

Frequency Mixer

ZAY-2

Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB) | | | RF (IN) (MHz) | LO (MHz) | IP3 INPUT (dBm) | | | RF (IN) (MHz) | LO (MHz) | COMPRESSION @RF IN=+15dBm (dB) | | |
|---------------|----------|--|-------|-------|---------------|----------|-----------------|-------|-------|---------------|----------|--------------------------------|-------|-------|
| | | @LO (dBm) | | | | | @LO (dBm) | | | | | @LO (dBm) | | |
| | | +20 | +23 | +26 | | | +20 | +23 | +26 | | | +20 | +23 | +26 |
| 10.1 | 40.1 | 6.20 | 6.01 | 5.91 | 10.1 | 40.1 | 28.96 | 30.91 | 30.54 | 10.1 | 40.1 | 0.23 | 0.13 | 0.05 |
| 20.1 | 50.1 | 6.10 | 5.96 | 5.90 | 20.1 | 50.1 | 30.43 | 29.58 | 37.34 | 20.1 | 50.1 | 0.27 | 0.12 | 0.03 |
| 30.1 | 60.1 | 6.19 | 6.04 | 5.97 | 30.1 | 60.1 | 27.99 | 28.37 | 41.13 | 30.1 | 60.1 | 0.24 | 0.14 | 0.05 |
| 40.1 | 70.1 | 6.22 | 6.07 | 6.01 | 40.1 | 70.1 | 28.54 | 30.04 | 30.62 | 40.1 | 70.1 | 0.23 | 0.10 | 0.02 |
| 60.1 | 90.1 | 6.21 | 6.11 | 6.07 | 60.1 | 90.1 | 28.98 | 29.89 | 29.83 | 60.1 | 90.1 | 0.16 | 0.05 | 0.00 |
| 80.1 | 110.1 | 6.27 | 6.16 | 6.11 | 80.1 | 110.1 | 33.29 | 27.66 | 29.79 | 80.1 | 110.1 | 0.14 | 0.01 | -0.03 |
| 100.1 | 130.1 | 6.28 | 6.16 | 6.11 | 100.1 | 130.1 | 32.48 | 26.98 | 28.99 | 100.1 | 130.1 | 0.15 | 0.04 | -0.01 |
| 125.1 | 155.1 | 6.27 | 6.19 | 6.15 | 125.1 | 155.1 | 26.44 | 27.75 | 29.13 | 125.1 | 155.1 | 0.14 | 0.04 | 0.00 |
| 150.1 | 180.1 | 6.33 | 6.25 | 6.21 | 150.1 | 180.1 | 25.79 | 28.17 | 29.33 | 150.1 | 180.1 | 0.15 | 0.06 | 0.03 |
| 175.1 | 205.1 | 6.37 | 6.27 | 6.22 | 175.1 | 205.1 | 25.57 | 27.93 | 28.96 | 175.1 | 205.1 | 0.13 | 0.05 | 0.03 |
| 200.1 | 230.1 | 6.34 | 6.25 | 6.20 | 200.1 | 230.1 | 25.44 | 26.86 | 28.32 | 200.1 | 230.1 | 0.11 | 0.05 | 0.02 |
| 225.1 | 255.1 | 6.32 | 6.24 | 6.20 | 225.1 | 255.1 | 25.70 | 27.20 | 29.01 | 225.1 | 255.1 | 0.14 | 0.08 | 0.04 |
| 250.1 | 280.1 | 6.41 | 6.33 | 6.29 | 250.1 | 280.1 | 24.93 | 26.03 | 28.33 | 250.1 | 280.1 | 0.16 | 0.11 | 0.08 |
| 275.1 | 305.1 | 6.47 | 6.35 | 6.29 | 275.1 | 305.1 | 25.42 | 26.55 | 29.77 | 275.1 | 305.1 | 0.16 | 0.12 | 0.08 |
| 300.1 | 330.1 | 6.47 | 6.33 | 6.27 | 300.1 | 330.1 | 24.44 | 26.85 | 30.35 | 300.1 | 330.1 | 0.16 | 0.12 | 0.09 |
| 325.1 | 355.1 | 6.48 | 6.37 | 6.28 | 325.1 | 355.1 | 24.43 | 25.79 | 28.42 | 325.1 | 355.1 | 0.15 | 0.12 | 0.09 |
| 350.1 | 380.1 | 6.58 | 6.47 | 6.40 | 350.1 | 380.1 | 26.13 | 26.46 | 29.24 | 350.1 | 380.1 | 0.24 | 0.19 | 0.14 |
| 400.1 | 430.1 | 6.58 | 6.47 | 6.43 | 400.1 | 430.1 | 26.14 | 28.60 | 32.26 | 400.1 | 430.1 | 0.38 | 0.23 | 0.14 |
| 450.1 | 480.1 | 6.87 | 6.70 | 6.58 | 450.1 | 480.1 | 20.58 | 22.83 | 26.77 | 450.1 | 480.1 | 0.59 | 0.41 | 0.23 |
| 500.1 | 530.1 | 7.06 | 6.84 | 6.68 | 500.1 | 530.1 | 21.57 | 23.42 | 25.99 | 500.1 | 530.1 | 0.76 | 0.55 | 0.36 |
| 550.1 | 580.1 | 6.94 | 6.70 | 6.54 | 550.1 | 580.1 | 24.36 | 27.28 | 32.24 | 550.1 | 580.1 | 0.91 | 0.69 | 0.48 |
| 600.1 | 630.1 | 6.93 | 6.70 | 6.57 | 600.1 | 630.1 | 26.79 | 31.19 | 35.10 | 600.1 | 630.1 | 1.08 | 0.83 | 0.58 |
| 650.1 | 680.1 | 7.07 | 6.69 | 6.47 | 650.1 | 680.1 | 25.08 | 31.32 | 31.44 | 650.1 | 680.1 | 1.10 | 0.85 | 0.60 |
| 700.1 | 730.1 | 7.56 | 6.99 | 6.70 | 700.1 | 730.1 | 24.57 | 29.44 | 29.33 | 700.1 | 730.1 | 1.16 | 0.95 | 0.71 |
| 750.1 | 780.1 | 8.61 | 7.57 | 6.89 | 750.1 | 780.1 | 19.18 | 23.53 | 27.59 | 750.1 | 780.1 | 0.10 | 0.46 | 0.53 |
| 800.1 | 830.1 | 9.04 | 8.25 | 7.50 | 800.1 | 830.1 | 20.78 | 23.18 | 26.10 | 800.1 | 830.1 | 0.13 | 0.23 | 0.39 |
| 850.1 | 880.1 | 9.13 | 8.26 | 7.72 | 850.1 | 880.1 | 18.54 | 22.46 | 25.43 | 850.1 | 880.1 | -0.33 | 0.01 | 0.10 |
| 900.1 | 930.1 | 8.81 | 8.17 | 7.87 | 900.1 | 930.1 | 22.86 | 26.18 | 25.92 | 900.1 | 930.1 | 0.31 | 0.34 | 0.21 |
| 950.1 | 980.1 | 8.52 | 8.14 | 7.94 | 950.1 | 980.1 | 30.71 | 29.16 | 28.17 | 950.1 | 980.1 | 0.26 | 0.17 | 0.10 |
| 1000.1 | 1030.1 | 8.83 | 8.60 | 8.45 | 1000.1 | 1030.1 | 32.23 | 31.78 | 30.47 | 1000.1 | 1030.1 | 0.30 | 0.15 | 0.05 |
| 1050.1 | 1080.1 | 9.14 | 8.86 | 8.69 | 1050.1 | 1080.1 | 30.32 | 32.85 | 35.21 | 1050.1 | 1080.1 | 0.10 | 0.06 | 0.03 |
| 1100.1 | 1130.1 | 9.79 | 9.55 | 9.39 | 1100.1 | 1130.1 | 28.39 | 30.61 | 33.08 | 1100.1 | 1130.1 | 0.04 | 0.01 | 0.00 |
| 1150.1 | 1180.1 | 10.17 | 9.89 | 9.69 | 1150.1 | 1180.1 | 29.49 | 29.18 | 33.03 | 1150.1 | 1180.1 | -0.04 | -0.03 | -0.01 |
| 1200.1 | 1230.1 | 10.85 | 10.60 | 10.41 | 1200.1 | 1230.1 | 32.90 | 31.05 | 33.03 | 1200.1 | 1230.1 | -0.02 | -0.03 | -0.02 |
| 1250.1 | 1280.1 | 11.10 | 10.88 | 10.72 | 1250.1 | 1280.1 | 32.78 | 33.68 | 33.06 | 1250.1 | 1280.1 | -0.03 | -0.04 | -0.05 |
| 1300.1 | 1330.1 | 11.87 | 11.64 | 11.46 | 1300.1 | 1330.1 | 35.21 | 36.03 | 35.62 | 1300.1 | 1330.1 | -0.01 | -0.01 | -0.02 |
| 1350.1 | 1380.1 | 12.36 | 12.15 | 11.99 | 1350.1 | 1380.1 | 32.23 | 33.13 | 34.22 | 1350.1 | 1380.1 | -0.07 | -0.06 | -0.05 |
| 1400.1 | 1430.1 | 13.20 | 13.03 | 12.91 | 1400.1 | 1430.1 | 31.59 | 32.16 | 33.78 | 1400.1 | 1430.1 | -0.05 | -0.05 | -0.05 |
| 1450.1 | 1480.1 | 13.46 | 13.28 | 13.17 | 1450.1 | 1480.1 | 33.64 | 33.85 | 34.51 | 1450.1 | 1480.1 | -0.07 | -0.06 | -0.06 |
| 1500.1 | 1530.1 | 14.16 | 14.01 | 13.92 | 1500.1 | 1530.1 | 36.16 | 38.17 | 40.10 | 1500.1 | 1530.1 | -0.04 | -0.04 | -0.04 |

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Frequency Mixer

ZAY-2

Typical Performance Data

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=500.1MHz (dB) | IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=10.1MHz (dB) | IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1000.1MHz (dB) |
|----------------|----------|--|----------------|----------|---|----------------|----------|---|
| | | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) |
| | | +23 | | | +23 | | | +23 |
| 0.5 | 499.6 | 6.91 | 0.5 | 10.6 | 6.11 | 0.5 | 999.6 | 8.39 |
| 0.8 | 499.4 | 6.86 | 1.0 | 11.1 | 6.03 | 1.0 | 999.1 | 8.31 |
| 1.0 | 499.1 | 6.83 | 2.0 | 12.1 | 6.01 | 2.0 | 998.1 | 8.30 |
| 2.0 | 498.1 | 6.81 | 5.0 | 15.1 | 6.02 | 5.0 | 995.1 | 8.32 |
| 3.0 | 497.1 | 6.81 | 10.0 | 20.1 | 6.03 | 10.0 | 990.1 | 8.35 |
| 4.0 | 496.1 | 6.80 | 20.0 | 30.1 | 6.07 | 20.0 | 980.1 | 8.44 |
| 5.0 | 495.1 | 6.80 | 30.0 | 40.1 | 6.08 | 30.0 | 970.1 | 8.52 |
| 6.0 | 494.1 | 6.80 | 40.0 | 50.1 | 6.03 | 40.0 | 960.1 | 8.63 |
| 8.0 | 492.1 | 6.82 | 50.0 | 60.1 | 6.07 | 50.0 | 950.1 | 8.67 |
| 10.0 | 490.1 | 6.82 | 70.0 | 80.1 | 6.06 | 70.0 | 930.1 | 8.66 |
| 15.0 | 485.1 | 6.82 | 90.0 | 100.1 | 6.10 | 90.0 | 910.1 | 8.85 |
| 20.0 | 480.1 | 6.83 | 110.0 | 120.1 | 6.07 | 110.0 | 890.1 | 9.22 |
| 25.0 | 475.1 | 6.82 | 130.0 | 140.1 | 6.11 | 130.0 | 870.1 | 9.50 |
| 30.0 | 470.1 | 6.80 | 150.0 | 160.1 | 6.11 | 150.0 | 850.1 | 9.53 |
| 35.0 | 465.1 | 6.79 | 175.0 | 185.1 | 6.09 | 175.0 | 825.1 | 9.15 |
| 40.0 | 460.1 | 6.78 | 200.0 | 210.1 | 6.10 | 200.0 | 800.1 | 9.13 |
| 45.0 | 455.1 | 6.76 | 225.0 | 235.1 | 6.14 | 225.0 | 775.1 | 9.02 |
| 50.0 | 450.1 | 6.77 | 250.0 | 260.1 | 6.16 | 250.0 | 750.1 | 8.78 |
| 70.0 | 430.1 | 6.74 | 275.0 | 285.1 | 6.14 | 275.0 | 725.1 | 8.42 |
| 90.0 | 410.1 | 6.73 | 300.0 | 310.1 | 6.14 | 300.0 | 700.1 | 8.41 |
| 110.0 | 390.1 | 6.79 | 330.0 | 340.1 | 6.21 | 330.0 | 670.1 | 8.44 |
| 130.0 | 370.1 | 6.84 | 360.0 | 370.1 | 6.28 | 360.0 | 640.1 | 8.39 |
| 150.0 | 350.1 | 6.81 | 390.0 | 400.1 | 6.25 | 390.0 | 610.1 | 8.16 |
| 170.0 | 330.1 | 6.80 | 420.0 | 430.1 | 6.29 | 420.0 | 580.1 | 8.41 |
| 190.0 | 310.1 | 6.76 | 450.0 | 460.1 | 6.38 | 450.0 | 550.1 | 8.69 |
| 210.0 | 290.1 | 6.78 | 480.0 | 490.1 | 6.32 | 480.0 | 520.1 | 8.83 |
| 230.0 | 270.1 | 6.84 | 510.0 | 520.1 | 6.33 | 510.0 | 490.1 | 8.82 |
| 250.0 | 250.1 | 6.51 | 540.0 | 550.1 | 6.24 | 540.0 | 460.1 | 8.72 |
| 270.0 | 230.1 | 6.81 | 570.0 | 580.1 | 6.12 | 570.0 | 430.1 | 8.46 |
| 290.0 | 210.1 | 6.75 | 600.0 | 610.1 | 6.05 | 600.0 | 400.1 | 8.52 |
| 310.0 | 190.1 | 6.75 | 630.0 | 640.1 | 6.02 | 630.0 | 370.1 | 9.19 |
| 330.0 | 170.1 | 6.77 | 660.0 | 670.1 | 6.04 | 660.0 | 340.1 | 9.05 |
| 350.0 | 150.1 | 6.74 | 690.0 | 700.1 | 6.01 | 690.0 | 310.1 | 8.79 |
| 370.0 | 130.1 | 6.70 | 720.0 | 730.1 | 6.08 | 720.0 | 280.1 | 9.05 |
| 390.0 | 110.1 | 6.70 | 750.0 | 760.1 | 6.14 | 750.0 | 250.1 | 9.02 |
| 410.0 | 90.1 | 6.64 | 790.0 | 800.1 | 6.23 | 790.0 | 210.1 | 9.07 |
| 430.0 | 70.1 | 6.61 | 840.0 | 850.1 | 6.39 | 840.0 | 160.1 | 9.26 |
| 450.0 | 50.1 | 6.65 | 890.0 | 900.1 | 6.51 | 890.0 | 110.1 | 9.07 |
| 470.0 | 30.1 | 6.77 | 940.0 | 950.1 | 6.83 | 940.0 | 60.1 | 8.93 |
| 490.0 | 10.1 | 6.85 | 990.0 | 1000.1 | 7.23 | 990.0 | 10.1 | 8.65 |

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Frequency Mixer

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Typical Performance Data

| LO (MHz) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | |
|-------------|-------------------------|-------|-------|-------------------------|-------|-------|
| | @LO (dBm) | | | @LO (dBm) | | |
| | +20 | +23 | +26 | +20 | +23 | +26 |
| 10.1 | 85.80 | 85.20 | 85.49 | 62.70 | 61.55 | 60.85 |
| 20.1 | 79.79 | 79.60 | 84.61 | 57.43 | 56.52 | 55.77 |
| 30.1 | 76.70 | 76.48 | 82.15 | 54.40 | 53.61 | 53.00 |
| 40.1 | 74.32 | 74.32 | 75.26 | 52.23 | 51.53 | 51.19 |
| 60.1 | 71.07 | 71.06 | 71.69 | 48.93 | 48.17 | 48.01 |
| 80.1 | 68.95 | 68.93 | 77.82 | 46.17 | 45.53 | 44.92 |
| 100.1 | 67.84 | 67.78 | 85.64 | 44.27 | 43.61 | 42.87 |
| 125.1 | 65.71 | 65.68 | 73.17 | 43.93 | 43.23 | 42.31 |
| 150.1 | 63.17 | 63.10 | 63.53 | 43.66 | 42.77 | 42.32 |
| 175.1 | 62.15 | 62.09 | 74.92 | 42.27 | 41.14 | 39.91 |
| 200.1 | 62.60 | 62.56 | 86.66 | 40.67 | 39.36 | 37.96 |
| 225.1 | 61.19 | 61.15 | 69.65 | 40.73 | 39.45 | 38.08 |
| 250.1 | 61.95 | 61.90 | 62.29 | 40.00 | 39.01 | 38.38 |
| 275.1 | 61.79 | 61.76 | 73.71 | 39.59 | 38.44 | 36.84 |
| 300.1 | 61.80 | 61.75 | 70.54 | 37.46 | 36.49 | 35.06 |
| 325.1 | 59.48 | 59.41 | 64.08 | 36.78 | 35.67 | 34.85 |
| 350.1 | 57.26 | 57.19 | 58.43 | 37.99 | 36.99 | 36.12 |
| 400.1 | 59.83 | 59.79 | 63.59 | 34.91 | 34.01 | 32.78 |
| 450.1 | 61.60 | 61.51 | 67.47 | 33.73 | 33.16 | 33.13 |
| 500.1 | 58.56 | 58.50 | 60.27 | 35.02 | 33.51 | 31.43 |
| 550.1 | 58.31 | 58.23 | 61.10 | 34.90 | 35.01 | 33.26 |
| 600.1 | 52.59 | 52.54 | 54.00 | 31.36 | 31.12 | 30.23 |
| 650.1 | 49.77 | 49.69 | 59.12 | 29.70 | 30.81 | 30.77 |
| 700.1 | 47.85 | 47.77 | 49.96 | 28.19 | 28.94 | 29.10 |
| 750.1 | 46.18 | 46.12 | 53.48 | 28.46 | 28.71 | 29.28 |
| 800.1 | 46.66 | 46.64 | 49.34 | 30.97 | 29.97 | 28.74 |
| 850.1 | 46.49 | 46.46 | 48.53 | 32.62 | 35.82 | 34.61 |
| 900.1 | 47.54 | 47.54 | 53.00 | 32.79 | 37.90 | 34.45 |
| 950.1 | 46.88 | 46.87 | 46.57 | 33.74 | 37.96 | 37.15 |
| 1000.1 | 48.78 | 48.77 | 51.92 | 34.34 | 37.48 | 37.60 |
| 1050.1 | 46.36 | 46.33 | 44.49 | 34.05 | 38.38 | 41.24 |
| 1100.1 | 48.73 | 48.71 | 49.51 | 35.05 | 40.46 | 45.22 |
| 1150.1 | 47.08 | 47.07 | 43.61 | 36.47 | 43.13 | 55.33 |
| 1200.1 | 49.23 | 49.22 | 48.46 | 39.10 | 49.79 | 49.68 |
| 1250.1 | 46.81 | 46.78 | 44.47 | 44.95 | 53.40 | 42.39 |
| 1300.1 | 48.17 | 48.15 | 48.22 | 52.95 | 42.08 | 37.30 |
| 1350.1 | 46.27 | 46.25 | 44.46 | 41.39 | 35.94 | 33.12 |
| 1400.1 | 47.71 | 47.69 | 47.63 | 38.44 | 33.88 | 31.56 |
| 1450.1 | 45.36 | 45.36 | 44.11 | 32.50 | 29.85 | 28.13 |
| 1500.1 | 46.48 | 46.47 | 46.69 | 32.25 | 29.64 | 27.93 |

| RF (IN) (MHz) | LO (MHz) | RF-IF ISOLATION (dB) | | |
|---------------------|-------------|-------------------------|-------|-------|
| | | @LO (dBm) | | |
| | | +20 | +23 | +26 |
| 10.1 | 40.1 | 55.59 | 48.31 | 38.74 |
| 20.1 | 50.1 | 49.41 | 44.46 | 36.67 |
| 30.1 | 60.1 | 46.81 | 44.20 | 38.22 |
| 40.1 | 70.1 | 44.58 | 43.68 | 42.95 |
| 60.1 | 90.1 | 41.74 | 41.66 | 42.22 |
| 80.1 | 110.1 | 39.50 | 39.36 | 39.69 |
| 100.1 | 130.1 | 37.73 | 37.41 | 36.42 |
| 125.1 | 155.1 | 35.93 | 35.65 | 33.28 |
| 150.1 | 180.1 | 35.27 | 35.56 | 35.82 |
| 175.1 | 205.1 | 34.33 | 34.55 | 34.90 |
| 200.1 | 230.1 | 34.07 | 34.05 | 33.36 |
| 225.1 | 255.1 | 33.89 | 34.00 | 33.43 |
| 250.1 | 280.1 | 33.66 | 34.05 | 34.57 |
| 275.1 | 305.1 | 33.36 | 33.88 | 34.43 |
| 300.1 | 330.1 | 33.58 | 33.99 | 33.95 |
| 325.1 | 355.1 | 33.52 | 33.94 | 34.09 |
| 350.1 | 380.1 | 33.78 | 34.22 | 34.41 |
| 400.1 | 430.1 | 34.56 | 35.98 | 37.66 |
| 450.1 | 480.1 | 31.82 | 32.39 | 32.21 |
| 500.1 | 530.1 | 29.86 | 30.47 | 31.36 |
| 550.1 | 580.1 | 27.77 | 27.43 | 26.85 |
| 600.1 | 630.1 | 26.56 | 26.52 | 26.95 |
| 650.1 | 680.1 | 25.62 | 25.18 | 24.64 |
| 700.1 | 730.1 | 25.61 | 25.39 | 25.67 |
| 750.1 | 780.1 | 25.75 | 24.98 | 24.22 |
| 800.1 | 830.1 | 26.25 | 25.92 | 25.72 |
| 850.1 | 880.1 | 26.50 | 26.14 | 24.99 |
| 900.1 | 930.1 | 25.16 | 24.82 | 24.63 |
| 950.1 | 980.1 | 24.00 | 23.75 | 23.25 |
| 1000.1 | 1030.1 | 22.44 | 22.33 | 22.20 |
| 1050.1 | 1080.1 | 21.89 | 21.77 | 21.68 |
| 1100.1 | 1130.1 | 20.82 | 20.66 | 20.54 |
| 1150.1 | 1180.1 | 20.40 | 20.20 | 20.08 |
| 1200.1 | 1230.1 | 19.37 | 19.22 | 19.11 |
| 1250.1 | 1280.1 | 18.92 | 18.82 | 18.80 |
| 1300.1 | 1330.1 | 18.02 | 17.94 | 17.90 |
| 1350.1 | 1380.1 | 17.43 | 17.34 | 17.32 |
| 1400.1 | 1430.1 | 16.87 | 16.81 | 16.78 |
| 1450.1 | 1480.1 | 16.27 | 16.19 | 16.15 |
| 1500.1 | 1530.1 | 15.94 | 15.87 | 15.84 |

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Frequency Mixer

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Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | RF VSWR (:1) | | |
|------------------|-------------|--------------|------|------|
| | | @LO (dBm) | | |
| | | +20 | +23 | +26 |
| 10.1 | 40.1 | 1.06 | 1.10 | 1.15 |
| 20.1 | 50.1 | 1.05 | 1.11 | 1.16 |
| 30.1 | 60.1 | 1.03 | 1.10 | 1.16 |
| 40.1 | 70.1 | 1.05 | 1.12 | 1.18 |
| 60.1 | 90.1 | 1.11 | 1.17 | 1.22 |
| 80.1 | 110.1 | 1.13 | 1.20 | 1.23 |
| 100.1 | 130.1 | 1.13 | 1.20 | 1.24 |
| 125.1 | 155.1 | 1.17 | 1.22 | 1.26 |
| 150.1 | 180.1 | 1.19 | 1.24 | 1.28 |
| 175.1 | 205.1 | 1.20 | 1.26 | 1.30 |
| 200.1 | 230.1 | 1.22 | 1.27 | 1.31 |
| 225.1 | 255.1 | 1.25 | 1.30 | 1.33 |
| 250.1 | 280.1 | 1.25 | 1.30 | 1.33 |
| 275.1 | 305.1 | 1.26 | 1.31 | 1.35 |
| 300.1 | 330.1 | 1.28 | 1.33 | 1.36 |
| 325.1 | 355.1 | 1.29 | 1.33 | 1.37 |
| 350.1 | 380.1 | 1.32 | 1.37 | 1.40 |
| 400.1 | 430.1 | 1.37 | 1.41 | 1.43 |
| 450.1 | 480.1 | 1.31 | 1.35 | 1.38 |
| 500.1 | 530.1 | 1.28 | 1.31 | 1.33 |
| 550.1 | 580.1 | 1.34 | 1.37 | 1.40 |
| 600.1 | 630.1 | 1.55 | 1.57 | 1.59 |
| 650.1 | 680.1 | 1.84 | 1.86 | 1.88 |
| 700.1 | 730.1 | 2.28 | 2.28 | 2.27 |
| 750.1 | 780.1 | 2.95 | 2.87 | 2.83 |
| 800.1 | 830.1 | 3.70 | 3.60 | 3.50 |
| 850.1 | 880.1 | 4.63 | 4.41 | 4.29 |
| 900.1 | 930.1 | 5.36 | 5.10 | 4.98 |
| 950.1 | 980.1 | 5.79 | 5.59 | 5.47 |
| 1000.1 | 1030.1 | 6.35 | 6.17 | 6.03 |
| 1050.1 | 1080.1 | 6.89 | 6.66 | 6.51 |
| 1100.1 | 1130.1 | 7.20 | 7.00 | 6.83 |
| 1150.1 | 1180.1 | 7.53 | 7.28 | 7.11 |
| 1200.1 | 1230.1 | 7.60 | 7.38 | 7.20 |
| 1250.1 | 1280.1 | 8.08 | 7.87 | 7.73 |
| 1300.1 | 1330.1 | 8.43 | 8.20 | 7.97 |
| 1350.1 | 1380.1 | 9.04 | 8.81 | 8.64 |
| 1400.1 | 1430.1 | 8.95 | 8.72 | 8.55 |
| 1450.1 | 1480.1 | 8.77 | 8.51 | 8.39 |
| 1500.1 | 1530.1 | 8.35 | 8.16 | 8.01 |

| LO (MHz) | LO VSWR (:1) | | |
|-------------|--------------|------|------|
| | @LO (dBm) | | |
| | +20 | +23 | +26 |
| 10.1 | 1.68 | 2.58 | 3.86 |
| 20.1 | 1.59 | 2.27 | 2.97 |
| 30.1 | 1.51 | 2.05 | 2.38 |
| 40.1 | 1.47 | 1.96 | 2.21 |
| 60.1 | 1.55 | 2.17 | 2.61 |
| 80.1 | 1.71 | 2.67 | 3.95 |
| 100.1 | 1.66 | 2.54 | 3.72 |
| 125.1 | 1.48 | 1.99 | 2.23 |
| 150.1 | 1.53 | 2.09 | 2.52 |
| 175.1 | 1.71 | 2.66 | 4.03 |
| 200.1 | 1.59 | 2.29 | 2.84 |
| 225.1 | 1.49 | 1.97 | 2.25 |
| 250.1 | 1.64 | 2.33 | 3.10 |
| 275.1 | 1.78 | 2.71 | 3.93 |
| 300.1 | 1.60 | 2.16 | 2.42 |
| 325.1 | 1.56 | 2.06 | 2.43 |
| 350.1 | 1.80 | 2.67 | 3.94 |
| 400.1 | 1.62 | 2.13 | 2.46 |
| 450.1 | 1.91 | 2.79 | 3.85 |
| 500.1 | 1.67 | 2.17 | 2.55 |
| 550.1 | 1.94 | 2.71 | 3.33 |
| 600.1 | 1.77 | 2.31 | 2.70 |
| 650.1 | 2.01 | 2.70 | 3.21 |
| 700.1 | 1.98 | 2.56 | 3.01 |
| 750.1 | 2.17 | 2.82 | 3.33 |
| 800.1 | 2.20 | 2.84 | 3.42 |
| 850.1 | 2.29 | 3.00 | 3.60 |
| 900.1 | 2.21 | 2.83 | 3.35 |
| 950.1 | 2.37 | 3.20 | 4.08 |
| 1000.1 | 2.23 | 2.89 | 3.41 |
| 1050.1 | 2.43 | 3.30 | 4.12 |
| 1100.1 | 2.41 | 3.09 | 3.51 |
| 1150.1 | 2.46 | 3.11 | 3.61 |
| 1200.1 | 2.74 | 3.48 | 4.09 |
| 1250.1 | 2.44 | 2.88 | 3.19 |
| 1300.1 | 3.16 | 4.09 | 5.47 |
| 1350.1 | 2.48 | 2.78 | 3.00 |
| 1400.1 | 3.69 | 4.77 | 6.91 |
| 1450.1 | 2.69 | 2.89 | 3.02 |
| 1500.1 | 4.16 | 5.03 | 6.21 |

| IF (OUT) (MHz) | IF VSWR @LO=1000.1MHz (:1) | | |
|-------------------|----------------------------|------|------|
| | @LO (dBm) | | |
| | +20 | +23 | +26 |
| 0.5 | 1.32 | 1.34 | 1.37 |
| 1.0 | 1.19 | 1.08 | 1.05 |
| 2.0 | 1.28 | 1.15 | 1.09 |
| 5.0 | 1.23 | 1.11 | 1.06 |
| 10.0 | 1.19 | 1.08 | 1.03 |
| 20.0 | 1.19 | 1.08 | 1.02 |
| 30.0 | 1.20 | 1.09 | 1.02 |
| 40.0 | 1.21 | 1.09 | 1.03 |
| 50.0 | 1.22 | 1.10 | 1.04 |
| 70.0 | 1.23 | 1.11 | 1.06 |
| 90.0 | 1.24 | 1.12 | 1.07 |
| 110.0 | 1.25 | 1.14 | 1.09 |
| 130.0 | 1.25 | 1.14 | 1.10 |
| 150.0 | 1.26 | 1.15 | 1.12 |
| 175.0 | 1.28 | 1.17 | 1.13 |
| 200.0 | 1.29 | 1.18 | 1.15 |
| 225.0 | 1.30 | 1.20 | 1.16 |
| 250.0 | 1.30 | 1.20 | 1.17 |
| 275.0 | 1.31 | 1.21 | 1.18 |
| 300.0 | 1.32 | 1.22 | 1.19 |
| 330.0 | 1.31 | 1.22 | 1.20 |
| 360.0 | 1.31 | 1.22 | 1.20 |
| 390.0 | 1.30 | 1.21 | 1.20 |
| 420.0 | 1.28 | 1.20 | 1.19 |
| 450.0 | 1.26 | 1.18 | 1.18 |
| 480.0 | 1.25 | 1.16 | 1.16 |
| 510.0 | 1.22 | 1.13 | 1.15 |
| 540.0 | 1.19 | 1.10 | 1.13 |
| 570.0 | 1.16 | 1.07 | 1.12 |
| 600.0 | 1.14 | 1.03 | 1.12 |
| 630.0 | 1.12 | 1.02 | 1.13 |
| 660.0 | 1.12 | 1.06 | 1.16 |
| 690.0 | 1.13 | 1.11 | 1.20 |
| 720.0 | 1.16 | 1.17 | 1.26 |
| 750.0 | 1.21 | 1.24 | 1.32 |
| 790.0 | 1.28 | 1.34 | 1.43 |
| 840.0 | 1.41 | 1.49 | 1.59 |
| 890.0 | 1.56 | 1.67 | 1.78 |
| 940.0 | 1.74 | 1.87 | 2.00 |
| 990.0 | 1.92 | 2.07 | 2.22 |

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Harmonics Tables

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|------|------|------|------|------|------|------|------|------|------|
| 0 | - | - | 7 | 21 | 12 | 45 | 7 | 37 | 25 | 43 | 41 | 46 |
| 1 | - | 24 | +0 | 41 | 12 | 39 | 35 | 54 | 33 | 59 | 38 | 64 |
| 2 | 94 | 60 | 49 | 60 | 48 | 62 | 64 | 87 | 56 | 76 | 62 | 83 |
| 3 | 105 | 74 | 55 | 71 | 54 | 71 | 56 | 81 | 70 | 88 | 67 | 85 |
| 4 | >123 | 107 | 94 | 100 | 83 | 94 | 80 | 91 | 94 | 102 | 99 | 99 |
| 5 | >122 | 111 | 114 | 105 | 94 | 98 | 91 | 97 | 91 | 111 | 101 | 118 |
| 6 | >122 | >122 | 110 | >125 | 106 | 110 | 99 | 109 | 98 | 110 | 114 | 121 |
| 7 | >120 | >124 | >125 | >124 | >127 | >126 | >120 | >122 | 116 | >121 | 120 | >127 |
| 8 | >122 | 124 | >124 | >126 | >126 | 125 | >124 | >122 | >119 | >120 | >118 | >125 |
| 9 | >121 | >122 | >125 | >125 | >126 | >125 | >125 | >127 | >122 | >121 | >123 | >122 |
| 10 | >120 | >125 | >123 | >125 | >125 | >124 | >124 | >125 | >126 | >122 | >122 | >122 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; .05.00 dBm.
 LO IN: 530.01 MHz; +23.00 dBm
 IF OUT: 29.91 MHz; -6.76 dBm

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|----|-----|----|----|
| 0 | - | - | 16 | 32 | 22 | 58 | 18 | 46 | 37 | 50 | 51 | 56 |
| 1 | - | 24 | +0 | 38 | 12 | 39 | 38 | 52 | 39 | 57 | 42 | 70 |
| 2 | 87 | 50 | 38 | 51 | 37 | 54 | 63 | 72 | 44 | 67 | 56 | 71 |
| 3 | 97 | 55 | 35 | 55 | 35 | 55 | 37 | 64 | 52 | 71 | 50 | 70 |
| 4 | 110 | 84 | 78 | 71 | 59 | 65 | 52 | 65 | 69 | 82 | 66 | 80 |
| 5 | >119 | 83 | 81 | 85 | 64 | 77 | 56 | 71 | 55 | 76 | 67 | 97 |
| 6 | >122 | 88 | 85 | 95 | 89 | 75 | 70 | 72 | 64 | 73 | 79 | 86 |
| 7 | >121 | 94 | 87 | 91 | 93 | 99 | 78 | 79 | 70 | 74 | 70 | 87 |
| 8 | >120 | 105 | 107 | 101 | 105 | 108 | 90 | 86 | 79 | 84 | 73 | 82 |
| 9 | >121 | 109 | 98 | 112 | 95 | 108 | 117 | 96 | 90 | 105 | 86 | 92 |
| 10 | >122 | 112 | 108 | 106 | 113 | 103 | 104 | 107 | 97 | 96 | 97 | 92 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; 10.05.00 dBm.
 LO IN: 530.01 MHz; +23.00 dBm
 IF OUT: 29.91 MHz; 3.25 dBm

- Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
 2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
 3. RF Cal represent the Harmonics level of the RF input signal to the mixer.

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