

Ceramic Resin Sealed SMD Crystal



Model: FE

RoHS Compliant / Pb Free

Rev. 5/5/2014

Page 1 of 2

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FEATURES

- Low Cost
- High Frequency Range
- Fundamental to 50 MHz (BT Cut)
- Resin Sealed
- Tape and Reel (2,000 pcs. STD)

OPTIONS

- Tolerances to < 20 PPM
- Stabilities to < 15 PPM
- Temperatures to -40°C ~ +85°C
- 1.4mm Height Max
- 2 Additional Footprints (FH, FL)

• PART NUMBER

Part Number	Model Number	Frequency Range (MHz)
219-Frequency-xxxxx	FE	6.000 ~ 160.000

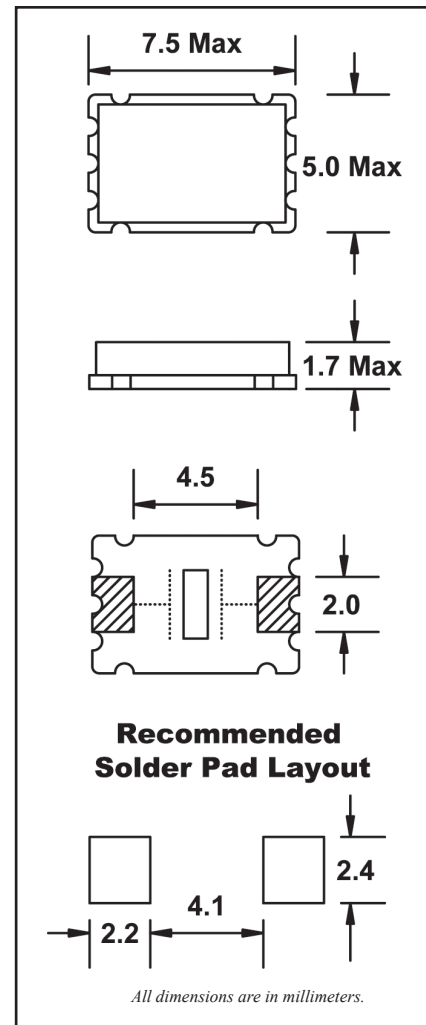
• STANDARD SPECIFICATIONS¹

PARAMETERS	MAX (unless otherwise noted)
Frequency Range	6.000 ~ 160.000 MHz
Frequency Tolerance @ 25°C	±50 PPM
Frequency Stability, ref @ 25°C Over Operating Temp Range	±50PPM
Temperature Range	
Operating (TOPR)	-10°C ~ +60°C
Storage (TSTG)	-40°C ~ +85°C
Shunt Capacitance (Co)	7.0 pF
Load Capacitance (CL)	10 pF ~ Series (Customer Specified)
Drive Level	0.5 mW
Aging per year	±5 PPM

¹ Other stabilities & operating temperature ranges available. Consult Fox Customer Service for specific requirements.

All specifications subject to change without notice.

Frequency Range (MHz)	Operating Mode	Max ESR Ω
6.000 ~ 8.000	Fundamental	80
8.000+ ~ 16.000	Fundamental	60
16.000+ ~ 50.000	Fundamental	40
28.000 ~ 84.000	3rd OT	60
84.000+ ~ 160.000	5th OT	80



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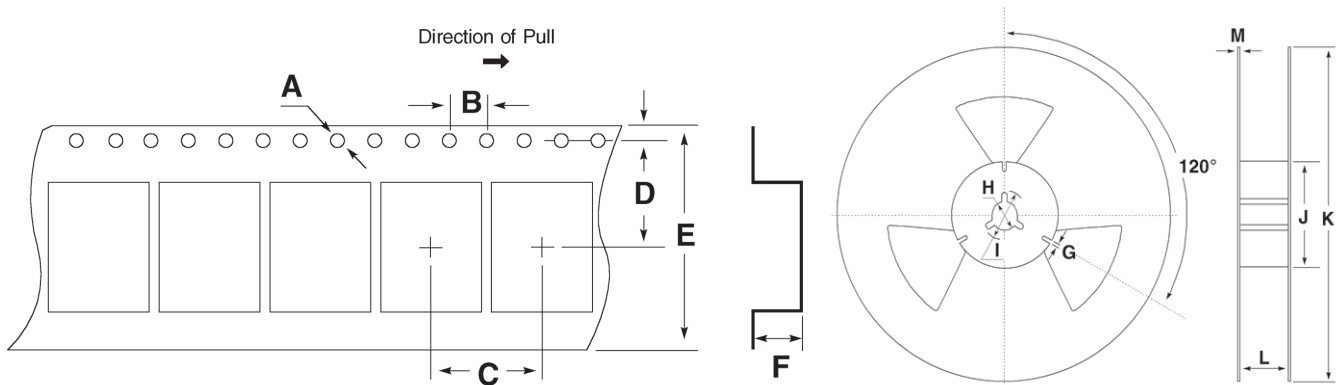
Page 2 of 2

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• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
FE	∅1.5	4.0	8.0	7.5	16.0	2.3	2,000

• REEL SPECIFICATIONS (millimeters)							
MODEL	G	H	I	J	K	L	M
FE	2.0	∅13	∅21	∅80	∅250	17.5	2.0



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• FE Standard Crystals					
Part Number	Frequency	Tolerance	Stability	Temp Range	CL
FE098-20	9.830400	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE100-20	10.000000	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE115-20	11.059200	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE143-20	14.318180	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE147-20	14.745600	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE150-20	15.000000	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE160-20	16.000000	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE200-20	20.000000	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE221-20	22.118400	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE240F-20	24.000000	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE245LF-20	24.576000	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF
FE250LF-20	25.000000	+/- 50 ppm	+/- 50 ppm	-10 to +60 C	20pF