

KEYSIGHT TECHNOLOGIES (AGILENT HP)

85027E

The Keysight (Agilent) 85027E directional bridge is high-performance reflection measurement hardware designed to operate with scalar network analyzers. It offers excellent directivity, low test port SWR, and a wide frequency range up to 26.5 GHz for RF and microwave components characterization in coaxial environments. Depending on the analyzer model utilized, it can detect both AC and DC detection signals.

SPECIFICATIONS

General

Interfaces	Integrated cable with multi-pin analog connector for connection to HP/Agilent scalar network analyzers
Display	No display (passive device requiring external scalar network analyzer)

Physical

Power Supply	Powered by host scalar network analyzer via connection cable
Operating Temperature	0 to +55 °C °C
Dimensions (W×H×D)	163 mm × 120 mm × 36 mm mm
Weight	0.5 kg
Integrated Cable Length	1.5 m (5 ft)

RF & Electrical Performance

Frequency Range	10 MHz to 26.5 GHz
Nominal Impedance	50 Ω
Directivity (0.01 to 20 GHz)	≥40 dB
Directivity (20 to 26.5 GHz)	≥36 dB
Maximum RF Input Power	+23 dBm (200 mW)
Maximum DC Input Voltage	±16 V
Detection Modes	AC and DC (analyzer dependent)

Impedance & SWR

Test Port Return Loss (0.01 to 8 GHz)	≥26 dB (SWR ≤ 1.11)
Test Port Return Loss (8 to 20 GHz)	≥22 dB (SWR ≤ 1.17)
Test Port Return Loss (20 to 26.5 GHz)	≥18 dB (SWR ≤ 1.29)

Port & Connector Configurations

Input Port Connector Type	3.5 mm (f)
Test Port Connector Type	3.5 mm (m)

System Compatibility

Compatible Analyzer Models	HP 8757 (AC/DC detection), HP 8756 (AC detection), HP 8755 (AC detection)
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Physical Characteristics

Shipping Weight	1.2 kg
Dimensions (inches)	6.4 in × 4.7 in × 1.4 in

Environmental

Storage Temperature	-40 to +75 °C
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Port Characteristics

Input Port Return Loss (0.01 to 20 GHz)	≥ 20 dB
Input Port Return Loss (20 to 26.5 GHz)	≥ 16 dB

Interfaces

Integrated Cable	1.5 m (5 ft) cable with multi-pin connector for direct interface to 8757 analyzer
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Detector Characteristics

Detector Type	Schottky diode
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Inputs & Outputs

Cable Connector Type	Proprietary multi-pin (mates with Agilent/HP 8757 series SNA detector inputs)
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Power

Power Source	Powered directly by the scalar network analyzer via the integrated cable
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TECHNOLOGY

RF/Microwave Directional Bridge

APPLICATIONS

Reflection and transmission measurements with scalar network analyzers

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