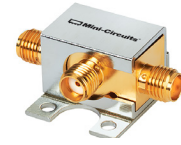


Coaxial Frequency Mixer

ZX05-1HW-S+

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



Generic photo used for illustration purposes only

CASE STYLE: FL905

| Connectors | Model |
|------------|-------------|
| SMA | ZX05-1HW-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 | 200mW |
| 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

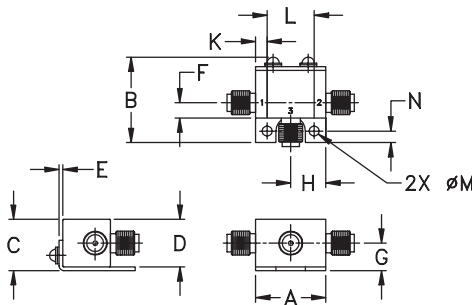
Electrical Specifications (T_{AMB}=25°C)

| FREQUENCY (MHz) | CONVERSION LOSS (dB) | LO-RF ISOLATION (dB) | | | | | | LO-IF ISOLATION (dB) | | | | | | IP3 at center band (dBm) | | | | |
|-----------------|----------------------|----------------------|----------|------------------|------|------|------|----------------------|------|------|------|------|------|--------------------------|----|----|----|----|
| | | Mid-Band m | | Total Range Max. | | L | M | U | L | M | U | | | | | | | |
| LO/RF | IF | \bar{X} | σ | Max. | Max. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | Min. | Typ. | | | | |
| f_L - f_U | DC-750 | 6.0 | 0.1 | 8.6 | 9.0 | 64 | 45 | 48 | 35 | 42 | 28 | 50 | 35 | 40 | 30 | 30 | 20 | 26 |

1 dB COMP: +14 dBm typ.
Positive phase detection
Conversion loss specification at 30 MHz IF

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 [$2 f_L$ to $f_U/2$]

Outline Drawing



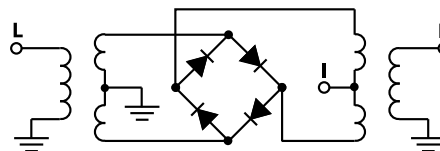
Outline Dimensions (inch/mm)

| | | | | | | | |
|-------|-------|-------|-------|------|------|-------|--|
| 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 +17dBm | LO +17dBm | LO +17dBm | LO +17dBm | LO +17dBm |
| 5.10 | 35.10 | 6.74 | 94.96 | 63.87 | 1.31 | 1.53 |
| 35.10 | 65.10 | 6.40 | 67.86 | 54.58 | 1.12 | 1.48 |
| 75.10 | 45.10 | 6.40 | 60.85 | 49.58 | 1.11 | 1.61 |
| 120.10 | 90.10 | 6.33 | 56.83 | 47.30 | 1.07 | 1.61 |
| 139.72 | 109.72 | 6.17 | 55.81 | 45.58 | 1.04 | 1.61 |
| 159.33 | 129.33 | 6.13 | 54.98 | 44.04 | 1.03 | 1.61 |
| 198.56 | 168.56 | 6.06 | 52.51 | 43.49 | 1.03 | 1.58 |
| 237.79 | 207.79 | 6.05 | 52.13 | 42.27 | 1.04 | 1.56 |
| 277.02 | 247.02 | 6.06 | 49.94 | 42.33 | 1.05 | 1.56 |
| 316.25 | 286.25 | 6.15 | 48.93 | 42.92 | 1.07 | 1.54 |
| 355.49 | 325.49 | 6.22 | 49.43 | 41.63 | 1.08 | 1.60 |
| 400.10 | 370.10 | 6.28 | 49.34 | 39.26 | 1.10 | 1.63 |
| 443.85 | 413.85 | 6.33 | 47.39 | 37.31 | 1.11 | 1.68 |
| 487.60 | 457.60 | 6.45 | 43.70 | 35.86 | 1.13 | 1.74 |
| 531.35 | 479.48 | 6.56 | 42.87 | 33.92 | 1.14 | 1.79 |
| 575.10 | 545.10 | 6.62 | 42.60 | 31.89 | 1.15 | 1.82 |
| 618.85 | 588.85 | 6.73 | 42.18 | 30.57 | 1.16 | 1.85 |
| 662.60 | 632.60 | 6.75 | 42.16 | 29.55 | 1.19 | 1.91 |
| 706.35 | 676.35 | 6.99 | 40.42 | 29.93 | 1.24 | 2.03 |
| 750.10 | 720.10 | 7.38 | 40.62 | 29.75 | 1.36 | 2.11 |

Electrical Schematic



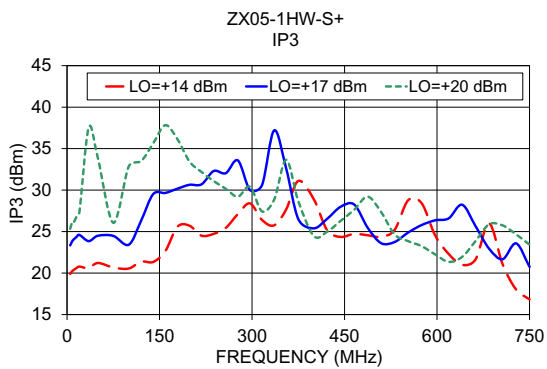
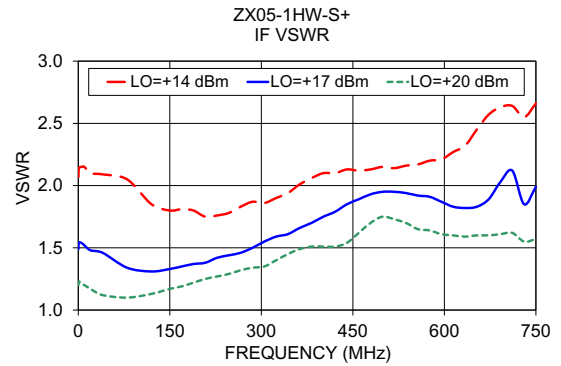
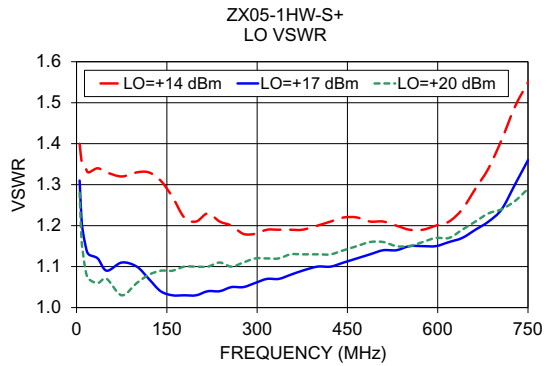
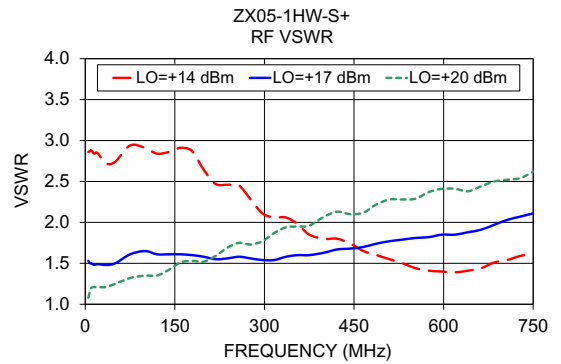
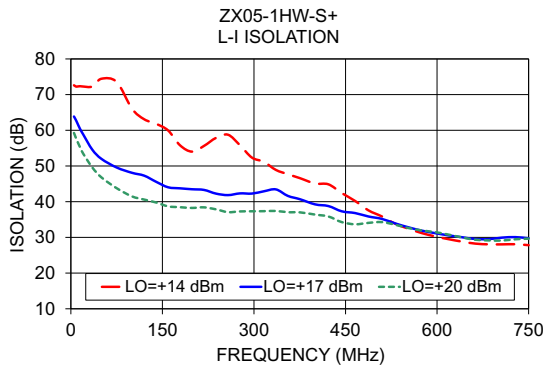
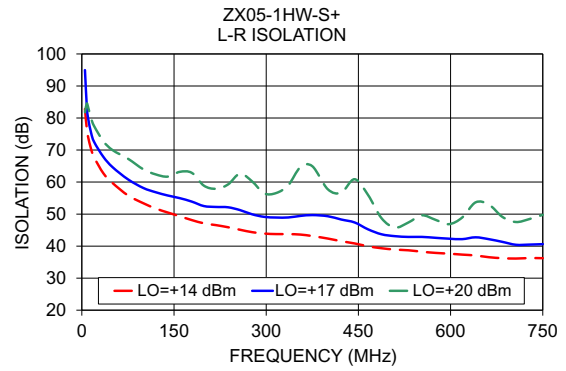
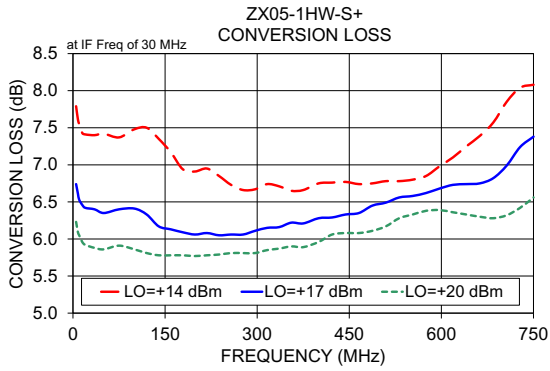
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