

PLL Part No.: PT626-1005-GPS

Issue 2: 27th January 2023

Features

- Temperature stability locked to ± 0.001 ppb long term
- Low phase noise
- Frequency 10.0MHz
- SMA connector interface
- The flexible nature of the design means that variations to suit almost any application can be developed to meet individual customer requirements

Specifications

- Temperature stability unlocked: ± 20 ppb over $(-40$ to $+70)^{\circ}\text{C}$
- Output: Sinewave +7dBm
- Voltage: 5.0V 12V
- Warm Up Current: 750mA 330 mA
- Quiescent current: 430mA 190 mA

Phase Noise (typical)

- $F_{0}+10\text{Hz}$ -120 dBc/Hz
- $F_{0}+100\text{Hz}$ -140 dBc/Hz
- $F_{0}+1\text{KHz}$ -155 dBc/Hz
- $F_{0}+10\text{KHz}$ -165 dBc/Hz
- $F_{0}+100\text{KHz}$ -168 dBc/Hz

Voltage / Load change

- $\pm 5\%$ supply voltage change: ± 2 ppb
- $\pm 10\%$ load change: ± 5 ppb

Ageing:

Based on 10MHz unit after 30 days continuous operation:

- Per day: ± 0.1 ppb max.
- Per year: ± 50 ppb max.
- Warm up time: 5 minutes to within 0.1ppm

1pps accuracy:

- ± 50 ns

Antenna

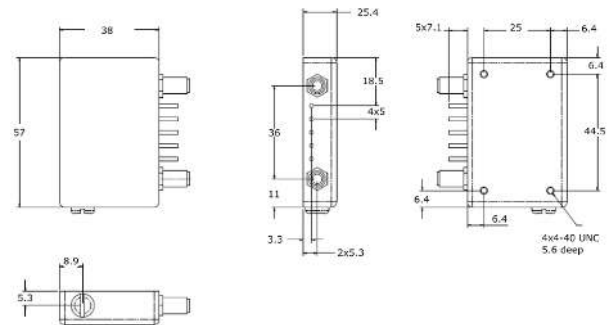
- Typical Gain +25dBm

Environmental

- Electrostatic-Sensitive Device (ESD)
- Storage Temperature Range: $(-40$ to $+125)^{\circ}\text{C}$
- Mechanical shock: MIL standard 202F, method 213, condition J
- Thermal shock: MIL standard 202F, method 107, condition A
- Vibration: MIL standard 202F, method 204, condition B



Dimensions (mm)



GPS antenna

- #1 Lock 1
- #2 Lock 2
- #3 Vcc
- #4 1 pps
- #5 ground
- RF out

Typical active GPS antenna
Gain 25 dBm including cable loss

Lock Status

Lock 1	Lock 2	
low	low	no status
high/low	low/high	power up test OK
high	low	GPS satellite detect
low	high	GPS Lock
high	high	Full operational lock

- Solderability: 5 seconds maximum at 230°C
- 3 seconds maximum at 350°C

Compliance

- RoHS Status (2011/65/EU) - Compliant
- REACH Status - Compliant

Packaging

- Pack Style: Bulk

Ordering Information

- PLL part No.: PT626-1005-GPS
- Operating voltage, 5V or 12 V
- Frequency: 10.0MHz

Test Circuit - Sinewave

