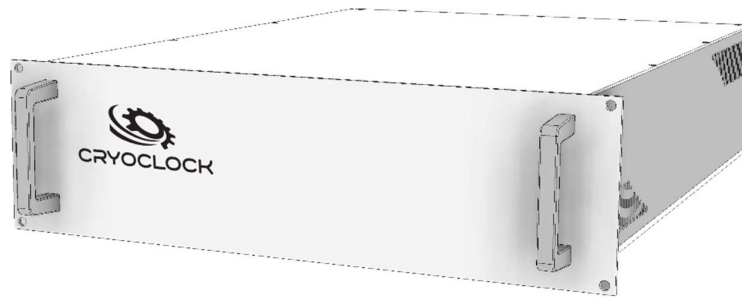


# X-LNO

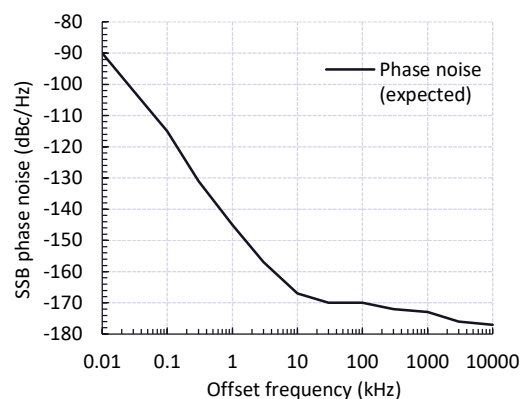
## Ultra Low-Noise Microwave Oscillator



\*Concept design only

The **XLNO-9G** is a microwave reference oscillator in development that will produce an ultra-low phase noise reference signal around 9 GHz. By utilising the high Q of a temperature-controlled sapphire, the XLNO-9G oscillator is designed to generate a +10 dBm signal with a typical phase noise of below -165 dBc/Hz at 10 kHz offset. The XLNO-9G will be packaged in a milled aluminium 3U enclosure. A key application for the XLNO-9G is as the master oscillator in microwave communications and radar systems, such as Precision Approach Radars and surface detection radars. The ultra-low phase noise of the XLNO-9G will enable significantly greater sensitivity in these radar systems.

| Description         | Parameter value<br>(preliminary/targeted) |                 |
|---------------------|---|-----------------|
| Operating frequency | 9 GHz                                     |                 |
| Time to lock        | <20 minutes                               |                 |
| Output power        | +10 dBm                                   |                 |
| Phase noise         | Offset freq                               | Expected values |
|                     | 10 Hz                                     | -90 dBc/Hz      |
|                     | 100 Hz                                    | -115 dBc/Hz     |
|                     | 1 kHz                                     | -145 dBc/Hz     |
|                     | 10 kHz                                    | -167 dBc/Hz     |
|                     | 100 kHz                                   | -170 dBc/Hz     |
|                     | 1 MHz                                     | -173 dBc/Hz     |
|                     | 10 MHz                                    | -177 dBc/Hz     |
| Dimensions          | 3U rack enclosure                         |                 |



\*Preliminary/target specifications only. Specifications subject to change