



### Features and Benefits

- Less than  $\pm 100$  ppb over  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$
- Less than  $\pm 50$  ppb over  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Frequency Range from 10 MHz to 40 MHz
- Compatible with DIP-14 package
- Sealed Crystal Package; Sealed Oscillator Case
- 3.3V or 5.0V supply

### Typical Applications

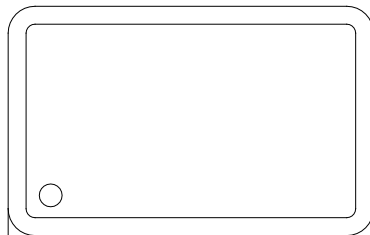
- Wireless Communications
- Test Instruments

### Description

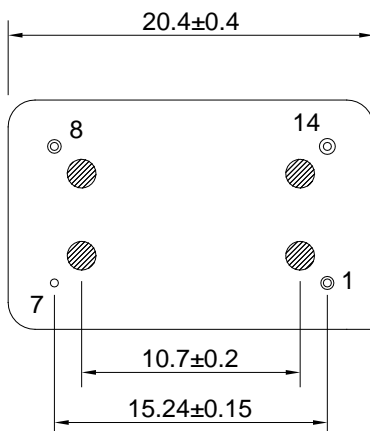
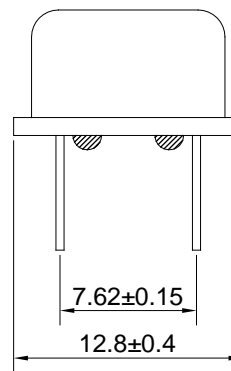
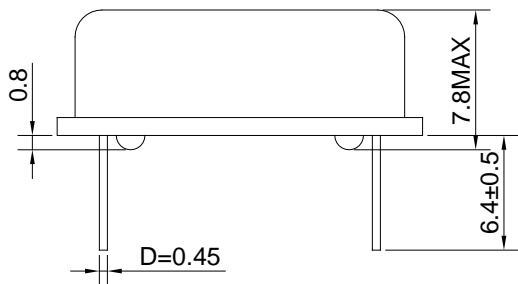
Advanced compensation algorithms combined with precision resonator manufacturing techniques deliver a highly precise TCXO product platform offering OCXO type stabilities at a fraction of the power.

### Mechanical Drawing & Pin Connections

Drawing No: MD140035-1



PIN1 SYMBOL



PIN	Function
1	VC/NC
7	GND
8	Output
14	VCC

Unit : mm  
1mm=0.0394inch



## Specifications

General Specifications				
Parameter	3.3V		5.0V	
	Min.	Max.	Min.	Max.
<b>Frequency Range</b>	10MHz	40 MHz	10MHz	40 MHz
<b>Standard Frequency</b>	10.00 MHz, 12.80MHz, 19.20MHz, 19.44 MHz, 20.00MHz, 26.00MHz			
<b>Frequency Tolerance*</b>	-	±2.0ppm	-	±2.0ppm
<b>Frequency Stability</b> Vs. Temperature range (-40°C to +85°C) (-20°C to +70°C) Vs Supply Voltage (±5%) change Vs Aging (@1 <sup>st</sup> year)	- - - -	±50 ppb ±30 ppb ±0.02ppm ±1.0ppm	- - - -	±50 ppb ±30 ppb ±0.02ppm ±1.0ppm
<b>Supply Voltage Variation</b> (V <sub>DD</sub> ) ±5%	3.13V	3.47V	4.75V	5.25V
<b>Supply Current</b>	-	10 mA	-	15mA
<b>Output Level</b> (Clipped Sine Wave)	0.8Vp-p	-	0.8Vp-p	-
<b>Output Level (CMOS)</b> Output High (Logic "1") Output Low (Logic "0") Duty	2.31 V - 45%	- 0.99 V 55%	3.5 V - 45%	- 1.5 V 55%
<b>Pulling Range</b>	±5.0ppm	-	±5.0ppm	-
<b>Phase Noise @ 10 MHz</b>	100 Hz	-123dBc/Hz		
	1 kHz	-143dBc/Hz		
	10 kHz	-150dBc/Hz		
<b>Transition Time: Rise / Fall Time+</b>	6 nsec			
<b>Start-up Time</b>	2ms max.			
<b>Storage Temp. Range</b>	-55°C to +125°C			

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

\*Frequency at 25°C, 1 hour after reflow

+Transition times are measured between 10% and 90% or VDD, with an output load of 15pF

Stability vs. Temperature Range Availability			
Stability in ppb	Temperature Range		
	-20°C to +70°C	-40°C to +85°C	-40°C to +105°C
<b>±30</b>	Available	Conditional (depends on operating frequency; case by case)	Not Available
<b>±50</b>	Available	Available	Conditional (depends on operating frequency; case by case)
<b>±100</b>	Available	Available	Available

Other customized specifications maybe available. Please contact Dynamic Engineers Inc. for further details.