dBm (leveled)
Harmonic Suppression: >20 dBc in any band
Phase Noise: -70 dBc typical at 10 kHz offset (35 GHz carrier, with 8340B/8349B)
Frequency Resolution: 6 Hz (26.5-40 GHz band, with 8341B/8349B)
FM Deviation Capability: Up to 16 MHz (with HP 8360 B-series)
Output Connector: EIA WR 28 waveguide (JAN UG-599)
Weight: 1.7 kg

Key Features
Frequency multiplication from 13.25-20.00 GHz input to 26.5-40 GHz output
Inherits modulation capabilities from driving source
Leveled output simplifies system integration
Harmonic and sub-harmonic suppression >20 dBc
Typical Applications
Radar system development
Satellite communications testing
Advanced RF component characterization
Scalar network analysis to 110 GHz
Mixer local oscillator duty
Compatibility & Integration
HP 8350B sweep oscillator mainframes
HP 83630B and 8341B/8349B systems
Agilent 83623B, 83624B microwave sources
11-20 GHz sources with Agilent 8349B amplifier for extended coverage to 110 GHz

Features & description

From manufacturer datasheet

Features

- Full WR-28 band 26.5 to 40.0 GHz
- Internally leveled output; digital power display on driver at 0.1 dB resolution
- Maximum leveled +8 dBm (26.5 to 37.2 GHz) and +7 dBm (37.2 to 40.0 GHz)
- Minimum settable power -5 dBm
- Input 13.25 to 20.00 GHz at +17 to +27 dBm
- Translates driver sweep, markers, AM/FM/pulse (driver dependent) to mm-wave

83554A Characteristics / Specifications

PARAMETER	VALUE
Model	83554A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Millimeter wave source module (frequency multiplier)
Frequency Range	26.5 to 40.0 GHz
Waveguide Output	EIA WR 28; mates JAN UG 599 flange
Input Frequency	13.25 to 20.00 GHz
Minimum Input Power	+17 dBm (50 mW) into RF input cable
Maximum Input Power	+27 dBm (0.5 W) into RF input cable
Maximum Leveled Power 26.5 to 37.2 GHz	+8 dBm
Maximum Leveled Power 37.2 to 40.0 GHz	+7 dBm
Minimum Settable Power	-5 dBm
Power Level Accuracy Internally Leveled	plus/minus 2.00 dB
Power Flatness Internally Leveled	plus/minus 1.50 dB
Source Output SWR Internally Leveled	less than 2.0
Spurious 26.5 to 26.7 GHz	greater than 25 dBc
Spurious 26.7 to 40.0 GHz	greater than 20 dBc (greater than 45 dBc with 83592C driver class)
CW Accuracy With 8350B 83550A Driver	plus/minus 20 MHz class at 25 plus/minus 5 C
CW Resolution With 8350B Drivers	52 kHz class
CW Resolution With 8340 8341 Synthesizer	6 Hz
Residual FM Peak 8350B 83550A	less than 18 kHz (20 Hz to 15 kHz BW)
Net Weight	1.7 kg (4 lb)
Operating Temperature	0 to 55 C
Harmonic Multiplication Factor	2

PARAMETER	VALUE
Alias	HP 83554A; Agilent 83554A; Keysight 83554A

83554A Specifications

PARAMETER	VALUE
HP 83554A Millimeter Wave Source Module 26.5 to 40.0 GHz	Overview
Key Features	- Full WR-28 band 26.5 to 40.0 GHz
Technical Specifications	Model: 83554A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 55 C
Operating Temperature	0 to 55 C
Harmonic Multiplication Factor	2
Alias	HP 83554A; Agilent 83554A; Keysight 83554A Notes Warranted rows from Agilent 83554A/83555A/83556A data sheet. Driver-specific accuracy/modulation columns vary; cite the installed driver when documenting system performance.

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	
Specifications	
PARAMETER	VALUE
Model	83554A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Millimeter wave source module (frequency multiplier)
Frequency Range	26.5 to 40.0 GHz
Waveguide Output	EIA WR 28; mates JAN UG 599 flange
Input Frequency	13.25 to 20.00 GHz
Minimum Input Power	+17 dBm (50 mW) into RF input cable
Maximum Input Power	+27 dBm (0.5 W) into RF input cable
Maximum Leveled Power 26.5 to 37.2 GHz	+8 dBm
Maximum Leveled Power 37.2 to 40.0 GHz	+7 dBm
Minimum Settable Power	-5 dBm
Power Level Accuracy Internally Leveled	plus/minus 2.00 dB
Power Flatness Internally Leveled	plus/minus 1.50 dB
Source Output SWR Internally Leveled	less than 2.0
Spurious 26.5 to 26.7 GHz	greater than 25 dBc
Spurious 26.7 to 40.0 GHz	greater than 20 dBc (greater than 45 dBc with 83592C driver class)
CW Accuracy With 8350B 83550A Driver	plus/minus 20 MHz class at 25 plus/minus 5 C
CW Resolution With 8350B Drivers	52 kHz class
CW Resolution With 8340 8341 Synthesizer	6 Hz
Residual FM Peak 8350B 83550A	less than 18 kHz (20 Hz to 15 kHz BW)
Net Weight	1.7 kg (4 lb)
Operating Temperature	0 to 55 C
Harmonic Multiplication Factor	2
Alias	HP 83554A; Agilent 83554A; Keysight 83554A

Notes

Warranted rows from Agilent 83554A/83555A/83556A data sheet. Driver-specific accuracy/modulation columns vary; cite the installed driver when documenting system performance.

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
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 13, 2026

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