

KEYSIGHT TECHNOLOGIES (AGILENT HP)

87405A

The Keysight (Agilent) 87405A is a compact, high-performance preamplifier operating from 10 MHz to 3 GHz. It offers a minimum gain of 22 dB and a typical noise figure of 6.5 dB up to 2 GHz, making it an excellent front-end accessory for spectrum analyzers and noise figure measurement solutions. With an insertable Type-N connector configuration, it is highly optimized for test port applications.

SPECIFICATIONS

General

Interfaces	3-pin probe-power bias connector
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Physical

Power Supply	+15 VDC @ 80 mA (via probe-power cable)
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	45 mm × 22 mm × 115 mm mm

Frequency & Gain

Frequency Range	0.01 to 3 GHz
Minimum Gain	22 dB

Noise & Distortion

Noise Figure (0.01 to 2 GHz)	< 6.5 dB
Noise Figure (2 to 3 GHz)	< 7.5 dB

Signal Limits

Output Power at 1dB Compression	+8 dBm (minimum)
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Connectors

RF Input Connector	Type-N (male)
RF Output Connector	Type-N (female)
Bias Power Connector	3-pin probe power

Power Requirements

DC Supply Voltage	+15 V
DC Current Consumption	80 mA
Bias Regulation	Integral bias regulation

Impedance & Port Characteristics

Nominal Impedance	50 Ω
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System Compatibility

Recommended Compatibility	Keysight/Agilent 8590E series portable spectrum analyzers, 8594E Noise Figure Measurement Solution
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Performance

Input SWR (0.01 to 2 GHz)	< 1.5
Input SWR (2 to 3 GHz)	< 1.8
Output SWR (0.01 to 2 GHz)	< 1.5
Output SWR (2 to 3 GHz)	< 1.8
Gain Flatness	±1.5 dB
Typical Gain	24 dB
Third-order Intercept Point (IP3)	+20 dBm (typical)
Maximum RF Input Power	+13 dBm
Maximum DC Input Voltage	±20 V
Reverse Isolation	> 30 dB
Harmonics	-30 dBc (typical @ +4 dBm output)

Environmental

Storage Temperature	-40 to +75 °C
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TECHNOLOGY

Solid State Preamplifier

APPLICATIONS

Test port preamplification, noise figure measurements, spectrum analyzer front-end enhancement

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