

OCXO 147 SERIES

Features:

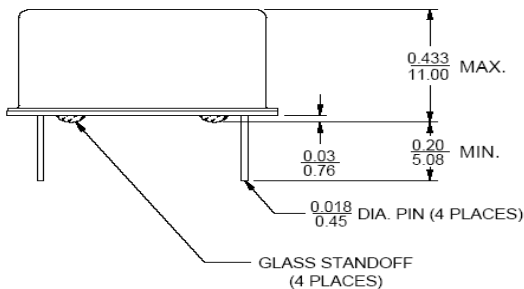
- 20.3 x 12.7 x 9.4 ~ 11.0 mm
- AT-Cut Crystal
- Small Size
- Low Cost
- SC-Cut Crystal Available
- SMD Version Available (OCXO 146 Series)



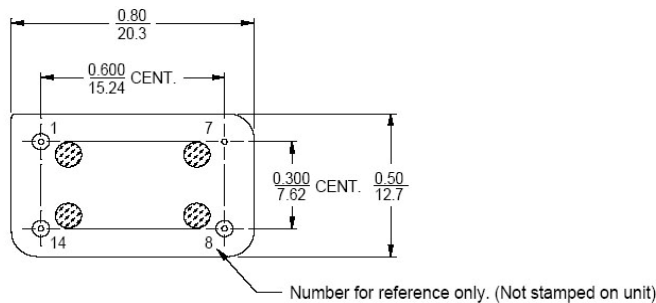
OCXO Series	Package (mm)	Supply Voltage (V)	Pulling Range	Freq. Stability (ppb)	Temp. Range (°C)	Output Logic and Symmetry		Pin Out	Lead Free	Freq. (MHz)
147 Series	L: 20.3 W: 12.7 H: 9.4~11	3.3 5.0	Not Connected or >10 Year Adjustment	± 30 ± 50 ± 100 ± 200	0~+50 0~+70 -30~+70 -40~+85	Output	Symmetry	Refer To	RoHS Compliant Standard	5 to 50
						CMOS or Sine Wave	50±10% or 50±5%	OUTLINE DRAWING		

Outline Drawing

[TOP VIEW]



[BOTTOM VIEW]



INCH
mm (Reference only)

Freq. Stability vs. TEMP. Range

Temp. (°C)	ppb ±30	ppb ±50	ppb ±100	ppb ±200
0 to +50	○	○	○	○
0 to +70	△	○	○	○
-30 to +70	X	△	○	○
-40 to +85	X	X	△	○

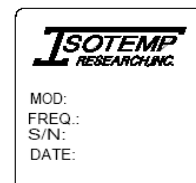
○ = Standard △ = Available (case by case) X = Not available

PIN CONNECTIONS

PIN	FUNCTION
1 (See Note 1)	VCO INPUT or NOT CONNECTED
7	0 VOLTS & CASE
8	R.F. OUTPUT
14	+VDC

Note 1. If the specification does not specify parameters for PIN 1 then PIN 1 is not internally CONNECTED

MARKING



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Electrical Specification*

	Min.	Nominal	Max.	Note	Unit
Output					
Frequency		10.00			MHz
Wave Form		CMOS			
Level					
"1" Level	3.5				V
"0" Level			0.5		
Load		15			pF
Duty Cycle	45		55		%
Spurious			-60		dBc
Frequency Stability					
Ambient			±100	Referenced to +25°C	ppb
Operating Temperature	0		+70		°C
Aging **					
At time of shipment			±5.0		ppb
After indefinite storage					
Daily			±5.0	After 30 days	ppb
Yearly			±0.5		ppm
10 Years			±3.0		
Voltage			±50	VDC ±5% change	ppb
Short term			±0.1	Second root Allan variance	
Warm-up			±100	In 2 minutes @+25°C (Reference to 1 hours)	
Phase Noise					dBc
@ 10 Hz			-100		
@ 100 Hz			-130		
@ 1 kHz			-145		
@ 10 kHz			-150		
Electrical Frequency Adjustment					
Range	±5			Referenced from Nominal Frequency	±ppm
Control	0.0		5.0		V
Slope		Positive			
Linearity			±10		%
Input Impedance	50				kΩ
Input Power					
Voltage	4.75	5.0	5.25		V
Current					
@ turn on			400		mA
Steady state @25°C			0.6		W

* 147-1004 model specifications provided as an example. Custom specifications available.

** The electronic frequency adjustment range is sufficient for the life of the oscillator.