

PLO13G10MIH Technical Data Sheet (SMA Female connectors)

Case PN: 6UGG4W6H41SMA2

Features:

- * 13 GHz Phase Locked Oscillator
- * Internal 10 MHz Reference Oscillator
- * -77 dBc/Hz @ 10kHz Offset
- * High Pout +12 dBm (Lower Level can be customized)
- * Harmonics -20 dBc
- * Single DC Voltage supply: +5V
- * Operating Current: 380mA
- * Operating Temperature: -40°C to +85°C
- * RF OUT are AC-Coupled Internally
- * ROHS Compliant

Applications:

- * Test Instrumentation
- * Phase Locked Loop
- * Frequency Synthesizer
- * Local Oscillator
- * Wireless and Optical Communication

General Description:

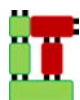
PLO13G10MIH is a 13 GHz Phase Locked Oscillator with an internal 10 MHz reference oscillator (TCXO 0.28ppm). The PLO features excellent phase noise performance of -77 dBc/Hz @ 10kHz offset. Supply Voltage is +5V DC with low power consumption (<1 watt). This PLO is RoHS complaint with compact coaxial package (1.5"x1.5"x0.48") and Nickel plated. It supports SMA connector and DC Bias Pins and 3.3V Lock Detect pin to indicate out-of-lock condition. The reference oscillator has a high output power level of +12 dBm and 2nd harmonic output of -20dBc typical. It only weights 1.5 Oz (42g).



Electrical Specifications:

| Item | Parameter | Conditions | Min | Typ | Max | Units |
|------|--------------------------------------|------------|-----|----------------------|------|--------|
| 1 | Output Frequency | | | 13 | | GHz |
| 2 | Output Impedance | | | 50 | | Ohms |
| 3 | Output Power Level | | +11 | +12 | +13 | dBm |
| 4 | Phase Noise @ 1kHz Offset | | | -80 | -75 | dBc/Hz |
| 5 | Phase Noise @ 10kHz Offset | | | -77 | -72 | dBc/Hz |
| 6 | Phase Noise @ 100kHz Offset | | | -98 | -93 | dBc/Hz |
| 7 | Phase Noise @ 1MHz Offset | | | -120 | -115 | dBc/Hz |
| 8 | External Reference Frequency | | | 10 | | MHz |
| 9 | Reference Impedance | | | 50 | | Ohms |
| 10 | Reference Phase Noise @ 10Hz Offset | | | -100 | | dBc/Hz |
| 11 | Reference Phase Noise @ 100Hz Offset | | | -127 | | dBc/Hz |
| 12 | Reference Phase Noise @ 1kHz Offset | | | -147 | | dBc/Hz |
| 13 | 2 nd Harmonics | | | -25 | -20 | dBc |
| 14 | Spurs | | | -80 | -70 | dBc |
| 15 | Lock Detect | | | +3.3 VDC High = Lock | | |
| 16 | Single Power Supply | | | 5 | | Vdc |
| 8 | Current, I _{DD} | | | 380 | | mA |

Test Conditions: V_{DD}=+5V, I_{dd} = 380 mA (typ.) Temp = +25 °C, 50Ω system.



Absolute Maximum Ratings

| Item | Parameter | Rating | UNITS |
|------|-------------------------|-------------|-------|
| 1 | Max Device Voltage | +7 | V |
| 2 | Operating Temperature | -40 to +85 | °C |
| 3 | Max Storage Temperature | -65 to +150 | °C |

Note: ESD Sensitive Material, Transport material in ESD bags and handle only in ESD Workstation.

Mechanical Specifications

Size:

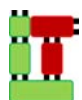
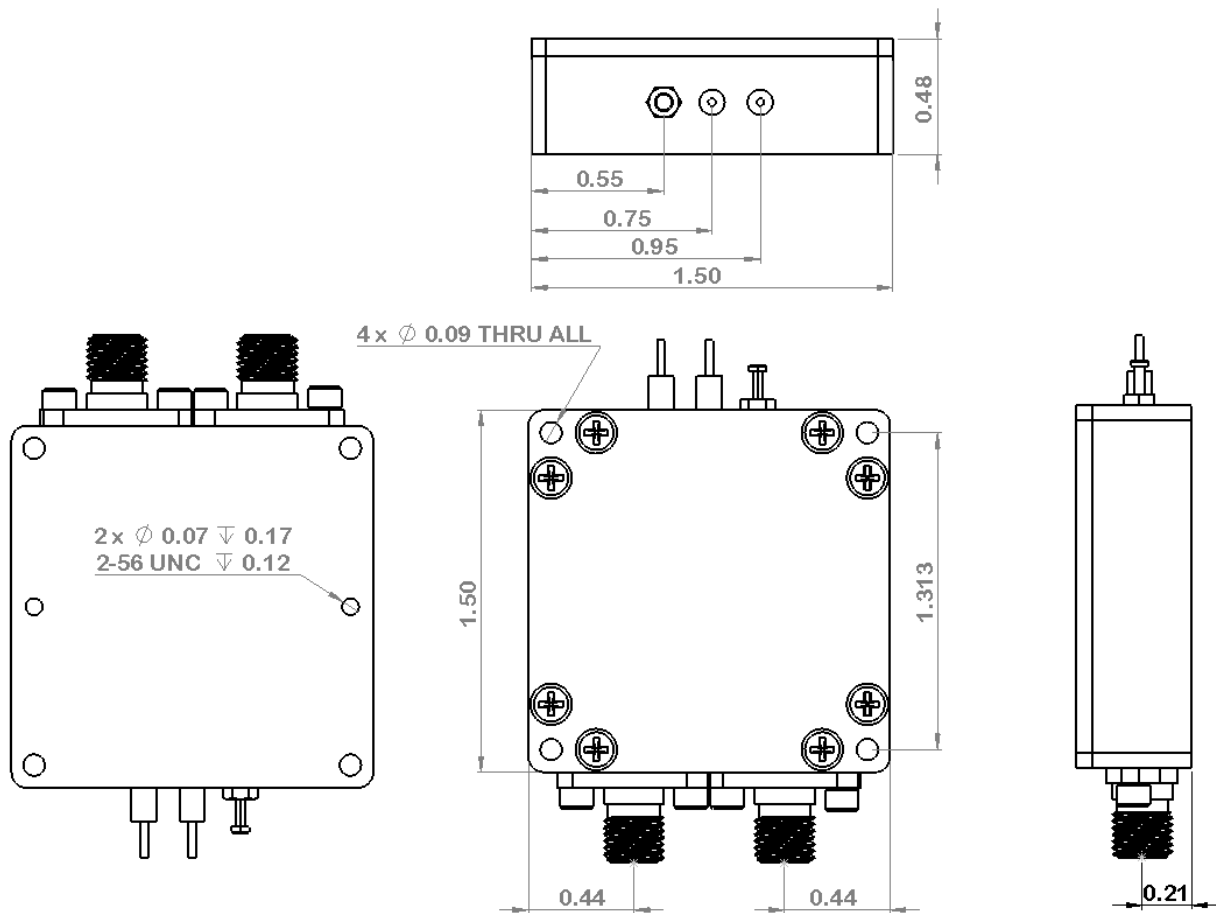
Length: 1.5 in

Width: 1.5 in

Height: 0.48 in

Weight: 1.5 Oz (42 g)

Body Material and Plating: Aluminum with Electroless Nickel Plating



Typical Phase Noise Performance Date

