



9210B

Military OCXO

STANDARD FEATURES

- 5 or 10MHz Output
- <1E-10 Per Day Aging
- <3E-10 G Sensitivity
- 30grms Random Vibration

As the military moves toward implementing more advanced communications, navigation and targeting systems, precision oscillators that can withstand a wide range of operating environments is becoming more critical.

The Symmetricom 9210B is a COTS military OCXO designed for ground tactical and air-borne applications where superior frequency stability and phase noise are required. The 9210B is well suited for these applications as it provides superior phase noise performance, which is critical for radar applications and precise frequency accuracy and stability which is critical for secure communication and navigation applications.

The standard oscillator is available in either 5 or 10MHz output configurations, both of which provide excellent frequency stability and phase noise performance in static or dynamic environments.

For more challenging dynamic applications where phase noise under vibration is a key specification, a low G sensitivity option is available that improves g sensitivity to < 2E-10/g.

The 9210B is based around a double oven SC cut crystal resonator enclosed in an industry standard 2.0" x 2.0" x 1.25" package.



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9210B Specifications

ELECTRICAL SPECIFICATIONS

- Frequency
 - Standard output

Frequency:	10MHz
Format:	Sinewave
Amplitude:	7.5 to 10.5dBm
Harmonic:	<-30dBc
Non harmonic:	<-80dBc
Load impedance:	50Ω
 - Optional output

Frequency:	5MHz
Format:	Sinewave
Amplitude:	7.5 to 10.5dBm
Harmonic:	<-30dBc
Non-harmonic:	<-80dBc
Load impedance:	50Ω

- Performance Parameters

Stability	10MHz	5MHz
Avg time [s]		
1	<5.0E-12	<2.0E-12
10	<5.0E-12	<2.0E-12
Aging (per day):	<3E-10	<1E-10
Retrace:	±1E-8	±1E-8
Acceleration sensitivity		
Standard:	±3E-9	±4E-9
Low g option:	±2E-10	-----
SSB Phase noise		
Offset (Hz)	10MHz	5 MHz
1	-100dBc	-110dBc
10	-130dBc	-140dBc
100	-145dBc	-150dBc
1,000	-155dBc	-157dBc
10,000	-157dBc	-160dBc
100k	-157dBc	-160dBc
Temp vs Freq		
-30°C to -70°C:	<±1E-8	<±1E-8
0 to 50°C:	<±5E-9	<±5E-9
Tuning range	±5E-7	±5E-7
Linearity	5%	5%

ENVIRONMENTAL & PHYSICAL SPECIFICATIONS

- General environment

Operating temperature:	-30°C to 70°C
Storage temperature:	-55°C to 100°C
Humidity:	95% up to 50°C
Altitude (operating):	0 to 50,000 feet
- Random vibration

Operating:	30 grms, 10 Min, 3 axis (80Hz - 1kHz)
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- DC Power requirements:

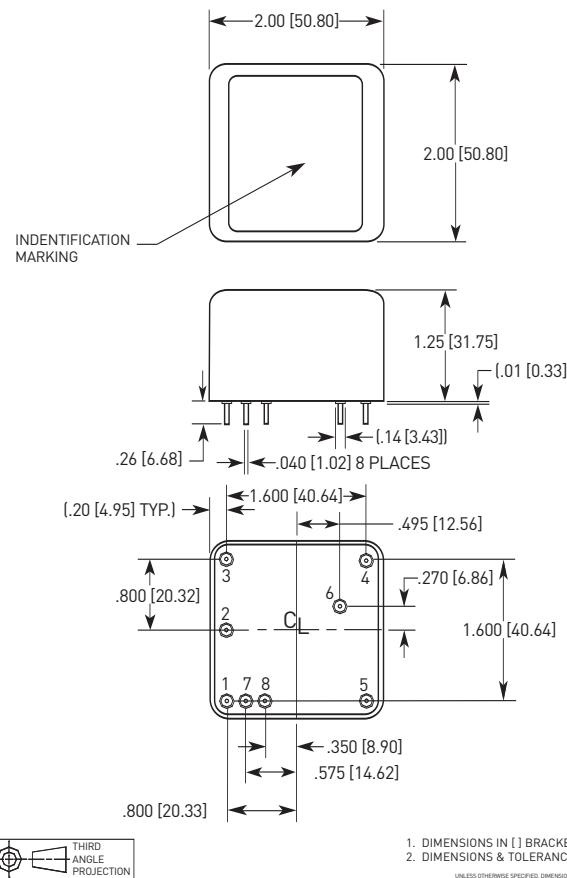
12 - 18VDC
<3W operating power at 12Vdc
<5W warm-up power at 12Vdc
- Dimensions/weight:

2.0" x 2.0" x 1.25"
<120 grams

OPTIONS

- 5MHz output
- Low g sensitivity

Pin number	Function
1	EFC tuning input (0 to +6 VDC)
2	Reference voltage out (+8.5 to +9 VDC)
3	RF output
4	GND
5	Supply (+12 to +18 VDC)
6	GND
7	NC
8	NC



1. DIMENSIONS IN [] BRACKETS ARE METRIC MM.

2. DIMENSIONS & TOLERANCING PER ANSI Y14.5M.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN INCHES

.XX DECIMALS .03 .010



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