

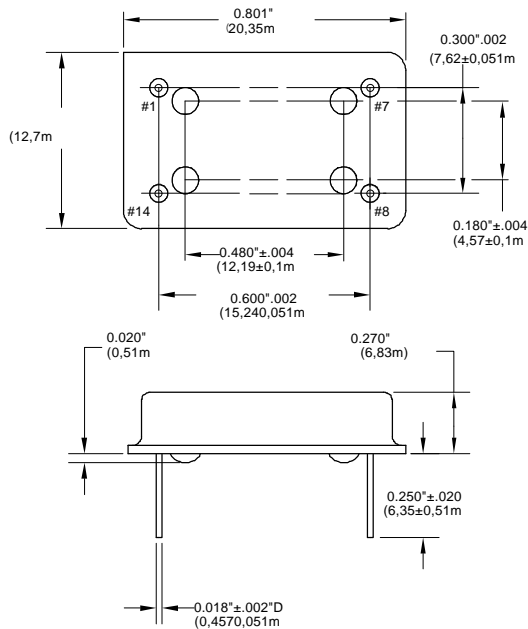
# VALPEY-FISHER

## VFHS170 SERIES HCMOS CRYSTAL CLOCK OSCILLATORS FOR 5 V SYSTEMS

### Features:

- *Tristate Output Available*
- *Low Cost*
- *Industrial Temperature Range*
- *Wide Frequency Range*
- *Very Low Phase Jitter*

### Package:



All dimensions are TYP, in inches

### Specifications

Parameter	Symb	Condition	Min	Typ	Max	Unit	Note
<b>Absolute Maximum Ratings</b>							
Input Break Down Voltage	V <sub>cc</sub>		-0.5		7.0	V	
Storage temp.	T <sub>s</sub>		-55		125	°C	

### Electrical

Frequency range	F		.500		70	MHz	
Frequency stability	ΔF/F	Overall	-100		100	PPM	1
Input Voltage	V <sub>cc</sub>		4.50	5.00	5.50	V	
Input Current	I <sub>cc</sub>	unloaded	30	40	50	mA	2
Load	10 LSTTL						
Duty cycle		@ 50% V <sub>cc</sub>	40	50	60	%	3
Rise/Fall time	Tr/Tf	20 % to 80%	8	10	15	ns	
Logic "1" level	V <sub>oh</sub>	Loaded, over all	.9V <sub>cc</sub>			V	
Logic "0" level	V <sub>ol</sub>	Loaded, over all			.1V <sub>cc</sub>	V	
Start up time	T <sub>s</sub>			2	10	ms	
Phase jitter		1σ			1	ps	
Enable Time					100	ns	

### Environmental and Mechanical

Operating temp. range	0°C to 70°C (-40°C to 85°C available)
Mechanical Shock	Per MIL-STD-202, Method 213, Cond. E
Thermal Shock	Per MIL-STD-883, Method 1011, Cond. A
Vibration	Per MIL-STD-883, Method 2007, Cond. A
Soldering Conditions	260°C, for 10s, Max.
Hermetic Seal	Leak rate less than 5x10 <sup>-8</sup> atm.ccm/s of helium

### Electrical Connections:

Pin Out	Pin #1 - Tri-State Control Pin #3 - Output	Pin #2 - Case, GND Pin #4 - V <sub>cc</sub>
---------	-----------------------------------------------	------------------------------------------------

### Notes:

1. Standard frequency stability, others available.
2. Typical current load and frequency dependent.
3. Standard symmetry, tighter available.

### Creating a part number:

