Features and Benefits

Stability : +/-0.5 ppm over -30℃ to +85℃
Phase noise :
10Hz offset : better than -84dbc/Hz
100Hz offset : better than -115dBc/Hz
1KHz offset : better than -129dBc/Hz
10KHz offset : better than -125dBc/Hz
3.3V supply ; 1.5V control voltage
7.0 x 5.0 x 2.5 mm , 4 pads.

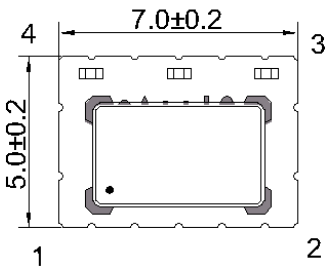
Typical Applications

15.5MHz TCXO; 3.3V supply voltage; +/-0.5 ppm over -30℃ to +85℃; CMOS RF output

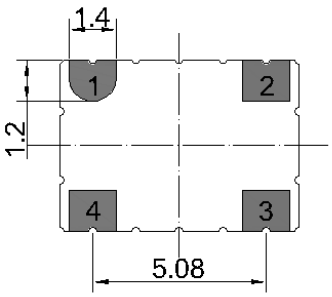
Mechanical Drawing & Pin Connections

Drawing No: MD140037-1

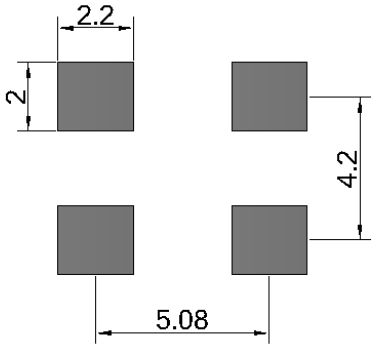
Top View



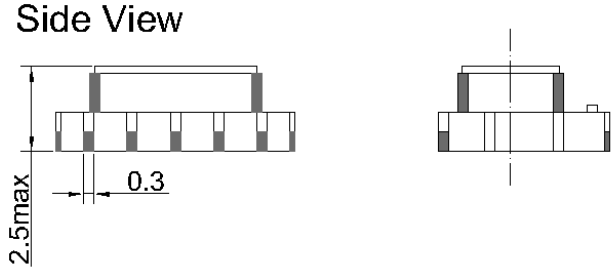
Bottom View



Land Pattern (reference)



Side View



Pad Connections	
Pad1	Make no connection if TCXO; Control voltage if VCTCXO
Pad2	Ground / Case Ground
Pad3	Output
Pad4	Supply Voltage

Unit : mm

Specifications

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Nominal Frequency		F_{nom}			15.500000		MHz	
CMOS	Wave form				CMOS			
	Output voltage high	L_{oh}		2.97			V	
	Output voltage low	L_{ol}				0.33	V	
	Load	C_L			15		pF	
	Duty Cycle	Duty	At 50% output swing	40		60	%	
Power Supply								
Input Voltage		V_{cc}	3.3V +/- 5%	3.135	3.3	3.465	V	
Current consumption		I_{cc}				10	mA	
Start-up time		S_T			5	10	m sec.	
Frequency Control*								
Input impedance		R		50			kOhm	
Control voltage		V_{con}		0.5	1.5	2.5	V	
Slope					positive			
Frequency deviation range		F_{pull}	With V_{con} +/- 1.0V	-6		6	ppm	
Linearity						10	%	
Frequency Stability								
Frequency tolerance		F_{tol}	At 25°C	-2.0		+2.0	ppm	
Freq. stability VS temperature		$\triangle F_T$		-0.5		+0.5	ppm	
Freq. stability VS voltage change		$\triangle F_V$	For a +/- 5% input voltage change	-0.3		+0.3	ppm	
Freq. stability VS load change		$\triangle F_L$	For a +/- 10% loading condition change	-0.3		+0.3	ppm	
Freq. stability VS reflow		$\triangle F_R$	1 reflow and measured 14 hours	-1.0		+1.0	ppm	
SSB phase noise			10Hz		-84		dBc/Hz	
			100 Hz		-115			
			1 KHz		-129			
			10 KHz		-125			
			100 KHz		-117			
			1MHz		-125			
Environmental Conditions								
Power voltage		3.135 to 3.465 V						
Control voltage		-0.5 to 2.5 V						
Operating temperature range		-30℃ to +85℃						
Storage temperature range		-40℃ to 85℃						