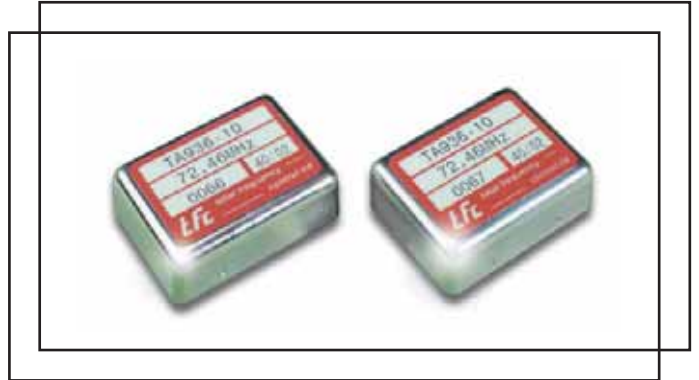


## Series TA936-10 1MHz ~ 1GHz

- # sine wave, CMOS output
- # custom designs
- # excellent phase noise
- # very low ageing



### Standard options:

**frequency range:**

1MHz ~ 1GHz

**accuracy codes:**

 temperature tolerance  
temperature range

(A)	(B)	(C)
±0.5ppm	±1.0ppm	±2.0ppm
(0 +50)°C	(-20 +70)°C	(-40 +70)°C

**output codes:**

output

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

**supply voltage codes:**

 supply voltage  $V_{CC}$   
voltage 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 #2

### Generic specification:

**stability:**

against supply voltage change

 ±0.02ppm max. for  $V_{CC} \pm 5\%$ 

 against load change  
ageing short term

 ±0.02ppm max. for load ±10%  
±0.005ppm max. per day  
after 30 days continuous operation

 ageing long term  
voltage trim  $V_t$ 

±1.5ppm max. first year

trim input impedance

 ±10ppm min. typical, linearity ±5%  
100KΩ min.

**power supplies:**

 supply voltage  $V_{CC}$ 

+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
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supply current

 frequency,  $V_{CC}$  and output load dependent

insulation resistance

500MegΩ min., at +100Vd.c.

**phase noise:**

single sideband, 1Hz bandwidth

-80dBc/Hz, $f_o+10$ Hz
-100dBc/Hz, $f_o+100$ Hz
-125dBc/Hz, $f_o+1$ kHz

**temperature:**

operating range

(0 +50)°C	(-10 +60)°C	(-40 +70)°C
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storage range

(-40 +125)°C	(-40 +125)°C	(-40 +125)°C
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## Series TA936-10

### 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:** TA936-10 A S V2\* - 6.40M

TA936-10 = series generic code

**A** temp. tol. and temp. range code: A =  $\pm 0.5\text{ppm}(0 + 50)^\circ\text{C}$

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

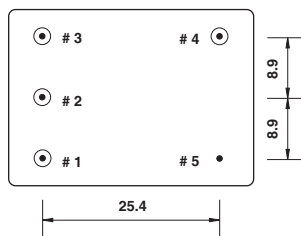
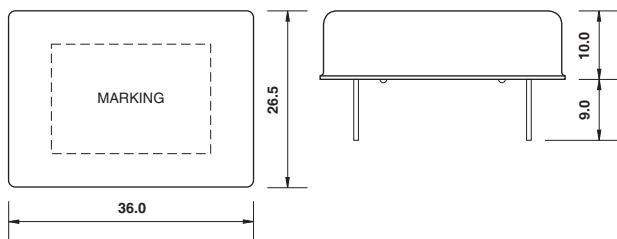
**V2\*** supply voltage code: V2 = +5Vd.c. supply

\*Add suffix (R) for  $V_{\text{ref}}$  output on pin #2

**6.40M** output frequency: 6.40M = 6.40MHz

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

### Dimensions(mm):

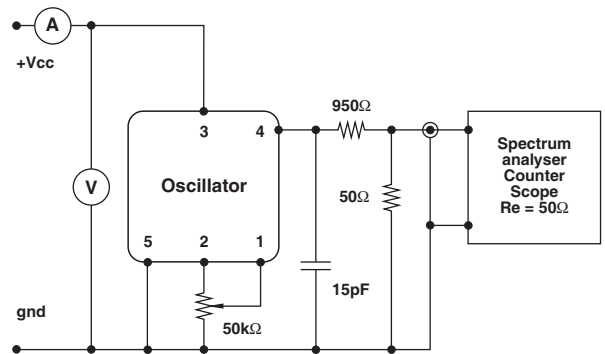


Pins viewed from bottom  
pin diameter 0.8mm

### Pin connections:

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

### Test circuit:



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