Features and Benefits

24 MHz VCTCXO
3.3V
CMOS
+/- 0.5 ppm from -40°C to +85°C
5 x 7 mm SMD
Next Generation TCXO IC technology

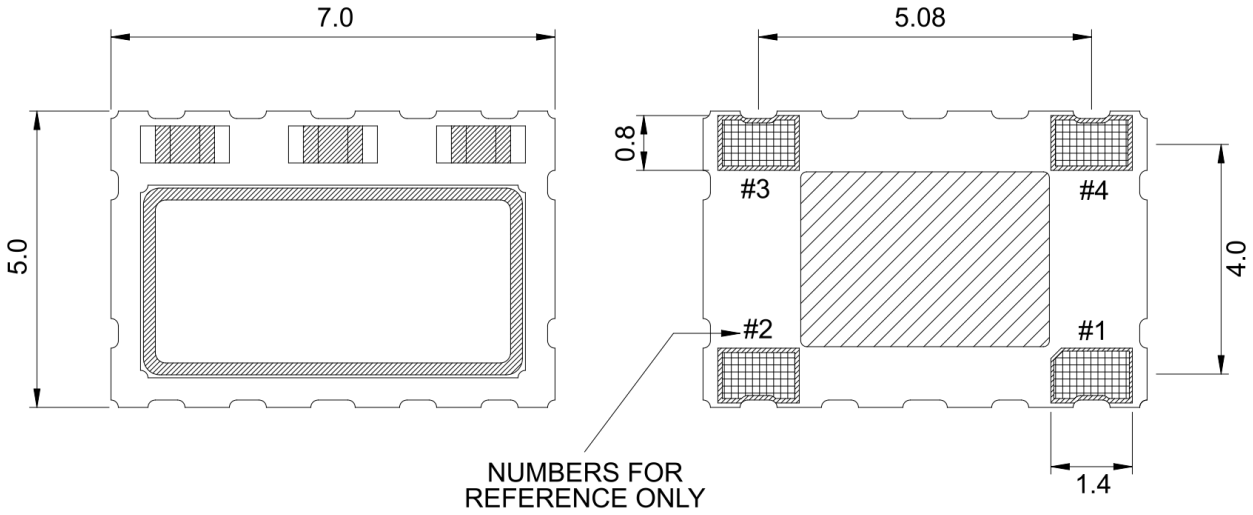
Typical Applications

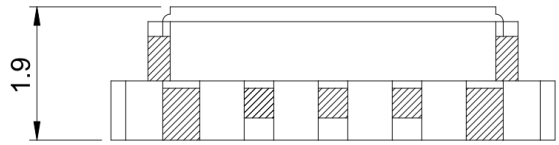
Mobile Radio
GPS
Beidou Navigation Systems

Description

The TCXO7500T family represents the next generation TCXO IC compensation technology with lower phase noise and offering even tighter stabilities.

Mechanical Drawing & Pin Connections





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

Specification

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		F_{nom}			24.000000		MHz	
CMOS	Logic Level 1			2.97			V	
	Logic Level 0					0.33	V	
	Rise / Fall Time					6.0	ns	
	Duty Cycle			45	50	55	%	
Power Supply								
Voltage		V_{cc}		3.135	3.3	3.465	V	
Current Consumption						6.0	mA	
Frequency Control*								
Control voltage range		V_c		0.5	1.5	2.5	V	Tuning Slope Positive
Tuning range				± 5.0			ppm	
Input Impedance				100			**Ω**	
Frequency Stability								
Versus temperature			-40°C to 85°C, ref 25°C	-0.5		+0.5	ppm	
Tolerance at 25°C			1 hour after 2 times reflow	-2.0		+2.0	ppm	
Versus ±5% change in supply voltage				-0.1		+0.1	ppm	varied ±5% at 25°C
Versus ±10% change in load				-0.1		+0.1	ppm	
First Year Aging				-1.0		+1.0	ppm	first years at 25°C
SSB Phase noise (typ.) @24 MHz CMOS output and Vcc = 3.3V			1 Hz				dBc/Hz	
			10 Hz			-85		
			100 Hz			-115		
			1000 Hz			-135		
			10 KHz			-148		
			100 KHz			-150		
Environmental Conditions								
Operating temperature range	-40°C to +85°C							
Storage temperature range	-55°C to +125°C							
Mechanical Shock	MIL-STD-883 2002, 1500G, half-sine, 0.5ms, each axis for 3 times.							
Vibration Test	MIL-STD-883 2007, 10~2000Hz, 1.52mm, 20g, each axis for 4 HRS							
Thermal Shock	MIL-STD-883 1010, -55°C, 125°C; soak time is 10 mins, w/ total 200 cycles							