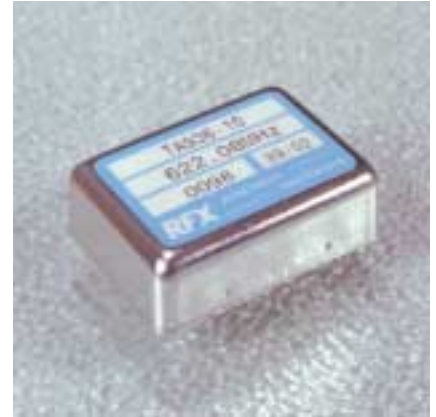


### Series TA936-10

- 1MHz ~ 1GHz
- stability from  $\pm 0.5\text{ppm}$
- sine wave, CMOS output
- good phase noise
- ageing from  $\pm 4.6\text{ppm}$  over 10 years

### Applications:

- communications equipment
- instrumentation
- telemetry



### Standard options:

<b>frequency range:</b>	_____ 1MHz ~ 1GHz _____		
<b>accuracy codes:</b>	_____ (A) _____	_____ (B) _____	_____ (C) _____
temperature tolerance	$\pm 0.5\text{ppm}$	$\pm 1.0\text{ppm}$	$\pm 2.0\text{ppm}$
temperature range	$(0 +50)^\circ\text{C}$	$(-20 +70)^\circ\text{C}$	$(-40 +70)^\circ\text{C}$
<b>output codes:</b>	_____ (S) _____	_____ (L) _____	
output	sine wave, 0dBm into 50 $\Omega$ harmonics -30dBc max.	CMOS 15pF, 45% ~ 55% <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.	+3.0Vd.c.	+3.0Vd.c.

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

### Generic specification:

<b>stability:</b>	
against supply voltage change	$\pm 0.02\text{ppm max. for } V_{\text{cc}} \pm 5\%$
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 $V_t$	$\pm 1.5\text{ppm max. first year}$
trim input impedance	$\pm 10\text{ppm min. typical, linearity } \pm 5\%$ 100K $\Omega$ min.
<b>power supplies:</b>	
supply voltage $V_{\text{cc}}$	+3.3Vd.c.                      +5.0Vd.c.                      +12.0Vd.c.
supply current	50mA typical
insulation resistance	500Meg $\Omega$ min., 100Vd.c.
<b>phase noise:</b>	
single sideband, 1Hz bandwidth	-80dBc/Hz, $f_o+10\text{Hz}$ -100dBc/Hz, $f_o+100\text{Hz}$ -125dBc/Hz, $f_o+1\text{kHz}$
<b>temperature:</b>	
operating range	(0 +50) $^\circ\text{C}$ (-20 +70) $^\circ\text{C}$ (-40 +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:

frequency, date code, serial number on high temperature metalised polyester label

### Ordering code:

**standard options:**

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

**TA936-10** = series generic code

**A** temp. tol. and temp. range code: **A = ±0.5ppm(0 +50)°C**

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

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

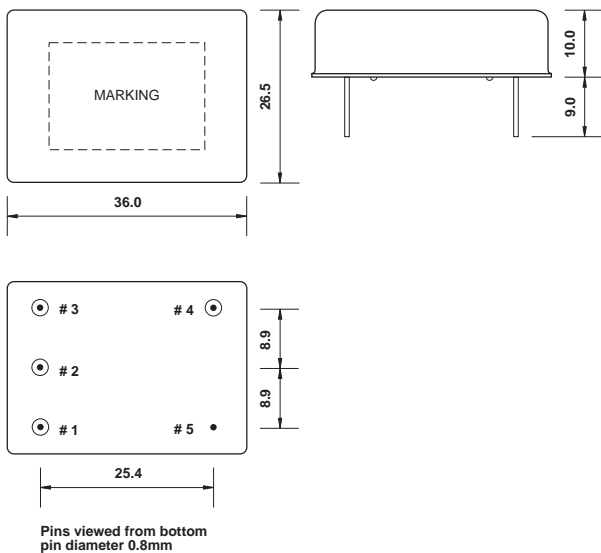
\*add suffix (R) for  $V_{ref}$  output on pin #2

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

**custom specification:**

part number issued with custom specification and drawing

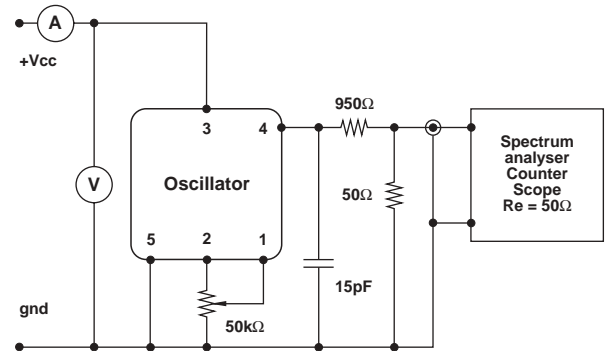
### Dimensions(mm):



### Pin connections:

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

### Test circuit, CMOS load:



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