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Data Sheet

August 13, 2026

KEYSIGHT / AGILENT / HP

Keysight / Agilent / HP 8721A Directional Bridge

HP Agilent 8721A Coaxial Directional Bridge The HP 8721A is a coaxial directional bridge for reflection measurements with vector voltmeters and network analyzers in the HF/VHF range. Catalog accessory tables list the 8721A among coaxial directional bridges used with instruments such as the 8405A vector voltmeter. High directivity separates incident and reflected signals for return-loss and reflection-coefficient work. Coaxial reflection measurements; return loss with 8405A/network analyzers; HF/VHF antenna and cable checks; 50 ohm bridge measurements. The HP 8721A is a coaxial directional bridge for reflection measurements with vector voltmeters and network analyzers in the HF/VHF range. Catalog accessory tables list the 8721A among coaxial directional bridges used with instruments such as the 8405A vector voltmeter. High directivity separates incident and reflected signals for return-loss and reflection-coefficient work. Coaxial reflection measurements; return loss with 8405A/network analyzers; HF/VHF antenna and cable checks; 50 ohm bridge measurements.

**MODEL****Keysight / Agilent /
HP 8721A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****8721A****LISTING**<https://aumictechlabs.com/products/8721a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 8721A Directional Bridge is a precision instrument for accurate impedance and reflection coefficient measurements across RF and microwave frequencies. It enables return-loss, insertion-loss, and isolation measurements while serving as a power-monitoring device for both source and load conditions. The bridge delivers the directivity and frequency response required

for component characterization, filter analysis, and impedance matching in swept-source and network analyzer configurations. Technical Specifications Frequency Range: 100 kHz to 100 MHz Impedance: 50 Ω (75 Ω optional) Insertion Loss: 6 dB Coupling to Auxiliary Arm: 6 dB Frequency Response: ± 0.5 dB (0.1 to 110 MHz) Directivity: Greater than 40 dB (1 to 110 MHz) Load-Port Return Loss: Greater than 30 dB Maximum Input Power: +20 dBm Weight: 1 lbs Key Features Monitors source power under load and power delivered to remote loads with 6 dB attenuation in both bridge arms Directivity exceeding 40 dB enables precise separation of incident and reflected signals Flat frequency response of ± 0.5 dB maintains measurement accuracy across the operating band Compatible with both 50 Ω and 75 Ω systems Typical Applications Return-loss characterization of RF and microwave components Impedance measurement and validation Transmission and reflection analysis with tracking generators and spectrum analyzers Power-level monitoring in multi-port systems Filter and matching network evaluation Compatibility & Integration The 8721A integrates with the HP 11652A Transmission/Reflection Kit and operates with swept sources including tracking generators and spectrum analyzers. It pairs with network analyzers such as the HP 8407A and with vector voltmeters like the HP 8405A for CW transmission and reflection measurements.

Features & description

From manufacturer datasheet

Features

- Coaxial directional bridge (notadual-directional coupler waveguide unit)

8721A Characteristics / Specifications

PARAMETER	VALUE
Model	8721A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Coaxial Directional Bridge
Alias	8721A; HP 8721A
Function	directional bridge for reflection/return loss
Impedance	50 ohm coaxial class (confirm label)
Frequency Class	HF/VHF coaxial bridge (HP accessory tables group 8721A with 0.1 to 110 MHz class bridges)
Connectors	coaxial (TypeNor APC class per option)
Use With	8405A vector voltmeter and LF/HF network setups
Directivity	high directivity bridge (see 8721A sheet for dB vs frequency)
Insertion	through-arm insertion loss per sheet
Test Port	DUT reflection port
Source Port	generator input
Reflected Port	reflected-signal output to detector/voltmeter
Power Handling	small-signal coaxial (confirm maximum incident power)
Related 35677A/B	3577A S-parameter test sets (different instrument)
Related 87	later microwave NA family (do not confuse 8721A bridge with 8722C NA)
Form	coaxial accessory (notainframe)
Calibration	directivity/source-match characterized accessory
Status	HP 8721A EOL
Mounting	benchtop coaxial
Gender	confirm test-port sex
NotADetector	bridge not 83440B
NotACoupler Waveguide	coaxial bridge

PARAMETER	VALUE
Documentation	HP coaxial accessory catalog / 8721A sheet Notes Identity from HP coaxial/waveguide accessory catalogs listing 8721A asacoaxial directional bridge. Frequency directivity and connector sex are on the 8721A specification line: confirm the nameplate rather than copying 778D or 8722C numbers.
Return loss	with 8405A/network analyzers; HF/VHF antenna and cable checks; 50 ohm bridge measurements.

8721A Specifications

PARAMETER	VALUE
HP Agilent 8721A Coaxial Directional Bridge	Overview
Applications	Coaxial reflection measurements; return loss with 8405A/network analyzers; HF/VHF antenna and cable checks; 50 ohm bridge measurements.
Technical Specifications	Model: 8721A

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Specifications	
PARAMETER	VALUE
Source Port	generator input
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Power Handling	small-signal coaxial (confirm maximum incident power)

Specifications

PARAMETER	VALUE
Related 35677A/B	3577A S-parameter test sets (different instrument)
Related 8722	later microwave NA family (do not confuse 8721A bridge with 8722C NA)
Form	coaxial accessory (notamainframe)

Specifications

PARAMETER	VALUE
Calibration	directivity/source-match characterized accessory
Status	HP 8721A EOL
Mounting	benchtop coaxial

Specifications

PARAMETER	VALUE
Gender	confirm test-port sex
NotADetector	bridge not 83440B
NotACoupler Waveguide	coaxial bridge

Documentation: HP coaxial accessory catalog / 8721A sheet

Notes

Identity from HP coaxial/waveguide accessory catalogs listing 8721A asacoaxial directional bridge. Frequency directivity and connector sex are on the 8721A specification line: confirm the nameplate rather than copying 778D or 8722C numbers.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.