



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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Title / Description: Y7H SERIES STANDARD SPECIFICATIONS

Drawing Number: Y7H-DOC-1

Part Number:

Draftsperson: BEC

Approved: MAJ

Size: A

Cage: 61429

Revision Date: 09/18/2019



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5.0V Specifications

Parameter	Max unless otherwise specified
Frequency Range	1.000~ 80.000 MHz
Temperature Range	
Operating (T _{OPR})	See Table
Storage (T _{STG})	-40°C ~ +85°C
Frequency Stability	See Table below
Pullability (V _c = 2.5V ± 2.0V)	See Options Table
Supply Voltage (V _{DD})	5.0V ± 10%
Control Voltage (V _c) ²	2.5V ± 2.0V
Input Current (I _{DD})	
1.0 ~ 18MHz	20 mA
>18.0 ~ 36MHz	30 mA
>36.0 ~ 52MHz	40 mA
>52.0 ~ 80MHz	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})	10%V _{DD}
(V _{OH})	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 ~ 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 V_c=2.5V.

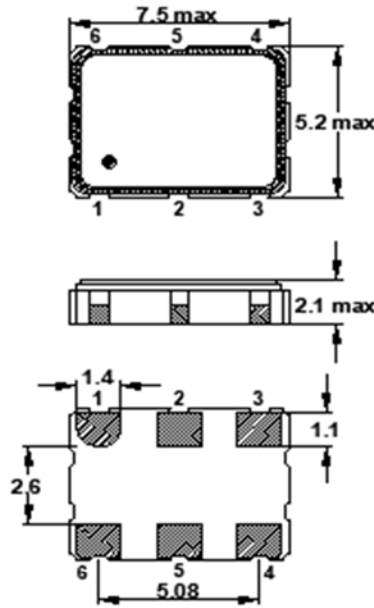
³ Inclusive of 25°C tolerance, operating temperature range and V_c=2.5V.



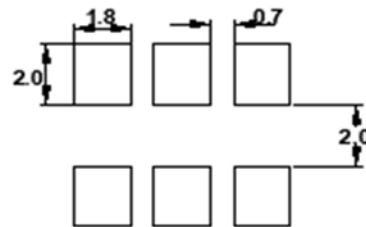


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Recommended Solder Pad Layout



Dimensions are in millimeters.

Pin Connections

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

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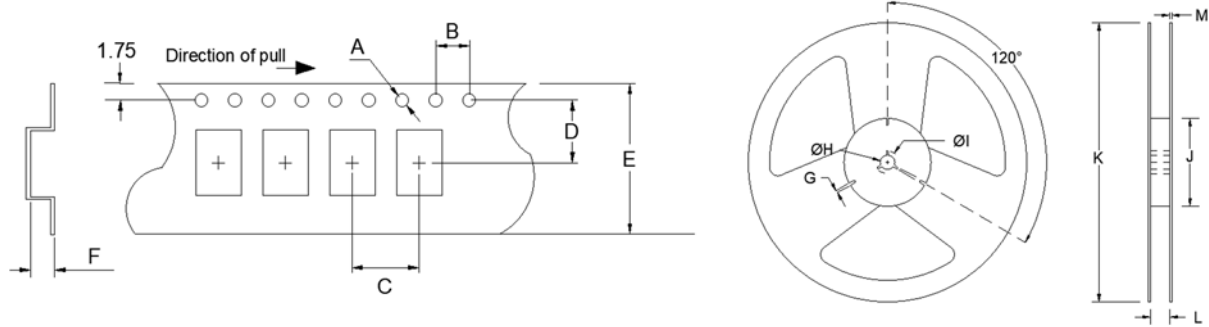
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Tape Specifications (millimeters)							Reel Specifications (millimeters)						
A	B	C	D	E	F	Reel Qty	G	H	I	J	K	L	M
Ø1.55	4.0	8.0	7.5	16.0	2.15	-T2 = 2,000 -T1 = 1,000	2.0	Ø13	Ø21	Ø80	Ø255	17.5	2.0



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.



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		Pin1	Output (P
		OPEN ²	Active
		'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
		'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z