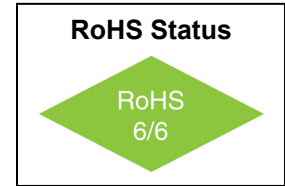


**VFXO100**  
**XO**  
**9x14mm SMD, LVPECL**

**Features**

- 180MHz to 1.0GHz frequency range
- Ultra low jitter and phase noise
- Low aging, vacuum sealed crystal



**Applications**

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

**Replaces Part Number: VFT5C**

**Electrical Specifications \***

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		180		1,000	MHz	
Frequency Stability	$\Delta F/F$	Vs. Operating Temperature B: 0°C to +70°C G: -40°C to +85°C			$\pm 20$ $\pm 20$	ppm	
		Vs. Supply Voltage Vs. Aging / Year		$\pm 3$ $\pm 1$		ppm/V ppm	First Year
Operating Temperature Range	T		0° -40°		+70° +85°	°C	Order Code B Order Code G
Output		Signal	LVPECL Unterminated				
Phase Jitter		1 $\sigma$		0.2	0.5	ps	
SSB Phase Noise		100Hz		-93		dBc/Hz	@ 155.52MHz
		1kHz		-118			
		10kHz		-142			
		100kHz		-145			
Supply Voltage	V <sub>CC</sub>		3.15	3.30	3.45	V	
Input Current	I <sub>CC</sub>	50 Ohms Load			75	mA	

\*V<sub>CC</sub> = 3.3V; Ta = +25°C unless otherwise specified.

**VFXO100**  
**XO**  
**9x14mm SMD, LVPECL**

**Electrical Specifications \***

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Load	50 Ohms to $V_{CC}-2V$ or Thevenin Equivalent Bias Required						
Duty Cycle		@ 50%	45	50	55	%	
Rise / Fall Time	$T_r/T_f$	20% to 80%			0.5	ns	
Logic "1" Level	$V_{OH}$		$V_{CC}-0.96$		$V_{CC}-0.81$	V	
Logic "0" Level	$V_{OL}$		$V_{CC}-1.85$		$V_{CC}-1.65$	V	
Start up time				2	10	ms	
Subharmonics				-50	-40	dBc	
Enable / Disable Function	Input HIGH (>2.5V): DISABLED Input LOW (<0.5V) or floating: ACTIVE						
Enable / Disable Time	$T_E/T_D$				100	ns	

\* $V_{CC} = 3.3V$ ;  $T_a = +25^{\circ}C$  unless otherwise specified.

**Absolute Maximum Ratings**

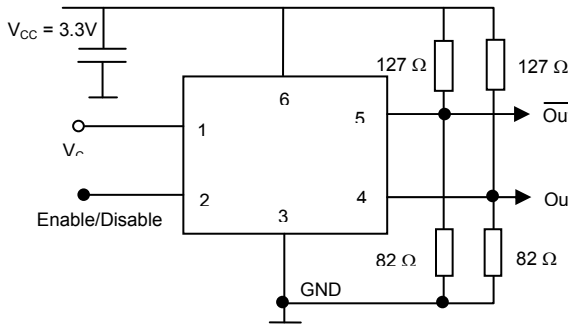
Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Break Down Voltage	$V_{CC}$		-0.5		7.0	V	
Storage Temperature	$T_s$		-55		+85°	°C	

**Environmental and Mechanical**

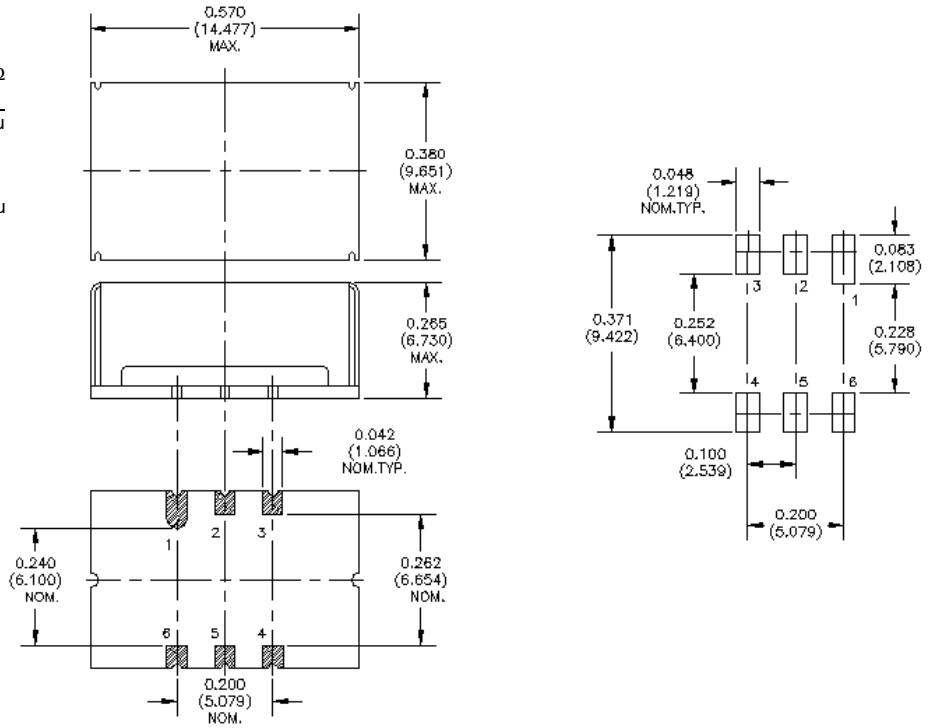
Parameter	Specification
Mechanical Shock	Per MIL-STD-202, Method 213, Condition E
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Vibration	Per MIL-STD-883, Method 2007, Condition A
Soldering Conditions	260°C for 10s max
Hermetic Seal	Leak rate less than $5 \times 10^{-8}$ atm.cc/s of helium (crystal only)
Termination	Gold flash
Marking	Epoxy ink or laser engraved

# VFXO100 XO 9x14mm SMD, LVPECL

## Connection Diagram



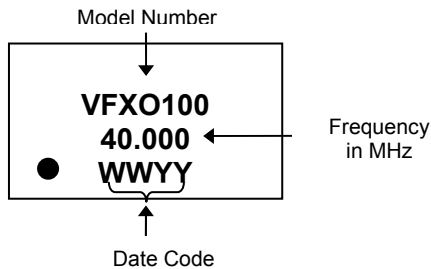
## Mechanical Outline



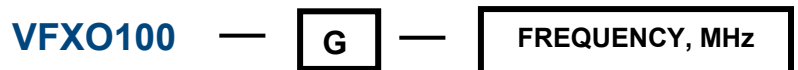
## Pin Assignments

Pin #	Connection
1	NC
2	Enable
3	Case, GND
4	Output
5	Output
6	V <sub>CC</sub>

## Marking Specification



## How to Order



### Temperature Range

Code	Specification
B	0°C to 70°C
G	-40°C to 85°C