

# GX1222 SERIES

## WIDEBAND AMPLIFIER

- DC to 20MHz bandwidth
- 40Vp-p maximum output voltage into open circuit
- 20Vp-p maximum output voltage into 50Ω load
- Isolated input & output
- 3U PXI (single slot)



## DESCRIPTION

The GX1222 is a 3U single-slot, PXI-based wideband power amplifier used for signal amplification purposes. Offering excellent fidelity, the GX1222 amplifies signals from DC to over 20 MHz with a fixed gain of x10. Custom gains are also available without compromising signal purity and amplifier performance.

## FEATURES

On-board DC-DC converters and custom components allow the GX1222 to amplify signals to levels far above standard PXI voltage rails. The GX1222 can amplify input signals to an output of 40Vp-p into a high impedance load, or 20Vp-p into a 50Ω load.

The GX1222 can be configured with floating input and output connections allowing the amplifier to float up to 250 VDC above ground. . The only limiting factor is that both the input and output grounds must connect to the same potential. This capability is very beneficial in applications where the amplifying device should reside at the same ground potential as its source. The floating capability can be added or removed using a simple, user-accessible jumper connection.

## CONFIGURATIONS

The GX1222 is available in numerous configurations according to the application's requirements. The following factory-set options are available (numbers in parentheses represent the standard configuration):

- Gain: 1 through 10 (10)
- Input Impedance: 50Ω or 1MΩ (50Ω)

- Output Impedance: 50Ω, 75Ω, or 600Ω (50Ω)
- Output Polarity: Normal or Inverted (Inverted)
- Signal Ground: Tied to Ground or Floating (Tied to Ground)

The Signal Ground option is user-selectable via jumpers; all other options must be specified at the time the GX1222 is ordered.

## APPLICATIONS

- Automotive testing
- Avionics testing
- Automatic Test Equipment (ATE)

# GX1222 SERIES

## SPECIFICATIONS

INPUT CHARACTERISTICS	
CONNECTOR	BNC
IMPEDANCE	50Ω,DC coupled
AMPLITUDE	0 to 2Vp-p, max
FREQUENCY RANGE	DC to 20MHz
OUTPUT CHARACTERISTICS	
CONNECTOR	BNC
IMPEDANCE	50Ω,DC coupled
PROTECTION	Short-circuit, 10 seconds
GAIN	x10, fixed (custom gains available, contact factory)
AMPLITUDE	0 to 20Vp-p into 50Ω; 0 to 40Vp-p into high impedance
SQUARE WAVE CHARACTERISTICS	
TRANSITION TIME	<20ns
ABERRATIONS	<7%
SINE WAVE CHARACTERISTICS	
-3 DB BANDWIDTH	50 MHz, at 2 V p-p (small signal), 20 MHz at 20 V p-p ( large signal)
GAIN ACCURACY	+/- (2% of full-scale amplitude range + 25mV), 1 KHz
FLATNESS (10 VP-P)	5% of amplitude to 1MHz; 10% of amplitude to 20MHz
THD	.1 %, 10 Hz to 100 KHz
HARMONICS (10 V P-P)	< -60 dBc, 10 HZ to 100 KHz, < -50 dBc, 100 KHz to 5 MHz, < -40 dBc, 5 MHz to 20 MHz
GENERAL	
PHYSICAL SIZE	Single-slot, 3U high PXI module
POWER REQUIREMENTS	7.2W maximum
CURRENT CONSUMPTION	+5V (3.5A maximum)
SIGNAL GROUND	Floated to the same level as the source, 250VDC + Peak AC maximum
EMC CERTIFICATION	CE marked
RELIABILITY	MTBF per MIL-HDBK-217E, 25°C, Ground Benign
SAFETY	Designed to meet IEC 1010-1, UL 3111-1, CSA 22.2 #1010
ENVIRONMENTAL	
OPERATING TEMPERATURE	0°C - 50°C
HUMIDITY	RH 80% (non condensing)

## ORDERING INFORMATION

GX1222-II-00-GG-P-S	PXI WIDEBAND AMPLIFIER
	<b>Configuration Description</b> <ul style="list-style-type: none"> <li>•ii Input Impedance: 50 or 1MΩ</li> <li>•oo Output Impedance: 50, 75, or 600Ω</li> <li>•gg Gain: 1 through 10</li> <li>•p Polarity – N (normal) or I (inverted)</li> <li>•s Signal Ground: G (grounded) or F (floating)</li> </ul>

Note: Specifications are subject to change without notification.