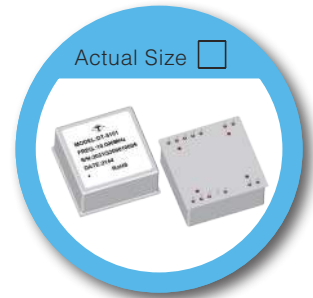


Ultra-High Precision Disciplined Oscillator DT-5151 Series

FEATURE

- 24 Hours Holdover < 1.5uS, $\pm 10^{\circ}\text{C}$ temperature change
- 1pps input and 1pps output for 1pps synchronization
- Discipline to 1ns in phase and $< 10^{-12}$ in frequency
- 1 Second continuous phase measurement and report system, resolution $\leq 1\text{ns}$
- ToD (Time of Day)
- RS232 digital interface
- 5MHz, 10MHz, CMOS output
- $-10^{\circ}\text{C} \sim 70^{\circ}\text{C}$ operating
- Proprietary adaptive algorithm

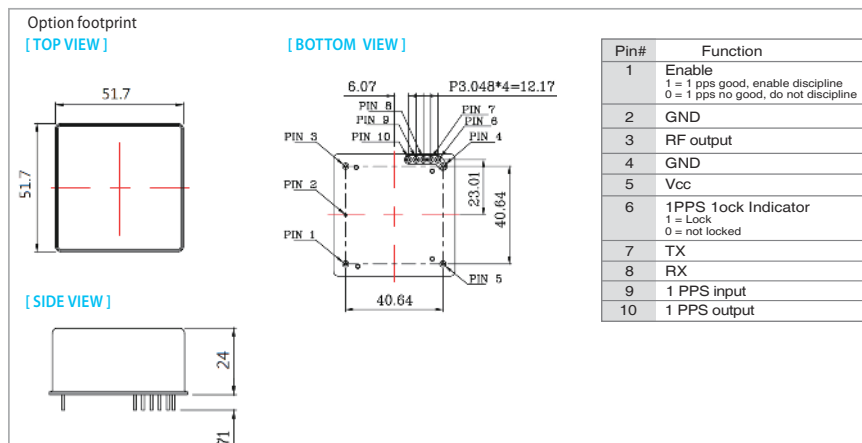
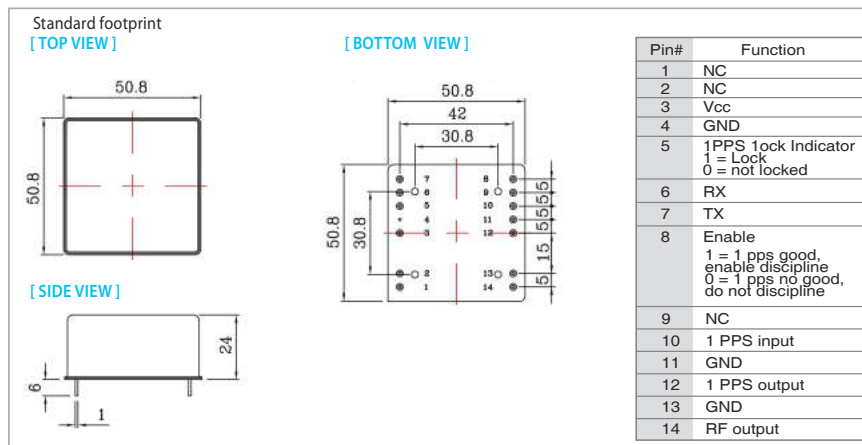


RoHS Compliant

TYPICAL APPLICATION

- 5G Telecommunication, Base Station
- Smart Power Grid
- Test and measurement equipment

DIMENSION (mm)



Note: not all combination of options are available. Other specifications may be available upon request.

Specifications subject to change without notice.

ELECTRICAL SPECIFICATION

1.RF OUTPUT

Parameter	Min.	Typ.	Max.	Unit	Test Condition
Frequency Output	10			MHz	5MHz is available. Consult factory for other frequency
Output Waveform	3.3V CMOS				Consult factory for another waveform
Load	10M Ω /10pF				
Rise/Fall Time			10	nS	
Output Level	V _{CL}		0.4	V	
	V _{OH}	2.7			
Duty Cycle	40		60		
Stability over Temperature			+/-0.1	ppb	-10°C ~ 70°C
Frequency Accuracy			+/-1	x10 ⁻¹²	24 hours average. Locked to 1pps.
24Hours Holdover			1.5	μ S	+/-10°C, after 7 days power on and 1 days discipline. Temperature variance below 1°C/Minute.
Acceleration Sensitivity			+/-1	ppb/g	Worst direction, consult factory for better sensitivity.

2.1pps Time Output

Parameter	Min.	Typ.	Max.	Unit	Test Condition
1pps	1			Hz	
Output Amplitude	3.3V CMOS				
Pulse Width		20		μ s	
Rise/Fall Time			15	ns	
Load	10M Ω //10pF				

3.1pps Time Input

Parameter	Reference Std.	Test Condition
1pps	1Hz	
Timing Edge	Rising edge	
Input Amplitude	3.3V CMOS	
Input Impedance	10M Ω //10pF	

4.Phase Noise (@10MHz)

Parameter	Min.	Typ.	Max.	Unit	Test Condition
1 Hz			-100	dBc/Hz	
10 Hz			-125	dBc/Hz	
100 Hz			-135	dBc/Hz	
1 KHz			-145	dBc/Hz	
10 KHz			-150	dBc/Hz	

5.Supply Voltage

Parameter	Min.	Typ.	Max.	Unit	Test Condition
Supply Voltage	4.75	5.0	5.25	Vdc	
Steady Power			2.55	W	at 25°C ambient
Warm up Power			8.8	W	Factory configurable
Warm up Time			5	Min.	To +/-5ppb. Factory configurable for fast warm up

Note: not all combination of options are available. Other specifications may be available upon request.

6. Digital Communication

Parameter	Reference Std.	Test Condition
Protocol	RS232	
Logic Level	3.3V CMOS	
Baud rate	57600 bps	

7. Environmental

Parameter	Reference Std.	Test Condition
Mechanical Shock	>30G, 11ms Half Sine	MIL-STD-202
Vibration	5G up to 2KHz	MIL-STD-202

Table 1 : ORDERING INFORMATION

DT-5151 Series Ordering Information	FootPrint	
	Standard (A)	Optional (B)
	DT-5151-A	DT-5151-B

Note: not all combination of options are available. Other specifications may be available upon request.

Specifications subject to change without notice.