



**OCXO OS3E936 - 10**

- **Stratum 3E compliant; long term and 24 hour holdover to Stratum 3E levels specified in GR-1244-CORE issue 2 and GR-63-CORE issue 1.**
- **Hermetic seal.**
- **High quality, excellent phase noise, extremely low ageing from a precision SC cut resonator.**
- **Manufactured to standard and custom frequencies 1.0MHz to 125MHz.**



**Standard options:**

<b>frequency range:</b>	_____ (1.0 ~ 125.0)MHz _____		
<b>supply voltage codes:</b>	(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:**

<b>output:</b>	CMOS 15pF, 45% ~ 55% rise and fall time 2ns max.		
<b>stability:</b>	$\pm 0.0085\text{ppm}(0 +70)^\circ\text{C}$		
against temperature change 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 $V_t$	$\pm 0.5\text{ppm min. typical, linearity } \pm 5\%$		
trim input impedance	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	-110dBc/Hz, $f_o + 10\text{Hz}$ -135dBc/Hz, $f_o + 100\text{Hz}$ -155dBc/Hz, $f_o + 1\text{kHz}$		
<b>temperature:</b>			
operating range	(0 +70) $^\circ\text{C}$		
storage range	(-40 +125) $^\circ\text{C}$		

## Environmental conditions:

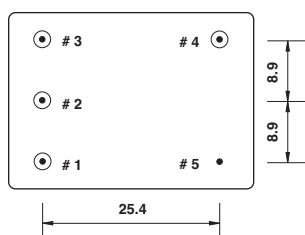
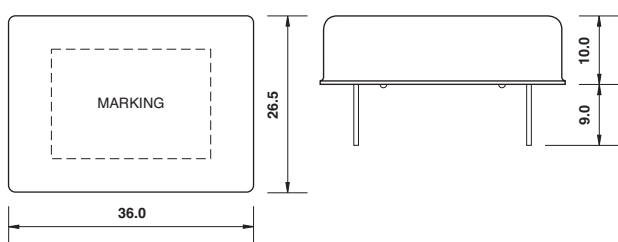
- mechanical shock:** MIL standard 202F, method 213, condition J
- thermal shock:** MIL standard 202F, method 107, condition A
- vibration:** MIL standard 202F, method 204, condition B
- solderability:** 5 seconds max. at +230°C, 3 seconds max. at +350°C

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

**Ordering code:** **standard specification: OS3E936-10-V2\* - 10.00M**  
**OS3E936-10** = 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):

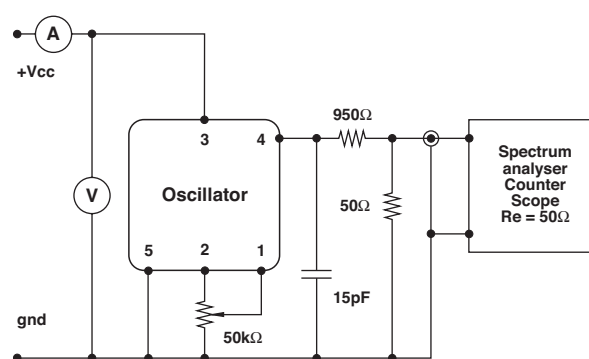


Pins viewed from bottom  
pin diameter 0.8mm

## Pin connections:

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

## Test circuit, CMOS load:



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