



Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA
TEL: 1-281-870-8822 EMAIL:Sales@DynamicEng.com

H7 LC)' \$\$G!&* A <n!5 !J

High performance SMD TCXO

Features and Benefits

- 26MHz low consumption clipped sine wave output
- 2.8V power supply; 3.3mA maximum
- 115dBc/Hz @ 1KHz offset

Typical Applications

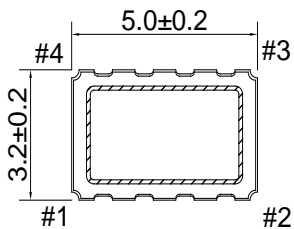
- Mobile Radio
- GPS Reference
- Beidou Navigation Systems

Mechanical Drawing & Pin Connections

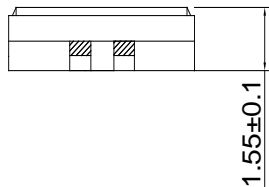
Drawing No: MD140026-2

DIMENSIONS

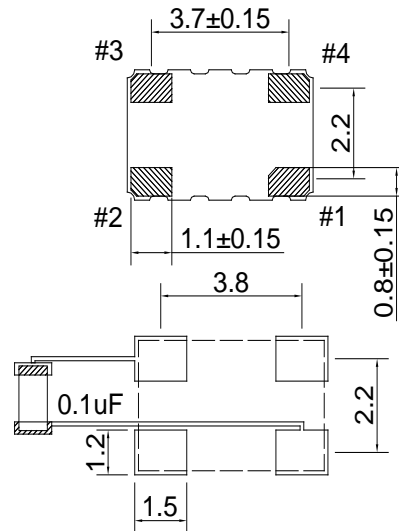
[TOP VIEW]



[SIDE VIEW]



[BOTTOM VIEW]



PIN FUNCTIONS

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

Recommended soldering pattern

*To ensure optional oscillator performance place a by-pass capacitor of $0.1 \mu F$ as close to the part as possible between Vdd and GND pads.



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Nominal Frequency	F_{nom}			26.000000		MHz	
Output	Output Waveform	DC Couple clipped sine wave	Clipped sine wave				
	Output Voltage Level		0.8		2.0	Vp-p	
	Output Load		10Kohm//10pF				
	Start Up Time				2.0	ms	
Power Supply							
Supply Voltage	V_{cc}		2.7	2.8	2.9	V	
Supply Current		At maximum supply voltage			3.3	mA	
Frequency Control*							
Control Voltage Range	V_c		0.5	1.5	2.5	V	
Pulling Range		Reference to VCON at 1.5V	+/-5.0			ppm	
Vcon Input Impedance		Measured between VCON and GND pin	100			KOhm	
Linearity					10	%	
Frequency Stability							
VS. Temperature		Referenced to the midpoint between minimum and maximum frequency value	-0.28		+0.28	ppm	
Nominal Frequency Tolerance		Frequency @25°C, 1hour after 2 times reflow.	-2.0		+2.0	ppm	
VS. Supply Voltage		Supply voltage varied +/-0.1V at 25°C	-0.2		+0.2	ppm	
Load Sensitivity		+/-10% load change	-0.2		+0.2	ppm	
20 Years Aging		Over 20 years	+/ -2.0			ppm	
SSB Phase noise (typ.)		10Hz		-90		dBc/Hz	
		100Hz		-115		dBc/Hz	
		1KHz		-135		dBc/Hz	
		10KHz		-152		dBc/Hz	
		100KHz		-155		dBc/Hz	
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.				

Test Circuit

