T5300TMP-16.32MHz-A-V
CMOS ; 3.3V supply ; VCTCXO

Features and Benefits

16.32 MHz
Temp. stability less than +/- 0.5 ppm
-40C to +85C operation
+3.3V supply ; Voltage-controlled

Typical Applications

Beidou Navigation Reference Oscillator
SATCOM SYSTEMS (ON THE MOVE ; MOBILE)
Mobile Radio

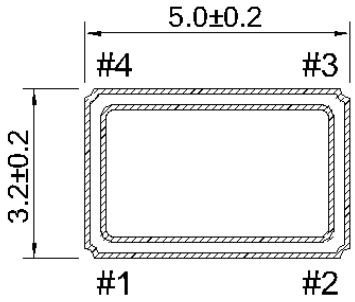
Description

The T5300TMP TCXO design technology offers a new generation IC compensation with better phase noise and lower ultimate stability over operating temperature.

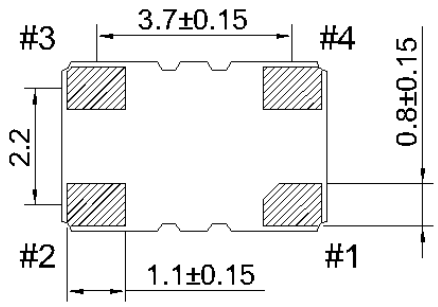
Mechanical Drawing & Pin Connections

Drawing No: MD140051-1

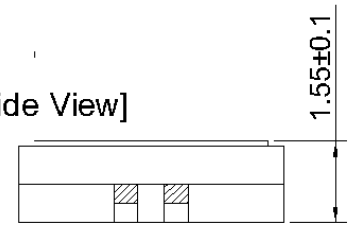
[Top View]



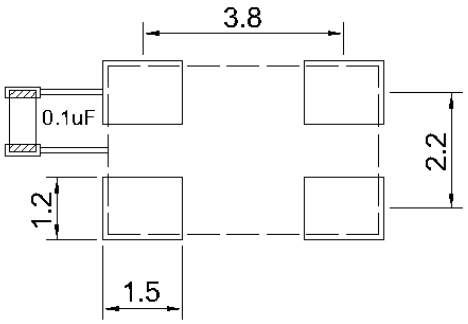
[Bottom View]



[Side View]



Recommended soldering pattern



Pin	Function
#1	Control Voltage
#2	GND
#3	Output
#4	Supply Voltage

Unit : mm

Specification

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		F_{nom}			16.320		MHz	
CMOS	High Level			2.97			V	
	Low LEvel					0.33	V	
	Output Load		Operating range			15	pF	
	Start Time					2.0	ms	Milli-seconds
	Rise and fall time		CMOS logic output at 10% to 90%			8.0	ns	
	Duty cycle		Measured at 50% VDD trigger level	45	50	55	%	
Power Supply								
Supply voltage				3.135	3.30	3.465	V	
Supply current			At maximum supply voltage			6.0	mA	
Frequency Control* (Electronic + Mechanical)								
Control voltage range				0.5	1.5	2.5	V	
Pulling range			Referenced to Vcon at 1.5V	+/-5.0			ppm	
Vcon input impedange			Measured between Vcon and GND pin	100			kOhm	
Linearity						10.0	%	
Frequency Stability								
Nominal frequency tolerance			Frequency at 25℃, 1 hour after 2 times reflow	-2		+2	ppm	
Frequency stability vs. temperature			Referenced to the frequency at 25℃	-0.5		+0.5	ppm	
Temperature range			The operating temperature range over which the frequency stability is measured	-40		+85	℃	
Frequency stability vs.supply voltage			supply voltage varied +/-5% at 25℃	-0.3		+0.3	ppm	
Frequency stability vs. load			+/-10% load change	-0.2		+0.2	ppm	
Aging			first year at 25℃	-1.0		+1.0	ppm	
SSB Phase noise (worst case) @16.32 MHz			10 Hz offset			-85.0	dBc/Hz	
			100 Hz offset			-115.0		
			1000 Hz offset			-135.0		
			10 KHz offset			-150.0		
			100 KHz offset			-152.0		
Environmental Conditions								
Vibration test		MIL-STD-883 2007 Condition A: 10~2000Hz, 1.52mm, 20G, each axis for 4 hrs						
Thermal shock		MIL-STD-883 1010 Condition B: -55℃, 125℃; Soak time is 10 mins, with total 200 cycles						
Mechanical shock		MIL-STD-883 2002 Condition B: 1500G, half-sine, 0.5ms, each axis for 3 hrs						
Storage temperature		-55℃ to +125℃						