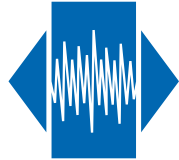


# SMX-5S

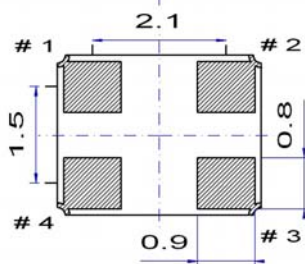
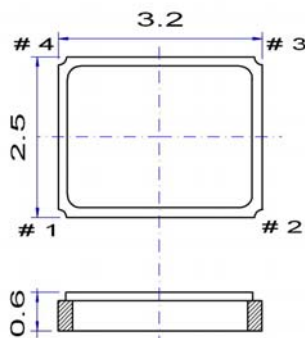


## Miniature SMD Crystal

### Features

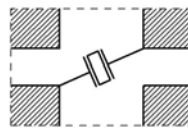
- Applications: telecommunications, automotive, medical, avionics
- Small package (3.2 x 2.5 x 0.6 mm)
- Wide frequency range: 12 to 67 MHz
- High shock and vibrational resistivity
- Reflow soldering @ 260 °C

Parameter	Specification	
Frequency range	12 ~ 67 MHz	fundamental
Mode of oscillation	AT-cut	
Standard frequencies	12.0, 13.0, 14.746, 16.0, 24.0, 24.576, 25.0, 26.0, 27.0 28.636, 30.0, 32.0, 33.0, 33.333, 40.0, 44.0 & 48.0 MHz	
Frequency tolerance	±10 ~ ±50 ppm	@ +25 °C
Frequency stability	±10 ~ ±50 ppm	vs. operating temperature range
Aging	±1 ppm	1 <sup>st</sup> year
Load capacitance	series or parallel resonance (CL = 8 ~ 32 pF)	
Equivalent series resistance (ESR)	< 50 Ω	@ 16 MHz
	< 20 Ω	@ 40 MHz
Drive level	10 ~ 100 μW	
Operating temperature range	-20 ~ +70 °C -40 ~ +85 °C -40 ~ +125 °C	commercial application industrial application automotive & avionic application
Storage temperature range	-55 ~ +125 °C	
Packaging unit	tape & reel	1'000 or 2'500 pieces
Customer specifications on request		

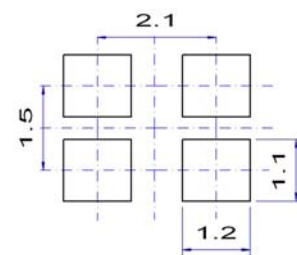


### Pin function

- # 1 crystal connection
- # 2 GND
- # 3 crystal connection
- # 4 GND

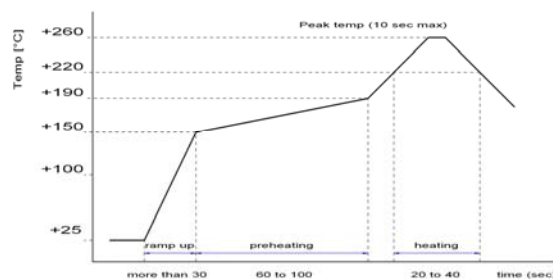


### Example for soldering pattern



**Do not design any conductive path between the pattern**

### Example for IR reflow soldering temperature



2002/95/EC RoHS compliant