

# SMX-3F

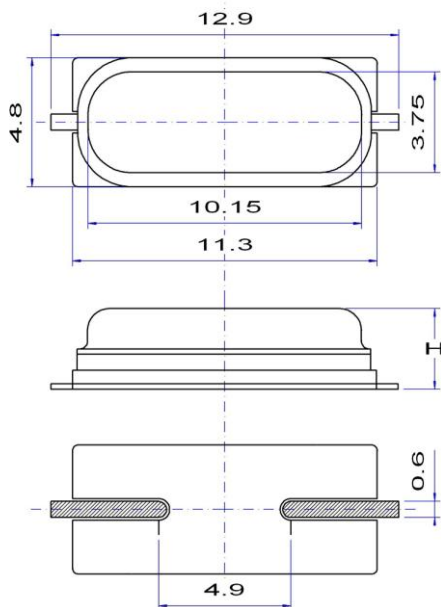


## Ultra low profile SMD Crystal

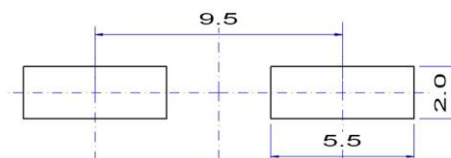
### Features

- Applications: telecommunications, audio, automotive, instruments
- Ultra low profile package, height: 2.5 ~ 4.5 mm
- High reliable, low cost crystal
- Reflow soldering @ 260 °C

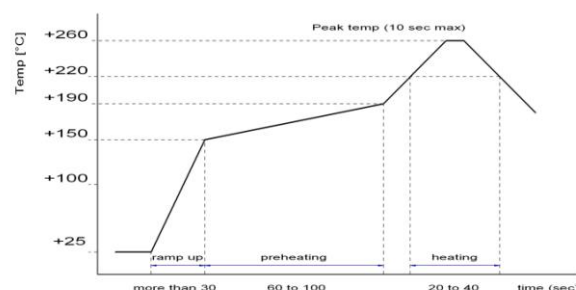
| Parameter                          | Specification   |  |
|------------------------------------|---|--|
| Frequency range                    | 3.5 ~ 40 MHz<br>32 ~ 70 MHz   | fundamental<br>3 <sup>rd</sup> overtone                                    |
| Mode of oscillation                | AT-cut  | BT-cut on request  |
| Standard frequencies               | 3.579545, 3.6864, 4.096, 4.9152, 5.00, 7.20, 8.00, 10.3680<br>13.0133, 14.31818, 16.00, 20.00, 24.576 & 25.00 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>24.576 MHz   |
| Drive level                        | 10 ~ 250 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 |   |  |



### Soldering pattern



### IR reflow soldering temperature



Height H: 2.5 to 4.5 mm Max.

2011/65/EU RoHS compliant

03 May. 12