

## 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 ~ +85°C
Supply Voltage ( $V_{DD}$ ) ( $\pm 5\%$ )	2.5V; 2.7V; 2.8V; 3.0V; 3.3V
Input Current ( $I_{DD}$ )	2.0 mA
Initial Frequency Tolerance @ 25°C (after reflow) (T3CV: $V_c = 0.5V_{DD}$ ) <sup>1</sup>	$\pm 2.0$ PPM
Frequency Stability	
Over Temperature Range	(See table below)
Over Supply Voltage Change ( $V_{DD} \pm 5\%$ )	$\pm 0.3$ PPM
Over Load Change [10k $\Omega$ /10pF]+-10%	$\pm 0.3$ PPM
Output Voltage Level	0.8V <sub>p-p</sub> min
Output Load	[10k $\Omega$ /10pF]+-10%
Pullability ( $V_c = 0.5V_{DD} \pm 1.0V$ ) <sup>1</sup>	$\pm 3 \sim \pm 15$ PPM
Aging per year	$\pm 1.0$ 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**

Dimensions:  $3.2 \pm 0.15$  (width),  $2.5 \pm 0.15$  (height). Pin locations: #1 (bottom-left), #2 (bottom-right), #3 (top-right), #4 (top-left).

**Side View**

Dimension: 1.0 max (height).

**Bottom View**

Dimensions: 0.6 (width of top pad), 0.70 (height of left pad), 1.88 (width of bottom pad), 0.84 (height of right pad). Pin locations: #1 (top-left), #2 (top-right), #3 (bottom-right), #4 (bottom-left).

## Recommended Solder Pad Layout

Dimensions: 1.6 (width of top pad), 1.3 (height of top pad), 1.0 (width of bottom pad), 0.4 (height of bottom pad).

Dimensions in mm

## Pin Connections

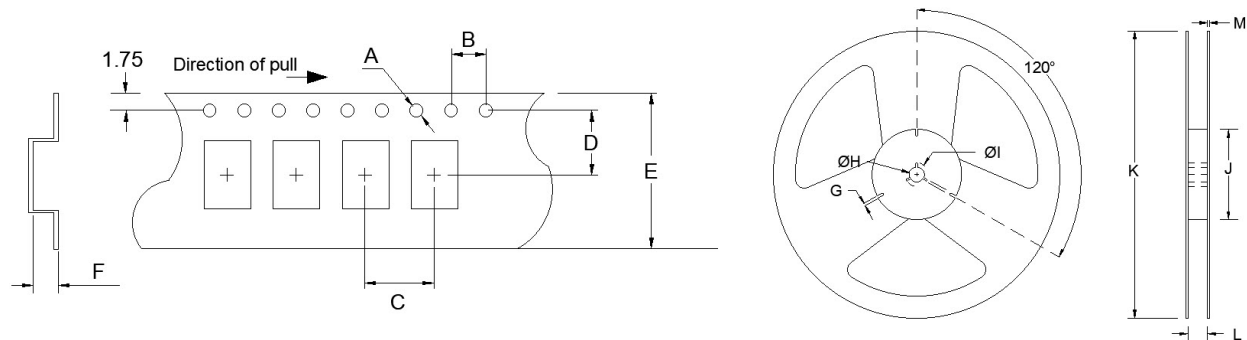
VCTCXO			
#1 V <sub>c</sub>	#3 Out		
#2 GND	#4 V <sub>DD</sub>		

\*Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, reference pin shape, etc. may vary. All specifications subject to change without notice.

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

<sup>1</sup>For proper operation, a control voltage ( $V_c$ ) must be applied to pin 1 of VCTCXO's.

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 -T2 = 2,000 -T1 = 1,000	2.0	ø13	ø21	ø60	ø180	9.0	1.5



Available Options & Part Identification for VCTCXO Model T3CV <sup>1</sup>						
Sample PN: <u>FT3CVBPK25.0-T3</u>						
F	T3CV	B	P	K	25.0	-T3
<b>Fox</b>	<b>Model Number</b> T3CV = VCTCXO	<b>Voltage</b> B = +3.3V±5% D = +3.0V±5% Q = +2.8V±5% S = +2.7V±5% H = +2.5V±5%	<b>Stability</b> T = ±1.0 PPM S = ±1.5 PPM R = ±2.0 PPM <b>P = ±2.5 PPM</b> F = ±15 PPM	<b>Operating Temperature</b> <b>K = -30 to +85°C</b> M = -40 to +85°C P = -40 to +105°C	<b>Frequency (MHz)</b>	<b>Values Added Options</b> Blank = Bulk T1 = 1,000 pcs T2 = 2,000 pcs <b>T3 = 3,000 pcs</b>

<sup>1</sup> 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
Please contact Abracon Quality Assurance department

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[FT3CNDPK32.0-T3](#) [FT3CVDTK20.0-T1](#) [FT3CVDTM16.384-T3](#)