

Image Reject Mixer

RCIR-161LH+

Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | CONVERSION LOSS IF FIXED @IF(OUT)=20.6 MHz (dB) | | | RF (IN) (MHz) | LO (MHz) | IMAGE REJECTION IF FIXED @IF(OUT)=20.6 MHz (dBc) | | | RF (IN) (MHz) | LO (MHz) | IP3 INPUT (dBm) | | | RF (IN) (MHz) | LO (MHz) | COMPRESSION @RF=+1dBm (dB) | | |
|---------------|----------|---|------|------|---------------|----------|--|-------|-------|---------------|----------|-----------------|-------|-------|---------------|----------|----------------------------|------|------|
| | | @LO (dBm) | | | | | @LO (dBm) | | | | | @LO (dBm) | | | | | @LO (dBm) | | |
| | | +7 | +10 | +13 | | | +7 | +10 | +13 | | | +7 | +10 | +13 | | | +7 | +10 | +13 |
| 80.0 | 100.6 | 6.26 | 6.06 | 5.95 | 80.0 | 100.6 | 48.55 | 40.21 | 34.46 | 80.0 | 100.6 | 17.18 | 20.71 | 24.73 | 80.0 | 100.6 | 0.22 | 0.12 | 0.06 |
| 86.0 | 106.6 | 6.19 | 6.01 | 5.92 | 86.0 | 106.6 | 40.30 | 37.10 | 36.06 | 86.0 | 106.6 | 18.01 | 21.01 | 21.60 | 86.0 | 106.6 | 0.24 | 0.13 | 0.08 |
| 92.0 | 112.6 | 6.18 | 6.00 | 5.92 | 92.0 | 112.6 | 36.23 | 36.09 | 36.30 | 92.0 | 112.6 | 18.46 | 20.24 | 20.70 | 92.0 | 112.6 | 0.22 | 0.12 | 0.07 |
| 98.0 | 118.6 | 6.20 | 6.03 | 5.95 | 98.0 | 118.6 | 35.22 | 34.82 | 35.39 | 98.0 | 118.6 | 19.02 | 19.91 | 20.49 | 98.0 | 118.6 | 0.21 | 0.10 | 0.06 |
| 104.0 | 124.6 | 6.20 | 6.03 | 5.96 | 104.0 | 124.6 | 33.94 | 34.01 | 34.34 | 104.0 | 124.6 | 18.16 | 19.31 | 20.10 | 104.0 | 124.6 | 0.23 | 0.12 | 0.07 |
| 110.0 | 130.6 | 6.21 | 6.03 | 5.96 | 110.0 | 130.6 | 32.99 | 33.39 | 33.84 | 110.0 | 130.6 | 18.35 | 19.57 | 20.12 | 110.0 | 130.6 | 0.23 | 0.12 | 0.06 |
| 116.0 | 136.6 | 6.24 | 6.05 | 5.96 | 116.0 | 136.6 | 32.75 | 33.10 | 33.27 | 116.0 | 136.6 | 19.13 | 19.67 | 19.82 | 116.0 | 136.6 | 0.22 | 0.12 | 0.07 |
| 119.4 | 140.0 | 6.25 | 6.06 | 5.97 | 119.4 | 140.0 | 32.63 | 32.84 | 33.01 | 119.4 | 140.0 | 19.12 | 19.01 | 19.44 | 119.4 | 140.0 | 0.22 | 0.12 | 0.07 |
| 122.8 | 143.4 | 6.26 | 6.07 | 5.98 | 122.8 | 143.4 | 32.40 | 32.71 | 32.85 | 122.8 | 143.4 | 18.58 | 18.44 | 18.93 | 122.8 | 143.4 | 0.23 | 0.14 | 0.09 |
| 126.2 | 146.8 | 6.28 | 6.09 | 6.01 | 126.2 | 146.8 | 32.35 | 32.72 | 32.78 | 126.2 | 146.8 | 18.31 | 18.12 | 18.83 | 126.2 | 146.8 | 0.22 | 0.12 | 0.07 |
| 129.6 | 150.2 | 6.30 | 6.11 | 6.03 | 129.6 | 150.2 | 32.44 | 33.02 | 32.85 | 129.6 | 150.2 | 18.10 | 18.09 | 18.84 | 129.6 | 150.2 | 0.23 | 0.14 | 0.09 |
| 133.0 | 153.6 | 6.31 | 6.13 | 6.04 | 133.0 | 153.6 | 32.91 | 33.32 | 33.17 | 133.0 | 153.6 | 17.97 | 17.96 | 18.66 | 133.0 | 153.6 | 0.22 | 0.13 | 0.08 |
| 136.4 | 157.0 | 6.31 | 6.13 | 6.04 | 136.4 | 157.0 | 33.37 | 33.86 | 33.41 | 136.4 | 157.0 | 17.87 | 17.81 | 18.56 | 136.4 | 157.0 | 0.25 | 0.15 | 0.10 |
| 139.8 | 160.4 | 6.32 | 6.13 | 6.04 | 139.8 | 160.4 | 33.94 | 34.40 | 33.94 | 139.8 | 160.4 | 17.74 | 17.85 | 18.69 | 139.8 | 160.4 | 0.21 | 0.12 | 0.07 |
| 143.2 | 163.8 | 6.32 | 6.12 | 6.03 | 143.2 | 163.8 | 34.45 | 34.77 | 34.43 | 143.2 | 163.8 | 17.59 | 17.64 | 18.54 | 143.2 | 163.8 | 0.21 | 0.12 | 0.08 |
| 146.6 | 167.2 | 6.31 | 6.12 | 6.01 | 146.6 | 167.2 | 34.88 | 35.26 | 34.69 | 146.6 | 167.2 | 17.31 | 17.56 | 18.40 | 146.6 | 167.2 | 0.19 | 0.10 | 0.06 |
| 150.0 | 170.6 | 6.29 | 6.09 | 5.99 | 150.0 | 170.6 | 35.40 | 35.48 | 35.04 | 150.0 | 170.6 | 16.82 | 17.22 | 18.20 | 150.0 | 170.6 | 0.20 | 0.11 | 0.06 |
| 156.0 | 176.6 | 6.25 | 6.05 | 5.95 | 156.0 | 176.6 | 35.80 | 34.92 | 34.92 | 156.0 | 176.6 | 16.23 | 16.92 | 18.01 | 156.0 | 176.6 | 0.18 | 0.08 | 0.04 |
| 162.0 | 182.6 | 6.23 | 6.05 | 5.95 | 162.0 | 182.6 | 35.66 | 34.60 | 34.07 | 162.0 | 182.6 | 16.17 | 16.93 | 17.94 | 162.0 | 182.6 | 0.21 | 0.10 | 0.05 |
| 168.0 | 188.6 | 6.27 | 6.10 | 6.00 | 168.0 | 188.6 | 35.95 | 30.83 | 33.53 | 168.0 | 188.6 | 15.96 | 17.06 | 18.20 | 168.0 | 188.6 | 0.18 | 0.08 | 0.04 |



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Typical Performance Data

| LO (MHz) | LO-RF ISOLATION (dB) | | | LO-IF ISOLATION (dB) | | | IMAGE REJECT ION IF FIXED @IF(OUT)=20.6 | LO (MHz) | RF-IF ISOLATION (dB) | | |
|-------------|-------------------------|-------|-------|-------------------------|-------|-------|--|-------------|-------------------------|-------|-------|
| | @LO (dBm) | | | @LO (dBm) | | | | | @LO (dBm) | | |
| | +7 | +10 | +13 | +7 | +10 | +13 | | | +7 | +10 | +13 |
| 100.6 | 59.94 | 61.96 | 63.68 | 57.90 | 56.69 | 56.02 | 80.0 | 100.6 | 34.31 | 34.44 | 34.48 |
| 106.6 | 59.65 | 61.63 | 63.37 | 57.57 | 56.38 | 55.69 | 86.0 | 106.6 | 34.00 | 34.17 | 34.21 |
| 112.6 | 59.28 | 61.41 | 62.97 | 57.28 | 56.14 | 55.24 | 92.0 | 112.6 | 33.60 | 33.77 | 33.80 |
| 118.6 | 58.99 | 61.21 | 62.83 | 57.00 | 55.74 | 54.81 | 98.0 | 118.6 | 33.13 | 33.29 | 33.35 |
| 124.6 | 58.54 | 60.72 | 62.72 | 56.66 | 55.24 | 54.27 | 104.0 | 124.6 | 32.81 | 32.99 | 33.04 |
| 130.6 | 58.29 | 60.36 | 62.37 | 56.11 | 54.69 | 53.65 | 110.0 | 130.6 | 32.41 | 32.62 | 32.70 |
| 136.6 | 57.79 | 59.93 | 61.90 | 55.10 | 53.65 | 52.70 | 116.0 | 136.6 | 32.00 | 32.21 | 32.32 |
| 140.0 | 57.64 | 59.91 | 61.67 | 54.28 | 53.00 | 52.06 | 119.4 | 140.0 | 31.84 | 32.07 | 32.16 |
| 143.4 | 57.47 | 59.73 | 61.59 | 53.60 | 52.26 | 51.39 | 122.8 | 143.4 | 31.71 | 31.96 | 32.08 |
| 146.8 | 57.41 | 59.64 | 61.37 | 52.76 | 51.62 | 50.77 | 126.2 | 146.8 | 31.57 | 31.85 | 31.99 |
| 150.2 | 57.27 | 59.36 | 61.22 | 52.13 | 51.11 | 50.37 | 129.6 | 150.2 | 31.44 | 31.73 | 31.89 |
| 153.6 | 57.25 | 59.35 | 61.19 | 51.92 | 51.02 | 50.36 | 133.0 | 153.6 | 31.34 | 31.63 | 31.80 |
| 157.0 | 57.09 | 59.43 | 61.18 | 52.64 | 51.64 | 50.99 | 136.4 | 157.0 | 31.28 | 31.59 | 31.77 |
| 160.4 | 57.09 | 59.19 | 61.10 | 54.51 | 53.46 | 52.73 | 139.8 | 160.4 | 31.26 | 31.61 | 31.79 |
| 163.8 | 56.82 | 58.99 | 60.90 | 58.28 | 56.74 | 55.76 | 143.2 | 163.8 | 31.35 | 31.71 | 31.90 |
| 167.2 | 56.69 | 58.84 | 60.75 | 64.58 | 62.35 | 60.68 | 146.6 | 167.2 | 31.69 | 32.08 | 32.28 |
| 170.6 | 56.41 | 58.58 | 60.35 | 76.91 | 74.54 | 69.62 | 150.0 | 170.6 | 32.43 | 32.83 | 33.05 |
| 176.6 | 56.04 | 58.22 | 59.97 | 63.50 | 63.49 | 63.83 | 156.0 | 176.6 | 35.15 | 35.45 | 35.59 |
| 182.6 | 55.78 | 57.89 | 59.53 | 59.10 | 58.54 | 58.43 | 162.0 | 182.6 | 36.50 | 36.68 | 36.73 |
| 188.6 | 55.45 | 57.62 | 59.18 | 56.85 | 56.10 | 55.89 | 168.0 | 188.6 | 34.03 | 34.30 | 34.45 |



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Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | RF VSWR (:1) | | | LO (MHz) | LO VSWR (:1) | | | IF (OUT) (MHz) | IF VSWR (:1) | | |
|---------------|----------|--------------|------|------|----------|--------------|------|------|----------------|--------------|------|------|
| | | @LO (dBm) | | | | @LO (dBm) | | | | @LO (dBm) | | |
| | | +7 | +10 | +13 | | +7 | +10 | +13 | | +7 | +10 | +13 |
| 80.0 | 100.6 | 1.79 | 1.93 | 2.04 | 100.6 | 1.39 | 1.42 | 1.45 | 10.0 | 1.27 | 1.26 | 1.26 |
| 86.0 | 106.6 | 1.81 | 1.96 | 2.08 | 106.6 | 1.36 | 1.39 | 1.42 | 12.5 | 1.18 | 1.18 | 1.18 |
| 92.0 | 112.6 | 1.82 | 1.97 | 2.09 | 112.6 | 1.35 | 1.37 | 1.39 | 15.0 | 1.12 | 1.13 | 1.13 |
| 98.0 | 118.6 | 1.83 | 1.99 | 2.11 | 118.6 | 1.33 | 1.35 | 1.36 | 17.5 | 1.09 | 1.09 | 1.09 |
| 104.0 | 124.6 | 1.83 | 2.00 | 2.12 | 124.6 | 1.31 | 1.33 | 1.34 | 20.0 | 1.12 | 1.10 | 1.10 |
| 110.0 | 130.6 | 1.83 | 2.00 | 2.12 | 130.6 | 1.30 | 1.31 | 1.33 | 22.5 | 1.20 | 1.16 | 1.13 |
| 116.0 | 136.6 | 1.82 | 1.99 | 2.12 | 136.6 | 1.29 | 1.30 | 1.31 | 25.0 | 1.22 | 1.18 | 1.16 |
| 119.4 | 140.0 | 1.83 | 1.99 | 2.12 | 140.0 | 1.29 | 1.30 | 1.31 | 27.5 | 1.24 | 1.21 | 1.19 |
| 122.8 | 143.4 | 1.84 | 2.00 | 2.13 | 143.4 | 1.28 | 1.29 | 1.30 | 30.0 | 1.27 | 1.24 | 1.21 |
| 126.2 | 146.8 | 1.84 | 2.01 | 2.14 | 146.8 | 1.28 | 1.29 | 1.30 | 34.0 | 1.33 | 1.29 | 1.25 |
| 129.6 | 150.2 | 1.85 | 2.02 | 2.15 | 150.2 | 1.27 | 1.29 | 1.30 | 38.0 | 1.37 | 1.32 | 1.28 |
| 133.0 | 153.6 | 1.85 | 2.02 | 2.15 | 153.6 | 1.27 | 1.29 | 1.30 | 42.0 | 1.41 | 1.35 | 1.31 |
| 136.4 | 157.0 | 1.86 | 2.03 | 2.15 | 157.0 | 1.27 | 1.29 | 1.30 | 46.0 | 1.44 | 1.37 | 1.33 |
| 139.8 | 160.4 | 1.86 | 2.03 | 2.15 | 160.4 | 1.27 | 1.29 | 1.30 | 50.0 | 1.47 | 1.40 | 1.35 |
| 143.2 | 163.8 | 1.86 | 2.03 | 2.15 | 163.8 | 1.28 | 1.30 | 1.31 | 55.0 | 1.50 | 1.42 | 1.36 |
| 146.6 | 167.2 | 1.86 | 2.02 | 2.14 | 167.2 | 1.28 | 1.31 | 1.32 | 60.0 | 1.53 | 1.44 | 1.38 |
| 150.0 | 170.6 | 1.86 | 2.02 | 2.14 | 170.6 | 1.29 | 1.32 | 1.34 | 65.0 | 1.55 | 1.45 | 1.39 |
| 156.0 | 176.6 | 1.87 | 2.03 | 2.14 | 176.6 | 1.32 | 1.35 | 1.37 | 70.0 | 1.57 | 1.47 | 1.40 |
| 162.0 | 182.6 | 1.89 | 2.05 | 2.16 | 182.6 | 1.35 | 1.39 | 1.42 | 75.0 | 1.58 | 1.48 | 1.41 |
| 168.0 | 188.6 | 1.91 | 2.07 | 2.18 | 188.6 | 1.40 | 1.45 | 1.49 | 80.0 | 1.59 | 1.49 | 1.42 |



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