

# VOLTAGE CONTROLLED OSCILLATOR

## TOM9302

50 - 100 MHz

### Available as:

- TOM9302, 4 Pin TO-8 (T4)
- TON9302, 4 Pin Surface Mount (SM3)
- TOP9302, 4 Pin Flatpack (FP4)
- BXO9302, Connectorized Housing (H1)

### Features

- Low Noise Bipolar Transistor
- Broad Tuning Range
- Operating Case Temp. -55 °C to + 85 °C
- Environmental Screening available

### Specifications

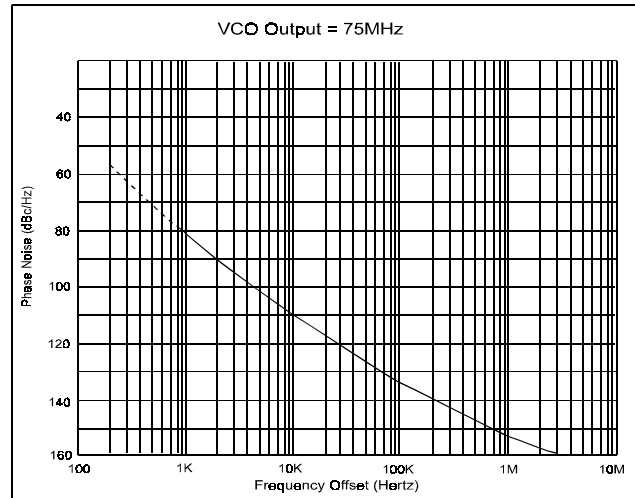
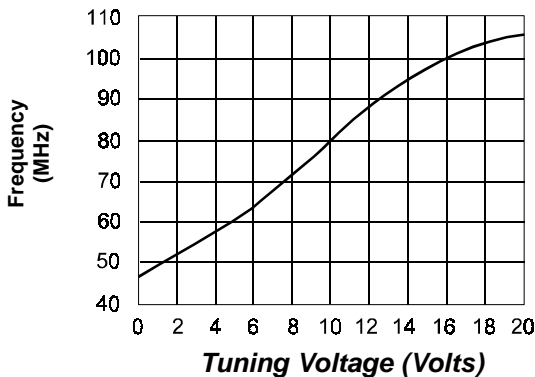
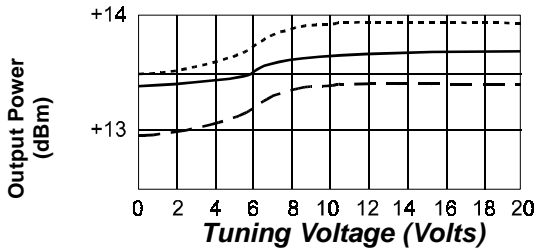
| CHARACTERISTIC                     | TYPICAL<br>Ta = 25 °C | MIN/MAX<br>Ta = - 55 °C to + 85 °C |
|------------------------------------|-----------------------|------------------------------------|
| Frequency                          | 50 - 100 MHz          | 50 - 100 MHz                       |
| Output Power (dBm)                 | +12                   | +10 Min.                           |
| Power Flatness (dB)                | ±1.0                  | ±1.5 Max.                          |
| Tuning Voltage Range (v)           | 1 to 17               | 0 to 20                            |
| Tuning Voltage Sensitivity (MHz/V) | 4                     | 1.5 Min.                           |
| Harmonics (dBc)                    | -15                   | -10 Max.                           |
| Spurious (dBc)                     | <-80                  | - 80 Max.                          |
| 3dB Modulation BW,<br>Zg = 50 Ohm  | —                     | .3MHz Min.                         |
| Pushing (MHz/V)                    | .5                    | 1.5 Max.                           |
| Pulling (MHz); 12dB RL             | 3                     | 5.0 Max.                           |
| Frequency Drift (MHz/°C)           | —                     | .05 Max.                           |
| Power                              | Vdc                   | +15                                |
|                                    | mA                    | 14                                 |
|                                    |                       | +15                                |
|                                    |                       | 18 Max.                            |

### Maximum Ratings

|                                     |                   |
|-------------------------------------|-------------------|
| Ambient Operating Temperature ..... | -54°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 Volts           |

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 -130 dBc/Hz.

Legend ——— + 25 °C    - - - - - +85 °C    - - - - - -54 °C

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