

KEYSIGHT TECHNOLOGIES (AGILENT HP)

86205A

The Keysight (formerly Agilent HP) 86205A is a high-directivity 50 Ω RF bridge designed for precise reflection measurements and signal-leveling applications. It features an exceptionally wide frequency range of 300 kHz to 6 GHz, very low insertion loss, and a highly flat coupling factor, making it an ideal companion for vector network analyzers (such as the ENA series), scalar network analyzers, and spectrum analyzers.

SPECIFICATIONS

General

Interfaces	None (passive RF device)
------------	--------------------------

Physical

Power Supply	None (passive, requires no external power)
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	93 mm × 26 mm × 142 mm mm
Weight	0.57 kg kg
Shipping Weight	1.8 kg

RF Performance Specifications

Frequency Range	300 kHz to 6 GHz
Nominal Impedance	50 Ω
Directivity (Minimum)	40 dB (300 kHz to 2 GHz), 30 dB (2 GHz to 3 GHz), 20 dB (3 GHz to 5 GHz), 16 dB (5 GHz to 6 GHz)
Insertion Loss (Input to Test Port)	1.5 dB + 0.1 dB/GHz nominal
Coupling Factor	16.0 dB + 0.15 dB/GHz nominal
Coupling Flatness	±0.2 dB (300 kHz to 3 GHz), ±0.4 dB (3 GHz to 6 GHz)

Physical & Mechanical Characteristics

RF Input Connector Type	Type-N
RF Input Connector Gender	Female
RF Output Connector Type	Type-N
RF Output Connector Gender	Female
Test Port Connector Type	Type-N
Test Port Connector Gender	Female

Compatibility & Metrology

Compatible Vector Network Analyzers	E5061/71 family (ENA series) and other RF VNAs
-------------------------------------	--

Performance

Maximum Input Power	+25 dBm
Input Port Match	≥ 23 dB (300 kHz to 2 GHz), ≥ 20 dB (2 to 3 GHz), ≥ 16 dB (3 to 5 GHz), ≥ 14 dB (5 to 6 GHz)
Coupled Port Match	≥ 20 dB (300 kHz to 2 GHz), ≥ 18 dB (2 to 3 GHz), ≥ 16 dB (3 to 5 GHz), ≥ 14 dB (5 to 6 GHz)
Test Port Match	≥ 25 dB (300 kHz to 2 GHz), ≥ 20 dB (2 to 3 GHz), ≥ 18 dB (3 to 5 GHz), ≥ 16 dB (5 to 6 GHz)

Electrical Ratings

Maximum DC Voltage	30 V
--------------------	------

Environmental

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

TECHNOLOGY

Directional Bridge

APPLICATIONS

RF reflection measurements and signal-leveling

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