

## Voltage Controlled Oscillators

### FEATURES:

- ❖ Frequency Range: 2.05-38.5GHz
- ❖ No External Resonator Needed
- ❖ Low Cost
- ❖ Low Phase-noise Performance
- ❖ High reliability
- ❖ High frequency stability/High Reliability

### APPLICATIONS:

- ❖ Wireless Infrastructure
- ❖ Industrial Controls
- ❖ Test Equipment
- ❖ Military
- ❖ Point-to-Point Radio



**CVO Series**

### SPECIFICATIONS:

#### Narrowband (with Buffer):

| Model Number | Frequency Range (GHz) | Output Power (Typ, dBm) | 10kHz SSB Phase Noise (Typ, dBc/Hz) | 100kHz SSB Phase Noise (Typ, dBc/Hz) | DC Bias Supply (Typ.) |
|--------------|-----------------------|-------------------------|-------------------------------------|--------------------------------------|-----------------------|
| CVO020203H   | 2.05 - 2.25           | 3.5                     | -89                                 | -112                                 | +3V @ 35mA            |
| CVO020204H   | 2.25 - 2.5            | 4.5                     | -89                                 | -115                                 | +3V @ 35mA            |
| CVO020205H   | 2.6 - 2.8             | 5                       | -88                                 | -115                                 | +3V @ 35mA            |
| CVO020304H   | 2.75 - 3.0            | 4.5                     | -89                                 | -114                                 | +3V @ 37mA            |
| CVO030304H   | 3.15 - 3.4            | 4.9                     | -88                                 | -113                                 | +3V @ 39mA            |
| CVO030304H   | 3.35 - 3.55           | 4.7                     | -89                                 | -112                                 | +3V @ 41mA            |
| CVO030304H   | 3.55 - 3.9            | 4.7                     | -87                                 | -112                                 | +3V @ 42mA            |
| CVO030405H   | 3.9 - 4.45            | 5                       | -81                                 | -106                                 | +3V @ 30mA            |
| CVO040504H   | 4.45 - 5.0            | 4                       | -79                                 | -105                                 | +3V @ 30mA            |
| CVO050502H   | 5.0 - 5.5             | 2                       | -80                                 | -103                                 | +3V @ 27mA            |
| CVO050602H   | 5.5 - 6.1             | 2                       | -80                                 | -102                                 | +3V @ 27mA            |
| CVO050604M   | 5.5 - 6.5             | 4.5                     | -77                                 | -97                                  | +5V @ 20mA            |
| CVO050610H   | 5.8 - 6.8             | 10                      | -82                                 | -105                                 | +3V @ 100mA           |
| CVO050605M   | 5.8 - 6.9             | 5.0                     | -77                                 | -97                                  | +5V @ 20mA            |
| CVO060604H   | 6.1 - 6.72            | 4.5                     | -73                                 | -101                                 | +3V @ 31mA            |
| CVO060705M   | 6.4 - 7.4             | 5.0                     | -77                                 | -97                                  | +5V @ 20mA            |
| CVO060711H   | 6.8 - 7.4             | 11                      | -80                                 | -106                                 | +3V @ 80mA            |
| CVO060704M   | 6.8 - 7.9             | 4.5                     | -77                                 | -97                                  | +5V @ 20mA            |
| CVO070714H   | 7.1-7.9               | 14                      | -80                                 | -103                                 | +3v @ 85mA            |
| CVO070805M   | 7.4 - 8.6             | 5.0                     | -77                                 | -97                                  | +5V @ 20mA            |
| CVO121228U   | 12.65-12.85           | 8                       | -75                                 | -100                                 | +4.5v@150mA           |
| CVO070814H   | 7.8 - 8.7             | 14                      | -80                                 | -103                                 | +3V @ 77mA            |



| Model Number | Frequency Range (GHz) | Output Power (Typ, dBm) | 10kHz SSB Phase Noise (Typ, dBc/Hz) | 100kHz SSB Phase Noise (Typ, dBc/Hz) | DC Bias Supply (Typ.) |
|--------------|-----------------------|-------------------------|-------------------------------------|--------------------------------------|-----------------------|
| CVO242416U   | 24-24.25              | 16                      | -                                   | -90                                  | +5V@220mA             |
| CVO383808U   | 38-38.5               | 8                       | -35                                 | -65                                  | +4.5V@110mA           |

## Voltage Controlled Oscillators

### Broadband:

| Model Number | Frequency Range (GHz) | Output Power (Typ, dBm) | 10kHz SSB Phase Noise (Typ, dBc/Hz) | 100kHz SSB Phase Noise (Typ, dBc/Hz) | DC Bias Supply (Typ.) | Case Type |
|--------------|-----------------------|-------------------------|-------------------------------------|--------------------------------------|-----------------------|-----------|
| CVO020410    | 2 – 4                 | 10                      | -75                                 | -100                                 | +12V @ 250mA          | LN5       |
| CVO040810    | 4 – 8                 | 10                      | -75                                 | -100                                 | +12V @ 200mA          | LN4       |
| CVO051005H   | 5 – 10                | 5                       | -65                                 | -95                                  | +5V @ 55mA            | LN3       |
| CVO081205H   | 8 – 12.5              | 5                       | -65                                 | -93                                  | +5V @ 55mA            | LN3       |
| CVO121810    | 12 – 18               | 10                      | -65                                 | -95                                  | +12V @ 250mA          | LN6       |

### With-Divider:

| Model Number   | Frequency Range (GHz) | Output Power (Typ, dBm) | Divider  | 10kHz SSB Phase Noise (Typ, dBc/Hz) | 100kHz SSB Phase Noise (Typ, dBc/Hz) | DC Bias Supply (Typ.) |
|----------------|-----------------------|-------------------------|----------|-------------------------------------|--------------------------------------|-----------------------|
| CVO060713D2H   | 6.65 – 7.65           | 13                      | Fo/2     | -90                                 | -115                                 | +5V @ 290mA           |
| CVO070815D2H   | 7.3 – 8.2             | 15                      | Fo/2     | -90                                 | -116                                 | +5V @ 240mA           |
| CVO070813D2H   | 7.8 – 8.8             | 13                      | Fo/2     | -90                                 | -115                                 | +5V @ 250mA           |
| CVO080913D2D4H | 8.45 – 9.55           | 13                      | Fo/2 & 4 | -92                                 | -116                                 | +5V @ 315mA           |
| CVO091013D2H   | 9.05 – 10.15          | 13                      | Fo/2     | -88                                 | -115                                 | +5V @ 265mA           |
| CVO091011D2D4H | 9.5 – 10.8            | 11                      | Fo/2 & 4 | -85                                 | -110                                 | +5V @ 350mA           |
| CVO091009D2D4H | 9.6 – 10.8            | 9                       | Fo/2 & 4 | -85                                 | -111                                 | +5V @ 330mA           |
| CVO101107D2D4H | 10.43 – 11.46         | 7                       | Fo/2 & 4 | -85                                 | -110                                 | +3V @ 275mA           |
| CVO101107D2D4H | 10.6 – 11.8           | 11                      | Fo/2 & 4 | -82                                 | -110                                 | +5V @ 350mA           |
| CVO111209D2D4H | 11.1 – 12.4           | 9                       | Fo/2 & 4 | -83                                 | -110                                 | +5V @ 350mA           |
| CVO111207D2D4H | 11.17 – 12.02         | 7                       | Fo/2 & 4 | -87                                 | -110                                 | +3V @ 275mA           |
| CVO111210D2D4H | 11.5 – 12.5           | 10                      | Fo/2 & 4 | -83                                 | -110                                 | +5V @ 200mA           |
| CVO111211D2D4H | 11.5 – 12.8           | 11                      | Fo/2 & 4 | -80                                 | -110                                 | +5V @ 350mA           |
| CVO121308D2D4H | 12.4 – 13.4           | 8                       | Fo/2 & 4 | -83                                 | -110                                 | +5V @ 260mA           |
| CVO121310D2D4H | 12.5 – 13.9           | 10                      | Fo/2 & 4 | -81                                 | -110                                 | +5V @ 330mA           |
| CVO131308D8H   | 13.2 – 13.5           | -8                      | Fo/8     | -83                                 | -110                                 | +5V @ 230mA           |
| CVO131407D2D4H | 13.6 – 14.9           | 7                       | Fo/2 & 4 | -82                                 | -110                                 | +5V @ 260mA           |
| CVO141506D8H   | 14 – 15               | 6                       | Fo/8     | -75                                 | -110                                 | +5V @ 260mA           |
| CVO141506D2M   | 14.2 – 15.2           | 6.0                     | Fo/8     | -                                   | -88                                  | +4V @ 110mA           |

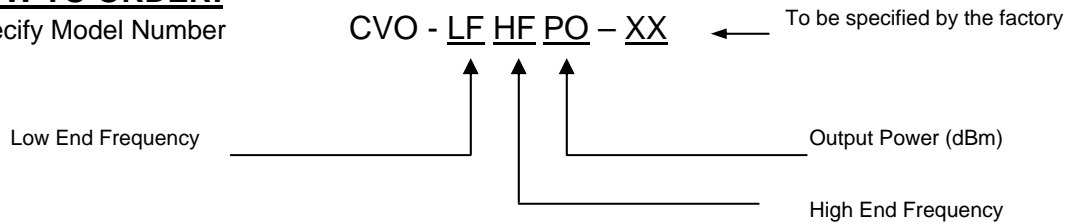
| Model Number    | Frequency Range (GHz) | Output Power (Typ, dBm) | Divider   | 10kHz SSB Phase Noise (Typ, dBc/Hz) | 100kHz SSB Phase Noise (Typ, dBc/Hz) | DC Bias Supply (Typ.) |
|-----------------|-----------------------|-------------------------|-----------|-------------------------------------|--------------------------------------|-----------------------|
| CVO141509D2D4H  | 14.25 – 15.65         | 9                       | Fo/2 & 4  | -80                                 | -107                                 | +5V @ 350mA           |
| CVO141509D2H    | 14.5 – 15.0           | 9                       | Fo/2      | -80                                 | -105                                 | +4.2V @ 150mA         |
| CVO141505D2M    | 14.7 – 15.7           | 5.0                     | Fo/4      | -                                   | -88                                  | +4V @ 110mA           |
| CVO141509D2H    | 14.9 – 15.5           | +9                      | Fo/2      | -80                                 | -105                                 | +4.2V @ 150mA         |
| CVO202309D2D16H | 20.9 – 23.9           | 9                       | Fo/2 & 16 | -65                                 | -95                                  | +5V @ 200mA           |
| CVO232411D16H   | 23.8 – 24.8           | 12                      | Fo/16     | -70                                 | -95                                  | +5V @ 225mA           |
| CVO232608D2D16H | 23.8 – 26.8           | 8                       | Fo/2 & 16 | -64                                 | -93                                  | +5V @ 200mA           |
| CVO383807D3U    | 38 – 38.5             | 7                       | Fo/3      | -48                                 | -75                                  | +4.5/-4.5V @ 110/5mA  |

OTHER FREQUENCY BANDS ARE ALSO AVAILABLE

NOTES: \* CONSULT THE FACTORY

## HOW TO ORDER:

Specify Model Number



**Example:** To order a VCO with Low End Frequency at 5.8GHz and High End Frequency at 6.8 GHz with Output Power at 10dBm , specify CVO050610-XX.

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