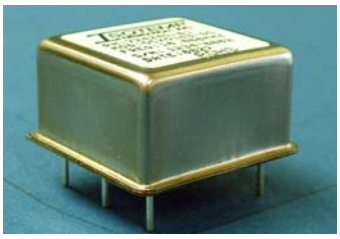
OCXO 143 Series



Features:

- Typical 25.4 x 25.4 x 15.0 mm.
- SC-Cut Crystal
- High Stability; Low Phase Noise
- CMOS//Sine Wave; Fast Warm-up

The OCXO 143 series oscillators are only one inch square and designed for thru-hole mounting. These packages offer much tighter frequency stability than TCXOs and in some cases cost less. Frequency adjustment is by electrical means using a potentiometer or D/A converter. A Convenient voltage reference source is available for this purpose. Your choice of AT or SC cut resonators are available to meet your frequency stability requirements.

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)
143 Series	L: 25.4 W: 25.4 H: 15.0	5.0	±0.4	± 5 ± 10 ± 20 ± 30 ± 50	0~+50 0~+70 -30~+70	Output CMOS15pF Sine Wave	Symmetry 50±10%	* Not selectable by customer	Normal Please refer to "OUTLINE DRAWING"	RoHS Compliant Not RoHS Compliant	XX.XXXXXX

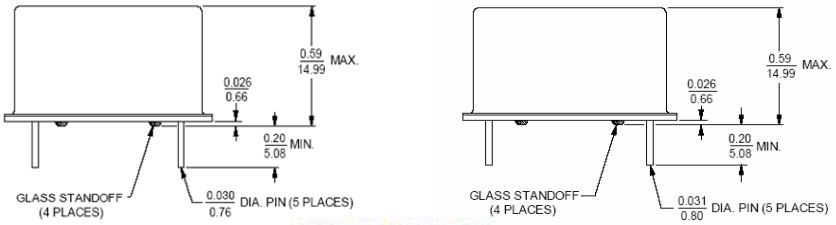
Ordering Example: OCXO143 Series; V_{DD}: 5V, Pulling Range ±0.4ppm; Freq. Stability: ±20ppb; Temp. Range: 0ºC to + 70ºC; Sine Wave; Pin Out: Normal; RoHS Compliant; Freq. 10.000000 MHz

Outline Drawing

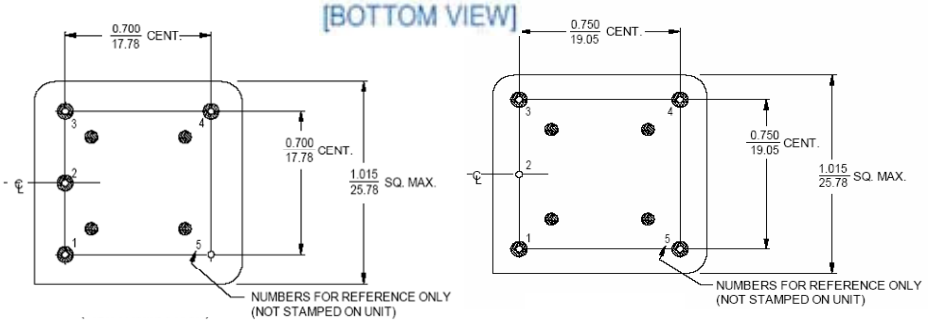
MARKING

MARKING

N [TOP VIEW] A



[BOTTOM VIEW]



INCH
mm (Reference only)

Freq. Stability vs. TEMP. Range

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

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

PIN CONNECTIONS - N	
PIN	FUNCTION
1*	VCO INPUT
2*	REFERENCE VOLTAGE
3	+VDC
4	R.F. OUTPUT
5	0 VOLTS & CASE

PIN CONNECTIONS - A	
PIN	FUNCTION
1	R.F. INPUT
2	0 VOLTS & CASE
3*	VCO INPUT
4*	REFERENCE VOLTAGE
5	+VDC

* If the specification does not specify parameters for VCO input or reference voltage then that respective PIN is not internally CONNECTED.

OCXO 143 Series

Electrical Specification

	Min.	Nominal	Max.	Note	Unit
Output					
Frequency		10.00			MHz
Wave Form		Sine Wave			
Level	2.0	4.0	6.0		dBm
Load		50			Ω
Harmonics		-25			dBc
Spurious		-60			
Frequency Stability					
Ambient			±20	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			±20	In 3 minutes @+25ºC (Reference to 1 hours)	
Phase Noise @ 10 MHz					dBc
@ 10 Hz			-115		
@ 100 Hz			-135		
@ 1 kHz			-140		
Electrical Frequency Adjustment					
Range	0.4		1.0		±ppm
Control	0.0		4.0		V
Slope		Positive			
Center	1.4	2.0	2.6	Control Voltage at which nominal frequency occurs at time of shipment	V
Linearity			10		%
Input Impedance	50				KΩ
Input Power					
Voltage	4.75	5.0	5.25		V
@ turn on			3.7		W
Steady state @25ºC			1.5		
Reference Voltage					
Voltage	3.8	4.0	4.2		V
Load	9		∞		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