



**T1300**  
**Ultra-Low Acceleration Sensitivity**  
**Low Phase Noise TCXO**

- ❖ Ultra-Low Acceleration Sensitivity <math> < 5 \times 10^{-11}</math> per g
- ❖ Low Phase Noise CMOS Output
- ❖ Standard Dual-In-Line Package
- ❖ Precision Crystal Technology
- ❖ Hermetically Sealed Case
- ❖ ROHS Compliant Available



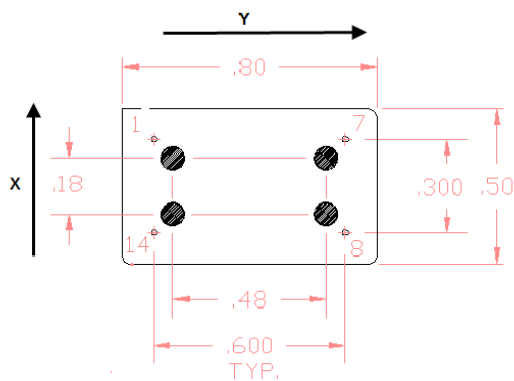
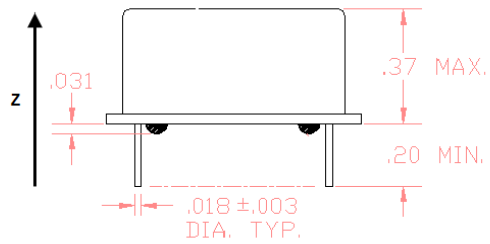
**Electrical Characteristics**

Parameter	Conditions	Min	Typical	Max	Units
<b>Frequency Range</b>		10		50	MHz
Freq. vs. Temp.	-40 to +70° C	-3.0	±2	3.0	ppm
Freq. vs. Supply	5% Change			±0.1	ppm
Freq. vs. Load	10 % Change			±0.1	ppm
Aging	After 7 days	-0.5		0.5	ppm/year
Short Term Stability	Allan Deviation, $\tau = 1$ second		$1 \times 10^{-10}$		/ Sec
<b>Acceleration Sensitivity</b>	<b>Any Axis</b>		<b>3</b>	<b>5</b>	<b><math>\times 10^{-11}/g</math></b>
Turn-On Time	To within ±1ppm			10	mSec
<b>Frequency Tuning</b>					
Electrical Adjust (EFC)		± 4.0	± 6		ppm
EFC Voltage Range	Positive Slope	0		+5	V
Input Impedance		50			kΩ
<b>Inputs:</b>					
Supply Voltage	Oscillator (+3.3V Available)	4.75	5.0	5.25	Vdc
Input Current	@ Vcc=+5.25Vdc		10	15	mA
<b>Output:</b>	CMOS Squarewave				
Output Levels	$R_L = 15pF // 10K\Omega$	0.7Vcc ("1" Level)	0.1 / 4.9	0.3Vcc ("0" Level)	V
Duty Cycle		45	50	55	%
Phase Noise	Offset=10Hz		-100	-90	dBc/Hz
	100Hz		-130	-125	dBc/Hz
	1kHz		-155	-150	dBc/Hz
	10kHz		-158	-155	dBc/Hz
	100kHz		-160	-157	dBc/Hz
	1MHz		-161	-158	dBc/Hz

Rev. X3



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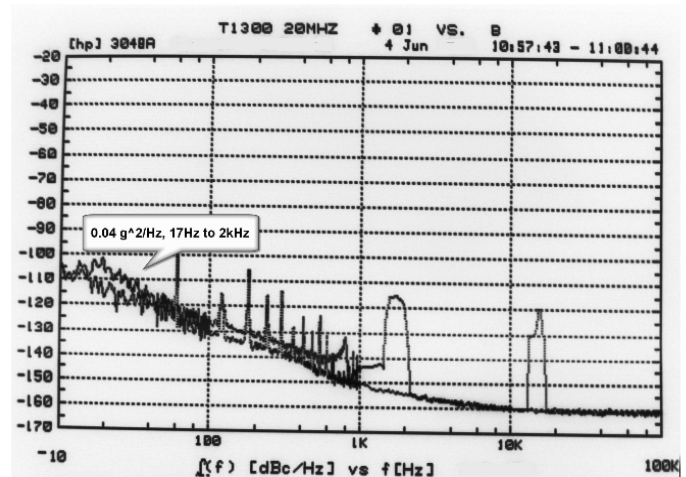
**Pin Connections**

1. EFC
7. 0 volts & Ground
8. Output
14. +Vcc Supply Voltage

Typical "g-sense"

Axis	dF/g
X	4.31E-11
Y	3.08E-11
Z	2.81E-11

Phase Noise Under Random Vibration



### Preliminary Specification

The specifications on this datasheet pertain to a product which is under engineering development and therefore subject to change without notice. Contact the factory to determine the current availability.

**Environmental Specifications**  
 Operating Temp. Range: -40 to +70° C  
 Storage Temp. Range: -55 to +105° C  
 Shock: MIL-STD-202, Method 213, Condition C  
 Vibration: MIL-STD-202, Method 204, Condition A

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