High Power (+30 dBm)
AMPLIFIERS, BROADBAND

ZHL SERIES

<table>
<thead>
<tr>
<th>MODEL</th>
<th>FREQUENCY</th>
<th>Z (Ohms)</th>
<th>COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZHL-1A</td>
<td>2 MHz - 500 MHz</td>
<td>50</td>
<td>$199</td>
</tr>
<tr>
<td>ZHL-2</td>
<td>10 MHz - 1000 MHz</td>
<td>50</td>
<td>$349</td>
</tr>
<tr>
<td>ZHL-2B</td>
<td>10 MHz - 1000 MHz</td>
<td>50</td>
<td>$449</td>
</tr>
<tr>
<td>ZHL-3A</td>
<td>0.4 MHz - 150 MHz</td>
<td>50</td>
<td>$199</td>
</tr>
<tr>
<td>ZHL-32A</td>
<td>50 KHz - 130 MHz</td>
<td>50</td>
<td>$199</td>
</tr>
</tbody>
</table>

DESCRIPTION — The ZHL RF power amplifiers are capable of providing approximately 1 watt of power output over a broad frequency range from 50 KHz to 1000 MHz. Using an ultra linear Class A design, the ZHL provides a minimum of 16 dB gain over the full frequency range. Gain flatness is typically within ±0.5 dB. The ZHL provides a minimum gain of 24 dB.

The ZHL is unconditionally stable and can be connected to any load impedance without amplifier damage or oscillation. Having a two stage design, and incorporating a highly reliable power output transistor enables the ZHL to be designed for reliability of performance.

BNC connectors are supplied. Housed in a ⅛ inch aluminum case, the ZHL is constructed to withstand tough environments. This rugged case includes a hefty heat sink as an integral part of the case construction.

The high performance ZHL is offered at a remarkable price of ½ to ½ the cost of competitive units.

DIMENSIONS AND CONNECTIONS

NEW MODELS AVAILABLE
ZHL-2 .......... 10-1000 MHz
ZHL-2-8 .......... 10-1000 MHz
ZHL-32A 50 KHz-130 MHz

ONE WEEK DELIVERY

FEATURES
- High Power: 1 watt output
- Broadband: 50 KHz to 1000 MHz
- Compact
- Connectors: BNC (SMA Add $10 to unit price)
- Price: From $199 (1-9)
- Very Flat Frequency Response: ±0.5 dB typ
- Self Contained Heat Sink

APPLICATIONS
- Increase the output power of signal generators
- Intermodulation testing of components
- Broadband, high level isolators
- Provide linear gain in signal processing systems

ABSOLUTE MAXIMUM RATINGs
- Total Input Power: +20 dBm when output loaded,
  +10 dBm when output not loaded
- DC Supply Voltage: +24 V
- Operating Temperature: 0°C to +65°C
- Storage Temperature: -55°C to +100°C

WEIGHT:
- ZHL-A 220 grams .49 lbs.
- ZHL 400 grams .88 lbs.
ZHL Series
50 KHz to 1000 MHz

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Frequency Range MHz</th>
<th>Gain dB</th>
<th>Gain Flatness dB</th>
<th>Maximum Power Output dBm</th>
<th>Compression</th>
<th>Noise Figure dB</th>
<th>Intercept Point 3rd Order</th>
<th>Impedance Ohms Input</th>
<th>Output</th>
<th>VSWR, Max. Input</th>
<th>Output</th>
<th>DC Power Voltage Current</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZHL-1A</td>
<td>2-500</td>
<td>16 Min.</td>
<td>±1.0 Max.</td>
<td>+28 Min.</td>
<td>11 Typ.</td>
<td>+38 Typ.</td>
<td>50</td>
<td>50</td>
<td>2:1</td>
<td>2:1</td>
<td>+24V</td>
<td>0.6A</td>
<td>$199</td>
</tr>
<tr>
<td>ZHL-2</td>
<td>10-1000</td>
<td>16 Min.</td>
<td>±1.0 Max.</td>
<td>+29 Min.</td>
<td>18 Typ.</td>
<td>+38 Typ.</td>
<td>50</td>
<td>50</td>
<td>2:1</td>
<td>2:1</td>
<td>+24V</td>
<td>0.6A</td>
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<tr>
<td>ZHL-2-B</td>
<td>10-1000</td>
<td>27 Min.</td>
<td>±1.0 Max.</td>
<td>+29 Min.</td>
<td>10 Typ.</td>
<td>+38 Typ.</td>
<td>50</td>
<td>50</td>
<td>2:1</td>
<td>2:1</td>
<td>+24V</td>
<td>0.6A</td>
<td>$449</td>
</tr>
<tr>
<td>ZHL-3A</td>
<td>0.4-150</td>
<td>24 Min.</td>
<td>±1.0 Max.</td>
<td>+29.5 Min.</td>
<td>11 Typ.</td>
<td>+38 Typ.</td>
<td>50</td>
<td>50</td>
<td>2:1</td>
<td>2:1</td>
<td>+24V</td>
<td>0.6A</td>
<td>$199</td>
</tr>
<tr>
<td>ZHL-32A</td>
<td>0.05-130</td>
<td>25 Min.</td>
<td>±1.0 Max.</td>
<td>+27 Min.</td>
<td>10 Typ.</td>
<td>+33 Typ.</td>
<td>50</td>
<td>50</td>
<td>2:1</td>
<td>2:1</td>
<td>+24V</td>
<td>0.6A</td>
<td>$199</td>
</tr>
</tbody>
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COMMON SPECIFICATIONS: Total Input Power: ±20 dBm. Operating Temperature: +0°C to +65°C. Storage Temperature: −55°C to +100°C.

MODEL ZHL-1A

GAIN vs FREQUENCY

1 dB COMPRESSION POINT vs FREQUENCY

INPUT PORT VSWR vs FREQUENCY

GAIN vs INPUT LEVEL

3-TONE 3rd ORDER INTERMODULATION OUTPUT vs SIGNAL OUTPUT

OUTPUT PORT VSWR vs FREQUENCY

MODEL ZHL-3A

GAIN vs FREQUENCY

1 dB COMPRESSION POINT vs FREQUENCY

GAIN vs DC VOLTAGE

GAIN vs INPUT

2 TONE 3rd ORDER INTERMODULATION OUTPUT vs SIGNAL OUTPUT

VSWR vs FREQUENCY

PROMPT SERVICE / ONE WEEK DELIVERY