



Features and Benefits

Low phase noise and jitter < 0.4ps
Wide range of output frequency up to 800 MHz

Typical Applications

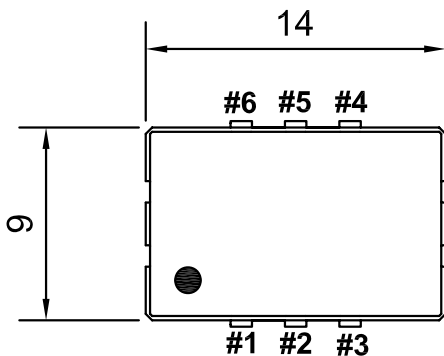
10 Gigabit Ethernet
SDH SONET, Fiber Channel broadband access
DSL, GPON

Description

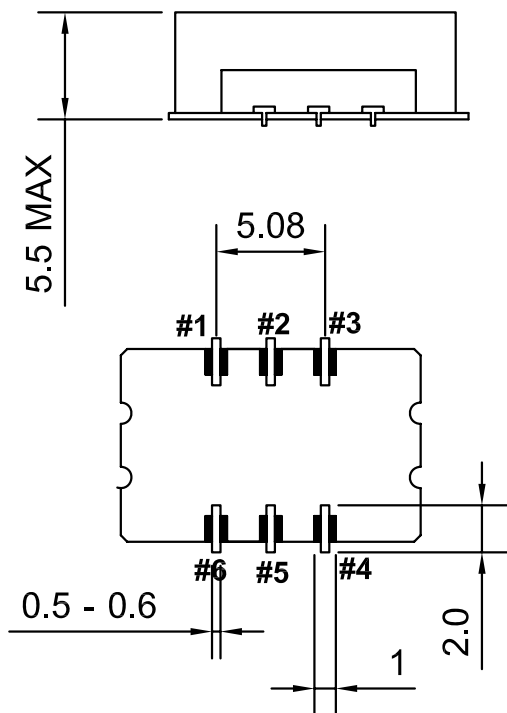
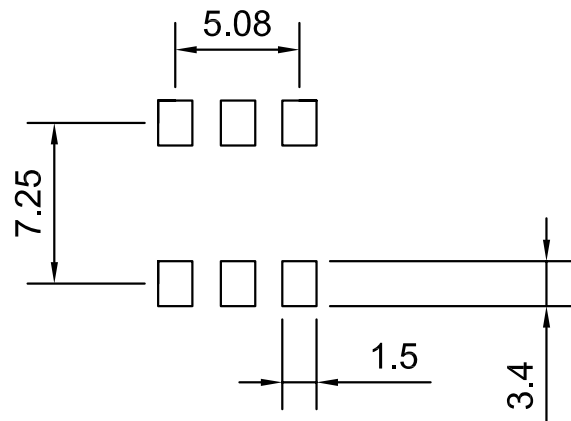
VCXO914ZLP1 offers wide frequency range, low phase noise and low jitter, all in one simple package, ideal for various broadband access and communication systems.

Mechanical Drawing & Pin Connections

Drawing No: MD150098-5



Solder pattern



Pin Connections:

- #1. Vc (Control Voltage)
- #2. E/D or not connected
- #3. GND
- #4. RF Output
- #5. Complementary Output
- #6. Vdc

unit in mm

1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Frequency Range	F		100		800	MHz	
Standard Frequencies			120.00, 122.88, 155.52, 156.25, 307.20, 320.00, 368.64, 460.80, 491.52, 614.40, 622.08			MHz	
Output Waveform			LVPECL				
Output Voltage			$V_{OH} \geq 1.475V$ $V_{OL} \leq 1.095V$			V	
Output Load		@ Vdc – 2.0V	50			Ω	
Jitter (rms)		@ 12 KHz ~ 20 MHz from carrier frequency	< 0.4			ps	
Symmetry		@ 1/2Vdc	45		55	%	
Rise / Fall Time			1.0			ns	
Frequency Pulling Range			± 50		± 100	ppm	
Voltage Control		$\pm 1.25V$	1.25			V	
Enable / Disable Function		Pin #4 & 5 → (E) signal Pin #4 & 5 → (D) no signal	Pin #2 = high or open Pin #2 = low				
Power Supply							
Voltage	V_{cc}	$\pm 5\%$		+2.5		V	
Supply Current			30		100	mA	
Frequency Stability							
Frequency Stability vs. Temperature Tolerance		Over -20°C to +70°C		± 25		ppm	
Aging		Over -40°C to +85°C		± 50			
Supply and Load Variation							
Environmental Conditions							
Operating temperature range		-20°C to +70°C for commercial applications -40°C to +85°C for industrial applications					

Ordering Options: Operating Temperature and Frequency Stability

Operating Temperature (w)		Frequency Stability (z)
Code	T (°C)	Stability [ppm]
1	-20 to +70	± 25
2	-40 to +85	± 50

Ordering Codes

Model	Frequency in MHz (up to 4 digits)	Operating Temperature vs Frequency Stability
VCXO914ZLP1	xx.yyyy	w

Example: VCXO914ZLP1-320.0000-2 has the following specifications
 Operating Frequency = 320.0000 MHz
 Operating Temperature = -40°C to +85°C
 Frequency Stability = ± 50 ppm

Example for IR reflow soldering temperature

