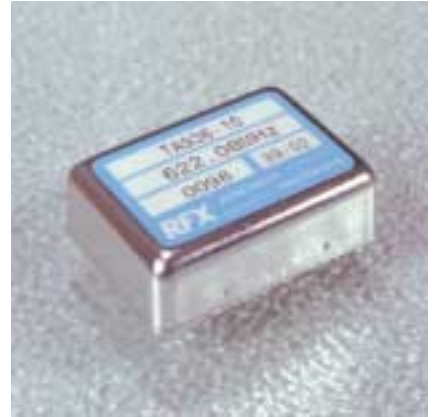


Series TA936-10

- 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:

frequency range:	1MHz ~ 1GHz		
accuracy codes:	(A)	(B)	(C)
temperature tolerance	$\pm 0.5\text{ppm}$	$\pm 1.0\text{ppm}$	$\pm 2.0\text{ppm}$
temperature range	$(0 +50)^\circ\text{C}$	$(-20 +70)^\circ\text{C}$	$(-40 +70)^\circ\text{C}$
output codes:	(S)	(L)	
output	sine wave, 0dBm into 50 Ω harmonics -30dBc max.	CMOS 15pF, 45% ~ 55% <2ns max. rise and fall	
supply voltage codes:	(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_{ref} output on pin #2

Generic specification:

stability:	
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 Ω min.
power supplies:	
supply voltage V_{cc}	+3.3Vd.c. +5.0Vd.c. +12.0Vd.c.
supply current	50mA typical
insulation resistance	500Meg Ω min., 100Vd.c.
phase noise:	
single sideband, 1Hz bandwidth	-80dBc/Hz, $f_o + 10\text{Hz}$ -100dBc/Hz, $f_o + 100\text{Hz}$ -125dBc/Hz, $f_o + 1\text{kHz}$
temperature:	
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**

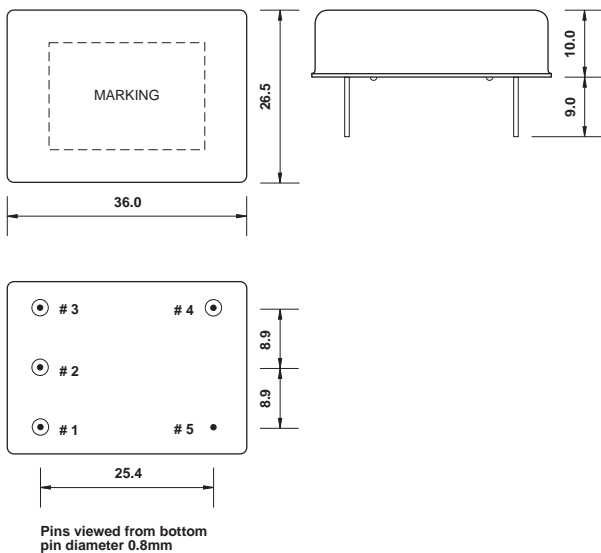
*add suffix (R) for V_{ref} output on pin #2

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

custom specification:

part number issued with custom specification and drawing

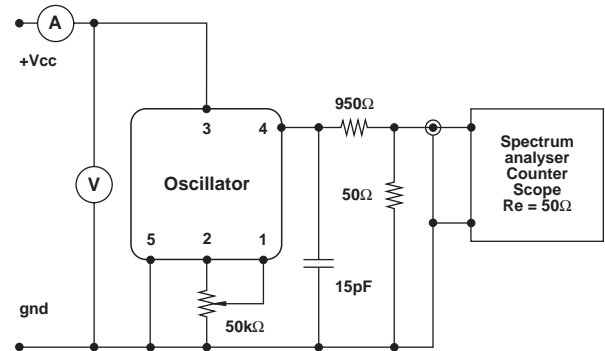
Dimensions(mm):



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