3.2x2.5mm HCMOS TCXO/VCTCXO

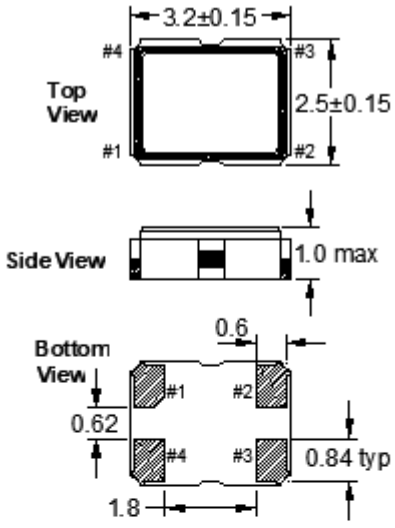
T3HN/T3HV

(former FOX923CH, FOX923CEH)

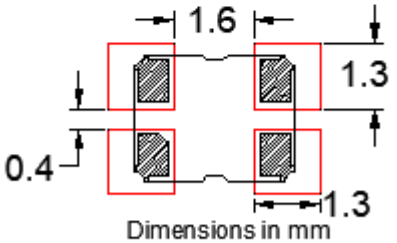
DATASHEET

- Digital Temperature Compensation

ELECTRICAL CHARACTERISTICS	
PARAMETERS	**MAX** (unless otherwise noted)
Frequency Range (MHz)	8.0 ~ 40.000
Temperature Range Operating (T_{OPR}) Storage (T_{STG})	 See table below -40ºC ~ +90ºC
Supply Voltage (V_{DD})	+3.3 VDC ± 5%
Input Current (I_{DD})	6.0mA
Initial Frequency Tolerance @ 25°C (after reflow) (T3HV: Vc = 1.65V)[1]	±2.0 PPM
Frequency Stability Over Temperature Range Over Supply Voltage Change (3.3V±5%) Over Load Change (15pF ±5%)	 See table below ±0.3 PPM ±0.3 PPM
Rise Time (10% ~ 90% V_{DD}) Fall Time (90% ~10% V_{DD})	5nS 5nS
Symmetry (50% V_{DD})	40% ~ 60%
Output Voltage (V_{OL}) (V_{OH})	10% V_{DD} 90%V_{DD} Min
Output Load (C_L)	15pF
Pullability (T3HV: Vc = 1.65V±1.0V)[1]	±3 ~ ±15 PPM
Aging per year	±1.0 PPM
Startup Time (T_S)	3.0mS
Phase Noise @ 1kHz offset	 -130 dBc/Hz Typical
Reflow Soldering Temp	260ºC / 10 Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Lead-Free	Yes
RoHS/REACH Compliant	Yes



Recommended Solder Pad Layout



Dimensions in mm

Pin Connections

TCXO		VCTCXO	
# 1 GND	# 3 Out	# 1 Vc	# 3 Out
# 2 GND	# 4 V_{DD}	# 2 GND	# 4 V_{DD}

Operating Temperature	±1 PPM	±1.5 PPM	±2 PPM	±2.5 PPM	±15 PPM
-30 ~+85ºC	O	O	O	O	NA
-40 ~+85ºC	Δ	O	O	O	NA
-40 ~+105ºC	X	X	X	X	O

Key: O=Available, X=Not Available, NA=Not Applicable, = Consult Fox Engineering

[1]For proper operation, a control voltage (Vc) must be applied to pin 1 of VCTCXO's.
All specifications subject to change without notice.

© Copyright 2019 Fox Electronics. All rights reserved

Title / Description: **T3HN/T3HV SERIES STANDARD SPECIFICATIONS**		
Drawing Number: T3HN_T3HV-DOC-1		Size: A
Part Number:		Cage: **61429**
Draftsperson: MAJ	Approved: BEC	Revision Date: 08/06/2019

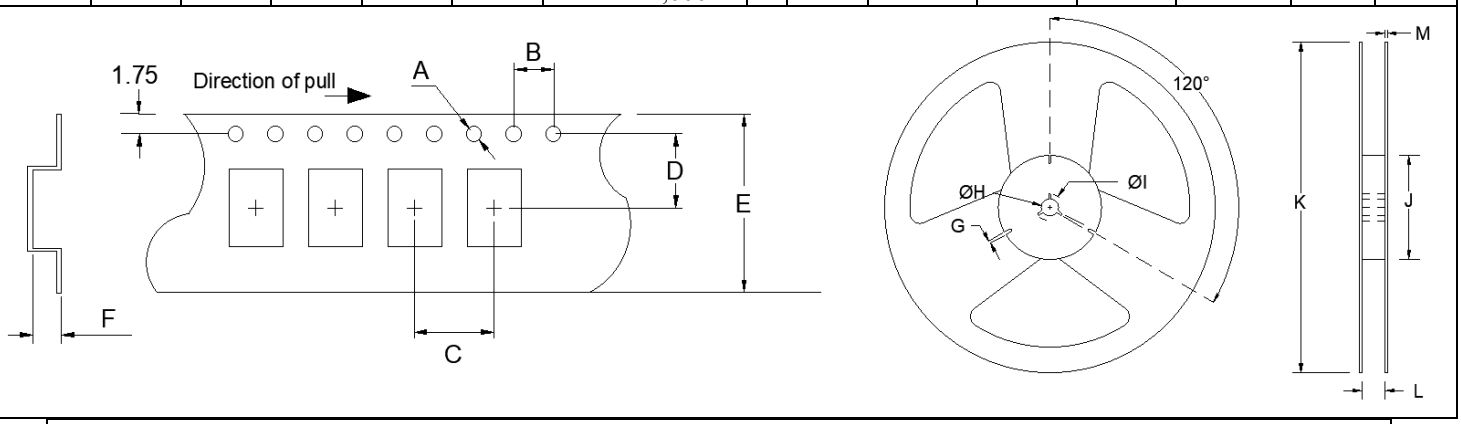
3.2x2.5mm HCMOS TCXO/VCTCXO

T3HN/T3HV

(former FOX923CH, FOX923CEH)

DATASHEET

Tape Specifications (millimeters)								Reel Specifications (millimeters)						
A	B	C	D	E	F	Reel Qty		G	H	I	J	K	L	M
Ø1.5	4.0	4.0	3.5	8.0	1.4	**-T3 = 3,000 default** -T2 = 2,000 -T1 = 1,000		2.0	Ø13	Ø21	Ø60	Ø180	9.0	1.5



Available Options & Part Identification for TCXO Model T3HN/T3HV[1]

F T3HN B P K 25.0

F	T3HN	B	P	K	25.0
FOX	**Model Number** **T3HN = TCXO** T3HV = VCTCXO	**Voltage** **B = +3.3V±5%**	**Stability** T = ±1.0 PPM S = ±1.5 PPM R = ±2.0 PPM **P = ±2.5 PPM** F = ±15 PPM	**Operating Temperature** **K = -30 to +85°C** M = -40 to +85ºC P = -40 to +105ºC	**Frequency (MHz)**

[1] Not all frequencies in the frequency range, or every combination of stability, temp range, and voltage available. See stabilities/operating temp table.

Corporate Headquarters
5570 Enterprise Parkway
Fort Myers, FL 33905
http://www.FOXONLINE.com

Sales
1-888-GET-2-FOX (1-888-438-2369) or
1-239-693-0099
http://www.FOXONLINE.com/repdisty

Tech Support
http://www.FOXONLINE.com/email

PRODUCT USE: Fox Electronics reserves the right to modify the products and/or specifications described herein at any time and at Fox Electronics' sole discretion. All information in this document, including descriptions of product features and performance, is subject to change without notice. Performance specifications and the operating parameters of the described products are determined in the independent state and are not guaranteed to perform the same way when installed in customer products. The information contained herein is provided without representation or warranty of any kind, whether express or implied, including, but not limited to, the suitability of Fox Electronics' products for any particular purpose, an implied warranty of merchantability, or non-infringement of the intellectual property rights of others. This document is presented only as a guide and does not convey any license under intellectual property rights of Fox Electronics or any third parties.

Fox Electronics' products are not intended for use in applications involving extreme environmental conditions or in life support systems or similar devices where the failure or malfunction of a Fox Electronics product can be reasonably expected to significantly affect the health or safety of users. Anyone using a Fox Electronics product in such a manner does so at their own risk, absent an express, written agreement by Fox Electronics.

Fox Electronics and the Fox logo are registered trademarks of Fox Electronics. Product specification is subject to change without notice. Other trademarks and service marks used herein, including protected names, logos and designs, are the property of Fox Electronics or their respective third-party owners.

© Copyright 2019 Fox Electronics. All rights reserved

Title / Description: **T3HN/T3HV SERIES STANDARD SPECIFICATIONS**		
Drawing Number: T3HN_T3HV-DOC-1		Size: A
Part Number:		Cage: **61429**
Draftsperson: MAJ	Approved: BEC	Revision Date: 08/06/2019