

# VFTX300

## TCXO with Voltage Control Option

### 3.2x2.5mm Surface Mount, Clipped Sine

#### Features

- Frequency range of 10MHz to 40MHz
- Very Low Phase Noise
- Excellent Frequency Stability
- Clipped Sine Wave Output
- Low Aging, Vacuum sealed Crystal
- Available as a VCXO



#### Applications

- Optical Networking, SONET/SDH
- 10 Gbit Ethernet
- Frequency Translation

#### Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		10		40	MHz	
Frequency Stability	$\Delta F/F$	Vs. Operating Temperature				ppm	See "How to Order"
		Vs. Supply Voltage Vs. Aging / Year			$\pm 0.2$ $\pm 1$	ppm/V ppm	
Operating Temperature Range	T		-40°		+85°	°C	Order Code G See "How to Order"
Output		Clipped Sine	0.8Vp-p minimum				
Load		10K $\Omega$ //10pF					
Supply Voltage	V <sub>cc</sub>		2.85 2.35	3.0 2.5	3.15 2.625	V	Order Code F Order Code G
Supply Current	I <sub>cc</sub>				2.0	mA	
Voltage Control	V <sub>c</sub>		0.5	1.5	2.5	V	
Input Impedance			500			K $\Omega$	
Pullability						ppm	See "How to Order"
SSB Phase Noise		@100 Hz @ 1 KHz @10 KHz		-115 -135 -148		dBc/Hz	Fo=13MHz
Start up				2	10	ms	

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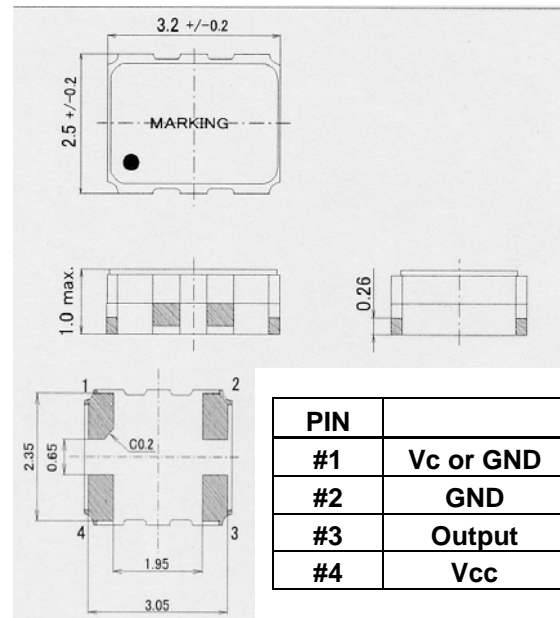
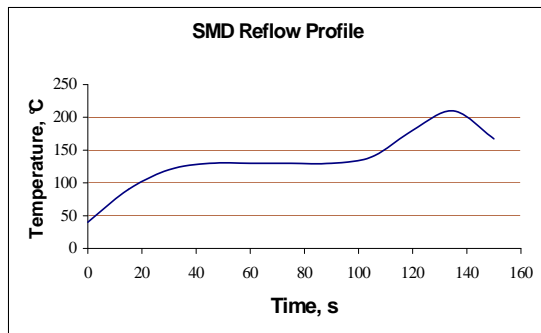
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#### Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Break Down Voltage	V <sub>cc</sub>		-0.6		6.0	V	
Storage Temperature	T <sub>s</sub>		-55°		+125°	°C	
Control Voltage	V <sub>c</sub>		-0.6		V <sub>cc</sub> +0.6	V	

#### 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	230°C for 90s max
Hermetic Seal	Leak rate less than $5 \times 10^{-8}$ atm.cc/s of helium (crystal only)



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### How to Order



Stability		Temperature Range		Vcc		Pullability	
Code	Specification	Code	Specification	Code	Specification	Code	Specification
L	±0.5ppm	A	0°C to 50°C	F	3.0V	T	TCXO
K	±1.0ppm	C	-10°C to +60°C	G	2.5V	A	±5ppm
J	±1.5ppm	D	-20°C to 70°C			B	±8ppm
H	±2.0ppm	F	-30°C to +85°C			C	±10ppm
G	±2.5ppm	G	-40°C to 85°C			D	±12ppm

**Freq. Vs Temp Availability**

Temp (°C)	L: 0.5ppm	K: 1.0ppm	J: 1.5ppm	H: 2.0ppm	G: 2.5ppm
0°C to +50°C	◆	◆	◆	◆	◆
-10°C to +60°C	◆	◆	◆	◆	◆
-20°C to +70°C	◆	◆	◆	◆	◆
-30°C to +85°C	o	◆	◆	◆	◆
-40°C to +85°C		o	◆	◆	◆

o case by case  
◆ available

