OCXO OS400 - 10

- **±0.005ppm stability, excellent phase noise.**

- **A small high quality hermetically sealed OCXO combining minimum volume with an excellent specification from a precision SC cut resonator.**

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

- **Ageing from ±0.05ppm first year.**
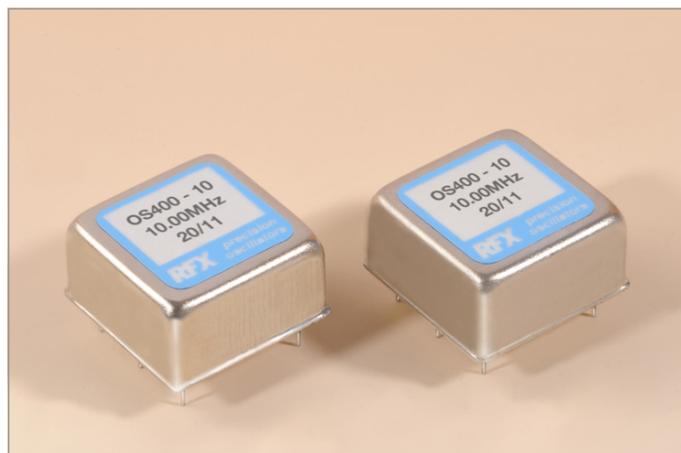
Standard options:

frequency range:		(5 ~ 50)MHz	

accuracy codes:	(A)	(B)	(C)
temperature tolerance	±0.005ppm	±0.01ppm	±0.02ppm
temperature range	(0 +50)°C	(-10 +60)°C	(-20 +70)°C

output codes:	(S)	(L)
output	sine wave, 0dBm into 50Ω	CMOS 15pF, 45% ~ 55%
harmonics -30dBc max.	<2ns max. rise and fall	

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:

stability:

against supply voltage change	±0.002ppm max. for V_{cc} ±5%
against load change	±0.002ppm max. for load ±10%
ageing short term	±0.0005ppm max. per day
	after 30 days continuous operation
ageing long term	±0.05ppm max. first year
voltage trim V_t	±0.5ppm min. typical, linearity ±5%
trim input impedance	100KΩ 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	500MegΩ min., 100Vd.c.		

phase noise:

single sideband, 1Hz bandwidth	-130dBc/Hz, f_o+10Hz
	-155dBc/Hz, f_o+100Hz
	-160dBc/Hz, f_o+1kHz

temperature:

operating range	(0 +50)°C	(-10 +60)°C	(-20 +70)°C
storage range	(-40 +125)°C	(-40 +125)°C	(-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 and frequency on high temperature metalised polyester label

standard specification: **OS400-10 A S V2* - 10.00M**

OS400-10 = series generic code

A temp. tol. and temp. range code: **A = ±0.005ppm(0 +50)°C**

S output code: **S = sine wave output, 0dBm into 50Ω**

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):

10.0

6.0

15.0

15.0

20.75

20.75

15.0
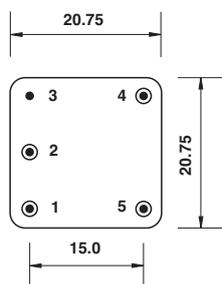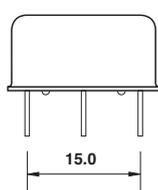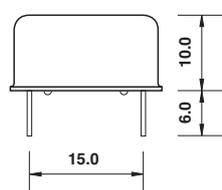
Pins viewed from bottom
pin diameter 0.45mm

Pin connections:

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

Test circuit, CMOS load:

+Vcc

gnd

Oscillator

950Ω

50Ω

15pF

50kΩ

Spectrum analyser
Counter
Scope
Re = 50Ω
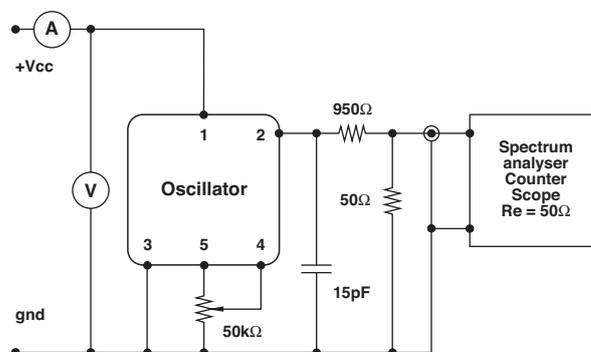
test circuit includes a 20:1 step down into a matched 50Ω load