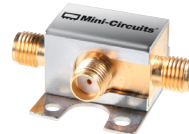


# Frequency Mixer WIDE BAND

Level 7 (LO Power +7 dBm) 750 to 4200 MHz

## ZX05-43-S+



CASE STYLE: FL905

| Connectors | Model      |
|------------|------------|
| SMA        | ZX05-43-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           |

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

### Coaxial Connections

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

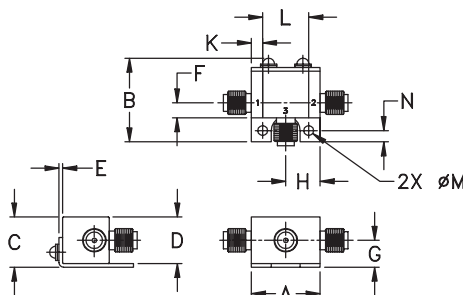
### Features

- wide bandwidth, 750 to 4200 MHz
- low conversion loss, 6.1 dB typ.
- excellent L-R isolation, 35 dB typ.
- rugged construction
- small size
- useable as up and down converter
- protected by US patents, 6,790,049 and 7,027,795

### Applications

- cellular
- defense and weather radar
- defense communications
- PCN
- WCDMA
- WIFI
- blue tooth
- VSAT
- ISM

### 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  |

### Electrical Specifications

| FREQUENCY (MHz)   |         | CONVERSION LOSS* (dB) |          |      | LO-RF ISOLATION (dB) |      | LO-IF ISOLATION (dB) |      | IP3 at center band (dBm) |
|-------------------|---------|-----------------------|----------|------|----------------------|------|----------------------|------|--------------------------|
|                   |         | Typ.                  | $\sigma$ | Max. | Typ.                 | Min. | Typ.                 | Min. |                          |
| LO/RF $f_c - f_u$ | IF      |                       |          |      |                      |      |                      |      |                          |
| 750-4200          | DC-1500 |                       |          |      |                      |      |                      |      |                          |
| 750-2500          |         | 6.3                   | 0.1      | 8.3  | 35                   | 29   | 24                   | 9    | 12                       |
| 2500-4200         |         | 6.0                   | 0.1      | 8.9  | 26                   | 22   | 20                   | 13   | 12                       |

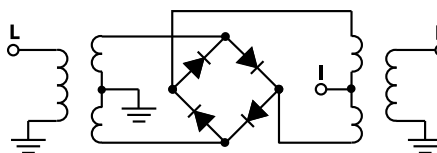
1 dB COMPR.: +1 dBm typ.

\* Conversion loss at 30 MHz IF.  $\sigma$  is a measure of repeatability from unit to unit.

### 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          |
| 750.00          | 780.00  | 7.32                 | 41.67              | 24.97              | 2.28              | 9.85              |
| 950.00          | 980.00  | 6.99                 | 39.87              | 26.96              | 2.12              | 3.01              |
| 1150.00         | 1180.00 | 6.57                 | 41.71              | 30.28              | 3.13              | 1.46              |
| 1350.00         | 1380.00 | 6.50                 | 35.27              | 33.17              | 3.18              | 1.13              |
| 1550.00         | 1580.00 | 6.39                 | 33.25              | 28.75              | 2.99              | 1.71              |
| 1750.00         | 1780.00 | 6.56                 | 35.54              | 21.12              | 2.87              | 2.05              |
| 1950.00         | 1980.00 | 6.87                 | 33.83              | 13.03              | 3.17              | 1.91              |
| 2150.00         | 2180.00 | 6.83                 | 34.63              | 12.22              | 3.02              | 1.91              |
| 2350.00         | 2380.00 | 6.23                 | 32.19              | 14.93              | 2.37              | 2.03              |
| 2550.00         | 2580.00 | 6.67                 | 30.60              | 17.84              | 2.54              | 1.97              |
| 2750.00         | 2780.00 | 5.56                 | 29.18              | 19.08              | 1.71              | 1.51              |
| 2950.00         | 2980.00 | 5.24                 | 28.19              | 21.52              | 1.40              | 1.40              |
| 3150.00         | 3180.00 | 5.47                 | 26.03              | 25.95              | 1.63              | 1.16              |
| 3350.00         | 3380.00 | 5.84                 | 26.52              | 25.86              | 1.63              | 1.18              |
| 3550.00         | 3580.00 | 6.31                 | 25.30              | 22.00              | 2.33              | 1.59              |
| 3750.00         | 3780.00 | 6.53                 | 25.45              | 19.15              | 2.80              | 2.01              |
| 3950.00         | 3980.00 | 7.42                 | 26.91              | 19.85              | 3.70              | 2.67              |
| 4150.00         | 4180.00 | 7.65                 | 26.78              | 16.35              | 3.79              | 3.59              |
| 4190.00         | 4220.00 | 7.83                 | 27.09              | 15.96              | 3.73              | 3.79              |
| 4210.00         | 4240.00 | 7.57                 | 27.32              | 15.67              | 3.69              | 3.84              |

### 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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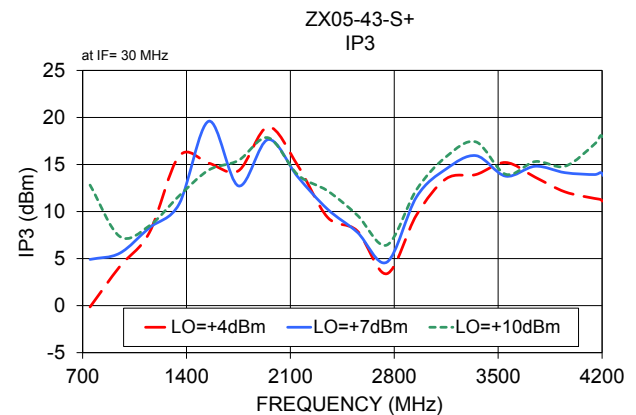
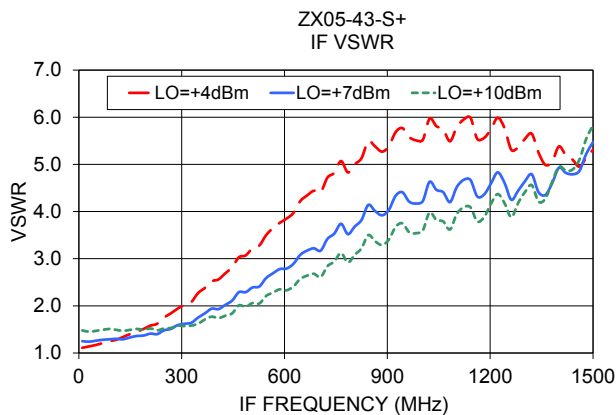
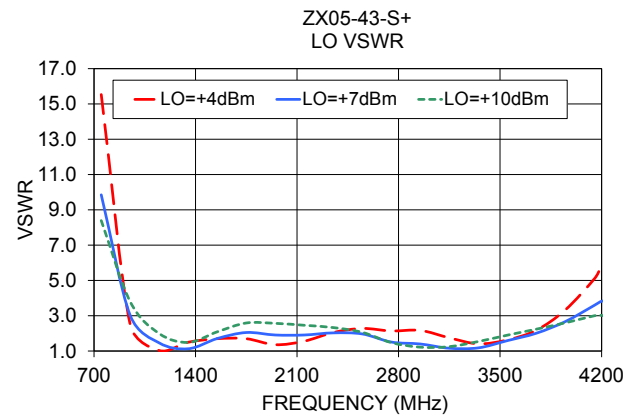
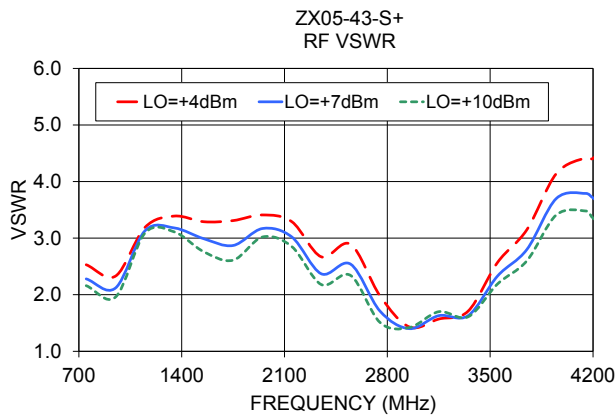
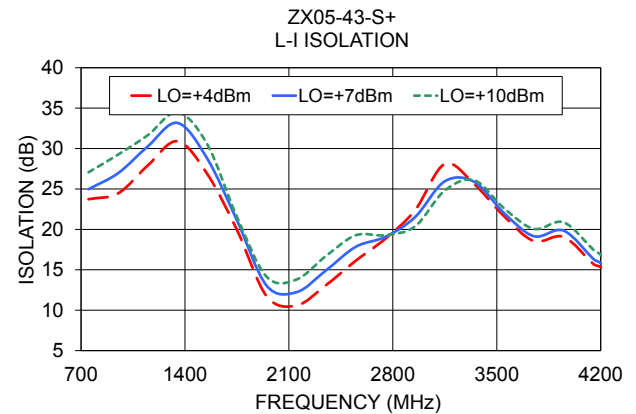
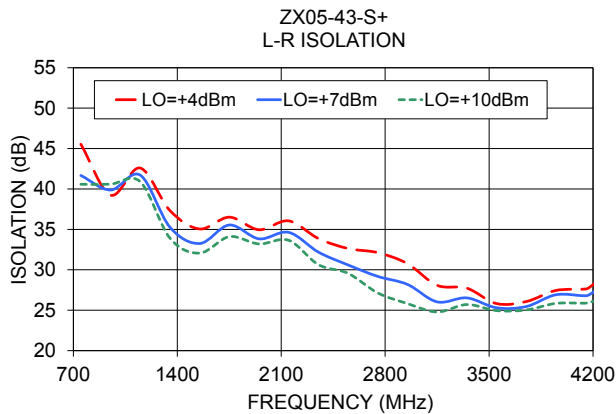
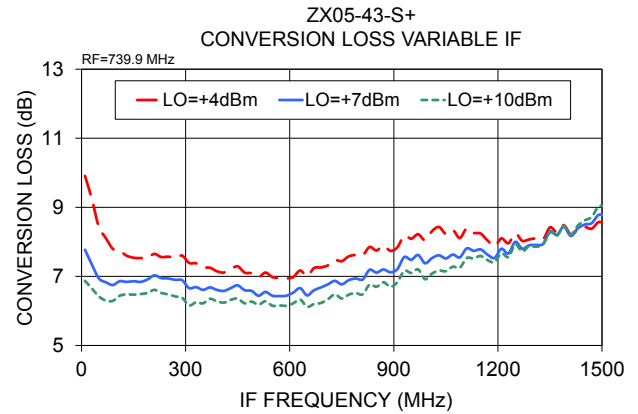
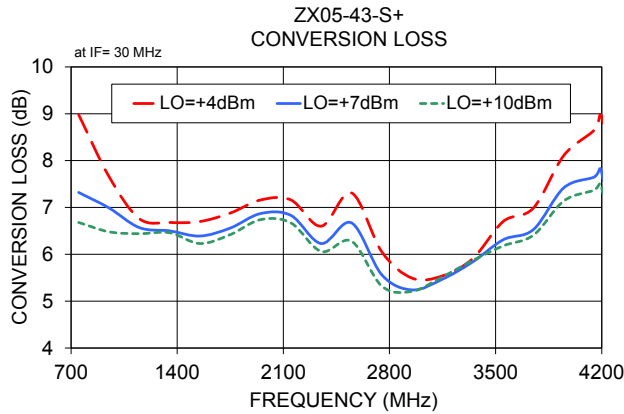


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Page 1 of 2

# Performance Charts

## ZX05-43-S+



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