



### Features and Benefits

- 10MHz--52MHz Frequency range
- 1.8V,2.5V,2.8V,3.0V and 3.3V Supply voltage
- Clipped Sinewave Output waveform
- ±0.5ppm Stability Vs -40C ---+85C
- 2.0x1.6mm Size
- 16.369,19.2,26,38.4MHz standard frequency

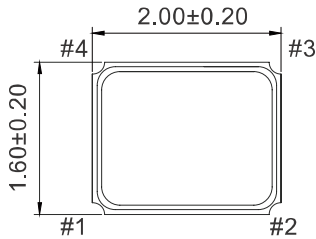
### Typical Applications

- GPS
- WiMAX, WLAN
- Mobile Phone
- IoT, Wearable Electronics

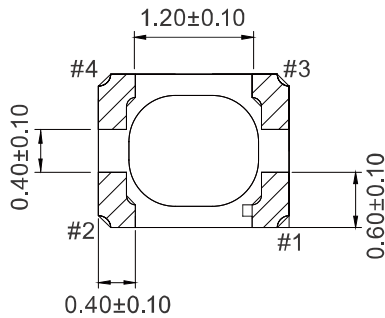
### Mechanical Drawing & Pin Connections

Drawing No: MD1) 00% -'

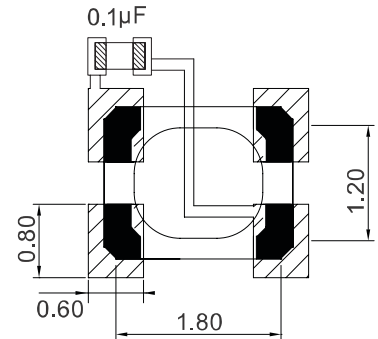
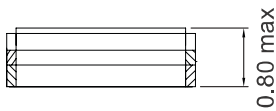
[ TOP VIEW ]



[ BOTTOM VIEW ]



[ SIDE VIEW ]



Recommended soldering pattern.

| Pin# | Function                       |
|------|--------------------------------|
| 1    | VCON:VC-TCXO<br>GND / NC: TCXO |
| 2    | GND                            |
| 3    | Output                         |
| 4    | VDD                            |

Unit in mm  
1mm = 0.0394 inches



### Specifications

| Specification                  | Conditon                   | 3.3V/3.0V/2.8V         |       | 2.5V         |       | 1.8V         |      | Unit       |
|--------------------------------|----------------------------|------------------------|-------|--------------|-------|--------------|------|------------|
|                                |                            | Min.                   | Max.  | Min.         | Max.  | Min.         | Max. |            |
| Supply Voltage Variation(VDD)  |                            | 2.66                   | 3.465 | 2.375        | 2.625 | 1.71         | 1.89 | V          |
| Frequency Range                |                            | 10                     | 52    | 10           | 52    | 10           | 52   | MHz        |
| Frequency Tolerance            | @25°C, 1 hour after reflow |                        | ±2.0  |              | ±2.0  |              | ±2.0 | ppm        |
| Standard Frequency             |                            | 16.369, 19.2, 26, 38.4 |       |              |       |              |      | MHz        |
| Frequency Stability            |                            |                        |       |              |       |              |      |            |
| Vs Supply Voltage Change       | ±5%                        |                        | ±0.2  |              | ±0.2  |              | ±0.2 | ppm        |
| Vs Load Change                 | ±10%                       |                        | ±0.2  |              | ±0.2  |              | ±0.2 | ppm        |
| Vs Aging(first year)           |                            |                        | ±1.0  |              | ±1.0  |              | ±1.0 | ppm        |
| Supply Current                 | 10MHz ≤ Fo ≤ 26MHz         | -                      | 1.5   | -            | 1.5   | -            | 1.5  | mA         |
|                                | 26MHz < Fo ≤ 52MHz         | -                      | 2.0   | -            | 2.0   | -            | 2.0  |            |
| Output Level(Clipped Sinewave) |                            | 0.8                    | -     | 0.8          | -     | 0.8          | -    | Vp-p       |
| Load                           |                            | 10kohm//10pf           |       | 10kohm//10pf |       | 10kohm//10pf |      |            |
| Control Voltage Range          | VCTCXO                     | 0.5                    | 2.5   | 0.4          | 2.4   | 0.3          | 1.5  | V          |
| Pulling Range                  | VCTCXO                     | ±5.0                   |       | ±5.0         |       | ±5.0         |      | ppm        |
| Vc Input Impedance             | VCTCXO                     | 500                    |       | 500          |       | 500          |      | kohm       |
| Phase Noise@19.2MHz            |                            |                        |       |              |       |              |      |            |
| 100Hz                          |                            | -115                   |       | -115         |       | -115         |      | dBc/H<br>z |
| 1KHz                           |                            | -135                   |       | -135         |       | -135         |      |            |
| 10KHz                          |                            | -148                   |       | -148         |       | -148         |      |            |
| Start Time                     |                            | -                      | 2     | -            | 2     | -            | 2    | mSec       |
| Storage Temp. Range            |                            | -55°C to +125°C        |       |              |       |              |      | °C         |

### Frequency Stability vs. Temperature

|                | ±0.5PPM   | ±1.0PPM   | ±1.5PPM   | ±2.0PPM   | ±2.5PPM   |
|----------------|-----------|-----------|-----------|-----------|-----------|
| -20°C to +70°C | Available | Available | Available | Available | Available |
| -30°C to +85°C | Available | Available | Available | Available | Available |
| -40°C to +85°C | Available | Available | Available | Available | Available |

Note: not all combination of options are available. Other specifications may be available upon request.