



SMD Temperature Compensated Crystal Oscillators

FEATURE

The SMK3225TCBI with voltage control option, employs an analogue IC for the oscillator and temperature compensation. The RSX-8 crystal is surface mounted on top of the ceramic IC carrier. The segregation of the crystal from the oscillator further improves the reliability of the product.

APPLICATION

Feature phone

GPS

Wi-Fi

WiMAX/W-LAN

Other

3.2 * 2.5 * 0.8 mm

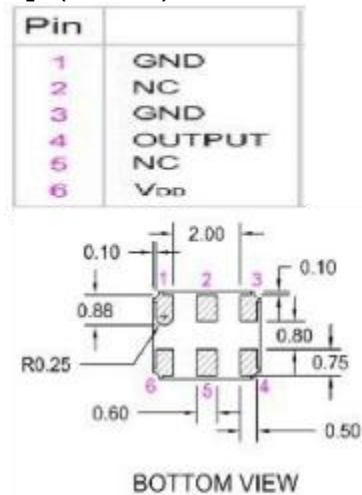
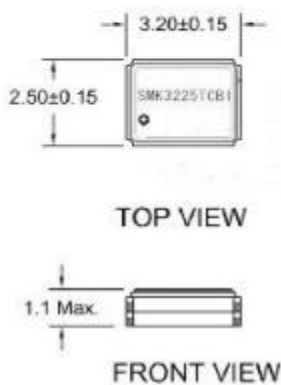
**ELECTRICAL SPECIFICATION**

Parameter	Value	Unit
Nominal supply voltage range	2.4 to 3.7	V
Frequency Range	10 to 40	MHz
Standard Frequency (Clipped Sine)	10.0/12.8/16/16.384/19.2/25/38.88/40	
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 1.0	ppm/°C
Sensitivity to supply voltage variations±5% at 25. C	±0.1max	ppm
Sensitivity to load variations±10%	±0.2 max	ppm
Long term stability	±1 max	ppm
Current	2.0	mA
Control voltage range	0.5 to 2.8	V
Frequency control range	6 to 50	ppm
Linearity	20 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 @ 16.369MHz		dBc/Hz
10Hz	-89	
100Hz	-113	
1KHz	-132	
10KHz	-145	
Start Time	0.5	mSec
Storage Temp. Range	-55 125 -55 125	°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 1000temperature cycles, where each cycle consists of a 25 minutes soak time 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



RECOMMENDED LAYOUT

- TOP VIEW, 6 PAD

