KEYSIGHT TECHNOLOGIES (AGILENT HP)

# 85038A

The Keysight Technologies (formerly Agilent / HP) 85038A is a high-precision 7-16 mechanical calibration kit designed for calibrating vector network analyzers. Operating from DC to 7.5 GHz, this kit contains precision open, short, and broadband load standards of both male and female genders, ensuring accurate and traceable system-error characterization for 50-ohm measurement environments.

## SPECIFICATIONS

### General

| | |
|---|---|
| Interfaces | None (passive mechanical standards) |

### Physical

| | |
|---|---|
| Power Supply | None (passive components) |
| Operating Temperature | 20 °C to 26 °C (recommended for specified calibration accuracy) °C |

### Frequency Parameters

| | |
|---|---|
| Frequency Range | DC to 7.5 GHz |

### Electrical Parameters

| | |
|---|---|
| Nominal Impedance | 50 Ω |

### Physical Parameters

| | |
|---|---|
| Connector Type | 7-16 (DIN 47223) |

### Kit Components

| | |
|---|---|
| Male Open Standard | Included |
| Female Open Standard | Included |
| Male Short Standard | Included |
| Female Short Standard | Included |
| Male Broadband Load | Included |
| Female Broadband Load | Included |

### Metrology & Calibration

| | |
|---|---|
| Calibration Method Support | SOLT (Short-Open-Load-Thru) |

### General Compatibility

| | |
|---|---|
| Compatible Instruments | Keysight / Agilent Vector Network Analyzers |

### Kit Contents

| | |
|---|---|
| Male Open Part Number | 85038-60005 |
| Female Open Part Number | 85038-60002 |
| Male Short Part Number | 85038-60006 |
| Female Short Part Number | 85038-60003 |
| Male Broadband Load Part Number | 85038-60007 |
| Female Broadband Load Part Number | 85038-60004 |

### Electrical Specifications

| | |
|---|---|
| Broadband Load Return Loss (DC to 2 GHz) | ≥ 40 dB |
| Broadband Load Return Loss (2 to 7.5 GHz) | ≥ 36.5 dB |
| Open Phase Deviation (DC to 2 GHz) | ± 1.5° |
| Open Phase Deviation (2 to 7.5 GHz) | ± 2.0° |
| Short Phase Deviation (DC to 2 GHz) | ± 1.0° |
| Short Phase Deviation (2 to 7.5 GHz) | ± 1.5° |

### Environmental

| | |
|---|---|
| Storage Temperature Range | -40 °C to +75 °C |

### Accessories

| | |
|---|---|
| Torque Wrench Size | 27 mm |
| Torque Wrench Torque Setting | 2.2 N-m (20 lb-in) |
| Torque Wrench Part Number | 8710-2175 |

### Standard Definitions

| | |
|---|---|
| Standards Offset Z0 | 50 Ω |

### Standard Definitions - Male Open

| | |
|---|---|
| Male Open Offset Delay | 94.269 ps |
| Male Open Offset Loss | 1.3 GΩ/s |
| Male Open C0 | $104.14 \times 10^{-15}$ F |
| Male Open C1 | $-1522.6 \times 10^{-27}$ F/Hz |
| Male Open C2 | $304.6 \times 10^{-36}$ F/Hz² |
| Male Open C3 | $-10.364 \times 10^{-45}$ F/Hz³ |

### Standard Definitions - Female Open

| | |
|---|---|
| Female Open Offset Delay | 75.316 ps |
| Female Open Offset Loss | 1.5 GΩ/s |
| Female Open C0 | $114.77 \times 10^{-15}$ F |
| Female Open C1 | $-1803.9 \times 10^{-27}$ F/Hz |
| Female Open C2 | $337.89 \times 10^{-36}$ F/Hz² |
| Female Open C3 | $-10.604 \times 10^{-45}$ F/Hz³ |

### Standard Definitions - Male Short

| | |
|---|---|
| Male Short Offset Delay | 104.908 ps |
| Male Short Offset Loss | 1.8 GΩ/s |

### Standard Definitions - Female Short

| | |
|---|---|
| Female Short Offset Delay | 83.122 ps |
| Female Short Offset Loss | 1.9 GΩ/s |

## TECHNOLOGY

RF / Microwave Mechanical Calibration

## APPLICATIONS

Vector Network Analyzer (VNA) 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.