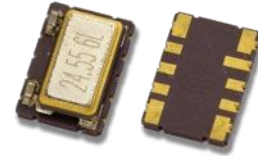


Features

Frequency 10 MHz
 7mm x 5mm x 2mm ceramic SMD
 Compact and lightweight
 Low power consumption
 High Reliability in Harsh Environments

Picture of Part



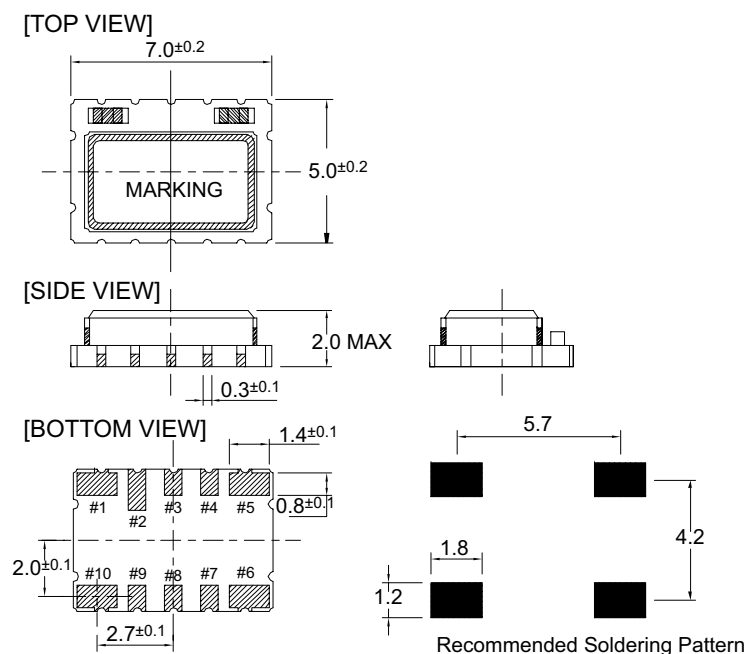
Typical Applications

Mobile SATCOM
 VHF / UHF Mobile Radio

Description

The TCXO7501TC-10M family offers low noise compensation techniques combined with high volume manufacturing processes resulting in lower cost, tightly distributed performance parameters, and very good overall long term frequency stability and reliability.

Mechanical Drawing and PIN Connections



Pin	Function
#1	VCON : VCTCXO GND : TCXO
#2	NC
#3	NC
#4	NC
#5	GND
#6	Output
#7	NC
#8	NC
#9	NC
#10	VDD

Specification

TCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		f_0			10		MHz	
Clipped Sine-wave Option	Level	L		0.8			pk-pk	
	Load Resistance	RL			10		Kohm	
	Load Capacitance	CL			10		pF	
Power supply								
Voltage		V _{CC}		4.75	5.00	5.25	V	
Current consumption		I _{CC}				2.5	mA	
Frequency control*								
Control voltage range		V _C		0.5	1.5	2.5	V	Positive tuning slope
Tuning range				+/- 5.0			ppm	
V _C Input Impedance						500	Kohm	
Frequency stability								
vs. temperature			-40 °C to +85 °C, ref 25 °C	-2.0		+2.0	ppm	
vs. 5% change in supply voltage			ref V _{CC} typ.	-0.200		+0.200	ppm	
Tolerance at 25°C				-2.0		+2.0	ppm	Frequency 1 hr after reflow
SSB Phase noise			10 Hz				dBc/Hz	
			100 Hz		-115			
			1 kHz		-135			
			10 kHz		-148			
			100 kHz					
Aging	Per Year		Projected yearly aging after 30 days operation	-1.0		+1.0	ppm	

Environmental Qualifications

Environmental	Test Conditions	Reference STD.
Thermal Shock	-55°C to +125°C, each temperature for 10 mins, 200 cycles.	MIL-STD-883D 1011,9 (condition B)
IR Reflow test	Peak temp: 260 °C, 10 sec. Go through twice.	MIL-STD-202F, condition B.
High temp storage	85°C, 500 hrs	MIL-STD-202G Method 108, condition C.
High Temperature & Humidity Storage	85°C, 85%RH, 500hrs	JIS-C 7022 B-5 (condition C)
Low temp storage test	-40°C±3°C, 500hrs	JIS-C 5021

Mechanical	Test Conditions	Reference STD.
Mechanical Shock	1500g, half-sine, 0.5ms; each direction for 3 times in X, Y, Z	MIL-STD-883D 2002.3, (condition B)
Vibration	10-2000Hz, 20g, 1.52mm; each direction for 4 hrs in X, Y, Z	MIL-STD-883D 2007.2, (condition A)