



### Features and Benefits

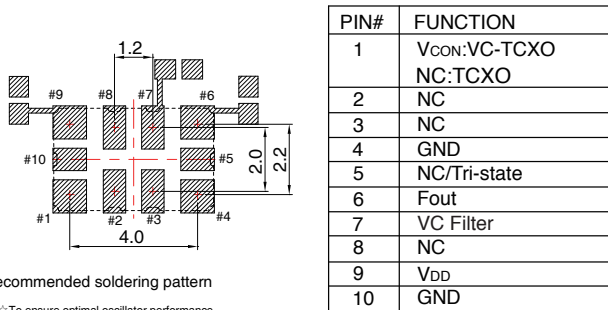
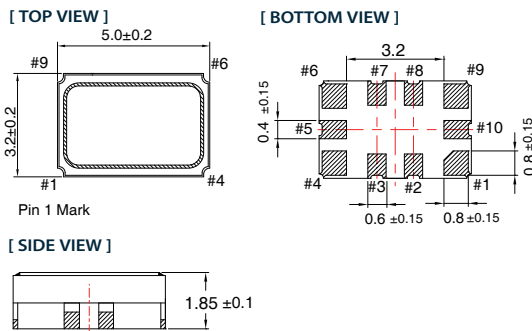
- Typical 5.0 x 3.2 x 1.85 mm ceramic SMD package
- High Stability for Stratum III
- High Precision for  $\pm 0.1 \text{ ppm} @ -40^\circ\text{C} \sim +85^\circ\text{C}$ ,  
 $\pm 0.2 \text{ ppm} @ -40^\circ\text{C} \sim +105^\circ\text{C}$
- Frequency support from 10MHz to 52MHz
- Wide temperature range
- Tri-state Enable/Disable function
- Pb-free/RoHS compliant

### Typical Applications

- Time Synchronization- Microwave Communication
- Test & Measurement
- Telecom Systems
- Satellite Comination

### Mechanical Drawing & Pin Connections

Drawing No: MD190037-1



Recommended soldering pattern

☆To ensure optimal oscillator performance, place a by-pass capacitor of 0.1 $\mu$ F as close to the part as possible between V<sub>DD</sub> and GND pads.

PIN#	FUNCTION
1	V <sub>CON</sub> :VC-TCXO NC:TCXO
2	NC
3	NC
4	GND
5	NC/Tri-state
6	Fout
7	VC Filter
8	NC
9	V <sub>DD</sub>
10	GND

Unit in mm  
 1mm = 0.0394 inches



**Specifications**

Specification	Conditon	3.3V		2.5V		Unit
		Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)	V <sub>DD</sub> ±5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range		10	52	10	52	MHz
Frequency Tolerance	@25°C		±1.0		±1.0	ppm
<b>Frequency Stability</b>						
Vs Supply Voltage	±5% Change		±0.1		±0.1	ppm
Vs Load	±10% Change		±0.05		±0.05	ppm
Vs Aging	1 <sup>st</sup> year		±1.0		±1.0	ppm
Transition Time (10% ~ 90%)(CMOS)	Rise Time	-	6.5	-	6.5	nSec
	Fall Time	-	6.5	-	6.5	
Supply Current(CMOS)	10MHz>=Fo>=38MHz	-	6.5	-	6.5	mA
	38MHz>Fo>=52MHz	-	7.5	-	7.5	
Output Level(CMOS)	Output High	90%V <sub>DD</sub>	-	90%V <sub>DD</sub>	-	V
	Output Low	-	10%V <sub>DD</sub>	-	10%V <sub>DD</sub>	
	Duty Cycle	45	55	45	55	%
Load(CMOS)		15		15		pF
Supply Current(Clipped sine wave)	10MHz>=Fo>=38MHz	-	4.5	-	4.5	mA
	38MHz>Fo>=52MHz	-	5.0	-	5.0	
Load(Clipped Sinewave)		10kohm//10pf		10kohm//10pf		
Output Level(Clipped sine wave)		0.8	-	0.8	-	V <sub>p-p</sub>
Control Voltage Range (VCTCXO)		0.5	2.5	0.5	2.5	V
Pulling Range(VCTCXO)		±5	-	±5	-	ppm
Vc Input Impedance(VCTCXO)		100	-	100	-	kohm
Phase Noise @20MHz, VDD=3.3V	100Hz	-122		-122		dBc/Hz
	1KHz	-142		-142		
	10KHz	-154		-154		
	100KHz	-157		-157		
	1MHz	-159		-159		
Startup Time		-	5	-	5	mSec
Tri-State	Enable	80% VDD	-	80% VDD	-	
	Disable	-	20%VDD	-	20%VDD	



### Ordering Information

TCXO5302BM	-	xx MHz	-	01	02	03	04	
Group				Code				

For example, TCXO5302BM-10MHz-2221 denotes the OCXO has the following specifications:

Temperature Range            -20°C to +70°C  
Stability Over Temperature   ±0.1ppm

Supply Voltage                3.3V  
Output                         CMOS  
Frequency                     10MHz

01	Temperature Range
Code	Specification
1	-10°C..+60°C
2	-20°C..+70°C
3	-40°C..+85°C
4	-40°C..+95°C
5	-40°C..+105°C

02	Stability Over Temperature
Code	Specification
1	±0.05ppm
2	±0.1ppm
3	±0.2ppm
4	±0.28ppm
5	±0.5ppm

03	Supply voltage
Code	Specification
1	+2.5V
2	+3.3V

04	Output
Code	Specification
1	CMOS
2	Clipped Sine wave

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

### Frequency Stability vs. Temperature

	±0.05PPM	±0.1PPM	±0.2PPM	±0.28PPM	±0.5PPM	±2.0PPM
-10°C to +60°C	Available	Available	Available	Available	Available	Available
-20°C to +70°C	Available	Available	Available	Available	Available	Available
-40°C to +85°C	Conditional	Available	Available	Available	Available	Available
-40°C to +95°C	Conditional	Conditional	Available	Available	Available	Available
-40°C to +105°C	Not Available	Conditional	Available	Available	Available	Available

Available for standard frequencies.

For more information, please contact our sales.