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Data Sheet

August 13, 2026

KEYSIGHT / AGILENT / HP

Keysight / Agilent / HP N4691B Electronic Calibration (ECal) Module for Vector Network Analyzer

Keysight N4691B Electronic Calibration Module 3.5 mm 2 Port 26.5 GHz The Keysight N4691B is a 2-port microwave electronic calibration (ECal) module covering 300 kHz to 26.5 GHz with 3.5 mm connectors. Characterized standards stored in the module automate full two-port VNA calibration via USB (or legacy ECal interface depending on analyzer firmware). Connector sex options include M0F 00M and 00F. Two-port VNA calibration to 26.5 GHz; production S-parameter setup; replacing mechanical open short load thru kits for speed and repeatability. The Keysight N4691B is a 2-port microwave electronic calibration (ECal) module covering 300 kHz to 26.5 GHz with 3.5 mm connectors. Characterized standards stored in the module automate full two-port VNA calibration via USB (or legacy ECal interface depending on analyzer firmware). Connector sex options include M0F 00M and 00F. Two-port VNA calibration to 26.5 GHz; production S-parameter setup; replacing mechanical open short load thru kits for speed and repeatability.

**MODEL****Keysight / Agilent /
HP N4691B****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****N4691B****LISTING**[https://aumictechlabs.c
om/products/n4691b-2/](https://aumictechlabs.com/products/n4691b-2/)

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N4691B is a 2-port Electronic Calibration (ECal) module that automates vector network analyzer calibration from 300 kHz to 26.5 GHz. It replaces time-consuming mechanical calibration kits with solid-state switching and fully traceable electronic impedance standards, delivering NIST-traceable accuracy in a single connection. The module cuts calibration time to less than half that of conventional methods while eliminating operator errors and reducing connector wear.

Technical Specifications
Frequency Range: 300 kHz to 26.5 GHz
Ports: 2-port configuration
Connector Type: 3.5 mm
Calibration Technique: Single-connection, full two-port calibration
Switching Architecture: Solid-state switching
Standards: Fully traceable and verifiable electronic impedance standards
Measurement Traceability: NIST traceable

Key Features
Reduced Calibration Time: Calibration cycles complete in significantly less than half the time required for mechanical calibration kits.
Minimized Measurement Errors: Solid-state switching and characterized impedance standards eliminate manual calibration variability.
Extended Connector Life: Fewer physical connections reduce wear on VNA test ports.
Repeatable Results: Electronic standards provide consistent calibration accuracy across repeated measurements and multiple analyzers.
USB Control Interface: Direct connection to Keysight PNA and ENA series analyzers with automatic firmware recognition.

Compatibility & Integration
The N4691B integrates natively with Keysight PNA and ENA series vector network analyzers via USB. Legacy support extends to Keysight 8753E/ES/ET and 8720D/ES/ET analyzers through the optional 85097B interface kit. Firmware automatically recognizes the ECal module upon connection, eliminating manual setup steps.

Typical Applications
The module is a transfer standard for production calibration, multi-site calibration verification, and laboratory measurement traceability. It is suited for organizations requiring frequent VNA calibration with minimal downtime and high measurement confidence.

Features & description

From manufacturer datasheet

Features

- Microwave ECal covering 300 kHz to 26.5 GHz in 3.5 mm

N4691B Characteristics / Specifications

PARAMETER	VALUE
Model	N4691B
Manufacturer	Keysight Technologies
Instrument Type	Electronic Calibration Module (ECal)
Family	N469x microwave ECal
Alias	N4691B; Agilent N4691B
Frequency Range	300 kHz to 26.5 GHz
Ports	2
Connector Type	3.5 mm
Connector Options	M0F (m/f); 00M (m/m); 00F (f/f)
Module PN M0F	N4691-60004
Module PN 00M	N4691-60005
Module PN 00F	N4691-60006
Directivity 300 kHz to 2 MHz	31 dB
Directivity 500 MHz to 2 GHz	52 dB
Directivity 20 to 26.5 GHz	44 dB
Source Match 300 kHz to 2 MHz	29 dB
Source Match 500 MHz to 2 GHz	47 dB
Source Match 20 to 26.5 GHz	40 dB
Reflection Tracking 300 kHz to 2 MHz	plus or minus 0.11 dB
Reflection Tracking 500 MHz to 2 GHz	plus or minus 0.02 dB
Reflection Tracking 20 to 26.5 GHz	plus or minus 0.05 dB
Transmission Tracking 20 to 26.5 GHz	plus or minus 0.08 dB
Load Match 20 to 26.5 GHz	38 dB
Power Note	results degrade when applied power exceeds -5 dBm
Control	USB / analyzer ECal interface per VNA firmware

PARAMETER	VALUE
Related N4691A	10 MHz to 26.5 GHz predecessor (N4691-60001/2/3)
Related N4691D	300 kHz or DC to 26.5 GHz successor
Related N4690B	Type N 50 ohm to 18 GHz
Related N4692A	2.92 mm 10 MHz to 40 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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Related N4692A: 2.92 mm 10 MHz to 40 GHz

Options: UK6 1A7 A6J commercial/ISO/ANSI cal data classes

Notes

Corrected terms from Keysight ECal modules data sheet N4691B table. Confirm connector sex option and analyzer firmware ECal support. Do not confuse with N4691D.

Ordering Information

OPTION	DESCRIPTION
Option 200	class analyzers

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
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<https://aumictechlabs.com>

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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.