

KEYSIGHT TECHNOLOGIES (AGILENT HP)

85046B

The Keysight Agilent HP 85046B is a 75 ohm S-parameter test set designed to measure transmission and reflection characteristics of two-port devices from 300 kHz to 2 GHz. It is controlled directly by a compatible vector network analyzer and features an integrated programmable step attenuator and 75 ohm Type-N female test ports.

SPECIFICATIONS

General

Interfaces	Special system interconnect cable interface
Display	None (controlled via host analyzer display)

Physical

Power Supply	Powered by host network analyzer via interconnect cable
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	426 mm × 90 mm × 503 mm mm
Weight	9.1 kg

RF & S-Parameter Performance

Frequency Range	300 kHz to 2 GHz
Nominal Impedance	75 ohms
Number of Test Ports	2
Directivity (0.3 to 1300 MHz)	>= 35 dB
Directivity (1300 to 2000 MHz)	>= 30 dB
Source Match (0.3 to 1300 MHz)	>= 17 dB
Source Match (1300 to 2000 MHz)	>= 16 dB
Load Match (0.3 to 1300 MHz)	>= 17 dB
Load Match (1300 to 2000 MHz)	>= 16 dB

Signal Handling & Insertion Loss

Maximum Operating RF Input Power	+20 dBm
Programmable Step Attenuator Range	0 to 70 dB (in 10 dB steps) with Option 009

DC Bias Specifications

DC Bias Inputs	Rear-panel BNC (f)
Maximum DC Bias Current	200 mA

Connectors & Interface Ports

Test Port 1 Connector Type	75 ohm Type-N female
Test Port 2 Connector Type	75 ohm Type-N female
RF Input Connector Type	Type-N female

System Control & Compatibility

Compatible Vector Network Analyzers	Agilent/HP 8753A, 8753B, 8753C, 8753D Option 011, 8753E Option 011, 8753ES Option 011, 4395, 4396, and selected 8702 lightwave component analyzer configurations
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Electrical Specifications

Maximum DC Bias Voltage	40 VDC
Nominal Insertion Loss (RF Input to Test Ports 1 or 2) (0.3 to 1300 MHz)	16 dB
Nominal Insertion Loss (RF Input to Test Ports 1 or 2) (1300 to 2000 MHz)	19 dB
Nominal Insertion Loss (RF Input to A, B, or R) (0.3 to 1300 MHz)	14 dB
Nominal Insertion Loss (RF Input to A, B, or R) (1300 to 2000 MHz)	17 dB
Port-to-Port Isolation (0.3 to 2000 MHz)	>100 dB
Transmission Tracking Magnitude (0.3 to 1300 MHz)	±1.5 dB
Transmission Tracking Magnitude (1300 to 2000 MHz)	±2.0 dB
Transmission Tracking Phase (0.3 to 1300 MHz)	±10°
Transmission Tracking Phase (1300 to 2000 MHz)	±15°
Reflection Tracking Magnitude (0.3 to 1300 MHz)	±1.5 dB
Reflection Tracking Magnitude (1300 to 2000 MHz)	±2.5 dB
Reflection Tracking Phase (0.3 to 1300 MHz)	±10°
Reflection Tracking Phase (1300 to 2000 MHz)	±20°

Interfaces & Connectivity

Outputs to Analyzer (A, B, R) Connector Type	50 Ω Type-N (female)
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Power

Power Source	Powered directly from the compatible network analyzer via interconnect cable
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Performance

Maximum RF Input Damage Level	+30 dBm (1 W)
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Inputs & Outputs

DC Bias Input Connector Type	BNC female (rear panel)
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Environmental

Storage Temperature Range	-40 °C to +75 °C
Operating Altitude	Up to 4,570 meters (15,000 feet)
Storage Altitude	Up to 15,240 meters (50,000 feet)
Operating Humidity Range	5% to 95% relative humidity (non-condensing) at +40 °C

TECHNOLOGY

RF S-Parameter Test Set

APPLICATIONS

RF and microwave component testing of 75 Ohm devices

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