

Miniature Rubidium Oscillators

Provisional Information



APPLICATIONS

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

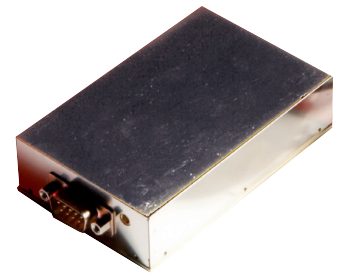
BENEFITS

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

FEATURES

- RS232 Interface
- Low phase noise to -165dBc/Hz
- 2 Year Warranty
- Aging: $5 \times 10^{-10}/\text{year}$
- Stability
- 1PPS I/O Sync

E10 MRO SPECIFICATIONS PROVISIONAL INFORMATION		
Output	10MHz HCMOS	
Optional outputs	Consult factory	
Accuracy	±5E-11 at shipment @25°C	
Aging	E10-MRO 5x10 ⁻¹² /day 5x10 ⁻¹¹ /month	E10-Y 5x10 ⁻¹³ /day
Retrace	≤±3E-11	
Short Term Stability	E10-MRO	E10-Y
1s	5E-11	5x10 ⁻¹²
10s	1.6E-11	2x10 ⁻¹²
100s	5E-12	4x10 ⁻¹³
Phase Noise	E10-MRO	E10-Y
10Hz	-85dBc	-120dBc
100Hz	-125dBc	-140dBc
1kHz	-140dBc	-160dBc
Input Power	8W at 12V@25°C, Max 2.5A	
Input Voltage Range	12 ±0.5Vdc	
Warm-up	5 minutes to lock @ 25°C	
Frequency Control		
Internal trim range (trimpot)	≥2E-9	
External trim range	≥2E-9 (0V~5V)	
Temperature		
Operating	-20°C to +50°C	
Temperature Coefficient (ambient)	2E-10 (-20°C to 50°C)	
Storage	-55°C to +85°C	
MTBF	100,000 hours	
Connector	DB-9 Connector, SMA	
Size	89×76×28 (mm ³) (190cc)	
Weight	0.25kg max	
Warranty	2 years	



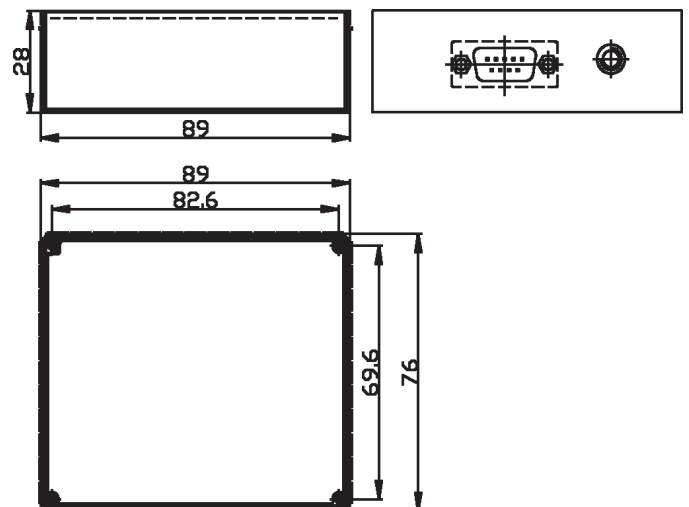
CONNECTOR INTERFACE

- J1:** SMA, RF OUTPUT
- J2:** DB-9
- 1: lock monitor(bit)
- 2&4: dc return/ground
- 3: locking signal
- 5: ext C-field (0~5V)
- 6, 8 & 9: NC (Used for RS232 option)
- 7: +12V

E10-Y

This high performance version exhibits lower phase noise and higher short term stability. A 1PPS locking module is included (see A6-1PPS). Customers may specify lower phase noise than above.

DIMENSIONS



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