

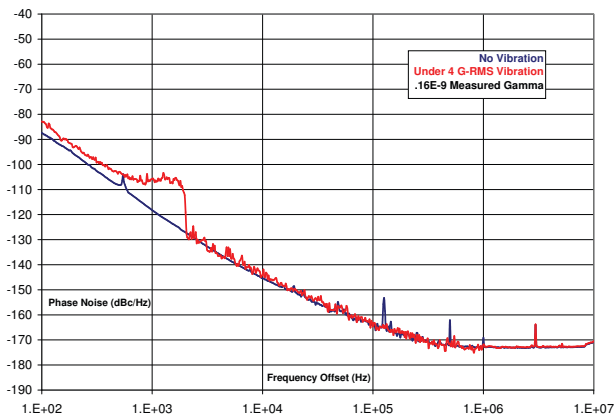
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640 MHz Oscillator

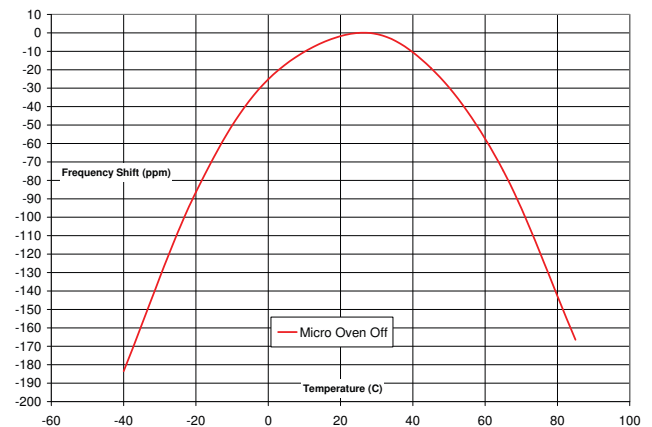
Specifications

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Center Frequency	F_0	-0.048	640	0.048	MHz	$V_{TUNE} = 1.0V, 20^\circ C$
Absolute Pull Range	APR	30	n/a	n/a	ppm	$V_{TUNE} = 0.5V \text{ to } 5.0V, -20^\circ C \text{ to } 70^\circ C$
Tuning K		12.8	25.6	51.2	KHz/V	Average incremental sensitivity
Tuning $K_R = K_{max} / K_{min}$		n/a	3:01	4:01	unitless	
Temperature Stability		n/a	150	200	ppm _{P-P}	$V_{TUNE} = 1.0V, -20^\circ C \text{ to } 70^\circ C$
Aging, 20 years		n/a	20	30	ppm	Absolute change from initial freq
Output Power		8	10	12	dBm	50 Ohm load, $-20^\circ C \text{ to } 70^\circ C$
Harmonic Spurious		n/a	-30	-20	dBc	50 Ohm load, $-20^\circ C \text{ to } 70^\circ C$
Non-harmonic Spurious		n/a	-80	n/a	dBc	50 Ohm load, $-20^\circ C \text{ to } 70^\circ C$
SSB Phase Noise at 1 KHz			-118		dBc/Hz	
SSB Phase Noise at 10 KHz			-145		dBc/Hz	
SSB Phase Noise Floor			-173		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	n/a	n/a	W	from $-40^\circ C$
Oven warm-up time		n/a	n/a	n/a	sec	from $-40^\circ C$
V_{SUPPLY}		5	12	15	Volts	Range of Supply Voltages
I_{SUPPLY}		n/a	30	n/a	mA	50 Ohm load, $-20^\circ C \text{ to } 70^\circ C$, w/o oven $V_S = 12V$

Typical Phase Noise Performance



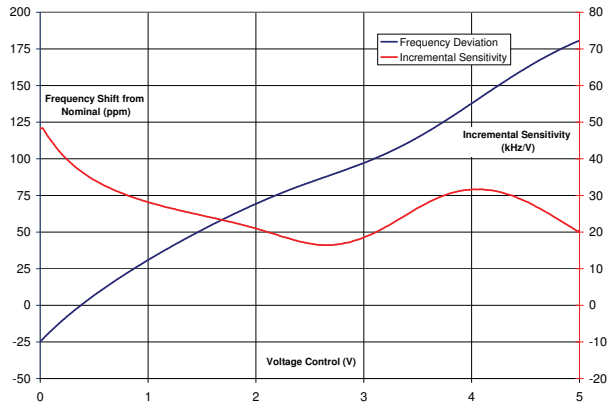
Micro-Oven Performance



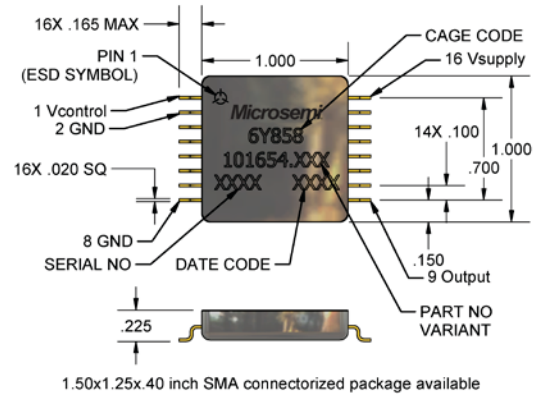
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640 MHz Oscillator

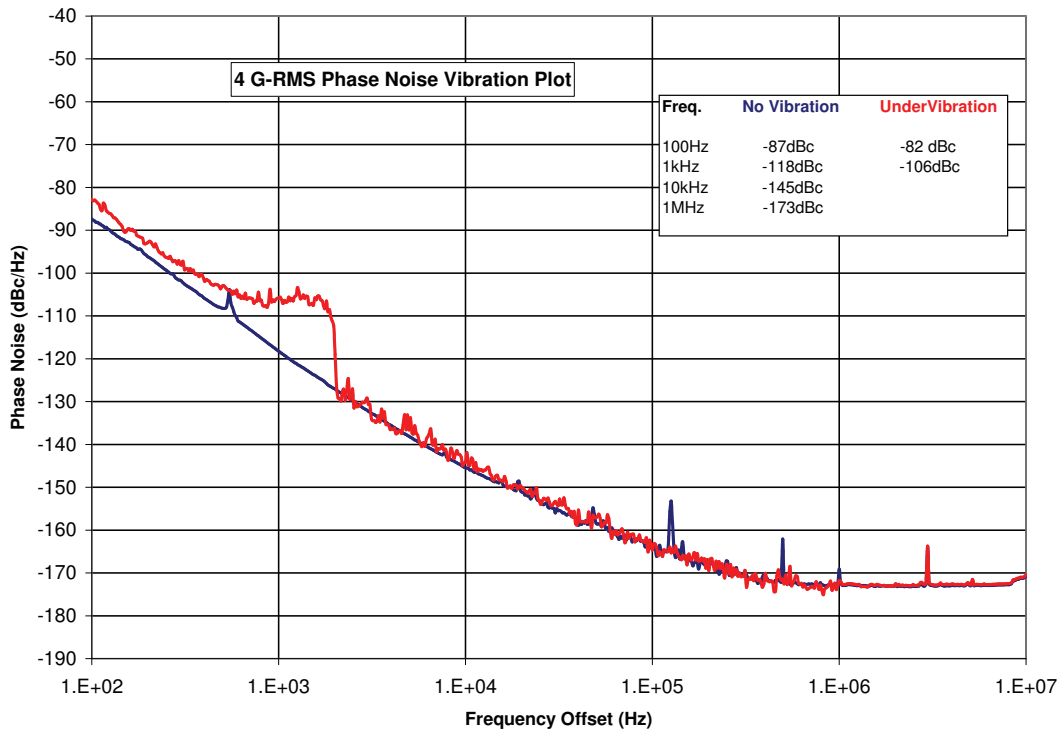
Electrical Tuning



Package Outline



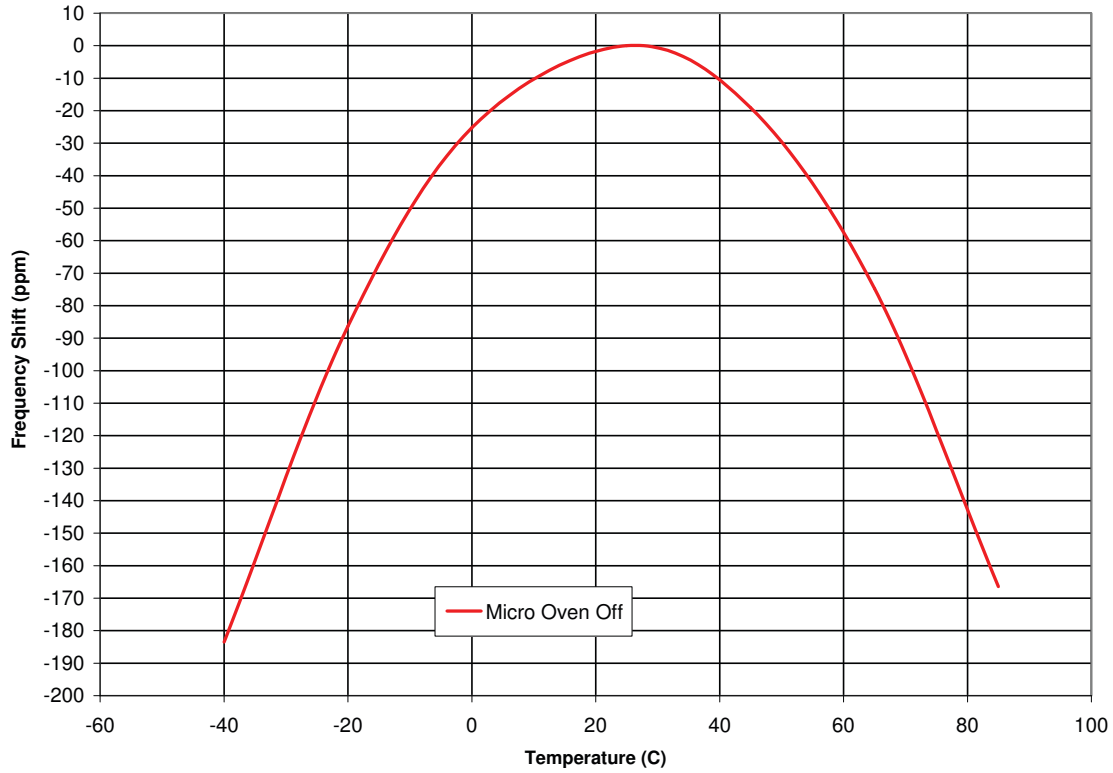
Typical Phase Noise Performance



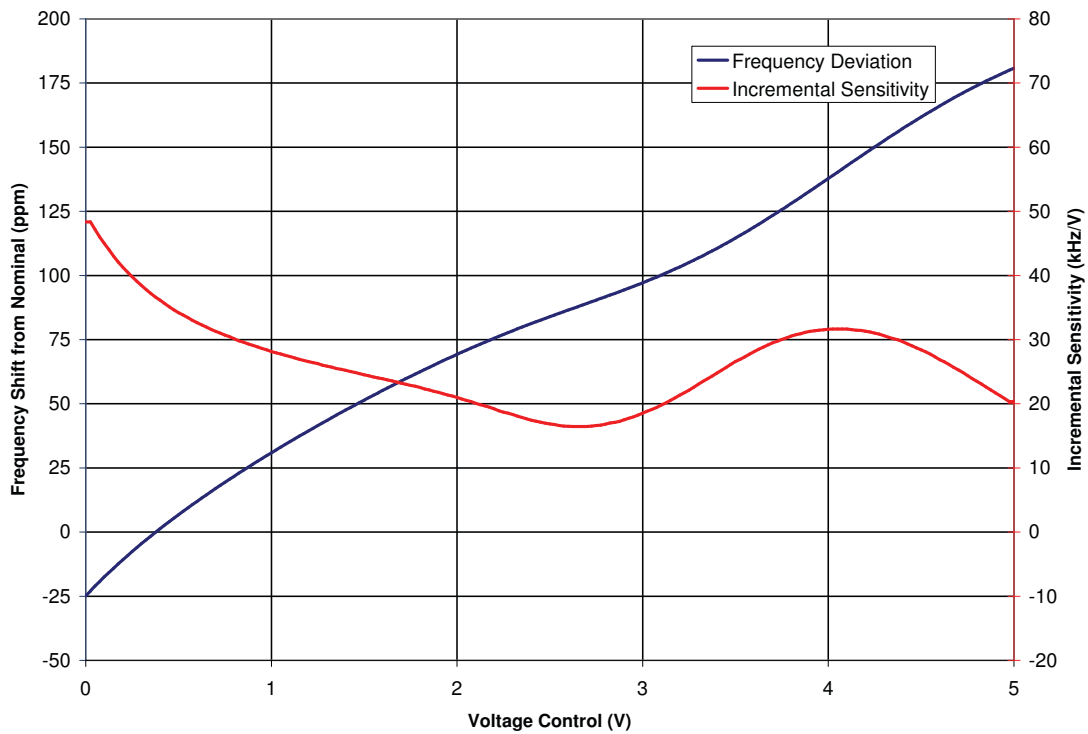
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640 MHz Oscillator

Micro-Oven Performance (Patent Pending)



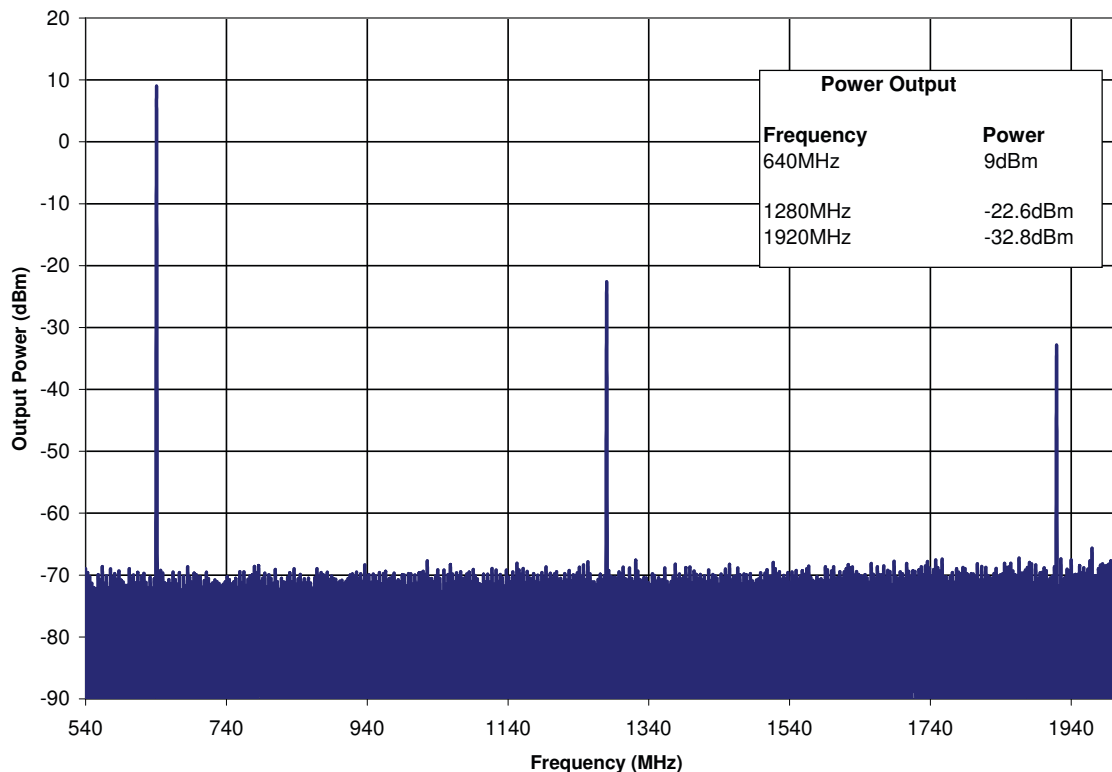
Frequency Shift and Incremental Sensitivity



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640 MHz Oscillator

Spectrum Output



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