

Coaxial Frequency Mixer

ZLW-1WSH+ ZLW-1WSH

Level 17 (LO Power +17 dBm) 5 to 750 MHz



CASE STYLE: M21

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 200mW |
| IF Current | 40mA |

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

Coaxial Connections

| | |
|----|---|
| LO | 1 |
| RF | 3 |
| IF | 2 |

Features

- low conversion loss, 5.83 dB typ.
- high isolation, 40 dB typ. L-R, 35 dB typ. L-I
- rugged shielded case

Applications

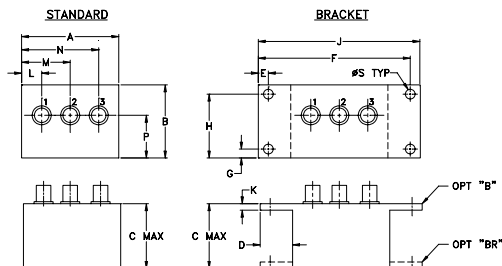
- VHF/UHF
- instrumentation
- defense & federal communications

| Connectors | Model | Price | Qty. |
|-----------------------|-------------|---------|-------|
| SMA | ZLW-1WSH(+) | \$66.95 | (1-9) |
| BRACKET (OPTION "B") | | \$5.00 | (1+) |
| BRACKET (OPTION "BR") | | \$1.50 | (1+) |

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

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

Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H |
|-------|-------|-------|-------|------|-------|------|-------|
| 1.50 | 1.13 | 1.00 | .50 | .155 | 2.345 | .138 | .987 |
| 38.10 | 28.70 | 25.40 | 12.70 | 3.94 | 59.56 | 3.51 | 25.07 |

| J | K | L | M | N | P | S | wt |
|-------|------|------|-------|-------|-------|------|-------|
| 2.50 | .10 | .31 | .75 | 1.19 | .66 | .150 | grams |
| 63.50 | 2.54 | 7.87 | 19.05 | 30.23 | 16.76 | 3.81 | 40.0 |

Electrical Specifications

| FREQUENCY (MHz) | CONVERSION LOSS (dB) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | |
|-----------------|----------------------|----------------------|----|----|----------------------|----|----|
| | | L | M | U | L | M | U |
| 5-750 | 5.83 | 50 | 40 | 30 | 45 | 35 | 20 |

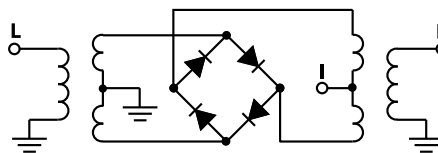
1 dB COMP.: +14 dBm typ.

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]
m = mid band [$2f_L$ to $f_U/2$]

Typical Performance Data

| Frequency (MHz) | Conversion Loss (dB) | Isolation L-R (dB) | Isolation L-I (dB) | VSWR RF Port (:1) | VSWR LO Port (:1) |
|-----------------|----------------------|--------------------|--------------------|-------------------|-------------------|
| | | | | | |
| 5.00 | 5.75 | 63.53 | 62.84 | 1.14 | 1.53 |
| 10.00 | 5.93 | 59.56 | 57.61 | 1.06 | 1.52 |
| 20.00 | 5.97 | 51.08 | 48.85 | 1.03 | 1.41 |
| 50.00 | 5.91 | 46.53 | 44.54 | 1.04 | 1.54 |
| 100.00 | 5.77 | 42.94 | 41.21 | 1.05 | 1.48 |
| 125.84 | 5.75 | 40.60 | 39.07 | 1.05 | 1.48 |
| 175.77 | 5.75 | 37.40 | 36.16 | 1.06 | 1.43 |
| 225.70 | 5.81 | 35.63 | 34.27 | 1.08 | 1.45 |
| 250.67 | 5.69 | 35.33 | 33.54 | 1.10 | 1.40 |
| 300.60 | 5.68 | 34.13 | 32.33 | 1.14 | 1.51 |
| 350.54 | 6.07 | 33.75 | 30.78 | 1.19 | 1.44 |
| 400.47 | 6.22 | 33.94 | 29.35 | 1.24 | 1.56 |
| 450.41 | 6.24 | 33.76 | 28.19 | 1.28 | 1.60 |
| 500.00 | 6.26 | 35.44 | 29.36 | 1.32 | 1.59 |
| 525.31 | 6.57 | 33.37 | 28.37 | 1.35 | 1.68 |
| 550.27 | 6.80 | 31.48 | 26.00 | 1.37 | 1.74 |
| 600.21 | 6.81 | 29.25 | 22.84 | 1.39 | 1.68 |
| 650.14 | 6.95 | 29.21 | 20.68 | 1.38 | 1.89 |
| 700.08 | 7.41 | 32.78 | 22.79 | 1.35 | 1.94 |
| 750.00 | 7.73 | 31.78 | 24.62 | 1.29 | 1.96 |

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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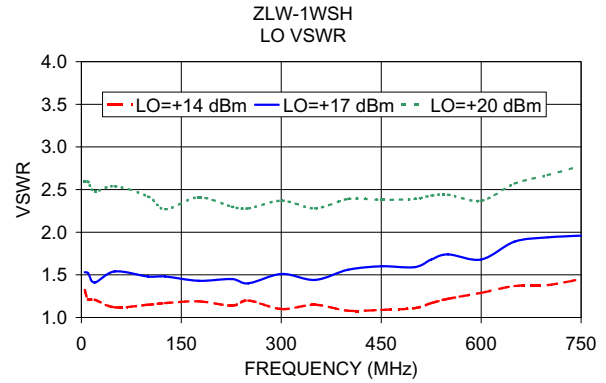
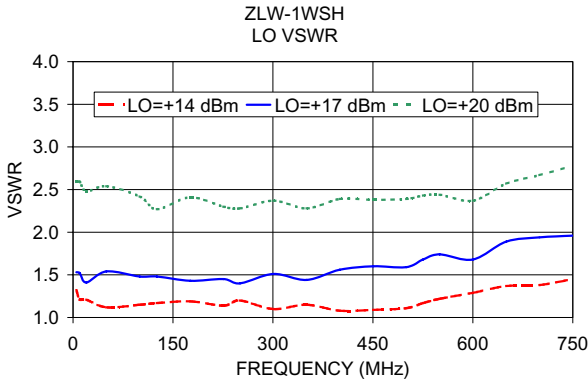
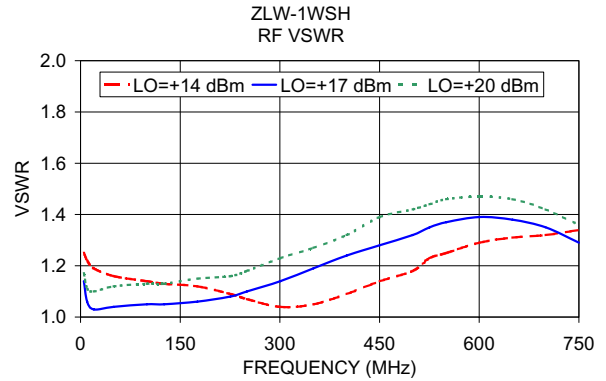
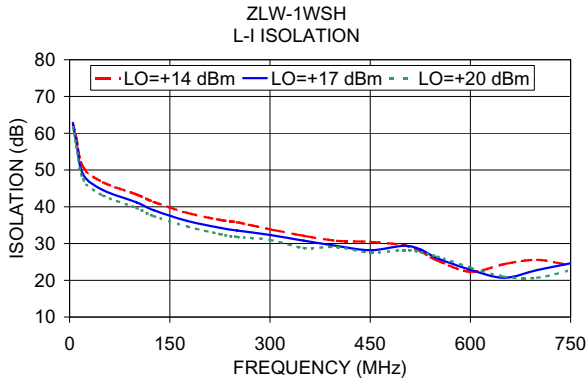
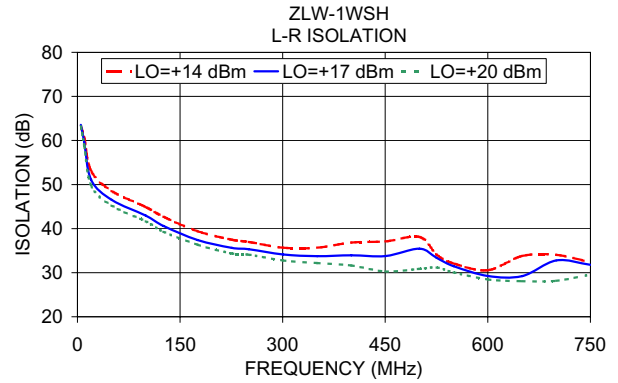
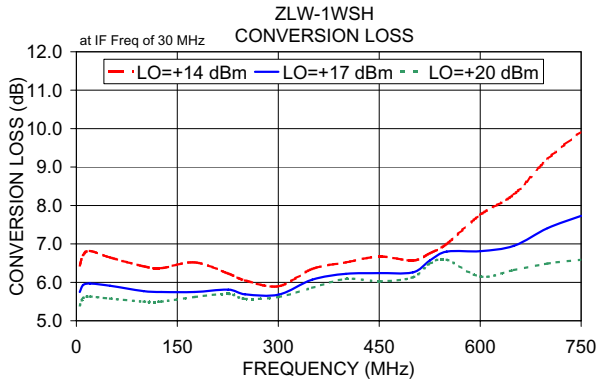
IF/RF MICROWAVE COMPONENTS

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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp.

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Performance Charts

ZLW-1WSH+ ZLW-1WSH



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