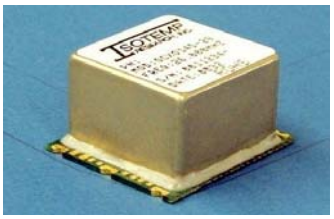
OCXO 145 Series



Features:

- Typical 25.4 x 22.1 x 15.3 mm.
- SC-Cut Crystal
- High Stability; Low Phase Noise
- CMOS//Sine Wave; Fast Warm-up

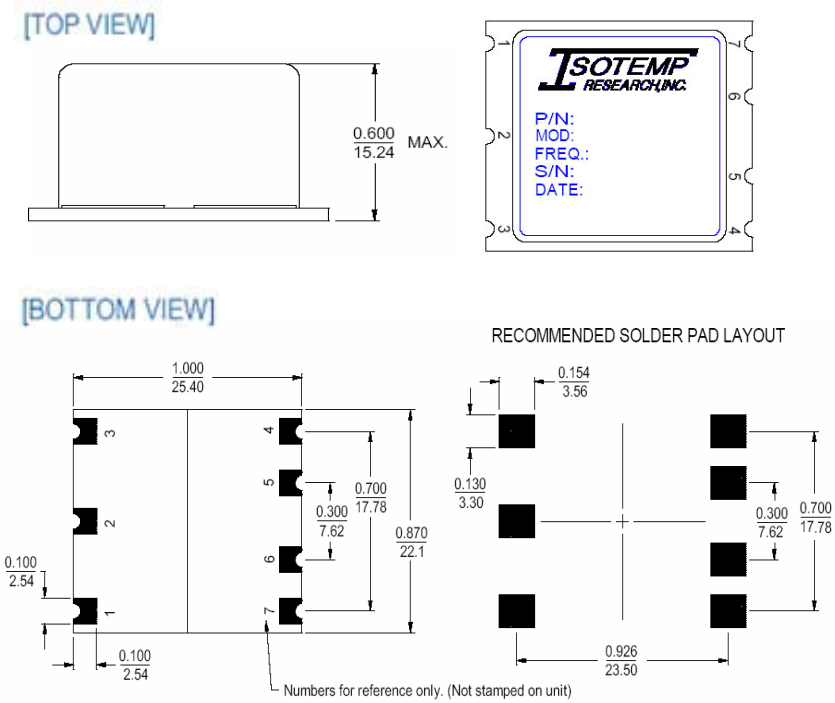
The OCXO 145 series oscillators feature small surface-mounted packages designed for applications where space is at a premium and good frequency stability is required. The oscillators can be used in phased locked loops or as stand alone references in many communications applications such as Stratum 3 switching apparatus or cellular telephone base stations. An internal voltage reference can be provided to make frequency corrections via a simple potentiometer or may be used as a voltage source for a digital to analog converter. A choice of quartz resonators offers a variety of performance versus cost options to fit most applications.

Ordering Information

OCXO	Package (mm)	Supply Voltage (V)	Pulling Range (ppm)	Freq. Stability (ppb)	Temp. Range (ºC)	Output Logic and Symmetry		Oscillator Mode	Pin Out	Lead Free	Freq. (MHz)
145 Series	L: 25.4 W: 22.1 H: 15.3	12.0. 5.0 3.3	±0.4 ±1.0	± 5 ± 10 ± 20 ± 30 ± 50	0~+50 0~+70 -30~+70	Output CMOS15pF Sine Wave	Symmetry 50±5%	* Not selectable by customer	Normal Please refer to "OUTLINE DRAWING"	RoHS Compliant Not RoHS Compliant	XX.XXXXXX

Ordering Example: OCXO 145 Series; V_{DD}: 3.3 V; Pulling Range: ±0.4ppm; freq. Stability: ± 30 ppb; Temp. Range: 0ºC to + 70ºC; CMOS15pF, Symmetry: 50±5%; Pin Out: Normal; RoHS Compliant; Freq. 10.000000 MHz.

Outline Drawing



INCH
mm (Reference only)

Freq. Stability vs. TEMP. Range

ppb / Temp. (ºC)	±5	±10	±20	±30
0 to +50	△	O	O	O
0 to +70	△	△	O	O
-30 to +70	X	△	△	O

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

PIN CONNECTIONS	
PIN	FUNCTION
1 (See Note 1)	VCO INPUT or NOT CONNECTED
2 (See Note 1)	REFERENCE VOLTAGE or NOT CONNECTED
3	+VDC
4	R.F. OUTPUT
5	OVEN MONITOR or NOT CONNECTED
6	0 VOLTS & CASE
7	0 VOLTS & CASE

Note1: If the specification does not specify parameters for either PIN 1, PIN 2 or PIN 5 then that respective PIN is not internally CONNECTED.

OCXO 145 Series

Electrical Specification

	Min.	Nominal	Max.	Note	Unit
Output					
Frequency		10.00			MHz
Wave Form		CMOS			
Level "1"	2.4				V
Level "0"			0.4		
Load		15			Pf
Spurious			-70		DBc
Frequency Stability					
Ambient			±30	Referenced to +25ºC	ppb
Operating Temperature	0		+70		ºC
Aging *					
At time of shipment			±1.0		ppb
After indefinite storage					
Daily			±1.0	After 30 days	ppb
Yearly			±100		
10 Years			±350		
Voltage			±10	VDC ±5% change	
Warm-up			±10	In 4 minutes @+25ºC (Reference to 1 hour)	
Phase Noise @ 10 MHz					dBc
@ 10 Hz			-115		
@ 100 Hz			-135		
@ 1 Hz			-140		
@ 10 kHz			-140		
Electrical Frequency Adjustment					
Range	0.4		1.0		±ppm
Control	0.0		2.8		V
Slope		Positive			
Center	1.0	1.4	1.8	Control Voltage at which nominal frequency occurs at time of shipment	V
Input Impedance	100				KΩ
Input Power					
Voltage	3.14	3.3	3.46		V
@ turn on			3.0		W
Steady state @25ºC			1.0		
Reference Voltage					
Voltage	2.72	2.8	2.88		V
Load	9.0		∞		KΩ
Temperature Stability			±0.01		VDC

* All aging stabilities are after storage of up to one year and apply after 30 days of continuous operation.
The daily aging rate also applies at the time of shipment from factory.

** The electronic frequency adjustment range is sufficient for the life of the oscillator specifications subject to change with frequency.

Available Frequency Range: 5 MHz to 40 MHz Including 5.0, 10.0, 16.384, 19.44, 24.576, 24.704 and 32.768 MHz