LOGAMP3

90 dB Logarithmic Amplifier

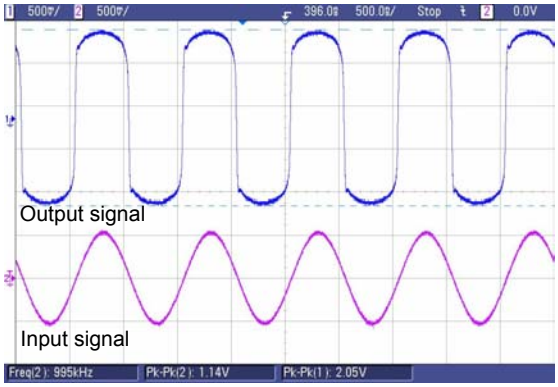
FEATURES

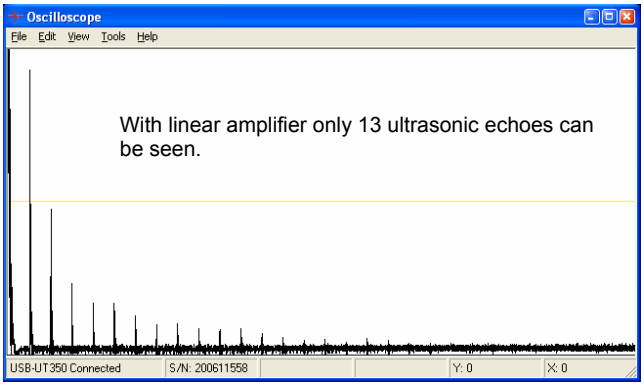
- **High-speed logarithmic signal compression**
- **High dynamic range – up to 90 dB**
- **Selectable input coupling**
- **Selectable input impedance**
- **Compact size**
- **Input protection for high-voltage transients**

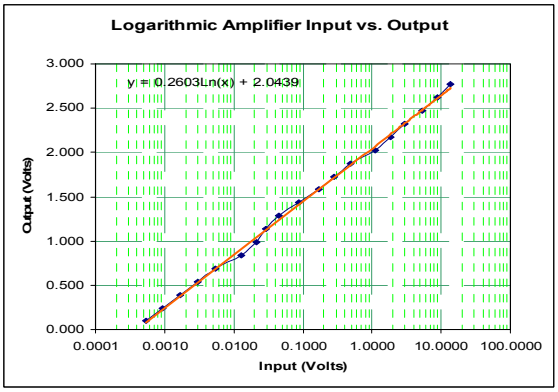
DESCIPTIONS

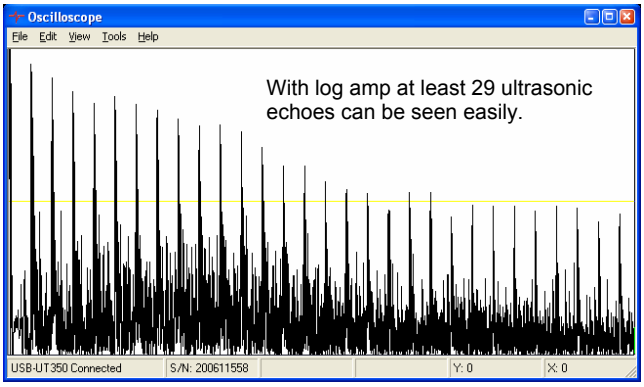
LOGAMP3 is a stand-alone logarithmic amplifier (log amp). It provides high-speed logarithmic signal compression from micro volts to volts with exceptional linearity. Both positive and negative information may be processed over a wide range of duty cycles. The diagram below shows the response chart of the log amp. The weaker signals get higher magnification than the stronger signals. The output signal from the log amp can be further processed by the hardware on a receiver board.

LOGAMP3 is widely used for ultrasonic testing on high attenuation materials which require high dynamic range of signals on one scope screen without using high resolution ADC instrument. Applications in the ultrasonic testing include composite material evaluation, corrosion mapping with rough surfaces, small flaw detections, and some tests with wide range of signal amplitude. Other applications include LIDAR, lasers, and electro-optiics.









SPECIFICATIONS

Input Impedance	200 or 50 ohms switch selectable
Input Coupling	AC or DC switch selectable
Input Range	0.0001 to 10 Vp-p
Input Noise	16 micro volts typical
Pulse Response	Rise time: 12 ns (DC-30 MHz)
	Fall time: 15 ns typical
Operating Temperature	0°C to 50°C

Output	Single-ended
	Noise: 7mV$_{RMS}$ typical
	Load: >=50 ohms
	Slope: 29 mV/dB typical
Polarity	Non-Inverting
Linearity	+/-1 dB
Power	12VAC/100mA from an AC/AC adapter
Dimension	4.5”x2.7”x1.2” (107mm x 70mm x 30mm)
Weight	7 oz (0.2kg)

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