

# Voltage Controlled Oscillator

## Low Noise Bipolar Transistor

# Model TOM9338

## 180 to 220 MHz

### Features

- Low Noise Bipolar Transistor
- Broad Tuning Range
- Operating Case Temp. -40 °C to + 85 °C
- Environmental Screening Available

### Specifications

CHARACTERISTIC	TYPICAL Ta = +25 °C	MIN/MAX Ta = -40°C to +85 °C
Frequency	180 - 220 MHz	180 - 220 MHz
Output Power (dBm)	+17.5	+15.0 Min.
Power Flatness (dBm)	±0.25	±0.5 Max.
Tuning Voltage Range (V)	4.0 to 9.0	0.0 to 12.0
Tuning Voltage Sensitivity (MHz/V)	9.0	3.0 Min.
Harmonics (dBc)	20.0	10.0 Max.
3dB Modulation BW, Zg = 50 Ohms	----	5 MHz Min.
Pushing (MHz/V)	0.5	2.0 Max.
Pulling (MHz); 14 dB RL	5.0	10.0 Max.
Frequency Drift (MHz/°C)	----	.10 Max.
Power Vdc	+15	+15
mA	26.0	30.0 Max.

### Maximum Ratings

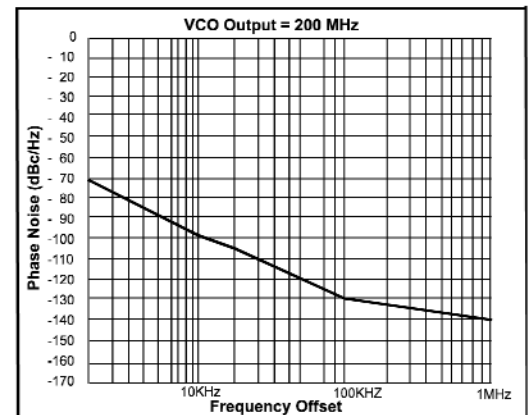
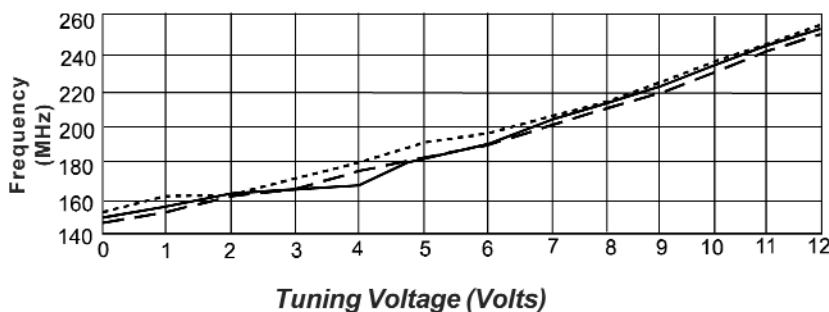
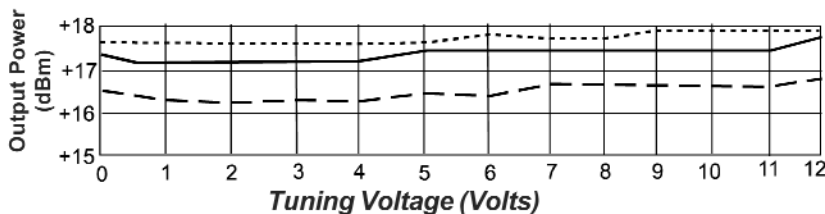
Ambient Operating Temperature ..... -40°C to + 85 °C  
 Storage Temperature ..... -62°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 15 Volts  
 Maximum DC Tuning Voltage ..... + 15 Volts  
 Minimum DC Tuning Voltage ..... 0 Volts

### Packaging Options (see Appendix)

TOM9338, 4 Pin TO-8 (T4)  
 TON9338, 4 Pin Surface Mount (SM3)  
 BXO9338, Connectorized Housing (H1)

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

### Typical Performance Data



### Notes:

- 1- Phase Noise is measured using the Aeroflex PN9000.
- 2- Worst case phase noise @ 100KHz offset across frequency range and temperature extremes is -120dBc/Hz

Legend ——— + 25 °C - - - - - +50 °C - - - - - 0 °C

