



ADVANCED NOISE TECHNOLOGY

PLX600A SERIES

LOW NOISE PHASE LOCKED MULTIPLIER



The 600 Series Phase Locked Multiplier is a TCI low noise VCXO. The VCXO operates at a selected frequency between 50 MHz to 120 MHz depending on the required output frequency. The PLX600 series is designed to work with a very low noise 10 MHz reference (5 MHz is optional) to provide the highest output noise performance. The reference frequency is multiplied by a comb generator and the desired locking frequency is selected by filtering. The multiplied reference frequency and a sampled VCXO output are compared in a linear phase detector. The loop bandwidth of the phase locked loop is typically 50 Hz to 80 Hz so that extremely low noise reference oscillator noise can be tracked. Buffered EFC monitor and lock alarms are provided as outputs. If higher output frequencies are required, the VCXO output is further multiplied to the desired frequency.

Output Frequency Range: 40 MHz to 500 MHz

Output Performance

Output Power: +13.0 dBm (others optional)
Harmonics: < -30 dBc
Coherent Spurious: < -45 dBc
Non-Coherent Spurious: < -80 dBc
Output Impedance: 50 Ohms

Operating Supply

Input Voltage: +15 & -15 VDC
Current: +15 VDC @ 90 ma typical
(Depends on multiplication)
-15 VDC @ 20 ma typical

Phase Noise Performance (Unlocked)

100 MHz (typical)

100 Hz: -125 dBc/Hz
1 KHz: -155 dBc/Hz
10 KHz: -170 dBc/Hz
100 KHz: -172 dBc/Hz

Input Reference Requirement

Frequency: 10 MHz (5 MHz)
Input Level: +3 dBm, ±2 dB
Lock Range: ±2 PPM

Mechanical Frequency Adjust

Compensation for 10 years aging

Lock Alarm Output

TTL Compatible, HI=Lock
(Low=Lock option)

EFC Monitor

1K max load

Frequency vs. Temperature Performance (Unlocked)

Temperature	Stability
-20° C to 60° C	±5 PPM

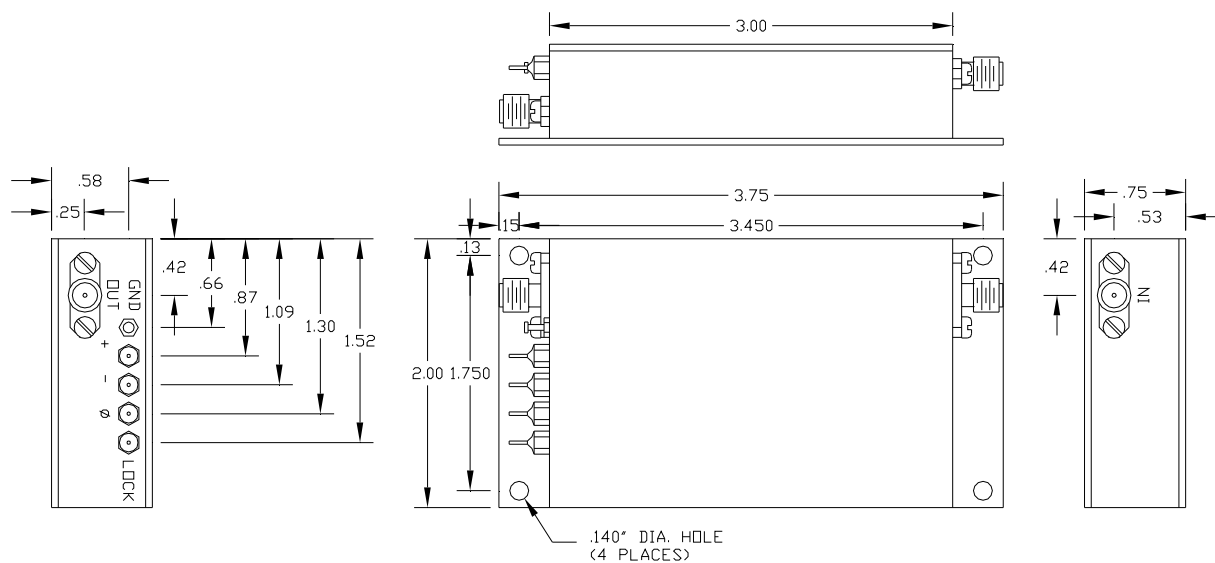
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OUTLINE DRAWING



Dimensions: Inches

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