**B&Z Technologies**

**BZ1220LC1**

**WIDEBAND LNA, 12 - 20 GHz**

### Features

- **Noise Figure ≤1.5 dB**
- Unconditionally Stable at all temperatures
- Internally Regulated DC Voltage
- 50 Ohm Matched Input/Output
- Field Replaceable SMA connectors
- Drop in Package
- Excellent Group Delay and Phase Linearity
- 0.009 inches diameter RF In/Out feed through
- Operating Temp. -55 C to +85 C
- 3 Year Warranty

### Options

- **Optimized Performance over Selected Bandwidth**
- Internally DC Block Input (Output DC Block Standard)
- Hermetically Sealed Package
- Improved Gain Flatness ± 0.7 dB Max
- Improved IN and OUT VSWR
- Gain and Phase matching
- Lower Noise Figure (Cryogenic Temp)

### Specifications (23 °C)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>12</td>
<td>20</td>
<td></td>
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<tr>
<td>Noise Figure *</td>
<td>1.5</td>
<td>dBA</td>
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<tr>
<td>Gain</td>
<td>27</td>
<td>28</td>
<td>-</td>
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<tr>
<td>Gain Flatness</td>
<td>-</td>
<td>±1.0</td>
<td>dB</td>
</tr>
<tr>
<td>P1dB Output Power</td>
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<td>-</td>
<td>dBm</td>
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<tr>
<td>Input VSWR</td>
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<td>1</td>
</tr>
<tr>
<td>Output VSWR</td>
<td>-</td>
<td>2.0</td>
<td>1</td>
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<tr>
<td>Operating Temperature</td>
<td>-55</td>
<td>+85</td>
<td>°C</td>
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<tr>
<td>Third Order Intercept</td>
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<td>dBM</td>
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<tr>
<td>Second Order Intercept</td>
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<td>dBM</td>
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<td>Group Delay 12-20 GHz</td>
<td>±20</td>
<td>psec</td>
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<tr>
<td>Voltage</td>
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<td>-</td>
<td>V</td>
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<tr>
<td>Current</td>
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<td>150</td>
<td>mA</td>
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</table>

* Noise Sources used for measurement: 12–18 GHz: HP346A, 18–20 GHz: HP346C-K01

N.F. Uncertainty (approx. 0.3 dB). 0.2 dB due to ENR of HP 346C-K01, and 0.1 dB, due to gain modulation of the unit, caused by the HP 346C-K01 source impedance change in the ON and OFF state.

Noise Figures and other parameters degrade below 500 MHz.

Noise Figures at Cryogenic Temp, not given due to uncertainty of measurement for very low values. Call to discuss.

### Performance Graphs

- **S21**
- **Noise Figure (dB)**
- **Power 1dB Compression**
- **S11**
- **Output Return Loss (dB)**

### Outline Drawing

**Mounting Drawing**

**Drop In Module**