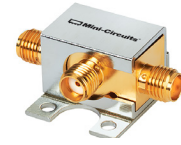


Coaxial Frequency Mixer

ZX05-5-S+

Level 7 (LO Power +7 dBm) 5 to 1500 MHz



Generic photo used for illustration purposes only

CASE STYLE: FL905

| Connectors | Model |
|------------|-----------|
| SMA | ZX05-5-S+ |

+RoHS Compliant

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

Maximum Ratings

| | |
|---|----------------|
| Operating Temperature | -40°C to 85°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 | 2 |
| IF | 3 |

Features

- rugged construction
- small size
- low conversion loss
- high L-R isolation
- protected by US Patents 6,133,525 & 6,790,049

Applications

- cellular
- PCS
- instrumentation
- satellite communication

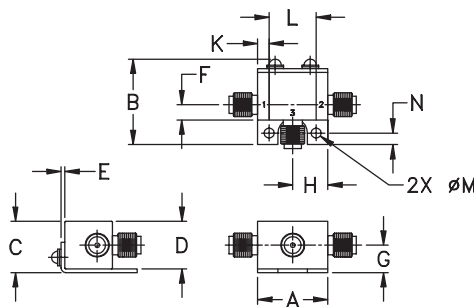
Electrical Specifications (T_{AMB}=25°C)

| FREQUENCY (MHz) | CONVERSION LOSS (dB) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | | IP3 at center band (dBm) | | | | | |
|-----------------|----------------------|----------------------|----|----|----------------------|----|----|--------------------------|----|----|----|----|----|
| | | L | M | U | L | M | U | | | | | | |
| 5-1500 | DC-1000 | 50 | 40 | 25 | 33 | 23 | 50 | 40 | 30 | 20 | 20 | 10 | 15 |

1 dB COMP.: +1 dBm typ.
Positive detection: positive output with in-phase RF & LO signals

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]

Outline Drawing



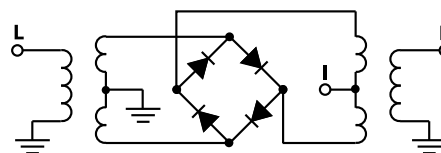
Outline Dimensions (inch/mm)

| | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--|
| A | B | C | D | E | F | G | |
| .74 | .90 | .54 | .50 | .04 | .16 | .29 | |
| 18.80 | 22.86 | 13.72 | 12.70 | 1.02 | 4.06 | 7.37 | |
| H | J | K | L | M | N | wt | |
| .37 | -- | .122 | .496 | .106 | .122 | grams | |
| 9.40 | -- | 3.10 | 12.60 | 2.69 | 3.10 | 20.0 | |

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 |
| 5.10 | 35.10 | 6.93 | 82.10 | 96.28 | 1.48 | 1.83 |
| 35.10 | 65.10 | 6.51 | 65.10 | 76.81 | 1.38 | 1.80 |
| 50.10 | 80.10 | 6.48 | 61.74 | 69.65 | 1.37 | 1.80 |
| 100.10 | 70.10 | 6.60 | 55.18 | 56.54 | 1.36 | 1.77 |
| 171.43 | 141.43 | 6.54 | 50.58 | 45.84 | 1.35 | 1.80 |
| 254.10 | 224.10 | 6.51 | 47.52 | 39.83 | 1.33 | 1.78 |
| 336.77 | 306.77 | 6.56 | 45.52 | 36.24 | 1.32 | 1.78 |
| 419.43 | 389.43 | 6.63 | 43.47 | 34.05 | 1.31 | 1.78 |
| 502.10 | 472.10 | 6.58 | 42.13 | 31.97 | 1.30 | 1.81 |
| 584.77 | 554.77 | 6.56 | 40.92 | 30.53 | 1.28 | 1.82 |
| 667.43 | 637.43 | 6.64 | 37.49 | 29.33 | 1.25 | 1.84 |
| 750.10 | 720.10 | 6.78 | 35.27 | 28.03 | 1.24 | 1.87 |
| 831.53 | 801.53 | 6.81 | 34.84 | 25.74 | 1.19 | 1.90 |
| 934.39 | 904.39 | 6.70 | 33.83 | 23.60 | 1.09 | 1.91 |
| 1037.24 | 1007.24 | 6.59 | 33.85 | 22.24 | 1.05 | 1.97 |
| 1140.10 | 1110.10 | 6.66 | 33.64 | 21.45 | 1.20 | 2.09 |
| 1242.96 | 1212.96 | 7.02 | 32.75 | 20.75 | 1.41 | 2.22 |
| 1345.81 | 1315.81 | 7.39 | 31.63 | 18.60 | 1.62 | 2.15 |
| 1448.67 | 1418.67 | 7.75 | 29.54 | 17.12 | 1.84 | 2.01 |
| 1500.10 | 1470.10 | 7.94 | 28.84 | 17.08 | 1.93 | 2.06 |

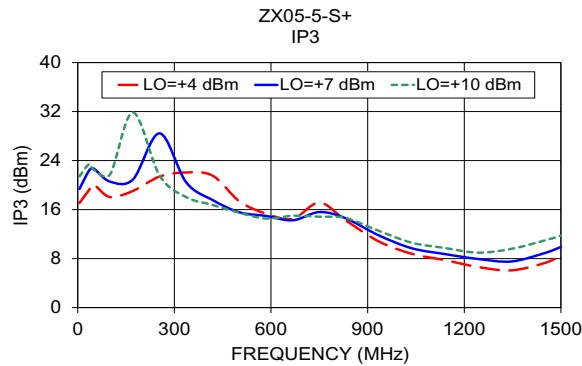
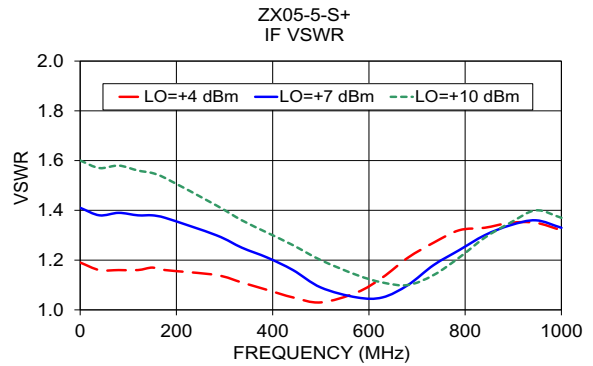
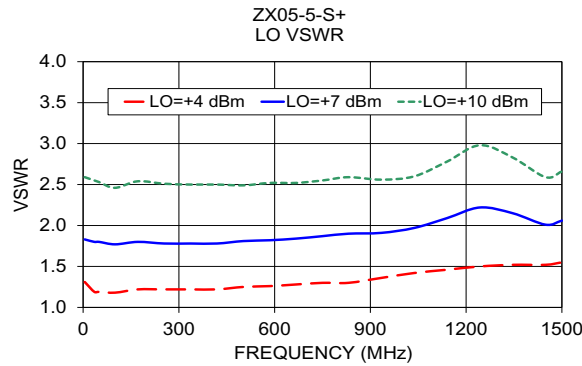
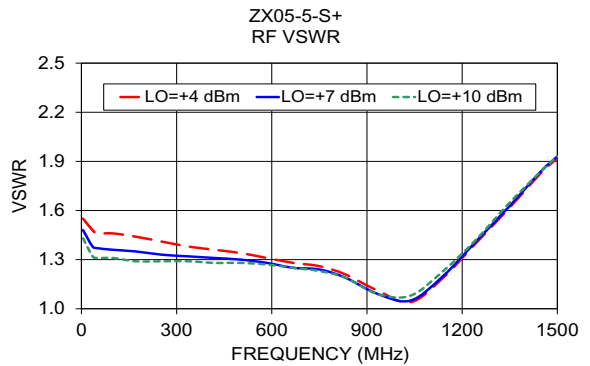
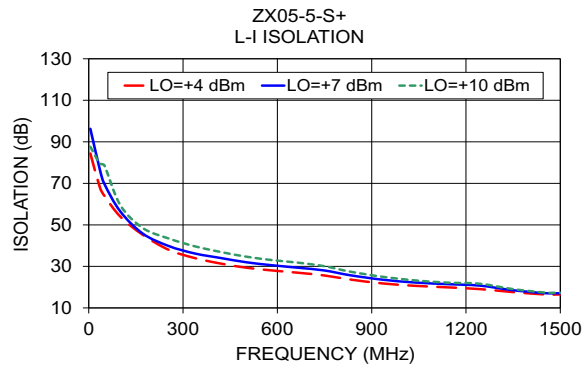
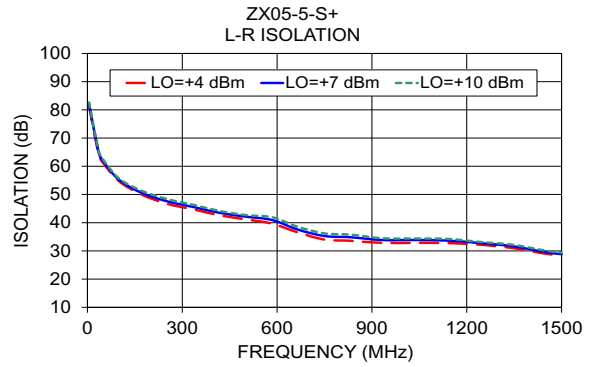
Electrical Schematic



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.
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