

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N4693A

The Keysight (formerly Agilent) N4693A is a high-performance 2-port Microwave Electronic Calibration (ECal) module operating from 10 MHz to 50 GHz with 2.4 mm precision connectors. It provides fast, repeatable, and highly accurate calibrations for compatible vector network analyzers, significantly reducing the complexity and human error associated with traditional mechanical calibration kits.

SPECIFICATIONS

General

Product Family	N4690 Series Microwave ECal
Calibration Cycle	1 Year

RF & Electrical Performance

Frequency Range	10 MHz to 50 GHz
Nominal Impedance	50 Ω
Number of Calibration Ports	2
Connector Type	2.4 mm

Calibration Configurations & Standards

Option 00F	Both ports 2.4 mm female
Option 00M	Both ports 2.4 mm male
Option 00A	Port A 2.4 mm female, Port B 2.4 mm male

Interface & Connectivity

Control Bus	USB
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System Compatibility

Compatible Analyzer Series	Keysight PNA and ENA Vector Network Analyzers
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Environmental Specifications

Guaranteed Specification Temperature Range	+20 °C to +30 °C
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Guaranteed Performance (at 23 °C ± 1 °C)

Guaranteed Directivity (10 MHz to 45 MHz)	32 dB
Guaranteed Directivity (45 MHz to 2 GHz)	55 dB
Guaranteed Directivity (2 GHz to 10 GHz)	49 dB
Guaranteed Directivity (10 GHz to 20 GHz)	45 dB
Guaranteed Directivity (20 GHz to 40 GHz)	43 dB
Guaranteed Directivity (40 GHz to 50 GHz)	41 dB
Guaranteed Source Match (10 MHz to 45 MHz)	25 dB
Guaranteed Source Match (45 MHz to 2 GHz)	46 dB
Guaranteed Source Match (2 GHz to 10 GHz)	41 dB
Guaranteed Source Match (10 GHz to 20 GHz)	37 dB
Guaranteed Source Match (20 GHz to 40 GHz)	36 dB
Guaranteed Source Match (40 GHz to 50 GHz)	34 dB
Guaranteed Load Match (10 MHz to 45 MHz)	25 dB
Guaranteed Load Match (45 MHz to 2 GHz)	47 dB
Guaranteed Load Match (2 GHz to 10 GHz)	42 dB
Guaranteed Load Match (10 GHz to 20 GHz)	39 dB
Guaranteed Load Match (20 GHz to 40 GHz)	35 dB
Guaranteed Load Match (40 GHz to 50 GHz)	33 dB

Guaranteed Performance

Guaranteed Reflection Tracking (10 MHz to 45 MHz)	±0.08 dB
Guaranteed Reflection Tracking (45 MHz to 2 GHz)	±0.03 dB
Guaranteed Reflection Tracking (2 GHz to 10 GHz)	±0.04 dB
Guaranteed Reflection Tracking (10 GHz to 20 GHz)	±0.05 dB
Guaranteed Reflection Tracking (20 GHz to 40 GHz)	±0.06 dB
Guaranteed Reflection Tracking (40 GHz to 50 GHz)	±0.08 dB
Guaranteed Transmission Tracking (10 MHz to 45 MHz)	±0.15 dB
Guaranteed Transmission Tracking (45 MHz to 2 GHz)	±0.04 dB
Guaranteed Transmission Tracking (2 GHz to 10 GHz)	±0.06 dB
Guaranteed Transmission Tracking (10 GHz to 20 GHz)	±0.08 dB
Guaranteed Transmission Tracking (20 GHz to 40 GHz)	±0.11 dB
Guaranteed Transmission Tracking (40 GHz to 50 GHz)	±0.17 dB

TECHNOLOGY

Electronic Calibration (ECal)

APPLICATIONS

Vector Network Analyzer 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.