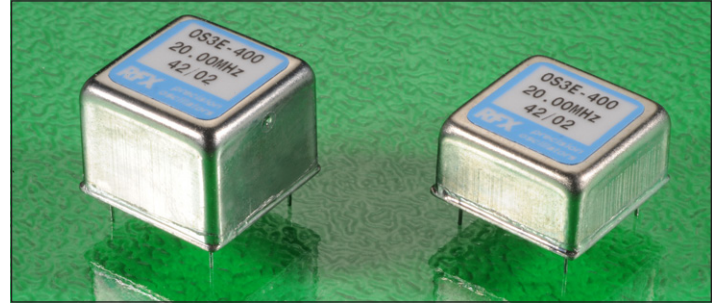


Stratum 3E compliant, GR-1244-CORE issue 2 and GR-63-CORE issue 1.

High quality, excellent phase noise, extremely low ageing from a precision SC cut resonator.

Manufactured to standard and custom frequencies 5.0Mz to 50MHz.



**Standard options:**

**frequency range:** \_\_\_\_\_ (5.0 ~ 50.0)MHz \_\_\_\_\_

**supply voltage codes:** \_\_\_\_\_ (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:**

**output:** \_\_\_\_\_ CMOS 15pF, 45% ~ 55% \_\_\_\_\_  
 rise and fall time 2ns max.

**stability:**  
 against temperature change  $\pm 0.0085\text{ppm}(0 +70)^\circ\text{C}$   
 stratum 3E compliant 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  $\pm 0.002\text{ppm max. for } V_{cc} \pm 5\%$   
 against load change  $\pm 0.002\text{ppm max. for load } \pm 10\%$   
 ageing short term  $\pm 0.0005\text{ppm max. per day}$   
 after 30 days continuous operation  
 ageing long term  $\pm 0.1\text{ppm max. first year}$   
 voltage trim  $V_i$   $\pm 0.5\text{ppm min. typical, linearity } \pm 5\%$   
 trim input impedance 100K $\Omega$  min.

**power supplies:**  
 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 500Meg $\Omega$  min., 100Vd.c.

**phase noise:**  
 single sideband, 1Hz bandwidth -110dBc/Hz,  $f_o + 10\text{Hz}$   
 -135dBc/Hz,  $f_o + 100\text{Hz}$   
 -155dBc/Hz,  $f_o + 1\text{kHz}$

**temperature:**  
 operating range (0 +70) $^\circ\text{C}$   
 storage range (-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

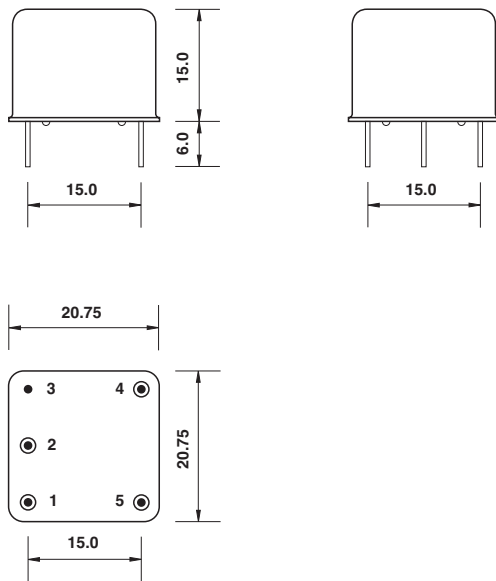
**Custom specification:** part number issued with custom specification and drawing

**Ordering code:**

- standard option:** OS3E400-15-V2\* - 10.00M  
= 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):**

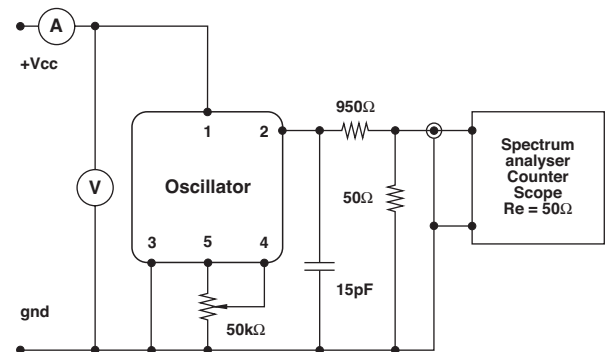


Pins viewed from bottom  
pin diameter 0.45mm

**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