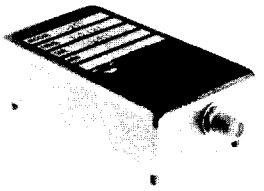
TCXOs (140-1000 MHz)



	CO-255 SERIES	CO-256 SERIES	CO-856 SERIES
FREQUENCY	140.1 - 420 MHz	420.1 - 630 MHz	630.1 - 1000 MHz
STABILITY Temperature (Temp. Range **A**) +15°C to +35°C:	**CO-255A57:** $\pm 5 \times 10^{-7}$ **CO-255A17:** $\pm 1 \times 10^{-7}$	**CO-256A57:** $\pm 5 \times 10^{-7}$ **CO-256A17:** $\pm 1 \times 10^{-7}$	**CO-856A57:** $\pm 5 \times 10^{-7}$ **CO-856A17:** $\pm 1 \times 10^{-7}$
(Temp. Range **B**) 0°C to +50°C:	**CO-255B16:** $\pm 1 \times 10^{-6}$ **CO-255B57:** $\pm 5 \times 10^{-7}$ **CO-255B27:** $\pm 2 \times 10^{-7}$	**CO-256B16:** $\pm 1 \times 10^{-6}$ **CO-256B57:** $\pm 5 \times 10^{-7}$ **CO-256B27:** $\pm 2 \times 10^{-7}$	**CO-856B16:** $\pm 1 \times 10^{-6}$ **CO-856B57:** $\pm 5 \times 10^{-7}$
(Temp. Range **C**) 0°C to +70°C:	**CO-255C36:** $\pm 3 \times 10^{-6}$ **CO-255C16:** $\pm 1 \times 10^{-6}$ **CO-255C37:** $\pm 3 \times 10^{-7}$	**CO-256C36:** $\pm 3 \times 10^{-6}$ **CO-256C16:** $\pm 1 \times 10^{-6}$ **CO-256C37:** $\pm 3 \times 10^{-7}$	**CO-856C36:** $\pm 3 \times 10^{-6}$ **CO-856C16:** $\pm 1 \times 10^{-6}$
(Temp. Range **D**) −20°C to +70°C:	**CO-255D56:** $\pm 5 \times 10^{-6}$ **CO-255D16:** $\pm 1 \times 10^{-6}$ **CO-255D57:** $\pm 5 \times 10^{-7}$	**CO-256D56:** $\pm 5 \times 10^{-6}$ **CO-256D16:** $\pm 1 \times 10^{-6}$ **CO-256D57:** $\pm 5 \times 10^{-7}$	**CO-856D56:** $\pm 5 \times 10^{-6}$ **CO-856D16:** $\pm 1 \times 10^{-6}$
(Temp. Range **E**) −40°C to +75°C:	**CO-255E56:** $\pm 5 \times 10^{-6}$ **CO-255E26:** $\pm 2 \times 10^{-6}$ **CO-255E16:** $\pm 1 \times 10^{-6}$	**CO-256E56:** $\pm 5 \times 10^{-6}$ **CO-256E26:** $\pm 2 \times 10^{-6}$ **CO-256E16:** $\pm 1 \times 10^{-6}$	**CO-856E56:** $\pm 5 \times 10^{-6}$ **CO-856E26:** $\pm 2 \times 10^{-6}$
(Temp. Range **F**) −55°C to +85°C:	**CO-255F56:** $\pm 5 \times 10^{-6}$ **CO-255F26:** $\pm 2 \times 10^{-6}$ **CO-255F16:** $\pm 1 \times 10^{-6}$	**CO-256F56:** $\pm 5 \times 10^{-6}$ **CO-256F26:** $\pm 2 \times 10^{-6}$ **CO-256F16:** $\pm 1 \times 10^{-6}$	**CO-856F56:** $\pm 5 \times 10^{-6}$
(Temp. Range **G**) −55°C to +105°C:	**CO-255G56:** $\pm 5 \times 10^{-6}$	**CO-256G56:** $\pm 5 \times 10^{-6}$	N/A
(Temp. Range **H**) −55°C to +125°C:	**CO-255H15:** $\pm 1 \times 10^{-5}$	**CO-256H15:** $\pm 1 \times 10^{-5}$	N/A
Aging Rate	1×10^{-6}/year		
Short Term (Allan Variance)	1×10^{-9}/second under constant conditions		
Frequency vs Supply	2×10^{-8} per percent in supply		
OUTPUT / SUPPLY (±5%)	Output level / ***Supply ±5% Standard: ≥0.5 Vrms/50Ω (+7 dBm) / +15 Vdc *Option "**R**": ≥1.0 Vrms/50Ω (+13 dBm) / +15 Vdc **Option "**M**": 100K ECL / +15 Vdc and −5.2 Vdc (−4.5 Vdc optional) * Not available in CO-856 ** Only available in CO-255 *** Any supply in 12-24 Vdc range optional		
Current	Sine: <50 mA ECL: <30 mA for oscillator; also <60 mA at −5.2V	<60 mA	<85 mA
Harmonics and Sub-Harmonics (sine output)	Harmonics and subharmonics are −20 dBc. Improved harmonic and subharmonic attenuation optional.		
Phase Noise	See page 37 for standard and low noise Option L2 specifications.		
FREQUENCY ADJUSTMENT Mechanical	Range sufficient to compensate for 5 to 10 years of crystal aging; settable to $<1 \times 10^{-7}$		
Electronic Tuning Option Option "V"	VCXO operation permits remote frequency adjustment or locking onto an external frequency source. Add "**V**" to Model Number. Nominal range with 0 to +5 volt control input is 3×10^{-6} total (Wider deviations available). V options not available in CO-856. For very wide deviation and/or linear voltage control, see TC/VCXOs in the VCXO section on page 76.		
SIZE/ CONFIGURATION (See drawings on page 41)	2" x 3" x 3/4" (51 x 76 x 19 mm) SMA output connector on 2" x 3/4" side, pins for supply and studs on base. Option "**U**": Replace SMA connector with SMC. Option "**P**": Pins for printed circuit board mount and studs on base	2" x 4" x 3/4" (51 x 102 x 19 mm) SMA output connector on 2" x 3/4" side, pins for supply and studs on base. Option "**U**": Replace SMA connector with SMC.	1.75" x 3.75" x 0.75" (45 x 95 x 19 mm) SMA output connector on 1.75" x 0.75" side, pins for supply and hold-down on base. Option "**U**": Replace SMA with SMC.
ENVIRONMENTAL	See page 98 for environmental specifications and screen test option.		
HOW TO ORDER	See page 41		

ORDERING METHOD

For example, a 400 MHz TCXO with stability of $\pm 1 \times 10^{-6}$ over –20°C to +70°C and standard +15V supply +7 dBm/50Ω sinewave output via SMA connector is

CO-255 | **D** | **16** | ☐ ☐ ☐ ☐ at **400 MHz** = **CO-255D16 at 400 MHz**

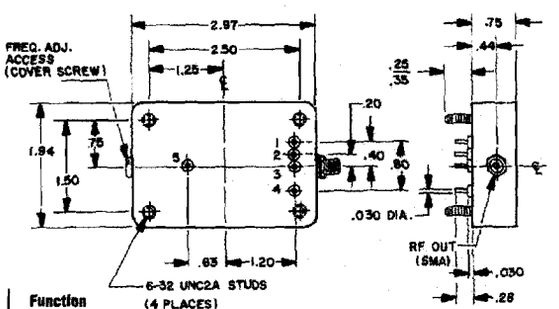
- Basic Series CO-255/256/856
- Temp. Range (e.g. "D")
- Stability over Temp.(e.g."16")
- *Frequency*
- *Low phase noise (**L2**)
- *Mechanical option (**U**, **P**)
- *VCXO option (**V**)
- *Input/output option (**M**, **R**)

NOTE: If none of our standard models with coded options meet your specific needs, please detail the differences from our closest standard model (e.g. CO-255D16 except 12 Vdc supply and +7dBm/50Ω output).

*Leave blank if option is not desired

OUTLINE/INSTALLATION DRAWINGS

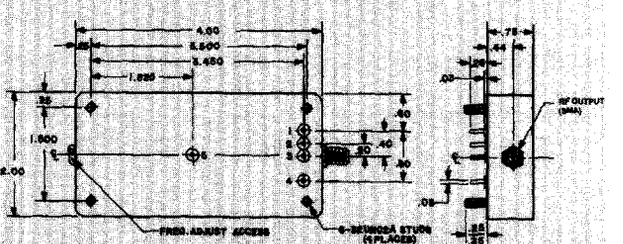
CO-255 SERIES



Pin	Function
1	Supply (+)
2	Case
3	N/C
4	0 volts, case
*5	Case

* For models with electronic tuning, control voltage is applied from pin 5 to pin 4.

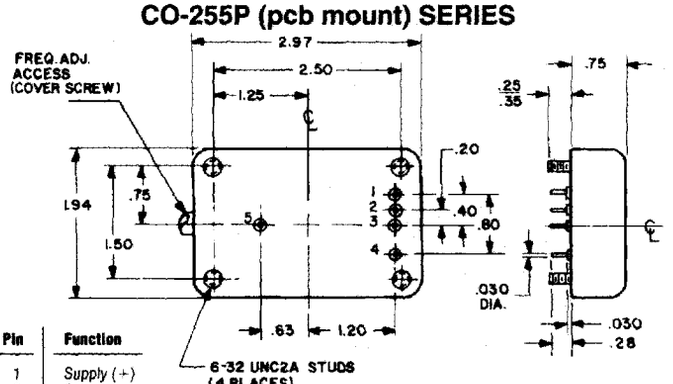
CO-256 SERIES



Pin	Function
1	Supply (+)
2	Case
3	N/C
4	0 volts, case
*5	Case

* For models with electronic tuning, control voltage is applied from pin 5 to pin 4.

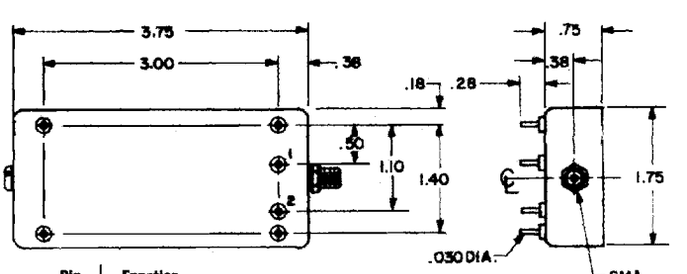
CO-255P (pcb mount) SERIES



Pin	Function
1	Supply (+)
2	Case
3	RF Output
4	0 volts, rf return, case
*5	Case

* For models with electronic tuning, control voltage is applied from pin 5 to pin 4.

CO-856 SERIES



Pin	Function
1	0 volts, case
2	Supply (+)

Markings do not appear on oscillators; they are for reference only. Dimensions are in inches. Case dimension tolerances are ± .02"

Immediate need? Please call. (203) 853-4433
Let our staff of application engineers assist you with your order.