

Crystal Oscillator (XO)

The C-Type Fixed-Frequency Crystal Oscillator (XO) is designed for use in CMOS and TTL surface-mount applications. The C-Type is packaged in a ceramic, leadless chip carrier with a seam-welded step lid. The device is available in tape-and-reel packaging.



The C-Type's miniature footprint and ultralow-profile package is ideal for applications in PCMCIA cards, laptop computer, disk drives, and other environments where small size and surface mountability are paramount. Additional applications include the generation of clock signals for DSPs and microprocessors.

Features

- PCMCIA Compatible
- Miniature SMT Package
- Stability to 20 ppm
- TTL or CMOS
- Choice of Temperature Range
- Tri-State Output Option
- Hermetically Sealed
- Tape and Reel Configurations

Mechanical Characteristics

Parameter	Description
Mechanical Shock	MIL-STD-883C, Method 2002.3, Condition A.
Mechanical Vibration	MIL-STD-883C, Method 2007.1, Condition A.
Temperature Cycle	MIL-STD-883C, Method 1010, Condition A.
Gross Leak Test	All Units 100% leak tested in deionized water.
Fine Leak Test	All Units test to MIL-STD-883C, Method 1014.
Resistance to Solvents	MIL-STD-883, Method 2015

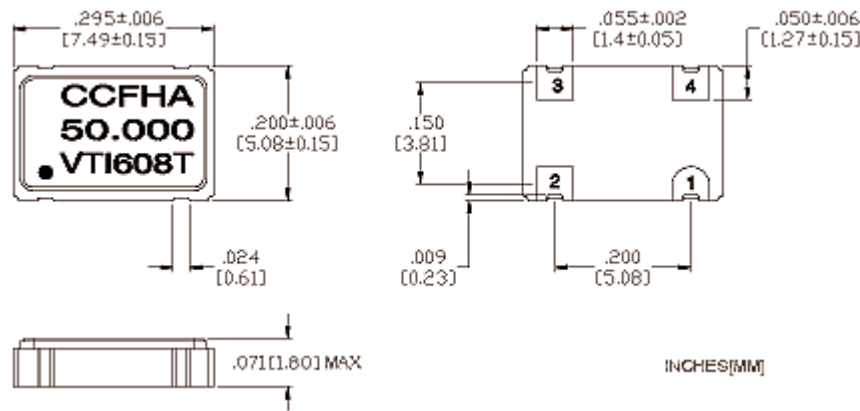
Parameter	Symbol	Min		Typ		Max		Unit
		3.3V	5.0V	3.3V	5.0V	3.3V	5.0V	
Frequency Range	f ₀	1 to 80						Mhz
Temperature Range	T _O	0 to 70 or -40 to 85						°C
Stability Options ¹		±25, ±50 or ±100						ppm
Supply Voltage	V _{DD}	3.3 (±10%) or 5.0 (±10%)						V
Supply Current 1 to 20 MHz 21 to 80 MHz	I _{DD}	-		-		10 35	15 50	mA
Output Levels High Low	V _{OH} V _{OL}	3.0	4.5	-		0.3	0.5	V
Output Rise/Fall Time ² 1 to 20 MHz 21 to 80 MHz	t _{R/F}	-		-		5 4	8 6	ns
Tri-State Out Enable Out Disable (High Imp.)		2.0	4.0	-		0.5	0.8	V
Output Symmetry	-	45		50		55		%
Start-up Time	t _{SU}			3				ms
Output Load Options	-	TTL or CMOS, 15 or 50 pF						-
Storage Temperature	T _S	-55		-		125		°C

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

2 Current consumption is typically 0.4 mA/MHz above 20 MHz frequencies.

3 Transition times are measured between 10% and 90% of V_{DD}

Outline Drawing



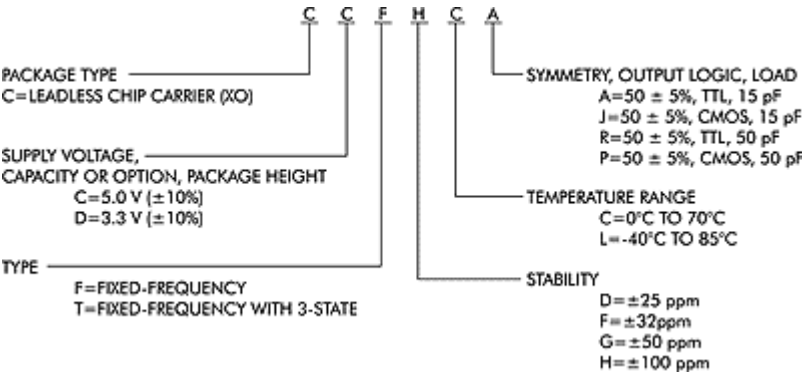
Pinout

- 1 Tristate Control / No Connect
- 2 Ground
- 3 Output
- 4 V_{DD}

Standard Frequencies*

10.000	12.000	12.288	14.31818	14.7456
15.000	15.360	16.000	16.384	18.000
18.432	19.440	19.6608	20.000	20.480
22.7692	25.000	28.224	29.4912	33.333
35.328	40.000	44.2368	44.736	45.000
49.867	50.000	55.289	56.448	61.000
65.536	66.667			
* Other Frequencies available upon request.				

Part Numbering Information



Note: Other specifications available upon request