



ADVANCED NOISE TECHNOLOGY

PLX8000

Synthesized Phase Locked Multiplier

The 8000 series phase lock mates a TCI low noise oscillator with a (X3, X6, X9) multiplier circuit. The external reference input (typically 5 MHz or 10 MHz) is multiplied to the crystal oscillator base frequency, then phase locked via an 80 Hz bandwidth, type 2 loop. Buffered EFC monitor, lock alarm monitor, and reference level detect monitors are provided.



Output Frequency Range: 80 MHz to 1.0 GHz

Input Reference Requirement

Frequency: 5 MHz or 10 MHz ± 2.0 PPM
Input Power: 10 dBm ± 2.0 dBm (typical)
(0 dBm optional)

Loop Bandwidth

80 Hz (typical)

Mechanical Frequency Adjust

Compensation for 10 years aging

Phase Noise Performance (unlocked)

600 MHz (typical)
100 Hz: -101 dBc/Hz
1.0 KHz: -131 dBc/Hz
10 KHz: -143 dBc/Hz
100 KHz: -143 dBc/Hz

Operating Supply

Input Voltage: +15 VDC
-15 VDC

Operating Current

Sub Harmonics: ≤ -45 dBc
+15 VDC @ 45 ma typical
-15 VDC @ 20 ma typical

Output Performance

Output Power: +13.0 dBm
Harmonics: ≤ -30 dBc
Spurious: ≤ -80 dBc
Load: 50 Ohms
(Options for < -60 dBc Harmonics and Spurious available)

Phase Lock Status Monitors

Buffered EFC Monitor (10K)
TTL Lock Alarm (Fault= logic 1)
Reference Level Detect Alarm (Fault logic 1)

Aging Performance

$\leq \pm 1.0$ PPM / 1st year; $\leq \pm 10$ PPM/10 years
(International oscillator)

Frequency vs. Temperature Performance (unlocked)

<u>Temperature</u>	<u>Stability</u>
-20° C to 60° C	± 5.0 PPM

Options

Single Positive Supply Power

Techtrol Cyclonetics Inc.

815 Market Street New Cumberland, PA 17070
Phone: (717) 774-2746 Fax: (717) 774-6799
Website: tci-ant.com E-mail: Sales@tci-ant.com

