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Data Sheet

August 14, 2026

AMPLIFIER RESEARCH

Amplifier Research 20S1G4

Amplifier Research 20S1G4 Solid State Microwave Amplifier The Amplifier Research 20S1G4 is a solid-state air-cooled broadband amplifier providing 20 W CW minimum across the S1G4 instantaneous band of 0.8 GHz to 4.2 GHz. OEM channel documentation lists Class A solid-state stages intended for wireless and EMC driver service. Multi-band wireless subsystem drive, antenna and component testing, and EMC radiated immunity where moderate microwave power is required. Digital local remote amplifier control class The Amplifier Research 20S1G4 is a solid-state air-cooled broadband amplifier providing 20 W CW minimum across the S1G4 instantaneous band of 0.8 GHz to 4.2 GHz. OEM channel documentation lists Class A solid-state stages intended for wireless and EMC driver service. Multi-band wireless subsystem drive, antenna and component testing, and EMC radiated immunity where moderate microwave power is required. Digital local remote amplifier control class Frequency Response: 0.8 to 4.2 GHz instantaneously



MODEL

**Amplifier Research
20S1G4**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

20S1G4

LISTING

<https://aumictechlabs.com/products/20s1g4-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Amplifier Research 20S1G4 is a solid-state, air-cooled RF amplifier delivering 20 watts minimum power across 0.7 GHz to 4.2 GHz instantaneously. This benchtop unit features front-panel local/remote control, digital status display, and multiple remote interfaces including GPIB, RS-232, USB, and Ethernet. RF input leveling and over-temperature protection safeguard the

amplifier during high-power operation and thermal stress.

Technical Specifications

Frequency Range: 0.7 GHz – 4.2 GHz instantaneously

Power Output: 20 watts minimum; 25 watts nominal at 3 dB compression; 22 watts nominal at 1 dB compression

Gain: 43 dB minimum at maximum setting; 10 dB minimum continuous range

Gain Flatness: ± 1.5 dB typical, ± 2.0 dB maximum

Impedance: 50 ohms

VSWR: 2.0:1 maximum

Harmonic Distortion: -20 dBc maximum at 15 watts

RF Input: 1.0 milliwatt maximum for rated output

Mismatch Tolerance: 100% rated power without foldback; operates without damage or oscillation with any magnitude and phase of source and load impedance

Input Power: 90–132 VAC and 180–264 VAC, 50/60 Hz, single phase; 210 watts maximum consumption

Key Features

- RF input leveling circuit prevents overdrive conditions
- Over-temperature protection cuts DC voltage to RF stages under thermal fault
- Type N female RF connectors
- Front-panel digital display indicates operate status and fault conditions
- Removable from cabinet for rack mounting
- Self-contained air cooling

Typical Applications

- EMC testing
- Communication system development
- General laboratory RF power amplification

Compatibility & Integration

- Remote control via IEEE-488 (GPIB), RS-232 serial (copper and fiber optic), USB 2.0, and Ethernet. Local/Remote switch enables operator selection of control mode.

20S1G4 Characteristics / Specifications

PARAMETER	VALUE
Rated Output Power	20 watts minimum
Frequency Response	0.8 to 4.2 GHz instantaneously
Gain At Maximum Setting Class	43 dB minimum class
Input For Rated Output Class	1.0 milliwatt maximum
Flatness Maximum Class	plus or minus 2.0 dB
Input Impedance Class	50 ohms VSWR 2.0:1 maximum
Output Impedance Class	50 ohms nominal
Mismatch Tolerance Class	100 percent of rated power without foldback
Harmonic Distortion Class	minus 20 dBc maximum near rated power
Modulation Capability Class	AM FM pulse faithful reproduction
Remote Interfaces Class	IEEE 488 and RS 232
Cooling	Forced air self contained fans
RF Connector Class	TypeNfemale
Form Factor	Portable self contained air cooled cabinet
Series Family	Amplifier Research S1G4 0.8 to 4.2 GHz
Power Class Sibling 10S1G4A	10 W minimum
Power Class Sibling 25S1G4A	25 W minimum
Power Class Sibling 50S1G4A	50 W minimum
Primary Power Class	Universal AC mains class
Export Classification Class	EAR99 family class
Circuit Topology	Push pull solid state broadband stages
Spurious Typical Class	minus 73 dBc class family

20S1G4 Specifications

PARAMETER	VALUE
Key Features	Solid state broadband microwave chassis
Forced air self contained cooling	Type N RF ports typical
Technical Specifications	Rated Output Power: 20 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 20S1G4 OEM/rental product documentation for the S1G4 family. Confirm exact gain, compression, and mass on the unit datasheet revision.	

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.