



frequency control solutions

## YH1322

LOW PHASE NOISE OPTION  
SMA CONNECTOR

# OCXO

### Product Description

Greenray Industries' YH1322 Series OCXOs offer very low phase noise and are ideal for base station or test equipment applications.



### Features

- Typical phase noise of -150 dBc (@ 100 Hz offset)
- Frequency Range: 10 - 120 MHz
- Phase noise floor of -170 dBc
- 50.8mm sq. package
- Low Phase Noise performance from 10 MHz through 120 MHz
- SMA connector

### Applications

- Ground radar
- Air traffic control system
- Clock reference for analyzers or synthesizers
- Emergency wireless communications transceiver
- Ethernet synchronization
- Communication system
- Ground station RF telemetry systems
- Multiband terminal
- Upconverter

Rev J



ISO 9001  
Quality

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AS9100  
Aerospace



frequency control solutions

**YH1322 SERIES**  
10 MHz to 120 MHz



## Electrical Characteristics

Frequency Characteristics							
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code	
Nominal Frequency	Sinewave	10		120	MHz	YH1322	
Frequency Stability typical (other stability available, please contact factory)	Frequency	10 MHz		100 MHz		10 MHz	100 MHz
	0°C to +50°C		± 10	± 50		ppb	B18 B58
	-10°C to +60°C		± 15	± 70		ppb	G158 G78
	-20°C to +70°C		± 20	± 100		ppb	N28 N17
Aging	Freq. < 100 MHz			± 0.1	ppm		
	Freq. ≥ 100 MHz			± 0.5	ppm		
Warm-up Time	Within ± 50 ppb		5		min		
Frequency vs Voltage	For a 5% change			± 5	ppb		
Frequency vs Load	For a 10% change			± 5	ppb		
Electronic Frequency Control	EFC = 0 to V <sub>DD</sub> Positive slope		± 1		ppm		
Phase Noise Performance							
Parameter	Frequency	10 MHz		100 MHz		Units	Ordering Code
	Frequency Offset (Hz)	STD	UL	STD	UL		
Phase Noise (static)	10	- 125	- 128	- 85	- 90	dBc/Hz	STD for Standard UL for Ultra Low
	100	- 150	- 155	- 115	- 120	dBc/Hz	
	1k	- 160	- 163	- 145	- 150	dBc/Hz	
	10 k	- 165	- 168	- 160	- 165	dBc/Hz	
	100 k	- 165	- 168	- 165	- 165	dBc/Hz	
DC Supply							
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code	
Supply Voltage (V <sub>DD</sub> )		11.4	12.0	12.6	VDC		
Supply Current				25	mA		
Input Power	Warm-up, 5 min			6	W		
	Idle, at +25°C			2	W		
RF Output: Sinewave							
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code	
Sinewave Output						YH1322	
Harmonics				- 20	dBc		
Load			50		Ω		
Level	50Ω load	+ 8	+ 10	+ 12	dBm		



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## Environmental and Mechanical Specifications

Screenings			
Screening	Standard	Method, Condition	Description
Vibration	MIL-STD-202	204, Cond A	50 g, 20 to 2,000 Hz, swept sine
Shock	MIL-STD-202	213, Cond C	1,500 g, 0.5 ms half-sine

## Recommendations and General Information

Conditions	
Parameter	Notes
Operating Temperature	-40°C to +85°C
Storage Temperature	-45°C to +90°C
Connector Finish	Gold plated
Package Finish	Stainless Steel
Package Weight	70 grams
Soldering Instruction	Hand solder
Shipping	Tray package
Marking	Line 1: Greenray Logo Line 2: Model Line 3: Serial Number + Data Code (YYWW)

## Ordering Example

<b>YH1322</b>	-	<b>N17</b>	-	<b>UL</b>	-	<b>100.0MHz</b>	-	<b>E</b>
Model		Stability Code		Phase Noise		Frequency in MHz		Termination finish
		Refer to Electrical Specs Table* B18, B58 (0 to +50°C) G158, G78 (-10 to +60°C) N28, N17 (-20 to +70°C) T58, T37 (-40 to +85°C)		STD : Standard UL : Ultra-Low		From 10 to 120 MHz		E: Gold plated (RoHS), Standard PB: SnPb 63/37 (non-RoHS) LF: SnAg 96.5/3.5 (Lead-free)

\*other frequency stabilities available, please contact factory



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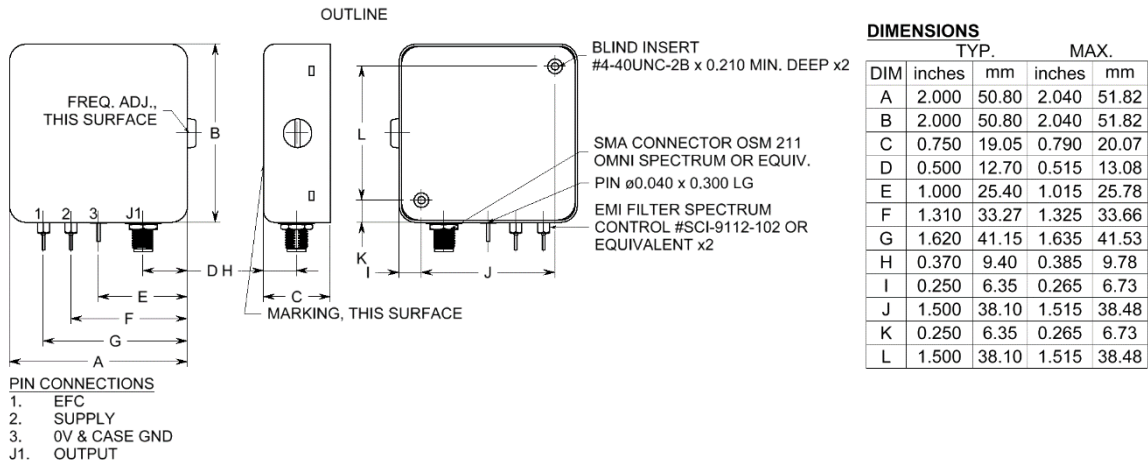
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## Package information



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