



### Features and Benefits

Frequency range: 10-50MHz  
Supply voltage: 3.3V or 5.0V  
Steady current: 12-30mA Max  
Output waveform: Sinewave  
Frequency stability vs. operating temperature: 0.5ppm  
Aging: 1.0ppm per year  
Phase noise@100KHz: -145dBc/Hz  
Operating temperature: -40°C to +85°C  
Size: 12.7x12.7x5.1mm

### Typical Applications

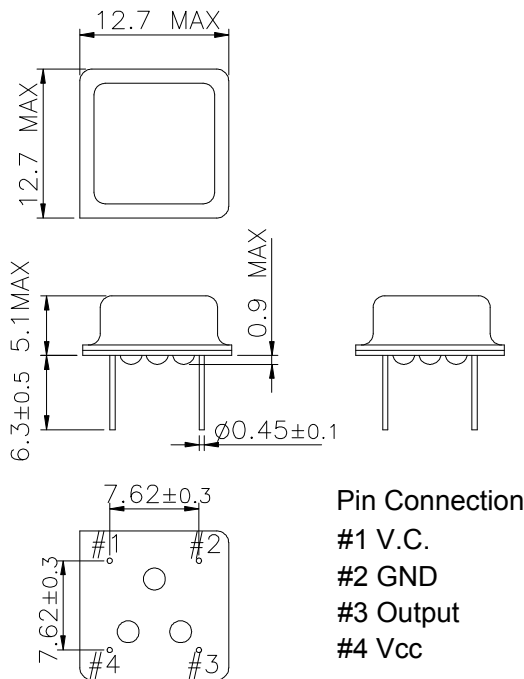
UHF Synthesizers  
SATCOM System  
Portable Microwave Applications

### Description

TCXO1212BE\_Sine offers wide temperature operation with outstanding frequency stability and low phase noise performance.

### Mechanical Drawing & Pin Connections

Drawing No: A8 & \$\$\$) %%



Pin Connection  
 #1 V.C.  
 #2 GND  
 #3 Output  
 #4 Vcc

Unit in mm  
 1mm = 0.0394 inches



**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F <sub>nom</sub>		10		50	MHz	
<b>RF Output</b>							
Signal Waveform			Sinewave				
Level		V <sub>cc</sub> =5V		10		dBm	
		V <sub>cc</sub> =3.3V		0		dBm	
Load				50		ohm	
<b>Power Supply</b>							
Supply Voltage	V <sub>cc</sub>	±5%		5.0		V	
		±5%		3.3			
		at +25°C to Δf/f=1e-8		120		sec	
Input Current		10MHz			12	mA	
		50MHz			30	mA	
<b>Frequency Adjustment Range</b>							
Frequency Adjustment			±3ppm min by internal trimmer			ppm	
Output Pulling Range			±5.0ppm or ±10ppm min				
ΔF/ΔV			ΔF/ΔV >±20ppm is available, please contact us				
Control Voltage Range			1.65V ± 1.5V ( V <sub>cc</sub> : 3.3V ), 2.5V ± 2.0V ( V <sub>cc</sub> : 5.0V )				
<b>Frequency Stability</b>							
Versus Operating Temperature Range			±0.5		±5.0	ppm	See ordering information
Versus supply voltage		±5% change	±0.1		±0.2	ppm	
Versus Load		±10% change, 15pF load			±0.2	ppm	
Aging 1 <sup>st</sup> Year					±1.0	ppm	
SSB Phase noise (20MHz)		10Hz		-80		dBc/Hz	
		100Hz		-120		dBc/Hz	
		1kHz		-135		dBc/Hz	
		10kHz		-140		dBc/Hz	
		100kHz		-145		dBc/Hz	
<b>Environmental, Mechanical Conditions</b>							
Operating temperature range	See ordering information						
Storage temperature range	-55°C to +125°C						
Shock	MIL-STD-883C, Method 2002, Condition B						
Solderability	MIL-STD-883C, Method 2003						
Seal integrity	MIL-STD-883C, Method 1014, Condition C & A2						
Vibration	MIL-STD-883C, Method 2007, Condition A						
Marking	MIL-STD-202F, Method 215						



### Ordering Information

TCXO1212BE_Sine	-	10MHz	-	x	x	x	x
Group				01	02	03	04

For example, TCXO1212BE\_Sine-10MHz-1-1-2-2 denotes the TCXO has the following specifications:

Temperature Range: 0°C to +50°C  
 Stability Over Temperature: ±0.5ppm  
 Supply Voltage: 5V  
 Pulling Range: ±10.0ppm min  
 Frequency: 10MHz

01	Temperature Range
Code	Specification
1	0°C to +50°C
2	-10°C to +60°C
3	-20°C to +70°C
4	-30°C to +75°C
5	-40°C to +80°C
6	-40°C to +85°C

02	Stability
Code	Spec
1	±0.5ppm
2	±1.0ppm
3	±1.5ppm
4	±2.0ppm
5	±2.5ppm
6	±3.0ppm
7	±3.5ppm
8	±5.0ppm

03	Supply Voltage
Code	Specification
1	3.3V
2	5V

04	Pulling Range
Code	Specification
1	±5.0ppm min
2	±10.0ppm min