

Coaxial Frequency Mixer

ZLW-1SH+

Level 17 (LO Power +17 dBm) 2 to 500 MHz



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, 5.93 dB typ.
- high L-R isolation, 40 dB typ., L-I, 35 dB typ.
- rugged shielded case

Applications

- VHF/UHF
- instrumentations

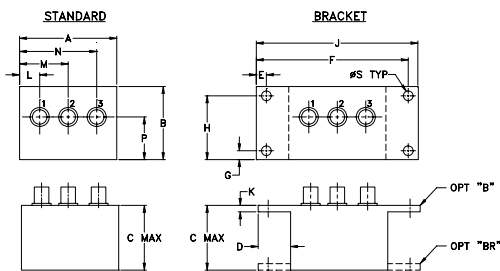
CASE STYLE: M21

Connectors Model
SMA ZLW-1SH+
BRACKET (OPTION "B")
BRACKET (OPTION "BR")

+RoHS Compliant

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) | | | | | | | | |
|-----------------|--------|----------------------|----------|-------------|------|----------------------|------|------|----------------------|------|------|----|----|----|----|----|----|
| LO/RF | IF | Mid-Band m | | Total Range | L | M | U | L | M | U | | | | | | | |
| f_L - f_U | | \bar{X} | σ | Max. | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | | | | | | |
| 2-500 | DC-500 | 5.93 | 0.08 | 7.5 | 8.5 | 50 | 40 | 40 | 30 | 30 | 25 | 45 | 35 | 35 | 25 | 25 | 20 |

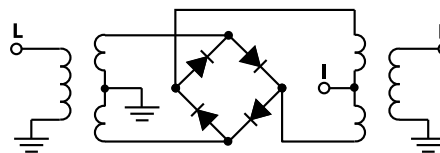
1 dB COMP.: +14 dBm typ.

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) |
|-----------------|--------|----------------------|--------------------|--------------------|-------------------|-------------------|
| RF | LO | LO +17dBm | LO +17dBm | LO +17dBm | LO +17dBm | LO +17dBm |
| 2.00 | 32.00 | 6.30 | 62.98 | 52.28 | 1.22 | 1.67 |
| 5.00 | 35.00 | 5.95 | 62.06 | 52.79 | 1.10 | 1.60 |
| 10.00 | 40.00 | 5.92 | 60.47 | 52.35 | 1.03 | 1.63 |
| 20.00 | 50.00 | 5.91 | 57.14 | 51.13 | 1.02 | 1.61 |
| 34.13 | 64.13 | 5.81 | 53.27 | 49.30 | 1.04 | 1.58 |
| 50.00 | 80.00 | 5.72 | 50.24 | 47.27 | 1.06 | 1.57 |
| 66.26 | 96.26 | 5.66 | 48.03 | 45.61 | 1.07 | 1.55 |
| 82.33 | 122.33 | 5.71 | 46.33 | 44.27 | 1.08 | 1.54 |
| 100.00 | 140.00 | 5.63 | 44.99 | 43.26 | 1.09 | 1.57 |
| 130.52 | 170.52 | 5.61 | 43.18 | 41.91 | 1.10 | 1.55 |
| 162.65 | 208.65 | 5.61 | 41.46 | 40.45 | 1.10 | 1.55 |
| 200.00 | 270.00 | 5.60 | 40.12 | 39.22 | 1.08 | 1.60 |
| 259.04 | 348.04 | 5.42 | 38.10 | 37.51 | 1.07 | 1.67 |
| 307.24 | 414.24 | 5.62 | 37.54 | 36.13 | 1.06 | 1.70 |
| 355.43 | 465.43 | 5.86 | 37.41 | 36.94 | 1.05 | 1.76 |
| 387.56 | 499.56 | 5.92 | 36.35 | 35.99 | 1.04 | 1.82 |
| 435.76 | 562.76 | 5.81 | 35.35 | 33.91 | 1.05 | 1.84 |
| 467.89 | 599.89 | 5.90 | 36.34 | 33.81 | 1.06 | 1.85 |
| 483.95 | 623.95 | 6.08 | 36.44 | 33.54 | 1.08 | 1.87 |
| 500.00 | 670.00 | 6.27 | 36.27 | 33.21 | 1.09 | 1.90 |

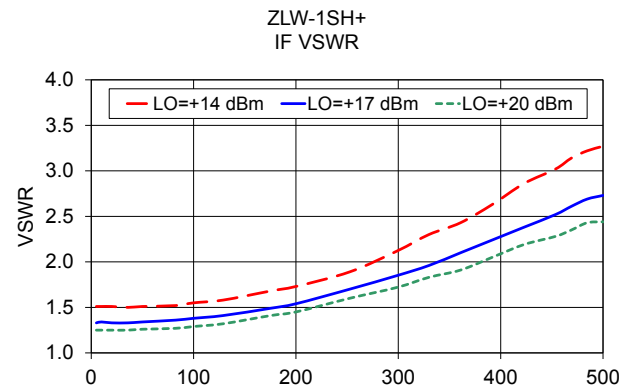
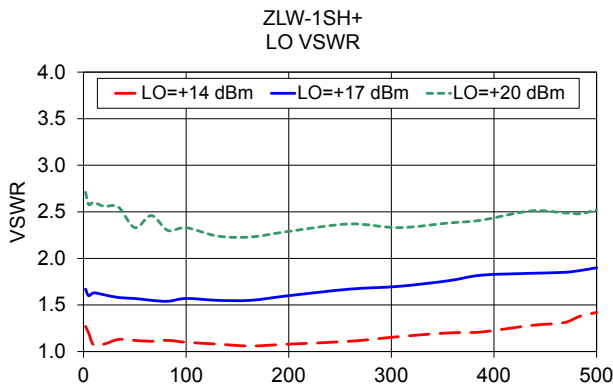
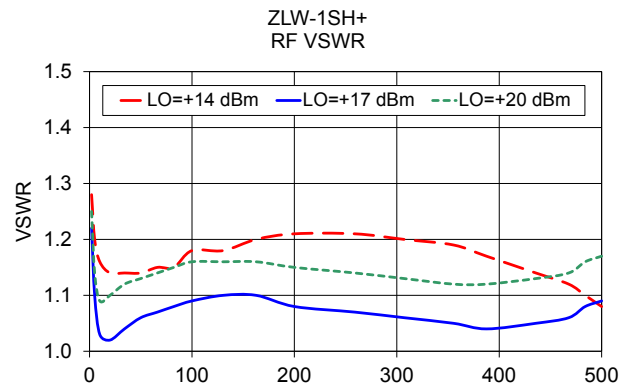
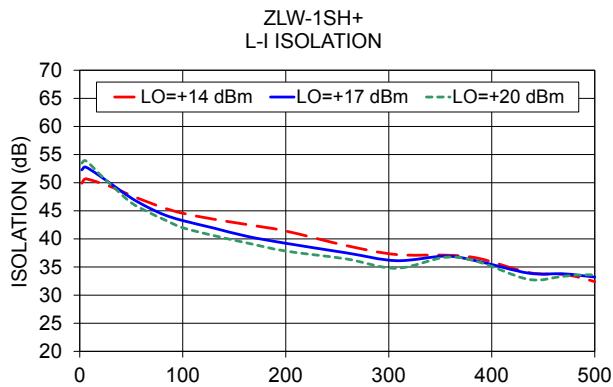
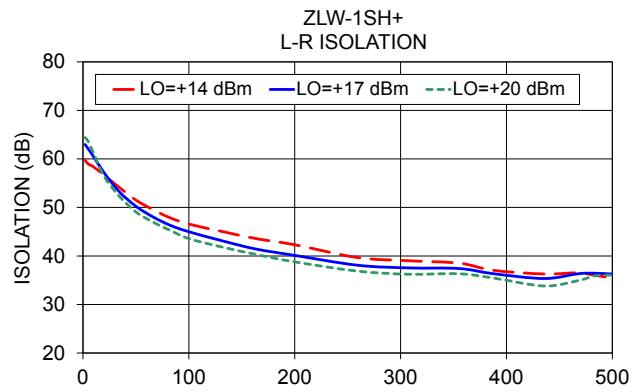
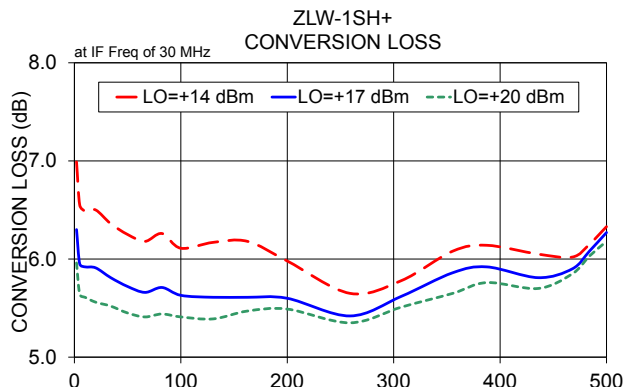
Electrical Schematic



Notes

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