

# Voltage Controlled Oscillator

## Low Noise Bipolar Transistor

# Model TOM9329

## 1875 to 1975 MHz

### Features

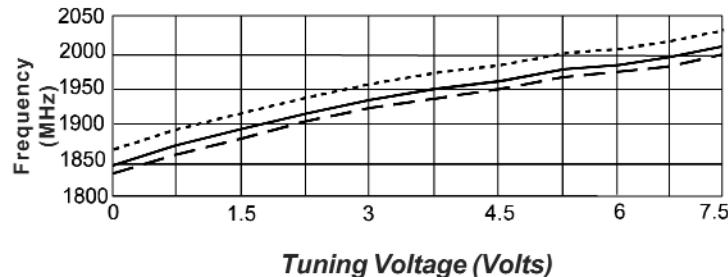
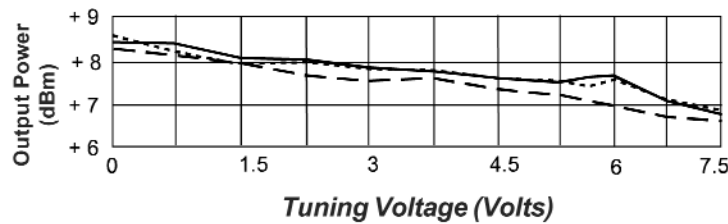
- Low Noise Bipolar Transistor
- Linear Tuning
- Operating Case Temp. -30 °C to + 55 °C
- Environmental Screening Available

### Specifications

CHARACTERISTIC	TYPICAL Ta = +25 °C	MIN/MAX Ta = -30°C to +55 °C
Frequency	1875 - 1975 MHz	1875 - 1975 MHz
Output Power (dBm)	+7.0	+5.0 Min.
Power Flatness (dBm)	±0.5	±0.75 Max.
Tuning Voltage Range (V)	0.5 to 5.5	0.0 to 7.5
Tuning Voltage Sensitivity (MHz/V)	25.0	15.0 Min.
Harmonics (dBc)	-30	-20 Max.
Spurious (dBc)	<- 80	<- 80 Max.
Phase Noise @ 100 KHz (dBc/Hz)	-105	-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	24.0	30.0 Max.

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

### Typical Performance Data



Legend ——— + 25 °C - - - - + 55 °C ······ -30 °C

### 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

### Packaging Options (see Appendix)

TOM9329, 4 Pin TO-8 (T4)  
 TON9329, 4 Pin Surface Mount (SM3)  
 BXO9329, Connectorized Housing (H1)

V <sub>t</sub> (V)	f <sub>o</sub> (MHz)	Δ f (MHz)	P <sub>o</sub> (dBm)	2H (dBc)	3H (dBc)
0.00	1851.9		+8.49	-28.96	-33.91
0.50	1868.4	33.0	+8.45	-29.45	-33.52
1.00	1883.0	29.2	+8.31	-30.63	-34.13
1.50	1895.6	25.3	+8.12	-32.05	-34.59
2.00	1907.3	23.2	+8.08	-32.79	-33.97
2.50	1918.6	22.8	+7.95	-33.32	-34.35
3.00	1929.0	20.7	+7.82	-34.06	-35.94
3.50	1939.0	20.0	+7.82	-34.93	-37.88
4.00	1948.6	19.3	+7.64	-36.10	-38.50
4.50	1958.1	19.0	+7.55	-37.23	-37.58
5.00	1967.6	19.0	+7.47	-38.03	-38.80
5.50	1976.6	18.0	+7.46	-38.65	-39.44
6.00	1985.8	18.2	+7.32	-39.38	-38.47
6.50	1995.3	19.0	+7.15	-39.36	-38.83
7.00	2004.3	18.0	+7.02	-40.15	-38.87
7.50	2013.8	19.0	+6.93	-40.70	-38.52

