# Voltage Controlled Oscillator — Model HVA103T-1 / Model HVA103SM-12

## Microwave Band — 5.5 to 7.0 GHz

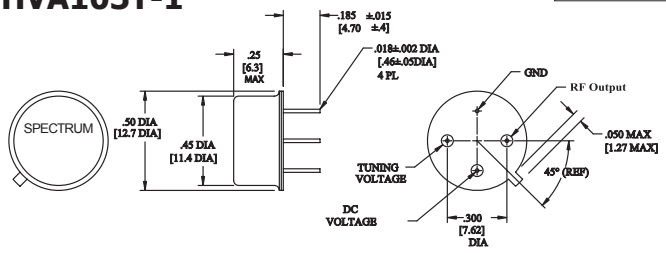
**Electrical Specifications:**[1]

| Parameter | Specifications |
|---|---|
| Frequency Range | 5.5 to 7.0 GHz |
| Power Output at 25°C (50 Ohm load) | +10.0 dBm, min. |
| Power Output Variation vs. Temperature | 2.0 dB, typical |
| Frequency Drift vs. Temperature[2] | 140 MHz, typical |
| Frequency Pulling (12 dB Return Loss) | 30 MHz, typical |
| Frequency Pushing | 8 MHz/V, typical |
| Tuning Voltage Limits | 0 to +20 VDC |
| SSB Phase Noise (50 kHz offset) | -87 dBc/Hz, typical |
| Harmonics[3] | -14 dBc, typical |
| Spurious | -70 dBc, max. |
| Bias Voltage[4] | +15 VDC ±1% |
| Bias Current[5] | 75 mA, typical |
| Operating Temperature | -30 to +65 °C |

**Notes:**
1. Specifications guaranteed over the operating temperature range. Those specifications indicated as typical are not guaranteed. Plots exemplify typical performance at +25°C
2. Total frequency drift over the full temperature range.
3. Worst case harmonics over the frequency range.
4. Alternate bias voltages available.
5. Lower bias current available.
6. Military screening available.

### HVA103T-1

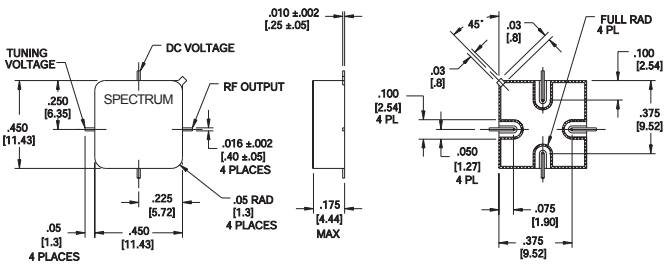
Outline: TO-8



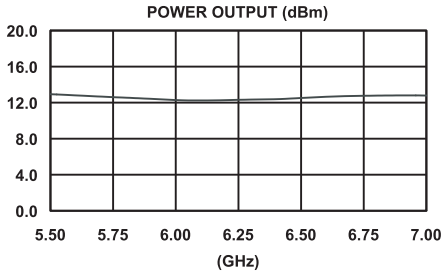

All dimensions are in inches and [mm].

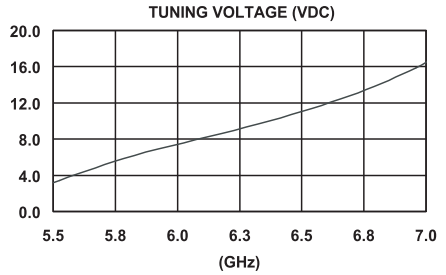
### HVA103SM-12

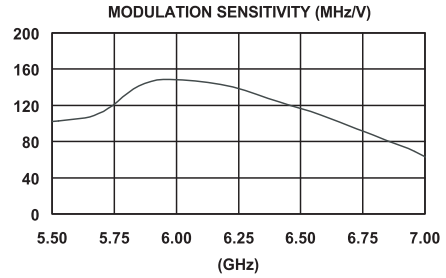
Outline: SMV2




### Typical Performance at 25°C





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