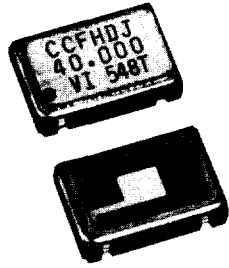


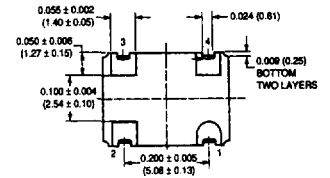
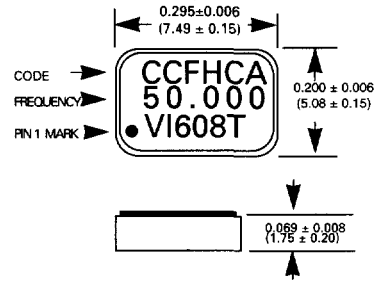
# High Volume Fixed Frequency Crystal Oscillators (XOs)

## C-Type



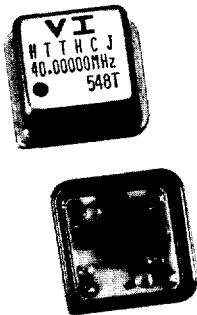
### Features

- PCMCIA Compatible
- Miniature SMT Package
- Stability to  $\pm 32$ ppm
- TTL or CMOS
- Choice of Temperature Range
- Tri-State Output Option
- Hermetically Sealed
- Tape and Reel Configurations



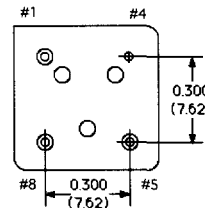
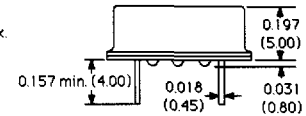
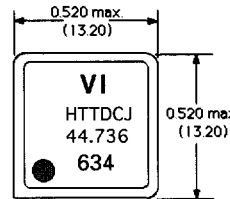
Note: 608 is the date code and represents the year 199(6) and the week (08) of manufacture. Dimensions are in inches and (millimeters).

## H-Type



### Features

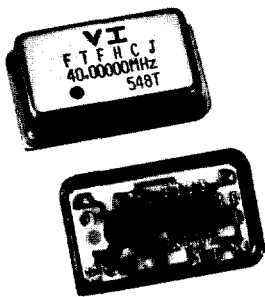
- Industry Standard Pinout
- Stability to  $\pm 25$  ppm
- TTL or CMOS
- Choice of Temperature Range
- Tri-State Output option
- Hermetically Sealed Metal Package
- Tape and Reel Configurations



PIN #	FUNCTION
1	No Connect/3-State
4	Case Ground
5	Output
8	VDD

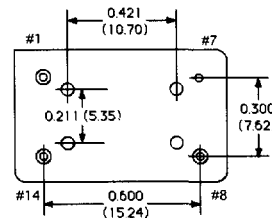
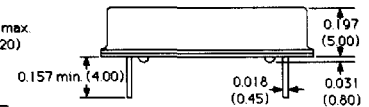
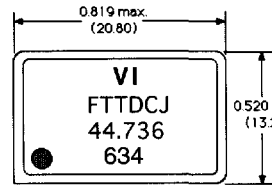
Dimensions are in inches and (millimeters). 634 is the date code and represents the year 199(6) and the week (34) of manufacture.

## F-Type



### Features

- Industry Standard Pinout
- Stability to  $\pm 25$  ppm
- TTL or CMOS
- Choice of Temperature Range
- Tri-State Output option
- Hermetically Sealed Metal Package



PIN #	FUNCTION
1	No Connect/3-State
7	Case Ground
8	Output
14	VDD

Dimensions are in inches and (millimeters). 634 is the date code and represents the year 199(6) and the week (34) of manufacture.

# High Volume Fixed Frequency Crystal Oscillators (XOs)

## Electrical Characteristics - Series C, H and F Type

Parameter	Symbol	Min	Typ	Max	Unit	
Center Frequency Range (See Standard Frequency Table)	C Type H&F	F <sub>0</sub>	1.5	-	75	MHz
			1.0	-	80	MHz
Operational Temperature Range (See Part Numbering Information)	T <sub>OP</sub>	0 to 70 or -40 to 85			°C	
Frequency Stability <sup>1</sup> (See Part Numbering Information)	-	±25 to ±100			ppm from F <sub>0</sub>	
Supply Voltage 5V (3.3V) (See Part Numbering Information)	V <sub>DD</sub>	3.0	3.3	3.6	V	
		4.5	5.0	5.5	V	
Supply Current	I <sub>DD</sub>	-	-	15 (10)	mA	
1.5 MHz to 20 MHz		-	-	50 (35)	mA	
>20 MHz <sup>2</sup>		-	-	-	-	
Output Levels (CMOS)						
Output High	V <sub>OH</sub>	0.9*V <sub>DD</sub>	-	0.1+V <sub>DD</sub>	V	
Output Low	V <sub>OL</sub>	-	-	0.5	V	
Transition Times <sup>3</sup> (1.5 MHz to 20 MHz)						
Rise Time 5V (3.3v)	t <sub>R</sub>	-	-	8 (5)	ns	
Fall Time	t <sub>F</sub>	-	-	8 (5)	ns	
>20 MHz						
Rise Time	t <sub>R</sub>	-	-	6 (4)	ns	
Fall Time	t <sub>F</sub>	-	-	6 (4)	ns	
Symmetry or Duty Cycle	SYM	45	49/51	55	%	
Start-Up Time	C Type H & F Type		3		mS	
			2			
Fan-out	-	-	-	10	TTL Loads	
Storage Temperature	-	-55	-	125	°C	
Tri-State (See Part Numbering Information)						
Output Active	3-State	0.8*V <sub>DD</sub>	-	-	V	
Output in High-Impedance State		-	-	0.16*V <sub>DD</sub>	V	

1 Inclusive of calibration tolerance at 25 °C, over the operating temperature range, and aging.

2 Current consumption is typically 0.6 mA/MHz above 20 MHz frequencies.

3 Transition times are measured between 10% and 90% of V<sub>DD</sub>.

## Part Numbering Information - Series C, H and F Type

