



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 ~ +85°C
Frequency Stability	See Table below
Pullability (V _c = 1.65V ± 1.5V)	See Options Table
Supply Voltage (V _{DD})	3.3V ± 10%
Control Voltage (V _c) 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} ≥ 70%V _{DD}	Active
'0' Level V _{IL} ≤ 30%V _{DD}	High Z

• Available Options by Stability & Operating Temp

Frequency Stability	Operating Temperature (°C)	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 V_c=1.65V.

³ Inclusive of 25°C tolerance, operating temperature range and V_c=1.65V.





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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 ~ +85°C
Frequency Stability	See Table below
Pullability ($V_c = 2.5V \pm 2.0V$)	See Options Table
Supply Voltage (V_{DD})	5.0V \pm 10%
Control Voltage (V_c) ²	2.5V \pm 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	\pm 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 (°C)	Frequency Range (MHz)
$\pm 100PPM^2$	-10 ~ +70	1.0 ~ 80.0
$\pm 100PPM^2$	-40 ~ +85	1.0 ~ 80.0
$\pm 50PPM^2$	-10 ~ +70	1.0 ~ 80.0
$\pm 50PPM^2$	-40 ~ +85	1.0 ~ 80.0
$\pm 25PPM^2$	-10 ~ +70	1.0 ~ 80.0
$\pm 25PPM^3$	-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 $V_c=2.5V$.

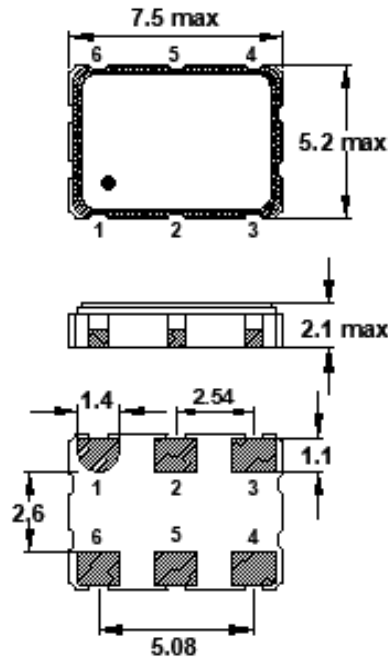
³ Inclusive of 25°C tolerance, operating temperature range and $V_c=2.5V$.



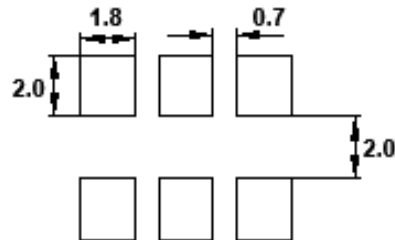


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Recommended Solder Pad Layout



Dimensions are in millimeters.

Pin Connections

#1 VC #4 Output
#2 E/D #5 N.C.
#3 GND #6 V_{DD}

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



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Title / Description: Y7H SERIES STANDARD SPECIFICATIONS

Drawing Number: Y7H-DOC-1

Part Number:

Draftsperson: BEC

Approved: MAJ

Size: A

Cage: 61429

Revision Date: 03/03/2020



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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 A = 5.0V±10% C = 3.3V±10%	Stability/Pullability E = ±25PPM/±50PPM F = ±50PPM/±50PPM H = ±25PPM/±100PPM J = ±50PPM/±100PPM K = ±100PPM/±100PPM	Operating Temperature E = -10 to +70°C M = -40 to +85°C	Frequency (MHz)

*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>

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