

# Voltage Controlled Oscillator

## Low Noise Bipolar Transistor

# Model TOM9332

## 1400 to 1800 MHz

### Features

- Low Noise Bipolar Transistor
- Broad Tuning Range
- Operating Case Temp. -55 °C to + 95 °C
- Environmental Screening available

### Specifications

CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = -55 °C to +95 °C
Frequency	1400 - 1800 MHz	1400 - 1800 MHz
Output Power (dBm)	>+12	+10.0 Min.
Power Flatness (dBm)	±1.0	±1.5 Max.
Tuning Voltage Range (V)	1.5 to 8	0 to 15
Tuning Voltage Sensitivity (MHz/V)	<125	40 Min.
Harmonics (dBc)	<-18	-10 Max.
Spurious (dBc)	<-80	- 80 Max.
Phase Noise @ 100 KHz (dBc/Hz)	-108	-100 Max.
Pushing (MHz/V)	<2	3.0 Max.
Pulling (MHz); 22 dB RL	21	30.0 Max.
Frequency Drift (MHz/°C)	—	0.2 Max.
Power Vdc	+15	+15
mA	20	24.0 Max.

### Maximum Ratings

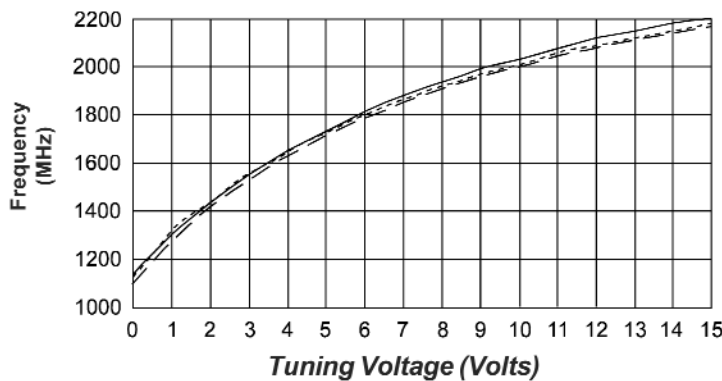
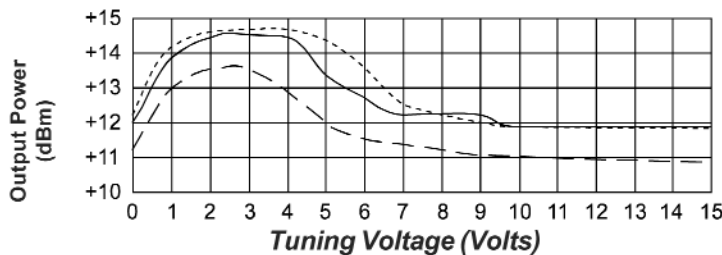
Ambient Operating Temperature ..... -55°C to + 100 °C  
 Storage Temperature ..... -62°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 20 Volts  
 Maximum DC Tuning Voltage ..... + 20 Volts  
 Minimum DC Tuning Voltage ..... 0 Volt

### Packaging Options (see Appendix)

TOM9332, 4 Pin TO-8 (T4)  
 TON9332, 4 Pin Surface Mount (SM3)  
 BXO9332, Connectorized Housing (H1)

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

### Typical Performance Data



Legend ----- + 25 °C ----- +95 °C - - - - -55°C

V <sub>t</sub> (V)	f <sub>o</sub> (MHz)	Δf (MHz)	P <sub>o</sub> (dBm)	2H (dBc)	3H (dBc)
0.0	1135.4		+12.0	- 8.8	-19.5
1.00	1300.8	165.4	+13.9	-14.2	-17.8
2.00	1437.2	136.3	+14.4	-19.0	-19.5
3.00	1554.5	117.3	+14.5	-19.3	-22.8
4.00	1650.1	95.6	+14.2	-18.0	-26.2
5.00	1733.3	83.3	+13.4	-19.2	-33.5
6.00	1813.4	80.1	+12.7	-22.8	-32.5
7.00	1880.3	66.9	+12.2	-27.7	-30.2
8.00	1939.3	58.9	+12.2	-34.2	-28.8
9.00	1991.8	52.6	+12.2	-36.0	-29.0
10.00	2038.3	46.5	+11.9	-32.0	-29.3
11.00	2079.8	41.5	+11.9	-30.3	-29.3
12.00	2118.6	38.8	+12.2	-29.3	-30.2
13.00	2152.4	33.8	+12.0	-28.5	-30.5
14.00	2183.1	30.7	+11.9	-27.5	<-30
15.00	2208.9	25.8	+11.7	-27.0	<-30

