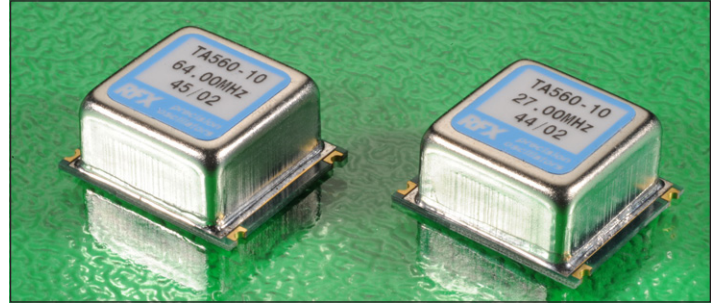


$\pm 0.5$ ppm, excellent phase noise, low ageing, wide frequency range.

A low profile smd package, manufactured to standard and custom specifications over the frequency range of 1MHz to 1GHz.

Precision crystals provide outstanding long term ageing from  $\pm 4.6$ ppm over 10 years.



**Standard options:**

<b>frequency range:</b>	1MHz ~ 1GHz		
<b>accuracy codes:</b>	(A)	(B)	(C)
temperature tolerance	$\pm 0.5$ ppm	$\pm 1.0$ ppm	$\pm 2.0$ ppm
temperature range	(0 +50) $^{\circ}$ C	(-20 +70) $^{\circ}$ C	(-40 +70) $^{\circ}$ C
<b>output codes:</b>	(S)	(L)	
output	sine wave, 0dBm into 50 $\Omega$	CMOS 15pF, 45% ~ 55%	
harmonics -30dBc max.	<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.	+4.5Vd.c.	+4.5Vd.c.

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

**Generic specification:**

<b>stability:</b>	
against supply voltage change	$\pm 0.02$ ppm max. for $V_{cc} \pm 5\%$
against load change	$\pm 0.02$ ppm max. for load $\pm 10\%$
ageing short term	$\pm 0.005$ ppm max. per day
ageing long term	after 30 days continuous operation
voltage trim $V_t$	$\pm 1.5$ ppm max. first year
trim input impedance	$\pm 10$ ppm min. typical, linearity $\pm 5\%$ 100K $\Omega$ min.

<b>power supplies:</b>			
supply voltage $V_{cc}$	+3.3Vd.c.	+5.0Vd.c.	+12.0Vd.c.
supply current	50mA max. typical		
insulation resistance	500Meg $\Omega$ min., 100Vd.c.		

<b>phase noise:</b>	
single sideband, 1Hz bandwidth	-80dBc/Hz, $f_o + 10$ Hz -100dBc/Hz, $f_o + 100$ Hz -125dBc/Hz, $f_o + 1$ kHz

<b>temperature:</b>			
operating range	(0 +50) $^{\circ}$ C	(-10 +60) $^{\circ}$ C	(-40 +70) $^{\circ}$ C
storage range	(-40 +125) $^{\circ}$ C	(-40 +125) $^{\circ}$ C	(-40 +125) $^{\circ}$ 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

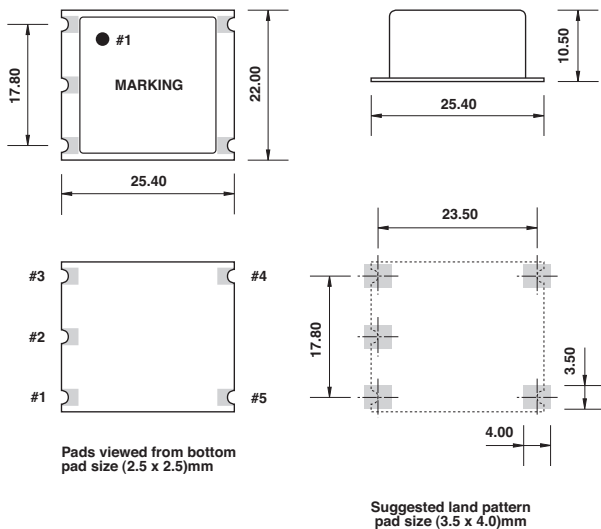
**Marking:** part number and frequency on high temperature metalised polyester label

**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

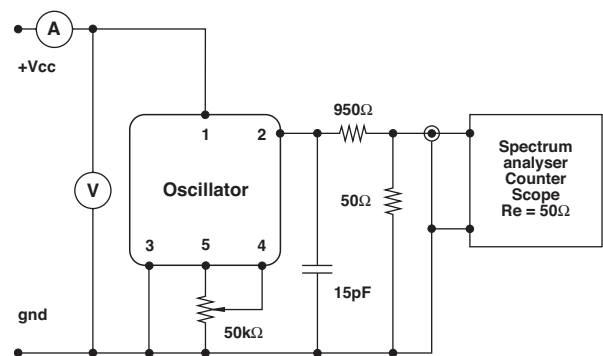
**Dimensions(mm):**



**Pin connections:**

- # 1 +V<sub>cc</sub>
- # 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