

# MASYML0007

**COBHAM**

Low Phase Noise  
Phase Locked Oscillator

2011 Datasheet v1

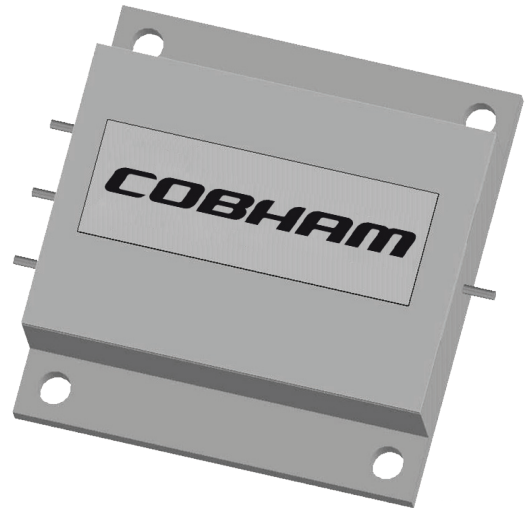
The most important thing we build is trust

## Features

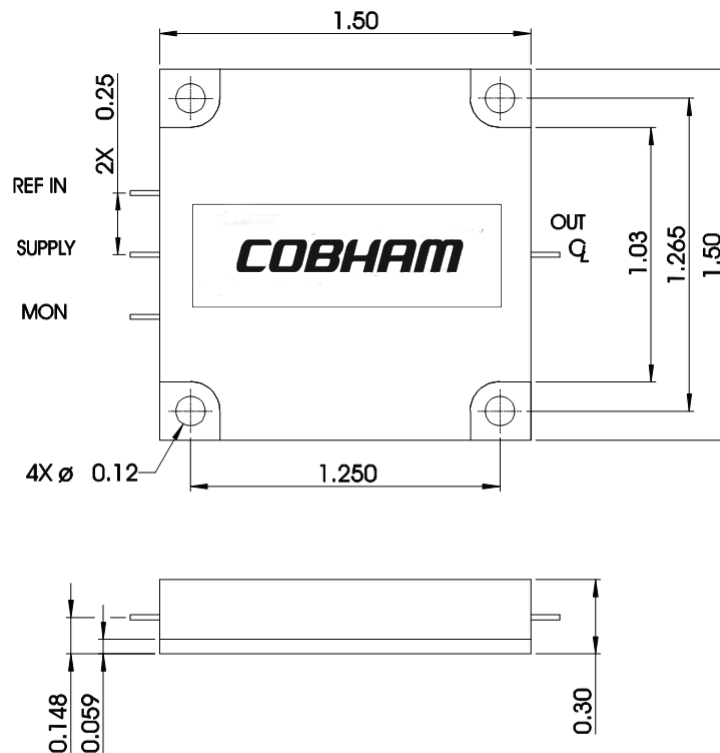
- Low Phase Noise
- Ceramic resonator
- Fixed frequency applications
- High Reliability
- Hermetic package
- Derivative designs available from 1.0 GHz to 2.0 GHz

## Description

Cobham MAL Ltd. MASYML0007 is a high reliability phase locked CRO oscillator with excellent phase noise performance. The MASYML0007 is designed for demanding applications that require the ultimate in low phase noise and robust construction. Applications include communications terminals, surveillance radar excitors, airborne transponders and fire control radar. The module is supplied in a flange mount metal package for ease of integration into the user's hardware. Frequency control is handled internally using a customized microcontroller.



## Mechanical Outline



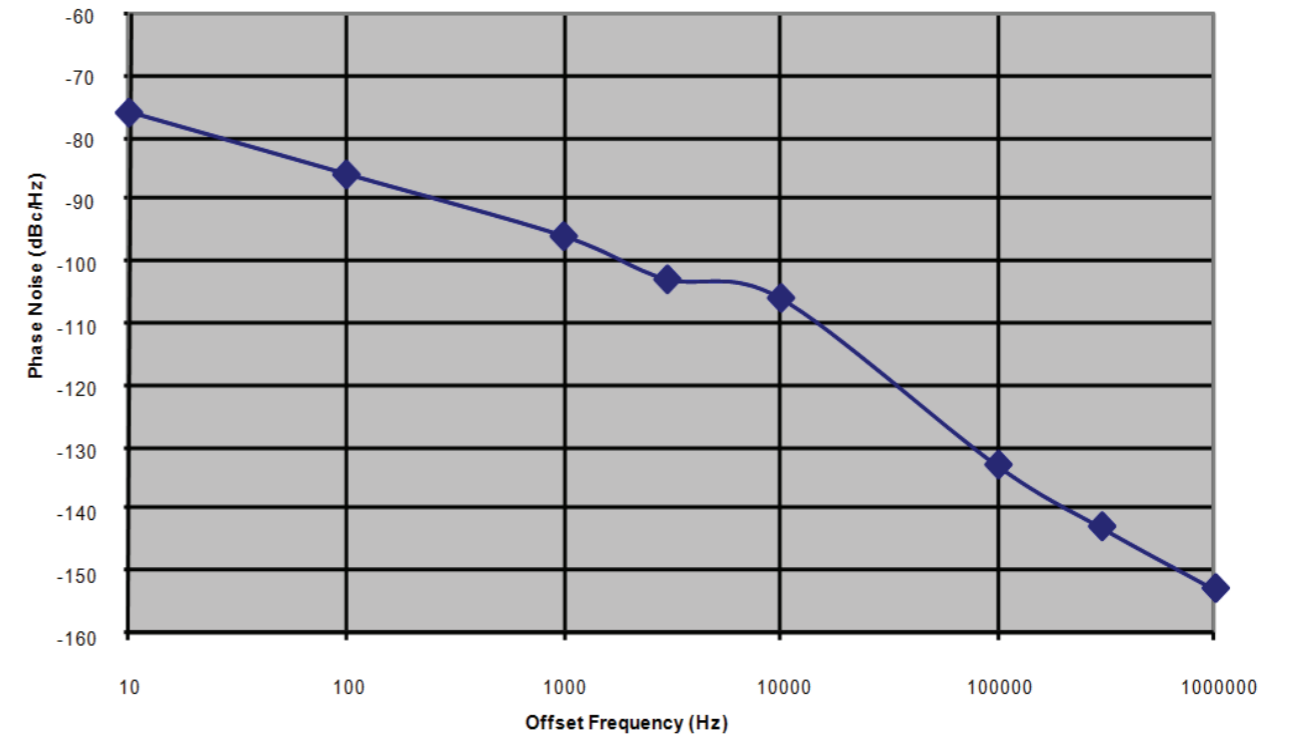
NOTES:-  
1. CONDUCTOR PINS WITH GLASS/METAL  
SEALS. PIN  $\varnothing$ 0.018 SEALS. PIN  $\pm$  0.020.

## Typical Electrical Performance

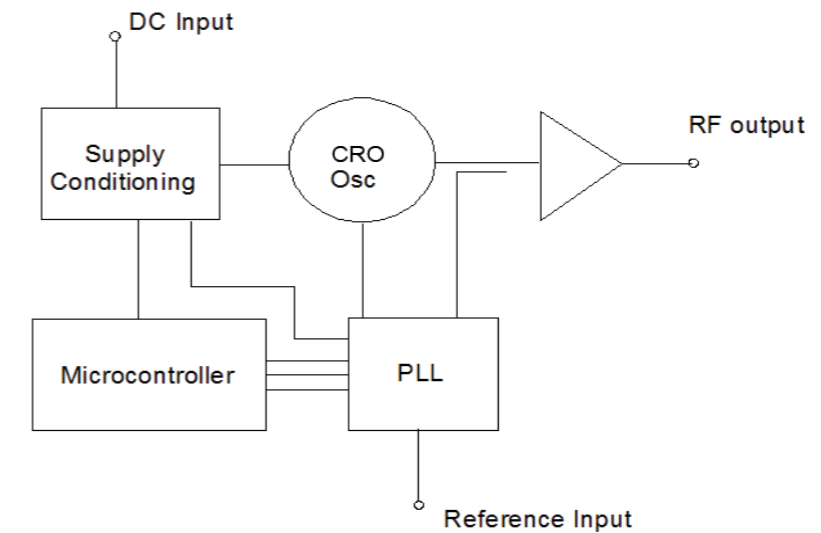
Parameter	Min	Typ	Max	Unit	Notes
Frequency		1600		MHz	Deivative designs available from 1.0 GHz to 2.0 GHz
RF Ouput power	-3	0	+3	dBm	
RF Ouput VSWR		1.2:1			
Switch on Time		200	350	ms	
Harmonic		-20	-15	dBc	
Spurious		-75	-70	dBc	
Phase Noise		-76	-73	dBc/Hz	10Hz offset
		-86	-83	dBc/Hz	100Hz offset
		-96	-93	dBc/Hz	1kHz offset
		-106	-103	dBc/Hz	10kHz offset
		-133	-130	dBc/Hz	100kHz offset
		-153	-150	dBc/Hz	1MHz offset
External Ref		100		MHz	With stability of 200ppm (Max) over temperature. Reference phase noise: -98 dBc/Hz @ 10 Hz -110 dBc/Hz @ 100 Hz -120 dBc/Hz @ 1 kHz
					>10MHz offset
Lock Monitor (in lock)	2.0	2.5	3.3	Volt	
Lock Monitor (not locked)	0	0.1	0.8	Volt	
DC Supply voltage		9		Volt	Other voltages may be specified
Power consumption		1		Watt	
Operating Temperature	-40		+85	°C	
Non-Operating / Storage Temperature	-55		+125	°C	

## Typical Performance

Typical Phase Noise



Block Diagram



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**COBHAM**



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