

**GSVCO1204**  
**Surface Mount**  
**Voltage Controlled Oscillator**

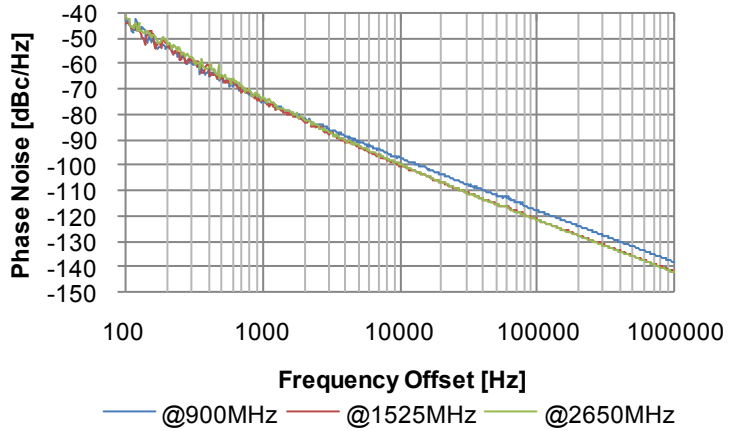
Wide band 1000 to 21 50 MHz

**Features**

- Low phase noise
- Linear tuning characteristics
- Low pushing / Low pulling
- Aqueous washable

**Applications**

- SATCOM
- Receiver
- Test Equipment
- Radar
- Point-to-Point
- Radio
- MMDS
- WiMax

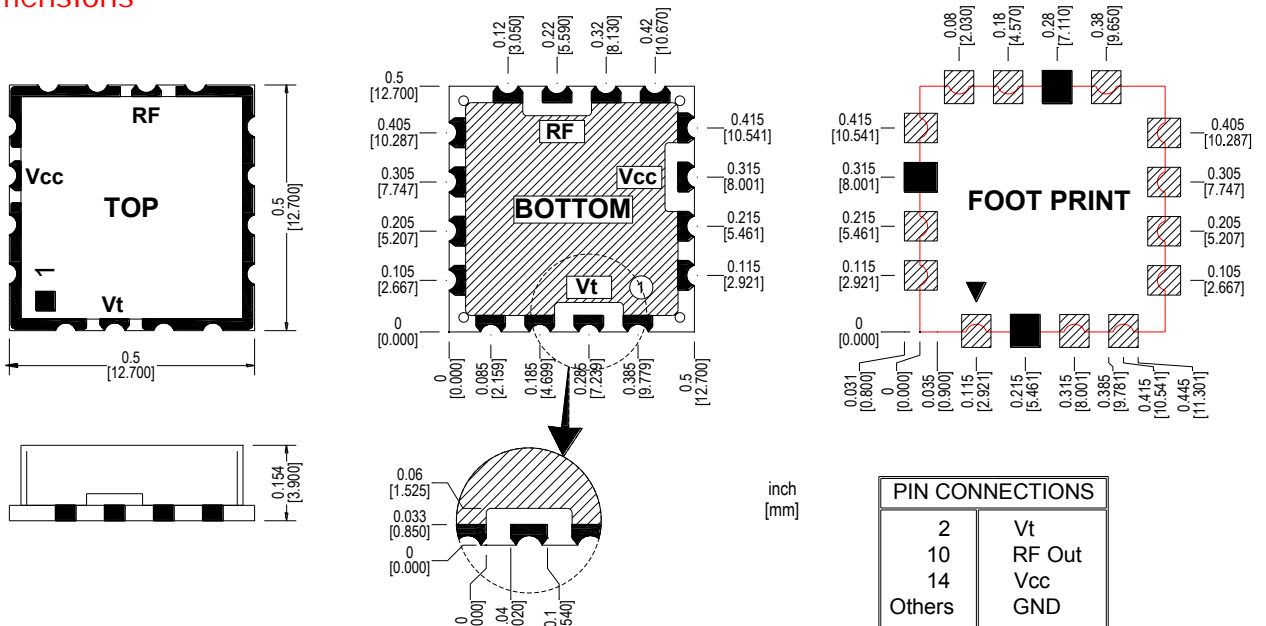


**Electrical Characteristics**



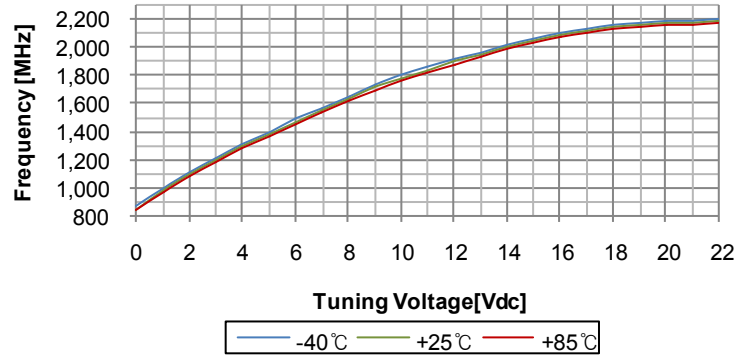
| Parameter                       | Units              | Min  | Typ      | Max   |
|---------------------------------|--------------------|------|----------|-------|
| Operating Frequency Range       | MHz                | 1000 |          | 2150  |
| Output Power                    | dBm                | +7.0 | +9.0     | +10.0 |
| Output Impedance                | $\Omega$           |      | 50       |       |
| Phase Noise                     | @10kHz offset      |      | -99      | -94   |
|                                 | @100kHz offset     |      | -119     | -114  |
| Tuning Voltage (Vt)             | Vdc                | 0    |          | 22.0  |
| Tuning Voltage Sensitivity (Kv) | MHz/V              |      | 24 - 138 |       |
| 2nd Harmonic Suppression        | dBc                |      | -21      |       |
| Power Supply (Vcc)              | Voltage            |      | 5        |       |
|                                 | Current            |      | 29       | 35    |
| Pushing Figure                  | MHz/V              |      | 2.9      |       |
| Pulling Figure                  | MHz                |      | 13       |       |
| Input Capacitance               | pF                 |      | 100      |       |
| Operating Temp. Range           | $^{\circ}\text{C}$ | -40  |          | +85   |

**Dimensions**

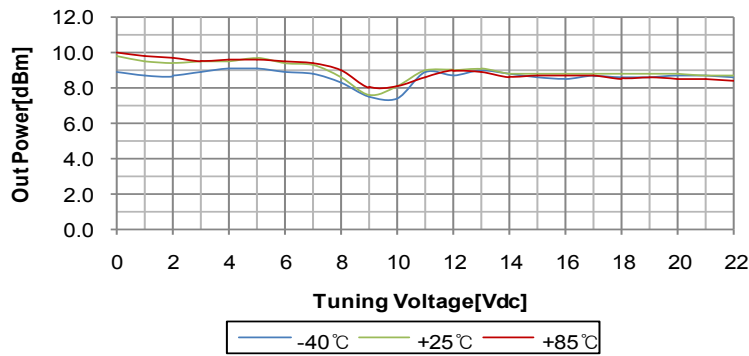


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**Surface Mount**  
**Voltage Controlled Oscillator**

**Tuning Curve**



**Output Power Curve**



**Performance Data**

| Vt [Vdc] | Frequency [MHz] |        |        | Kv [MHz/V] |       |       | Output Power [dBm] |       |       | 2nd Harmonic [dBc] |
|----------|-----------------|--------|--------|------------|-------|-------|--------------------|-------|-------|--------------------|
|          | +25°C           | +85°C  | -40°C  | +25°C      | +85°C | -40°C | +25°C              | +85°C | -40°C |                    |
| 0.0      | 845.8           | 842.9  | 866.1  | -          | -     | -     | 9.8                | 10.0  | 8.9   | -22.1              |
| 1.0      | 984.6           | 973.1  | 1002.8 | 138.8      | 130.1 | 136.6 | 9.6                | 9.8   | 8.7   | -25.2              |
| 2.0      | 1098.0          | 1084.7 | 1114.4 | 113.5      | 111.6 | 111.7 | 9.4                | 9.7   | 8.7   | -44.4              |
| 3.0      | 1197.5          | 1183.7 | 1213.6 | 99.5       | 99.1  | 99.2  | 9.5                | 9.5   | 8.9   | -30.9              |
| 4.0      | 1293.0          | 1276.7 | 1309.0 | 95.5       | 92.9  | 95.4  | 9.6                | 9.6   | 9.1   | -23.3              |
| 5.0      | 1382.3          | 1367.5 | 1398.9 | 89.3       | 90.8  | 89.9  | 9.7                | 9.7   | 9.1   | -22.8              |
| 6.0      | 1470.4          | 1453.9 | 1488.0 | 88.1       | 86.4  | 89.1  | 9.4                | 9.5   | 8.9   | -21.8              |
| 7.0      | 1554.2          | 1538.0 | 1571.2 | 83.8       | 84.1  | 83.2  | 9.3                | 9.4   | 8.8   | -23.4              |
| 8.0      | 1633.7          | 1616.9 | 1650.9 | 79.5       | 78.9  | 79.7  | 8.7                | 9.0   | 8.3   | -21.3              |
| 9.0      | 1716.0          | 1695.8 | 1733.9 | 82.3       | 78.9  | 82.9  | 7.6                | 8.0   | 7.5   | -18.7              |
| 10.0     | 1784.0          | 1765.7 | 1803.5 | 68.0       | 69.9  | 69.6  | 8.1                | 8.1   | 7.4   | -16.3              |
| 11.0     | 1840.4          | 1825.2 | 1860.0 | 56.4       | 59.5  | 56.5  | 9.0                | 8.6   | 8.9   | -20.8              |
| 12.0     | 1900.7          | 1884.7 | 1920.4 | 60.2       | 59.5  | 60.4  | 9.0                | 9.0   | 8.7   | -30.9              |
| 13.0     | 1955.8          | 1940.4 | 1971.6 | 55.1       | 55.7  | 51.3  | 9.1                | 8.9   | 9.0   | -30.1              |
| 14.0     | 2008.6          | 1991.4 | 2023.5 | 52.9       | 50.9  | 51.8  | 8.8                | 8.7   | 8.8   | -32.8              |
| 15.0     | 2051.3          | 2035.9 | 2069.1 | 42.7       | 44.5  | 45.6  | 8.8                | 8.7   | 8.6   | -32.5              |
| 16.0     | 2090.6          | 2075.0 | 2106.4 | 39.3       | 39.1  | 37.4  | 8.8                | 8.7   | 8.5   | -33.0              |
| 17.0     | 2118.5          | 2104.8 | 2134.7 | 27.8       | 29.8  | 28.2  | 8.8                | 8.7   | 8.7   | -43.5              |
| 18.0     | 2143.0          | 2128.6 | 2158.1 | 24.6       | 23.8  | 23.5  | 8.8                | 8.6   | 8.6   | -37.8              |
| 19.0     | 2160.5          | 2146.6 | 2174.5 | 17.5       | 18.0  | 16.4  | 8.8                | 8.6   | 8.7   | -43.2              |
| 20.0     | 2173.8          | 2159.9 | 2188.1 | 13.2       | 13.2  | 13.6  | 8.8                | 8.6   | 8.7   | -47.8              |
| 21.0     | 2184.6          | 2170.8 | 2199.2 | 10.9       | 10.9  | 11.1  | 8.8                | 8.5   | 8.7   | -38.3              |
| 22.0     | 2193.7          | 2179.8 | 2208.5 | 9.0        | 9.1   | 9.3   | 8.8                | 8.4   | 8.7   | -34.1              |