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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 85031B Calibration Kit, DC to 6 GHz, 7 mm

Agilent 85031B 7 mm Economy Calibration Kit to 6 GHz The Keysight 85031B is a 7 mm economy mechanical calibration kit used to calibrate network analyzers for precision 7 mm devices up to 6 GHz. OEM 85031B user's and service guide 9018-01288 Table 2-3 lists broadband-load return loss greater than or equal to 50 dB DC to 5 GHz and greater than or equal to 44 dB from 5 to 6 GHz, with typical return loss greater than or equal to 23 dB from 6 to 18 GHz. Economy 7 mm OSL calibration to 6 GHz using two broadband loads and a combination open/short. The Keysight 85031B is a 7 mm economy mechanical calibration kit used to calibrate network analyzers for precision 7 mm devices up to 6 GHz. OEM 85031B user's and service guide 9018-01288 Table 2-3 lists broadband-load return loss greater than or equal to 50 dB DC to 5 GHz and greater than or equal to 44 dB from 5 to 6 GHz, with typical return loss greater than or equal to 23 dB from 6 to 18 GHz. Economy 7 mm OSL calibration to 6 GHz using two broadband loads and a combination open/short. Instrument Type: Economy mechanical calibration kit



MODEL

**Agilent / Keysight
85031B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

85031B

LISTING

<https://aumictechlabs.com/products/85031b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 85031B is a DC to 6 GHz calibration kit engineered for precise one-port and two-port calibration of network analyzers and RF test equipment using 7 mm connectors. This metrology-grade kit delivers the fixed standards necessary for reliable coaxial measurements and includes broadband load terminations and a combination open/short circuit standard, all optimized for repeatable performance across its operating frequency range.

Technical Specifications
Frequency Range: DC to 6 GHz
Connector Type: 7 mm
Characteristic Impedance: 50 Ω
Return Loss: ≥ 52 dB (DC to 5 GHz); ≥ 46 dB (5 to 6 GHz)
Kit Components
Two 50 Ω broadband load terminations with distributed resistive element on sapphire substrate
One combination open/short circuit standard with precision-machined construction

Key Features
The broadband loads feature a rugged internal structure designed for repeatable connections and stable return loss performance to 6 GHz. The combination open/short standard uses precision-machined parts that control pin depth to minimize phase errors during calibration. The 7 mm connector interface is a precision standard where mechanical characteristics - including center conductor protrusion and pin depth - are verified by Keysight to ensure electrical performance.

Typical Applications
Calibration of Keysight and Agilent network analyzers for measurement of devices with 7 mm connectors. Suitable for one-port and two-port calibration procedures in coaxial measurement systems.

Compatibility & Integration
Designed specifically for Keysight and Agilent network analyzers. Calibration kit definition files (.xkt) are available for download and can be loaded into Vector Network Analyzers for automated calibration setup. Complete user's and service guide available with replacement part numbers, specifications, and procedures for use, maintenance, and troubleshooting.

85031B Characteristics / Specifications

PARAMETER	VALUE
Model	85031B
Instrument Type	Economy mechanical calibration kit
Connector Type	7 mm
Frequency Range	DC to 6 GHz
Kit Contents	two 50 ohm broadband load terminations and one combination open/short
Load Return Loss Dc To 5 Ghz	greater than or equal to 50 dB
Load Return Loss 5 To 6 Ghz	greater than or equal to 44 dB
Load Return Loss Typical 6 To 18 Ghz	greater than or equal to 23 dB typical, not warranted
Operating Temperature	+15 C to +35 C
Storage Temperature	minus 40 C to +75 C
Error Corrected Temperature	plus or minus 1 C of measurement calibration temperature
Humidity Type Tested	0 percent to 95 percent at 40 C non-condensing
Torque 7 Mm	135 N-cm (12 in-lb) plus or minus 13.5 N-cm
Lowband Load Typical Pin Depth	minus 0.0002 to minus 0.0025 in (plus 0.0051 to minus 0.0635 mm table listing)
Combo Open Typical Pin Depth	0 to minus 0.001 in (0 to minus 0.0254 mm)
Combo Short Typical Pin Depth	plus 0.0001 to minus 0.0001 in (plus 0.00254 to minus 0.00254 mm)
Center Conductor Recession Collet Off	0.000 to 0.002 inches with collet removed
Impedance	50 ohm
Literature	Keysight 85031B 7 mm Calibration Kit User's and Service Guide 9018-01288
Related Precision 7 Mm	85050B/C/D cover 7 mm to 18 GHz
Load Design	sapphire distributed resistive element optimized to 6 GHz
Calibration Definitions	resident in the analyzer or entered from the kit definitions
Ports	1-port and 2-port OSL with 7 mm standards
Form Factor	foam-lined mechanical calibration kit

PARAMETER

VALUE

Humidity

Type Tested: 0 percent to 95 percent at 40 C non-condensing

Return loss

Dc To 5 Ghz: greater than or equal to 50 dB

85031B Specifications

PARAMETER	VALUE
Agilent 85031B 7 mm Economy Calibration Kit to 6 GHz	Overview
Applications	Economy 7 mm OSL calibration to 6 GHz using two broadband loads and a combination open/short.
Key Features	Two 50 ohm 7 mm broadband loads
One combination open/short	Specified DC to 6 GHz
Technical Specifications	Model: 85031B

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 40 C to +75 C
Operating temperature	+15 C to +35 C
Operating Temperature	+15 C to +35 C
Humidity	Type Tested: 0 percent to 95 percent at 40 C non-condensing
Error Corrected Temperature	plus or minus 1 C of measurement calibration temperature
Humidity Type Tested	0 percent to 95 percent at 40 C non-condensing
Torque 7 Mm	135 N-cm (12 in-lb) plus or minus 13.5 N-cm
Lowband Load Typical Pin Depth	minus 0.0002 to minus 0.0025 in (plus 0.0051 to minus 0.0635 mm table listing)
Combo Open Typical Pin Depth	0 to minus 0.001 in (0 to minus 0.0254 mm)
Combo Short Typical Pin Depth	plus 0.0001 to minus 0.0001 in (plus 0.00254 to minus 0.00254 mm)
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Load Design	sapphire distributed resistive element optimized to 6 GHz
Calibration Definitions	resident in the analyzer or entered from the kit definitions
Ports	1-port and 2-port OSL with 7 mm standards
Form Factor	foam-lined mechanical calibration kit Notes From Keysight 85031B 7 mm Calibration Kit User's and Service Guide 9018-01288 Table 2-1 environment, Table 2-2 pin-depth limits, Table 2-3 electrical specifications, and Table 3-2 torque. DC-to-5 GHz load return loss is greater than or equal to 50 dB on Table 2-3 (reseller sheets quoting 52 dB are not used here).

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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PARAMETER	VALUE
Model	85031B
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Connector Type	7 mm
Frequency Range	DC to 6 GHz
Kit Contents	two 50 ohm broadband load terminations and one combination open/short
Load Return Loss Dc To 5 Ghz	greater than or equal to 50 dB
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Load Design	sapphire distributed resistive element optimized to 6 GHz
Calibration Definitions	resident in the analyzer or entered from the kit definitions

PARAMETER	VALUE
Ports	1-port and 2-port OSL with 7 mm standards
Form Factor	foam-lined mechanical calibration kit

Notes

From Keysight 85031B 7 mm Calibration Kit User's and Service Guide 9018-01288 Table 2-1 environment, Table 2-2 pin-depth limits, Table 2-3 electrical specifications, and Table 3-2 torque. DC-to-5 GHz load return loss is greater than or equal to 50 dB on Table 2-3 (reseller sheets quoting 52 dB are not used here).

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