

Coaxial Low Noise Amplifier

ZQL-900LN+

50Ω 824 to 849 MHz

Features

- Very low noise figure, 1.3 dB max.
- High IP3, +35 dBm typ.
- Rugged, shielded case

Applications

- UHF
- Communications systems
- Cellular



Generic photo used for illustration purposes only

| | |
|-------------------|------------|
| Case Style: CW686 | |
| Connectors | Model |
| SMA | ZQL-900LN+ |

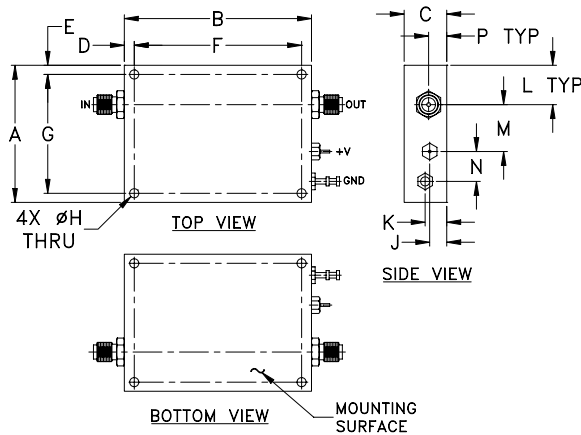
+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

| Parameter | Condition (MHz) | Min. | Typ. | Max. | Units |
|------------------------------------|-----------------|------|------|------|-------|
| Frequency Range | | 824 | | 849 | MHz |
| Noise Figure | 824-849 | — | — | 1.3 | dB |
| Gain | 824-849 | 15 | — | — | dB |
| Gain Flatness | 824-849 | — | — | ±0.5 | dB |
| Output Power at 1dB compression | 824-849 | — | +21 | — | dBm |
| Output third order intercept point | 824-849 | — | +35 | — | dBm |
| Input VSWR | 824-849 | — | 1.2 | — | :1 |
| Output VSWR | 824-849 | — | 1.1 | — | :1 |
| DC Supply Voltage | 824-849 | — | 15 | — | V |
| Supply Current | 824-849 | — | — | 160 | mA |

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

Outline Drawing



Maximum Ratings

| Parameter | Ratings |
|----------------------------|----------------|
| Operating Temperature | -40°C to 70°C |
| 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)

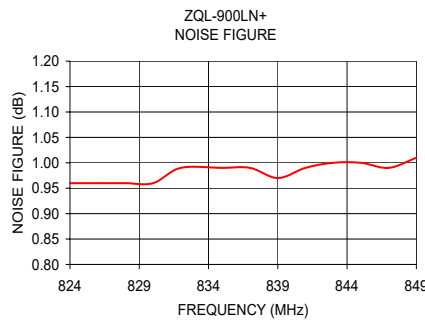
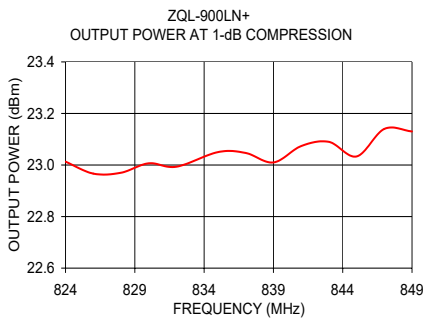
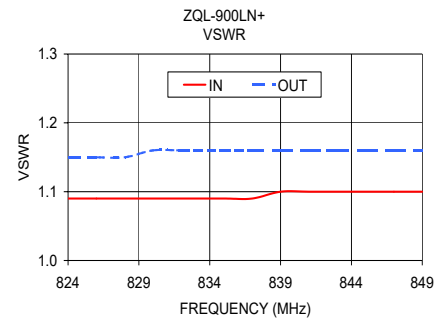
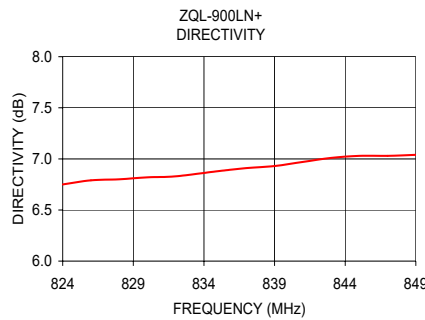
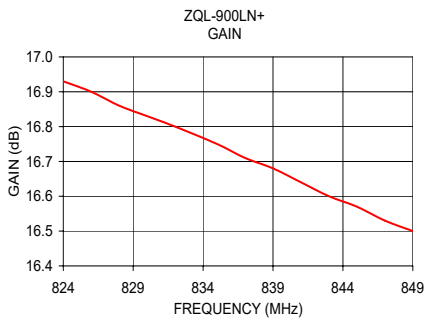
| A | B | C | D | E | F | G | H | J | K | L | M | N | P | wt |
|-------|-------|-------|------|------|-------|-------|------|------|------|-------|-------|------|------|-------|
| 1.77 | 2.42 | .55 | .13 | .12 | 2.165 | 1.535 | .126 | .22 | .28 | .51 | .61 | .39 | 0.22 | grams |
| 44.96 | 61.47 | 13.97 | 3.30 | 3.05 | 55.0 | 39.0 | 3.20 | 5.59 | 7.11 | 12.95 | 15.49 | 9.91 | 5.59 | 71.0 |

Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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



| FREQUENCY (MHz) | GAIN (dB) | DIRECTIVITY (dB) | VSWR (:1) | | NOISE FIGURE (dB) | POUT at 1 dB COMPR. (dBm) |
|-----------------|-----------|------------------|-----------|------|-------------------|---------------------------|
| | 15V | 15V | IN | OUT | 15V | 15V |
| 824.00 | 16.93 | 6.75 | 1.09 | 1.15 | 0.96 | 23.01 |
| 826.00 | 16.90 | 6.79 | 1.09 | 1.15 | 0.96 | 22.97 |
| 828.00 | 16.86 | 6.80 | 1.09 | 1.15 | 0.96 | 22.97 |
| 830.00 | 16.83 | 6.82 | 1.09 | 1.16 | 0.96 | 23.01 |
| 832.00 | 16.80 | 6.83 | 1.09 | 1.16 | 0.99 | 22.99 |
| 835.00 | 16.75 | 6.88 | 1.09 | 1.16 | 0.99 | 23.05 |
| 837.00 | 16.71 | 6.91 | 1.09 | 1.16 | 0.99 | 23.05 |
| 839.00 | 16.68 | 6.93 | 1.10 | 1.16 | 0.97 | 23.01 |
| 841.00 | 16.64 | 6.97 | 1.10 | 1.16 | 0.99 | 23.07 |
| 843.00 | 16.60 | 7.01 | 1.10 | 1.16 | 1.00 | 23.09 |
| 845.00 | 16.57 | 7.03 | 1.10 | 1.16 | 1.00 | 23.03 |
| 847.00 | 16.53 | 7.03 | 1.10 | 1.16 | 0.99 | 23.14 |
| 849.00 | 16.50 | 7.04 | 1.10 | 1.16 | 1.01 | 23.13 |



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



Low Noise Amplifier

ZQL-900LN+

Typical Performance Data

| FREQUENCY (MHz) | GAIN (dB) 15V | DIRECTIVITY (dB) 15V | VSWR IN (:1) 15V | VSWR OUT (:1) 15V | NOISE FIGURE (dB) 15V | Pout at 1dB Comp. (dBm) 15V |
|--------------------|---------------------|----------------------------|---------------------------|-------------------------|--------------------------------|--------------------------------------|
| 800.0 | 17.28 | 6.50 | 1.14 | 1.17 | 0.82 | 22.93 |
| 811.1 | 17.11 | 6.59 | 1.13 | 1.17 | 0.82 | 22.86 |
| 822.2 | 16.93 | 6.77 | 1.12 | 1.17 | 0.83 | 22.89 |
| 833.3 | 16.73 | 6.91 | 1.12 | 1.17 | 0.85 | 23.00 |
| 844.4 | 16.53 | 7.10 | 1.12 | 1.17 | 0.87 | 22.91 |
| 855.6 | 16.31 | 7.29 | 1.12 | 1.16 | 0.85 | 22.98 |
| 866.7 | 16.09 | 7.52 | 1.11 | 1.16 | 0.89 | 22.87 |
| 877.8 | 15.90 | 7.70 | 1.11 | 1.15 | 0.88 | 22.99 |
| 888.9 | 15.71 | 7.88 | 1.11 | 1.15 | 0.90 | 22.94 |
| 900.0 | 15.52 | 8.15 | 1.11 | 1.14 | 0.90 | 23.00 |

REV. X1
ZQL-900LN+
060917
Page 1 of 1



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



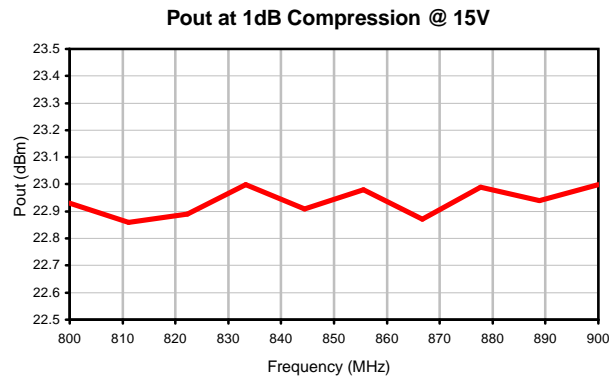
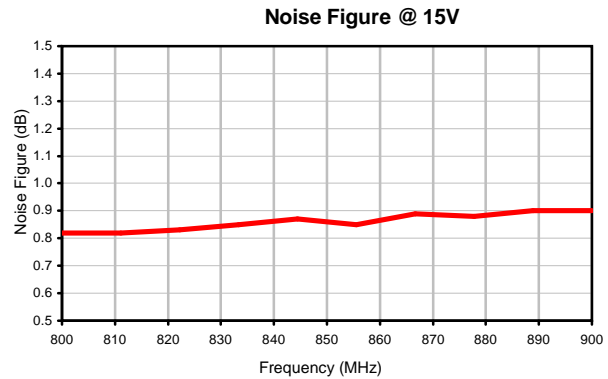
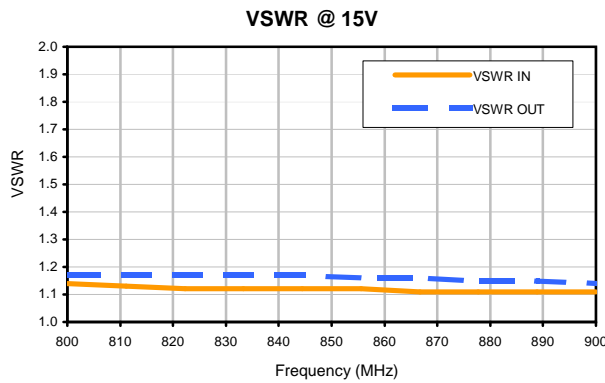
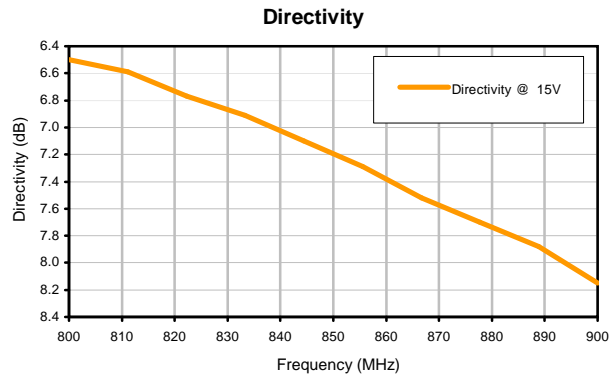
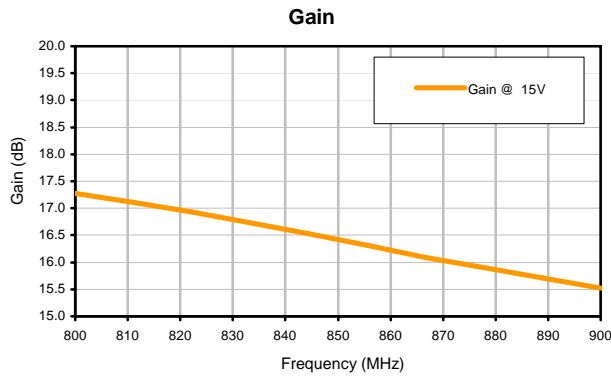
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



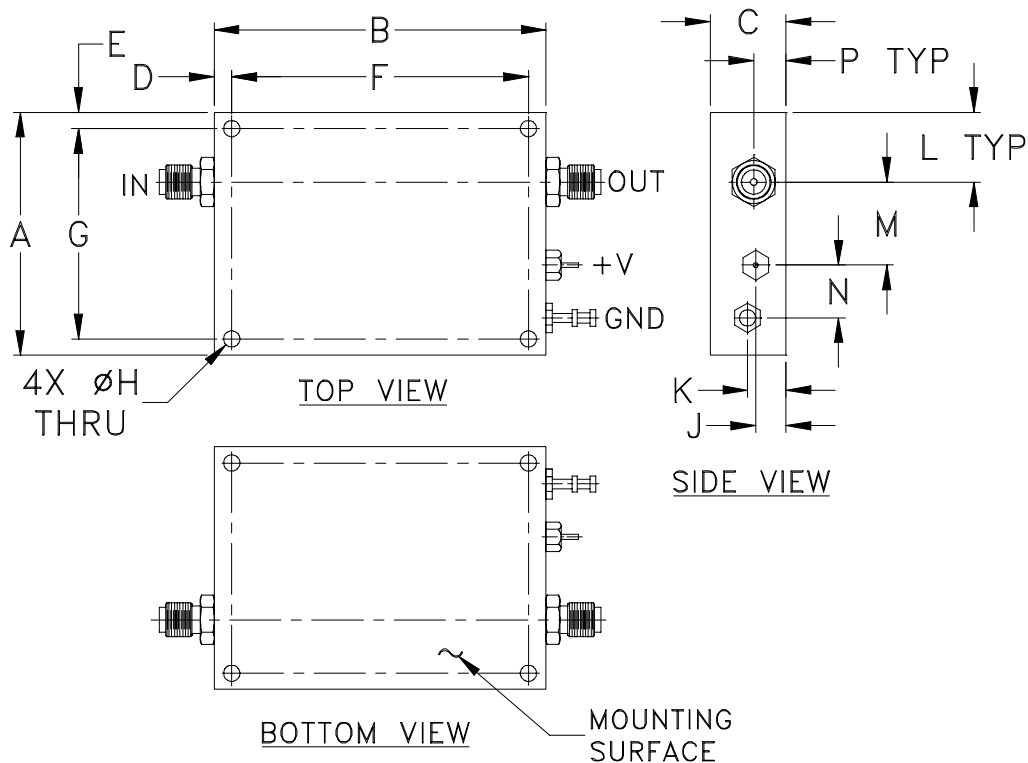
Low Noise Amplifier

ZQL-900LN+

Typical Performance Curves



Outline Dimensions



| CASE# | A | B | C | D | E | F | G | H | J | K | L | M | N |
|-------|-----------------|-----------------|----------------|---------------|---------------|------------------|------------------|----------------|---------------|---------------|----------------|----------------|---------------|
| CW686 | 1.77 (44.96) | 2.42 (61.47) | .55 (13.97) | .13 (3.30) | .12 (3.05) | 2.165 (54.99) | 1.535 (38.99) | .126 (3.20) | .22 (5.59) | .28 (7.11) | .51 (12.95) | .61 (15.49) | .39 (9.91) |

| CASE# | P | Q | WT. GRAMS |
|-------|---------------|----------|-----------|
| CW686 | .22 (5.59) | -- -- | 71 |

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|---------------------------|---------------------------------------|--------------------------------------|
| Operating Temperature | -40° to 70° C Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C Ambient Environment | Individual Model Data Sheet |
| Stabilization Bake | (non-operating) 125°C, 24 hours | - - - |
| Burn-in at Elevated Temp. | (DC on) 160 hours at 85° C | MIL-STD-202, Method 108 |
| Thermal Shock | -55° to 85°C, 5 cycles | MIL-STD-202, Method 107, Condition A |