



Features and Benefits

Frequency: 10MHz
Supply voltage: 3.3V
Steady power consumption: 330mW
Output waveform: Sinewave
Hold over stability: ±22us over 24h
Aging: ±0.5ppb per day
Operating temperature: -30°C to +70°C
Size: 39*34mm

Typical Applications

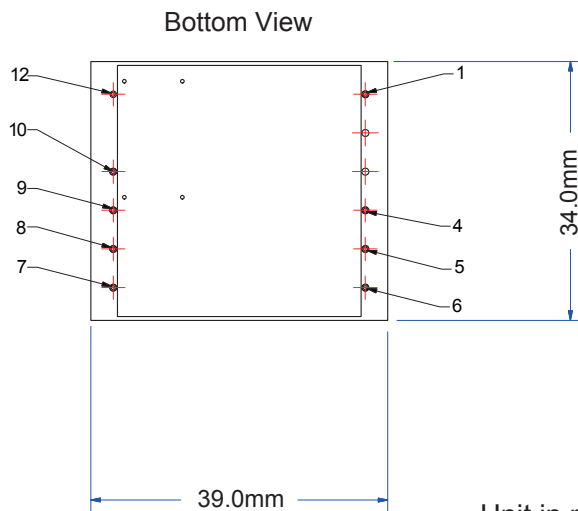
AUV
Ocean bottom node
LBL positioning
Portable test instrument

Description

TM3934DE-LP-10MHz-B is the high performance and low aging timing module with 10MHz frequency and 1PPS output. Its core low aging and low power consumption makes it ideal for all applications under water or underground.

Mechanical Drawing & Pin Connections

Drawing No: MD220007-1



PIN	FUNCTION
1	Vtune
4	Tune Enable
5	TX
6	RX
7	Vcc
8	GND
9	1PPS IN
10	1PPS OUT
12	RF OUT

Unit in mm
1mm = 0.0394 inches



Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f ₀			10		MHz	
RF Output							
Waveform			Sinewave				
Load	R _L			50		Ohm	
Level			7	9	13	dBm	
Harmonics Level					-25	dBc	
Power Supply							
Voltage	V _{cc}		3.15	3.3	3.45	V	
Power Consumption		Steady state, @+25°C			330	mW	
Warm-up Time	T _F	@+25°C, to df/f=1e-7		60		s	ref.at 15 min
Frequency Stability							
Versus Temperature		Ref 25°C			±50	ppb	
Versus Supply Voltage		Ref V _{cc} typ.		±2		ppb	
Aging	Per day	After 30 days of operation			±0.5	ppb	
	First Year				±0.05	ppm	
Allan Variance		1s	5			e-12	
1PPS and Holdover Stability							
Accuracy after Lock				±25		ns	
Holdover Stability		@25°C, 24h			±22	us	
1PPS Output Parameters							
Load				10		pF	1MOhm
Signal Level-High			2.4			V	
Signal Level-Low					0.4	V	
1PPS Input Parameters							
Format			Rising edge				
Load				1		MOhm	
Serial Communications							
Protocol			RS232				
Baud Rate			57600				
Environmental Conditions							
Operating Temperature Range		-30°C to +70°C					
Storage Temperature range		-60°C to +85 °C					
PCB cleaning/washing		Not washable					