3.3V SMD Stratum III HCMOS TCXO/VCTCXO

Model: FOX331 Series | **RoHS Compliant** | **Rev. 11/8/2013**

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• PART NUMBER SELECTION

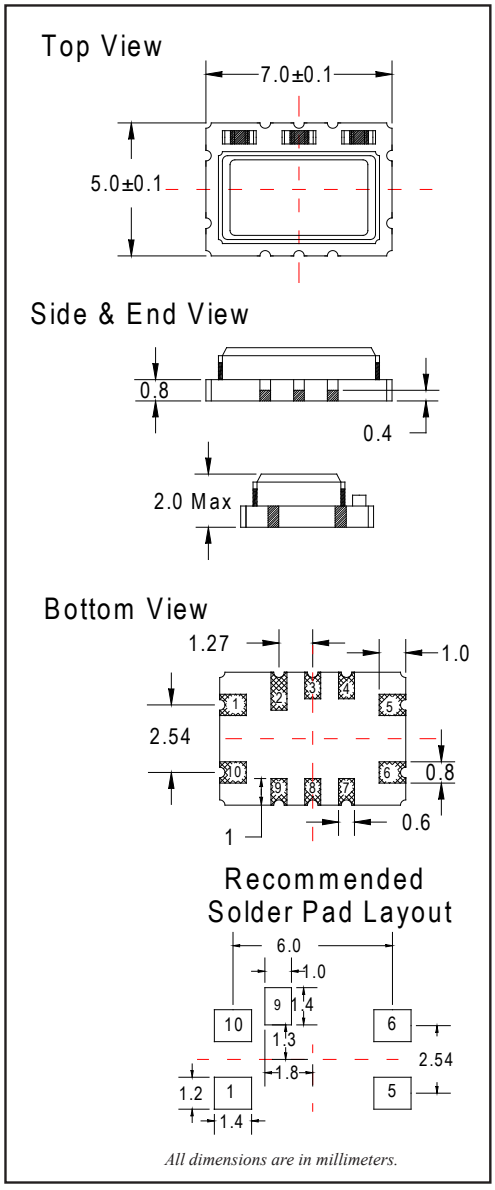
Part Number	Model Number	Frequency Stability (vs Temperature)	Operating Temperature (ºC)
822-Frequency-xxxxx	FOX331	±0.28 PPM	-20 ~ +70
822R-Frequency-xxxxx	FOX331R	±0.37 PPM	-40 ~ +85
822AR-Frequency-xxxxx	FOX331AR	±0.28 PPM	-40 ~ +85
822E-Frequency-xxxxx	FOX331E	±0.28 PPM	-20 ~ +70
822ER-Frequency-xxxxx	FOX331ER	±0.37 PPM	-40 ~ +85

• Available Frequencies

10.000MHz	12.800MHz	16.384MHz
19.200MHz	19.440MHz	20.000MHz
26.000MHz	27.000MHz	40.000MHz

• ELECTRICAL CHARACTERISTICS

PARAMETERS	MAX (unless otherwise noted)
Storage Temperature Range	-55ºC ~ +125ºC
Frequency Stability Overall (including 20 years aging)[1]	 ±4.6PPM
Supply Voltage (V_{DD})	3.3V±5%
Input Current (I_{DD})	6mA
Rise Time (10% ~ 90% V_{DD}) (T_R)	5nS
Fall Time (90% ~ 10% V_{DD}) (T_F)	5nS
Output Symmetry (50% V_{DD})	45% ~ 55%
Output Voltage (HCMOS) Output Low (V_{OL}) Output High (V_{OH})	 10%V_{DD} 90%V_{DD}
Output Current (I_{OL}) (I_{OH})	6mA Min -6mA Min
Output Load	15pF
Startup Time	2mS
Pullability (VCTCXO) (V_C = 1.65±1.65V)[2]	±5PPM Min
Phase Noise @100Hz @1kHz @10kHz	-120dBc -140dBc -148dBc
Maximum Soldering Temp / Time	260ºC / 10 Seconds
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au



[1] Inclusive of initial frequency tolgerance, operating temperature range, 20 years aging, input voltage change, load change, shock and vibration.
[2] For proper operation, a control voltage (Vc) must be applied to pin 1 on VCTCXOs.
[3] An internal pullup resistor from pin 9 to pin 10 allows active output if pin 9 is left open.

Note: The above specifications, having been carefully prepared and checked, is believed to be accurate at the time of publication; however, no responsibility is assumed by Fox Electronics for inaccuracies.
Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, etc. may vary.

Pin Connections

FOX331/331R/331AR (TCXO)		FOX331E/331ER (VCTCXO)	
#1 NC	#6 Output	#1 Vc	#6 Output
#2 NC	#7 NC	#2 NC	#7 NC
#3 NC	#8 NC	#3 NC	#8 NC
#4 NC	#9 E/D	#4 NC	#9 E/D
#5 GND	#10 V_{DD}	#5 GND	#10 V_{DD}

• ENABLE / DISABLE FUNCTION

(Pin 9)	OUTPUT (Pin 6)
OPEN [3]	ACTIVE
'1' Level $V_{IH} \geq 70\%V_{DD}$	ACTIVE
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

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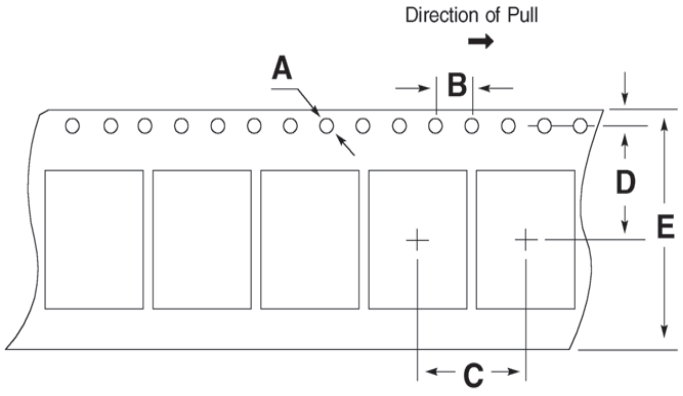
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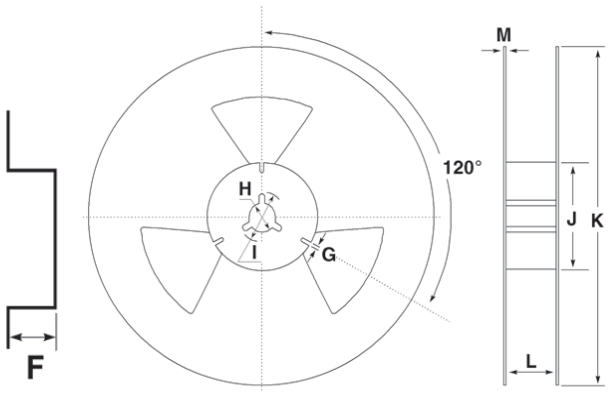
• TAPE SPECIFICATIONS (millimeters)

MODEL	A	B	C	D	E	F	STD Reel QTY
FOX331	∅1.5	4.0	8.0	7.5	16.0	2.16	3,000

• REEL SPECIFICATIONS (millimeters)

MODEL	G	H	I	J	K	L	M
FOX331	1.5	∅13.5	∅20.2	100.0	∅330	16.4	2.0





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