



ISSUE 13; October 2013 - RoHS 2011/65/EU

Description

- Standard 7 x 5mm SMD crystal. 7 x 5mm SMD crystal available in three different pad designs and two different package materials. 12SMX-A, -C, -D are ceramic package with a resin sealed ceramic lid, hermetically sealed. 12SMX-B is a ceramic package with a seam sealed metal lid, hermetically sealed. Please Note: 12SMX-B is the standard package style. For low profile version of a 7 x 5mm crystal please see our 14SMX. For tighter tolerances and stabilities please see our 14SMX. Stock parts available.

Frequency Range

- | | |
|-----------------------|-------------------|
| ■ Frequency | 6.0 to 84.0Mhz |
| ■ Frequency Stability | ±20.00ppm |
| ■ Frequency Tolerance | ±20ppm to ±100ppm |

General Specification

- | | |
|--------------------------|--------------------|
| ■ Load Capacitance (CL) | 10.0pF to 75.0pF |
| ■ Drive Level | 100µW max |
| ■ Ageing | ±5ppm per year max |
| ■ Shunt Capacitance (C0) | 7pF max |

Operating Temperature Ranges

- 0 to 50°C
- -10 to 60°C
- -20 to 70°C
- -40 to 85°C

Environmental Parameters

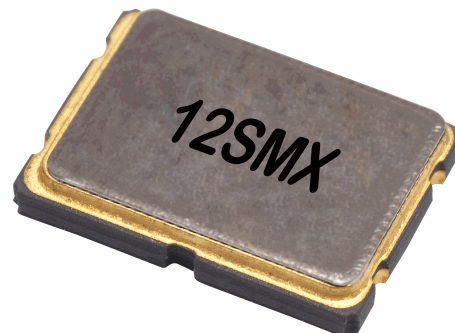
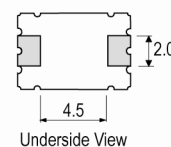
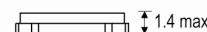
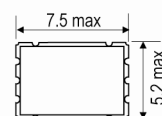
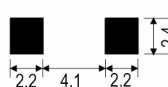
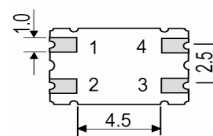
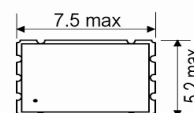
- Storage Temperature Range: -40 to 85°C

Ordering Information

- Frequency*
- Model*
- Variant*
- Frequency Tolerance (@25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone
- Example
- 10.0MHz 12SMX-B
- 50/50/-20 to 70C/10 FUND

Packing Details

- | | |
|---|--|
| ■ Pack Style: Bulk | Loose in bulk pack |
| Pack Size | 100 |
| ■ Pack Style: Reel | Tape and reel in accordance with EIA-481-D |
| Pack Size | 1,000 |
| ■ Alternative packing options available | |

**Outline (mm) -A = 2 pad (ceramic lid)****Solder Pad Layout****-B = 4 pad (metal lid)****Pad Connection**

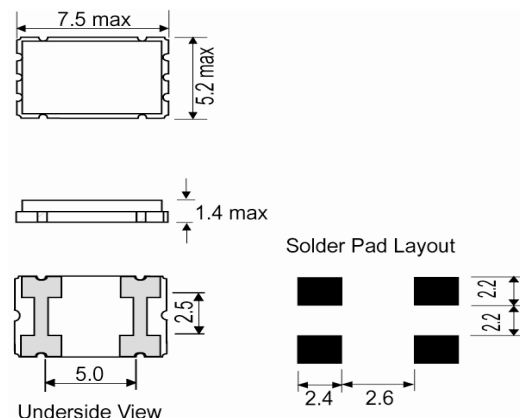
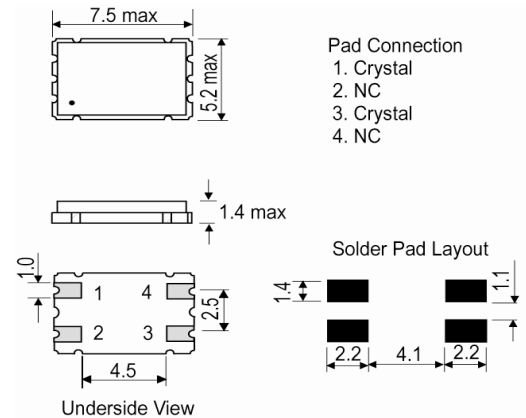
1. Crystal
2. GND & Lid
3. Crystal
4. GND & Lid

Solder Pad Layout**Sales Office Contact Details:**

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**-C = 2 into 4 pad (ceramic lid)****-D = 4 pad (ceramic lid)****Electrical Specification - maximum limiting values**

Frequency Range	Frequency Tolerance	Stability		Temperature Range	ESR Max	Vibration Mode
		Min	Max			
6.0 to <8.0MHz	±20 to ±100ppm	±20ppm ±20ppm ±20ppm ±30ppm	±100ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	150Ω	Fundamental
8.0 to <10.0MHz	±20 to ±100ppm	±20ppm ±20ppm ±20ppm ±30ppm	±100ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	80Ω	Fundamental
10.0 to <16.0MHz	±20 to ±100ppm	±20ppm ±20ppm ±20ppm ±30ppm	±100ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	60Ω	Fundamental
16.0 to <50.0MHz	±20 to ±100ppm	±20ppm ±20ppm ±20ppm ±30ppm	±100ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	40Ω	Fundamental
50.0 to <84.0MHz	±20 to ±100ppm	±20ppm ±20ppm ±20ppm ±30ppm	±100ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	60Ω	3RD Overtone

This document was correct at the time of printing; please contact your local sales office for the latest version

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