

Frequency Mixer

MCA1-60MH+

Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB) | | |
|---------------|----------|--|-------|-------|
| | | @LO (dBm) | | |
| | | +10 | +13 | +16 |
| 1500.1 | 1530.1 | 8.49 | 9.08 | 10.80 |
| 1620.1 | 1650.1 | 6.77 | 6.34 | 7.88 |
| 1740.1 | 1770.1 | 5.72 | 5.43 | 8.93 |
| 1860.1 | 1890.1 | 5.71 | 5.44 | 5.28 |
| 1980.1 | 2010.1 | 5.62 | 5.31 | 5.16 |
| 2100.1 | 2130.1 | 5.56 | 5.32 | 5.29 |
| 2220.1 | 2250.1 | 5.40 | 5.16 | 5.11 |
| 2340.1 | 2370.1 | 5.61 | 5.35 | 5.24 |
| 2460.1 | 2490.1 | 5.31 | 5.21 | 5.20 |
| 2580.1 | 2610.1 | 5.24 | 5.20 | 5.24 |
| 2700.1 | 2730.1 | 5.56 | 5.42 | 5.38 |
| 2820.1 | 2850.1 | 6.31 | 5.99 | 5.79 |
| 2940.1 | 2970.1 | 6.80 | 6.33 | 6.11 |
| 3060.1 | 3090.1 | 7.10 | 6.61 | 6.35 |
| 3180.1 | 3210.1 | 7.46 | 6.92 | 6.56 |
| 3300.1 | 3330.1 | 7.83 | 7.32 | 6.94 |
| 3420.1 | 3450.1 | 7.73 | 7.14 | 6.83 |
| 3540.1 | 3570.1 | 7.67 | 7.05 | 6.76 |
| 3660.1 | 3690.1 | 8.21 | 7.16 | 6.68 |
| 3800.1 | 3830.1 | 8.15 | 6.98 | 6.38 |
| 3920.1 | 3950.1 | 8.34 | 7.11 | 6.52 |
| 4060.1 | 4090.1 | 9.16 | 7.38 | 6.78 |
| 4180.1 | 4210.1 | 8.91 | 6.42 | 6.05 |
| 4320.1 | 4350.1 | 10.28 | 6.21 | 5.75 |
| 4440.1 | 4470.1 | 10.05 | 5.97 | 5.49 |
| 4580.1 | 4610.1 | 7.48 | 5.55 | 5.41 |
| 4700.1 | 4730.1 | 7.72 | 6.05 | 5.80 |
| 4840.1 | 4870.1 | 6.88 | 5.80 | 5.64 |
| 4960.1 | 4990.1 | 6.18 | 5.59 | 5.54 |
| 5100.1 | 5130.1 | 5.91 | 5.51 | 5.47 |
| 5220.1 | 5250.1 | 5.95 | 5.55 | 5.48 |
| 5360.1 | 5390.1 | 6.38 | 5.92 | 5.63 |
| 5480.1 | 5510.1 | 6.59 | 6.13 | 5.80 |
| 5620.1 | 5650.1 | 7.25 | 6.38 | 6.12 |
| 5740.1 | 5770.1 | 10.45 | 6.79 | 6.48 |
| 5880.1 | 5910.1 | 13.29 | 7.94 | 6.58 |
| 6000.1 | 6030.1 | 15.45 | 8.51 | 6.81 |
| 6140.1 | 6170.1 | 24.23 | 10.25 | 7.47 |
| 6260.1 | 6290.1 | 27.51 | 11.99 | 7.31 |
| 6400.1 | 6430.1 | 38.49 | 17.46 | 10.96 |

| RF (IN) (MHz) | LO (MHz) | IP3 INPUT (dBm) | | |
|---------------|----------|-----------------|-------|-------|
| | | @LO (dBm) | | |
| | | +10 | +13 | +16 |
| 1500.1 | 1530.1 | 13.13 | 18.45 | 17.75 |
| 1620.1 | 1650.1 | 16.03 | 16.97 | 16.39 |
| 1740.1 | 1770.1 | 17.10 | 15.78 | 13.90 |
| 1860.1 | 1890.1 | 22.12 | 18.68 | 17.85 |
| 1980.1 | 2010.1 | 22.53 | 18.76 | 17.08 |
| 2100.1 | 2130.1 | 17.09 | 17.50 | 17.91 |
| 2220.1 | 2250.1 | 17.86 | 17.87 | 18.74 |
| 2340.1 | 2370.1 | 18.88 | 19.21 | 21.35 |
| 2460.1 | 2490.1 | 19.57 | 19.04 | 20.43 |
| 2580.1 | 2610.1 | 22.38 | 23.51 | 24.50 |
| 2700.1 | 2730.1 | 20.21 | 20.01 | 21.02 |
| 2820.1 | 2850.1 | 21.86 | 23.02 | 22.23 |
| 2940.1 | 2970.1 | 20.27 | 22.92 | 24.38 |
| 3060.1 | 3090.1 | 19.90 | 18.55 | 21.32 |
| 3180.1 | 3210.1 | 22.66 | 20.31 | 19.46 |
| 3300.1 | 3330.1 | 19.95 | 22.55 | 20.71 |
| 3420.1 | 3450.1 | 16.89 | 19.16 | 19.35 |
| 3540.1 | 3570.1 | 17.01 | 16.69 | 17.81 |
| 3660.1 | 3690.1 | 17.01 | 17.02 | 18.86 |
| 3800.1 | 3830.1 | 14.46 | 15.66 | 17.36 |
| 3920.1 | 3950.1 | 13.25 | 14.89 | 16.35 |
| 4060.1 | 4090.1 | 11.77 | 13.42 | 14.15 |
| 4180.1 | 4210.1 | 8.43 | 14.65 | 19.99 |
| 4320.1 | 4350.1 | 7.47 | 12.47 | 16.47 |
| 4440.1 | 4470.1 | 7.28 | 14.19 | 15.67 |
| 4580.1 | 4610.1 | 14.63 | 21.08 | 18.22 |
| 4700.1 | 4730.1 | 13.57 | 22.82 | 18.37 |
| 4840.1 | 4870.1 | 14.32 | 15.52 | 16.28 |
| 4960.1 | 4990.1 | 15.76 | 15.52 | 16.94 |
| 5100.1 | 5130.1 | 19.23 | 16.91 | 17.80 |
| 5220.1 | 5250.1 | 23.46 | 18.02 | 18.20 |
| 5360.1 | 5390.1 | 18.84 | 17.00 | 16.83 |
| 5480.1 | 5510.1 | 17.98 | 17.84 | 16.72 |
| 5620.1 | 5650.1 | 14.00 | 18.15 | 15.39 |
| 5740.1 | 5770.1 | 8.75 | 17.56 | 19.49 |
| 5880.1 | 5910.1 | 10.00 | 9.88 | 18.86 |
| 6000.1 | 6030.1 | 8.10 | 9.48 | 16.24 |
| 6140.1 | 6170.1 | -0.91 | 9.87 | 12.27 |
| 6260.1 | 6290.1 | -2.94 | 18.75 | 11.83 |
| 6400.1 | 6430.1 | -5.50 | 7.52 | 18.93 |

| RF (IN) (MHz) | LO (MHz) | COMPRESSION @RF IN=+9dBm (dB) | | |
|---------------|----------|-------------------------------|-------|------|
| | | @LO (dBm) | | |
| | | +10 | +13 | +16 |
| 1500.1 | 1530.1 | 1.57 | 2.44 | 1.78 |
| 1620.1 | 1650.1 | 2.64 | 2.35 | 2.01 |
| 1740.1 | 1770.1 | 2.66 | 2.35 | 2.10 |
| 1860.1 | 1890.1 | 1.98 | 1.72 | 1.60 |
| 1980.1 | 2010.1 | 1.75 | 1.58 | 1.50 |
| 2100.1 | 2130.1 | 1.87 | 1.71 | 1.56 |
| 2220.1 | 2250.1 | 1.66 | 1.40 | 1.25 |
| 2340.1 | 2370.1 | 1.47 | 1.25 | 1.11 |
| 2460.1 | 2490.1 | 1.37 | 1.03 | 0.88 |
| 2580.1 | 2610.1 | 1.32 | 0.85 | 0.71 |
| 2700.1 | 2730.1 | 1.58 | 1.21 | 1.02 |
| 2820.1 | 2850.1 | 1.67 | 1.40 | 1.23 |
| 2940.1 | 2970.1 | 1.41 | 1.21 | 1.07 |
| 3060.1 | 3090.1 | 1.18 | 1.08 | 0.97 |
| 3180.1 | 3210.1 | 0.81 | 0.73 | 0.64 |
| 3300.1 | 3330.1 | 0.69 | 0.56 | 0.53 |
| 3420.1 | 3450.1 | 0.79 | 0.68 | 0.64 |
| 3540.1 | 3570.1 | 0.97 | 0.68 | 0.69 |
| 3660.1 | 3690.1 | 1.22 | 0.69 | 0.58 |
| 3800.1 | 3830.1 | 1.41 | 0.73 | 0.59 |
| 3920.1 | 3950.1 | 1.30 | 0.86 | 0.63 |
| 4060.1 | 4090.1 | 0.67 | 0.89 | 0.69 |
| 4180.1 | 4210.1 | 0.36 | 1.28 | 0.89 |
| 4320.1 | 4350.1 | -1.00 | 1.06 | 0.72 |
| 4440.1 | 4470.1 | -0.95 | 1.02 | 0.67 |
| 4580.1 | 4610.1 | 0.82 | 1.01 | 0.52 |
| 4700.1 | 4730.1 | 1.03 | 1.28 | 1.05 |
| 4840.1 | 4870.1 | 1.37 | 1.35 | 1.22 |
| 4960.1 | 4990.1 | 1.38 | 1.17 | 1.08 |
| 5100.1 | 5130.1 | 1.31 | 1.07 | 0.95 |
| 5220.1 | 5250.1 | 1.36 | 1.05 | 0.89 |
| 5360.1 | 5390.1 | 1.24 | 1.04 | 1.01 |
| 5480.1 | 5510.1 | 1.37 | 0.97 | 0.95 |
| 5620.1 | 5650.1 | 1.76 | 1.16 | 1.02 |
| 5740.1 | 5770.1 | -0.03 | 1.38 | 0.94 |
| 5880.1 | 5910.1 | -1.15 | 1.50 | 1.21 |
| 6000.1 | 6030.1 | -2.05 | 2.09 | 1.41 |
| 6140.1 | 6170.1 | -8.36 | 2.70 | 3.07 |
| 6260.1 | 6290.1 | -9.80 | 3.22 | 5.22 |
| 6400.1 | 6430.1 | -19.83 | -1.53 | 2.24 |



Frequency Mixer

MCA1-60MH+

Typical Performance Data

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=3800MHz (dB) | IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=1590MHz (dB) | IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=6010.1MHz (dB) |
|----------------|----------|---|----------------|----------|---|----------------|----------|---|
| | | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) |
| | | +13 | | | +13 | | | +13 |
| 2199.9 | 1600.1 | 9.68 | 10.1 | 1600.1 | 7.84 | 2510.0 | 3500.1 | 10.26 |
| 2079.4 | 1720.6 | 9.38 | 90.1 | 1680.1 | 7.19 | 2450.0 | 3560.1 | 9.99 |
| 1958.8 | 1841.2 | 8.29 | 170.1 | 1760.1 | 5.68 | 2390.0 | 3620.1 | 9.95 |
| 1838.3 | 1961.7 | 8.13 | 250.1 | 1840.1 | 5.53 | 2330.0 | 3680.1 | 9.66 |
| 1717.7 | 2082.3 | 8.76 | 330.1 | 1920.1 | 5.39 | 2270.0 | 3740.1 | 9.56 |
| 1597.2 | 2202.8 | 7.87 | 410.1 | 2000.1 | 5.40 | 2210.0 | 3800.1 | 9.54 |
| 1476.6 | 2323.4 | 9.02 | 490.1 | 2080.1 | 5.53 | 2150.0 | 3860.1 | 9.53 |
| 1356.1 | 2443.9 | 9.25 | 570.1 | 2160.1 | 5.98 | 2090.0 | 3920.1 | 9.53 |
| 1235.5 | 2564.5 | 8.72 | 650.1 | 2240.1 | 5.75 | 2030.0 | 3980.1 | 9.87 |
| 1115.0 | 2685.0 | 8.73 | 730.1 | 2320.1 | 5.98 | 1970.0 | 4040.1 | 9.85 |
| 994.5 | 2805.5 | 9.34 | 810.1 | 2400.1 | 6.14 | 1910.0 | 4100.1 | 9.74 |
| 873.9 | 2926.1 | 8.76 | 890.1 | 2480.1 | 6.31 | 1850.0 | 4160.1 | 9.52 |
| 753.4 | 3046.6 | 8.08 | 970.1 | 2560.1 | 6.16 | 1790.0 | 4220.1 | 9.06 |
| 652.9 | 3147.1 | 7.33 | 1050.1 | 2640.1 | 6.32 | 1730.0 | 4280.1 | 9.74 |
| 532.4 | 3267.6 | 6.95 | 1130.1 | 2720.1 | 6.20 | 1670.0 | 4340.1 | 10.11 |
| 431.9 | 3368.1 | 6.66 | 1210.1 | 2800.1 | 5.94 | 1610.0 | 4400.1 | 10.43 |
| 311.4 | 3488.6 | 6.55 | 1290.1 | 2880.1 | 5.80 | 1550.0 | 4460.1 | 10.99 |
| 210.9 | 3589.1 | 6.56 | 1370.1 | 2960.1 | 5.92 | 1490.0 | 4520.1 | 10.65 |
| 90.4 | 3709.6 | 7.00 | 1450.1 | 3040.1 | 6.17 | 1430.0 | 4580.1 | 10.58 |
| 10.0 | 3810.0 | 7.57 | 1530.1 | 3120.1 | 6.24 | 1370.0 | 4640.1 | 10.03 |
| 129.5 | 3929.5 | 7.34 | 1610.1 | 3200.1 | 6.31 | 1310.0 | 4700.1 | 9.38 |
| 229.0 | 4029.0 | 7.61 | 1690.1 | 3280.1 | 6.52 | 1250.0 | 4760.1 | 9.09 |
| 348.5 | 4148.5 | 7.76 | 1770.1 | 3360.1 | 6.74 | 1190.0 | 4820.1 | 8.53 |
| 448.0 | 4248.0 | 7.46 | 1870.1 | 3460.1 | 6.96 | 1130.0 | 4880.1 | 8.20 |
| 567.5 | 4367.5 | 8.13 | 1950.1 | 3540.1 | 6.79 | 1050.0 | 4960.1 | 8.14 |
| 667.0 | 4467.0 | 8.20 | 2050.1 | 3640.1 | 6.64 | 990.0 | 5020.1 | 7.81 |
| 786.5 | 4586.5 | 8.22 | 2130.1 | 3720.1 | 6.07 | 910.0 | 5100.1 | 7.79 |
| 886.0 | 4686.0 | 7.93 | 2230.1 | 3820.1 | 6.02 | 850.0 | 5160.1 | 7.59 |
| 1005.5 | 4805.5 | 7.84 | 2310.1 | 3900.1 | 6.18 | 770.0 | 5240.1 | 7.68 |
| 1105.1 | 4905.1 | 7.75 | 2410.1 | 4000.1 | 6.80 | 710.0 | 5300.1 | 7.76 |
| 1224.5 | 5024.5 | 7.95 | 2490.1 | 4080.1 | 7.51 | 630.0 | 5380.1 | 7.84 |
| 1324.1 | 5124.1 | 7.90 | 2590.1 | 4180.1 | 8.89 | 570.0 | 5440.1 | 7.94 |
| 1443.5 | 5243.5 | 8.14 | 2670.1 | 4260.1 | 9.76 | 490.0 | 5520.1 | 7.68 |
| 1543.1 | 5343.1 | 8.02 | 2770.1 | 4360.1 | 10.90 | 430.0 | 5580.1 | 7.77 |
| 1662.5 | 5462.5 | 8.19 | 2850.1 | 4440.1 | 12.11 | 350.0 | 5660.1 | 7.72 |
| 1762.1 | 5562.1 | 8.72 | 2950.1 | 4540.1 | 13.66 | 290.0 | 5720.1 | 7.71 |
| 1881.5 | 5681.5 | 9.64 | 3030.1 | 4620.1 | 15.34 | 210.0 | 5800.1 | 7.42 |
| 1981.1 | 5781.1 | 10.06 | 3130.1 | 4720.1 | 17.15 | 150.0 | 5860.1 | 7.70 |
| 2100.6 | 5900.6 | 11.78 | 3210.1 | 4800.1 | 19.02 | 70.0 | 5940.1 | 8.15 |
| 2200.1 | 6000.1 | 13.58 | 3310.1 | 4900.1 | 21.71 | 10.0 | 6000.1 | 9.11 |



Frequency Mixer

MCA1-60MH+

Typical Performance Data

| LO (MHz) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | |
|-------------|-------------------------|-------|-------|-------------------------|-------|-------|
| | @LO (dBm) | | | @LO (dBm) | | |
| | +10 | +13 | +16 | +10 | +13 | +16 |
| 1530.1 | 32.07 | 36.13 | 30.67 | 15.01 | 18.79 | 21.37 |
| 1650.1 | 32.01 | 32.71 | 33.95 | 15.55 | 18.31 | 22.75 |
| 1770.1 | 33.30 | 32.26 | 30.42 | 17.46 | 20.71 | 21.14 |
| 1890.1 | 42.21 | 41.32 | 40.44 | 19.05 | 21.68 | 22.87 |
| 2010.1 | 48.23 | 42.84 | 39.27 | 19.73 | 21.10 | 20.81 |
| 2130.1 | 38.94 | 37.04 | 34.23 | 19.50 | 20.15 | 19.56 |
| 2250.1 | 33.90 | 32.17 | 30.75 | 20.20 | 18.65 | 17.45 |
| 2370.1 | 32.30 | 30.76 | 28.89 | 18.97 | 17.42 | 15.90 |
| 2490.1 | 32.76 | 30.71 | 29.29 | 18.95 | 17.06 | 15.49 |
| 2610.1 | 32.94 | 30.67 | 29.61 | 18.93 | 16.84 | 15.89 |
| 2730.1 | 35.48 | 34.21 | 33.40 | 18.31 | 17.11 | 16.29 |
| 2850.1 | 35.45 | 35.44 | 35.14 | 17.27 | 16.60 | 15.94 |
| 2970.1 | 33.73 | 33.95 | 33.79 | 16.23 | 16.31 | 15.99 |
| 3090.1 | 32.73 | 33.01 | 32.88 | 15.60 | 16.40 | 16.62 |
| 3210.1 | 33.46 | 33.58 | 33.24 | 15.30 | 16.54 | 17.38 |
| 3330.1 | 35.17 | 35.25 | 34.97 | 15.01 | 16.82 | 18.39 |
| 3450.1 | 35.96 | 35.56 | 34.76 | 14.72 | 16.83 | 18.78 |
| 3570.1 | 38.95 | 36.71 | 34.24 | 14.60 | 16.57 | 18.12 |
| 3690.1 | 46.95 | 42.93 | 36.64 | 14.96 | 16.34 | 16.75 |
| 3830.1 | 51.44 | 41.81 | 34.85 | 17.89 | 17.45 | 16.02 |
| 3950.1 | 43.28 | 48.16 | 36.72 | 22.13 | 19.00 | 16.22 |
| 4090.1 | 37.43 | 48.45 | 41.20 | 27.77 | 19.98 | 16.39 |
| 4210.1 | 36.61 | 45.53 | 40.67 | 28.81 | 22.18 | 17.43 |
| 4350.1 | 34.00 | 37.41 | 39.17 | 27.02 | 23.62 | 18.94 |
| 4470.1 | 32.72 | 35.33 | 34.29 | 25.87 | 23.40 | 19.50 |
| 4610.1 | 31.90 | 34.40 | 31.64 | 24.68 | 22.48 | 19.62 |
| 4730.1 | 30.11 | 31.92 | 32.87 | 24.10 | 22.28 | 19.91 |
| 4870.1 | 26.43 | 26.77 | 27.23 | 23.14 | 21.73 | 20.88 |
| 4990.1 | 24.34 | 24.76 | 24.97 | 22.10 | 21.95 | 22.30 |
| 5130.1 | 22.23 | 22.83 | 23.28 | 20.82 | 21.64 | 22.75 |
| 5250.1 | 21.41 | 22.48 | 23.34 | 20.07 | 21.88 | 23.61 |
| 5390.1 | 20.84 | 22.04 | 22.98 | 19.61 | 21.83 | 24.12 |
| 5510.1 | 21.62 | 22.96 | 23.96 | 16.33 | 18.78 | 21.48 |
| 5650.1 | 21.42 | 22.56 | 23.74 | 13.15 | 15.54 | 18.13 |
| 5770.1 | 21.53 | 22.76 | 23.81 | 12.44 | 14.90 | 17.60 |
| 5910.1 | 21.26 | 22.54 | 24.21 | 12.88 | 14.87 | 17.34 |
| 6030.1 | 21.01 | 22.18 | 24.08 | 13.08 | 14.82 | 16.99 |
| 6170.1 | 20.94 | 21.66 | 22.93 | 12.69 | 13.54 | 15.39 |
| 6290.1 | 20.30 | 20.87 | 22.12 | 11.59 | 12.22 | 13.70 |
| 6430.1 | 19.16 | 19.50 | 20.29 | 9.40 | 9.80 | 10.80 |

| RF (IN) (MHz) | LO (MHz) | RF-IF ISOLATION (dB) | | |
|---------------------|-------------|-------------------------|-------|-------|
| | | @LO (dBm) | | |
| | | +10 | +13 | +16 |
| 1500.1 | 1530.1 | 12.83 | 14.18 | 26.93 |
| 1620.1 | 1650.1 | 15.26 | 14.12 | 15.01 |
| 1740.1 | 1770.1 | 18.03 | 17.99 | 18.25 |
| 1860.1 | 1890.1 | 20.26 | 19.71 | 19.02 |
| 1980.1 | 2010.1 | 22.70 | 22.71 | 22.22 |
| 2100.1 | 2130.1 | 25.49 | 22.59 | 19.76 |
| 2220.1 | 2250.1 | 23.02 | 20.90 | 19.35 |
| 2340.1 | 2370.1 | 19.94 | 18.55 | 17.48 |
| 2460.1 | 2490.1 | 17.29 | 16.20 | 15.65 |
| 2580.1 | 2610.1 | 15.40 | 14.94 | 14.64 |
| 2700.1 | 2730.1 | 16.33 | 16.10 | 15.93 |
| 2820.1 | 2850.1 | 19.74 | 19.36 | 19.05 |
| 2940.1 | 2970.1 | 20.55 | 20.36 | 20.13 |
| 3060.1 | 3090.1 | 18.51 | 18.62 | 18.58 |
| 3180.1 | 3210.1 | 18.17 | 18.35 | 18.34 |
| 3300.1 | 3330.1 | 19.22 | 19.37 | 19.44 |
| 3420.1 | 3450.1 | 21.23 | 21.36 | 21.43 |
| 3540.1 | 3570.1 | 26.53 | 26.63 | 26.68 |
| 3660.1 | 3690.1 | 26.08 | 25.36 | 24.78 |
| 3800.1 | 3830.1 | 16.90 | 16.51 | 16.21 |
| 3920.1 | 3950.1 | 13.94 | 13.73 | 13.53 |
| 4060.1 | 4090.1 | 12.94 | 12.99 | 12.83 |
| 4180.1 | 4210.1 | 12.86 | 12.97 | 12.67 |
| 4320.1 | 4350.1 | 12.59 | 13.22 | 13.18 |
| 4440.1 | 4470.1 | 12.94 | 13.49 | 13.66 |
| 4580.1 | 4610.1 | 14.11 | 14.34 | 14.55 |
| 4700.1 | 4730.1 | 15.03 | 15.13 | 15.26 |
| 4840.1 | 4870.1 | 15.14 | 14.97 | 15.09 |
| 4960.1 | 4990.1 | 15.37 | 15.00 | 15.12 |
| 5100.1 | 5130.1 | 15.82 | 15.29 | 15.23 |
| 5220.1 | 5250.1 | 15.20 | 14.39 | 14.04 |
| 5360.1 | 5390.1 | 18.65 | 18.01 | 17.57 |
| 5480.1 | 5510.1 | 22.43 | 21.59 | 21.18 |
| 5620.1 | 5650.1 | 24.97 | 24.34 | 24.42 |
| 5740.1 | 5770.1 | 20.87 | 21.02 | 21.13 |
| 5880.1 | 5910.1 | 17.22 | 20.40 | 20.13 |
| 6000.1 | 6030.1 | 15.99 | 18.40 | 20.19 |
| 6140.1 | 6170.1 | 14.89 | 16.82 | 18.28 |
| 6260.1 | 6290.1 | 14.86 | 16.21 | 17.91 |
| 6400.1 | 6430.1 | 15.15 | 15.99 | 17.74 |

Frequency Mixer

MCA1-60MH+

Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | RF VSWR (:1) | | | LO (MHz) | LO VSWR (:1) | | | IF (OUT) (MHz) | IF VSWR @LO=6000MHz (:1) | | |
|---------------------|-------------|-----------------|------|------|-------------|-----------------|-------|-------|----------------------|--------------------------------|------|------|
| | | @LO (dBm) | | | | @LO (dBm) | | | | @LO (dBm) | | |
| | | +10 | +13 | +16 | | +10 | +13 | +16 | | +10 | +13 | +16 |
| 1500.1 | 1530.1 | 2.53 | 2.63 | 1.50 | 1530.1 | 6.46 | 5.95 | 8.81 | 10.0 | 5.44 | 2.08 | 1.18 |
| 1620.1 | 1650.1 | 2.64 | 2.48 | 1.83 | 1650.1 | 3.60 | 3.80 | 5.97 | 90.0 | 5.56 | 2.15 | 1.24 |
| 1740.1 | 1770.1 | 2.45 | 2.32 | 1.86 | 1770.1 | 2.40 | 3.00 | 5.91 | 170.0 | 5.58 | 2.26 | 1.36 |
| 1860.1 | 1890.1 | 2.53 | 2.38 | 2.29 | 1890.1 | 1.82 | 2.58 | 3.53 | 250.0 | 5.83 | 2.37 | 1.49 |
| 1980.1 | 2010.1 | 2.67 | 2.46 | 2.35 | 2010.1 | 1.63 | 2.37 | 3.23 | 330.0 | 6.26 | 2.59 | 1.67 |
| 2100.1 | 2130.1 | 2.84 | 2.57 | 2.41 | 2130.1 | 1.44 | 2.08 | 2.82 | 410.0 | 6.97 | 2.89 | 1.92 |
| 2220.1 | 2250.1 | 2.56 | 2.35 | 2.22 | 2250.1 | 1.20 | 1.75 | 2.40 | 490.0 | 7.66 | 3.19 | 2.20 |
| 2340.1 | 2370.1 | 2.49 | 2.30 | 2.18 | 2370.1 | 1.10 | 1.63 | 2.26 | 570.0 | 8.16 | 3.46 | 2.40 |
| 2460.1 | 2490.1 | 2.22 | 2.06 | 2.00 | 2490.1 | 1.11 | 1.56 | 2.18 | 650.0 | 8.95 | 3.85 | 2.60 |
| 2580.1 | 2610.1 | 2.02 | 1.89 | 1.83 | 2610.1 | 1.07 | 1.54 | 2.16 | 730.0 | 9.90 | 4.28 | 2.77 |
| 2700.1 | 2730.1 | 2.22 | 2.02 | 1.90 | 2730.1 | 1.16 | 1.66 | 2.30 | 810.0 | 10.43 | 4.45 | 2.90 |
| 2820.1 | 2850.1 | 3.19 | 2.95 | 2.75 | 2850.1 | 1.31 | 1.87 | 2.57 | 890.0 | 10.82 | 4.63 | 3.06 |
| 2940.1 | 2970.1 | 4.01 | 3.73 | 3.54 | 2970.1 | 1.55 | 2.11 | 2.83 | 970.0 | 10.62 | 4.68 | 3.15 |
| 3060.1 | 3090.1 | 4.21 | 3.90 | 3.67 | 3090.1 | 1.85 | 2.38 | 3.08 | 1050.0 | 10.56 | 4.75 | 3.21 |
| 3180.1 | 3210.1 | 4.13 | 3.75 | 3.39 | 3210.1 | 2.24 | 2.77 | 3.49 | 1130.0 | 10.56 | 4.83 | 3.22 |
| 3300.1 | 3330.1 | 4.28 | 3.99 | 3.69 | 3330.1 | 2.79 | 3.27 | 4.02 | 1210.0 | 10.31 | 4.84 | 3.24 |
| 3420.1 | 3450.1 | 4.43 | 4.04 | 3.80 | 3450.1 | 3.58 | 3.85 | 4.54 | 1290.0 | 9.90 | 4.74 | 3.15 |
| 3540.1 | 3570.1 | 4.63 | 3.97 | 3.67 | 3570.1 | 4.53 | 4.33 | 4.68 | 1370.0 | 9.58 | 4.74 | 3.17 |
| 3660.1 | 3690.1 | 4.64 | 3.94 | 3.50 | 3690.1 | 5.65 | 4.87 | 4.92 | 1450.0 | 9.53 | 4.91 | 3.21 |
| 3800.1 | 3830.1 | 4.33 | 3.63 | 3.10 | 3830.1 | 7.20 | 5.77 | 5.54 | 1530.0 | 9.43 | 5.17 | 3.29 |
| 3920.1 | 3950.1 | 4.19 | 3.47 | 3.00 | 3950.1 | 8.72 | 6.19 | 5.61 | 1610.0 | 8.35 | 5.30 | 3.19 |
| 4060.1 | 4090.1 | 4.17 | 3.19 | 2.75 | 4090.1 | 11.09 | 5.99 | 4.87 | 1690.0 | 7.60 | 5.75 | 3.16 |
| 4180.1 | 4210.1 | 3.86 | 2.36 | 2.07 | 4210.1 | 12.80 | 6.49 | 4.84 | 1770.0 | 7.83 | 6.11 | 3.15 |
| 4320.1 | 4350.1 | 4.25 | 2.33 | 1.81 | 4350.1 | 15.53 | 8.12 | 5.06 | 1850.0 | 8.16 | 6.81 | 3.14 |
| 4440.1 | 4470.1 | 3.82 | 2.16 | 1.57 | 4470.1 | 14.62 | 7.38 | 4.48 | 1930.0 | 9.43 | 6.89 | 3.11 |
| 4580.1 | 4610.1 | 2.73 | 1.73 | 1.28 | 4610.1 | 11.93 | 5.58 | 3.42 | 2010.0 | 9.23 | 6.46 | 3.02 |
| 4700.1 | 4730.1 | 2.62 | 1.81 | 1.47 | 4730.1 | 8.99 | 4.13 | 2.46 | 2090.0 | 9.04 | 6.07 | 3.04 |
| 4840.1 | 4870.1 | 2.48 | 1.89 | 1.61 | 4870.1 | 5.36 | 2.58 | 1.56 | 2170.0 | 8.35 | 5.41 | 3.14 |
| 4960.1 | 4990.1 | 2.22 | 1.82 | 1.68 | 4990.1 | 3.03 | 1.67 | 1.15 | 2250.0 | 6.86 | 4.67 | 3.22 |
| 5100.1 | 5130.1 | 2.08 | 1.85 | 1.77 | 5130.1 | 1.61 | 1.14 | 1.53 | 2310.0 | 5.58 | 3.96 | 3.22 |
| 5220.1 | 5250.1 | 2.13 | 1.90 | 1.79 | 5250.1 | 1.06 | 1.49 | 2.08 | 2390.0 | 4.27 | 3.46 | 3.42 |
| 5360.1 | 5390.1 | 2.51 | 2.29 | 2.11 | 5390.1 | 1.74 | 2.17 | 2.78 | 2450.0 | 3.34 | 3.10 | 3.52 |
| 5480.1 | 5510.1 | 2.66 | 2.48 | 2.31 | 5510.1 | 2.67 | 2.89 | 3.45 | 2530.0 | 2.25 | 2.60 | 3.57 |
| 5620.1 | 5650.1 | 3.17 | 2.85 | 2.67 | 5650.1 | 4.78 | 4.31 | 4.70 | 2590.0 | 1.76 | 2.49 | 3.77 |
| 5740.1 | 5770.1 | 4.37 | 3.02 | 2.90 | 5770.1 | 7.22 | 6.11 | 5.75 | 2670.0 | 1.53 | 2.44 | 3.95 |
| 5880.1 | 5910.1 | 5.39 | 3.80 | 3.14 | 5910.1 | 9.23 | 8.95 | 7.63 | 2730.0 | 1.82 | 2.52 | 4.15 |
| 6000.1 | 6030.1 | 6.13 | 4.43 | 3.54 | 6030.1 | 10.82 | 10.56 | 10.25 | 2810.0 | 2.70 | 2.95 | 4.68 |
| 6140.1 | 6170.1 | 7.47 | 4.83 | 4.08 | 6170.1 | 11.61 | 11.38 | 11.03 | 2870.0 | 3.58 | 3.50 | 5.07 |
| 6260.1 | 6290.1 | 7.66 | 5.03 | 3.65 | 6290.1 | 10.31 | 10.13 | 10.02 | 2950.0 | 4.89 | 4.43 | 5.72 |
| 6400.1 | 6430.1 | 7.87 | 6.11 | 4.70 | 6430.1 | 7.08 | 7.25 | 7.22 | 3010.0 | 5.97 | 5.33 | 6.63 |

Harmonics Tables

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | +9 | 23 | 22 | 49 | 18 | 49 | --- | --- | --- | --- |
| 1 | - | 9 | +0 | 25 | 22 | 42 | 45 | 53 | 51 | --- | --- | --- |
| 2 | 76 | 49 | 43 | 49 | 42 | 49 | 67 | 52 | 50 | 69 | --- | --- |
| 3 | >90 | 66 | 59 | 71 | 56 | 63 | 61 | 73 | 70 | 70 | >77 | --- |
| 4 | >90 | >77 | >77 | >77 | >77 | >77 | 76 | >77 | >77 | >77 | 74 | >77 |
| 5 | >90 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 |
| 6 | >90 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 |
| 7 | --- | --- | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 | >77 |
| 8 | --- | --- | --- | >77 | 76 | >77 | >77 | >77 | >77 | >77 | >77 | >77 |
| 9 | --- | --- | --- | --- | >77 | 75 | >77 | >77 | >77 | >77 | >77 | >77 |
| 10 | --- | --- | --- | --- | --- | >77 | >77 | >77 | >77 | >77 | >77 | >77 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Test conditions: RF IN: 3800 MHz; -6.00 dBm.
 LO IN: 3830 MHz; +13.00 dBm
 IF OUT: 30 MHz; -13.04 dBm

RF HARMONICS ORDER

| | (-dBm) | (-dBc) | | | | | | | | | | |
|----|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 | - | - | 1 | 33 | 34 | 47 | 35 | 75 | --- | --- | --- | --- |
| 1 | - | 9 | +0 | 29 | 21 | 53 | 48 | 52 | 68 | --- | --- | --- |
| 2 | 56 | 38 | 36 | 39 | 35 | 42 | 57 | 49 | 48 | 83 | --- | --- |
| 3 | 86 | 46 | 38 | 51 | 43 | 42 | 48 | 56 | 61 | 66 | 69 | --- |
| 4 | >90 | 61 | 68 | 61 | 54 | 58 | 51 | 56 | 76 | 61 | 62 | 81 |
| 5 | >90 | >87 | 76 | 75 | 61 | 82 | 51 | 64 | 55 | 75 | 68 | 68 |
| 6 | >90 | >87 | 74 | 81 | 80 | 82 | 73 | 78 | 67 | 74 | 85 | 73 |
| 7 | --- | --- | >87 | >87 | >87 | >87 | 70 | >87 | 72 | 67 | 79 | 81 |
| 8 | --- | --- | --- | >87 | 81 | >87 | >87 | >87 | 77 | 83 | 73 | 76 |
| 9 | --- | --- | --- | --- | >87 | >87 | >87 | >87 | 83 | >87 | 78 | 79 |
| 10 | --- | --- | --- | --- | --- | >87 | >87 | >87 | >87 | >87 | >87 | >87 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

LO HARMONICS ORDER

Test conditions: RF IN: 3800 MHz; 4.00 dBm.
 LO IN: 3830 MHz; +13.00 dBm
 IF OUT: 30 MHz; -3.09 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.