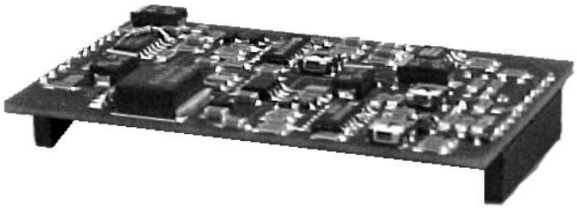
90 dB LOGARITHMIC AMPLIFIER

- **High Dynamic Range – up to 90 dB**
- **Fast Risetime – 12 ns, DC Coupled**
- **Exceptional Linearity - 1.0 dB**
- **Small Size**



DESCRIPTION:

The ***Model 384*** provides high-speed logarithmic signal compression from microvolts to volts with exceptional linearity. Both positive and negative information may be processed over a wide range of duty cycles. A null correction loop is available to minimize offset variations.

SPECIFICATIONS:

Input	
Impedance	50 Ω (Add -1 to part number.) ≥200 Ω (Add -2 to part number.)
Dynamic Range	Log Range ±100 μV to ±5 V Linear Range +100 μV to -100 μV Gain in linear range 450 typical performance vs. capacitance.
Noise	16 μV_{RMS} typical
Pulse Response	
Risetime	12 ns (DC-30 MHz)
Falltime	15 ns typical
Output	Single-Ended (See table on reverse.)
Noise	7 mV_{RMS} typical
Load	≥50 Ω
Slope	29 mV/dB typical

Polarity	Non-Inverting
Linearity	±1 dB (measured over 80 dB at 25°C)
Power	±12 VDC at ±10% at 50 mA typical
Temperature	
Operating	0° to 50°C Drift compensation loop (null) included for low duty cycles.
Connections	
Input/Output	2 x Samtec SSQ-110-01-S-S PCB Mount
Power	Accepts 0.025" sq. pins on 0.10" centers
Size	2.65" x 1.60" x 0.55"

Specifications subject to change without notice.

APPLICATIONS:

Lidar, Lasers, Instruments, Ultra-Sound, Signal Compression, Electro-Optics

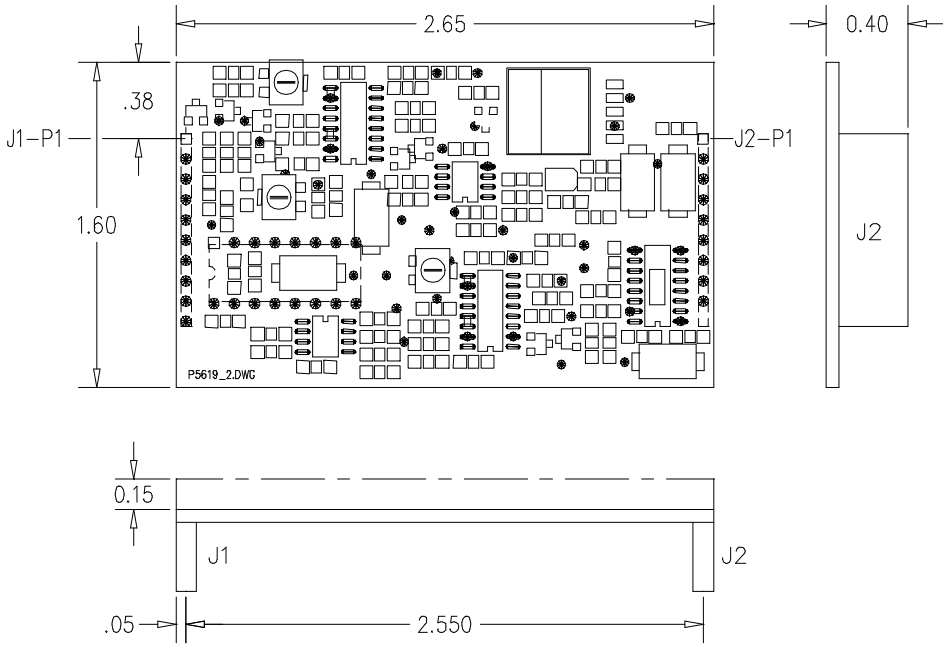
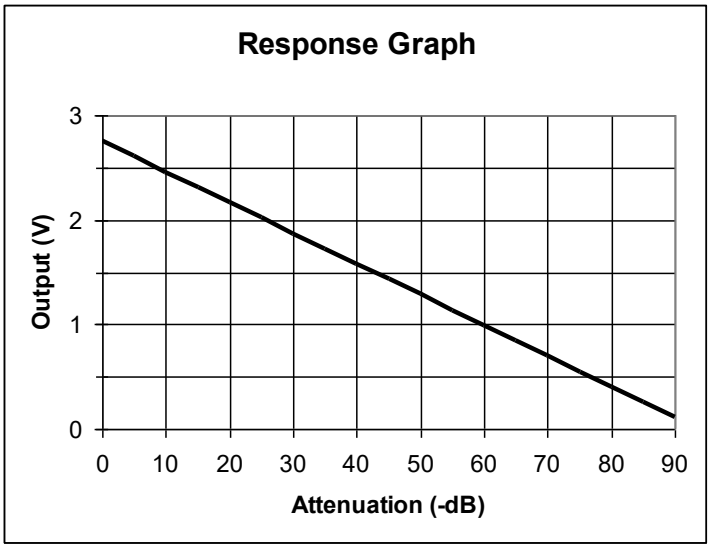
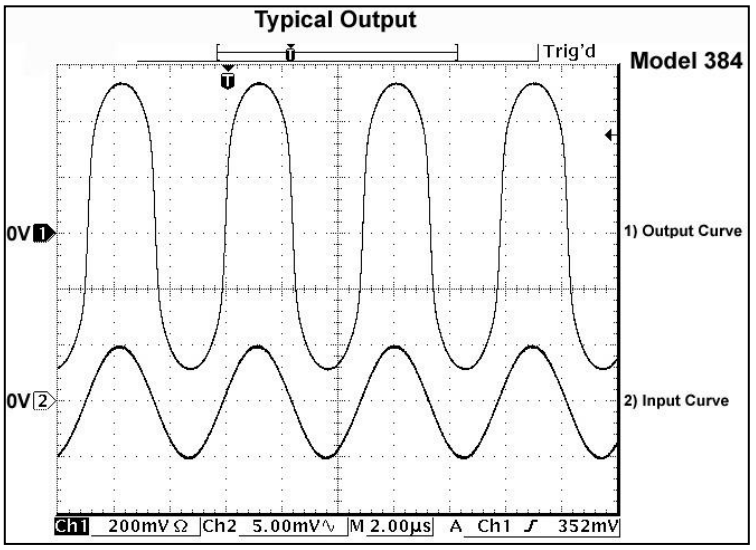
126 BAYWOOD AVENUE ♦ LONGWOOD, FLORIDA 32750-3426 ♦ USA
(407) 339-4355 ♦ FAX (407) 834-3806 ♦ E-mail: ami@analogmodules.com
www.analogmodules.com

01/2003

	MODEL NUMBER	
	384-1	**384-2**
INPUT IMEDPANCE	50 Ω	≥200 Ω
OFFSET	0 V typical	0 V typical
SWING (pk-pk signal)	2.5 V	2.5 V

Typical Part Number: ***384-1*** =

Input Impedance: 50 Ω
Offset: 0 V typical
Swing: 2.5 V pk-pk
Input Connections: PCB Mount Connector
Linearity: ±1 dB



Pin Out	
J1	
1	GND
2	INPUT
3-9	GND
10	OUTPUT
J2	
1-2	-12VDC
3-5	GND
6	KEY
7-8	GND
9-10	+12VDC