

# Voltage Controlled Oscillator

ROS-ED10440/1

## Typical Performance Data

| V<br>TUNE | TUNE<br>SENS<br>(MHz/V) | FREQUENCY<br>(MHz) |        |        | POWER OUTPUT<br>(dBm) |       |       | HARMONICS (dBc) |       |       | FREQ.<br>PUSH<br>(MHz/V) | FREQ<br>OFFSET<br>(KHz) | PHASE<br>NOISE<br>(dBc/Hz) |
|-----------|-------------------------|--------------------|--------|--------|-----------------------|-------|-------|-----------------|-------|-------|--------------------------|-------------------------|----------------------------|
|           |                         | -55°C              | +25°C  | +85°C  | -55°C                 | +25°C | +85°C | F2              | F3    | F4    |                          |                         |                            |
| 0.3       | 83.38                   | 1116.4             | 1104.5 | 1086.6 | 7.11                  | 7.15  | 7.24  | -17.4           | -28.3 | -34.6 | 2.31                     | 1                       | -73                        |
| 0.7       | 83.23                   | 1144.6             | 1131.9 | 1114.0 | 6.86                  | 6.99  | 6.93  | -18.5           | -26.9 | -34.1 | 1.77                     | 10                      | -96                        |
| 1.0       | 89.29                   | 1174.3             | 1161.4 | 1142.1 | 6.59                  | 6.64  | 6.69  | -19.3           | -26.2 | -34.8 | 1.54                     | 100                     | -116                       |
| 1.3       | 89.26                   | 1204.7             | 1190.9 | 1171.7 | 6.36                  | 6.49  | 6.38  | -20.4           | -25.6 | -35.8 | 1.26                     | 1000                    | -136                       |
| 1.7       | 89.76                   | 1235.3             | 1220.5 | 1201.0 | 5.86                  | 6.08  | 6.20  | -21.4           | -25.7 | -34.2 | 1.02                     |                         |                            |
| 2.0       | 89.85                   | 1265.5             | 1250.1 | 1230.3 | 5.69                  | 5.79  | 5.67  | -22.6           | -26.9 | -37.3 | 0.83                     |                         |                            |
| 2.3       | 93.33                   | 1296.6             | 1280.9 | 1261.1 | 5.27                  | 5.55  | 5.47  | -23.7           | -31.7 | -45.5 | 0.83                     |                         |                            |
| 2.6       | 101.32                  | 1333.6             | 1314.4 | 1292.6 | 5.33                  | 5.39  | 5.18  | -25.3           | -34.2 | -34.1 | 1.19                     |                         |                            |
| 3.0       | 101.80                  | 1368.3             | 1347.9 | 1324.5 | 5.48                  | 5.56  | 5.22  | -28.3           | -27.6 | -30.3 | 1.54                     |                         |                            |
| 3.3       | 94.05                   | 1399.4             | 1379.0 | 1355.4 | 5.60                  | 5.67  | 5.24  | -33.3           | -25.6 | -27.4 | 1.70                     |                         |                            |
| 3.6       | 90.18                   | 1429.1             | 1408.7 | 1385.1 | 5.55                  | 5.73  | 5.28  | -38.1           | -24.5 | -25.4 | 1.84                     |                         |                            |
| 4.0       | 88.43                   | 1458.3             | 1437.9 | 1414.4 | 5.55                  | 5.70  | 5.24  | -32.1           | -24.0 | -23.6 | 1.90                     |                         |                            |
| 4.3       | 87.62                   | 1486.6             | 1466.8 | 1443.4 | 5.44                  | 5.71  | 5.20  | -27.3           | -24.2 | -22.2 | 1.92                     |                         |                            |
| 4.6       | 84.51                   | 1514.2             | 1494.7 | 1472.1 | 5.58                  | 5.70  | 5.17  | -24.8           | -24.7 | -21.7 | 1.87                     |                         |                            |
| 5.0       | 83.11                   | 1541.2             | 1522.2 | 1499.9 | 5.59                  | 5.90  | 5.23  | -22.5           | -25.4 | -21.9 | 1.79                     |                         |                            |
| 5.3       | 81.64                   | 1567.4             | 1549.1 | 1527.4 | 5.57                  | 5.94  | 5.43  | -20.7           | -26.3 | -22.5 | 1.68                     |                         |                            |
| 5.6       | 78.92                   | 1592.6             | 1575.1 | 1554.4 | 5.71                  | 6.09  | 5.48  | -19.2           | -30.3 | -23.6 | 1.51                     |                         |                            |
| 5.9       | 75.99                   | 1617.1             | 1600.2 | 1580.4 | 5.70                  | 6.30  | 5.71  | -18.1           | -26.0 | -25.0 | 1.38                     |                         |                            |
| 6.3       | 73.63                   | 1640.9             | 1624.5 | 1605.4 | 5.63                  | 6.31  | 5.92  | -17.2           | -26.1 | -25.6 | 1.23                     |                         |                            |
| 6.6       | 71.83                   | 1664.1             | 1648.2 | 1629.7 | 5.55                  | 6.25  | 5.94  | -16.4           | -26.2 | -26.8 | 1.13                     |                         |                            |
| 6.9       | 70.02                   | 1686.8             | 1671.3 | 1653.4 | 5.63                  | 6.25  | 5.91  | -16.2           | -26.6 | -28.1 | 1.04                     |                         |                            |
| 7.3       | 68.78                   | 1709.0             | 1694.0 | 1676.4 | 5.69                  | 6.39  | 5.93  | -15.5           | -27.3 | -29.8 | 0.96                     |                         |                            |
| 7.6       | 67.55                   | 1731.1             | 1716.3 | 1699.1 | 5.66                  | 6.42  | 6.05  | -15.1           | -29.0 | -32.3 | 0.89                     |                         |                            |
| 7.9       | 67.83                   | 1753.3             | 1738.7 | 1721.4 | 5.61                  | 6.35  | 6.05  | -14.9           | -30.3 | -33.1 | 0.85                     |                         |                            |
| 8.3       | 67.61                   | 1775.4             | 1761.0 | 1743.9 | 5.64                  | 6.32  | 5.98  | -14.9           | -32.4 | -34.9 | 0.83                     |                         |                            |
| 8.6       | 67.03                   | 1797.5             | 1783.1 | 1766.1 | 5.69                  | 6.40  | 5.98  | -14.7           | -35.9 | -36.2 | 0.82                     |                         |                            |
| 8.9       | 66.78                   | 1819.8             | 1805.2 | 1788.0 | 5.61                  | 6.43  | 6.09  | -14.7           | -40.4 | -38.2 | 0.87                     |                         |                            |
| 9.2       | 66.53                   | 1841.9             | 1827.1 | 1809.7 | 5.53                  | 6.35  | 6.12  | -14.8           | -44.2 | -38.9 | 0.89                     |                         |                            |
| 9.6       | 65.36                   | 1863.5             | 1848.7 | 1831.1 | 5.53                  | 6.31  | 6.06  | -15.1           | -44.5 | -40.4 | 0.93                     |                         |                            |
| 9.9       | 64.02                   | 1884.7             | 1869.8 | 1852.1 | 5.51                  | 6.30  | 6.04  | -15.1           | -40.7 | -40.3 | 0.92                     |                         |                            |
| 10.2      | 63.44                   | 1906.0             | 1890.8 | 1872.9 | 5.45                  | 6.26  | 5.98  | -15.7           | -35.8 | -40.9 | 0.98                     |                         |                            |
| 10.6      | 63.32                   | 1926.8             | 1911.6 | 1893.4 | 5.53                  | 6.25  | 5.98  | -16.2           | -34.0 | -41.1 | 1.02                     |                         |                            |
| 10.9      | 60.53                   | 1946.5             | 1931.6 | 1913.7 | 5.58                  | 6.29  | 5.99  | -16.5           | -31.3 | -40.6 | 0.97                     |                         |                            |
| 11.2      | 59.30                   | 1965.8             | 1951.2 | 1933.5 | 5.56                  | 6.27  | 5.97  | -17.4           | -27.0 | -41.1 | 0.92                     |                         |                            |
| 11.6      | 59.54                   | 1985.3             | 1970.8 | 1953.3 | 5.53                  | 6.20  | 5.91  | -18.6           | -23.7 | -39.6 | 0.90                     |                         |                            |
| 11.9      | 60.52                   | 2005.2             | 1990.8 | 1973.2 | 5.48                  | 6.16  | 5.82  | -20.2           | -21.7 | -39.4 | 0.83                     |                         |                            |
| 12.2      | 60.33                   | 2025.3             | 2010.7 | 1992.9 | 5.52                  | 6.15  | 5.80  | -20.5           | -20.8 | -39.6 | 0.85                     |                         |                            |
| 12.5      | 59.85                   | 2045.4             | 2030.5 | 2012.2 | 5.55                  | 6.19  | 5.83  | -19.5           | -20.8 | -40.1 | 0.79                     |                         |                            |
| 12.9      | 57.82                   | 2064.5             | 2049.6 | 2031.1 | 5.52                  | 6.20  | 5.92  | -18.4           | -21.3 | -49.7 | 0.75                     |                         |                            |