



### Features and Benefits

- Frequency range: 32MHz
- Supply voltage: 3.3V
- Steady current: 4mA
- Output waveform: CMOS
- Frequency stability vs. operating temperature:0.5ppm
- Aging: 1ppm per year
- Phase noise@100KHz: -155dBc/Hz
- Operating temperature: -20°C to +70°C
- Size: 5x3.2x1.7mm

### Typical Applications

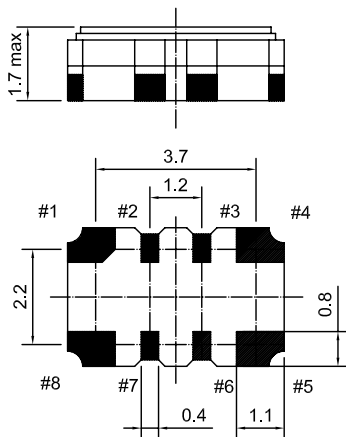
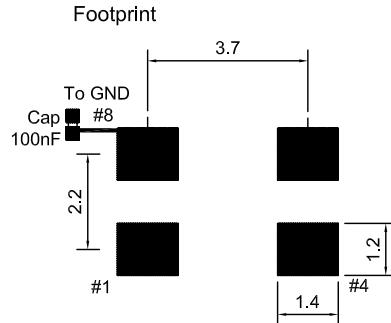
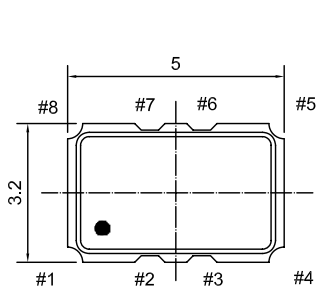
- UHF Synthesizers
- SATCOM System
- Portable Microwave Applications

### Description

TCXO5300BT-32MHz-A offers wide temperature operation from -20°C to +70°C with outstanding frequency stability and low phase noise performance.

### Mechanical Drawing & Pin Connections

Drawing No: MD150017-9



#### Pin Function

#1	N.C. or GND
#2	N.C.
#3	N.C.
#4	GND
#5	Output
#6	N.C.
#7	N.C.
#8	Vcc

Unit : mm  
1mm = 0.039 inches



**Specifications**

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F <sub>nom</sub>			32		MHz	
Output			CMOS				
Output Level			V <sub>OH</sub> ≥ 0.9 x V <sub>cc</sub> V <sub>OL</sub> ≤ 0.1 x V <sub>cc</sub>				
Output load					15	pF	
<b>Power Supply</b>							
Voltage	V <sub>cc</sub>	±5%		3.3		V	
Current Consumption					4	mA	
<b>Frequency Stability</b>							
Versus temperature		ref to +25°C	-0.5		+0.5	ppm	
Tolerance at 25°C			0		+1.0	ppm	
Versus ±5% change in supply voltage		Ref to frequency at nominal supply	-0.1		+0.1	ppm	
Versus ±5% change in load		Ref to frequency at nominal load	-0.1		+0.1	ppm	
First Year Aging		@+25°C	-1.0		+1.0	ppm	
G-sensitivity		per axis			1.5	ppb/g	
Phase noise		10Hz		-90		dBc/Hz	
		100 Hz		-116			
		1000 Hz		-140			
		10 KHz		-150			
		100 KHz		-155			
<b>Environmental Conditions</b>							
Operating temperature range	-20°C to +70°C						
Storage temperature range	-55°C to +105°C						
Reflow Profiles as per IPC/JEDEC J-STD-020C	260 °C maximum during 10 sec. Max						
Moisture sensitivity	Level 1(unlimited)						

**Environmental Conditions**

Test	IEC 60068 Part...	IEC 60679-1 Clause	MIL-STD-202G Method	MIL-STD-810F Method	MIL-PRF-55310D Clause	Test conditions (IEC)
Sealing tests (if applicable)	2-17	5.6.2	112E		3.6.1.2	Gross leak: Test Qc Fine leak: Test Qk
Solderability	2-20	5.6.3	208H		3.6.52	Test Ta method 1
Resistance to soldering heat	2-58		210F		3.6.48	Test Td <sub>1</sub> method 2 Test Td <sub>2</sub> method 2
Shock	2-27	5.6.8	213B	516.4	3.6.40	Test Ea, 3 x per axis 100 g 6 ms half-sine pulse
Vibration sinusoidal	2-6	5.6.7.1	201A 204D	516.4-4	3.6.38.1 3.6.38.2	Test Fc, 30 min per axis, 1 oct / min 10 Hz – 55 Hz 0, 75 mm; 55 Hz – 2 kHz, 10g
Vibration random	2-64	5.6.7.3	214A	514.5	3.6.38.3 3.6.38.4	Test Fdb
Endurance tests			108A			
- Aging		5.7.1			4.8.35	30 days @ +85°C, 1000 h, 2000 h, 8000 h @ +85°C
- Extended aging		5.7.2				