

Frequency Mixer

LRMS-1W+

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=+1dBm (dB) | | |
|---------------|----------|--|-------|------|---------------|----------|-----------------|-------|-------|---------------|----------|-------------------------------|------|------|
| | | @LO (dBm) | | | | | @LO (dBm) | | | | | @LO (dBm) | | |
| | | +4 | +7 | +10 | | | +4 | +7 | +10 | | | +4 | +7 | +10 |
| 2.0 | 32.0 | 6.44 | 6.15 | 6.06 | 10.1 | 40.1 | 18.99 | 21.08 | 21.36 | 10.1 | 40.1 | 1.31 | 1.16 | 0.78 |
| 4.0 | 34.0 | 6.24 | 5.93 | 5.84 | 30.1 | 60.1 | 17.10 | 17.52 | 17.80 | 30.1 | 60.1 | 1.32 | 1.08 | 0.89 |
| 5.0 | 35.0 | 6.20 | 5.89 | 5.82 | 50.1 | 80.1 | 18.40 | 17.17 | 17.79 | 50.1 | 80.1 | 1.45 | 1.04 | 0.80 |
| 10.0 | 40.0 | 6.24 | 5.90 | 5.79 | 70.1 | 100.1 | 19.15 | 18.28 | 18.28 | 70.1 | 100.1 | 1.37 | 1.13 | 0.77 |
| 30.1 | 60.1 | 5.99 | 5.66 | 5.50 | 110.1 | 140.1 | 16.26 | 16.71 | 23.72 | 110.1 | 140.1 | 1.33 | 1.04 | 0.76 |
| 50.1 | 80.1 | 6.01 | 5.69 | 5.57 | 130.1 | 160.1 | 16.22 | 16.80 | 29.19 | 130.1 | 160.1 | 1.33 | 1.06 | 0.73 |
| 70.1 | 100.1 | 6.00 | 5.73 | 5.58 | 170.1 | 200.1 | 15.92 | 19.23 | 25.28 | 170.1 | 200.1 | 1.26 | 1.01 | 0.66 |
| 110.1 | 140.1 | 6.11 | 5.78 | 5.68 | 190.1 | 220.1 | 17.24 | 19.70 | 24.84 | 190.1 | 220.1 | 1.30 | 0.93 | 0.70 |
| 170.1 | 200.1 | 6.13 | 5.83 | 5.72 | 230.1 | 260.1 | 17.17 | 19.18 | 18.74 | 230.1 | 260.1 | 1.35 | 0.93 | 0.77 |
| 190.1 | 220.1 | 6.11 | 5.84 | 5.72 | 250.1 | 280.1 | 18.49 | 20.29 | 19.40 | 250.1 | 280.1 | 1.23 | 0.95 | 0.72 |
| 230.1 | 260.1 | 6.07 | 5.84 | 5.74 | 290.1 | 320.1 | 17.01 | 23.23 | 24.68 | 290.1 | 320.1 | 1.25 | 0.84 | 0.71 |
| 250.1 | 280.1 | 6.09 | 5.82 | 5.72 | 310.1 | 340.1 | 24.46 | 20.51 | 21.56 | 310.1 | 340.1 | 1.27 | 1.02 | 0.72 |
| 290.1 | 320.1 | 6.10 | 5.84 | 5.72 | 350.1 | 380.1 | 15.36 | 16.34 | 18.49 | 350.1 | 380.1 | 1.34 | 0.90 | 0.74 |
| 310.1 | 340.1 | 6.09 | 5.84 | 5.75 | 370.1 | 400.1 | 13.41 | 15.40 | 16.38 | 370.1 | 400.1 | 1.27 | 0.90 | 0.65 |
| 350.1 | 380.1 | 6.03 | 5.76 | 5.77 | 410.1 | 440.1 | 16.27 | 14.87 | 18.05 | 410.1 | 440.1 | 1.20 | 0.76 | 0.71 |
| 370.1 | 400.1 | 6.12 | 5.90 | 5.80 | 430.1 | 460.1 | 18.83 | 18.71 | 22.25 | 430.1 | 460.1 | 1.03 | 0.82 | 0.67 |
| 410.1 | 440.1 | 6.25 | 6.01 | 5.87 | 470.1 | 500.1 | 16.22 | 21.29 | 19.12 | 470.1 | 500.1 | 1.18 | 0.90 | 0.73 |
| 430.1 | 460.1 | 6.23 | 5.96 | 5.79 | 490.1 | 520.1 | 16.13 | 19.67 | 19.17 | 490.1 | 520.1 | 1.25 | 0.96 | 0.76 |
| 470.1 | 500.1 | 6.33 | 6.07 | 5.95 | 530.1 | 560.1 | 17.83 | 21.11 | 18.53 | 530.1 | 560.1 | 1.15 | 0.81 | 0.57 |
| 490.1 | 520.1 | 6.33 | 6.08 | 5.96 | 550.1 | 580.1 | 13.87 | 16.63 | 19.08 | 550.1 | 580.1 | 1.23 | 0.90 | 0.63 |
| 550.1 | 580.1 | 6.40 | 6.13 | 6.02 | 590.1 | 620.1 | 12.50 | 14.05 | 16.44 | 590.1 | 620.1 | 1.16 | 0.98 | 0.63 |
| 590.1 | 620.1 | 6.52 | 6.30 | 6.20 | 610.1 | 640.1 | 11.02 | 13.11 | 16.57 | 610.1 | 640.1 | 1.33 | 0.82 | 0.61 |
| 610.1 | 640.1 | 6.60 | 6.39 | 6.26 | 650.1 | 680.1 | 9.26 | 11.29 | 13.80 | 650.1 | 680.1 | 1.63 | 1.17 | 0.98 |
| 650.1 | 680.1 | 6.80 | 6.56 | 6.44 | 670.1 | 700.1 | 8.39 | 10.64 | 14.74 | 670.1 | 700.1 | 1.61 | 1.19 | 0.93 |
| 670.1 | 700.1 | 6.86 | 6.63 | 6.52 | 710.1 | 740.1 | 7.36 | 9.46 | 12.54 | 710.1 | 740.1 | 1.63 | 1.29 | 1.05 |
| 710.1 | 740.1 | 6.97 | 6.76 | 6.60 | 730.1 | 760.1 | 6.98 | 9.16 | 11.98 | 730.1 | 760.1 | 1.72 | 1.49 | 1.15 |
| 730.1 | 760.1 | 7.09 | 6.84 | 6.67 | 770.1 | 800.1 | 6.92 | 9.57 | 13.01 | 770.1 | 800.1 | 1.86 | 1.42 | 1.20 |
| 770.1 | 800.1 | 7.22 | 6.93 | 6.75 | 790.1 | 820.1 | 7.19 | 10.04 | 14.21 | 790.1 | 820.1 | 1.80 | 1.53 | 1.27 |
| 790.1 | 820.1 | 7.25 | 6.97 | 6.77 | 830.1 | 860.1 | 8.20 | 12.22 | 16.11 | 830.1 | 860.1 | 1.94 | 1.62 | 1.43 |
| 830.1 | 860.1 | 7.42 | 7.09 | 6.89 | 850.1 | 880.1 | 9.03 | 12.84 | 20.16 | 850.1 | 880.1 | 2.03 | 1.69 | 1.43 |
| 850.1 | 880.1 | 7.48 | 7.12 | 6.96 | 890.1 | 920.1 | 10.59 | 16.29 | 27.84 | 890.1 | 920.1 | 1.97 | 1.77 | 1.47 |
| 890.1 | 920.1 | 7.63 | 7.20 | 7.01 | 910.1 | 940.1 | 11.48 | 15.51 | 18.06 | 910.1 | 940.1 | 2.11 | 1.73 | 1.62 |
| 910.1 | 940.1 | 7.83 | 7.37 | 7.14 | 950.1 | 980.1 | 13.81 | 20.68 | 19.28 | 950.1 | 980.1 | 1.90 | 1.71 | 1.39 |
| 950.1 | 980.1 | 8.19 | 7.66 | 7.38 | 970.1 | 1000.1 | 14.67 | 20.93 | 19.37 | 970.1 | 1000.1 | 1.80 | 1.64 | 1.28 |
| 970.1 | 1000.1 | 8.50 | 7.85 | 7.57 | 1010.1 | 1040.1 | 12.90 | 15.62 | 16.51 | 1010.1 | 1040.1 | 1.50 | 1.31 | 1.18 |
| 1010.1 | 1040.1 | 8.95 | 8.35 | 8.04 | 1030.1 | 1060.1 | 11.17 | 14.11 | 14.57 | 1030.1 | 1060.1 | 1.37 | 1.07 | 0.91 |
| 1070.1 | 1100.1 | 9.70 | 9.07 | 8.69 | 1070.1 | 1100.1 | 8.87 | 11.15 | 12.80 | 1070.1 | 1100.1 | 1.20 | 1.01 | 0.78 |
| 1090.1 | 1120.1 | 9.92 | 9.25 | 8.91 | 1090.1 | 1120.1 | 8.38 | 10.79 | 12.15 | 1090.1 | 1120.1 | 1.16 | 0.89 | 0.87 |
| 1130.1 | 1160.1 | 10.39 | 9.77 | 9.44 | 1130.1 | 1160.1 | 7.80 | 9.46 | 12.12 | 1130.1 | 1160.1 | 1.06 | 0.94 | 0.81 |
| 1150.1 | 1180.1 | 10.70 | 10.01 | 9.62 | 1150.1 | 1180.1 | 7.94 | 9.66 | 11.57 | 1150.1 | 1180.1 | 1.04 | 0.90 | 0.78 |

REV. X2
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Frequency Mixer

LRMS-1W+

Typical Performance Data

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=375.1MHz (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)=750.1MHz (dB) |
|----------------|----------|--|----------------|----------|---|----------------|----------|--|
| | | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) |
| | | +7 | | | +7 | | | +7 |
| 365.0 | 10.1 | 6.03 | 10.0 | 20.1 | 5.78 | 740.0 | 10.1 | 7.31 |
| 356.1 | 19.0 | 6.02 | 28.7 | 38.8 | 5.64 | 721.3 | 28.8 | 7.30 |
| 347.3 | 27.9 | 5.99 | 47.4 | 57.5 | 5.62 | 702.6 | 47.5 | 7.22 |
| 338.4 | 36.7 | 5.97 | 66.2 | 76.3 | 5.68 | 683.8 | 66.3 | 7.15 |
| 329.5 | 45.6 | 5.94 | 84.9 | 95.0 | 5.69 | 665.1 | 85.0 | 7.09 |
| 320.6 | 54.5 | 5.90 | 103.6 | 113.7 | 5.75 | 646.4 | 103.7 | 7.05 |
| 311.8 | 63.4 | 5.89 | 122.3 | 132.4 | 5.71 | 627.7 | 122.4 | 7.04 |
| 302.9 | 72.2 | 5.87 | 141.0 | 151.1 | 5.75 | 609.0 | 141.1 | 6.99 |
| 294.0 | 81.1 | 5.84 | 159.7 | 169.8 | 5.78 | 590.3 | 159.8 | 6.94 |
| 285.1 | 90.0 | 5.84 | 178.5 | 188.6 | 5.79 | 571.5 | 178.6 | 6.91 |
| 276.3 | 98.9 | 5.83 | 197.2 | 207.3 | 5.81 | 552.8 | 197.3 | 6.94 |
| 267.4 | 107.7 | 5.82 | 215.9 | 226.0 | 5.85 | 534.1 | 216.0 | 6.90 |
| 258.5 | 116.6 | 5.80 | 234.6 | 244.7 | 5.85 | 515.4 | 234.7 | 6.90 |
| 249.6 | 125.5 | 5.82 | 253.3 | 263.4 | 5.89 | 496.7 | 253.4 | 6.86 |
| 240.8 | 134.4 | 5.78 | 272.1 | 282.2 | 5.89 | 477.9 | 272.2 | 6.84 |
| 231.9 | 143.2 | 5.77 | 290.8 | 300.9 | 5.92 | 459.2 | 290.9 | 6.86 |
| 223.0 | 152.1 | 5.77 | 309.5 | 319.6 | 5.93 | 440.5 | 309.6 | 6.96 |
| 214.1 | 161.0 | 5.77 | 328.2 | 338.3 | 5.94 | 421.8 | 328.3 | 6.94 |
| 205.3 | 169.9 | 5.77 | 346.9 | 357.0 | 5.91 | 403.1 | 347.0 | 6.91 |
| 196.4 | 178.7 | 5.75 | 365.6 | 375.7 | 5.94 | 384.4 | 365.7 | 6.91 |
| 187.5 | 187.6 | 5.32 | 384.4 | 394.5 | 5.96 | 365.6 | 384.5 | 6.98 |
| 178.6 | 196.5 | 5.75 | 403.1 | 413.2 | 5.92 | 346.9 | 403.2 | 6.99 |
| 169.8 | 205.4 | 5.74 | 421.8 | 431.9 | 5.98 | 328.2 | 421.9 | 6.99 |
| 160.9 | 214.2 | 5.73 | 440.5 | 450.6 | 6.01 | 309.5 | 440.6 | 6.99 |
| 152.0 | 223.1 | 5.78 | 459.2 | 469.3 | 6.00 | 290.8 | 459.3 | 6.95 |
| 143.1 | 232.0 | 5.77 | 477.9 | 488.0 | 6.06 | 272.1 | 478.0 | 6.94 |
| 134.3 | 240.9 | 5.77 | 496.7 | 506.8 | 6.12 | 253.3 | 496.8 | 6.93 |
| 125.4 | 249.7 | 5.78 | 515.4 | 525.5 | 6.14 | 234.6 | 515.5 | 6.90 |
| 116.5 | 258.6 | 5.80 | 534.1 | 544.2 | 6.17 | 215.9 | 534.2 | 6.88 |
| 107.6 | 267.5 | 5.79 | 552.8 | 562.9 | 6.21 | 197.2 | 552.9 | 6.88 |
| 98.8 | 276.4 | 5.79 | 571.5 | 581.6 | 6.24 | 178.5 | 571.6 | 6.90 |
| 89.9 | 285.2 | 5.77 | 590.3 | 600.4 | 6.20 | 159.7 | 590.4 | 6.93 |
| 81.0 | 294.1 | 5.66 | 609.0 | 619.1 | 6.24 | 141.0 | 609.1 | 6.94 |
| 72.1 | 303.0 | 5.64 | 627.7 | 637.8 | 6.20 | 122.3 | 627.8 | 6.92 |
| 63.3 | 311.9 | 5.77 | 646.4 | 656.5 | 6.16 | 103.6 | 646.5 | 6.90 |
| 54.4 | 320.7 | 5.80 | 665.1 | 675.2 | 6.15 | 84.9 | 665.2 | 6.91 |
| 45.5 | 329.6 | 5.76 | 683.8 | 693.9 | 6.19 | 66.2 | 683.9 | 6.91 |
| 36.6 | 338.5 | 5.80 | 702.6 | 712.7 | 6.20 | 47.4 | 702.7 | 6.86 |
| 18.9 | 356.2 | 5.85 | 721.3 | 731.4 | 6.14 | 28.7 | 721.4 | 6.88 |
| 10.0 | 365.1 | 5.72 | 740.0 | 750.1 | 6.08 | 10.0 | 740.1 | 6.78 |

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Frequency Mixer

LRMS-1W+

Typical Performance Data

| LO (MHz) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | |
|-------------|-------------------------|-------|-------|-------------------------|-------|-------|
| | @LO (dBm) | | | @LO (dBm) | | |
| | +4 | +7 | +10 | +4 | +7 | +10 |
| 2.0 | 76.36 | 77.45 | 78.57 | 61.46 | 62.05 | 62.37 |
| 4.0 | 76.01 | 77.30 | 78.72 | 61.31 | 61.60 | 61.92 |
| 5.0 | 75.18 | 76.89 | 78.20 | 61.28 | 61.49 | 61.60 |
| 10.0 | 71.36 | 74.36 | 77.17 | 60.46 | 60.26 | 59.90 |
| 30.1 | 61.83 | 62.72 | 62.90 | 56.35 | 52.56 | 52.15 |
| 50.1 | 57.32 | 58.63 | 58.28 | 52.53 | 49.13 | 47.92 |
| 70.1 | 54.12 | 54.62 | 54.97 | 49.58 | 46.69 | 45.41 |
| 110.1 | 49.78 | 50.12 | 50.71 | 45.90 | 43.60 | 42.25 |
| 170.1 | 45.44 | 45.97 | 46.55 | 42.64 | 40.71 | 39.21 |
| 190.1 | 44.34 | 44.95 | 45.35 | 41.99 | 40.01 | 38.56 |
| 230.1 | 42.59 | 43.13 | 43.53 | 40.23 | 38.45 | 36.94 |
| 250.1 | 41.72 | 42.10 | 42.35 | 39.41 | 37.82 | 36.44 |
| 290.1 | 40.51 | 41.02 | 41.27 | 37.64 | 36.35 | 35.13 |
| 310.1 | 39.79 | 40.31 | 40.60 | 36.78 | 35.67 | 34.54 |
| 350.1 | 38.21 | 38.52 | 38.76 | 35.13 | 34.39 | 33.44 |
| 370.1 | 37.69 | 37.92 | 38.19 | 34.14 | 33.63 | 32.76 |
| 410.1 | 37.07 | 37.25 | 37.46 | 32.32 | 32.29 | 31.89 |
| 430.1 | 37.05 | 37.27 | 37.37 | 31.18 | 31.20 | 30.98 |
| 470.1 | 36.77 | 36.98 | 36.94 | 29.84 | 29.85 | 29.71 |
| 490.1 | 36.50 | 36.66 | 36.56 | 29.28 | 29.30 | 29.19 |
| 550.1 | 35.15 | 35.11 | 34.93 | 28.08 | 28.12 | 28.01 |
| 590.1 | 34.07 | 34.26 | 34.29 | 27.60 | 27.83 | 27.55 |
| 610.1 | 33.41 | 33.69 | 33.81 | 27.18 | 27.58 | 27.25 |
| 650.1 | 32.57 | 33.04 | 33.36 | 26.26 | 27.10 | 26.87 |
| 670.1 | 32.19 | 32.73 | 33.12 | 25.67 | 26.84 | 26.91 |
| 710.1 | 31.67 | 32.31 | 32.84 | 24.57 | 25.97 | 26.53 |
| 730.1 | 31.65 | 32.37 | 32.97 | 23.99 | 25.47 | 26.18 |
| 770.1 | 31.60 | 32.41 | 33.07 | 23.09 | 24.52 | 25.41 |
| 790.1 | 31.59 | 32.42 | 33.04 | 22.57 | 23.91 | 24.78 |
| 830.1 | 31.40 | 32.12 | 32.51 | 21.64 | 22.83 | 23.64 |
| 850.1 | 31.12 | 31.69 | 31.96 | 21.17 | 22.25 | 23.05 |
| 890.1 | 30.02 | 30.33 | 30.44 | 20.56 | 21.49 | 22.26 |
| 910.1 | 29.51 | 29.73 | 29.79 | 20.11 | 20.98 | 21.75 |
| 950.1 | 28.43 | 28.40 | 28.35 | 19.86 | 20.63 | 21.38 |
| 970.1 | 27.88 | 27.75 | 27.65 | 19.71 | 20.45 | 21.18 |
| 1010.1 | 26.94 | 26.64 | 26.50 | 19.72 | 20.45 | 21.17 |
| 1070.1 | 26.04 | 25.57 | 25.34 | 19.86 | 20.80 | 21.59 |
| 1090.1 | 25.70 | 25.25 | 25.03 | 19.56 | 20.64 | 21.49 |
| 1130.1 | 25.05 | 24.66 | 24.43 | 19.24 | 20.60 | 21.64 |
| 1150.1 | 24.64 | 24.32 | 24.12 | 19.11 | 20.64 | 21.83 |

| RF (IN) (MHz) | LO (MHz) | RF-IF ISOLATION (dB) | | |
|---------------------|-------------|-------------------------|-------|-------|
| | | @LO (dBm) | | |
| | | +4 | +7 | +10 |
| 10.1 | 40.1 | 34.96 | 34.93 | 33.54 |
| 30.1 | 60.1 | 35.76 | 40.36 | 36.20 |
| 50.1 | 80.1 | 34.37 | 33.30 | 33.89 |
| 70.1 | 100.1 | 31.98 | 31.62 | 31.60 |
| 110.1 | 140.1 | 28.28 | 28.34 | 28.40 |
| 130.1 | 160.1 | 27.18 | 27.18 | 27.41 |
| 170.1 | 200.1 | 25.73 | 25.79 | 25.86 |
| 190.1 | 220.1 | 25.36 | 25.48 | 25.50 |
| 230.1 | 260.1 | 24.61 | 24.69 | 24.81 |
| 250.1 | 280.1 | 24.61 | 24.59 | 24.69 |
| 290.1 | 320.1 | 24.92 | 25.03 | 25.16 |
| 310.1 | 340.1 | 24.77 | 25.21 | 25.58 |
| 350.1 | 380.1 | 24.77 | 25.29 | 25.64 |
| 370.1 | 400.1 | 24.81 | 25.14 | 25.29 |
| 410.1 | 440.1 | 25.07 | 25.10 | 25.09 |
| 430.1 | 460.1 | 25.32 | 25.41 | 25.44 |
| 470.1 | 500.1 | 24.09 | 24.59 | 25.05 |
| 490.1 | 520.1 | 22.84 | 23.45 | 24.03 |
| 530.1 | 560.1 | 20.10 | 20.59 | 20.98 |
| 550.1 | 580.1 | 18.81 | 19.18 | 19.55 |
| 590.1 | 620.1 | 16.89 | 17.09 | 17.30 |
| 610.1 | 640.1 | 16.14 | 16.28 | 16.42 |
| 650.1 | 680.1 | 15.05 | 15.08 | 15.16 |
| 670.1 | 700.1 | 14.60 | 14.61 | 14.69 |
| 710.1 | 740.1 | 13.84 | 13.83 | 13.89 |
| 730.1 | 760.1 | 13.54 | 13.49 | 13.54 |
| 770.1 | 800.1 | 13.05 | 13.00 | 13.03 |
| 790.1 | 820.1 | 12.85 | 12.81 | 12.86 |
| 830.1 | 860.1 | 12.53 | 12.54 | 12.68 |
| 850.1 | 880.1 | 12.44 | 12.51 | 12.67 |
| 890.1 | 920.1 | 12.27 | 12.45 | 12.74 |
| 910.1 | 940.1 | 12.20 | 12.44 | 12.77 |
| 950.1 | 980.1 | 11.93 | 12.25 | 12.64 |
| 970.1 | 1000.1 | 11.73 | 12.04 | 12.41 |
| 1010.1 | 1040.1 | 11.42 | 11.63 | 11.84 |
| 1030.1 | 1060.1 | 11.28 | 11.47 | 11.65 |
| 1070.1 | 1100.1 | 11.07 | 11.31 | 11.49 |
| 1090.1 | 1120.1 | 10.94 | 11.20 | 11.38 |
| 1130.1 | 1160.1 | 10.54 | 10.83 | 11.00 |
| 1150.1 | 1180.1 | 10.30 | 10.58 | 10.74 |

Frequency Mixer

LRMS-1W+

Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | RF VSWR (:1) | | |
|------------------|-------------|--------------|------|------|
| | | @LO (dBm) | | |
| | | +4 | +7 | +10 |
| 2.0 | 32.0 | 1.68 | 2.41 | 3.33 |
| 4.0 | 34.0 | 1.64 | 2.36 | 3.28 |
| 5.0 | 35.0 | 1.70 | 2.47 | 3.42 |
| 10.0 | 40.0 | 1.64 | 2.39 | 3.32 |
| 30.1 | 60.1 | 1.02 | 1.06 | 1.09 |
| 50.1 | 80.1 | 1.07 | 1.04 | 1.10 |
| 70.1 | 100.1 | 1.06 | 1.03 | 1.10 |
| 110.1 | 140.1 | 1.04 | 1.11 | 1.15 |
| 130.1 | 160.1 | 1.07 | 1.11 | 1.16 |
| 170.1 | 200.1 | 1.01 | 1.08 | 1.13 |
| 190.1 | 220.1 | 1.06 | 1.12 | 1.17 |
| 230.1 | 260.1 | 1.08 | 1.13 | 1.19 |
| 250.1 | 280.1 | 1.09 | 1.15 | 1.21 |
| 290.1 | 320.1 | 1.14 | 1.21 | 1.26 |
| 310.1 | 340.1 | 1.14 | 1.21 | 1.28 |
| 350.1 | 380.1 | 1.16 | 1.24 | 1.30 |
| 370.1 | 400.1 | 1.17 | 1.25 | 1.30 |
| 410.1 | 440.1 | 1.19 | 1.26 | 1.31 |
| 430.1 | 460.1 | 1.23 | 1.29 | 1.34 |
| 470.1 | 500.1 | 1.29 | 1.37 | 1.42 |
| 490.1 | 520.1 | 1.33 | 1.41 | 1.47 |
| 550.1 | 580.1 | 1.43 | 1.53 | 1.61 |
| 590.1 | 620.1 | 1.46 | 1.56 | 1.63 |
| 610.1 | 640.1 | 1.47 | 1.57 | 1.63 |
| 650.1 | 680.1 | 1.47 | 1.56 | 1.62 |
| 670.1 | 700.1 | 1.46 | 1.54 | 1.59 |
| 710.1 | 740.1 | 1.44 | 1.51 | 1.56 |
| 730.1 | 760.1 | 1.43 | 1.48 | 1.53 |
| 770.1 | 800.1 | 1.43 | 1.47 | 1.50 |
| 790.1 | 820.1 | 1.44 | 1.47 | 1.52 |
| 830.1 | 860.1 | 1.51 | 1.54 | 1.58 |
| 850.1 | 880.1 | 1.58 | 1.61 | 1.64 |
| 890.1 | 920.1 | 1.76 | 1.78 | 1.81 |
| 910.1 | 940.1 | 1.85 | 1.87 | 1.90 |
| 950.1 | 980.1 | 2.10 | 2.09 | 2.10 |
| 970.1 | 1000.1 | 2.22 | 2.21 | 2.21 |
| 1010.1 | 1040.1 | 2.44 | 2.42 | 2.42 |
| 1070.1 | 1100.1 | 2.79 | 2.75 | 2.73 |
| 1090.1 | 1120.1 | 2.86 | 2.82 | 2.80 |
| 1130.1 | 1160.1 | 3.07 | 3.03 | 2.99 |
| 1150.1 | 1180.1 | 3.08 | 3.05 | 3.02 |

| LO (MHz) | LO VSWR (:1) | | |
|-------------|--------------|------|------|
| | @LO (dBm) | | |
| | +4 | +7 | +10 |
| 2.0 | 1.14 | 1.16 | 1.20 |
| 4.0 | 1.06 | 1.10 | 1.15 |
| 5.0 | 1.01 | 1.08 | 1.14 |
| 10.0 | 1.03 | 1.09 | 1.14 |
| 30.1 | 1.86 | 2.71 | 3.73 |
| 50.1 | 1.86 | 2.70 | 3.76 |
| 70.1 | 1.81 | 2.59 | 3.60 |
| 110.1 | 1.82 | 2.59 | 3.54 |
| 130.1 | 1.84 | 2.64 | 3.62 |
| 170.1 | 1.81 | 2.59 | 3.56 |
| 190.1 | 1.83 | 2.61 | 3.57 |
| 230.1 | 1.87 | 2.65 | 3.61 |
| 250.1 | 1.84 | 2.60 | 3.53 |
| 290.1 | 1.87 | 2.61 | 3.53 |
| 310.1 | 1.89 | 2.63 | 3.55 |
| 350.1 | 1.90 | 2.66 | 3.57 |
| 370.1 | 1.94 | 2.71 | 3.63 |
| 410.1 | 1.96 | 2.71 | 3.60 |
| 430.1 | 1.97 | 2.70 | 3.58 |
| 470.1 | 2.01 | 2.73 | 3.61 |
| 490.1 | 1.98 | 2.68 | 3.52 |
| 550.1 | 2.04 | 2.74 | 3.60 |
| 590.1 | 2.04 | 2.72 | 3.53 |
| 610.1 | 2.07 | 2.75 | 3.55 |
| 650.1 | 2.12 | 2.80 | 3.60 |
| 670.1 | 2.09 | 2.73 | 3.50 |
| 710.1 | 2.11 | 2.74 | 3.50 |
| 730.1 | 2.13 | 2.78 | 3.56 |
| 770.1 | 2.12 | 2.73 | 3.47 |
| 790.1 | 2.12 | 2.73 | 3.47 |
| 830.1 | 2.14 | 2.75 | 3.48 |
| 850.1 | 2.12 | 2.69 | 3.40 |
| 890.1 | 2.16 | 2.72 | 3.40 |
| 910.1 | 2.18 | 2.74 | 3.43 |
| 950.1 | 2.22 | 2.76 | 3.42 |
| 970.1 | 2.26 | 2.80 | 3.45 |
| 1010.1 | 2.31 | 2.82 | 3.47 |
| 1070.1 | 2.35 | 2.82 | 3.43 |
| 1090.1 | 2.35 | 2.81 | 3.41 |
| 1130.1 | 2.39 | 2.83 | 3.42 |
| 1150.1 | 2.41 | 2.86 | 3.46 |

| IF (OUT) (MHz) | IF VSWR @LO=750.1MHz (:1) | | |
|-------------------|---------------------------|------|------|
| | @LO (dBm) | | |
| | +4 | +7 | +10 |
| 5.0 | 1.39 | 1.24 | 1.14 |
| 10.0 | 1.40 | 1.25 | 1.15 |
| 28.8 | 1.92 | 1.69 | 1.48 |
| 47.5 | 1.92 | 1.65 | 1.43 |
| 66.3 | 1.98 | 1.72 | 1.51 |
| 85.0 | 1.97 | 1.71 | 1.49 |
| 103.7 | 1.92 | 1.70 | 1.51 |
| 122.4 | 1.92 | 1.72 | 1.53 |
| 141.1 | 1.95 | 1.71 | 1.54 |
| 159.8 | 2.03 | 1.79 | 1.58 |
| 178.6 | 2.01 | 1.77 | 1.60 |
| 197.3 | 1.99 | 1.78 | 1.61 |
| 216.0 | 1.96 | 1.77 | 1.62 |
| 234.7 | 1.95 | 1.77 | 1.60 |
| 253.4 | 1.96 | 1.77 | 1.62 |
| 272.2 | 1.96 | 1.78 | 1.64 |
| 290.9 | 1.92 | 1.77 | 1.65 |
| 309.6 | 1.91 | 1.78 | 1.67 |
| 328.3 | 1.95 | 1.81 | 1.70 |
| 347.0 | 1.95 | 1.83 | 1.72 |
| 365.7 | 1.93 | 1.83 | 1.72 |
| 384.5 | 1.93 | 1.84 | 1.76 |
| 403.2 | 1.93 | 1.85 | 1.78 |
| 421.9 | 1.93 | 1.86 | 1.78 |
| 440.6 | 1.93 | 1.87 | 1.81 |
| 459.3 | 1.93 | 1.88 | 1.83 |
| 478.0 | 1.93 | 1.88 | 1.84 |
| 496.8 | 1.93 | 1.89 | 1.87 |
| 515.5 | 1.93 | 1.90 | 1.88 |
| 534.2 | 1.93 | 1.92 | 1.90 |
| 552.9 | 1.95 | 1.93 | 1.93 |
| 571.6 | 1.95 | 1.95 | 1.95 |
| 590.4 | 1.97 | 1.96 | 1.97 |
| 609.1 | 1.97 | 1.97 | 1.98 |
| 627.8 | 1.98 | 1.97 | 1.99 |
| 646.5 | 2.00 | 1.99 | 2.00 |
| 665.2 | 2.01 | 2.00 | 2.02 |
| 683.9 | 2.01 | 2.00 | 2.02 |
| 702.7 | 2.02 | 2.00 | 2.00 |
| 721.4 | 2.01 | 1.99 | 2.01 |
| 740.1 | 2.01 | 1.98 | 2.01 |

Harmonics Tables

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | 6 | 23 | 7 | 26 | 13 | 27 | 26 | 39 | 41 | 42 |
| 1 | - | 19 | 0 | 26 | 11 | 32 | 18 | 37 | 40 | 41 | 48 | 37 |
| 2 | 112 | 61 | 47 | 56 | 46 | 64 | 45 | 54 | 50 | 70 | 60 | 63 |
| 3 | 110 | 69 | 61 | 69 | 63 | 68 | 58 | 72 | 66 | 73 | 82 | 74 |
| 4 | 126 | 90 | 89 | 88 | 92 | 84 | 94 | 92 | 83 | 88 | 93 | 94 |
| 5 | 114 | 105 | 93 | 95 | 96 | 94 | 83 | 101 | 94 | 101 | 97 | 113 |
| 6 | 120 | 110 | 100 | 106 | 101 | 97 | 87 | 96 | 105 | 96 | 104 | 105 |
| 7 | 115 | 113 | 116 | 126 | 104 | 96 | 105 | 89 | 105 | 97 | 93 | 98 |
| 8 | 112 | 119 | 113 | 106 | 110 | 110 | 102 | 89 | 84 | 87 | 98 | 95 |
| 9 | 112 | 104 | 105 | 118 | 110 | 106 | 104 | 109 | 96 | 91 | 99 | 98 |
| 10 | 114 | 119 | 107 | 125 | 116 | 99 | 112 | 101 | 103 | 96 | 83 | 89 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 370.1 MHz; -14.00 dBm.
 LO IN: 400.01 MHz; +7.00 dBm
 IF OUT: 29.91 MHz; -20.05 dBm

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|----|----|----|----|----|-----|
| 0 | - | - | 15 | 32 | 19 | 43 | 25 | 40 | 39 | 52 | 60 | 63 |
| 1 | - | 19 | 0 | 28 | 12 | 32 | 19 | 41 | 41 | 47 | 52 | 45 |
| 2 | 112 | 53 | 39 | 52 | 39 | 56 | 40 | 50 | 45 | 55 | 52 | 66 |
| 3 | 121 | 56 | 44 | 54 | 46 | 51 | 40 | 67 | 44 | 54 | 61 | 57 |
| 4 | 114 | 62 | 69 | 63 | 58 | 63 | 56 | 77 | 50 | 62 | 60 | 77 |
| 5 | 113 | 83 | 64 | 66 | 59 | 71 | 56 | 79 | 56 | 67 | 62 | 76 |
| 6 | 123 | 95 | 73 | 81 | 77 | 81 | 77 | 83 | 72 | 85 | 90 | 81 |
| 7 | 119 | 81 | 90 | 85 | 72 | 76 | 73 | 79 | 75 | 78 | 70 | 85 |
| 8 | 113 | 98 | 109 | 97 | 91 | 90 | 93 | 93 | 98 | 89 | 82 | 94 |
| 9 | 109 | 99 | 101 | 96 | 100 | 93 | 84 | 86 | 84 | 86 | 84 | 90 |
| 10 | 113 | 99 | 103 | 108 | 112 | 116 | 96 | 94 | 94 | 98 | 97 | 102 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 370.1 MHz; -4.00 dBm.
 LO IN: 400.01 MHz; +7.00 dBm
 IF OUT: 29.91 MHz; -10.06 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.

REV. X2
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 100817
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