

KEYSIGHT TECHNOLOGIES (AGILENT HP)

85032F

The Keysight Technologies (formerly Agilent) 85032F is a high-precision Type-N mechanical calibration kit designed for vector network analyzers (VNAs). Operating from DC to 9 GHz, it features precision male and female 50 Ω loads along with combined open/short standards. It is widely used to perform systematic error characterization and calibration in RF and microwave laboratory environments.

SPECIFICATIONS

Physical

Operating Temperature	15 to 35 °C °C
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General System Specifications

Frequency Range	DC to 9 GHz
Nominal Impedance	50 Ω
Connector Type	Type-N
Connector Gender Configuration	Male and Female
Compatible Vector Network Analyzers	Keysight/Agilent ENA, PNA, and FieldFox series VNAs

Broadband Load Standards Parameters

Male Load Return Loss (DC to 2 GHz)	≥ 49 dB (SWR ≤ 1.007)
Male Load Return Loss (2 to 3 GHz)	≥ 46 dB (SWR ≤ 1.010)
Male Load Return Loss (3 to 9 GHz)	≥ 40 dB (SWR ≤ 1.020)
Female Load Return Loss (DC to 2 GHz)	≥ 49 dB (SWR ≤ 1.007)
Female Load Return Loss (2 to 3 GHz)	≥ 46 dB (SWR ≤ 1.010)
Female Load Return Loss (3 to 9 GHz)	≥ 40 dB (SWR ≤ 1.020)
Load DC Resistance Accuracy	50 $\Omega \pm 0.5 \Omega$ ($\pm 1\%$)
Maximum Power Rating (Continuous Wave)	1 W

Open Standards Parameters

Open Standard DC Resistance	Infinite (Open Circuit)
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Short Standards Parameters

Short Standard DC Resistance	0 Ω (Short Circuit)
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Mechanical & Connector Physical Properties

Recommended Connection Torque Limit	1.3 N-m (12 in-lb)
Required Torque Wrench Hex Size	3/4 inch (19 mm)

Environmental Specifications

Calibration Verification Temperature Range	20 °C to 26 °C (± 1 °C from environmental calibration)
Storage Temperature Range	-40 °C to +75 °C
Relative Humidity Limits	Non-condensing

Metrology & Traceability

Calibration Interval Recommendation	12 Months
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Physical Characteristics & Storage

Included Standards - Male Open/Short	Part Number 85032-60011
Included Standards - Female Open/Short	Part Number 85032-60012
Included Standards - Male 50 Ω Fixed Load	Part Number 85032-60017
Included Standards - Female 50 Ω Fixed Load	Part Number 85032-60018

Phase Specifications

Male Open Deviation from Nominal Phase (DC to 2 GHz)	$\pm 0.6^\circ$
Male Open Deviation from Nominal Phase (2 to 3 GHz)	$\pm 1.0^\circ$
Male Open Deviation from Nominal Phase (3 to 9 GHz)	$\pm 2.5^\circ$
Female Open Deviation from Nominal Phase (DC to 2 GHz)	$\pm 0.6^\circ$
Female Open Deviation from Nominal Phase (2 to 3 GHz)	$\pm 1.0^\circ$
Female Open Deviation from Nominal Phase (3 to 9 GHz)	$\pm 2.5^\circ$
Male Short Deviation from Nominal Phase (DC to 2 GHz)	$\pm 0.6^\circ$
Male Short Deviation from Nominal Phase (2 to 3 GHz)	$\pm 1.0^\circ$
Male Short Deviation from Nominal Phase (3 to 9 GHz)	$\pm 2.5^\circ$
Female Short Deviation from Nominal Phase (DC to 2 GHz)	$\pm 0.6^\circ$
Female Short Deviation from Nominal Phase (2 to 3 GHz)	$\pm 1.0^\circ$
Female Short Deviation from Nominal Phase (3 to 9 GHz)	$\pm 2.5^\circ$

Standard Definitions

Male Open Offset Delay	17.544 ps
Male Open Offset Loss	1.6 GOhm/s
Male Open C0 Coefficient	104.54 fF
Male Open C1 Coefficient	-1.1002 fF/GHz
Male Open C2 Coefficient	0.054343 fF/GHz ²
Male Open C3 Coefficient	-0.0010221 fF/GHz ³
Female Open Offset Delay	0 ps
Female Open Offset Loss	1.6 GOhm/s
Female Open C0 Coefficient	62.143 fF
Female Open C1 Coefficient	-0.15105 fF/GHz
Female Open C2 Coefficient	0.06412 fF/GHz ²
Female Open C3 Coefficient	-0.0019796 fF/GHz ³
Male Short Offset Delay	17.544 ps
Male Short Offset Loss	1.6 GOhm/s
Female Short Offset Delay	0 ps
Female Short Offset Loss	1.6 GOhm/s

TECHNOLOGY

Mechanical Calibration Kit

APPLICATIONS

Vector Network Analyzer (VNA) System 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.