

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8496A

The Keysight (Agilent HP) 8496A is a manual coaxial step attenuator operating from DC to 4 GHz. Designed for exceptional repeatability and reliability, it offers attenuation from 0 to 110 dB in 10 dB steps. Featuring precision gold-plated leaf springs, it guarantees a long operating life of over 5 million cycles per section. It is ideal for RF and microwave measurement setups where accurate and repeatable signal leveling is required.

SPECIFICATIONS

General

Interfaces	None (manual operation)
Display	Manual direct-reading dial

Physical

Power Supply	None required (passive device)
Operating Temperature	0 to +55 °C °C
Dimensions (W×H×D)	54 mm × 60 mm × 177 mm mm
Weight	0.48 kg kg

RF and Microwave Performance

Frequency Range	DC to 4 GHz
Attenuation Range	0 to 110 dB
Attenuation Steps	10 dB
Nominal Impedance	50 Ω
Maximum SWR	1.5
Insertion Loss at 0 dB	0.6 dB maximum
Maximum Insertion Loss (at 4 GHz)	0.6 dB
Maximum Average Input Power	1 W
Maximum Peak Input Power	100 W
Maximum Peak Power Pulse Width	10 μ s
Maximum Peak Power Duty Cycle	0.001 (0.1%)
RF Power Sensitivity	< 0.001 dB/W
Attenuation Accuracy (10 dB)	± 0.2 dB
Attenuation Accuracy (20 dB)	± 0.4 dB
Attenuation Accuracy (30 dB)	± 0.5 dB
Attenuation Accuracy (40 dB)	± 0.7 dB
Attenuation Accuracy (50 dB)	± 0.8 dB
Attenuation Accuracy (60 dB)	± 1.0 dB
Attenuation Accuracy (70 dB)	± 1.2 dB
Attenuation Accuracy (80 dB)	± 1.3 dB
Attenuation Accuracy (90 dB)	± 1.5 dB
Attenuation Accuracy (100 dB)	± 1.6 dB
Attenuation Accuracy (110 dB)	± 1.8 dB

Mechanical and Actuation Specifications

Actuation Type	Manual
Operating Life	5 million cycles per section
Attenuation Repeatability	0.03 dB maximum (typically 0.01 dB)
Internal Section Configuration	4 sections (10, 20, 40, and 40 dB)
Contact Material	Gold-plated leaf springs

Physical Characteristics

RF Input/Output Port Locations	In-line (end-to-end)
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Environmental Specifications

Storage Temperature Range	-40 to +75 $^{\circ}$ C
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Ordering and Configuration Options

Connector Option 001	Type-N female
Connector Option 002	SMA female
Connector Option 003	APC-7
Calibration Option 890	NIST traceable calibration data (SWR and attenuation)
Compatible Interconnect Kits	Keysight 11716A/B/C

Mechanical

Actuation Torque	0.12 N-m (17 oz-in) typical
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Environmental

Operating Altitude	4,570 m (15,000 ft)
Non-Operating Altitude	15,240 m (50,000 ft)
Operating Humidity	95% RH @ 40 °C
Shock Resistance	100 g, 6 ms
Vibration Resistance	0.015 inches, 10 Hz to 55 Hz, 3 axes, 15 mins

Compliance

Environmental Standards Compliance	Complies with MIL-A-24215B
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Options

Calibration Option UK6	Commercial calibration certificate with test data
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RF Performance

Maximum SWR (DC to 1 GHz)	1.15
Maximum SWR (1 GHz to 4 GHz)	1.25

TECHNOLOGY

Coaxial Step Attenuator

APPLICATIONS

RF/Microwave Signal Level Control

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