

# VOLTAGE CONTROLLED OSCILLATOR

**TOM9328**  
800 - 1300 MHz

**Available as:**

TOM9328, 4 Pin TO-8 (T4)  
TON9328, 4 Pin Surface Mount (SM3)  
BXO9328, Connectorized Housing (H1)

**Features**

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

**Specifications**

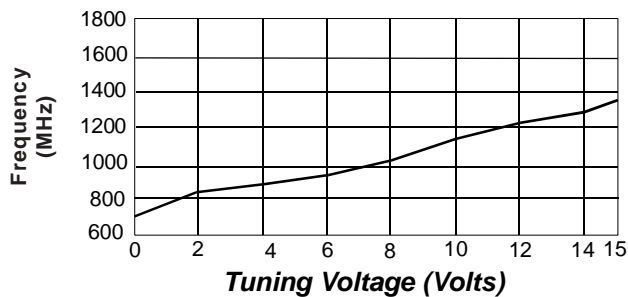
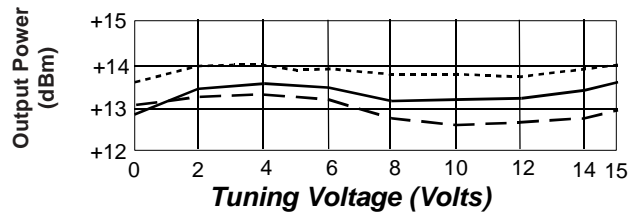
CHARACTERISTIC	TYPICAL Ta = +25 °C	MIN/MAX Ta = -55 °C to + 85 °C
Frequency	800 - 1300 MHz	800 - 1300 MHz
Output Power (dBm)	+13.0	+10.0 Min.
Power Flatness (dBm)	±0.5	±1.0 Max.
Tuning Voltage Range (V)	1.0 to 14.0	0.0 to 15.0
Tuning Voltage Sensitivity (MHz/V)	>38.0	30.0 Min.
Harmonics (dBc)	-20	-10 Max.
Spurious (dBc)	<-80	-60 Max.
Phase Noise @ 100 KHz (dBc/Hz)	-116	-112 Max.
Pushing (MHz/V)	2.0	4.0 Max.
Pulling (MHz); 20 dB RL	6.0	12.0 Max.
Frequency Drift (MHz/°C)	---	0.15 Max.
Power Vdc	+15	+15
mA	22.0	25.0 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 Volts

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

**Typical Performance Data**



V <sub>t</sub> (V)	f <sub>o</sub> (MHz)	Δf (MHz)	P <sub>o</sub> (dBm)	2H (dBc)	3H (dBc)
0.00	701.67	0.00	+12.97	-11.68	- 8.92
1.00	771.16	69.49	+13.24	-14.30	-11.33
2.00	812.90	41.74	+13.40	-18.92	-13.13
3.00	846.02	33.12	+13.42	-24.51	-14.04
4.00	876.77	30.75	+13.36	-33.27	-14.65
5.00	909.26	32.49	+13.44	-32.15	-15.57
6.00	946.63	37.37	+13.43	-24.80	-16.47
7.00	988.75	42.12	+13.43	-20.85	-17.76
8.00	1035.62	46.87	+13.29	-19.11	-18.84
9.00	1086.36	50.74	+13.22	-18.74	-20.80
10.00	1136.35	49.99	+13.22	-18.75	-21.68
11.00	1184.22	47.87	+13.19	-18.82	-22.23
12.00	1228.47	44.25	+13.24	-19.56	-23.06
13.00	1267.46	38.99	+13.39	-20.37	-23.85
14.00	1301.58	34.12	+14.47	-20.69	-25.19
15.00	1331.58	30.00	+13.68	-21.03	-25.91

Legend ——— +25 °C - - - - - +85 °C - - - - - -55 °C



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