

# Frequency Mixer

MBA-EE7756/8

## 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)               |      |      |
|             |             | +10                     | +13  | +16  |             | +10                     | +13  | +16  | +10                     | +13  | +16  |
| 800.0       | 830.0       | 8.01                    | 7.41 | 7.01 | 830.0       | 24.8                    | 24.0 | 22.7 | 18.0                    | 17.4 | 16.9 |
| 936.7       | 966.7       | 7.98                    | 6.88 | 6.38 | 966.7       | 24.8                    | 23.0 | 22.0 | 18.0                    | 18.0 | 17.5 |
| 1000.0      | 1030.0      | 8.42                    | 7.12 | 6.72 | 1030.0      | 25.0                    | 23.7 | 22.4 | 17.0                    | 17.8 | 17.7 |
| 1180.0      | 1210.0      | 7.61                    | 7.11 | 7.01 | 1210.0      | 26.2                    | 24.3 | 23.0 | 13.2                    | 15.3 | 17.3 |
| 1200.0      | 1230.0      | 7.53                    | 7.23 | 7.03 | 1230.0      | 26.0                    | 24.2 | 23.1 | 12.9                    | 15.1 | 17.1 |
| 1250.0      | 1280.0      | 7.47                    | 7.17 | 6.97 | 1280.0      | 25.9                    | 24.3 | 23.2 | 12.4                    | 14.5 | 16.5 |
| 1400.0      | 1430.0      | 7.34                    | 7.04 | 7.04 | 1430.0      | 26.5                    | 25.6 | 24.7 | 10.9                    | 12.6 | 13.8 |
| 1600.0      | 1630.0      | 7.60                    | 7.60 | 7.60 | 1630.0      | 28.6                    | 28.4 | 28.2 | 10.5                    | 11.7 | 12.1 |
| 1666.7      | 1696.7      | 7.43                    | 7.43 | 7.43 | 1696.7      | 29.3                    | 29.4 | 29.3 | 10.6                    | 11.4 | 11.7 |
| 1800.0      | 1830.0      | 7.04                    | 6.94 | 6.84 | 1830.0      | 27.8                    | 29.1 | 29.7 | 10.6                    | 10.8 | 10.6 |
| 1900.0      | 1930.0      | 6.91                    | 6.81 | 6.71 | 1930.0      | 28.5                    | 29.1 | 29.4 | 11.2                    | 11.0 | 10.4 |
| 1910.0      | 1940.0      | 6.87                    | 6.77 | 6.77 | 1940.0      | 28.8                    | 29.1 | 29.4 | 11.2                    | 11.0 | 10.5 |
| 2000.0      | 2030.0      | 6.80                    | 6.70 | 6.60 | 2030.0      | 33.6                    | 32.8 | 32.3 | 12.5                    | 11.8 | 11.0 |
| 2100.0      | 2130.0      | 6.86                    | 6.66 | 6.66 | 2130.0      | 36.3                    | 36.0 | 35.5 | 13.7                    | 12.7 | 11.8 |
| 2153.3      | 2183.3      | 7.24                    | 7.04 | 7.04 | 2183.3      | 38.0                    | 37.2 | 36.3 | 13.7                    | 12.9 | 11.8 |
| 2200.0      | 2230.0      | 7.85                    | 7.65 | 7.55 | 2230.0      | 38.0                    | 37.8 | 36.9 | 14.1                    | 13.0 | 12.1 |
| 2300.0      | 2330.0      | 8.00                    | 7.80 | 7.70 | 2330.0      | 34.2                    | 34.5 | 34.0 | 14.9                    | 13.6 | 12.6 |
| 2400.0      | 2430.0      | 7.70                    | 7.60 | 7.60 | 2430.0      | 30.1                    | 30.8 | 31.1 | 15.6                    | 14.2 | 13.2 |
| 2470.0      | 2500.0      | 7.66                    | 7.56 | 7.56 | 2500.0      | 28.1                    | 29.2 | 29.7 | 16.1                    | 14.9 | 13.8 |
| 2500.0      | 2530.0      | 7.81                    | 7.71 | 7.71 | 2530.0      | 27.3                    | 28.6 | 29.1 | 16.3                    | 14.7 | 13.8 |
| 2640.0      | 2670.0      | 8.80                    | 8.60 | 8.50 | 2670.0      | 25.8                    | 26.6 | 26.6 | 16.0                    | 14.5 | 13.2 |
| 2883.3      | 2913.3      | 7.77                    | 7.47 | 7.37 | 2913.3      | 27.6                    | 28.3 | 26.4 | 15.6                    | 15.8 | 15.7 |
| 3126.7      | 3156.7      | 6.89                    | 6.59 | 6.49 | 3156.7      | 30.4                    | 27.5 | 25.2 | 15.1                    | 16.5 | 17.7 |
| 3370.0      | 3400.0      | 5.97                    | 5.67 | 5.67 | 3400.0      | 27.4                    | 23.4 | 21.1 | 14.5                    | 15.2 | 15.7 |
| 3613.3      | 3643.3      | 6.47                    | 6.37 | 6.47 | 3643.3      | 24.2                    | 22.1 | 20.7 | 11.2                    | 11.1 | 11.1 |
| 3856.7      | 3886.7      | 6.51                    | 6.31 | 6.21 | 3886.7      | 51.2                    | 40.1 | 35.4 | 14.4                    | 15.0 | 15.4 |
| 4100.0      | 4130.0      | 6.37                    | 6.27 | 6.27 | 4130.0      | 29.5                    | 30.2 | 31.2 | 16.1                    | 17.1 | 18.0 |

# Frequency Mixer

MBA-EE7756/8

## 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)       |      |      |
|                | +10             | +13  | +16  | +10             | +13  | +16  |             | +10             | +13  | +16  |
| 830.0          | 4.12            | 3.71 | 3.38 | 2.58            | 2.37 | 2.76 | 52.7        | 2.58            | 2.96 | 3.16 |
| 966.7          | 5.03            | 4.32 | 3.86 | 2.49            | 2.30 | 2.61 | 60.0        | 2.58            | 2.96 | 3.21 |
| 1030.0         | 5.17            | 4.53 | 4.22 | 2.55            | 2.35 | 2.65 | 80.0        | 2.49            | 2.84 | 3.06 |
| 1210.0         | 5.03            | 4.64 | 4.53 | 2.37            | 2.23 | 2.65 | 100.0       | 2.43            | 2.76 | 3.01 |
| 1230.0         | 5.03            | 4.77 | 4.64 | 2.30            | 2.23 | 2.72 | 105.4       | 2.43            | 2.80 | 3.01 |
| 1280.0         | 5.03            | 4.77 | 4.64 | 2.04            | 2.10 | 2.65 | 150.0       | 2.20            | 2.49 | 2.72 |
| 1430.0         | 4.12            | 4.03 | 3.95 | 1.76            | 1.94 | 2.55 | 158.0       | 2.20            | 2.46 | 2.68 |
| 1630.0         | 2.58            | 2.58 | 2.58 | 1.59            | 1.71 | 2.16 | 200.0       | 1.97            | 2.23 | 2.40 |
| 1696.7         | 2.25            | 2.18 | 2.16 | 1.49            | 1.68 | 2.14 | 210.6       | 1.97            | 2.23 | 2.40 |
| 1830.0         | 2.46            | 2.32 | 2.23 | 1.33            | 1.67 | 2.18 | 250.0       | 1.80            | 1.99 | 2.16 |
| 1930.0         | 2.61            | 2.43 | 2.32 | 1.30            | 1.80 | 2.46 | 263.2       | 1.78            | 1.96 | 2.12 |
| 1940.0         | 2.58            | 2.40 | 2.30 | 1.33            | 1.77 | 2.46 | 300.0       | 1.66            | 1.80 | 1.92 |
| 2030.0         | 2.58            | 2.35 | 2.20 | 1.27            | 1.88 | 2.61 | 315.9       | 1.66            | 1.78 | 1.88 |
| 2130.0         | 2.76            | 2.49 | 2.27 | 1.31            | 1.88 | 2.58 | 350.0       | 1.59            | 1.67 | 1.75 |
| 2183.3         | 3.16            | 2.92 | 2.76 | 1.34            | 1.89 | 2.68 | 368.5       | 1.61            | 1.65 | 1.71 |
| 2230.0         | 3.64            | 3.44 | 3.32 | 1.31            | 1.82 | 2.49 | 400.0       | 1.61            | 1.59 | 1.62 |
| 2330.0         | 3.71            | 3.50 | 3.32 | 1.46            | 1.87 | 2.46 | 421.1       | 1.67            | 1.61 | 1.60 |
| 2430.0         | 3.06            | 2.88 | 2.72 | 1.77            | 1.92 | 2.37 | 450.0       | 1.75            | 1.63 | 1.59 |
| 2500.0         | 2.80            | 2.61 | 2.49 | 2.01            | 1.92 | 2.25 | 473.7       | 1.85            | 1.68 | 1.61 |
| 2530.0         | 2.76            | 2.55 | 2.43 | 2.16            | 1.96 | 2.20 | 500.0       | 1.96            | 1.77 | 1.67 |
| 2670.0         | 3.32            | 3.11 | 2.96 | 2.61            | 1.89 | 1.80 | 526.4       | 2.10            | 1.88 | 1.76 |
| 2913.3         | 3.64            | 3.21 | 2.96 | 3.06            | 1.87 | 1.26 | 579.0       | 2.37            | 2.12 | 1.99 |
| 3156.7         | 2.55            | 2.32 | 2.16 | 2.72            | 1.91 | 1.91 | 631.6       | 2.68            | 2.46 | 2.27 |
| 3400.0         | 1.80            | 1.59 | 1.46 | 1.97            | 1.85 | 2.10 | 684.2       | 2.96            | 2.68 | 2.55 |
| 3643.3         | 1.52            | 1.37 | 1.23 | 1.26            | 1.38 | 1.67 | 736.9       | 3.21            | 3.01 | 2.80 |
| 3886.7         | 2.18            | 1.92 | 1.80 | 1.27            | 1.69 | 2.16 | 789.5       | 3.57            | 3.38 | 3.26 |
| 4130.0         | 2.23            | 1.96 | 1.80 | 1.64            | 1.63 | 1.87 | 842.1       | 4.32            | 4.03 | 3.86 |