

# Voltage Controlled Oscillator

ROS-ED9726/1

## 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       | 250.00                  | 1554.9             | 1518.3 | 1485.0 | 0.52                  | 0.85  | 0.36  | -17.6           | -23.5 | -34.9 | 0.68                     | 1                       | -65                        |
| 0.5       | 229.92                  | 1610.4             | 1575.8 | 1544.5 | 0.78                  | 1.08  | 0.87  | -18.1           | -28.1 | -40.6 | 0.84                     | 10                      | -90                        |
| 0.8       | 215.96                  | 1664.0             | 1629.8 | 1600.0 | 0.93                  | 1.27  | 1.10  | -18.5           | -22.5 | -43.0 | 1.02                     | 100                     | -110                       |
| 1.0       | 211.20                  | 1715.2             | 1682.6 | 1653.5 | 1.39                  | 1.47  | 1.13  | -19.2           | -23.9 | -42.3 | 1.05                     | 1000                    | -130                       |
| 1.3       | 199.28                  | 1763.3             | 1732.4 | 1705.0 | 1.42                  | 1.73  | 1.41  | -19.8           | -25.7 | -38.7 | 0.92                     |                         |                            |
| 1.5       | 195.84                  | 1811.2             | 1781.4 | 1754.9 | 1.53                  | 1.89  | 1.51  | -19.2           | -25.8 | -37.3 | 0.97                     |                         |                            |
| 1.8       | 194.00                  | 1859.3             | 1829.9 | 1804.4 | 1.47                  | 1.89  | 1.67  | -18.2           | -26.0 | -36.8 | 0.92                     |                         |                            |
| 2.0       | 196.94                  | 1908.1             | 1879.1 | 1854.0 | 1.30                  | 1.82  | 1.62  | -16.7           | -26.1 | -36.5 | 0.80                     |                         |                            |
| 2.3       | 197.18                  | 1957.5             | 1928.4 | 1904.1 | 1.24                  | 1.66  | 1.43  | -15.2           | -26.1 | -37.8 | 1.20                     |                         |                            |
| 2.5       | 199.97                  | 2007.2             | 1978.4 | 1954.3 | 1.16                  | 1.54  | 1.31  | -14.1           | -27.2 | -38.1 | 2.03                     |                         |                            |
| 2.8       | 196.60                  | 2056.6             | 2027.5 | 2004.4 | 1.16                  | 1.50  | 1.17  | -13.1           | -29.4 | -40.4 | 3.50                     |                         |                            |
| 3.0       | 196.60                  | 2105.3             | 2076.7 | 2053.9 | 0.93                  | 1.33  | 1.13  | -12.7           | -34.3 | -37.7 | 5.50                     |                         |                            |
| 3.3       | 193.32                  | 2153.3             | 2125.0 | 2102.3 | 0.57                  | 0.99  | 0.85  | -12.6           | -38.0 | -36.1 | 8.78                     |                         |                            |
| 3.5       | 189.28                  | 2199.6             | 2172.3 | 2149.1 | 0.40                  | 0.49  | 0.52  | -12.5           | -38.5 | -36.6 | 9.84                     |                         |                            |
| 3.8       | 178.28                  | 2244.7             | 2216.9 | 2194.4 | 0.37                  | 0.46  | 0.24  | -12.4           | -37.8 | -38.7 | 11.78                    |                         |                            |
| 4.0       | 169.04                  | 2287.4             | 2259.2 | 2237.2 | 0.26                  | 0.53  | 0.23  | -12.1           | -37.1 | -38.3 | 12.34                    |                         |                            |
| 4.3       | 159.88                  | 2327.7             | 2299.1 | 2278.1 | 0.02                  | 0.45  | 0.14  | -12.0           | -36.3 | -37.3 | 10.86                    |                         |                            |
| 4.5       | 150.68                  | 2365.4             | 2336.8 | 2315.1 | -0.59                 | 0.18  | -0.03 | -12.8           | -35.0 | -38.3 | 10.22                    |                         |                            |
| 4.8       | 139.88                  | 2398.6             | 2371.8 | 2349.7 | -0.06                 | -0.16 | -0.33 | -15.6           | -35.3 | -37.9 | 8.92                     |                         |                            |
| 5.0       | 123.80                  | 2429.7             | 2402.7 | 2381.7 | -0.16                 | 0.16  | -0.26 | -11.5           | -36.2 | -40.3 | 8.16                     |                         |                            |
| 5.3       | 113.96                  | 2458.5             | 2431.2 | 2410.2 | -0.15                 | 0.10  | -0.22 | -11.5           | -34.6 | -39.3 | 6.24                     |                         |                            |
| 5.5       | 108.28                  | 2483.2             | 2458.3 | 2436.4 | -0.06                 | 0.10  | -0.23 | -12.0           | -37.4 | -40.9 | 5.04                     |                         |                            |
| 5.8       | 91.64                   | 2506.9             | 2481.2 | 2460.9 | -0.18                 | 0.23  | -0.21 | -11.8           | -37.3 | -40.8 | 4.16                     |                         |                            |
| 6.0       | 88.04                   | 2527.4             | 2503.2 | 2482.6 | -0.10                 | 0.08  | -0.11 | -12.2           | -38.1 | -41.8 | 3.86                     |                         |                            |
| 6.3       | 78.68                   | 2546.7             | 2522.9 | 2502.5 | -0.13                 | 0.17  | -0.14 | -12.2           | -39.0 | -42.1 | 2.78                     |                         |                            |
| 6.5       | 72.40                   | 2565.1             | 2541.0 | 2521.8 | -0.10                 | 0.16  | -0.16 | -12.6           | -40.2 | -42.8 | 2.28                     |                         |                            |
| 6.8       | 72.12                   | 2581.6             | 2559.0 | 2538.7 | -0.16                 | 0.14  | -0.13 | -12.8           | -39.8 | -42.4 | 1.52                     |                         |                            |
| 7.0       | 61.36                   | 2598.3             | 2574.3 | 2555.1 | -0.41                 | 0.12  | -0.19 | -13.1           | -40.7 | -42.5 | 1.34                     |                         |                            |
| 7.3       | 60.48                   | 2612.0             | 2589.5 | 2570.2 | -0.35                 | -0.05 | -0.16 | -13.3           | -39.5 | -41.9 | 1.02                     |                         |                            |
| 7.5       | 59.88                   | 2624.8             | 2604.4 | 2584.2 | -0.36                 | -0.18 | -0.27 | -13.7           | -43.1 | -43.6 | 0.34                     |                         |                            |
| 7.8       | 47.76                   | 2637.5             | 2616.4 | 2597.6 | -0.45                 | -0.16 | -0.44 | -13.6           | -43.1 | -43.5 | 0.32                     |                         |                            |
| 8.0       | 47.20                   | 2650.8             | 2628.2 | 2610.6 | -0.53                 | -0.20 | -0.48 | -13.7           | -42.8 | -42.9 | 0.00                     |                         |                            |
| 8.3       | 47.32                   | 2661.2             | 2640.0 | 2621.1 | -0.56                 | -0.30 | -0.42 | -14.0           | -42.6 | -42.7 | 0.54                     |                         |                            |
| 8.5       | 45.88                   | 2672.1             | 2651.5 | 2631.5 | -0.69                 | -0.33 | -0.43 | -14.2           | -43.0 | -42.2 | 0.72                     |                         |                            |
| 8.8       | 37.72                   | 2682.6             | 2660.9 | 2641.5 | -0.90                 | -0.38 | -0.47 | -14.2           | -43.3 | -43.2 | 0.86                     |                         |                            |
| 9.0       | 39.20                   | 2693.5             | 2670.7 | 2651.6 | -1.02                 | -0.51 | -0.56 | -14.4           | -42.7 | -42.9 | 1.26                     |                         |                            |
| 9.3       | 37.60                   | 2701.0             | 2680.1 | 2660.1 | -0.92                 | -0.66 | -0.55 | -14.5           | -42.5 | -42.4 | 1.66                     |                         |                            |
| 9.5       | 37.08                   | 2708.3             | 2689.4 | 2668.0 | -0.92                 | -0.79 | -0.63 | -15.0           | -40.7 | -42.3 | 2.32                     |                         |                            |
| 9.8       | 30.52                   | 2715.6             | 2697.0 | 2675.9 | -0.96                 | -0.73 | -0.70 | -14.9           | -41.8 | -42.6 | 1.86                     |                         |                            |
| 10.0      | 25.08                   | 2722.8             | 2703.3 | 2683.4 | -1.01                 | -0.68 | -0.79 | -14.6           | -42.8 | -42.7 | 2.26                     |                         |                            |