

# Plastic Encased SMD Crystal



Model: FPXLF

RoHS Compliant

Rev. 5/5/2014

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[http://www.foxonline.com/need\\_a\\_sample.htm](http://www.foxonline.com/need_a_sample.htm)

This product is End of Life, See PCN466



## FEATURES

- Low Cost
- Stocking Standard
- Plastic Encapsulated
- Tape and Reel (1,000 pcs. STD)

## OPTIONS

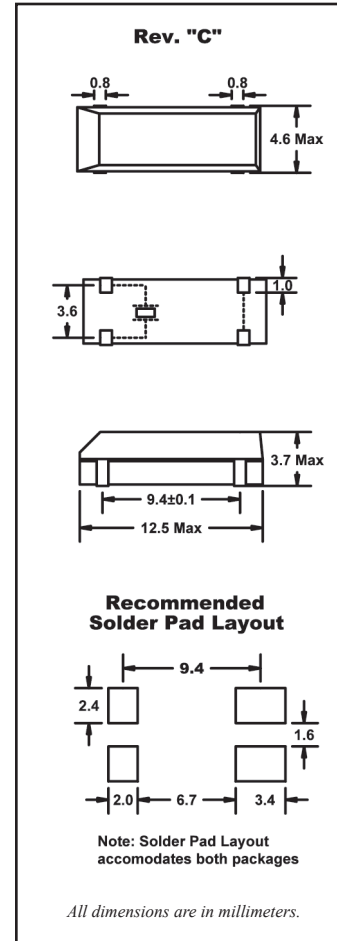
- Tolerances to < 20 PPM
- Stabilities to < 20 PPM
- Temperatures to -40°C ~ +85°C

This model has long lead times.  
See page 3 for alternative.

• PART NUMBER		
Part Number	Model Number	Frequency Range (MHz)
256LF-Frequency-xxxxx	FPXLF	3.579545 ~ 90.000

• STANDARD SPECIFICATIONS <sup>1</sup>	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range	3.579545 ~ 90.000MHz
Frequency Tolerance @ 25°C	±50 PPM
Frequency Stability, ref @ 25°C Over Operating Temp Range	±50 PPM
Temperature Range	
Operating (TOPR)	-10°C ~ +70°C
Storage (TSTG)	-55°C ~ +125°C
Shunt Capacitance (Co)	7.0 pF
Load Capacitance (CL)	10 pF ~ Series (Customer Specified)
Drive Level	0.1 mW
Aging per year	±5 PPM

<sup>1</sup> Other tolerances, stabilities & operating temperature ranges available. Consult Fox Customer Service for specific requirements and availability of Rev "A".  
All specifications subject to change without notice.



Frequency Range (MHz)	Operating Mode	Max ESR Ω
3.579545 ~ 4.000	Fundamental	200
4.000+ ~ 5.000	Fundamental	150
5.000+ ~ 6.000	Fundamental	120
6.000+ ~ 7.000	Fundamental	100
7.000+ ~ 9.000	Fundamental	80
9.000+ ~ 13.000	Fundamental	60
13.000+ ~ 20.000	Fundamental	40
20.000+ ~ 30.000	Fundamental	30
30.000+ ~ 90.000	3rd OT	100

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## • FPXLF Standard Crystals

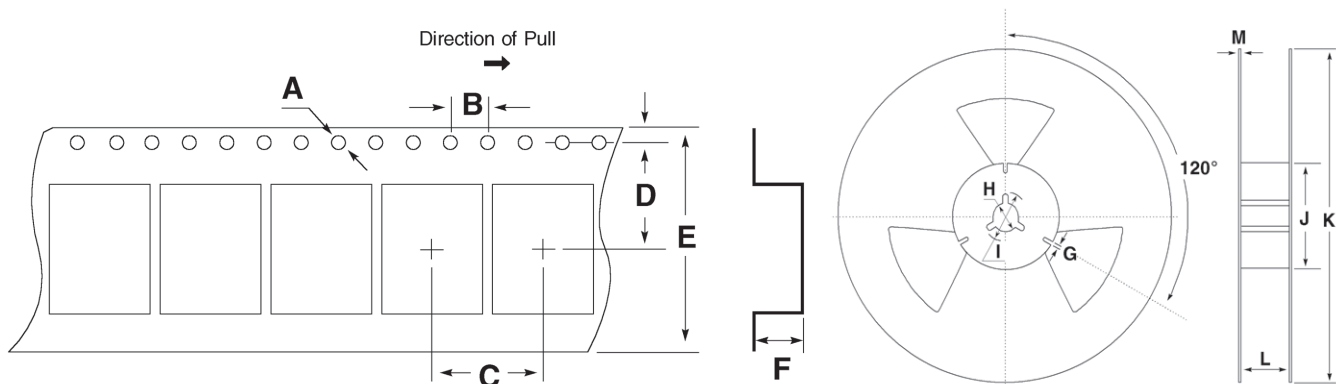
Part Number	Frequency	Tolerance	Stability	Temp Range	CL
FPXLF036S	3.579545	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	18pF
FPXLF0368S	3.686400	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	Series
FPXLF0368-20	3.686400	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF040	4.000000	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF049-20	4.915200	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF073-20	7.372800	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF080	8.000000	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	Series
FPXLF080-20	8.000000	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF100-20	10.000000	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF115-20	11.059200	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF120-20	12.000000	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF160	16.000000	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	Series
FPXLF160-20	16.000000	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF
FPXLF200-20	20.000000	+/- 50 ppm	+/- 50 ppm </td <td>-10 to +70 C</td> <td>20pF</td>	-10 to +70 C	20pF
FPXLF250F-20	25.000000	+/- 50 ppm	+/- 50 ppm	-10 to +70 C	20pF

## • TAPE SPECIFICATIONS (millimeters)

MODEL	A	B	C	D	E	F	STD Reel QTY
FPXLF	Ø1.5	4.0	12.0	11.5	24.0	5.5	1,000

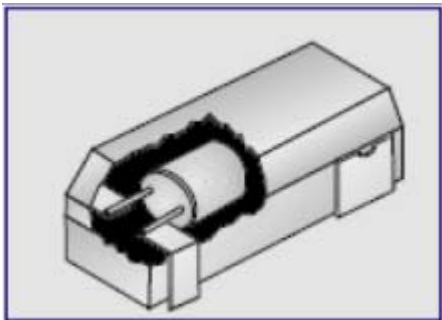
## • REEL SPECIFICATIONS (millimeters)

MODEL	G	H	I	J	K	L	M
FPXLF	2.0	Ø13	Ø21	Ø100	Ø250	25.5	2.0



# Due to the long lead times for plastic FPXLF parts?

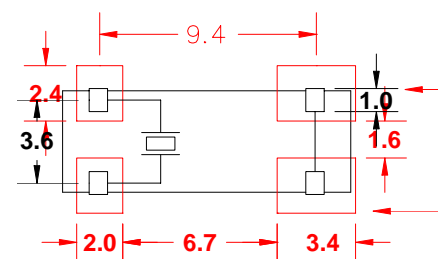
**We, at Fox, thought you might be interested in alternatives that do not require that you change your circuit board?**  
*Alternative is fully RoHS Compliant / Pb Free – FPXLF uses Exemption 7a*



The FPXLF layout is one of the earliest conversions from Thru-Hole, to surface mount. As such, the 2 terminations on the right are not used for anything in the circuit. The pads are there only to provide additional mechanical adherence to the circuit board.

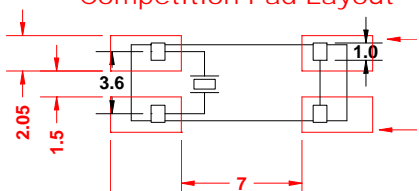
The circuit only uses the 2 pads on the left. The pads on the right can remain empty and the circuit will work normally.

Fox FPXLF on the Recommended Fox Pad Layout



Even if you are using one of the competitor recommended layouts, it is only the 2 pads on the left. If an alternative will fit on the smaller Fox recommendation, it will fit on the competitor's layout.

Fox FPXLF on the Recommended Oversized Competition Pad Layout

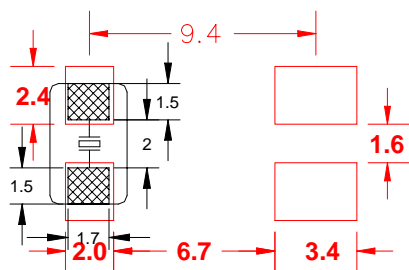


For Frequencies above 8MHz<sup>\*\*</sup>, there is an alternative, the Fox model FQ5032A. It is available with 25°C accuracy of ±20ppm, ±25ppm, ±30ppm, ±50ppm, or ±100ppm. And the same values for stability between -20°C & +70°C. For -40°C to +85°C, it is available at ±30ppm, ±50ppm, or ±100ppm.

*More capable than the model FPXLF – and can be purchased at a lower cost!*

And it fits very well on the active 2 pads of the model FPXLF.

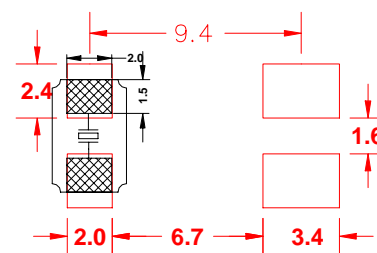
FQ5032A on the Recommended Fox Pad Layout



For even tighter Tolerance and Temperature Stability, the model FX532AS is available.

To fit on the same 2 pads

(Call for details) FX532AS on the Recommended Fox Pad Layout



<sup>\*\*</sup> Limited available frequencies between 8MHz and 10MHz