

XO5019 Series

2x2 inch, 12.0 Volt, CMOS/Sinewave, OCXO



- Low aging and phase noise
- External or voltage control

Model	Frequency (MHz)	Temperature Range (°C)	Temperature Stability	Aging First Year	Output	Supply Voltage
SC-Cut	10	-20 to +70	$\pm 1.0 \times 10^{-8}$	$\pm 1.5 \times 10^{-7}$	Sinewave	+15 Vdc oven (+12 Vdc osc)
AT-Cut	10	-20 to +70	$\pm 5.0 \times 10^{-8}$	$\pm 2.0 \times 10^{-7}$	Sinewave	+15 Vdc oven (+12 Vdc osc)
Options	5 to 15	See Table		Consult Factory	TTL/CMOS	+10 Vdc to 24 Vdc

Additional Specifications

Aging daily	$\pm 5.0 \times 10^{-10}$ for SC-cut
Turn on	600 mA max
Current	300 mA max @ 25°C steady state
Warm-up time	@ 25°C, to within ± 0.10 ppm of Fo in 2.5 min ± 0.01 ppm in 5 min
Load Stability	$\pm 1.0 \times 10^{-9}$
Aging adjustment	External 10 k pot/voltage
Voltage range	0.5 V to 10 V
Deviation	$\pm 3.0 \times 10^{-7}$
Slope	Positive

Phase Noise @

	(SC-cut)	(AT-cut)
1 Hz	-90 dBc/Hz	-75 dBc/Hz
10 Hz	-120 dBc/Hz	-110 dBc/Hz
100 Hz	-145 dBc/Hz	-140 dBc/Hz
1 kHz	-155 dBc/Hz	-155 dBc/Hz
10 kHz	-160 dBc/Hz	-160 dBc/Hz

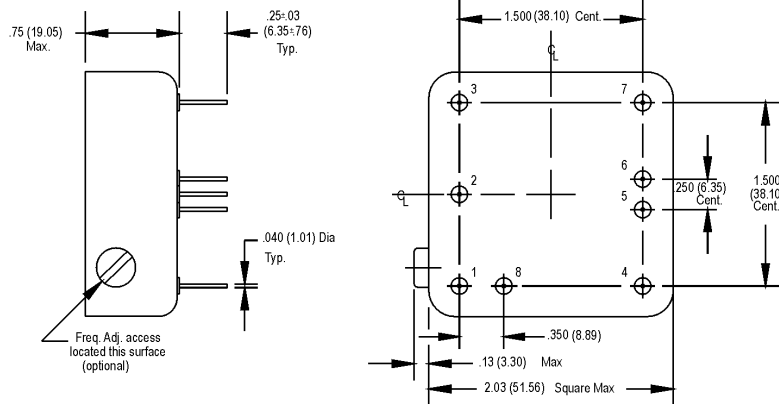
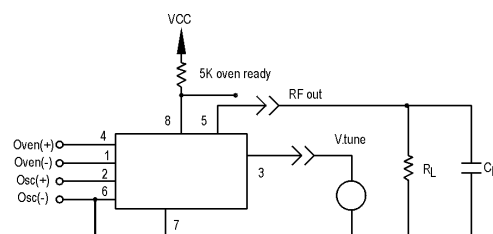
Sinewave Version

Harmonics	-20 dBc max
Spurious	-75 dBc max
Load	50Ω to 3 kΩ
Output level	+7 dBm min into 50Ω

HCMOS Version

Duty cycle	40/60
Load	2 Gates

Optional Temperature Ranges and Frequency Stabilities		
Temperature Range (°C)	Stability Limits	
	SC-cut	AT-cut
0 to +50	$\pm 2.0 \times 10^{-9}$	$\pm 1.0 \times 10^{-8}$
0 to +70	$\pm 3.0 \times 10^{-9}$	$\pm 3.0 \times 10^{-8}$
-10 to +70	$\pm 4.0 \times 10^{-9}$	$\pm 3.0 \times 10^{-8}$
-30 to +70	$\pm 5.0 \times 10^{-9}$	$\pm 5.0 \times 10^{-8}$
-40 to +70	$\pm 7.0 \times 10^{-9}$	$\pm 1.0 \times 10^{-7}$
-55 to +70	$\pm 3.0 \times 10^{-9}$	$\pm 5.0 \times 10^{-7}$



Dimensions are in inches (mm)

Pin connections
1. Oven supply return
2. Oscillator Supply (+)
3. Frequency Adjust
4. Oven supply(+)
5. RF output
6. RF ground & Osc. supply return
7. Case ground
8. Oven Ready (Optional)

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

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