



OCXO OS400 - 15

- $\pm 0.005\text{ppm}$ 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 5.0MHz to 50MHz.
- Ageing from $\pm 0.1\text{ppm}$ first year.



Standard options:

frequency range:	_____ (5 ~ 50)MHz _____		
accuracy codes:	(A)	(B)	(C)
temperature tolerance	$\pm 0.005\text{ppm}$	$\pm 0.01\text{ppm}$	$\pm 0.02\text{ppm}$
temperature range	(0 +50) $^{\circ}\text{C}$	(-10 +60) $^{\circ}\text{C}$	(-20 +70) $^{\circ}\text{C}$
output codes:	(S)	(L)	
output	sine wave, 0dBm into 50 Ω	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		$\pm 0.002\text{ppm}$ 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_t		$\pm 0.5\text{ppm}$ min. typical, linearity $\pm 5\%$	
trim input impedance		100K Ω 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 Ω 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 +50) $^{\circ}\text{C}$	(-10 +60) $^{\circ}\text{C}$	(-20 +70) $^{\circ}\text{C}$
storage range	(-40 +125) $^{\circ}\text{C}$	(-40 +125) $^{\circ}\text{C}$	(-40 +125) $^{\circ}\text{C}$

Environmental conditions:

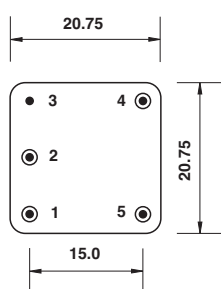
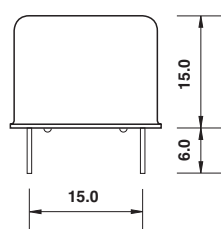
- mechanical shock:** MIL standard 202F, method 213, condition J
- thermal shock:** MIL standard 202F, method 107, condition A
- vibration:** MIL standard 202F, method 204, condition B
- solderability:** 5 seconds max. at +230°C, 3 seconds max. at +350°C

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

- standard specification:** OS400-15 A S V2* - 10.00M
 OS400-15 = series generic code
A temp. tol. and temp. range code: A = $\pm 0.005\text{ppm}(0 +50)^\circ\text{C}$
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):

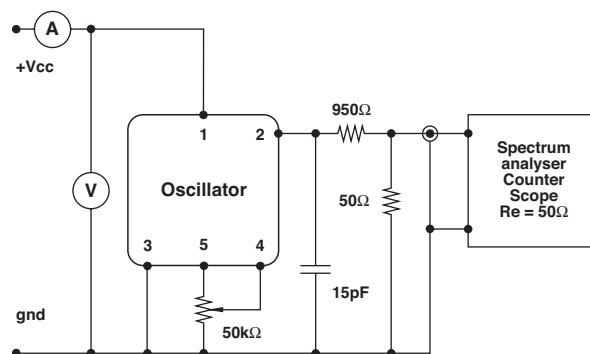


Pins viewed from bottom
pin diameter 0.45mm

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