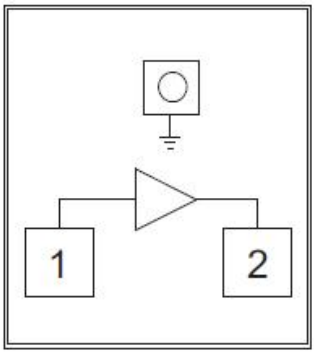
# GHLN-102D

## High Linearity, Medium Power Gain Block Chip, 0.1-6GHz

### Performance characteristics

- Operating frequency: 0.1 - 6 GHz
- Noise figure: 4.5 dB
- Small signal gain: 14.5dB
- Gain flatness: ± 1.8dB
- P-1dB: 24dBm
- OIP3: 42 dBm
- 50Ohm input and output
- + 9V / 195mA
- DIE: 0.82 x 1.02 x0.1mm

### Functional Block Diagram




| Use restriction parameter [1] | |
|---|---|
| Maximum input power | +22dBm |
| Maximum operating current | 330mA |
| Operating temperature | -55 ~ + 105 °C |
| Storage temperature | -65 ~ +150°C |

【1】 Exceeding any of these maximum limits may cause permanent damage.

| Electrical performance parameters ( TA = +25°C , Vcc = +9V ) | | | | |
|---|---|---|---|---|
| Index | Minimum | Typical Value | Maximum | Unit |
| Frequency Range | | 0.1-6 | | GHz |
| Small Signal Gain | | 14.5 | | dB |
| Gain Flatness | | ± 1.8 | | dB |
| Input return loss | | 12 | - | dB |
| Output return loss | | 16 | - | dB |
| Reverse Isolation | - | 23 | - | dB |
| P-1 dB | - | 24 | - | dBm |
| OIP3 @with Pout=0dBm | | 42 | | dBm |
| Noise Figure | - | 4.5 | | dB |
| Quiescent Current | - | 195 | - | mA |

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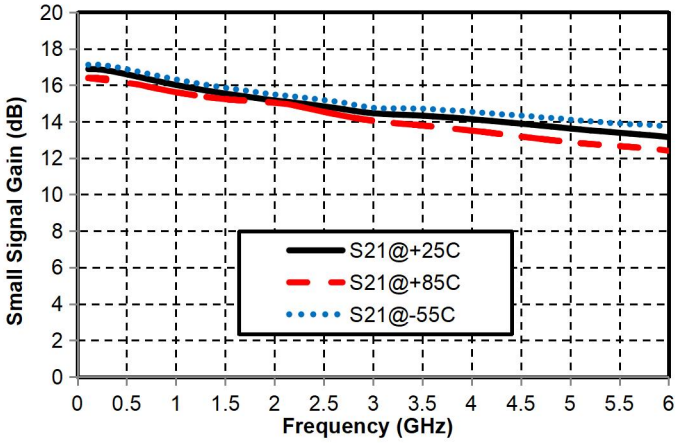
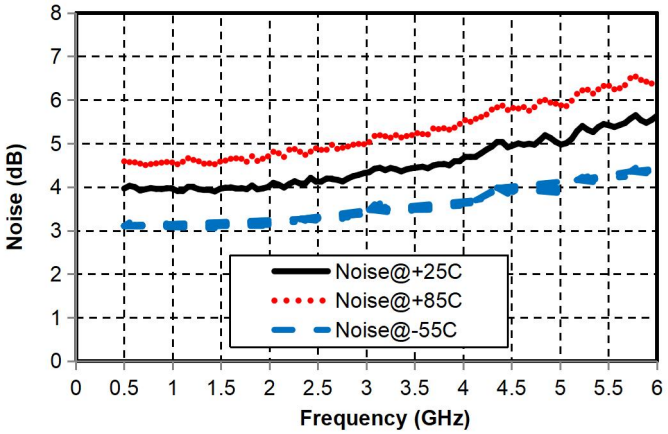
### Main index test curve

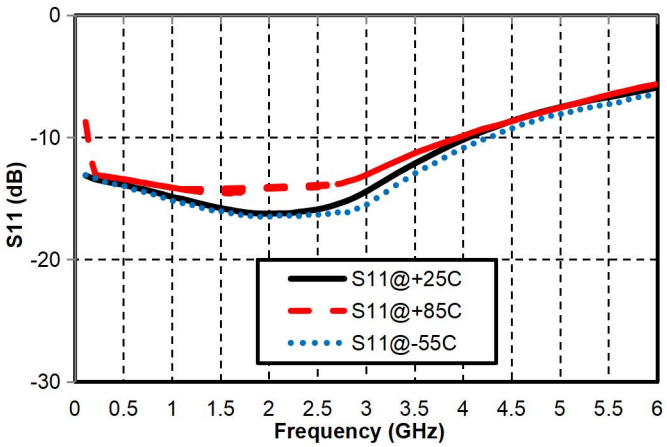
Gain vs. Frequency



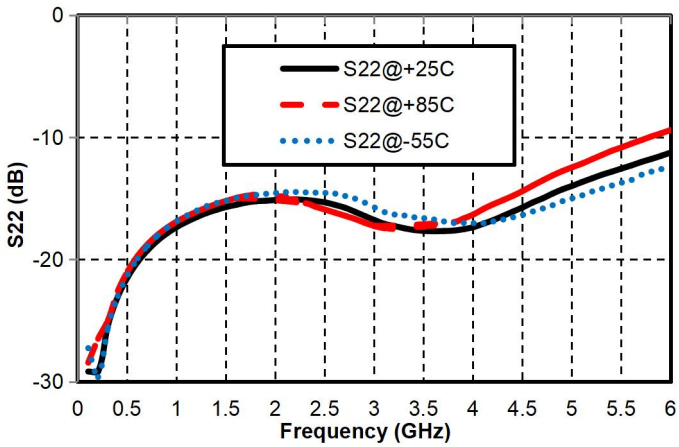

Noise Figure vs. Frequency



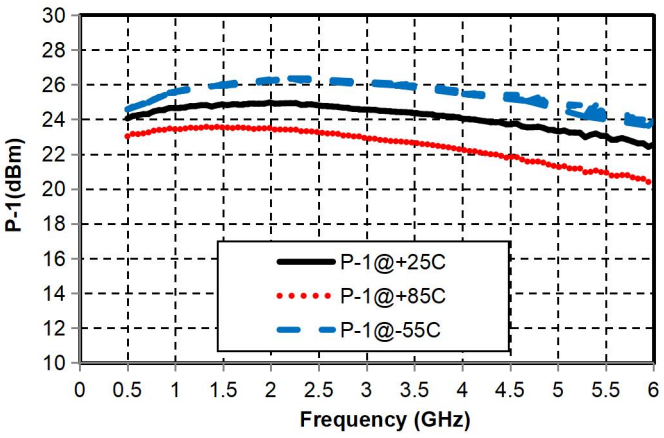

Input Return Loss vs. Frequency



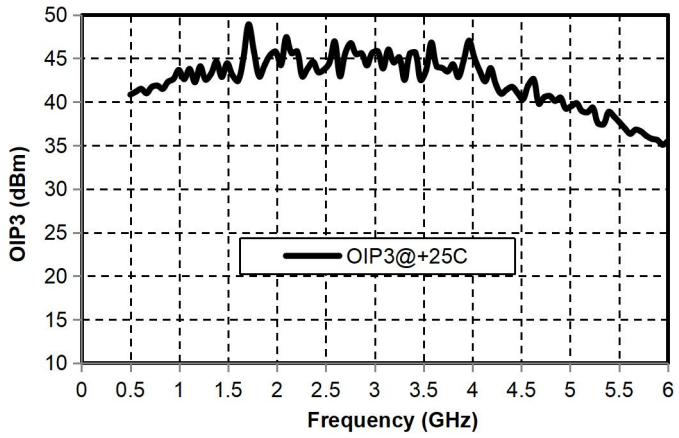

Output Return Loss vs. Frequency




P-1dB vs. Frequency




OIP3 vs. Frequency (Pout=0dBm)



# GHLN-102D

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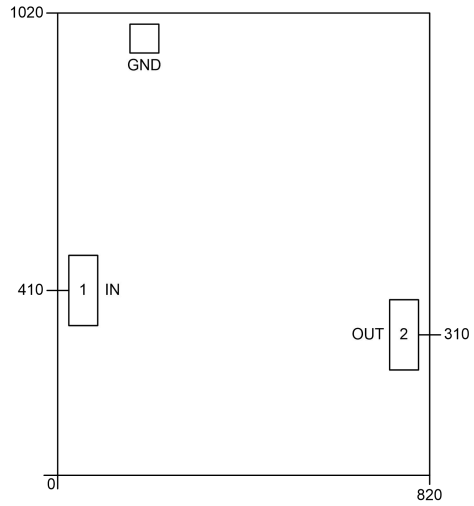
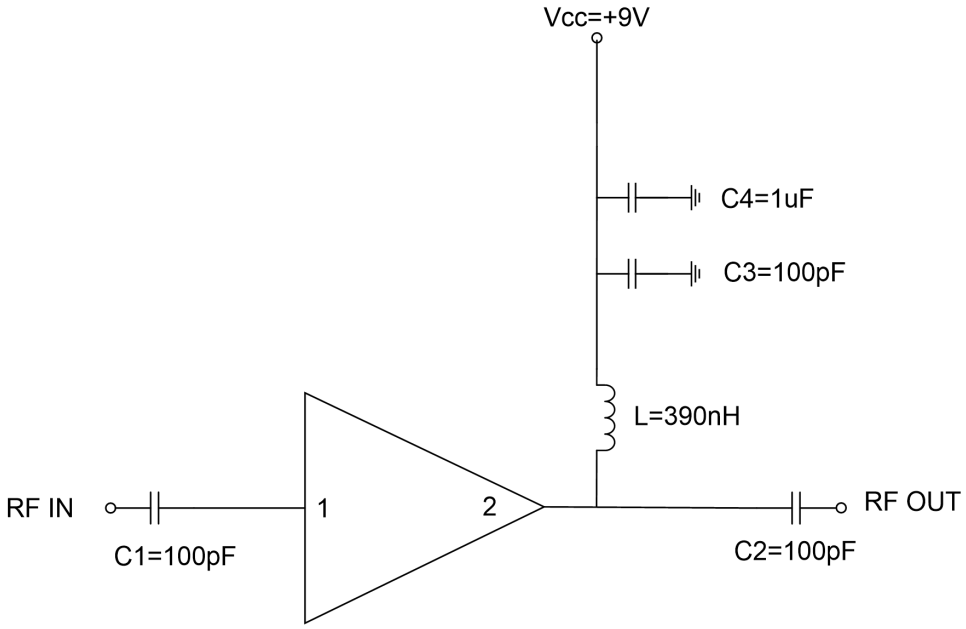
### Appearance structure




*GND pad does not need soldering

| Bonding point number | Function Symbol | Functional Description |
|---|---|---|
| 1 | RFIN | RF input, external DC blocking capacitor is required |
| 2 | RFOUT | RF output and chip DC bias, bias the circuit at the output end through an external choke inductor, and require an external DC blocking capacitor |
| Chip bottom | GND | The bottom of the chip needs to be well grounded to RF and DC |

### Recommended circuit diagram

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