



## Dynamic Engineers Inc.

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LC & SSI < 15

High Performance XO

### Features and Benefits

±10 ppm high stability from -40°C to +85°C

2.5V supply; 7mA maximum

Low phase noise -155dBc/Hz @ 100KHz offset

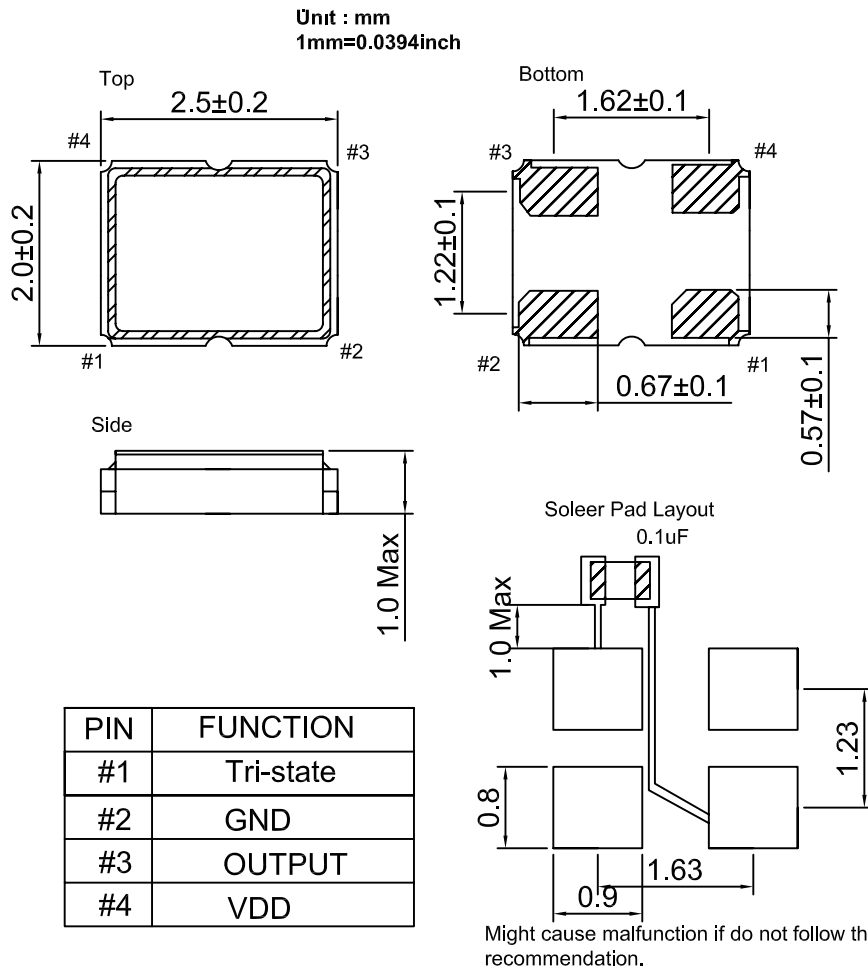
### Typical Applications

Mobile Radio

Communication Equipment

### Mechanical Drawing & Pin Connections

Drawing No: MD160028-1



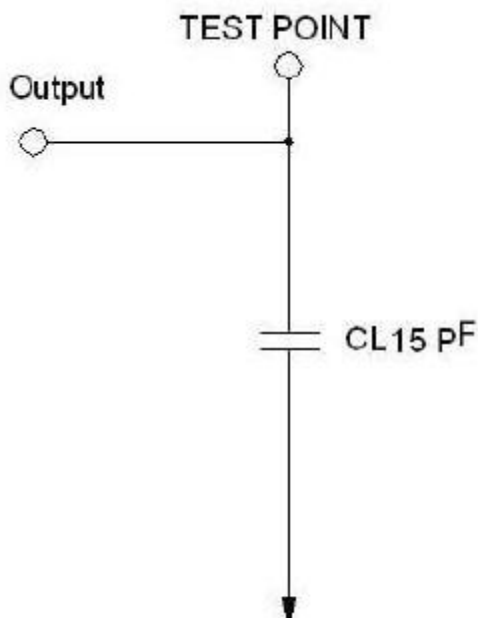


## Specifications

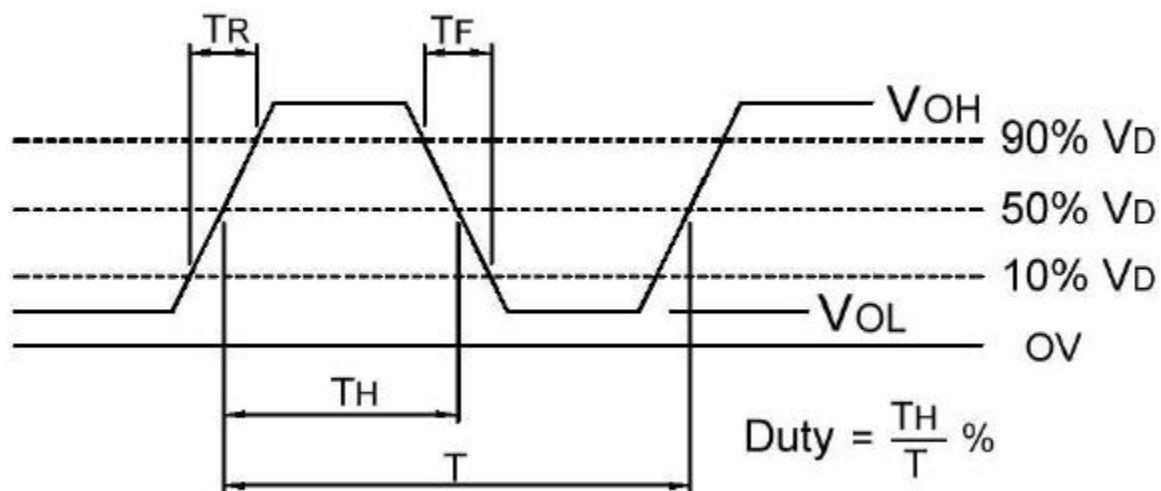
Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Frequency Range		F <sub>0</sub>			25.00		MHz	
RF Output								
Output Wave Form				CMOS				
Load						15	pF	
Output High (Logic “1”)				90%V <sub>DD</sub>			V	
Output Low (Logic “0”)						10%V <sub>DD</sub>	V	
Duty Cycle				45	50	55	%	
Start Time						5	msec	
Rise / Fall Time						8	nsec	
Tri-state	Output Active			70%V <sub>DD</sub> or floating			V	Pin 1 Tri-state
	Output in High-Impedance state					30%V <sub>DD</sub>	V	
Period Jitter			(PK-PK)			40.0	psec	
RMS Phase Jitter			(12 KHz - 5 MHz)			1.0	psec	
Power Supply								
Voltage		V <sub>cc</sub>		2.25	2.50	2.75	V	
Current			At maximum supply voltage			7.00	mA	
Frequency Stability								
Vs. Tolerance @ 25°C				-10		+10	ppm	
Vs. Operating Temperature								
Vs. Voltage Change								
Vs. Load Change								
Vs. First Year Aging								
Phase Noise								
Phase noise			100Hz offset		-115		dBc/Hz	
			1K Hz offset		-140			
			10K Hz offset		-153			
			100K Hz offset		-155			
Environmental Conditions								
Parameter		Reference Std.			Test Condition			
Operating temperature range		-40°C to +85°C						
Storage temperature range		-55°C to +125°C						
Vibration Test		MIL-STD-883-2007 Condition A JESD22-B103 Condition 1			10-2000 Hz, 1.52mm, 20G, each axis for 4 hours			
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			
Mechanical Shock		MIL-STD-883-2002 Condition B JESD22-B104 Condition B			1500G, half-sine, 0.5ms, each axis for 3 times			



### Test Circuit (CMOS Load)

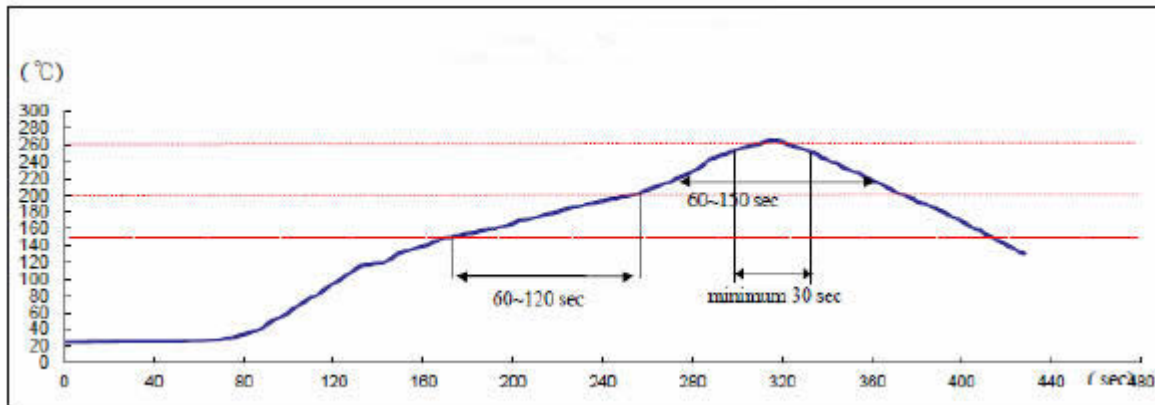


### Output Waveform (CMOS Load)





## Recommended IR Reflow Profile



IR Reflow Profile of Ceramic SMD Products for Pb free process

Reference Standard JEDEC-STD 020

Test Conditions: Pre-heating: 150°C to 200°C, 60-120 secs

Heating: 217°C, 60-150 sec

Peak temperature at least: 260°C, the time above 255°C, minimum 30 sec