

# VOLTAGE CONTROLLED OSCILLATOR

## SURFACE MOUNT MODEL: DCO8190-5

OPTIMIZED BANDWIDTH

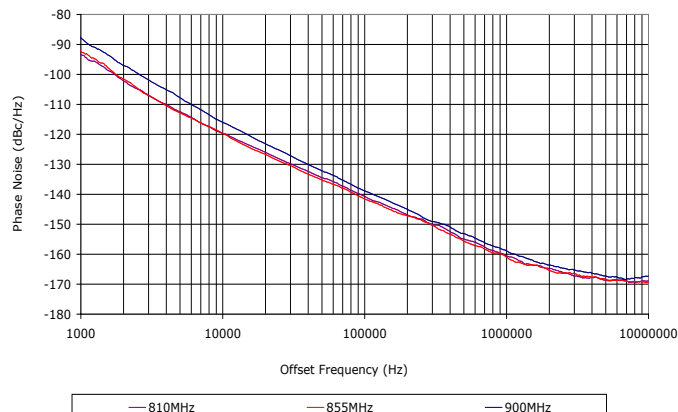
810 - 900 MHz

### FEATURES:

- ▶ Miniature Size, Surface Mount (0.3" x 0.3")
- ▶ Exceptional Phase Noise Performance
- ▶ Fast Tuning
- ▶ Planar Resonator Construction



### Phase Noise



### SPECIFICATIONS (Rev. D 05/29/14)

|                             |                            |        |
|-----------------------------|----------------------------|--------|
| Frequency                   | 810 - 900 MHz              |        |
| Tuning Voltage              | See table below.           |        |
| Bias Voltage                | +5 VDC @ 34 mA (Max.)      |        |
| Output Power                | +4.5 dBm (Min.)            |        |
| Tuning Sensitivity          | 5.5 - 9.5 MHz/V (Typ.)     |        |
| Output Impedance            | 50 Ohms (Nom.)             |        |
| Harmonic Suppression        | 20 dB (Typ.)               |        |
| Frequency Pulling           | 2 MHz (Typ. @ 1.75:1 VSWR) |        |
| Frequency Pushing           | 1.5 MHz/V (Typ.)           |        |
| Tuning Port Capacitance     | 100 pF (Typ.)              |        |
| Typical Phase Noise         | Offset                     | dBc/Hz |
|                             | 10 kHz                     | -118   |
|                             | 100 kHz                    | -140   |
| Operating Temperature Range | -40 to +85 °C              |        |

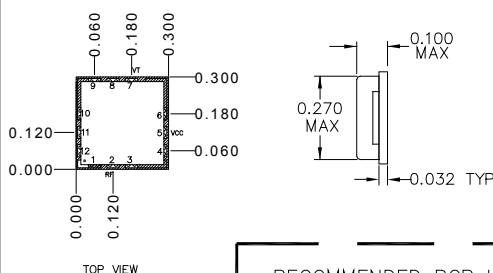
### Guaranteed Tuning Specifications

| Tuning Voltage ( V ) | Frequency ( MHz ) |
|----------------------|-------------------|
| 0.5                  | 810 (Max.)        |
| 5                    | 820 (Min.)        |
| 8                    | 840 (Min.)        |
| 12                   | 875 (Min.)        |
| 16                   | 900 (Min.)        |

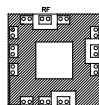
### Absolute Maximum Ratings

|                              |                |
|------------------------------|----------------|
| Storage Temp. Range          | -55 to +125 °C |
| Bias Voltage                 | +5.50 V        |
| Tuning Voltage               | +25 V          |
| DC Voltage Applied to RF Out | ±25 V          |

Package # 343LF

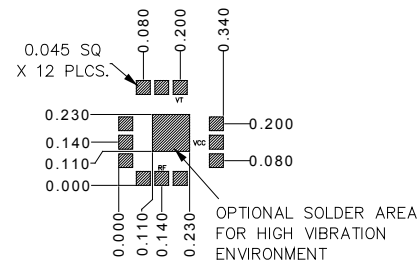


TOP VIEW



BOTTOM VIEW

### RECOMMENDED PCB LAYOUT



PACKAGE MOUNTING: SEE APPLICATION NOTE AN7302  
TOLERANCES ON THREE DIMENSIONS ARE IN INCHES.  
ALL UNLABELED PINS TO BE GROUND.  
DECIMAL PLACES= ± 0.015

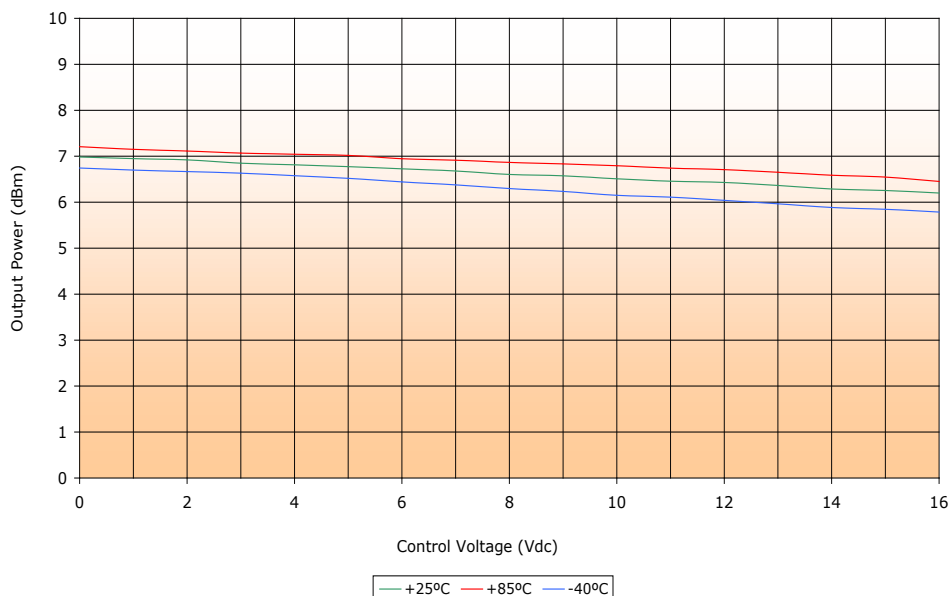
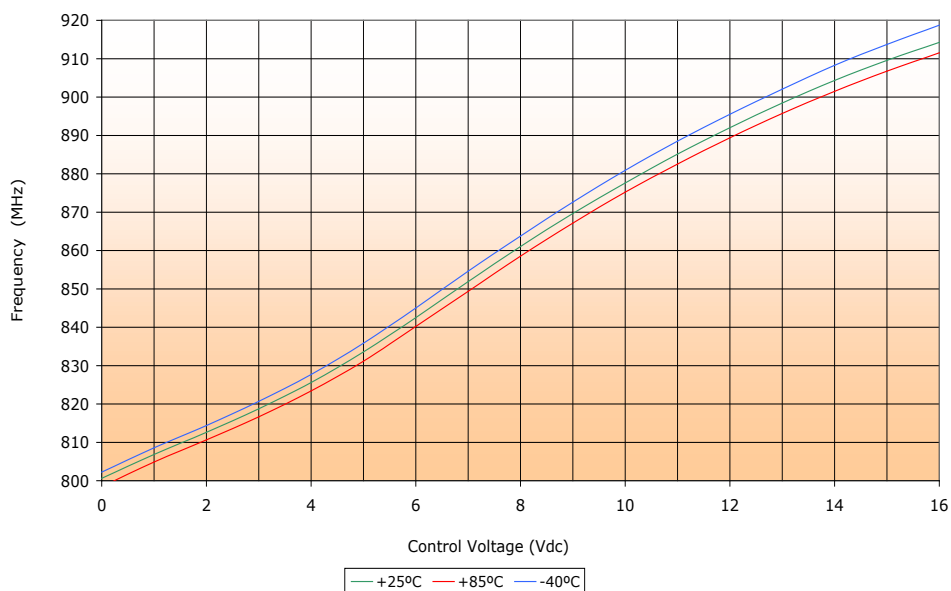
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