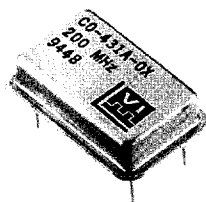


ECL/PECL Clock Oscillators

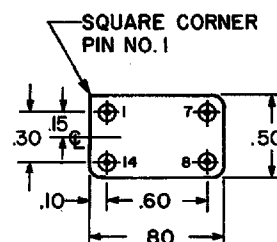
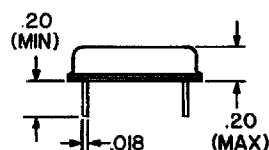
CO-431/CO-451



Features

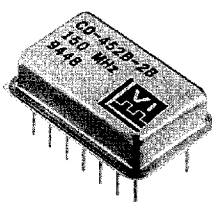
- Frequencies from 5 MHz to 200 MHz
- Low Profile 4 Pin DIP
- 10K, 10KH, 100K, ECLinPS, 10E/EL and 100E/EL Logic
- CO431 Available as QPL to MIL-0-55310/25B

CO-431 CO-451



Note: Dimensions in inches

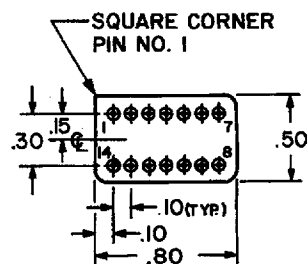
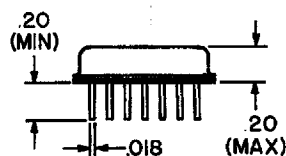
CO-432/CO-452



Features

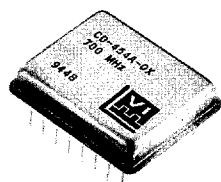
- Frequencies from 5 MHz to 200 MHz
- Low Profile 14 Pin DIP
- 10K, 10KH, 100K, ECLinPS, 10E/EL and 100E/EL Logic
- CO-431 Available as QPL to MIL-0-55310/25B

CO-432 CO-452



Note: Dimensions in inches

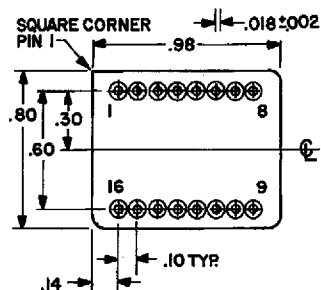
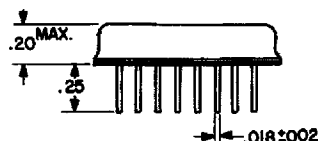
CO-434/CO-454



Features

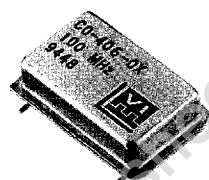
- Frequencies from 200.1 MHz to 700 MHz
- Low Profile 16 Pin Double DIP
- 10K, 10KH, 100K, ECLinPS, 10E/EL and 100E/EL Logic

CO-434 CO-454



Note: Dimensions in inches

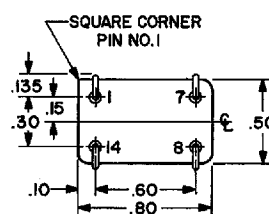
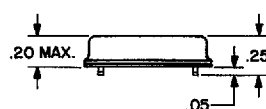
CO-436/CO-456



Features

- Frequencies from 5 MHz to 200 MHz
- Low profile surface mount
- 10K, 10KH, 100K, ECLinPS, 10E/EL and 100E/EL Logic

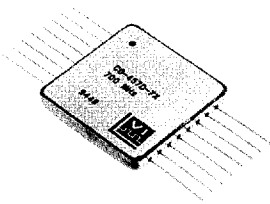
CO-436 CO-456



Note: Dimensions in inches

ECL/PECL Clock Oscillators

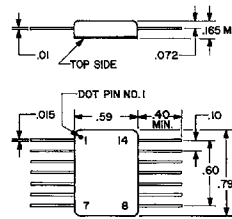
CO-437/CO-457



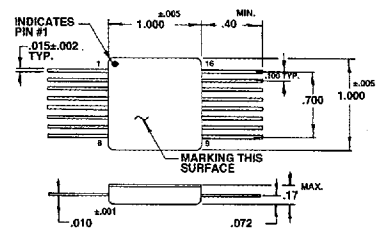
Features

- Frequencies from 5 MHz to 700 MHz
- Low Profile 14 Pin Flatpack
- 10K, 10KH, 100K, ECLinPS, 10E/EL and 100E/EL Logic

CO-437



CO-457



Note: Dimensions in inches

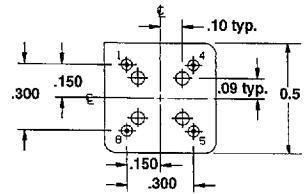
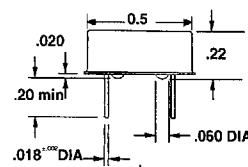
CO-439/CO-459



Features

- Frequencies from 10 MHz to 100 MHz
- Low Profile 4 Pin 1/2 DIP
- 10K, 10KH, 100K, ECLinPS, 10E/EL and 100E/EL Lo
- Surface mount option available

CO-439/CO-459



Note: Dimensions in inches

SPECIFICATIONS

Series	CO-431: 4 Pin DIP CO-432: 14 Pin DIP CO-434: 16 Pin Double DIP CO-436: Surface Mount CO-437: Flatpack	CO-439: 4 Pin 1/2 DIP 10EL CO-459: 4 Pin 1/2 DIP 100EL	CO-451: 4 Pin DIP CO-452: 14 Pin DIP CO-454: 16 Pin Double DIP CO-456: Surface Mount CO-457: Flatpack
Frequency	CO-434: 200.1 MHz to 700 MHz CO-437: 5.0 MHz to 700 MHz Other models: 5.0 MHz to 200 MHz	10 MHz to 100 MHz	CO-454: 200.1 MHz to 700 MHz CO-457: 5.0 MHz to 700 MHz Other Models: 5.0 MHz to 200 MHz
Output	Output taken directly from 10K, 10KH, ECLinPS or ECLinPS Lite gate, depending on temperature and frequency range. Complementary outputs optional (Standard in CO-434)	Output taken directly from 10EL gate (CO-439) or 100EL gate (CO-459)	Output taken directly from 100K, ECLinPS or ECLinPS Lite gate, depending on temperature and frequency range. Complementary outputs standard in CO-454; optional in CO-452 and CO-457
Supply	-5.2V $\pm 5\%$; <45 mA from 5 to 110 MHz <70 mA above 110 MHz	CO-439: -5.2V $\pm 5\%$ at <50 mA CO-459: -4.5V $\pm 5\%$ at <50 mA	-4.5V $\pm 5\%$ at <60 mA
Accuracy (at 25°C)	CO-43 ☐ A: ± 50 ppm CO-43 ☐ C: ± 25 ppm CO-43 ☐ D: ± 15 ppm CO-43 ☐ B: ± 10 ppm *CO-43 ☐ E: ± 1 ppm *E= set to ± 1 ppm via external capacitor (≤ 60 MHz in CO-432 and ≤ 240 MHz in CO-434/37 package) T= set to ± 1 ppm via internal capacitor ① 4 pin DIP ② 14 pin DIP ③ 16 pin double DIP ④ surface mount ⑤ flatpack	CO-4 ☐ 9 A: ± 50 ppm CO-4 ☐ 9 C: ± 25 ppm CO-4 ☐ 9 D: ± 15 ppm CO-4 ☐ 9 B: ± 10 ppm ⑥ 10EL ECL ⑦ 100EL ECL	CO-45 ☐ A: ± 50 ppm CO-45 ☐ C: ± 25 ppm CO-45 ☐ D: ± 15 ppm CO-45 ☐ B: ± 10 ppm *CO-45 ☐ E: ± 1 ppm *E, see note CO-430 series ① 4 pin DIP ② 14 pin DIP ③ 16 pin double DIP ④ surface mount ⑤ flatpack * CO-457 >200MHz. 1" x 1" x .017", 16 pin flatpack
Temperature Stability	STANDARD: 0°C to +70°C: ± 25 ppm Option 1: -55°C to +85°C: ± 50 ppm (lower limit -40°C in CO-439/459) Option 2: -55°C to +125°C: ± 50 ppm (N/A for model CO-439/459) 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 (N/A for model CO-439/459)		
Aging Rate (typical after 30 days)	3 ppm first year 2 ppm/year thereafter	3 ppm first year <2 ppm/year thereafter	3 ppm first year <2 ppm/year thereafter