*Engineering Development Model*

# Frequency Mixer ADE-ED6750/1

## Level 7 (LO Power + 7 dBm)

### Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability.
At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

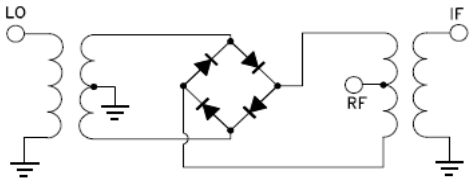
Please click "Back", and then click "Contact Us" for Applications support.

**CASE STYLE : CD542**

| ELECTRICAL SPECIFICATIONS 50Ω @ +25°C | | | | | |
|---|---|---|---|---|---|
| **Parameter** | | **Min.** | **Typ.** | **Max.** | **Units** |
| **Frequency** | **LO** ($f_L$ to $f_U$) | 50 | | 1000 | MHz |
| | **RF** ($f_L$ to $f_U$) | 50 | | 1000 | MHz |
| | **IF** | 10 | | 820 | MHz |
| **Conversion Loss** | **Total Range** | | 6.25 | | dB |
| **LO-RF Isolation** | | | 47 | | dB |
| **LO-IF Isolation** | | | 28 | | dB |
| **Input IP3** | | | +15 | | dBm |
| **1 dB Compression** | | | 0 | | dBm |

| MAXIMUM RATINGS | |
|---|---|
| **Operating Temperature** | -40°C to +85°C |
| **Storage Temperature** | -55°C to +100°C |

**Electrical Schematic**




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

## *Typical Performance Data*

| RF (IN) (MHz) | LO (MHz) | CONVERSION LOSS IF FIXED @IF(OUT)=30MHz (dB) @LO (dBm) | | |
|---|---|---|---|---|
| | | +4 | +7 | +10 |
| 50.1 | 80.1 | 6.00 | 5.70 | 5.50 |
| 60.1 | 90.1 | 5.95 | 5.71 | 5.49 |
| 70.1 | 100.1 | 5.86 | 5.62 | 5.48 |
| 100.1 | 130.1 | 5.93 | 5.70 | 5.56 |
| 130.1 | 160.1 | 5.91 | 5.68 | 5.54 |
| 160.1 | 190.1 | 5.91 | 5.70 | 5.55 |
| 190.1 | 220.1 | 5.92 | 5.71 | 5.61 |
| 220.1 | 250.1 | 5.93 | 5.74 | 5.61 |
| 250.1 | 280.1 | 6.00 | 5.77 | 5.65 |
| 280.1 | 310.1 | 5.97 | 5.78 | 5.66 |
| 310.1 | 340.1 | 5.98 | 5.78 | 5.67 |
| 340.1 | 370.1 | 6.06 | 5.85 | 5.73 |
| 370.1 | 400.1 | 6.03 | 5.82 | 5.70 |
| 400.1 | 430.1 | 6.13 | 5.87 | 5.72 |
| 440.1 | 470.1 | 6.16 | 5.92 | 5.75 |
| 470.1 | 500.1 | 6.24 | 6.03 | 5.91 |
| 510.1 | 540.1 | 6.30 | 6.09 | 5.96 |
| 540.1 | 570.1 | 6.32 | 6.10 | 5.97 |
| 580.1 | 610.1 | 6.40 | 6.14 | 5.99 |
| 610.1 | 640.1 | 6.50 | 6.20 | 6.04 |
| 650.1 | 680.1 | 6.65 | 6.30 | 6.12 |
| 680.1 | 710.1 | 6.86 | 6.45 | 6.17 |
| 720.1 | 750.1 | 7.08 | 6.69 | 6.36 |
| 750.1 | 780.1 | 7.18 | 6.75 | 6.42 |
| 790.1 | 820.1 | 7.38 | 6.93 | 6.58 |
| 820.1 | 850.1 | 7.51 | 7.01 | 6.63 |
| 860.1 | 890.1 | 7.72 | 7.17 | 6.77 |
| 890.1 | 920.1 | 7.95 | 7.32 | 6.87 |
| 930.1 | 960.1 | 7.99 | 7.33 | 6.95 |
| 960.1 | 990.1 | 8.11 | 7.40 | 7.05 |
| 1000.1 | 1030.1 | 8.18 | 7.46 | 7.16 |
| 1030.1 | 1060.1 | 8.26 | 7.56 | 7.30 |
| 1070.1 | 1100.1 | 8.40 | 7.73 | 7.54 |
| 1100.1 | 1130.1 | 8.63 | 7.99 | 7.81 |
| 1140.1 | 1170.1 | 8.96 | 8.26 | 8.08 |
| 1170.1 | 1200.1 | 9.40 | 8.64 | 8.46 |
| 1210.1 | 1240.1 | 9.95 | 9.03 | 8.86 |
| 1240.1 | 1270.1 | 10.53 | 9.45 | 9.24 |
| 1280.1 | 1310.1 | 11.32 | 10.06 | 9.82 |
| 1310.1 | 1340.1 | 11.66 | 10.40 | 10.15 |

| RF (IN) (MHz) | LO (MHz) | IP3 INPUT (dBm) @LO (dBm) | | |
|---|---|---|---|---|
| | | +4 | +7 | +10 |
| 50.1 | 80.1 | 16.74 | 17.18 | 18.34 |
| 60.1 | 90.1 | 16.65 | 17.67 | 17.93 |
| 70.1 | 100.1 | 18.41 | 19.69 | 17.51 |
| 100.1 | 130.1 | 15.76 | 16.18 | 19.72 |
| 130.1 | 160.1 | 16.56 | 17.28 | 19.73 |
| 160.1 | 190.1 | 17.61 | 19.65 | 19.73 |
| 190.1 | 220.1 | 15.51 | 18.83 | 19.70 |
| 220.1 | 250.1 | 17.64 | 19.63 | 18.49 |
| 250.1 | 280.1 | 18.12 | 19.61 | 18.81 |
| 280.1 | 310.1 | 16.38 | 19.61 | 19.21 |
| 310.1 | 340.1 | 16.79 | 15.84 | 17.00 |
| 340.1 | 370.1 | 14.10 | 12.64 | 13.28 |
| 370.1 | 400.1 | 17.39 | 14.22 | 14.96 |
| 400.1 | 430.1 | 19.44 | 17.74 | 19.38 |
| 440.1 | 470.1 | 19.42 | 19.54 | 17.61 |
| 470.1 | 500.1 | 14.78 | 16.10 | 19.55 |
| 510.1 | 540.1 | 12.93 | 12.60 | 14.28 |
| 540.1 | 570.1 | 12.76 | 12.06 | 12.85 |
| 580.1 | 610.1 | 15.17 | 14.70 | 17.43 |
| 610.1 | 640.1 | 16.38 | 19.40 | 19.48 |
| 650.1 | 680.1 | 15.75 | 14.85 | 15.41 |
| 680.1 | 710.1 | 10.99 | 15.74 | 14.10 |
| 720.1 | 750.1 | 7.32 | 14.99 | 15.52 |
| 750.1 | 780.1 | 6.68 | 14.42 | 14.82 |
| 790.1 | 820.1 | 6.30 | 12.69 | 11.87 |
| 820.1 | 850.1 | 7.12 | 14.35 | 10.58 |
| 860.1 | 890.1 | 9.08 | 17.34 | 9.71 |
| 890.1 | 920.1 | 10.78 | 12.46 | 9.01 |
| 930.1 | 960.1 | 13.17 | 10.32 | 9.01 |
| 960.1 | 990.1 | 13.52 | 10.79 | 10.86 |
| 1000.1 | 1030.1 | 18.41 | 12.05 | 13.13 |
| 1030.1 | 1060.1 | 14.79 | 12.36 | 13.22 |
| 1070.1 | 1100.1 | 12.35 | 12.93 | 14.10 |
| 1100.1 | 1130.1 | 12.22 | 13.49 | 15.32 |
| 1140.1 | 1170.1 | 12.02 | 12.84 | 15.26 |
| 1170.1 | 1200.1 | 11.81 | 12.25 | 15.16 |
| 1210.1 | 1240.1 | 11.64 | 11.37 | 15.26 |
| 1240.1 | 1270.1 | 12.86 | 11.38 | 14.86 |
| 1280.1 | 1310.1 | 12.07 | 11.24 | 14.71 |
| 1310.1 | 1340.1 | 12.43 | 11.80 | 14.85 |

| RF (IN) (MHz) | LO (MHz) | COMPRESSION @RF IN=0dBm (dB) @LO (dBm) | | |
|---|---|---|---|---|
| | | +4 | +7 | +10 |
| 50.1 | 80.1 | 0.62 | 0.33 | 0.29 |
| 60.1 | 90.1 | 0.62 | 0.39 | 0.30 |
| 70.1 | 100.1 | 0.71 | 0.46 | 0.30 |
| 100.1 | 130.1 | 0.56 | 0.37 | 0.26 |
| 130.1 | 160.1 | 0.57 | 0.36 | 0.25 |
| 160.1 | 190.1 | 0.58 | 0.38 | 0.27 |
| 190.1 | 220.1 | 0.56 | 0.36 | 0.24 |
| 220.1 | 250.1 | 0.54 | 0.35 | 0.24 |
| 250.1 | 280.1 | 0.51 | 0.34 | 0.24 |
| 280.1 | 310.1 | 0.52 | 0.35 | 0.25 |
| 310.1 | 340.1 | 0.52 | 0.36 | 0.26 |
| 340.1 | 370.1 | 0.48 | 0.33 | 0.26 |
| 370.1 | 400.1 | 0.55 | 0.39 | 0.31 |
| 400.1 | 430.1 | 0.49 | 0.36 | 0.29 |
| 440.1 | 470.1 | 0.54 | 0.40 | 0.32 |
| 470.1 | 500.1 | 0.56 | 0.41 | 0.34 |
| 510.1 | 540.1 | 0.61 | 0.43 | 0.38 |
| 540.1 | 570.1 | 0.74 | 0.54 | 0.51 |
| 580.1 | 610.1 | 0.79 | 0.57 | 0.56 |
| 610.1 | 640.1 | 0.89 | 0.64 | 0.61 |
| 650.1 | 680.1 | 0.96 | 0.74 | 0.72 |
| 680.1 | 710.1 | 0.99 | 0.84 | 0.85 |
| 720.1 | 750.1 | 1.03 | 0.87 | 0.91 |
| 750.1 | 780.1 | 1.11 | 0.98 | 1.01 |
| 790.1 | 820.1 | 1.12 | 1.01 | 1.05 |
| 820.1 | 850.1 | 1.19 | 1.12 | 1.18 |
| 860.1 | 890.1 | 1.13 | 1.11 | 1.20 |
| 890.1 | 920.1 | 1.06 | 1.08 | 1.15 |
| 930.1 | 960.1 | 1.06 | 1.05 | 0.97 |
| 960.1 | 990.1 | 1.02 | 0.96 | 0.82 |
| 1000.1 | 1030.1 | 1.04 | 0.88 | 0.68 |
| 1030.1 | 1060.1 | 1.03 | 0.80 | 0.61 |
| 1070.1 | 1100.1 | 1.06 | 0.75 | 0.53 |
| 1100.1 | 1130.1 | 0.99 | 0.66 | 0.45 |
| 1140.1 | 1170.1 | 1.01 | 0.67 | 0.44 |
| 1170.1 | 1200.1 | 0.98 | 0.66 | 0.41 |
| 1210.1 | 1240.1 | 0.91 | 0.70 | 0.43 |
| 1240.1 | 1270.1 | 0.79 | 0.70 | 0.43 |
| 1280.1 | 1310.1 | 0.66 | 0.69 | 0.43 |
| 1310.1 | 1340.1 | 0.65 | 0.66 | 0.42 |




Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 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 minicircuits.com

## *Typical Performance Data*

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=400.1MHz (dB) @LO (dBm) +7 |
|---|---|---|
| 390.0 | 10.1 | 5.83 |
| 380.3 | 19.8 | 5.77 |
| 370.5 | 29.6 | 5.72 |
| 360.8 | 39.3 | 5.71 |
| 351.0 | 49.1 | 5.75 |
| 341.3 | 58.8 | 5.72 |
| 331.5 | 68.6 | 5.72 |
| 321.8 | 78.3 | 5.72 |
| 312.1 | 88.0 | 5.67 |
| 302.3 | 97.8 | 5.67 |
| 292.6 | 107.5 | 5.63 |
| 282.8 | 117.3 | 5.64 |
| 273.1 | 127.0 | 5.59 |
| 263.3 | 136.8 | 5.60 |
| 253.6 | 146.5 | 5.62 |
| 243.8 | 156.3 | 5.62 |
| 234.1 | 166.0 | 5.64 |
| 224.4 | 175.7 | 5.61 |
| 214.6 | 185.5 | 5.65 |
| 204.9 | 195.2 | 5.63 |
| 195.1 | 205.0 | 5.60 |
| 185.4 | 214.7 | 5.63 |
| 175.6 | 224.5 | 5.60 |
| 165.9 | 234.2 | 5.63 |
| 156.2 | 243.9 | 5.66 |
| 146.4 | 253.7 | 5.68 |
| 136.7 | 263.4 | 5.68 |
| 126.9 | 273.2 | 5.68 |
| 117.2 | 282.9 | 5.68 |
| 107.4 | 292.7 | 5.67 |
| 97.7 | 302.4 | 5.68 |
| 87.9 | 312.2 | 5.56 |
| 78.2 | 321.9 | 5.53 |
| 68.5 | 331.6 | 5.71 |
| 58.7 | 341.4 | 5.73 |
| 49.0 | 351.1 | 5.78 |
| 39.2 | 360.9 | 5.79 |
| 29.5 | 370.6 | 5.80 |
| 19.7 | 380.4 | 5.88 |
| 10.0 | 390.1 | 6.22 |

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=50MHz (dB) @LO (dBm) +7 |
|---|---|---|
| 10.1 | 60.1 | 5.93 |
| 50.1 | 100.1 | 5.57 |
| 90.1 | 140.1 | 5.45 |
| 130.1 | 180.1 | 5.56 |
| 170.1 | 220.1 | 5.51 |
| 210.1 | 260.1 | 5.67 |
| 250.1 | 300.1 | 5.69 |
| 290.1 | 340.1 | 5.72 |
| 330.1 | 380.1 | 5.74 |
| 370.1 | 420.1 | 5.78 |
| 410.1 | 460.1 | 5.87 |
| 450.1 | 500.1 | 6.02 |
| 490.1 | 540.1 | 6.16 |
| 530.1 | 580.1 | 6.05 |
| 570.1 | 620.1 | 6.05 |
| 610.1 | 660.1 | 6.06 |
| 650.1 | 700.1 | 6.01 |
| 690.1 | 740.1 | 6.07 |
| 730.1 | 780.1 | 6.15 |
| 770.1 | 820.1 | 6.16 |
| 810.1 | 860.1 | 6.09 |
| 850.1 | 900.1 | 6.09 |
| 890.1 | 940.1 | 6.29 |
| 930.1 | 980.1 | 6.27 |
| 970.1 | 1020.1 | 6.29 |
| 1010.1 | 1060.1 | 6.27 |
| 1050.1 | 1100.1 | 6.31 |
| 1090.1 | 1140.1 | 6.52 |
| 1130.1 | 1180.1 | 6.77 |
| 1170.1 | 1220.1 | 7.36 |
| 1210.1 | 1260.1 | 8.02 |
| 1250.1 | 1300.1 | 8.55 |
| 1290.1 | 1340.1 | 8.91 |
| 1330.1 | 1380.1 | 8.97 |
| 1370.1 | 1420.1 | 9.15 |
| 1410.1 | 1460.1 | 9.37 |
| 1450.1 | 1500.1 | 10.02 |
| 1470.1 | 1520.1 | 10.10 |
| 1510.1 | 1560.1 | 10.47 |
| 1530.1 | 1580.1 | 11.57 |

| IF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=800.1MHz (dB) @LO (dBm) +7 |
|---|---|---|
| 790.0 | 10.1 | 6.82 |
| 770.0 | 30.1 | 6.65 |
| 750.0 | 50.1 | 6.62 |
| 730.0 | 70.1 | 6.62 |
| 710.0 | 90.1 | 6.59 |
| 690.0 | 110.1 | 6.64 |
| 670.0 | 130.1 | 6.53 |
| 650.0 | 150.1 | 6.55 |
| 630.0 | 170.1 | 6.54 |
| 610.0 | 190.1 | 6.53 |
| 590.0 | 210.1 | 6.51 |
| 570.0 | 230.1 | 6.53 |
| 550.0 | 250.1 | 6.56 |
| 530.0 | 270.1 | 6.56 |
| 510.0 | 290.1 | 6.57 |
| 490.0 | 310.1 | 6.56 |
| 470.0 | 330.1 | 6.50 |
| 450.0 | 350.1 | 6.52 |
| 430.0 | 370.1 | 6.58 |
| 410.0 | 390.1 | 6.57 |
| 390.0 | 410.1 | 6.51 |
| 370.0 | 430.1 | 6.46 |
| 350.0 | 450.1 | 6.50 |
| 330.0 | 470.1 | 6.47 |
| 310.0 | 490.1 | 6.50 |
| 290.0 | 510.1 | 6.48 |
| 270.0 | 530.1 | 6.49 |
| 250.0 | 550.1 | 6.51 |
| 230.0 | 570.1 | 6.47 |
| 210.0 | 590.1 | 6.41 |
| 190.0 | 610.1 | 6.27 |
| 170.0 | 630.1 | 6.27 |
| 150.0 | 650.1 | 6.27 |
| 130.0 | 670.1 | 6.28 |
| 110.0 | 690.1 | 6.31 |
| 90.0 | 710.1 | 6.35 |
| 70.0 | 730.1 | 6.50 |
| 50.0 | 750.1 | 6.58 |
| 30.0 | 770.1 | 6.80 |
| 10.0 | 790.1 | 7.22 |




Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 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 minicircuits.com

## *Typical Performance Data*

| LO (MHz) | LO-RF ISOLATION (dB) @LO (dBm) | | | LO-IF ISOLATION (dB) @LO (dBm) | | |
|---|---|---|---|---|---|---|
| | +4 | +7 | +10 | +4 | +7 | +10 |
| 51.0 | 65.37 | 71.96 | 82.83 | 38.27 | 40.43 | 42.66 |
| 61.3 | 62.49 | 67.87 | 79.50 | 37.21 | 39.49 | 41.79 |
| 71.5 | 62.30 | 67.05 | 76.28 | 36.39 | 38.76 | 41.14 |
| 102.2 | 58.63 | 64.13 | 70.79 | 33.96 | 36.43 | 38.72 |
| 132.9 | 56.80 | 62.28 | 68.35 | 32.51 | 35.05 | 37.29 |
| 163.6 | 54.44 | 59.38 | 63.41 | 31.12 | 33.50 | 35.64 |
| 194.3 | 52.54 | 56.76 | 60.28 | 29.75 | 32.06 | 34.15 |
| 224.9 | 51.12 | 55.33 | 58.60 | 28.96 | 31.31 | 33.41 |
| 255.6 | 49.44 | 53.14 | 55.76 | 28.12 | 30.37 | 32.43 |
| 286.3 | 47.81 | 51.07 | 53.39 | 27.19 | 29.37 | 31.36 |
| 317.0 | 46.66 | 49.83 | 52.34 | 26.56 | 28.87 | 30.92 |
| 347.7 | 45.60 | 48.66 | 50.80 | 26.02 | 28.20 | 30.25 |
| 378.4 | 44.36 | 46.99 | 48.85 | 25.37 | 27.46 | 29.29 |
| 409.1 | 43.48 | 46.13 | 48.33 | 25.17 | 27.40 | 29.23 |
| 450.0 | 42.52 | 45.20 | 47.45 | 24.64 | 26.86 | 28.83 |
| 480.7 | 41.85 | 44.61 | 46.59 | 24.14 | 26.01 | 27.80 |
| 521.6 | 40.97 | 43.66 | 45.57 | 24.15 | 25.66 | 26.99 |
| 552.3 | 40.39 | 43.48 | 46.00 | 24.34 | 25.65 | 26.66 |
| 593.3 | 39.69 | 43.07 | 46.10 | 25.03 | 26.47 | 27.26 |
| 623.9 | 38.91 | 41.99 | 44.89 | 25.51 | 27.22 | 28.02 |
| 664.9 | 37.77 | 40.32 | 42.95 | 25.56 | 27.81 | 28.63 |
| 695.6 | 36.85 | 38.89 | 40.99 | 25.33 | 27.82 | 28.35 |
| 736.5 | 35.61 | 37.54 | 39.50 | 24.87 | 27.20 | 27.26 |
| 767.2 | 34.99 | 37.31 | 39.69 | 25.03 | 26.84 | 26.34 |
| 808.1 | 33.97 | 36.19 | 38.43 | 25.56 | 26.54 | 25.44 |
| 838.8 | 33.31 | 35.51 | 37.73 | 25.72 | 26.03 | 24.56 |
| 879.7 | 32.91 | 35.34 | 37.73 | 25.69 | 25.10 | 23.08 |
| 910.4 | 32.95 | 35.78 | 38.01 | 24.56 | 23.43 | 21.27 |
| 951.3 | 33.36 | 36.34 | 37.01 | 22.68 | 21.24 | 19.03 |
| 982.0 | 34.11 | 36.25 | 35.28 | 21.07 | 19.62 | 17.37 |
| 1022.9 | 34.42 | 34.48 | 33.02 | 18.84 | 17.36 | 15.36 |
| 1053.6 | 34.52 | 33.48 | 31.94 | 17.15 | 15.79 | 13.97 |
| 1094.6 | 33.42 | 31.55 | 30.02 | 15.18 | 14.04 | 12.52 |
| 1125.3 | 32.40 | 30.14 | 28.68 | 13.75 | 12.72 | 11.36 |
| 1166.2 | 30.70 | 28.53 | 27.23 | 12.30 | 11.48 | 10.41 |
| 1196.9 | 29.54 | 27.51 | 26.39 | 11.30 | 10.55 | 9.53 |
| 1237.8 | 28.07 | 26.34 | 25.60 | 10.27 | 9.59 | 8.72 |
| 1268.5 | 27.02 | 25.51 | 24.93 | 9.65 | 8.99 | 8.15 |
| 1309.4 | 25.48 | 24.34 | 24.03 | 9.06 | 8.34 | 7.52 |
| 1340.1 | 24.59 | 23.82 | 23.68 | 8.74 | 7.95 | 7.11 |

| RF (IN) (MHz) | LO (MHz) | RF-IF ISOLATION (dB) @LO (dBm) | | |
|---|---|---|---|---|
| | | +4 | +7 | +10 |
| 50.1 | 80.1 | 45.28 | 43.61 | 43.64 |
| 60.1 | 90.1 | 45.50 | 43.96 | 43.58 |
| 70.1 | 100.1 | 44.95 | 44.13 | 43.70 |
| 100.1 | 130.1 | 44.87 | 44.20 | 43.84 |
| 130.1 | 160.1 | 45.72 | 45.63 | 45.44 |
| 160.1 | 190.1 | 45.81 | 45.50 | 45.36 |
| 190.1 | 220.1 | 45.96 | 45.76 | 44.73 |
| 220.1 | 250.1 | 46.29 | 46.68 | 46.79 |
| 250.1 | 280.1 | 47.66 | 47.23 | 46.94 |
| 280.1 | 310.1 | 47.81 | 46.77 | 45.79 |
| 310.1 | 340.1 | 47.60 | 46.84 | 46.60 |
| 340.1 | 370.1 | 46.68 | 46.16 | 45.99 |
| 370.1 | 400.1 | 46.15 | 47.39 | 47.23 |
| 400.1 | 430.1 | 42.98 | 43.94 | 44.01 |
| 440.1 | 470.1 | 40.08 | 39.94 | 40.03 |
| 470.1 | 500.1 | 37.82 | 37.72 | 37.53 |
| 510.1 | 540.1 | 36.24 | 36.11 | 36.00 |
| 540.1 | 570.1 | 35.27 | 34.91 | 34.51 |
| 580.1 | 610.1 | 34.03 | 32.95 | 32.37 |
| 610.1 | 640.1 | 34.49 | 32.98 | 32.51 |
| 650.1 | 680.1 | 35.90 | 34.70 | 34.78 |
| 680.1 | 710.1 | 37.27 | 36.52 | 36.91 |
| 720.1 | 750.1 | 39.72 | 40.48 | 40.28 |
| 750.1 | 780.1 | 42.03 | 42.63 | 40.55 |
| 790.1 | 820.1 | 46.41 | 48.11 | 45.71 |
| 820.1 | 850.1 | 53.24 | 42.73 | 38.61 |
| 860.1 | 890.1 | 39.85 | 34.45 | 31.45 |
| 890.1 | 920.1 | 33.87 | 30.10 | 28.26 |
| 930.1 | 960.1 | 29.63 | 26.83 | 26.44 |
| 960.1 | 990.1 | 26.93 | 24.75 | 25.26 |
| 1000.1 | 1030.1 | 24.81 | 23.50 | 24.07 |
| 1030.1 | 1060.1 | 23.79 | 22.66 | 22.94 |
| 1070.1 | 1100.1 | 22.57 | 21.42 | 21.44 |
| 1100.1 | 1130.1 | 21.54 | 20.32 | 20.23 |
| 1140.1 | 1170.1 | 20.77 | 19.46 | 19.16 |
| 1170.1 | 1200.1 | 20.35 | 19.09 | 18.63 |
| 1210.1 | 1240.1 | 20.13 | 18.87 | 18.09 |
| 1240.1 | 1270.1 | 19.92 | 18.72 | 17.70 |
| 1280.1 | 1310.1 | 20.11 | 19.08 | 17.71 |
| 1310.1 | 1340.1 | 20.42 | 19.53 | 17.96 |




Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 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 minicircuits.com

## *Typical Performance Data*

| RF (IN) (MHz) | LO (MHz) | RF VSWR (:1) @LO (dBm) +4 | +7 | +10 |
|---|---|---|---|---|
| 51.0 | 81.0 | 1.15 | 1.04 | 1.01 |
| 61.3 | 91.3 | 1.14 | 1.05 | 1.02 |
| 71.5 | 101.5 | 1.12 | 1.06 | 1.05 |
| 102.2 | 132.2 | 1.15 | 1.07 | 1.04 |
| 132.9 | 162.9 | 1.13 | 1.06 | 1.05 |
| 163.6 | 193.6 | 1.14 | 1.08 | 1.08 |
| 194.3 | 224.3 | 1.13 | 1.08 | 1.08 |
| 224.9 | 254.9 | 1.11 | 1.08 | 1.10 |
| 255.6 | 285.6 | 1.13 | 1.11 | 1.13 |
| 286.3 | 316.3 | 1.12 | 1.09 | 1.12 |
| 317.0 | 347.0 | 1.10 | 1.09 | 1.13 |
| 347.7 | 377.7 | 1.11 | 1.11 | 1.13 |
| 378.4 | 408.4 | 1.11 | 1.10 | 1.13 |
| 409.1 | 439.1 | 1.11 | 1.12 | 1.17 |
| 450.0 | 480.0 | 1.13 | 1.15 | 1.19 |
| 480.7 | 510.7 | 1.12 | 1.15 | 1.19 |
| 521.6 | 551.6 | 1.13 | 1.16 | 1.21 |
| 552.3 | 582.3 | 1.14 | 1.18 | 1.23 |
| 593.3 | 623.3 | 1.12 | 1.19 | 1.24 |
| 623.9 | 653.9 | 1.13 | 1.20 | 1.25 |
| 664.9 | 694.9 | 1.11 | 1.15 | 1.21 |
| 695.6 | 725.6 | 1.13 | 1.16 | 1.22 |
| 736.5 | 766.5 | 1.19 | 1.18 | 1.21 |
| 767.2 | 797.2 | 1.20 | 1.17 | 1.19 |
| 808.1 | 838.1 | 1.31 | 1.28 | 1.29 |
| 838.8 | 868.8 | 1.40 | 1.37 | 1.38 |
| 879.7 | 909.7 | 1.52 | 1.51 | 1.55 |
| 910.4 | 940.4 | 1.69 | 1.69 | 1.74 |
| 951.3 | 981.3 | 1.82 | 1.85 | 1.93 |
| 982.0 | 1012.0 | 1.99 | 2.04 | 2.13 |
| 1022.9 | 1052.9 | 2.22 | 2.27 | 2.35 |
| 1053.6 | 1083.6 | 2.37 | 2.43 | 2.51 |
| 1094.6 | 1124.6 | 2.66 | 2.72 | 2.80 |
| 1125.3 | 1155.3 | 2.87 | 2.89 | 2.96 |
| 1166.2 | 1196.2 | 3.11 | 3.10 | 3.16 |
| 1196.9 | 1226.9 | 3.40 | 3.36 | 3.40 |
| 1237.8 | 1267.8 | 3.64 | 3.54 | 3.54 |
| 1268.5 | 1298.5 | 4.00 | 3.86 | 3.85 |
| 1309.4 | 1339.4 | 4.42 | 4.26 | 4.20 |
| 1340.1 | 1370.1 | 4.53 | 4.37 | 4.32 |

| LO (MHz) | LO VSWR (:1) @LO (dBm) +4 | +7 | +10 |
|---|---|---|---|
| 81.0 | 2.29 | 4.72 | 13.70 |
| 91.3 | 2.00 | 3.43 | 6.21 |
| 71.5 | 1.83 | 2.88 | 4.54 |
| 102.2 | 1.74 | 2.66 | 3.99 |
| 132.9 | 1.77 | 2.70 | 4.01 |
| 163.6 | 1.71 | 2.50 | 3.55 |
| 194.3 | 1.69 | 2.46 | 3.47 |
| 224.9 | 1.73 | 2.53 | 3.56 |
| 255.6 | 1.71 | 2.46 | 3.40 |
| 286.3 | 1.71 | 2.44 | 3.37 |
| 317.0 | 1.76 | 2.51 | 3.46 |
| 347.7 | 1.77 | 2.50 | 3.41 |
| 378.4 | 1.78 | 2.48 | 3.37 |
| 409.1 | 1.83 | 2.55 | 3.45 |
| 450.0 | 1.86 | 2.55 | 3.40 |
| 480.7 | 1.88 | 2.58 | 3.45 |
| 521.6 | 1.95 | 2.65 | 3.53 |
| 552.3 | 1.95 | 2.62 | 3.47 |
| 593.3 | 2.02 | 2.69 | 3.54 |
| 623.9 | 2.08 | 2.72 | 3.55 |
| 664.9 | 2.14 | 2.77 | 3.56 |
| 695.6 | 2.22 | 2.88 | 3.67 |
| 736.5 | 2.27 | 2.92 | 3.69 |
| 767.2 | 2.31 | 2.98 | 3.76 |
| 808.1 | 2.39 | 3.08 | 3.88 |
| 838.8 | 2.41 | 3.09 | 3.87 |
| 879.7 | 2.46 | 3.14 | 3.92 |
| 910.4 | 2.50 | 3.15 | 3.92 |
| 951.3 | 2.50 | 3.11 | 3.81 |
| 982.0 | 2.52 | 3.10 | 3.76 |
| 1022.9 | 2.56 | 3.08 | 3.69 |
| 1053.6 | 2.56 | 3.05 | 3.60 |
| 1094.6 | 2.61 | 3.08 | 3.61 |
| 1125.3 | 2.67 | 3.09 | 3.56 |
| 1166.2 | 2.69 | 3.04 | 3.45 |
| 1196.9 | 2.77 | 3.06 | 3.40 |
| 1237.8 | 2.82 | 3.03 | 3.31 |
| 1268.5 | 2.85 | 3.01 | 3.25 |
| 1309.4 | 2.91 | 3.00 | 3.19 |
| 1340.1 | 2.91 | 2.95 | 3.08 |

| IF (OUT) (MHz) | IF VSWR @LO=830.1MHz (:1) @LO (dBm) +4 | +7 | +10 |
|---|---|---|---|
| 10.1 | 1.96 | 1.65 | 1.40 |
| 30.1 | 1.97 | 1.65 | 1.40 |
| 50.1 | 1.98 | 1.67 | 1.43 |
| 70.1 | 2.01 | 1.69 | 1.44 |
| 90.1 | 2.01 | 1.69 | 1.44 |
| 110.1 | 2.05 | 1.72 | 1.47 |
| 130.1 | 2.01 | 1.70 | 1.46 |
| 150.1 | 2.02 | 1.71 | 1.48 |
| 170.1 | 2.06 | 1.75 | 1.51 |
| 190.1 | 2.06 | 1.75 | 1.53 |
| 210.1 | 2.08 | 1.78 | 1.56 |
| 230.1 | 2.04 | 1.75 | 1.55 |
| 250.1 | 2.09 | 1.80 | 1.59 |
| 270.1 | 2.10 | 1.82 | 1.62 |
| 290.1 | 2.12 | 1.83 | 1.64 |
| 310.1 | 2.12 | 1.84 | 1.65 |
| 330.1 | 2.11 | 1.84 | 1.66 |
| 350.1 | 2.15 | 1.88 | 1.70 |
| 370.1 | 2.14 | 1.87 | 1.71 |
| 390.1 | 2.16 | 1.90 | 1.73 |
| 410.1 | 2.12 | 1.87 | 1.71 |
| 430.1 | 2.17 | 1.91 | 1.75 |
| 450.1 | 2.18 | 1.94 | 1.79 |
| 470.1 | 2.14 | 1.90 | 1.75 |
| 490.1 | 2.19 | 1.95 | 1.80 |
| 510.1 | 2.13 | 1.89 | 1.75 |
| 530.1 | 2.21 | 1.96 | 1.81 |
| 550.1 | 2.16 | 1.92 | 1.79 |
| 570.1 | 2.18 | 1.93 | 1.78 |
| 590.1 | 2.16 | 1.92 | 1.80 |
| 610.1 | 2.12 | 1.88 | 1.74 |
| 630.1 | 2.18 | 1.94 | 1.80 |
| 650.1 | 2.12 | 1.88 | 1.74 |
| 670.1 | 2.18 | 1.92 | 1.77 |
| 690.1 | 2.08 | 1.84 | 1.71 |
| 720.1 | 2.14 | 1.88 | 1.73 |
| 740.1 | 2.07 | 1.82 | 1.68 |
| 770.1 | 2.12 | 1.86 | 1.70 |
| 790.1 | 2.01 | 1.74 | 1.59 |
| 820.1 | 2.08 | 1.81 | 1.64 |




Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 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 minicircuits.com

## *Harmonics Tables*

| RF HARMONICS ORDER | (-dBm) | (-dBc) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | - | - | +1 | 19 | 4 | 29 | 13 | 33 | 32 | 46 | 45 | 53 |
| 1 | - | 36 | +0 | 45 | 11 | 36 | 24 | 43 | 41 | 60 | 44 | 56 |
| 2 | >90 | 60 | 44 | 60 | 43 | 58 | 44 | 69 | 56 | >69 | >69 | 67 |
| 3 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 4 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 5 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 6 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 7 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 8 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 9 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 10 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**LO HARMONICS ORDER**

**Test conditions:**
**RF IN: 425.1 MHz; -15.00 dBm.**
**LO IN: 455.1 MHz; +7.00 dBm**
**IF OUT: 30 MHz; -20.9 dBm**

| RF HARMONICS ORDER | (-dBm) | (-dBc) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | - | - | 10 | 29 | 16 | 44 | 24 | 45 | 44 | 59 | 59 | 70 |
| 1 | - | 35 | +0 | 60 | 12 | 37 | 25 | 47 | 42 | 65 | 49 | 62 |
| 2 | 74 | 51 | 35 | 60 | 34 | 53 | 36 | 53 | 48 | 64 | 70 | 69 |
| 3 | >90 | 59 | 51 | 57 | 53 | 58 | 46 | 58 | 49 | 62 | 55 | 71 |
| 4 | >90 | 76 | 64 | 69 | 56 | 63 | 53 | 61 | 52 | >79 | 74 | 78 |
| 5 | >90 | >79 | 74 | >79 | 59 | 71 | 58 | 69 | 59 | 72 | 66 | >79 |
| 6 | >90 | >79 | 77 | >79 | 76 | >79 | 77 | 78 | 67 | 73 | 67 | >79 |
| 7 | >90 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | 75 | >79 |
| 8 | >90 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 9 | >90 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 10 | >90 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**LO HARMONICS ORDER**

**Test conditions:**
**RF IN: 425.1 MHz; -5.00 dBm.**
**LO IN: 455.1 MHz; +7.00 dBm**
**IF OUT: 30 MHz; -10.95 dBm**

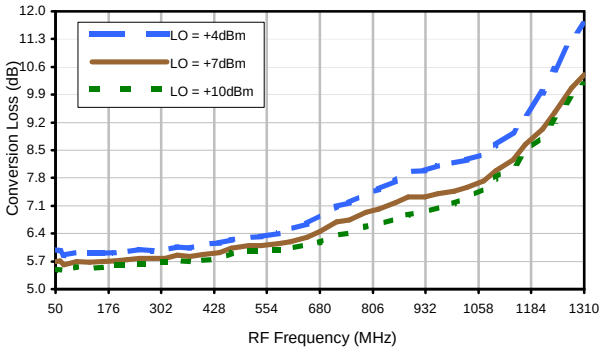
**Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.**
**2. + entry denotes harmonics are in (dBc) above IF OUTPUT.**
**3. RF Cal represent the Harmonics level of the RF input signal to the mixer.**



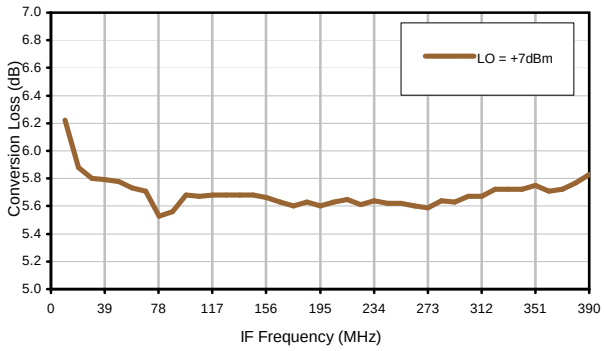

Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see minicircuits.com

## *Typical Performance Curves*

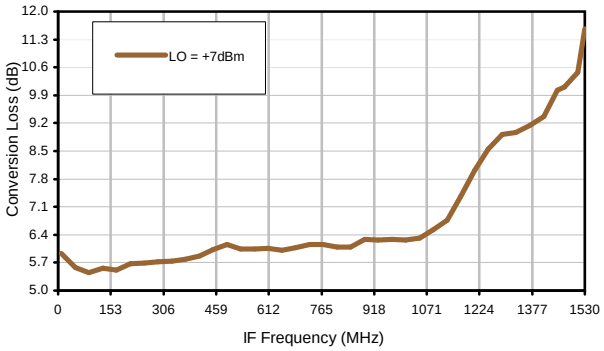
**Conversion Loss @ IF=30MHz**



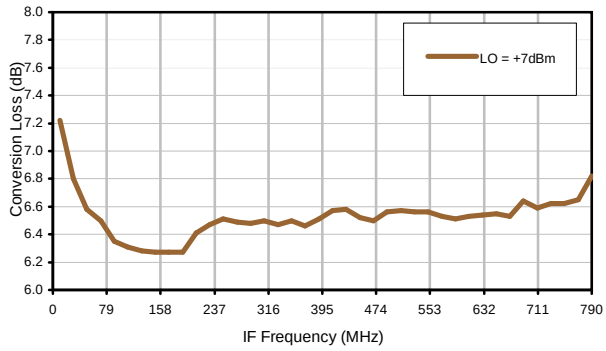

**Conversion Loss vs. IF @ RF=400.1MHz**



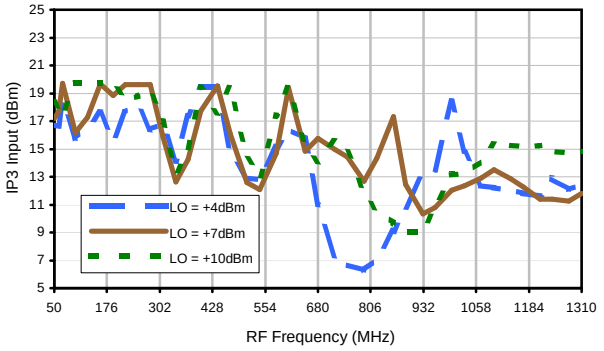

**Conversion Loss vs. IF @ RF=50MHz**



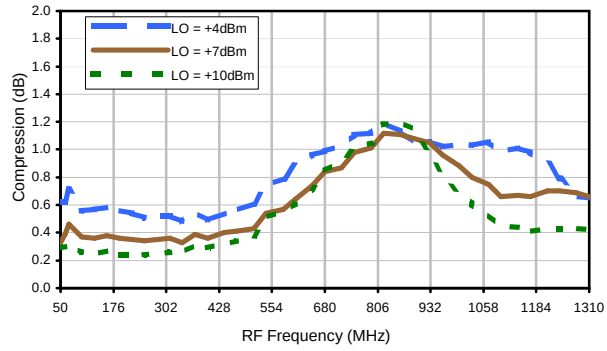

**Conversion Loss vs. IF @ RF=800.1MHz**




**IP3 Input**




**Compression @ RF IN=0dBm**



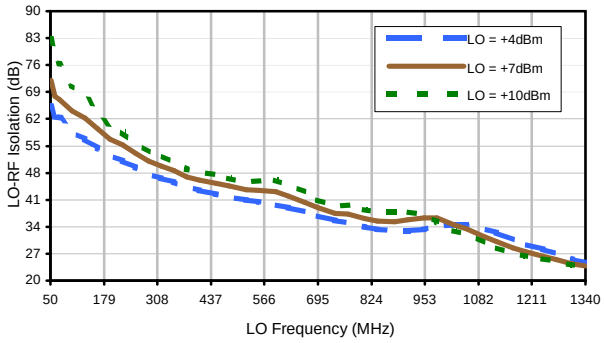




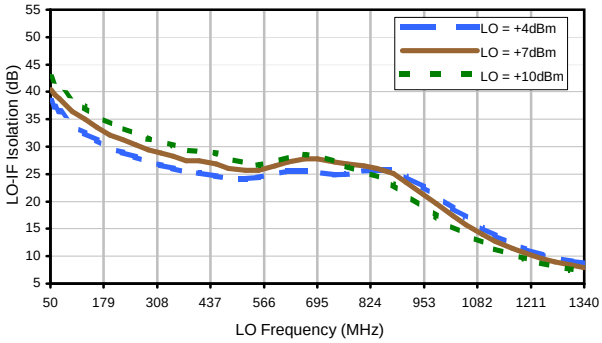
Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see minicircuits.com

## *Typical Performance Curves*

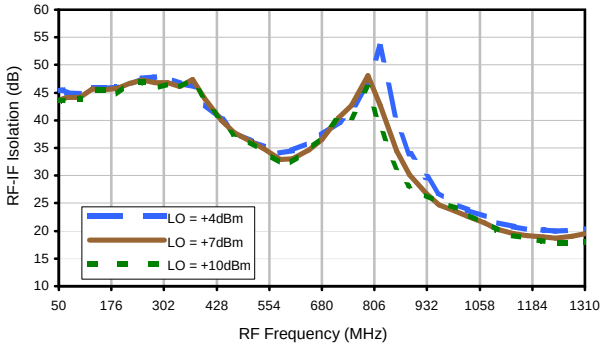
### LO-RF Isolation



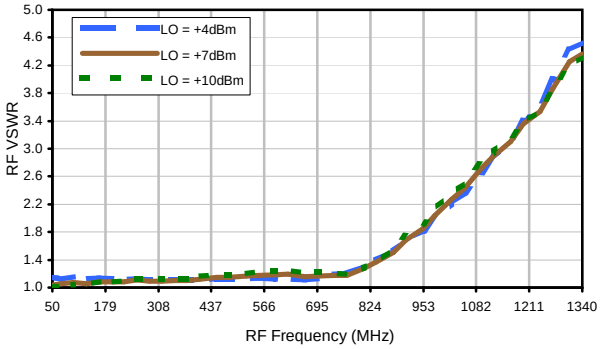

### LO-IF Isolation



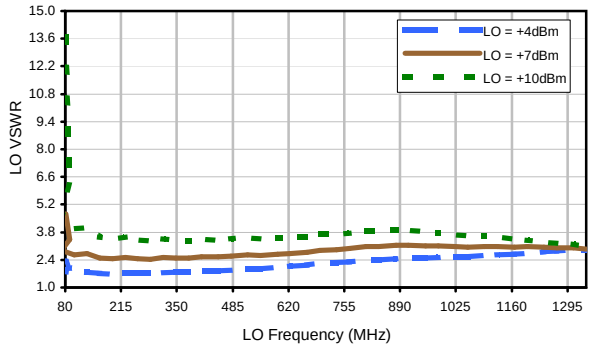

### RF-IF Isolation



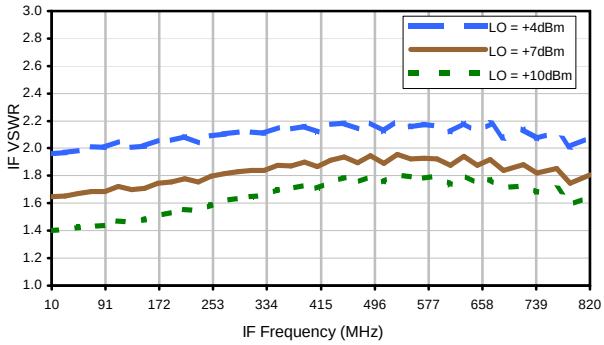

### RF VSWR




### LO VSWR




### IF VSWR







Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 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 minicircuits.com

## *Harmonics Tables*

| RF HARMONICS ORDER | (-dBm) | (-dBc) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | - | - | +1 | 19 | 4 | 29 | 13 | 33 | 32 | 46 | 45 | 53 |
| 1 | - | 36 | +0 | 45 | 11 | 36 | 24 | 43 | 41 | 60 | 44 | 56 |
| 2 | >90 | 60 | 44 | 60 | 43 | 58 | 44 | 69 | 56 | >69 | >69 | 67 |
| 3 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 4 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 5 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 6 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 7 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 8 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 9 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| 10 | >90 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 | >69 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**LO HARMONICS ORDER**

**Test conditions:**
**RF IN: 425.1 MHz; -15.00 dBm.**
**LO IN: 455.1 MHz; +7.00 dBm**
**IF OUT: 30 MHz; -20.9 dBm**

| RF HARMONICS ORDER | (-dBm) | (-dBc) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | - | - | 10 | 29 | 16 | 44 | 24 | 45 | 44 | 59 | 59 | 70 |
| 1 | - | 35 | +0 | 60 | 12 | 37 | 25 | 47 | 42 | 65 | 49 | 62 |
| 2 | 74 | 51 | 35 | 60 | 34 | 53 | 36 | 53 | 48 | 64 | 70 | 69 |
| 3 | >90 | 59 | 51 | 57 | 53 | 58 | 46 | 58 | 49 | 62 | 55 | 71 |
| 4 | >90 | 76 | 64 | 69 | 56 | 63 | 53 | 61 | 52 | >79 | 74 | 78 |
| 5 | >90 | >79 | 74 | >79 | 59 | 71 | 58 | 69 | 59 | 72 | 66 | >79 |
| 6 | >90 | >79 | 77 | >79 | 76 | >79 | 77 | 78 | 67 | 73 | 67 | >79 |
| 7 | >90 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | 75 | >79 |
| 8 | >90 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 9 | >90 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| 10 | >90 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 | >79 |
| | RF CAL | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**LO HARMONICS ORDER**

**Test conditions:**
**RF IN: 425.1 MHz; -5.00 dBm.**
**LO IN: 455.1 MHz; +7.00 dBm**
**IF OUT: 30 MHz; -10.95 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.**

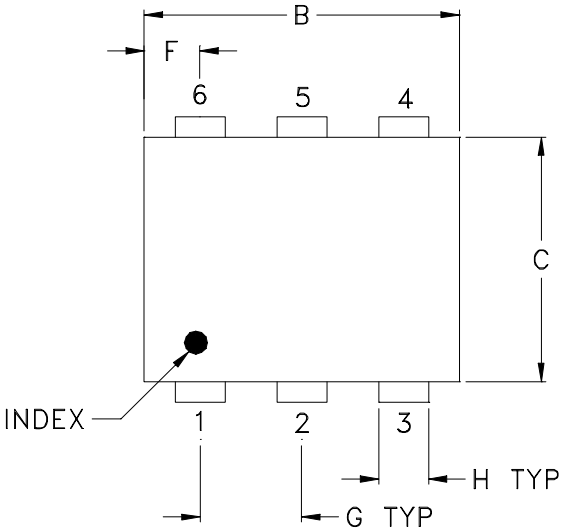


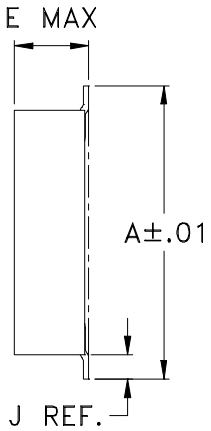

Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see minicircuits.com

# Case Style CD

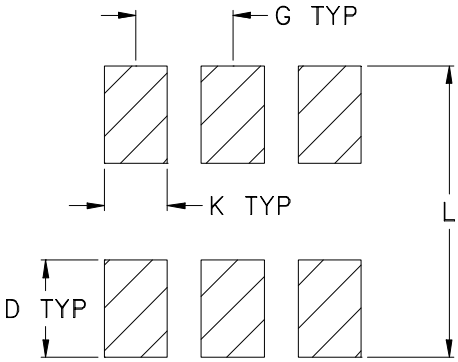
**CD541**
**CD542**
**CD636**
**CD637**

## Outline Dimensions




## PCB Land Pattern




Suggested Layout,
Tolerance to be within ±.002

| CASE# | A | B | C | D | E | F | G | H | J | K | L | WT, GRAM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CD541 | .272 (6.91) | .310 (7.87) | .220 (5.58) | .100 (2.54) | .082 (2.08) | .055 (1.40) | .100 (2.54) | .030 (0.76) | .026 (0.66) | .065 (1.65) | .300 (7.62) | .15 |
| CD542 | | | | | .112 (2.84) | | | | | | | .20 |
| CD636 | | | | | .162 (4.11) | | | | | | | .25 |
| CD637 | | | | | .206 (5.23) | | | | | | | .40 |

**Dimensions are in inches (mm). Tolerances: 2 Pl. ± .01; 3 Pl. ± .005**

**Notes:**

1. Case material: Plastic.
2. Termination finish:
   For RoHS Case Styles: Tin plate over Nickel plate. All models, (+) suffix.
   For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.

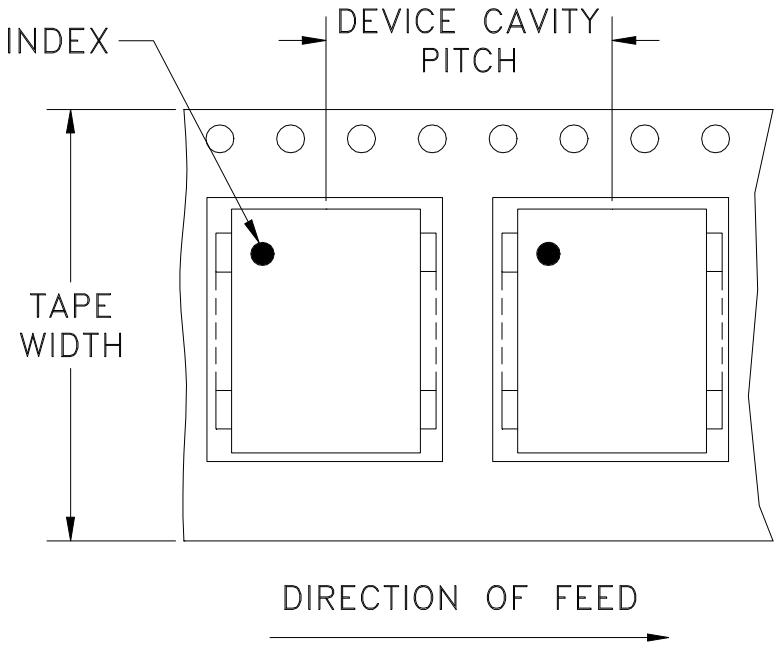

Mini-Circuits®
INTERNET http://www.minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010
Mini-Circuits ISO 9001 & ISO 14001 Certified




This document and its contents are the property of Mini-Circuits

# Tape & Reel Packaging TR-F34

DEVICE ORIENTATION IN T&R




| Tape Width, mm | Device Cavity Pitch, mm | Reel Size, inches | Devices per Reel see note | |
|---|---|---|---|---|
| 16 | 12 | 7 | Small quantity standard (see note) | 20 |
| | | | | 50 |
| | | | | 100 |
| | | | | 200 |
| | | 13 | Standard | 500 |
| | | | | 1000 |

Note: Availability of small reel quantity varies by model.
Refer to pricing and availability on individual model dashboard.

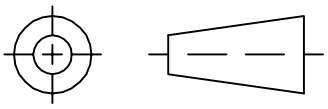
Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf

Mini-Circuits®
INTERNET http://www.minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010
Mini-Circuits ISO 9001 & ISO 14001 Certified


This document and its contents are the property of Mini-Circuits.

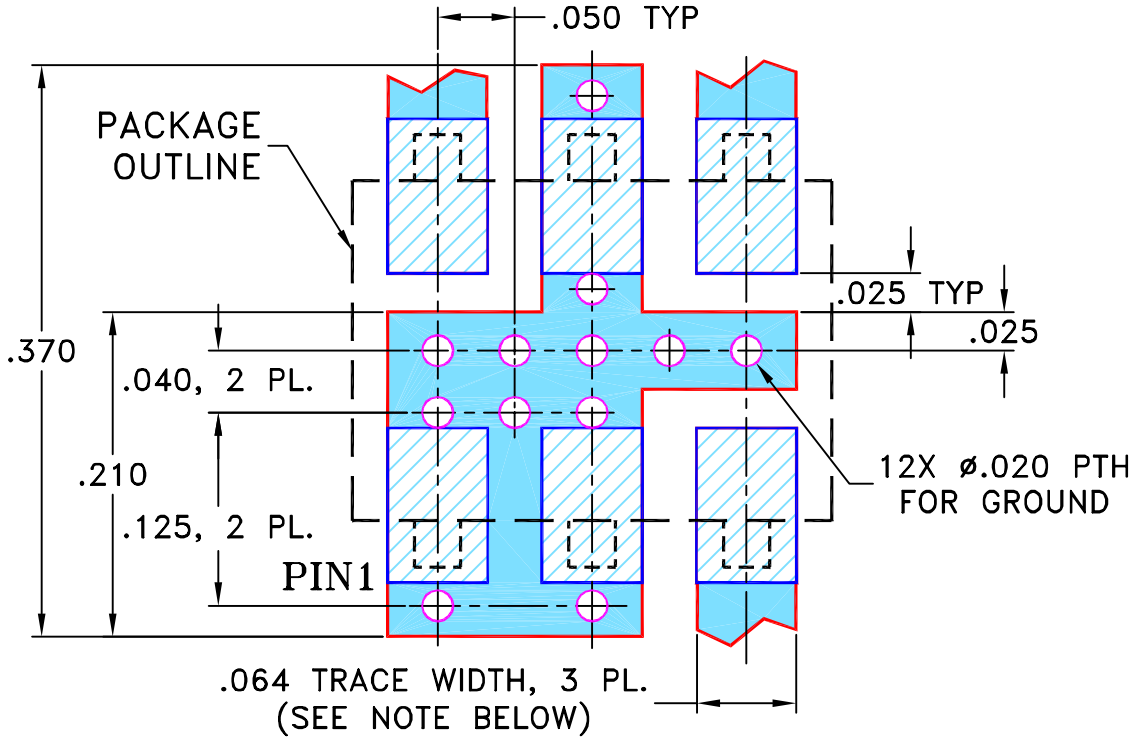
THIRD ANGLE PROJECTION



REVISIONS

| REV | ECN No. | DESCRIPTION | DATE | DR | AUTH |
|---|---|---|---|---|---|
| OR | M82272 | NEW RELEASE | 08/05/02 | MMG | DJ |
| A | M102713 | ADDED NOTE 2 & "...WITH SMOBC" | 01/17/06 | MMG | IL |
| | | | | | |
| | | | | | |

# SUGGESTED MOUNTING CONFIGURATION FOR CD541/542/636/637 CASE STYLES, "jv", "ju", "jw" PIN CONNECTIONS




NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .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 | MMG | 07/17/02 |
| TOLERANCES ON: | CHECKED | WL | 08/02/02 |
| 2 PL DECIMALS ± | APPROVED | DJ | 08/05/02 |
| 3 PL DECIMALS ± .005 | | | |
| ANGLES ± | | | |
| FRACTIONS ± | | | |

Mini-Circuits®

THIS DOCUMENT AND ITS CONTENTS ARE THE PROPERTY OF MINI-CIRCUITS. EXCEPT FOR USE EXPRESSLY GRANTED, IN WRITING, TO ITS VENDORS, VENDEE AND THE UNITED STATES GOVERNMENT, MINI-CIRCUITS RESERVES ALL PROPRIETARY DESIGN, USE , MANUFACTURING AND REPRODUCTION RIGHTS THERETO. THESE CONTENTS SHALL NOT BE USED, DUPLICATED OR DISCLOSED TO ANY OUTSIDE PARTY, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION OF MINI-CIRCUITS.

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

Mini-Circuits®
13 Neptune Avenue
Brooklyn NY 11235

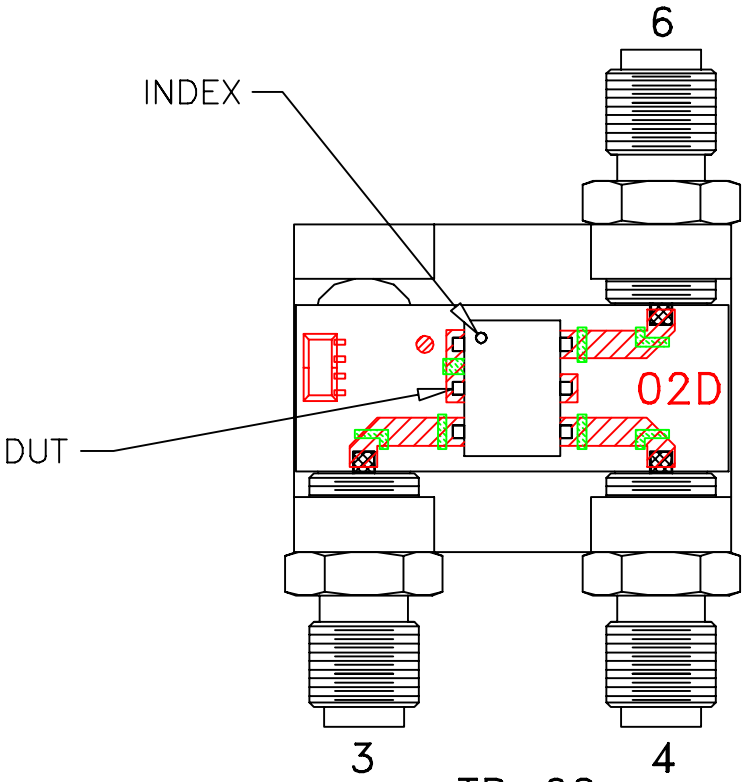
PL, jv/ju/jw, CD541/542/636/637, ADE, TB-02

| SIZE | CODE IDENT | DRAWING NO: | REV: |
|---|---|---|---|
| A | 15542 | 98-PL-051 | A |

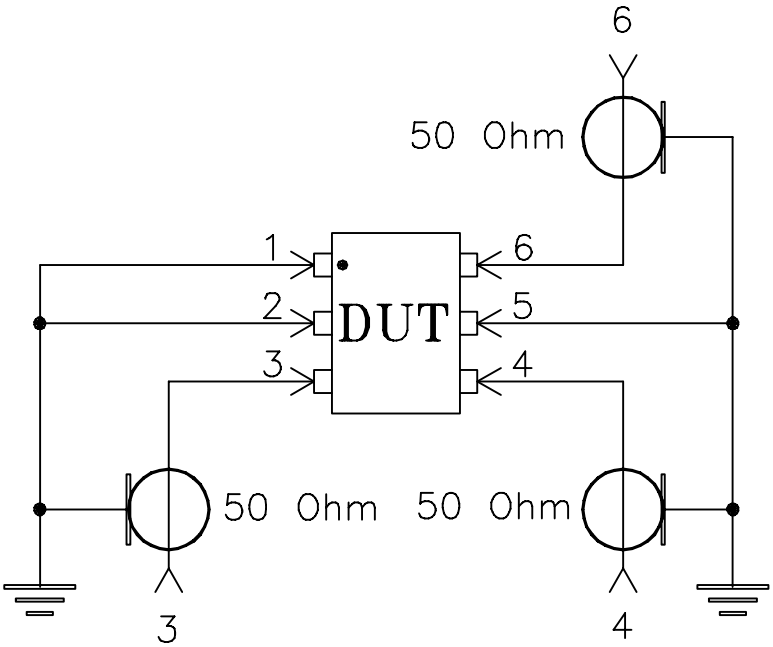
| FILE: | SCALE: | SHEET: |
|---|---|---|
| 98PL051 | 8:1 | 1 OF 1 |

# Evaluation Board and Circuit

For Pin Connections refer to Data Sheet of the DUT




TB–02




Schematic Diagram

## Notes:

1. SMA Female connectors.
2. PCB Material: Rogers RO4350 or equivalent, Dielectric Constant=3.5, Thickness=.030 inch.

Mini–Circuits®



THIS DOCUMENT AND ITS CONTENTS ARE THE PROPERTY OF MINI–CIRCUITS.

Mini-Circuits

# Environmental Specifications ENV02T1

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|---|---|---|
| Operating Temperature | -40° to 85°C<br>Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C<br>Ambient Environment | Individual Model Data Sheet |
| Humidity | 90 to 95% RH, 240 hours, 50°C | MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours |
| Thermal Shock | -55° to 100°C, 100 cycles | MIL-STD-202, Method 107, Condition A-3, except +100°C |
| Solder Reflow Heat | Sn-Pb Eutetic Process: 225°C peak<br>Pb-Free Process 245° - 250°C peak | J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1 |
| Solderability | 10X Magnification | J-STD-002, 95% Coverage |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36) | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock | 50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes | MIL-STD-202, Method 213, Condition A |
| Marking Resistance to Solvents | Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C;<br>distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C | MIL-STD-202, Method 215 |


This document and its contents are the property of Mini-Circuits.