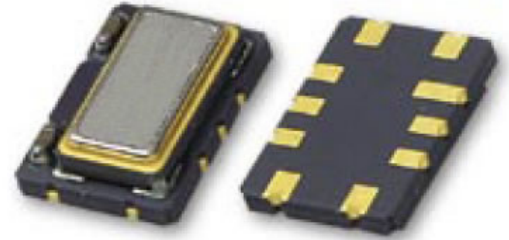


Features

Frequency 10 MHz
 7 mm x 5.0 mm x 2.0 mm ceramic SMD
 +/- 4.6 ppm total frequency tolerance over 20 years
 CMOS square wave
 +/- 1.0 ppm from -40°C to 85°C

Picture of Part



Typical Applications

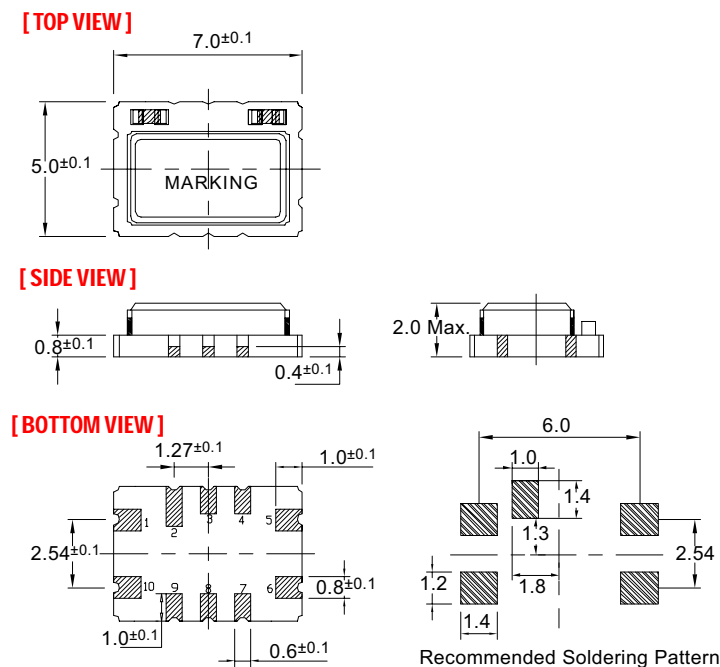
Femtocells, GPS Receivers
 Mobile Radio
 System Clocks for wide range of applications

Description

The TCXO3404 family offers low noise compensation techniques combined with aggressive conditioning processes resulting in outstanding long term frequency stability, tightly distributed performance parameters, and superior long term reliability.

Mechanical Drawing and PIN Connections

Unit: mm



Pad	Function
1	VCON : VC-TCXO NC : TCXO
2	NC
3	NC
4	NC
5	GND
6	CMOS/ Clipped Sinewave Output
7	NC
8	NC
9	Tri-State Control*
10	VDD

Specifications

VCTCXO Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		F ₀			10.000000		MHz	
CMOS Square wave	Load				15		pF	
	H - level voltage	V _H		0.9V _{cc}			V	
	L - level voltage	V _L				0.1 V _{cc}	V	
	Rise & Fall time		@10 MHz CMOS		3.5		ns	
	Duty cycle			45		55	%	
Power Supply								
Voltage		V _{cc}		4.750	5.000	5.250	V	
Current Consumption		I _{cc}				6.0	mA	
Frequency Control*								
Frequency Adjust Range				+/- 5.0			ppm	
Control Voltage on Pin 1				0.5	1.5	2.5	V	
Pin 1 Input Impedance				100			Kohms	
Frequency Stability								
Vs. temperature (See Below)			-40°C to 85°C, see below	-1.0		+1.0	ppm	
Vs. 5% change in supply voltage			ref. V _{cc} typ.	-0.300		+0.300	ppm	
Tolerance at 25°C				-1.000		+1.000	ppm	Frequency 1hr after reflow
SSB Phase noise @10 MHz CMOS typical			100 Hz		-120		dBc/Hz	
			1000 Hz		-140			
			10 kHz		-148			
Total Tolerance		Over 20 years	Projected after 30 days operation	-4.600		+4.600	ppm	
Environmental, and PPM Measurement Criteria								
Operating temperature range		-40°C to 85°C maximum range available that is standard						
Storage temperature range		-55°C to 125°C						
For Frequency vs. Temperature		The reference frequency for ALL temperatures will be (F _{max} + F _{min}) / 2 (max and min across -40°C to 85°C)						
Stability Calculation		To calculate relative stability at 85°C for example:						