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Data Sheet

August 14, 2026

AMPLIFIER RESEARCH

Amplifier Research 75A250A

Amplifier Research 75A250A Broadband RF Amplifier The Amplifier Research 75A250A is a solid-state air-cooled broadband amplifier providing 75 W CW minimum from 10 kHz to 250 MHz. OEM A250A family datasheets list push-pull MOSFET stages, front-panel or digital gain control, and mismatch-tolerant Class A operation. RF susceptibility testing, antenna and component testing, wattmeter calibration, and driver service for higher-power amplifiers below 250 MHz. Solid state broadband 10 kHz to 250 MHz design The Amplifier Research 75A250A is a solid-state air-cooled broadband amplifier providing 75 W CW minimum from 10 kHz to 250 MHz. OEM A250A family datasheets list push-pull MOSFET stages, front-panel or digital gain control, and mismatch-tolerant Class A operation. RF susceptibility testing, antenna and component testing, wattmeter calibration, and driver service for higher-power amplifiers below 250 MHz. Solid state broadband 10 kHz to 250 MHz design Push pull MOSFET mismatch tolerant stages



MODEL

**Amplifier Research
75A250A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

75A250A

LISTING

<https://aumictechlabs.com/products/75a250a-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Amplifier Research 75A250A is a solid-state RF amplifier delivering 75 watts CW minimum across 10 kHz to 250 MHz with instantaneous bandwidth operation. Built on push-pull MOSFET circuitry, it achieves 45 dB typical gain with ± 1 dB flatness and operates unconditionally into any

load impedance without damage or oscillation. The unit accepts modulated input signals AM, FM, or pulse - and reproduces them faithfully at the output. Front panel RF gain control and remote operation via IEEE-488 GPIB or RS-232 enable flexible laboratory integration. Over-temperature and input overdrive protection safeguard against faults, while a digital display reports operational status and fault conditions in real time.

Technical Specifications

Frequency Range: 10 kHz to 250 MHz instantaneous bandwidth
Output Power: 75 W CW minimum; 100 W CW nominal; 50 W linear at 1 dB compression (46.99 dBm P1dB)
Gain: 45 dB typical; 49 dB minimum at maximum setting; 18 dB continuous adjustment range
Gain Flatness: ± 1 dB typical and maximum
Input/Output Impedance: 50 Ω ; input VSWR 1.5:1 maximum; output VSWR 2.0:1 maximum
Input Power for Rated Output: 1.0 mW maximum
Noise Figure: 6 dB typical (above 1.0 MHz)
Harmonics: 20 dBc
IP3: 57 dBm / 501.19 W
AC Power: Universal autoranging 90–135 VAC or 180–270 VAC; 47–63 Hz; 400 W nominal consumption
Connectors: N-type female input; N-type output
Cooling: Air-cooled with built-in fan
Dimensions: 50.3 $\times$ 15.5 $\times$ 37.6 cm; 20.5 kg

Key Features

- Load-mismatch tolerant: 100% rated power operation with any impedance
- Diode limiter input overdrive protection
- Over-temperature shutdown with automatic fault reset
- Remote control via GPIB and RS-232 asynchronous full-duplex serial
- Built-in AC circuit breaker protection

Typical Applications

- RF susceptibility testing
- Antenna and component characterization
- Watt-meter calibration
- Driver stage for higher-power amplifiers and frequency multipliers

Compatibility & Integration

IEEE-488 GPIB and RS-232 enable integration into automated test systems. The amplifier reproduces AM, FM, and pulse modulation on input signals without distortion, supporting complex signal conditioning in laboratory environments.

75A250A Characteristics / Specifications

PARAMETER	VALUE
Rated Output Power	75 watts minimum
Frequency Response	10 kHz to 250 MHz instantaneously
Gain At Maximum Setting Class	49 dB minimum class
Input For Rated Output Class	1.0 milliwatt maximum
Flatness Maximum Class	plus or minus 1.5 dB class
Gain Adjustment Range Class	18 dB minimum class
Input Impedance Class	50 ohms VSWR 1.5:1 maximum
Output Impedance Class	50 ohms VSWR 2.0:1 maximum
Mismatch Tolerance Class	100 percent of rated power without foldback
Harmonic Distortion Class	minus 20 dBc maximum near rated power
Noise Figure Above 1 MHz Typical Class	10 dB class
Modulation Capability Class	AM FM pulse faithful reproduction
Remote Interfaces Class	IEEE 488 and RS 232 class
Cooling	Forced air self contained fans
RF Connector Class	TypeNfemale
Form Factor	Benchtop or rack mountable cabinet
Series Family	Amplifier Research A250A 10 kHz to 250 MHz
Power Class Sibling 50A250A	50 W minimum
Power Class Sibling 100A250A	100 W minimum
Primary Power Class	Universal AC mains class
Export Classification Class	EAR99 family class
Circuit Topology	Push pull MOSFET broadband stages
Third Order Intercept Class Typical	56 dBm class

75A250A Specifications

PARAMETER	VALUE
Amplifier Research 75A250A Broadband RF Amplifier	Overview
Key Features	Solid state broadband 10 kHz to 250 MHz design
Forced air self contained cooling	Type N RF connector class
Technical Specifications	Rated Output Power: 75 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	
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Notes	
Rated power and frequency from Amplifier Research 75A250A OEM A250A family documentation. Confirm compression and enclosure mass on the unit datasheet.	

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.