

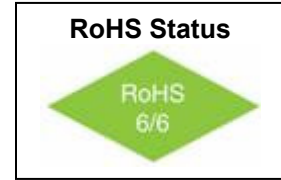
VFCG100

Quad Output Clock Generator



Features

- 300MHz to 1.5GHz frequency range
- 4 selectable output frequencies
- Stability: < 1 ppm
- Low power: <220mW typical
- Low profile SMD package

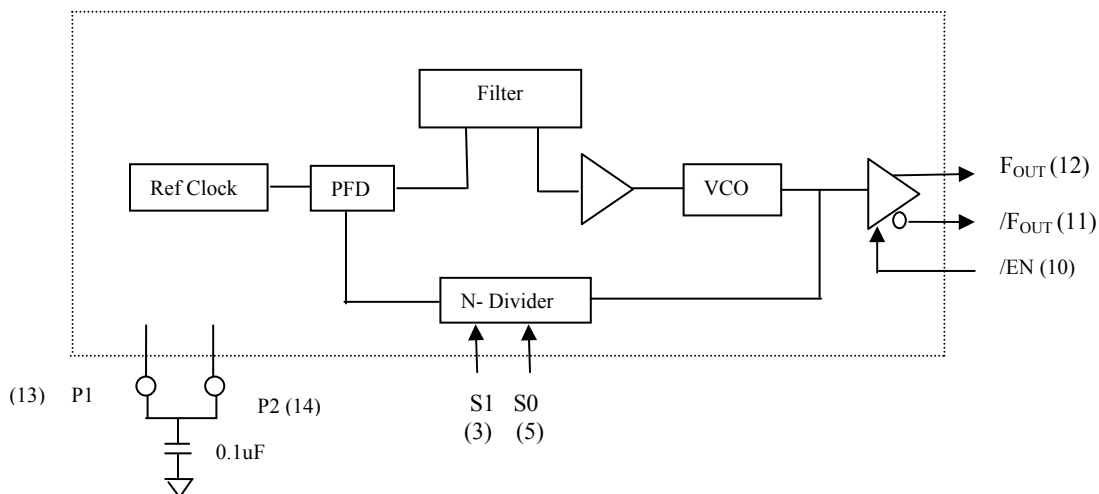


Applications

- 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 1.5GHz. 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



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Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Output Frequencies	F_{OUT}	(F0) – F0(3)	300		1500	MHz	See table 2
Output Frequency Range	F				100	MHz	$F_{OUT \text{ min}}$ to $F_{OUT \text{ max}}$
Frequency Stability	$\Delta F/F$	Vs. Operating temperature			± 1	ppm	@ 25°C
Operating Temperature	T		-40		+85	°C	
Output		Differential LVPECL					Unterminated
Supply Voltage	V_{CC}		3.135	3.3	3.465	V	
Supply Current					80	mA	
RMS Jitter		50kHz to 80MHz		0.2		ps	
Accuracy				± 5		ppm	@ 25°C
Start Up Time					300	ms	
I/O Select Inputs		S1: S0					LVMOS
Tristate Enable/Disable Input		Logic "0" or Floating: Output Enabled Logic "1": Output Disabled					

Absolute Maximum Ratings

Parameter	Min	Max	Units
Power Supply Voltage	-0.5	+4.0	Volts
Storage Temperature	-45	+90	°C



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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	V _{CC}	3.3 volt power supply	
9	GND	Ground	
10	/OE	Output disable	
11	/F _{OUT}	Complimentary output	
12	F _{OUT}	Output	
13	P1	Connect to P2 externally	Add 0.1 uF capacitor
14	P2	Connect to P1 externally	

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

Mechanical Outline

