Dynamic Engineers Inc.
2550 Gray Falls Dr., Suite#128, Houston, TX, 77077
TEL: 281-870-8822EMAIL:Sales@DynamicEngineers.com

TCXO5300Z-15.050000MHz-A
Highly accurate, reliable temperature compensated CSW SMD TCXO

Features and Benefits

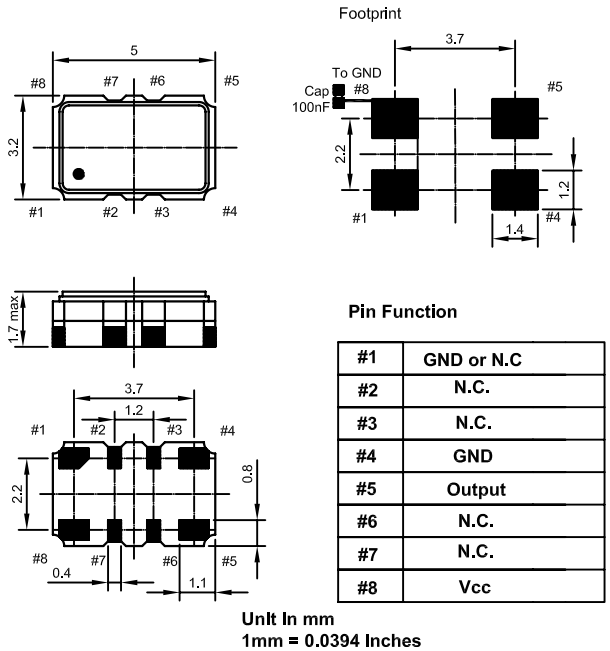
Better than ±0.5 ppm stability over operating temperature
Better than ±1.0 ppm 1st year aging
Less than 3mA current consumption
-135 dBc/Hz @ 1 kHz phase noise

Typical Applications

Location and GNSS navigation
Communication

Mechanical Drawing & Pin Connections

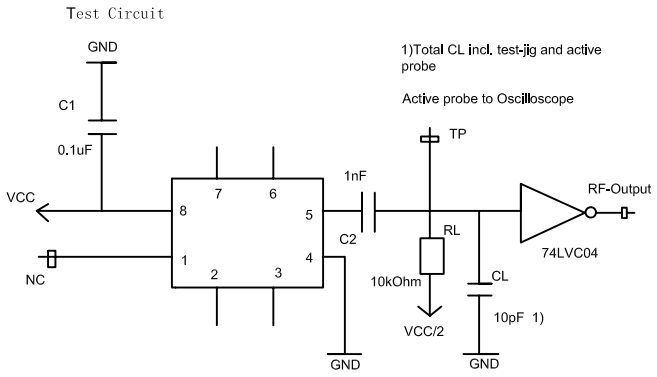
Drawing No:MD150017-3



Pin Function

#1	GND or N.C
#2	N.C.
#3	N.C.
#4	GND
#5	Output
#6	N.C.
#7	N.C.
#8	Vcc

Unit In mm
1mm = 0.0394 Inches



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Specifications

Oscillator Specification	Sym	Condition	Value Min.	Value Typ.	Value Max.	Unit	Note
Nominal Frequency	F_0			15.050000		MHz	
RF Output							
Output Wave Form				Clipped Sine Wave			
Output Level				> 0.8 Vp-p			
Load				10 10		kΩ pF	±10%
Supply Voltage				+3.3		V	
Current Consumption				<3		mA	
Start-up Time				<5		ms	
Frequency Stability							
VS. Tolerance ex-factory		@ +25°C		0 ~ +1.00		ppm	
VS. Temperature Reference $(F_{MAX}+F_{MIN})/2$		Over -40°C to +85°C		≤±0.50		ppm	
VS. Supply Voltage Changes Reference to frequency at nominal supply		±5%		≤±0.10		ppm	
VS. Load Change Reference to frequency at nominal load		±10%		≤±0.10		ppm	
VS. Aging		1st year		≤±1.00		ppm	
Frequency Slope		Over operating temperature		≤0.05		ppm/°C	
Short term Stability ADEV		T = 1.0 sec		<1 x 10^{-10}			
Phase Noise							
Phase noise @ 15.050000 MHz		@ 100 Hz		-120		dBc/Hz	
		@ 1 kHz		-135			
		@ 10 kHz		-145			
		@ 100 kHz		-155			

Environmental Conditions

Parameter	Reference Std.
Operating temperature range	-40°C to +85°C
Storage temperature range	-55°C to +105°C
Reflow Profiles as per JEDEC J-STD-020	≤260°C maximum during 10 sec. max.
Moisture sensitivity	Level 1 (unlimited)

Test	IEC 60068 Part…	IEC 60679-1 Clause	MIL-STD-202G Method	MIL-STD-810F Method	MIL-PRF-55310D Clause	Test Conditions (IEC)
Sealing tests (if applicable)	2-17	5.6.2	112E		3.6.1.2	Gorss leak: Test Qc, Fine leak: Test Qk
Solderability Resistance to soldering heat	2-20 2-58	5.6.3	208H 210F		3.6.52 3.6.48	Test Ta method 1 Test Td_1 method 2 Test Td_2 method 2
Shock	2-27	5.6.8	213B	516.4	3.6.40	Test Ez, 3 x per axis 100g, 6 ms half-sine pulse
Vibration, sinusoidal	2-6	5.6.7.1	201A 204D	516-4-4	3.6.38.1 3.6.38.2	Test Fc, 30 min per axis, 1 oct/min 10 Hz - 55 Hz 0, 75 mm, 55 Hz - 2 kHz 10g
Vibration, random	2-64	5.6.7.3	214A	514.5	3.6.38.3 3.6.38.4	Test Fdb
Endurance tests - Aging - Extended aging		 5.7.1 5.7.2	108A		4.8.35	 30 days @ 85°C 1000h, 2000h, 8000h @ 85°C