



## VF150 Series TTL Enable/Disable & Tri-State Hybrid Crystal Clock Oscillators

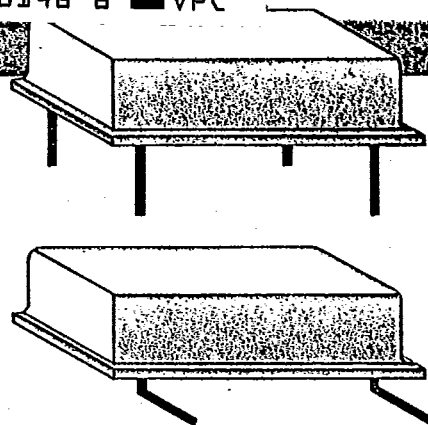
Valpey-Fisher's series of tri-state and enable/disable hybrid oscillators offer several options for changing the output logic level or turning on and off the output of the oscillators. This feature allows testing of the completed circuit board with the oscillator in place.

When an enable/disable design is disabled, the output switches to logic 0 or logic 1, stopping the function of the oscillator but leaving it as an element of the circuit during board test. When a tri-state oscillator is disabled, the output goes to a high impedance state, making it appear that the oscillator has been completely removed from the circuit. The availability of the high impedance condition means that the finished circuit board can be tested by automated test equipment (ATE) without having to remove the oscillator from the circuit.

Valpey-Fisher oscillators are housed in rugged, resistance-welded metal packages to assure long life and hermeticity. Pin 7 case grounding provides RF radiation shielding, and the low package profile and minimal footprint assure efficient use of board space. Normal wave soldering assembly techniques can be used, and a surface mount option is available.

### FEATURES

- Accommodates Automated Test Equipment (ATE)
- Rugged, Resistance Welded Case
- Low Profile
- Proven Quality
- Through Hole or Gull Wing Surface Mount



### SPECIFICATIONS

Frequency Range	2.400 MHz–40.000 MHz	
Frequency Stability*	± 0.01% or ± 0.005%	
Operating Temperature Range	0°C to +70°C	
Storage Temperature Range	–40°C to +100°C	
Input Voltage	5.0 V, ± 0.5 V	
Input Current	60 mA max @ 25°C and VCC = 5.0 V	
Symmetry	40% – 60%, @ 1.4 V	
Rise/Fall Time (max)	2.40000 MHz–9.9999 MHz: 15 nsec 10.0000 MHz–19.9999 MHz: 10 nsec 20.0000 MHz–31.9999 MHz: 8 nsec 32.0000 MHz–40.0000 MHz: 6 nsec	
Logic '0' Level	Up to 31.9999 MHz 32.0000 MHz–40.0000 MHz	0.4 V max 0.5 V max
Logic '1' Level	2.4 V min, full frequency range	
Output Load	10 TTL	
Enable/Disable Input, Pin 1	Logic '0' (0.8 V max) enables, and logic '1' (2.0 V min) disables	
Shock	1000 G's, 0.35 millisec, ½ sine wave, 3 shocks each plane	
Vibration	10–55 Hz, 0.060" D.A., 55–2000 Hz, 35 G's, duration time 12 hours	
Humidity	85% relative humidity, 85°C, 250 hours	
Hermetic Seal	Leak rate less than $2 \times 10^{-8}$ atmosphere cc/sec of helium	

\* Inclusive of calibration tolerance @ 25°C, operating temperature range, input voltage change, load voltage change, aging, shock and vibration.

All specifications subject to change without notice.

# VF150 Series TTL Enable /Disable & Tri-State Hybrid Crystal Clock Oscillators

## HOW TO ORDER

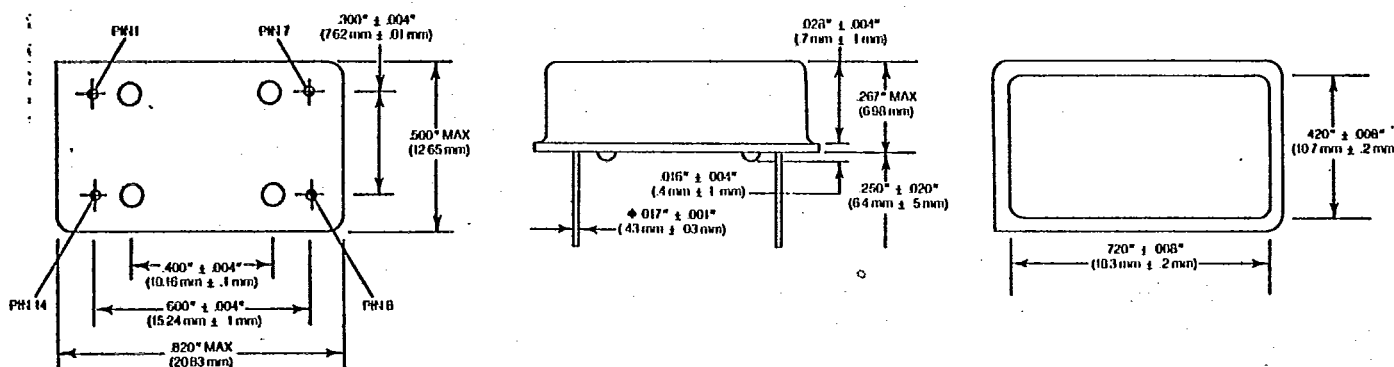
Enable/Disable				
Leaded Pkg.	Surface Mount	Enable Signal*	Disable Signal*	Output when Disabled
VF150-C	VF150-CSM	Logic 1	Logic 0	Logic 0
VF150-C1	VF150-C1SM	Logic 1	Logic 0	Logic 1

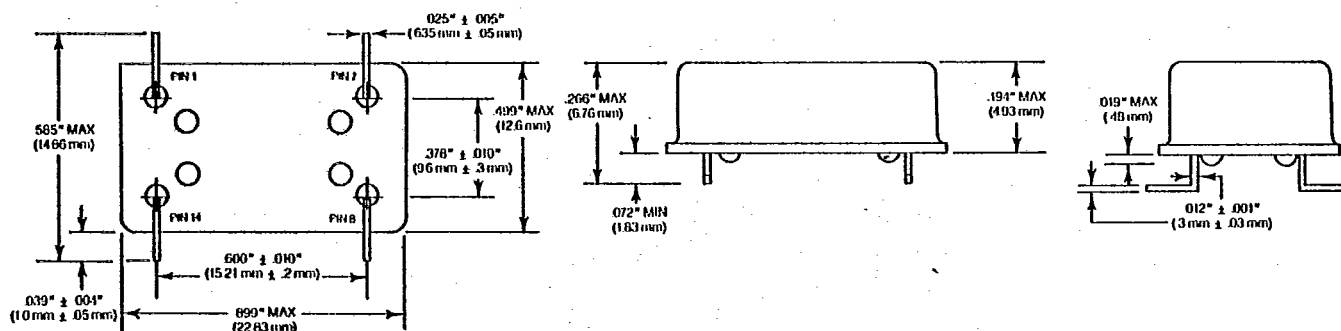
Tri-State				
Leaded Pkg.	Surface Mount	Enable Signal*	Disable Signal*	Output when Disabled
VF150-T	VF150-TSM	Logic 1	Logic 0	None
VF150-T1	VF150-T1SM	Logic 0	Logic 1	None

\* Pin 1 Signal in

## THROUGH HOLE MOUNT



## GULL WING MOUNT



VALPEY-FISHER CORPORATION  
A SUBSIDIARY OF MATEC CORPORATION  
75 SOUTH STREET  
HOPKINTON, MA 01748  
TELEPHONE (617) 435-6831  
FAX (617) 435-5289  
TELEX 94-8332

**VALPEY-FISHER**  
A SUBSIDIARY OF MATEC

Information furnished by Valpey-Fisher is believed to be accurate and reliable. However, no responsibility is assumed by Valpey-Fisher for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Valpey-Fisher. Valpey-Fisher reserves the right to make changes in specifications, without notice, at any time.

PRINTED IN U.S.A.