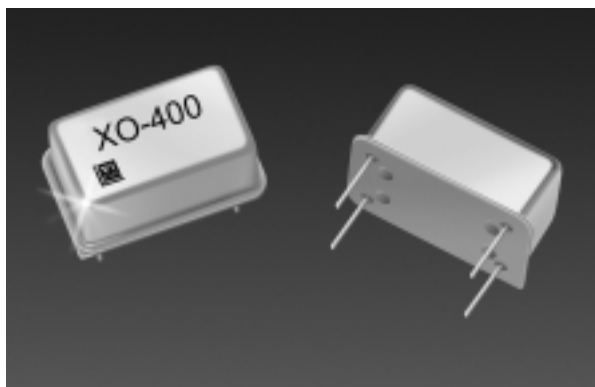


# Crystal Oscillators (XO's)

## 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%<br><b>D</b> = 3.3 Vdc $\pm$ 5%  |
| Supply Current:            | <80 mA  |
| Output Type:               | Complementary PECL  |
| Output Level:<br>@ +25°C   | $V_{OH}$ ("1") = $V_{CC} - 1.02V$ min.<br>$V_{OL}$ ("0") = $V_{CC} - 1.63V$ max   |
| Rise/Fall Time $t_r/t_f$ : | <1.5 ns (20% to 80%)  |
| Symmetry (Duty Cycle):     | 50/50 $\pm$ 5% @ $V_{CC} - 1.3V$ for "D"; $V_{CC} - 3V$ 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<br><b>C-F</b> = $\pm$ 32 ppm All Causes over 0°C to +70°C<br><b>C-G</b> = $\pm$ 50 ppm All Causes over 0°C to +70°C<br><b>F-G</b> = $\pm$ 50 ppm All Causes over -40°C to +85°C<br>All Causes = Entire Temperature Range, Aging for 10 years<br>Initial Accuracy and Supply variation. |
| Jitter:                    | <0.5 ps rms from 12 kHz to 20 MHz BW @ 155.52 MHz   |

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