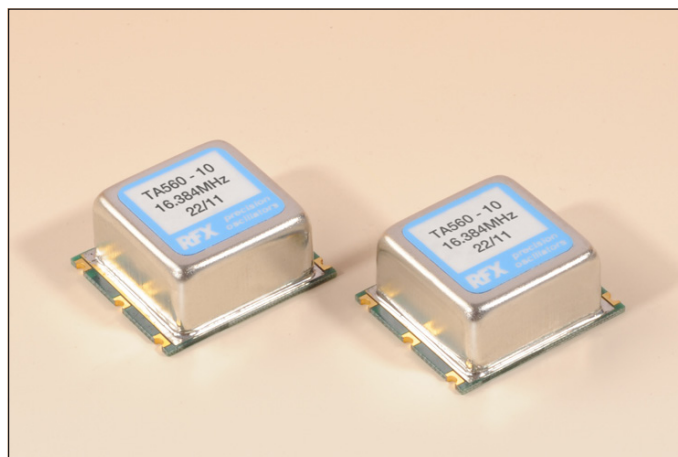




TA560 - 10

- $\pm 0.5\text{ppm}$, excellent phase noise, low ageing, wide frequency range.
- A low profile hermetically sealed smd package, manufactured to standard and custom specifications over the frequency range of 1MHz to 1.5GHz.
- Precision crystals provide outstanding long term ageing from $\pm 4.6\text{ppm}$ over 10 years.



Standard options:

frequency range:	_____ 1MHz ~ 1.5GHz _____		
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	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.	+4.5Vd.c.	+4.5Vd.c.

*add suffix (R) for V_{ref} output on pin #5

Generic specification:

stability:	
against supply voltage change	$\pm 0.02\text{ppm max. for } V_{cc} \pm 5\%$
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	$\pm 1\text{ppm max. first year}$
trim input impedance	10ppm 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 max. 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) $^{\circ}\text{C}$	(-10 +60) $^{\circ}\text{C}$	(-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

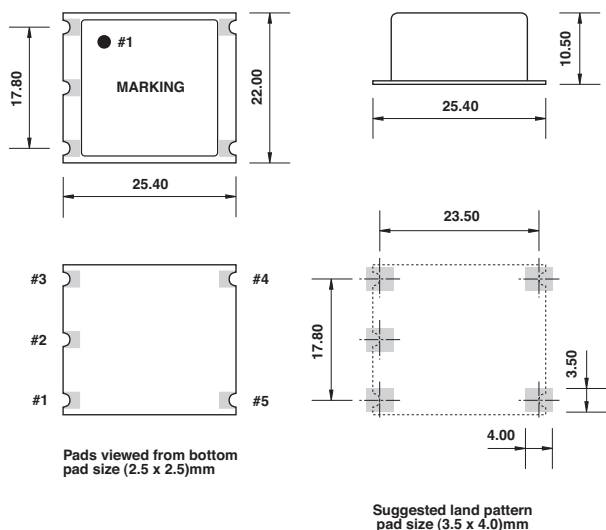
Marking: part number and frequency on high temperature metalised polyester label

Ordering code:

- standard specification:** **TA560-10 A S V2* - 16.384M**
TA560-10 = 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

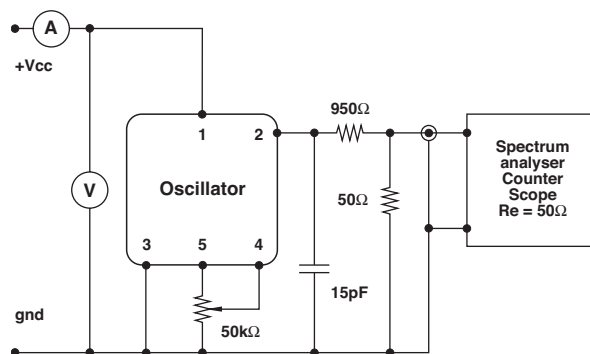
Dimensions(mm):



Pin connections:

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

Test circuit, CMOS load:



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