

# XO5030 Series

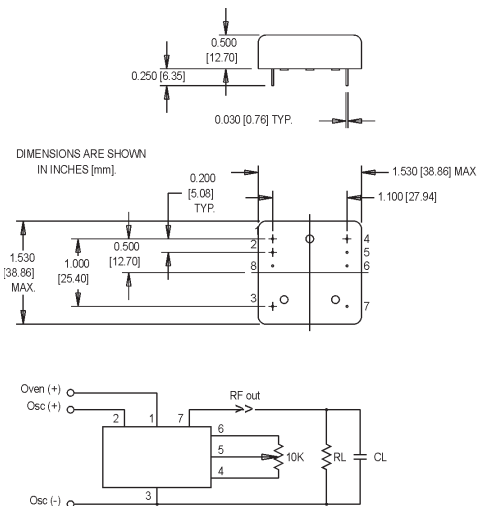
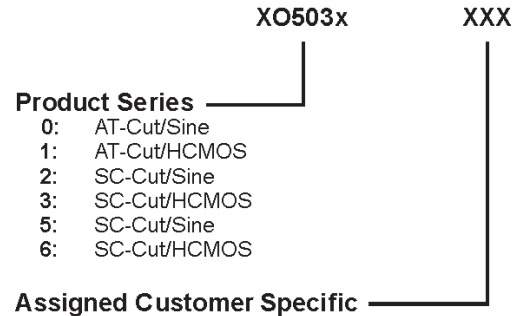
1.5x1.5 inch, 12.0 Volt, HCMOS/Sinewave, OCXO



- Low phase noise and aging
- Ideal for Stratum 3E, PCS base stations, Synthesizers, and test equipment

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	$\pm 1 \times 10^{-8}$	$\pm 3 \times 10^{-8}$
-10 to +70	$\pm 1 \times 10^{-8}$	$\pm 3 \times 10^{-8}$
-30 to +70	$\pm 20 \times 10^{-8}$	$\pm 4 \times 10^{-8}$
-40 to +70	$\pm 20 \times 10^{-9}$	$\pm 4 \times 10^{-8}$
-40 to +85	$\pm 40 \times 10^{-9}$	$\pm 5 \times 10^{-9}$

## Ordering Information



## Pin Connections

PIN	FUNCTION
1	Oven Supply (+)
2	Oscillator Supply (+)
3	Case Ground & Supply Return
4	Case Ground
5	Frequency Adjust
6	Vref
7	RF Output
8	Oven Ready (Optional)

PARAMETER	Symbol	Minimum	Typical	Maximum	Units	Condition
Frequency Range	$F_{ON}$	10		50	MHz	Contact factory for availability
Operating Temperature	$T_A$		-55 to +70		°C	Contact factory for availability
Stability Over Temperature	$\Delta F/F$	$\pm 20$	$\pm 50$		ppb	XO5030 and XO5031
	$\Delta F/F$	$\pm 5$	$\pm 10$		ppb	XO5032 and XO5033
	$\Delta F/F$	$\pm 5$	$\pm 10$		ppb	XO5035 and XO5036
Daily Aging			$\pm 1$		ppb	SC-Cut
Yearly Aging			$\pm 2$		ppb	AT-Cut
			$\pm 0.1$		ppm	SC-Cut
			$\pm 0.5$		ppm	AT-Cut
Frequency vs. Supply			$\pm 1.0$		ppb	
Frequency vs. Load			$\pm 1.0$		ppb	
Supply Voltage	$V_S$		12 to 24		$V_{DC}$	Consult Factory
Power Consumption				8	Watts	
	@ Warm-Up Steady State @ 25°C			1.5	Watts	
Warm-Up Time @ 25°C			To within $\pm 0.1$ ppm in 3 minutes		Minutes	
HCMOS Output Signal	Rise/Fall Time	$T_R/T_F$	3nsec	7nsec	nsec	
	Logic "0" Level	$V_{OL}$	0.2		Volts	
	Logic "1" Level	$V_{OH}$	40	4.2	Volts	
	Symmetry	Sym		60	%	
	Output Load			20	$\mu F$	
Sinewave Output Signal	Level		+3		dBm	
	Output Load		50		$\Omega$	
Frequency Adjustment (Pin 1)	Slope		Positive			
	External Voltage Range	$V_C$	0	10	Volts	Consult Factory
	Range		$\pm 3$		ppm	AT-cut
	Range		$\pm 1$		ppm	SC-Cut
Phase Noise	typical @ 10MHz		20		$K\Omega$	
		AT-Cut		SC-Cut	SC-Cut	
		5030-5031	5032-5033	5035-5036		
		-80	-90	-90	dBc/Hz	
		-105	-120	-130	dBc/Hz	
		-135	-135	-150	dBc/Hz	
1 Hz						
10 Hz						
100 Hz						
1 kHz						
10 kHz						
Environmental	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				

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