

WIDEBAND MICROCUBE™ OSCILLATOR 2.0 TO 7.6 GHz

FEATURES

1 inch **MICROCUBE™** Package
Low Phase Noise
Low Spurious

APPLICATIONS

Microwave Test Equipment
Frequency Synthesizers
Up & Down Converters



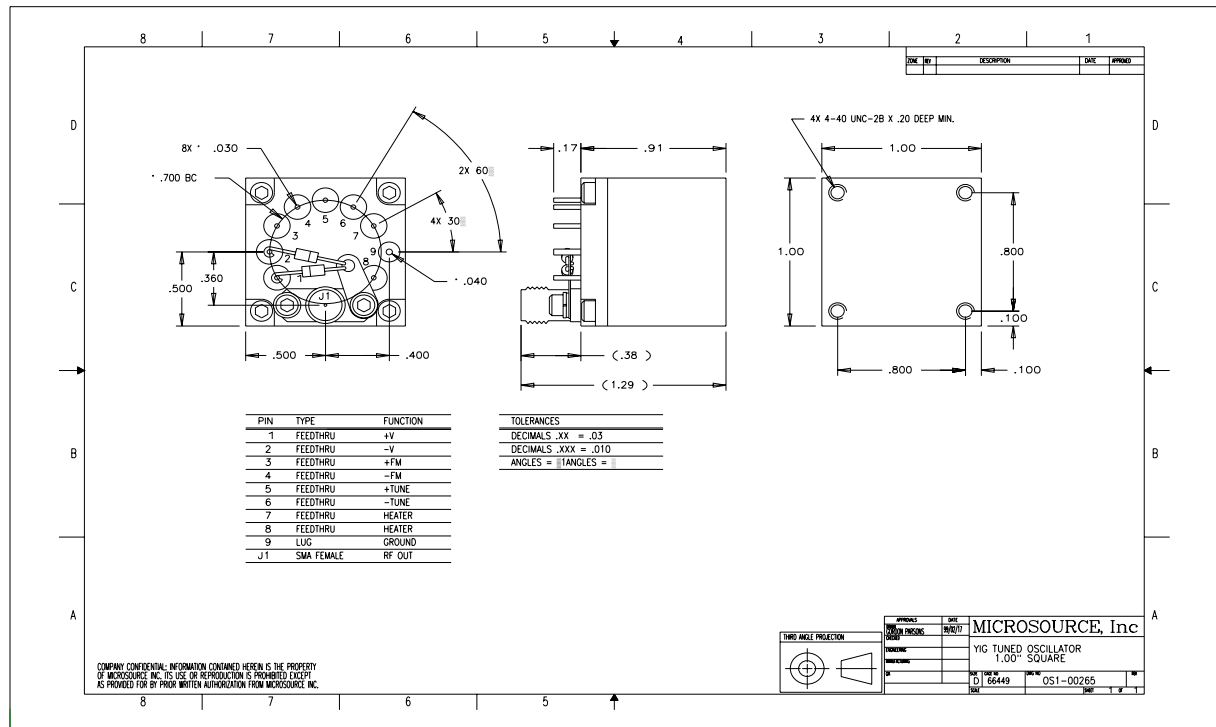
DESCRIPTION

The MCO 2 to 7.6 GHz YIG tuned oscillators provides superior spectral purity, tuning linearity, and frequency drift performance in a small 1 in. x 1 in. x 0.9 in. **MICROCUBE™** package. Phase noise for this oscillators is typically better than -105 dBc/Hz @ 10 kHz and -128 dBc/Hz @ 100 kHz. Non-harmonic spurious are less than -70 dBc.

Parameter	Model Number	MCO-0207-500-01
	Units	Specification
General Characteristics		
Frequency Range	GHz, min	2.0 to 7.6
RF Power	dBm, min.	+15
RF power Variation (Freq. & Temp.)	dBc, max.	±2.5
Harmonic Level	dBc, max.	-10
Non-Harmonic Spurious	dBc, max.	-70
SSB Phase Noise		Typical Maximum
10 kHz Offset	dBc / Hz	-105 -101
100 kHz Offset	dBc / Hz	-128 -125
Freq. Drift (over Temp.)	MHz, typ.	±10
Freq. Pulling (into a 2:1 load VSWR)	MHz, typ.	0.5
Main Coil Characteristics		
Sensitivity	kHz / mA, max.	20 ± 10%
Bandwidth (3 dB)	kHz, typ.	5
Linearity (from Best Fit Line)	max.	0.1%
Hysteresis	MHz, max.	3.5
Coil Impedance Ohms	Ohms, typ.	12.5
Inductance	mH, typ.	55
Connection Capacity (per Pin)	pF, typ.	100
FM Coil Characteristics		
Sensitivity	kHz / mA, max.	310 ± 15%
Bandwidth (3 dB)	MHz, typ.	0.8
Coil Impedance Ohms	Ohms, typ.	1.0
Inductance	uH, typ.	1.0
Connection Capacity (per Pin)	pF, typ.	27
DC Circuit Power		
Bias Voltage & Currents		
+15 Vdc	mA, max.	150
- 5 Vdc	mA, max.	30
YIG Heater (20 to 32 Vdc)	mA, max.	35 Steady State
	mA, max.	400 Surge
Connection Capacity (per Pin)	pF, typ.	1000
Bias Supply Pushing +15 Vdc	MHz / V, typ.	0.5
-5 Vdc	MHz / V, typ.	1
Packaging & Environmental		
Size (See attached figure)	inches	1.0 x 1.0 x 0.9
Weight	oz.	10
Operational Case Temperature	Degrees C	0 to 65

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Envelope Drawing, 1 Inch MICROCUBE™



Customer Specific Applications

If you don't see what you need, contact us. MicroSource takes pride in being a world class, fast turn design center for microwave YIG based component, subsystems and synthesizers.