

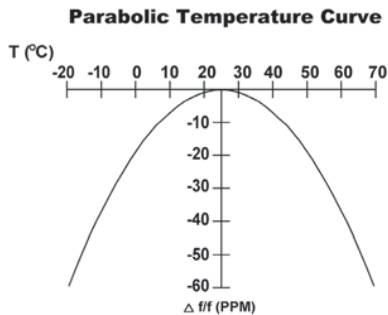
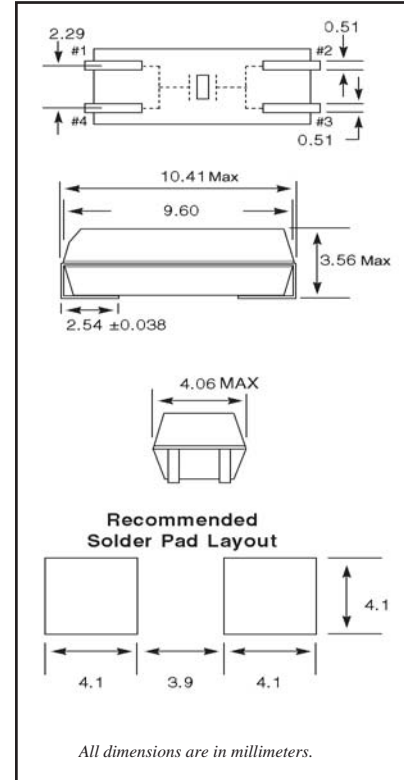


# SMD Tuning Fork

**KFSM**  
(former FSMLF)  
**DATASHEET**

## • KFSM STANDARD SPECIFICATIONS

PARAMETERS	MAX (unless otherwise noted)
Frequency	32.768 kHz
Frequency Tolerance @ 25°C	±20 PPM
Frequency Stability Temperature Coefficient	-0.04 PPM / (Δ°C) <sup>2</sup>
Temperature Range	
Turnover (T <sub>O</sub> )	+20°C ~ +30°C
Operating (T <sub>OPR</sub> )	+40°C ~ +85°C
Storage (T <sub>STG</sub> )	-55°C ~ +125°C
Equivalent Series Resistance (R <sub>S</sub> )	50 kΩ
Load Capacitance (C <sub>L</sub> )	(See options on page 2)
Insulation Resistance @ 100VDC	500 MΩ Min
Drive Level	1.0 μW
Aging per year	±3 PPM
Termination Finish	100% Matte Sn
Lead (Pb) Free	Yes
RoHS Compliant	Yes



To determine frequency stability, use parabolic curvature (K).  
For example: What is stability at 45°C?

- 1) Change in T (°C) = 45-25 = 20°C
- 2) Change in frequency = -0.04 PPM \* (Δ C)<sup>2</sup>  
= -0.04 PPM \* (20)<sup>2</sup>  
= -16.0 PPM

Note: Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, etc. may vary.



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<b>Title / Description:</b> KFSM SERIES STANDARD SPECIFICATIONS	
<b>Drawing Number:</b> 101145	<b>Size:</b> A
<b>Part Number:</b>	<b>Cage:</b> 61429
<b>Draftsperson:</b> SM	<b>Approved:</b> CMR
	<b>Revision Date:</b> 1/19/2017

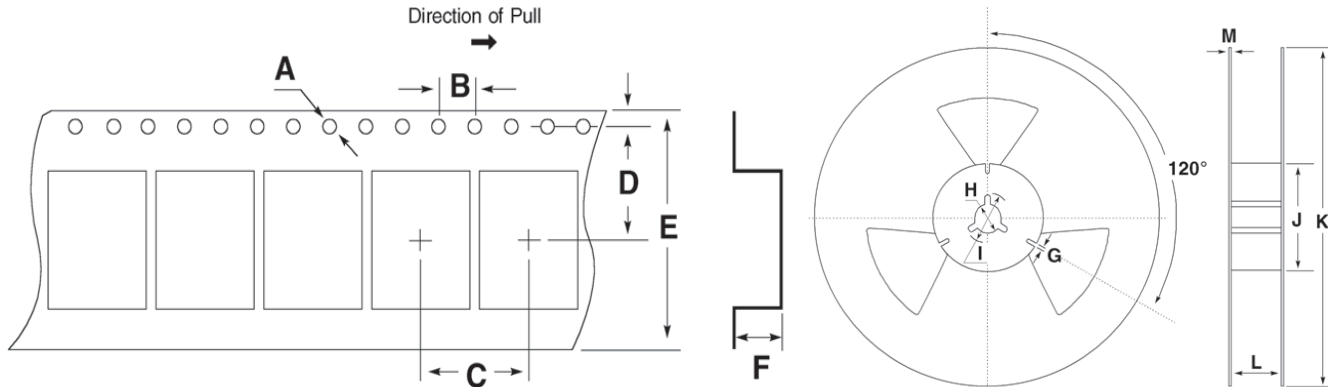


# SMD Tuning Fork

**KFSM**  
(former FSMLF)  
**DATASHEET**

• TAPE SPECIFICATIONS (millimeters)							
MODEL	A	B	C	D	E	F	STD Reel QTY
KFSM	∅1.5	4.0	8.0	7.5	16.0	2.7	2,000

• REEL SPECIFICATIONS (millimeters)							
MODEL	G	H	I	J	K	L	M
KFSM	2.0	∅13	∅21	∅50/100	∅330	16.4	2.0



## Available Options & Part Identification for SMD Tuning Fork Crystal KFSM F KFSM E I H M 0.32768

F	KFSM	E	I	H	M	0.32768
<u>FOX</u>	<u>Model Number</u>	<u>Tolerance</u> E = 20 PPM	<u>Stability</u> I = -0.04 PPM / (Δ°C) <sup>2</sup>	<u>Load Capacitance</u> B = 6 pF H = 12.5 pF* (*standard)	<u>Operating Temperature</u> M = -40 ~ +85 °C	<u>Frequency (MHz)</u>



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