7.5x5.2mm HCMOS VCXO

Y7H
(former VCS Series)
DATASHEET

- VCXO
- Supply Voltages: 3.3V; 5.0V

3.3V Specifications

Parameter	Max unless otherwise specified
Frequency Range	1.000~ 96.000 MHz
Temperature Range Operating (T_{OPR}) Storage (T_{STG})	 See Table -40°C ~ +85ºC
Frequency Stability	See Table below
Pullability (Vc = 1.65V ± 1.5V)	See Options Table
Supply Voltage (V_{DD})	3.3V ± 10%
Control Voltage (Vc)[2]	1.65V ± 1.5V
Input Current (I_{DD}) 1.0 ~ 30MHz >30.0 ~ 45MHz >45.0 ~ 96MHz	 15 mA 25 mA 50 mA
Output Symmetry (50% V_{DD})	40% ~ 60%
Rise/Fall Time (10% ~ 90% V_{DD}) (T_R/T_F)	5 nS
Output Voltage (V_{OL}) (V_{OH})	10%V_{DD} 90%V_{DD} Min
Output Load (HCMOS)	15 pF
Start-up Time (T_S)	10 mS
Enable/Disable Time [3]	150 nS
Frequency Linearity	± 10%
Modulation Bandwidth	20 kHz Min

ENABLE / DISABLE FUNCTION	
Pin2	Output
OPEN [1]	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

- Available Options by Stability & Operating Temp

Frequency Stability	Operating Temperature (ºC)	Frequency Range (MHz)
±100PPM[2]	-10 ~ +70	1.0 ~ 96.0
±100PPM[2]	-40 ~ +85	1.0 ~ 96.0
±50PPM[2]	-10 ~ +70	1.0 ~ 96.0
±50PPM[2]	-40 ~ +85	1.0 ~ 96.0
±25PPM[2]	-10 ~ +70	1.0 ~ 96.0
±25PPM[3]	-40 ~ +85	1.0 ~ 96.0

[1] An internal pull-up resistor from pin 2 to pin 4 allows active output if pin 2 is left open
[2] Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock, vibration, reflow, and one-year aging and Vc=1.65V.
[3] Inclusive of 25°C tolerance, operating temperature range and Vc=1.65V.

© Copyright 2020 Fox Electronics. All rights reserved

Title / Description: Y7H SERIES STANDARD SPECIFICATIONS		
Drawing Number: Y7H-DOC-1		**Size:** A
Part Number:		**Cage:** 61429
Draftsperson: BEC	**Approved:** MAJ	**Revision Date:** 03/03/2020

5.0V Specifications

Parameter	Max unless otherwise specified
Frequency Range	1.000~ 80.000 MHz
Temperature Range Operating (T_{OPR}) Storage (T_{STG})	 See Table -40°C ~ +85ºC
Frequency Stability	See Table below
Pullability (Vc = 2.5V ± 2.0V)	See Options Table
Supply Voltage (V_{DD})	5.0V ± 10%
Control Voltage (Vc)[2]	2.5V ± 2.0V
Input Current (I_{DD}) 1.0 ~ 18MHz >18.0 ~ 36MHz >36.0 ~ 52MHz >52.0 ~ 80MHz	 20 mA 30 mA 40 mA 60 mA
Output Symmetry (50% V_{DD})	40% ~ 60%
Rise/Fall Time (10% ~ 90% V_{DD}) (T_R/T_F)	5 nS
Output Voltage (V_{OL}) (V_{OH})	10%V_{DD} 90%V_{DD} Min
Output Load (HCMOS)	15 pF
Start-up Time (T_S)	10 mS
Enable/Disable Time [3]	150 nS
Frequency Linearity	± 10%
Modulation Bandwidth	20 kHz Min

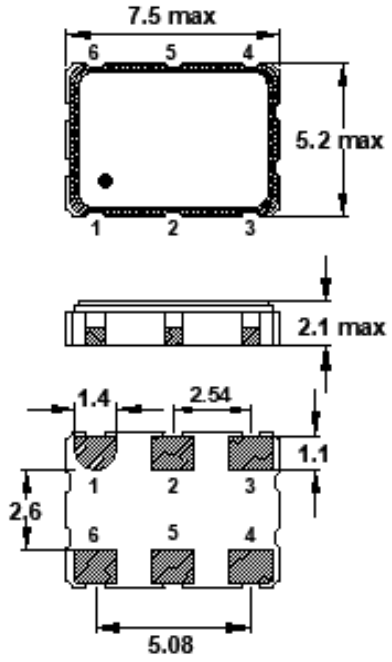
ENABLE / DISABLE FUNCTION	
Pin2	Output
OPEN [1]	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

• Available Options by Stability & Operating Temp

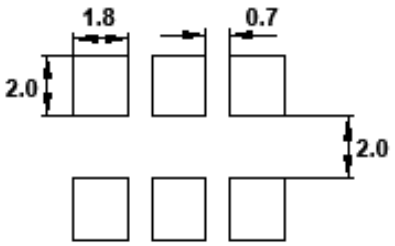
Frequency Stability	Operating Temperature (ºC)	Frequency Range (MHz)
±100PPM[2]	-10 ~ +70	1.0 ~ 80.0
±100PPM[2]	-40 ~ +85	1.0 ~ 80.0
±50PPM[2]	-10 ~ +70	1.0 ~ 80.0
±50PPM[2]	-40 ~ +85	1.0 ~ 80.0
±25PPM[2]	-10 ~ +70	1.0 ~ 80.0
±25PPM[3]	-40 ~ +85	1.0 ~ 80.0

[1] An internal pull-up resistor from pin 2 to pin 4 allows active output if pin 2 is left open
[2] Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, shock, vibration, reflow, and one-year aging and Vc=2.5V.
[3] Inclusive of 25°C tolerance, operating temperature range and Vc=2.5V.

© Copyright 2020 Fox Electronics. All rights reserved



Recommended Solder Pad Layout



Dimensions are in millimeters.

Pin Connections

#1 VC	#4 Output
#2 E/D	#5 N.C.
#3 GND	#6 Voo

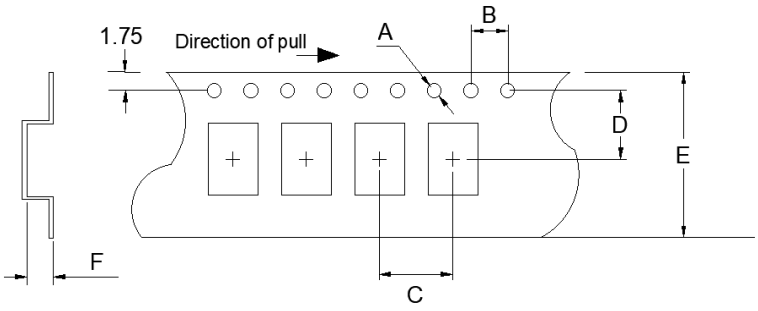
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Seal Method	Seam
Lead (Pb) Free	Yes
ROHS/REACH Compliant	Yes

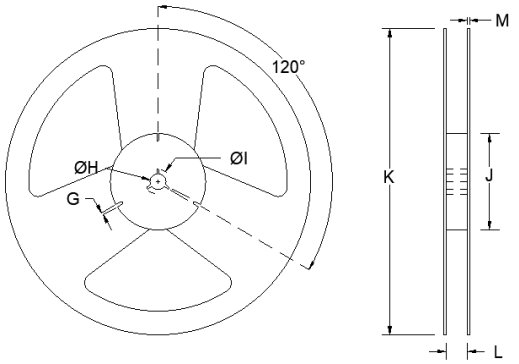
© Copyright 2020 Fox Electronics. All rights reserved

7.5x5.2mm HCMOS VCXO

Y7H
(former VCS Series)
DATASHEET

Tape Specifications (millimeters)								Reel Specifications (millimeters)						
A	B	C	D	E	F	Reel Qty		G	H	I	J	K	L	M
Ø1.55	4.0	8.0	7.5	16.0	2.15	-T2 = 2,000 -T1 = 1,000		2.0	Ø13	Ø21	Ø80	Ø255	17.5	2.0





Available Options & Part Identification*

Example: F Y7H C J M 27.0

F	Y7H	C	J	M	27.0
F = Fox	**Model Number**	**Voltage**	**Stability/Pullability**	**Operating Temperature**	**Frequency (MHz)**
		A = 5.0V±10%	E = ±25PPM/±50PPM	E = -10 to +70ºC	
		C = 3.3V±10%	F = ±50PPM/±50PPM	**M = -40 to +85ºC**	
			H = ±25PPM/±100PPM		
			J = ±50PPM/±100PPM		
			K = ±100PPM/±100PPM		

*Not all frequencies in the frequency range, or every combination of stability, temp range, and voltage available.

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 2020 Fox Electronics. All rights reserved

Title / Description: Y7H SERIES STANDARD SPECIFICATIONS			
Drawing Number: Y7H-DOC-1			**Size:** A
Part Number:			**Cage:** 61429
Draftsperson: BEC	**Approved:** MAJ		**Revision Date:** 03/03/2020