

# Voltage Controlled Oscillator

ROSA-ED9286A/4

## 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    |                          |                         |                            |
| 0.4       | 120.78                  | 1080.9             | 1057.1 | 1038.9 | 10.14                 | 9.82  | 9.49  | -9.2            | -21.5 | -36.2 | 0.43                     | 1                       | -62                        |
| 0.8       | 118.45                  | 1128.9             | 1104.4 | 1086.6 | 10.60                 | 10.21 | 9.64  | -10.6           | -23.4 | -40.2 | 0.74                     | 10                      | -88                        |
| 1.2       | 111.67                  | 1172.4             | 1149.1 | 1131.5 | 10.19                 | 10.01 | 9.94  | -10.8           | -23.9 | -46.4 | 1.21                     | 100                     | -110                       |
| 1.6       | 102.26                  | 1212.5             | 1190.0 | 1173.8 | 9.93                  | 9.79  | 9.51  | -11.9           | -24.9 | -54.6 | 1.29                     | 1000                    | -130                       |
| 2.0       | 99.59                   | 1251.8             | 1229.8 | 1214.9 | 10.32                 | 10.00 | 9.52  | -12.8           | -27.3 | -45.7 | 1.28                     |                         |                            |
| 2.4       | 99.78                   | 1291.3             | 1269.7 | 1255.8 | 10.26                 | 10.09 | 9.84  | -14.4           | -27.9 | -41.5 | 1.26                     |                         |                            |
| 2.8       | 101.34                  | 1331.4             | 1310.3 | 1297.0 | 9.79                  | 10.02 | 9.98  | -16.0           | -29.2 | -38.9 | 1.26                     |                         |                            |
| 3.2       | 103.40                  | 1372.5             | 1351.6 | 1338.9 | 9.75                  | 9.56  | 9.46  | -17.0           | -31.0 | -38.2 | 1.19                     |                         |                            |
| 3.6       | 106.37                  | 1414.6             | 1394.2 | 1381.6 | 10.15                 | 9.87  | 9.63  | -18.1           | -33.3 | -38.0 | 1.08                     |                         |                            |
| 4.0       | 108.82                  | 1457.7             | 1437.7 | 1424.9 | 9.99                  | 10.18 | 10.13 | -18.6           | -36.9 | -36.0 | 0.88                     |                         |                            |
| 4.4       | 110.77                  | 1501.7             | 1482.0 | 1468.7 | 9.80                  | 9.99  | 9.84  | -20.4           | -40.7 | -34.2 | 0.65                     |                         |                            |
| 4.8       | 110.97                  | 1545.5             | 1526.4 | 1513.0 | 10.06                 | 9.90  | 9.67  | -21.2           | -48.4 | -33.2 | 0.41                     |                         |                            |
| 5.2       | 109.86                  | 1588.7             | 1570.4 | 1557.0 | 10.73                 | 10.40 | 9.92  | -21.8           | -51.7 | -32.2 | 0.31                     |                         |                            |
| 5.6       | 103.45                  | 1629.0             | 1611.7 | 1599.2 | 10.88                 | 10.70 | 10.32 | -22.6           | -51.7 | -32.1 | 0.32                     |                         |                            |
| 6.0       | 98.46                   | 1668.3             | 1651.1 | 1638.7 | 10.62                 | 10.36 | 10.16 | -24.3           | -50.5 | -31.8 | 0.30                     |                         |                            |
| 6.4       | 97.11                   | 1708.8             | 1690.0 | 1676.8 | 10.87                 | 10.27 | 10.06 | -24.9           | -51.9 | -32.5 | 0.06                     |                         |                            |
| 6.8       | 94.54                   | 1748.3             | 1727.8 | 1714.0 | 11.27                 | 10.66 | 10.17 | -25.6           | -51.7 | -31.6 | 0.52                     |                         |                            |
| 7.2       | 92.12                   | 1786.1             | 1764.6 | 1750.2 | 11.03                 | 10.81 | 10.55 | -26.0           | -51.2 | -29.9 | 0.84                     |                         |                            |
| 7.6       | 88.79                   | 1822.0             | 1800.1 | 1785.5 | 10.71                 | 10.46 | 10.25 | -26.6           | -48.3 | -29.0 | 0.95                     |                         |                            |
| 8.0       | 86.20                   | 1857.0             | 1834.6 | 1819.5 | 10.72                 | 10.21 | 9.90  | -28.0           | -47.3 | -29.6 | 0.86                     |                         |                            |
| 8.4       | 84.12                   | 1890.7             | 1868.3 | 1852.8 | 11.06                 | 10.45 | 9.90  | -28.5           | -45.2 | -31.1 | 0.73                     |                         |                            |
| 8.8       | 80.47                   | 1923.1             | 1900.5 | 1884.8 | 11.20                 | 10.64 | 10.09 | -28.5           | -40.0 | -32.3 | 0.60                     |                         |                            |
| 9.2       | 77.96                   | 1954.7             | 1931.6 | 1915.5 | 10.90                 | 10.60 | 10.23 | -29.8           | -37.0 | -32.4 | 0.48                     |                         |                            |
| 9.6       | 76.36                   | 1985.3             | 1962.2 | 1945.7 | 10.57                 | 10.17 | 9.97  | -30.5           | -35.2 | -34.3 | 0.26                     |                         |                            |
| 10.0      | 74.01                   | 2015.0             | 1991.8 | 1975.0 | 10.44                 | 9.78  | 9.52  | -31.8           | -32.7 | -35.5 | 0.08                     |                         |                            |
| 10.4      | 71.52                   | 2044.0             | 2020.4 | 2003.3 | 10.50                 | 9.81  | 9.36  | -33.7           | -31.9 | -38.7 | 0.04                     |                         |                            |
| 10.8      | 68.87                   | 2071.9             | 2048.0 | 2030.4 | 10.58                 | 10.02 | 9.50  | -35.9           | -31.9 | -43.7 | 0.07                     |                         |                            |
| 11.2      | 65.88                   | 2098.4             | 2074.3 | 2056.5 | 10.35                 | 10.11 | 9.67  | -37.7           | -31.6 | -48.8 | 0.11                     |                         |                            |
| 11.6      | 62.57                   | 2123.6             | 2099.3 | 2081.4 | 10.10                 | 9.85  | 9.70  | -39.6           | -31.1 | -46.2 | 0.13                     |                         |                            |
| 12.0      | 59.40                   | 2147.7             | 2123.1 | 2105.0 | 10.08                 | 9.58  | 9.43  | -40.2           | -31.4 | -48.6 | 0.17                     |                         |                            |
| 12.4      | 56.72                   | 2170.6             | 2145.8 | 2127.5 | 10.13                 | 9.44  | 9.13  | -41.6           | -32.0 | -46.9 | 0.23                     |                         |                            |
| 12.8      | 54.20                   | 2192.2             | 2167.5 | 2149.0 | 10.09                 | 9.41  | 9.06  | -41.8           | -32.7 | -47.9 | 0.24                     |                         |                            |
| 13.2      | 51.40                   | 2212.9             | 2188.0 | 2169.6 | 10.26                 | 9.54  | 9.05  | -42.2           | -33.0 | -48.7 | 0.23                     |                         |                            |
| 13.6      | 48.55                   | 2232.4             | 2207.4 | 2189.1 | 10.26                 | 9.58  | 9.01  | -43.0           | -33.0 | -48.6 | 0.24                     |                         |                            |
| 14.0      | 46.17                   | 2251.1             | 2225.9 | 2207.5 | 10.15                 | 9.65  | 9.11  | -44.0           | -32.8 | -47.9 | 0.25                     |                         |                            |
| 14.4      | 44.03                   | 2268.8             | 2243.5 | 2225.0 | 9.94                  | 9.56  | 9.10  | -44.0           | -33.0 | -49.0 | 0.29                     |                         |                            |
| 14.8      | 41.67                   | 2285.6             | 2260.2 | 2241.6 | 9.74                  | 9.41  | 8.99  | -44.9           | -33.0 | -48.8 | 0.31                     |                         |                            |
| 15.2      | 39.30                   | 2301.3             | 2275.9 | 2257.3 | 9.52                  | 9.24  | 8.71  | -48.8           | -32.4 | -48.6 | 0.32                     |                         |                            |
| 15.6      | 36.87                   | 2316.0             | 2290.7 | 2272.0 | 9.37                  | 9.04  | 8.71  | -45.1           | -33.1 | -48.2 | 0.33                     |                         |                            |
| 16.0      | 34.75                   | 2329.9             | 2304.6 | 2286.0 | 9.36                  | 8.84  | 8.50  | -44.8           | -32.7 | -47.6 | 0.35                     |                         |                            |