

# VOLTAGE CONTROLLED OSCILLATOR

## TOM9331

1725 - 1790 MHz

Available as:  
TOM9331, 4 Pin TO-8 (T4)  
TON9331, 4 Pin Surface Mount (SM3)  
BXO9331, Connectorized Housing (H1)

### Features

- Low Noise Bipolar Transistor
- Linear Tuning
- Operating Case Temp. -35 °C to + 60 °C
- Environmental Screening Available

### Specifications

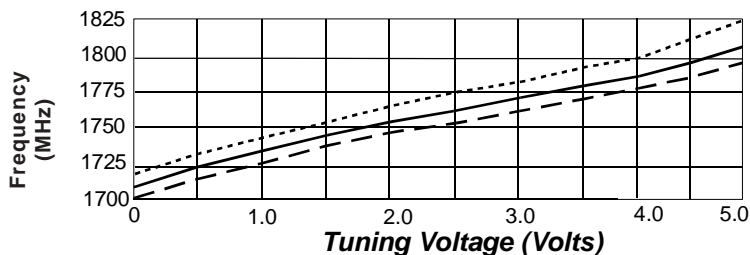
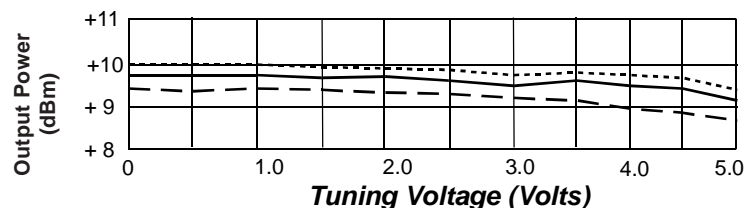
CHARACTERISTIC	TYPICAL Ta = +25 °C	MIN/MAX Ta = -35°C to +60 °C
Frequency	1725 - 1790 MHz	1725 - 1790 MHz
Output Power (dBm)	+9.5	+8.0 Min.
Power Flatness (dBm)	±0.5	±0.75 Max.
Tuning Voltage Range (V)	0.5 to 4.5	0.0 to 5.0
Tuning Voltage		
Sensitivity (MHz/V)	20.0	15.0 Min.
Harmonics (dBc)	-30	-20 Max.
Spurious (dBc)	<-80	<-80 Max.
Phase Noise		
@ 100 KHz (dBc/Hz)	-104	-100 Max.
Pushing (MHz/V)	6.0	9.0 Max.
Pulling (MHz); 12 dB RL	40.0	55.0 Max.
Frequency Drift (MHz/°C)	-0.35	-0.50 Max.
Power		
Vdc	+5	+5
mA	30.0	35.0 Max.

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 100 °C  
Storage Temperature ..... -62°C to + 125 °C  
Case Temperature ..... + 125 °C  
DC Voltage ..... + 10 Volts  
Maximum DC Tuning Voltage ..... + 15 Volts  
Minimum DC Tuning Voltage ..... 0 Volts

Note: Care should always be taken to effectively ground the case of each unit.

### Typical Performance Data



V <sub>t</sub> (V)	f <sub>o</sub> (MHz)	Δf (MHz)	P <sub>o</sub> (dBm)	2H (dBc)	3H (dBc)
0.00	1707.0		+9.79	-31.5	-37.9
0.50	1718.3	22.5	+9.80	-30.9	-39.8
1.00	1730.1	23.8	+9.81	-30.7	-36.8
1.50	1741.5	22.7	+9.72	-30.5	-33.9
2.00	1751.5	20.0	+9.70	-30.3	-36.6
2.50	1762.1	21.3	+9.64	-30.4	-32.7
3.00	1770.6	17.0	+9.48	-29.7	-33.4
3.50	1779.4	17.5	+9.51	-29.8	-32.4
4.00	1788.1	17.5	+9.35	-29.5	-31.8
4.50	1797.3	18.2	+9.29	-29.8	-32.5
5.00	1806.0	17.5	+9.17	-29.7	-31.7

Legend ——— +25 °C - - - - +60 °C - - - - -35 °C



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 03/02/05

www.SpectrumMicrowave.com Spectrum Microwave (Europe) · 2707 Black Lake Place · Philadelphia, Pa. 19154 · PH (215) 464-4000 · Fax (215) 464-4001