



Features and Benefits

Frequency: 10MHz
Supply voltage: 5.0V
Steady power consumption: 330mW
Output waveform: Sinewave
Hold over stability: $\pm 13\mu\text{s}$ over 24h
Aging: $\pm 0.3\text{ppb}$ per day
Operating temperature: -40°C to $+85^{\circ}\text{C}$
Size: 39*34mm

Typical Applications

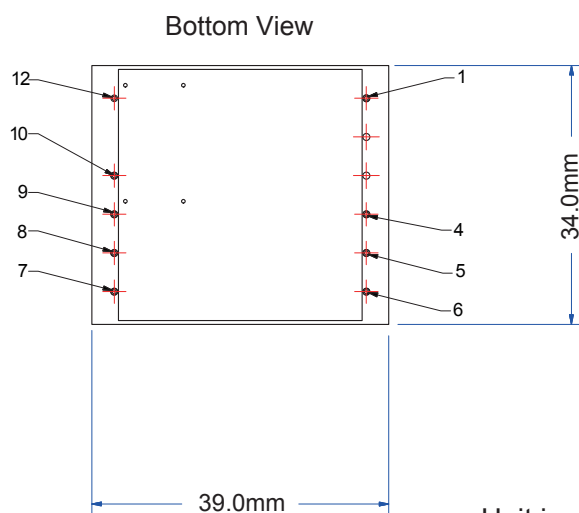
AUV
Ocean bottom node
LBL positioning
Portable test instrument

Description

TM3934DE-LP-10MHz-A 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}		4.75	5.0	5.25	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			±5	ppb	
Versus Supply Voltage			Ref V _{cc} typ.		±2		ppb	
Aging	Per day		After 30 days of operation			±0.3	ppb	
	First Year					±0.03	ppm	
Allan Variance			1s	5			e-12	
1PPS and Holdover Stability								
Accuracy after Lock					±25		ns	
Holdover Stability			@25°C, 24h			±13	us	
1PPS Output Parameters								
Load					10		pF	1MOhm
Signal Level-High				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		-40°C to +85°C						
Storage Temperature range		-60°C to +85 °C						
PCB cleaning/washing		Not washable						