

**Aumictech**

Test &amp; measurement · bought, sold, repaired, calibrated

**Data Sheet**

August 14, 2026

## AMPLIFIER RESEARCH

# Amplifier Research 500T1G2

Amplifier Research 500T1G2 Solid State RF Amplifier The Amplifier Research 500T1G2 is a self-contained air-cooled solid-state broadband amplifier providing 500 W CW minimum from 1.0 GHz to 2.0 GHz. OEM 500T1G2 catalog and datasheet materials list instantaneous bandwidth, high gain, mismatch tolerance, and IEEE-488/RS-232 remote interfaces on the T1G2 platform. RF susceptibility testing, antenna and component testing, wattmeter calibration, and broadband driver service from 1.0 GHz to 2.0 GHz. Forward and reflected power monitoring class The Amplifier Research 500T1G2 is a self-contained air-cooled solid-state broadband amplifier providing 500 W CW minimum from 1.0 GHz to 2.0 GHz. OEM 500T1G2 catalog and datasheet materials list instantaneous bandwidth, high gain, mismatch tolerance, and IEEE-488/RS-232 remote interfaces on the T1G2 platform. RF susceptibility testing, antenna and component testing, wattmeter calibration, and broadband driver service from 1.0 GHz to 2.0 GHz. Forward and reflected power monitoring class Safety interlock rear panel connector class



## MODEL

**Amplifier Research  
500T1G2**

## CALIBRATION

**Available on  
request**

## CONDITION

**Used**

## STATUS

**In stock**

## RFQ / SKU

**500T1G2**

## LISTING

<https://aumictechlabs.com/products/500t1g2-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

## This unit

The Amplifier Research 500T1G2 is a self-contained, air-cooled solid-state amplifier designed for laboratory and test environments requiring broadband coverage, high gain, and moderate RF power. Operating across 1 GHz to 2.5 GHz instantaneously, it delivers a nominal 537 watts CW

output with a minimum guaranteed 500 watts, making it suitable for EMC testing, scientific research, and communication system applications.

**Technical Specifications**

**Power Output**  
Continuous Wave: 537 W nominal, 500 W minimum  
Linear Power @ 1 dB Compression: 125 W minimum  
Mismatch Protection: Output power foldback when reflected power exceeds 100 W

**Frequency & Gain**  
Frequency Range: 1 GHz to 2.5 GHz (instantaneous bandwidth)  
Maximum Gain: 57 dB minimum  
Continuous Gain Adjustment: 35 dB minimum range  
Gain Flatness:  $\pm 8$  dB maximum ( $\pm 5$  dB maximum equalized at rated power)

**Input/Output Impedance**  
Input Level for Rated Output: 1.0 mW maximum  
Input Impedance: 50  $\Omega$ , VSWR 2.0:1 maximum  
Output Impedance: 50  $\Omega$ , VSWR 2.5:1 typical

**Input Connector:** Type N female (rear)  
**Output Connector:** 7-16 DIN female (rear)  
**Sample Port:** Type N female (forward power monitoring)

**Signal Capability**  
Modulation Support: AM, FM, pulse (peak envelope power limited to rated output)

**Key Features**  
Real-time monitoring of TWT helix current, cathode voltage, collector voltage, heater current, heater voltage, baseplate temperature, and cabinet temperature  
Digital front panel display with forward and reflected power readout  
Continuous front panel and remote gain control via soft keys  
Integrated VSWR protection circuitry with excess reflected power warning  
IEEE-488 GPIB interface for remote operation  
DB15 interlock connector for external system integration  
Auto sleep function standard  
Modular power supply and RF component design for serviceability  
Switching mode power supply for reduced weight and size  
Benchtop cabinet with rack-mount capability

**Typical Applications**  
EMC testing and compliance verification  
Scientific research requiring broadband RF amplification  
Communication systems development and validation

**Compatibility & Integration**  
IEEE-488 GPIB interface enables integration into automated test systems. External interlock capability via DB15 connector supports multi-unit coordination and safety interlocking.

## 500T1G2 Characteristics / Specifications

| PARAMETER                         | VALUE                                                   |
|-----------------------------------|---------------------------------------------------------|
| Rated Output Power                | 500 watts minimum                                       |
| Input For Rated Output            | 1.0 milliwatt maximum                                   |
| Frequency Response                | 1.0 GHz to 2.0 GHz instantaneously                      |
| Gain At Maximum Setting           | 57 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 500T1G2                              |
| 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                              |
| Device Technology Class           | TWT                                                     |

# 500T1G2 Specifications

| PARAMETER                                           | VALUE                                                                                                                                  |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Amplifier Research 500T1G2 Solid State RF Amplifier | Overview                                                                                                                               |
| Applications                                        | RF susceptibility testing, antenna and component testing, wattmeter calibration, and broadband driver service from 1.0 GHz to 2.0 GHz. |
| Technical Specifications                            | Rated Output Power: 500 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                                                                                                                                                                                                                 |                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Specifications                                                                                                                                                                                                                 |                                                         |
| PARAMETER                                                                                                                                                                                                                      | VALUE                                                   |
| Rated Output Power                                                                                                                                                                                                             | 500 watts minimum                                       |
| Input For Rated Output                                                                                                                                                                                                         | 1.0 milliwatt maximum                                   |
| Frequency Response                                                                                                                                                                                                             | 1.0 GHz to 2.0 GHz instantaneously                      |
| Gain At Maximum Setting                                                                                                                                                                                                        | 57 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 500T1G2                              |
| 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                              |
| Device Technology Class                                                                                                                                                                                                        | TWT                                                     |
| Notes                                                                                                                                                                                                                          |                                                         |
| Rated power, band, and gain from Amplifier Research 500T1G2 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](mailto:sales@aumictech.com) · +1 (484) 841-9341

#### Aumictech

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

NIST-traceable calibration · SAM registered ·  
30-day returns  
NAICS 423690 · 811210 · 541380  
Generated August 14, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.