

Features

- Digital Temperature Compensation

STANDARD SPECIFICATIONS	
PARAMETERS	MAX (Unless otherwise noted)
Frequency Range (MHz)	8.0 ~ 40.000
Temperature Range	
Operating (T_{OPR})	(See table below)
Storage (T_{STG})	-40°C ~ +90°C
Supply Voltage (V_{DD})	+3.3 $V_{DC} \pm 5\%$
Input Current (I_{DD})	6.0 mA
Initial Frequency Tolerance @ 25°C (after reflow) (T3HV: $V_c = 1.66V$) ¹	± 2.0 PPM
Frequency Stability	
Over Temperature Range	See table below
Over Supply Voltage Change (3.3V $\pm 5\%$)	± 0.3 PPM
Over Load Change (15pF $\pm 5\%$)	± 0.3 PPM
Rise Time (10% ~ 90% V_{DD})	5nS
Fall Time (90% ~ 10% V_{DD})	5nS
Symmetry (50% V_{DD})	40% ~ 60%
Output Voltage (V_{OL})	10% V_{DD}
(V_{OH})	90% V_{DD} Min
Output Load (C_L)	15pF
Pullability (T3HV: $V_c = 1.65V \pm 1.0V$) ¹	$\pm 3 \sim \pm 15$ PPM
Aging per year	± 1.0 PPM
Startup Time (T_s)	3.0 mS
Phase Noise @ 1kHz offset	-130 dBc/Hz Typical
Reflow Soldering Temp	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Lead-Free	Yes
RoHS/REACH Compliant	Yes

DIMENSIONS / MECHANICAL SPECIFICATIONS

Top View: Shows a rectangular package with a width of 3.2 ± 0.15 mm and a height of 2.5 ± 0.15 mm. The pins are labeled #1, #2, #3, and #4.

Side View: Shows the package height as 1.0 max mm.

Bottom View: Shows the pin footprints with dimensions: 0.6 mm for the top pin spacing, 0.62 mm for the bottom pin spacing, 1.8 mm for the total width, and 0.84 typ mm for the total height.

Recommended Solder Pad Layout

The diagram shows the recommended solder pad layout for the four pins. The pads are arranged in a 2x2 grid. The dimensions are: 1.6 mm for the horizontal distance between the centers of the top two pads, 1.3 mm for the vertical distance between the centers of the left two pads, 1.3 mm for the horizontal distance between the centers of the bottom two pads, and 0.4 mm for the distance from the left edge of the leftmost pad to the left edge of the solder pad area.

Dimensions in mm
Pin Connections

VCTCXO			
#1 V _c	#3 Out		
#2 GND	#4 V _{DD}		

Available Options by Stability & Operating Temp					
Operating Temperature	± 1 PPM	± 1.5 PPM	± 2 PPM	± 2.5 PPM	± 15 PPM
-30 ~ +85°C	O	O	O	O	NA
-40 ~ +85°C	Δ	O	O	O	NA
-40 ~ +105°C	X	X	X	X	O
Key: O=Available, X=Not Available, NA=Not Applicable, Δ = Consult Fox Engineering					

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

FT3HV

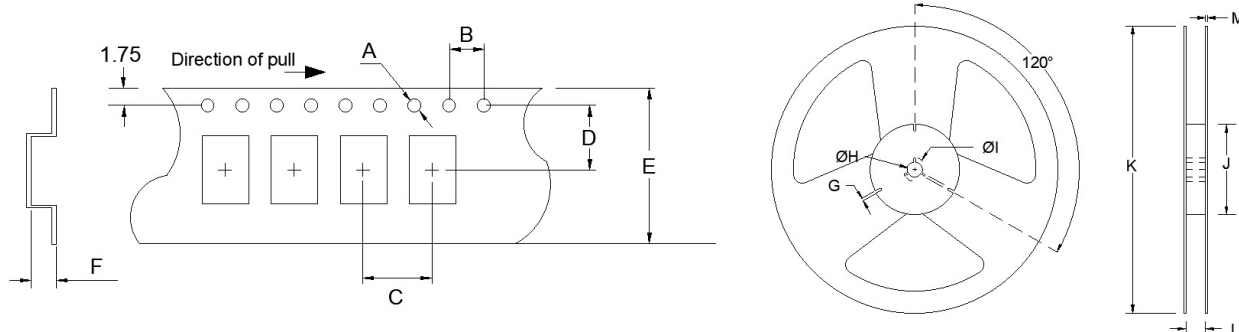
(Former FOX923CEH)

3.2mm x 2.5mm

HCMOS VCTCXO



TAPE SPECIFICATIONS (mm)							REEL SPECIFICATIONS (mm)						
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 VCTCXO Model T3HV¹

Sample PN: **FT3HVBPK25.0-T3**

F	T3HV	B	P	K	25.0	-T3
Fox	Model Number T3HV = VCTCXO	Tolerance 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 +85°C P = -40 to +105°C	Frequency (MHz)	Values Added Options Blank = Bulk T1 = 1,000 pcs T2 = 2,000 pcs T3 = 3,000 pcs

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

Reliability Test Conditions

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ABRACON:

[FT3HVBTK20.0-BULK](#) [FT3HVBPK16.0-T1](#) [FT3HNBSK25.0-BULK](#) [FT3HNBSK25.0-T3](#) [FT3HVBSK25.0-BULK](#)
[FT3HVBSK25.0-T3](#) [FT3HNBPK32.0-T3](#) [FT3HNBPK32.0-BULK](#) [FT3HNBRM20.0-BULK](#) [FT3HNBRM20.0-T1](#)
[FT3HVBTK20.0-T1](#) [FT3HNBPK10.0-T3](#) [FT3HNBPK12.0-T3](#) [FT3HNBPK16.0-T3](#) [FT3HNBPK25.0-T3](#)
[FT3HNBPK27.0-T3](#) [FT3HNBPK32.0-T1](#) [FT3HNBTK12.0-T1](#) [FT3HVBRM20.0-1-T3](#) [FT3HVBRM24.0-1-T3](#)
[FT3HVBTK20.0-T3](#)