VFVX213
VCXO Sine Wave
13mm x 13mm SMD

CTS Valpey Corporation

Features

- 1 GHz Output Frequency
- Low Jitter and Phase Noise
- Low Aging, Vacuum Sealed Crystal

RoHS Status

RoHS 6/6

Applications

- Wireless Communication
- 10 Gigabi Ethernet
- Broadband Access

Electrical Specifications *

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Output Frequency Range	Fout		150		1000	MHz	
Frequency Stability	ΔF/F	Vs. Operating Temperature -40°C to +85°C			± 20	ppm	
		Vs. Supply Voltage Vs. Aging / Year		± 3 ± 1		ppm/V ppm	First Year
Operating Temperature Range	T		-40°		+85°	°C	
Output		Signal	Sine Wave				
Output Level	Po		7	10		dBm	
Voltage Control	Vc		0		3.3	V	Vcc = 3.3V
Input Impedance		*Fm < 10Khz*	50K			Ω	
K_{VCO}		*@25°C*		20		ppm/V	
APR		*Overall*	±20			ppm	
Deviation slope		*Monotonic positive*					
Linearity			-10		+10	%	
Modulation BW			10			KHz	3dB BW

*V_{CC} = 3.3V ; Ta = +25°C unless otherwise specified.

Electrical Specifications *

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
SSB Phase Noise		100Hz 1kHz 10kHz 100kHz		-110 -136 -150 -156		dBc/Hz	@ 320 MHz
SSB Phase Noise		100Hz 1kHz 10kHz 100kHz		-101 -128 -146 -150		dBc/Hz	@ 500 MHz
SSB Phase Noise		100Hz 1kHz 10kHz 100kHz		-85 -117 -138 -143		dBc/Hz	@ 1GHz
Supply Voltage	V_{CC}		3.15	3.30	3.45	V	
Input Current	I_{CC}	50 Ohms Load			75	mA	
Start up time				2	10	ms	
Subharmonics				-43	-36	dBc	

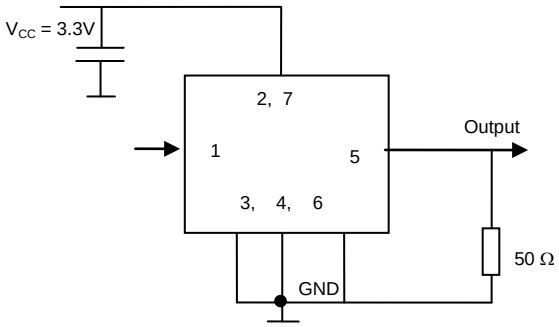
Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Break Down Voltage	V_{CC}		-0.5		4.6	V	
Storage Temperature	T_S		-55		+85	°C	

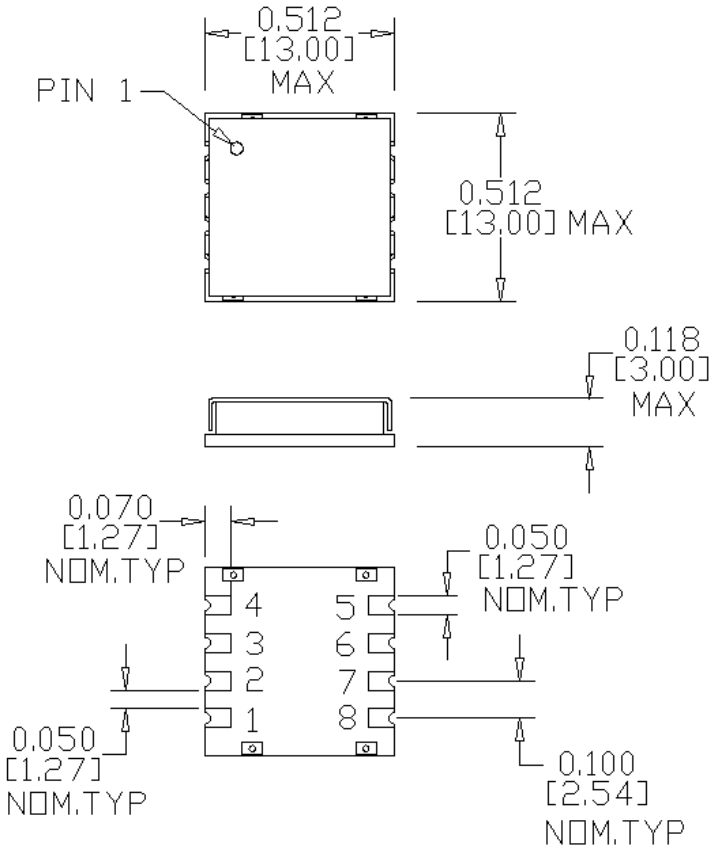
Environmental and Mechanical

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 $5x10^{-8}$ atm.cc/s of helium (crystal only)
Termination	Gold flash
Marking	Epoxy ink or laser engraved

Connection Diagram



Mechanical Outline



Pin Assignments

Pin #	Connection
1	Control Voltage
2	Vcc
3	Gnd
4	Gnd
5	Output
6	Gnd
7	Vcc
8	N/C

How to Order

VFVX213 – Frequency, MHz