

# VOLTAGE CONTROLLED OSCILLATOR

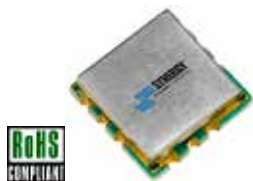
## SURFACE MOUNT MODEL: DCO231243-5

**OPTIMIZED BANDWIDTH**

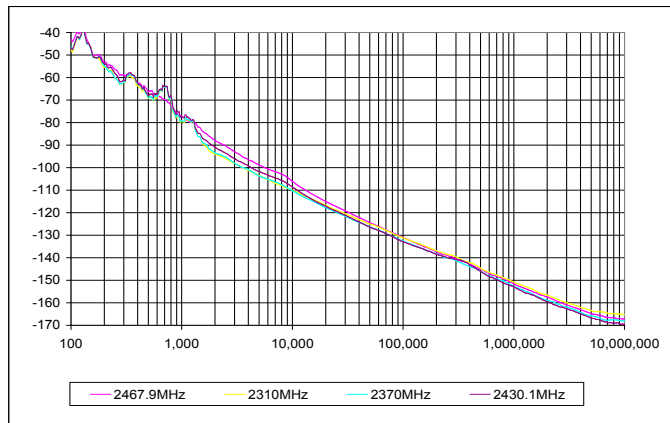
**2300 - 2450 MHz**

**FEATURES:**

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



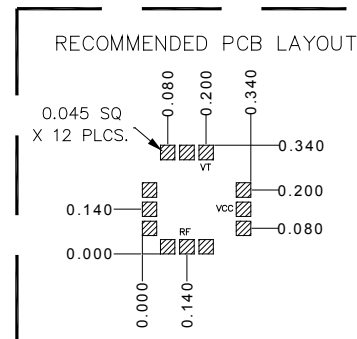
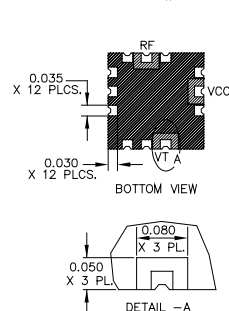
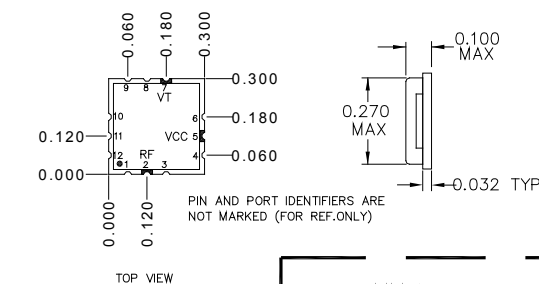
**Phase Noise**



**SPECIFICATIONS**

|                             |                            |        |
|-----------------------------|----------------------------|--------|
| Frequency                   | 2300 - 2450 MHz            |        |
| Tuning Voltage              | See table below.           |        |
| Bias Voltage                | +5 VDC @ 35 mA (Max.)      |        |
| Output Power                | +4 dBm (Min.)              |        |
| Tuning Sensitivity          | 6 - 14 MHz/V (Typ.)        |        |
| Output Impedance            | 50 Ohms (Nom.)             |        |
| Harmonic Suppression        | 12 dB (Typ.)               |        |
| Frequency Pulling           | 2 MHz (Typ. @ 1.75:1 VSWR) |        |
| Frequency Pushing           | 1 MHz/V (Typ.)             |        |
| Tuning Port Capacitance     | 55 pF (Typ.)               |        |
| Typical Phase Noise         | Offset                     | dBc/Hz |
|                             | 10 kHz                     | -102   |
|                             | 100 kHz                    | -122   |
| Operating Temperature Range | -40 to +85 °C              |        |

Package # 343



**Guaranteed Tuning Specifications**

| Tuning Voltage ( V ) | Frequency ( MHz ) |
|----------------------|-------------------|
| 0.5                  | 2300 (Max.)       |
| 5                    | 2325 (Min.)       |
| 8                    | 2350 (Min.)       |
| 11                   | 2375 (Min.)       |
| 20                   | 2450 (Min.)       |

PACKAGE MOUNTING: SEE APPLICATION NOTE AN7300 & AN7302

TOLERANCES ON THREE DECIMAL PLACES= ± 0.015

DIMENSIONS ARE IN INCHES. ALL UNLABELED PINS TO BE GROUNDING.

**Absolute Maximum Ratings**

|                              |                |
|------------------------------|----------------|
| Storage Temp. Range          | -55 to +125 °C |
| Bias Voltage                 | +5.5 V         |
| Tuning Voltage               | +21 V          |
| DC Voltage Applied to RF Out | ± 25 V         |

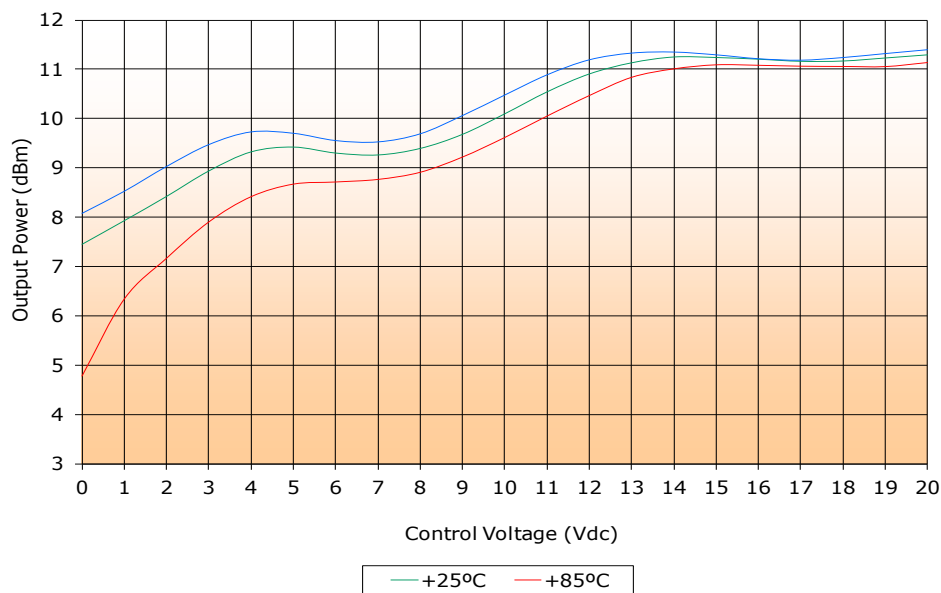
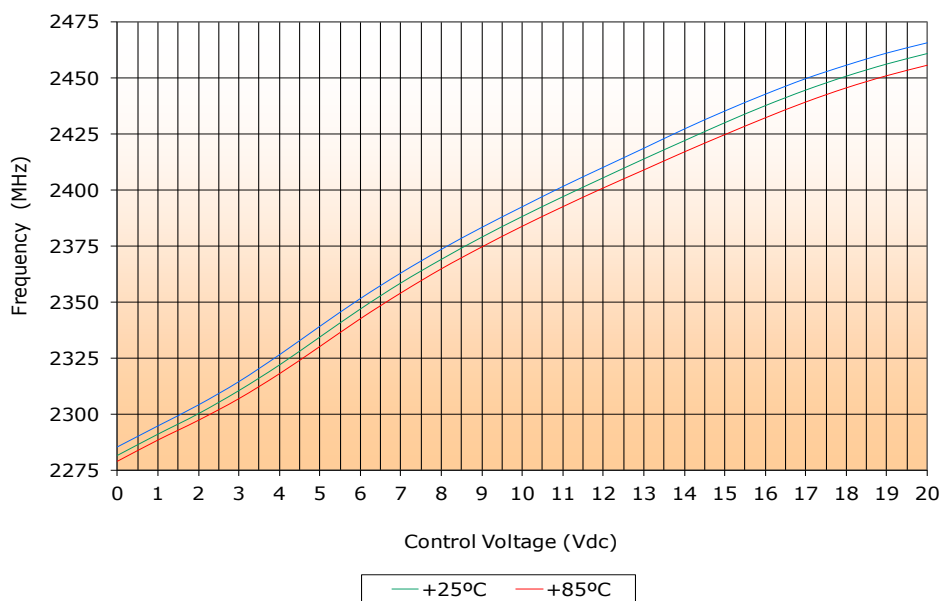
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