

# VOLTAGE CONTROLLED OSCILLATOR

## SURFACE MOUNT MODEL: DCYS250500-5

WIDE BANDWIDTH

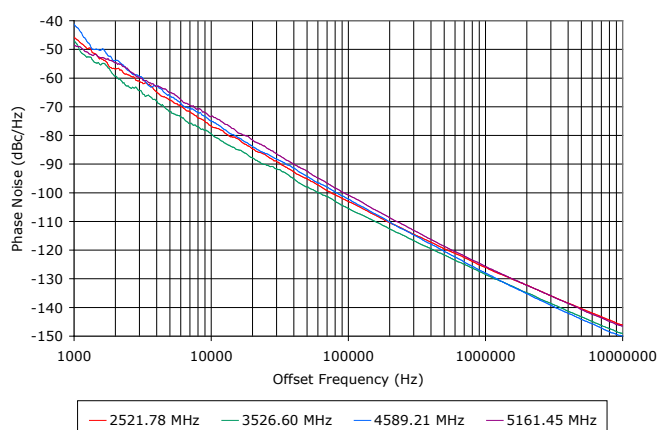
2500 - 5000 MHz

### FEATURES:

- ▶ Exceptional Phase Noise Performance
- ▶ Small Size, Surface Mount
- ▶ Lead Free REL-PRO® Technology
- ▶ Buffered Output



### Phase Noise



### SPECIFICATIONS ( Rev. I 10/20/08)

|                             |                            |
|-----------------------------|----------------------------|
| Frequency                   | 2500 - 5000 MHz            |
| Tuning Voltage (Full Band)  | See table below.           |
| Bias Voltage                | +5 VDC @ 55 mA (Max.)      |
| Output Power                | -3 dBm (Min.)              |
| Tuning Sensitivity          | 130 - 375 MHz/V (Typ.)     |
| Output Impedance            | 50 Ohms (Nom.)             |
| Harmonic Suppression        | 15 dB (Typ.)               |
| Frequency Pulling           | 14 MHz (Typ @ 1.75:1 VSWR) |
| Frequency Pushing           | 7 MHz/V (Typ)              |
| Tuning Port Capacitance     | 74 pF (Typ.)               |
| Phase Noise @ 10 kHz        | -76 dBc/Hz (Typ)           |
| Operating Temperature Range | -20 to +70 °C              |

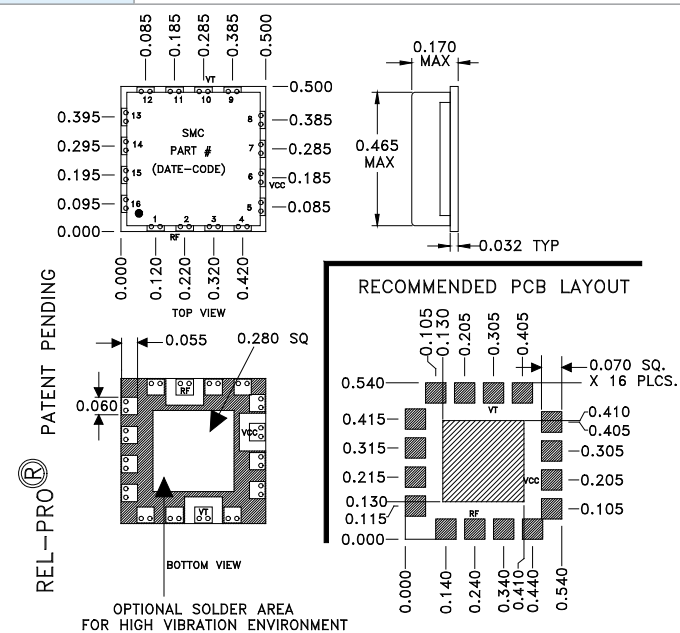
### Guaranteed Tuning Specifications

| Tuning Voltage ( V ) | Frequency ( MHz ) |
|----------------------|-------------------|
| 0.5                  | 2500 (Max.)       |
| 5                    | 3450 (Min)        |
| 8                    | 4250 (Min)        |
| 14                   | 5000 (Min)        |

### Absolute Maximum Ratings

|                              |                |
|------------------------------|----------------|
| Storage Temp. Range          | -55 to +125 °C |
| Bias Voltage                 | +5.5 V         |
| Tuning Voltage               | +15 V          |
| DC Voltage Applied to RF Out | ± 25 V         |

### Package # 278LF



This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113  
 Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834;  
 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation  
 201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361  
 E-Mail: sales@synergymw.com • World Wide Web: http://www.synergymw.com



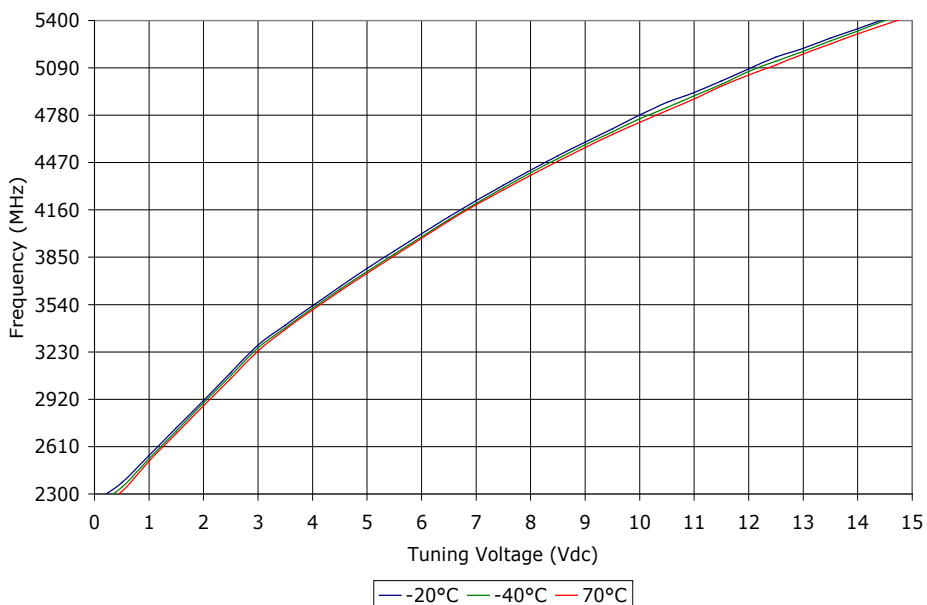
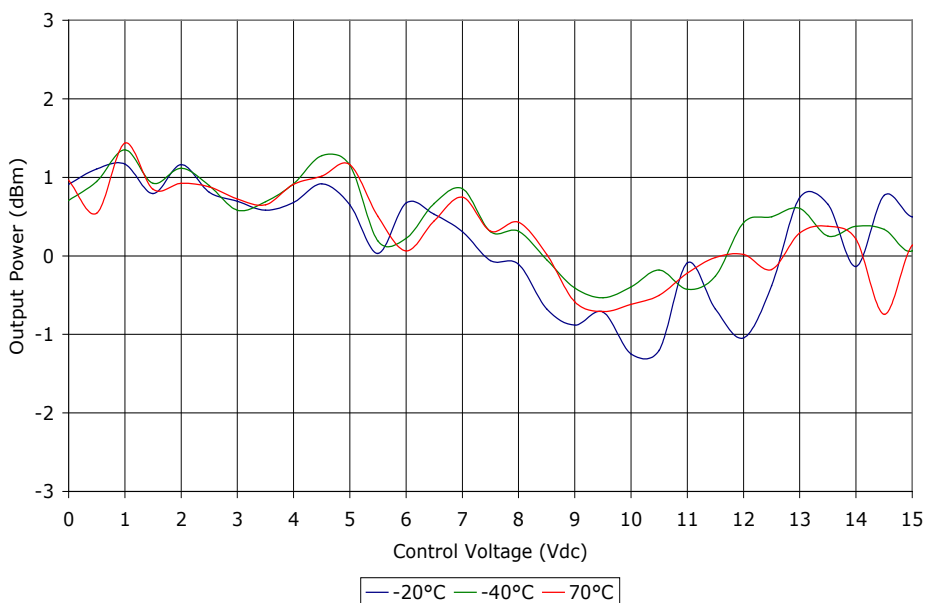
# VOLTAGE CONTROLLED OSCILLATOR

## SURFACE MOUNT MODEL: DCYS250500-5

WIDE BANDWIDTH

2500 - 5000 MHz

PERFORMANCE PLOTS



This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113  
Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation  
201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361  
E-Mail: [sales@synergymw.com](mailto:sales@synergymw.com) • World Wide Web: <http://www.synergymw.com>



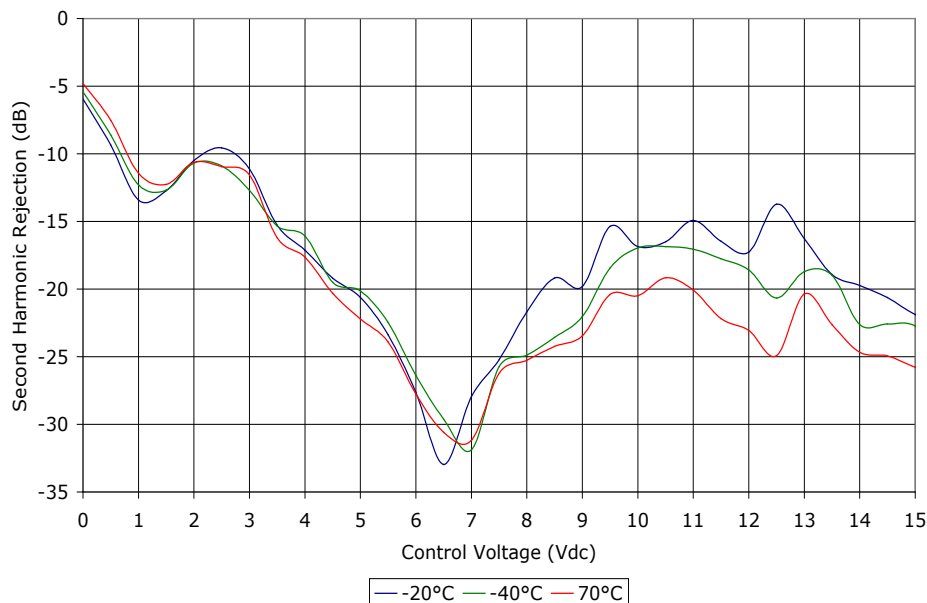
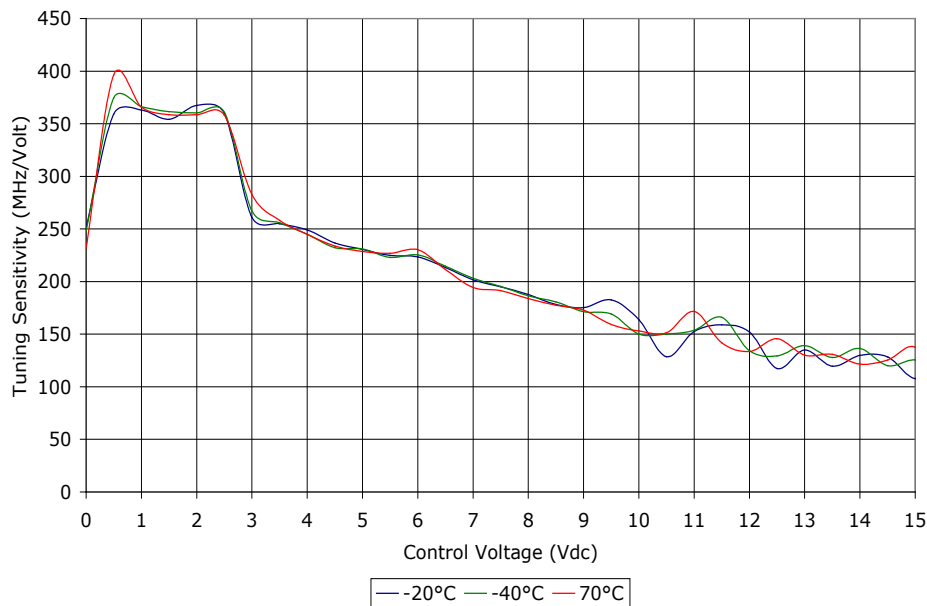
# VOLTAGE CONTROLLED OSCILLATOR

## SURFACE MOUNT MODEL: DCYS250500-5

WIDE BANDWIDTH

2500 - 5000 MHz

PERFORMANCE PLOTS



This product is manufactured under one or more of the following patents: Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,525,623; 6,850,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113  
 Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787

Copyright © 2008 Synergy Microwave Corporation  
 201 McLean Boulevard • Paterson, New Jersey 07504 • Tel: (973) 881-8800 • Fax: (973) 881-8361  
 E-Mail: sales@synergymw.com • World Wide Web: <http://www.synergymw.com>

