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| DATA SHEET NUMBER | NR3606-O |
| REVISION          | A        |
| DATE              | 2-7-22   |

## NR3606-O

### Eight Channel OCXO Reference

#### 3 PPS and 3 Sine Plus LVDS



Unique in the industry, the NR3606 provides three 10 MHz sine outputs and three synthesized PPS outputs. It also provides a 10 MHz LVDS and PPS LVDS output. Ideally suited for applications requiring the stability of a OCXO frequency reference and the synchronization of a PPS but are operating in a GNSS denied environment. 1PPS synthesizer is factory programmable to other frequencies and pulse widths.

The OCXO provides low phase noise and a holdover stability of 5 ppb/day.

The PPS outputs can be factory configured to either 3.3 or 5.0 Volt CMOS levels capable of driving a 50 Ohm load.

#### OCXO Holdover

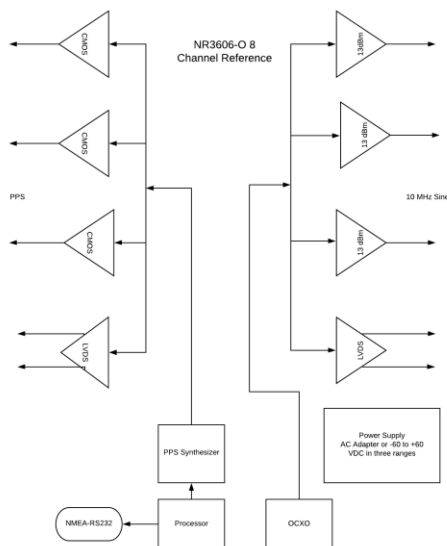
Aging < +/-5 ppb/day

#### LVDS

Three sine and three PPS plus a 10 MHz LVDS and PPS LVDS

#### Low Phase Noise

| Phase Noise |        |
|-------------|--------|
| Offset      | dBc/Hz |
| 10          | -125   |
| 100         | -140   |
| 1K          | -145   |
| 10K         | -150   |



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| <b>Output</b>                         | 10 MHz, 0.5 Vrms $\pm 0.2$ , into 50 Ohms, LVDS 100 Ohms load                                                                                                  |
| Accuracy at shipment                  | $< \pm 1E-9$                                                                                                                                                   |
| 10MHz sine                            | 13 $\pm 2$ dBm ,50 Ohm - BNC                                                                                                                                   |
| Harmonics                             | Less than -30 dBc                                                                                                                                              |
| First year frequency stability        | $\pm 50$ ppb (long-term unlocked)                                                                                                                              |
| Temperature stability                 | $\pm 10$ ppb (long-term unlocked)                                                                                                                              |
| Yearly aging                          | $\pm 50$ ppb (long-term unlocked)                                                                                                                              |
| Power requirements                    | Standard configuration is 12VDC (9 to 15VDC)<br>Options- $\pm 24$ VDC (20 to 30VDC), $\pm 48$ VDC (40 to 60VDC)<br>AC adapter available 100 to 240VAC, 50/60Hz |
| Connectors                            | BNC 10 MHz output<br>BNC 10 MHz input                                                                                                                          |
| LVDS outputs                          | BNC PPS (3.3 VDC CMOS) (assigned when ordered)<br>On Shore tech OSTOQ033251 mates with Digikey ED2876-ND                                                       |
| <b>PPS</b>                            |                                                                                                                                                                |
| Amplitude for 1PPS                    | 3.3 VDC CMOS (5 VDC option)                                                                                                                                    |
| Pulse width for 1PPS                  | 100ms                                                                                                                                                          |
| Rise time for 1PPS                    | $< 5$ ns                                                                                                                                                       |
| Connector                             | BNC                                                                                                                                                            |
| Load Impedance                        | 50 Ohm                                                                                                                                                         |
| Location                              | rear                                                                                                                                                           |
| Other                                 | Port is factory programmable to other pulse frequencies.                                                                                                       |
| LVDS                                  | 100 Ohm load                                                                                                                                                   |
| <b>Remote interface &amp; control</b> |                                                                                                                                                                |
| Protocol                              | RS232                                                                                                                                                          |
| Connector                             | DB-9                                                                                                                                                           |
| Location                              | Rear panel                                                                                                                                                     |
| Protocol                              | Bit plus stop                                                                                                                                                  |
| Standard Baud Rates                   | Selectable 4800, 9600, 19200, 38400, 57600 or 115200 bps                                                                                                       |
| <b>Main Power</b>                     |                                                                                                                                                                |
| DC input                              | -60 to +60 in three ranges                                                                                                                                     |
| Power                                 | $< 15$ W ( steady state $< 10$ W)                                                                                                                              |
| <b>Warranty</b>                       | 1 year plus 3 year optional extended warranty from date of shipment                                                                                            |

### ***Environmental and Mechanical***

|                       |                          |
|-----------------------|--------------------------|
| Operating temperature | 0 to 50°C non-condensing |
|-----------------------|--------------------------|



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| Storage temperature | -40 to 70°C                   |
| Height              | 1.58"                         |
| Width               | 6.0"                          |
| Depth               | 6.0 " exclusive of connectors |
| Weight              | 1.5 lbs.                      |

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