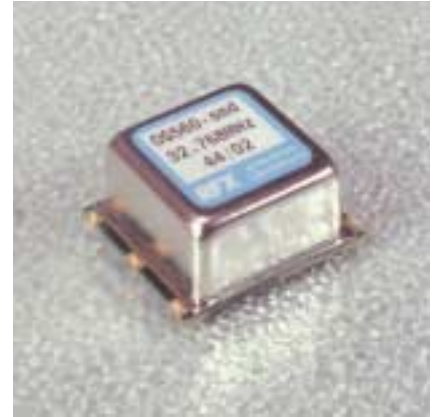


smd series OS560-10

- (5.0 ~ 50.0)MHz
- stability from $\pm 0.005\text{ppm}$
- hermetically sealed smd case
- excellent phase noise from SC cut crystal
- ageing $\pm 0.1\text{ppm max. first year}$

Applications:

- telecomms systems
- satellite systems
- base stations



Standard options:

frequency range:	_____ (5.0 ~ 50.0)MHz _____		
accuracy codes:	_____ (A) _____	_____ (B) _____	_____ (C) _____
temperature tolerance	$\pm 0.005\text{ppm}$	$\pm 0.01\text{ppm}$	$\pm 0.02\text{ppm}$
temperature range	(0 +50) $^{\circ}\text{C}$	(-10 +60) $^{\circ}\text{C}$	(-20 +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.
trim 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	$\pm 0.002\text{ppm max. for } V_{\text{cc}} \pm 5\%$
against load change	$\pm 0.002\text{ppm max. for load } \pm 10\%$
ageing short term	$\pm 0.0005\text{ppm max. per day}$ after 30 days continuous operation
ageing long term	$\pm 0.1\text{ppm max. first year}$
voltage trim V_t	$\pm 0.5\text{ppm min. typical, linearity } \pm 5\%$
trim input impedance	100K Ω min.
power supplies:	
supply voltage V_{cc}	+3.3Vd.c. +5.0Vd.c. +12.0Vd.c.
start up current at min. temp. range	900mA max. 600mA max. 300mA max.
quiescent current at max. temp. range	320mA max. 220mA max. 120mA max.
warm up time	5 minutes max. to within 0.1ppm of nominal
insulation resistance	500Meg Ω min., 100Vd.c.
phase noise:	
single sideband, 1Hz bandwidth	-110dBc/Hz, $f_o + 10\text{Hz}$ -135dBc/Hz, $f_o + 100\text{Hz}$ -155dBc/Hz, $f_o + 1\text{kHz}$
temperature:	
operating range	(0 +50) $^{\circ}\text{C}$ (-10 +60) $^{\circ}\text{C}$ (-20 +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: OS560-10 A S V2* - 10.00M

OS560-10 = series generic code

A temp. tol. and temp. range code: $A = \pm 0.005\text{ppm}(0 + 50)^\circ\text{C}$

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

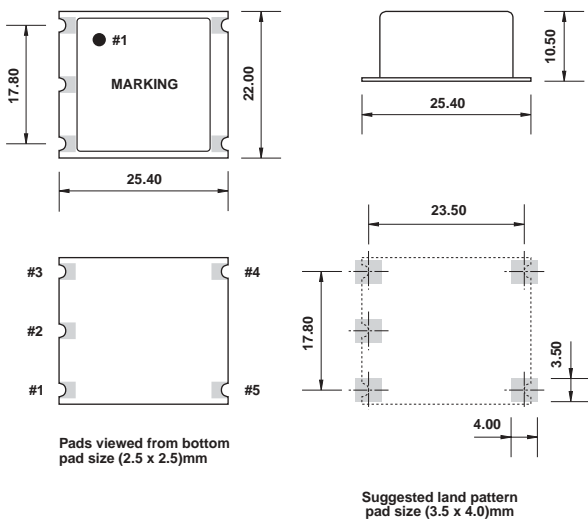
V2* supply voltage code: **V2** = +5Vd.c. supply

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

10.00M output frequency: **10.00M** = 10.000MHz

custom specification: part number issued with custom specification and drawing

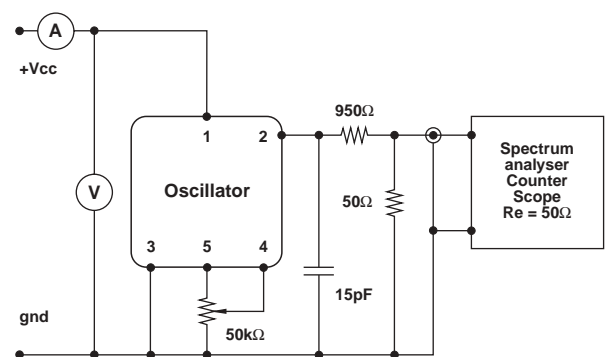
Dimensions(mm):



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