

VCXO Model: V936-10 series

Issue 2; 16th May 2022

Features

- Pulling Range to ± 300 ppm
- Low phase noise options
- Standard frequency range (1 to 250) MHz
- Low pre-aged options available
- The flexible nature of the design means that variations to suit almost any application can be developed to meet individual customer requirements

Option A

- Temperature stability: ± 10 ppm over (0 to $+50$) $^{\circ}$ C
- Output: CMOS 15pF, 45% 55% or Sinewave 0dBm
- Voltage: 3.3V 5.0V 12.0V
- Current at 1MHz: 20mA 15 mA 10 mA
- Current at 250MHz: 80 mA 65 mA 45 mA

Option B

- Temperature stability: ± 20 ppm over (-20 to $+70$) $^{\circ}$ C
- Output: CMOS 15pF, 45% 55% or Sinewave 0dBm
- Voltage: 3.3V 5.0V 12.0V
- Current at 1MHz: 20mA 15 mA 10 mA
- Current at 250MHz: 80 mA 65 mA 45 mA

Phase Noise (typical)

- $F_0 + 10$ Hz -80dBc/Hz
- $F_0 + 100$ Hz -110 dBc/Hz
- $F_0 + 1$ KHz -130 dBc/Hz
- $F_0 + 10$ KHz -150 dBc/Hz
- $F_0 + 100$ KHz -160 dBc/Hz

Values based on a 10MHz unit

Voltage/ Load change

- $\pm 5\%$ supply voltage change: ± 20 ppb
- $\pm 10\%$ load change: ± 50 ppb

Ageing

Based on 10MHz unit after 30 days continuous operation:

- Per day: ± 5 ppb max.
- Per year: ± 1 ppm max.
- Warm up time: 2 minutes to specification

Voltage Trim

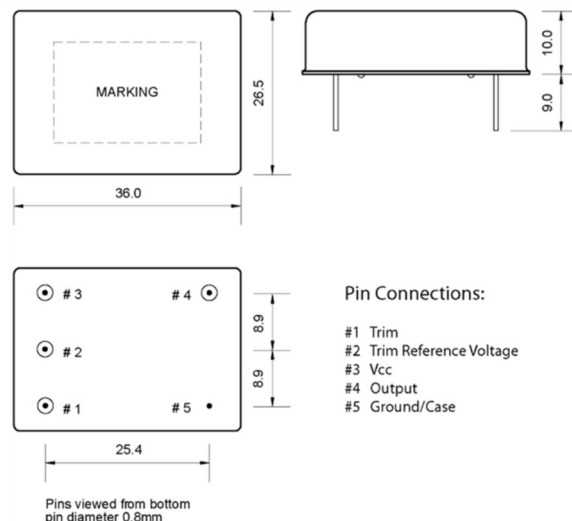
- To ± 300 ppm 0V to Vcc or Vref if fitted
- Trim impedance 50K Ω

Reference Options:

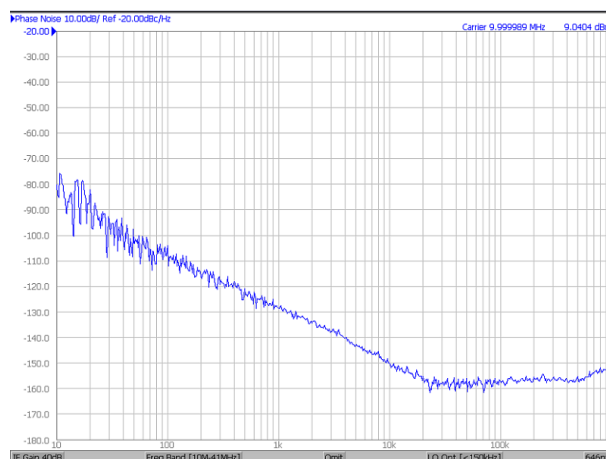
- 3.0V for 3.3V supply



Dimensions (mm)



Phase Noise Plot



- 4.5V for 5.0V supply
- 4.5V for 12.0V supply

Environmental

- Electrostatic-Sensitive Device (ESD)
- Storage Temperature Range: (-40 to +125)°C
- Mechanical shock: MIL standard 202F, method 213, condition J
- Thermal shock: MIL standard 202F, method 107, condition A
- Vibration: MIL standard 202F, method 204, condition B
- Solderability: 5 seconds maximum at 230°C
- 3 seconds maximum at 350°C

Compliance

- RoHS Status (2011/65/EU) - Compliant
- REACH Status - Compliant

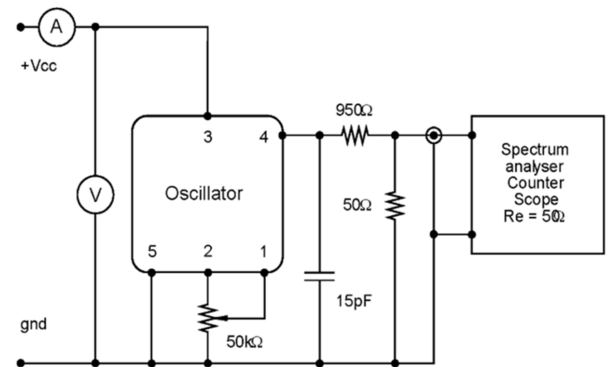
Packaging

- Pack Style: Bulk

Ordering Information

- Unique customer part number and custom specification issued with each application
- VCXO Model: V936-10 series
- Frequency: (1 to 250) MHz
- Stability/Output/Voltage Option: A or B
- Supply voltage code: V1= +3.3Vd.c. supply
- V2= +5.0Vd.c. supply
- V3= +12Vd.c. supply
- Add suffix (R) for Vref output on pin #2

Test Circuit - CMOS Load



Test Circuit - Sinewave

