



SMD Temperature Compensated Crystal Oscillators

2.0*1.5*0.8mm



FEATURE

- Excellent phase noise performance
- Low start up drift rate
- Height less than 0.8mm
- Operates at 1.8V supply
- Power Down Mode
- Standard temperature stability of ± 0.5 ppm over wide temperature ranges

APPLICATION

- GPS
- Smartphone
- Communications
- Consumer

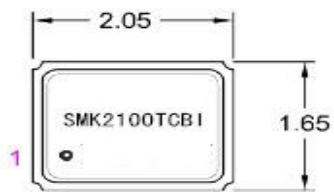
ELECTRICAL SPECIFICATION

Parameter	Value	Unit
Nominal supply voltage range	1.8to3.0	V
Frequency Range	10to52	MHz
Standard Frequency (Clipped Sine)	12.8/16/16.384/19.2/25/38.88/50	
Frequency Tolerance*	± 1.0 ± 1.0	ppm
Frequency stability over temperature	0.5-2.0	ppm
Temperature range	(-40 to 85)	$^{\circ}$ C
Frequency slope	0.05 to 1	ppm/ $^{\circ}$ C
Sensitivity to supply voltage variations $\pm 5\%$ at 25 $^{\circ}$ C	± 0.1 max	ppm
Sensitivity to load variations $\pm 10\%$	± 0.2 max	ppm
Long term stability	± 1 max	ppm
Current	2.0	mA
Control voltage range	0.3 to 1.5	V
Frequency control	6 to 30	ppm
Linearity	10 max	%
Control voltage inputresistance	500	K Ω
Output voltage level	0.8 min	V
Output loadresistance	9 to 11	k Ω
Output loadcapacitance	9 to 11	pF
Power down/RF disabled.Minimum GND	20 max	%Vcc
Normal operating mode/RF enabled. Maximum Vcc	80 min	%Vcc
Phase Noise @ 26.0MHz		dBc/Hz
10Hz	-93	
100Hz	-117	
1KHz	-137	
10KHz	-149	
Start Time	0.5	mSec
Storage Temp. Range	-55 125 -55 125	$^{\circ}$ C

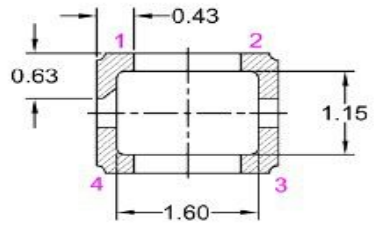


- Shock Half sine-wave acceleration of 3000g peak amplitude.
Duration: 0.3ms, Velocity: 12.3ft/s [MIL-STD-202 M213] (Note 4)
- Moisture resistance 1000 hours at 85° C, 85% relative humidity. Biased. [MIL-STD-202 M106g]
- Thermal cycling 1000 temperature cycles, where each cycle consists of a 25 minutes soaktime at -40° C followed by a 25 minute soak time at 85° C, with a 60 second maximum transition time between temperatures.
Air to air transition.
- Vibration 10g peak acceleration for 4 minutes per sweep.
4 sweeps in each of the 3 orientations.
Swept from 20-2000Hz [JESD22-B103-B] (Note 4)

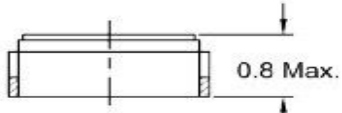
MODEL DRAWING



TOP VIEW



BOTTOM VIEW



FRONT VIEW

PIN	
1	GND / NC
2	GND
3	OUTPUT
4	Vcc

RECOMMENDED PAD LAYOUT TOP VIEW

