

Rubidium Oscillators



FEATURES

- RS232 & GPS Interface options
- Low phase noise to -160dBc/Hz
- 3 Year warranty
- Tuned Rb cell
- 'A' Class & HSRO stability variants
- $5 \times 10^{-12}/1s$, $4 \times 10^{-13}/100s$ stability
- Aging: $5 \times 10^{-10}/\text{year}$

APPLICATIONS

- Frequency Calibration
- Telecom Network Synchronisation
- Broadcast
- Cellular Wireless Base Stations

BENEFITS

- Low cost, high performance standard
- Fits 1U case
- Low failure risk
- Simple integration into systems

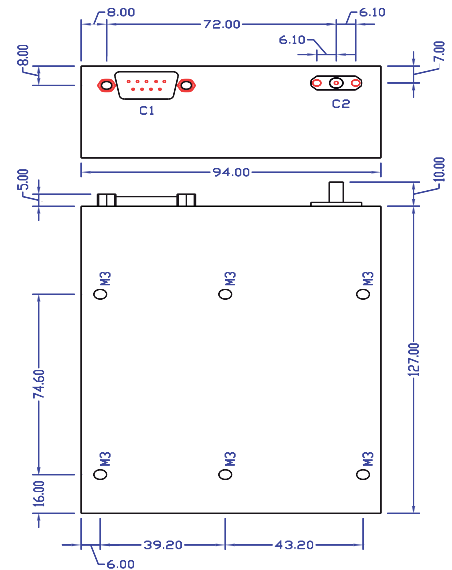
STANDARD SPECIFICATIONS

Output	10MHz, +7dBm into 50Ω, 0.5V RMS		
Adjustment Mechanical Range Electrical Range Control Voltage Factory Setting	2x10 ⁻⁹ min 2x10 ⁻⁹ min 0 ~ 5V ±5x10 ⁻¹¹		
Frequency Stability 1s 10s 100s 1day	Std 3x10 ⁻¹¹ 1x10 ⁻¹¹ 3x10 ⁻¹² 1x10 ⁻¹¹	'B' Class 1x10 ⁻¹¹ 5x10 ⁻¹² 1x10 ⁻¹²	'A' Class 5x10 ⁻¹² 2x10 ⁻¹² 4x10 ⁻¹³
Aging 1 day 1 month 1 year	3x10 ⁻¹² 4x10 ⁻¹¹ 5x10 ⁻¹⁰	1x10 ⁻¹²	5x10 ⁻¹³
Phase Noise 1Hz 10Hz 100Hz 1000Hz 10000Hz	Std - 100dBc 120dBc 140dBc 145dBc	LN 110dBc 130dBc 145dBc 155dBc	HSRO to -120dBc to -178dBc
Harmonics	<40dBc		
Spurious	<80dBc		
Warm time to 1x10⁻⁹	5min		
Retrace after 24h off & 1h on, same temp	<3x10 ⁻¹¹		
Power Supply Power at steady state at 25°C Freq offset over output voltage range	13W @ 24V (22~30Vdc) @ 25°C, Max 2A <2x10 ⁻¹¹		
Temperature Operating Storage Freq offset over operating temperature range	-20°C ~ +50°C -40°C ~ +70°C <3x10 ⁻¹⁰		
Magnetic Field Sensitivity Atmospheric Pressure Approx MTBF, Stationary	<2x10 ⁻¹¹ /Gauss -60m ~ 4000m <1x10 ⁻¹³ /mbar 100,000Hrs		
Mechanical	38(40 RS232 Version)x94x127mm, 650g max 1.5"(1.57" RS232 Version)x3.7"x5", 23oz max		

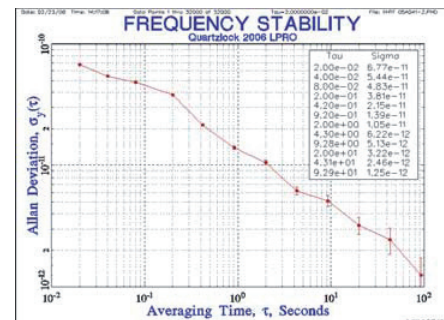
PIN CONNECTIONS

- C1:** 'D' 9 Pin Male
C2: SMA RF Output
 1. LOCK MONITOR (BIT)
 2. DC RETURN
 3. CASE
 4. N/C
 5. EXT 'C' FIELD VOLTAGE (0 - 5V)
 6. N/C
 7. DC POWER (+24V)
 8. VCXO CV MONITOR
 9. LAMP (LIGHT) MONITOR

DIMENSIONS



STS



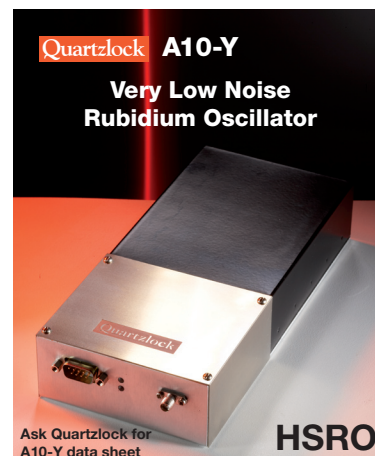
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A10-FRS
High Performance
Rb Oscillator
Mil Spec



A10-HSRO
High Stability
Rb Oscillator
Use A10-Y
for current
designs

Ask Quartzlock for
A10-Y data sheet

HSRO