



OSCILLATORS

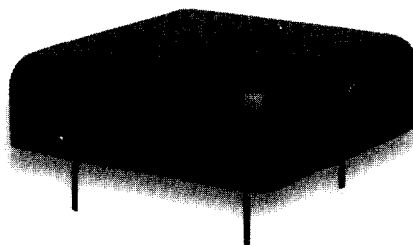
TCXO -- Models XO3050 to XO3059

Features:

- All output types
- Tight stabilities
- Wide frequency range
- Standard 1.5" x 1.5" x 0.5" hermetic package
- VCXO version available

Applications:

Commercial/industrial applications for avionics, instrumentation and communications.



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Specifications

	Performance Parameters			
Output Type	SINE	HCMOS	TTL	ECL
Frequency Range	3.2 to 160 MHz	12.5 kHz to 50 MHz	12.5 kHz to 70 MHz	10 to 160 MHz
Aging	Dependent on frequency, as low as ± 0.5 ppm/year			
SSB Phase Noise	Noise floor as low as -150 dBc/Hz at >10 kHz offset Close in noise as low as -100 dBc/Hz at >10 Hz offset			
Power Supply	3.3 to 15 V		5 to 15 V	± 5.2 V
Frequency Adjust	Mechanical or electrical to compensate for >10 years of aging			
Output Signal Characteristics	0 dBm (50 Ω) Opt: 10 dBm (50 Ω) Loads up to 1 k Ω	Duty cycle 45 to 55% Standard logic levels into standard loads		
Environmental	Vibration: 10 g pk 10-500 Hz Shock: 50 g 11 msec 1/2 sine			
Pin Assignments	1. RF output 2. Supply (+) 3. Case 4. Freq. adj. or case 5. Case	1. RF output 2. Supply (+) 3. Case 4. Freq. adj. or case 5. +5 V or case	1. RF output 2. Supply (+) 3. Case 4. Freq. adj. or case 5. +5 V or case	1. RF output 2. Supply (+)* 3. Supply (-)* 4. Freq. adj. or case 5. Case
	*For negative ground, connect pin 3 to case; for positive ground, connect pin 2 to case.			

Optional Temperature Ranges and Frequency Stabilities

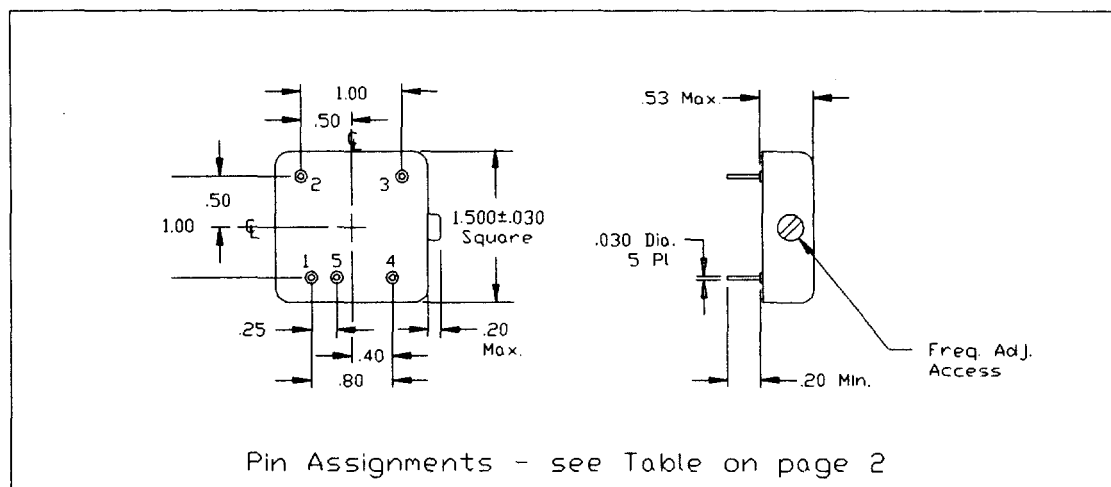
Temperature Range ($^{\circ}$ C)	Frequency/Temperature Stability (ppm)						
	± 5	± 3	± 2	± 1	± 0.75	± 0.50	± 0.25
+15 to +30	X	X	X	X	X	X	X
0 to +50	X	X	X	X	X	X	X
0 to +70	X	X	X	X	X	X	
-20 to +70	X	X	X	X	X		
-40 to +75	X	X	X	X			
-55 to +85	X	X	X	X			

This TCXO can be produced to these specifications, with extended temperature range and tighter stability being cost drivers.

XO3050-006 & XO3051-006 -- Standard Versions in Stock

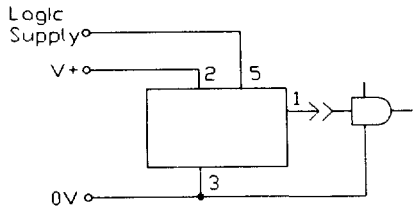
	XO3050-006	XO3051-006
Frequency	10 MHz	
Temperature Range	-30 to +70°C	
Temperature Stability	± 0.75 ppm	
Aging Per Year Aging Per 10 Years	± 1.0 ppm max. ± 3.0 ppm max.	
SSB Phase Noise (dBc) at:		
10 Hz	-90	
100 Hz	-125	
1000 Hz	-140	
10000 Hz	-150	
Power Supply:		
Oscillator voltage	5 V ± 0.25 V	9.5 to 16.5 V
Oscillator current	8 mA	8 mA @ 10 V
Frequency Adjustment:	Internal	
Method	10 yrs	
Range		
Output Signal:		
Type	Squarewave	Sinewave
Level	HCMOS	+7 dBm ± 2 dB
Load	2 gates	50 ohms
Environmental:		
Vibration	10 g pk 10-500 Hz	
Shock	50 g 11 mS ½ sine	

Outline Drawing -- Series XO3050

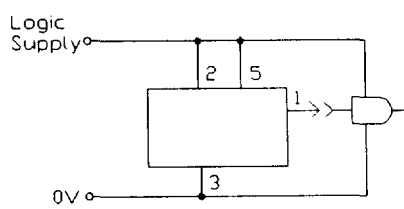


Typical Connections for Internal Aging Adjustment

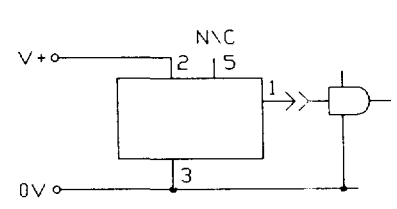
TTL/HCMOS Output
Separate Supplies



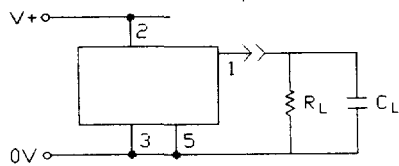
TTL/HCMOS Output
Common Supply



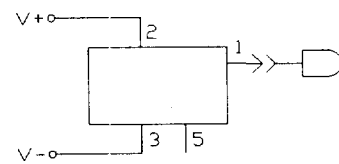
TTL/HCMOS
No Logic Supply Required



Sine Output



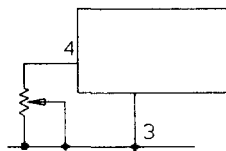
ECL Output



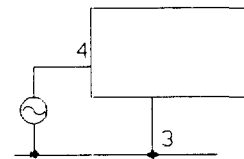
For neg. ground connect 3 to 5
For pos. ground connect 2 to 5

Optional External Aging Adjustment or VCXO Connections for All Output Types

External Potentiometer



VCXO



Specifications subject to change without notice.