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CO-402 Custom Hybrid TTL Clock Oscillators



Features:

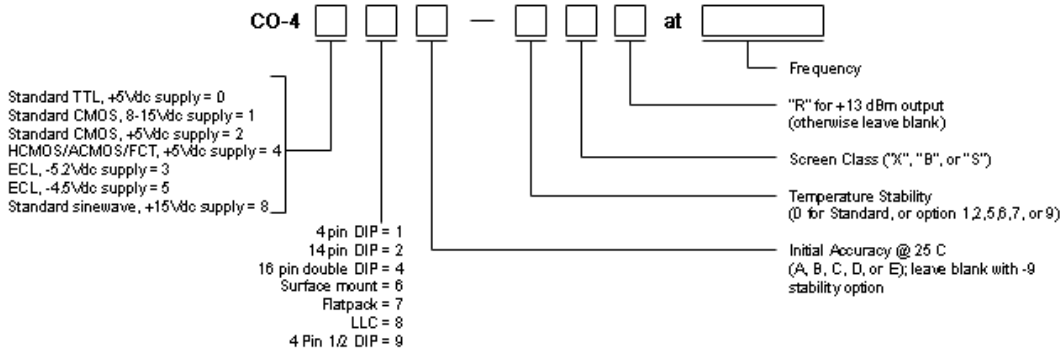
- Low Profile 14 Pin DIP
- Resistance Welded Metal Can
- 3 Point Mount Crystal
- 16 kHz to 100 MHz Frequency Range
- Available as QPL to Mil-0-55310/16 B&S

SPECIFICATIONS	
Series	CO-402: 14 Pin DIP
Frequency	16 kHz-100 MHz
Supply	5 Vdc ± 5%
Accuracy (at 25°C)	CO-402A ±50 ppm CO-402C ±25 ppm CO-402D ±15 ppm CO-402B ±10 ppm CO-402E ±1 ppm* <small>*Stability via external capacitor; 16 kHz-60 MHz only.</small>
Temperature Stability <small>Improved accuracy/stability available on some models. For example, for ±7 ppm over 0°C to +50°C and for ±10ppm over 0°C to +70°C. Improvement is also available over wider temperature ranges. Please contact factory.</small>	STANDARD: 0°C to +70°C: ±25 ppm Option 1: -55°C to +85°C: ±50 ppm Option 2: -55°C to +125°C: ±50 ppm Option 5: 0°C to +50°C: ±5 ppm Option 6: 0°C to +50°C: ±10 ppm Option 7: -55°C to +125°C: ±100 ppm *Option 9: -55°C to +200°C: ±300 ppm (Option 9: Only for CO-401/2/6/7 series in 4-20 MHz range) *Specified stability includes initial accuracy; do not specify A,B,C,D or E accuracy.
Aging Rate (typical after 30 days)	3 ppm first year 2 ppm/year thereafter
Case	Resistance welded metal case
Output	Output: <4 MHz 4-20 MHz >20 MHz Drive: 10 TTL 10 TTL 10 STTL "0" Level: <0.4V <0.4V <0.4V "1" Level: >2.4V >2.4V >2.4V Rise/Fall Time: <15ns <15ns 2-5ns (0.5-2.4V) Symmetry: 55/45 60/40 60/40 at 1.5V If improved symmetry is required, please contact factory.

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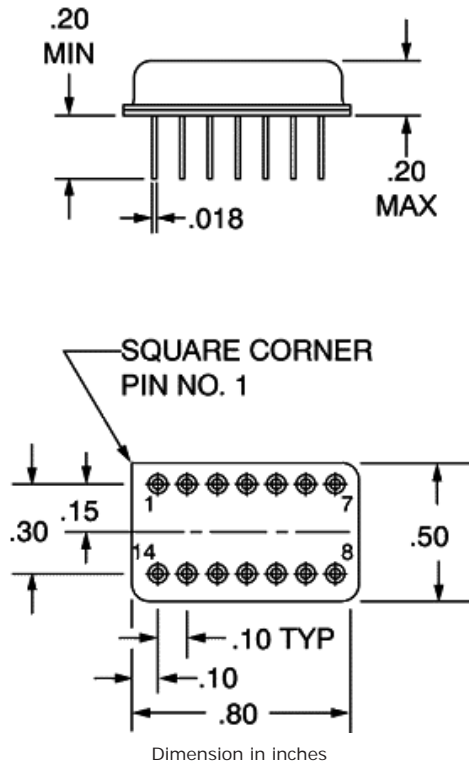
How to Order Hybrid XO's - CO-400 Series

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



SCREEN TESTING OF ABOVE MODELS					
SCREEN TEST	MIL-STD-883 METHOD	Standard Options			
		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 ₁ axis)	2001, Cond A			X	

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Pinouts

Pin	Function
1	*N/C
7	OV, case, gnd
8	Output
14	+5V
Other	N/C

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