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Data Sheet

August 14, 2026

AMPLIFIER RESEARCH

Amplifier Research 250S1G4

Amplifier Research 250S1G4 Solid State Microwave Amplifier The Amplifier Research 250S1G4 is a portable self-contained air-cooled solid-state amplifier providing 250 W CW minimum from 0.8 GHz to 4.2 GHz. OEM datasheets list push-pull high-power stages, graphic LCD digital control, and remote GPIB, RS-232, USB, and Ethernet interfaces. High-power wireless component and subsystem testing, multi-band CDMA/W-CDMA/TDMA/GSM class drive, and EMC tests requiring linear envelopes through 4.2 GHz. Solid state broadband microwave design to 250 W class The Amplifier Research 250S1G4 is a portable self-contained air-cooled solid-state amplifier providing 250 W CW minimum from 0.8 GHz to 4.2 GHz. OEM datasheets list push-pull high-power stages, graphic LCD digital control, and remote GPIB, RS-232, USB, and Ethernet interfaces. High-power wireless component and subsystem testing, multi-band CDMA/W-CDMA/TDMA/GSM class drive, and EMC tests requiring linear envelopes through 4.2 GHz. Solid state broadband microwave design to 250 W class Local remote switch with multi bus remotes



MODEL

**Amplifier Research
250S1G4**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

250S1G4

LISTING

<https://aumictechlabs.com/products/250s1g4-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Amplifier Research 250S1G4 is a solid-state, air-cooled broadband amplifier delivering 250 watts of RF power across 0.8 to 4.2 GHz with instantaneous bandwidth. Push-pull power stage

circuitry provides inherent stability and reduced distortion, making this self-contained unit ideal for driver applications, wireless component testing, and EMC measurements. The amplifier faithfully reproduces AM, FM, and pulse modulation while maintaining low spurious signal levels and high linearity across supported protocols including CDMA, W-CDMA, TDMA, and GSM.

Technical Specifications

Output Power: 250 watts minimum
Frequency Range: 0.8 to 4.2 GHz (instantaneous bandwidth)
Gain: 54 dB minimum at maximum setting; 15 dB minimum adjustment range
Harmonic Distortion: -20 dBc maximum at 225 watts
Third Order Intercept Point: 64 dBm typical
Input Level for Rated Output: 1.0 mW maximum
Input Impedance: 50 Ω , VSWR 2.0:1 maximum
Output Impedance: 50 Ω nominal
Mismatch Tolerance: Full capacity operation into load ratios as high as 6.0:1 VSWR without foldback circuitry
Primary Power: Selectable 90–132 VAC or 180–264 VAC, 50/60 Hz, single phase; maximum consumption 250 watts

Key Features

RF connectors: Type N female
Digital Control Panel with graphic LCD displaying forward power, reflected power, and amplifier status
Local and remote control via menu-assigned inputs
Multiple remote interfaces: IEEE-488 (GPIB), RS-232, fiber optic (ST connector), USB 2.0 Type B, and Ethernet RJ-45
Benchtop design with removable cabinet for rack mounting
Air-cooled operation suitable for indoor environments up to 2000 m altitude
Operating temperature: 5°C to 40°C; maximum relative humidity 80% (50% at 40°C)

Typical Applications

Driver amplification for wireless component and subsystem testing
Modulated signal delivery for CDMA, W-CDMA, TDMA, and GSM systems
EMC and radiated immunity testing
Communication technology validation requiring undistorted modulation envelopes

Compatibility & Integration

The amplifier integrates with test systems via GPIB, RS-232 (copper and fiber), USB 2.0, and Ethernet. Safety interlock via 15-pin female subminiature D connector on rear panel. Operator control through RJ-11 interface.

250S1G4 Characteristics / Specifications

PARAMETER	VALUE
Rated Output Power	250 watts minimum
Input For Rated Output	1.0 milliwatt maximum
Power Output At 3 dB Compression Nominal	280 watts
Power Output At 3 dB Compression Minimum	240 watts
Power Output At 1 dB Compression Nominal	240 watts
Power Output At 1 dB Compression Minimum	200 watts
Flatness Typical	plus or minus 2.0 dB
Frequency Response	0.8 to 4.2 GHz instantaneously
Gain At Maximum Setting	54 dB minimum
Input Impedance	50 ohms VSWR 2.0:1 maximum class
Output Impedance	50 ohms nominal
Mismatch Tolerance	100 percent of rated power without foldback class
Harmonic Distortion Class	minus 20 dBc maximum near rated power
Modulation Capability	Reproduces AM FM or pulse modulation on the input
Primary Power	120 to 240 VAC, 50/60 Hz, 1450 W maximum
Remote Interfaces	IEEE 488 RS 232 fiber USB Ethernet
Cooling	Forced air self contained fans
RF Input Connector Standard	TypeNfemale front panel
RF Output Connector Standard	Type 7/16 female front panel class
Weight Standard Config Class	71.8 kg class per OEM configuration table
Form Factor	Portable self contained air cooled cabinet
Series Family	Amplifier Research 250S1G4 M1 through M5
Export Classification Class	EAR99 family class

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	
From Amplifier Research Model 250S1G4 OEM datasheet and 250S1G4A channel tables. Confirm exact output connector and mass for the installed M-configuration.	

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.