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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 70907B – Microwave Preamplifier Module

HP Agilent 70907B External Millimeter Interface Module The HP/Agilent 70907B is a 1/8-width MMS External Millimeter Interface Module (EMIM) for the 70000 Modular Measurement System. OEM 70000 installation/verification specifications provide preselector tune/span, mixer bias, LO output, and IF input limits for driving HP 11974 preselected and 11970 harmonic mixers for millimeter spectrum analysis. External-mixer millimeter spectrum analysis on HP 70000 systems with 11970/11974 mixers, extending coverage well above native RF-section bands. The HP/Agilent 70907B is a 1/8-width MMS External Millimeter Interface Module (EMIM) for the 70000 Modular Measurement System. OEM 70000 installation/verification specifications provide preselector tune/span, mixer bias, LO output, and IF input limits for driving HP 11974 preselected and 11970 harmonic mixers for millimeter spectrum analysis. External-mixer millimeter spectrum analysis on HP 70000 systems with 11970/11974 mixers, extending coverage well above native RF-section bands. Swept LO and tune/span interface for 11974 preselected mixers



MODEL

**Agilent / Keysight
70907B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

70907B

LISTING

<https://aumictechlabs.com/products/70907b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 70907B is an External Mixer Interface Module (EMIM) that integrates preselected millimeter-wave mixers with Keysight 70000 series modular spectrum analyzers. The module supplies swept Local Oscillator (LO) and tune/span signals to external mixers, receives the resulting intermediate frequency (IF) signal, converts it to 21.4 MHz, and outputs it to a compatible IF module. This architecture extends spectrum analyzer measurement capability into the millimeter-wave band.

Technical Specifications

- IF output frequency: 21.4 MHz
- Compatible with Keysight 11974 series preselected millimeter mixers
- Compatible with Keysight 11970 series mixers (frequency range to 110 GHz)
- Compatible with third-party external millimeter mixers (frequency range to 325 GHz, non-preselected)
- Requires Keysight 70900A or 70900B LO module with specific date code compatibility

Key Features

- Swept LO signal generation and distribution to external mixers
- Tune and span signal control for external mixer operation
- IF signal reception and conversion to standardized 21.4 MHz output
- Software-selectable external mixer configuration via softkeys
- Modular form factor for direct 70000 series chassis integration

Compatibility & Integration

The 70907B works with the Keysight 70000 series modular spectrum analyzer platform. It accepts IF and control signals from external millimeter mixers and interfaces directly with compatible 70000 series IF modules. Users operating a Keysight 70907A can upgrade to the 70907B using the 70907A K74 upgrade kit, which supports customer installation.

Typical Applications

- Millimeter-wave spectrum analysis from external mixer interfaces
- Extended frequency range measurements beyond standalone analyzer capability
- Preselected mixer integration for improved selectivity
- Multi-mixer configurations selectable via software control

70907B Characteristics / Specifications

PARAMETER	VALUE
Model	70907B
Instrument Type	External millimeter interface module
Module Width	1/8-width MMS module
Host System	HP 70000 Modular Measurement System
Compatible Mixers	HP 11974 preselected and HP 11970 harmonic mixers
Presel Tune Voltage Range	less than 4.5 V to greater than 9.9 V
Presel Tune Sensitivity	1.5 V/GHz
Presel Tune Load Impedance	greater than 10 kohm nominal
Mixer Bias Maximum Voltage	3.3 V characteristic
Mixer Bias Current Range	-10 mA to +10 mA specification
Mixer Bias Resolution	less than 20 uA characteristic
Mixer Bias Accuracy	plus or minus 30 uA specification
Mixer Bias Source Impedance	greater than 1 Mohm nominal
Lo Output Frequency Range	3.0 GHz to 6.6 GHz
Lo Output Power	6 dBm plus or minus 1.5 dB
Lo Output Vswr	1.9 characteristic
Lo Output Impedance	50 ohm nominal
If Input Frequency	321.4 MHz characteristic
If Input Maximum Safe Ac	30 dBm characteristic
If Input Maximum Safe Dc	3 V characteristic
If Input Vswr At 321p4 Plus Minus 5 Mhz	1.8 characteristic
If Input Impedance	50 ohm nominal
Module Weight	2.8 kg (6.2 lb) characteristic
External Mixer Frequency Capability	supports mixers extending to 110 GHz class with 11970 series
Firmware Note 70900A	firmware 860203 or greater required

PARAMETER	VALUE
Firmware Note 70900B	firmware 890606 or greater required
Internal Calibrator Accuracy With Emim	0.6 dB at -35 dBm class system statement for 70907B use

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 provide preselector tune/span, mixer bias, LO output, and IF input limits for driving HP 11974 preselected and 11970 harmonic mixers for millimeter spectrum analysis.

Applications

External-mixer millimeter spectrum analysis on HP 70000 systems with 11970/11974 mixers, extending coverage well above native RF-section bands.

Key Features

Swept LO and tune/span interface for 11974 preselected mixers

Compatible with 11970 harmonic mixers to 110 GHz class systems

Front-panel mixer bias source with microamp resolution

1/8-width MMS module for 70001A/70004A systems

Works with 70900A/B local oscillator firmware date codes stated in OEM literature

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Notes
Module electrical rows from HP 70000 Series Spectrum Analyzer Installation and Verification Manual HP 70907B External Millimeter Interface Module specifications (presel tune, mixer bias, LO, IF). LO power 6 dBm plus or minus 1.5 dB corroborated on Keysight/Agilent 70907B calibration specification summaries. Weight from system tables listing HP 70907B EMIM 2.8 kg.

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.