

### OCXO OA936 - 10

- **Stability from  $\pm 0.05\text{ppm}$ , good phase noise from a precision AT cut crystal.**
- **Standard and custom frequency range 1MHz to 1GHz.**
- **Ageing from  $\pm 1\text{ppm}$  first year.**
- **A standard hermetically sealed OCXO package providing a useful volume for the manufacture of high quality single oven specifications.**



#### Standard options:

<b>frequency range:</b>	_____ 1MHz ~ 1GHz _____		
<b>accuracy codes:</b>	(A)	(B)	(C)
temperature tolerance	$\pm 0.05\text{ppm}$	$\pm 0.1\text{ppm}$	$\pm 0.2\text{ppm}$
temperature range	(0 +50) $^{\circ}\text{C}$	(-10 +60) $^{\circ}\text{C}$	(-20 +70) $^{\circ}\text{C}$
<b>output codes:</b>	(S)	(L)	
output	sine wave, 0dBm into 50 $\Omega$	CMOS 15pF, 45% ~ 55%	
harmonics -30dBc max.	<2ns max. rise and fall		
<b>supply voltage codes:</b>	(V1)*	(V2)*	(V3)*
supply voltage	+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
voltage reference option*	+3.0Vd.c.	+4.5Vd.c.	+4.5Vd.c.
	*add suffix (R) for $V_{ref}$ output on pin #2		

#### Generic specification:

<b>stability:</b>			
against supply voltage change			$\pm 0.02\text{ppm}$ max. for $V_{cc} \pm 5\%$
against load change			$\pm 0.02\text{ppm}$ max. for load $\pm 10\%$
ageing short term			$\pm 0.005\text{ppm}$ max. per day
ageing long term			after 30 days continuous operation
voltage trim $V_t$			$\pm 1\text{ppm}$ max. first year
trim input impedance			$\pm 10\text{ppm}$ min. typical, linearity $\pm 5\%$
			100K $\Omega$ 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	500Meg $\Omega$ min., 100Vd.c.		
<b>phase noise:</b>			
single sideband, 1Hz bandwidth			-90dBc/Hz, $f_o + 10\text{Hz}$
			-125dBc/Hz, $f_o + 100\text{Hz}$
			-140dBc/Hz, $f_o + 1\text{kHz}$
<b>temperature:</b>			
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:

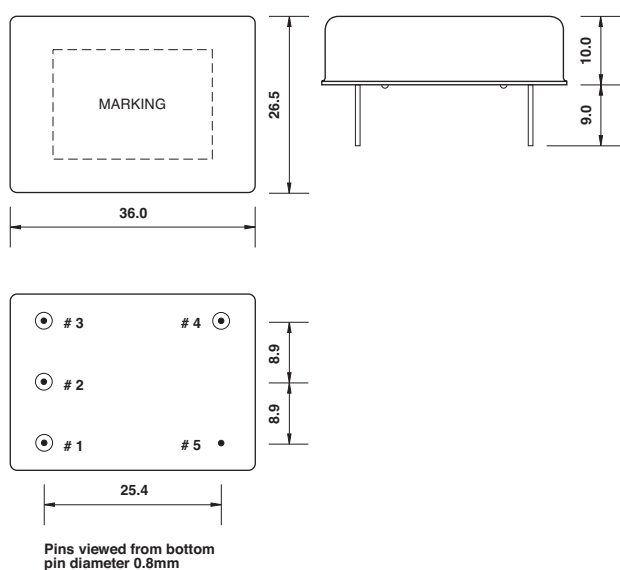
- mechanical shock:** MIL standard 202F, method 213, condition J
- thermal shock:** MIL standard 202F, method 107, condition A
- vibration:** MIL standard 202F, method 204, condition B
- solderability:** 5 seconds max. at +230°C, 3 seconds max. at +350°C

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

**Ordering code:** **standard specification: OA936-10 A S V2\* - 10.00M**  
**OA936-10** = series generic code  
**A** temp. tol. and temp. range code: **A = ±0.05ppm(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 #2  
**10.00M** output frequenc: **10.00M = 10.000MHz**

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

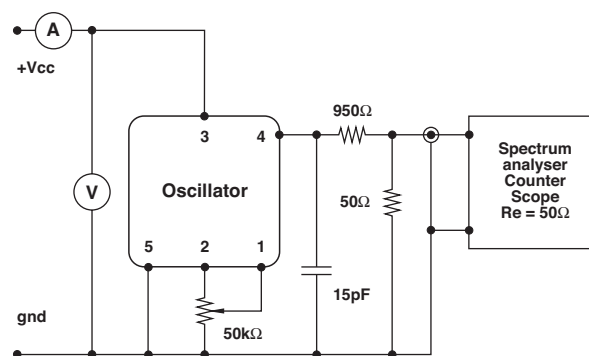
### Dimensions(mm):



### Pin connections:

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

### Test circuit, CMOS load:



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