TEGAM®
MODEL 2348

2.0 MHZ POWER AMPLIFIER FOR SIGNAL GENERATORS

TEGAM model 2348 is a compact but robust power amplifier designed for applications that require moderate voltage amplification and high current beyond the ranges of arbitrary, function, sweep, or pulse generators.

PRODUCT HIGHLIGHTS

- Precise amplification and voltage stability
- ± 25 V with up to 750 mA of output current
- Bandwidth from DC to 2.0 MHz
- Full power bandwidth, from DC to 500 kHz
- Precision voltage monitor
- Compatible with most function, sweep, pulse, or arbitrary waveform generators
- 1-year warranty

AT A GLANCE

Number of Channels

1

Input Voltage

110/220 VAC

Input Impedance

50 Ω Direct Coupled

Output Voltage Range

0 to ± 25 VDC

Slew Rate

>200 V/µSec

OVERVIEW

High Current Output

The 2348's current capabilities make it ideal as a buffer for signal generation devices used in solenoid or magnetic excitation. This unique amplifier meets requirements for MEMS testing, transducer characterization, and pulse applications. Its high voltage stability and low noise characteristics also meet the demands of mass spectrometry and related scientific applications.

A continuous current of 750 mA is available at voltages up to 50 Vp-p. This provides 18.75 W of AC or DC output power to 500 kHz. The instrument's bandwidth ranges from DC to 2.0 MHz.

All this performance is packed into a compact, rack-mountable chassis no larger than a typical function generator.

Built-in Protection

Output current is sensed in either polarity by the 2348's built-in current limit function. The 2348 power amplifier is equipped with thermal shutoff to protect against overheating. This maximizes protection to the amplifier's circuitry in the event of an external fault.

The main output is isolated from ground. A binding post is provided on the front panel for a direct chassis ground connection.

Ideal for Your Test Application

An independent, buffered, voltage monitor output is provided for applications that require a low-level representation of the output signal such as in closed loop applications. The monitor output reduces the output signal to 20:1 for 50 Ω inputs and 10:1 for inputs exceeding 1 MΩ.

The model 2348 is a cost-effective solution for specialized applications where low distortion and precision is required.

The 2348 is ideally suited for high frequency power applications that require voltage amplification with an abundant supply of current.

PERFORMANCE GRAPHS

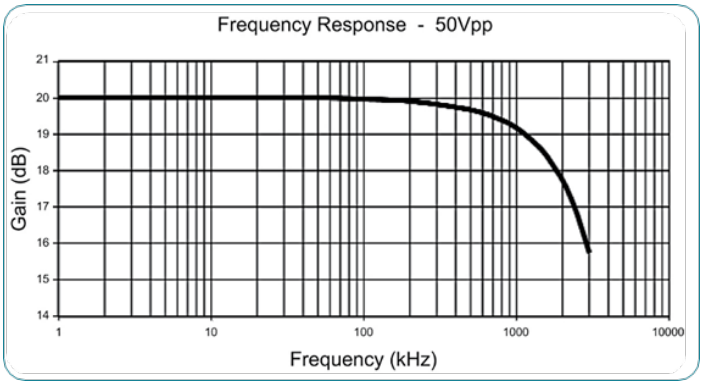

Figure 1: No Load and Full Load Gain (dB) vs. Frequency (Typical) [1]

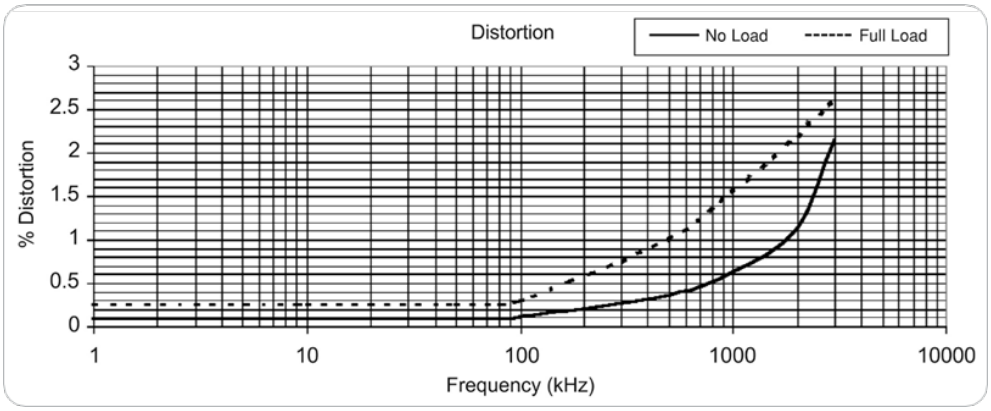

Figure 2: No Load and Full Load % Distortion | 50 Vp-p [2]

Note:

1. Amplifier gain measured at 50 Vp-p Bandwidth 2.0 MHz (-3 dB cutoff).
2. % distortion will decrease as the input voltage is reduced.

PRODUCT SPECIFICATIONS

Electrical Specifications	
Number of Channels	1
Input Impedance	50 Ω direct coupled
Output Voltage Range	0 to ± 25 VDC
Maximum Output Current	750 mA
Voltage Gain	+10 Fixed
Sine Wave Distortion (THD)	Refer to figure 2
Bandwidth	DC to 2 MHz, 50 Vp-p full load (-3 dB)
Full Power Bandwidth	DC to 500 kHz / 50 Vp-p / 750 mA sine -typical (-0.4 dB) (RL=33 Ω)
Slew Rate	>200 V/µs
Square Wave Response (10 %-90 %)	< 0.16 µs for 35 volt step RL=23 Ω - Typical
Aberrations	< 2 % 50 Ω voltage monitor output 50 Ω input Z (20:1 Ratio) > 1 MΩ Input Z (10:1 Ratio)
Enviromental	
Operating Temperature	0°C to +45°C, (+32°F to +113°F) Ambient
Storage Temperature	-20°C to +50°C (-4°F to +122°F)
Humidity Range	< 80 % RH non-condensing
General	
Input Supply Voltage	110/220 VAC 50/60 Hz – Rear Panel Selectable
Power Rating	100 VA; 80 W
Dimensions: (H x W x L)	11.5 x 25.8 x 30.0 cm (4.51 in x 10.14 in x 11.81 in)
Weight (approximate)	4.5 kg (10 lb)
Recommended Calibration Cycle	1 Year
Warranty	
1 Year Parts and Labor	
Included Accessories	
CD User Manual	P/N 810049-CD
Power Cord	P/N 60014
Optional Accessories	
Rack Mount Kit	P/N 740532
Standard BNC Cable	P/N CBL-3102

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than four decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE | TRUST

Advanced Energy®

For international contact information,
visit advancedenergy.com.

powersales@aei.com (Sales Support)
productsupport.ep@aei.com (Technical Support)
+1 888 412 7832

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