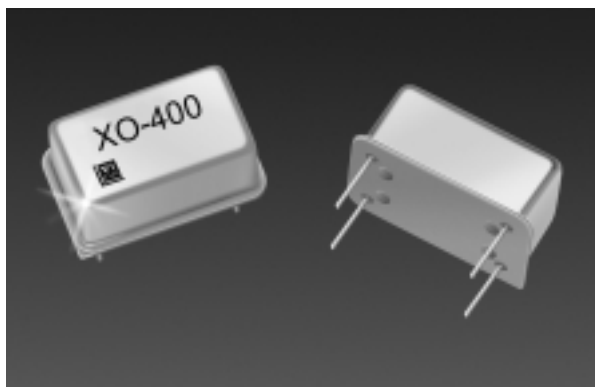


# Crystal Oscillators (XO's)

## XO-400



### Description:

Vectron International has introduced a series of low cost complementary PECL Crystal Oscillators (XO's) available in frequencies from 15 MHz to 250 MHz in a standard 4 pin DIP package. This series offers ultra low jitter of <0.5 ps rms from 12 kHz to 20 MHz bandwidth.

### Features:

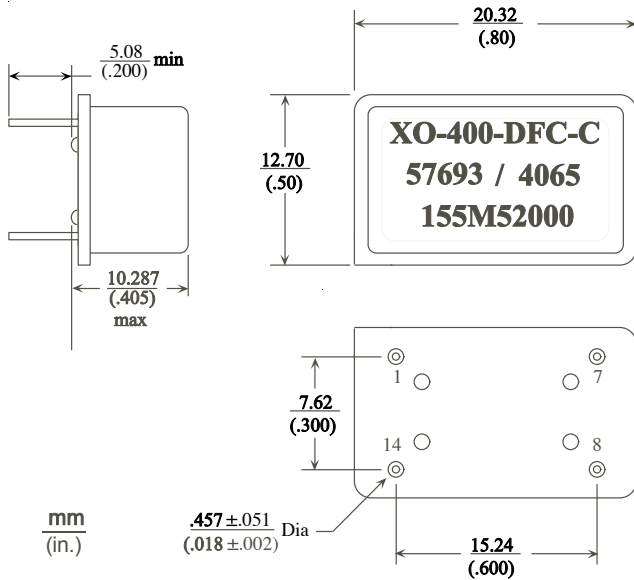
- Ultra low jitter
- 3.3 Vdc or 5 Vdc operation
- Complementary PECL output
- Standard 4 pin DIP package

### Performance Characteristics

Parameter	Characteristics
Frequencies:	15 MHz to 250 MHz
Package Size:	20.32 x 12.70 x 10.29 mm (0.8" x 0.5" x 0.405")
Supply Voltage:	<b>C</b> = 5 Vdc $\pm$ 5% <b>D</b> = 3.3 Vdc $\pm$ 5%
Supply Current:	<80 mA
Output Type:	Complementary PECL
Output Level: @ +25°C	V <sub>OH</sub> ("1") = V <sub>CC</sub> - 1.02V min. V <sub>OL</sub> ("0") = V <sub>CC</sub> - 1.63V max
Rise/Fall Time t <sub>r</sub> /t <sub>f</sub> :	<1.5 ns (20% to 80%)
Symmetry (Duty Cycle):	50/50 $\pm$ 5% @ V <sub>CC</sub> - 1.3V for "D"; V <sub>CC</sub> - 3V for "C"
Internal Load:	274 ohm internal load for each output for 3.3 Vdc, 510 ohms for 5Vdc
Temperature Stability:	<b>C-C</b> = $\pm$ 20 ppm All Causes over 0°C to +70°C <b>C-F</b> = $\pm$ 32 ppm All Causes over 0°C to +70°C <b>C-G</b> = $\pm$ 50 ppm All Causes over 0°C to +70°C <b>F-G</b> = $\pm$ 50 ppm All Causes over -40°C to +85°C All Causes = Entire Temperature Range, Aging for 10 years Initial Accuracy and Supply variation.
Jitter:	<0.5 ps rms from 12 kHz to 20 MHz BW @ 155.52 MHz

## XO-400

### Outline Drawing



### Standard Frequencies

Frequency	Application
19.4400 MHz	SONET
38.8800 MHz	SONET
51.8400 MHz	OC-1
77.7600 MHz	SONET
78.1250 MHz	10G / 128
125.0000 MHz	FDDI
139.2640 MHz	
155.5200 MHz	OC-3, SDH, STM1
156.2500 MHz	10G/64
161.1328 MHz	10.3125 G/64
166.6286 MHz	OC-3 FEC 15/14
167.3316 MHz	OC-3 FEC 255/237
175.0000 MHz	
177.7371 MHz	OC-3 FEC 8/7

XO

### Pin Out Information

1	Complementary output
7	Case, Ground
8	Output
14	Supply Voltage (Vcc)

### Ordering Information

