

KEYSIGHT TECHNOLOGIES (AGILENT HP)

85056A

The Keysight (Agilent) 85056A is a high-precision 2.4 mm mechanical calibration kit designed to characterize systematic errors of vector network analyzers from DC to 50 GHz. It includes precision open, short, broadband load, and sliding load standards, as well as high-quality phase-matched adapters, connector gauges, and a torque wrench to ensure highly accurate, repeatable measurements in demanding microwave applications.

SPECIFICATIONS

General

Interfaces	None (Mechanical kit; definitions delivered on disk)
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Physical

Power Supply	None (Passive calibration standards)
Operating Temperature	15 °C to 35 °C °C

General Specifications

Frequency Range	DC to 50 GHz
Nominal Impedance	50 Ω
Connector Type	2.4 mm
Calibration Methods Supported	Full two-port calibration (SOLT)

Broadband Load Specifications

Broadband Load Frequency Range	DC to 50 GHz
Broadband Load Return Loss (DC to 4 GHz)	≥ 42 dB
Broadband Load Return Loss (4 to 26.5 GHz)	≥ 34 dB
Broadband Load Return Loss (26.5 to 50 GHz)	≥ 30 dB
Broadband Load Maximum Power	0.5 W (average)

Sliding Load Specifications

Sliding Load Frequency Range	4 to 50 GHz
Sliding Load Return Loss (4 to 20 GHz)	≥ 42 dB
Sliding Load Return Loss (20 to 38 GHz)	≥ 38 dB
Sliding Load Return Loss (38 to 50 GHz)	≥ 36 dB

Offset Open Specifications

Offset Open Phase Deviation (DC to 2 GHz)	$\pm 0.5^\circ$
Offset Open Phase Deviation (2 to 20 GHz)	$\pm 1.25^\circ$
Offset Open Phase Deviation (20 to 50 GHz)	$\pm 2.50^\circ$

Offset Short Specifications

Offset Short Phase Deviation (DC to 2 GHz)	±0.5°
Offset Short Phase Deviation (2 to 20 GHz)	±1.25°
Offset Short Phase Deviation (20 to 50 GHz)	±2.25°

Precision Adapter Specifications

Adapter Frequency Range	DC to 50 GHz
Adapter Return Loss (DC to 4 GHz)	≥ 32 dB
Adapter Return Loss (4 to 26.5 GHz)	≥ 28 dB
Adapter Return Loss (26.5 to 50 GHz)	≥ 23 dB

Included Adapters

Included 2.4 mm (f) to 2.4 mm (f) Adapter (085056-60021)	Yes
Included 2.4 mm (m) to 2.4 mm (m) Adapter (085056-60022)	Yes
Included 2.4 mm (m) to 2.4 mm (f) Adapter (085056-60023)	Yes

Tools & Accessories

Torque Wrench Inclusion	Yes
Torque Wrench Open Size	5/16 in
Torque Wrench Torque Setting	8 lb-in (90 N-cm)
Open-End Spanner Wrench Inclusion	Yes
Connector Gauges	Included (Male & Female)
Calibration Definition Media	Included on disk
Commercial Calibration Certificate	Yes

Environmental

Storage Temperature	-40 °C to +75 °C
Calibration Temperature Range	20 °C to 26 °C

Calibration Standard Definitions

Offset Open Offset Delay	14.103 ps
Offset Open Offset Loss	2.2 G/s
Offset Open Offset Z0	50 Ω
Offset Short Offset Delay	14.103 ps
Offset Short Offset Loss	2.2 G/s
Offset Short Offset Z0	50 Ω
Open C0 Coefficient	17.50 × 10 ⁻¹⁵ F
Open C1 Coefficient	100.00 × 10 ⁻²⁷ F/Hz
Open C2 Coefficient	0.00 × 10 ⁻³⁶ F/Hz ²
Open C3 Coefficient	0.00 × 10 ⁻⁴⁵ F/Hz ³
Short L0 Coefficient	0.00 × 10 ⁻¹² H
Short L1 Coefficient	0.00 × 10 ⁻²⁴ H/Hz
Short L2 Coefficient	0.00 × 10 ⁻³³ H/Hz ²
Short L3 Coefficient	0.00 × 10 ⁻⁴² H/Hz ³

Adapter Specifications

2.4 mm (f) to 2.4 mm (f) Adapter Offset Delay	41.341 ps (085056-60021)
2.4 mm (m) to 2.4 mm (m) Adapter Offset Delay	53.037 ps (085056-60022)
2.4 mm (m) to 2.4 mm (f) Adapter Offset Delay	47.190 ps (085056-60023)
Adapter Offset Loss	3.3 G/s
Adapter Offset Z0	50 Ω

TECHNOLOGY

Coaxial RF & Microwave

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.