Dynamic Engineers Inc.
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TCXO5300BM-16.384MHz-A-V
High Precision 16.384MHz TCXO_Temperature Compensated Crystal Oscillator

Features and Benefits

Frequency range: 16.384MHz
Supply voltage: 3.3V
Steady current: 4mA Max
Output waveform: Clipped Sinewave
Frequency stability vs. operating temperature: ±0.5PPM
Operating temperature: -40°C to +85°C
Size: 5.0x3.2x1.85mm
Package type: SMD

Typical Applications

Stratum 3
Femtocell
Base Stations

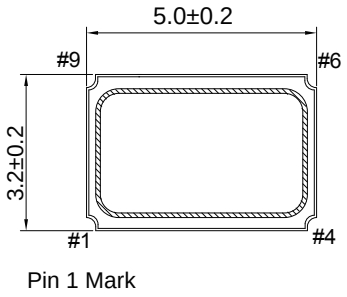
Description

TCXO5300BM-16.384MHz-A-V is the high precision TCXO. The frequency stability can be less than ±0.5PPM. It can be widely used in the portable communication device.

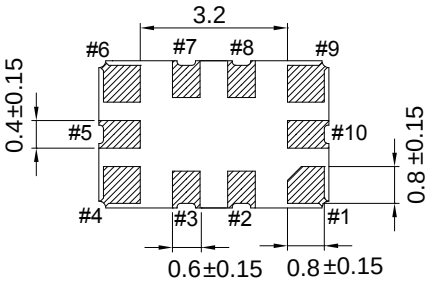
Mechanical Drawing & Pin Connections

Drawing No: MD220030-1

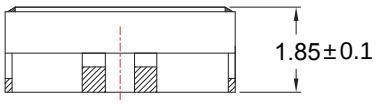
Top View



Bottom View

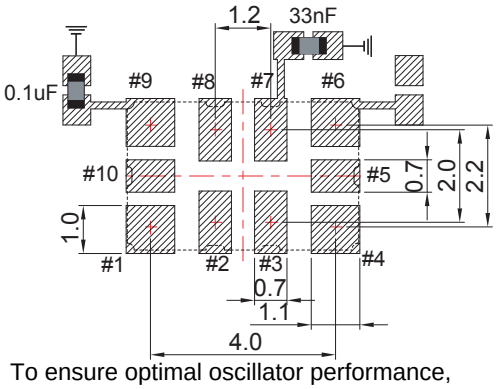


Side View



PIN#	FUNCTION
1	GND/NC
2	NC
3	NC
4	GND
5	Tri-state
6	Fout
7	VC Filter
8	NC
9	Vcc
10	GND

Recommended Soldering Pattern



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1uF as close to the part as possible between Vcc and GND PAD

Unit in mm
1mm = 0.0394 inches

Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f_0			16.384		MHz	
RF Output							
Output Waveform		DC Coupled clipped sine wave	Clipped sinewave				
Output Level			0.8			Vp-p	
Output Load			10Kohm//10pF				
Power Supply							
Voltage	V_{cc}		2.97	3.3	3.63	V	
Current		At maximum supply voltage			4	mA	
OE (Tri-State)		Output enable	0.8Vcc			V	High: Enable frequency output
		Output disable and High-Impedance			0.2Vcc	V	Low: Disable frequency output
Startup Time					10	mSec	
Frequency Stability							
Vs. Temperature		Ref to 25°C			±0.5	ppm	
Vs. Supply Voltage		±5%, @25°C			±0.2	ppm	
Aging		1st year, @25°C			±1	ppm	
Tolerance		@25°C, before reflow			±0.5	ppm	
Environmental Conditions							
Operating temperature range	-40°C to +85°C						
Storage temperature range	-40°C to +85°C						
Thermal Shock	MIL-STD-883H,1010.8 Condition B. -55°C, 125°C; soak time is 10 mins, with total 200 cycles						
Damp Heat	JESD22-A101. 85°C /85% RH for 500 hrs						
Low Temp Storage	IEC 60068-2-1. -55°C for 500 hrs						
Drop Test	IEC 60068-2-32. 70, 80, 100cm, each height for 3 times on hardboard						
Mechanical Shock	MIL-STD-883H,2002.5 Condition B. 1500g, half-sine, 0.5ms, each axis for 3 times.						
Vibration Test	MIL-STD-883H,2007.3 Condition A. 10~2000Hz, 1.52mm, 20g, each axis for 4 hrs						