



ISSUE 10; September 2012 - RoHS 2011/65/EU

Description

- Industry standard SMD crystal
- Plastic encapsulated
- Low profile version also available please contact our sales offices for details

Frequency Range

- Frequency: 3.579545 to 89.999999MHz
- Frequency Stability: ± 10.00 ppm
- Frequency Tolerance: ± 10 ppm to ± 100 ppm

General Specification

- Load Capacitance (CL): 10.0pF to 50.0pF or Series
- Drive Level: 100 μ W max
- Ageing: ± 5 ppm max per year at 25°C
- Shunt Capacitance (C0): 5pF 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 90°C
- Drop: 75cm drop (3 times) onto hard wooden board
- Vibration: 1.5mm amplitude, 10Hz-55Hz, 1min in 3 mutually perpendicular planes, duration 2hrs each plane

Ordering Information

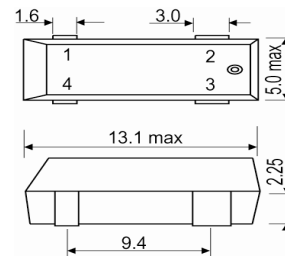
- Frequency*
- Model*
- Frequency Tolerance (@25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone*
- Example:
10.0MHz 86SMX
50/50/-40 to 85C/10 FUND

Packing Details

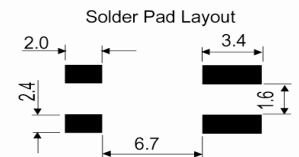
- Pack Style: **Bulk** Loose in bulk pack
Pack Size: 100
- Pack Style: **Reel** Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Alternative packing options available



Outline (mm)



Pad Connections
 1. Crystal
 2. N/C
 3. N/C
 4. Crystal



Sales Office Contact Details:

UK: +44 (0)1460 270200
 Germany: +49 (0)7264 9145-0

France: +33 (0)5 34 50 91 18
 USA: +1 (0)408.273.4530

Email: info@iqdfrequencyproducts.com
 Web: www.iqdfrequencyproducts.com

**Electrical Specification - maximum limiting values**

Frequency Range	Frequency Tolerance	Stability		Temperature Range	ESR Max	Vibration Mode
		Min	Max			
3.579545 to <3.999999MH	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	200Ω	Fundamental
4.000000 to <4.499999MH	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	150Ω	Fundamental
4.500000 to <4.999999MH	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	120Ω	Fundamental
5.000000 to <5.999999MH	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	100Ω	Fundamental
6.000000 to <8.999999MH	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	80Ω	Fundamental
9.000000 to <9.999999MH	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	60Ω	Fundamental
10.000000 to <12.999999M	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	50Ω	Fundamental
13.000000 to <18.999999M	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	35Ω	Fundamental
19.000000 to <40.000000M	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	25Ω	Fundamental
30.000000 to <34.999999M	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	80Ω	3RD Overtone
35.000000 to <39.999999M	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	70Ω	3RD Overtone
40.000000 to <44.999999M	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C	65Ω	3RD Overtone

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USA: +1 (0)408.273.4530

Email: info@iqdfrequencyproducts.comWeb: www.iqdfrequencyproducts.com



Electrical Specification - maximum limiting values

Frequency Range	Frequency Tolerance	Stability		Temperature Range	ESR Max	Vibration Mode
		Min	Max			
		±50ppm		-40 to 85°C		
45.000000 to <49.999999M	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	60Ω	3RD Overtone
50.000000 to <89.999999M	±10ppm to ±100ppm	±10ppm ±20ppm ±30ppm ±50ppm	±150ppm	0 to 50°C -10 to 60°C -20 to 70°C -40 to 85°C	80Ω	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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