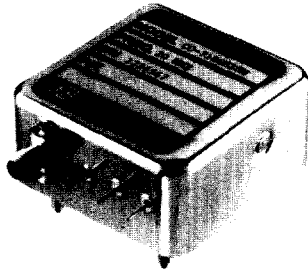


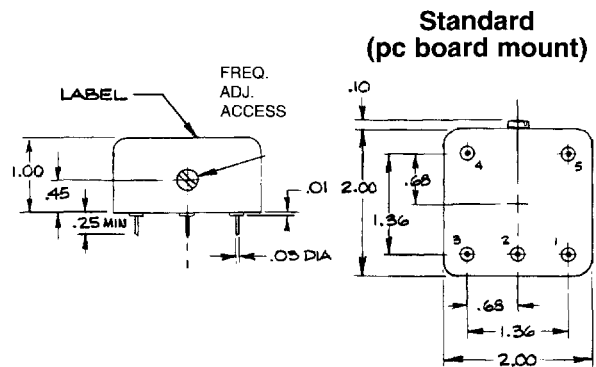
OCXOs Basic Series - 1 MHz to 25 MHz

CO-714/717/718S Series



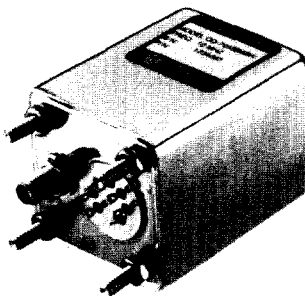
Features

- Frequencies from 1 to 25 MHz
- Superior Aging Characteristics
- Excellent Temperature Stabilities
- AT and SC/IT Cut Crystals
- Low phase noise option
- SMA connector available



Note: Dimensions in inches

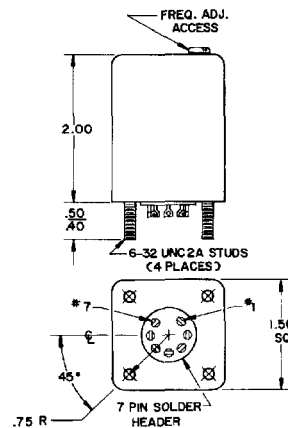
CO-705S Series



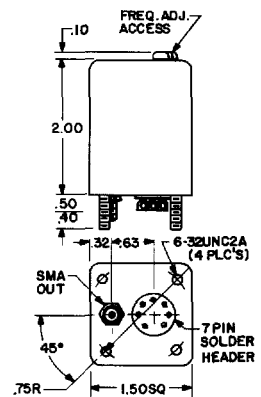
Features

- Frequencies from 1 to 25 MHz
- Superior Aging Characteristics
- Excellent Temperature Stabilities
- SC/IT Cut Crystal
- Low Phase Noise option

Standard (solder header)

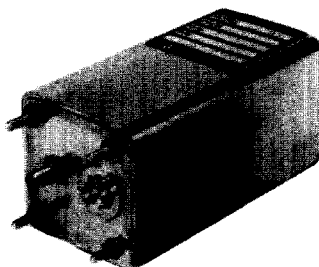


Option W (rf output connector)



Note: Dimensions in inches

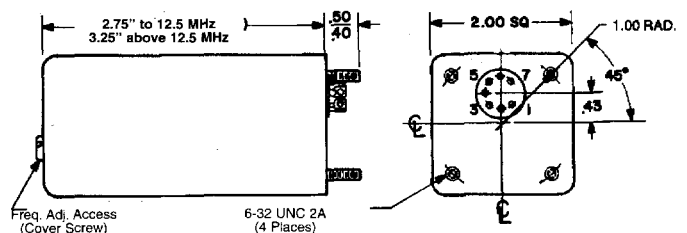
CO-706S/707S



Features

- 5 MHz Standard (available to 75 MHz)
- Ultra-Stable to 1x10⁻¹⁰/day
- Superior Aging Characteristics
- SC/IT Cut Crystal
- Low Phase Noise Option

Models CO-706S, CO-707S



Note: Dimensions in inches

OCXOs Basic Series - 1 MHz to 25 MHz

SPECIFICATIONS

	CO-714/717 SERIES (AT Cut Crystal)	CO-718S SERIES (SC/IT Cut Crystal)																																				
Frequency	1-25 MHz with 5 MHz and 10MHz standard (available 32 kHz - 25 MHz with logic output)																																					
Temperature Stability (Temp. Range A) +15°C to +35°C	CO-71 ☐ A38: $\pm 3 \times 10^{-8}$ CO-71 ☐ A29: $\pm 2 \times 10^{-9}$	CO-718SA28: $\pm 2 \times 10^{-8}$ CO-718SA19: $\pm 1 \times 10^{-9}$																																				
(Temp. Range B) 0°C to +50°C	CO-71 ☐ B58: $\pm 5 \times 10^{-8}$ CO-71 ☐ B59: $\pm 5 \times 10^{-9}$	CO-718SB38: $\pm 3 \times 10^{-8}$ CO-718SB29: $\pm 2 \times 10^{-9}$																																				
(Temp. Range D) -20°C to +70°C	CO-71 ☐ D17: $\pm 1 \times 10^{-7}$ CO-71 ☐ D28: $\pm 2 \times 10^{-8}$	CO-718SD58: $\pm 5 \times 10^{-8}$ CO-718SD59: $\pm 5 \times 10^{-9}$																																				
(Temp. Range G) -55°C to +75°C	CO-71 ☐ G27: $\pm 2 \times 10^{-7}$ CO-71 ☐ G38: $\pm 3 \times 10^{-8}$	CO-718SG17: $\pm 1 \times 10^{-7}$ CO-718SG28: $\pm 2 \times 10^{-8}$																																				
(Temp. Range F) -55°C to +85°C	* Not available with "L2" option																																					
Aging	4: 1×10^{-8} /day (2×10^{-6} /year) 7: 1×10^{-9} /day (3×10^{-7} /year)	5 $\times 10^{-10}$ /day (1×10^{-7} /year) 5 $\times 10^{-9}$ /year optional at some frequencies 2 $\times 10^{-8}$ /year optional at 5 MHz																																				
Output Level	Standard: >0.5 Vrms/50 Ω (+7 dBm); >1 Vrms/50 Ω (+13 dBm) with L2 option HCMOS/TTL optional																																					
Supply Voltage ($\pm 5\%$)	+15 Vdc standard (12-24 Vdc optional); -15 Vdc and -5 Vdc for HCMOS/TTL; Option "N": +5 Vdc supply with HCMOS/TTL output available (results in some degradation in stability)																																					
Input Power	<4 Watts at turn-on -20/+70°C (lower power available); 2 Watts stabilized at 25°C																																					
Frequency Adjustment	Mechanical adjustment settable to 1×10^{-6} . Option "V": Voltage tuning																																					
Size	2" x 2" x 1" (0.75" also available), pins for pcb mounting, SMA connector optional																																					
Phase Noise (typical) (with sinewave output 4-12 MHz)	<table> <tr><th>Offset</th><th>Standard</th><th>Option L2*</th></tr> <tr><td>10 Hz</td><td>-105 dBc/Hz</td><td>-120 dBc/Hz</td></tr> <tr><td>100 Hz</td><td>-135 dBc/Hz</td><td>-145 dBc/Hz</td></tr> <tr><td>1 kHz</td><td>-145 dBc/Hz</td><td>-160 dBc/Hz</td></tr> <tr><td>10 kHz</td><td>-148 dBc/Hz</td><td>-165 dBc/Hz</td></tr> <tr><td>50 kHz</td><td>-150 dBc/Hz</td><td>-165 dBc/Hz</td></tr> </table> *10 MHz lower frequency limit. Contact Factory for lower frequencies.	Offset	Standard	Option L2*	10 Hz	-105 dBc/Hz	-120 dBc/Hz	100 Hz	-135 dBc/Hz	-145 dBc/Hz	1 kHz	-145 dBc/Hz	-160 dBc/Hz	10 kHz	-148 dBc/Hz	-165 dBc/Hz	50 kHz	-150 dBc/Hz	-165 dBc/Hz	<table> <tr><th>Offset</th><th>Standard</th><th>Option L2*</th></tr> <tr><td>10 Hz</td><td>-115 dBc/Hz</td><td>-130 dBc/Hz</td></tr> <tr><td>100 Hz</td><td>-140 dBc/Hz</td><td>-155 dBc/Hz</td></tr> <tr><td>1 kHz</td><td>-145 dBc/Hz</td><td>-163 dBc/Hz</td></tr> <tr><td>10 kHz</td><td>-148 dBc/Hz</td><td>-166 dBc/Hz</td></tr> <tr><td>50 kHz</td><td>-150 dBc/Hz</td><td>-168 dBc/Hz</td></tr> </table> *4 MHz lower limit	Offset	Standard	Option L2*	10 Hz	-115 dBc/Hz	-130 dBc/Hz	100 Hz	-140 dBc/Hz	-155 dBc/Hz	1 kHz	-145 dBc/Hz	-163 dBc/Hz	10 kHz	-148 dBc/Hz	-166 dBc/Hz	50 kHz	-150 dBc/Hz	-168 dBc/Hz
Offset	Standard	Option L2*																																				
10 Hz	-105 dBc/Hz	-120 dBc/Hz																																				
100 Hz	-135 dBc/Hz	-145 dBc/Hz																																				
1 kHz	-145 dBc/Hz	-160 dBc/Hz																																				
10 kHz	-148 dBc/Hz	-165 dBc/Hz																																				
50 kHz	-150 dBc/Hz	-165 dBc/Hz																																				
Offset	Standard	Option L2*																																				
10 Hz	-115 dBc/Hz	-130 dBc/Hz																																				
100 Hz	-140 dBc/Hz	-155 dBc/Hz																																				
1 kHz	-145 dBc/Hz	-163 dBc/Hz																																				
10 kHz	-148 dBc/Hz	-166 dBc/Hz																																				
50 kHz	-150 dBc/Hz	-168 dBc/Hz																																				

	Premium Performance CO-705S SERIES (SC/IT Cut Crystal)	Ultra Stable CO-706S/707S SERIES (SC/IT Cut Crystal)																																				
Frequency	1-25 MHz with 5 MHz and 10MHz standard	5 MHz (available to 75 MHz)																																				
Temperature Stability (Temp. Range A) +15°C to +35°C	CO-705SA39: $\pm 3 \times 10^{-9}$ CO-705SA510: $\pm 5 \times 10^{-10}$	CO-70 ☐ A19-V: $\pm 1 \times 10^{-9}$ *CO-70 ☐ A310-V: $\pm 3 \times 10^{-10}$																																				
(Temp. Range B) 0°C to +50°C	CO-705SB59: $\pm 5 \times 10^{-9}$ CO-705SB19: $\pm 1 \times 10^{-9}$	CO-70 ☐ B29-V: $\pm 2 \times 10^{-9}$ *CO-70 ☐ B510-V: $\pm 5 \times 10^{-10}$																																				
(Temp. Range D) -20°C to +70°C	CO-705SD18: $\pm 1 \times 10^{-8}$ CO-705SD39: $\pm 3 \times 10^{-9}$	CO-70 ☐ D59-V: $\pm 5 \times 10^{-9}$ *CO-70 ☐ D29-V: $\pm 2 \times 10^{-9}$																																				
(Temp. Range G) -55°C to +75°C	CO-705SG28: $\pm 2 \times 10^{-8}$ CO-705SG59: $\pm 5 \times 10^{-9}$	CO-70 ☐ G28-V: $\pm 2 \times 10^{-8}$ *CO-70 ☐ G59-V: $\pm 5 \times 10^{-9}$																																				
(Temp. Range F) -55°C to +85°C	*CO-705SF38: $\pm 3 \times 10^{-8}$ *CO-705SF18: $\pm 1 \times 10^{-8}$	*CO-70 ☐ F38-V: $\pm 3 \times 10^{-8}$ *CO-70 ☐ F18-V: $\pm 1 \times 10^{-8}$																																				
Aging	5 $\times 10^{-10}$ /day (1×10^{-7} /year) 5 $\times 10^{-6}$ /year optional at some frequencies 2 $\times 10^{-6}$ /year optional at 5 MHz	6S: 3×10^{-10} /day (4×10^{-6} /year) *7S: 1×10^{-10} /day (2×10^{-6} /year) ** 1×10^{-10} /day models in 4-6.25 MHz range and at multiples and some binary divisions of 4-6.25 MHz																																				
Output Level	>1 Vrms/50 Ω (+13 dBm) HCMOS/TTL optional	0.5 Vrms/50 Ω , 1 Vrms opt. HCMOS/TTL optional																																				
Supply Voltage ($\pm 5\%$)	+15 Vdc standard (12-24 Vdc optional); -15 Vdc and -5 Vdc for HCMOS/TTL; Option "N": +5 Vdc supply with HCMOS/TTL output available (results in some degradation in stability)																																					
Input Power	<5 Watts at turn-on																																					
Frequency Adjustment	Option "V": Voltage tuning Mechanical adjustment	Both mechanical and electrical																																				
Size	1.5" x 1.5" x 2", solder header and studs: SMA output optional	≤ 12.5 MHz: 2" x 2" x 2.75" >12.5 MHz: 2" x 2" x 3.25" solder header, studs																																				
Phase Noise (typical) (with sinewave output 4-12 MHz)	<table> <tr><th>Offset</th><th>Standard</th><th>Option L2</th></tr> <tr><td>10 Hz</td><td>-115 dBc/Hz</td><td>-130 dBc/Hz</td></tr> <tr><td>100 Hz</td><td>-140 dBc/Hz</td><td>-155 dBc/Hz</td></tr> <tr><td>1 kHz</td><td>-145 dBc/Hz</td><td>-163 dBc/Hz</td></tr> <tr><td>10 kHz</td><td>-148 dBc/Hz</td><td>-166 dBc/Hz</td></tr> <tr><td>50 kHz</td><td>-150 dBc/Hz</td><td>-168 dBc/Hz</td></tr> </table>	Offset	Standard	Option L2	10 Hz	-115 dBc/Hz	-130 dBc/Hz	100 Hz	-140 dBc/Hz	-155 dBc/Hz	1 kHz	-145 dBc/Hz	-163 dBc/Hz	10 kHz	-148 dBc/Hz	-166 dBc/Hz	50 kHz	-150 dBc/Hz	-168 dBc/Hz	<table> <tr><th>Offset</th><th>Standard</th><th>Option L2*</th></tr> <tr><td>10 Hz</td><td>-115 dBc/Hz</td><td>-135 dBc/Hz</td></tr> <tr><td>100 Hz</td><td>-140 dBc/Hz</td><td>-155 dBc/Hz</td></tr> <tr><td>1 kHz</td><td>-145 dBc/Hz</td><td>-165 dBc/Hz</td></tr> <tr><td>10 kHz</td><td>-148 dBc/Hz</td><td>-168 dBc/Hz</td></tr> <tr><td>50 kHz</td><td>-150 dBc/Hz</td><td>-168 dBc/Hz</td></tr> </table> * Output is >10 dBm. Specify RF connector	Offset	Standard	Option L2*	10 Hz	-115 dBc/Hz	-135 dBc/Hz	100 Hz	-140 dBc/Hz	-155 dBc/Hz	1 kHz	-145 dBc/Hz	-165 dBc/Hz	10 kHz	-148 dBc/Hz	-168 dBc/Hz	50 kHz	-150 dBc/Hz	-168 dBc/Hz
Offset	Standard	Option L2																																				
10 Hz	-115 dBc/Hz	-130 dBc/Hz																																				
100 Hz	-140 dBc/Hz	-155 dBc/Hz																																				
1 kHz	-145 dBc/Hz	-163 dBc/Hz																																				
10 kHz	-148 dBc/Hz	-166 dBc/Hz																																				
50 kHz	-150 dBc/Hz	-168 dBc/Hz																																				
Offset	Standard	Option L2*																																				
10 Hz	-115 dBc/Hz	-135 dBc/Hz																																				
100 Hz	-140 dBc/Hz	-155 dBc/Hz																																				
1 kHz	-145 dBc/Hz	-165 dBc/Hz																																				
10 kHz	-148 dBc/Hz	-168 dBc/Hz																																				
50 kHz	-150 dBc/Hz	-168 dBc/Hz																																				