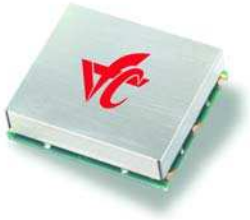
VFCG100
Quad Output Clock Generator

Features

- 300 MHz to 1.5 GHz Frequency Range
- 4 Selectable Output Frequencies
- Stability: < 1 ppm
- Low Profile SMD package



RoHS Status

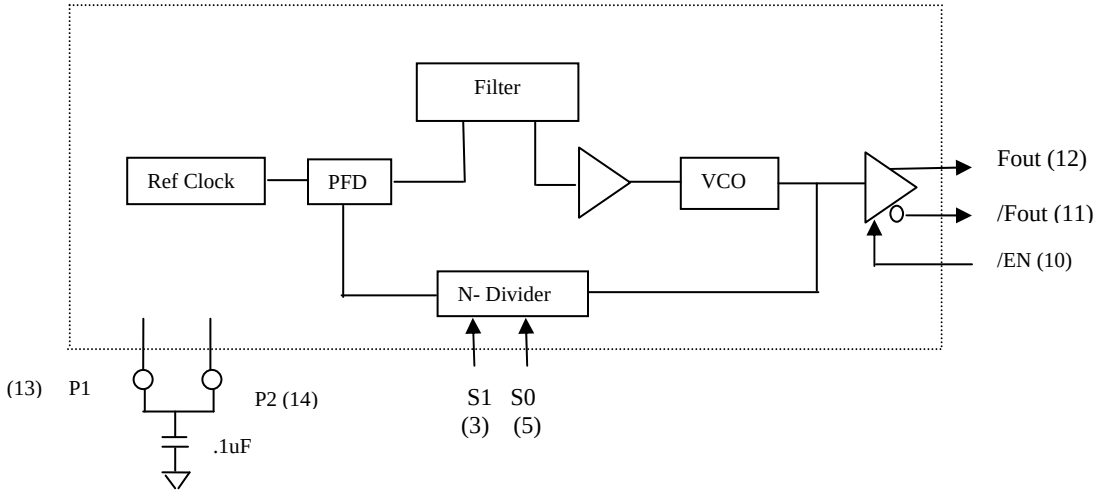
RoHS 6/6

Applications

- Optical Networking, Sonet / SDH / ATM
- 10 Gigabit Ethernet
- Forward Error Correction (FEC)

Description

The VFCG100 is a Clock Generator which provides an output frequency up to 1.5 GHz. Up to four preset output frequencies can be selected by asserting the frequency select inputs [S1:S0]. The VFCG100 is offered in a 19.5mm x17mm surface mount package. Consult factory for frequency selections.



Block Diagram

Valpey Fisher Corporation
High Frequency, Low Phase Noise Timing Solutions

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	110 mA (max)	
Output Frequencies (F0) – F0(3)	300 MHz (min) to 1500 MHz (max)	See Table 2
Output Frequency Range	100MHz (max)	Fout Min to Fout Max
Output Configuration	Differential LVPECL	Unterminated
Jitter (rms)	0.8 pS (typ)	50 KHz to 80 MHz
Accuracy	+/- 5 ppm	@ 25 ºC
Temperature Stability	+/- 1ppm	-40 ºC to + 85 ºC
Start up Time	100 mS (max)	
I/O Select Inputs	S1: S0	LVCMOS
Enable / Disable Input	Logic “0” or Floating: Output Enabled Logic “1”: Output Disabled	
Operating Temperature Range	-40 ºC to +85 ºC	

Pin Assignments

Pin #	Symbol	Description	Notes
1	DNC	Do not connect to this pad	
2	Gnd	Ground	
3	S1	Output Select (msb)	
4	DNC	Do not connect to this pad	
5	S0	Output Select (lsb)	
6	DNC	Do not connect to this pad	
7	DNC	Do not connect to this pad	
8	Vcc	3.3 Volt Power Supply	
9	Gnd	Ground	
10	/OE	Output Disable	
11	/Fout	Complimentary Output	
12	Fout	Output	
13	P1	Connect to P2 externally	Add .1 uF Capacitor
14	P2	Connect to P1 externally	

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Ordering Information:
Once Input and Output frequencies have been submitted and approved, the Factory will assign a part number.

VFCG100 - suffix

Sample Frequencies **Table 2**

P/N suffix	S1:S0	Output Frequency (MHz)		P/N suffix	S1:S0	Output Frequency (MHz)
-001	00	622.080		-002	00	1065.00
	01	644.5314			01	1066.00
	10	669.32658			10	1067.00
	11	693.48315			11	1068.00
-003	00	666.5192		-004	00	900.00
	01	669.32658			01	910.00
	10	693.48315			10	920.00
	11	704.38			11	930.00
-005	00	622.080		-006	00	800.00
	01	625.000			01	820.00
	10	666.5192			10	840.00
	11	690.5692			11	860.00
-007	00	1500				
	01	1500				
	10	1500				
	11	1500				

Mechanical Outline