



Features and Benefits

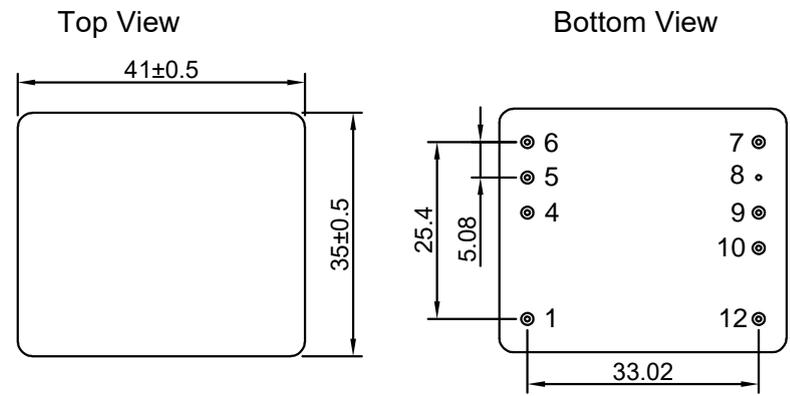
- Frequency: 10MHz
- Supply voltage: 3.3V
- Warm-up power: 500mW
- Output waveform: CMOS
- Temperature stability: $\pm 1 \times 10^{-9}$
- Accuracy: $\pm 5 \times 10^{-11}$
- Operating temperature: -10°C to +70°C
- Size: 41x35x12mm

Typical Applications

- GNSS Receivers
- Portable Radios
- IED Jamming System
- UAV
- Autonomous Sensor Networks

Mechanical Drawing & Pin Connections

Drawing No: MD240007-1



Pin Connections:

Pin#	Function
1	Tune
4	BITE
5	TX
6	RX
7	Vcc
8	GND
9	1PPS In
10	1PPS Out
12	10MHz Out

Unit in mm
1mm = 0.0394 inches

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Specifications

Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	F _{nom}			10		MHz	
RF Output							
Output wave form			3.3V CMOS				
Output Level	V _{OL}				0.7	V	
	V _{OH}		2.2			V	
Duty Cycle			40		60	%	
Rise/Fall time					10	ns	
Load			10Mohm//10pF				
1 PPS Time Output							
1 PPS			1			Hz	
Output amplitude			3.3V CMOS				
Pulse width			1			ms	
Rise/Fall time					10	ns	
Load			10Mohm//10pF				
1 PPS Time Input							
1 PPS			1			Hz	
Low Level					0.5	V	
High Level			2.5		3.3	V	
Timing edge			Rising edge				
Input impedance			10Mohm//10pF				
Built-In Test Equipment (BITE) Output							
Format			3.3V CMOS				
Load Impedance			1Mohm				
Logic			0=Normal operation; 1=Alarm				
Digital Communications							
Protocol			RS-202				
Logic level			LVTTTL				
Baud Rate			57600				
Number of data bits			8				
Number of stop bits			1				
Parity			none				
Power Supply							
Supply Voltage			3.2	3.3	3.4	Vdc	
Warm-up power					500	mW	
Steady power					130	mW	
Warm-up Time					180	sec	
Frequency Stability							
Versus Operating Temperature Range		-10°C to +70°C			±1.0	ppb	Temperature Slope < 0.5°C /min.
Frequency accuracy		At shipment			±5	10 ⁻¹¹	
Daily Aging		After 1 day of continuous operation.			±3	10 ⁻¹¹	
Short term (ADEV)		Tau=1sec			3	10 ⁻¹⁰	
		Tau=10sec			1	10 ⁻¹⁰	
		Tau=100sec			3	10 ⁻¹¹	
Frequency Control		Resolution: 1x10 ⁻¹²	±2			10 ⁻⁸	
Phase noise		10Hz			-80	dBc/Hz	
		100Hz			-113	dBc/Hz	
		1KHz			-125	dBc/Hz	
		10KHz			-135	dBc/Hz	
Environmental, Mechanical Conditions							
Parameter	Reference STD.			Test Condition			
Storage temperature	-40°C to +85°C			Non-operating			
Vibration	7G rms, maintain lock			MIL-STD-810, method 514.5			
Humidity	0-95%, RH			MIL-STD-810, method 507.4			
Magnetic Sensitivity	<±1x10 ⁻¹⁰ /1 Gauss			Up to 2 Gauss			