



### FEATURES

- 3.3V Operation
- HCMOS Output
- Enable/Disable
- Tape and Reel (2,000 pcs. STD)

### OPTIONS

- Many Stability/Pullability Options
- -40°C ~ +85°C Option ('R' Version)

XpressO® Equivalent  
**FVXO-HC73**

Why XpressO?  
Lower Cost, Faster Delivery, Low Jitter!

• PART NUMBER SELECTION <a href="#">Learn More</a> - Internet Required					
Part Number	Model Number	Frequency Stability <sup>1</sup>	Frequency Pullability	Operating Temperature	Frequency
421-Frequency-xxxxx	VCS12AXT	±25PPM	±50PPM	-10 ~ +70(°C)	1.000~80.000
437-Frequency-xxxxx	VCS12AXTR <sup>2</sup>	±25PPM	±50PPM	-40 ~ +85(°C)	1.000~80.000
422-Frequency-xxxxx	VCS15AXT	±50PPM	±50PPM	-10 ~ +70(°C)	1.000~80.000
439-Frequency-xxxxx	VCS15AXTR	±50PPM	±50PPM	-40 ~ +85(°C)	1.000~80.000
423-Frequency-xxxxx	VCS22AXT	±25PPM	±100PPM	-10 ~ +70(°C)	1.000~80.000
443-Frequency-xxxxx	VCS22AXTR <sup>3</sup>	±25PPM	±100PPM	-40 ~ +85(°C)	1.000~80.000
424-Frequency-xxxxx	VCS25AXT	±50PPM	±100PPM	-10 ~ +70(°C)	1.000~80.000
445-Frequency-xxxxx	VCS25AXTR	±50PPM	±100PPM	-40 ~ +85(°C)	1.000~80.000
425-Frequency-xxxxx	VCS20AXT	±100PPM	±100PPM	-10 ~ +70(°C)	1.000~80.000
441-Frequency-xxxxx	VCS20AXTR	±100PPM	±100PPM	-40 ~ +85(°C)	1.000~80.000

• ELECTRICAL CHARACTERISTICS	
PARAMETERS	MAX (unless otherwise noted)
Frequency Range (Fo)	1.000 ~ 80.000 <sup>4</sup> MHz
Storage Temperature Range (T <sub>STG</sub> )	-40°C ~ +85°C
Supply Voltage (V <sub>DD</sub> )	3.3V ± 10%
Control Voltage (V <sub>c</sub> )	1.65V ± 1.5V
Input Current (I <sub>DD</sub> )	
1.000 ~ 30.000 MHz	15mA
30.000+ ~ 45.000 MHz	25mA
45.000+ ~ 80.000 MHz	50mA
Output Symmetry (50% V <sub>DD</sub> )	40% ~ 60%
Rise Time (10% ~ 90% V <sub>DD</sub> ) (T <sub>R</sub> )	5nS
Fall Time (90% ~ 10% V <sub>DD</sub> ) (T <sub>F</sub> )	5nS
Output Voltage (V <sub>OL</sub> )	10% V <sub>DD</sub>
(V <sub>OH</sub> )	90% V <sub>DD</sub> Min
Output Current (I <sub>OL</sub> )	4.0mA Min
(I <sub>OH</sub> )	-1.0mA Min
Output Load (HCMOS)	15pF
Start-up Time (T <sub>s</sub> )	10mS
Enable/Disable Time <sup>2</sup>	150nS
Frequency Linearity	±10%
Modulation Bandwidth	20 kHz

<sup>1</sup> Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock, vibration, and V<sub>c</sub> = 1.65V.

<sup>2</sup> An internal pullup resistor from pin 2 to pin 6 allows active output if pin 2 is left open.

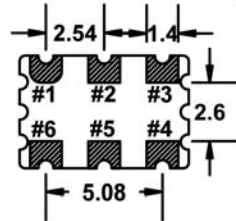
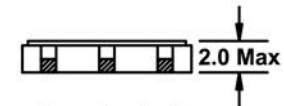
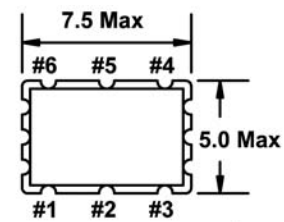
<sup>3</sup> Available on an individual inquiry basis.

<sup>4</sup> Custom specifications from 45.000 to 80.000 MHz available on an individual inquiry basis.

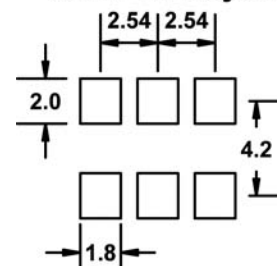
Note: A 0.01µF bypass capacitor should be placed between V<sub>DD</sub> (Pin 6) and GND (Pin 3) to minimize power supply line noise.

Note: An alternate pin connection with E/D on pin #5 is available.

All specifications subject to change without notice. Rev. 6/1/04



#### Recommended Solder Pad Layout



#### Pin Connections

#1 V <sub>Control</sub>	#4 Output
#2 E/D	#5 N.C.
#3 GND	#6 V <sub>DD</sub>

All dimensions are in millimeters.

• ENABLE / DISABLE FUNCTION	
INH (Pin 2)	OUTPUT (Pin 4)
OPEN <sup>2</sup>	ACTIVE
'1' Level V <sub>IH</sub> ≥ 70% V <sub>DD</sub>	ACTIVE
'0' Level V <sub>IL</sub> ≤ 30% V <sub>DD</sub>	High Z