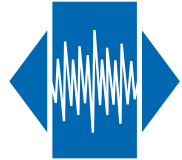


# SMX-5F-QA SMX-5F-QB

**QuartzCom**  
the communications company



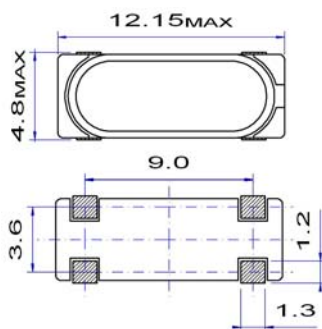
## Low profile SMD Crystal

### Features

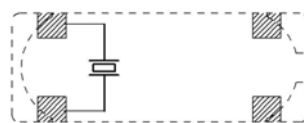
- Applications: telecommunications, audio, automotive, instruments
- Pin compatible to several plastic moulded Crystals
- High reliable, low cost crystal
- Reflow soldering @ 260 °C

| Parameter                          | Specification                                                                                      |                                                                            |
|------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Frequency range                    | 3.5 ~ 40 MHz fundamental<br>32 ~ 70 MHz                                                            | 3 <sup>rd</sup> overtone                                                   |
| Mode of oscillation                | AT-cut                                                                                             | BT-cut on request                                                          |
| Standard frequencies               | 3.6864, 4.00, 5.00, 6.776, 8.00, 9.8304, 10.00, 11.0592<br>16.00, 18.432, 20.00, 24.00 & 48.00 MHz |                                                                            |
| Frequency tolerance                | ±10 ~ ± 50 ppm                                                                                     | @ +25 °C                                                                   |
| Frequency stability                | ±10 ~ ±100 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) | < 75 Ω<br>< 12 Ω                                                                                   | 3.6864 MHz<br>24.00 MHz                                                    |
| Drive level                        | 100 µW                                                                                             |                                                                            |
| Operating temperature range        | -20 ~ +70 °C<br>-40 ~ +85 °C<br>-40 ~ +125 °C                                                      | commercial application<br>industrial application<br>automotive application |
| Storage temperature range          | -55 ~ +125 °C                                                                                      |                                                                            |
| Packaging unit                     | tape & reel                                                                                        | 1'000 pieces                                                               |
| Customer specifications on request |                                                                                                    |                                                                            |

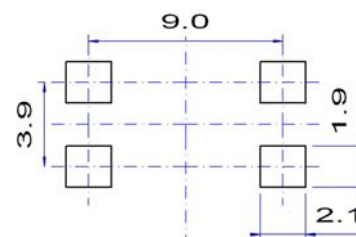
### SMX-5F-QA



Pin function

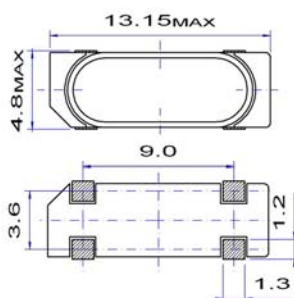


### Example for soldering pattern

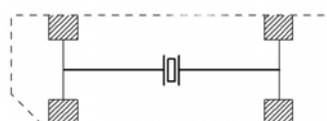


Do not design any conductive path between the pattern

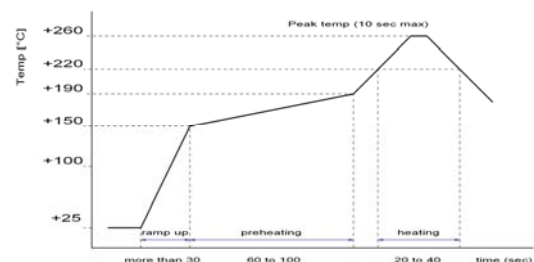
### SMX-5F-QB



Pin function



### Example for IR reflow soldering temperature



2002/95/EC RoHS compliant

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ISO 9001  
BUREAU VERITAS  
Certification



03 May. 10