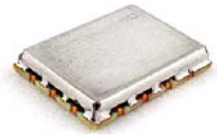
Z-Communications, Inc.
9939 Via Pasar • San Diego, CA 92126
TEL (858) 621-2700 FAX (858) 621-2722

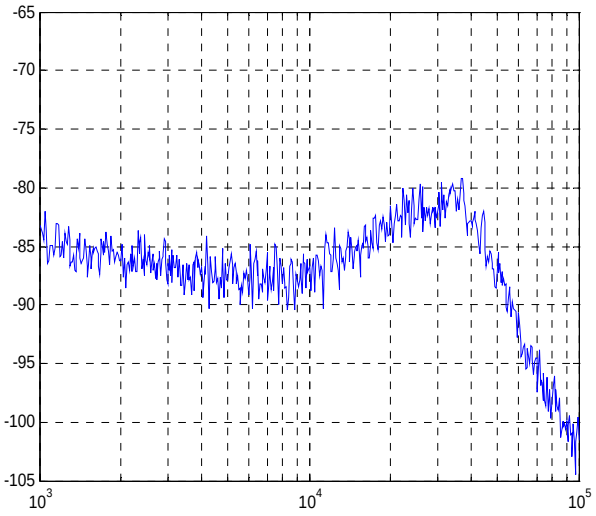
PSA4000A

PHASE LOCKED LOOP

Rev B2



PHASE NOISE (1 Hz BW, typical)



FEATURES

- Frequency Range: 3975 - 4025 MHz
- Step Size: 1000 KHz
- PLL - Style Package

APPLICATIONS

- Microwave Radios
- Satellite Communications
- Direct Broadcast

PERFORMANCE SPECIFICATIONS	VALUE	UNITS
Frequency Range	3975 - 4025	MHz
Phase Noise @ 10 kHz offset (1 Hz BW, typ.)	-85	dBc/Hz
Harmonic Suppression (2nd, typ.)	-15	dBc
Sideband Spurs (typ.)	-65	dBc
Power Output	-0.5±2.5	dBm
Load Impedance	50	Ω
Step Size	1000	KHz
Charge Pump Output Current	5000	µA
Switching Speed (typ., adjacent channel)	3	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.)	26	mA

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

APPLICATION NOTES

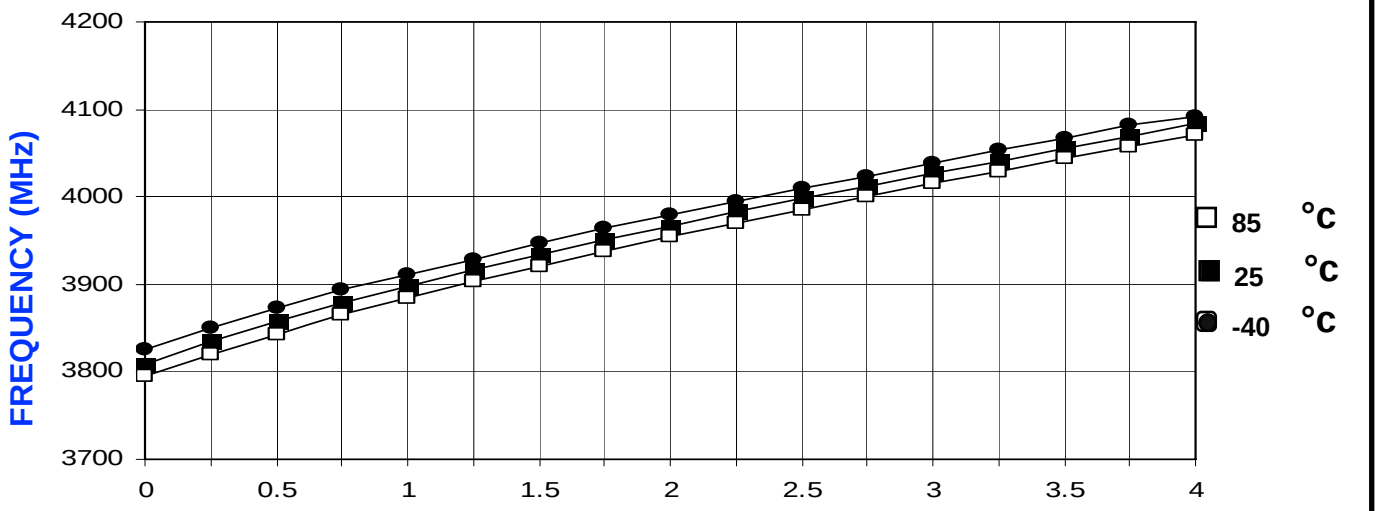
- AN-107 : How to Solder Z-COMM VCOs / PLLs
- AN-200 : Mounting and Grounding of Z-COMM PLLs
- AN-201 : PLL Fundamentals AN-202 : PLL Functional Description

NOTES:

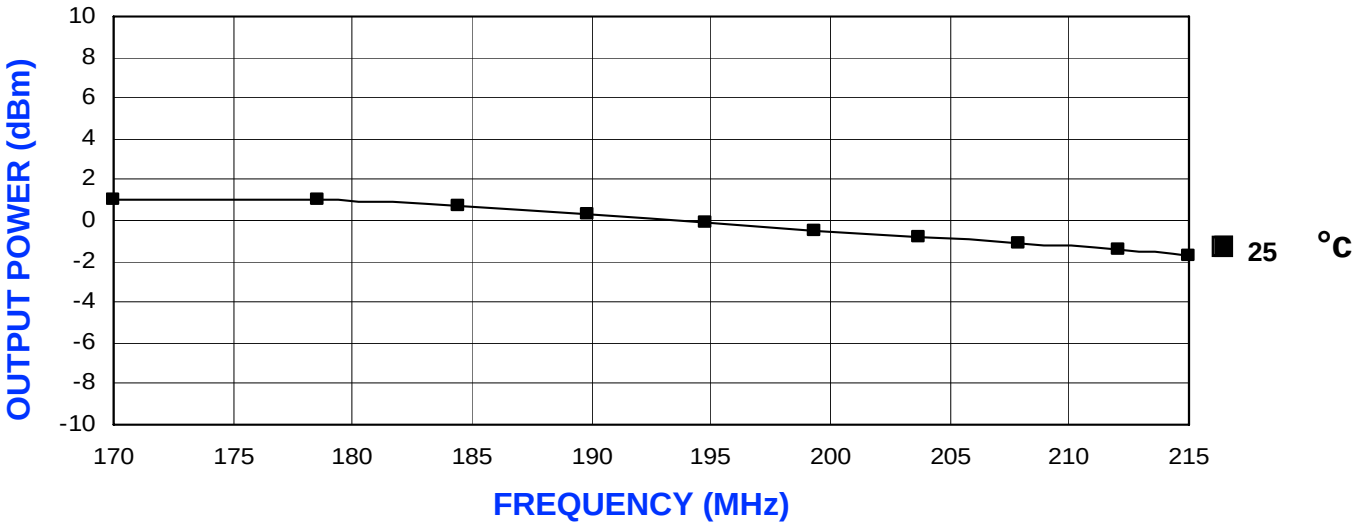
Reference Oscillator Signal: 5 MHz<f_{osc}<100 MHz

Frequency Synthesizer: Analog Devices - ADF4113

VCO TUNING CURVE, typ.

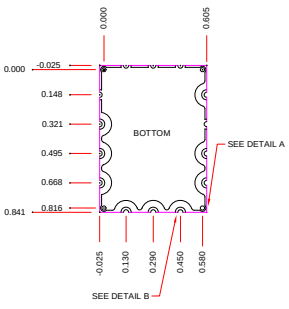


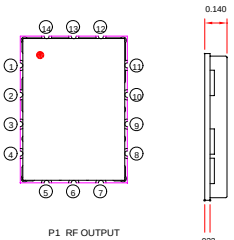
VCO POWER CURVE, typ.



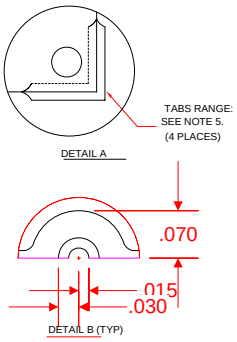
PHYSICAL DIMENSIONS

PLL
415-0078 REV. F
(DRAWING NOT TO SCALE)





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



NOTES:
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 A PCB, IN 11 LOCATIONS, WITH 3 PADS BEING USED FOR ELECTROMECHANICAL INTERFACE. 14 SOLDER LOCATIONS REQUIRED.
2. THE SURFACE OF THE SHIELD IS TIN PLATED AND MAY BE SOLDERED TO. THE SHIELD'S BASE METAL IS COLD ROLLED STEEL.
3. THE GROUND PLANE IS GROUND AND ATTACHES TO A GROUND TRACK ON THE UPPER SIDE OF THE BOARD AS WELL AS THE SHIELD BY PTH.
4. UNLESS OTHERWISE NOTED ALL DIMENSIONS ARE IN INCHES.
5. UNLESS OTHERWISE NOTED ALL TOLERANCES ARE AS FOLLOWS:
TOLERANCES
.XXX= ± .010