

# Frequency Mixer

MBA-12H

## Typical Performance Data

| RF<br>(MHz) | LO<br>(MHz) | CONVERSION LOSS<br>(dB) |      |      | LO<br>(MHz) | LO-RF ISOLATION<br>(dB) |      |      | LO-IF ISOLATION<br>(dB) |      |      |
|-------------|-------------|-------------------------|------|------|-------------|-------------------------|------|------|-------------------------|------|------|
|             |             | @LO (dBm)               |      |      |             | @LO (dBm)               |      |      | @LO (dBm)               |      |      |
|             |             | +14                     | +17  | +20  |             | +14                     | +17  | +20  | +14                     | +17  | +20  |
| 800.0       | 830.0       | 7.68                    | 7.28 | 7.08 | 830.0       | 23.8                    | 23.7 | 23.0 | 17.1                    | 16.9 | 16.9 |
| 900.0       | 930.0       | 7.22                    | 6.62 | 6.42 | 930.0       | 22.8                    | 22.1 | 21.6 | 16.8                    | 16.4 | 16.1 |
| 936.7       | 966.7       | 7.36                    | 6.66 | 6.26 | 966.7       | 23.9                    | 23.2 | 22.4 | 17.4                    | 17.3 | 17.0 |
| 1000.0      | 1030.0      | 7.47                    | 6.57 | 6.37 | 1030.0      | 23.5                    | 22.8 | 21.9 | 16.6                    | 16.8 | 16.7 |
| 1100.0      | 1130.0      | 7.29                    | 6.89 | 6.69 | 1130.0      | 25.0                    | 24.1 | 23.2 | 15.0                    | 16.3 | 17.1 |
| 1180.0      | 1210.0      | 7.00                    | 6.70 | 6.60 | 1210.0      | 24.8                    | 24.0 | 23.0 | 13.5                    | 15.4 | 17.1 |
| 1250.0      | 1280.0      | 6.93                    | 6.73 | 6.63 | 1280.0      | 25.0                    | 23.7 | 22.9 | 12.3                    | 14.7 | 16.5 |
| 1400.0      | 1430.0      | 6.83                    | 6.73 | 6.73 | 1430.0      | 25.6                    | 24.6 | 24.2 | 10.4                    | 12.6 | 14.0 |
| 1423.3      | 1453.3      | 6.93                    | 6.83 | 6.83 | 1453.3      | 25.9                    | 25.3 | 24.7 | 10.5                    | 12.4 | 13.8 |
| 1500.0      | 1530.0      | 7.04                    | 6.84 | 6.84 | 1530.0      | 25.2                    | 26.0 | 25.7 | 10.0                    | 11.5 | 12.5 |
| 1600.0      | 1630.0      | 7.01                    | 7.01 | 7.11 | 1630.0      | 27.9                    | 28.3 | 28.4 | 9.9                     | 11.3 | 12.0 |
| 1666.7      | 1696.7      | 6.87                    | 6.77 | 6.87 | 1696.7      | 26.3                    | 27.8 | 28.2 | 9.8                     | 10.8 | 11.1 |
| 1800.0      | 1830.0      | 6.62                    | 6.52 | 6.62 | 1830.0      | 27.1                    | 29.7 | 31.0 | 9.6                     | 9.9  | 9.8  |
| 1910.0      | 1940.0      | 6.65                    | 6.45 | 6.45 | 1940.0      | 27.4                    | 29.6 | 30.7 | 9.9                     | 9.6  | 9.3  |
| 2000.0      | 2030.0      | 6.58                    | 6.48 | 6.48 | 2030.0      | 31.6                    | 33.0 | 33.6 | 10.9                    | 10.5 | 10.0 |
| 2100.0      | 2130.0      | 6.62                    | 6.52 | 6.62 | 2130.0      | 40.2                    | 41.2 | 41.1 | 12.1                    | 11.4 | 10.9 |
| 2250.0      | 2280.0      | 7.68                    | 7.48 | 7.48 | 2280.0      | 60.8                    | 59.1 | 52.0 | 12.5                    | 11.6 | 11.0 |
| 2300.0      | 2330.0      | 7.71                    | 7.51 | 7.51 | 2330.0      | 42.9                    | 49.0 | 56.7 | 13.0                    | 11.8 | 11.3 |
| 2470.0      | 2500.0      | 7.98                    | 7.78 | 7.88 | 2500.0      | 30.3                    | 33.5 | 36.2 | 14.3                    | 12.9 | 12.2 |
| 2500.0      | 2530.0      | 8.24                    | 8.04 | 8.04 | 2530.0      | 28.8                    | 31.9 | 34.9 | 14.1                    | 12.7 | 12.0 |

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MBA-12H

## Typical Performance Data

| RF/LO<br>(MHz) | RF VSWR<br>(:1) |      |      | LO VSWR<br>(:1) |      |      | IF<br>(MHz) | IF VSWR<br>(:1) |      |      |
|----------------|-----------------|------|------|-----------------|------|------|-------------|-----------------|------|------|
|                | @LO (dBm)       |      |      | @LO (dBm)       |      |      |             | @LO (dBm)       |      |      |
|                | +14             | +17  | +20  | +14             | +17  | +20  |             | +14             | +17  | +20  |
| 830.0          | 3.71            | 3.38 | 3.16 | 2.68            | 2.18 | 2.68 | 0.1         | 2.72            | 3.11 | 3.44 |
| 930.0          | 3.86            | 3.50 | 3.32 | 2.46            | 2.46 | 3.01 | 2.0         | 2.61            | 2.96 | 3.26 |
| 966.7          | 4.32            | 3.79 | 3.44 | 2.40            | 2.32 | 2.80 | 7.0         | 2.65            | 3.01 | 3.21 |
| 1030.0         | 4.64            | 3.95 | 3.64 | 2.43            | 2.52 | 3.26 | 10.0        | 2.65            | 3.01 | 3.26 |
| 1130.0         | 4.53            | 4.22 | 4.03 | 2.40            | 2.35 | 2.88 | 20.0        | 2.61            | 2.96 | 3.21 |
| 1210.0         | 4.32            | 4.03 | 3.86 | 2.06            | 2.18 | 2.76 | 30.0        | 2.55            | 2.96 | 3.16 |
| 1280.0         | 4.32            | 4.12 | 3.95 | 1.81            | 2.08 | 2.58 | 50.0        | 2.55            | 2.88 | 3.11 |
| 1430.0         | 3.38            | 3.32 | 3.26 | 1.66            | 2.14 | 2.88 | 70.0        | 2.55            | 2.88 | 3.06 |
| 1453.3         | 3.21            | 3.21 | 3.16 | 1.47            | 1.81 | 2.40 | 100.0       | 2.40            | 2.76 | 2.92 |
| 1530.0         | 2.80            | 2.80 | 2.80 | 1.51            | 1.87 | 2.40 | 105.4       | 2.40            | 2.76 | 2.96 |
| 1630.0         | 2.16            | 2.14 | 2.14 | 1.36            | 1.59 | 1.94 | 150.0       | 2.16            | 2.43 | 2.65 |
| 1696.7         | 2.01            | 1.91 | 1.88 | 1.38            | 1.70 | 2.14 | 158.0       | 2.16            | 2.40 | 2.61 |
| 1830.0         | 2.12            | 2.04 | 1.97 | 1.30            | 1.68 | 2.14 | 200.0       | 1.94            | 2.16 | 2.30 |
| 1940.0         | 2.16            | 2.06 | 1.99 | 1.41            | 1.97 | 2.61 | 263.2       | 1.70            | 1.87 | 1.99 |
| 2030.0         | 2.18            | 2.03 | 1.91 | 1.43            | 2.03 | 2.76 | 300.0       | 1.59            | 1.73 | 1.81 |
| 2130.0         | 2.16            | 1.97 | 1.87 | 1.44            | 2.03 | 2.61 | 315.9       | 1.59            | 1.69 | 1.77 |
| 2280.0         | 3.06            | 2.96 | 2.80 | 1.65            | 2.27 | 2.92 | 368.5       | 1.54            | 1.58 | 1.63 |
| 2330.0         | 2.96            | 2.88 | 2.76 | 1.60            | 2.14 | 2.68 | 400.0       | 1.59            | 1.57 | 1.59 |
| 2500.0         | 2.27            | 2.16 | 2.06 | 1.91            | 2.20 | 2.65 | 473.7       | 1.80            | 1.68 | 1.62 |
| 2530.0         | 2.27            | 2.16 | 2.08 | 2.04            | 2.25 | 2.68 | 500.0       | 1.91            | 1.74 | 1.67 |

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