

OCXO OS3E400 - 10

- **Stratum 3E compliant; long term and 24 hour holdover to Stratum 3E levels specified in GR-1244-CORE issue 2 and GR-63-CORE issue 1**
- **High quality, excellent phase noise, extremely low ageing from a precision SC cut resonator**
- **Hermetic seal**
- **Manufactured to standard and custom frequencies (5.0 ~ 50)MHz**



Standard options:

frequency range:

(5.0 ~ 50.0)MHz

supply voltage codes:

supply voltage

trim reference option*

(V1)*	(V2)*	(V3)*
+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
+3.0Vd.c.	+4.5Vd.c.	+4.5Vd.c.

* add suffix (R) for V_{ref} output on pin #5

Generic specification:

output:

CMOS 15pF, 45% ~ 55%
rise and fall time 2ns max.

stability:

against temperature change
stratum 3E compliant

$\pm 0.0085\text{ppm}(0 +70)^\circ\text{C}$
long term and 24 hour holdover requirements of Stratum 3E levels
specified in GR-1244-CORE issue 2 and GR-63-CORE issue 1

against supply voltage change
against load change
ageing short term

$\pm 0.002\text{ppm max. for } V_{cc} \pm 5\%$
 $\pm 0.002\text{ppm max. for load } \pm 10\%$
 $\pm 0.0005\text{ppm max. per day}$
after 30 days continuous operation

ageing long term
voltage trim V_t
trim input impedance

$\pm 0.05\text{ppm max. first year}$
 $\pm 0.5\text{ppm min. typical, linearity } \pm 5\%$
100K Ω min.

power supplies:

supply voltage V_{cc}
start up current at min. temp. range
quiescent current at max. temp. range
warm up time
insulation resistance

+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
900mA max.	600mA max.	300mA max.
320mA max.	220mA max.	120mA max.

5 minutes max. to within 0.1ppm of nominal
500Meg Ω min., 100Vd.c.

phase noise:

single sideband, 1Hz bandwidth

-130dBc/Hz, $f_o + 10\text{Hz}$
-155dBc/Hz, $f_o + 100\text{Hz}$
-160dBc/Hz, $f_o + 1\text{kHz}$

temperature:

operating range
storage range

(0 +70) $^\circ\text{C}$
(-40 +125) $^\circ\text{C}$

Environmental conditions:

- 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 max. at +230°C, 3 seconds max. at +350°C

Marking: part number, frequency and serial number on high temperature metalised polyester label

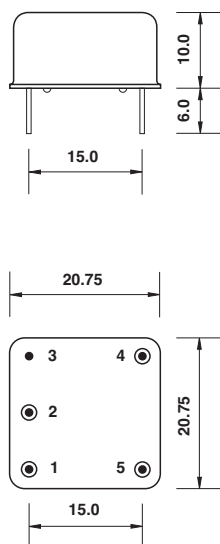
Custom specification: part number issued with custom specification and drawing

Ordering code:

- standard option:** OS3E400-10-V2* - 10.00M
- OS3E400-10** = series generic code
- V2*** supply voltage code: V2 = +5Vd.c. supply
- *Add suffix (R) for V_{ref} output on pin #5
- 10.00M** output frequency: 10.00M = 10.000MHz

custom specification: part number issued with custom specification and drawing

Dimensions(mm):

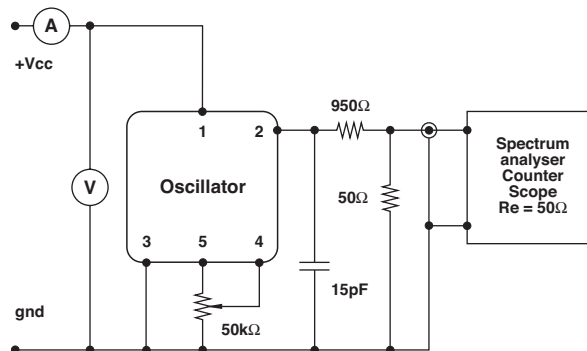


Pins viewed from bottom
pin diameter 0.45mm

Pin connections:

- # 1 +V_{cc}
- # 2 output
- # 3 ground/case
- # 4 trim
- # 5 n.c. or trim reference voltage*

Test circuit, CMOS load:



test circuit includes a 20:1 step down into a matched 50Ω load