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Data Sheet

August 14, 2026

AMPLIFIER RESEARCH

Amplifier Research 25A250A

Amplifier Research 25A250A Broadband RF Amplifier The Amplifier Research 25A250A is a self-contained broadband solid-state RF amplifier for laboratory use where instantaneous bandwidth, high gain, and moderate CW power are required. OEM specifications list 25 W minimum rated output from 10 kHz to 250 MHz with 44 dB minimum gain and push-pull MOSFET stages tolerant of severe load mismatch. RF susceptibility and EMC drive, antenna and component testing, wattmeter calibration, and driver service for higher-power amplifiers. The Amplifier Research 25A250A is a self-contained broadband solid-state RF amplifier for laboratory use where instantaneous bandwidth, high gain, and moderate CW power are required. OEM specifications list 25 W minimum rated output from 10 kHz to 250 MHz with 44 dB minimum gain and push-pull MOSFET stages tolerant of severe load mismatch. RF susceptibility and EMC drive, antenna and component testing, wattmeter calibration, and driver service for higher-power amplifiers. Input For Rated Output: 1.0 milliwatt maximum



MODEL

**Amplifier Research
25A250A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

25A250A

LISTING

<https://aumictechlabs.com/products/25a250a-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Amplifier Research 25A250A is a self-contained, broadband solid-state RF amplifier engineered for laboratory and field applications requiring instantaneous bandwidth, high gain, and moderate power output across a wide frequency spectrum. Built on push-pull MOSFET circuitry, it

delivers reduced distortion, enhanced stability, and unconditional load impedance tolerance - operating without damage or oscillation regardless of load phase or magnitude.

Technical Specifications

Power Output & Linearity CW output: 35 W nominal, 25 W minimum Linear @ 1 dB compression: 15 W minimum Third order intercept point: 54 dBm typical Harmonic distortion: -20 dBc maximum at 15 W

Frequency Response Operating range: 10 kHz to 250 MHz instantaneously Flatness: ± 1.0 dB maximum Gain Maximum setting: 44 dB minimum Adjustment range: 18 dB minimum continuous Input for rated output: 1.0 mW maximum

Impedance & Connectors Input impedance: 50 Ω , VSWR 1.5:1 maximum Output impedance: 50 Ω nominal (VSWR 2.0:1 maximum) RF connectors: Type N female

Noise Performance Noise figure (above 1.0 MHz): 6 dB typical

Power Supply Input voltage: 90–135 VAC or 180–270 VAC (autoranging) Frequency: 47–63 Hz, single phase Maximum consumption: 200 W

Switching architecture with universal input acceptance

Physical Dimensions: 50.3 × 15.5 × 30.0 cm Weight: 15.9 kg Cooling: Forced air circulation

Key Features 100% mismatch tolerance - delivers full rated power into any load without foldback Faithful reproduction of AM, FM, and pulse modulation Broad instantaneous bandwidth eliminates tuning delays Compact benchtop form factor with forced-air cooling

Typical Applications RF susceptibility testing Antenna and component characterization Watt meter calibration Driver stage for higher-power amplifier systems

Compatibility & Integration Type N female connectors ensure standard RF integration. The 50 Ω input and output impedances match laboratory instrumentation and test fixtures. Universal autoranging power supply accommodates worldwide mains voltages without configuration.

25A250A Characteristics / Specifications

PARAMETER	VALUE
Rated Output Power	25 watts minimum
Input For Rated Output	1.0 milliwatt maximum
Power Output At 3 dB Compression Nominal	32 watts
Power Output At 3 dB Compression Minimum	25 watts
Power Output At 1 dB Compression Nominal	20 watts
Power Output At 1 dB Compression Minimum	15 watts
Flatness	plus or minus 1.0 dB maximum
Frequency Response	10 kHz to 250 MHz instantaneously
Gain At Maximum Setting	44 dB minimum
Gain Adjustment Range	18 dB minimum continuous
Input Impedance	50 ohms, VSWR 1.5:1 maximum
Output Impedance	50 ohms nominal
Mismatch Tolerance	100 percent of rated power without foldback
Noise Figure Above 1 MHz Typical	16 dB
Harmonic Distortion	minus 20 dBc maximum at 15 watts
Third Order Intercept Typical	54 dBm
Primary Power	90 to 135 or 180 to 270 VAC, 47 to 63 Hz, 200 W maximum
RF Connectors	TypeNfemale
Cooling	Forced air self contained fans
Weight	15.9 kg (35.0 lb)
Size WxHxD	50.3 × 15.5 × 30.0 cm
Modulation Capability	Reproduces AM FM or pulse modulation on the input
Circuit Topology	Push pull MOSFET broadband stages

25A250A Specifications

PARAMETER	VALUE
Amplifier Research 25A250A Broadband RF Amplifier	Overview
Key Features	Push pull MOSFET broadband design
Forced air self contained cooling	Type N female RF connectors
Technical Specifications	Rated Output Power: 25 watts minimum

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 list 25 W minimum rated output from 10 kHz to 250 MHz with 44 dB minimum gain and push-pull MOSFET stages tolerant of severe load mismatch.

Applications

RF susceptibility and EMC drive, antenna and component testing, wattmeter calibration, and driver service for higher-power amplifiers.

Key Features

Push pull MOSFET broadband design

Front panel continuous gain control

Universal autoranging AC supply

Forced air self contained cooling

TypeNfemale RF connectors

Technical Specifications

Technical Specifications

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Notes
From Amplifier Research Model 25A250A OEM datasheet (M1 through M7 configurations). Noise figure and harmonic figures are as published on that sheet.

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

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NIST-traceable calibration · SAM registered ·
30-day returns
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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.