

High IP3

Low Noise Amplifier

ZRL-1150LN+
ZRL-1150LN

50Ω

650 to 1400 MHz

Features

- High IP3, +40 dBm typ.
- Low Noise figure, 0.8 dB typ.
- Broadband flat gain response
- Internal voltage regulated
- Over-voltage and transient protected

Applications

- Very low noise, preamplifier
- Analog/digital cellular
- PCS, GSM, TDMA, CDMA
- GPS and MAS
- Aeronautical and defense communications



Case Style: FJ893

| Connectors | Model | Price | Qty. |
|------------|---------------|--------------|-------|
| SMA | ZRL-1150LN(+) | \$119.95 ea. | (1-9) |

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

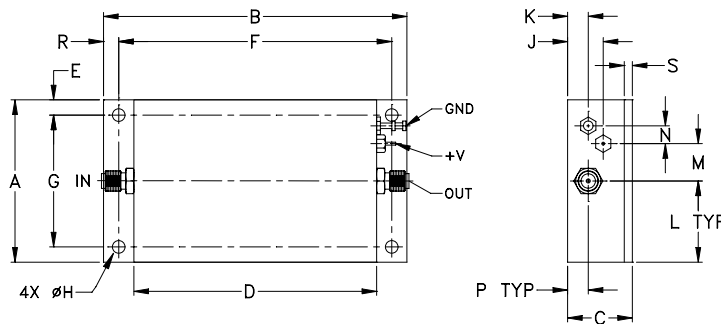
Electrical Specifications at 25°C

| Parameter | Condition (MHz) | Min. | Typ. | Max. | Units |
|---|-----------------|------|------|------|-------|
| Frequency Range | | 650 | | 1400 | MHz |
| Noise Figure | 650 - 1400 | — | 1.1 | 1.7 | dB |
| | 685 - 1000 | — | 0.8 | 1.4 | |
| Gain | 650 - 1400 | 25 | 29 | — | dB |
| | 685 - 1000 | 27 | 32 | — | |
| Gain Flatness | 650 - 1400 | — | ±2.0 | — | dB |
| | 685 - 1000 | — | ±0.5 | ±1.0 | |
| Output Power at 1dB compression | 650 - 1400 | 22 | 24 | — | dBm |
| | 685 - 1000 | 22 | 24 | — | |
| Output Power at 3dB compression | 650 - 1400 | — | 26.3 | — | dBm |
| | 685 - 1000 | — | 26.0 | — | |
| Output third order intercept point ¹ | 650 - 1400 | — | +40 | — | dBm |
| | 685 - 1000 | — | +40 | — | |
| Input VSWR | 650 - 1400 | — | 1.25 | — | :1 |
| | 685 - 1000 | — | 1.20 | — | |
| Output VSWR | 650 - 1400 | — | 1.20 | — | :1 |
| | 685 - 1000 | — | 1.25 | — | |
| Active Directivity | 650 - 1400 | — | 19 | — | dB |
| | 685 - 1000 | — | 17 | — | |
| DC Supply Voltage ² | | — | 12 | — | V |
| Supply Current | | — | 450 | 500 | mA |

1. 1 MHz tone spacing.

2. Unit is internally voltage regulated for 6.5 to 17VDC input voltage range.

Outline Drawing



Maximum Ratings

| Parameter | Ratings |
|----------------------------|--|
| Operating Temperature | -40°C to 80°C case -40°C to 60° ambient |
| Storage Temperature | -55°C to 100°C |
| DC Voltage | +17V |
| Input RF Power (no damage) | +10 dBm |

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

Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | wt |
|-------|-------|-------|-------|------|-------|-------|------|-------|------|-------|-------|------|------|----|------|------|-------|
| 2.00 | 3.75 | 0.80 | 3.00 | 0.19 | 3.374 | 1.624 | 0.16 | 0.44 | 0.26 | 1.00 | 0.51 | 0.22 | 0.26 | -- | 0.19 | 0.10 | grams |
| 50.80 | 95.25 | 20.32 | 76.20 | 4.83 | 85.70 | 41.25 | 3.96 | 11.18 | 6.60 | 25.40 | 12.95 | 5.59 | 6.60 | -- | 4.83 | 2.54 | 135 |



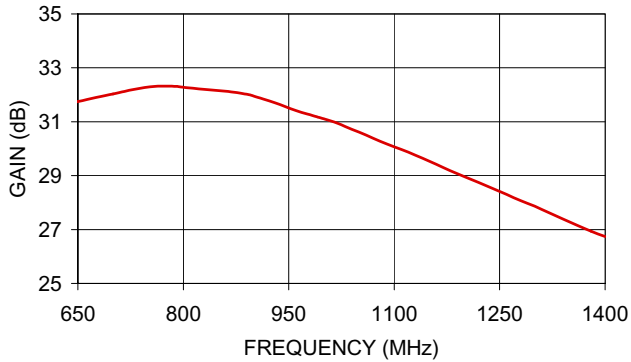
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

For detailed performance specs & shopping online see web site

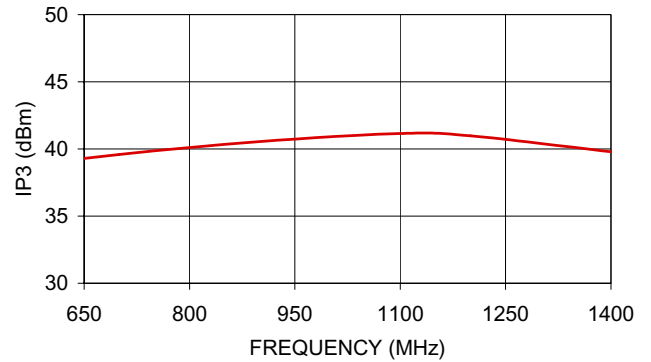
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's 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.

Typical Performance Data/Curves

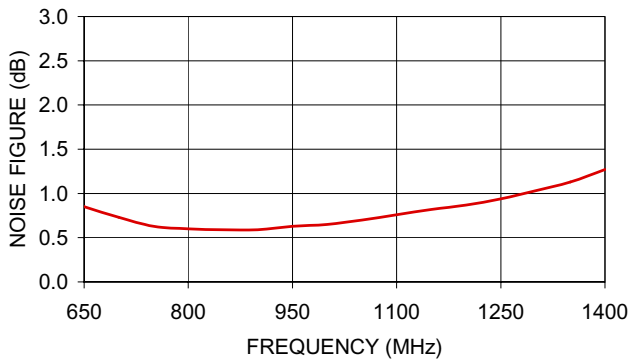
ZRL-1150LN
GAIN



ZRL-1150LN
IP3



ZRL-1150LN
NOISE FIGURE



ZRL-1150LN
VSWR

