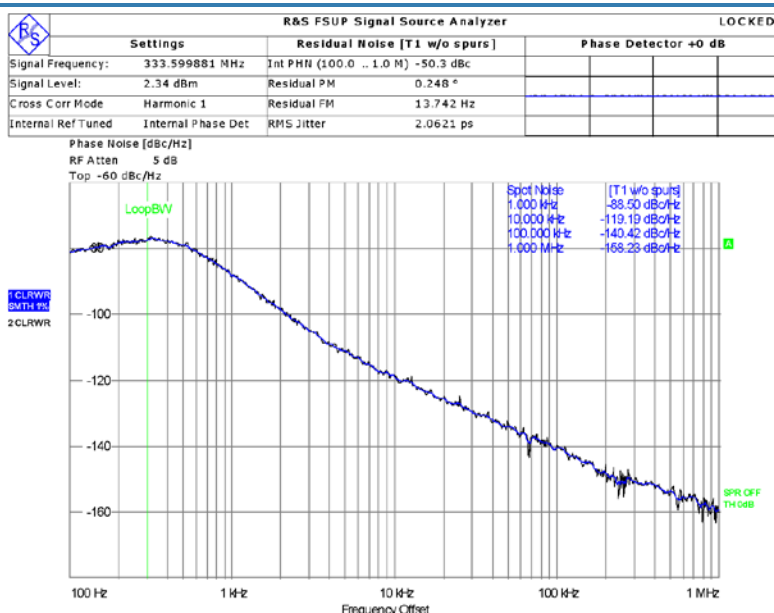




### FEATURES

- ◆ Low Phase Noise
- ◆ Fast Settling Time
- ◆ Small Size, Surface Mount
- ◆ Integrated VCO, PLL IC, Loop Filter

### APPLICATIONS

- ◆ Commercial Wireless Applications

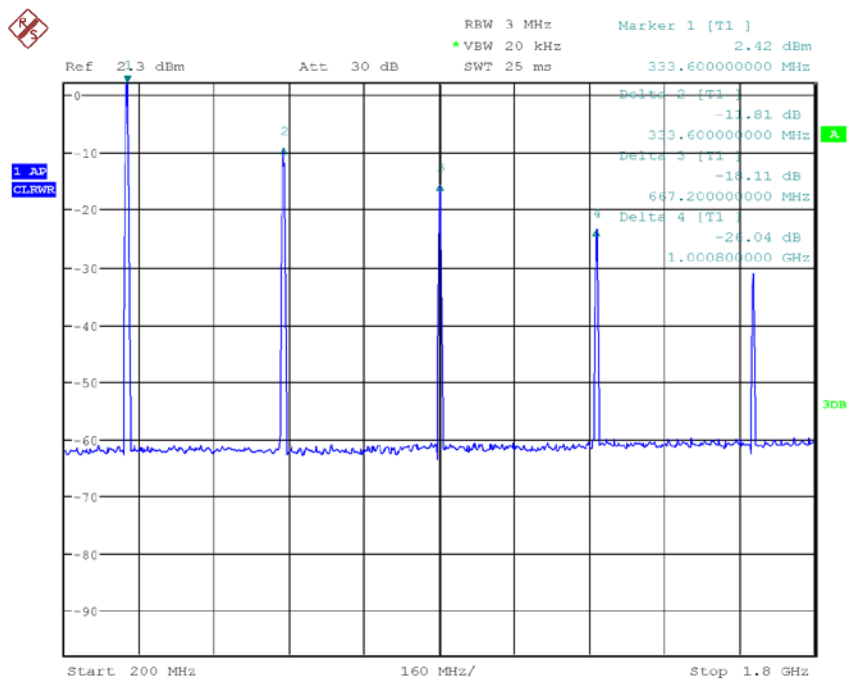
| Parameter                   | Min                     | Typ  | Max   | Units  |
|-----------------------------|-------------------------|------|-------|--------|
| Frequency Range -           | 328.6                   |      | 338.6 | MHz    |
| Step Size                   |                         | 12.5 |       | KHz    |
| Startup Lock Time           |                         | 11.1 |       | ms     |
| Charge Pump Output Current  |                         | 5.0  |       | mA     |
| Output Power -              | 0.0                     |      | 4.0   | dBm    |
| Phase Noise:                |                         |      |       |        |
| 1 kHz                       |                         | -87  | -84   | dBc/Hz |
| 10 kHz                      |                         | -118 | -115  | dBc/Hz |
| 100 kHz                     |                         | -139 | -136  | dBc/Hz |
| Spurious Product - 12.5KHz  |                         | -80  | -70   | dBc    |
| Reference Feedthrough -     |                         | -80  | -70   | dBc    |
| Harmonic Suppression -2nd   |                         | -10  |       | dBc    |
| Output Impedance -          |                         | 50   |       | Ω      |
| Operating Temperature Range | -40                     |      | +85   | °C     |
| Package Type                | PLL-20(20.3X14.8X3.5mm) |      |       |        |

### POWER SUPPLY REQUIREMENTS

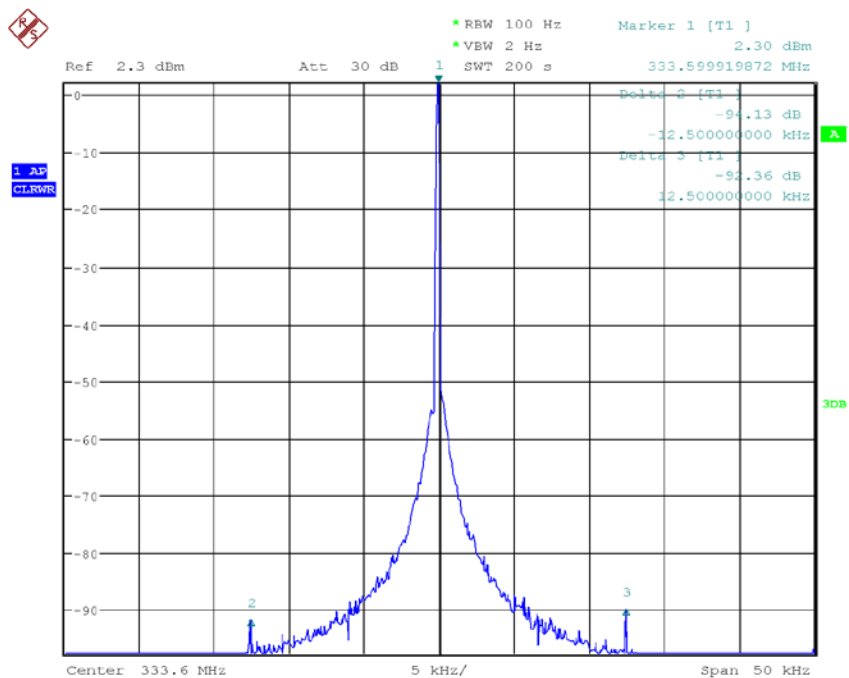
|                |      |    |      |     |
|----------------|------|----|------|-----|
| Supply Voltage | 4.75 | 5  | 5.25 | Vdc |
| Supply Current |      | 48 | 51   | mA  |

### NOTES

|                            |         |      |     |        |
|----------------------------|---------|------|-----|--------|
| Reference Input Frequency  | 5       | 13   | 104 | MHz    |
| Reference Input Voltage    | 0.4     |      | 3.0 | Vp-p   |
| Phase Noise @ 1 kHz offset |         | -145 |     | dBc/Hz |
| PLL IC                     | ADF4113 |      |     |        |



Date: 30.JUL.2012 11:55:44



Date: 30.JUL.2012 12:00:53

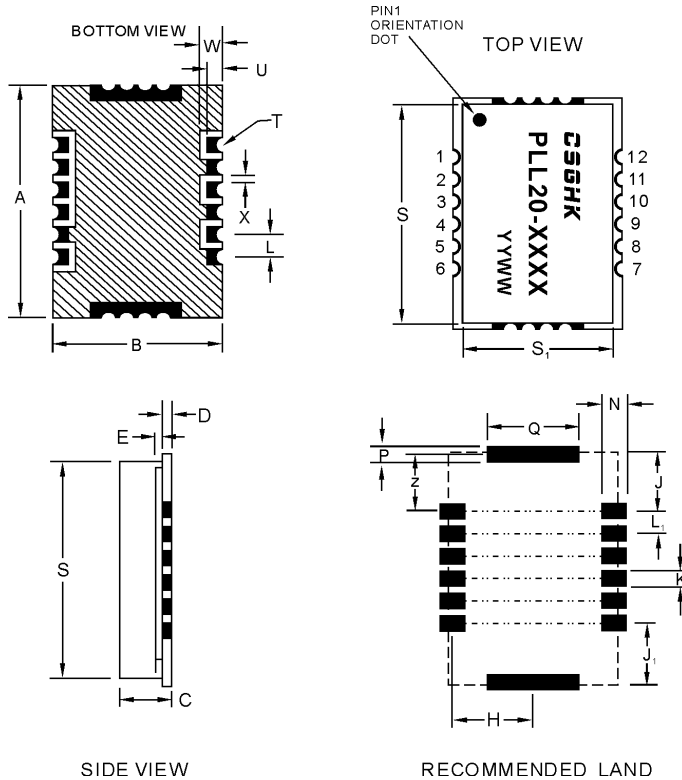
# REVISIONS

NOTE. UNLESS OTHERWISE SPECIFIED:

1. THE METAL CASE IS GROUND
2. ALL HALF VIA CONTACTS ARE PLATED THRU FROM THE PAD ON THE TOP SIDE TO THE PAD ON THE BOTTOM SIDE OF THE BOARD.
3. HATCHED AREAS GROUND AND ARE COVERED WITH LPI SOLDER MASK OVER BARE COPPER. ALL CONTACT AREAS ARE PLATED. SIGNAL VIAS MAY BE LOCATED WITHIN GROUND PLANE.
4. SUBSTRATE MATERIAL: FR-4
5. XXXX REPRESENTS THE MODEL NUMBER.
6. YYWW IS THE DATA CODE.

| PIN OUT FOR PLL |             |
|-----------------|-------------|
| PIN             | APPLICATION |
| 1               | VCC (CHIP)  |
| 3               | OSC IN      |
| 5               | VCC (VCO)   |
| 7               | RF OUT      |
| 9               | LOCK DETECT |
| 10              | CLOCK       |
| 11              | DATA        |
| 12              | ENABLE      |

ALL OTHER PINS ARE GROUND



| SYMBOL         | DIMENSION   |             |
|----------------|-------------|-------------|
|                | MILLIMETERS | INCHES      |
| A              | 20.3±0.25   | 0.800±0.010 |
| B              | 14.8±0.25   | 0.582±0.010 |
| C              | 3.50        | 0.138       |
| D              | 0.99MAX     | 0.039MAX    |
| E              | 0.51        | 0.020       |
| H              | 6.91        | 0.272       |
| J              | 5.16        | 0.203       |
| J <sub>1</sub> | 5.13        | 0.202       |
| K              | 1.50        | 0.059       |
| L              | 2.00±0.05   | 0.080±0.002 |
| L <sub>1</sub> | 2.00        | 0.080       |
| N              | 1.98        | 0.078±0.003 |
| P              | 1.52        | 0.060±0.003 |
| Q              | 7.40        | 0.291±0.003 |
| S              | 19.56       | 0.770       |
| S <sub>1</sub> | 14.02       | 0.552       |
| T              | R=0.50      | R=0.020     |
| U              | 1.47        | 0.058       |
| W              | 1.78        | 0.070       |
| X              | 0.51        | 0.020       |
| Z              | 4.90        | 0.193       |

|             | APPROVALS | DATA | <br>PLL-20 PACKAGE<br>MECHANICAL PCB OUTLINE |
|-------------|-----------|------|----------------------------------------------------------------------------------------------------------------------------------|
| DRAWN BY    |           |      |                                                                                                                                  |
| CHECKED BY  |           |      |                                                                                                                                  |
| PROCESS ENG |           |      |                                                                                                                                  |
| QUALITY     |           |      |                                                                                                                                  |