

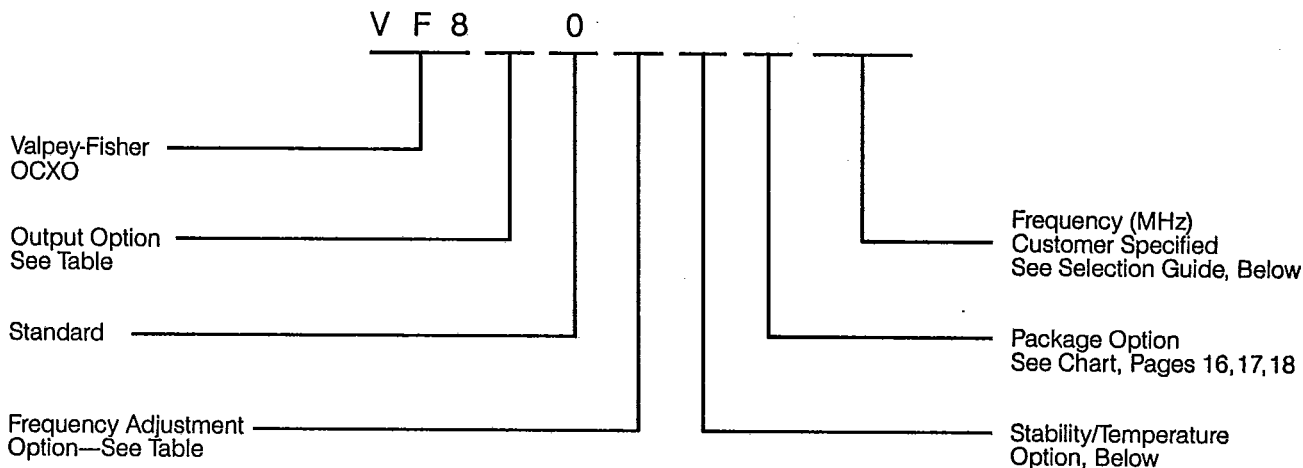
OSCILLATORS

VF800 Series OVEN CONTROLLED CRYSTAL OSCILLATORS (OCXO)

Valpey-Fisher Oven Controlled Crystal Oscillator (OCXO) designs use a highly stable crystal oscillator contained in an oven at a precisely controlled temperature. The oven temperature is optimized to the specific, individual crystal used, assuring extraordinary frequency stability over a wide ambient temperature range. Ovenizing also allows the use of double rotated crystals, resulting in greatly

improved phase noise and decreased accelerational sensitivity. Second in accuracy of frequency only to atomic standards, Valpey-Fisher VF800 series oven controlled oscillator uses include precision frequency generation, secondary frequency standards, and low noise sources for multiplication of frequencies to the microwave range, as in high-end frequency synthesizers.

VF800 Series (OCXO) Ordering Guide



Example: OCXO Design, HCMOS Output, 12.5 MHz, 2" x 2" x 3" Package, $\pm 5 \times 10^{-9}$ Stability Over -20°C to $+60^{\circ}\text{C}$ Range, Mechanical Frequency Adjustment.

Order: VF8801RR 12.5

VF800 Series (OCXO) Output Waveform Options*

WAVE FORM	SINE	TTL	HCMOS
PART # DESIGNATOR	4	5	8

VF800 Series (OCXO) Selection Guide*

PACKAGE OPTION ¹	OUTPUT OPTION ¹	FREQ. RANGE (MHz)	STAB/TEMP OPTION ¹	INPUT VOLTAGE ⁴	ADJUST OPTION ¹	DAILY AGING RATE ²
#	SIZE	#	FORM			
R	2" x 2" x 3"	4	SINE	1-25MHz	R,S,T	+15 VDC
		5	TTL			
		8	HCMOS			
R	2" x 2" x 3"	4	SINE	25-100MHz	R,S	+15 VDC
		5	TTL			
R	2" x 2" x 3"	4	SINE	25-100MHz (Note 3)	T	+15VDC
		5	TTL			

*Consult factory for other options
Notes:

- See appropriate option tables
- After 30 days continuous operation
- Requires internal multiplication. Subharmonics will be -20dBc max.
- Standard input power requirements @ 15VDC: 5W max at turn-on, 2.5W @ 25°C typ after stabilization. Separate input for oven power and other voltages available.

VF800 Series (OCXO) Stability/Temperature Options

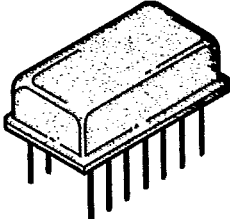
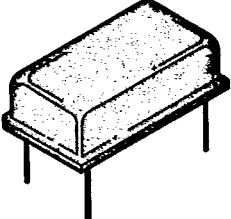
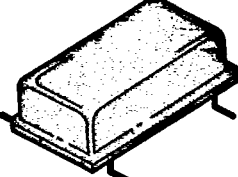
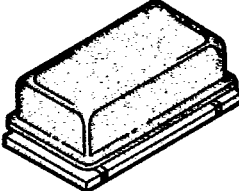
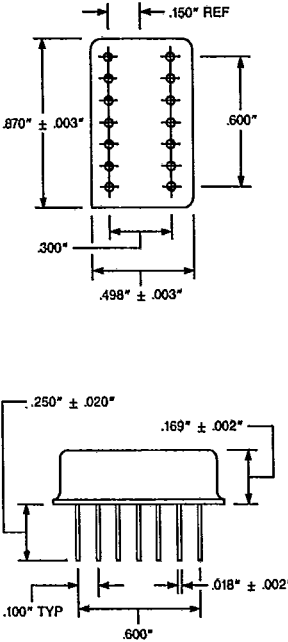
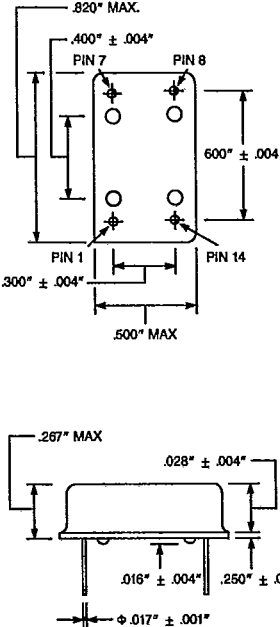
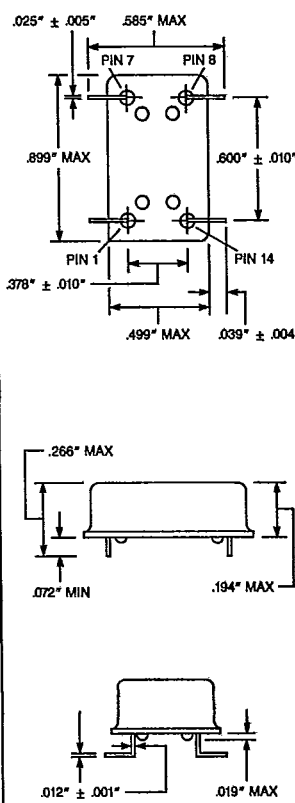
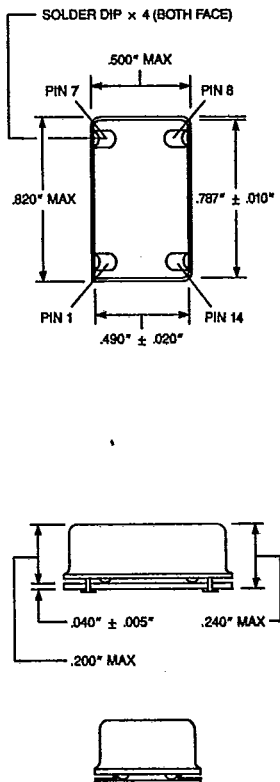
PART # DESIGNATOR	TEMPERATURE/STABILITY RANGE FREQ. STABILITY OVER TEMP RANGE
J	$\pm 1 \times 10^{-8}$ -20°C to 60°C
K	$\pm 5 \times 10^{-7}$ -20°C to 70°C
R	$\pm 5 \times 10^{-8}$ -20°C to 60°C
S	$\pm 1 \times 10^{-8}$ 0°C to 50°C
T	$\pm 5 \times 10^{-9}$ 0°C to 50°C

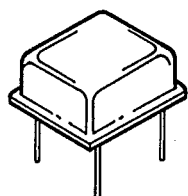
VF800 Series (OCXO) Frequency Adjustment Options

PART # DESIGNATOR	ADJUSTMENT METHOD
0	NONE
1	MECHANICAL
2	ELECTRICAL

OSCILLATORS

OSCILLATOR
HOLDERS AND ENCLOSURES

				
Package Description	14 pin DIP PTH, 14 pins loaded	14 pin DIP PTH, 4 pins loaded	14 pin DIP SMT, 4 leads, Gullwing	14 pin DIP SMT, 4 pads on substrate
Package Designation	Special, consult factory	Standard	G	L
Construction	Metal, Resistance Weld	Metal, Resistance Weld	Metal, Resistance Weld	Metal, Resistance Weld
Logic or Oscillator Series	VF150 (TTL) VF160 (ECL) VF170 (CMOS) VFHS170 (HCMOS) VF600 (VCXO)	VF150 (TTL) VF160 (ECL) VF170 (CMOS) VFHS170 (HCMOS) VF600 (VCXO)	VF150 (TTL) VF160 (ECL) VF170 (CMOS) VFHS170 (HCMOS) VF600 (VCXO)	VF150 (TTL) VF160 (ECL) VF170 (CMOS) VFHS170 (HCMOS)
Package Dimensions Type Available in this Package				

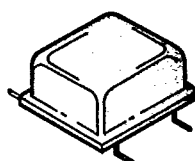


1/2 size DIP
PTH, 4 pins
loaded

84, 85

Metal,
Resistance
Weld

VF75 (TTL)
VF84 (CMOS)
VFHS85 (HCMOS)



1/2 size DIP
SMT, 4 leads
Gullwing

SM

Metal,
Resistance
Weld

VF75 (TTL)
VF84 (CMOS)
VFHS85 (HCMOS)

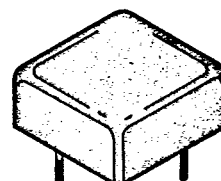


28 pin PLCC,
SMT, 4 "J" leads

PSM

Plastic,
Molded

VF500(TTL/CMOS)

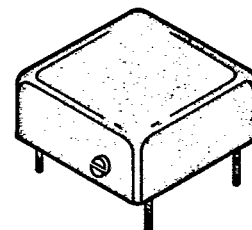


1.5" x 1.5"
stamped, PTH
4 pins

D

Metal,
Solder
Seal

VF500 (TCXO)
VF600 (VCXO)

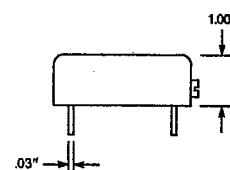
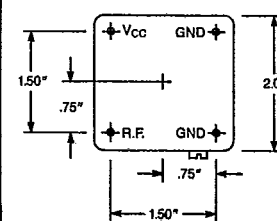
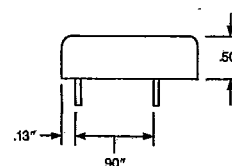
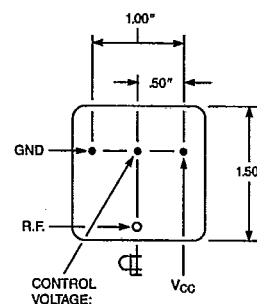
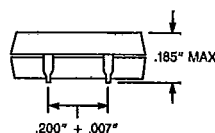
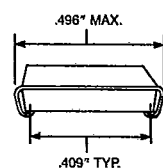
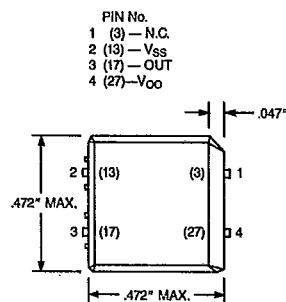
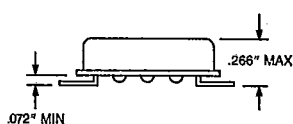
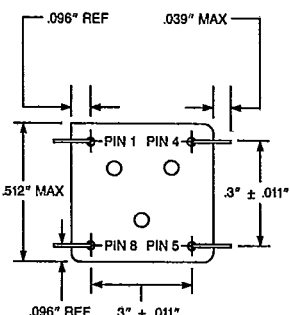
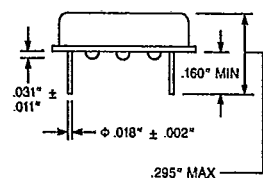
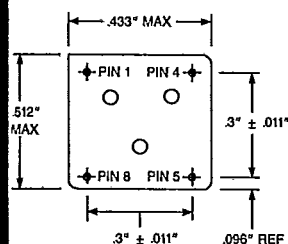


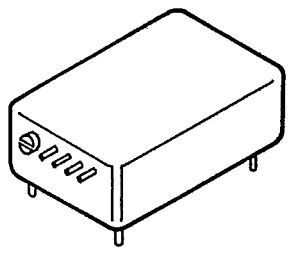
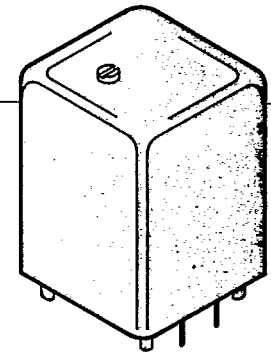
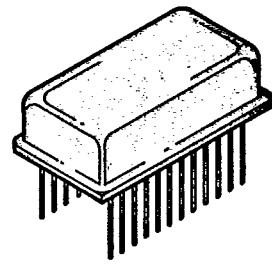
2.0" x 2.0"
stamped, PTH
4 pins

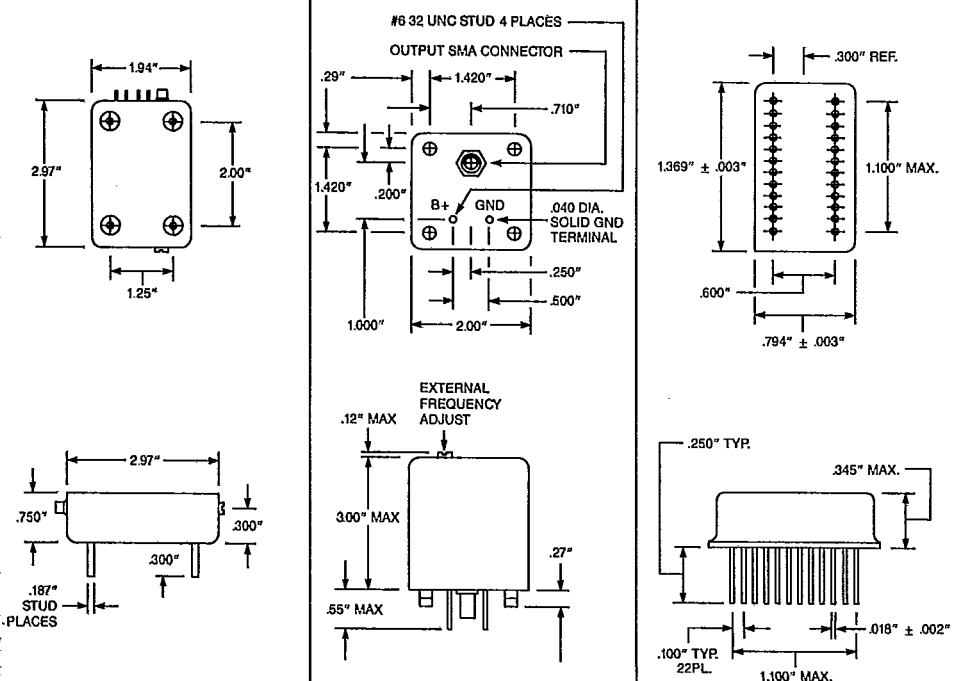
H

Metal,
Solder
Seal

VF500 (TCXO)
VF600 (VCXO)



		
2.0" x 3.0" stamped, PTH, 4 pins + SMT connector	2.0" x 2.0" x 3.0" ht, PTH, 4 studs, 2 pins, SMA connector	24 pin DIP, PTH, 4 to 24 pins loaded
M	R	U
Metal, Solder Seal	Metal, Solder Seal	Metal, Resistance Weld
VF500 (TCXO) VF600 (VCXO)	VF800 (OCXO)	VF500 (TCXO) VF600 (VCXO)



Valpey-Fisher Hybrid Oscillator Options

SERIES/ OPTION	Tighter Symmetry	Half Size	Plastic Package	Double and Triple Outputs	Enable/ Disable Function	Tristate Output
VF75 (TTL)	✓	✓			✓	✓
VF84 (HCMOS)	✓	✓			✓	✓
VF85 (HCMOS)	✓	✓			✓	✓
VF150 (TTL)	✓			✓	✓	✓
VF160 (ECL)					✓	
VF160R (ECL)					✓	
VF161 (ECL)					✓	
VF161R (ECL)					✓	
VF170 (CMOS)	✓					
VFHS170 (HCMOS)	✓			✓	✓	
VFHS170P (HCMOS)	✓		✓			

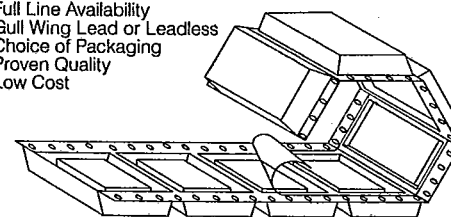
Valpey-Fisher Surface Mount Hybrid Clock Oscillators

Valpey-Fisher oscillators are available in surface mount packages, giving you the many benefits of surface mount technology while continuing Valpey-Fisher's tradition of quality, service and economy. Surface mount oscillators meet the needs of almost every circuit design, allowing reduction in printed circuit board layers and increase in component density. Further benefits can include reduced labor content and cost, increased system reliability, more easily automated assembly and testing, and increased circuit speed due to shorter circuit runs.

Surface mount oscillators from Valpey-Fisher are available in gull wing leaded or leadless design and are suitable for any surface mount soldering technique, including wave, vapor phase, and infrared reflow. Package options include pocket tape and reel and static-free tubes.

Features

- Full Line Availability
- Gull Wing Lead or Leadless
- Choice of Packaging
- Proven Quality
- Low Cost

POCKET TAPE
AND REEL

STATIC FREE TUBE