# Frequency Mixer HJK-ED13554/1

## *Typical Performance Data*

| RF (IN) (MHz) | LO (MHz) | CONVERSION LOSS IF FIXED @IF(OUT)=50.1MHz (dB) @LO (dBm) | | |
|---|---|---|---|---|
| | | +14 | +17 | +19 |
| 120.0 | 170.1 | 13.25 | 13.19 | 13.20 |
| 140.0 | 190.1 | 11.09 | 11.04 | 10.99 |
| 170.0 | 220.1 | 9.43 | 9.33 | 9.32 |
| 190.0 | 240.1 | 8.94 | 8.87 | 8.88 |
| 210.0 | 260.1 | 8.19 | 8.13 | 8.12 |
| 230.0 | 280.1 | 7.76 | 7.69 | 7.66 |
| 260.0 | 310.1 | 7.50 | 7.41 | 7.37 |
| 280.0 | 330.1 | 7.23 | 7.12 | 7.05 |
| 300.0 | 350.1 | 6.94 | 6.81 | 6.76 |
| 320.0 | 370.1 | 6.71 | 6.59 | 6.53 |
| 350.0 | 400.1 | 6.57 | 6.45 | 6.40 |
| 355.0 | 405.1 | 6.51 | 6.40 | 6.35 |
| 360.0 | 410.1 | 6.49 | 6.38 | 6.33 |
| 365.0 | 415.1 | 6.48 | 6.38 | 6.32 |
| 372.5 | 422.6 | 6.46 | 6.36 | 6.30 |
| 377.5 | 427.6 | 6.47 | 6.35 | 6.31 |
| 382.5 | 432.6 | 6.49 | 6.38 | 6.33 |
| 387.5 | 437.6 | 6.48 | 6.38 | 6.31 |
| 395.0 | 445.1 | 6.47 | 6.36 | 6.31 |
| 400.0 | 450.1 | 6.46 | 6.35 | 6.28 |
| 450.0 | 500.1 | 6.57 | 6.44 | 6.38 |
| 500.0 | 550.1 | 6.92 | 6.75 | 6.66 |
| 575.0 | 625.1 | 7.64 | 7.36 | 7.22 |
| 625.0 | 675.1 | 8.01 | 7.69 | 7.51 |
| 675.0 | 725.1 | 8.65 | 8.26 | 8.06 |
| 725.0 | 775.1 | 8.95 | 8.51 | 8.27 |
| 800.0 | 850.1 | 9.46 | 8.94 | 8.69 |
| 850.0 | 900.1 | 9.84 | 9.24 | 8.97 |
| 900.0 | 950.1 | 10.06 | 9.41 | 9.09 |
| 950.0 | 1000.1 | 10.30 | 9.62 | 9.30 |
| 1025.0 | 1075.1 | 10.66 | 9.85 | 9.48 |
| 1075.0 | 1125.1 | 10.91 | 10.03 | 9.62 |
| 1125.0 | 1175.1 | 11.16 | 10.22 | 9.77 |
| 1175.0 | 1225.1 | 11.41 | 10.42 | 9.97 |
| 1250.0 | 1300.1 | 11.66 | 10.61 | 10.08 |
| 1300.0 | 1350.1 | 12.04 | 10.87 | 10.32 |
| 1350.0 | 1400.1 | 12.04 | 10.91 | 10.33 |
| 1400.0 | 1450.1 | 12.38 | 11.16 | 10.53 |
| 1475.0 | 1525.1 | 12.71 | 11.43 | 10.75 |
| 1500.0 | 1550.1 | 12.81 | 11.49 | 10.78 |

| RF (IN) (MHz) | LO (MHz) | IP-3 INPUT (dBm) @LO (dBm) | | |
|---|---|---|---|---|
| | | +14 | +17 | +19 |
| 120.0 | 170.1 | 29.00 | 30.92 | 32.28 |
| 140.0 | 190.1 | 18.56 | 21.83 | 23.82 |
| 170.0 | 220.1 | 18.43 | 20.91 | 22.60 |
| 190.0 | 240.1 | 21.08 | 23.77 | 25.47 |
| 210.0 | 260.1 | 22.46 | 25.08 | 26.86 |
| 230.0 | 280.1 | 21.36 | 23.66 | 25.11 |
| 260.0 | 310.1 | 22.03 | 25.68 | 28.78 |
| 280.0 | 330.1 | 22.27 | 26.13 | 28.44 |
| 300.0 | 350.1 | 23.84 | 27.07 | 29.44 |
| 320.0 | 370.1 | 24.75 | 27.92 | 29.64 |
| 350.0 | 400.1 | 27.62 | 30.90 | 34.75 |
| 355.0 | 405.1 | 28.31 | 31.50 | 33.55 |
| 360.0 | 410.1 | 28.24 | 31.81 | 34.50 |
| 365.0 | 415.1 | 28.67 | 32.54 | 34.65 |
| 372.5 | 422.6 | 29.54 | 32.33 | 37.01 |
| 377.5 | 427.6 | 29.60 | 32.54 | 35.43 |
| 382.5 | 432.6 | 30.53 | 34.47 | 35.62 |
| 387.5 | 437.6 | 30.01 | 33.10 | 36.24 |
| 395.0 | 445.1 | 29.03 | 31.93 | 34.20 |
| 400.0 | 450.1 | 28.81 | 31.40 | 33.68 |
| 450.0 | 500.1 | 28.76 | 30.44 | 31.94 |
| 500.0 | 550.1 | 25.36 | 29.18 | 31.46 |
| 575.0 | 625.1 | 21.19 | 22.81 | 24.95 |
| 625.0 | 675.1 | 19.24 | 20.31 | 21.62 |
| 675.0 | 725.1 | 17.83 | 18.95 | 19.91 |
| 725.0 | 775.1 | 15.95 | 17.50 | 18.64 |
| 800.0 | 850.1 | 13.78 | 15.44 | 16.52 |
| 850.0 | 900.1 | 13.03 | 14.72 | 15.74 |
| 900.0 | 950.1 | 12.41 | 14.08 | 15.09 |
| 950.0 | 1000.1 | 12.13 | 13.69 | 14.64 |
| 1025.0 | 1075.1 | 11.89 | 13.62 | 14.57 |
| 1075.0 | 1125.1 | 11.83 | 13.76 | 14.84 |
| 1125.0 | 1175.1 | 11.62 | 13.70 | 14.79 |
| 1175.0 | 1225.1 | 11.44 | 13.58 | 14.69 |
| 1250.0 | 1300.1 | 11.30 | 13.50 | 14.90 |
| 1300.0 | 1350.1 | 11.12 | 13.42 | 14.87 |
| 1350.0 | 1400.1 | 10.96 | 13.18 | 14.75 |
| 1400.0 | 1450.1 | 10.54 | 12.70 | 14.31 |
| 1475.0 | 1525.1 | 10.24 | 12.32 | 13.95 |
| 1500.0 | 1550.1 | 10.35 | 12.33 | 13.93 |

| RF (IN) (MHz) | LO (MHz) | COMPRESSION @RF IN=+14dBm (dB) @LO (dBm) | | |
|---|---|---|---|---|
| | | +14 | +17 | +19 |
| 120.0 | 170.1 | -0.13 | -0.12 | -0.09 |
| 140.0 | 190.1 | 0.07 | -0.12 | -0.15 |
| 170.0 | 220.1 | 0.88 | 0.60 | 0.47 |
| 190.0 | 240.1 | 0.87 | 0.53 | 0.36 |
| 210.0 | 260.1 | 0.62 | 0.34 | 0.23 |
| 230.0 | 280.1 | 0.58 | 0.27 | 0.18 |
| 260.0 | 310.1 | 0.32 | 0.16 | 0.10 |
| 280.0 | 330.1 | 0.32 | 0.16 | 0.11 |
| 300.0 | 350.1 | 0.22 | 0.11 | 0.06 |
| 320.0 | 370.1 | 0.21 | 0.10 | 0.06 |
| 350.0 | 400.1 | 0.15 | 0.08 | 0.05 |
| 355.0 | 405.1 | 0.16 | 0.08 | 0.05 |
| 360.0 | 410.1 | 0.18 | 0.09 | 0.06 |
| 365.0 | 415.1 | 0.18 | 0.09 | 0.06 |
| 372.5 | 422.6 | 0.16 | 0.08 | 0.06 |
| 377.5 | 427.6 | 0.15 | 0.08 | 0.05 |
| 382.5 | 432.6 | 0.14 | 0.07 | 0.04 |
| 387.5 | 437.6 | 0.15 | 0.06 | 0.05 |
| 395.0 | 445.1 | 0.15 | 0.06 | 0.04 |
| 400.0 | 450.1 | 0.16 | 0.07 | 0.05 |
| 450.0 | 500.1 | 0.24 | 0.11 | 0.07 |
| 500.0 | 550.1 | 0.51 | 0.21 | 0.13 |
| 575.0 | 625.1 | 1.17 | 0.51 | 0.27 |
| 625.0 | 675.1 | 1.75 | 0.79 | 0.44 |
| 675.0 | 725.1 | 2.29 | 1.07 | 0.62 |
| 725.0 | 775.1 | 2.84 | 1.59 | 0.94 |
| 800.0 | 850.1 | 3.53 | 2.17 | 1.45 |
| 850.0 | 900.1 | 4.03 | 2.62 | 1.81 |
| 900.0 | 950.1 | 4.69 | 3.12 | 2.19 |
| 950.0 | 1000.1 | 5.07 | 3.46 | 2.49 |
| 1025.0 | 1075.1 | 5.61 | 4.10 | 3.05 |
| 1075.0 | 1125.1 | 6.11 | 4.42 | 3.37 |
| 1125.0 | 1175.1 | 6.32 | 4.69 | 3.60 |
| 1175.0 | 1225.1 | 6.56 | 4.90 | 3.81 |
| 1250.0 | 1300.1 | 6.77 | 5.27 | 4.10 |
| 1300.0 | 1350.1 | 6.94 | 5.39 | 4.29 |
| 1350.0 | 1400.1 | 6.99 | 5.63 | 4.53 |
| 1400.0 | 1450.1 | 7.13 | 5.74 | 4.62 |
| 1475.0 | 1525.1 | 6.91 | 5.70 | 4.65 |
| 1500.0 | 1550.1 | 6.67 | 5.51 | 4.52 |

## *Typical Performance Data*

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=375.1MHz (dB) |
|---|---|---|
| | | @LO (dBm) |
| | | +17 |
| 195.1 | 180.0 | 11.91 |
| 185.1 | 190.0 | 11.08 |
| 175.1 | 200.0 | 10.30 |
| 165.1 | 210.0 | 9.38 |
| 155.1 | 220.0 | 9.15 |
| 145.1 | 230.0 | 8.78 |
| 135.1 | 240.0 | 8.41 |
| 125.1 | 250.0 | 7.98 |
| 115.1 | 260.0 | 7.61 |
| 105.1 | 270.0 | 7.38 |
| 90.1 | 285.0 | 7.08 |
| 80.1 | 295.0 | 6.75 |
| 70.1 | 305.0 | 6.72 |
| 60.1 | 315.0 | 6.72 |
| 50.1 | 325.0 | 6.65 |
| 40.1 | 335.0 | 6.61 |
| 30.1 | 345.0 | 6.57 |
| 20.1 | 355.0 | 6.54 |
| 10.1 | 385.1 | 6.69 |
| 30.1 | 405.1 | 6.46 |
| 50.1 | 425.1 | 6.37 |
| 70.1 | 445.1 | 6.33 |
| 90.1 | 465.1 | 6.44 |
| 120.1 | 495.1 | 6.54 |
| 140.1 | 515.1 | 6.68 |
| 160.1 | 535.1 | 6.81 |
| 180.1 | 555.1 | 7.05 |
| 200.1 | 575.1 | 7.35 |
| 220.1 | 595.1 | 7.58 |
| 240.1 | 615.1 | 7.90 |
| 260.1 | 635.1 | 8.15 |
| 280.1 | 655.1 | 8.58 |
| 300.1 | 675.1 | 8.98 |
| 330.1 | 705.1 | 9.73 |
| 350.1 | 725.1 | 10.12 |
| 370.1 | 745.1 | 10.60 |
| 390.1 | 765.1 | 11.32 |
| 410.1 | 785.1 | 11.84 |

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=350MHz (dB) |
|---|---|---|
| | | @LO (dBm) |
| | | +17 |
| 10.1 | 360.1 | 6.72 |
| 20.1 | 370.1 | 6.59 |
| 30.1 | 380.1 | 6.52 |
| 40.1 | 390.1 | 6.42 |
| 50.1 | 400.1 | 6.47 |
| 60.1 | 410.1 | 6.41 |
| 70.1 | 420.1 | 6.42 |
| 80.1 | 430.1 | 6.39 |
| 90.1 | 440.1 | 6.37 |
| 100.1 | 450.1 | 6.48 |
| 120.1 | 470.1 | 6.59 |
| 130.1 | 480.1 | 6.57 |
| 140.1 | 490.1 | 6.69 |
| 150.1 | 500.1 | 6.64 |
| 160.1 | 510.1 | 6.77 |
| 170.1 | 520.1 | 6.81 |
| 180.1 | 530.1 | 6.92 |
| 190.1 | 540.1 | 7.09 |
| 200.1 | 550.1 | 7.16 |
| 210.1 | 560.1 | 7.36 |
| 220.1 | 570.1 | 7.36 |
| 230.1 | 580.1 | 7.53 |
| 240.1 | 590.1 | 7.69 |
| 250.1 | 600.1 | 7.85 |
| 260.1 | 610.1 | 7.99 |
| 270.1 | 620.1 | 8.10 |
| 280.1 | 630.1 | 8.41 |
| 290.1 | 640.1 | 8.54 |
| 300.1 | 650.1 | 8.82 |
| 310.1 | 660.1 | 8.89 |
| 330.1 | 680.1 | 9.42 |
| 340.1 | 690.1 | 9.63 |
| 350.1 | 700.1 | 10.00 |
| 360.1 | 710.1 | 10.11 |
| 370.1 | 720.1 | 10.46 |
| 380.1 | 730.1 | 10.68 |
| 400.1 | 750.1 | 11.22 |
| 410.1 | 760.1 | 11.38 |

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=400.1MHz (dB) |
|---|---|---|
| | | @LO (dBm) |
| | | +17 |
| 220.1 | 180.0 | 12.08 |
| 215.1 | 185.0 | 11.68 |
| 210.1 | 190.0 | 11.26 |
| 205.1 | 195.0 | 10.81 |
| 200.1 | 200.0 | 9.46 |
| 190.1 | 210.0 | 9.58 |
| 185.1 | 215.0 | 9.38 |
| 180.1 | 220.0 | 9.14 |
| 175.1 | 225.0 | 8.98 |
| 170.1 | 230.0 | 8.84 |
| 165.1 | 235.0 | 8.64 |
| 160.1 | 240.0 | 8.40 |
| 155.1 | 245.0 | 8.18 |
| 150.1 | 250.0 | 8.00 |
| 145.1 | 255.0 | 7.83 |
| 135.1 | 265.0 | 7.49 |
| 130.1 | 270.0 | 7.42 |
| 125.1 | 275.0 | 7.36 |
| 120.1 | 280.0 | 7.25 |
| 115.1 | 285.0 | 7.12 |
| 110.1 | 290.0 | 7.01 |
| 105.1 | 295.0 | 6.89 |
| 100.1 | 300.0 | 6.85 |
| 95.1 | 305.0 | 6.74 |
| 90.1 | 310.0 | 6.66 |
| 80.1 | 320.0 | 6.53 |
| 75.1 | 325.0 | 6.68 |
| 70.1 | 330.0 | 6.61 |
| 65.1 | 335.0 | 6.58 |
| 60.1 | 340.0 | 6.52 |
| 55.1 | 345.0 | 6.54 |
| 50.1 | 350.0 | 6.55 |
| 45.1 | 355.0 | 6.54 |
| 40.1 | 360.0 | 6.50 |
| 35.1 | 365.0 | 6.48 |
| 25.1 | 375.0 | 6.52 |
| 15.1 | 385.0 | 6.42 |
| 10.1 | 390.0 | 6.59 |

## *Typical Performance Data*

| LO (MHz) | LO-RF ISOLATION (dB) @LO (dBm) | | | LO-IF ISOLATION (dB) @LO (dBm) | | |
|---|---|---|---|---|---|---|
| | +14 | +17 | +19 | +14 | +17 | +19 |
| 170.1 | 50.89 | 51.00 | 51.09 | 46.17 | 46.27 | 46.31 |
| 190.1 | 52.98 | 53.06 | 53.20 | 47.75 | 47.88 | 47.94 |
| 220.1 | 56.03 | 56.91 | 57.40 | 47.62 | 47.79 | 47.83 |
| 240.1 | 55.94 | 56.39 | 56.50 | 46.10 | 46.08 | 46.07 |
| 260.1 | 55.39 | 55.46 | 55.36 | 44.28 | 44.24 | 44.21 |
| 280.1 | 54.71 | 54.83 | 54.80 | 42.91 | 42.83 | 42.79 |
| 310.1 | 54.75 | 54.77 | 54.78 | 41.26 | 41.16 | 41.12 |
| 330.1 | 53.45 | 53.49 | 53.51 | 39.86 | 39.77 | 39.71 |
| 350.1 | 52.62 | 52.62 | 52.62 | 38.34 | 38.26 | 38.21 |
| 370.1 | 51.89 | 51.72 | 51.66 | 36.97 | 36.90 | 36.86 |
| 400.1 | 51.07 | 50.85 | 50.61 | 35.81 | 35.76 | 35.74 |
| 405.1 | 50.82 | 50.60 | 50.37 | 35.57 | 35.53 | 35.54 |
| 410.1 | 50.52 | 50.27 | 50.19 | 35.35 | 35.31 | 35.29 |
| 415.1 | 50.01 | 49.78 | 49.66 | 35.16 | 35.13 | 35.11 |
| 422.6 | 49.51 | 49.26 | 49.02 | 35.01 | 34.99 | 35.07 |
| 427.6 | 49.31 | 49.06 | 48.76 | 34.89 | 34.88 | 34.99 |
| 432.6 | 49.21 | 48.97 | 48.67 | 34.86 | 34.86 | 34.97 |
| 437.6 | 49.32 | 49.05 | 48.78 | 34.97 | 34.99 | 35.09 |
| 445.1 | 49.49 | 49.21 | 48.97 | 35.20 | 35.24 | 35.33 |
| 450.1 | 49.63 | 49.39 | 49.27 | 35.25 | 35.28 | 35.32 |
| 500.1 | 50.29 | 50.05 | 49.96 | 37.07 | 37.20 | 37.28 |
| 550.1 | 55.25 | 54.56 | 54.33 | 39.80 | 39.98 | 40.09 |
| 625.1 | 62.73 | 60.08 | 59.21 | 43.82 | 44.00 | 44.14 |
| 675.1 | 66.58 | 63.97 | 62.47 | 46.22 | 46.35 | 46.48 |
| 725.1 | 71.30 | 72.12 | 69.23 | 49.02 | 49.15 | 49.27 |
| 775.1 | 69.16 | 72.61 | 74.01 | 52.12 | 52.22 | 52.35 |
| 850.1 | 56.45 | 57.19 | 57.38 | 56.71 | 56.70 | 56.71 |
| 900.1 | 52.55 | 53.30 | 53.58 | 58.81 | 58.75 | 58.77 |
| 950.1 | 52.79 | 53.31 | 53.51 | 57.00 | 56.95 | 56.92 |
| 1000.1 | 55.09 | 55.79 | 56.01 | 54.21 | 54.17 | 54.20 |
| 1075.1 | 49.05 | 49.38 | 49.59 | 50.53 | 50.51 | 50.51 |
| 1125.1 | 49.44 | 49.59 | 49.68 | 48.75 | 48.72 | 48.70 |
| 1175.1 | 48.59 | 48.93 | 49.14 | 47.16 | 47.11 | 47.14 |
| 1225.1 | 55.04 | 56.49 | 57.33 | 46.24 | 46.23 | 46.22 |
| 1300.1 | 56.98 | 57.89 | 58.43 | 44.87 | 44.82 | 44.80 |
| 1350.1 | 50.35 | 50.98 | 51.55 | 44.06 | 44.00 | 43.97 |
| 1400.1 | 52.27 | 52.53 | 52.82 | 42.94 | 42.88 | 42.85 |
| 1450.1 | 53.52 | 52.50 | 51.91 | 42.41 | 42.35 | 42.32 |
| 1525.1 | 48.93 | 48.71 | 48.62 | 41.53 | 41.47 | 41.44 |
| 1550.1 | 46.71 | 46.85 | 46.99 | 40.98 | 40.91 | 40.88 |

| RF (IN) (MHz) | LO (MHz) | RF-IF ISOLATION (dB) @LO (dBm) | | |
|---|---|---|---|---|
| | | +14 | +17 | +19 |
| 120.0 | 170.1 | 23.70 | 23.24 | 23.00 |
| 140.0 | 190.1 | 24.96 | 24.33 | 23.99 |
| 170.0 | 220.1 | 23.17 | 22.22 | 21.73 |
| 190.0 | 240.1 | 24.03 | 23.31 | 22.86 |
| 210.0 | 260.1 | 26.39 | 25.75 | 25.41 |
| 230.0 | 280.1 | 28.07 | 27.24 | 26.77 |
| 260.0 | 310.1 | 31.63 | 30.92 | 30.59 |
| 280.0 | 330.1 | 32.99 | 32.31 | 31.88 |
| 300.0 | 350.1 | 35.03 | 34.55 | 34.36 |
| 320.0 | 370.1 | 36.66 | 36.16 | 36.16 |
| 350.0 | 400.1 | 39.72 | 39.48 | 38.23 |
| 355.0 | 405.1 | 40.15 | 40.01 | 38.63 |
| 360.0 | 410.1 | 40.89 | 40.87 | 40.76 |
| 365.0 | 415.1 | 41.05 | 40.82 | 40.71 |
| 372.5 | 422.6 | 41.47 | 41.28 | 39.46 |
| 377.5 | 427.6 | 42.14 | 41.85 | 39.96 |
| 382.5 | 432.6 | 42.70 | 42.47 | 40.70 |
| 387.5 | 437.6 | 43.05 | 42.80 | 41.48 |
| 395.0 | 445.1 | 43.41 | 43.15 | 42.10 |
| 400.0 | 450.1 | 43.99 | 43.73 | 43.48 |
| 450.0 | 500.1 | 51.15 | 50.00 | 49.75 |
| 500.0 | 550.1 | 61.76 | 57.38 | 55.58 |
| 575.0 | 625.1 | 48.37 | 48.60 | 48.53 |
| 625.0 | 675.1 | 46.10 | 46.01 | 46.11 |
| 675.0 | 725.1 | 45.37 | 45.32 | 45.31 |
| 725.0 | 775.1 | 45.27 | 45.07 | 45.16 |
| 800.0 | 850.1 | 44.96 | 44.85 | 44.69 |
| 850.0 | 900.1 | 44.38 | 44.20 | 44.10 |
| 900.0 | 950.1 | 43.90 | 43.80 | 43.75 |
| 950.0 | 1000.1 | 43.34 | 43.28 | 43.31 |
| 1025.0 | 1075.1 | 42.28 | 42.37 | 42.49 |
| 1075.0 | 1125.1 | 41.50 | 41.60 | 41.75 |
| 1125.0 | 1175.1 | 41.21 | 41.36 | 41.53 |
| 1175.0 | 1225.1 | 40.87 | 41.04 | 41.21 |
| 1250.0 | 1300.1 | 40.79 | 40.91 | 41.14 |
| 1300.0 | 1350.1 | 40.72 | 40.82 | 41.04 |
| 1350.0 | 1400.1 | 40.95 | 41.04 | 41.34 |
| 1400.0 | 1450.1 | 41.00 | 41.13 | 41.38 |
| 1475.0 | 1525.1 | 41.55 | 41.84 | 42.14 |
| 1500.0 | 1550.1 | 41.99 | 42.25 | 42.64 |

## *Typical Performance Data*

| RF (IN) (MHz) | LO (MHz) | RF VSWR (:1) @LO (dBm) | | |
|---|---|---|---|---|
| | | +14 | +17 | +19 |
| 120.0 | 170.1 | 1.65 | 1.71 | 1.76 |
| 140.0 | 190.1 | 1.67 | 1.72 | 1.75 |
| 170.0 | 220.1 | 2.49 | 2.75 | 2.93 |
| 190.0 | 240.1 | 2.63 | 2.84 | 2.99 |
| 210.0 | 260.1 | 2.54 | 2.72 | 2.82 |
| 230.0 | 280.1 | 2.31 | 2.45 | 2.55 |
| 260.0 | 310.1 | 2.01 | 2.11 | 2.16 |
| 280.0 | 330.1 | 1.78 | 1.86 | 1.90 |
| 300.0 | 350.1 | 1.59 | 1.65 | 1.68 |
| 320.0 | 370.1 | 1.42 | 1.47 | 1.50 |
| 350.0 | 400.1 | 1.28 | 1.33 | 1.36 |
| 355.0 | 405.1 | 1.27 | 1.32 | 1.35 |
| 360.0 | 410.1 | 1.27 | 1.32 | 1.36 |
| 365.0 | 415.1 | 1.26 | 1.30 | 1.34 |
| 372.5 | 422.6 | 1.27 | 1.32 | 1.35 |
| 377.5 | 427.6 | 1.27 | 1.31 | 1.34 |
| 382.5 | 432.6 | 1.28 | 1.31 | 1.34 |
| 387.5 | 437.6 | 1.30 | 1.33 | 1.36 |
| 395.0 | 445.1 | 1.32 | 1.34 | 1.36 |
| 400.0 | 450.1 | 1.34 | 1.36 | 1.38 |
| 450.0 | 500.1 | 1.59 | 1.59 | 1.60 |
| 500.0 | 550.1 | 1.88 | 1.85 | 1.85 |
| 575.0 | 625.1 | 2.32 | 2.26 | 2.22 |
| 625.0 | 675.1 | 2.63 | 2.56 | 2.52 |
| 675.0 | 725.1 | 2.85 | 2.77 | 2.73 |
| 725.0 | 775.1 | 3.01 | 2.93 | 2.89 |
| 800.0 | 850.1 | 3.00 | 2.92 | 2.89 |
| 850.0 | 900.1 | 3.00 | 2.93 | 2.90 |
| 900.0 | 950.1 | 2.90 | 2.83 | 2.80 |
| 950.0 | 1000.1 | 2.84 | 2.77 | 2.73 |
| 1025.0 | 1075.1 | 2.63 | 2.55 | 2.51 |
| 1075.0 | 1125.1 | 2.50 | 2.43 | 2.39 |
| 1125.0 | 1175.1 | 2.40 | 2.33 | 2.29 |
| 1175.0 | 1225.1 | 2.27 | 2.20 | 2.16 |
| 1250.0 | 1300.1 | 2.09 | 2.02 | 1.97 |
| 1300.0 | 1350.1 | 2.01 | 1.92 | 1.87 |
| 1350.0 | 1400.1 | 1.88 | 1.80 | 1.75 |
| 1400.0 | 1450.1 | 1.77 | 1.70 | 1.65 |
| 1475.0 | 1525.1 | 1.66 | 1.58 | 1.51 |
| 1500.0 | 1550.1 | 1.63 | 1.54 | 1.47 |

| LO (MHz) | LO VSWR (:1) @LO (dBm) | | |
|---|---|---|---|
| | +14 | +17 | +19 |
| 170.1 | 3.33 | 3.33 | 3.33 |
| 190.1 | 3.72 | 3.73 | 3.73 |
| 220.1 | 3.98 | 3.98 | 3.98 |
| 240.1 | 4.01 | 4.01 | 4.01 |
| 260.1 | 3.96 | 3.96 | 3.95 |
| 280.1 | 3.87 | 3.87 | 3.87 |
| 310.1 | 3.60 | 3.60 | 3.59 |
| 330.1 | 3.31 | 3.30 | 3.30 |
| 350.1 | 2.94 | 2.92 | 2.91 |
| 370.1 | 2.50 | 2.49 | 2.48 |
| 400.1 | 1.79 | 1.77 | 1.73 |
| 405.1 | 1.67 | 1.66 | 1.61 |
| 410.1 | 1.56 | 1.54 | 1.53 |
| 415.1 | 1.45 | 1.44 | 1.40 |
| 422.6 | 1.30 | 1.28 | 1.25 |
| 427.6 | 1.20 | 1.19 | 1.15 |
| 432.6 | 1.11 | 1.10 | 1.07 |
| 437.6 | 1.03 | 1.02 | 1.03 |
| 445.1 | 1.09 | 1.10 | 1.14 |
| 450.1 | 1.17 | 1.18 | 1.21 |
| 500.1 | 2.12 | 2.14 | 2.16 |
| 550.1 | 2.91 | 2.93 | 2.94 |
| 625.1 | 3.55 | 3.56 | 3.56 |
| 675.1 | 3.75 | 3.75 | 3.75 |
| 725.1 | 3.82 | 3.82 | 3.82 |
| 775.1 | 3.86 | 3.86 | 3.86 |
| 850.1 | 3.83 | 3.83 | 3.82 |
| 900.1 | 3.79 | 3.79 | 3.79 |
| 950.1 | 3.73 | 3.72 | 3.72 |
| 1000.1 | 3.67 | 3.67 | 3.67 |
| 1075.1 | 3.57 | 3.57 | 3.57 |
| 1125.1 | 3.46 | 3.45 | 3.45 |
| 1175.1 | 3.38 | 3.38 | 3.38 |
| 1225.1 | 3.28 | 3.27 | 3.27 |
| 1300.1 | 3.15 | 3.15 | 3.15 |
| 1350.1 | 3.07 | 3.07 | 3.07 |
| 1400.1 | 2.98 | 2.97 | 2.97 |
| 1450.1 | 2.88 | 2.88 | 2.88 |
| 1525.1 | 2.73 | 2.73 | 2.72 |
| 1550.1 | 2.68 | 2.68 | 2.68 |

| IF (OUT) (MHz) | IF VSWR @LO=450MHz (:1) @LO (dBm) | | |
|---|---|---|---|
| | +14 | +17 | +19 |
| 10.0 | 1.26 | 1.29 | 1.30 |
| 15.0 | 1.26 | 1.29 | 1.31 |
| 25.0 | 1.27 | 1.30 | 1.32 |
| 30.0 | 1.27 | 1.30 | 1.31 |
| 35.0 | 1.28 | 1.30 | 1.31 |
| 45.0 | 1.34 | 1.35 | 1.36 |
| 50.0 | 1.40 | 1.41 | 1.42 |
| 60.0 | 1.50 | 1.51 | 1.52 |
| 65.0 | 1.53 | 1.55 | 1.56 |
| 70.0 | 1.56 | 1.58 | 1.59 |
| 80.0 | 1.63 | 1.64 | 1.64 |
| 85.0 | 1.64 | 1.65 | 1.65 |
| 90.0 | 1.69 | 1.69 | 1.70 |
| 100.0 | 1.80 | 1.80 | 1.80 |
| 110.0 | 1.90 | 1.90 | 1.91 |
| 120.0 | 1.97 | 1.97 | 1.97 |
| 140.0 | 2.24 | 2.24 | 2.24 |
| 150.0 | 2.40 | 2.40 | 2.40 |
| 160.0 | 2.49 | 2.48 | 2.48 |
| 180.0 | 2.71 | 2.69 | 2.68 |
| 190.0 | 2.91 | 2.89 | 2.88 |
| 210.0 | 3.08 | 3.05 | 3.04 |
| 220.0 | 3.22 | 3.18 | 3.16 |
| 230.0 | 3.45 | 3.41 | 3.40 |
| 250.0 | 3.73 | 3.68 | 3.65 |
| 260.0 | 3.81 | 3.75 | 3.71 |
| 270.0 | 4.03 | 3.97 | 3.92 |
| 290.0 | 4.41 | 4.32 | 4.27 |
| 300.0 | 4.45 | 4.36 | 4.27 |
| 310.0 | 4.60 | 4.49 | 4.43 |
| 330.0 | 5.13 | 5.01 | 4.93 |
| 340.0 | 5.19 | 5.04 | 4.96 |
| 350.0 | 5.29 | 5.12 | 5.03 |
| 370.0 | 5.90 | 5.71 | 5.60 |
| 380.0 | 6.10 | 5.90 | 5.78 |
| 400.0 | 6.45 | 6.22 | 6.09 |
| 410.0 | 6.82 | 6.58 | 6.44 |
| 420.0 | 7.10 | 6.86 | 6.71 |
| 430.0 | 7.21 | 6.95 | 6.78 |
| 440.0 | 7.46 | 7.19 | 7.03 |

## *Harmonics Tables*

| RF HARMONICS ORDER | (-dBm) | (-dBc) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | - | - | 8.44 | 39.26 | 45.37 | 34.58 | 44.08 | 47.12 | 39.80 | 45.82 | 43.34 | 51.40 |
| 1 | - | 35.88 | +0 | 44.78 | 29.65 | 51.24 | 31.06 | 62.93 | 34.67 | 41.20 | 45.07 | 38.39 |
| 2 | 70.97 | 79.41 | 64.13 | 66.99 | 71.20 | 89.16 | 100.11 | 82.92 | 85.24 | 76.97 | 76.08 | 73.23 |
| 3 | 98.92 | 102.14 | 84.07 | 100.26 | 82.36 | 94.88 | 94.30 | 103.34 | 85.07 | 98.29 | 80.03 | 90.91 |
| 4 | 117.52 | 96.12 | 98.10 | 104.51 | 93.89 | 93.60 | 109.18 | 105.77 | 101.87 | 113.64 | 117.25 | 102.29 |
| 5 | 103.79 | 100.44 | 112.72 | 113.15 | 93.98 | 93.93 | 93.14 | 117.86 | 101.93 | 103.71 | 99.52 | 111.31 |
| 6 | 106.70 | 92.05 | 107.10 | 116.90 | 96.19 | 102.14 | 92.95 | 98.53 | 105.11 | 98.86 | 130.30 | 97.02 |
| 7 | 106.21 | 98.66 | 103.11 | 113.85 | 104.88 | 103.57 | 100.24 | 95.81 | 98.67 | 129.08 | 98.18 | 98.94 |
| 8 | 106.86 | 100.26 | 107.37 | 102.63 | 96.43 | 105.15 | 103.99 | 96.33 | 94.82 | 97.31 | 104.60 | 101.95 |
| 9 | 112.97 | 101.72 | 96.16 | 105.40 | 108.23 | 100.04 | 103.23 | 94.79 | 92.60 | 104.73 | 93.82 | 94.28 |
| 10 | 111.70 | 102.21 | 96.89 | 95.51 | 109.77 | 107.97 | 103.18 | 100.41 | 105.94 | 89.54 | 92.76 | 102.78 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**LO HARMONICS ORDER**

**Test conditions:** RF IN: 375.00 (MHz); -5.00 dBm
LO IN: 425.00 (MHz); 17.00 dBm
IF OUT: 50.00 (MHz); -11.59 dBm

| RF HARMONICS ORDER | (-dBm) | (-dBc) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | - | - | 17.97 | 49.71 | 55.27 | 43.97 | 56.11 | 56.67 | 47.47 | 53.70 | 53.89 | 62.69 |
| 1 | - | 35.85 | +0 | 44.54 | 29.80 | 51.07 | 31.39 | 61.28 | 35.69 | 41.16 | 50.35 | 38.64 |
| 2 | 60.90 | 69.39 | 53.78 | 57.32 | 61.80 | 79.13 | 91.13 | 72.81 | 74.10 | 68.48 | 64.49 | 66.02 |
| 3 | 90.15 | 99.08 | 64.38 | 92.42 | 66.20 | 76.46 | 83.42 | 89.55 | 67.52 | 82.24 | 61.75 | 75.19 |
| 4 | 123.62 | 112.22 | 112.56 | 96.45 | 82.47 | 95.66 | 86.16 | 119.04 | 99.15 | 112.65 | 91.87 | 94.95 |
| 5 | 109.94 | 113.66 | 103.89 | 110.93 | 92.15 | 100.60 | 89.50 | 112.80 | 112.43 | 108.45 | 102.76 | 103.87 |
| 6 | 109.80 | 113.81 | 112.01 | 112.50 | 102.69 | 112.93 | 102.63 | 102.23 | 119.09 | 117.21 | 117.16 | 108.29 |
| 7 | 112.92 | 108.19 | 102.94 | 110.10 | 112.68 | 104.92 | 105.02 | 101.55 | 97.71 | 108.57 | 112.11 | 105.96 |
| 8 | 123.07 | 105.70 | 108.35 | 106.23 | 105.45 | 117.13 | 105.30 | 114.55 | 116.12 | 104.87 | 108.28 | 121.87 |
| 9 | 112.99 | 105.85 | 112.74 | 106.78 | 115.40 | 113.41 | 112.58 | 110.51 | 114.33 | 122.45 | 103.85 | 107.56 |
| 10 | 128.80 | 115.22 | 99.69 | 110.64 | 114.34 | 105.28 | 116.95 | 116.62 | 116.56 | 97.22 | 101.80 | 128.09 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**LO HARMONICS ORDER**

**Test conditions:** RF IN: 375.00 (MHz); 5.00 dBm
LO IN: 425.00 (MHz); 17.00 dBm
IF OUT: 50.00 (MHz); -1.60 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 represents the Harmonics level of the RF Input Signal to the mixer