

## Fixed Frequency Synthesizer Surface Mount Module

### Applications

- Basestations
- Mobile Radios
- Satellite Communications

### Application Notes

- AN-107: Manual Soldering Technique
- AN-205: Measuring Phase Noise for SFS Series

### Performance Specifications

|                                       | Min      | Typ  | Max    | Units    |
|---------------------------------------|----------|------|--------|----------|
| Frequency                             | 1387.5   |      | 1387.5 | MHz      |
| Phase Noise @ 10 kHz offset (1 Hz BW) |          | -112 |        | dBc/Hz   |
| Harmonic Suppression (2nd)            |          | -20  |        | dBc      |
| Spurious Suppression                  |          | -80  |        | dBc      |
| Power Output                          | 6        | 8    | 10     | dBm      |
| Load Impedance                        |          | 50   |        | $\Omega$ |
| Settling Time                         |          | 2.8  |        | mS       |
| Operating Temperature Range           | -40      |      | 85     | °C       |
| Package Style                         | PLL-V12N |      |        |          |

### Power Supply Requirements

|                                  | Min | Typ | Max | Units |
|----------------------------------|-----|-----|-----|-------|
| Supply Voltage 1: PLL (Vcc, nom) |     | 3   |     | Vdc   |
| Supply Voltage 2: VCO (Vcc, nom) |     | 5   |     | Vdc   |
| Supply Current 1: PLL (Icc, typ) |     | 10  |     | mA    |
| Supply Current 2: VCO (Icc, typ) |     | 33  |     | mA    |

### Reference Oscillator Signal

|                           | Min | Typ  | Max | Units  |
|---------------------------|-----|------|-----|--------|
| Frequency                 |     | 10   |     | MHz    |
| Phase Noise @1 kHz offset |     | -145 |     | dBc/Hz |

### Additional Notes

For Reference oscillator frequency of <20MHz, ensure SR>50V/us. See Analog Devices ADF4106 application note for more details.  
Pin 7, 8, and 9 are no-connect.

LFSuffix = RoHS Compliant. All specifications are subject to change without notice.

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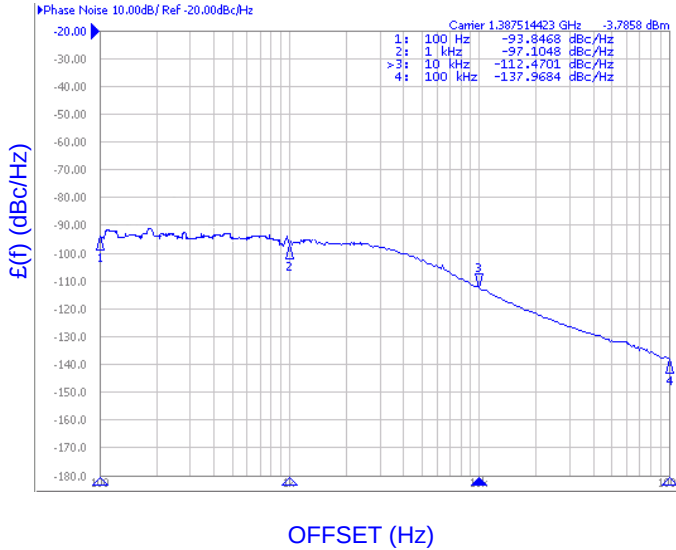
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**Phase Noise, typ.**

**Footprint**

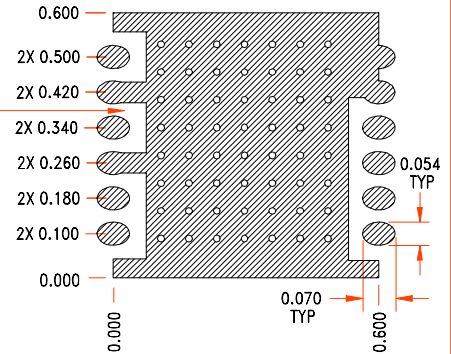
**PHASE NOISE (1 Hz BW, typical)**



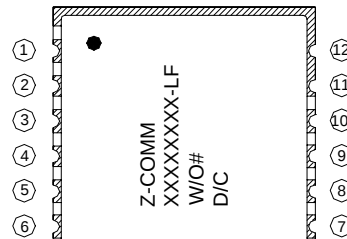
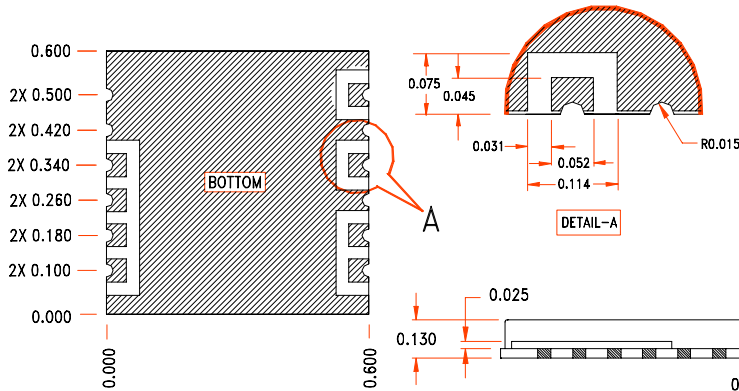
**RECOMMENDED FOOTPRINT**

SEVERAL HOLES OF  $\phi$  0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

0.030 MIN. CUTBACK FROM LIVE PADS



**Physical Dimensions**



**PIN CONFIGURATION**

|      |           |
|------|-----------|
| 1    | Vcc(VCO)  |
| 3    | RF OUT    |
| 5    | MUX OUT   |
| 6    | Vcc(CHIP) |
| 7    | CLOCK     |
| 8    | DATA      |
| 9    | ENABLE    |
| 10   | REF IN    |
| REST | GROUND    |

NOTE: ALL DIMENSIONS ARE IN INCHES  
TOL: XXX: +/- 0.010