86SMX CRYSTALS

ISSUE 9; 19 NOVEMBER 2008 – RoHS 2002/95/EC

Holder Style

- 86SMX surface mount crystals are plastic encapsulated

General Specifications

- Load Capacitance (CL): 10pF to 50pF or Series
- Drive Level: 100µW max

Packaging

- Loose in bulk pack or tape and reel

Standard Frequency Tolerances and Stabilities

- ±10ppm, ±20ppm, ±30ppm, ±50ppm, ±100ppm, ±150ppm,

Operating Temperature Ranges

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

Storage Temperature Range

- –40 to 90°C

Enviornmental

- Drop: dropped 3 times from 75cm onto hardwood surface
- Vibration: 10–55Hz, 1.5mm amplitude, period 1min, in X, Y & Z axes, 2 hrs in each axes

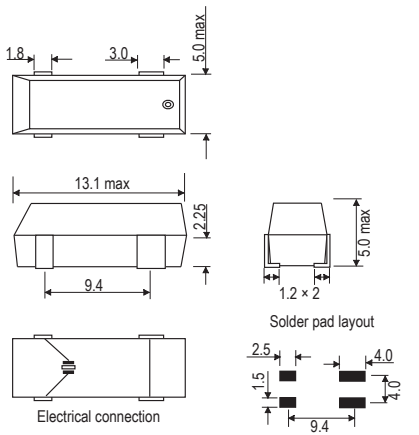
Marking includes

- Frequency

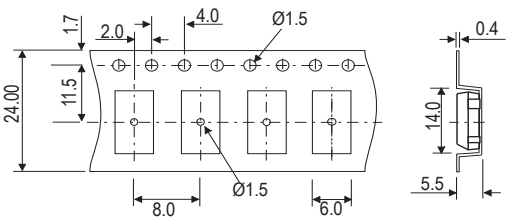
Minimum Order Information Required

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

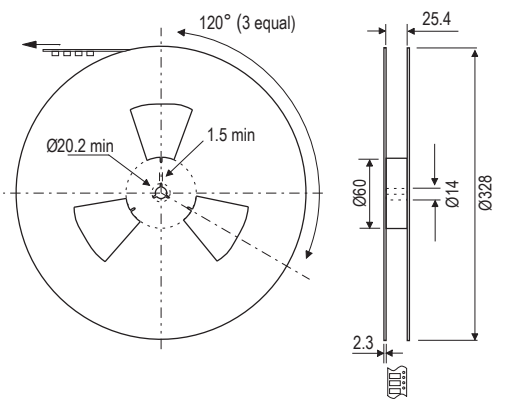
Outline (mm)



Tape (mm)



Reel (mm)



IQD Frequency Products Ltd, Station Road, Crewkerne, Somerset TA18 8AR, United Kingdom
Tel: +44 (1460) 270200; Fax: +44 (1460) 72578;
Email: info@iqdfrequencyproducts.com Web: www.iqdfrequencyproducts.com

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		
3.579545 to < 4.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	200Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
4.0MHz to < 4.5MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	150Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
4.5MHz to < 5.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	120Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
5.0 to < 6.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	100Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
6.0 to < 9.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	80Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
9.0 to < 10.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	60Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
10.0 to < 13.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	50Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
13.0 to < 19.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	35Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
19.0 to < 40.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	25Ω	Fundamental
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
30.0 to < 35.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	80Ω	3rd Overtone
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
35.0 to < 40.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	70Ω	3rd Overtone
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
40.0 to < 45.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	65Ω	3rd Overtone
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
45.0 to < 50.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	60Ω	3rd Overtone
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		
50.0 to < 90.0MHz	±10ppm to ±100ppm	0 to 50°C	±10ppm	±100ppm	80Ω	3rd Overtone
		–10 to 60°C	±20ppm			
		–20 to 70°C	±30ppm			
		–40 to 85°C	±50ppm	±150ppm		