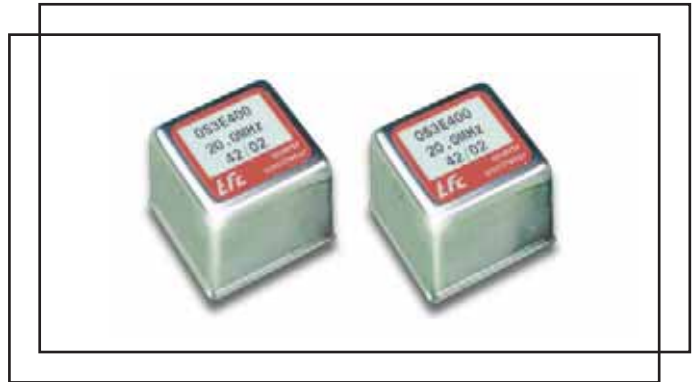


## Series OS3E400 stratum 3E (5.0 ~ 50.0)MHz

- # CMOS output
- # stratum 3E compliant
- # excellent phase noise
- # extremely low ageing



### 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

$\pm 0.002\text{ppm max. for } V_{cc} \pm 5\%$

against load change

$\pm 0.002\text{ppm max. for load } \pm 10\%$

ageing short term

$\pm 0.0005\text{ppm max. per day}$

ageing long term

after 30 days continuous operation

voltage trim  $V_t$

$\pm 0.1\text{ppm max. first year}$

trim input impedance

$\pm 0.5\text{ppm min. typical, linearity } \pm 5\%$   
 $100\text{K}\Omega \text{ min.}$

**power supplies:**

supply voltage  $V_{cc}$

+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
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start up current at min. temp. range

900mA max.	600mA max.	300mA max.
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quiescent current at max. temp. range

320mA max.	220mA max.	120mA max.
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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) $^\circ\text{C}$

## Series OS3E400 stratum 3E

### Environmental test conditions (on request):

**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:

frequency, date code, serial number on high temperature metalised polyester label

### Ordering code:

**standard specification:** OS3E400-15-V2\* - 10.00M

OS3E400-15 = series generic code

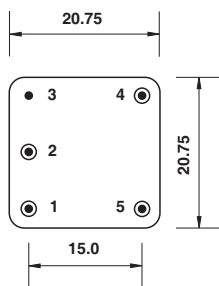
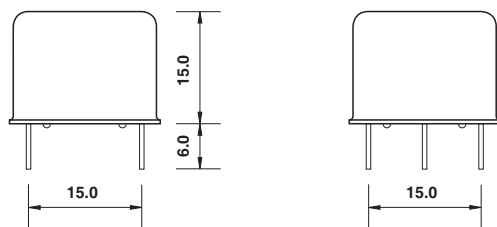
V2\* supply voltage code: V2 = +5Vd.c. supply

\*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):

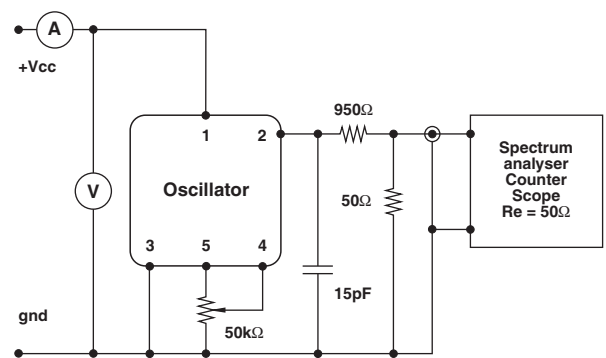


Pins viewed from bottom  
pin diameter 0.45mm

### Pin connections:

- #1 +V<sub>CC</sub>
- #2 output
- #3 ground/case
- #4 trim
- #5 n.c. or trim reference voltage\*

### Test circuit:



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