

# **Rubidium Frequency Reference**



## **Description**

The Quartzlock A1000 Rubidium Frequency Reference is a 10 MHz high stability standard with very low capital and cost of ownership.

### **Features**

- Low Phase Noise
- Low Drift
- High Stability
- 3 Year Warranty

### **Applications:**

- Systems & Test Solutions
- Frequency Reference
- Frequency Standard
- Wireless Transmitter Ref.

# Quartzlock A1000 Rubidium Frequency Reference

Quartzlock A1000 Rubidium time & frequency reference

# (6)

## Low phase noise • low drift • high stability

#### **SPECIFICATION**

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| Output (50 ohms)<br>OPTION A<br>OPTION B   |                                  | 10MHz sine 0.7V rms +7dBm<br>1V rms +13dBm<br>Custom output frequencies  |  |  |
|--|----------------------------------|--|--|--|
| Accuracy   | ±5x10 <sup>-11</sup> a           | ±5x10 <sup>-11</sup> at shipment @25°C   |  |  |
| Phase to Noise (SSB)   | 10Hz<br>100Hz<br>1KHz            | -100dBc<br>-120 dBc<br>-140 dBc  |  |  |
| Input Power  |                                  | 13W  |  |  |
| Input Voltage Range  |                                  | 90-240V ac   |  |  |
| Warm Time  | 5 minu                           | 5 minutes to lock @ 25°C   |  |  |
| Retrace  |                                  | ±3x10 <sup>-11</sup>   |  |  |
| Frequency Control Internal (external ask Quartzlock)<br>Internal trim range (trimpot) greater than 2x10 <sup>-9</sup><br>External trim range greater than 2x10 <sup>-9</sup> (0V~5V) |                                  |  |  |  |
| Short term stability   | 1s<br>10s<br>100s<br>hour<br>day | 3x10 <sup>-11</sup><br>1x10 <sup>-11</sup><br>3x10 <sup>-12</sup><br>x10 <sup>-13</sup><br>1x10 <sup>-12</sup> |  |  |
| Harmonics<br>Second Harmonic<br>Third Harmonic   |                                  | -48 dBc<br>-45 dBc   |  |  |
| Frequency Drift  | 3x10 <sup>-12</sup> /d, 3>       | 3x10 <sup>-12</sup> /d, 3x10 <sup>-11</sup> /m, 5x10 <sup>-10</sup> /yr  |  |  |
| Status Monitors  | Lock and On LED                  |  |  |  |
| RS232 i/o NMEA NTP, loo  | ck advice etc                    | ).   |  |  |
| Operating Temp. Range  |                                  | -20°C to +50°C   |  |  |
| Temperature Coefficient (  | (ambient) 3x <sup>-</sup>        | 10 <sup>-10</sup> (-20° to 50°C)   |  |  |
| Storage Temperature  |                                  | -40° to 70°C   |  |  |
| MTBF   |                                  | 100,000 hours  |  |  |
| Connectors E   | BNC RF & IEC line supply input   |  |  |  |
| Size   | 19" Rack 1 U (44mm/1.75")        |  |  |  |
| Weight 1.75Kg  |                                  |  |  |  |
| Warranty   | 3 years                          |  |  |  |

Applications: Systems & Test Solutions Frequency Reference Frequency Standard Wireless Transmitter Ref.

## new 2007 economy '1U' line instruments

| Quartzlock A1000 Rubidium time & frequency reference |      | 0 |
|--|------|---|
|  |      | 8 |
| A1000 Rubidium instrument                            | P.L  |   |
| Low phase noise • low drift • high stabi             | lity |   |

A5000 Distribution Amplifier Up to 24 outputs from 1 or 2 inputs

ock A5000 Distribution Amplifier

| Quartzlock A8000 GPS CA code time & frequency reference | 2006-06C-23<br>19185146 UTC+18 | ÷    | 8 |
|---|--------------------------------|------|---|
| A8000 GPS CA code time                                  | & freq.                        | ref. |   |

A4000 Redundant RF Switch Unit For use with Rb and GPS references

Quartzlock can combine any of the above instruments into a single 1U unit to meet specified requirements.

#### **Contact us:**

Telephone: +44(0)1803 862062

Fax: +44(0)1803 867962

e-mail: sales@quartzlock.com

### Web: quartzlock.com

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