

87SMX CRYSTALS

ISSUE 6; 1 NOVEMBER 2008 – RoHS 2002/95/EC

Holder Style

- Resistance welded, hermetically sealed in an inert atmosphere with glass to metal seals securing the lead wires. The low profile crystal is attached to a surface mount base. A low cost 'drop on' alternative to the 86SMX package

General Specifications

- Load Capacitance (CL): 10pF to 75pF or Series
- Drive Level: 500µW max
- Static Capacitance (C0): 7pF max
- Ageing: ±3ppm typ per year

Packaging

- Loose in bulk pack or tape and reel

Standard Frequency Tolerances and Stabilities

- ±30ppm, ±50ppm, ±100ppm

Operating Temperature Ranges

- 0 to 50°C
- 10 to 60°C
- 20 to 70°C
- 40 to 85°C
- 55 to 105°C

Storage Temperature Range

- 55 to 125°C

Environmental Specification

- Shock: 981m/s² for 6ms, three shocks in each direction along three mutually perpendicular planes
- Vibration: 10 to 60Hz 0.75mm displacement, 60 to 500Hz 98.1m/s² acceleration, 30 minute in each of three mutually perpendicular planes

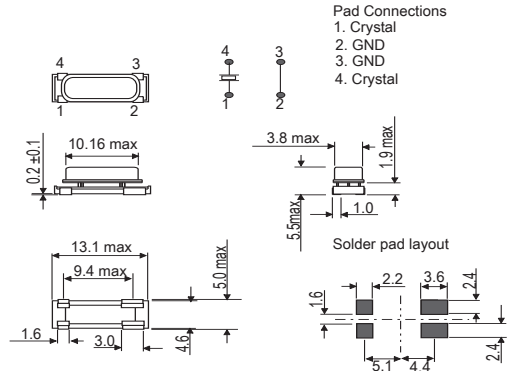
Marking includes

- Frequency

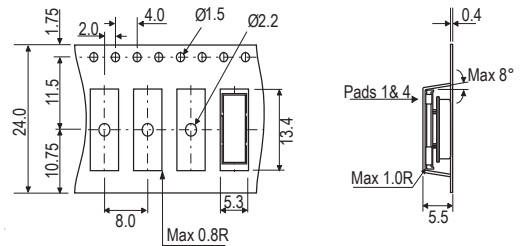
Minimum Order Information Required

- Frequency + Holder + Frequency Tolerance @ 25°C + Frequency Stability + Operating Temperature Range + Circuit Condition + Overtone Order

Outline (mm)

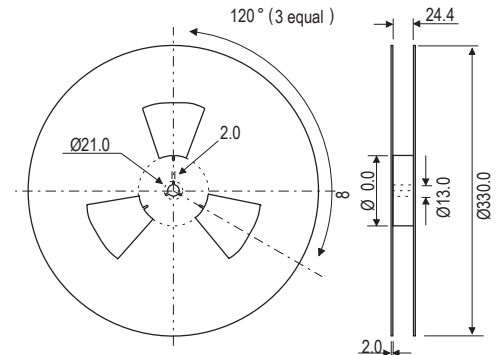


Tape (mm)



Pad Orientation. Pins 1 and 4 on Sprocket side of Tape as

Reel (mm)



Electrical Specifications – maximum limiting values

Frequency Range	Frequency Tolerance @25°C ±2°C	Operating Temperature Range	Frequency Stability Available Over Operating Temperature Range		ESR Max	Vibration Mode
			Minimum	Maximum		
3.2 to <4.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	300Ω	Fundamental AT cut
		-10 to 60°C	±20ppm			
		-20 to 70°C	±20ppm			
		-30 to 80°C	±25ppm			
		-40 to 85°C	±30ppm			
		-55 to 105°C	±100ppm			
4.0 to <5.5MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	130Ω	Fundamental AT cut
		-10 to 60°C	±20ppm			
		-20 to 70°C	±20ppm			
		-30 to 80°C	±25ppm			
		-40 to 85°C	±30ppm			
		-55 to 105°C	±100ppm			
5.5 to <8.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	60Ω	Fundamental AT cut
		-10 to 60°C	±20ppm			
		-20 to 70°C	±20ppm			
		-30 to 80°C	±25ppm			
		-40 to 85°C	±30ppm			
		-55 to 105°C	±100ppm			
8.0 to <40.0MHz	±10ppm to ±100ppm	0 to 50°C	±15ppm	±100ppm	40Ω	Fundamental AT cut
		-10 to 60°C	±20ppm			
		-20 to 70°C	±20ppm			
		-30 to 80°C	±25ppm			
		-40 to 85°C	±30ppm			
		-55 to 105°C	±100ppm			
27.0 to 50.0MHz	Inclusive with Frequency Stability	0 to 50°C	±50ppm	±100ppm	40Ω	Fundamental BT cut
		-10 to 60°C	±70ppm			
		-20 to 70°C	±100ppm			
26.0 to 100.0MHz	±10ppm to 100ppm	0 to 50°C	±15ppm	±100ppm	100Ω	3rd Overtone AT cut
		-10 to 60°C	±20ppm			
		-20 to 70°C	±20ppm			
		-30 to 80°C	±25ppm			
		-40 to 85°C	±50ppm			
		-55 to 105°C	±100ppm			

Note. For any other frequencies / specification please contact our sales office.