

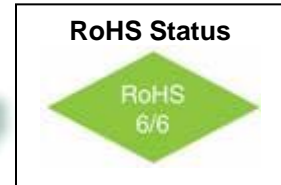
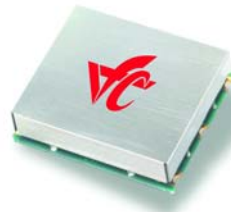
VFJA130

Jitter Attenuator to 200 MHz

25.4x22mm SMD, CMOS

Features

- 200 MHz Output Frequency Range
- Ultra Low Jitter: < 0.18 ps
- Meets OC-192 Jitter transfer, generation, and tolerance
- Low Power: <220mW typical
- Low Profile SMD package



Applications

- Long Haul, Metro, Access Communications
- 10 Gigabit Ethernet
- Wireless Reference

Description

The VFJA130 is a Jitter Attenuator capable of providing an output frequency up to 200 MHz. An internal synthesizer locks to the input reference clock and multiplies it up to the desired output frequency. The output frequency is determined by a VCXO designed for low phase noise. The +5 volt option has an internal voltage regulator for improved stability and noise performance. The output is configured to provide CMOS logic levels. The VFJA130 is available in a 25.4mm x 22 mm surface mount package.

Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Input Frequency	Fref		0.008		100	MHz	
Output Frequency	Fout		10		200	MHz	
Operating Temperature Range	Ta		0° -40°		+70° +85°	°C	Order code B Order code G
Supply Voltage	Vcc	Order Code D Order Code E	4.75 3.15	5.00 3.30	5.25 3.45	V	Optional Standard
Jitter		12KHz to 20MHz		0.18	.35	ps (rms)	
SSB Phase Noise	ϕ_n	100Hz 1KHz 10KHz 100KHz		-110 -135 -152 -158		dBc/Hz	@ 100MHz
Modulation Bandwidth	MBW			10		Hz	

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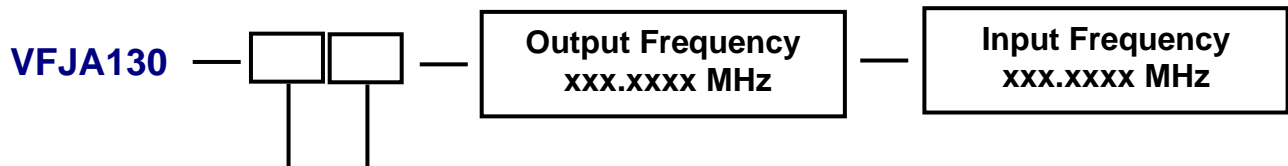
Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Current	Icc			60	70	mA	
Output Level Logic "1"	Voh	Ioh= -100uA	Vcc-0.1	Vcc		V	
Output Level Logic "0"	Vol	Iol= 100uA		0	0.1	V	
Lock Range			35			ppm	
Input Level		AC coupled internally	.4		3.3	V p-p	

Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Voltage	Vcc		-0.5		+5.5	V	
Storage Temperature	Ts		-55		+105°	°C	

How to Order



Temperature Range

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

Supply Voltage

Code	Specification
D	5V ± 5%
E	3.3V ± 5%

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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	Fref
2	N/C
3	Vcc
4	Fout
5	N/C
6	N/C
7	GND

Mechanical Outline