The Model 99531 is designed to provide high performance, including gain stability, phase stability, and noise over the 10Hz to 50 kHz band while providing a balanced line driving capability. It is designed to work with small capacitance transducers and provide adequate input overload protection.
OUTLINE DRAWING

1.141 inch diameter X 3.5 inch long hermetically sealed cylindrical module. Input on one end, all other functions on opposite end to make it convenient for applications where signal flow is in a straight line.

PIN CONNECTIONS

INPUT:

L  INPUT LO
H  INPUT HI
OUTPUT:
G GROUND
O1 OUTPUT 1
O2 OUTPUT 2
B+ POWER
B- POWER
C CALIBRATE

99531 Block diagram

SPECIFICATIONS

GAIN (1 kHz, 50Ω source, output unterminated):

17 dB Input to non-inverting output
23dB±0.1dB Input to balanced output
FREQUENCY RESPONSE: -3dB at 10 Hz, 6 dB min. slope below 10 Hz; 1 dB at 50 kHz min.

INPUT R: 1500 Meg Ω/ 20 pF

INPUT PROTECTION: Biased diode overload protection to prevent damage

NOISE (1 Hz BW, 100pF source)

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Noise Level (dB V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>-122</td>
</tr>
<tr>
<td>100</td>
<td>-142</td>
</tr>
<tr>
<td>1k</td>
<td>-160</td>
</tr>
<tr>
<td>10k</td>
<td>-169</td>
</tr>
<tr>
<td>50k</td>
<td>-169</td>
</tr>
</tbody>
</table>

DISTORTION: 0.1% 50 Hz to 50 KHz, 6V p-p output line to line open circuit
Or 32V p-p total load including source resistors equal to 130Ω

PHASE SHIFT: Non-inverting output to inverting output 180°±3°
Input to NINV output ±2°

OUTPUT TYPE: balanced, referenced to signal ground

OUTPUT CAPABILITY: 8 Volt p-p unloaded

OUTPUT IMPEDANCE: 30 Ω ± 2Ω dc couple each side

OUTPUT DRIVE: 50 mA peak

CAL: Cal resistor divider 20dB CAL PAD

POWER: ±13 V dc TO ± 20 V dc at 40 mA

POWER SUPPLY REJECTION: ≥75 dB 50 Hz -2 kHz
OPERATING TEMPERATURE
-25 °C to +55 °C operation
-55 °C to +85 °C storage

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