Z-Communications, Inc.

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PLL1000A
PHASE LOCKED LOOP
Rev   A

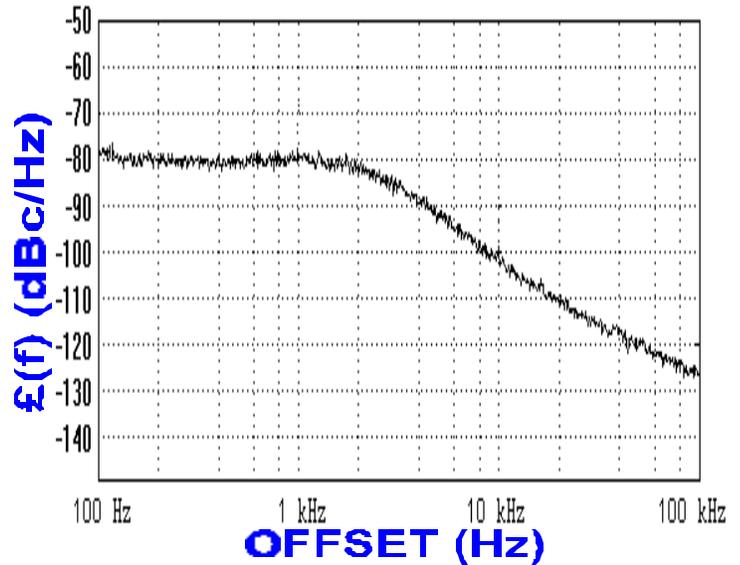## PHASE NOISE (1 Hz BW, typical)

FEATURES
- Frequency Range: 988 - 1028 MHz
- Step Size: 1000 KHz
- PLL - Style Package

APPLICATIONS
- Basestations
- Mobile Radios
- Satellite Communications

PERFORMANCE SPECIFICATIONS	VALUE	UNITS
Frequency Range	988 - 1028	MHz
RMS Phase Error (100 Hz - 100 KHz)	0.75	°
Harmonic Suppression (2nd, typ.)	-20	dBc
Sideband Spurs (typ.)	-70	dBc
Power Output	0±2	dBm
Load Impedance	50	Ω
Step Size	1000	KHz
Charge Pump Output Current	LOW	
Switching Speed (typ., adjacent channel)	2	mSec
Startup Lock Time (typ.)	5	mSec
Operating Temperature Range	-40 to +85	°C
Package Style	PLL	
POWER SUPPLY REQUIREMENTS		
Supply Voltage (Vcc, nom.)	5	Vdc
Supply Current (Icc, typ.)	32	mA

All specifications are typical unless otherwise noted and subject to change without notice.

APPLICATION NOTES
- AN-107 : How to Solder Z-COMM VCOs / PLLs
- AN-200 : Mounting and Grounding of Z-COMM PLLs
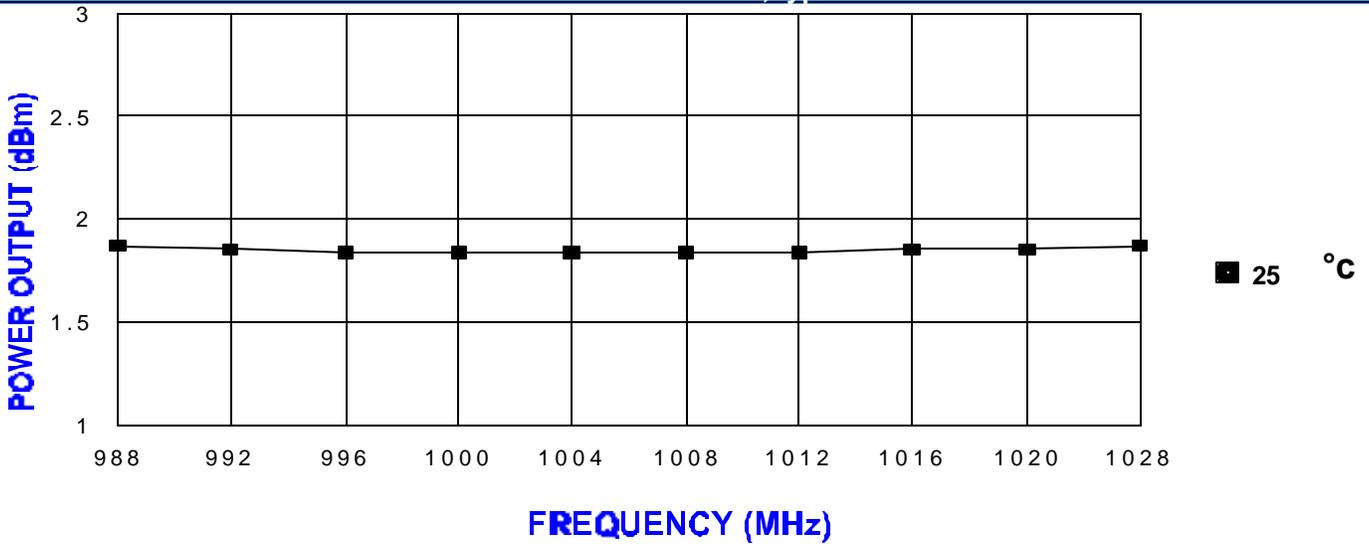- AN-201 : PLL Fundamentals   AN-202 : PLL Functional Description

NOTES:

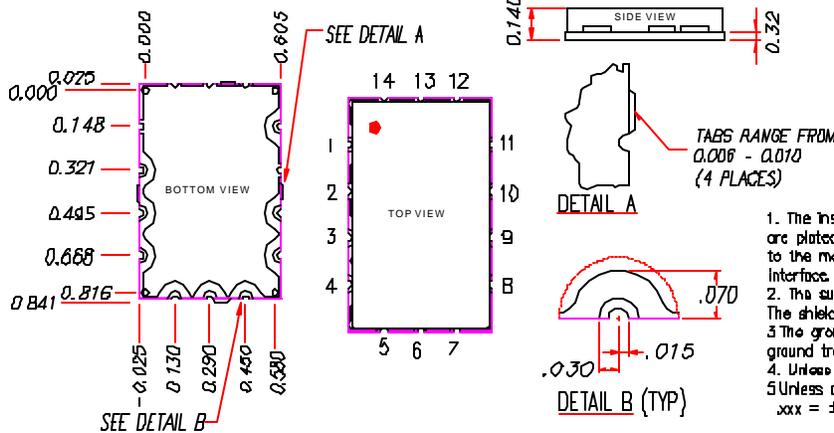Reference Oscillator Signal: 5 MHz$<f_{osc}<$40 MHz

PLL OUTPUT SPECTRUM

POWER

FREQUENCY OFFSET (KHz)

POWER CURVE, typ.

POWER OUTPUT (dBm) vs FREQUENCY (MHz)

Y-axis: 1, 1.5, 2, 2.5, 3

X-axis: 988, 992, 996, 1000, 1004, 1008, 1012, 1016, 1020, 1028

■ 25 °C

FREQUENCY (MHz)

PHYSICAL DIMENSIONS

SIDE VIEW
0.140
0.32

SEE DETAIL A

0.000
0.605
0.025
0.000
0.148
0.321
0.495
0.668
0.816
0.841

BOTTOM VIEW

0.025 0.130 0.290 0.450 0.580

SEE DETAIL B

14 13 12
1   11
2   TOP VIEW   10
3   9
4   8
5 6 7

DETAIL A

TABS RANGE FROM
0.006 - 0.010
(4 PLACES)

DETAIL B (TYP)
.070
.015
.030

P1   RF OUTPUT
P2   GROUND
P3   REFERENCE OSCILLATOR INPUT
P4   CLOCK
P5   DATA
P6   LOAD ENABLE
P7   LOCK DETECT
P8   VCC
P9   MODULATION INPUT (OPTIONAL)
P10   NO CONNECTION
P11-14 GROUND

1. The inside radius of all 14 half holes at the perimeter of the board are plated to provide a surface for the attachment of the PLL Module to the motherboard. 5 pads are for grounding, 8 pads are for signal interface.
2. The surface of the shield is tin-plated and may be soldered to The shield's base metal is brass.
3. The ground plane on the bottom side is ground and attaches to a ground track on the top side of the board as well as to the shield.
4. Unless otherwise noted all dimensions are in inches.
5. Unless otherwise noted all tolerances are as follows:
   .xxx = ± .010