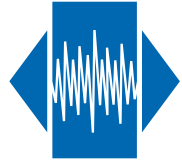


# SMX-3F3

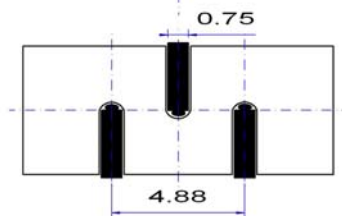
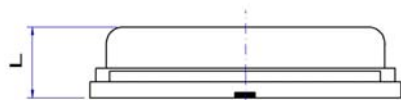
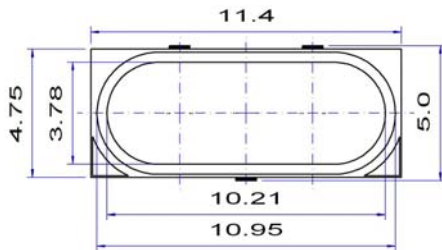
**Highly reliable low cost crystal**  
**Designed for automotive**



## Features

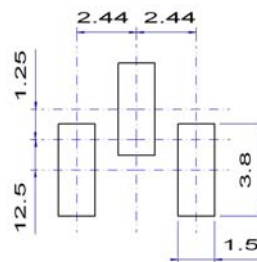
- Applications: telecommunications, audio, automotive, instruments
- Excellent environmental performance
- High reliable, low cost crystal
- Reflow soldering @ 260 °C

Parameter	Specification
Frequency range	3.5 ~ 40 MHz fundamental 32 ~ 70 MHz 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 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 3.6864 MHz < 12 Ω 24.576 MHz
Drive level	100 μW
Operating temperature range	-20 ~ +70 °C commercial application -40 ~ +85 °C industrial application -40 ~ +125 °C automotive application
Storage temperature range	-55 ~ +125 °C
Packaging unit	tape & reel 1'000 pieces
Customer specifications on request	



Height H: 2.5 to 4.5 mm Max.

Example for soldering pattern



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

Example for IR reflow soldering temperature

