

Features

Frequency 100 MHz
 HCMOS output
 Analog compensation for low noise
 5.0 V supply

Picture of Part



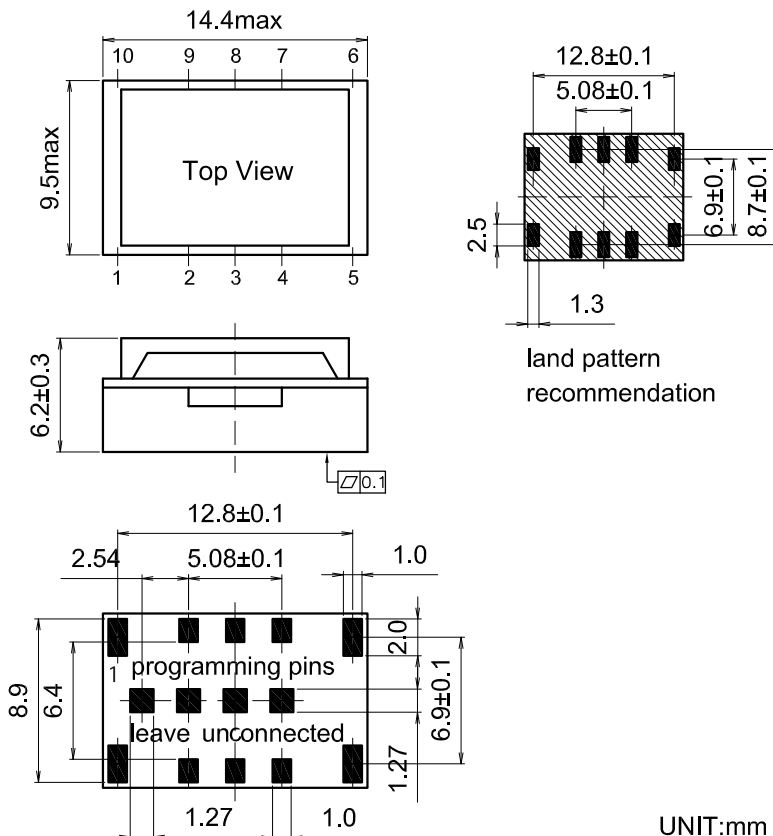
Typical Applications

Land Mobile and portable radio
 Test and Measurement
 Wireless Communications
 Low Noise Synthesizer Reference

Description

The TCXO914VHS represents a 100% analog compensation design whereby the compensating voltage is a continuous function. This allows for the Frequency versus temperature curve of the oscillator to behave without sudden frequency jumps that degrade phase noise in the customer application.

Mechanical Drawing and PIN Connections



Pin Connections	
1	N/C
2	NC / Control Voltage Input (Vc)
3	N/C / Enable (optional)
4	Ground (Case)
5	NC
6	NC
7	RF-Output
8	NC
9	Supply Voltage (Vs)
10	NC

UNIT:mm

Specification

TCXO Specification		Sym.	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Operational Frequency Range		f ₀			100.000		MHz	
HCMOS compatible option	Load			13.5	15	16.5	pF	
	H - level voltage	V _H		4.5			V	
	L - level voltage	V _L				0.5	V	
	Rise & Fall time					5	ns	From 10% to 90% of waveform
	Duty cycle			40	50	60	%	
Frequency Tolerance @25C			At time of shipment nominal	-1.0		+1.0	ppm	
			EFC of 2.50 volts					
Power supply								
Voltage		V _{cc}		4.75	5.00	5.25	V	
Current consumption		I _{cc}				40	mA	Dependent on frequency
Frequency control*								
Control voltage range		V _c		0.5	2.5	4.5	V	
Input Impedance (10K ohm)								
Tuning range				+/- 5.0	+/- 12.0	+/- 20.0	ppm	
Linearity			Tuning Slope Positive			10	%	
Frequency stability								
vs. temperature			-40 °C to +70 °C, ref 25 °C	-0.5		+0.5	ppm	
vs. 5% change in supply voltage			ref V _{cc} typ.	-0.3		+0.3	ppm	
vs. 10% change in load				-0.1		+0.1	ppm	
SSB Phase noise For 100 MHz Frequency with HCMOS output			10 Hz		-74		dBc/Hz	for 100 MHz operating frequency
			100 Hz		-103			
			1 kHz		-134			
			10 kHz		-152			
			100 kHz		-160			
Phase Jitter (12K to 20 MHz)					0.073		pS	
Aging	Per Year		Projected aging after 30 days operation			+/- 1.0	ppm	
	20 Years					+/- 2.5	ppm	
Environmental, mechanical conditions.								
Operating temperature range			-40 °C to +85 °C maximum range available that is standard					
Storage temperature range			-55 °C to +105 °C					
Shock			MIL-STD-883G ; Method 2002.4 ; Condition D : 5000 g / 0.3 ms duration : higher values upon request					
Random Vibration			MIL-STD-202G ; Method 214A ; Condition II-K					
Sine Vibration			MIL-STD-883 ; Method 2007					
Solvent Resistance			NON-washable device					