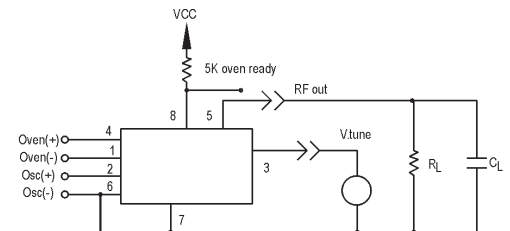**THIS PRODUCT IS NOT RECOMMENDED FOR NEW DESIGNS.**

- Low aging and phase noise
- External or voltage control

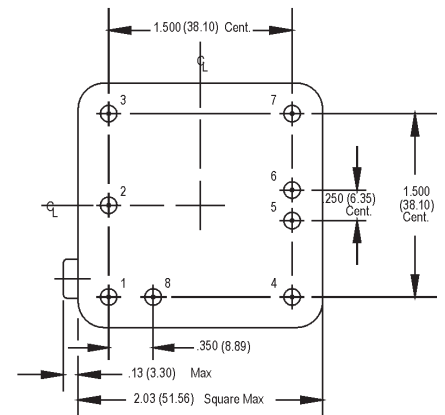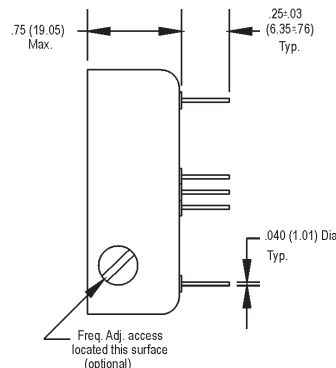| Model XO5019	Frequency (MHz)	Temperature Range (°C)	Temperature Stability	Aging First Year	Output	Supply Voltage
SC-Cut	10	-20 to +70	$\pm 1.0 \times 10^{-8}$	$\pm 1.5 \times 10^{-7}$	Sinewave	+15 Vdc oven (+12 Vdc osc)
AT-Cut	10	-20 to +70	$\pm 5.0 \times 10^{-8}$	$\pm 2.0 \times 10^{-7}$	Sinewave	+15 Vdc oven (+12 Vdc osc)
Options	5 to 15	See Table		Consult Factory	TTL/CMOS	+10 Vdc to 24 Vdc

Electrical Specifications

PARAMETER	SC-cut	AT-cut
Frequency Range	10 MHz	
Temperature Range	-20°C to +70°C	
Temperature Stability	$\pm 1.0 \times 10^{-8}$	$\pm 5.0 \times 10^{-8}$
Supply Voltage	+15 Vdc oven (+12 Vdc osc)	+15 Vdc oven (+12 Vdc osc)
Aging Over 1 Year	$\pm 1.5 \times 10^{-7}$	$\pm 2.0 \times 10^{-7}$
Aging Per Day	$\pm 5.0 \times 10^{-10}$	
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		
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		
Spurious	-75 dBc max	
Harmonics	-20 dBc max	
Load	50 Ω to 3 k Ω	
Output Level	+7 dBm min into 50 Ω	
HCMOS Version		
Duty Cycle	40/60	
Load	2 Gates	

Optional Temperature Ranges and Frequncy 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	$\pm 3.0 \times 10^{-9}$	$\pm 5.0 \times 10^{-7}$

VCC
5K oven ready
RF out
Oven(+) 4
Oven(-) 1
Osc(+) 2
Osc(-) 6
8 5
V.tune
3
R_L C_L
7

Dimensions are in inches (mm)

.75 (19.05) Max.
.25±.03 (6.35±.76) Typ.

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.

.040 (1.01) Dia Typ.

Freq. Adj. access located this surface (optional)

1.500 (38.10) Cent.
.250 (6.35) Cent.
1.500 (38.10) Cent.
.350 (8.89)
.13 (3.30) Max
2.03 (51.56) Square Max

Please see **www.mtronpti.com** for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI **1-800-762-8800.**

Revison: 11-29-10