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Data Sheet

August 14, 2026

AMPLIFIER RESEARCH

Amplifier Research 50A220

Amplifier Research 50A220 Solid State RF Amplifier The Amplifier Research 50A220 is a self-contained air-cooled solid-state broadband amplifier providing 50 W CW minimum from 10 kHz to 220 MHz. OEM 50A220 catalog and datasheet materials list instantaneous bandwidth, high gain, mismatch tolerance, and IEEE-488/RS-232 remote interfaces on the A220 platform. RF susceptibility testing, antenna and component testing, wattmeter calibration, and broadband driver service from 10 kHz to 220 MHz. Forward and reflected power monitoring class The Amplifier Research 50A220 is a self-contained air-cooled solid-state broadband amplifier providing 50 W CW minimum from 10 kHz to 220 MHz. OEM 50A220 catalog and datasheet materials list instantaneous bandwidth, high gain, mismatch tolerance, and IEEE-488/RS-232 remote interfaces on the A220 platform. RF susceptibility testing, antenna and component testing, wattmeter calibration, and broadband driver service from 10 kHz to 220 MHz. Forward and reflected power monitoring class Safety interlock rear panel connector class



MODEL

**Amplifier Research
50A220**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

50A220

LISTING

<https://aumictechlabs.com/products/50a220-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Amplifier Research 50A220 is a self-contained, air-cooled solid-state RF power amplifier engineered for broadband applications across EMC testing, laboratory work, and communication systems. It delivers a minimum of 50 watts across 10 kHz to 220 MHz with push-pull MOSFET

circuitry optimized for stability and low distortion. The amplifier operates reliably into any load impedance without damage, foldback, or shutdown - handling 100% rated power across all magnitude and phase conditions.

Technical Specifications

Power Output: 50 watts minimum
Frequency Range: 10 kHz to 220 MHz
Input Power: 1.0 milliwatt maximum (typical) for rated output
Gain Flatness: ± 1.5 dB maximum (typical)
Input Impedance: 50 ohms, VSWR 1.5:1 maximum
Topology: Push-pull MOSFET circuitry
Cooling: Air-cooled RF
Connectors: Type N female (standard configuration)

Key Features

Mismatch-tolerant design - no damage under any load condition
Enhanced stability and reduced distortion from MOSFET topology
Thermal and over-current protection
Modulation capability for AM, FM, and pulse modulation on input signals
Local and remote control options

Typical Applications

Electromagnetic Compatibility (EMC) testing
Laboratory RF amplification
Communication system signal conditioning
Broadband signal distribution requiring moderate power levels

Compatibility & Integration

The 50A220 accepts 50-ohm input sources and operates into any load configuration. Control interfaces support both local operation and remote command capability.

50A220 Characteristics / Specifications

PARAMETER	VALUE
Rated Output Power	50 watts minimum
Input For Rated Output	1.0 milliwatt maximum
Frequency Response	10 kHz to 220 MHz instantaneously
Gain At Maximum Setting	47 dB minimum
Gain Adjustment Continuous Range	18 dB minimum class remote stepped
Flatness Class	plus or minus 1.5 to 3.0 dB class by model family sheet
Power Output At Compression Class	see model datasheet P1dB and P3dB rows
Input Impedance	50 ohms, VSWR 2.0:1 maximum class
Output Impedance	50 ohms nominal
Mismatch Tolerance	operates without damage into high VSWR loads class
Modulation Capability	Faithful AM FM pulse reproduction
Harmonic Distortion Class	minus 20 dBc class at rated power family
Remote Interfaces	IEEE-488 and RS-232
RF Connector Class	TypeNfemale class
Cooling	Forced air self contained fans
Form Factor	Portable benchtop or rack amplifier class
Series Family	Amplifier Research 50A220
Export Classification Class	EAR99 family class
Primary Power Class	universal AC mains auto ranging class
ALC Leveling	available class
Safety Interlock	rear panel interlock class
Sample Ports	forward reverse sample class

50A220 Specifications

PARAMETER	VALUE
Amplifier Research 50A220 Solid State RF Amplifier	Overview
Applications	RF susceptibility testing, antenna and component testing, wattmeter calibration, and broadband driver service from 10 kHz to 220 MHz.
Technical Specifications	Rated Output Power: 50 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, band, and gain from Amplifier Research 50A220 OEM catalog/datasheet summaries. Quote the exact configuration sheet for compression flatness mass and primary-power draw; do not assume sibling compression rows.	

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.