

**2200 – 2500MHz VCO**

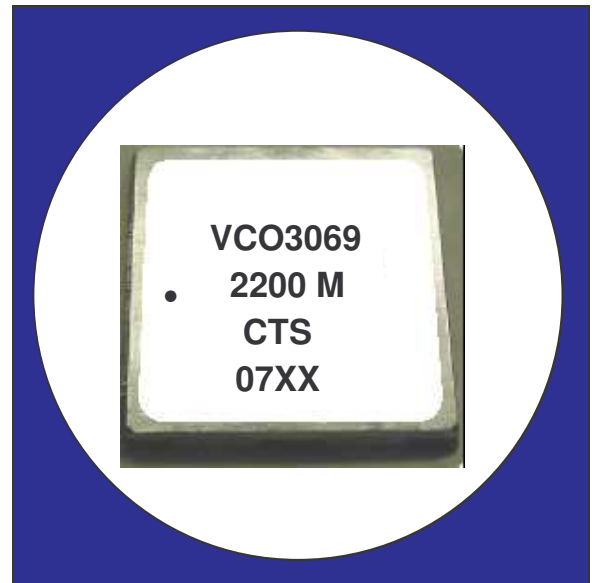
**FEATURES**

- Industry Standard 12.7x12.7mm SMT Footprint
- +5Vdc Supply Voltage
- -40°C to +85°C Temp. Range
- Low Phase Noise
- Tape & Reel Packaging
- Fully compliant to RoHS Directive 2002/95/EC

**DESCRIPTION**

The CTS VCO3069 is a high performance SMT VCO. Its low phase noise makes it the ideal choice for any wireless telecommunications system.

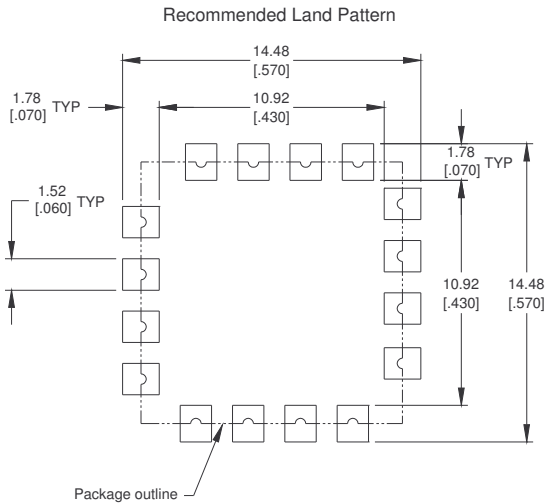
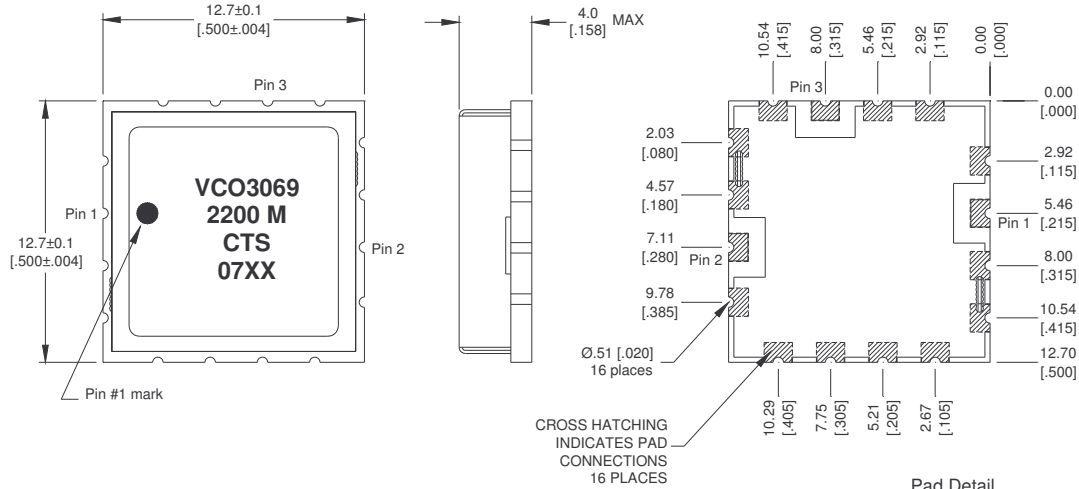
- See [WWW.CTSCORP.COM](http://WWW.CTSCORP.COM) for product patent status.



**ELECTRICAL SPECIFICATIONS**

| Parameter                   | Conditions & Remarks    | Min  | Typical | Max  | Unit   |
|-----------------------------|-------------------------|------|---------|------|--------|
| Operating Frequency         | F <sub>OUT</sub>        | 2200 | -       | 2500 | MHz    |
| Supply Voltage              | V <sub>CC</sub>         | 4.75 | 5       | 5.25 | Vdc    |
| Supply Current              | I <sub>CC</sub>         | -    | 12      | 18   | mA     |
| Operating Temperature Range | T <sub>OP</sub>         | -40  | -       | +85  | °C     |
| Storage Temperature Range   | T <sub>STG</sub>        | -40  | -       | +125 | °C     |
| Tuning Voltage Range        | V <sub>T</sub>          | 1    | -       | 10   | Vdc    |
| Tuning Sensitivity          | @ V <sub>t</sub> = 5.5V | -    | 50      | -    | MHz/V  |
| Power Output                | 50 Ohms                 | 0    | 3       | 6    | dBm    |
| Pushing                     | (5.0V +/- .25V)         | -3   | -       | 3    | MHz/V  |
| Pulling                     | (12db return loss)      | -3   | -       | 3    | MHz    |
| Harmonics                   |                         | -    | -       | -15  | dBc    |
| Spurious response           |                         | -    | -       | -75  | dBc    |
| Output Impedance            |                         | -    | 50      | -    | Ohms   |
| Phase Noise                 | 1kHz                    | -    | -74     | -70  | dBc/Hz |
|                             | 10kHz                   | -    | -95     | -92  | dBc/Hz |
|                             | 100KHz                  | -    | -116    | -112 | dBc/Hz |
|                             | 1MHz                    | -    | -134    | -132 | dBc/Hz |

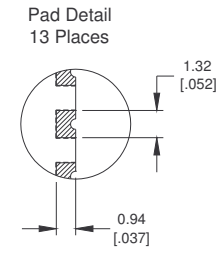
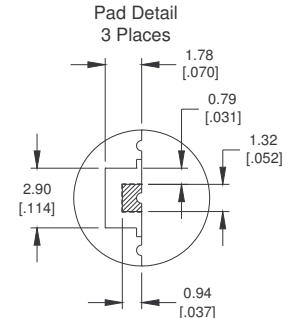
**MECHANICAL SPECIFICATIONS:**



Function table

| Pin  | Function  |
|------|-----------|
| 1    | Vt        |
| 2    | RF Output |
| 3    | Vcc       |
| 4-16 | GND       |

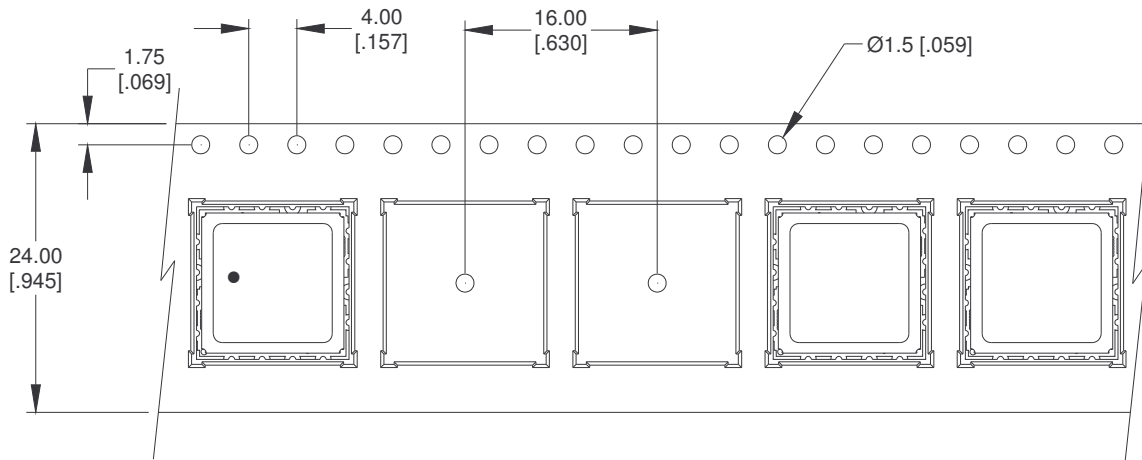
Note: The Lid/Sheild is grounded.



All dimensions are in MM [Inches].  
All dimensions are nominal unless otherwise specified.  
Lead Termination Finish: Gold Flash, <10 micro inch, over Ni plated Cu.

**Tape & Reel Information:**

Tape width 24 mm, pitch 16 mm, as per EIA 481-2, 1000 units max per 330 mm reel.



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All dimensions are Nominal

**STANDARD ENVIRONMENTAL LIMITS:**

This product is capable of operating within the following environmental conditions:

**Operating Temperature:** -40 to +85 °C.

**Storage Temperature:** -40 to +125°C.

**Humidity:** 85% Relative humidity max @ 50°C.

**Solder Reflow Conditions:** Device is capable of withstanding reflow of 260 degrees C for 10 seconds maximum.

**Atmospheric Pressure:** 730 to 780 mm Hg.

**Moisture Sensitivity:** MSL 1

**RoHS:** This device is fully compliant to RoHS Directive 2002/95/EC