

Frequency Mixer WIDE BAND

ZX05-43-S+

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

Maximum Ratings

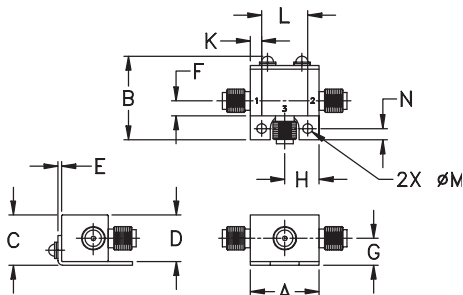
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power | 50mW |

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

Coaxial Connections

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

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 |

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

Electrical Specifications

| FREQUENCY (MHz) | CONVERSION LOSS* (dB) | LO-RF ISOLATION (dB) | | LO-IF ISOLATION (dB) | | IP3 at center band (dBm) | | | |
|-----------------|-----------------------|----------------------|----------|----------------------|------|--------------------------|------|----|----|
| | | Typ. | Min. | Typ. | Min. | | | | |
| LO/RF f_L-f_U | IF | Typ. | σ | Max. | Typ. | Min. | Typ. | | |
| 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 |

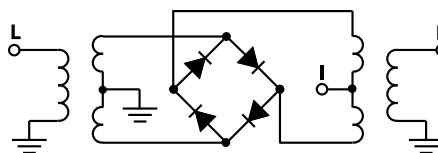
1 dB COMPR.: +1 dBm typ.

* Conversion loss at 30 MHz IF. σ 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) | |
|-----------------|----------------------|--------------------|--------------------|-------------------|-------------------|----------|
| | | | | | LO +7dBm | LO +7dBm |
| 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



Generic photo used for illustration purposes only

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

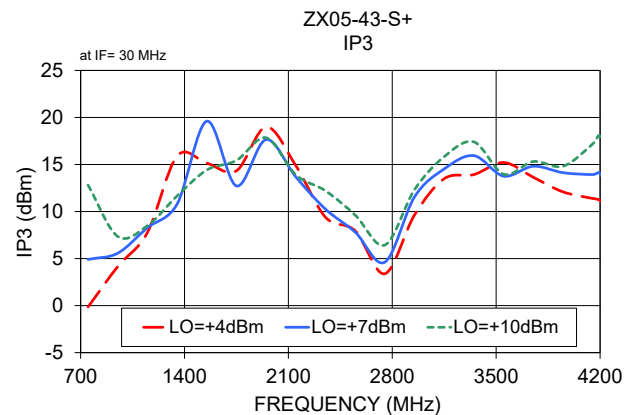
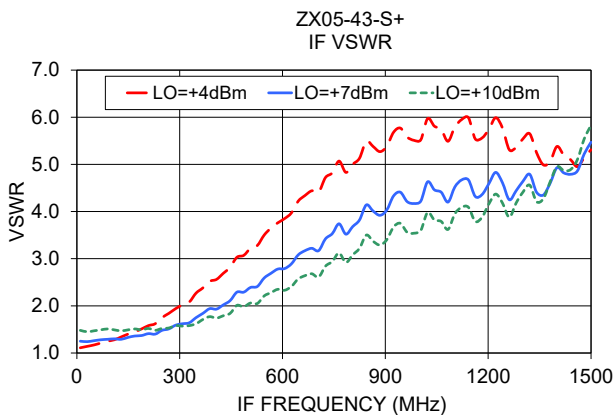
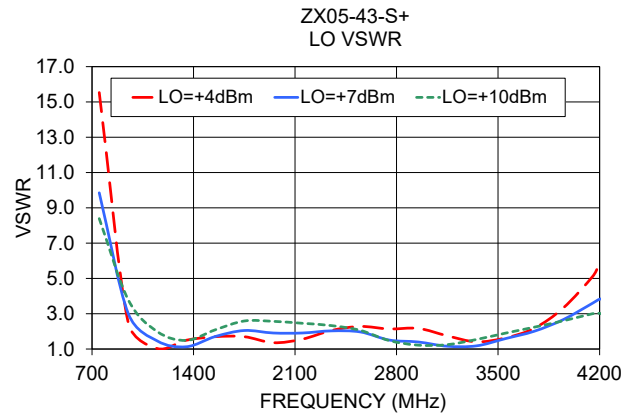
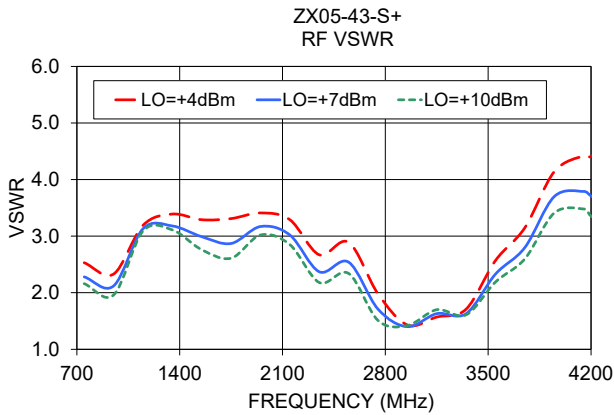
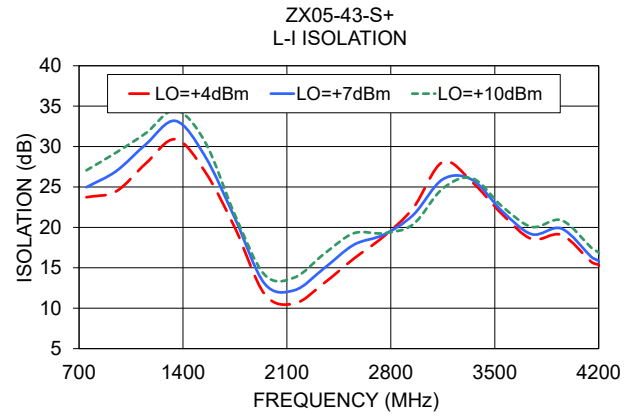
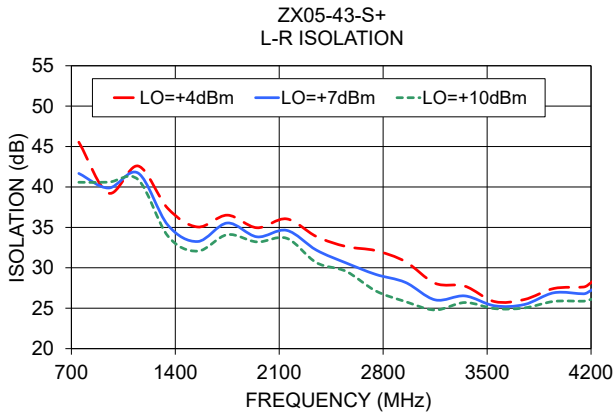
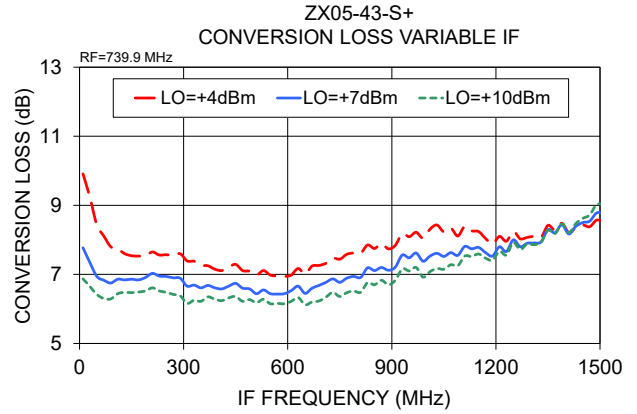
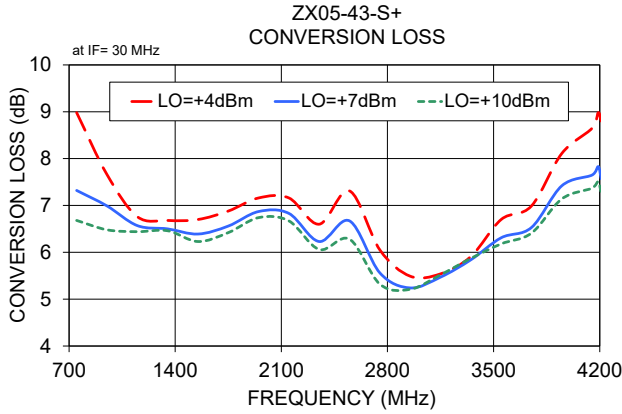
Notes

- 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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Performance Charts

ZX05-43-S+



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Frequency Mixer

ZX05-43+

Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB) | | |
|---------------|----------|--|-------|-------|
| | | @LO (dBm) | | |
| | | +4 | +7 | +10 |
| 570.0 | 600.0 | 23.98 | 16.31 | 10.58 |
| 670.0 | 700.0 | 12.96 | 8.91 | 7.39 |
| 770.0 | 800.0 | 8.24 | 6.80 | 6.23 |
| 870.0 | 900.0 | 7.39 | 6.58 | 6.10 |
| 970.0 | 1000.0 | 7.27 | 6.66 | 6.16 |
| 1070.0 | 1100.0 | 6.85 | 6.39 | 6.08 |
| 1170.0 | 1200.0 | 6.53 | 6.31 | 6.18 |
| 1270.0 | 1300.0 | 6.56 | 6.40 | 6.28 |
| 1370.0 | 1400.0 | 6.44 | 6.24 | 6.18 |
| 1470.0 | 1500.0 | 6.31 | 6.03 | 5.98 |
| 1570.0 | 1600.0 | 6.38 | 6.10 | 5.97 |
| 1670.0 | 1700.0 | 6.48 | 6.18 | 6.05 |
| 1770.0 | 1800.0 | 6.67 | 6.35 | 6.22 |
| 1870.0 | 1900.0 | 6.66 | 6.38 | 6.27 |
| 1970.0 | 2000.0 | 6.70 | 6.46 | 6.34 |
| 2070.0 | 2100.0 | 6.65 | 6.39 | 6.26 |
| 2170.0 | 2200.0 | 6.76 | 6.41 | 6.23 |
| 2270.0 | 2300.0 | 6.73 | 6.30 | 6.11 |
| 2370.0 | 2400.0 | 6.10 | 5.77 | 5.64 |
| 2470.0 | 2500.0 | 6.75 | 6.16 | 5.86 |
| 2570.0 | 2600.0 | 6.74 | 6.30 | 6.01 |
| 2670.0 | 2700.0 | 6.11 | 5.64 | 5.39 |
| 2770.0 | 2800.0 | 5.87 | 5.42 | 5.19 |
| 2870.0 | 2900.0 | 5.59 | 5.17 | 5.04 |
| 2970.0 | 3000.0 | 5.40 | 5.14 | 5.07 |
| 3070.0 | 3100.0 | 5.39 | 5.22 | 5.20 |
| 3170.0 | 3200.0 | 5.44 | 5.30 | 5.31 |
| 3270.0 | 3300.0 | 5.58 | 5.43 | 5.43 |
| 3370.0 | 3400.0 | 5.85 | 5.69 | 5.67 |
| 3470.0 | 3500.0 | 6.25 | 5.96 | 5.87 |
| 3550.0 | 3580.0 | 6.60 | 6.16 | 5.97 |
| 3650.0 | 3680.0 | 6.77 | 6.39 | 6.24 |
| 3730.0 | 3760.0 | 6.87 | 6.41 | 6.25 |
| 3830.0 | 3860.0 | 7.46 | 6.80 | 6.47 |
| 3910.0 | 3940.0 | 7.90 | 7.25 | 6.91 |
| 4010.0 | 4040.0 | 8.28 | 7.42 | 7.10 |
| 4090.0 | 4120.0 | 8.38 | 7.48 | 7.17 |
| 4190.0 | 4220.0 | 8.66 | 7.59 | 7.25 |
| 4270.0 | 4300.0 | 8.74 | 7.45 | 7.08 |
| 4370.0 | 4400.0 | 10.24 | 8.08 | 7.52 |

| RF (IN) (MHz) | LO (MHz) | IP3 INPUT (dBm) | | |
|---------------|----------|-----------------|-------|-------|
| | | @LO (dBm) | | |
| | | +4 | +7 | +10 |
| 570.0 | 600.0 | -8.64 | -4.33 | 3.40 |
| 670.0 | 700.0 | -2.95 | 2.21 | 6.33 |
| 770.0 | 800.0 | 0.44 | 5.75 | 11.26 |
| 870.0 | 900.0 | 3.97 | 6.49 | 9.41 |
| 970.0 | 1000.0 | 4.25 | 5.47 | 7.40 |
| 1070.0 | 1100.0 | 6.18 | 8.23 | 10.02 |
| 1170.0 | 1200.0 | 7.86 | 9.75 | 10.86 |
| 1270.0 | 1300.0 | 9.31 | 9.66 | 11.43 |
| 1370.0 | 1400.0 | 14.24 | 11.48 | 11.29 |
| 1470.0 | 1500.0 | 11.04 | 9.18 | 13.40 |
| 1570.0 | 1600.0 | 16.18 | 16.79 | 15.37 |
| 1670.0 | 1700.0 | 14.14 | 14.68 | 16.27 |
| 1770.0 | 1800.0 | 13.39 | 14.21 | 16.98 |
| 1870.0 | 1900.0 | 12.98 | 18.24 | 20.86 |
| 1970.0 | 2000.0 | 17.77 | 16.50 | 16.60 |
| 2070.0 | 2100.0 | 14.58 | 15.00 | 15.13 |
| 2170.0 | 2200.0 | 13.34 | 12.55 | 12.82 |
| 2270.0 | 2300.0 | 10.32 | 11.83 | 12.93 |
| 2370.0 | 2400.0 | 9.97 | 10.29 | 12.04 |
| 2470.0 | 2500.0 | 14.78 | 12.02 | 10.76 |
| 2570.0 | 2600.0 | 7.25 | 7.05 | 8.31 |
| 2670.0 | 2700.0 | 4.69 | 5.34 | 5.78 |
| 2770.0 | 2800.0 | 3.67 | 5.22 | 7.47 |
| 2870.0 | 2900.0 | 6.23 | 10.73 | 12.04 |
| 2970.0 | 3000.0 | 9.94 | 11.81 | 12.51 |
| 3070.0 | 3100.0 | 11.19 | 13.35 | 14.32 |
| 3170.0 | 3200.0 | 12.90 | 14.62 | 16.03 |
| 3270.0 | 3300.0 | 13.62 | 16.26 | 17.39 |
| 3370.0 | 3400.0 | 14.50 | 15.76 | 17.03 |
| 3470.0 | 3500.0 | 15.22 | 13.85 | 15.42 |
| 3550.0 | 3580.0 | 15.76 | 13.91 | 13.92 |
| 3650.0 | 3680.0 | 16.67 | 15.38 | 13.37 |
| 3730.0 | 3760.0 | 14.79 | 15.24 | 15.99 |
| 3830.0 | 3860.0 | 19.92 | 17.55 | 17.08 |
| 3910.0 | 3940.0 | 11.50 | 13.27 | 14.61 |
| 4010.0 | 4040.0 | 12.53 | 14.58 | 15.30 |
| 4090.0 | 4120.0 | 12.06 | 14.48 | 16.36 |
| 4190.0 | 4220.0 | 11.76 | 14.13 | 17.74 |
| 4270.0 | 4300.0 | 13.77 | 17.36 | 17.70 |
| 4370.0 | 4400.0 | 10.99 | 19.13 | 20.24 |

| RF (IN) (MHz) | LO (MHz) | COMPRESSION @RF IN=+1dBm (dB) | | |
|---------------|----------|-------------------------------|-------|-------|
| | | @LO (dBm) | | |
| | | +4 | +7 | +10 |
| 570.0 | 600.0 | -8.13 | -3.38 | -0.08 |
| 670.0 | 700.0 | 0.06 | 1.48 | 0.94 |
| 770.0 | 800.0 | 2.93 | 2.21 | 1.68 |
| 870.0 | 900.0 | 2.38 | 2.16 | 1.90 |
| 970.0 | 1000.0 | 1.80 | 1.68 | 1.59 |
| 1070.0 | 1100.0 | 1.63 | 1.38 | 1.15 |
| 1170.0 | 1200.0 | 1.23 | 0.96 | 0.76 |
| 1270.0 | 1300.0 | 0.76 | 0.55 | 0.48 |
| 1370.0 | 1400.0 | 0.67 | 0.44 | 0.32 |
| 1470.0 | 1500.0 | 0.68 | 0.54 | 0.40 |
| 1570.0 | 1600.0 | 0.58 | 0.43 | 0.34 |
| 1670.0 | 1700.0 | 0.61 | 0.43 | 0.32 |
| 1770.0 | 1800.0 | 0.58 | 0.35 | 0.20 |
| 1870.0 | 1900.0 | 0.56 | 0.30 | 0.17 |
| 1970.0 | 2000.0 | 0.49 | 0.28 | 0.18 |
| 2070.0 | 2100.0 | 0.55 | 0.34 | 0.21 |
| 2170.0 | 2200.0 | 0.63 | 0.43 | 0.31 |
| 2270.0 | 2300.0 | 0.75 | 0.56 | 0.40 |
| 2370.0 | 2400.0 | 0.88 | 0.61 | 0.44 |
| 2470.0 | 2500.0 | 0.92 | 0.67 | 0.49 |
| 2570.0 | 2600.0 | 1.09 | 0.93 | 0.81 |
| 2670.0 | 2700.0 | 1.29 | 1.16 | 1.08 |
| 2770.0 | 2800.0 | 1.43 | 1.15 | 0.97 |
| 2870.0 | 2900.0 | 1.31 | 0.95 | 0.73 |
| 2970.0 | 3000.0 | 1.07 | 0.67 | 0.54 |
| 3070.0 | 3100.0 | 0.86 | 0.47 | 0.37 |
| 3170.0 | 3200.0 | 0.78 | 0.37 | 0.26 |
| 3270.0 | 3300.0 | 0.91 | 0.45 | 0.28 |
| 3370.0 | 3400.0 | 0.94 | 0.50 | 0.30 |
| 3470.0 | 3500.0 | 0.88 | 0.53 | 0.35 |
| 3550.0 | 3580.0 | 0.91 | 0.62 | 0.43 |
| 3650.0 | 3680.0 | 0.66 | 0.43 | 0.30 |
| 3730.0 | 3760.0 | 0.69 | 0.46 | 0.33 |
| 3830.0 | 3860.0 | 0.79 | 0.58 | 0.46 |
| 3910.0 | 3940.0 | 0.55 | 0.44 | 0.38 |
| 4010.0 | 4040.0 | 0.47 | 0.39 | 0.35 |
| 4090.0 | 4120.0 | 0.40 | 0.30 | 0.25 |
| 4190.0 | 4220.0 | 0.45 | 0.32 | 0.24 |
| 4270.0 | 4300.0 | 0.49 | 0.43 | 0.28 |
| 4370.0 | 4400.0 | 0.07 | 0.39 | 0.28 |

Frequency Mixer

ZX05-43+

Typical Performance Data

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=2475MHz (dB) | IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=739.9MHz (dB) | IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=4210MHz (dB) |
|----------------|----------|---|----------------|----------|--|----------------|----------|---|
| | | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) |
| | | +7 | | | +7 | | | +7 |
| 1390.0 | 1085.0 | 10.75 | 10.1 | 750.0 | 7.72 | 1410.0 | 2800.0 | 11.06 |
| 1314.4 | 1160.6 | 9.36 | 50.1 | 790.0 | 7.07 | 1370.0 | 2840.0 | 10.71 |
| 1238.8 | 1236.2 | 7.61 | 90.1 | 830.0 | 6.74 | 1330.0 | 2880.0 | 10.26 |
| 1163.2 | 1311.8 | 6.80 | 130.1 | 870.0 | 6.74 | 1290.0 | 2920.0 | 9.82 |
| 1087.5 | 1387.5 | 7.01 | 170.1 | 910.0 | 6.78 | 1250.0 | 2960.0 | 9.69 |
| 1011.9 | 1463.1 | 7.66 | 210.1 | 950.0 | 6.90 | 1210.0 | 3000.0 | 9.88 |
| 936.3 | 1538.7 | 8.50 | 250.1 | 990.0 | 6.87 | 1170.0 | 3040.0 | 9.63 |
| 860.7 | 1614.3 | 9.24 | 290.1 | 1030.0 | 6.79 | 1130.0 | 3080.0 | 9.37 |
| 785.1 | 1689.9 | 8.73 | 330.1 | 1070.0 | 6.68 | 1090.0 | 3120.0 | 9.04 |
| 709.5 | 1765.5 | 7.63 | 370.1 | 1110.0 | 6.55 | 1050.0 | 3160.0 | 9.02 |
| 633.8 | 1841.2 | 7.01 | 410.1 | 1150.0 | 6.49 | 1010.0 | 3200.0 | 8.81 |
| 558.2 | 1916.8 | 6.59 | 450.1 | 1190.0 | 6.57 | 970.0 | 3240.0 | 8.83 |
| 482.6 | 1992.4 | 6.34 | 490.1 | 1230.0 | 6.49 | 930.0 | 3280.0 | 8.88 |
| 407.0 | 2068.0 | 5.98 | 530.1 | 1270.0 | 6.39 | 890.0 | 3320.0 | 8.72 |
| 331.4 | 2143.6 | 5.80 | 570.1 | 1310.0 | 6.39 | 850.0 | 3360.0 | 8.72 |
| 255.8 | 2219.2 | 5.52 | 610.1 | 1350.0 | 6.52 | 810.0 | 3400.0 | 8.69 |
| 180.1 | 2294.9 | 5.44 | 650.1 | 1390.0 | 6.59 | 770.0 | 3440.0 | 8.84 |
| 104.5 | 2370.5 | 5.64 | 690.1 | 1430.0 | 6.65 | 730.0 | 3480.0 | 9.14 |
| 28.9 | 2446.1 | 6.07 | 730.1 | 1470.0 | 6.81 | 690.0 | 3520.0 | 9.06 |
| 52.2 | 2527.2 | 6.32 | 770.1 | 1510.0 | 6.88 | 650.0 | 3560.0 | 9.19 |
| 136.5 | 2611.5 | 6.87 | 810.1 | 1550.0 | 7.05 | 610.0 | 3600.0 | 9.19 |
| 220.8 | 2695.8 | 7.00 | 850.1 | 1590.0 | 7.23 | 570.0 | 3640.0 | 9.13 |
| 305.1 | 2780.1 | 6.92 | 890.1 | 1630.0 | 7.25 | 530.0 | 3680.0 | 9.03 |
| 389.5 | 2864.5 | 6.52 | 930.1 | 1670.0 | 7.55 | 490.0 | 3720.0 | 8.92 |
| 473.8 | 2948.8 | 6.35 | 970.1 | 1710.0 | 7.59 | 450.0 | 3760.0 | 8.90 |
| 537.0 | 3012.0 | 6.47 | 1010.1 | 1750.0 | 7.51 | 430.0 | 3780.0 | 8.86 |
| 621.4 | 3096.4 | 6.59 | 1050.1 | 1790.0 | 7.54 | 390.0 | 3820.0 | 8.58 |
| 684.6 | 3159.6 | 6.57 | 1090.1 | 1830.0 | 7.67 | 370.0 | 3840.0 | 8.49 |
| 768.9 | 3243.9 | 6.53 | 1130.1 | 1870.0 | 7.81 | 330.0 | 3880.0 | 8.29 |
| 832.2 | 3307.2 | 6.69 | 1170.1 | 1910.0 | 7.72 | 310.0 | 3900.0 | 8.12 |
| 916.5 | 3391.5 | 6.62 | 1210.1 | 1950.0 | 7.72 | 270.0 | 3940.0 | 7.95 |
| 979.7 | 3454.7 | 6.62 | 1250.1 | 1990.0 | 7.95 | 250.0 | 3960.0 | 7.83 |
| 1064.1 | 3539.1 | 6.79 | 1290.1 | 2030.0 | 7.97 | 210.0 | 4000.0 | 7.58 |
| 1127.3 | 3602.3 | 6.91 | 1330.1 | 2070.0 | 8.14 | 190.0 | 4020.0 | 7.55 |
| 1211.6 | 3686.6 | 7.26 | 1370.1 | 2110.0 | 8.50 | 150.0 | 4060.0 | 7.54 |
| 1274.9 | 3749.9 | 7.50 | 1410.1 | 2150.0 | 8.43 | 130.0 | 4080.0 | 7.52 |
| 1359.2 | 3834.2 | 8.02 | 1450.1 | 2190.0 | 8.63 | 90.0 | 4120.0 | 7.50 |
| 1422.4 | 3897.4 | 8.43 | 1510.1 | 2250.0 | 8.84 | 70.0 | 4140.0 | 7.56 |
| 1506.8 | 3981.8 | 9.41 | 1550.1 | 2290.0 | 9.40 | 30.0 | 4180.0 | 7.54 |
| 1570.0 | 4045.0 | 10.52 | 1610.1 | 2350.0 | 10.20 | 10.0 | 4200.0 | 7.76 |

REV. X2
ZX05-43+
101011
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IF/RF MICROWAVE COMPONENTS



Frequency Mixer

ZX05-43+

Typical Performance Data

| LO (MHz) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | |
|-------------|-------------------------|-------|-------|-------------------------|-------|-------|
| | @LO (dBm) | | | @LO (dBm) | | |
| | +4 | +7 | +10 | +4 | +7 | +10 |
| 600.0 | 58.55 | 58.29 | 57.35 | 28.34 | 28.38 | 28.54 |
| 700.0 | 52.30 | 52.65 | 46.08 | 25.70 | 25.88 | 26.74 |
| 800.0 | 43.48 | 40.85 | 40.22 | 23.49 | 25.00 | 27.16 |
| 900.0 | 37.65 | 37.94 | 38.49 | 23.44 | 25.83 | 28.30 |
| 1000.0 | 41.15 | 41.71 | 42.21 | 24.73 | 27.26 | 29.55 |
| 1100.0 | 45.37 | 44.93 | 44.32 | 26.34 | 28.93 | 31.15 |
| 1200.0 | 41.93 | 40.69 | 39.62 | 28.12 | 30.39 | 31.62 |
| 1300.0 | 39.18 | 36.90 | 35.47 | 29.97 | 31.92 | 32.43 |
| 1400.0 | 36.89 | 34.53 | 33.17 | 31.14 | 33.49 | 34.99 |
| 1500.0 | 35.19 | 33.19 | 31.45 | 30.46 | 33.37 | 36.32 |
| 1600.0 | 34.96 | 33.39 | 32.27 | 26.25 | 27.95 | 29.43 |
| 1700.0 | 35.70 | 34.32 | 33.47 | 23.47 | 24.66 | 25.31 |
| 1800.0 | 36.25 | 35.29 | 34.10 | 18.89 | 20.05 | 20.58 |
| 1900.0 | 35.11 | 33.92 | 32.99 | 14.41 | 15.62 | 16.43 |
| 2000.0 | 34.96 | 34.15 | 33.44 | 11.12 | 12.57 | 13.70 |
| 2100.0 | 35.20 | 34.20 | 33.30 | 10.05 | 11.68 | 13.04 |
| 2200.0 | 35.84 | 34.60 | 33.47 | 10.73 | 12.37 | 13.91 |
| 2300.0 | 34.81 | 33.44 | 32.32 | 12.00 | 13.72 | 15.44 |
| 2400.0 | 33.84 | 31.95 | 30.70 | 13.42 | 15.14 | 16.94 |
| 2500.0 | 35.16 | 33.42 | 32.14 | 14.88 | 16.53 | 18.22 |
| 2600.0 | 32.58 | 29.90 | 28.43 | 16.33 | 17.97 | 19.30 |
| 2700.0 | 32.85 | 30.45 | 28.41 | 17.65 | 18.71 | 19.53 |
| 2800.0 | 31.95 | 29.02 | 26.43 | 19.10 | 19.29 | 19.13 |
| 2900.0 | 32.28 | 29.17 | 26.23 | 20.57 | 20.20 | 19.63 |
| 3000.0 | 30.11 | 27.69 | 25.50 | 22.86 | 21.97 | 20.80 |
| 3100.0 | 28.54 | 26.30 | 24.67 | 25.89 | 23.92 | 22.59 |
| 3200.0 | 27.72 | 25.87 | 24.42 | 28.22 | 26.57 | 25.42 |
| 3300.0 | 28.06 | 26.50 | 25.46 | 25.50 | 24.71 | 24.27 |
| 3400.0 | 27.49 | 26.36 | 25.60 | 25.02 | 25.41 | 25.84 |
| 3500.0 | 26.43 | 25.71 | 24.92 | 23.13 | 23.43 | 23.89 |
| 3580.0 | 25.76 | 25.33 | 24.67 | 21.34 | 21.77 | 22.13 |
| 3680.0 | 25.60 | 25.28 | 24.59 | 18.98 | 19.56 | 20.07 |
| 3760.0 | 25.86 | 25.44 | 24.76 | 18.21 | 18.81 | 19.46 |
| 3860.0 | 26.73 | 26.32 | 25.62 | 19.33 | 19.71 | 20.44 |
| 3940.0 | 27.05 | 26.54 | 25.69 | 19.81 | 20.31 | 21.07 |
| 4040.0 | 27.51 | 26.96 | 26.02 | 17.33 | 17.99 | 19.15 |
| 4120.0 | 27.44 | 26.86 | 25.92 | 16.07 | 16.77 | 17.86 |
| 4220.0 | 27.85 | 26.99 | 26.06 | 15.28 | 15.82 | 16.93 |
| 4300.0 | 28.92 | 28.12 | 26.31 | 14.91 | 15.53 | 16.33 |
| 4400.0 | 29.84 | 28.81 | 27.09 | 14.66 | 15.08 | 15.75 |

| RF (IN) (MHz) | LO (MHz) | RF-IF ISOLATION (dB) | | |
|---------------------|-------------|-------------------------|-------|-------|
| | | @LO (dBm) | | |
| | | +4 | +7 | +10 |
| 570.0 | 600.0 | 28.29 | 26.77 | 22.36 |
| 670.0 | 700.0 | 24.39 | 21.45 | 17.14 |
| 770.0 | 800.0 | 17.80 | 14.81 | 13.70 |
| 870.0 | 900.0 | 13.45 | 12.51 | 11.99 |
| 970.0 | 1000.0 | 14.01 | 13.25 | 12.71 |
| 1070.0 | 1100.0 | 17.02 | 16.20 | 15.67 |
| 1170.0 | 1200.0 | 19.97 | 19.46 | 19.14 |
| 1270.0 | 1300.0 | 22.98 | 22.66 | 22.25 |
| 1370.0 | 1400.0 | 24.53 | 24.70 | 25.02 |
| 1470.0 | 1500.0 | 25.16 | 25.05 | 25.29 |
| 1570.0 | 1600.0 | 25.66 | 26.04 | 26.28 |
| 1670.0 | 1700.0 | 24.69 | 24.89 | 25.09 |
| 1770.0 | 1800.0 | 26.30 | 26.41 | 26.25 |
| 1870.0 | 1900.0 | 29.19 | 28.87 | 28.72 |
| 1970.0 | 2000.0 | 34.38 | 34.11 | 33.91 |
| 2070.0 | 2100.0 | 39.86 | 39.08 | 38.87 |
| 2170.0 | 2200.0 | 37.73 | 37.50 | 37.69 |
| 2270.0 | 2300.0 | 39.51 | 39.83 | 40.64 |
| 2370.0 | 2400.0 | 39.74 | 39.45 | 39.60 |
| 2470.0 | 2500.0 | 38.99 | 39.57 | 40.17 |
| 2570.0 | 2600.0 | 34.55 | 34.32 | 34.25 |
| 2670.0 | 2700.0 | 31.20 | 30.45 | 29.91 |
| 2770.0 | 2800.0 | 28.35 | 28.02 | 27.72 |
| 2870.0 | 2900.0 | 26.48 | 25.65 | 25.60 |
| 2970.0 | 3000.0 | 26.00 | 25.90 | 26.16 |
| 3070.0 | 3100.0 | 24.73 | 24.30 | 24.42 |
| 3170.0 | 3200.0 | 24.59 | 23.84 | 23.52 |
| 3270.0 | 3300.0 | 31.37 | 29.55 | 28.22 |
| 3370.0 | 3400.0 | 20.20 | 19.43 | 19.05 |
| 3470.0 | 3500.0 | 20.05 | 19.42 | 19.06 |
| 3550.0 | 3580.0 | 19.89 | 19.26 | 19.02 |
| 3650.0 | 3680.0 | 22.44 | 21.34 | 20.96 |
| 3730.0 | 3760.0 | 22.67 | 21.25 | 20.70 |
| 3830.0 | 3860.0 | 25.15 | 24.06 | 23.68 |
| 3910.0 | 3940.0 | 32.64 | 30.62 | 29.53 |
| 4010.0 | 4040.0 | 42.26 | 42.88 | 40.86 |
| 4090.0 | 4120.0 | 30.51 | 28.99 | 27.82 |
| 4190.0 | 4220.0 | 26.67 | 24.50 | 23.16 |
| 4270.0 | 4300.0 | 26.35 | 23.78 | 22.49 |
| 4370.0 | 4400.0 | 28.74 | 27.51 | 26.94 |

Frequency Mixer

ZX05-43+

Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | RF VSWR (:1) | | | LO (MHz) | LO VSWR (:1) | | | IF (OUT) (MHz) | IF VSWR @LO=4200MHz (:1) | | |
|------------------|-------------|--------------|------|------|-------------|--------------|-------|-------|-------------------|--------------------------|------|------|
| | | @LO (dBm) | | | | @LO (dBm) | | | | @LO (dBm) | | |
| | | +4 | +7 | +10 | | +4 | +7 | +10 | | +4 | +7 | +10 |
| 570.0 | 600.0 | 12.99 | 8.68 | 5.28 | 600.0 | 35.46 | 34.75 | 32.18 | 10.0 | 1.09 | 1.26 | 1.49 |
| 670.0 | 700.0 | 4.46 | 3.25 | 3.18 | 700.0 | 26.74 | 22.29 | 15.13 | 49.7 | 1.16 | 1.26 | 1.48 |
| 770.0 | 800.0 | 2.34 | 2.10 | 1.97 | 800.0 | 12.35 | 8.35 | 7.56 | 89.5 | 1.24 | 1.29 | 1.49 |
| 870.0 | 900.0 | 1.93 | 1.70 | 1.56 | 900.0 | 4.32 | 4.35 | 5.02 | 129.2 | 1.33 | 1.32 | 1.49 |
| 970.0 | 1000.0 | 2.56 | 2.35 | 2.16 | 1000.0 | 2.26 | 2.81 | 3.58 | 168.9 | 1.44 | 1.36 | 1.51 |
| 1070.0 | 1100.0 | 3.10 | 2.93 | 2.80 | 1100.0 | 1.37 | 1.90 | 2.55 | 208.7 | 1.56 | 1.40 | 1.51 |
| 1170.0 | 1200.0 | 3.29 | 3.21 | 3.15 | 1200.0 | 1.11 | 1.36 | 1.86 | 248.4 | 1.72 | 1.48 | 1.53 |
| 1270.0 | 1300.0 | 3.42 | 3.33 | 3.29 | 1300.0 | 1.41 | 1.06 | 1.49 | 288.1 | 1.92 | 1.57 | 1.57 |
| 1370.0 | 1400.0 | 3.46 | 3.20 | 3.08 | 1400.0 | 1.57 | 1.18 | 1.47 | 327.9 | 2.11 | 1.68 | 1.61 |
| 1470.0 | 1500.0 | 3.35 | 3.01 | 2.72 | 1500.0 | 1.67 | 1.48 | 1.78 | 367.6 | 2.35 | 1.83 | 1.71 |
| 1570.0 | 1600.0 | 3.19 | 2.88 | 2.66 | 1600.0 | 1.74 | 1.78 | 2.18 | 407.3 | 2.58 | 1.97 | 1.79 |
| 1670.0 | 1700.0 | 3.23 | 2.84 | 2.53 | 1700.0 | 1.77 | 2.03 | 2.56 | 447.1 | 2.82 | 2.13 | 1.89 |
| 1770.0 | 1800.0 | 3.27 | 2.87 | 2.65 | 1800.0 | 1.67 | 2.06 | 2.64 | 486.8 | 3.09 | 2.32 | 2.03 |
| 1870.0 | 1900.0 | 3.22 | 2.92 | 2.73 | 1900.0 | 1.45 | 1.97 | 2.64 | 526.5 | 3.33 | 2.49 | 2.14 |
| 1970.0 | 2000.0 | 3.31 | 3.05 | 2.88 | 2000.0 | 1.36 | 1.92 | 2.58 | 566.3 | 3.61 | 2.69 | 2.29 |
| 2070.0 | 2100.0 | 3.29 | 3.01 | 2.82 | 2100.0 | 1.42 | 1.89 | 2.52 | 606.0 | 3.86 | 2.86 | 2.40 |
| 2170.0 | 2200.0 | 3.50 | 3.20 | 2.99 | 2200.0 | 1.62 | 1.94 | 2.48 | 645.7 | 4.13 | 3.05 | 2.55 |
| 2270.0 | 2300.0 | 3.38 | 3.07 | 2.86 | 2300.0 | 1.89 | 2.01 | 2.42 | 685.5 | 4.40 | 3.22 | 2.68 |
| 2370.0 | 2400.0 | 2.58 | 2.27 | 2.08 | 2400.0 | 2.13 | 2.08 | 2.35 | 725.2 | 4.64 | 3.40 | 2.82 |
| 2470.0 | 2500.0 | 3.00 | 2.70 | 2.46 | 2500.0 | 2.29 | 2.06 | 2.22 | 764.9 | 4.84 | 3.56 | 2.98 |
| 2570.0 | 2600.0 | 2.87 | 2.56 | 2.33 | 2600.0 | 2.35 | 2.00 | 2.03 | 804.7 | 5.02 | 3.70 | 3.12 |
| 2670.0 | 2700.0 | 2.43 | 2.17 | 1.95 | 2700.0 | 2.25 | 1.74 | 1.74 | 844.4 | 5.22 | 3.92 | 3.30 |
| 2770.0 | 2800.0 | 1.94 | 1.67 | 1.47 | 2800.0 | 2.12 | 1.44 | 1.34 | 884.1 | 5.31 | 3.96 | 3.35 |
| 2870.0 | 2900.0 | 1.56 | 1.39 | 1.35 | 2900.0 | 2.10 | 1.38 | 1.21 | 923.9 | 5.52 | 4.15 | 3.52 |
| 2970.0 | 3000.0 | 1.45 | 1.43 | 1.44 | 3000.0 | 2.09 | 1.34 | 1.18 | 963.6 | 5.52 | 4.20 | 3.56 |
| 3070.0 | 3100.0 | 1.50 | 1.54 | 1.60 | 3100.0 | 1.91 | 1.24 | 1.22 | 1003.3 | 5.59 | 4.24 | 3.64 |
| 3170.0 | 3200.0 | 1.52 | 1.57 | 1.64 | 3200.0 | 1.72 | 1.15 | 1.32 | 1043.1 | 5.68 | 4.37 | 3.75 |
| 3270.0 | 3300.0 | 1.56 | 1.55 | 1.59 | 3300.0 | 1.57 | 1.15 | 1.44 | 1082.8 | 5.61 | 4.36 | 3.77 |
| 3370.0 | 3400.0 | 1.66 | 1.57 | 1.55 | 3400.0 | 1.51 | 1.25 | 1.57 | 1122.5 | 5.77 | 4.51 | 3.95 |
| 3470.0 | 3500.0 | 2.07 | 1.90 | 1.83 | 3500.0 | 1.57 | 1.42 | 1.72 | 1162.3 | 5.65 | 4.47 | 3.95 |
| 3550.0 | 3580.0 | 2.57 | 2.33 | 2.18 | 3580.0 | 1.69 | 1.57 | 1.84 | 1202.0 | 5.68 | 4.56 | 4.11 |
| 3650.0 | 3680.0 | 3.00 | 2.75 | 2.60 | 3680.0 | 1.89 | 1.76 | 2.01 | 1241.7 | 5.65 | 4.59 | 4.21 |
| 3730.0 | 3760.0 | 3.23 | 2.92 | 2.70 | 3760.0 | 2.09 | 1.91 | 2.12 | 1281.5 | 5.47 | 4.56 | 4.28 |
| 3830.0 | 3860.0 | 3.63 | 3.24 | 2.95 | 3860.0 | 2.55 | 2.19 | 2.29 | 1321.2 | 5.49 | 4.68 | 4.48 |
| 3910.0 | 3940.0 | 4.02 | 3.63 | 3.35 | 3940.0 | 2.99 | 2.45 | 2.44 | 1360.9 | 5.23 | 4.61 | 4.55 |
| 4010.0 | 4040.0 | 4.41 | 3.88 | 3.57 | 4040.0 | 3.86 | 2.94 | 2.70 | 1380.8 | 5.22 | 4.73 | 4.73 |
| 4090.0 | 4120.0 | 4.52 | 3.93 | 3.60 | 4120.0 | 4.52 | 3.34 | 2.92 | 1420.5 | 5.28 | 4.96 | 5.04 |
| 4190.0 | 4220.0 | 4.64 | 3.93 | 3.57 | 4220.0 | 5.65 | 3.82 | 3.05 | 1440.4 | 5.22 | 5.00 | 5.16 |
| 4270.0 | 4300.0 | 4.35 | 3.54 | 3.14 | 4300.0 | 6.51 | 4.16 | 3.06 | 1480.1 | 5.22 | 5.25 | 5.54 |
| 4370.0 | 4400.0 | 4.98 | 3.94 | 3.57 | 4400.0 | 8.08 | 5.20 | 3.45 | 1500.0 | 5.30 | 5.44 | 5.79 |

Harmonics Tables

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | +11 | 9 | 9 | 30 | 26 | 42 | 36 | 45 | 41 | --- |
| 1 | - | 33 | +0 | 41 | 18 | 31 | 33 | >70 | 48 | >70 | 55 | 60 |
| 2 | >90 | 55 | 56 | 61 | 53 | 69 | 54 | 61 | 67 | >70 | >70 | >70 |
| 3 | >90 | 65 | 63 | >70 | 63 | >70 | 67 | >70 | 69 | >70 | >70 | >70 |
| 4 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 5 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 6 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 7 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 8 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 9 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 10 | --- | --- | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 2475 MHz; -14.00 dBm.
 LO IN: 2505 MHz; +7.00 dBm
 IF OUT: 30 MHz; -20.26 dBm

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | +1 | 19 | 19 | 47 | 38 | 53 | 50 | 57 | 53 | --- |
| 1 | - | 32 | +0 | 43 | 18 | 36 | 33 | 71 | 47 | 73 | 60 | 62 |
| 2 | 71 | 47 | 49 | 48 | 45 | 56 | 48 | 55 | 58 | 70 | 71 | 71 |
| 3 | >90 | 44 | 40 | 65 | 40 | 61 | 47 | 49 | 53 | >80 | 67 | >80 |
| 4 | >90 | 70 | 62 | 62 | 62 | 57 | 63 | 64 | 62 | 67 | 79 | 75 |
| 5 | >90 | 75 | 66 | 70 | 61 | >80 | 56 | >80 | 62 | 77 | 68 | >80 |
| 6 | >90 | >80 | >80 | >80 | >80 | 75 | 79 | 68 | 80 | 78 | 78 | >80 |
| 7 | >90 | >80 | >80 | >80 | >80 | >80 | 77 | >80 | 71 | >80 | >80 | >80 |
| 8 | >90 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 |
| 9 | >90 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 |
| 10 | --- | --- | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

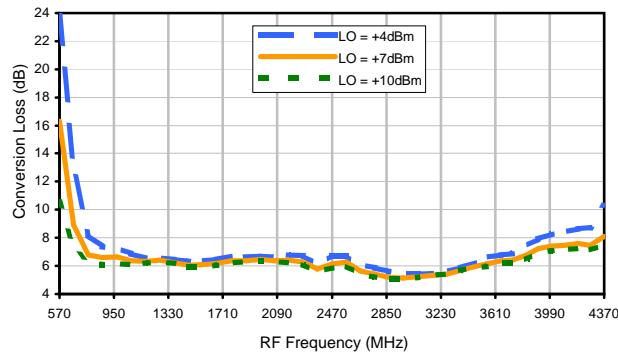
LO HARMONICS ORDER

Test conditions: RF IN: 2475 MHz; -4.00 dBm.
 LO IN: 2505 MHz; +7.00 dBm
 IF OUT: 30 MHz; -10.31 dBm

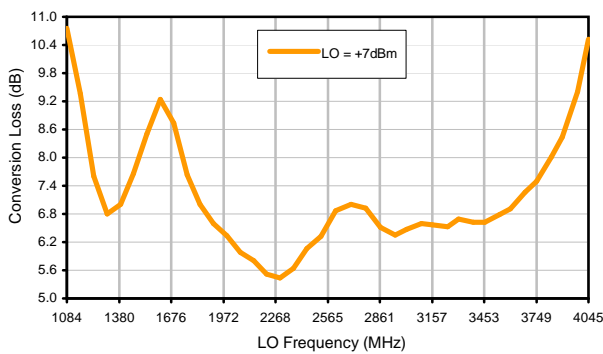
Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
 2. + entry denotes harmonics are in (dBc) above IF OUTPUT.

Typical Performance Curves

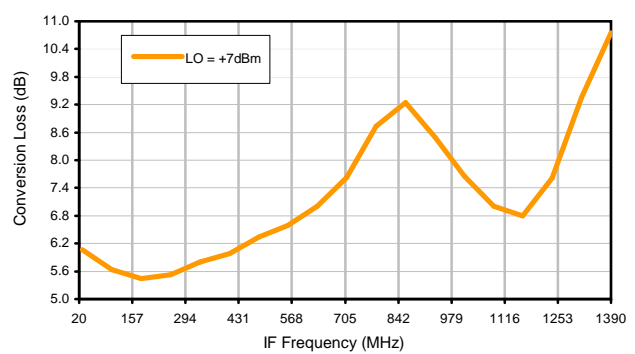
Conversion Loss @ IF=30MHz



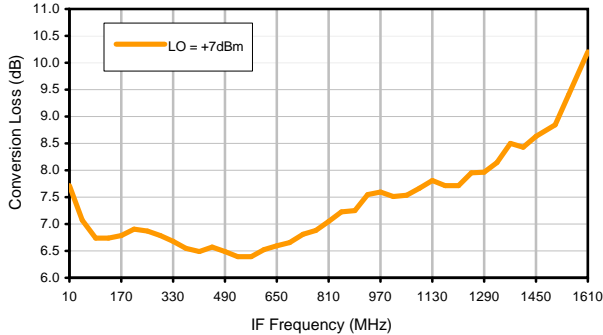
Conversion Loss vs. LO @ RF=2475MHz



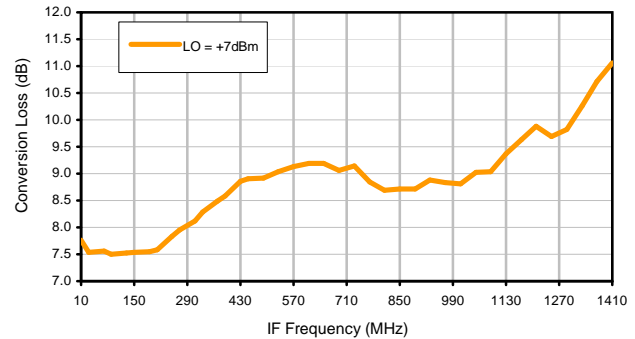
Conversion Loss vs. IF @ RF=2475MHz



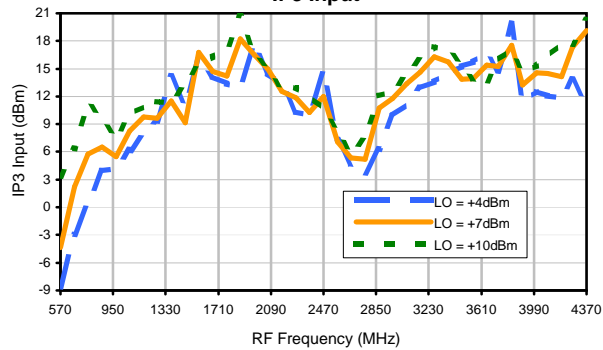
Conversion Loss vs. IF @ RF=739.9MHz



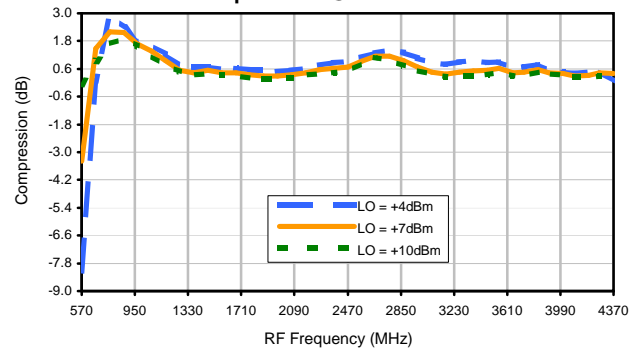
Conversion Loss vs. IF @ RF=4210MHz



IP3 Input

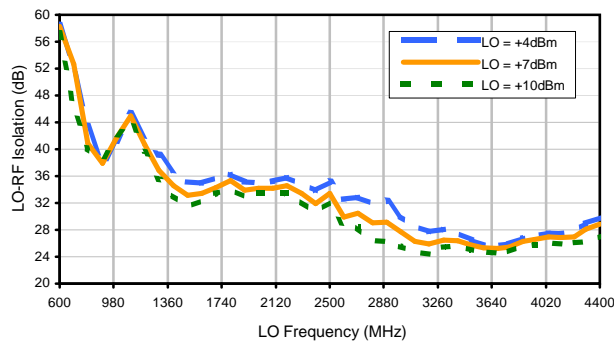


Compression @ RF IN=+1dBm

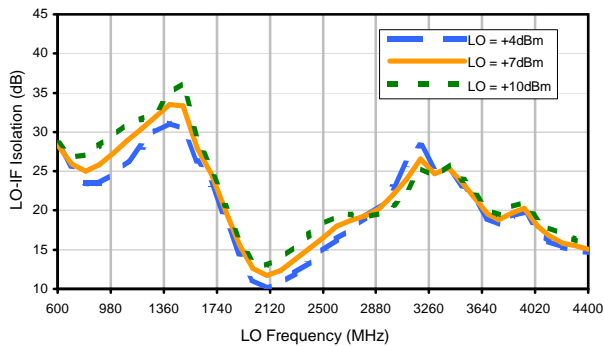


Typical Performance Curves

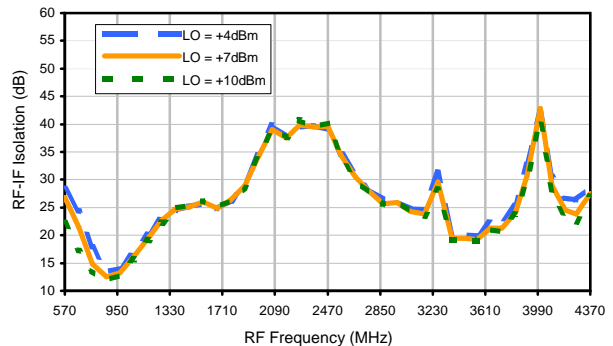
LO-RF Isolation



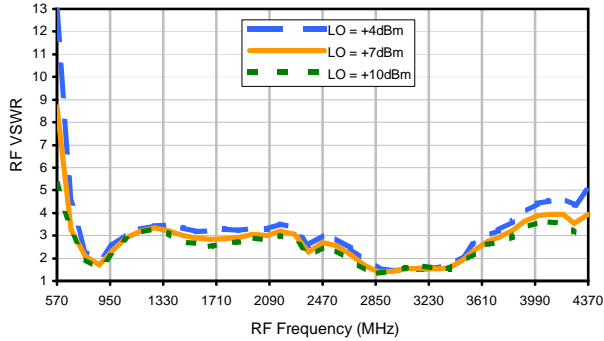
LO-IF Isolation



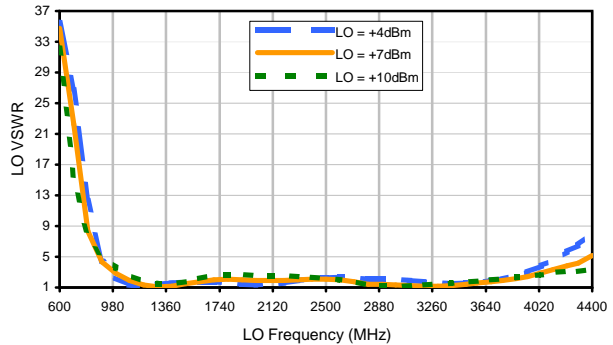
RF-IF Isolation



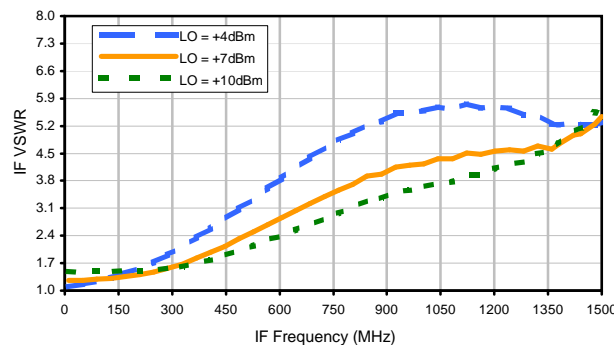
RF VSWR



LO VSWR



IF VSWR



Harmonics Tables

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | +11 | 9 | 9 | 30 | 26 | 42 | 36 | 45 | 41 | --- |
| 1 | - | 33 | +0 | 41 | 18 | 31 | 33 | >70 | 48 | >70 | 55 | 60 |
| 2 | >90 | 55 | 56 | 61 | 53 | 69 | 54 | 61 | 67 | >70 | >70 | >70 |
| 3 | >90 | 65 | 63 | >70 | 63 | >70 | 67 | >70 | 69 | >70 | >70 | >70 |
| 4 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 5 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 6 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 7 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 8 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 9 | >90 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| 10 | --- | --- | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 | >70 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 2475 MHz; -14.00 dBm.
 LO IN: 2505 MHz; +7.00 dBm
 IF OUT: 30 MHz; -20.26 dBm

RF HARMONICS ORDER

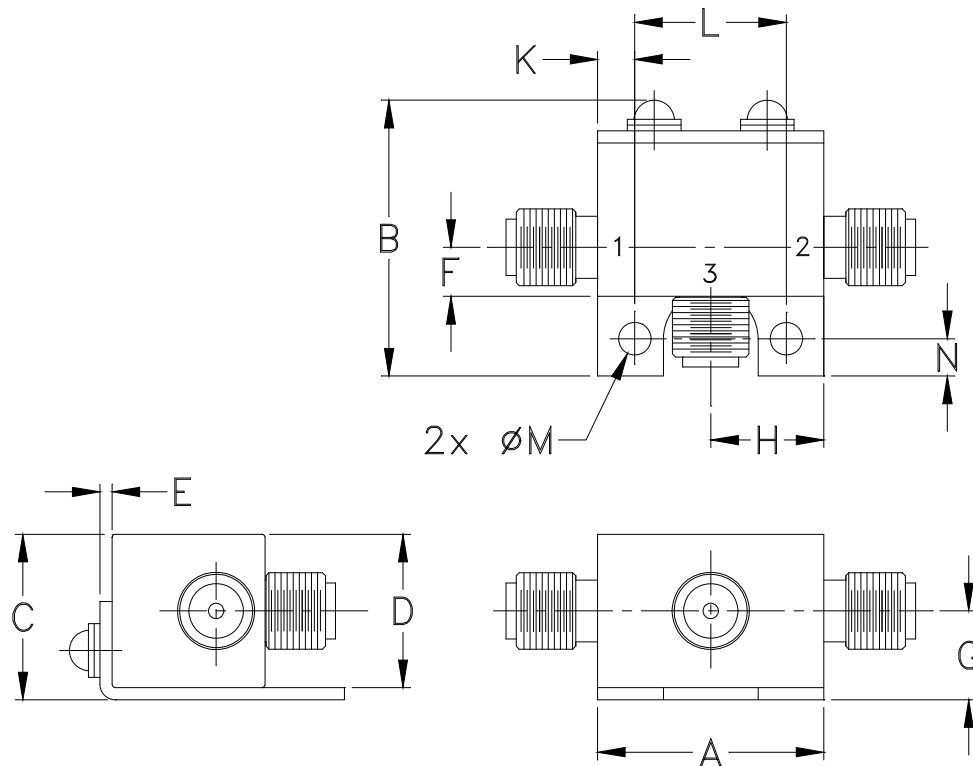
| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | +1 | 19 | 19 | 47 | 38 | 53 | 50 | 57 | 53 | --- |
| 1 | - | 32 | +0 | 43 | 18 | 36 | 33 | 71 | 47 | 73 | 60 | 62 |
| 2 | 71 | 47 | 49 | 48 | 45 | 56 | 48 | 55 | 58 | 70 | 71 | 71 |
| 3 | >90 | 44 | 40 | 65 | 40 | 61 | 47 | 49 | 53 | >80 | 67 | >80 |
| 4 | >90 | 70 | 62 | 62 | 62 | 57 | 63 | 64 | 62 | 67 | 79 | 75 |
| 5 | >90 | 75 | 66 | 70 | 61 | >80 | 56 | >80 | 62 | 77 | 68 | >80 |
| 6 | >90 | >80 | >80 | >80 | >80 | 75 | 79 | 68 | 80 | 78 | 78 | >80 |
| 7 | >90 | >80 | >80 | >80 | >80 | >80 | 77 | >80 | 71 | >80 | >80 | >80 |
| 8 | >90 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 |
| 9 | >90 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 |
| 10 | --- | --- | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 | >80 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 2475 MHz; -4.00 dBm.
 LO IN: 2505 MHz; +7.00 dBm
 IF OUT: 30 MHz; -10.31 dBm

Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
 2. + entry denotes harmonics are in (dBc) above IF OUTPUT.

Outline Dimensions



| CASE #. | A | B | C | D | E | F | G | H | J | K | L | M | N | WT, GRAM |
|---------|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|--------|----------------|-----------------|----------------|----------------|-------------|
| FL905 | .74 (18.80) | .90 (22.86) | .54 (13.72) | .50 (12.70) | .04 (1.02) | .16 (4.06) | .29 (7.37) | .37 (9.40) | - - | .122 (3.10) | .496 (12.60) | .106 (2.69) | .122 (3.10) | 20.0 |

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .03$; 3Pl. $\pm .015$.

Tolerance on hole size and interaxes dimensions to be $\pm .005$.

Notes:

1. Case material: Brass.
2. Case finish: Nickel plate.

Mini-Circuits®

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P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

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All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|----------------------------|--|--------------------------------------|
| Operating Temperature | -40° to 85°C | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C Ambient Environment | Individual Model Data Sheet |
| Barometric Pressure | 100,000 Feet | MIL-STD-202, Method 105, Condition D |
| Humidity | 90% RH, 65°C Units may require bake-out after humidity to restore full performance. | MIL-STD-202, Method 103 |
| Thermal Shock | -65° to 125°C, 5 cycles | MIL-STD-202, Method 107, Condition B |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36) | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock | 100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18) | MIL-STD-202, Method 213, Condition I |