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Data Sheet

August 14, 2026

AMPLIFIER RESEARCH

Amplifier Research 10S1G4A

Amplifier Research 10S1G4A Solid State Microwave Amplifier The Amplifier Research 10S1G4A is a solid-state air-cooled broadband amplifier providing 10 W CW minimum from 0.8 GHz to 4.2 GHz. OEM S1G4A family data emphasize instantaneous bandwidth, Class A linearity, and digital local/remote control for wireless and EMC testing. Low-to-moderate power microwave driver service, wireless component testing, and EMC work requiring clean modulation envelopes through 4.2 GHz. Solid state Class A broadband microwave design The Amplifier Research 10S1G4A is a solid-state air-cooled broadband amplifier providing 10 W CW minimum from 0.8 GHz to 4.2 GHz. OEM S1G4A family data emphasize instantaneous bandwidth, Class A linearity, and digital local/remote control for wireless and EMC testing. Low-to-moderate power microwave driver service, wireless component testing, and EMC work requiring clean modulation envelopes through 4.2 GHz. Solid state Class A broadband microwave design

Frequency Response: 0.8 to 4.2 GHz instantaneously



MODEL

**Amplifier Research
10S1G4A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

10S1G4A

LISTING

<https://aumictechlabs.com/products/10s1g4a-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Amplifier Research 10S1G4A is a solid-state, air-cooled RF power amplifier delivering 10 watts minimum CW output across 0.8 GHz to 4.2 GHz instantaneous bandwidth. With 40 dB gain and front-panel control, it is a primary amplifier or driver stage for laboratory and industrial RF

systems. The unit has stable, repeatable performance in EMC testing, component characterization, and wattmeter calibration without risk of oscillation under any load condition.

Technical Specifications

Frequency Range: 0.8 GHz to 4.2 GHz (instantaneous) Output Power: 10 W CW minimum; 16 W at compression; 18 W nominal @ 3 dB compression Gain: 40 dB, adjustable down 10 dB or more via front-panel control Impedance: 50 ohms VSWR: 2.0:1 maximum Flatness: ± 1.5 dB typical Harmonic Distortion: -20 dBc maximum (10 W and 15 W) Third Order Intercept Point (IP3): 52 dBm typical Spurious Output: -73 dBc typical Phase Linearity: ± 1 deg/100 MHz typical RF Input Drive: 1.0 mW maximum for rated output Power Consumption: 250 W nominal Primary Power: 90–264 VAC (automatic selection), 50/60 Hz, single phase

Key Features

Mismatch-tolerant architecture operates without damage or oscillation with any load impedance magnitude or phase Over-temperature and over-current protection with RF input leveling to prevent overdrive Multiple remote control interfaces: IEEE-488 (GPIB), RS-232, USB, Ethernet, fiber optic Digital display provides real-time status and fault indication Local/Remote control selection on front panel

Typical Applications

EMC and radiated immunity testing RF component characterization and validation Power meter and sensor calibration Driver amplifier for frequency multipliers and higher-power stages

Compatibility & Integration

Full command and monitoring capability via IEEE-488, RS-232, USB, Ethernet, and fiber optic links. Local control through dedicated front-panel interface with gain adjustment and operational mode selection.

10S1G4A Characteristics / Specifications

PARAMETER	VALUE
Rated Output Power	10 watts minimum
Frequency Response	0.8 to 4.2 GHz instantaneously
Gain At Maximum Setting Class	40 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 S1G4A 0.8 to 4.2 GHz
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
ALC Capability Class	Internal external ALC path 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	
Rated power and frequency from Amplifier Research 10S1G4A OEM family documentation. Confirm gain, compression, and enclosure mass on the M-configuration sheet for the specific unit.	

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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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.