

KEYSIGHT TECHNOLOGIES (AGILENT HP)

85052C

The Keysight Technologies 85052C is a precision 3.5 mm vector network analyzer (VNA) calibration kit operating from DC to 26.5 GHz. Designed primarily for TRL (Thru-Reflect-Line) and LRL calibration, the kit contains precision 50-ohm airlines, offset opens, offset shorts, broadband loads, precision adapters, and torque tools. It enables highly accurate 2-port calibration of compatible VNAs to ensure measurement traceability.

SPECIFICATIONS

General

Interfaces	None (Passive Mechanical Kit)
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Physical

Power Supply	None (Passive)
Operating Temperature	20 °C to 26 °C (Recommended Calibration Temperature) °C
Dimensions (W×H×D)	410 mm × 170 mm × 320 mm (Typical Case) mm
Weight	3.2 kg

General Specifications

Frequency Range	DC to 26.5 GHz
Nominal Impedance	50 Ω
Connector Type	3.5 mm
Calibration Methods Supported	TRL (Thru-Reflect-Line), LRL, Full 2-Port, Response

Broadband Load Standards

Broadband Load Frequency Range	DC to 26.5 GHz
Broadband Load Return Loss (DC to ≤2 GHz)	≥ 46 dB

Airline Standards

Long Precision Airline Frequency Range	> 2 to ≤ 7 GHz
Long Precision Airline Return Loss (>2 to ≤7 GHz)	≥ 56 dB
Short Precision Airline Frequency Range	> 7 to ≤ 26.5 GHz
Short Precision Airline Return Loss (>7 to ≤26.5 GHz)	≥ 50 dB
Precision Airline Nominal Impedance	50 Ω

Adapter Specifications

Precision Adapter Return Loss (DC to ≤2 GHz)	≥ 30 dB
Included Precision Adapters	3.5 mm (f) to 3.5 mm (f), 3.5 mm (m) to 3.5 mm (m), 3.5 mm (m) to 3.5 mm (f)

Open & Short Standards

Offset Open Phase Deviation (DC to ≤ 3 GHz)	$\pm 0.65^\circ$ from nominal
Offset Short Phase Deviation (DC to ≤ 3 GHz)	$\pm 0.50^\circ$ from nominal
Included Open Standards	3.5 mm (m) offset open, 3.5 mm (f) offset open
Included Short Standards	3.5 mm (m) offset short, 3.5 mm (f) offset short

Mechanical & Connector Specifications

Torque Wrench Size	5/16 in (8 mm)
Torque Wrench Torque Setting	90 N-cm (8 lb-in)
Open-End Spanner Wrench Size	7 mm

Environmental & Calibration Traceability

Calibration Definition Media	Disk (for loading into network analyzer)
Calibration Certificate	Commercial calibration certificate included

Broadband Load Specifications

Broadband Load Return Loss (2 to 13.5 GHz)	≥ 40 dB
Broadband Load Return Loss (13.5 to 26.5 GHz)	≥ 36 dB

Precision Adapter Specifications

Precision Adapter Return Loss (2 to 18 GHz)	≥ 28 dB
Precision Adapter Return Loss (18 to 26.5 GHz)	≥ 26 dB

Open Standard Specifications

Offset Open Phase Deviation (3 to 8 GHz)	$\pm 1.5^\circ$
Offset Open Phase Deviation (8 to 26.5 GHz)	$\pm 2.5^\circ$

Short Standard Specifications

Offset Short Phase Deviation (3 to 8 GHz)	$\pm 1.0^\circ$
Offset Short Phase Deviation (8 to 26.5 GHz)	$\pm 2.0^\circ$

Airline Specifications

Airline Electrical Length (Short)	42.3 ps
Airline Electrical Length (Long)	169.3 ps
Airline Physical Length (Short)	1.269 cm
Airline Physical Length (Long)	5.076 cm

Included Components

Broadband Load Part Number (Female)	85052-60010
Broadband Load Part Number (Male)	85052-60011
Short Standard Part Number (Female)	85052-60006
Short Standard Part Number (Male)	85052-60007
Open Standard Part Number (Female)	85052-60008
Open Standard Part Number (Male)	85052-60009
Long Airline Part Number	85052-60036
Short Airline Part Number	85052-60035

Environmental

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

Component Part Numbers

Precision Adapter 3.5 mm f-f Part Number	85052-60012
Precision Adapter 3.5 mm m-m Part Number	85052-60014
Precision Adapter 3.5 mm m-f Part Number	85052-60013
Spanner Wrench Part Number	8710-1761
Torque Wrench Part Number	8710-1765

Mechanical Specifications

Precision Adapter Pin Depth Limits	0.0025 to 0.013 mm
Fixed Load Pin Depth Limits	0.0025 to 0.013 mm
Open Standard Pin Depth Limits	0.000 to 0.0127 mm
Short Standard Pin Depth Limits	0.000 to 0.0127 mm

TECHNOLOGY

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.