

**Quartzlock** A10-X

# 10MHz Rubidium Oscillator



**Applications:**  
Frequency Reference  
Calibration  
Frequency Standard  
Fast Prototyping

**The evaluation/break-out PCB, power supply  
& SMA-BNC cable supplied enable  
“out of the box - ready to use”**

# 10MHz Rubidium Oscillator

Output	10MHz sine 0.7V rms into 50 ohms
Accuracy	$\pm 5 \times 10^{-11}$ at shipment @25°C
Phase to Noise (SSB)	-100dBc (10Hz) -120 dBc (100Hz) -140 dBc (1KHz)
Input Power	13W at 24V@25°C, Max 2A
Input Voltage Range (see options)	22 to 30Vdc
Warm Time	5 minutes to lock @ 25°C
Retrace	$\pm 3 \times 10^{-11}$
Frequency Control	
Internal trim range (trimpot)	greater than $2 \times 10^{-9}$
External trim range	greater than $2 \times 10^{-9}$ (0V~5V)
Short term stability	$3 \times 10^{-11}/1s$ $1 \times 10^{-11}/10s$ $3 \times 10^{-12}/100s$ /hour
Aging	$3 \times 10^{-12}/day$ $4 \times 10^{-11}/month$ $5 \times 10^{-10}/year$
Harmonics	
Second Harmonic	-48 dBc
Third Harmonic	-45 dBc
Frequency Drift	$3 \times 10^{-12}/day$ , $3 \times 10^{-11}/month$
Status Monitors	Lock and On LEDs
Operating Temp. Range	-20°C to +50°C
Temperature Coefficient (ambient)	$3 \times 10^{-10}$ (-20° to 50°C)
Storage Temperature	-40° to 70°C
MTBF	100,000 hours
Connectors (picture shows BNC adaptor not supplied)	SMA
Size	Evaluation/break-out PCB + 38x94x127mm
Weight	0.75Kg
Warranty	3 years

OPTION (included)  
Ext 24Vdc supply. 90-240V ac input. 1.5m coax lead  
SMA to BNC (to enable "out of box - ready to use")

19" Rack mount instrument version 1.75"/44mm/1U  
See A1000 data sheet

**Applications:**  
**Frequency Reference**  
**Calibration**  
**Frequency Standard**  
**Rubidium Evaluation Pack**  
**Fast Prototyping**



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