

## Non-Catalog Model

# Frequency Mixer

# LRMS-2DJ

Level 7 (LO Power +7 dBm)

### Important Note

This is a non-catalog model and can be manufactured on specific request.  
Pricing and delivery information can be supplied upon request.



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**CASE STYLE : QQQ569**

| ELECTRICAL SPECIFICATIONS 50Ω @ +25°C |               |      |      |      |       |
|---------------------------------------|---------------|------|------|------|-------|
| Parameter                             |               | Min. | Typ. | Max. | Units |
| Frequency                             | LO (fL to fU) | 5    |      | 1000 | MHz   |
|                                       | RF (fL to fU) | 5    |      | 1000 | MHz   |
|                                       | IF            | 0    |      | 1000 | MHz   |
| Conversion Loss                       | mid band      |      | 6.8  | 8.0  | dB    |
|                                       | Total Range   |      |      | 10.0 | dB    |
| LO-RF Isolation                       | Low Range     | 40   | 59   |      | dB    |
|                                       | Mid Range     | 30   | 40   |      | dB    |
|                                       | Upper Range   | 22   | 33   |      | dB    |
| LO-IF Isolation                       | Low Range     | 30   | 55   |      | dB    |
|                                       | Mid Range     | 22   | 40   |      | dB    |
|                                       | Upper Range   | 20   | 30   |      | dB    |
| 1 dB Comp. Input Power                |               |      | +1   |      | dBm   |

**Notes:** Low Range = [fL to 10fL]  
mid band = [2fL to fU/2]

Mid Range = [10fL to fU/2]

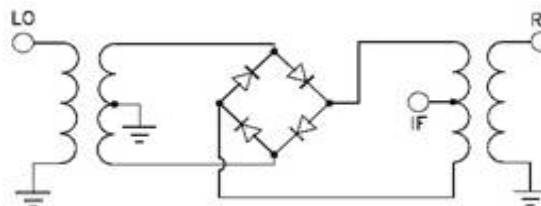
Upper Range = [fU/2 to fU]

Phase detection, positive polarity.  
Aqueous washable.

| MAXIMUM RATINGS       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Power              | 50mW           |
| IF Current            | 40mA           |

| PIN CONNECTIONS |         |
|-----------------|---------|
| LO              | 1       |
| RF              | 4       |
| IF              | 5       |
| GROUND          | 2, 3, 6 |

### Electrical Schematics



# Frequency Mixer

# LRMS-2DJ

## Typical Performance Data

| RF<br>(IN)<br>(MHz) | LO<br>(MHz) | CONVERSION LOSS<br>IF FIXED<br>@IF(OUT)=30MHz<br>(dB) |       |      | RF<br>(IN)<br>(MHz) | LO<br>(MHz) | IP3 INPUT<br>(dBm) |       |       | RF<br>(IN)<br>(MHz) | LO<br>(MHz) | COMPRESSION<br>@RF IN=+1dBm<br>(dB) |      |      |
|---------------------|-------------|-------------------------------------------------------|-------|------|---------------------|-------------|--------------------|-------|-------|---------------------|-------------|-------------------------------------|------|------|
|                     |             | @LO (dBm)                                             |       |      |                     |             | @LO (dBm)          |       |       |                     |             | @LO (dBm)                           |      |      |
|                     |             | +4                                                    | +7    | +10  |                     |             | +4                 | +7    | +10   |                     |             | +4                                  | +7   | +10  |
| 5.0                 | 35.0        | 7.57                                                  | 7.12  | 6.85 | 10.1                | 40.1        | 22.74              | 23.84 | 18.86 | 10.1                | 40.1        | 0.89                                | 0.67 | 0.51 |
| 10.0                | 40.0        | 7.41                                                  | 7.00  | 6.73 | 50.4                | 80.4        | 17.86              | 17.53 | 21.18 | 50.4                | 80.4        | 0.88                                | 0.55 | 0.44 |
| 50.4                | 80.4        | 7.28                                                  | 6.86  | 6.60 | 90.7                | 120.7       | 16.58              | 17.79 | 20.65 | 90.7                | 120.7       | 0.88                                | 0.65 | 0.52 |
| 90.7                | 120.7       | 7.26                                                  | 6.83  | 6.63 | 131.0               | 161.0       | 16.02              | 16.72 | 20.43 | 131.0               | 161.0       | 0.93                                | 0.63 | 0.49 |
| 131.0               | 161.0       | 7.25                                                  | 6.86  | 6.71 | 171.3               | 201.3       | 15.51              | 17.95 | 18.28 | 171.3               | 201.3       | 0.86                                | 0.68 | 0.45 |
| 171.3               | 201.3       | 7.21                                                  | 6.86  | 6.67 | 211.5               | 241.5       | 17.08              | 19.55 | 18.69 | 211.5               | 241.5       | 0.82                                | 0.60 | 0.47 |
| 211.5               | 241.5       | 7.15                                                  | 6.80  | 6.63 | 251.8               | 281.8       | 16.46              | 19.32 | 23.31 | 251.8               | 281.8       | 0.88                                | 0.66 | 0.49 |
| 251.8               | 281.8       | 7.14                                                  | 6.79  | 6.67 | 292.1               | 322.1       | 16.71              | 18.39 | 22.89 | 292.1               | 322.1       | 0.97                                | 0.67 | 0.53 |
| 292.1               | 322.1       | 7.13                                                  | 6.78  | 6.60 | 332.4               | 362.4       | 17.80              | 20.48 | 18.28 | 332.4               | 362.4       | 0.97                                | 0.65 | 0.49 |
| 332.4               | 362.4       | 7.13                                                  | 6.80  | 6.65 | 372.7               | 402.7       | 15.92              | 18.69 | 20.19 | 372.7               | 402.7       | 0.94                                | 0.71 | 0.41 |
| 372.7               | 402.7       | 7.12                                                  | 6.82  | 6.66 | 413.0               | 443.0       | 20.21              | 19.26 | 20.97 | 413.0               | 443.0       | 0.90                                | 0.65 | 0.59 |
| 413.0               | 443.0       | 7.09                                                  | 6.80  | 6.64 | 453.3               | 483.3       | 21.15              | 20.08 | 20.16 | 453.3               | 483.3       | 0.92                                | 0.60 | 0.51 |
| 453.3               | 483.3       | 7.16                                                  | 6.83  | 6.66 | 493.6               | 523.6       | 22.17              | 25.36 | 19.26 | 493.6               | 523.6       | 0.89                                | 0.67 | 0.45 |
| 493.6               | 523.6       | 7.19                                                  | 6.87  | 6.70 | 533.9               | 563.9       | 16.57              | 17.95 | 16.10 | 533.9               | 563.9       | 0.82                                | 0.51 | 0.48 |
| 533.9               | 563.9       | 7.21                                                  | 6.88  | 6.68 | 574.2               | 604.2       | 16.78              | 16.59 | 16.41 | 574.2               | 604.2       | 0.77                                | 0.45 | 0.43 |
| 574.2               | 604.2       | 7.27                                                  | 6.91  | 6.71 | 614.4               | 644.4       | 15.23              | 15.83 | 16.65 | 614.4               | 644.4       | 0.73                                | 0.52 | 0.40 |
| 614.4               | 644.4       | 7.27                                                  | 6.96  | 6.76 | 654.7               | 684.7       | 24.26              | 16.77 | 18.16 | 654.7               | 684.7       | 0.94                                | 0.67 | 0.50 |
| 654.7               | 684.7       | 7.31                                                  | 7.00  | 6.89 | 695.0               | 725.0       | 21.37              | 20.57 | 17.51 | 695.0               | 725.0       | 0.88                                | 0.61 | 0.44 |
| 695.0               | 725.0       | 7.39                                                  | 7.07  | 6.96 | 735.3               | 765.3       | 15.98              | 14.93 | 22.20 | 735.3               | 765.3       | 1.06                                | 0.70 | 0.53 |
| 735.3               | 765.3       | 7.44                                                  | 7.15  | 7.05 | 775.6               | 805.6       | 15.80              | 14.88 | 17.96 | 775.6               | 805.6       | 0.99                                | 0.70 | 0.59 |
| 775.6               | 805.6       | 7.60                                                  | 7.28  | 7.11 | 815.9               | 845.9       | 13.04              | 16.58 | 20.14 | 815.9               | 845.9       | 1.21                                | 0.87 | 0.76 |
| 815.9               | 845.9       | 7.74                                                  | 7.43  | 7.28 | 856.2               | 886.2       | 12.13              | 16.73 | 22.88 | 856.2               | 886.2       | 1.31                                | 0.95 | 0.74 |
| 856.2               | 886.2       | 7.94                                                  | 7.60  | 7.44 | 896.5               | 926.5       | 10.30              | 14.02 | 17.78 | 896.5               | 926.5       | 1.33                                | 0.95 | 0.76 |
| 896.5               | 926.5       | 8.03                                                  | 7.69  | 7.44 | 916.6               | 946.6       | 9.53               | 12.21 | 18.44 | 916.6               | 946.6       | 1.46                                | 1.17 | 0.93 |
| 916.6               | 946.6       | 8.24                                                  | 7.83  | 7.60 | 956.9               | 986.9       | 8.76               | 11.88 | 17.77 | 956.9               | 986.9       | 1.42                                | 1.21 | 0.93 |
| 956.9               | 986.9       | 8.39                                                  | 8.02  | 7.72 | 977.1               | 1007.1      | 8.31               | 11.87 | 21.18 | 977.1               | 1007.1      | 1.44                                | 1.23 | 1.14 |
| 977.1               | 1007.1      | 8.50                                                  | 8.08  | 7.78 | 1017.3              | 1047.3      | 8.43               | 12.50 | 18.44 | 1017.3              | 1047.3      | 1.52                                | 1.35 | 1.13 |
| 1017.3              | 1047.3      | 8.67                                                  | 8.23  | 7.90 | 1037.5              | 1067.5      | 8.73               | 12.69 | 22.89 | 1037.5              | 1067.5      | 1.46                                | 1.29 | 1.06 |
| 1037.5              | 1067.5      | 8.78                                                  | 8.23  | 7.93 | 1077.8              | 1107.8      | 8.62               | 12.79 | 21.00 | 1077.8              | 1107.8      | 1.45                                | 1.23 | 1.06 |
| 1077.8              | 1107.8      | 9.01                                                  | 8.44  | 8.09 | 1097.9              | 1127.9      | 9.03               | 12.89 | 20.14 | 1097.9              | 1127.9      | 1.51                                | 1.36 | 1.16 |
| 1097.9              | 1127.9      | 9.19                                                  | 8.51  | 8.13 | 1138.2              | 1168.2      | 9.83               | 13.61 | 19.34 | 1138.2              | 1168.2      | 1.42                                | 1.37 | 1.18 |
| 1138.2              | 1168.2      | 9.44                                                  | 8.73  | 8.30 | 1158.4              | 1188.4      | 9.89               | 15.25 | 16.45 | 1158.4              | 1188.4      | 1.36                                | 1.27 | 1.20 |
| 1158.4              | 1188.4      | 9.49                                                  | 8.79  | 8.35 | 1198.7              | 1228.7      | 10.28              | 13.37 | 14.14 | 1198.7              | 1228.7      | 1.21                                | 1.23 | 1.20 |
| 1198.7              | 1228.7      | 9.76                                                  | 9.00  | 8.49 | 1218.8              | 1248.8      | 10.54              | 12.61 | 13.73 | 1218.8              | 1248.8      | 1.23                                | 1.26 | 1.19 |
| 1218.8              | 1248.8      | 9.77                                                  | 9.05  | 8.57 | 1259.1              | 1289.1      | 10.04              | 11.89 | 13.35 | 1259.1              | 1289.1      | 1.19                                | 1.22 | 1.11 |
| 1259.1              | 1289.1      | 10.00                                                 | 9.27  | 8.78 | 1279.2              | 1309.2      | 9.92               | 11.83 | 13.64 | 1279.2              | 1309.2      | 1.26                                | 1.04 | 1.14 |
| 1279.2              | 1309.2      | 10.15                                                 | 9.42  | 8.95 | 1319.5              | 1349.5      | 9.36               | 12.65 | 15.04 | 1319.5              | 1349.5      | 1.09                                | 1.14 | 1.01 |
| 1319.5              | 1349.5      | 10.41                                                 | 9.70  | 9.26 | 1339.7              | 1369.7      | 9.05               | 11.83 | 15.38 | 1339.7              | 1369.7      | 1.22                                | 1.08 | 0.90 |
| 1380.0              | 1410.0      | 10.82                                                 | 10.15 | 9.71 | 1380.0              | 1410.0      | 8.48               | 10.38 | 13.14 | 1380.0              | 1410.0      | 1.12                                | 0.90 | 0.76 |
| 1400.1              | 1430.1      | 10.91                                                 | 10.27 | 9.83 | 1400.1              | 1430.1      | 8.61               | 10.31 | 12.21 | 1400.1              | 1430.1      | 1.11                                | 0.70 | 0.81 |

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# Frequency Mixer

# LRMS-2DJ

## Typical Performance Data

| IF<br>(OUT)<br>(MHz) | LO<br>(MHz) | CONVERSION LOSS<br>VS. IF FREQUENCY<br>@RF(IN)=500.1MHz<br>(dB) | IF<br>(OUT)<br>(MHz) | LO<br>(MHz) | CONVERSION LOSS<br>VS. IF FREQUENCY<br>@RF(IN)=10.1MHz<br>(dB) | IF<br>(OUT)<br>(MHz) | LO<br>(MHz) | CONVERSION LOSS<br>VS. IF FREQUENCY<br>@RF(IN)=1000.1MHz<br>(dB) |
|----------------------|-------------|-----------------------------------------------------------------|----------------------|-------------|----------------------------------------------------------------|----------------------|-------------|------------------------------------------------------------------|
|                      |             | @LO (dBm)                                                       |                      |             | @LO (dBm)                                                      |                      |             | @LO (dBm)                                                        |
|                      |             | +7                                                              |                      |             | +7                                                             |                      |             | +7                                                               |
| 490.0                | 10.1        | 6.96                                                            | 10.0                 | 20.1        | 6.85                                                           | 990.0                | 10.1        | 8.39                                                             |
| 477.7                | 22.4        | 6.96                                                            | 30.2                 | 40.3        | 6.61                                                           | 970.0                | 30.1        | 8.35                                                             |
| 465.4                | 34.7        | 6.93                                                            | 50.4                 | 60.5        | 6.63                                                           | 950.0                | 50.1        | 8.31                                                             |
| 453.1                | 47.0        | 6.92                                                            | 70.6                 | 80.7        | 6.60                                                           | 930.0                | 70.1        | 8.26                                                             |
| 440.8                | 59.3        | 6.93                                                            | 90.8                 | 100.9       | 6.62                                                           | 910.0                | 90.1        | 8.21                                                             |
| 428.5                | 71.6        | 6.89                                                            | 111.0                | 121.1       | 6.60                                                           | 890.0                | 110.1       | 8.15                                                             |
| 416.2                | 83.9        | 6.84                                                            | 131.2                | 141.3       | 6.59                                                           | 870.0                | 130.1       | 8.05                                                             |
| 403.8                | 96.3        | 6.80                                                            | 151.4                | 161.5       | 6.63                                                           | 850.0                | 150.1       | 8.04                                                             |
| 391.5                | 108.6       | 6.79                                                            | 171.6                | 181.7       | 6.67                                                           | 830.0                | 170.1       | 8.02                                                             |
| 379.2                | 120.9       | 6.77                                                            | 191.8                | 201.9       | 6.66                                                           | 810.0                | 190.1       | 7.99                                                             |
| 366.9                | 133.2       | 6.72                                                            | 212.0                | 222.1       | 6.71                                                           | 790.0                | 210.1       | 7.98                                                             |
| 354.6                | 145.5       | 6.71                                                            | 232.2                | 242.3       | 6.69                                                           | 770.0                | 230.1       | 7.94                                                             |
| 342.3                | 157.8       | 6.72                                                            | 252.4                | 262.5       | 6.73                                                           | 750.0                | 250.1       | 7.90                                                             |
| 330.0                | 170.1       | 6.70                                                            | 272.7                | 282.8       | 6.74                                                           | 730.0                | 270.1       | 7.93                                                             |
| 317.7                | 182.4       | 6.69                                                            | 292.9                | 303.0       | 6.76                                                           | 710.0                | 290.1       | 7.93                                                             |
| 305.4                | 194.7       | 6.70                                                            | 313.1                | 323.2       | 6.76                                                           | 690.0                | 310.1       | 7.91                                                             |
| 293.1                | 207.0       | 6.69                                                            | 333.3                | 343.4       | 6.79                                                           | 670.0                | 330.1       | 7.90                                                             |
| 280.8                | 219.3       | 6.68                                                            | 353.5                | 363.6       | 6.78                                                           | 650.0                | 350.1       | 7.90                                                             |
| 268.5                | 231.6       | 6.67                                                            | 373.7                | 383.8       | 6.82                                                           | 630.0                | 370.1       | 7.91                                                             |
| 256.2                | 243.9       | 6.69                                                            | 393.9                | 404.0       | 6.85                                                           | 610.0                | 390.1       | 7.92                                                             |
| 243.8                | 256.3       | 6.64                                                            | 434.3                | 444.4       | 6.90                                                           | 570.0                | 430.1       | 7.90                                                             |
| 231.5                | 268.6       | 6.60                                                            | 454.5                | 464.6       | 6.86                                                           | 550.0                | 450.1       | 7.91                                                             |
| 219.2                | 280.9       | 6.61                                                            | 494.9                | 505.0       | 6.88                                                           | 510.0                | 490.1       | 7.91                                                             |
| 206.9                | 293.2       | 6.70                                                            | 515.1                | 525.2       | 6.87                                                           | 490.0                | 510.1       | 7.88                                                             |
| 194.6                | 305.5       | 6.70                                                            | 555.5                | 565.6       | 6.85                                                           | 450.0                | 550.1       | 7.95                                                             |
| 182.3                | 317.8       | 6.71                                                            | 575.7                | 585.8       | 6.92                                                           | 430.0                | 570.1       | 7.98                                                             |
| 170.0                | 330.1       | 6.70                                                            | 616.1                | 626.2       | 7.02                                                           | 390.0                | 610.1       | 7.93                                                             |
| 157.7                | 342.4       | 6.67                                                            | 636.3                | 646.4       | 7.06                                                           | 370.0                | 630.1       | 7.94                                                             |
| 145.4                | 354.7       | 6.73                                                            | 676.7                | 686.8       | 7.12                                                           | 330.0                | 670.1       | 7.91                                                             |
| 133.1                | 367.0       | 6.71                                                            | 696.9                | 707.0       | 7.16                                                           | 310.0                | 690.1       | 7.91                                                             |
| 120.8                | 379.3       | 6.73                                                            | 737.3                | 747.4       | 7.12                                                           | 270.0                | 730.1       | 7.95                                                             |
| 108.5                | 391.6       | 6.72                                                            | 757.6                | 767.7       | 7.09                                                           | 250.0                | 750.1       | 8.00                                                             |
| 96.2                 | 403.9       | 6.73                                                            | 798.0                | 808.1       | 7.10                                                           | 210.0                | 790.1       | 8.02                                                             |
| 83.8                 | 416.3       | 6.71                                                            | 818.2                | 828.3       | 7.05                                                           | 190.0                | 810.1       | 8.01                                                             |
| 71.5                 | 428.6       | 6.74                                                            | 858.6                | 868.7       | 7.09                                                           | 150.0                | 850.1       | 8.00                                                             |
| 59.2                 | 440.9       | 6.73                                                            | 878.8                | 888.9       | 7.14                                                           | 130.0                | 870.1       | 7.98                                                             |
| 46.9                 | 453.2       | 6.75                                                            | 919.2                | 929.3       | 7.13                                                           | 90.0                 | 910.1       | 7.96                                                             |
| 34.6                 | 465.5       | 6.77                                                            | 939.4                | 949.5       | 7.12                                                           | 70.0                 | 930.1       | 7.99                                                             |
| 22.3                 | 477.8       | 6.82                                                            | 979.8                | 989.9       | 7.17                                                           | 30.0                 | 970.1       | 8.06                                                             |
| 10.0                 | 490.1       | 6.77                                                            | 1000.0               | 1010.1      | 7.12                                                           | 10.0                 | 990.1       | 8.31                                                             |

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## Typical Performance Data

| LO<br>(MHz) | LO-RF ISOLATION<br>(dB) |       |       | LO-IF ISOLATION<br>(dB) |       |       |
|-------------|-------------------------|-------|-------|-------------------------|-------|-------|
|             | @LO (dBm)               |       |       | @LO (dBm)               |       |       |
|             | +4                      | +7    | +10   | +4                      | +7    | +10   |
| 5.0         | 75.52                   | 75.17 | 72.21 | 66.42                   | 69.37 | 72.91 |
| 10.0        | 68.33                   | 69.29 | 68.74 | 66.13                   | 68.39 | 69.44 |
| 50.4        | 57.44                   | 57.58 | 57.53 | 64.37                   | 55.44 | 54.42 |
| 90.7        | 52.04                   | 52.07 | 52.15 | 54.96                   | 52.55 | 50.51 |
| 131.0       | 48.89                   | 48.81 | 48.80 | 51.86                   | 49.41 | 47.78 |
| 171.3       | 46.32                   | 46.39 | 46.37 | 50.31                   | 47.51 | 45.93 |
| 211.5       | 44.36                   | 44.41 | 44.43 | 48.95                   | 46.25 | 44.53 |
| 251.8       | 42.80                   | 42.86 | 42.86 | 47.33                   | 44.81 | 43.17 |
| 292.1       | 41.44                   | 41.51 | 41.48 | 46.12                   | 43.91 | 42.18 |
| 332.4       | 40.25                   | 40.25 | 40.18 | 44.63                   | 42.60 | 41.03 |
| 372.7       | 39.27                   | 39.29 | 39.21 | 43.07                   | 41.34 | 39.95 |
| 413.0       | 38.19                   | 38.16 | 38.09 | 41.84                   | 40.46 | 39.16 |
| 453.3       | 37.30                   | 37.22 | 37.11 | 40.20                   | 39.43 | 38.44 |
| 493.6       | 36.62                   | 36.57 | 36.53 | 38.93                   | 38.38 | 37.62 |
| 533.9       | 36.06                   | 36.01 | 35.94 | 37.44                   | 37.06 | 36.55 |
| 574.2       | 35.57                   | 35.50 | 35.31 | 36.14                   | 35.99 | 35.66 |
| 614.4       | 35.00                   | 34.93 | 34.78 | 35.11                   | 35.14 | 34.78 |
| 654.7       | 34.37                   | 34.25 | 34.03 | 34.19                   | 34.60 | 34.49 |
| 695.0       | 33.62                   | 33.50 | 33.30 | 33.41                   | 34.06 | 34.30 |
| 735.3       | 32.91                   | 32.82 | 32.65 | 32.47                   | 33.20 | 33.59 |
| 775.6       | 32.32                   | 32.35 | 32.32 | 31.81                   | 32.51 | 32.90 |
| 815.9       | 31.85                   | 31.90 | 31.93 | 31.00                   | 31.65 | 31.97 |
| 856.2       | 31.57                   | 31.64 | 31.70 | 30.24                   | 30.92 | 31.18 |
| 896.5       | 31.18                   | 31.31 | 31.40 | 29.61                   | 30.45 | 30.73 |
| 916.6       | 31.08                   | 31.25 | 31.36 | 29.23                   | 30.18 | 30.54 |
| 956.9       | 30.74                   | 30.92 | 31.05 | 28.62                   | 29.66 | 30.22 |
| 977.1       | 30.61                   | 30.79 | 30.92 | 28.29                   | 29.36 | 30.00 |
| 1017.3      | 30.28                   | 30.42 | 30.51 | 27.70                   | 28.76 | 29.50 |
| 1037.5      | 30.15                   | 30.27 | 30.32 | 27.27                   | 28.30 | 29.11 |
| 1077.8      | 29.81                   | 29.94 | 29.91 | 26.92                   | 27.92 | 28.78 |
| 1097.9      | 29.57                   | 29.72 | 29.69 | 26.62                   | 27.61 | 28.47 |
| 1138.2      | 28.99                   | 29.09 | 29.10 | 26.22                   | 27.18 | 28.08 |
| 1158.4      | 28.70                   | 28.76 | 28.74 | 26.10                   | 27.07 | 27.96 |
| 1198.7      | 28.05                   | 28.06 | 28.05 | 25.75                   | 26.73 | 27.65 |
| 1218.8      | 27.73                   | 27.71 | 27.70 | 25.49                   | 26.46 | 27.41 |
| 1259.1      | 27.04                   | 27.00 | 26.99 | 25.26                   | 26.24 | 27.23 |
| 1279.2      | 26.71                   | 26.65 | 26.64 | 25.07                   | 26.06 | 27.08 |
| 1319.5      | 26.02                   | 25.93 | 25.94 | 24.88                   | 25.84 | 26.89 |
| 1380.0      | 25.27                   | 25.12 | 25.12 | 25.01                   | 26.04 | 27.07 |
| 1400.1      | 25.08                   | 24.90 | 24.88 | 24.90                   | 25.96 | 26.97 |

| RF<br>(IN)<br>(MHz) | LO<br>(MHz) | RF-IF ISOLATION<br>(dB) |       |       |
|---------------------|-------------|-------------------------|-------|-------|
|                     |             | @LO (dBm)               |       |       |
|                     |             | +4                      | +7    | +10   |
| 10.1                | 40.1        | 34.81                   | 39.94 | 33.83 |
| 50.4                | 80.4        | 34.82                   | 35.25 | 35.54 |
| 90.7                | 120.7       | 31.26                   | 31.23 | 30.95 |
| 131.0               | 161.0       | 28.33                   | 28.55 | 28.60 |
| 171.3               | 201.3       | 26.59                   | 26.71 | 26.59 |
| 211.5               | 241.5       | 25.44                   | 25.40 | 25.41 |
| 251.8               | 281.8       | 24.73                   | 24.72 | 24.78 |
| 292.1               | 322.1       | 24.25                   | 24.32 | 24.27 |
| 332.4               | 362.4       | 24.12                   | 24.06 | 24.09 |
| 372.7               | 402.7       | 23.91                   | 24.12 | 24.17 |
| 413.0               | 443.0       | 23.87                   | 24.24 | 24.47 |
| 453.3               | 483.3       | 23.85                   | 24.13 | 24.39 |
| 493.6               | 523.6       | 23.60                   | 23.75 | 23.80 |
| 533.9               | 563.9       | 23.09                   | 23.23 | 23.31 |
| 574.2               | 604.2       | 22.20                   | 22.50 | 22.81 |
| 614.4               | 644.4       | 20.86                   | 21.33 | 21.75 |
| 654.7               | 684.7       | 19.26                   | 19.71 | 20.16 |
| 695.0               | 725.0       | 17.70                   | 18.05 | 18.39 |
| 735.3               | 765.3       | 16.43                   | 16.63 | 16.85 |
| 775.6               | 805.6       | 15.35                   | 15.45 | 15.59 |
| 815.9               | 845.9       | 14.49                   | 14.50 | 14.56 |
| 856.2               | 886.2       | 13.78                   | 13.77 | 13.78 |
| 896.5               | 926.5       | 13.16                   | 13.15 | 13.19 |
| 916.6               | 946.6       | 12.88                   | 12.90 | 12.93 |
| 956.9               | 986.9       | 12.40                   | 12.40 | 12.45 |
| 977.1               | 1007.1      | 12.20                   | 12.22 | 12.27 |
| 1017.3              | 1047.3      | 11.84                   | 11.90 | 11.97 |
| 1037.5              | 1067.5      | 11.71                   | 11.79 | 11.90 |
| 1077.8              | 1107.8      | 11.45                   | 11.61 | 11.81 |
| 1097.9              | 1127.9      | 11.32                   | 11.51 | 11.73 |
| 1138.2              | 1168.2      | 11.07                   | 11.29 | 11.56 |
| 1158.4              | 1188.4      | 10.99                   | 11.24 | 11.52 |
| 1198.7              | 1228.7      | 10.87                   | 11.14 | 11.46 |
| 1218.8              | 1248.8      | 10.82                   | 11.11 | 11.45 |
| 1259.1              | 1289.1      | 10.72                   | 11.00 | 11.32 |
| 1279.2              | 1309.2      | 10.67                   | 10.91 | 11.18 |
| 1319.5              | 1349.5      | 10.61                   | 10.76 | 10.87 |
| 1339.7              | 1369.7      | 10.62                   | 10.73 | 10.78 |
| 1380.0              | 1410.0      | 10.68                   | 10.83 | 10.85 |
| 1400.1              | 1430.1      | 10.70                   | 10.87 | 10.90 |

# Frequency Mixer

# LRMS-2DJ

## Typical Performance Data

| RF<br>(IN)<br>(MHz) | LO<br>(MHz) | RF VSWR<br>(:1) |      |      | LO<br>(MHz) | LO VSWR<br>(:1) |      |      | IF<br>(OUT)<br>(MHz) | IF VSWR<br>@LO=1000.1MHz<br>(:1) |      |      |
|---------------------|-------------|-----------------|------|------|-------------|-----------------|------|------|----------------------|----------------------------------|------|------|
|                     |             | @LO (dBm)       |      |      |             | @LO (dBm)       |      |      |                      | @LO (dBm)                        |      |      |
|                     |             | +4              | +7   | +10  |             | +4              | +7   | +10  |                      | +4                               | +7   | +10  |
| 5.0                 | 35.0        | 1.38            | 1.43 | 1.48 | 5.0         | 2.09            | 2.92 | 3.99 | 5.0                  | 1.29                             | 1.14 | 1.04 |
| 10.0                | 40.0        | 1.25            | 1.32 | 1.37 | 10.0        | 1.95            | 2.76 | 3.81 | 10.0                 | 1.30                             | 1.14 | 1.04 |
| 50.4                | 80.4        | 1.25            | 1.34 | 1.40 | 50.4        | 1.95            | 2.80 | 3.88 | 30.1                 | 1.98                             | 1.71 | 1.47 |
| 90.7                | 120.7       | 1.19            | 1.26 | 1.34 | 90.7        | 1.94            | 2.75 | 3.81 | 50.1                 | 1.84                             | 1.55 | 1.37 |
| 131.0               | 161.0       | 1.25            | 1.33 | 1.39 | 131.0       | 1.91            | 2.72 | 3.75 | 70.1                 | 1.79                             | 1.56 | 1.37 |
| 171.3               | 201.3       | 1.19            | 1.27 | 1.33 | 171.3       | 1.93            | 2.73 | 3.76 | 90.1                 | 1.89                             | 1.64 | 1.43 |
| 211.5               | 241.5       | 1.27            | 1.36 | 1.41 | 211.5       | 1.91            | 2.68 | 3.66 | 110.1                | 1.95                             | 1.69 | 1.50 |
| 251.8               | 281.8       | 1.27            | 1.34 | 1.40 | 251.8       | 1.94            | 2.72 | 3.72 | 130.1                | 1.89                             | 1.65 | 1.47 |
| 292.1               | 322.1       | 1.29            | 1.37 | 1.43 | 292.1       | 1.95            | 2.72 | 3.70 | 150.1                | 1.90                             | 1.65 | 1.46 |
| 332.4               | 362.4       | 1.32            | 1.39 | 1.45 | 332.4       | 1.98            | 2.77 | 3.76 | 170.1                | 1.87                             | 1.65 | 1.48 |
| 372.7               | 402.7       | 1.34            | 1.42 | 1.48 | 372.7       | 2.04            | 2.85 | 3.86 | 190.1                | 1.93                             | 1.69 | 1.51 |
| 413.0               | 443.0       | 1.38            | 1.47 | 1.53 | 413.0       | 2.03            | 2.82 | 3.81 | 210.1                | 1.95                             | 1.72 | 1.54 |
| 453.3               | 483.3       | 1.40            | 1.48 | 1.54 | 453.3       | 2.09            | 2.89 | 3.89 | 230.1                | 1.91                             | 1.68 | 1.51 |
| 493.6               | 523.6       | 1.42            | 1.49 | 1.55 | 493.6       | 2.06            | 2.82 | 3.78 | 250.1                | 1.91                             | 1.68 | 1.53 |
| 533.9               | 563.9       | 1.46            | 1.54 | 1.60 | 533.9       | 2.09            | 2.86 | 3.81 | 270.1                | 1.90                             | 1.70 | 1.55 |
| 574.2               | 604.2       | 1.50            | 1.57 | 1.63 | 574.2       | 2.12            | 2.86 | 3.79 | 290.1                | 1.92                             | 1.73 | 1.57 |
| 614.4               | 644.4       | 1.56            | 1.64 | 1.70 | 614.4       | 2.16            | 2.92 | 3.85 | 310.1                | 1.91                             | 1.73 | 1.59 |
| 654.7               | 684.7       | 1.63            | 1.71 | 1.78 | 654.7       | 2.24            | 3.00 | 3.94 | 330.1                | 1.90                             | 1.73 | 1.58 |
| 695.0               | 725.0       | 1.66            | 1.75 | 1.82 | 695.0       | 2.25            | 3.00 | 3.92 | 350.1                | 1.90                             | 1.72 | 1.60 |
| 735.3               | 765.3       | 1.75            | 1.84 | 1.91 | 735.3       | 2.31            | 3.07 | 3.99 | 370.1                | 1.91                             | 1.75 | 1.63 |
| 775.6               | 805.6       | 1.73            | 1.81 | 1.88 | 775.6       | 2.31            | 3.03 | 3.90 | 390.1                | 1.93                             | 1.78 | 1.67 |
| 815.9               | 845.9       | 1.79            | 1.88 | 1.94 | 815.9       | 2.35            | 3.05 | 3.90 | 430.1                | 1.94                             | 1.80 | 1.71 |
| 856.2               | 886.2       | 1.72            | 1.80 | 1.85 | 856.2       | 2.40            | 3.11 | 3.95 | 450.1                | 1.94                             | 1.81 | 1.72 |
| 896.5               | 926.5       | 1.78            | 1.84 | 1.89 | 896.5       | 2.44            | 3.12 | 3.94 | 490.1                | 1.94                             | 1.83 | 1.76 |
| 916.6               | 946.6       | 1.76            | 1.81 | 1.86 | 916.6       | 2.51            | 3.22 | 4.08 | 510.1                | 1.95                             | 1.85 | 1.79 |
| 956.9               | 986.9       | 1.72            | 1.76 | 1.80 | 956.9       | 2.56            | 3.25 | 4.09 | 550.1                | 1.95                             | 1.88 | 1.83 |
| 977.1               | 1007.1      | 1.78            | 1.83 | 1.87 | 977.1       | 2.58            | 3.26 | 4.08 | 570.1                | 1.98                             | 1.90 | 1.86 |
| 1017.3              | 1047.3      | 1.83            | 1.86 | 1.90 | 1017.3      | 2.65            | 3.35 | 4.18 | 610.1                | 1.96                             | 1.90 | 1.88 |
| 1037.5              | 1067.5      | 1.82            | 1.85 | 1.89 | 1037.5      | 2.65            | 3.33 | 4.14 | 630.1                | 1.99                             | 1.92 | 1.92 |
| 1077.8              | 1107.8      | 2.05            | 2.08 | 2.13 | 1077.8      | 2.67            | 3.33 | 4.10 | 670.1                | 2.03                             | 1.97 | 1.97 |
| 1097.9              | 1127.9      | 2.13            | 2.14 | 2.18 | 1097.9      | 2.69            | 3.36 | 4.15 | 690.1                | 2.03                             | 1.97 | 1.96 |
| 1138.2              | 1168.2      | 2.66            | 2.65 | 2.67 | 1138.2      | 2.75            | 3.42 | 4.22 | 730.1                | 2.02                             | 1.98 | 2.00 |
| 1158.4              | 1188.4      | 2.48            | 2.48 | 2.50 | 1158.4      | 2.80            | 3.47 | 4.27 | 750.1                | 2.07                             | 2.02 | 2.03 |
| 1198.7              | 1228.7      | 2.68            | 2.66 | 2.66 | 1198.7      | 2.78            | 3.43 | 4.20 | 790.1                | 2.05                             | 1.99 | 2.00 |
| 1218.8              | 1248.8      | 2.82            | 2.79 | 2.79 | 1218.8      | 2.76            | 3.39 | 4.15 | 810.1                | 2.02                             | 1.97 | 1.99 |
| 1259.1              | 1289.1      | 3.10            | 3.05 | 3.03 | 1259.1      | 2.83            | 3.45 | 4.21 | 850.1                | 2.09                             | 2.05 | 2.07 |
| 1279.2              | 1309.2      | 3.16            | 3.11 | 3.08 | 1279.2      | 2.80            | 3.41 | 4.15 | 870.1                | 2.11                             | 2.06 | 2.08 |
| 1319.5              | 1349.5      | 3.40            | 3.33 | 3.27 | 1319.5      | 2.84            | 3.43 | 4.18 | 910.1                | 2.06                             | 2.01 | 2.03 |
| 1339.7              | 1369.7      | 3.52            | 3.44 | 3.37 | 1339.7      | 2.92            | 3.52 | 4.28 | 930.1                | 2.07                             | 2.02 | 2.05 |
| 1380.0              | 1410.0      | 3.54            | 3.47 | 3.40 | 1380.0      | 2.95            | 3.54 | 4.26 | 970.1                | 2.14                             | 2.07 | 2.09 |
| 1400.1              | 1430.1      | 3.70            | 3.63 | 3.56 | 1400.1      | 2.94            | 3.50 | 4.20 | 990.1                | 2.13                             | 2.05 | 2.06 |

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## Harmonics Tables

RF HARMONICS ORDER

|        | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|--------|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0      | -      | -      | 11  | 19  | 12  | 29  | 21  | 37  | 21  | 47  | 30  | 45  |
| 1      | -      | 17     | 0   | 27  | 12  | 29  | 18  | 40  | 43  | 50  | 47  | 51  |
| 2      | 107    | 64     | 57  | 62  | 56  | 65  | 54  | 60  | 59  | 71  | 56  | 68  |
| 3      | 114    | 76     | 72  | 77  | 86  | 78  | 65  | 85  | 85  | 80  | 83  | 86  |
| 4      | 113    | 94     | 98  | 92  | 90  | 85  | 98  | 93  | 99  | 98  | 97  | 101 |
| 5      | 131    | 116    | 105 | 96  | 106 | 96  | 86  | 105 | 99  | 101 | 99  | 106 |
| 6      | 114    | 102    | 100 | 110 | 102 | 101 | 90  | 87  | 106 | 108 | 99  | 112 |
| 7      | 123    | 106    | 105 | 106 | 109 | 99  | 97  | 96  | 95  | 97  | 109 | 109 |
| 8      | 123    | 111    | 113 | 101 | 107 | 99  | 98  | 98  | 100 | 95  | 101 | 104 |
| 9      | 111    | 104    | 100 | 111 | 110 | 109 | 100 | 101 | 102 | 88  | 91  | 99  |
| 10     | 115    | 112    | 109 | 125 | 109 | 98  | 100 | 107 | 108 | 101 | 98  | 95  |
| RF CAL | 0      | 1      | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |     |

### LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; -14.00 dBm.  
LO IN: 530.01 MHz; +7.00 dBm  
IF OUT: 29.91 MHz; -20.75 dBm

RF HARMONICS ORDER

|        | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|--------|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0      | -      | -      | 21  | 28  | 23  | 43  | 32  | 50  | 33  | 67  | 45  | 57  |
| 1      | -      | 17     | 0   | 28  | 12  | 29  | 19  | 44  | 43  | 54  | 49  | 55  |
| 2      | 99     | 58     | 48  | 58  | 47  | 60  | 46  | 56  | 54  | 65  | 49  | 67  |
| 3      | 120    | 62     | 49  | 59  | 52  | 56  | 45  | 64  | 47  | 59  | 65  | 67  |
| 4      | 109    | 70     | 72  | 70  | 74  | 69  | 71  | 72  | 62  | 68  | 68  | 82  |
| 5      | 114    | 81     | 73  | 73  | 63  | 80  | 59  | 79  | 58  | 71  | 61  | 84  |
| 6      | 110    | 104    | 85  | 88  | 82  | 88  | 84  | 90  | 80  | 84  | 82  | 87  |
| 7      | 115    | 95     | 97  | 92  | 78  | 84  | 79  | 97  | 81  | 92  | 83  | 92  |
| 8      | 121    | 106    | 102 | 111 | 103 | 100 | 98  | 96  | 98  | 96  | 100 | 98  |
| 9      | 118    | 118    | 113 | 113 | 104 | 101 | 106 | 99  | 97  | 109 | 89  | 105 |
| 10     | 114    | 111    | 109 | 118 | 109 | 121 | 106 | 107 | 102 | 111 | 100 | 100 |
| RF CAL | 0      | 1      | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |     |

### LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; -4.00 dBm.  
LO IN: 530.01 MHz; +7.00 dBm  
IF OUT: 29.91 MHz; -10.91 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.



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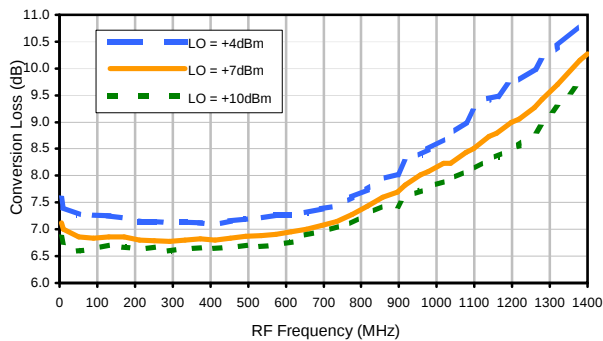
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# Frequency Mixer

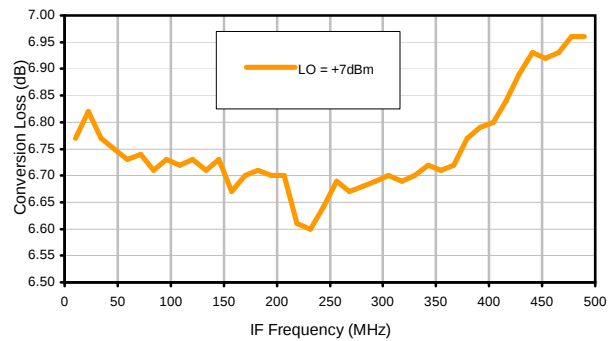
# LRMS-2DJ

## Typical Performance Curves

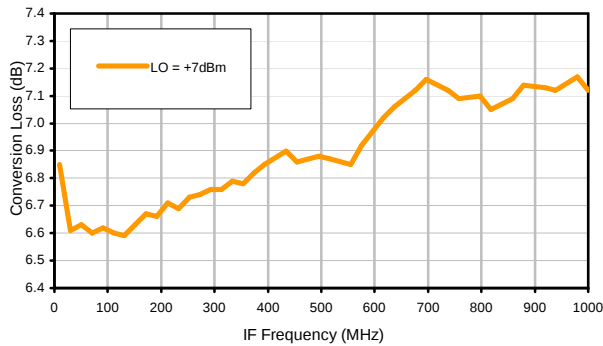
Conversion Loss @ IF=30MHz



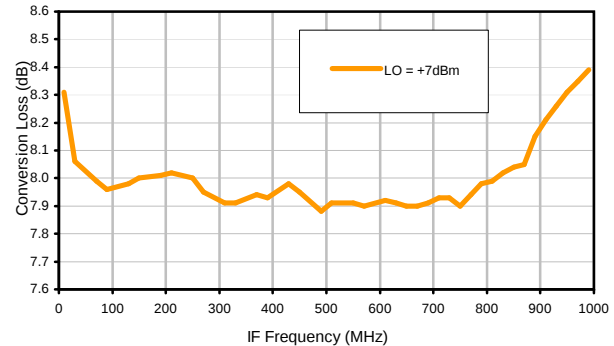
Conversion Loss vs. IF @ RF=500.1MHz



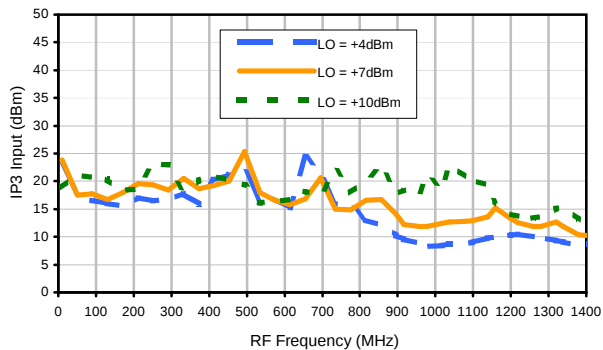
Conversion Loss vs. IF @ RF=10.1MHz



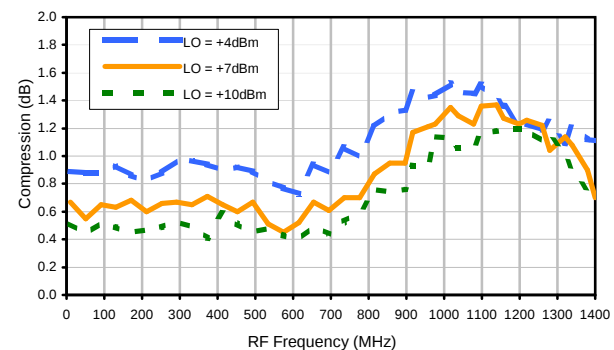
Conversion Loss vs. IF @ RF=1000.1MHz



IP3 Input



Compression @ RF IN=+1dBm



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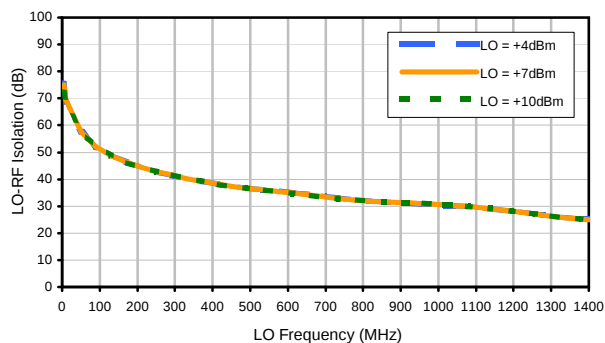
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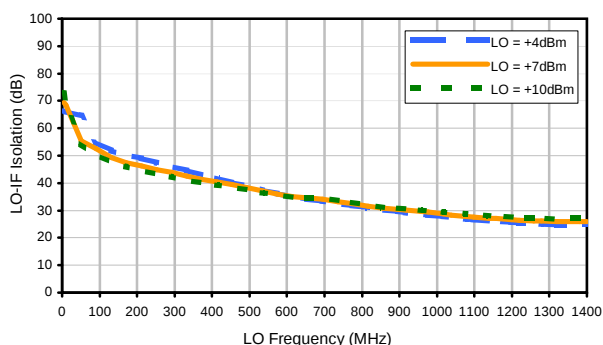
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## Typical Performance Curves

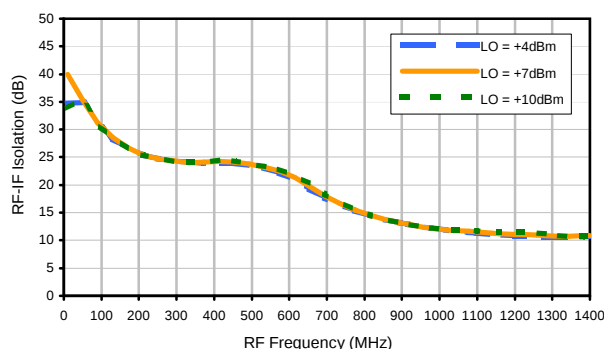
LO-RF Isolation



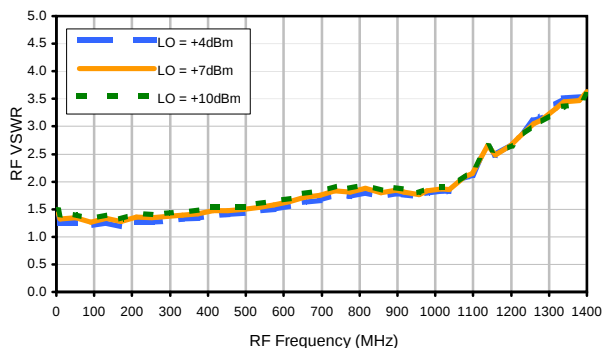
LO-IF Isolation



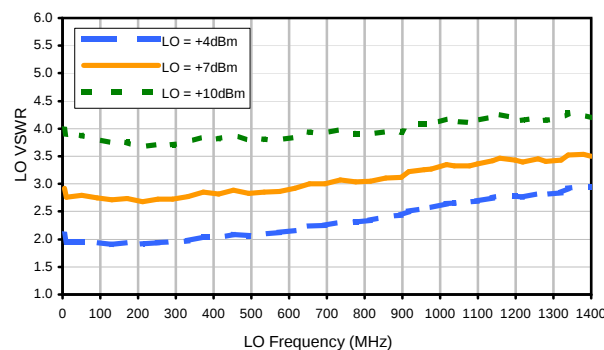
RF-IF Isolation



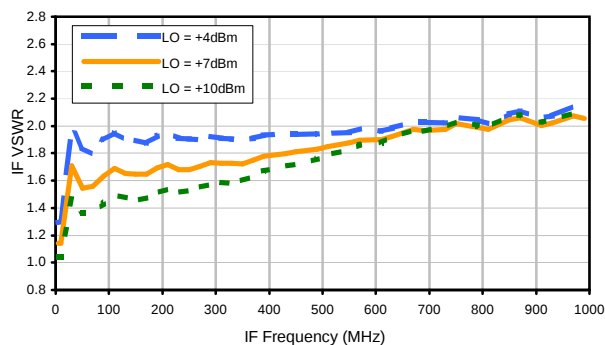
RF VSWR



LO VSWR



IF VSWR



## Harmonics Tables

RF HARMONICS ORDER

|        | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|--------|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0      | -      | -      | 11  | 19  | 12  | 29  | 21  | 37  | 21  | 47  | 30  | 45  |
| 1      | -      | 17     | 0   | 27  | 12  | 29  | 18  | 40  | 43  | 50  | 47  | 51  |
| 2      | 107    | 64     | 57  | 62  | 56  | 65  | 54  | 60  | 59  | 71  | 56  | 68  |
| 3      | 114    | 76     | 72  | 77  | 86  | 78  | 65  | 85  | 85  | 80  | 83  | 86  |
| 4      | 113    | 94     | 98  | 92  | 90  | 85  | 98  | 93  | 99  | 98  | 97  | 101 |
| 5      | 131    | 116    | 105 | 96  | 106 | 96  | 86  | 105 | 99  | 101 | 99  | 106 |
| 6      | 114    | 102    | 100 | 110 | 102 | 101 | 90  | 87  | 106 | 108 | 99  | 112 |
| 7      | 123    | 106    | 105 | 106 | 109 | 99  | 97  | 96  | 95  | 97  | 109 | 109 |
| 8      | 123    | 111    | 113 | 101 | 107 | 99  | 98  | 98  | 100 | 95  | 101 | 104 |
| 9      | 111    | 104    | 100 | 111 | 110 | 109 | 100 | 101 | 102 | 88  | 91  | 99  |
| 10     | 115    | 112    | 109 | 125 | 109 | 98  | 100 | 107 | 108 | 101 | 98  | 95  |
| RF CAL | 0      | 1      | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |     |

### LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; -14.00 dBm.  
LO IN: 530.01 MHz; +7.00 dBm  
IF OUT: 29.91 MHz; -20.75 dBm

RF HARMONICS ORDER

|        | (-dBm) | (-dBc) |     |     |     |     |     |     |     |     |     |     |
|--------|--------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0      | -      | -      | 21  | 28  | 23  | 43  | 32  | 50  | 33  | 67  | 45  | 57  |
| 1      | -      | 17     | 0   | 28  | 12  | 29  | 19  | 44  | 43  | 54  | 49  | 55  |
| 2      | 99     | 58     | 48  | 58  | 47  | 60  | 46  | 56  | 54  | 65  | 49  | 67  |
| 3      | 120    | 62     | 49  | 59  | 52  | 56  | 45  | 64  | 47  | 59  | 65  | 67  |
| 4      | 109    | 70     | 72  | 70  | 74  | 69  | 71  | 72  | 62  | 68  | 68  | 82  |
| 5      | 114    | 81     | 73  | 73  | 63  | 80  | 59  | 79  | 58  | 71  | 61  | 84  |
| 6      | 110    | 104    | 85  | 88  | 82  | 88  | 84  | 90  | 80  | 84  | 82  | 87  |
| 7      | 115    | 95     | 97  | 92  | 78  | 84  | 79  | 97  | 81  | 92  | 83  | 92  |
| 8      | 121    | 106    | 102 | 111 | 103 | 100 | 98  | 96  | 98  | 96  | 100 | 98  |
| 9      | 118    | 118    | 113 | 113 | 104 | 101 | 106 | 99  | 97  | 109 | 89  | 105 |
| 10     | 114    | 111    | 109 | 118 | 109 | 121 | 106 | 107 | 102 | 111 | 100 | 100 |
| RF CAL | 0      | 1      | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |     |

### LO HARMONICS ORDER

Test conditions: RF IN: 500.1 MHz; -4.00 dBm.  
LO IN: 530.01 MHz; +7.00 dBm  
IF OUT: 29.91 MHz; -10.91 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.



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED • RoHS compliant  
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

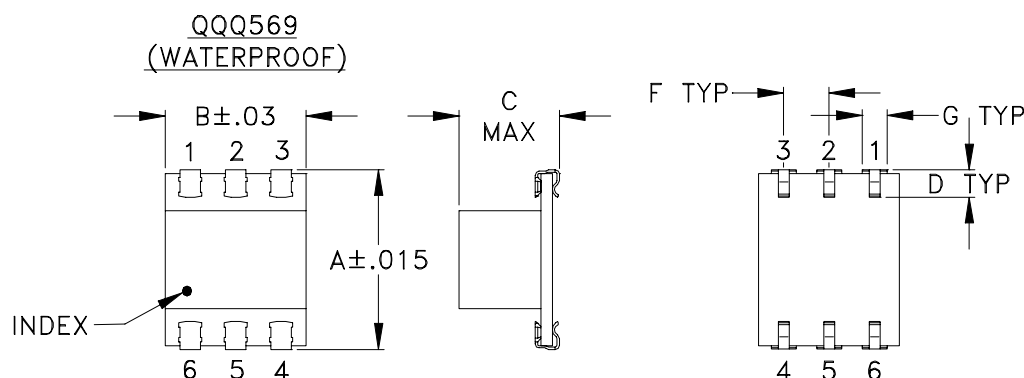


The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see

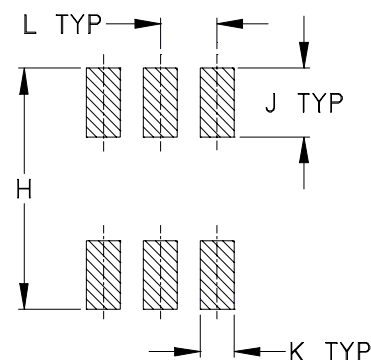


REV. X2  
LRMS-2DJ  
100817  
Page 3 of 3

### Outline Dimensions



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within  $\pm .002$

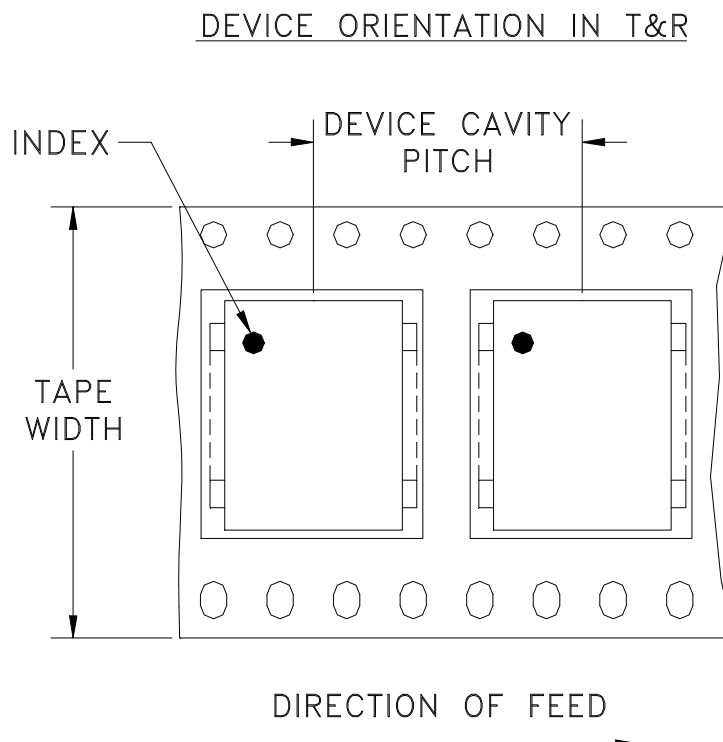
| CASE#  | A              | B             | C              | D              | E | F              | G              | H               | J              | K              | L              | M | WT,<br>GRAM |
|--------|----------------|---------------|----------------|----------------|---|----------------|----------------|-----------------|----------------|----------------|----------------|---|-------------|
| QQQ569 | .390<br>(9.90) | .31<br>(7.87) | .225<br>(5.72) | .060<br>(1.52) | - | .100<br>(2.54) | .045<br>(1.14) | .420<br>(10.67) | .120<br>(3.05) | .060<br>(1.52) | .100<br>(2.54) | - | .50         |

Dimensions are in inches (mm). Tolerances: 2 Pl.  $\pm .01$ ; 3 Pl.  $\pm .005$

### Notes:

- Case material: Ceramic.
- Termination finish:
  - For RoHS Case Styles: Tin plate over Nickel plate.
  - For RoHS-5 Case Styles: Tin-Lead plate.

# Tape & Reel Packaging TR-F5



| Tape Width,<br>mm | Device Cavity<br>Pitch, mm | Reel Size,<br>inches | Devices per Reel |
|-------------------|----------------------------|----------------------|------------------|
| 32                | 16                         | 13                   | 500              |

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: [www.minicircuits.com/pages/pdfs/tape.pdf](http://www.minicircuits.com/pages/pdfs/tape.pdf)



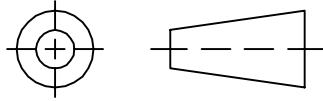
**Distribution Centers** NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

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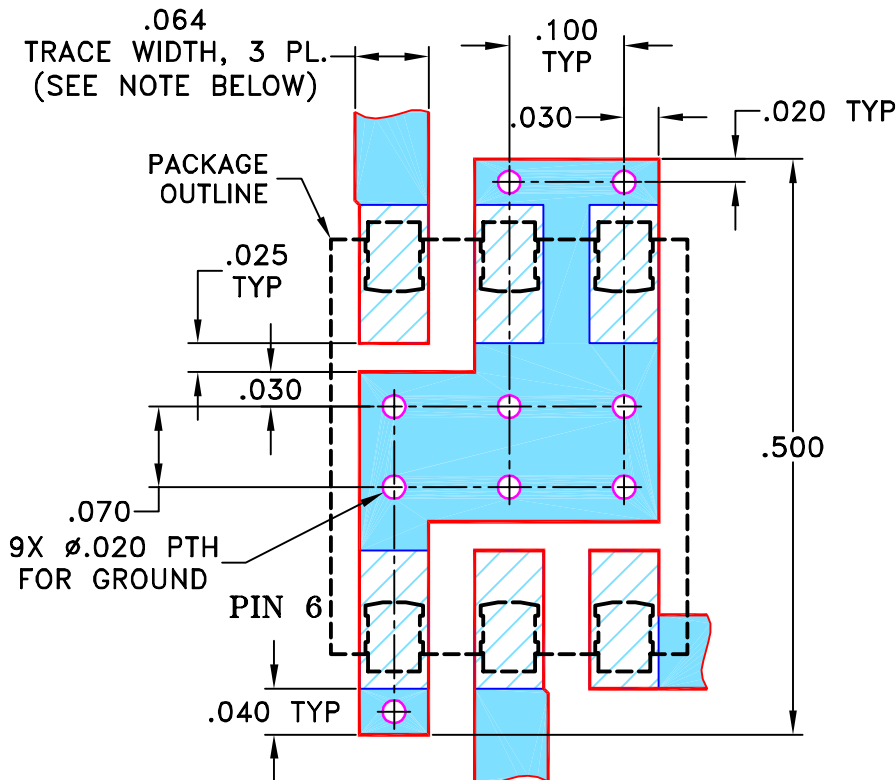
## THIRD ANGLE PROJECTION



## REVISIONS

| REV | ECN No. | DESCRIPTION   | DATE     | DR | AUTH |
|-----|---------|---------------|----------|----|------|
| OR  | M82272  | NEW RELEASE   | 08/02/02 | AV | DJ   |
| A   | M102713 | UPDATED NOTES | 01/14/06 | GF | IL   |
|     |         |               |          |    |      |
|     |         |               |          |    |      |

### SUGGESTED MOUNTING CONFIGURATION FOR QQQ569 CASE STYLE, "w" PIN CONNECTION



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030"  $\pm$  0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.



DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)



DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

UNLESS OTHERWISE SPECIFIED

INITIALS

DATE

DIMENSIONS ARE IN INCHES

DRAWN

AV

07/19/02

TOLERANCES ON:

CHECKED

WL

08/02/02

2 PL DECIMALS  $\pm$  .005

APPROVED

DJ

08/02/02

ANGLES  $\pm$

FRACTIONS  $\pm$

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ASHEETA1.DWG REV:A DATE:01/12/95



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Brooklyn NY 11235

PL, w, QQQ569, LRMS-J, TB-44

SIZE

A

CODE IDENT

15542

DRAWING NO:

98-PL-083

REV:

A

FILE: 98PL083

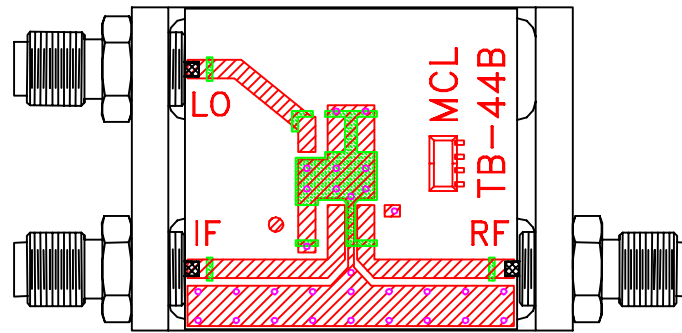
SCALE:

6:1

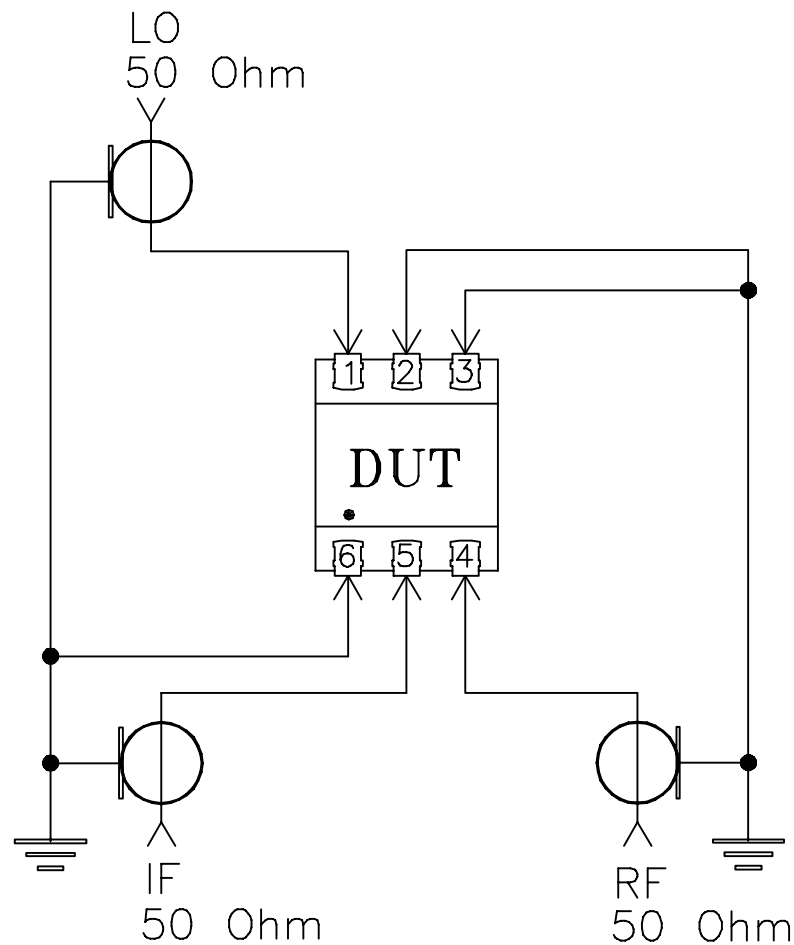
SHEET:

1 OF 1

# Evaluation Board and Circuit



TB-44+



Schematic Diagram

## Notes:

1. SMA Female connectors.
2. PCB Material: Rogers R04350 or equivalent,  
Dielectric Constant=3.5, Thickness=.030 inch.

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