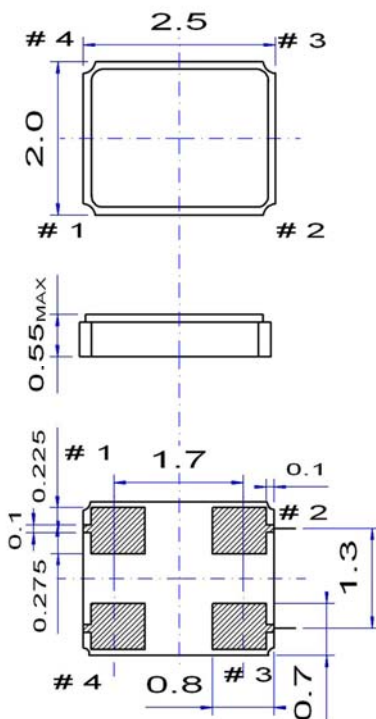


## Miniature SMD Crystal

### Features

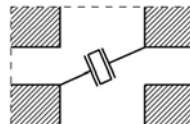
- Applications: telecommunications, automotive, medical, audio
- Super small package (2.5 x 2.0 x 0.55 mm)
- Wide frequency range: 16 to 54 MHz
- High shock and vibrational resistivity
- Reflow soldering @ 260 °C

Parameter	Specification	
Frequency range	12 ~ 66 MHz	fundamental
Mode of oscillation	AT-cut	
Standard frequencies	16.00, 16.368, 16.384, 18.432, 19.2, 22.184, 20.0, 24.0, 24.576, 26.0, 32.0, 40.0, 44.0, 48.0, 52.0 & 54.0 MHz	
Frequency tolerance	±10 ~ ±50 ppm	@ +25 °C
Frequency stability	±10 ~ ±50 ppm	vs. operating temperature range
Aging	±2 ppm	1 <sup>st</sup> year
Load capacitance	series or parallel resonance (CL = 8 ~ 32 pF)	
Equivalent series resistance (ESR)	< 80 Ω	@ 16 MHz
	< 35 Ω	@ 52 MHz
Drive level	10 ~ 100 μW	
Operating temperature range	-20 ~ +70 °C	commercial application
	-40 ~ +85 °C	industrial application
	-40 ~ +125 °C	automotive & avionic application
Storage temperature range	-55 ~ +125 °C	
Packaging unit	tape & reel	1'000 or 3'000 pieces
Customer specifications on request		

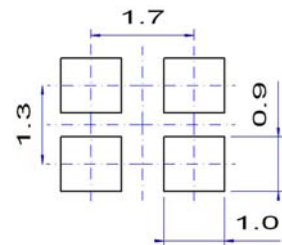


### Pin function

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

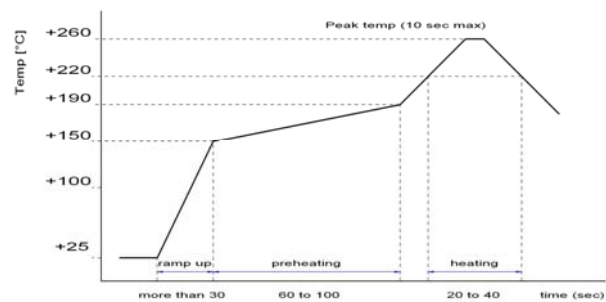


### Example for soldering pattern



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

### Example for IR reflow soldering temperature



2002/95/EC RoHS compliant