Coaxial Amplifier

ZHL-2-8

50Ω Medium High Power 10 to 1000 MHz

Features
• wideband, 10 to 1000 MHz
• high IP3, +38 dBm typ.
• medium high power, 29 dBm min.

Applications
• VHF/UHF
• test equipment
• cellular
• instrumentation
• laboratory

Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit’s applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, “Standard Terms”; Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits’ website at www.minicircuits.com/MCLStore/terms.jsp.

NOT RECOMMENDED FOR NEW DESIGNS

Recommended Replacement Part:
ZHL-2-8+
ZHL-2-8X+

Electrical Specifications

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>FREQ. (MHz)</th>
<th>GAIN (dB)</th>
<th>MAXIMUM POWER OUTPUT (dBm)</th>
<th>DYNAMIC RANGE</th>
<th>VSWR (1:1) Max.</th>
<th>DC POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZHL-2-8</td>
<td>fL fH</td>
<td>Min. Typ. Max.</td>
<td>Flatness (1 dB Compr.) Input (no damage)</td>
<td>NF dB</td>
<td>IP3 dBm</td>
<td>In Out</td>
</tr>
<tr>
<td>ZHL-2-8X</td>
<td>10 1000</td>
<td>31 35 ±1.0</td>
<td>+29</td>
<td>+5</td>
<td>10.0 +38</td>
<td>2.0 2.0</td>
</tr>
</tbody>
</table>

*heat sink not included
Open load is not recommended, potentially can cause damage.
With no load derate max input power by 20 dB

Maximum Ratings

Operating Temperature -20°C to 65°C
Storage Temperature -55°C to 100°C
DC Voltage +25V Max.

Permanent damage may occur if any of these limits are exceeded.

Outline Drawing

Outline Dimensions

A
4.75
B
2.00
C
2.12
D
.19
E
4.375
F
1.540
G
.144
H
.58
J
.34
K
.50
L
1.50
M
1.00
N
.12
O
.38
P
4.00
Q
3.00
R
2.60 grams*
S
2.00
T
.60
wt
440.0

*325 grams without heatsink

www.minicircuits.com  P.O. Box 350166, Brooklyn, NY 11235-0003  (718) 934-4500  sales@minicircuits.com

Mini-Circuits®

© 2023 Mini-Circuits
## Typical Performance Data/Curves

**ZHL-2-8**

<table>
<thead>
<tr>
<th>FREQ. (MHz)</th>
<th>GAIN (dB)</th>
<th>DIRECTIVITY (dB)</th>
<th>VSWR (IN:OUT)</th>
<th>POUT at 1 dB COMPR. (dBm)</th>
<th>NOISE FIGURE (dB)</th>
<th>IP3 (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24V</td>
<td>24V</td>
<td>IN</td>
<td>OUT</td>
<td>24V</td>
<td>24V</td>
<td>24V</td>
</tr>
<tr>
<td>10.00</td>
<td>35.09</td>
<td>21.27</td>
<td>1.48</td>
<td>3.19</td>
<td>28.98</td>
<td>4.18</td>
</tr>
<tr>
<td>24V</td>
<td>24V</td>
<td>IN</td>
<td>OUT</td>
<td>24V</td>
<td>24V</td>
<td>24V</td>
</tr>
<tr>
<td>50.00</td>
<td>35.32</td>
<td>27.55</td>
<td>1.20</td>
<td>2.54</td>
<td>30.21</td>
<td>3.32</td>
</tr>
<tr>
<td>100.00</td>
<td>35.68</td>
<td>26.62</td>
<td>1.17</td>
<td>2.10</td>
<td>30.45</td>
<td>3.91</td>
</tr>
<tr>
<td>150.00</td>
<td>35.70</td>
<td>26.34</td>
<td>1.16</td>
<td>1.94</td>
<td>30.48</td>
<td>3.69</td>
</tr>
<tr>
<td>200.00</td>
<td>35.67</td>
<td>26.59</td>
<td>1.15</td>
<td>1.91</td>
<td>30.45</td>
<td>3.91</td>
</tr>
<tr>
<td>250.00</td>
<td>35.63</td>
<td>25.46</td>
<td>1.14</td>
<td>1.92</td>
<td>30.47</td>
<td>4.06</td>
</tr>
<tr>
<td>300.00</td>
<td>35.52</td>
<td>26.43</td>
<td>1.12</td>
<td>1.94</td>
<td>30.46</td>
<td>4.29</td>
</tr>
<tr>
<td>350.00</td>
<td>35.42</td>
<td>25.99</td>
<td>1.10</td>
<td>1.96</td>
<td>30.55</td>
<td>4.12</td>
</tr>
<tr>
<td>400.00</td>
<td>35.34</td>
<td>26.04</td>
<td>1.09</td>
<td>1.97</td>
<td>30.58</td>
<td>4.10</td>
</tr>
<tr>
<td>450.00</td>
<td>35.20</td>
<td>25.54</td>
<td>1.10</td>
<td>1.97</td>
<td>30.88</td>
<td>4.31</td>
</tr>
<tr>
<td>500.00</td>
<td>35.11</td>
<td>26.06</td>
<td>1.14</td>
<td>1.95</td>
<td>31.07</td>
<td>4.41</td>
</tr>
<tr>
<td>550.00</td>
<td>35.12</td>
<td>25.10</td>
<td>1.17</td>
<td>1.94</td>
<td>31.18</td>
<td>4.41</td>
</tr>
<tr>
<td>600.00</td>
<td>35.15</td>
<td>25.53</td>
<td>1.21</td>
<td>1.94</td>
<td>31.29</td>
<td>4.54</td>
</tr>
<tr>
<td>650.00</td>
<td>35.28</td>
<td>25.11</td>
<td>1.35</td>
<td>1.94</td>
<td>31.35</td>
<td>4.55</td>
</tr>
<tr>
<td>700.00</td>
<td>35.28</td>
<td>24.08</td>
<td>1.52</td>
<td>1.87</td>
<td>31.33</td>
<td>4.53</td>
</tr>
<tr>
<td>800.00</td>
<td>35.02</td>
<td>24.73</td>
<td>1.67</td>
<td>1.70</td>
<td>31.41</td>
<td>4.77</td>
</tr>
<tr>
<td>900.00</td>
<td>35.02</td>
<td>24.73</td>
<td>1.67</td>
<td>1.70</td>
<td>31.41</td>
<td>4.77</td>
</tr>
<tr>
<td>1000.00</td>
<td>35.02</td>
<td>24.73</td>
<td>1.67</td>
<td>1.70</td>
<td>31.41</td>
<td>4.77</td>
</tr>
</tbody>
</table>

**Notes**

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit’s applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, “Standard Terms”); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits’ website at www.minicircuits.com/MCLStore/terms.jsp