OSA 2230 BVA Frequency Standard

Dual 5MHz Frequency Standard

TIME & FREQUENCY

TIME DISTRIBUTION

Highlights

- Ultra low phase noise and outstanding short term stability
- Excellent frequency stability over temperature range
- High long term stability
- Dual, independent 5MHz outputs
- Fine frequency adjustment

Applications

- Measuring and calibration equipment
- Frequency standard
- GPS and Loran C equipment
- Satellite communications
- Very long base interferometry

Stable frequency sources are crucial for test equipment, references and synchronization of the telecommunication networks.

To achieve this, the OSA 2230 BVA Frequency standard houses two independent 5MHz state of the art SC cut crystal BVA 8607 oscillators. These BVA oscillators are the industry standard alternative to compact atomic clocks (over 10'000 BVA 8607 oscillators have been shipped). The housing is a 19" subrack. Separate frequency control is provided. Signal distribution is made via BNC connectors mounted on the back panel.

Outline and electrical connections

- Power Supply: 220V-230V AC
- Environmental: -30/+60°C
- Mechanical: Size (HxWxD) 2U / 19"
  Weight < 5.5kg
- Connectors access:

  Front panel:
  - first frequency mechanical adjustment
  - second frequency mechanical adjustment

  Back panel:
  - two output BNC connectors per frequency
  - one BNC Connector for electrical adjustment

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Technical specification (for detailed precisions, see OSA 8607 BVA particular data-sheet)

Output Signal		
Number of outputs		4 in total 2 per frequency
Frequency each output		5MHz
Level value		7dBm / 50Ω
Wave form		Sinus
Frequency Control Range		
First frequency output		± 10^{-7}Mechanical
Second frequency output		± 10^{-7}Mechanical / ± 1.510^{-7}Electrical
Input Signal		
Electrical adjustment for second frequency		0 / 10 Volts
Stability		
Aging per day	Standard	$2x10^{-11}$
	Option G	$1x10^{-11}$
	Option G	$5x10^{-12}$
	Option J	$3x10^{-12}$
Over temperature range	Standard	$2x10^{-10}$ peak to peak –30°/+60°c
	Option B1	$1x10^{-10}$ peak to peak –30°/+60°c
	Option C	$1x10^{-10}$ peak to peak –15°/+60°c
	Option C5	$0.5x10^{-10}$ peak to peak –15°/+60°c
Short term stability	Option 8	Sigma Tau <$8x10^{-14}$, Tau 3 to 30 sec.
	Option 10	Sigma Tau <$1x10^{-13}$, Tau 1 to 30 sec.
	Option 15	Sigma Tau <$1.5x10^{-13}$, Tau 1 to 30 sec.
	Option 20	Sigma Tau <$2x10^{-13}$, Tau 1 to 30 sec.
	Option 25	Sigma Tau <$2.5x10^{-13}$, Tau 1 to 30 sec.
Phase noise BW = 1Hz		
Standard	1 Hz	-125/dBc
	10 Hz	-145/dBc
	100 Hz	-153/dBc
	1000 Hz	-156/dBc
	10000 Hz	-156/dBc
Option L	1 Hz	-130/dBc
	10 Hz	-145/dBc
	100 Hz	-153/dBc
	1000 Hz	-156/dBc
	10000 Hz	-156/dBc

For 10MHz output, please ask factory.

Subject to change without prior notice.

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