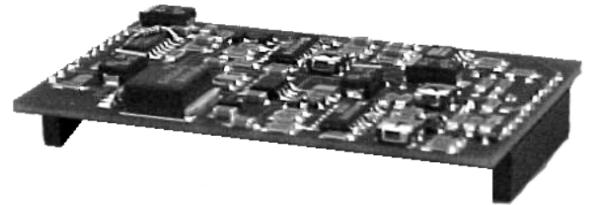




### 90dB LOGARITHMIC AMPLIFIER

- HIGH DYNAMIC RANGE - UP TO 90dB
- FAST RISETIME - 12ns, DC COUPLED
- EXCEPTIONAL LINEARITY - 1.0dB
- 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 50Ω (Add -1 to part number.)  
≥200Ω (Add -2 to part number.)

Dynamic Range Log Range ±100μV to ±5V  
Linear Range +100μV to -100μV  
Gain in linear range 450 typical  
performance vs. capacitance.

Noise 16μV<sub>RMS</sub> typical

#### Pulse Response

Risetime 12ns (DC-30MHz)  
Falltime 15ns typical

#### Output

Single-Ended (See table on reverse.)  
Noise 7mV<sub>RMS</sub> typical  
Load ≥50Ω  
Slope 29mV/dB typical

#### Polarity

Non-Inverting

#### Linearity

±1dB (measured over 80dB at 25°C)

#### Power

±12VDC at ±10% at 50mA 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*

