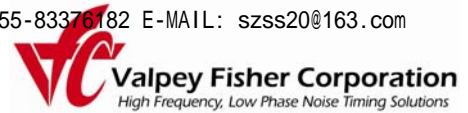


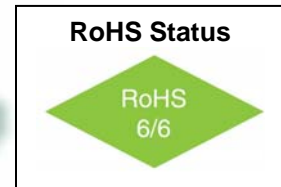
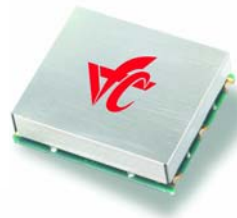
Stratum 3 TCXO to 1.0 GHz

25.4x22mm SMD, LVPECL



Features

- Stratum 3 Timing Source
- 200MHz to 1.0 GHz Frequency Range
- Ultra Low Jitter and Phase Noise: -118 dBc/Hz @ 1KHz
- Low Power: <220mW typical



Applications

- Sonet / SDH / ATM
- 10 Gigabit Ethernet
- Digital Wireless Reference

Description

The VFTX140 is a Stratum 3 TCXO capable of providing an output frequency up to 1 GHz. The temperature stability is less than 0.28 ppm over a temperature range of 0°C to +70°C. Operating with a +3.3 volt power supply the device typically consumes 220 mW. The device contains an internal voltage regulator for improved stability and noise performance. The output is configured as a differential LVPECL signal and requires external termination resistors. The VFTX140 is available in a 25.4mm x 22mm surface mount package.

Electrical Specifications

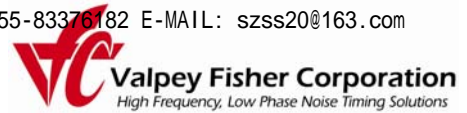
Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		200		1,000	MHz	
Frequency Stability	$\Delta F/F$	Vs. Operating Temperature 0°C to +70°C			±0.28	ppm	
		Overall conditions including aging 20 years			±4.6	ppm	
Operating Temperature Range	T		0°		+70°	°C	
Output		LVPECL					
Supply Voltage	Vcc		3.15	3.30	3.45	V	
Voltage Control	Vc		0		3.3	V	
Input Impedance			10K			Ω	
APR			± 5			ppm	
Deviation slope		<i>Monotonic positive</i>					
Linearity			-10		+10	ppm/V	
Modulation BW			10			Hz	3dB BW



VFTX140

Stratum 3 TCXO to 1.0 GHz

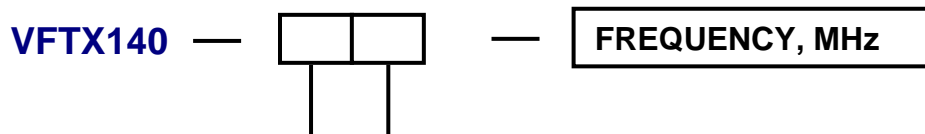
25.4x22mm SMD, LVPECL



Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Input Current	Icc	50 Ohm Load		65	80	mA	
Load	50 Ohm to Vcc-2V or Thevenin Equivalent						
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	
Phase Jitter		12KHz to 20MHz		0.25	0.5	ps	
SSB Phase Noise		100Hz 1KHz 10KHz 100KHz		-90 -118 -142 -145		dBc/Hz	@ 622.08 MHz
Setability					0.1	ppm	
Setability Voltage			1.3		1.7	V	
Enable / Disable Function	Input HIGH (>2.5V): DISABLED Input LOW (<0.5V) or floating: ACTIVE					LVCMOS	
Enable / Disable Time	Te/Td				100	ns	

How to Order



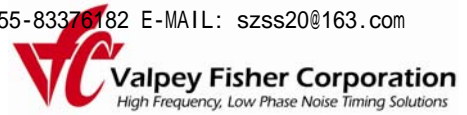
Temperature Range	
Code	Specification
B	0°C to 70°C

Supply Voltage	
Code	Specification
E	3.3V ± 5%



Stratum 3 TCXO to 1.0 GHz

25.4x22mm SMD, LVPECL



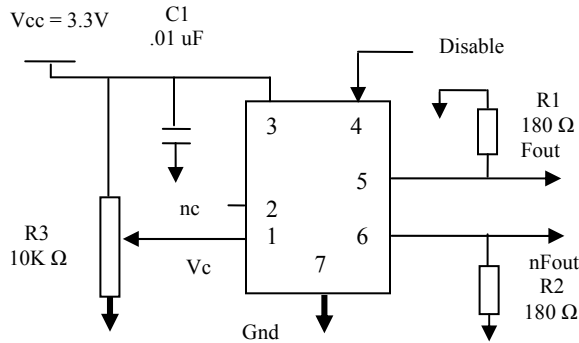
Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Break Down Voltage	Vcc		-0.5		5.5	V	
Storage Temperature	Ts		-55		+105	°C	
Control Voltage	Vc		-0.5		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	260°C for 10s max
Hermetic Seal	Leak rate less than 5×10^{-8} atm.cc/s of helium (crystal only)

Connection Diagram



Pin #	Connection
1	Vc
2	N/C
3	Vcc
4	N/C
5	Output
6	Output
7	GND

Mechanical Outline

