

# DIELECTRIC RESONATOR OSCILLATOR

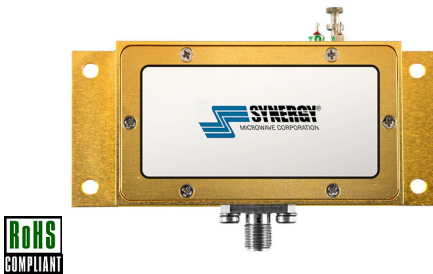
## CONNECTORIZED MODEL: DRO80

### FREQUENCY

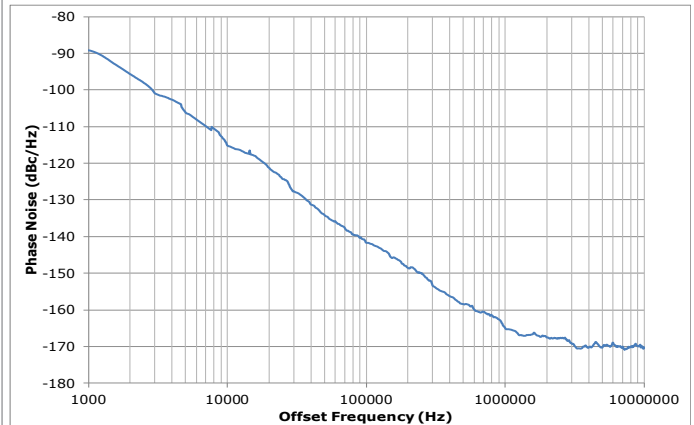
### 8.0 GHz

#### FEATURES:

- ▶ Exceptional Phase Noise Performance
- ▶ Lead Free RoHS Compliant



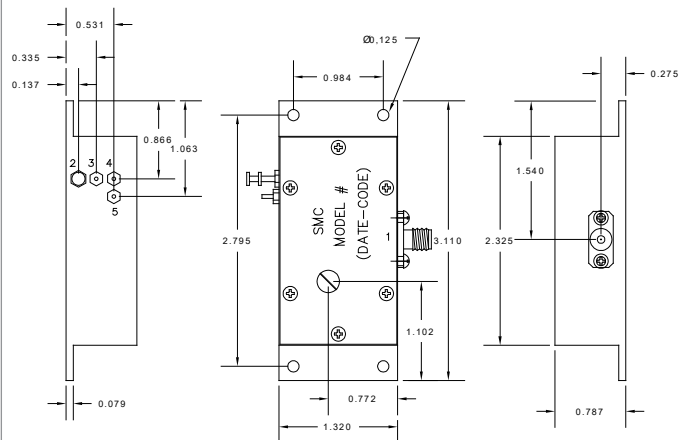
Phase Noise



#### SPECIFICATIONS

Frequency	8.0 GHz												
Tuning Voltage	1 - 15 VDC												
Bias Voltage	+7 - 10 VDC @ 70 mA (Max.)												
Output Power	+8 dBm (Min.)												
Tuning Sensitivity	0.25 MHz/V (Typ.)												
Thermal Drift	2 ppm / °C (Typ.)												
Output Impedance	50 Ohms (Nom.)												
Harmonic Suppression	30 dBc (Typ.)												
Tuning Port Capacitance	1 nF (Typ.)												
Modulation Bandwidth	20 MHz (Typ.)												
Phase Noise	<table border="1"> <thead> <tr> <th>Offset</th> <th>dBc/Hz (Typ.)</th> </tr> </thead> <tbody> <tr> <td>1 kHz</td> <td>-85</td> </tr> <tr> <td>10 kHz</td> <td>-114</td> </tr> <tr> <td>100 kHz</td> <td>-140</td> </tr> <tr> <td>1 MHz</td> <td>-160</td> </tr> <tr> <td>10 MHz</td> <td>-170</td> </tr> </tbody> </table>	Offset	dBc/Hz (Typ.)	1 kHz	-85	10 kHz	-114	100 kHz	-140	1 MHz	-160	10 MHz	-170
	Offset	dBc/Hz (Typ.)											
	1 kHz	-85											
	10 kHz	-114											
	100 kHz	-140											
1 MHz	-160												
10 MHz	-170												
Jitter	30 fs (@ 1 kHz to 30 MHz) (Typ.)												
Operating Temperature Range	-15 to +75 °C												

Package # 391



#### Port Configuration

Pin 1 - RF Output  
 Pin 2 - GND  
 Pin 4 - Tuning Voltage  $V_T$   
 Pin 5 - Supply Voltage  $V_S$   
 Pin 3 - V Temperature

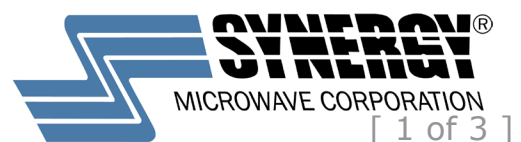
#### Absolute Maximum Ratings

Storage Temp. Range	-30 to +85 °C
Bias Voltage	+10.5 V
Tuning Voltage	+16.0 V
DC Voltage Applied to RF Out	±25 V

#### Notes:

1. Access to the tuning screw is underneath the label. Tuning screws are factory locked for optimum performance at the center frequency. Tuning of the mechanical screw can cause significant shifts in frequency and adversely affect overall performance. Warranty is void if seal over tuning screw is damaged.
2. Test data measured with bias voltage at +8V.
3. Specifications guaranteed at 8.0 GHz.

Copyright © Synergy Microwave Corporation  
 201 McLean Boulevard • Paterson, New Jersey 07504 USA  
 Tel: (973) 881-8800 • Fax: (973) 881-8361  
 E-Mail: sales@synergymwave.com • Website: <http://www.synergymwave.com>  
 Patents : <http://www.synergymwave.com/patents>

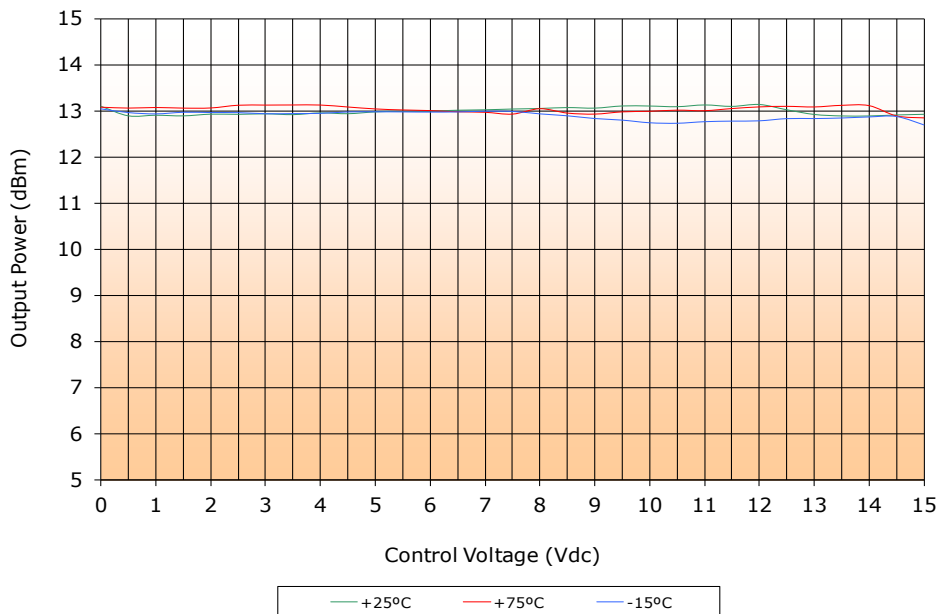
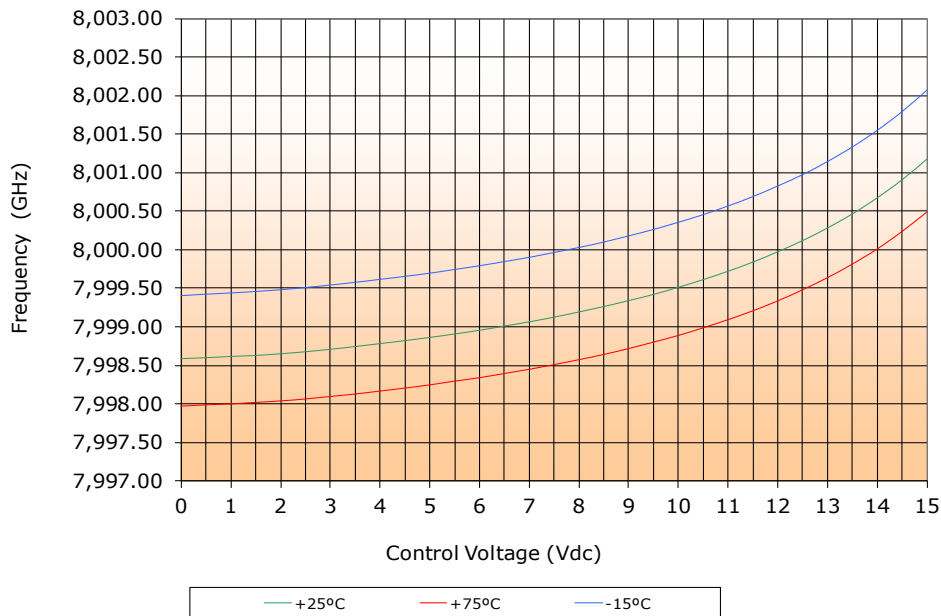


# DIELECTRIC RESONATOR OSCILLATOR CONNECTORIZED MODEL: DRO80

FREQUENCY

8.0 GHz

PERFORMANCE PLOTS



# DIELECTRIC RESONATOR OSCILLATOR CONNECTORIZED MODEL: DRO80

FREQUENCY

8.0 GHz

PERFORMANCE PLOTS

