



Features and Benefits

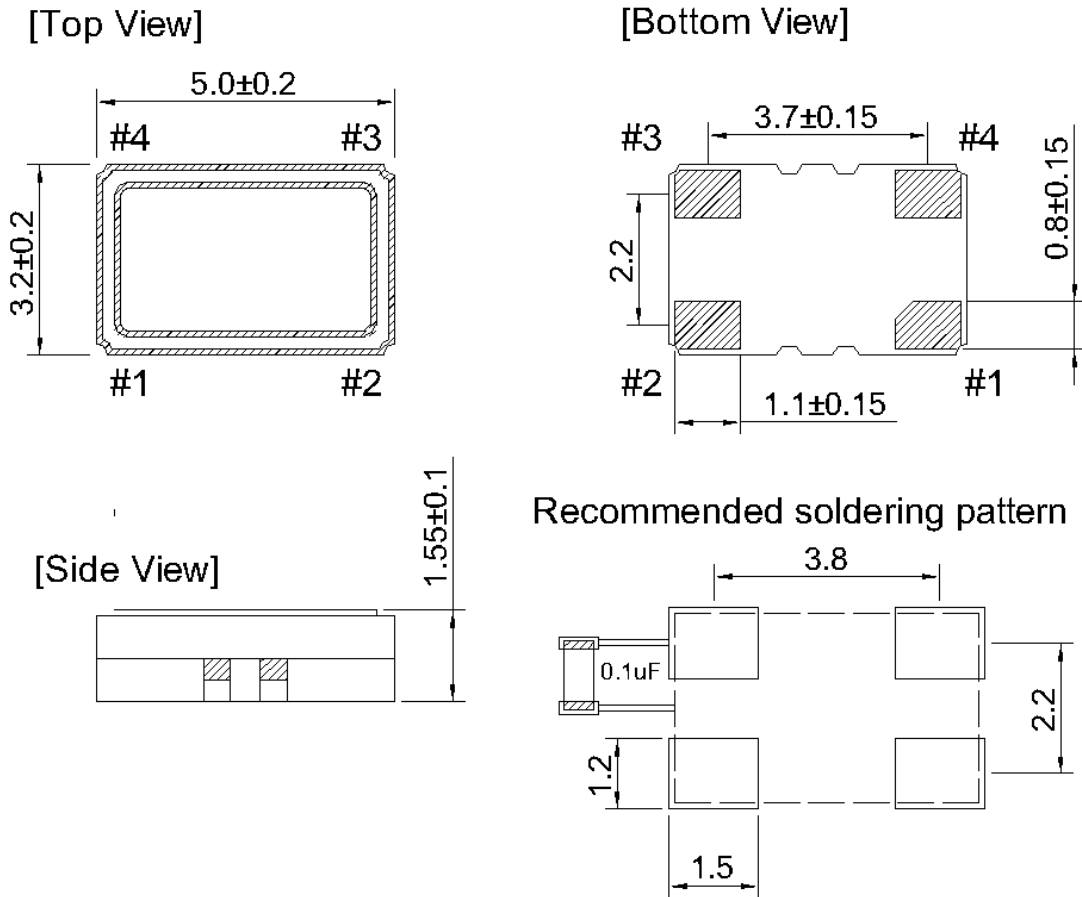
- Better than ± 0.28 ppm from -40°C to $+85^{\circ}\text{C}$
- 10MHz low noise clipped sine wave output
- 3.3V supply; 3.5mA maximum
- Less than -145dBc/Hz @ 1KHz offset
- Less than -155dBc/Hz @ 10KHz offset

Typical Applications

- Mobile Radio
- GPS Reference
- Beidou Navigation Systems

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.		
Nominal Frequency	F _{nom}			10.00000		MHz	
Output Wave Form			Clipped sine wave				
Output Voltage Level			0.8		2.0	Vp-p	
Output Load				10//10		Kohm/pF	
Start Time					2.0	ms	
Power Supply							
Supply Voltage	V _{cc}		3.135	3.3	3.465	V	
Supply Current		At maximum supply voltage			3.5	mA	
Frequency Control*							
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	%	
Frequency Stability							
VS. Temperature		From -40°C to +85°C (Ref. to the midpoint between min. and max. frequency value.)			+/-0.28	ppm	
Tolerance At 25°C		Frequency @25°C, 1hour after 2 times reflow.			+/-2.0	ppm	
VS. Supply Voltage		Supply voltage varied +/-5% at			+/-0.2	ppm	
VS. Load Change		+/-10% load change			+/-0.2	ppm	
First Year Aging		First year at 25°C			+/-1.0	ppm	
Phase noise (typ.)		10 Hz		-100		dBc/Hz	
		100 Hz		-125			
		1 KHz		-145			
		10 KHz		-155			
		100 KHz		-158			
Environmental Conditions							
Parameter		Reference Std.	Test Condition				
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.				