

# Voltage Controlled Oscillator

# MOS-1570+

## 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    |                          |                         |                            |
| 0.00      | 47.14                   | 1101.8             | 1096.1 | 1090.0 | 5.38                  | 5.14  | 4.72  | -16.8           | -17.2 | -40.7 | 2.39                     | 1                       | -78.24                     |
| 0.50      | 37.51                   | 1124.1             | 1119.7 | 1114.9 | 5.32                  | 5.07  | 4.67  | -17.6           | -16.8 | -40.2 | 1.44                     | 10                      | -105.44                    |
| 1.00      | 33.18                   | 1142.5             | 1138.4 | 1134.2 | 5.23                  | 5.02  | 4.63  | -18.0           | -16.6 | -40.1 | 1.17                     | 100                     | -126.75                    |
| 1.50      | 30.43                   | 1158.8             | 1155.0 | 1151.1 | 5.13                  | 4.94  | 4.59  | -18.6           | -16.9 | -40.2 | 1.04                     | 1000                    | -146.90                    |
| 2.00      | 28.63                   | 1173.9             | 1170.2 | 1166.5 | 5.07                  | 4.87  | 4.51  | -18.6           | -17.0 | -40.0 | 0.96                     |                         |                            |
| 2.50      | 27.60                   | 1188.1             | 1184.5 | 1181.1 | 5.00                  | 4.81  | 4.46  | -18.9           | -17.0 | -39.6 | 0.90                     |                         |                            |
| 3.00      | 26.75                   | 1201.7             | 1198.3 | 1194.9 | 4.94                  | 4.76  | 4.41  | -19.4           | -16.9 | -38.8 | 0.85                     |                         |                            |
| 3.50      | 26.15                   | 1215.0             | 1211.7 | 1208.4 | 4.86                  | 4.69  | 4.36  | -19.3           | -17.3 | -38.5 | 0.80                     |                         |                            |
| 4.00      | 25.82                   | 1228.0             | 1224.8 | 1221.6 | 4.81                  | 4.61  | 4.28  | -19.2           | -17.6 | -37.6 | 0.73                     |                         |                            |
| 4.50      | 25.83                   | 1240.9             | 1237.7 | 1234.6 | 4.77                  | 4.58  | 4.25  | -19.2           | -18.0 | -37.7 | 0.65                     |                         |                            |
| 5.00      | 25.87                   | 1253.8             | 1250.6 | 1247.6 | 4.72                  | 4.52  | 4.20  | -19.2           | -18.3 | -36.6 | 0.57                     |                         |                            |
| 5.50      | 25.83                   | 1266.6             | 1263.5 | 1260.5 | 4.66                  | 4.49  | 4.18  | -19.0           | -18.5 | -36.3 | 0.47                     |                         |                            |
| 6.00      | 25.88                   | 1279.5             | 1276.5 | 1273.5 | 4.54                  | 4.36  | 4.07  | -18.8           | -19.3 | -35.1 | 0.37                     |                         |                            |
| 6.50      | 26.24                   | 1292.4             | 1289.4 | 1286.5 | 4.44                  | 4.26  | 3.96  | -18.3           | -19.7 | -34.7 | 0.26                     |                         |                            |
| 7.00      | 26.72                   | 1305.6             | 1302.5 | 1299.6 | 4.33                  | 4.15  | 3.86  | -17.8           | -19.8 | -33.5 | 0.14                     |                         |                            |
| 7.50      | 27.24                   | 1319.0             | 1315.9 | 1312.8 | 4.24                  | 4.06  | 3.76  | -17.7           | -20.3 | -32.9 | 0.03                     |                         |                            |
| 8.00      | 27.80                   | 1332.7             | 1329.5 | 1326.4 | 4.14                  | 3.97  | 3.70  | -17.4           | -20.4 | -32.0 | 0.08                     |                         |                            |
| 8.50      | 28.64                   | 1346.8             | 1343.4 | 1340.2 | 4.05                  | 3.87  | 3.59  | -17.0           | -21.4 | -31.6 | 0.19                     |                         |                            |
| 9.00      | 29.43                   | 1361.2             | 1357.7 | 1354.5 | 3.92                  | 3.78  | 3.53  | -17.0           | -22.2 | -31.0 | 0.29                     |                         |                            |
| 9.50      | 30.19                   | 1376.0             | 1372.4 | 1369.0 | 3.76                  | 3.65  | 3.41  | -17.0           | -22.7 | -30.5 | 0.38                     |                         |                            |
| 10.00     | 31.05                   | 1391.2             | 1387.5 | 1384.0 | 3.57                  | 3.49  | 3.27  | -16.6           | -23.2 | -30.1 | 0.47                     |                         |                            |
| 10.50     | 32.38                   | 1407.0             | 1403.0 | 1399.4 | 3.44                  | 3.34  | 3.12  | -16.9           | -23.7 | -29.5 | 0.57                     |                         |                            |
| 11.00     | 33.56                   | 1423.4             | 1419.2 | 1415.4 | 3.33                  | 3.26  | 3.05  | -17.1           | -24.9 | -29.6 | 0.64                     |                         |                            |
| 11.50     | 34.41                   | 1440.4             | 1436.0 | 1432.0 | 3.21                  | 3.17  | 2.97  | -17.3           | -25.3 | -29.5 | 0.66                     |                         |                            |
| 12.00     | 35.29                   | 1457.7             | 1453.2 | 1449.1 | 3.00                  | 3.00  | 2.82  | -17.8           | -25.6 | -29.6 | 0.63                     |                         |                            |
| 12.50     | 36.27                   | 1475.5             | 1470.9 | 1466.6 | 2.81                  | 2.83  | 2.67  | -18.2           | -26.3 | -30.2 | 0.54                     |                         |                            |
| 13.00     | 36.85                   | 1493.8             | 1489.0 | 1484.6 | 2.61                  | 2.64  | 2.48  | -19.5           | -27.0 | -29.7 | 0.36                     |                         |                            |
| 13.50     | 37.30                   | 1512.3             | 1507.4 | 1503.0 | 2.47                  | 2.50  | 2.33  | -20.3           | -27.2 | -29.7 | 0.10                     |                         |                            |
| 14.00     | 37.64                   | 1531.1             | 1526.1 | 1521.7 | 2.39                  | 2.43  | 2.23  | -20.7           | -27.6 | -30.5 | 0.24                     |                         |                            |
| 14.50     | 37.49                   | 1549.9             | 1544.9 | 1540.5 | 2.24                  | 2.31  | 2.12  | -21.6           | -28.5 | -30.5 | 0.64                     |                         |                            |
| 15.00     | 36.81                   | 1587.3             | 1582.3 | 1578.0 | 2.02                  | 2.06  | 1.82  | -22.9           | -29.6 | -30.6 | 1.55                     |                         |                            |
| 16.00     | 36.03                   | 1605.7             | 1600.7 | 1596.5 | 1.86                  | 1.91  | 1.67  | -22.7           | -29.6 | -30.8 | 1.98                     |                         |                            |
| 17.00     | 34.35                   | 1641.4             | 1636.4 | 1632.3 | 1.62                  | 1.63  | 1.33  | -23.4           | -30.4 | -30.6 | 2.74                     |                         |                            |
| 17.50     | 32.92                   | 1658.5             | 1653.6 | 1649.5 | 1.49                  | 1.54  | 1.23  | -23.0           | -31.3 | -30.9 | 3.02                     |                         |                            |
| 18.50     | 30.36                   | 1690.9             | 1685.9 | 1681.9 | 1.25                  | 1.26  | 0.90  | -22.6           | -31.9 | -30.4 | 3.36                     |                         |                            |
| 19.00     | 28.84                   | 1706.2             | 1701.0 | 1697.1 | 1.20                  | 1.20  | 0.80  | -22.4           | -31.4 | -30.9 | 3.42                     |                         |                            |
| 20.00     | 25.86                   | 1734.3             | 1729.1 | 1725.1 | 1.07                  | 1.04  | 0.59  | -21.6           | -31.8 | -31.3 | 3.39                     |                         |                            |
| 20.50     | 24.48                   | 1747.3             | 1742.0 | 1738.0 | 1.01                  | 0.99  | 0.54  | -21.4           | -32.0 | -30.6 | 3.33                     |                         |                            |
| 21.50     | 21.48                   | 1771.2             | 1765.8 | 1761.5 | 0.89                  | 0.89  | 0.40  | -21.3           | -31.8 | -31.0 | 3.10                     |                         |                            |
| 22.00     | 21.48                   | 1782.0             | 1776.5 | 1772.2 | 0.80                  | 0.80  | 0.30  | -20.8           | -31.4 | -31.3 | 2.95                     |                         |                            |

