

SBTO -19

1MHz ~ 1GHz

- # sine wave, CMOS output
- # hermetic seal
- # excellent phase noise
- # very low ageing

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 harmonics -30dBc max.	CMOS 15pF, 45% ~ 55% <2ns max. rise and fall	
supply voltage codes:	(V1)*	(V2)*	(V3)*
supply voltage V_{CC}	+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	±0.02ppm max. for $V_{CC} \pm 5\%$
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	frequency, V_{CC} and output load dependent
insulation resistance	500MegΩ min., at +100Vd.c.
phase noise:	
single sideband, 1Hz bandwidth	-80dBc/Hz, f_o+10 Hz -100dBc/Hz, f_o+100 Hz -125dBc/Hz, f_o+1 kHz
temperature:	
operating range	(0 +50)°C (-10 +60)°C (-40 +70)°C
storage range	(-40 +125)°C (-40 +125)°C (-40 +125)°C

SBTO-19

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 specification: **A S V2* - 16.384M**

= **series generic code**

A temp. tol. and temp. range code: **A = ±0.5ppm(0 +50)°C**

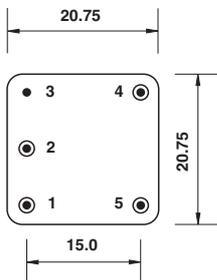
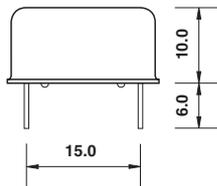
S output code: **S = sine wave output, 0dBm into 50Ω**

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**

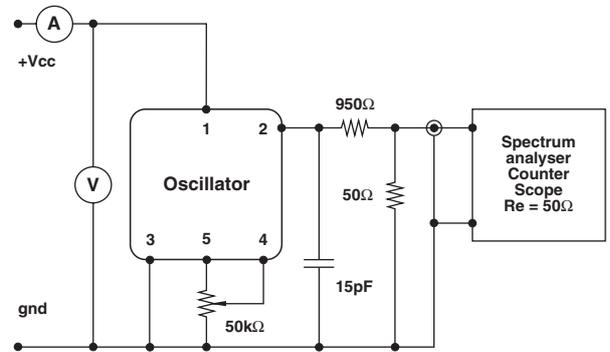
custom specification: part number issued with custom specification and drawing

Dimensions(mm):

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:

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