

VFTX250

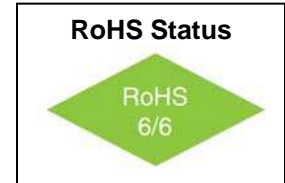
TCXO – Ultra Low Power

2.5x2.0mm SMD, Clipped Sine wave



Features

- 10 – 52 MHz Frequency Range
- 2.8V or 2.5V Supply Voltage
- Low power consumption
- TCXO and VCTCXO models available



Applications

- Portable Communications
- GPS

Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		10		52	MHz	
Frequency Stability	$\Delta F/F$	vs. Temperature	± 0.5		± 2.5	ppm	Ref. to +25°C frequency See "How to Order" chart for available options
		vs. Supply Voltage ($\pm 5\%$)			± 0.2		
		vs. Load ($\pm 10\%$)			± 0.2		
		Aging			± 1.0	ppm/yr	
Operating Temperature	T		-40°		+85°	°C	See "How to Order" chart for available options
Tolerance		25 °C 1 hour after reflow			± 2.0	ppm	
Supply Voltage	V _{DD}		2.66 2.375	2.8 2.5	2.94 2.625	V	Order Code L Order Code G
Supply Current	I _{CC}	10MHz ≤ F _o < 26MHz 26MHz ≤ F _o ≤ 52MHz			2.0 2.5	mA	Max Current across entire temp range
Control Voltage		VCTCXO models only	0.4		2.4	V	
Pull Range			± 5			ppm	Ref. to nominal frequency
Input Impedance			500			KΩ	



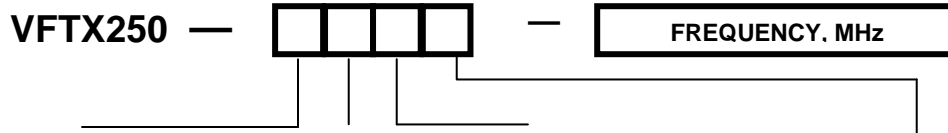
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Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note	
Output		Clipped sine wave Load: 10 K Ω // 10pF						DC cut Capacitor required
Level			0.8			Vp-p		
Phase Noise		100Hz 1KHz 10KHz		-115 -135 -148		dBc/Hz	@ 19.2MHz	
Start up time					2	ms		

How to Order



Frequency Stability		Temp. Range		Supply Voltage		Pullability		
Code	Specification	Code	Specification	Code	Specification	Code	Specification	Type
L	±0.5ppm	A	0°C ~ +50°C	G	2.5V	T	N/A	TCXO
K	± 1.0ppm	C	-10°C ~ +60°C	L	2.8V	A	±5ppm	VCTCXO
J	± 1.5ppm	D	-20°C ~ +70°C			B	±8ppm	VCTCXO
H	± 2.0ppm	F	-30°C ~ +85°C			C	±10ppm	VCTCXO
G	± 2.5ppm	G	-40°C ~ +85°C					

Available Frequency Stabilities over Operating Temperature Ranges

Code	Temperature Range	±0.5ppm	±1.0ppm	±1.5ppm	±2.0ppm	±2.5ppm
A	0°C to +50°C	o	o	o	o	o
C	-10°C to +60°C	o	o	o	o	o
D	-20°C to +70°C	o	o	o	o	o
F	-30°C to +85°C	*	o	o	o	o
G	-40°C to +85°C		*	o	o	o

* Available case by case



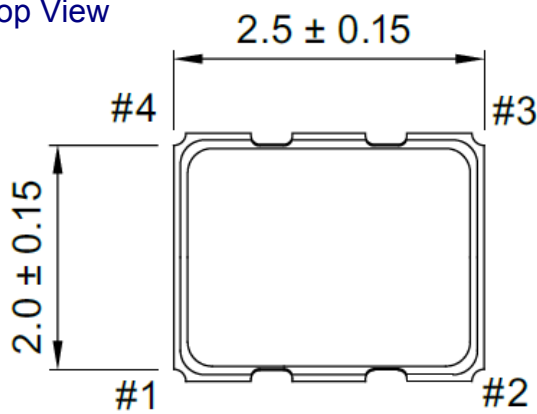
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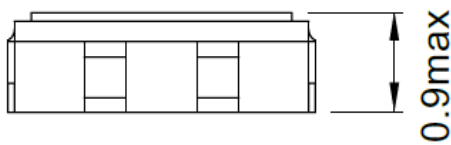
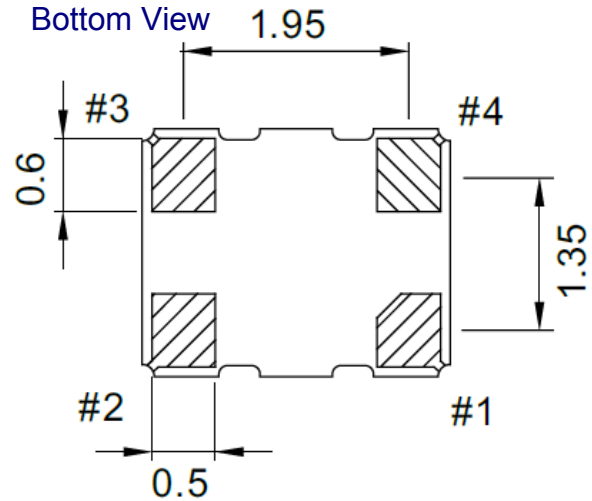
Environmental and Mechanical

Parameter	Specification
Mechanical Shock	Per MIL-STD-202, Method 213, Condition E
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Vibration	Per MIL-STD-883, Method 2007, Condition A
Soldering Conditions	260°C for 10s max
Hermetic Seal	Leak rate less than 5×10^{-8} atm.cc/s of helium
Storage Temperature	-55°C to +125°C

Top View



Bottom View



Pin #	Connection
1	Vc (VCTCXO models) GND (TCXO models)
2	GND
3	Output*
4	V _{DD}

* Note: DC cut capacitor (series blocking capacitor) required at OUTPUT. 150pF NPO recommended.

