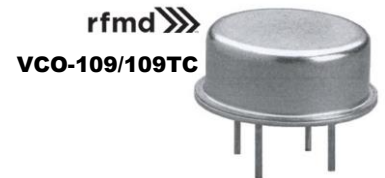


# VCO-109/109TC

## Nominal Operating Parameters



| Parameter                            | Specification |       |       | Unit    | Condition              |
|--------------------------------------|---------------|-------|-------|---------|------------------------|
|                                      | Min           | Typ   | Max   |         |                        |
| <b>General Performance</b>           |               |       |       |         |                        |
| Frequency Range                      | 900           |       | 1800  | MHz     | 100% Production Tested |
| Tuning Voltage :                     |               |       |       |         |                        |
| 900MHz                               | 0             | 1.2   |       | Vdc     | 100% Production Tested |
| 1800MHz                              |               | 18.5  | 20    | Vdc     | 100% Production Tested |
| Tuning Sensitivity:                  |               |       |       |         |                        |
| 900MHz                               | 61.2          | 81.6  | 102   | MHz/V   | 100% Production Tested |
| 1125MHz                              | 44.3          | 59.1  | 73.9  | MHz/V   | 100% Production Tested |
| 1350MHz                              | 49.1          | 65.5  | 81.9  | MHz/V   | 100% Production Tested |
| 1575MHz                              | 41.8          | 55.6  | 69.6  | MHz/V   | 100% Production Tested |
| 1800MHz                              | 17.6          | 23.5  | 29.4  | MHz/V   | 100% Production Tested |
| Output Power                         | 10            | 12.5  | 16    | dBm     | 100% Production Tested |
| Output Phase Noise:                  |               |       |       |         |                        |
| 10kHz                                |               | -90   | -84   | dBc/Hz  | 100% Production Tested |
| 100kHz                               |               | -112  | -106  | dBc/Hz  | 100% Production Tested |
| 1000kHz                              |               | -135  | -129  | dBc/Hz  | 100% Production Tested |
| Power Supply                         | 14.75         | 15    | 15.25 | V       | 100% Production Tested |
| Supply Current                       |               | 15    | 18    | mA      | 100% Production Tested |
| Harmonic Suppression:                |               |       |       |         |                        |
| 2nd Harmonic                         |               | -15   | -10   | dBc     | 100% Production Tested |
| 3rd Harmonic                         |               | -15   | -10   | dBc     | 100% Production Tested |
| Spurious (Non-Harmonic)              |               |       | -80   | dBc     |                        |
| Frequency Pushing – 14.75V to 15.25V |               | 4     | 6     | MHz p-p |                        |
| Frequency Pulling – 20 dBRL          |               | 20    | 25    | MHz p-p |                        |
| Output Impedance                     |               | 50    |       | Ω       |                        |
| Modulation:                          |               |       |       |         |                        |
| Bandwidth                            | 15000         | 20000 |       | kHz     |                        |
| Input Impedance                      |               | 0.05  |       | kΩ      |                        |

**Package:** TO-8 (Cir), 0.504 x 0.504 x 0.27 inches

**VCO-109 Temperature Range:** 0°C to 70°C

**VCO-109TC Temperature Range:** -55°C to 100°C

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