



**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 5.0MHz to 50MHz.**



**Standard options:**

<b>frequency range:</b>	_____ (5.0 ~ 50.0)MHz _____		
<b>supply voltage codes:</b>	(V1)*	(V2)*	(V3)*
supply voltage	+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
trim reference option*	+3.0Vd.c.	+4.5Vd.c.	+4.5Vd.c.

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

**Generic specification:**

<b>output:</b>	CMOS 15pF, 45% ~ 55% rise and fall time 2ns max.		
<b>stability:</b>	±0.0085ppm(0 +70)°C		
against temperature change	long term and 24 hour holdover requirements of Stratum 3E levels		
stratum 3E compliant	specified in GR-1244-CORE issue 2 and GR-63-CORE issue 1		
against supply voltage change	±0.002ppm max. for $V_{cc} \pm 5\%$		
against load change	±0.002ppm max. for load ±10%		
ageing short term	±0.0005ppm max. per day		
ageing long term	after 30 days continuous operation		
voltage trim $V_t$	±0.05ppm max. first year		
trim input impedance	±0.5ppm min. typical, linearity ±5% 100KΩ min.		
<b>power supplies:</b>			
supply voltage $V_{cc}$	+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
start up current at min. temp. range	900mA max.	600mA max.	300mA max.
quiescent current at max. temp. range	320mA max.	220mA max.	120mA max.
warm up time	5 minutes max. to within 0.1ppm of nominal		
insulation resistance	500MegΩ min., 100Vd.c.		
<b>phase noise:</b>			
single sideband, 1Hz bandwidth	-130dBc/Hz, $f_o + 10\text{Hz}$ -155dBc/Hz, $f_o + 100\text{Hz}$ -160dBc/Hz, $f_o + 1\text{kHz}$		
<b>temperature:</b>			
operating range	(0 +70)°C		
storage range	(-40 +125)°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

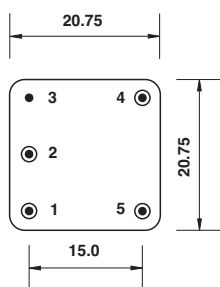
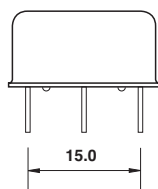
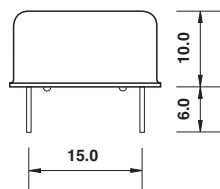
**Custom specification:** part number issued with custom specification and drawing

## 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):

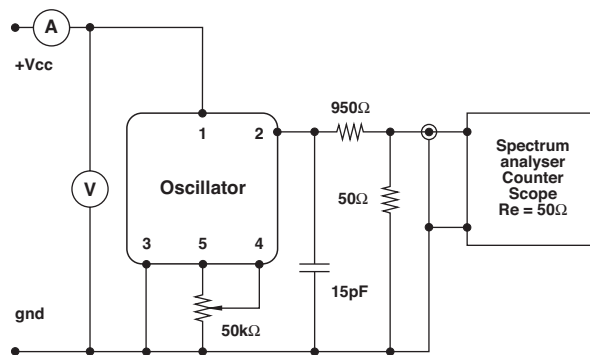


Pins viewed from bottom  
pin diameter 0.45mm

## Pin connections:

- # 1 +V<sub>cc</sub>
- # 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