

# Frequency Synthesizer

KSN-3310A-119+

50Ω 3210 to 3310 MHz

## The Big Deal

- Fractional N synthesizer
- Low phase noise and spurious
- Robust design and construction
- Small size 0.80" x 0.58" x 0.15"



CASE STYLE: DK1042

## Product Overview

The KSN-3310A-119+ is a Frequency Synthesizer, designed to operate from 3210 to 3310 MHz for internet wireless application. The KSN-3310A-119+ is packaged in a metal case (size of 0.80" x 0.58" x 0.15") to shield against unwanted signals and noise.

## Key Features

| Feature   | Advantages   |
|---|--|
| Low phase noise and spurious: <ul style="list-style-type: none"><li>• Phase Noise: -93 dBc/Hz typ. @ 10 kHz offset</li><li>• Step Size Spurious: -110 dBc typ.</li><li>• Comparison Spurious: -92 dBc typ.</li><li>• Reference Spurious: -93 dBc typ.</li></ul> | Low phase noise and spurious improve system EVM (Error Vector Magnitude).  |
| Robust design and construction  | To enhance the robustness of KSN-3310A-119+, each internal component is secured to the substrate with chip bonder, thereby eliminating the risk of tombstoning during subsequent solder reflow operations by the customer. |
| Small size, 0.80" x 0.58" x 0.15"   | The small size enables the KSN-3310A-119+ to be used in compact designs.   |



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50Ω 3210 to 3310 MHz

### Features

- Fractional N synthesizer
- Integrated VCO + PLL
- Low phase noise and spurious
- Robust design and construction
- Low operating voltage (VCC VCO=+5V, VCC PLL=+3V)
- Small size 0.80" x 0.58" x 0.15"

### Applications

- Internet wireless

### General Description

The KSN-3310A-119+ is a Frequency Synthesizer, designed to operate from 3210 to 3310 MHz for internet wireless application. The KSN-3310A-119+ is packaged in a metal case (size of 0.80" x 0.58" x 0.15") to shield against unwanted signals and noise. To enhance the robustness of KSN-3310A-119+, each internal component is secured to the substrate with chip bonder, thereby eliminating the risk of tombstoning during subsequent solder reflow operations by the customer.

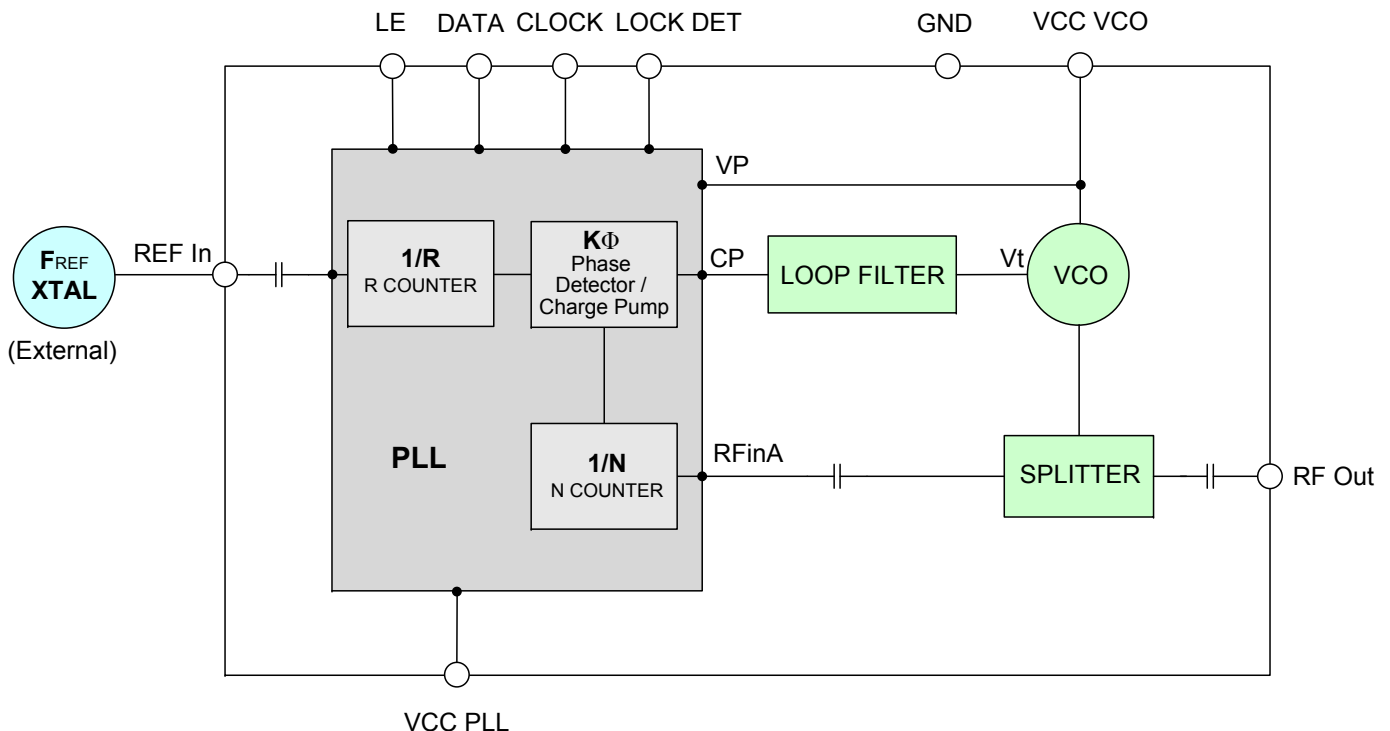


CASE STYLE: DK1042  
PRICE: \$29.95 ea. QTY (1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Simplified Schematic



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**Electrical Specifications** (over operating temperature -40°C to +70°C)

| Parameters                          | Test Conditions            | Min.                  | Typ.                               | Max. | Units  |                  |
|-------------------------------------|----------------------------|-----------------------|------------------------------------|------|--------|------------------|
| Frequency Range                     | -                          | 3210                  | -                                  | 3310 | MHz    |                  |
| Step Size                           | -                          | -                     | 2500                               | -    | kHz    |                  |
| Comparison Frequency                | -                          | -                     | 20                                 | -    | MHz    |                  |
| Settling Time                       | Within ± 1 kHz             | -                     | 2                                  | -    | mSec   |                  |
| Output Power                        | -                          | -1.0                  | +2.5                               | +5.0 | dBm    |                  |
| SSB Phase Noise                     | @ 100 Hz offset            | -                     | -78                                | -70  | dBc/Hz |                  |
|                                     | @ 1 kHz offset             | -                     | -88                                | -83  |        |                  |
|                                     | @ 10 kHz offset            | -                     | -93                                | -88  |        |                  |
|                                     | @ 100 kHz offset           | -                     | -113                               | -106 |        |                  |
|                                     | @ 1 MHz offset             | -                     | -137                               | -132 |        |                  |
| Step Size Spurious Suppression      | Step Size 2500 kHz         | -                     | -110                               | -75  | dBc    |                  |
| 0.5 Step Size Spurious Suppression  | 0.5 Step Size 1250 kHz     | -                     | -91                                | -    |        |                  |
| Reference Spurious Suppression      | Ref. Freq. 10 MHz          | -                     | -93                                | -75  |        |                  |
| Comparison Spurious Suppression     | Comp. Freq. 20 MHz         | -                     | -90                                | -65  |        |                  |
| Non - Harmonic Spurious Suppression | -                          | -                     | -90                                | -    |        |                  |
| Harmonic Suppression                | -                          | -                     | -35                                | -20  |        |                  |
| VCO Supply Voltage                  | +5.00                      | 4.75                  | 5.00                               | 5.25 | V      |                  |
| PLL Supply Voltage                  | +3.00                      | 2.85                  | 3.00                               | 3.15 |        |                  |
| VCO Supply Current                  | -                          | -                     | 52                                 | 58   | mA     |                  |
| PLL Supply Current                  | -                          | -                     | 18                                 | 27   |        |                  |
| Reference Input<br>(External)       | Frequency                  | 10 (square wave)      | -                                  | 10   | -      | MHz              |
|                                     | Amplitude                  | 1                     | -                                  | 1    | -      | V <sub>P-P</sub> |
|                                     | Input impedance            | -                     | -                                  | 100  | -      | KΩ               |
|                                     | Phase Noise @ 1 kHz offset | -                     | -                                  | -145 | -      | dBc/Hz           |
| RF Output port Impedance            | -                          | -                     | 50                                 | -    | Ω      |                  |
| Input Logic Level                   | Input high voltage         | -                     | 2.55                               | -    | -      | V                |
|                                     | Input low voltage          | -                     | -                                  | -    | 0.55   | V                |
| Digital Lock Detect                 | Locked                     | -                     | 2.45                               | -    | 3.15   | V                |
|                                     | Unlocked                   | -                     | -                                  | -    | 0.40   | V                |
| Frequency Synthesizer PLL           | -                          | ADF4153               |                                    |      |        |                  |
| PLL Programming                     | -                          | 3-wire serial 3V CMOS |                                    |      |        |                  |
| Register Map @ 3310 MHz             | R0_Register                | -                     | (MSB) 1001001001000000010000 (LSB) |      |        |                  |
|                                     | R1_Register                | -                     | (MSB) 101000100000000100001 (LSB)  |      |        |                  |
|                                     | R2_Register                | -                     | (MSB) 101111000010 (LSB)           |      |        |                  |
|                                     | R3_Register                | -                     | (MSB) 1111000111 (LSB)             |      |        |                  |

**Absolute Maximum Ratings**

| Parameters                               | Ratings                    |
|--|----------------------------|
| VCO Supply Voltage                       | 5.6V                       |
| PLL Supply Voltage                       | 4.0V                       |
| VCO Supply Voltage to PLL Supply Voltage | -0.3V to +5.8V             |
| Reference Frequency Voltage              | -0.3Vmin, VCC PLL +0.3Vmax |
| Data, Clock, LE Levels                   | -0.3Vmin, VCC PLL +0.3Vmax |
| Operating Temperature                    | -40°C to +85°C             |
| Storage Temperature                      | -55°C to +100°C            |

Permanent damage may occur if any of these limits are exceeded



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Typical Performance Data

| FREQUENCY<br>(MHz) | POWER OUTPUT<br>(dBm) |       |       | VCO CURRENT<br>(mA) |       |       | PLL CURENT<br>(mA) |       |       |
|--------------------|-----------------------|-------|-------|---------------------|-------|-------|--------------------|-------|-------|
|                    | -45°C                 | +25°C | +75°C | -45°C               | +25°C | +75°C | -45°C              | +25°C | +75°C |
|                    | 3210                  | 2.25  | 2.44  | 2.38                | 49.79 | 52.28 | 53.50              | 16.25 | 18.35 |
| 3220               | 2.24                  | 2.42  | 2.35  | 49.85               | 52.13 | 53.55 | 16.34              | 18.43 | 21.23 |
| 3230               | 2.25                  | 2.41  | 2.32  | 49.91               | 52.03 | 53.59 | 16.40              | 18.49 | 21.29 |
| 3240               | 2.30                  | 2.43  | 2.34  | 49.97               | 52.07 | 53.63 | 16.39              | 18.51 | 21.28 |
| 3250               | 2.35                  | 2.45  | 2.35  | 50.03               | 52.11 | 53.67 | 16.38              | 18.53 | 21.28 |
| 3260               | 2.39                  | 2.50  | 2.39  | 50.11               | 52.19 | 53.72 | 16.43              | 18.58 | 21.33 |
| 3270               | 2.42                  | 2.55  | 2.42  | 50.18               | 52.27 | 53.78 | 16.49              | 18.64 | 21.39 |
| 3280               | 2.44                  | 2.56  | 2.42  | 50.24               | 52.33 | 53.82 | 16.52              | 18.66 | 21.41 |
| 3290               | 2.45                  | 2.57  | 2.41  | 50.29               | 52.39 | 53.85 | 16.55              | 18.68 | 21.43 |
| 3300               | 2.46                  | 2.56  | 2.41  | 50.33               | 52.43 | 53.88 | 16.56              | 18.69 | 21.44 |
| 3310               | 2.47                  | 2.55  | 2.40  | 50.37               | 52.44 | 53.91 | 16.55              | 18.69 | 21.44 |

| FREQUENCY<br>(MHz) | HARMONICS (dBc) |        |        |        |        |        |
|--------------------|-----------------|--------|--------|--------|--------|--------|
|                    | F2              |        |        | F3     |        |        |
|                    | -45°C           | +25°C  | +75°C  | -45°C  | +25°C  | +75°C  |
| 3210               | -33.95          | -36.48 | -40.54 | -56.58 | -41.87 | -47.08 |
| 3220               | -33.95          | -36.49 | -40.52 | -57.07 | -41.50 | -47.58 |
| 3230               | -35.09          | -36.58 | -40.44 | -56.94 | -41.20 | -48.03 |
| 3240               | -35.09          | -36.88 | -40.14 | -54.98 | -41.13 | -48.35 |
| 3250               | -36.04          | -37.19 | -39.84 | -53.02 | -41.06 | -48.67 |
| 3260               | -36.04          | -37.02 | -39.87 | -53.73 | -40.98 | -49.50 |
| 3270               | -36.04          | -36.85 | -39.89 | -54.43 | -40.90 | -50.32 |
| 3280               | -36.33          | -36.79 | -39.48 | -56.63 | -41.08 | -51.38 |
| 3290               | -36.33          | -36.76 | -38.92 | -59.32 | -41.35 | -52.51 |
| 3300               | -36.30          | -36.68 | -38.63 | -61.15 | -41.05 | -53.72 |
| 3310               | -36.73          | -36.57 | -38.60 | -62.12 | -40.18 | -54.99 |



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| FREQUENCY<br>(MHz) | PHASE NOISE (dBc/Hz) @ OFFSETS |        |        |         |         |
|--------------------|--------------------------------|--------|--------|---------|---------|
|                    | +25°C                          |        |        |         |         |
|                    | 100Hz                          | 1kHz   | 10kHz  | 100kHz  | 1MHz    |
| 3210               | -80.39                         | -88.19 | -92.85 | -114.35 | -137.50 |
| 3220               | -78.55                         | -88.09 | -92.91 | -114.02 | -137.34 |
| 3230               | -77.39                         | -88.09 | -92.92 | -113.78 | -137.23 |
| 3240               | -78.28                         | -88.43 | -92.82 | -113.77 | -137.25 |
| 3250               | -79.16                         | -88.77 | -92.72 | -113.76 | -137.28 |
| 3260               | -79.21                         | -88.45 | -92.83 | -113.77 | -137.24 |
| 3270               | -79.27                         | -88.14 | -92.94 | -113.79 | -137.20 |
| 3280               | -79.21                         | -88.21 | -92.91 | -113.77 | -137.12 |
| 3290               | -79.12                         | -88.42 | -92.82 | -113.74 | -137.03 |
| 3300               | -79.39                         | -88.58 | -92.81 | -113.65 | -136.95 |
| 3310               | -80.00                         | -88.69 | -92.86 | -113.48 | -136.87 |

| FREQUENCY<br>(MHz) | PHASE NOISE (dBc/Hz) @ OFFSETS |        |        |         |         |
|--------------------|--------------------------------|--------|--------|---------|---------|
|                    | -45°C                          |        |        |         |         |
|                    | 100Hz                          | 1kHz   | 10kHz  | 100kHz  | 1MHz    |
| 3210               | -79.27                         | -88.10 | -94.20 | -114.83 | -138.76 |
| 3220               | -79.28                         | -88.39 | -94.21 | -114.72 | -138.66 |
| 3230               | -79.28                         | -88.62 | -94.20 | -114.61 | -138.57 |
| 3240               | -79.24                         | -88.68 | -94.14 | -114.55 | -138.54 |
| 3250               | -79.20                         | -88.75 | -94.07 | -114.48 | -138.51 |
| 3260               | -78.75                         | -88.96 | -93.89 | -114.46 | -138.44 |
| 3270               | -78.30                         | -89.18 | -93.71 | -114.44 | -138.38 |
| 3280               | -77.93                         | -89.12 | -93.77 | -114.40 | -138.33 |
| 3290               | -77.59                         | -88.97 | -93.90 | -114.37 | -138.29 |
| 3300               | -77.21                         | -88.46 | -93.96 | -114.26 | -138.20 |
| 3310               | -76.79                         | -87.59 | -93.93 | -114.07 | -138.06 |

| FREQUENCY<br>(MHz) | PHASE NOISE (dBc/Hz) @ OFFSETS |        |        |         |         |
|--------------------|--------------------------------|--------|--------|---------|---------|
|                    | +75°C                          |        |        |         |         |
|                    | 100Hz                          | 1kHz   | 10kHz  | 100kHz  | 1MHz    |
| 3210               | -80.05                         | -90.15 | -92.80 | -112.84 | -136.53 |
| 3220               | -79.35                         | -90.18 | -92.80 | -112.79 | -136.49 |
| 3230               | -78.97                         | -90.27 | -92.82 | -112.75 | -136.45 |
| 3240               | -79.54                         | -90.53 | -92.91 | -112.73 | -136.41 |
| 3250               | -80.11                         | -90.80 | -92.99 | -112.71 | -136.37 |
| 3260               | -79.82                         | -90.81 | -92.87 | -112.64 | -136.38 |
| 3270               | -79.53                         | -90.82 | -92.76 | -112.57 | -136.40 |
| 3280               | -79.60                         | -90.80 | -92.71 | -112.47 | -136.34 |
| 3290               | -79.78                         | -90.78 | -92.69 | -112.37 | -136.27 |
| 3300               | -79.30                         | -90.61 | -92.76 | -112.29 | -136.16 |
| 3310               | -78.16                         | -90.29 | -92.92 | -112.23 | -136.01 |



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| COMPARISON SPURIOUS ORDER | COMPARISON SPURIOUS @Fcarrier<br>3210MHz+(n*Fcomparison)<br>(dBc) note 1 |        |        | COMPARISON SPURIOUS @Fcarrier<br>3260MHz+(n*Fcomparison)<br>(dBc) note 1 |         |         | COMPARISON SPURIOUS @Fcarrier<br>3310MHz+(n*Fcomparison)<br>(dBc) note 1 |        |        |
|---------------------------|--|--------|--------|--|---------|---------|--|--------|--------|
|                           | n  | -45°C  | +25°C  | +75°C  | -45°C   | +25°C   | +75°C  | -45°C  | +25°C  |
| -5                        | -71.19   | -72.22 | -74.47 | -99.47   | -98.10  | -98.09  | -71.99   | -72.53 | -73.95 |
| -4                        | -74.26   | -75.03 | -76.99 | -106.53  | -107.96 | -104.49 | -75.16   | -75.87 | -76.84 |
| -3                        | -77.32   | -78.26 | -80.22 | -103.89  | -103.06 | -99.07  | -79.00   | -79.29 | -79.69 |
| -2                        | -81.53   | -82.65 | -84.57 | -99.56   | -100.40 | -97.04  | -82.79   | -83.59 | -84.27 |
| -1                        | -85.17   | -85.68 | -85.17 | -101.50  | -104.20 | -97.22  | -87.13   | -86.71 | -86.65 |
| 0 note 2                  | -  | -      | -      | -  | -       | -       | -  | -      | -      |
| +1                        | -87.67   | -86.57 | -91.70 | -100.64  | -99.83  | -100.31 | -88.63   | -88.06 | -92.00 |
| +2                        | -83.58   | -84.78 | -88.78 | -100.05  | -100.10 | -96.83  | -86.14   | -87.03 | -88.88 |
| +3                        | -79.50   | -80.62 | -82.45 | -107.84  | -103.43 | -99.33  | -81.04   | -81.64 | -82.84 |
| +4                        | -76.48   | -77.13 | -78.87 | -129.07  | -105.30 | -103.79 | -78.04   | -78.78 | -79.06 |
| +5                        | -73.33   | -74.26 | -76.21 | -98.94   | -96.99  | -100.02 | -75.47   | -75.61 | -76.56 |

Note 1: Comparison frequency 20 MHz

Note 2: All spurs are referenced to carrier signal (n=0).

| REFERENCE SPURIOUS ORDER | REFERENCE SPURIOUS @Fcarrier<br>3210MHz+(n*Freference)<br>(dBc) note 3 |         |         | REFERENCE SPURIOUS @Fcarrier<br>3260MHz+(n*Freference)<br>(dBc) note 3 |         |         | REFERENCE SPURIOUS @Fcarrier<br>3310MHz+(n*Freference)<br>(dBc) note 3 |         |         |
|--------------------------|--|---------|---------|--|---------|---------|--|---------|---------|
|                          | n  | -45°C   | +25°C   | +75°C  | -45°C   | +25°C   | +75°C  | -45°C   | +25°C   |
| -5                       | -108.15  | -97.06  | -103.50 | -122.75  | -119.28 | -118.74 | -107.03  | -103.64 | -108.42 |
| -4                       | -81.49   | -82.45  | -84.46  | -100.25  | -100.67 | -96.90  | -82.82   | -83.68  | -84.77  |
| -3                       | -107.55  | -107.61 | -110.04 | -125.59  | -112.01 | -117.88 | -119.13  | -107.78 | -108.77 |
| -2                       | -85.16   | -85.77  | -85.11  | -102.61  | -105.63 | -96.81  | -87.14   | -87.05  | -86.33  |
| -1                       | -95.47   | -96.57  | -89.03  | -97.23   | -96.33  | -91.54  | -105.63  | -92.99  | -95.44  |
| 0 note 4                 | -  | -       | -       | -  | -       | -       | -  | -       | -       |
| +1                       | -98.58   | -90.46  | -90.88  | -99.81   | -89.92  | -93.11  | -106.47  | -91.18  | -96.25  |
| +2                       | -87.83   | -86.97  | -91.71  | -100.40  | -99.32  | -99.79  | -88.61   | -88.66  | -91.66  |
| +3                       | -113.56  | -105.72 | -114.78 | -115.93  | -112.77 | -121.02 | -114.55  | -111.39 | -114.22 |
| +4                       | -83.55   | -84.67  | -88.69  | -102.33  | -99.11  | -97.71  | -86.10   | -86.94  | -88.29  |
| +5                       | -106.42  | -105.79 | -107.00 | -114.60  | -114.25 | -114.65 | -107.83  | -108.92 | -117.45 |

Note 3: Reference frequency 10 MHz

Note 4: All spurs are referenced to carrier signal (n=0).



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| STEP SIZE<br>SPURIOUS<br>ORDER<br><br>n | 0.5 STEP SIZE & STEP SIZE<br>SPURIOUS @Fcarrier<br>3210MHz+(n*Fstep size)<br>(dBc) note 5 |         |         | 0.5 STEP SIZE & STEP SIZE<br>SPURIOUS @Fcarrier<br>3260MHz+(n*Fstep size)<br>(dBc) note 5 |         |         | 0.5 STEP SIZE & STEP SIZE<br>SPURIOUS @Fcarrier<br>3310MHz+(n*Fstep size)<br>(dBc) note 5 |         |         |
|---|---|---------|---------|---|---------|---------|---|---------|---------|
|   | -45°C   | +25°C   | +75°C   | -45°C   | +25°C   | +75°C   | -45°C   | +25°C   | +75°C   |
| -5.0                                    | -116.19   | -114.29 | -112.84 | -127.99   | -127.54 | -124.77 | -120.09   | -112.14 | -112.36 |
| -4.5                                    | -105.39   | -112.32 | -113.56 | -111.52   | -111.96 | -111.30 | -114.13   | -111.44 | -106.88 |
| -4.0                                    | -95.45  | -93.89  | -88.97  | -97.46  | -95.79  | -91.65  | -97.63  | -92.61  | -94.62  |
| -3.5                                    | -122.73   | -117.27 | -121.68 | -128.70   | -124.14 | -122.27 | -125.49   | -119.21 | -126.50 |
| -3.0                                    | -123.99   | -121.01 | -114.74 | -125.47   | -124.68 | -125.18 | -117.02   | -118.27 | -111.99 |
| -2.5                                    | -118.60   | -113.45 | -114.87 | -124.62   | -127.05 | -127.76 | -116.34   | -114.92 | -112.31 |
| -2.0                                    | -115.91   | -118.05 | -115.54 | -117.07   | -121.84 | -118.54 | -115.94   | -117.01 | -116.96 |
| -1.5                                    | -115.94   | -114.29 | -113.99 | -123.36   | -123.03 | -119.93 | -121.98   | -118.26 | -109.87 |
| -1.0                                    | -110.01   | -106.30 | -108.18 | -113.42   | -115.95 | -114.15 | -113.22   | -114.63 | -113.75 |
| -0.5                                    | -99.01  | -92.31  | -89.76  | -114.39   | -115.11 | -116.07 | -91.29  | -90.22  | -89.40  |
| 0 note 6                                | -   | -       | -       | -   | -       | -       | -   | -       | -       |
| +0.5                                    | -98.68  | -91.73  | -89.78  | -116.30   | -115.19 | -114.46 | -90.93  | -90.26  | -89.81  |
| +1.0                                    | -112.07   | -108.31 | -111.79 | -122.99   | -119.24 | -122.44 | -113.20   | -113.20 | -118.36 |
| +1.5                                    | -109.70   | -107.52 | -111.85 | -108.38   | -108.52 | -110.13 | -110.33   | -110.48 | -110.59 |
| +2.0                                    | -120.05   | -110.79 | -126.00 | -111.90   | -116.75 | -120.01 | -116.27   | -125.02 | -114.68 |
| +2.5                                    | -115.24   | -115.73 | -119.28 | -125.46   | -123.38 | -121.97 | -117.25   | -119.44 | -115.07 |
| +3.0                                    | -124.66   | -121.35 | -122.54 | -123.53   | -126.35 | -128.14 | -127.16   | -121.07 | -117.52 |
| +3.5                                    | -119.32   | -118.65 | -123.97 | -123.38   | -124.45 | -125.22 | -129.04   | -118.25 | -124.39 |
| +4.0                                    | -98.61  | -91.00  | -90.97  | -99.47  | -90.26  | -93.19  | -102.55   | -91.29  | -96.53  |
| +4.5                                    | -123.25   | -114.19 | -124.42 | -116.07   | -114.50 | -118.75 | -129.48   | -116.26 | -115.00 |
| +5.0                                    | -117.54   | -120.25 | -127.78 | -120.77   | -127.26 | -126.18 | -127.64   | -123.99 | -124.00 |

Note 5: Step size 2500 kHz

Note 6: All spurs are referenced to carrier signal (n=0).



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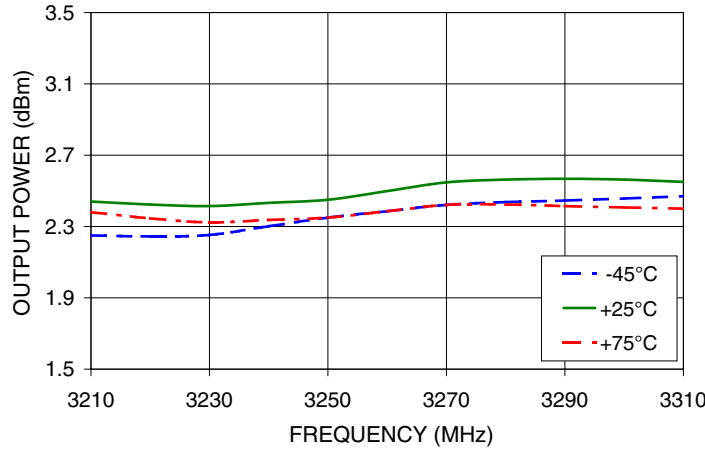
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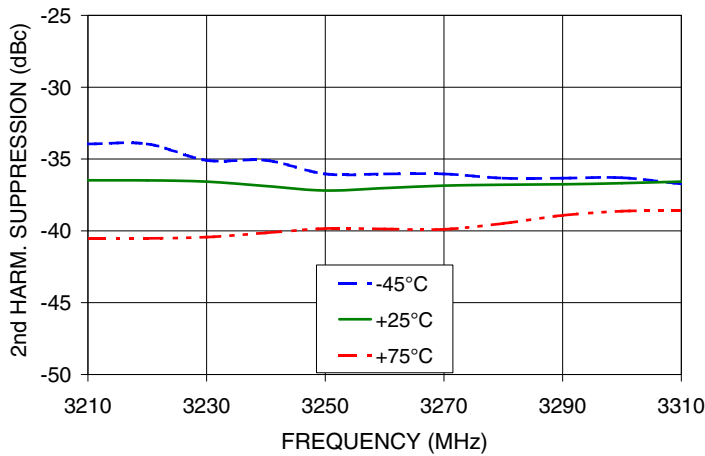
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Typical Performance Curves

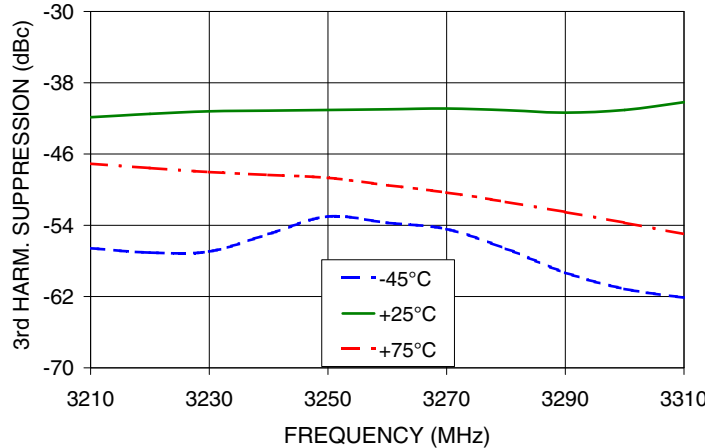
OUTPUT POWER Vs FREQUENCY



2nd HARMONIC Vs FREQUENCY



3rd HARMONIC Vs FREQUENCY



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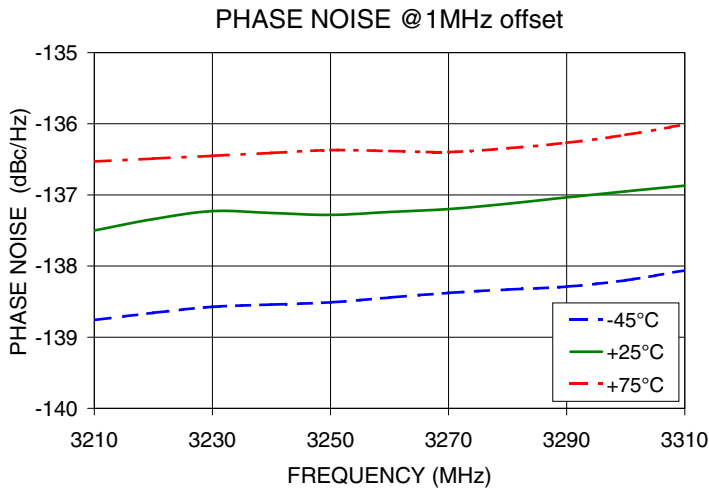
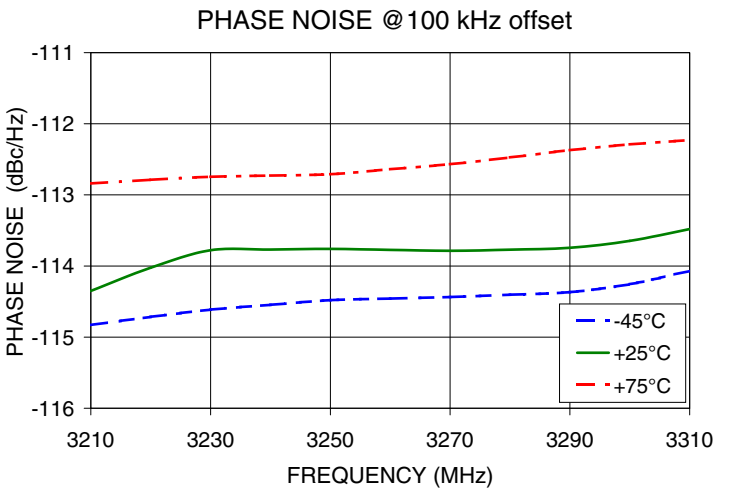
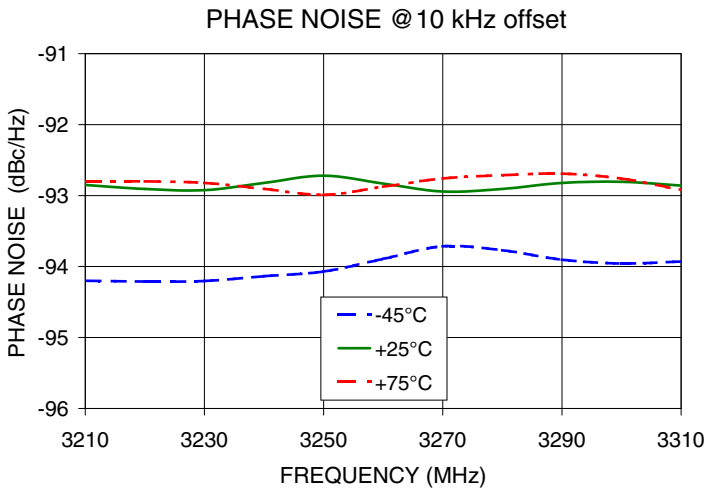
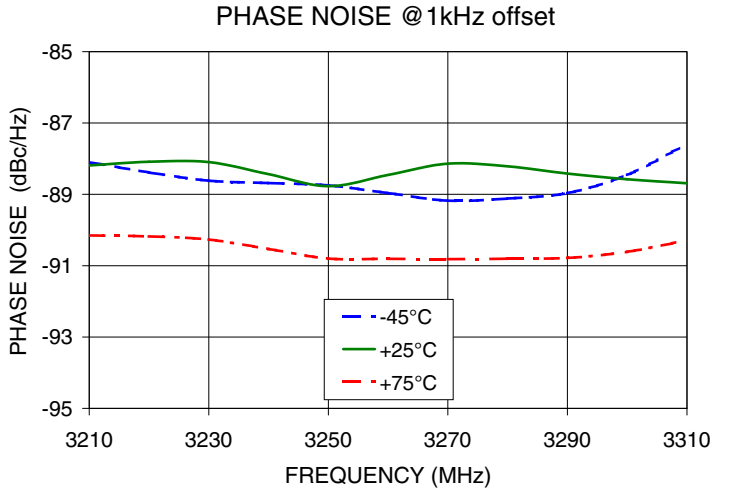
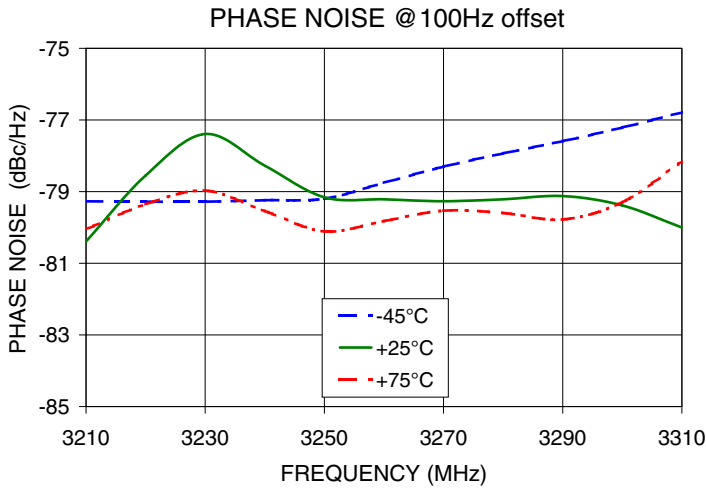


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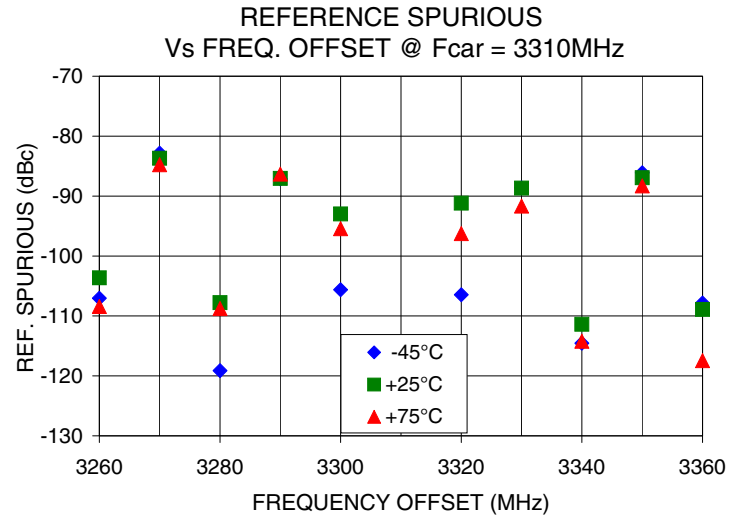
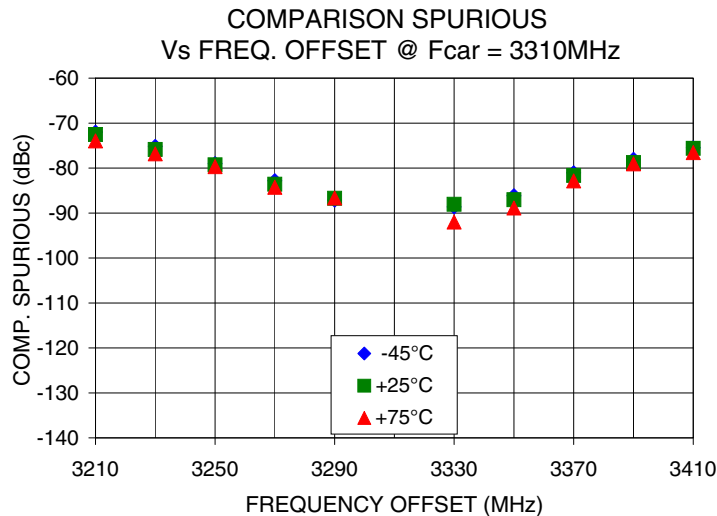
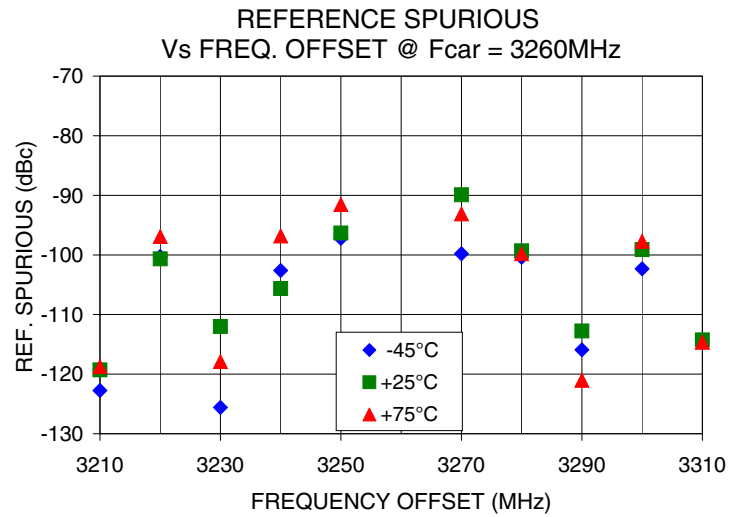
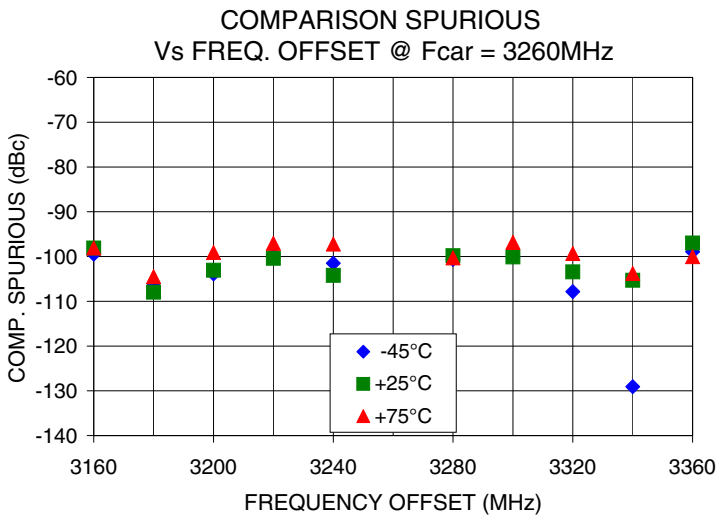
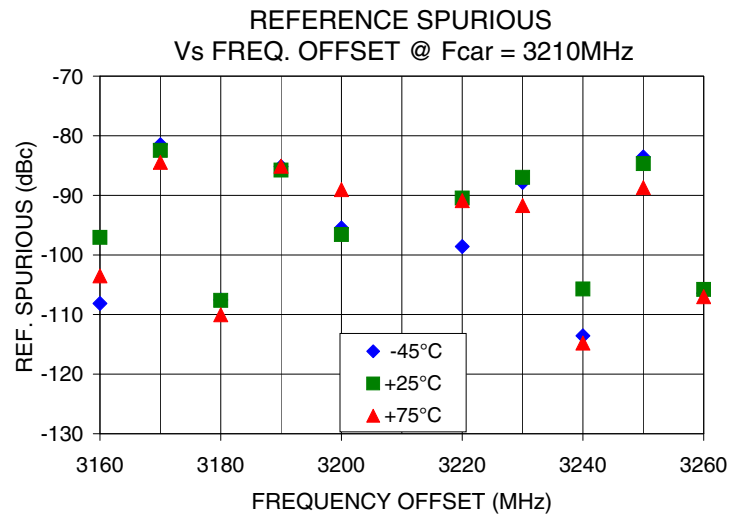
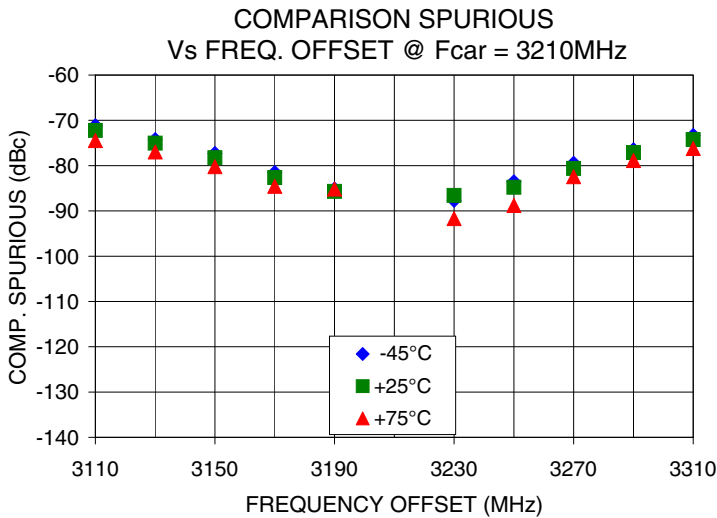
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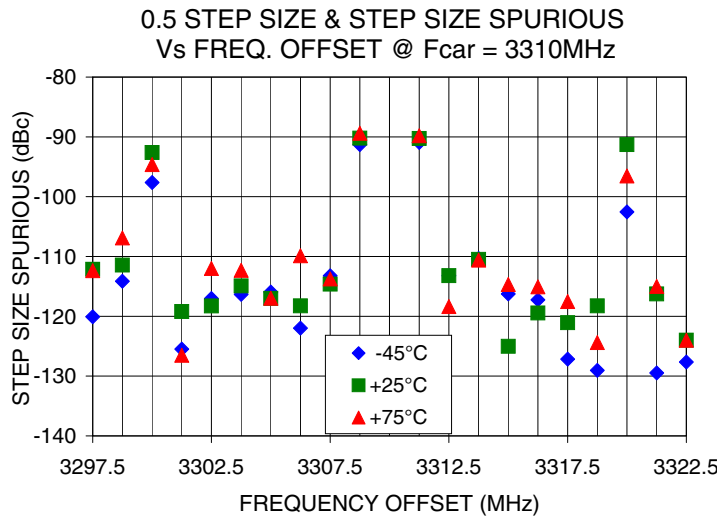
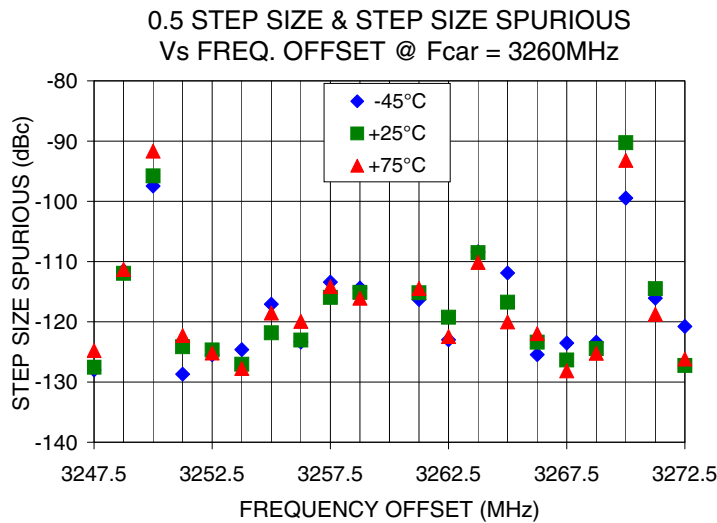
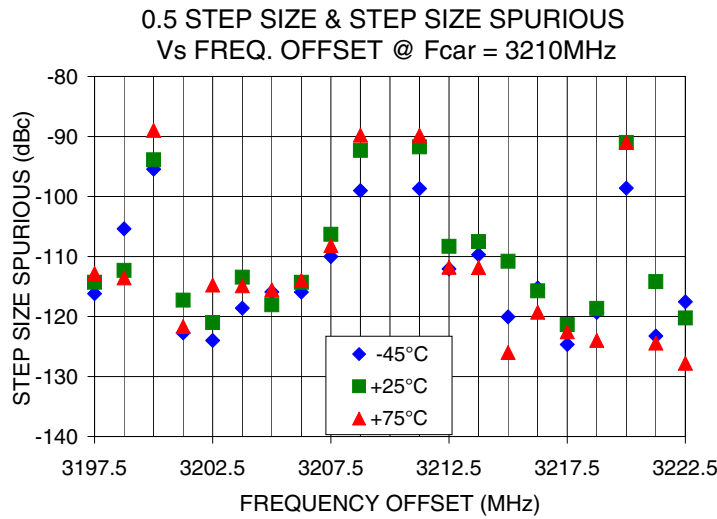


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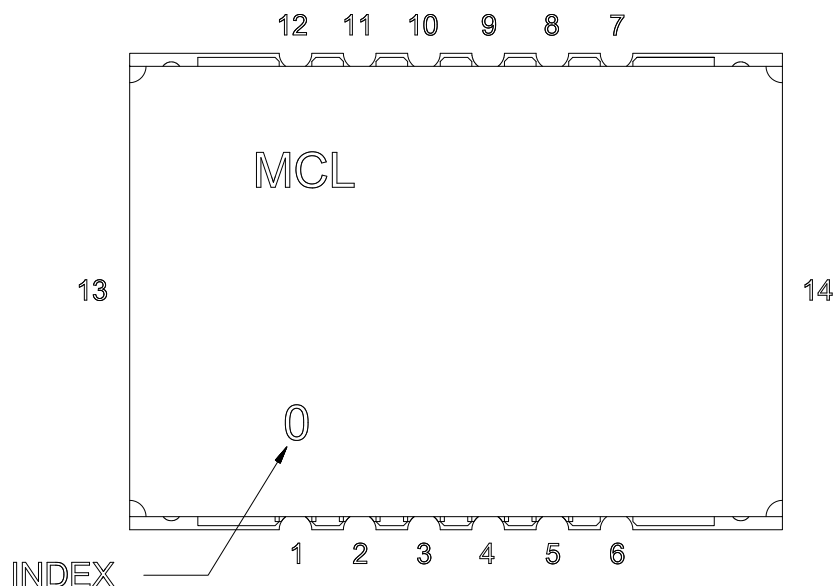


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Pin Configuration

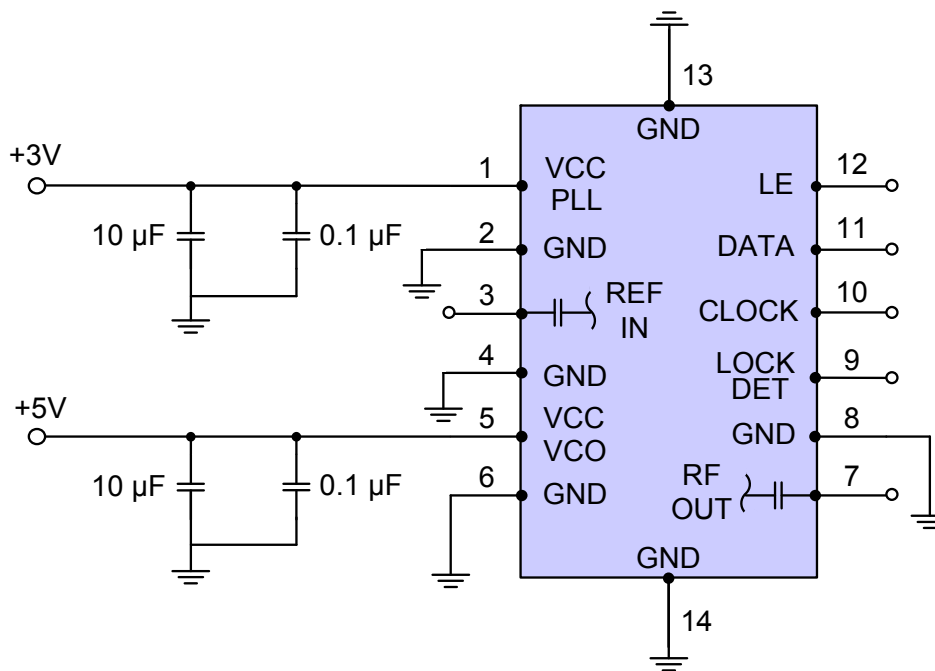


Pin Connection

| Pin Number | Function |
|------------|----------|
| 1          | VCC PLL  |
| 2          | GND      |
| 3          | REF IN   |
| 4          | GND      |
| 5          | VCC VCO  |
| 6          | GND      |
| 7          | RF OUT   |
| 8          | GND      |
| 9          | LOCK DET |
| 10         | CLOCK    |
| 11         | DATA     |
| 12         | LE       |
| 13         | GND      |
| 14         | GND      |

Recommended Application Circuit

Note: REF IN and RF OUT ports are internally AC coupled.



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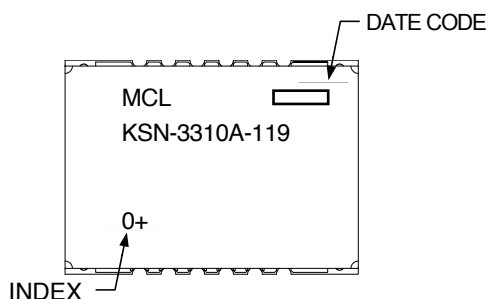


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## Device Marking



### Additional Detailed Technical Information

Additional information is available on our web site. To access this information enter the model number on our web site home page.

**Case Style:** DK1042

**Tape & Reel:** TR-F28

**Suggested Layout for PCB Design:** PL-249

**Evaluation Board:** TB-567-2+

**Environment Ratings:** ENV03T2



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