## Plastic Encased SMD Crystal

Model: FPXLF
RoHS Compliant
Page 1 of 2

## 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 $-40^{\circ} \mathrm{C} \sim+85^{\circ} \mathrm{C}$

| - PART NUMBER |  |  |
| :---: | :---: | :---: |
| Part Number | Model Number | Frequency Range (MHz) |
| 256LF-Frequency-xxxxx | FPXLF | $3.579545 \sim 90.000$ |


| - STANDARD SPECIFICATIONS1 |  |
| :---: | :---: |
| PARAMETERS | MAX (unless otherwise noted) |
| Frequency Range | $3.579545 \sim 90.000 \mathrm{MHz}$ |
| Frequency Tolerance @ $25^{\circ} \mathrm{C}$ | $\pm 50$ PPM |
| Frequency Stability, ref @ $25^{\circ} \mathrm{C}$ Over Operating Temp Range | $\pm 50$ PPM |
| Temperature Range |  |
| Operating (TOPR) <br> Storage (TstG) | $\begin{gathered} -10^{\circ} \mathrm{C} \sim+70^{\circ} \mathrm{C} \\ -55^{\circ} \mathrm{C} \sim+125^{\circ} \mathrm{C} \end{gathered}$ |
| Shunt Capacitance (Co) | 7.0 pF |
| Load Capacitance (CL) | 10 pF ~ Series (Customer Specified) |
| Drive Level | 0.1 mW |
| Aging per year | $\pm 5 \mathrm{PPM}$ |

${ }^{1}$ 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 <br> $(\mathrm{MHz})$ | Operating Mode | Max ESR $\Omega$ |
| :---: | :---: | :---: |
| $3.579545 \sim 4.000$ | Fundamental | 200 |
| $4.000+\sim 5.000$ | Fundamental | 150 |
| $5.000+\sim 6.000$ | Fundamental | 120 |
| $6.000+\sim 7.000$ | Fundamental | 100 |
| $7.000+\sim 9.000$ | Fundamental | 80 |
| $9.000+\sim 13.000$ | Fundamental | 60 |
| $13.000+\sim 20.000$ | Fundamental | 40 |
| $20.000+\sim 30.000$ | Fundamental | 30 |
| $30.000+\sim 90.000$ | 3rd OT | 100 |

## Plastic Encased SMD Crystal

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- FPXLF Standard Crystals

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


| - TAPE SPECIFICATIONS (millimeters) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MODEL | A | B | C | D | E | F | STD Reel QTY |
| FPXLF | $\varnothing 1.5$ | 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 | $\varnothing 13$ | $\varnothing 21$ | $\varnothing 100$ | $\varnothing 250$ | 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 7 a

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.

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

Fox FPXLF on the Recommended Fox Pad Layout


For Frequencies above $8 \mathrm{MHz}^{\pi_{1}}$, there is an alternative, the Fox model FQ5032A.
It is available with $25^{\circ} \mathrm{C}$ accuracy of $\pm 20 \mathrm{ppm}, \pm 25 \mathrm{ppm}, \pm 30 \mathrm{ppm}, \pm 50 \mathrm{ppm}$, or $\pm 100 \mathrm{ppm}$.
And the same values for stability between $-20^{\circ} \mathrm{C} \&+70^{\circ} \mathrm{C}$.
For $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$, it is available at $\pm 30 \mathrm{ppm}, \pm 50 \mathrm{ppm}$, or $\pm 100 \mathrm{ppm}$.
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
FX532AS on the Recommended Fox Pad Layout


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[^0]:    ${ }^{{ }^{*}{ }^{*}}$ Limited available frequencies between 8 MHz and 10 MHz

