Features and Benefits

40.96 MHz Clipped Sine Output VCTCXO
3.3V Supply
+/- 0.5 ppm stability over -40°C to +85°C
3.2mm x 2.5mm x 0.9mm package
SMD Ceramic Enclosure

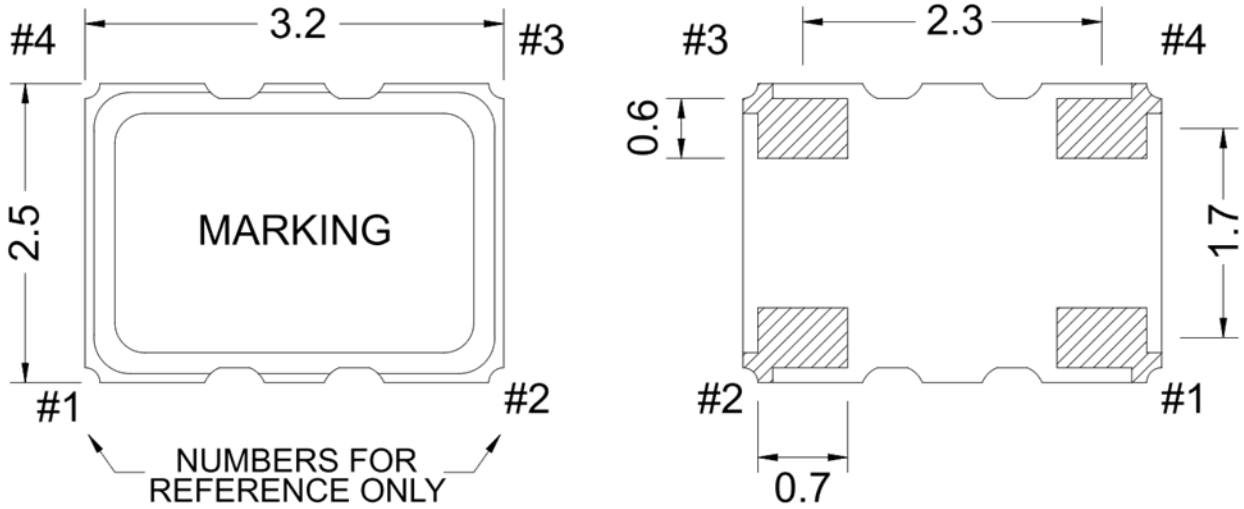
Typical Applications

Base Stations
10 G-bit Ethernet
SONET
GSM, CDMA, 3G, and 4G cellular

Description

The TCXO3225 family offers low noise compensation techniques combined with aggressive conditioning processes resulting in outstanding long term stability, tightly distributed performance parameters, and superior long term reliability.

Mechanical Drawing & Pin Connections



PIN NO.	CONNECTION
1	Voltage Control
2	Ground
3	Output
4	V_{DD}

MD140020-1
Unit = mm

Specifications

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		F_{nom}			40.960000		MHz	
Clipped Sine Waveform	Min. pk. to pk.			0.8			V	
	Max. pk to pk					2.0	V	
	Output Load					10	pF	
	Start Time					2.0	ms	Milli-seconds
Power Supply								
Voltage				3.135	3.3	3.465	V	
			Supply Current under load			2.5	mA	
Voltage Control								
Control Voltage				0.5	1.5	2.5	V	
Pulling Range			Referenced @ 1.5V	± 5			ppm	
Input Impedance				500			kΩ	
Pulling Range						10	%	
Frequency Stability								
Versus temperature				-500.0		+500.0	ppb	
Tolerance at 25°C			1 hr after 2 times reflow	-2000.0		+2000.0	ppb	After two reflows
Versus 5% change in supply voltage				-200.0		+200.0	ppb	
Versus 10% change in load				-200.0		+200.0	ppb	
Aging per year			First year @ 25°C	-1000.0		+1000.0	ppb	
SSB Phase noise (worst case) @40.96 MHz			10 Hz			-72.0	dBc/Hz	
			100 Hz			-102.0		
			1000 Hz			-124.0		
			10 KHz			-143.0		
			100 KHz			-147.0		
Environmental Conditions								
Operating temperature range		-40°C to +85°C						
Storage temperature range		-40°C to +85°C						
Mechanical Shock		MIL-STD-883 2002 Cond. B JESD22-B104 Cond. B, 1500G, half-sign, 0.5ms, each axis for 3 times						
Vibration Test		MIL-STD-883 2007 Cond. A JESD22-B103 Cond. 1, 10~2000Hz, 1.52mm, 20G, each axis for 4 hours						
Thermal Shock		MIL-STD-883 1010 Cond. B JESD22-A104 Cond. B, -55°C, 125°C; soak time is 10 mins, with total 200 cycles						