

### Features and Benefits

Better than +/- 500 ppb from -40°C to +85°C  
 10MHz low noise CMOS output  
 3.3V supply; 6.0mA maximum  
 Less than -135dBc/Hz @ 1KHz offset  
 Less than -148dBc/Hz @ 10KHz offset

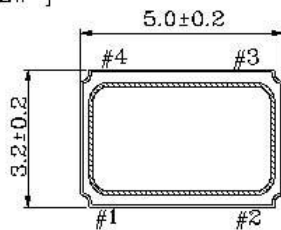
### Typical Applications

Mobile Radio  
 GPS Reference  
 Beidou Navigation Systems

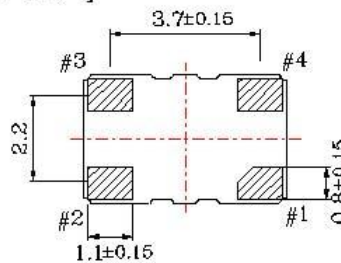
### Mechanical Drawing & Pin Connections

Unit : mm

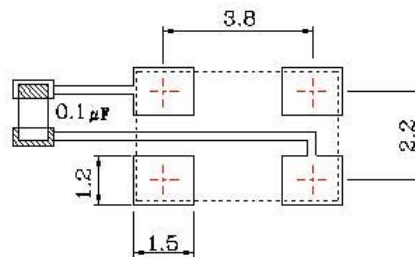
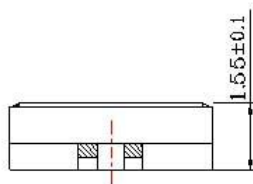
[ TOP VIEW ]



[ BOTTOM VIEW ]



[ SIDE VIEW ]



Recommended soldering pattern  
 \*To ensure optimal oscillator performance,  
 place a by-pass capacitor of 0.1µF as  
 close to the part as possible between  
 Vdd and GND pads.

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

## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	$F_{nom}$			10.000000		MHz	
CMOS	Logic Level 1		2.97			V	
	Logic Level 0				0.3	V	
	Rise / Fall Time	CMOS logic output at 10% to 90%			8.0	ns	
	Duty Cycle	Measured at 50% VDD trigger level	45	50	55	%	
	Start Time				2.0	ms	
	Load Capacitance		Operating range			15	pF
<b>Power Supply</b>							
Supply Voltage	$V_{cc}$		3.135	3.3	3.465	V	
Supply Current		At maximum supply voltage			6.0	mA	
<b>Frequency Control*</b>							
Control Voltage Range	$V_c$		0.5	1.5	2.5	V	
Tuning Range		Reference to VCON at 1.5V	+/-5.0			ppm	
Vcon Input Impedance		Measured between VCON and GND pin	100			KOhm	
Linearity					10.0	%	
<b>Frequency Stability</b>							
VS. Temperature		-40°C to 85°C, ref 25°C	-0.5		+0.5	ppm	
Tolerance At 25°C		Frequency @25C, 1hour after 2 times reflow.	-2.0		+2.0	ppm	
VS. Supply Voltage		Supply voltage varied +/-5% at 25C	-0.3		+0.3	ppm	
VS. Load Change		+10% load change	-0.2		+0.2	ppm	
First Year Aging		First year at 25C	-1.0		+1.0	ppm	
SSB Phase noise (typ.)		10 Hz			-90	dBc/Hz	
		100 Hz			-115		
		1 KHz			-135		
		10 KHz			-148		
		100 KHz			-152		
<b>Environmental Conditions</b>							
<b>Parameter</b>	<b>Reference Std.</b>		<b>Test Condition</b>				
Operating temperature range	-40°C to 85°C						
Storage temperature range	-55°C to 125°C						
Mechanical Shock	MIL-STD-883 2002 Condition B JESD22-B104 Condition B		1500G, half-sine, 0.5ms, each axis for 3 times				
Vibration	MIL-STD-883 2007 Condition A JESD22-B103 Condition 1		10-2000Hz, 1.52mm, 20G, each axis for 4hrs				
Thermal Shock	MIL-STD-883 1010 Condition B JESD22-A104 Condition B		-55°C, 125°C; soak time is 10 mins, with total 200 cycles.				

## Output Waveform

