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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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VFJA1491C

Jitter Attenuator / Clock Generator

Features

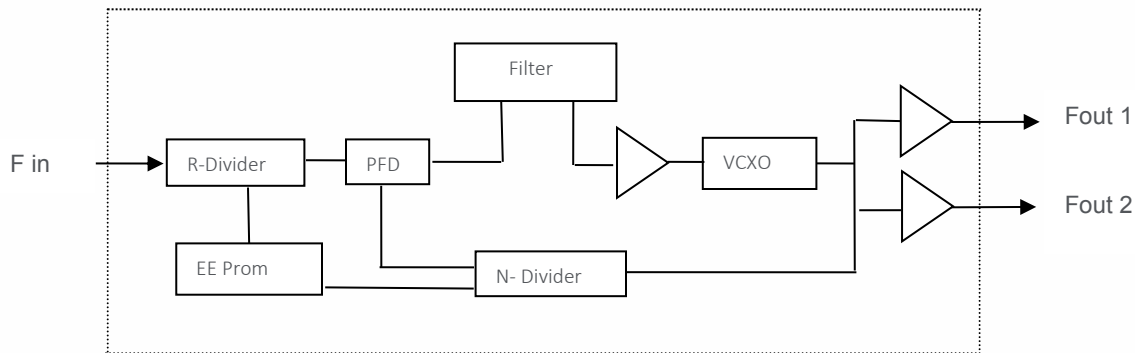
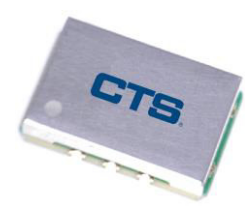
- Frequency Range 10MHz to 200 MHz
- 14mm x 9mm Surface Mount Package
- Dual LVCMOS Outputs
- Low Jitter/Phase Noise
- Tape and Reel Packaging

Applications

- Telecom Switching
- Wireless Communication
- Timing over Packet

Description

The VFJA1491P is a Jitter Attenuator which accepts an input reference clock up to 200 MHz and provides an output frequency up to 200 MHz. The output frequency is determined by a VCXO designed for low phase noise. The VFJA1491P is available in a 14 mm x 9 mm surface mount package.



Block Diagram



Electrical Specifications

Parameter	Symbol	Conditions & Remarks	Min	Typical	Max	Unit	
Input Frequency	F_{in}	Slew Rate 1.0V/ns	10	-	200	MHz	
Input Level		DC coupled internally	0.4		3.3	Vp-p	
Output Frequency	F_{out}		10		200	MHz	
Output Voltage Levels	V_{OH}	$R_L = 10K \Omega // 10pF$	$.9 V_{CC}$		V_{CC}	V	
	V_{OL}		0		$.1V_{CC}$	V	
Duty Cycle		@ 50% V_{out} (p-p)	45		55	%	
Rise / Fall Times	T_r/T_f	20% to 80%			0.5	ns	
Lock Range	APR		± 20			ppm	
Modulation BW	MBW		10			Hz	
Operating Temperature Range	T_a		-40		+85	$^{\circ}C$	
Jitter $F_o < 50MHz$		12kHz to 20 MHz		190	220	fs	
Jitter $F_o > 100 MHz$				85	100		
SSB Output Phase Noise @ 25 MHz	Φ_n	100 Hz offset		-117		dBc/Hz	
		1K Hz offset		-132			
		10K Hz offset		-153			
		100K Hz offset		-160			
		1M Hz offset		-161			
Start up Time				2	3	s	
Supply Voltage			+3.15	3.30	+3.45	V	
Input Current				85	100	mA	
Enable / Disable		Logic "0" (< 0.5V or floating) Output Enabled Logic "1" (> 2.2V) Output Disabled					LVC MOS
Enable/Disable Time					100	ns	

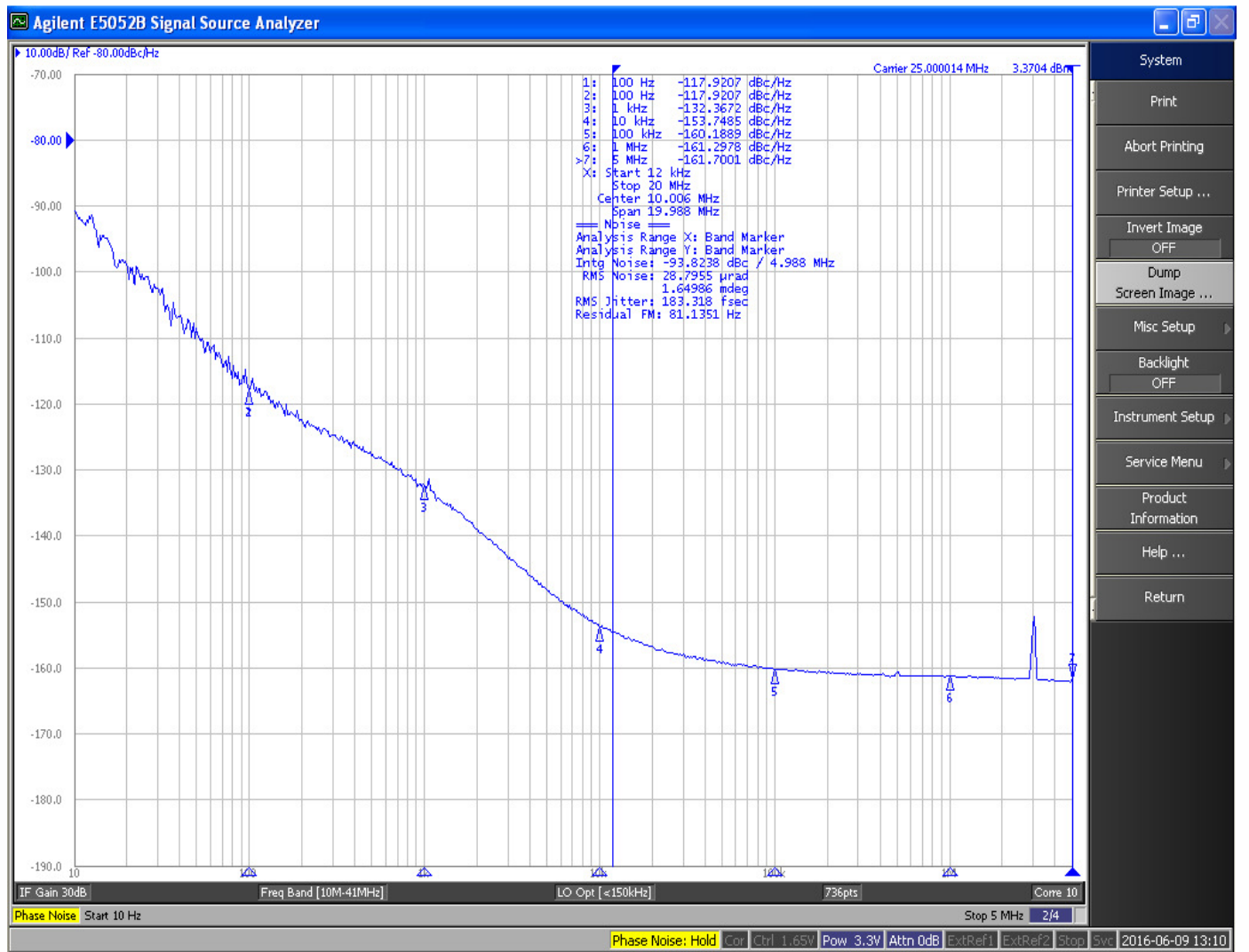
Absolute Maximum Ratings

Parameter	Conditions & Remarks	Min	Typical	Max	Unit
Supply Breakdown Voltage	V_{CC}	-0.5		+4.0	V
Storage Temperature	T_s	-50		+95	$^{\circ}C$

Mechanical and Environmental

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)

Phase Noise Performance @ Fout = 25.00 MHz



Notes:



Standard Frequencies

Part Number	Output Frequency	Input Frequency	Loop BW
VFJA1491C-125.000M-25.000M	125.00 MHz	25.00 MHz	15 Hz
VFJA1491C-100.000M-10.000M	100.00 MHz	10.00 MHz	15 Hz
VFJA1491C-25.000M-25.000M	25.00 Mhz	25.00 MHz	35 Hz

Consult factory for more frequency and bandwidth options.

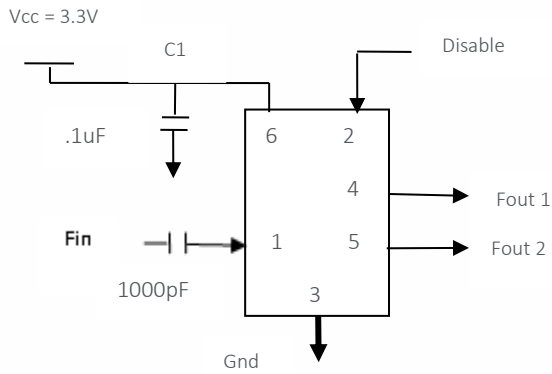
How to Order

Model Number	Output Frequency	Input Frequency
VFJA1491P	XXX.XXX M	XXX.XXX M

Marking

VFJA1491C xxx.xxx MHz (Fout) xxx.xxx MHz (Fin) ● XXYY (Date)

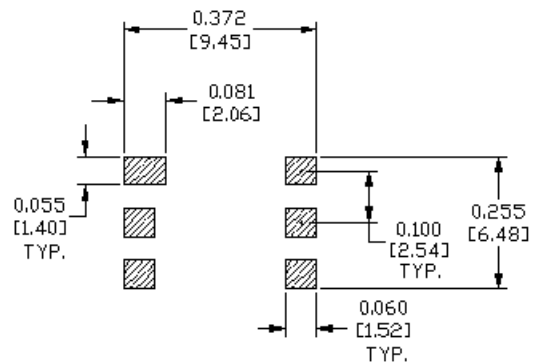
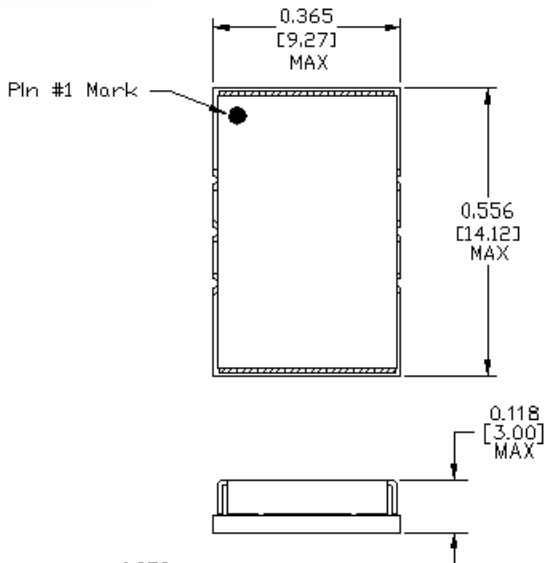
Connection Diagram



Pin Assignments

Pin #	Connection
1	Fin
2	Disable
3	Case, Gnd
4	Fout 1
5	Fout 2
6	Vcc

Mechanical Specifications



PCB Land Pattern
9mm x 14mm Body Size

