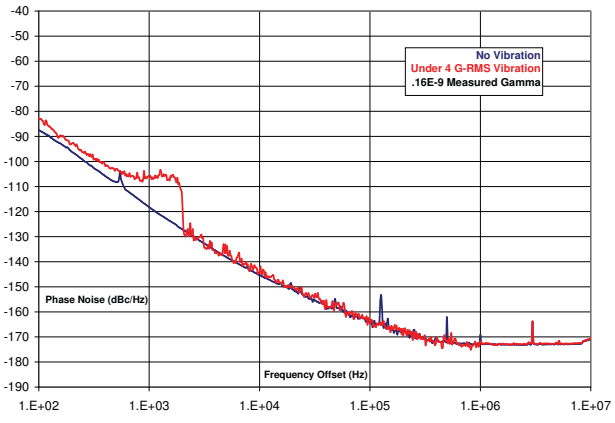
101654.103

640 MHz Oscillator

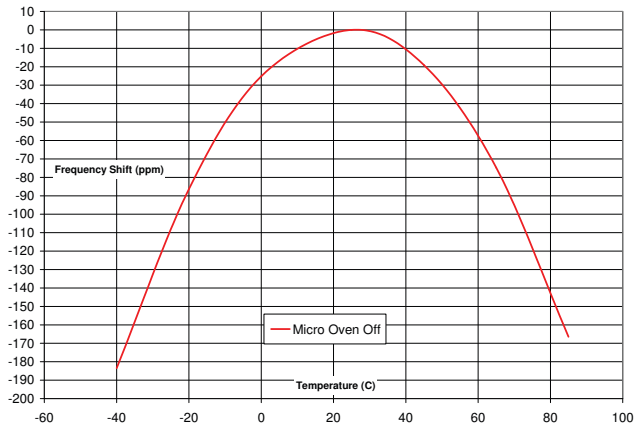
Specifications

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Center Frequency	F_0	–0.048	640	0.048	MHz	V_{TUNE} = 1.0 V, 20 °C
Absolute Pull Range	APR	30	n/a	n/a	ppm	V_{TUNE} = 0.5 V to 5.0 V, –20 °C to 70 °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} = 1.0 V, –20 °C to 70 °C
Aging, 20 years		n/a	20	30	ppm	Absolute change from initial freq
Output Power		8	10	12	dBm	50 Ohm load, –20 °C to 70 °C
Harmonic Spurious		n/a	–30	–20	dBc	50 Ohm load, –20 °C to 70 °C
Non-harmonic Spurious		n/a	–80	n/a	dBc	50 Ohm load, –20 °C to 70 °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 °C
Oven warm-up time		n/a	n/a	n/a	sec	from –40 °C
V_{SUPPLY}		5	12	15	Volts	Range of Supply Voltages
I_{SUPPLY}		n/a	30	n/a	mA	50 Ohm load, –20 °C to 70 °C, w/o oven V_S = 12 V

Typical Phase Noise Performance



Micro-Oven Performance



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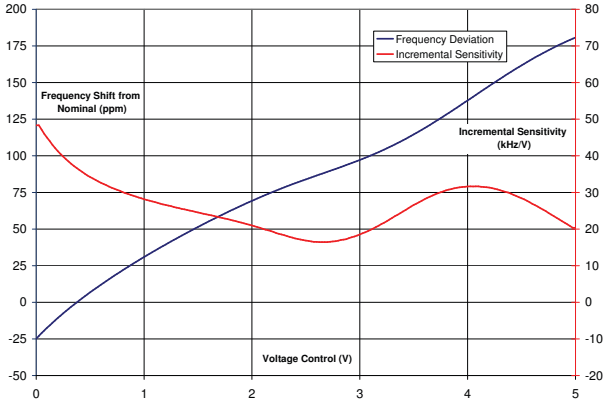
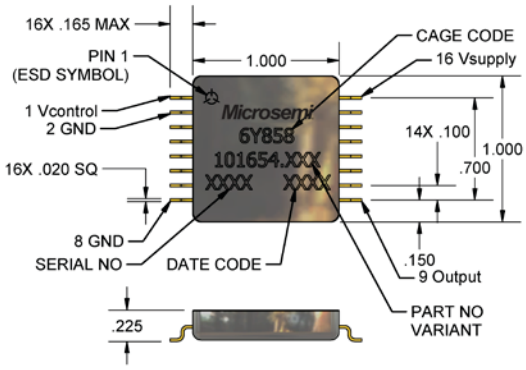
Electrical Tuning

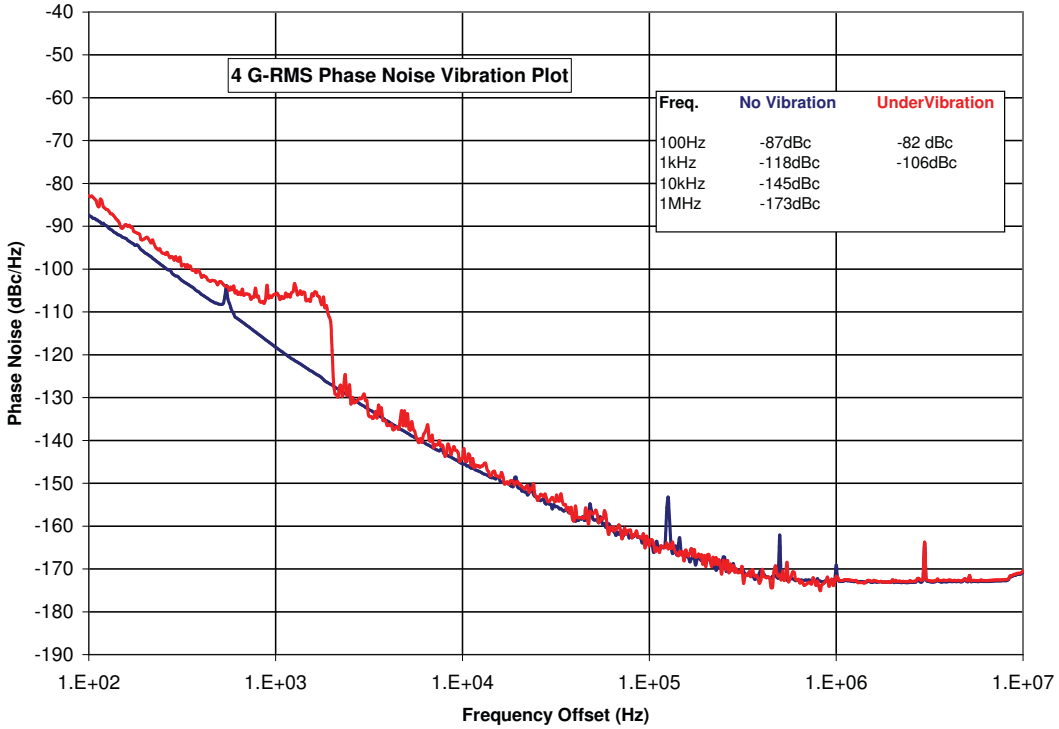


Package Outline



1.50x1.25x.40 inch SMA connectorized package available

Typical Phase Noise Performance



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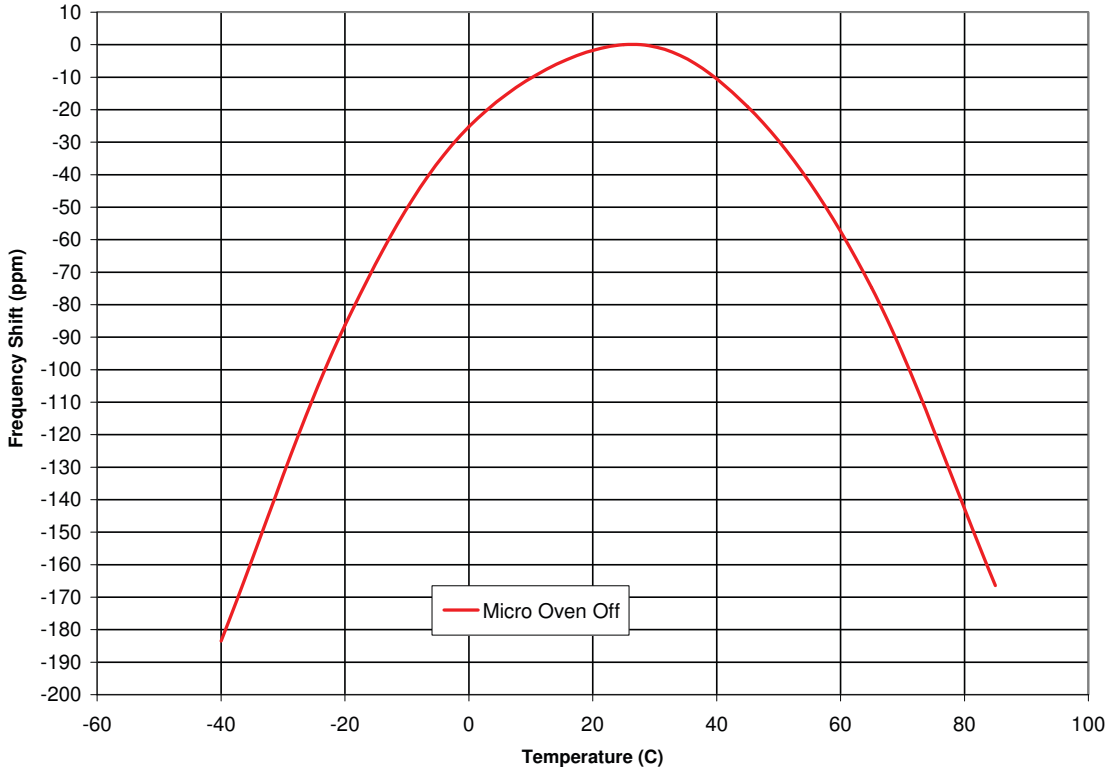
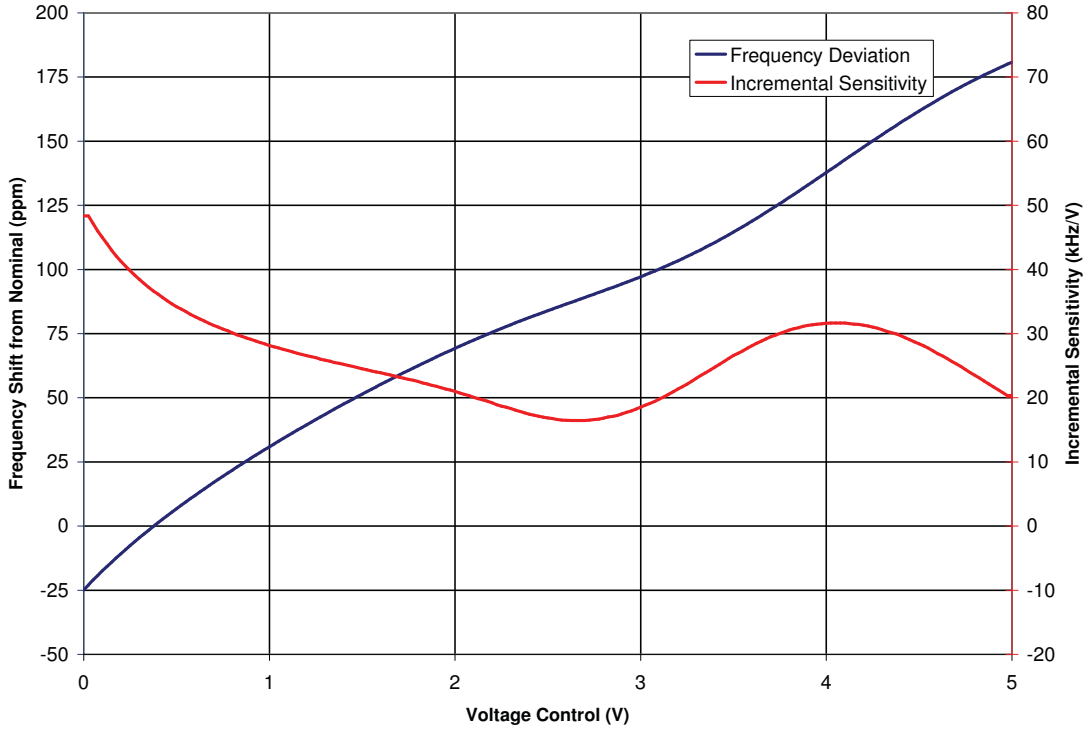
Micro-Oven Performance (Patent Pending)



Frequency Shift and Incremental Sensitivity



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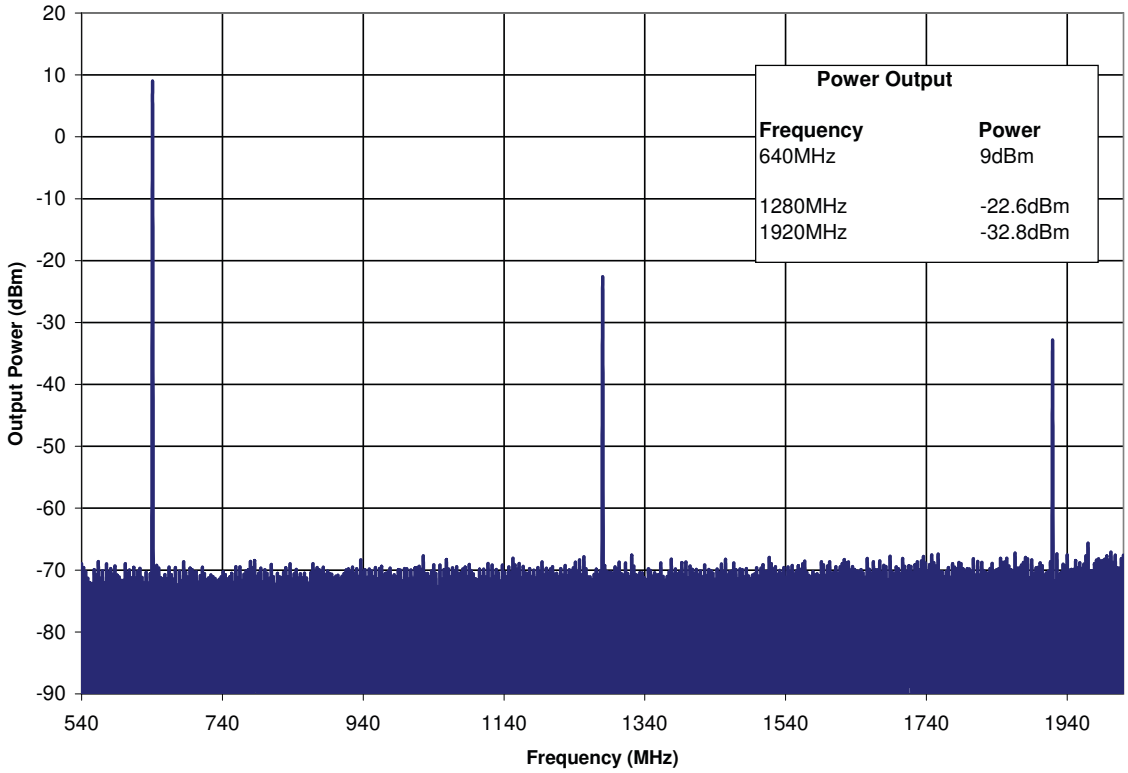
Spectrum Output



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