±0.5ppm, excellent phase noise, low ageing, wide frequency range.
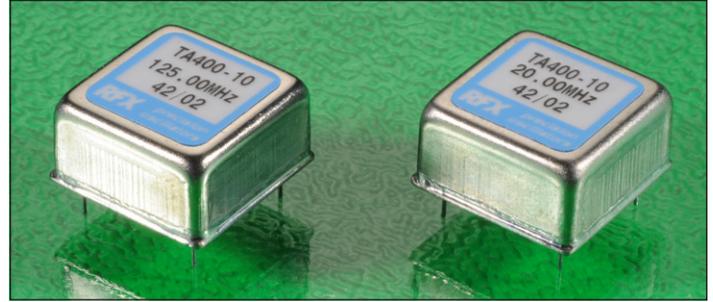
A small resistance weld package, manufactured to standard and custom specifications over the frequency range of 1MHz to 1GHz.

Precision crystals provide outstanding long term ageing from ±4.6ppm over 10 years.

Standard options:

frequency range: 1MHz ~ 1GHz

accuracy codes:

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

output codes:

	(S)	(L)
output	sine wave, 0dBm into 50Ω	CMOS 15pF, 45% ~ 55%
harmonics -30dBc max.	<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	±0.02ppm max. for V_{cc} ±5%
against load change	±0.02ppm max. for load ±10%
ageing short term	±0.005ppm max. per day after 30 days continuous operation
ageing long term	±1.5ppm max. first year
voltage trim V_t	±10ppm min. typical, linearity ±5%
trim input impedance	100KΩ min.

power supplies:

supply voltage V_{cc}	+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
supply current	50mA max. frequency dependent		
insulation resistance	500MegΩ min., 100Vd.c.		

phase noise:

single sideband, 1Hz bandwidth
-80dBc/Hz, f_o+10Hz
-100dBc/Hz, f_o+100Hz
-125dBc/Hz, f_o+1kHz

temperature:

operating range	(0 +50)°C	(-10 +60)°C	(-40 +70)°C
storage range	(-40 +125)°C	(-40 +125)°C	(-40 +125)°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:	**TA400-10 A S V2* - 16.384M**
TA400-10	*= 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 #5
16.384M	*output frequency: **16.384M = 16.384MHz***

Custom specification:
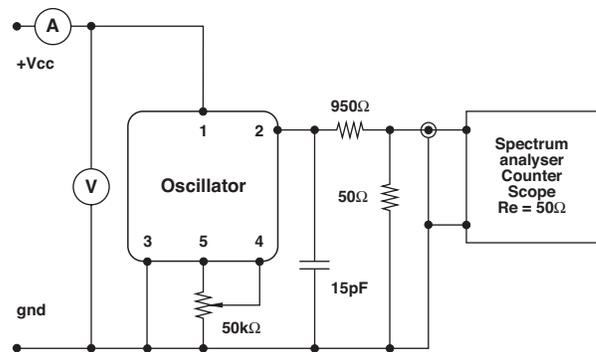
part number issued with custom specification and drawing

Dimensions(mm):

10.0
6.0
15.0
15.0
20.75
20.75
15.0

3   4
2
1   5

**Pins viewed from bottom
pin diameter 0.45mm**
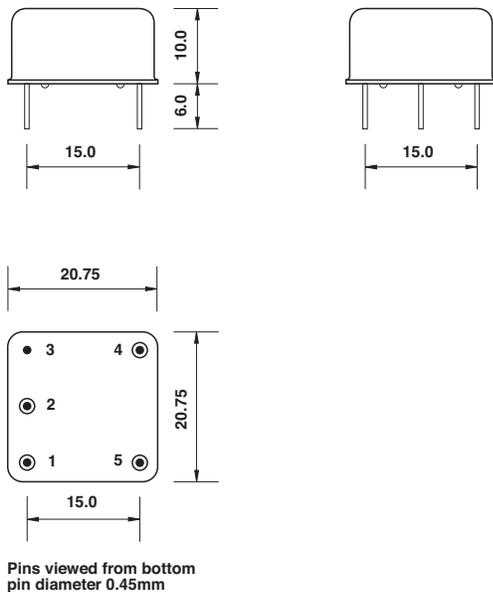
Pin connections:

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

Test circuit, CMOS load:

+Vcc
A
V
Oscillator
1   2
3   5   4
950Ω
50Ω
15pF
50kΩ
Spectrum
analyser
Counter
Scope
Re = 50Ω
gnd

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