

**Features and Benefits**

10.000000 MHz  
 Temp. stability less than +/- 0.28 ppm  
 -40C to +85C operation  
 +3.3V supply ; Voltage-controlled

**Typical Applications**

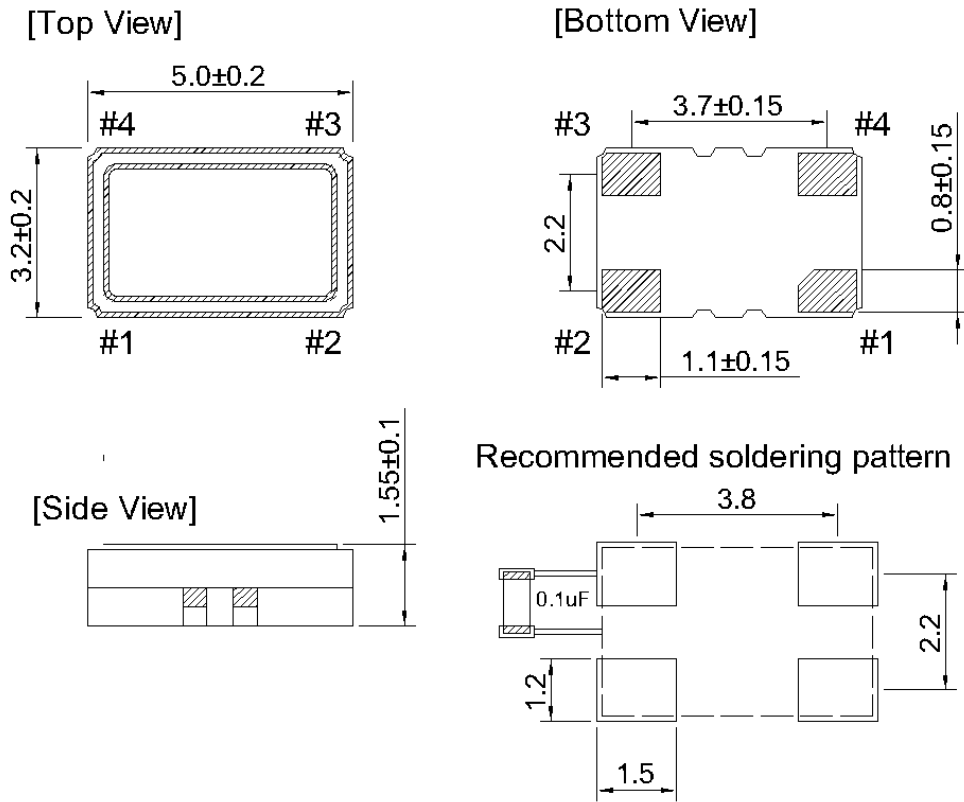
Beidou Navigation Reference Oscillator  
 SATCOM SYSTEMS ( ON THE MOVE ; MOBILE )  
 Mobile Radio

**Description**

The TCXO5320S-10MHz-D-V 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



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

Unit : mm

## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note	
			Min.	Typ.	Max.			
Operational Frequency Range	F <sub>nom</sub>			10.000		MHz		
CMOS	High Level		2.97			V		
	Low Level				0.33	V		
	Output Load		Operating range		15	pF		
	Start Time				2.0	ms		
	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	%	
<b>Power Supply</b>								
Supply voltage			3.135	3.30	3.465	V		
Supply current		At maximum supply voltage			3.3	mA		
<b>Frequency Control* ( Electronic + Mechanical )</b>								
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	%		
<b>Frequency Stability</b>								
Nominal frequency tolerance		Frequency at 25°C, 1 hour after 2 times reflow	-2.0		+2.0	ppm		
Frequency stability vs. temperature		Referenced to the midpoint between minimum and maximum frequency value	-0.28		+0.28	ppm		
Temperature range		The operating temperature range over which the frequency stability is measured	-40		+85	°C		
Frequency stability vs. supply voltage		supply voltage varied +/-5% at 25°C	-0.2		+0.2	ppm		
Frequency stability vs. load		+/-10% load change	-0.2		+0.2	ppm		
Aging		first year at 25°C	-1.0		+1.0	ppm		
SSB Phase noise (at 25°C) @10.000000 MHz		10 Hz offset		-100		dBc/Hz		
		100 Hz offset		-125				
		1 KHz offset		-145				
		10 KHz offset		-155				
		100 KHz offset		-158				
<b>Environmental Conditions</b>								
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°C, 125°C; 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 times						
Storage temperature		-55°C to +125°C						