

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 70301A – Microwave Tracking Generator (for 70000 series, up to 18 GHz)

Agilent HP 70301A Microwave Tracking Generator The HP 70301A is a 2-slot MMS microwave tracking generator for 70000-series spectrum analyzers. OEM Agilent literature lists 2.7 GHz to 18 GHz coverage (broader scalar system coverage cited to 50 kHz with companion hardware), greater than 130 dB dynamic range with 71210C class analyzers, and scalar stimulus-response measurements via 70871A personality. Scalar gain, frequency response, isolation, and return-loss measurements with HP 70000 MMS spectrum analyzers. The HP 70301A is a 2-slot MMS microwave tracking generator for 70000-series spectrum analyzers. OEM Agilent literature lists 2.7 GHz to 18 GHz coverage (broader scalar system coverage cited to 50 kHz with companion hardware), greater than 130 dB dynamic range with 71210C class analyzers, and scalar stimulus-response measurements via 70871A personality. Scalar gain, frequency response, isolation, and return-loss measurements with HP 70000 MMS spectrum analyzers.

Instrument Type: MMS microwave tracking generator



MODEL

**Agilent / Keysight
70301A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

70301A

LISTING

<https://aumictechlabs.com/products/70301a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 70301A is a microwave tracking generator module that adds stimulus-response measurement capability to Keysight 70000 series spectrum analyzers. Operating from

2.7 GHz to 18 GHz, it enables simultaneous signal generation and analysis for precise characterization of component gain, frequency response, isolation, and return loss. The module integrates directly into the 70000 series modular measurement system, delivering dynamic range exceeding 130 dB when paired with compatible analyzers.

Technical Specifications

Frequency Range: 2.7 GHz to 18 GHz Output Power (Maximum Levelled): -2 dBm typical; 0 dBm at 20–30°C Amplitude Control Range: +14.5 dBm to -66 dBm Dynamic Range: > 130 dB (with 71210C spectrum analyzer) Resolution Bandwidth: As narrow as 10 Hz Frequency Accuracy: $\pm[(\text{frequency} \times \text{reference } 1) + 1\% \text{ span} + 15 \text{ Hz}]$ for $\leq 10 \text{ MHz}$ synthesized span Frequency Tracking Drift: < 3 Hz/hr Tracking Adjust Range: $\pm 500 \text{ Hz}$ in 1 Hz steps Frequency Offset Range: $\pm 5 \text{ MHz}$ with external 21.4 MHz Output Attenuator Range: 70 dB in 10 dB steps Output Attenuator Repeatability: < $\pm 0.2 \text{ dB}$ per setting Amplitude Modulation: 0–100% depth; 20 Hz to 20 kHz rate Noise Sidebands (10 kHz offset): < -105 dBc/Hz @ -10 dBm Harmonic Spurious Content: < -25 dBc (20 Hz–10 MHz) RF Off Residuals Tracking: < -120 dBm; Non-tracking: < -80 dBm

Key Features

Two-slot MMS module architecture Tight frequency tracking with sub-3 Hz/hr drift specification Fine-resolution 1 Hz tracking adjustment capability Repeatable attenuator control within $\pm 0.2 \text{ dB}$ across 70 dB range Low spectral noise sidebands for clean stimulus signal

Typical Applications

Scalar network analysis and component characterization Filter and amplifier gain/phase response measurements Port isolation and return loss evaluation Systems requiring concurrent stimulus generation and spectral analysis

Compatibility & Integration

Designed for the Keysight 70000 Series Modular Measurement System. Compatible with 71210A and 71210C microwave spectrum analyzers. Controlled via Keysight 70871A scalar personality. Operating temperature range: 0 to 55°C. Module dimensions: 127 mm H × 96 mm W × 467 mm L; weight 5.0 kg.

70301A Characteristics / Specifications

PARAMETER	VALUE
Model	70301A
Instrument Type	MMS microwave tracking generator
Frequency Coverage	2.7 GHz to 18 GHz
Form Factor	2 slot MMS module
Dynamic Range With 71210C Class	greater than 130 dB
Host System	HP 70000 series spectrum analyzer
Scalar Software	Agilent 70871A personality
Measurement Types	gain response isolation return loss
Selectivity Example	resolution bandwidths to 10 Hz on host SA
Module Width	2 MMS slots
Manufacturer	Hewlett Packard / Agilent
Use Case	scalar component characterization
Output	tracks SA LO for stimulus response
Operating Temperature Class	0 C to 55 C
Storage Temperature Class	minus 40 C to 70 C class
Power	MMS mainframe backplane
Interface	MMS system bus
Sweep	continuous swept scalar display
Related Lightwave	compatible with lightwave signal analyzer setups
Calibration	normalize through scalar personality
Series Family	HP 70000 MMS
Connector Class	precision microwave front panel
Storage temperature	Class: minus 40 C to 70 C class
Operating temperature	Class: 0 C to 55 C
Return loss	Selectivity Example: resolution bandwidths to 10 Hz on host SA

70301A Specifications

PARAMETER	VALUE
Agilent HP 70301A Microwave Tracking Generator	Overview
Applications	Scalar gain, frequency response, isolation, and return-loss measurements with HP 70000 MMS spectrum analyzers.
Key Features	2.7 to 18 GHz tracking generator
Scalar personality support	Works with 70000 series analyzers
Technical Specifications	Model: 70301A
Notes	Frequency, 2-slot MMS, and >130 dB dynamic range from Agilent/HP 70301A product literature.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Class: minus 40 C to 70 C class
Operating temperature	Class: 0 C to 55 C
Operating Temperature	Class: 0 C to 55 C
Operating Temperature Class	0 C to 55 C
Storage Temperature Class	minus 40 C to 70 C class
Power	MMS mainframe backplane
Interface	MMS system bus
Sweep	continuous swept scalar display
Related Lightwave	compatible with lightwave signal analyzer setups
Calibration	normalize through scalar personality
Series Family	HP 70000 MMS
Connector Class	precision microwave front panel Notes Frequency, 2-slot MMS, and >130 dB dynamic range from Agilent/HP 70301A product literature.

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	70301A
Instrument Type	MMS microwave tracking generator
Frequency Coverage	2.7 GHz to 18 GHz
Form Factor	2 slot MMS module
Dynamic Range With 71210C Class	greater than 130 dB
Host System	HP 70000 series spectrum analyzer
Scalar Software	Agilent 70871A personality
Measurement Types	gain response isolation return loss
Selectivity Example	resolution bandwidths to 10 Hz on host SA
Module Width	2 MMS slots
Manufacturer	Hewlett Packard / Agilent
Use Case	scalar component characterization
Output	tracks SA LO for stimulus response
Operating Temperature Class	0 C to 55 C
Storage Temperature Class	minus 40 C to 70 C class
Power	MMS mainframe backplane
Interface	MMS system bus
Sweep	continuous swept scalar display
Related Lightwave	compatible with lightwave signal analyzer setups
Calibration	normalize through scalar personality
Series Family	HP 70000 MMS
Connector Class	precision microwave front panel
Notes	
Frequency, 2-slot MMS, and >130 dB dynamic range from Agilent/HP 70301A product literature.	

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 15, 2026

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