SMD Temperature Compensated Crystal Oscillators

FEATURE

2.0*1.5*0.8mm

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 ±0.5ppm 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)				°C
Frequency slope	0.05 to 1				ppm/°C
Sensitivity to supply voltage variations±5% at 25。C	±0.1 max				ppm
Sensitivity to load variations±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				KΩ
Output voltage level	0.8 min				V
Output loadresistance	9 to 11				kΩ
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					
10Hz	–93				dBc/Hz
100Hz	–117				
1KHz	–137				
10KHz	–149				
Start Time	0.5				mSec
Storage Temp. Range	–55	125	–55	125	°C

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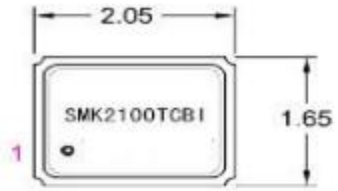
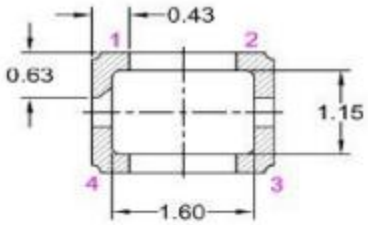
Shock	Half sine-wave acceleration of 3000g peak amplitude. Duration: 0.3ms, Velocity: 12.3ft/s [MIL-STD-202 M213] (Note 4)
Moisture resistance	1000 hours at85°C,85% relative humidity.Biased.[MIL-STD-202 M106g]
Thermal cycling	1000temperature cycles,where each cycle consists of a 25 minutes soaktime at -40°Cfollowed by a 25 minute soak time at 85°C,with a 60second 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. Sweptfrom 20-2000Hz [JESD22-B103-B] (Note 4)

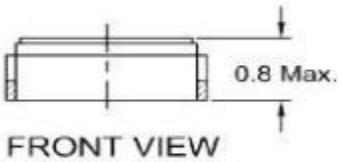
MODEL DRAWING



TOP VIEW



BOTTOM VIEW



FRONT VIEW

PIN	
1	GND / NC
2	GND
3	OUTPUT
4	Vcc

RECOMMENDED PAD LAYOUT TOP VIEW