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## CO-431/451 ECL/PECL Clock Oscillators



### Features:

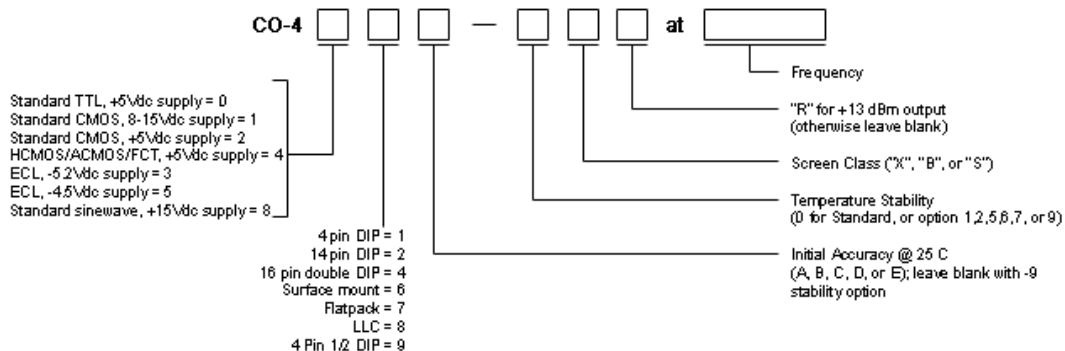
- Frequencies from 5 MHz to 200 MHz
- Low Profile 4 Pin Dip
- 10K, 10KH, 100K, ECLinPS, 10E/EL and 100E/EL Logic
- CO431 Available as QPL to MIL-0-55310/25B

SPECIFICATIONS		
Part	CO-431	CO-451
Series	4 Pin Dip	
Frequency	5 MHz-200 MHz	
Output	Output taken directly from 10K, 10KH, ECLinPS or ECLinPS Lite gate, depending on temperature and frequency range.	Output taken directly from 100K, ECLinPS or ECLinPS Lite gate, depending on temperature and frequency range.
Supply	-5.2 Vdc ± 5% <45 mA to 110 MHz <70 mA above 110 MHz	-4.5 Vdc±5% at <60 mA
Accuracy (at 25°C)	CO-431A: ±50 ppm	CO-451A: ±50 ppm
Temperature Stability	<p><b>STANDARD:</b> 0°C to +70°C: ±25 ppm</p> <p>Option 1: -55°C to +85°C: ±50 ppm</p> <p>Option 2: -55°C to +125°C: ±50 ppm</p> <p>Option 5: 0°C to +50°C: ±5 ppm</p> <p>Option 6: 0°C to +50°C: ±10 ppm</p> <p>*Option 7: -55°C to +125°C: ±100 ppm</p> <p>*-1,-2,-7 restricted to -30/+85°C above 110 MHz in CO-233ME</p>	
Aging Rate (typical after 30 days)	3 ppm first year 2 ppm/year thereafter	3 ppm first year <2 ppm/year thereafter

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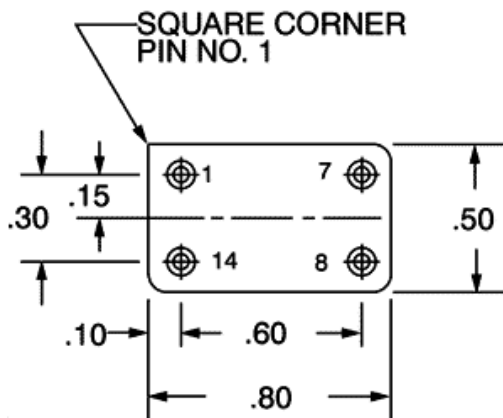
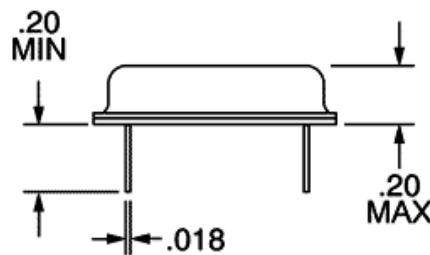
### How to Order Hybrid XO's - CO-400 Series

(Note: Not all combinations possible. See above for appropriate options.)



SCREEN TESTING OF ABOVE MODELS					
SCREEN TEST	MIL-STD-883 METHOD	Options			
		Standard CLASS X	CLASS D	CLASS B	CLASS S
Stabilization Bake (150°C)	—	X	X	X	Class S screen test requirements include 24 hour additional bake-out, 80 hour additional burn-in, thermal shock, PIND test and radiographic inspection in addition to Class B Screening. Has major cost impact.
Seal Test (Gross and Fine)	1014, Cond A2	X	X	X	
Temperature Cycling (Thermal Shock)	1010, Cond B		X	X	
Burn-in, operating 160 hours @125°C	—		X	X	
Acceleration (5000g in Y <sub>1</sub> axis)	2001, Cond A			X	

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Dimension in inches

**Pinouts**

Pin	Function
7	Supply (-)
8	Output
14	OV, case
1	N/C

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