

# Voltage Controlled Oscillator

## Low Noise Bipolar Transistor

# Model TOM9334

## 1000 to 1600 MHz

### Features

- \* Low Noise Bipolar Transistor
- \* Broad Tuning Range
- \* Operating Case Temp. -45 °C to + 85 °C
- \* Environmental Screening to MIL-STD- 883

### Specifications

CHARACTERISTIC	TYPICAL Ta = +25 °C	MIN/MAX Ta = -45°C to +85 °C
Frequency	1000 - 1600 MHz	1000 - 1600 MHz
Output Power (dBm)	+12.5	+10.0 Min.
Power Flatness (dBm)	±0.7	±1.0 Max.
Tuning Voltage Range (V)	1 to 11	1 to 11
Tuning Voltage	60	40 Min.
Sensitivity (MHz/V)	60	40 Min.
Harmonics (dBc)	-20	-12 Max.
Spurious (dBc)	<-80	- 80 Max.
Phase Noise @ 100 KHz (dBc/Hz)	-113	-102 Max.
Pushing (MHz/V)	<2.5	5.0 Max.
Pulling (MHz); 20 dB RL	20	25 Max.
Frequency Drift (MHz/°C)	--	0.2 Max.
Power Vdc	+15	+15
mA	19	20.0

### Maximum Ratings

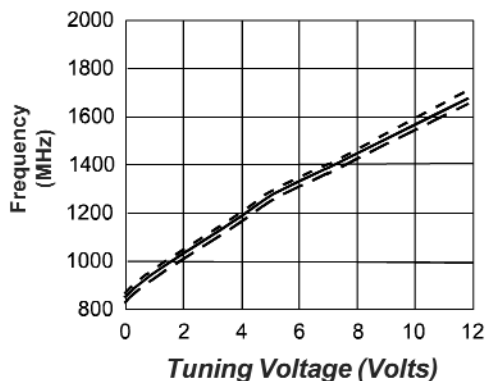
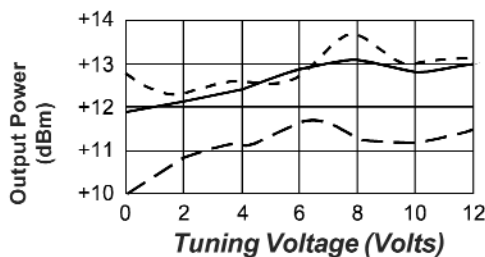
Ambient Operating Temperature ..... -55°C to + 100 °C  
 Storage Temperature ..... -62°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 20 Volts  
 Maximum DC Tuning Voltage ..... + 22 Volts  
 Minimum DC Tuning Voltage ..... 0 Volts

### Packaging Options (see Appendix)

TOM9334, 4 Pin TO-8 (T4)  
 TON9334, 4 Pin Surface Mount (SM3)  
 BXO9334, Connectorized Housing (H1)

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

### Typical Performance Data



Legend ——— + 25 °C - - - - +85 °C - - - - -45 °C

V <sub>t</sub> (V)	f <sub>o</sub> (MHz)	Δf (MHz)	P <sub>o</sub> (dBm)	2H (dBc)	3H (dBc)
0.00	885.1		+11.9	-19.0	-19.0
1.00	986.9	101.9	+12.1	-23.3	-18.2
2.00	1084.0	97.1	+12.1	-25.5	-19.2
3.00	1162.1	78.1	+12.1	-24.0	-20.5
4.00	1232.0	69.9	+12.3	-22.5	-22.3
5.00	1297.6	65.6	+12.4	-22.5	-24.5
6.00	1358.2	60.6	+12.9	-22.8	-26.5
7.00	1414.3	56.1	+13.1	-22.5	-29.2
8.00	1469.2	54.9	+13.1	-21.3	-33.0
9.00	1526.4	57.2	+12.9	-19.7	-36.7
10.00	1579.7	53.4	+12.6	-19.7	-39.2
11.00	1628.9	49.2	+12.8	-19.5	-38.8

