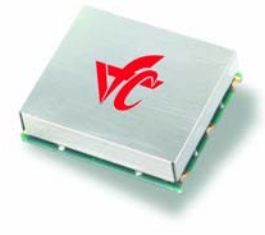
VFFT200
Frequency Translator
With Holdover to 200MHz

Valpey Fisher Corporation
High Frequency, Low Phase Noise Timing Solutions

Features

- Low Jitter and Phase noise
- Automatic Holdover Switching
- 10ppm Holdover Stability
- Low Profile SMD package



RoHS Status

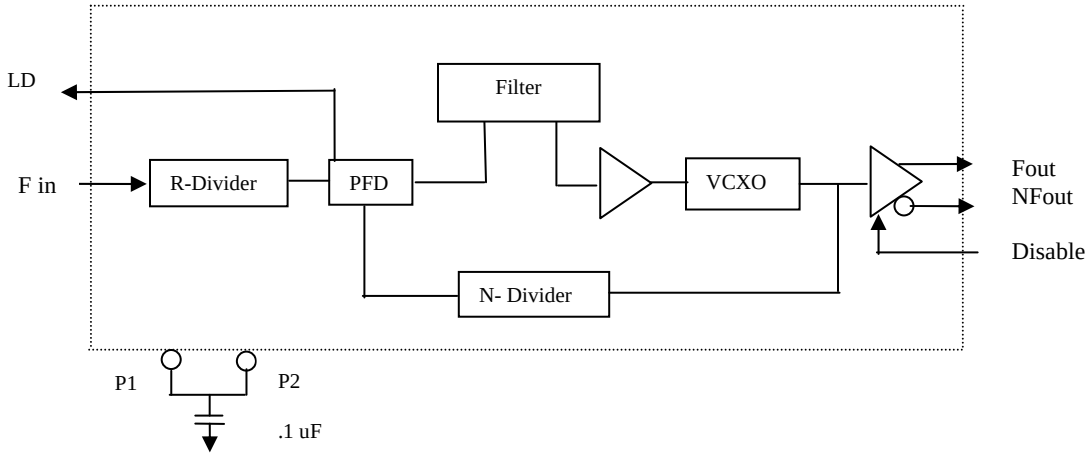
RoHS 6/6

Applications

- Optical Networking, Sonet / SDH / ATM
- 10 Gigabit Ethernet
- Broadband Access

Description

The VFFT200 is a Frequency Translator which accepts a predetermined input frequency from 8KHz to 200 MHz and provides an output frequency from 50 MHz to200 MHz. The output will be frequency locked to the input frequency during normal operation. In the event the input frequency fails, the output frequency will remain within 20 ppm of the nominal frequency. A Lock Detect output signal indicates an “out of lock” condition. The device is implemented with a Phase Locked Loop where all Loop Filter components are integrated into the module. The VFFT200 is offered in a 20.5mm x 19.5mm x 3.81 mm surface mount package.



Block Diagram

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Absolute Maximum Ratings

Parameter	Min	Max	Units
Power Supply Voltage	-.50	+4.0	Volts
Storage Temperature	-45	+90	º C

Operating Specification

Parameter	Specification	Notes
Supply Voltage	3.3 Volts +/- 5%	
Supply Current	80 mA (max)	
Output Frequency	50 to 200 MHz	LVPECL
Output Level Logic "1"	Vcc - .9V (typ)	
Output Level Logic "0"	Vcc – 1.75 V (typ)	
Jitter (rms)	1 ps(max)	12 KHz to 20 MHz
Input frequency Fin	.008 to 200 MHz	
Input Frequency Tracking	5 ppm (min) / 10 ppm (max)	
Input configuration	Single-ended, AC coupled	
Input Level	400Vp-p(min) / 3.3Vp-p (max)	
Modulation Bandwidth	4 Hz (Typ)	
Start up Time	100 mS (max)	To Holdover accuracy
Initial Lock Time	2 sec (max)	To a valid Fin
Lock Detect Output (LD)	Logic "1" : In lock Logic "0" : Out of lock	LVCMOS
Frequency Stability	10 ppm (typ) 20 (max)	
Operating Temperature Range	-40 ºC to +85 ºC	

Notes
1. The input frequency must be within 500 ppm of final value before asserting the "Select Inputs."

Pin Assignments

Pin #	Symbol	Description	Notes
1	Gnd	Ground	
2	N/C	No Connection	
3	N/C	No Connection	
4	Fin	Input Frequency	
5	DNC	Do not connect	
6	LD	Lock Detect	Drive : 1 LVCMOS Load
7	DNC	Do not connect	
8	Vcc	3.3 Volt Power Supply	
9	Gnd	Ground	
10	n Fout	Complementary Output Frequency	
11	Fout	Output Frequency	
12	OD	Output Disable	
13	P1	Must be connected to P2	Add .1 uF Capacitor
14	P2	Must be connected to P1	Add .1 uF Capacitor

Mechanical Outline