

PTS PRECISION TEST SYSTEMS

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 5×10^{-11} / month
- High Thermal Stability of 5×10^{-11} (0 to 50 °C)
- Low 100 second Allan Deviation of 2×10^{-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 Ω
Output Waveform	Sinewave
Spectral Purity	2 nd Harmonic < -45 dBc. Other harmonics < -60 dBc
Accuracy at shipment	< 5 x 10 ⁻¹¹
Frequency Stability (0 to 50 °C)	\pm 5 x 10 ⁻¹¹
Aging (per month)	< 5 x 10 ⁻¹¹
Aging (per year)	< 5 x 10 ⁻¹⁰
Frequency Retrace	\pm 5 x 10 ⁻¹¹ (72 hrs. off then 72 hrs. on)
Allan Deviation (1s)	< 2 x 10 ⁻¹¹
Allan Deviation (10s)	< 1 x 10 ⁻¹¹
Allan Deviation (100s)	< 2 x 10 ⁻¹²
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.

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Full specifications available from www.ptsyst.com. Specifications and features subject to change without notice (290311)