

VFVX120

VCXO Low Jitter, 9x14mm SMD, PECL / LVPECL

Features

- 19 MHz to 200 MHz Frequency Range
- Ultra Low Jitter and Phase Noise
- Absolute Pull Range of ± 50 ppm

Applications

- Optical Networking, SONET / SDH
- 10 Gigabit Ethernet
- Broadband Access



Part Dimensions: 14.5 X 9.7 X 6.3 mm

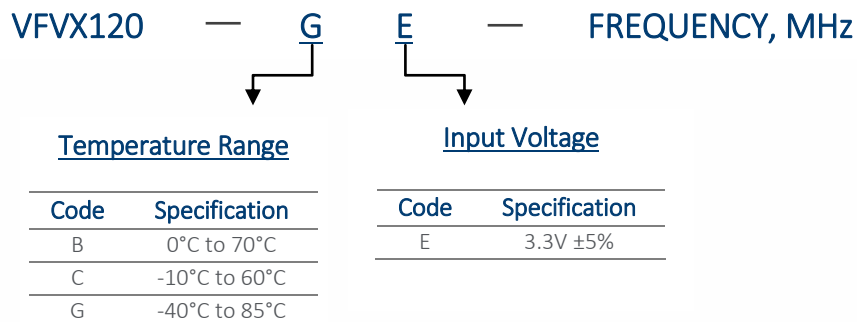
Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		19	-	200	Mhz	-
Frequency Stability	$\Delta F/F$	Vs. Operating Temp B: 0°C to +70°C C: -10°C to +60°C G: -40°C to +85°C	-	-	± 20 ± 20 ± 30	ppm	-
		Vs. Supply Voltage	-	± 3	-	ppm/V	
		Vs. Aging / Year	-	± 1	-	ppm	First Year
Operating Temperature Range	T		0° -10° -40	-	+70° +60° +85°	°C	Order Code B Order Code C Order Code G
Output		Signal			PECL / LVPECL		
Supply Voltage	Vcc		3.15	3.30	3.45	V	Order Code E
Voltage Control	Vc		0	-	3.3	V	Vcc = 3.3V
Input Impedance		Fm < 10Khz		>50		K Ω	-
KVCO		@25°C	-	± 35	-	ppm/V	-
APR		Overall	± 35	± 50	-	ppm	-
Deviation Slope		Monotonic Positive	-	-	-	-	-
Linearity			-	-	10	%	-
Modulation BW			>10	-	-	KHz	3dB BW
Supply Current	Icc	No Load	-	-	50	mA	@155MHz
Load		50 Ohm to Vcc-2V or Thevenin Equivalent Bias Required					
Duty Cycle		@ 50%	45	50	55	%	-
Rise / Fall Time	Tr/Tf	20% to 80%	-	-	0.6	ns	-
Logic "1" Level	Voh		Vcc-0.96	-	Vcc-0.81	V	-
Logic "0" Level	Vol		Vcc-1.85		Vcc-1.65	V	-
Start up time			-	2	10	ms	-

Electrical Specifications (continued)

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Phase Jitter		1 σ	-	0.2	0.5	Ps	-
SSB Phase Noise		100Hz		-90			@
		1KHz	-	-115	-	dBc/Hz	155.52MHz
		10KHz		-135			
		100KHz		-145			
Subharmonics			-	-50	-40	dBc	-
Enable / Disable Function			Input HIGH (>2.5V): DISABLED Input LOW (<0.5V) or floating: ACTIVE				
Enable / Disable Time	Te/Td		-	-	100	ns	-

How to Order



Absolute Maximum Ratings*

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Break Down Voltage	V _{cc}	-	-0.5	-	3.9	V	-
Storage Temp	T _s	-	-55	-	+95	°C	-
Control Voltage	V _c	-	-1	-	7	V	-

* Limits represent values that if exceeded may cause damage.

Maximum Operable Ratings*

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Break Down Voltage	V _{cc}	-	-0.5	-	3.6	V	-
Storage Temp	T _s	-	-55	-	+85	°C	-
Control Voltage	V _c	-	-0.5	-	3.9	V	-

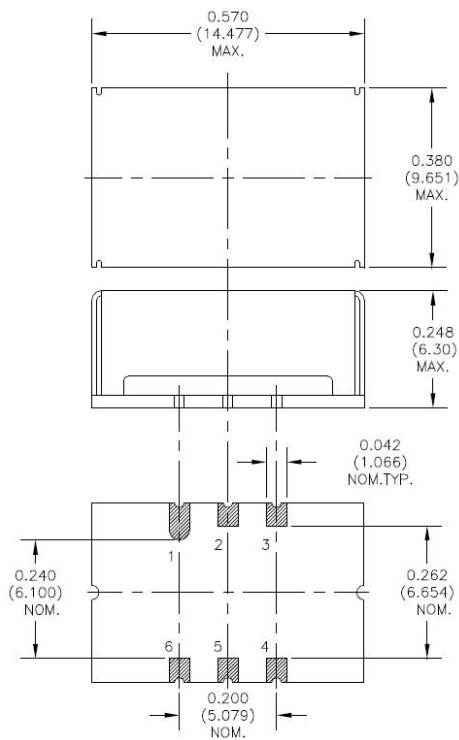
*If these values are exceeded CTS cannot guarantee oscillator performance.

Environmental and Mechanical

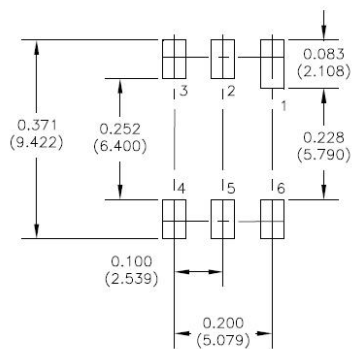
Parameter	Specification
Mechanical Shock	Per MIL-STD-202, Method 213, Condition E
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Vibration	Per MIL-STD-883, Method 2007, Condition A
Soldering Conditions	260°C for 10s max
Hermetic Seal	Leak rate less than 5×10^{-8} atm.cc/s of helium (crystal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

Mechanical Specifications

Package Drawing



Pad Layout



Pin Assignments

Pin #	Connection
1	Vc
2	Negative Enable
3	Case, GND
4	Output
5	Comp. Output
6	Vcc

This product is specified for use only in standard commercial applications. Supplier disclaims all express and implied warranties and liability in connection with any use of this product in any non-commercial applications or in any application that may expose the product to conditions that are outside of the tolerances provided in its specification.