

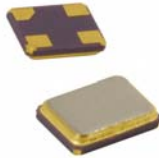
# Product Specification



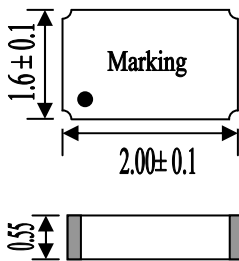
This product is certified to comply with the RoHS Directive 2002/95/EC.



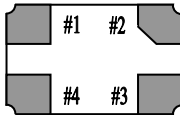
## SM21A 4-pad SMD Crystal



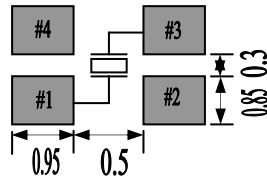
- 2.0x1.6x0.55mm
- Small size
- Au-Sn sealed
- Wide frequency range
- Tight tolerance



Bottom View



PCB Layout



### Specification

Frequency range	24.0 ~ 50.0MHz
Adjustment@25°C	See Table 2
Temp. Stability	See Table 1
Temp. range	See Table 1
ESR	150Ω max.
Load capacitance	See Table 3
Drive level	30uW typical
Storage temp.	-40 ~ +85°C
Ageing	5ppm/year max.

‘\*’ suffix denotes RoHS Compliant

Standard packing: 1Kpcs per 7" taped reel

### Ordering Code Guide

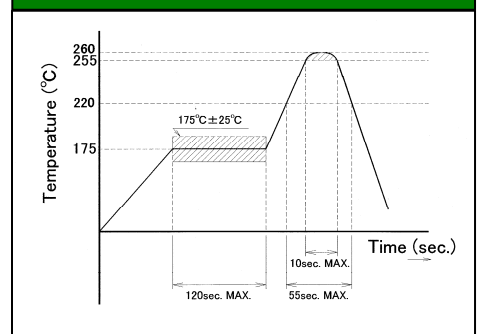
Series Code	Frequency	Specification	Holder Type	RoHS
X	xxMxxx	G C B E	SM21A	*

Magna use a 4 lettering coding system for defining standard specifications as shown below. Where other parameters are specified (such as C1 or pullability) then a customer specific datasheet will be produced. Other temperature ranges, stabilities, adjustments and load capacitances are available. Please contact us for advice.

1 <sup>st</sup> Letter	Temp. range	See Table 1
2 <sup>nd</sup> Letter	Temp. stability	See Table 1
3 <sup>rd</sup> Letter	Adjustment tolerance	See Table 2
4 <sup>th</sup> Letter	Load capacitance	See Table 3

Please note that not all combinations of temperature and stability are possible. Please see Table 1 for guide to availability.

### Reflow Profile



Issue 2 30/06/10

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## SM21A 4-pad SMD Crystal

### Crystal Ordering Codes

**Table 1: Temperature range v. Stability**

Temp. Range & Stability		±3ppm	±5ppm	±7.5ppm	±10ppm	±15ppm	±20ppm	±30ppm	±50ppm
		<b>K</b>	<b>J</b>	<b>H</b>	<b>G</b>	<b>F</b>	<b>E</b>	<b>B</b>	<b>C</b>
0 ~ +50°C	<b>J</b>	✓	✓	✓	✓	✓	✓	✓	✓
-5 ~ +55°C	<b>H</b>	✓	✓	✓	✓	✓	✓	✓	✓
-10 ~ +60°C	<b>G</b>	-	✓	✓	✓	✓	✓	✓	✓
-20 ~ +70°C	<b>E</b>	-	✓	✓	✓	✓	✓	✓	✓
-30 ~ +80°C	<b>C</b>	-	-	✓	✓	✓	✓	✓	✓
-40 ~ +85°C	<b>M</b>	-	-	-	✓	✓	✓	✓	✓

Other temperature ranges and stabilities are available.

**Table 2: Adjustment tolerance**

±5ppm	±10ppm	±15ppm	±20ppm	±25ppm	±30ppm	±50ppm	±100ppm
<b>J</b>	<b>G</b>	<b>F</b>	<b>E</b>	<b>D</b>	<b>B</b>	<b>C</b>	<b>A</b>

Other adjustment tolerances are available.

**Table 3: Load capacitance**

10pF	12pF	16pF	18pF	20pF	30pF	32pF	Series
<b>A</b>	<b>R</b>	<b>K</b>	<b>Q</b>	<b>C</b>	<b>E</b>	<b>F</b>	<b>S</b>

Other load capacitances are available. Min. 6pF