

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N4691B

The Keysight (formerly Agilent/HP) N4691B is a 2-port microwave electronic calibration (ECal) module that operates from 300 kHz to 26.5 GHz. It provides fast, accurate full two-port VNA calibrations with a single connection, reducing connector wear and operator error compared to traditional mechanical calibration kits. Featuring solid-state switching for reliable performance, the N4691B interfaces directly with Keysight PNA and ENA series network analyzers via USB, and can be used with legacy analyzers using an optional 85097B interface kit.

SPECIFICATIONS

Physical

Power Supply	USB powered
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General Specifications

Frequency Range	300 kHz to 26.5 GHz
Number of Ports	2
Connector Type	3.5 mm
Impedance	50 Ω

RF Performance Characteristics

Directivity (300 kHz to 2 MHz)	31 dB
Directivity (2 to 10 MHz)	41 dB
Directivity (10 to 500 MHz)	46 dB
Directivity (500 MHz to 2 GHz)	56 dB
Directivity (2 to 10 GHz)	54 dB
Directivity (10 to 20 GHz)	48 dB
Directivity (20 to 26.5 GHz)	44 dB
Source Match (300 kHz to 2 MHz)	29 dB
Source Match (2 to 10 MHz)	36 dB
Source Match (10 to 500 MHz)	41 dB
Source Match (500 MHz to 2 GHz)	47 dB
Source Match (2 to 10 GHz)	45 dB
Source Match (10 to 20 GHz)	44 dB
Source Match (20 to 26.5 GHz)	40 dB
Reflection Tracking (300 kHz to 2 MHz)	± 0.11 dB
Reflection Tracking (2 to 10 MHz)	± 0.06 dB
Reflection Tracking (10 to 500 MHz)	± 0.05 dB
Reflection Tracking (500 MHz to 2 GHz)	± 0.02 dB
Reflection Tracking (2 to 10 GHz)	± 0.03 dB
Reflection Tracking (10 to 20 GHz)	± 0.04 dB
Reflection Tracking (20 to 26.5 GHz)	± 0.05 dB
Transmission Tracking (300 kHz to 2 MHz)	± 0.14 dB
Transmission Tracking (2 to 10 MHz)	± 0.11 dB
Transmission Tracking (10 to 500 MHz)	± 0.07 dB
Transmission Tracking (500 MHz to 2 GHz)	± 0.05 dB
Transmission Tracking (2 to 10 GHz)	± 0.07 dB
Transmission Tracking (10 to 20 GHz)	± 0.10 dB
Transmission Tracking (20 to 26.5 GHz)	± 0.12 dB
Load Match (300 kHz to 2 MHz)	26 dB
Load Match (2 to 10 MHz)	31 dB
Load Match (10 to 500 MHz)	37 dB
Load Match (500 MHz to 2 GHz)	45 dB
Load Match (2 to 10 GHz)	49 dB
Load Match (10 to 20 GHz)	45 dB
Load Match (20 to 26.5 GHz)	40 dB

Configuration & Options

Connector Options	Option F0F (female/female), Option M0F (male/female), Option M0M (male/male)
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Performance

Maximum Input Power (Damage Level)	+20 dBm
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Environmental

Storage Temperature	-40 °C to +70 °C
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Calibration & Compliance

Accredited Calibration Options	ISO 17025 (Option 1A7), ANSI Z540-1 (Option A6J)
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TECHNOLOGY

Electronic Calibration (ECal)

APPLICATIONS

Vector Network Analyzer (VNA) Calibration

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.