

# NF5 Series

SMD Crystal

## Size, mm

7.2 x 5.2 x 1.4

## Frequency Stability

±30 PPM

## Temperature Range

-10°C to 70°C

## Frequency Range

8.0-80.0 MHz

## Features

- Meets NEL requirements for product reliability
- User specified tolerance available
- Leadless ceramic package
- Suitable for reflow soldering
- Wide frequency range 8.0 MHz to 80.0 MHz
- Automatic mounting
- Shock resistance: drop test of 3 times on 2 mm stainless plate from 75 cm height
- Glass sealed



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# SMD Crystal NF5 Series

Frequency Range: 8.0 MHz to 80.0 MHz

## Creating a Part Number

**N F5 - 70.000 - X - X - X - X**

<p><b>NEL Type</b> 7.2 x 5.2 x 1.4 mm - 2 pad</p> <p><b>Frequency (MHz)</b> 70.000</p> <p><b>Frequency Tolerance @25°C</b> A: ±30 ppm B: ±50 ppm X: Specify</p>	<p><b>Load Capacitance</b> Series, 16 pF, 20 pF, 30 pF, 32 pF, Specify</p> <p><b>Frequency Stability</b> A: ±30 ppm B: ±50 ppm X: Specify</p> <p><b>Operating Temp. Characteristics</b> A: -10° to 70°C B: -20° to 70°C</p> <p><b>Aging</b> A: ±3 ppm/year B: ±5 ppm/year</p>
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## Electrical Specifications

Frequency Range	8.000 MHz to 80.000 MHz	
Frequency Tolerance (at 25°C)	±30 ppm, ±50 ppm, or specify	
Frequency Stability Over	-10°C to 70°C ±30 ppm	
Operating Temp. Characteristics	-20°C to 70°C ±50 ppm or specify	
Storage Temperature	-55°C to 125°C	
Operating Temperature Range	-40°C to 85°C	
Shunt Capacitance	5.0 pF Max	
Drive Level (Typical)	10 µW	
Load Capacitance (C <sub>L</sub> )	Series, 16 pF, 20 pF, 30 pF, 32pF or specify	
Aging @ 25°C 1st year (Max)	±3 ppm, ±5 ppm/year	
Equivalent Series Resistance	Frequency Range	E.S.R. (Ω) Max
Mode: Fundamental/AT	8.000 to 10.000 MHz	70
	10.000 to 30.000 MHz	40
Mode: 3rd Overtone/AT	30.000 to 45.000 MHz	60
	45.000 to 80.000 MHz	50

## Drawing Specifications

**Dimensions shown in millimeters.**

**Top View:** Overall width 7.2 Max., height 5.2 Max., mounting pad width 1.4 Max.

**Bottom View:** Pad width 4.5, mounting pad length 2.0 Max.

**Connection (Top View):** Pad width 4.1, pad length 2.2, mounting pad length 2.4.

**Suggested Pad Layout (Top View):** Pad width 4.1, pad length 2.2, mounting pad length 2.4.