



FEI Communications, Inc.

A Subsidiary of Frequency Electronics, Inc.

Rubidium Atomic Frequency Standard FE-5682A Preliminary Data Sheet

Frequency:	10 MHz
Output Level:	0.5 Vrms into 50 Ω minimum (7.0 dBm min)
Phase Noise (SSB):	10 Hz -100 dBC 100 Hz -125 dBC 1000 Hz -145 dBC
Spurs:	-60 dBC max
Harmonics:	-30 dBC max
Stability	
Aging:	< 1×10^{-11} /day < 2×10^{-10} /month < 1×10^{-9} /year < 3×10^{-9} /10 years
Retrace:	< 5×10^{-11}
Allan Variance:	< $1.4 \times 10^{-11} / \sqrt{\tau}$
Input Voltage Sensitivity:	2×10^{-11} /19 TO 32 Vdc
Frequency vs. Temperature:	< 2×10^{-10} (0°C to +75°C)
Input Voltage Range:	+19 TO +32 Vdc
Frequency setting Resolution:	1×10^{-11}
Frequency Adjust Range:	4×10^{-9} minimum
Warm-up Time:	< 5 min to lock
Size:	3. 5" x 5. 0" x 1.5" H
Weight:	1.4 Lbs. Max.
Input Power Requirement	
Steady state:	< 11 Watts @ 25°C
Warm-Up:	< 32 Watts
Monitors:	
Analog	VCXO volts, lamp volts (20 k Ohm impedance, filtered)
Digital	LOCK monitor: 5V CMOS load
Lock:	0V to 50 mV (within $\sim \pm 5 \times 10^{-8}$)
Unlock:	4.2 to 4.7 V

OUTLINE DRAWING

