

## OCXO Model: OS560-10 series

Issue 2; 26th April 2022

### Features

- Temperature stability to  $\pm 5$ ppb
- Very Low phase noise options
- Standard frequency range (1 to 150) 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 :  $\pm 5$ ppb over (0 to  $+50$ ) $^{\circ}$ C
- Output: CMOS 15pF, 45% 50% or Sinewave 0dBm
- Voltage:                   3.3V           5.0V           12.0V
- Warm up Current:       750mA       470mA       270mA
- Quiescent current:     320mA       220mA       120mA

### Option B

- Temperature stability :  $\pm 10$ ppb over ( $-20$  to  $+70$ ) $^{\circ}$ C
- Output: CMOS 15pF, 45% 50% or Sinewave 0dBm
- Voltage:                   3.3V           5.0V           12.0V
- Warm up Current:       750mA       470mA       270mA
- Quiescent current:     320mA       220mA       120mA

### Option C

- Temperature stability :  $\pm 20$ ppb over ( $-40$  to  $+70$ ) $^{\circ}$ C
- Output: CMOS 15pF, 45% 50% or Sinewave 0dBm
- Voltage:                   3.3V           5.0V           12.0V
- Warm up Current:       750mA       470mA       270mA
- Quiescent current:     320mA       220mA       120mA

### Phase Noise (typical)

- $F_0+10$ Hz           -130 dBc/Hz
- $F_0+100$ Hz          -150 dBc/Hz
- $F_0+1$ KHz           -165 dBc/Hz
- $F_0+10$ KHz          -175 dBc/Hz
- $F_0+100$ KHz        -178 dBc/Hz

Values based on a 10MHz unit

### Voltage / Load change

- $\pm 5\%$  supply voltage change:  $\pm 2$ ppb
- $\pm 10\%$  load change:  $\pm 10$ ppb

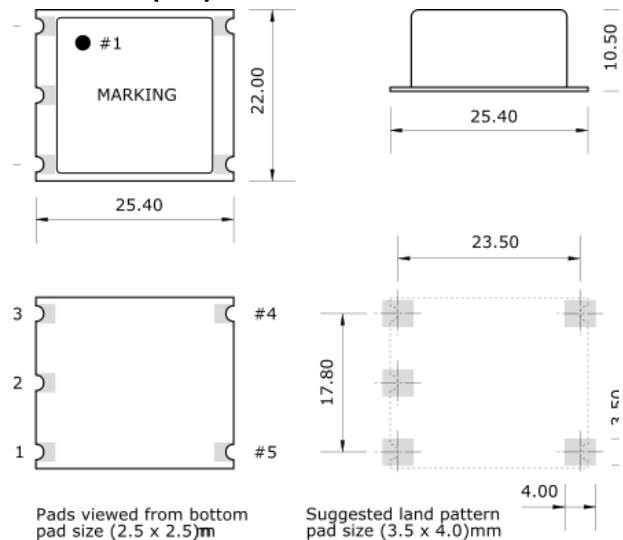
### Ageing

Based on 10MHz unit after 30 days continuous operation:

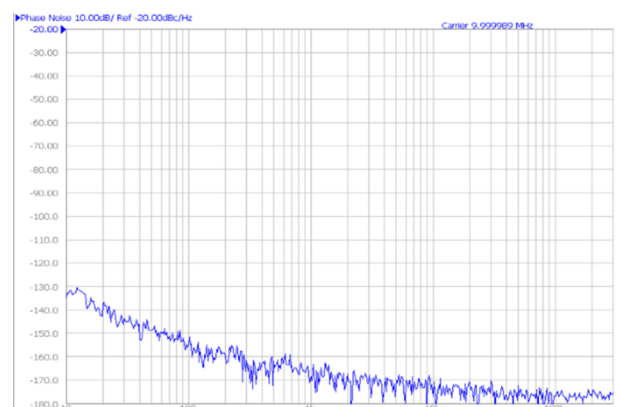
- Per day:  $\pm 0.1$ ppb max.
- Per year:  $\pm 50$ ppb max.



### Dimensions (mm)



### Phase Noise Plot



- Warm up time: 5 minutes to within 0.1 ppm

#### Voltage Trim:

- 0.5ppm minimum
- Trim impedance 50K $\Omega$

#### Reference Options:

- 3V for 3.3V supply
- 4.5V for 5V supply
- 4.5V for 12V supply

#### Environmental

- Electrostatic-Sensitive Device (ESD)
- Storage Temperature Range: (-40 to +125) $^{\circ}$ 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 $^{\circ}$ C
- 3 seconds maximum at 350 $^{\circ}$ C

#### Compliance

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

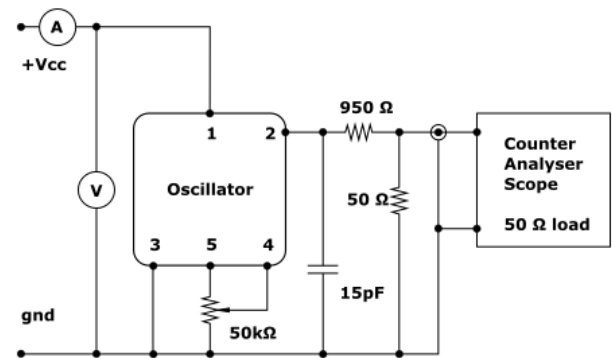
#### Packaging

- Pack Style: Bulk

#### Ordering Information

- Unique customer part number and custom specification issued with each application
- OCXO model: OS560-10
- Frequency: (1 to 150)MHz
- Stability/Output/Voltage Option :A, B or C
- Supply voltage code: V1= +3.3Vd.c. supply
- V2= +5Vd.c. supply
- V3= +12Vd.c. supply
- Add suffix (R) for Vref output on pin #5

#### Test Circuit - CMOS Load



#### Test Circuit - Sinewave

