

XO5080 Series

1x1 inch, 5.0 Volt, HCMOS or Sinewave, OCXO



- Surface mount package offering both AT and SC-cut crystals
- Ideal for microwave radios (short haul), base stations, and test equipment applications where size and package style (SMT) are critical

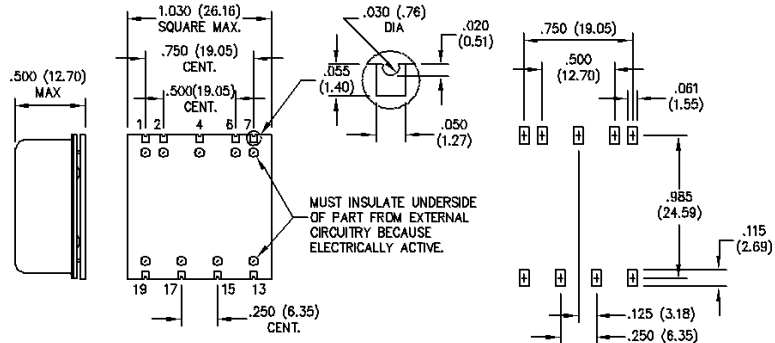
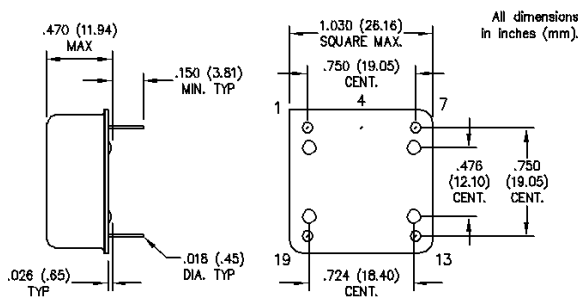
Ordering Information

XO508x XXX

Product Series

- 5081: AT/Sine
- 5082: AT/HCMOS
- 5083: SC/Sine
- 5084: SC/HCMOS

Assigned Customer Specific



Dimensions are in inches (mm)

PIN CONNECTIONS	
1.	RF OUTPUT
2.	N/C
4.	CASE GROUND & SUPPLY RETURN
6.	N/C
7.	FREQUENCY ADJUST OR Vref
13.	Vref (OPTIONAL)
15.	N/C
17.	OVEN READY (OPTIONAL)
19.	SUPPLY (+)

Pin numbers shown for ref. only. Numbers are not marked on unit.

Optional Temperature Ranges and Frequency Stabilities (F/T)		
OTR °C	SC-Cut	AT-Cut
0 to +50	$\pm 5 \times 10^{-9}$	$\pm 2 \times 10^{-8}$
0 to +70	$\pm 10 \times 10^{-9}$	$\pm 2 \times 10^{-8}$
-10 to +70	$\pm 10 \times 10^{-9}$	$\pm 2 \times 10^{-8}$
-30 to +70	$\pm 10 \times 10^{-9}$	$\pm 3 \times 10^{-8}$
-40 to +70	$\pm 10 \times 10^{-9}$	$\pm 3 \times 10^{-8}$
-40 to +85	$\pm 20 \times 10^{-9}$	$\pm 4 \times 10^{-8}$

PARAMETER	Symbol	Minimum	Typical	Maximum	Units	Condition
Frequency Range	F_{CON}	10		100	MHz	
Operating Temperature	T_A		-40 to +85		°C	Consult Factory
Stability Over Temperature	$\Delta F/F$	± 20	± 30		ppb	AT-Cut SC-Cut
Short Term Stability	$\Delta F/F$	± 5	0.1		ppb	AT-Cut SC-Cut
Daily Aging			± 1.0		ppb	AT-Cut
Yearly Aging			± 0.5		ppm	AT-Cut
Daily Aging			± 0.1		ppb	SC-Cut
Yearly Aging			± 0.3		ppm	SC-Cut
Frequency vs. Supply			± 1		ppb	
Frequency vs. Load			± 1		ppb	
Supply Voltage	V_S		3.3 to 12		Volts	Consult Factory
Power Consumption						
@ Warm-Up				3.5	Watts	
Steady State @ 25°C				1.25	Watts	
Warm-Up Time @ 25°C			To within $\pm 1 \times 10^{-7}$ in 3 minutes		Minutes	
HCMOS Output Signal			$V_S = +3.3V$ or $+5V$			
Rise/Fall Time			5nsec	7nsec		
Logic "0" Level		0.2			Volts	
Logic "1" Level				$V_S - 0.2$	Volts	
Symmetry		40		60	%	
Output Load			10		pF	
Sinewave Output Signal						
Level			+3		dBm	
Output Load			50		Ω	
Frequency Adjustment (Pin 7)						
Slope			Positive			
External Voltage Range	V_C	0		10	Volts	Consult Factory
Range			± 4		ppm	AT-Cut
Input Impedance (Pin 7)		20	± 2		ppm	SC-Cut
Phase Noise						
Typical @ 10MHz			AT-Cut	SC-Cut		
1 Hz		-80		-90	dBc/Hz	
10 Hz		-115		-120	dBc/Hz	
100 Hz		-140		-140	dBc/Hz	
1 kHz		-145		-150	dBc/Hz	
10 kHz		-150		-155	dBc/Hz	
Mechanical Shock		Per MIL-STD-202, Method 213, Condition C				
Vibration		Per MIL-STD-202, Method 201 & 204				
Storage Temperature		-55°C to 125°C				
Hermeticity		Per MIL-STD-202, Method 112				
Solderability		Per EIAJ-STD-002				

HCMOS Load – see load circuit diagram #2. Sinewave Load – see load circuit diagram #8.

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