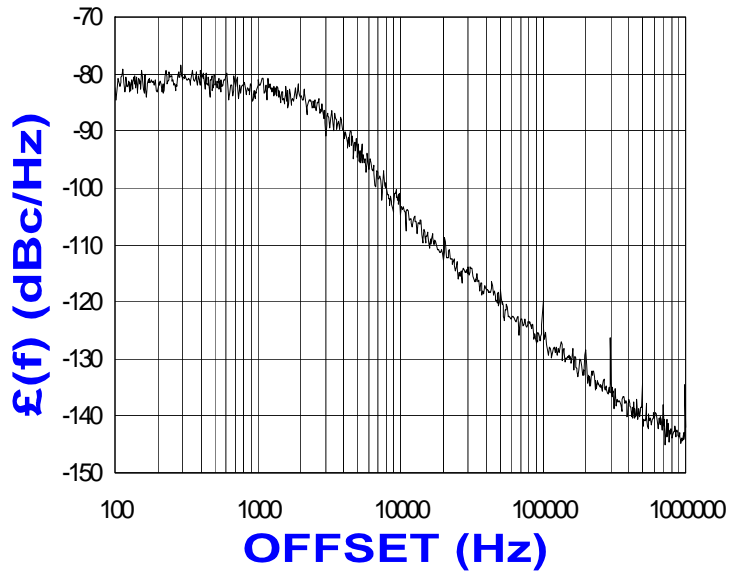




**PHASE NOISE (1 Hz BW, typical)**



| FEATURES               |               |
|------------------------|---------------|
| • Frequency Range:     | 198 - 199 MHz |
| • Step Size:           | 100 KHz       |
| • cPLL - Style Package |               |
| APPLICATIONS           |               |
| • Telecommunications   |               |
| • Satellite            |               |
| • Telemetry            |               |

| PERFORMANCE SPECIFICATIONS                  | VALUE     | UNITS        |
|---|-----------|--------------|
| Frequency Range                             | 198 - 199 | MHz          |
| Phase Noise @ 10 kHz offset (1 Hz BW, typ.) | -104      | dBc/Hz       |
| Harmonic Suppression (2nd, typ.)            | -10       | dBc          |
| Sideband Spurs (typ.)                       | -70       | dBc          |
| Power Output                                | 0±2       | dBm          |
| Load Impedance                              | 50        | $\Omega$     |
| Step Size                                   | 100       | KHz          |
| Charge Pump Output Current                  | 2500      | $\mu$ A      |
| Switching Speed (typ., adjacent channel)    | 1.5       | mSec         |
| Startup Lock Time (typ.)                    | 1.0       | mSec         |
| Operating Temperature Range                 | -40 to 85 | $^{\circ}$ C |
| Package Style                               | cPLL      |              |
| POWER SUPPLY REQUIREMENTS                   |           |              |
| Supply Voltage (Vcc, nom.)                  | 5         | Vdc          |
| Supply Current (Icc, typ.)                  | 45        | mA           |

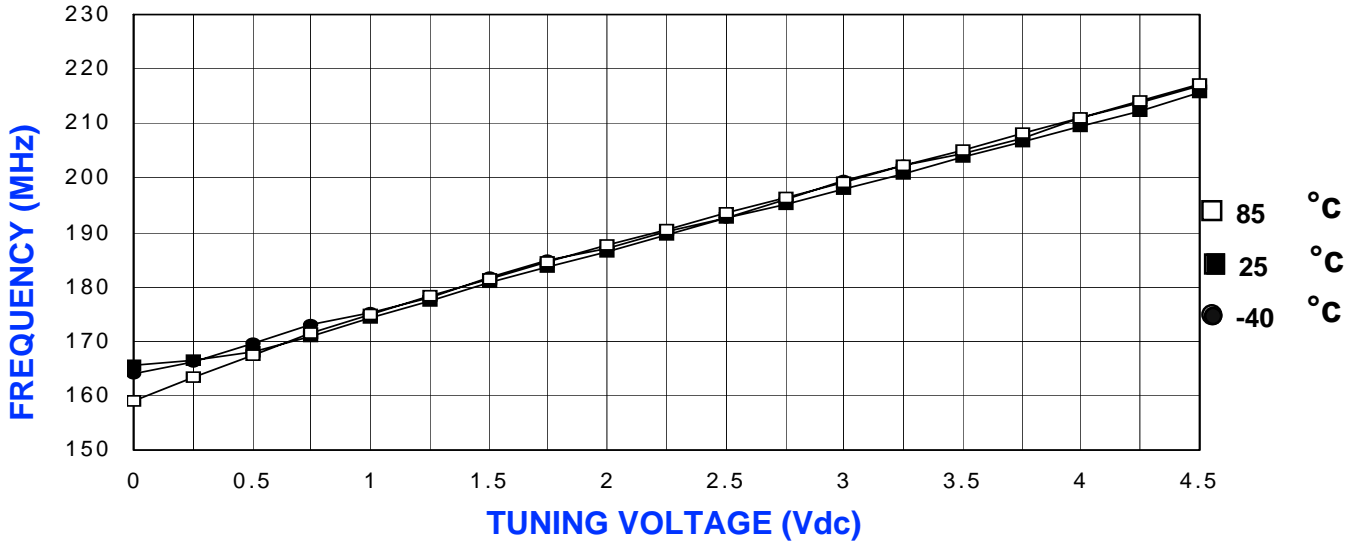
All specifications are typical unless otherwise noted and subject to change without notice.

| 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 |

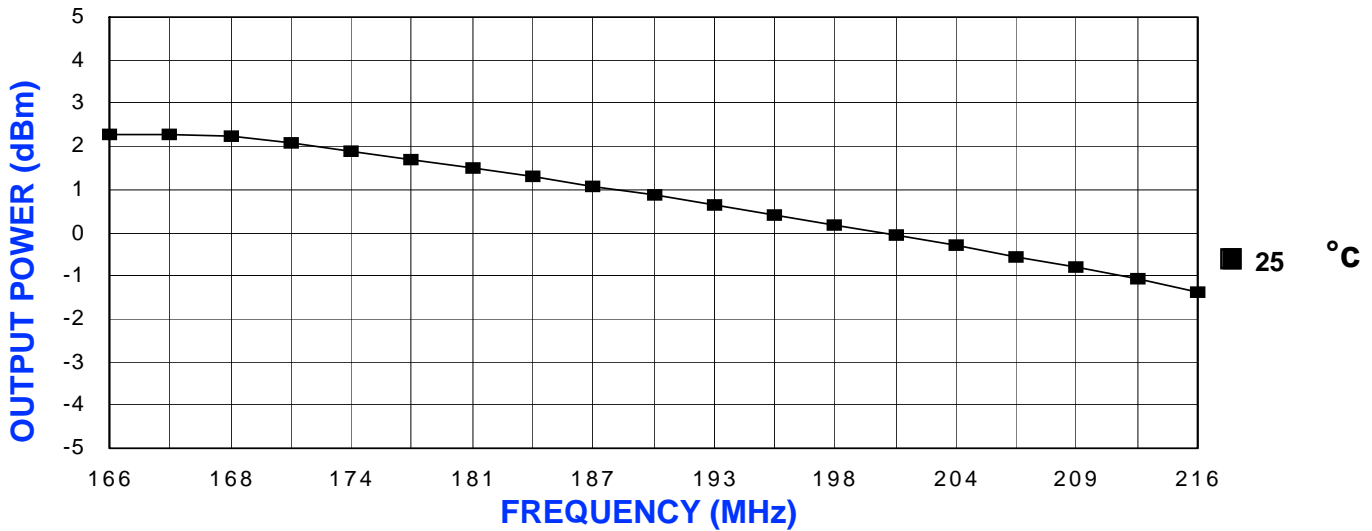
**NOTES:**

Reference Oscillator Signal:  $5 \text{ MHz} < f_{osc} < 100 \text{ MHz}$   
 Frequency Synthesizer: Analog Devices - ADF4001

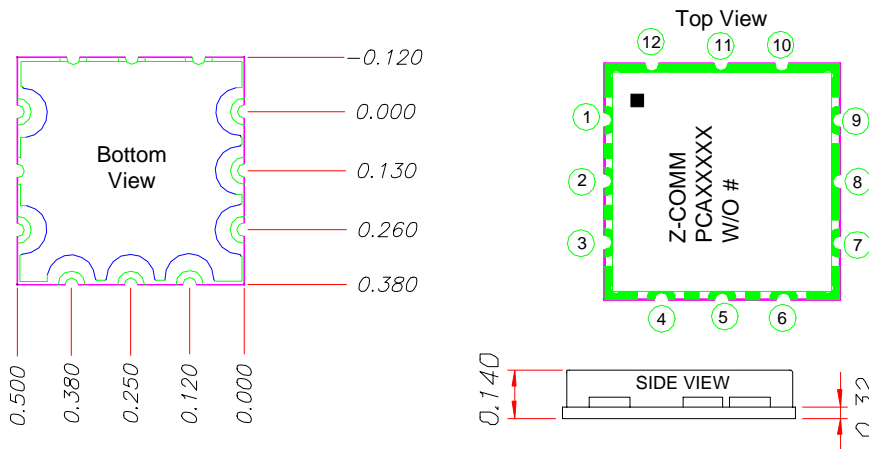
**VCO TUNING CURVE, typ.**



**VCO POWER CURVE, typ.**



**PHYSICAL DIMENSIONS**



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

- P1 RF OUTPUT
- P2 REFERENCE OSCILLATOR INPUT
- P3 CLOCK
- P4 DATA
- P5 LOAD ENABLE
- P6 LOCK DETECT
- P7 VCC
- P8 GROUND
- P9 NO CONNECTION
- P10-12 GROUND