

Frequency Mixer

SIMA-5

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 | 7.47 | 7.18 | 7.04 | 10.0 | 40.0 | 18.54 | 18.77 | 20.18 | 10.0 | 40.0 | 0.33 | 0.19 | 0.12 |
| 4.0 | 34.0 | 7.12 | 6.83 | 6.69 | 50.2 | 80.2 | 17.55 | 16.88 | 15.27 | 50.2 | 80.2 | 0.35 | 0.20 | 0.12 |
| 5.0 | 35.0 | 7.06 | 6.76 | 6.63 | 90.5 | 120.5 | 15.04 | 14.32 | 15.32 | 90.5 | 120.5 | 0.31 | 0.19 | 0.11 |
| 10.0 | 40.0 | 6.90 | 6.63 | 6.51 | 130.7 | 160.7 | 12.94 | 14.71 | 17.76 | 130.7 | 160.7 | 0.30 | 0.18 | 0.11 |
| 50.2 | 80.2 | 6.92 | 6.53 | 6.38 | 170.9 | 200.9 | 12.43 | 14.42 | 17.29 | 170.9 | 200.9 | 0.26 | 0.15 | 0.11 |
| 90.5 | 120.5 | 6.93 | 6.60 | 6.41 | 211.1 | 241.1 | 12.53 | 15.61 | 18.98 | 211.1 | 241.1 | 0.28 | 0.23 | 0.14 |
| 130.7 | 160.7 | 7.00 | 6.62 | 6.46 | 251.4 | 281.4 | 13.96 | 17.70 | 24.49 | 251.4 | 281.4 | 0.29 | 0.19 | 0.16 |
| 170.9 | 200.9 | 7.11 | 6.69 | 6.51 | 291.6 | 321.6 | 14.21 | 18.22 | 20.53 | 291.6 | 321.6 | 0.35 | 0.25 | 0.18 |
| 211.1 | 241.1 | 7.18 | 6.72 | 6.52 | 331.8 | 361.8 | 13.61 | 18.84 | 16.99 | 331.8 | 361.8 | 0.39 | 0.30 | 0.23 |
| 251.4 | 281.4 | 7.20 | 6.77 | 6.55 | 372.0 | 402.0 | 15.76 | 18.20 | 17.12 | 372.0 | 402.0 | 0.47 | 0.36 | 0.25 |
| 291.6 | 321.6 | 7.27 | 6.81 | 6.57 | 412.3 | 442.3 | 14.52 | 16.25 | 20.32 | 412.3 | 442.3 | 0.56 | 0.45 | 0.36 |
| 372.0 | 402.0 | 7.33 | 6.85 | 6.56 | 452.5 | 482.5 | 12.23 | 15.93 | 21.65 | 452.5 | 482.5 | 0.54 | 0.49 | 0.37 |
| 412.3 | 442.3 | 7.51 | 6.91 | 6.64 | 492.7 | 522.7 | 12.18 | 15.27 | 17.94 | 492.7 | 522.7 | 0.65 | 0.61 | 0.49 |
| 452.5 | 482.5 | 7.73 | 7.06 | 6.75 | 533.0 | 563.0 | 11.61 | 12.83 | 15.31 | 533.0 | 563.0 | 0.70 | 0.66 | 0.58 |
| 492.7 | 522.7 | 7.75 | 7.15 | 6.79 | 573.2 | 603.2 | 10.20 | 11.62 | 12.32 | 573.2 | 603.2 | 0.80 | 0.75 | 0.69 |
| 533.0 | 563.0 | 7.94 | 7.23 | 6.85 | 613.4 | 643.4 | 9.48 | 10.32 | 11.34 | 613.4 | 643.4 | 1.03 | 0.92 | 0.80 |
| 573.2 | 603.2 | 7.94 | 7.26 | 6.86 | 653.6 | 683.6 | 8.36 | 10.21 | 11.01 | 653.6 | 683.6 | 1.12 | 0.94 | 0.77 |
| 613.4 | 643.4 | 7.67 | 7.05 | 6.71 | 693.9 | 723.9 | 7.99 | 9.53 | 10.78 | 693.9 | 723.9 | 1.22 | 1.00 | 0.80 |
| 653.6 | 683.6 | 7.49 | 6.90 | 6.60 | 734.1 | 764.1 | 7.56 | 9.11 | 10.51 | 734.1 | 764.1 | 1.11 | 0.86 | 0.68 |
| 734.1 | 764.1 | 7.27 | 6.75 | 6.42 | 794.4 | 824.4 | 7.56 | 9.01 | 10.57 | 794.4 | 824.4 | 0.82 | 0.61 | 0.48 |
| 794.4 | 824.4 | 7.11 | 6.66 | 6.37 | 834.7 | 864.7 | 7.50 | 8.87 | 10.33 | 834.7 | 864.7 | 0.82 | 0.61 | 0.48 |
| 834.7 | 864.7 | 7.10 | 6.65 | 6.43 | 895.0 | 925.0 | 8.70 | 8.96 | 10.58 | 895.0 | 925.0 | 0.68 | 0.50 | 0.40 |
| 895.0 | 925.0 | 7.07 | 6.70 | 6.57 | 935.2 | 965.2 | 9.68 | 10.20 | 10.88 | 935.2 | 965.2 | 0.55 | 0.36 | 0.29 |
| 935.2 | 965.2 | 7.04 | 6.75 | 6.62 | 995.6 | 1025.6 | 9.65 | 10.87 | 12.28 | 995.6 | 1025.6 | 0.49 | 0.30 | 0.24 |
| 995.6 | 1025.6 | 7.16 | 6.78 | 6.62 | 1035.8 | 1065.8 | 9.65 | 11.27 | 12.59 | 1035.8 | 1065.8 | 0.50 | 0.31 | 0.25 |
| 1035.8 | 1065.8 | 7.25 | 6.86 | 6.68 | 1096.1 | 1126.1 | 9.56 | 11.69 | 13.70 | 1096.1 | 1126.1 | 0.42 | 0.24 | 0.19 |
| 1096.1 | 1126.1 | 7.43 | 7.00 | 6.85 | 1136.4 | 1166.4 | 10.66 | 12.01 | 14.47 | 1136.4 | 1166.4 | 0.34 | 0.20 | 0.15 |
| 1136.4 | 1166.4 | 7.52 | 7.12 | 6.97 | 1196.7 | 1226.7 | 12.12 | 13.58 | 14.83 | 1196.7 | 1226.7 | 0.30 | 0.16 | 0.12 |
| 1196.7 | 1226.7 | 7.65 | 7.30 | 7.19 | 1236.9 | 1266.9 | 13.18 | 14.16 | 16.23 | 1236.9 | 1266.9 | 0.38 | 0.17 | 0.13 |
| 1236.9 | 1266.9 | 7.84 | 7.46 | 7.34 | 1297.3 | 1327.3 | 15.86 | 16.63 | 16.27 | 1297.3 | 1327.3 | 0.32 | 0.17 | 0.13 |
| 1297.3 | 1327.3 | 7.90 | 7.58 | 7.51 | 1337.5 | 1367.5 | 16.86 | 15.81 | 19.08 | 1337.5 | 1367.5 | 0.31 | 0.16 | 0.11 |
| 1337.5 | 1367.5 | 8.01 | 7.64 | 7.51 | 1397.8 | 1427.8 | 15.34 | 22.67 | 17.66 | 1397.8 | 1427.8 | 0.32 | 0.17 | 0.12 |
| 1397.8 | 1427.8 | 8.12 | 7.74 | 7.56 | 1438.1 | 1468.1 | 13.83 | 21.13 | 16.36 | 1438.1 | 1468.1 | 0.36 | 0.20 | 0.14 |
| 1498.4 | 1528.4 | 8.53 | 7.95 | 7.73 | 1498.4 | 1528.4 | 13.47 | 20.50 | 15.96 | 1498.4 | 1528.4 | 0.39 | 0.24 | 0.17 |
| 1538.6 | 1568.6 | 8.70 | 8.08 | 7.81 | 1538.6 | 1568.6 | 13.90 | 24.21 | 17.76 | 1538.6 | 1568.6 | 0.33 | 0.22 | 0.16 |
| 1599.0 | 1629.0 | 9.12 | 8.42 | 8.08 | 1599.0 | 1629.0 | 13.89 | 24.20 | 19.26 | 1599.0 | 1629.0 | 0.26 | 0.22 | 0.18 |
| 1639.2 | 1669.2 | 9.41 | 8.70 | 8.37 | 1639.2 | 1669.2 | 15.86 | 18.98 | 20.86 | 1639.2 | 1669.2 | 0.22 | 0.19 | 0.18 |
| 1699.5 | 1729.5 | 9.67 | 9.08 | 8.78 | 1699.5 | 1729.5 | 19.25 | 17.93 | 16.79 | 1699.5 | 1729.5 | 0.12 | 0.09 | 0.10 |
| 1739.8 | 1769.8 | 9.83 | 9.26 | 8.98 | 1739.8 | 1769.8 | 19.04 | 20.61 | 16.97 | 1739.8 | 1769.8 | 0.09 | 0.05 | 0.08 |
| 1800.1 | 1830.1 | 10.13 | 9.59 | 9.36 | 1800.1 | 1830.1 | 19.58 | 18.85 | 17.75 | 1800.1 | 1830.1 | 0.06 | 0.06 | 0.08 |

REV. X2
SIMA-5
100920
Page 1 of 5



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Frequency Mixer

SIMA-5

Typical Performance Data

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=750.1MHz (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)=1500.1MHz (dB) |
|----------------|----------|--|----------------|----------|---|----------------|----------|---|
| | | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) |
| | | +7 | | | +7 | | | +7 |
| 740.0 | 10.1 | 7.26 | 10.0 | 20.1 | 6.54 | 1000.0 | 500.1 | 8.91 |
| 721.3 | 28.8 | 7.30 | 30.2 | 40.3 | 6.52 | 979.8 | 520.3 | 8.96 |
| 702.6 | 47.5 | 7.29 | 50.4 | 60.5 | 6.62 | 959.6 | 540.5 | 8.93 |
| 683.8 | 66.3 | 7.30 | 70.6 | 80.7 | 6.65 | 939.4 | 560.7 | 8.94 |
| 665.1 | 85.0 | 7.32 | 90.8 | 100.9 | 6.67 | 919.2 | 580.9 | 8.89 |
| 646.4 | 103.7 | 7.32 | 111.0 | 121.1 | 6.70 | 899.0 | 601.1 | 8.81 |
| 627.7 | 122.4 | 7.33 | 131.2 | 141.3 | 6.66 | 878.8 | 621.3 | 8.82 |
| 609.0 | 141.1 | 7.24 | 151.4 | 161.5 | 6.77 | 858.6 | 641.5 | 8.88 |
| 590.3 | 159.8 | 7.30 | 171.6 | 181.7 | 6.79 | 838.4 | 661.7 | 8.78 |
| 571.5 | 178.6 | 7.26 | 191.8 | 201.9 | 6.79 | 818.2 | 681.9 | 8.73 |
| 552.8 | 197.3 | 7.32 | 212.0 | 222.1 | 6.79 | 798.0 | 702.1 | 8.67 |
| 534.1 | 216.0 | 7.22 | 232.2 | 242.3 | 6.84 | 777.8 | 722.3 | 8.59 |
| 515.4 | 234.7 | 7.16 | 252.4 | 262.5 | 6.91 | 757.6 | 742.5 | 8.57 |
| 496.7 | 253.4 | 7.24 | 272.7 | 282.8 | 6.92 | 737.3 | 762.8 | 8.44 |
| 477.9 | 272.2 | 7.20 | 292.9 | 303.0 | 6.93 | 717.1 | 783.0 | 8.37 |
| 459.2 | 290.9 | 7.27 | 313.1 | 323.2 | 6.95 | 696.9 | 803.2 | 8.24 |
| 440.5 | 309.6 | 7.17 | 333.3 | 343.4 | 6.96 | 676.7 | 823.4 | 8.12 |
| 421.8 | 328.3 | 7.22 | 353.5 | 363.6 | 7.01 | 656.5 | 843.6 | 8.04 |
| 403.1 | 347.0 | 7.23 | 373.7 | 383.8 | 7.03 | 636.3 | 863.8 | 7.97 |
| 384.4 | 365.7 | 7.19 | 393.9 | 404.0 | 7.04 | 616.1 | 884.0 | 7.94 |
| 365.6 | 384.5 | 7.17 | 434.3 | 444.4 | 7.09 | 575.7 | 924.4 | 7.93 |
| 346.9 | 403.2 | 7.15 | 454.5 | 464.6 | 7.17 | 555.5 | 944.6 | 7.96 |
| 328.2 | 421.9 | 7.24 | 494.9 | 505.0 | 7.10 | 515.1 | 985.0 | 8.00 |
| 309.5 | 440.6 | 7.21 | 515.1 | 525.2 | 7.20 | 494.9 | 1005.2 | 8.07 |
| 290.8 | 459.3 | 7.12 | 555.5 | 565.6 | 7.22 | 454.5 | 1045.6 | 8.15 |
| 272.1 | 478.0 | 7.13 | 575.7 | 585.8 | 7.25 | 434.3 | 1065.8 | 8.23 |
| 253.3 | 496.8 | 7.16 | 616.1 | 626.2 | 7.25 | 393.9 | 1106.2 | 8.23 |
| 234.6 | 515.5 | 7.11 | 636.3 | 646.4 | 7.24 | 373.7 | 1126.4 | 8.23 |
| 215.9 | 534.2 | 7.01 | 676.7 | 686.8 | 7.22 | 333.3 | 1166.8 | 8.22 |
| 197.2 | 552.9 | 6.90 | 696.9 | 707.0 | 7.27 | 313.1 | 1187.0 | 8.18 |
| 178.5 | 571.6 | 6.92 | 737.3 | 747.4 | 7.37 | 272.7 | 1227.4 | 8.16 |
| 159.7 | 590.4 | 6.81 | 757.6 | 767.7 | 7.40 | 252.4 | 1247.7 | 8.15 |
| 141.0 | 609.1 | 6.72 | 798.0 | 808.1 | 7.51 | 212.0 | 1288.1 | 8.10 |
| 122.3 | 627.8 | 6.71 | 818.2 | 828.3 | 7.56 | 191.8 | 1308.3 | 8.10 |
| 103.6 | 646.5 | 6.66 | 858.6 | 868.7 | 7.70 | 151.4 | 1348.7 | 8.09 |
| 84.9 | 665.2 | 6.68 | 878.8 | 888.9 | 7.81 | 131.2 | 1368.9 | 8.04 |
| 66.2 | 683.9 | 6.58 | 919.2 | 929.3 | 8.10 | 90.8 | 1409.3 | 8.05 |
| 47.4 | 702.7 | 6.66 | 939.4 | 949.5 | 8.25 | 70.6 | 1429.5 | 8.04 |
| 28.7 | 721.4 | 6.62 | 979.8 | 989.9 | 8.66 | 30.2 | 1469.9 | 8.04 |
| 10.0 | 740.1 | 6.62 | 1000.0 | 1010.1 | 8.84 | 10.0 | 1490.1 | 8.00 |

REV. X2
SIMA-5
100920
Page 2 of 5



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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 | 66.17 | 71.44 | 80.12 | 71.67 | 75.64 | 80.12 |
| 4.0 | 65.57 | 70.85 | 78.74 | 71.47 | 75.65 | 79.24 |
| 5.0 | 65.37 | 70.64 | 77.71 | 71.67 | 75.44 | 78.61 |
| 10.0 | 64.98 | 69.77 | 74.75 | 71.48 | 74.07 | 74.55 |
| 50.2 | 62.87 | 61.22 | 60.16 | 54.02 | 56.95 | 60.15 |
| 90.5 | 58.70 | 56.99 | 55.91 | 54.54 | 57.42 | 58.93 |
| 130.7 | 55.40 | 54.29 | 53.30 | 55.82 | 57.17 | 57.41 |
| 170.9 | 54.16 | 52.41 | 51.46 | 56.30 | 56.55 | 55.73 |
| 211.1 | 52.13 | 51.07 | 49.81 | 56.12 | 54.60 | 52.92 |
| 251.4 | 51.33 | 49.91 | 48.75 | 54.18 | 52.05 | 50.18 |
| 291.6 | 50.69 | 49.00 | 47.91 | 52.03 | 49.73 | 48.00 |
| 372.0 | 48.94 | 47.31 | 46.11 | 45.63 | 44.04 | 42.71 |
| 412.3 | 49.21 | 47.31 | 45.94 | 44.26 | 42.46 | 40.98 |
| 452.5 | 48.83 | 47.14 | 45.74 | 42.74 | 40.99 | 39.52 |
| 492.7 | 47.99 | 46.68 | 45.49 | 40.85 | 39.10 | 37.75 |
| 533.0 | 46.64 | 45.82 | 45.02 | 38.62 | 37.18 | 35.95 |
| 573.2 | 44.96 | 44.32 | 43.81 | 37.46 | 35.96 | 34.76 |
| 613.4 | 43.50 | 42.79 | 42.16 | 35.72 | 34.40 | 33.30 |
| 653.6 | 42.45 | 41.59 | 40.71 | 34.43 | 33.19 | 32.10 |
| 734.1 | 40.73 | 39.75 | 38.86 | 31.65 | 30.54 | 29.71 |
| 794.4 | 39.70 | 38.76 | 37.88 | 29.85 | 28.92 | 28.25 |
| 834.7 | 38.96 | 38.04 | 37.00 | 28.83 | 27.89 | 27.08 |
| 895.0 | 38.12 | 37.03 | 36.06 | 27.22 | 26.31 | 25.65 |
| 935.2 | 37.79 | 36.73 | 35.57 | 26.45 | 25.53 | 24.80 |
| 995.6 | 37.26 | 36.23 | 35.10 | 25.22 | 24.27 | 23.68 |
| 1035.8 | 36.82 | 35.80 | 34.83 | 24.63 | 23.70 | 23.21 |
| 1096.1 | 36.47 | 35.33 | 34.38 | 23.59 | 22.88 | 22.42 |
| 1136.4 | 36.56 | 35.39 | 34.37 | 23.20 | 22.59 | 22.08 |
| 1196.7 | 36.31 | 35.14 | 34.19 | 22.71 | 22.20 | 21.75 |
| 1236.9 | 36.32 | 35.07 | 34.08 | 22.53 | 21.91 | 21.44 |
| 1297.3 | 36.27 | 35.08 | 34.03 | 22.76 | 22.02 | 21.45 |
| 1337.5 | 36.02 | 34.84 | 33.75 | 22.97 | 22.17 | 21.47 |
| 1397.8 | 35.51 | 34.27 | 33.27 | 23.42 | 22.40 | 21.73 |
| 1498.4 | 34.80 | 33.51 | 32.43 | 24.47 | 23.12 | 22.19 |
| 1538.6 | 34.54 | 33.22 | 32.13 | 24.92 | 23.38 | 22.35 |
| 1599.0 | 33.93 | 32.75 | 31.73 | 25.33 | 23.76 | 22.71 |
| 1639.2 | 33.57 | 32.51 | 31.40 | 25.72 | 24.02 | 22.85 |
| 1699.5 | 32.98 | 32.14 | 31.14 | 26.24 | 24.39 | 23.15 |
| 1739.8 | 32.55 | 31.90 | 31.09 | 26.63 | 24.66 | 23.41 |
| 1800.1 | 31.77 | 31.47 | 30.70 | 27.10 | 24.99 | 23.50 |

| RF (IN) (MHz) | LO (MHz) | RF-IF ISOLATION (dB) | | |
|---------------------|-------------|-------------------------|-------|-------|
| | | @LO (dBm) | | |
| | | +4 | +7 | +10 |
| 10.0 | 40.0 | 64.18 | 42.27 | 37.78 |
| 50.2 | 80.2 | 36.50 | 36.44 | 36.66 |
| 90.5 | 120.5 | 31.80 | 31.70 | 31.54 |
| 130.7 | 160.7 | 29.18 | 29.16 | 29.26 |
| 170.9 | 200.9 | 27.53 | 27.51 | 27.52 |
| 211.1 | 241.1 | 26.27 | 26.27 | 26.36 |
| 251.4 | 281.4 | 25.50 | 25.54 | 25.67 |
| 291.6 | 321.6 | 25.19 | 25.30 | 25.40 |
| 331.8 | 361.8 | 24.71 | 24.77 | 24.86 |
| 372.0 | 402.0 | 24.19 | 24.51 | 24.76 |
| 412.3 | 442.3 | 24.12 | 24.63 | 25.09 |
| 452.5 | 482.5 | 24.59 | 25.23 | 25.74 |
| 492.7 | 522.7 | 24.92 | 25.39 | 25.67 |
| 533.0 | 563.0 | 23.71 | 23.87 | 23.95 |
| 573.2 | 603.2 | 21.77 | 21.70 | 21.76 |
| 613.4 | 643.4 | 20.13 | 19.98 | 20.00 |
| 653.6 | 683.6 | 19.19 | 18.97 | 18.91 |
| 693.9 | 723.9 | 18.79 | 18.54 | 18.39 |
| 734.1 | 764.1 | 18.74 | 18.46 | 18.27 |
| 794.4 | 824.4 | 18.70 | 18.53 | 18.48 |
| 834.7 | 864.7 | 18.55 | 18.57 | 18.52 |
| 895.0 | 925.0 | 17.97 | 18.20 | 18.30 |
| 935.2 | 965.2 | 17.35 | 17.52 | 17.76 |
| 995.6 | 1025.6 | 16.29 | 16.39 | 16.53 |
| 1035.8 | 1065.8 | 15.72 | 15.76 | 15.83 |
| 1096.1 | 1126.1 | 14.65 | 14.58 | 14.48 |
| 1136.4 | 1166.4 | 14.02 | 13.79 | 13.61 |
| 1196.7 | 1226.7 | 13.12 | 12.69 | 12.55 |
| 1236.9 | 1266.9 | 12.61 | 12.24 | 12.04 |
| 1297.3 | 1327.3 | 11.87 | 11.52 | 11.36 |
| 1337.5 | 1367.5 | 11.58 | 11.23 | 11.07 |
| 1397.8 | 1427.8 | 11.11 | 10.82 | 10.63 |
| 1438.1 | 1468.1 | 10.86 | 10.63 | 10.54 |
| 1498.4 | 1528.4 | 10.57 | 10.38 | 10.32 |
| 1538.6 | 1568.6 | 10.32 | 10.15 | 10.13 |
| 1599.0 | 1629.0 | 9.97 | 9.81 | 9.91 |
| 1639.2 | 1669.2 | 9.71 | 9.66 | 9.70 |
| 1699.5 | 1729.5 | 9.51 | 9.46 | 9.55 |
| 1739.8 | 1769.8 | 9.42 | 9.44 | 9.48 |
| 1800.1 | 1830.1 | 9.24 | 9.31 | 9.33 |

Frequency Mixer

SIMA-5

Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | RF VSWR (:1) | | |
|------------------|-------------|--------------|------|------|
| | | @LO (dBm) | | |
| | | +4 | +7 | +10 |
| 5.0 | 35.0 | 1.27 | 1.31 | 1.34 |
| 10.0 | 40.0 | 1.15 | 1.20 | 1.23 |
| 50.2 | 80.2 | 1.17 | 1.23 | 1.28 |
| 90.5 | 120.5 | 1.15 | 1.22 | 1.27 |
| 130.7 | 160.7 | 1.15 | 1.21 | 1.25 |
| 170.9 | 200.9 | 1.13 | 1.19 | 1.24 |
| 211.1 | 241.1 | 1.12 | 1.18 | 1.23 |
| 251.4 | 281.4 | 1.12 | 1.17 | 1.22 |
| 291.6 | 321.6 | 1.12 | 1.17 | 1.22 |
| 331.8 | 361.8 | 1.12 | 1.17 | 1.22 |
| 372.0 | 402.0 | 1.13 | 1.18 | 1.23 |
| 412.3 | 442.3 | 1.14 | 1.18 | 1.22 |
| 452.5 | 482.5 | 1.17 | 1.18 | 1.21 |
| 492.7 | 522.7 | 1.21 | 1.21 | 1.23 |
| 533.0 | 563.0 | 1.30 | 1.29 | 1.29 |
| 573.2 | 603.2 | 1.44 | 1.42 | 1.41 |
| 613.4 | 643.4 | 1.59 | 1.57 | 1.57 |
| 653.6 | 683.6 | 1.72 | 1.72 | 1.72 |
| 693.9 | 723.9 | 1.86 | 1.85 | 1.84 |
| 734.1 | 764.1 | 1.99 | 1.98 | 1.97 |
| 794.4 | 824.4 | 2.18 | 2.19 | 2.17 |
| 834.7 | 864.7 | 2.28 | 2.31 | 2.30 |
| 895.0 | 925.0 | 2.36 | 2.44 | 2.48 |
| 935.2 | 965.2 | 2.38 | 2.48 | 2.55 |
| 995.6 | 1025.6 | 2.42 | 2.50 | 2.55 |
| 1035.8 | 1065.8 | 2.48 | 2.54 | 2.59 |
| 1096.1 | 1126.1 | 2.53 | 2.60 | 2.62 |
| 1136.4 | 1166.4 | 2.52 | 2.59 | 2.62 |
| 1196.7 | 1226.7 | 2.48 | 2.55 | 2.58 |
| 1236.9 | 1266.9 | 2.43 | 2.49 | 2.53 |
| 1297.3 | 1327.3 | 2.37 | 2.41 | 2.44 |
| 1337.5 | 1367.5 | 2.31 | 2.34 | 2.36 |
| 1397.8 | 1427.8 | 2.30 | 2.30 | 2.31 |
| 1438.1 | 1468.1 | 2.34 | 2.32 | 2.32 |
| 1498.4 | 1528.4 | 2.43 | 2.38 | 2.37 |
| 1538.6 | 1568.6 | 2.52 | 2.46 | 2.43 |
| 1599.0 | 1629.0 | 2.67 | 2.59 | 2.53 |
| 1639.2 | 1669.2 | 2.77 | 2.69 | 2.63 |
| 1699.5 | 1729.5 | 2.94 | 2.89 | 2.83 |
| 1739.8 | 1769.8 | 3.07 | 3.01 | 2.95 |
| 1800.1 | 1830.1 | 3.24 | 3.18 | 3.13 |

| LO (MHz) | LO VSWR (:1) | | |
|-------------|--------------|------|------|
| | @LO (dBm) | | |
| | +4 | +7 | +10 |
| 5.0 | 1.62 | 2.40 | 3.37 |
| 10.0 | 1.57 | 2.35 | 3.29 |
| 50.2 | 1.61 | 2.39 | 3.42 |
| 90.5 | 1.56 | 2.35 | 3.28 |
| 130.7 | 1.61 | 2.36 | 3.34 |
| 170.9 | 1.56 | 2.27 | 3.14 |
| 211.1 | 1.60 | 2.31 | 3.21 |
| 251.4 | 1.63 | 2.27 | 3.15 |
| 291.6 | 1.61 | 2.26 | 3.12 |
| 331.8 | 1.70 | 2.34 | 3.19 |
| 372.0 | 1.72 | 2.36 | 3.13 |
| 412.3 | 1.74 | 2.40 | 3.22 |
| 452.5 | 1.78 | 2.42 | 3.22 |
| 492.7 | 1.76 | 2.32 | 3.08 |
| 533.0 | 1.74 | 2.26 | 3.00 |
| 573.2 | 1.77 | 2.27 | 2.98 |
| 613.4 | 1.79 | 2.27 | 2.96 |
| 653.6 | 1.78 | 2.20 | 2.87 |
| 693.9 | 1.83 | 2.24 | 2.88 |
| 734.1 | 1.87 | 2.28 | 2.89 |
| 794.4 | 1.91 | 2.21 | 2.77 |
| 834.7 | 1.94 | 2.19 | 2.69 |
| 895.0 | 2.01 | 2.18 | 2.65 |
| 935.2 | 2.03 | 2.15 | 2.58 |
| 995.6 | 2.08 | 2.14 | 2.54 |
| 1035.8 | 2.10 | 2.09 | 2.44 |
| 1096.1 | 2.09 | 2.08 | 2.41 |
| 1136.4 | 2.15 | 2.04 | 2.30 |
| 1196.7 | 2.11 | 1.99 | 2.20 |
| 1236.9 | 2.11 | 1.95 | 2.13 |
| 1297.3 | 2.14 | 1.89 | 2.04 |
| 1337.5 | 2.09 | 1.85 | 1.96 |
| 1397.8 | 2.11 | 1.78 | 1.88 |
| 1438.1 | 2.06 | 1.73 | 1.80 |
| 1498.4 | 1.99 | 1.64 | 1.73 |
| 1538.6 | 1.93 | 1.59 | 1.66 |
| 1599.0 | 1.78 | 1.49 | 1.58 |
| 1639.2 | 1.75 | 1.43 | 1.52 |
| 1699.5 | 1.64 | 1.35 | 1.45 |
| 1739.8 | 1.58 | 1.30 | 1.43 |
| 1800.1 | 1.51 | 1.24 | 1.41 |

| IF (OUT) (MHz) | IF VSWR @LO=1500.1MHz (:1) | | |
|-------------------|----------------------------|------|------|
| | @LO (dBm) | | |
| | +4 | +7 | +10 |
| 5.0 | 1.32 | 1.16 | 1.07 |
| 10.0 | 1.33 | 1.17 | 1.07 |
| 30.2 | 1.69 | 1.39 | 1.27 |
| 50.4 | 1.68 | 1.42 | 1.23 |
| 70.6 | 1.69 | 1.44 | 1.23 |
| 90.8 | 1.69 | 1.42 | 1.25 |
| 111.0 | 1.68 | 1.40 | 1.25 |
| 131.2 | 1.67 | 1.40 | 1.23 |
| 151.4 | 1.66 | 1.40 | 1.21 |
| 171.6 | 1.66 | 1.39 | 1.21 |
| 191.8 | 1.65 | 1.37 | 1.21 |
| 212.0 | 1.62 | 1.34 | 1.19 |
| 232.2 | 1.60 | 1.34 | 1.18 |
| 252.4 | 1.59 | 1.33 | 1.16 |
| 272.7 | 1.55 | 1.30 | 1.14 |
| 292.9 | 1.52 | 1.27 | 1.12 |
| 313.1 | 1.51 | 1.26 | 1.12 |
| 333.3 | 1.49 | 1.25 | 1.11 |
| 353.5 | 1.47 | 1.23 | 1.09 |
| 373.7 | 1.46 | 1.22 | 1.09 |
| 393.9 | 1.44 | 1.21 | 1.09 |
| 434.3 | 1.41 | 1.21 | 1.08 |
| 454.5 | 1.42 | 1.21 | 1.09 |
| 494.9 | 1.36 | 1.18 | 1.09 |
| 515.1 | 1.37 | 1.20 | 1.11 |
| 555.5 | 1.34 | 1.18 | 1.11 |
| 575.7 | 1.31 | 1.16 | 1.11 |
| 616.1 | 1.29 | 1.18 | 1.16 |
| 636.3 | 1.28 | 1.16 | 1.14 |
| 676.7 | 1.20 | 1.14 | 1.18 |
| 696.9 | 1.16 | 1.15 | 1.21 |
| 737.3 | 1.16 | 1.17 | 1.24 |
| 757.6 | 1.10 | 1.15 | 1.25 |
| 798.0 | 1.09 | 1.23 | 1.35 |
| 818.2 | 1.12 | 1.26 | 1.39 |
| 858.6 | 1.11 | 1.28 | 1.41 |
| 878.8 | 1.20 | 1.38 | 1.52 |
| 919.2 | 1.30 | 1.49 | 1.63 |
| 939.4 | 1.32 | 1.52 | 1.65 |
| 979.8 | 1.53 | 1.73 | 1.88 |
| 1000.0 | 1.62 | 1.84 | 1.99 |

Harmonics Tables

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | 7 | 27 | 18 | 20 | 24 | 35 | 34 | 47 | 46 | 65 |
| 1 | - | 16 | +0 | 45 | 27 | 41 | 19 | 41 | 46 | 40 | 52 | 56 |
| 2 | >100 | 70 | 51 | 57 | 53 | 77 | 53 | 60 | 59 | 59 | 68 | 71 |
| 3 | >100 | >79 | 70 | 73 | 59 | 76 | >79 | >79 | 60 | 75 | 75 | 74 |
| 4 | >100 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 5 | >100 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 6 | >100 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 7 | >100 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 8 | >100 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 9 | >100 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 10 | >100 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 750.1 MHz; -14.00 dBm.
 LO IN: 780.01 MHz; +7.00 dBm
 IF OUT: 29.91 MHz; -20.83 dBm

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | 17 | 38 | 29 | 32 | 35 | 48 | 48 | 67 | 64 | 85 |
| 1 | - | 16 | +0 | 40 | 27 | 41 | 20 | 48 | 53 | 46 | 58 | 65 |
| 2 | 89 | 59 | 42 | 52 | 43 | 64 | 47 | 52 | 53 | 56 | 64 | 71 |
| 3 | >100 | 59 | 51 | 57 | 39 | 62 | 67 | 62 | 44 | 58 | 59 | 59 |
| 4 | >100 | 84 | 69 | 82 | 57 | 61 | 57 | 72 | 58 | 61 | 62 | 63 |
| 5 | >100 | 76 | 60 | 76 | 67 | 72 | 54 | 69 | 73 | 70 | 56 | 75 |
| 6 | >100 | 84 | 81 | 78 | 85 | 84 | 69 | 71 | 67 | 84 | 68 | 71 |
| 7 | >100 | 86 | >89 | >89 | 78 | 89 | 76 | 85 | 68 | 85 | 84 | 81 |
| 8 | >100 | >89 | >89 | >89 | >89 | >89 | >89 | >89 | 82 | 85 | 81 | >89 |
| 9 | >100 | >89 | >89 | >89 | >89 | >89 | >89 | >89 | >89 | >89 | 81 | >89 |
| 10 | >100 | >89 | >89 | >89 | >89 | >89 | >89 | >89 | >89 | >89 | >89 | >89 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 750.1 MHz; -4.00 dBm.
 LO IN: 780.01 MHz; +7.00 dBm
 IF OUT: 29.91 MHz; -10.9 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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Page 5 of 5



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