

Coaxial Frequency Mixer

Level 7 (LO Power +7 dBm) 0.025 to 200 MHz

ZAD-3+



CASE STYLE: M22

Connectors Model
BNC ZAD-3+
BRACKET (OPTION "B")
BRACKET (OPTION "BR")

+RoHS Compliant

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

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 50mW |
| IF Current | 40mA |

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

Coaxial Connections

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

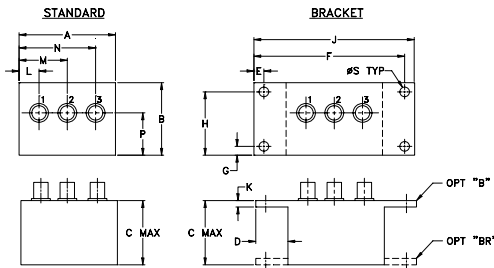
Features

- low conversion loss, 4.61 dB typ.
- high L-R isolation, 45 dB typ.
- rugged shielded case

Applications

- VHF
- FM radio
- instrumentation

Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|------|-------|
| A | B | C | D | E | F | G | H |
| 2.25 | 1.38 | 1.24 | .50 | .150 | 3.100 | .138 | 1.238 |
| 57.15 | 35.05 | 31.50 | 12.70 | 3.81 | 78.74 | 3.51 | 31.45 |
| J | K | L | M | N | P | S | wt |
| 3.25 | .10 | .40 | 1.15 | 1.86 | .64 | .150 | grams |
| 82.55 | 2.54 | 10.16 | 29.21 | 47.24 | 16.26 | 3.81 | 74.0 |

Electrical Specifications

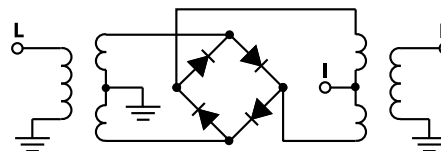
| FREQUENCY (MHz) | CONVERSION LOSS (dB) | LO-RF ISOLATION (dB) | | | | | | LO-IF ISOLATION (dB) | | | | | | | | | |
|-------------------|----------------------|----------------------|----------|------------------|------|------|------|----------------------|------|------|------|------|------|------|------|------|------|
| | | Mid-Band m | | Total Range Max. | | L | | M | | U | | L | | M | | U | |
| LO/RF $f_c - f_u$ | IF | \bar{X} | σ | Max. | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. |
| 0.025-200 | DC-200 | 4.61 | 0.06 | 7.5 | 8.5 | 60 | 50 | 45 | 35 | 35 | 25 | 45 | 35 | 40 | 30 | 30 | 20 |

1 dB COMP.: +1 dBm typ. L = low range [f_c to $10 f_c$] M = mid range [$10 f_c$ to $f_u/2$] U = upper range [$f_u/2$ to f_u]
 m = mid band [$2f_c$ 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 +7dBm | LO +7dBm | LO +7dBm | LO +7dBm | LO +7dBm |
| 0.03 | 30.03 | 6.94 | 58.72 | 53.27 | 1.16 | 2.06 |
| 0.04 | 30.04 | 5.80 | 55.35 | 51.43 | 1.17 | 2.04 |
| 0.05 | 30.05 | 5.52 | 54.61 | 51.09 | 1.17 | 2.01 |
| 0.10 | 30.10 | 5.16 | 53.51 | 50.41 | 1.16 | 1.99 |
| 0.20 | 30.20 | 4.98 | 53.27 | 50.18 | 1.16 | 2.05 |
| 0.50 | 30.50 | 4.92 | 53.12 | 50.13 | 1.15 | 2.08 |
| 1.00 | 31.00 | 4.82 | 53.18 | 50.48 | 1.15 | 2.07 |
| 2.00 | 32.00 | 4.77 | 53.13 | 50.55 | 1.14 | 2.07 |
| 5.00 | 35.00 | 4.76 | 53.42 | 50.99 | 1.13 | 2.05 |
| 10.00 | 40.00 | 4.81 | 53.68 | 51.27 | 1.11 | 2.02 |
| 20.00 | 50.00 | 4.87 | 53.67 | 50.52 | 1.10 | 2.02 |
| 38.48 | 68.48 | 4.96 | 53.25 | 48.52 | 1.09 | 2.02 |
| 50.00 | 80.00 | 4.94 | 53.49 | 47.54 | 1.09 | 2.03 |
| 69.25 | 99.25 | 4.90 | 53.53 | 45.77 | 1.08 | 2.03 |
| 84.63 | 54.63 | 4.86 | 53.31 | 44.13 | 1.09 | 2.05 |
| 100.00 | 70.00 | 4.81 | 53.55 | 42.70 | 1.11 | 2.07 |
| 123.09 | 93.09 | 4.87 | 55.31 | 40.58 | 1.13 | 2.11 |
| 153.85 | 123.85 | 4.96 | 52.97 | 38.04 | 1.15 | 2.13 |
| 176.93 | 146.93 | 5.19 | 49.53 | 38.76 | 1.18 | 2.14 |
| 200.00 | 170.00 | 5.28 | 45.61 | 38.31 | 1.21 | 2.15 |

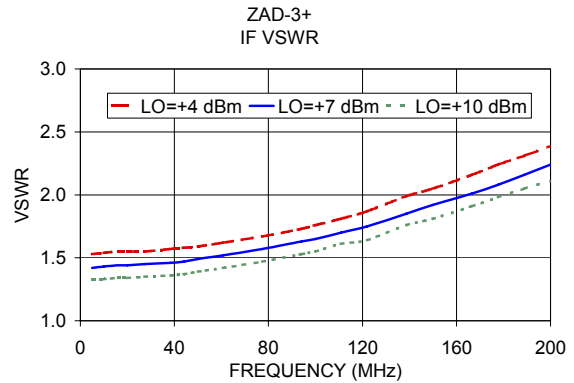
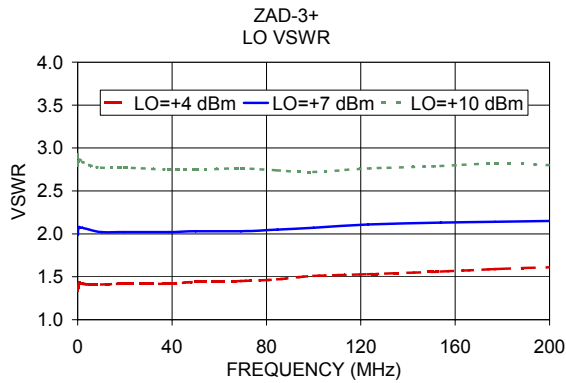
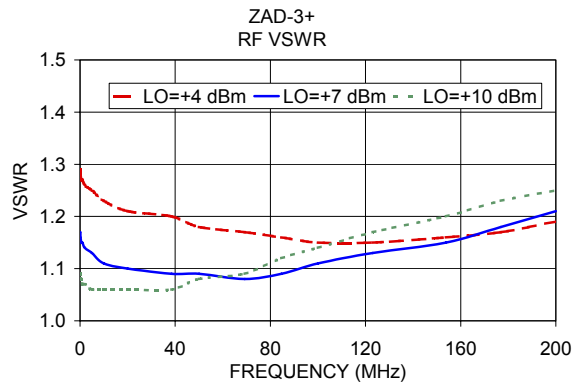
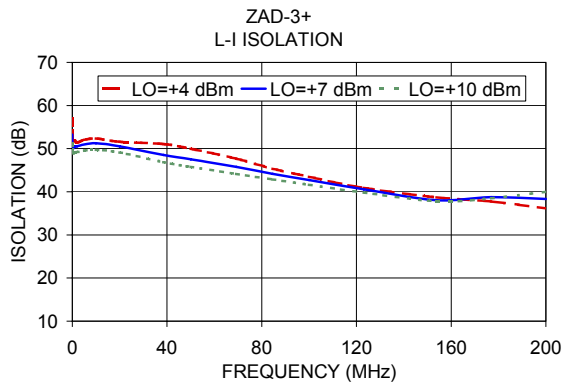
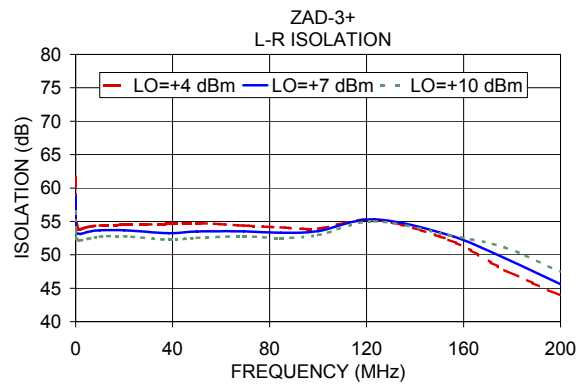
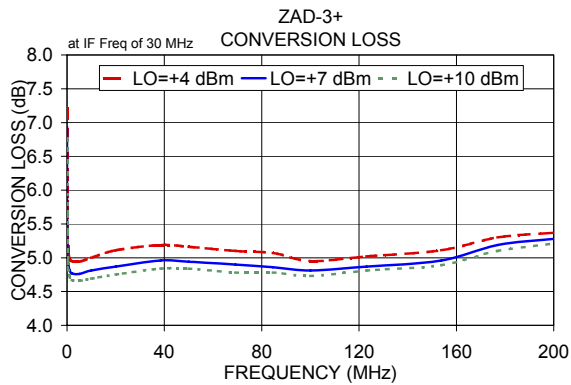
Electrical Schematic



Notes

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