

KEYSIGHT TECHNOLOGIES (AGILENT HP)

85047A

The Keysight (Agilent/HP) 85047A is an S-parameter test set designed for use with compatible network analyzers (such as the 8753 series). It allows for the complete measurement of transmission and reflection characteristics (S-parameters) of two-port, 50-ohm devices in both directions with a single connection. The test set features a built-in solid-state RF switch, a programmable step attenuator, bias tees, and an internal frequency doubler which extends the frequency range of compatible analyzers up to 6 GHz.

SPECIFICATIONS

General

Interfaces	Special multi-pin interconnect cable to network analyzer, BNC female DC bias inputs
Display	None (controlled via host analyzer)
Front Panel Status Indicators	Active port LEDs (Port 1 / Port 2)

Physical

Power Supply	Power supplied directly from host network analyzer via interconnect cable
Operating Temperature	0 to 55 °C °C
Weight	10 kg kg

Frequency & Port Characteristics

Frequency Range	300 kHz to 6 GHz
Frequency Range (Standard)	300 kHz to 3 GHz
Frequency Range (with Doubler)	3 MHz to 6 GHz
Nominal Impedance	50 Ω
Number of Test Ports	2
Test Port Connector Type	Precision 7 mm (APC-7)
RF Input Connector Type	Type-N (female)
Output Port Connectors (to Receiver)	Type-N female (A, B, R on front panel)
Directivity (300 kHz to 1.3 GHz)	35 dB
Directivity (1.3 GHz to 3.0 GHz)	30 dB
Directivity (3.0 GHz to 6.0 GHz)	25 dB

Signal Routing & Test Set Control

Internal Bias Tees	Standard
Bias Tee Connectors	BNC female (rear panel)
Internal Step Attenuator Range	0 to 70 dB
Step Attenuator Resolution	10 dB

Environmental & Compliance

Storage Temperature Range	-40 to +75 °C
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Tracking

Transmission Phase Tracking (300 kHz to 3.0 GHz)	±10°
Transmission Phase Tracking (3.0 GHz to 6.0 GHz)	±20°
Reflection Amplitude Tracking (300 kHz to 3.0 GHz)	±1.5 dB
Reflection Amplitude Tracking (3.0 GHz to 6.0 GHz)	±2.5 dB
Reflection Phase Tracking (300 kHz to 3.0 GHz)	±10°
Reflection Phase Tracking (3.0 GHz to 6.0 GHz)	±20°

Electrical Specifications

Maximum Operating RF Input Power	+20 dBm
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Power

Power Source	Derived from the host HP/Agilent 8753 network analyzer via the test set interconnect cable
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Performance

RF Input Damage Level	+26 dBm (or 0 VDC)
Test Port Damage Level	+30 dBm (or 30 VDC)

TECHNOLOGY

S-Parameter Test Set

APPLICATIONS

RF and Microwave Component Testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.