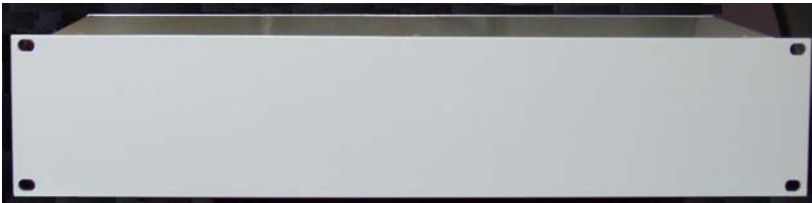


## RFS10B: 10 MHz Rubidium Frequency Reference

**RFS10B Front View**



**RFS10B Rear View**



### Key Features

- 10 MHz Output, +13 dBm
- Oven Controlled Rubidium Oscillator
- Very Low Phase Noise
- Low Aging of  $5 \times 10^{-11}$  / month
- High Thermal Stability of  $5 \times 10^{-11}$  (0 to 50 °C)
- Low 100 second Allan Variance of  $2 \times 10^{-12}$
- 19" Rack mount Case
- Many Options Available
- CE Marked

### General Description

The RFS10B is a 10 MHz rubidium frequency reference which offers excellent performance for virtually any frequency or timing application. It is ideal for instrumentation and communication systems which require a precise frequency reference. The RFS10B is supplied in a 19" rack mount case and is powered from a 115 / 230 VAC power supply.

Options such as a RS232 interface, DC power input, multiple isolated 10 MHz outputs and squarewave outputs are also available.

### Applications

The RFS10B is already used by a leading UK telecommunications company to synchronize their automatic satellite communication system. It meets stratum 1 performance (72 hour)

### Low Phase Noise

Traditionally rubidium frequency standards have suffered from poor phase noise. However, due to an unique phase lock loop design, the rubidium oscillator used in the RFS10B has very low phase noise, superior to most other competitive rubidium oscillators.

## Miscellaneous Information

The RFS10B is a highly reliable unit. It is housed in a fully screened aluminum 19 inch case aluminum case and operates from a 115 VAC or 230 VAC supply. The RFS10B is CE marked for sale within the EEC.

# RFS10B SPECIFICATIONS

Specification Parameter	Specification
Frequency	10.000000 MHz
Output level	+13 dBm into 50 $\Omega$
Output Waveform	Sinewave
Spectral Purity	2 <sup>nd</sup> Harmonic < -45 dBc. Other harmonics < -60 dBc
Accuracy at shipment	< 5 x 10 <sup>-11</sup>
Frequency Stability (0 to 50 °C)	$\pm$ 5 x 10 <sup>-11</sup>
Aging (per month)	< 5 x 10 <sup>-11</sup>
Aging (per year)	< 5 x 10 <sup>-10</sup>
Frequency Retrace	$\pm$ 5 x 10 <sup>-11</sup> (72 hrs. off then 72 hrs. on)
Allan Variance (1s)	< 2 x 10 <sup>-11</sup>
Allan Variance (10s)	< 1 x 10 <sup>-11</sup>
Allan Variance (100s)	< 2 x 10 <sup>-12</sup>
Phase Noise 1 Hz	< -96 dBc/Hz
Phase Noise 10 Hz	< -122 dBc/Hz
Phase Noise 100 Hz	< -138 dBc/Hz
Phase Noise 1 kHz	< -148 dBc/Hz
Power (AC)	115 VAC or 230 VAC $\pm$ 10%. Power 130 Watts max
Size	483 mm x 88 mm x 180 mm. Width x Depth x Height
Weight	4.5 kg
Ambient Operating Temperature	-20°C to +50 °C
Options Available	RS232 interface, 1 pps time tagging, DC Power Input. Multiple Frequency Outputs. Different Frequency Outputs. Squarewave Outputs. Redundancy. IRIG timing outputs.

Precision Test Systems			
Head Office - UK	South Africa	USA	Represented locally by:
Precision Test Systems LTD 40 Holkham Avenue, South Woodham Ferrers Essex, CM3 7AU, England Tel: +44 (0) 845 052 0920 Fax: +44 (0) 870 135 4973 Email: uksales@ptsyst.com Web: www.ptsyst.com	Precision Test Systems cc 183 Edison Crescent Hennops Park X7 Pretoria South Africa Tel: +27 (0) 12 653 5848 Email: sasales@ptsyst.com Web: www.ptsyst.com	Precision Test Systems Suite # 981 14781 Memorial Dr. Houston, TX 77079 Tel: 1 888 876 4804 Fax: 1 413 410 1112 Email: usasales@ptsyst.com Web: www.ptsyst.com	

Full specifications available from [www.ptsyst.com](http://www.ptsyst.com). Specifications and features subject to change without notice (101204)