FY7H

(Former VCS series)

7.5mm x 5.2mm

HCMOS VCXO

Features

- VCXO
- Supply Voltage: 3.3V; 5.0V

3.3V SPECIFICATIONS	
PARAMETERS	**MAX (Unless otherwise noted)**
Frequency Range	1.000~ 96.000 MHz
Temperature Range Operating (T_{OPR}) Storage (T_{STG})	 See Table -40°C ~ +85˚C
Frequency Stability	(See options below)
Pull ability (V_C = 1.65V ± 1.5V)	(See options below)
Supply Voltage (V_{DD})	3.3V ± 5%
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	
Pin[1]	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)**
±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.

5.0V SPECIFICATIONS	
PARAMETERS	**MAX (Unless otherwise noted)**
Frequency Range	1.000~ 80.000 MHz
Temperature Range Operating (T_{OPR}) Storage (T_{STG})	 See Table -40°C ~ +85˚C
Frequency Stability	(See options below)
Pull ability (V_C = 2.5V ± 2.0V)	(See options below)
Supply Voltage (V_{DD})	5.0V ± 10%
Control Voltage (V_C)[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	
Pin[1]	Output
OPEN [1]	Active
'1' Level $V_{IH} \geq 70\%V_{DD}$	Active
'0' Level $V_{IL} \leq 30\%V_{DD}$	High Z

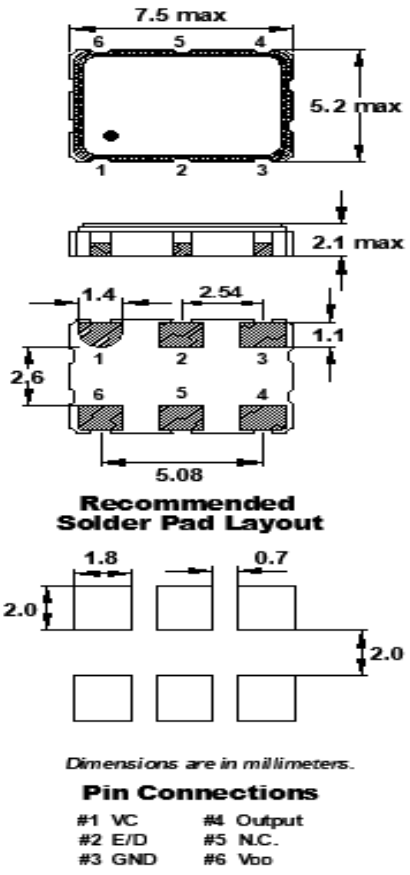
Available Options by Stability & Operating Temp		
Frequency Stability	**Operating Temperature (°C)**	**Frequency Range (MHz)**
±100PPM[2]	-10 ~ +70	1.0 ~ 80.0
±100PPM[2]	-40 ~ +85	1.0 ~ 80.0
±50PPM[2]	-10 ~ +70	1.0 ~ 80.0
±50PPM[2]	-40 ~ +85	1.0 ~ 80.0
±25PPM[2]	-10 ~ +70	1.0 ~ 80.0
±25PPM[3]	-40 ~ +85	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.

DIMENSIONS / MECHANICAL SPECIFICATIONS



Dimensions are in millimeters.

Pin Connections

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

Note:
*A 0.01µF capacitor should be placed between V_{DD} (Pin 6) and GND (Pin3) to minimize power supply line noise.
*Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellation's, reference pin shape, etc. may vary.

STANDARD SPECIFICATIONS

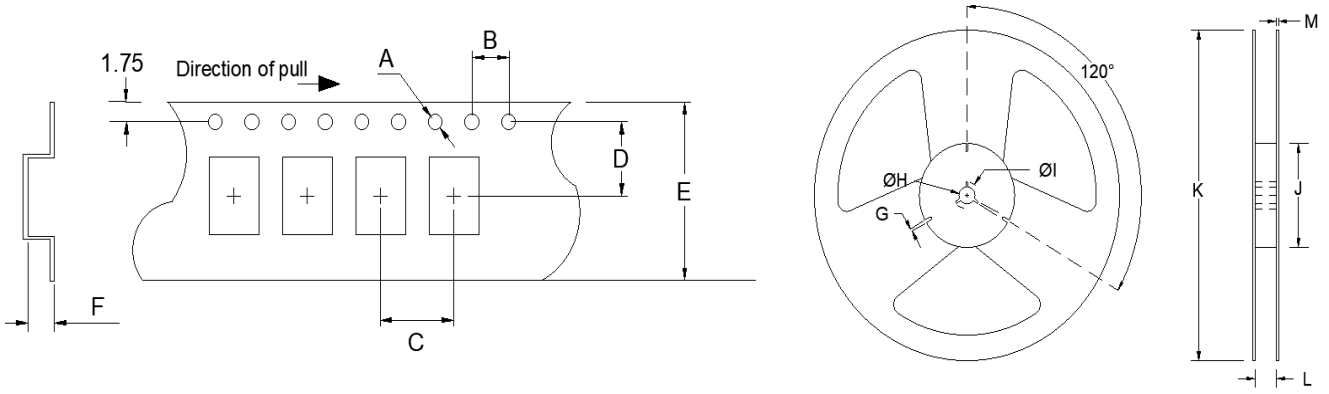
PARAMETERS	MAX (Unless otherwise noted)
Maximum Soldering Temp / Time	260°C / 10 Seconds x 2
Moisture Sensitivity Level (MSL)	1
Termination Finish	Au over Ni
Seal Method	Seam
Lead (Pb) Free	Yes
ROHS/REACH Compliant	Yes

FY7H

(Former VCS series)

7.5mm x 5.2mm
HCMOS VCXO

TAPE SPECIFICATIONS (mm)							REEL SPECIFICATIONS (mm)						
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 for HCMOS VCXO Y7H*

Sample PN: FY7HCJM27.0-T2

F	Y7H	C	J	M	27.0	-T2
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 +70ºC **M = -40 to +85ºC**	**Frequency (MHz)**	**Values Added Options** Blank = Bulk T1 = 1,000 pcs **T2 = 2,000 pcs**

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

Reliability Test Conditions
Please contact Abracon Quality Assurance department