

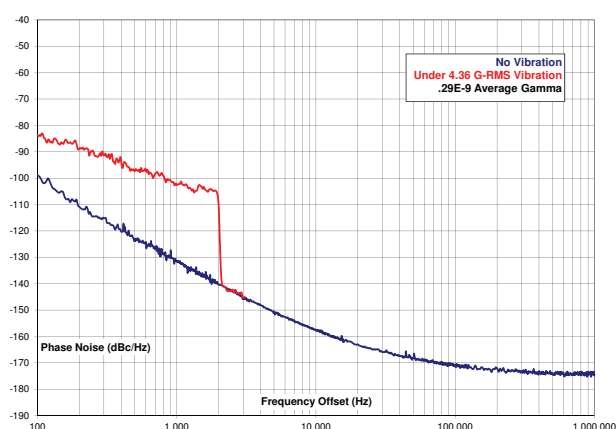
# 101662.101

## 400 MHz Oscillator

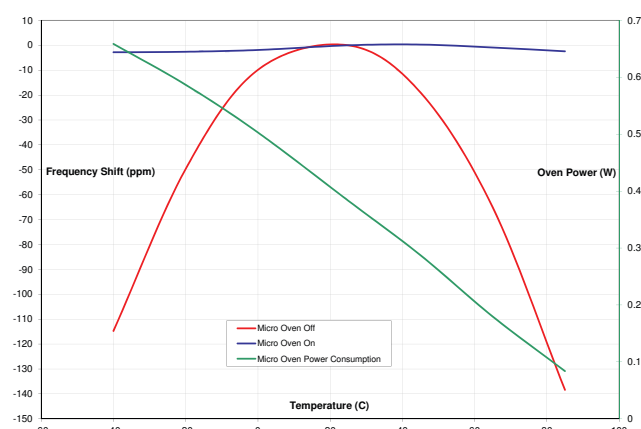
### Specifications

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Center Frequency	$F_0$	-0.008	400	0.008	MHz	$V_{TUNE} = 2.50V, 20^\circ C$
Absolute Pull Range	APR	30	n/a	n/a	ppm	$V_{TUNE} = 0.5V \text{ to } 5.0V, -40^\circ C \text{ to } 85^\circ C$
Tuning K		6	9	12	KHz/V	Average incremental sensitivity
Tuning $K_R = K_{max} / K_{min}$		n/a	1.5:1	2:1	unitless	
Temperature Stability			4	8	ppm <sub>P-P</sub>	$V_{TUNE} = 2.50V, -40^\circ C \text{ to } 85^\circ C$
Aging, 20 years			20	30	ppm	Absolute change from initial freq
Output Power		8	10	12	dBm	50 Ohm load, $-40^\circ C \text{ to } 85^\circ C$
Harmonic Spurious			-45	-35	dBc	50 Ohm load, $-40^\circ C \text{ to } 85^\circ C$
Non-harmonic Spurious		n/a	-80	n/a	dBc	50 Ohm load, $-40^\circ C \text{ to } 85^\circ C$
SSB Phase Noise at 1 KHz			-132		dBc/Hz	
SSB Phase Noise at 10 KHz			-158		dBc/Hz	
SSB Phase Noise Floor			-174		dBc/Hz	
Vibration Sensitivity		n/a	0.5	1	ppb/G	per axis
Output Frequency Multiplier		n/a	1	n/a	unitless	
Oven warm-up power		n/a	1.5	2	W	from $-40^\circ C$
Oven warm-up time		n/a	6	10	sec	from $-40^\circ C$
Oven power stable		n/a	0.65	0.8	W	$-40^\circ C$
		n/a	0.35	0.45		$+20^\circ C$
$V_{SUPPLY}$		5	12	15	Volts	
$I_{SUPPLY}$		n/a	30	n/a	mA	50 Ohm load, $-40^\circ C \text{ to } 85^\circ C$ , w/o oven

### Typical Phase Noise Performance



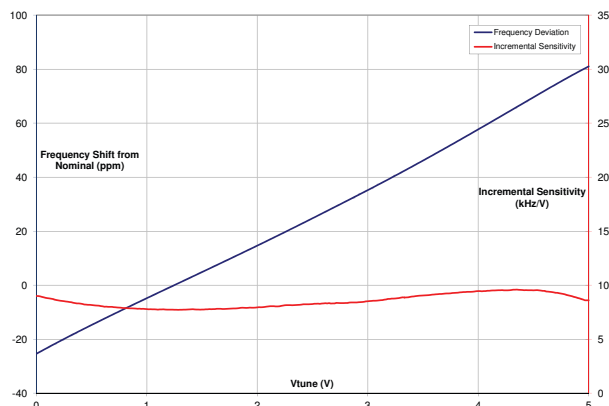
### Micro-Oven Performance



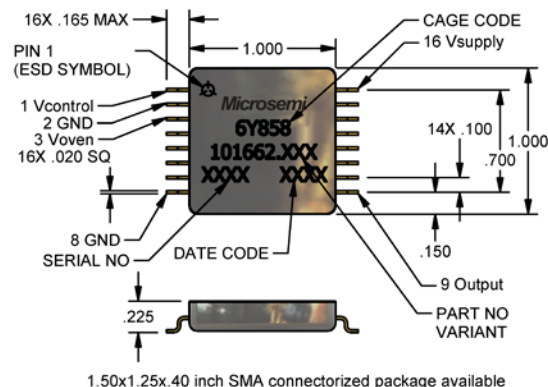
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## 400 MHz Oscillator

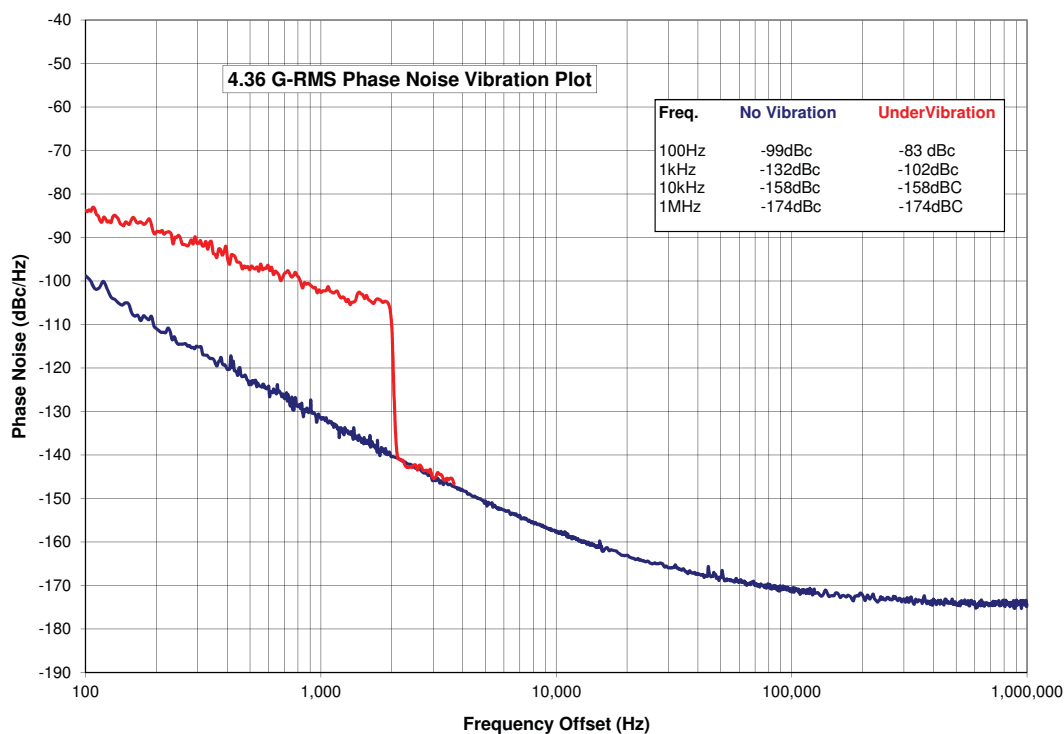
### Electrical Tuning



### Package Outline



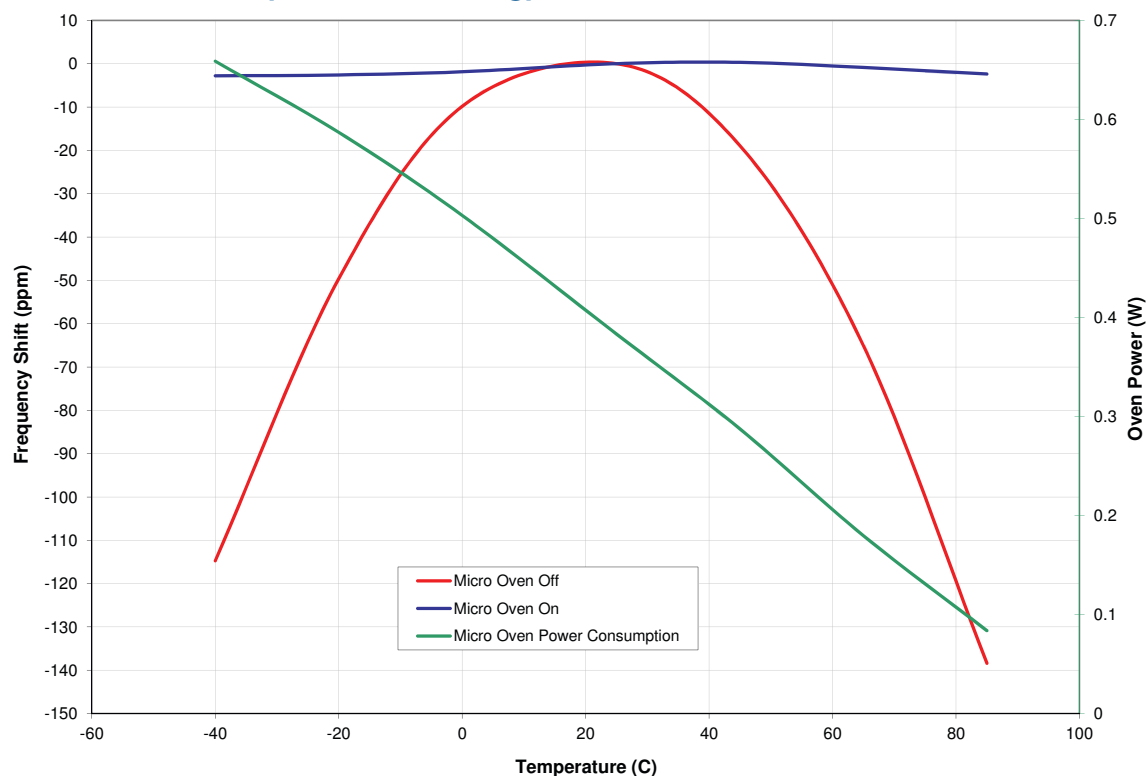
### Typical Phase Noise Performance



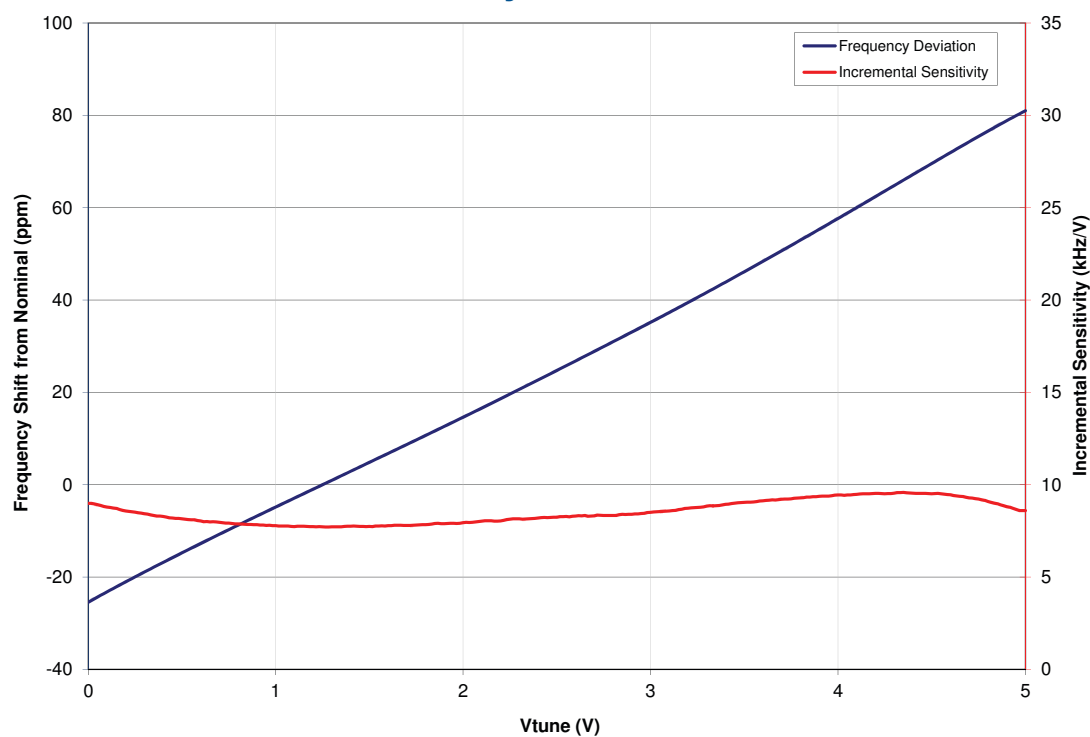
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## 400 MHz Oscillator

### Micro-Oven Performance (Patent Pending)



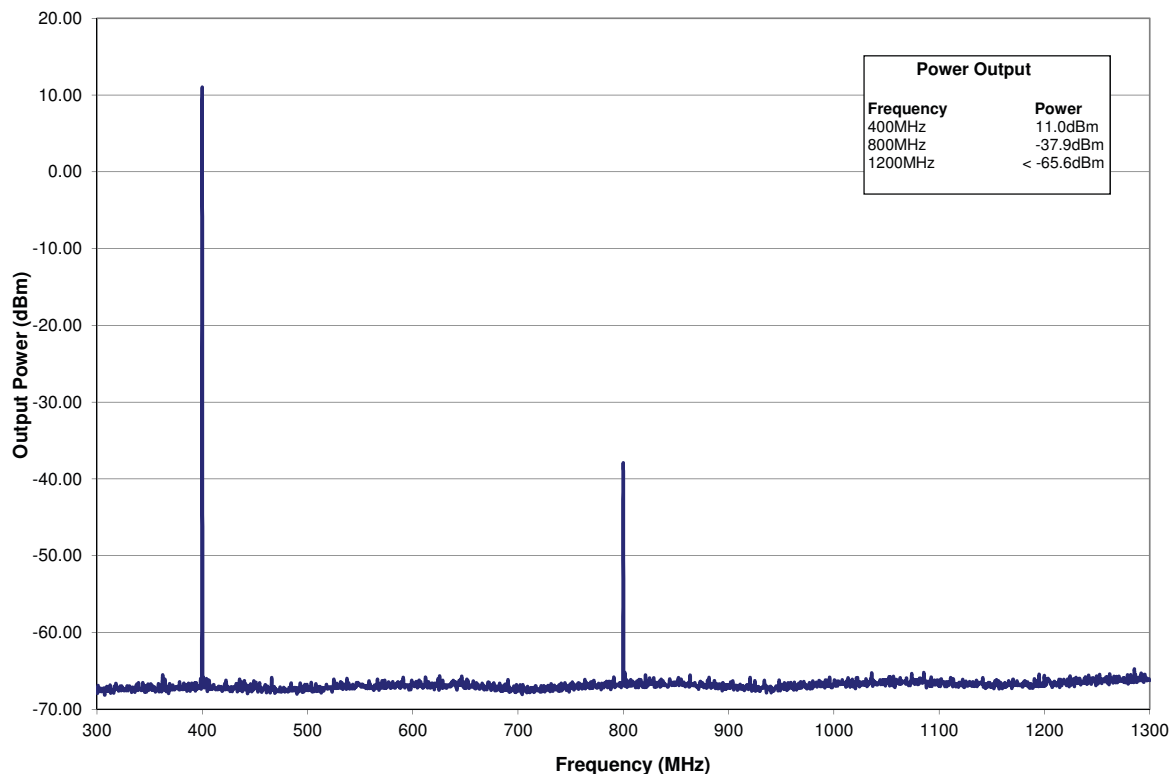
### Frequency Shift and Incremental Sensitivity



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## 400 MHz Oscillator

### Spectrum Output



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