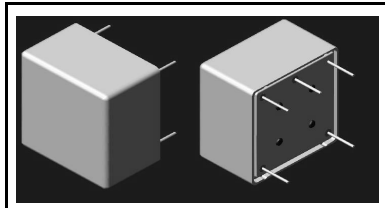


XOC17 Series OCXOs

**5 to 100 MHz
Frequency
Range**



- **Oven Controlled Crystal Oscillators**
- **Very High Frequency Accuracy and Stability with Fast Warm-up**
- **Low Power Consumption, Small Size**
- **Low Phase Noise and Jitter**
- **Fixed-tuned and Voltage-tunable Options**
- **Typical Applications Include:**
 - Cellular Base Stations
 - Communication Test Equipment
 - Precision Frequency Synthesizers
- **Complies with Directive 2002/95/EC (RoHS)**

Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Frequency Range (Each OCXO is Single Frequency)	Fo		5.000000		100.000000	MHz
Initial Frequency Tolerance Options			100		200	ppb
Warm-up Time to <10 ppb of 2 hour Warm-up Frequency (SC)		at 25 °C		10		minutes
0 to 70 °C Temperature Range Operation:						
Stability Options, 5 to 40 MHz using AT Crystal			5		50	ppb
Stability Options, 5 to 40 MHz using SC Crystal			4		20	
Stability Options, 40 to 100 MHz using AT Crystal			10		100	
Stability Options, 40 to 100 MHz using SC Crystal			4		50	
-20 to 70 °C Temperature Range Operation:						
Stability Options, 5 to 40 MHz using AT Crystal			5		50	ppb
Stability Options, 5 to 40 MHz using SC Crystal			4		50	
Stability Options, 40 to 100 MHz using AT Crystal			10		100	
Stability Options, 40 to 100 MHz using SC Crystal			4		50	
-40 to 85 °C Temperature Range Operation:						
Stability Options, 5 to 20 MHz using AT Crystal			10		50	ppb
Stability Options, 20 to 40 MHz using AT Crystal			10		100	
Stability Options, 40 to 100 MHz using AT Crystal			20		100	
Output Waveform Options:						
Sinewave Output, 50 ohm Load			harmonics -30 dBc, Non-harmonics -70 dBc			
HCMOS Output, 15 pF Load			40/60% duty cycle			
TTL Output, 5 TTL Load			40/60% duty cycle			
Power Supply Voltage Options, ±5% Tolerance	VCC		3.30	5.00	12.00	V
Optional Voltage Tuning Feature:						
Voltage Tuning Range for 3.3 V Power Supply Option			0		2.8	V
Voltage Tuning Range for 5 and 12 V Power Supply Options			0		3.0	V
Frequency Tuning Range and Linearity, AT Crystal			1 to 3 ppm, 10% to 20% Linearity			
Frequency Tuning Range and Linearity, SC Crystal			0.5 to 1 ppm, 10% Linearity			
Tuning Input Impedance				100K		ohms
Tuning Voltage Reference Output Impedance					100	ohms
Tuning Voltage Reference Output Current					1	mA
Operating Power:						
Within 2 minutes of Turn on				2.0	2.5	W
Steady State				0.9		

Electrical Characteristics

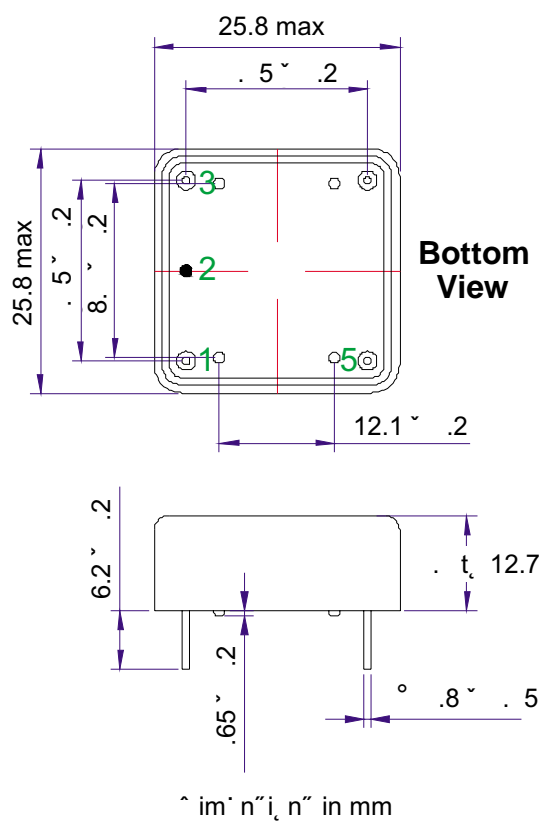
Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Aging:						
AT Crystal				50	200	ppb
SC Crystal				20	50	
SSB Phase Noise, 10 MHz SC Crystal Option:						
@ 10 Hz offset				-125		dBc/Hz
@ 100 Hz offset				-135		
@ 1 kHz offset				-145		
@ 10 and 100 kHz offset				-155		
Lid Symbolization	TBD // YWWS					

5-Pin Seam Weld Case 25.8 x 25.8 x 12.7 mm Nominal Dimensions

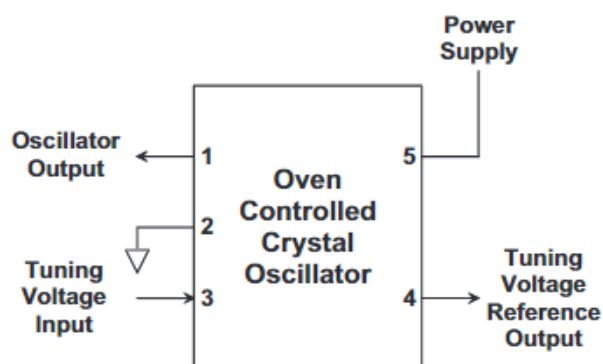
Pin Functions

Pin	Connection
1	Oscillator Output
2	Case/Circuit Ground
3	Tuning Voltage Input
4	Tuning Voltage Reference Output
5	Power Supply Voltage Input

Case Outline Drawing



Application Circuit



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

