

# Frequency Mixer

# ZX05-10H+

## 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<br>(MHz) | RF<br>(MHz) | IP3<br>Input<br>(dBm) |
|-------------|-------------|-------------------------|------|------|-------------|-------------------------|-------|-------|-------------------------|-------|-------|-------------|-------------|-----------------------|
|             |             | @LO (dBm)               |      |      |             | @LO (dBm)               |       |       | @LO (dBm)               |       |       |             |             | @LO<br>(dBm)          |
|             |             | +14                     | +17  | +20  |             | +14                     | +17   | +20   | +14                     | +17   | +20   |             |             | +17                   |
| 10.1        | 40.1        | 8.87                    | 7.55 | 7.01 | 40.1        | 77.47                   | 81.69 | 89.16 | 64.81                   | 62.06 | 60.23 | 40.1        | 10.1        | 25.90                 |
| 15.1        | 45.1        | 8.66                    | 7.42 | 6.91 | 45.1        | 74.23                   | 78.85 | 88.94 | 60.94                   | 58.72 | 56.72 | 45.1        | 15.1        | 26.00                 |
| 20.1        | 45.1        | 8.62                    | 7.42 | 6.85 | 45.1        | 60.79                   | 66.62 | 86.56 | 45.55                   | 43.40 | 41.82 | 45.1        | 20.1        | 26.20                 |
| 35.1        | 50.1        | 8.63                    | 7.39 | 6.90 | 50.1        | 72.06                   | 76.53 | 88.41 | 58.40                   | 56.02 | 54.19 | 50.1        | 35.1        | 26.10                 |
| 50.1        | 65.1        | 8.57                    | 7.39 | 6.90 | 65.1        | 67.27                   | 72.77 | 90.21 | 52.83                   | 50.66 | 49.21 | 65.1        | 50.1        | 26.60                 |
| 75.1        | 70.1        | 8.56                    | 7.45 | 6.95 | 70.1        | 58.34                   | 64.18 | 79.27 | 43.19                   | 40.85 | 38.87 | 70.1        | 75.1        | 25.80                 |
| 100.1       | 80.1        | 8.60                    | 7.47 | 6.93 | 80.1        | 64.14                   | 69.91 | 87.68 | 49.36                   | 47.32 | 45.88 | 80.1        | 100.1       | 26.20                 |
| 120.1       | 90.1        | 8.56                    | 7.40 | 6.89 | 90.1        | 56.61                   | 62.90 | 79.14 | 41.45                   | 39.09 | 37.09 | 90.1        | 120.1       | 27.00                 |
| 143.9       | 113.9       | 8.53                    | 7.39 | 6.85 | 113.9       | 54.97                   | 61.39 | 75.26 | 39.34                   | 37.09 | 35.22 | 113.9       | 143.9       | 27.70                 |
| 167.6       | 137.6       | 8.56                    | 7.47 | 6.86 | 137.6       | 54.08                   | 59.64 | 70.43 | 37.65                   | 35.18 | 33.78 | 137.6       | 167.6       | 26.40                 |
| 191.4       | 161.4       | 8.50                    | 7.37 | 6.81 | 161.4       | 53.10                   | 57.55 | 66.08 | 36.33                   | 33.65 | 32.62 | 161.4       | 191.4       | 26.00                 |
| 215.1       | 185.1       | 8.46                    | 7.24 | 6.80 | 185.1       | 51.86                   | 56.02 | 63.15 | 34.99                   | 32.50 | 32.07 | 185.1       | 215.1       | 25.80                 |
| 238.9       | 208.9       | 8.48                    | 7.18 | 6.79 | 208.9       | 50.46                   | 55.16 | 61.80 | 33.41                   | 31.38 | 31.35 | 208.9       | 238.9       | 25.10                 |
| 262.6       | 232.6       | 8.35                    | 7.10 | 6.81 | 232.6       | 49.48                   | 54.66 | 60.38 | 32.13                   | 30.65 | 30.73 | 232.6       | 262.6       | 24.90                 |
| 286.4       | 256.4       | 8.22                    | 7.08 | 6.80 | 256.4       | 48.01                   | 54.25 | 57.98 | 31.25                   | 29.99 | 30.02 | 256.4       | 286.4       | 24.90                 |
| 310.1       | 280.1       | 8.17                    | 7.07 | 6.85 | 280.1       | 46.71                   | 53.72 | 55.97 | 30.32                   | 29.51 | 29.64 | 280.1       | 310.1       | 25.10                 |
| 333.9       | 303.9       | 8.10                    | 7.06 | 6.83 | 303.9       | 45.87                   | 53.66 | 56.57 | 29.55                   | 29.32 | 29.57 | 303.9       | 333.9       | 24.80                 |
| 357.6       | 327.6       | 7.95                    | 7.02 | 6.81 | 327.6       | 45.34                   | 53.34 | 56.95 | 28.61                   | 28.60 | 28.90 | 327.6       | 357.6       | 24.70                 |
| 381.4       | 351.4       | 8.02                    | 7.06 | 6.82 | 351.4       | 44.53                   | 52.84 | 56.56 | 28.41                   | 28.55 | 28.65 | 351.4       | 381.4       | 25.20                 |
| 405.1       | 375.1       | 8.07                    | 7.15 | 6.91 | 375.1       | 43.58                   | 51.82 | 56.78 | 27.98                   | 28.24 | 28.34 | 375.1       | 405.1       | 26.20                 |
| 428.9       | 398.9       | 7.97                    | 7.08 | 6.82 | 398.9       | 42.91                   | 50.87 | 60.62 | 27.69                   | 28.23 | 28.52 | 398.9       | 428.9       | 25.60                 |
| 452.6       | 422.6       | 7.90                    | 7.04 | 6.79 | 422.6       | 42.49                   | 50.25 | 60.75 | 27.16                   | 27.84 | 28.11 | 422.6       | 452.6       | 24.60                 |
| 476.4       | 446.4       | 7.98                    | 7.17 | 6.89 | 446.4       | 41.85                   | 49.83 | 58.79 | 27.08                   | 27.70 | 27.76 | 446.4       | 476.4       | 24.80                 |
| 500.1       | 470.1       | 8.08                    | 7.24 | 7.00 | 470.1       | 41.18                   | 48.94 | 58.79 | 27.03                   | 27.66 | 27.52 | 470.1       | 500.1       | 25.40                 |
| 520.1       | 490.1       | 8.05                    | 7.17 | 6.93 | 490.1       | 40.73                   | 48.14 | 59.78 | 26.78                   | 27.49 | 27.41 | 490.1       | 520.1       | 26.10                 |
| 552.1       | 522.1       | 8.01                    | 7.17 | 6.86 | 522.1       | 40.33                   | 46.94 | 58.91 | 27.76                   | 27.44 | 27.00 | 522.1       | 552.1       | 27.00                 |
| 584.1       | 554.1       | 8.05                    | 7.23 | 6.90 | 554.1       | 39.56                   | 46.14 | 57.11 | 26.77                   | 27.45 | 26.86 | 554.1       | 584.1       | 25.50                 |
| 616.1       | 586.1       | 8.13                    | 7.30 | 6.98 | 586.1       | 38.74                   | 45.19 | 59.28 | 26.47                   | 27.21 | 26.85 | 586.1       | 616.1       | 24.40                 |
| 648.1       | 618.1       | 8.05                    | 7.31 | 7.00 | 618.1       | 38.10                   | 44.07 | 57.75 | 26.34                   | 27.04 | 26.46 | 618.1       | 648.1       | 24.70                 |
| 680.1       | 650.1       | 7.99                    | 7.26 | 6.97 | 650.1       | 37.30                   | 43.38 | 57.70 | 26.05                   | 26.51 | 25.79 | 650.1       | 680.1       | 25.20                 |
| 712.1       | 682.1       | 8.23                    | 7.39 | 7.07 | 682.1       | 36.44                   | 42.17 | 59.06 | 25.66                   | 25.98 | 25.18 | 682.1       | 712.1       | 26.30                 |
| 744.1       | 714.1       | 8.11                    | 7.28 | 6.96 | 714.1       | 35.63                   | 40.88 | 49.58 | 25.29                   | 25.40 | 24.59 | 714.1       | 744.1       | 27.40                 |
| 776.1       | 746.1       | 8.10                    | 7.14 | 6.80 | 746.1       | 34.68                   | 39.71 | 48.00 | 24.83                   | 24.50 | 23.56 | 746.1       | 776.1       | 29.60                 |
| 808.1       | 778.1       | 8.41                    | 7.27 | 6.86 | 778.1       | 33.78                   | 38.19 | 45.83 | 24.57                   | 24.11 | 23.16 | 778.1       | 808.1       | 33.60                 |
| 840.1       | 810.1       | 8.51                    | 7.25 | 6.78 | 810.1       | 33.09                   | 36.65 | 40.85 | 24.19                   | 23.70 | 22.44 | 810.1       | 840.1       | 35.30                 |
| 872.1       | 842.1       | 8.60                    | 7.32 | 6.76 | 842.1       | 32.45                   | 35.65 | 40.06 | 23.83                   | 23.22 | 21.64 | 842.1       | 872.1       | 35.60                 |
| 904.1       | 874.1       | 8.78                    | 7.47 | 6.78 | 874.1       | 31.93                   | 34.81 | 38.85 | 23.62                   | 23.29 | 21.70 | 874.1       | 904.1       | 27.50                 |
| 936.1       | 906.1       | 8.93                    | 7.70 | 6.90 | 906.1       | 31.38                   | 33.75 | 36.21 | 23.22                   | 22.96 | 21.37 | 906.1       | 936.1       | 23.50                 |
| 968.1       | 938.1       | 8.79                    | 7.65 | 6.91 | 938.1       | 30.70                   | 33.06 | 35.92 | 22.86                   | 22.47 | 20.85 | 938.1       | 968.1       | 21.80                 |
| 1000.1      | 970.1       | 8.82                    | 7.67 | 6.93 | 970.1       | 30.22                   | 32.44 | 35.05 | 26.14                   | 21.87 | 21.14 | 970.1       | 1000.1      | 21.40                 |

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# Frequency Mixer

**ZX05-10H+**

## 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  |
| 40.1           | 1.53            | 1.43 | 1.35 | 1.70            | 1.13 | 1.52 | 0.3         | 1.62            | 1.09 | 1.19 |
| 45.1           | 1.52            | 1.40 | 1.31 | 1.72            | 1.11 | 1.49 | 1.0         | 1.67            | 1.12 | 1.16 |
| 45.1           | 1.52            | 1.41 | 1.33 | 1.71            | 1.10 | 1.51 | 5.0         | 1.68            | 1.13 | 1.15 |
| 50.1           | 1.51            | 1.40 | 1.31 | 1.73            | 1.09 | 1.51 | 10.0        | 1.64            | 1.13 | 1.15 |
| 65.1           | 1.53            | 1.41 | 1.31 | 1.74            | 1.09 | 1.50 | 40.0        | 1.64            | 1.10 | 1.19 |
| 70.1           | 1.52            | 1.40 | 1.31 | 1.74            | 1.13 | 1.50 | 80.0        | 1.67            | 1.10 | 1.26 |
| 80.1           | 1.51            | 1.39 | 1.30 | 1.72            | 1.09 | 1.51 | 120.0       | 1.56            | 1.10 | 1.32 |
| 90.1           | 1.51            | 1.39 | 1.30 | 1.74            | 1.16 | 1.51 | 150.0       | 1.58            | 1.12 | 1.33 |
| 113.9          | 1.51            | 1.39 | 1.30 | 1.75            | 1.18 | 1.54 | 170.3       | 1.64            | 1.13 | 1.30 |
| 137.6          | 1.52            | 1.39 | 1.31 | 1.73            | 1.18 | 1.54 | 190.6       | 1.58            | 1.15 | 1.30 |
| 161.4          | 1.50            | 1.38 | 1.31 | 1.76            | 1.19 | 1.52 | 211.0       | 1.55            | 1.16 | 1.27 |
| 185.1          | 1.48            | 1.38 | 1.32 | 1.81            | 1.20 | 1.56 | 231.3       | 1.47            | 1.17 | 1.25 |
| 208.9          | 1.48            | 1.38 | 1.33 | 1.81            | 1.21 | 1.59 | 251.6       | 1.45            | 1.18 | 1.25 |
| 232.6          | 1.47            | 1.38 | 1.33 | 1.76            | 1.19 | 1.56 | 271.9       | 1.52            | 1.19 | 1.23 |
| 256.4          | 1.46            | 1.39 | 1.34 | 1.74            | 1.19 | 1.56 | 292.2       | 1.48            | 1.19 | 1.23 |
| 280.1          | 1.47            | 1.40 | 1.35 | 1.77            | 1.20 | 1.62 | 312.5       | 1.48            | 1.20 | 1.21 |
| 303.9          | 1.47            | 1.40 | 1.35 | 1.70            | 1.18 | 1.66 | 332.8       | 1.44            | 1.21 | 1.21 |
| 327.6          | 1.46            | 1.39 | 1.35 | 1.63            | 1.17 | 1.60 | 353.1       | 1.46            | 1.21 | 1.21 |
| 351.4          | 1.46            | 1.40 | 1.35 | 1.60            | 1.19 | 1.64 | 373.5       | 1.53            | 1.24 | 1.21 |
| 375.1          | 1.46            | 1.40 | 1.36 | 1.61            | 1.20 | 1.72 | 393.8       | 1.55            | 1.26 | 1.20 |
| 398.9          | 1.45            | 1.39 | 1.34 | 1.58            | 1.20 | 1.68 | 414.1       | 1.55            | 1.28 | 1.20 |
| 422.6          | 1.45            | 1.39 | 1.34 | 1.52            | 1.18 | 1.61 | 434.4       | 1.56            | 1.29 | 1.20 |
| 446.4          | 1.47            | 1.41 | 1.36 | 1.47            | 1.21 | 1.70 | 454.7       | 1.60            | 1.30 | 1.21 |
| 470.1          | 1.47            | 1.41 | 1.36 | 1.45            | 1.24 | 1.77 | 475.0       | 1.68            | 1.31 | 1.20 |
| 490.1          | 1.45            | 1.40 | 1.35 | 1.42            | 1.22 | 1.72 | 495.3       | 1.74            | 1.35 | 1.21 |
| 522.1          | 1.45            | 1.39 | 1.33 | 1.35            | 1.23 | 1.68 | 515.6       | 1.74            | 1.39 | 1.22 |
| 554.1          | 1.46            | 1.39 | 1.34 | 1.32            | 1.31 | 1.83 | 536.0       | 1.77            | 1.43 | 1.23 |
| 586.1          | 1.44            | 1.38 | 1.32 | 1.26            | 1.30 | 1.76 | 556.3       | 1.76            | 1.44 | 1.24 |
| 618.1          | 1.44            | 1.38 | 1.32 | 1.23            | 1.32 | 1.79 | 576.6       | 1.81            | 1.47 | 1.26 |
| 650.1          | 1.43            | 1.38 | 1.32 | 1.22            | 1.37 | 1.93 | 596.9       | 1.81            | 1.49 | 1.29 |
| 682.1          | 1.41            | 1.35 | 1.30 | 1.15            | 1.34 | 1.79 | 617.2       | 1.82            | 1.51 | 1.32 |
| 714.1          | 1.40            | 1.33 | 1.29 | 1.12            | 1.39 | 1.89 | 637.5       | 1.82            | 1.52 | 1.32 |
| 746.1          | 1.38            | 1.32 | 1.27 | 1.08            | 1.45 | 2.01 | 657.8       | 1.86            | 1.51 | 1.31 |
| 778.1          | 1.37            | 1.30 | 1.26 | 1.07            | 1.40 | 1.85 | 678.1       | 1.87            | 1.50 | 1.29 |
| 810.1          | 1.36            | 1.28 | 1.23 | 1.09            | 1.53 | 2.05 | 698.5       | 1.92            | 1.51 | 1.28 |
| 842.1          | 1.36            | 1.27 | 1.21 | 1.12            | 1.57 | 2.11 | 718.8       | 1.93            | 1.50 | 1.27 |
| 874.1          | 1.37            | 1.26 | 1.20 | 1.15            | 1.56 | 1.98 | 739.1       | 1.97            | 1.50 | 1.27 |
| 906.1          | 1.37            | 1.24 | 1.17 | 1.20            | 1.72 | 2.30 | 759.4       | 2.00            | 1.49 | 1.24 |
| 938.1          | 1.37            | 1.23 | 1.14 | 1.22            | 1.69 | 2.19 | 779.7       | 2.08            | 1.48 | 1.24 |
| 970.1          | 1.37            | 1.23 | 1.12 | 1.23            | 1.70 | 2.16 | 800.0       | 2.14            | 1.51 | 1.25 |

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