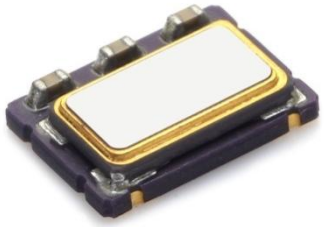
CERAMIC SMD TYPE

STG

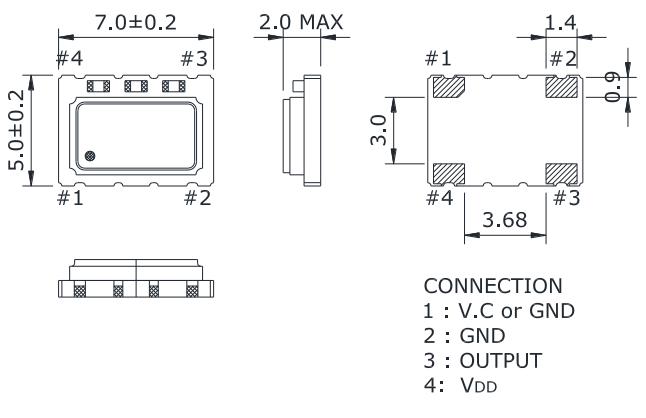
- Temperature Compensated Crystal Oscillator
- External Dimensions : 7.0×5.0 mm
- Fundamental AT-cut Crystal used
- Clipped Sinewave Output



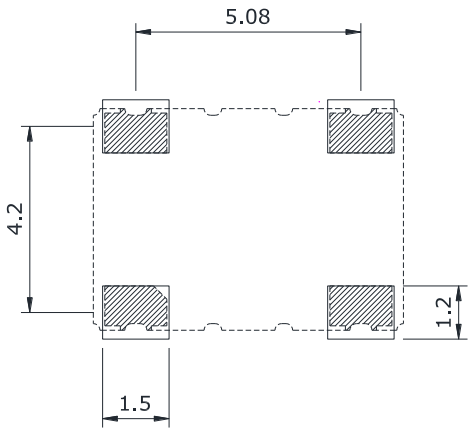
■ ELECTRICAL SPECIFICATIONS

ITEM	Value	Remarks
Output Logic Type	Clipped Sinewave	
Frequency Range	12.000 MHz to 26.000 MHz	
Supply Voltage(V_{DD})	3.3 V_{DC} ± 5 %, 5.0 V_{DC} ± 5 %	
Operating Temperature Range	-40 to +85 ℃	
Storage Temperature Range	-40 to +85 ℃	
Frequency Stability Vs. Temperature Vs. Supply voltage Vs. Load Vs. Aging	 ±0.5 ppm to ±5.0 ppm Max. ±0.2 ppm Max. ±0.2 ppm Max. ±1.0 ppm Max.	 Over Operating Temperature range Supply Voltage ± 5 % 10 kΩ//10 pF± 10 % 25℃, First year
Frequency Tolerance	±1.0 ppm Max.	
Input Current	2 mA to 5 mA Max.	
Frequency Deviation	±5.0 ppm, ±10 ppm Min.	Typical
Control Voltage(Vc)	1.65 V ± 1.5 V (V_{DD} : 3.3 V) 2.5 V ± 2.0 V (V_{DD} : 5.0 V)	
Output Level	0.8 V_{P-P} Min. (V_{DD} : 3.3 V) 1.0 V_{P-P} Min. (V_{DD} : 5.0 V)	Peak to peak
Output Load Condition	10 kΩ//10 pF	
Phase Noise at 1kHz offset	-130 dBc/Hz	Typical

■ MECHANICAL DIMENSIONS (mm)



■ LAND PATTERN (mm)



■ PART NUMBERING GUIDE

STG 33 20 H S 5 – 10.000M

SUPPLY VOLTAGE(V_{DD})
50 : 5.0 V
33 : 3.3 V

FREQUENCY STABILITY
TABLE 1

OPERATING TEMPERATURE RANGE
TABLE 1

OUTPUT
S : CLIPPED SINEWAVE

FREQUENCY
M : MHz

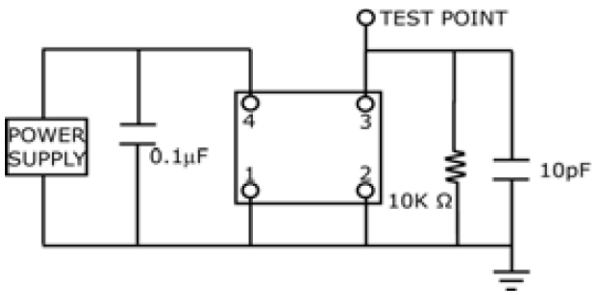
FREQUENCY DEVIATION
BLANK : TCXO
5 : ± 5 ppm min.
10 : ± 10 ppm min.

■ TABLE 1

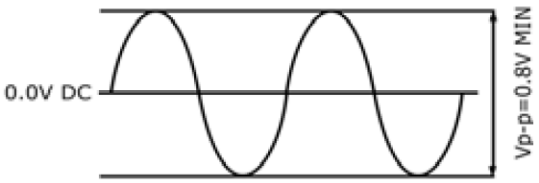
FREQUENCY STABILITY VS. TEMPERATURE RANGE

Temp \ Stability		±0.5	±1.0	±1.5	±2.0	±3.0	±5.0
		05	10	15	20	30	50
0~50℃	A	*	*	*	*	*	*
-10~60℃	B	*	*	*	*	*	*
-10~70℃	C	*	*	*	*	*	*
-20~70℃	D	*	*	*	*	*	*
-30~60℃	E	*	*	*	*	*	*
-30~70℃	F	*	*	*	*	*	*
-30~75℃	G	*	*	*	*	*	*
-40~80℃	H		*	*	*	*	*
-40~85℃	I		*	*	*	*	*

■ TEST CIRCUIT (Clipped Sinewave)



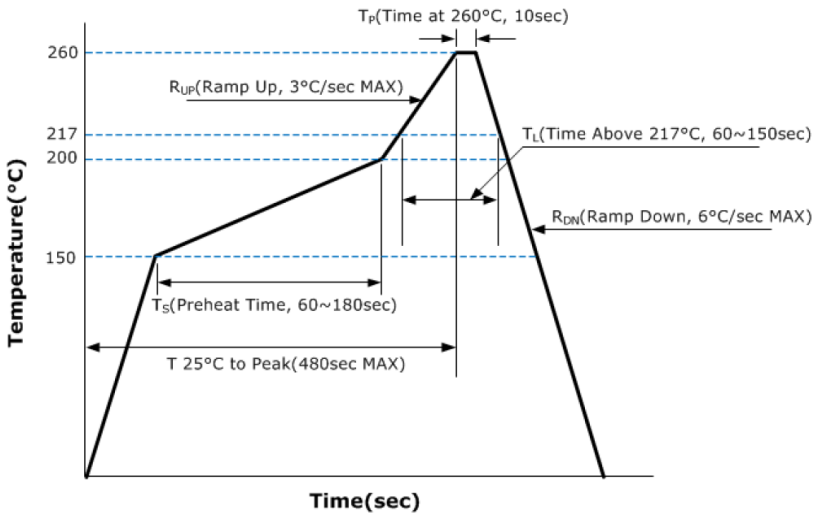
■ WAVEFORM (Clipped Sinewave)



■ ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Solderability	MIL-STD-883, Method 2003

■ REFLOW PROFILE



■ MARKING GUIDE

Model Name

LINE 1 : STG310AM

LINE 2 : XX.XXX MHz

Frequency in MHz

■ TAPE AND REEL DIMENSIONS

