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**Data Sheet**

August 13, 2026

## AMPLIFIED RESEARCH

## Amplified Research 5S1G4 RF Amplifier, 5 Watt, 800 Mhz, 4.2Ghz # 303245

Amplifier Research 5S1G4 RF Power Amplifier 800 MHz to 4.2 GHz (303245) The Amplifier Research 5S1G4 (catalog ID 303245 on some reseller listings) is a self-contained broadband solid-state RF power amplifier providing a minimum of 5 W swept output from 800 MHz to 4.2 GHz. Push-pull solid-state stages improve stability and mismatch tolerance for EMC susceptibility, component stress, and laboratory RF amplification. The Amplifier Research 5S1G4 (catalog ID 303245 on some reseller listings) is a self-contained broadband solid-state RF power amplifier providing a minimum of 5 W swept output from 800 MHz to 4.2 GHz. Push-pull solid-state stages improve stability and mismatch tolerance for EMC susceptibility, component stress, and laboratory RF amplification.



## MODEL

**Amplified  
Research 303245**

## CALIBRATION

**Available on  
request**

## CONDITION

**Used**

## STATUS

**In stock**

## RFQ / SKU

**303245**

## LISTING

<https://aumictechlabs.com/products/303245-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

### This unit

The Amplified Research 5S1G4 is a solid-state, air-cooled broadband RF amplifier delivering 5–8 watts across 0.8–4.2 GHz with instantaneous bandwidth coverage. This self-contained unit operates from a benchtop cabinet configuration or as a removable module for rack mounting. It combines high gain, flat frequency response, and input overdrive protection in a platform tolerant

of any load impedance without damage or oscillation. Technical Specifications Frequency Range: 0.8 GHz to 4.2 GHz instantaneous Power Output: Minimum 5 W @ 1 dB compression; nominal 7 W @ 1 dB compression; minimum 6.5 W @ 3 dB compression; nominal 8 W @ 3 dB compression Gain: 37 dB minimum (maximum setting); 10 dB continuous adjustment range Input for Rated Output: 1.0 mW maximum Frequency Response Flatness:  $\pm 1.5$  dB typical;  $\pm 2.0$  dB maximum Input Impedance: 50  $\Omega$  nominal; 2.0:1 VSWR maximum Output Impedance: 50  $\Omega$  nominal AC Power: 150 W nominal; dual-range autoselect 90–132 VAC or 180–264 VAC, 50/60 Hz Operating Temperature: 5°C to 40°C Humidity: 80% maximum up to 31°C, decreasing linearly to 50% at 40°C Altitude: Up to 2000 m Key Features RF input leveling circuit protects amplifier stages from overdrive signals exceeding 0 dBm Over-temperature shutdown with automatic DC removal if cooling fails; front-panel fault indicator 100% mismatch tolerance - operates without damage or oscillation regardless of source and load impedance magnitude or phase Front-panel gain control for real-time output adjustment Air-cooled design; unobstructed airflow required to prevent thermal shutdown Typical Applications Signal boosting in communication system testing Electromagnetic compatibility (EMC) testing Antenna and component characterization Wattmeter calibration EMI susceptibility testing Driver stage for frequency multipliers and high-power amplifiers Compatibility & Integration Designed for indoor benchtop and rack-mount environments. Accepts  $\pm 10\%$  supply voltage fluctuation within specified autorange bands. Operates in Pollution Degree 2 environments.

## Features & description

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From manufacturer datasheet

### Features

- Instantaneous bandwidth 800 MHz to 4.2 GHz • Minimum 5 W output at 1 dB compression • Minimum gain 37 dB with 10 dB gain adjust • Solid-state air-cooled benchtop or rack-mountable • Mismatch tolerant operation without foldback • Front panel gain control and fault protection

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### Applications

- RF susceptibility and EMC immunity testing 0.8 to 4.2 GHz • Broadband RF power amplification for lab benches • Antenna and component power stressing • Swept amplifier applications with RF sweep generators

## 800 Characteristics / Specifications

| PARAMETER                                | VALUE                                                     |
|------------------------------------------|-----------------------------------------------------------|
| Model                                    | 5S1G4                                                     |
| Manufacturer                             | Amplifier Research                                        |
| Instrument Type                          | Broadband RF Power Amplifier                              |
| Alias                                    | 5S1G4; AR 5S1G4; catalog 303245                           |
| Frequency response                       | 800 MHz to 4.2 GHz instantaneous                          |
| Rated power output minimum               | 6.5 W at 3 dB compression                                 |
| Power output at 1 dB compression minimum | 5 W                                                       |
| Power output at 1 dB compression nominal | 7 W                                                       |
| Power output at 3 dB compression minimum | 6.5 W                                                     |
| Power output at 3 dB compression nominal | 8 W                                                       |
| Input for rated output                   | 1.0 mW maximum                                            |
| Gain minimum                             | 37 dB                                                     |
| Gain adjustment range                    | 10 dB minimum continuous                                  |
| Flatness                                 | plus or minus 1.5 dB typical plus or minus 2.0 dB maximum |
| Input impedance                          | 50 ohm VSWR 2.0:1 maximum                                 |
| Output impedance                         | 50 ohm nominal                                            |
| Mismatch tolerance                       | 100 percent rated power without foldback                  |
| Harmonic distortion                      | -20 dBc maximum at 5 W                                    |
| Third order intercept typical            | 49 dBm                                                    |
| Modulation capability                    | AM FM pulse on input reproduced faithfully                |
| Primary power                            | 90 to 132 or 180 to 264 VAC autoranging                   |
| Line frequency                           | 50/60 Hz single phase                                     |
| Primary power maximum                    | 150 W                                                     |

| PARAMETER                     | VALUE                                                                                                                                                                                                                                                      |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cooling                       | forced air self contained fans                                                                                                                                                                                                                             |
| RF input overdrive protection | leveling above 0 dBm input                                                                                                                                                                                                                                 |
| Overtemperature protection    | DC removal on fault                                                                                                                                                                                                                                        |
| Form factor                   | self contained benchtop cabinet rack removable                                                                                                                                                                                                             |
| Listing note                  | reseller SKU 303245 maps to model 5S1G4 Notes Specs from Amplifier Research 5S1G4 product datasheet. Catalog number 303245 isareseller inventory ID for the 5S1G4; confirm model marking on the unit faceplate.                                            |
| Bandwidth                     | 800 MHz to 4.2 GHz - Minimum 5 W output at 1 dB compression - Minimum gain 37 dB with 10 dB gain adjust - Solid-state air-cooled benchtop or rack-mountable - Mismatch tolerant operation without foldback - Front panel gain control and fault protection |

# 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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| Instrument Type                          | Broadband RF Power Amplifier                              |
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| Rated power output minimum               | 6.5 W at 3 dB compression                                 |
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| Input for rated output                   | 1.0 mW maximum                                            |
| Gain minimum                             | 37 dB                                                     |
| Gain adjustment range                    | 10 dB minimum continuous                                  |
| Flatness                                 | plus or minus 1.5 dB typical plus or minus 2.0 dB maximum |
| Input impedance                          | 50 ohm VSWR 2.0:1 maximum                                 |
| Output impedance                         | 50 ohm nominal                                            |
| Mismatch tolerance                       | 100 percent rated power without foldback                  |
| Harmonic distortion                      | -20 dBc maximum at 5 W                                    |
| Third order intercept typical            | 49 dBm                                                    |
| Modulation capability                    | AM FM pulse on input reproduced faithfully                |
| Primary power                            | 90 to 132 or 180 to 264 VAC autoranging                   |
| Line frequency                           | 50/60 Hz single phase                                     |
| Primary power maximum                    | 150 W                                                     |
| Cooling                                  | forced air self contained fans                            |
| RF input overdrive protection            | leveling above 0 dBm input                                |
| Overtemperature protection               | DC removal on fault                                       |

| PARAMETER    | VALUE                                          |
|--------------|------------------------------------------------|
| Form factor  | self contained benchtop cabinet rack removable |
| Listing note | reseller SKU 303245 maps to model 5S1G4        |

Notes

Specs from Amplifier Research 5S1G4 product datasheet. Catalog number 303245 isareseller inventory ID for the 5S1G4; confirm model marking on the unit faceplate.

### Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: [sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341

#### Aumictech

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NIST-traceable calibration · SAM registered ·  
30-day returns  
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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.