GREENRAY
frequency control solutions

YH1322 OCXO

LOW PHASE NOISE OPTION
SMA CONNECTOR

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
- 50.8 mm 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 K

Greenray Industries, Inc., 840 West Church Road, Mechanicsburg, PA 17055
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www.greenrayindustries.com

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frequency control solutions

YH1322 SERIES
10 MHz to 120 MHz

OCXO

Electrical Characteristics

Frequency Characteristics								
Parameter	**Conditions**	**Min**	**Typical**		**Max**	**Units**	**Ordering Code**	
Nominal Frequency	Sinewave	10			120	MHz		
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
	-40°C to +85°C		± 50	± 300		ppb	T58	T37
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 SUP. Positive slope		± 1			ppm		
Phase Noise Performance								
Parameter	**Frequency Offset (Hz)**	**STD**	**UL**	**STD**	**UL**	**Units**	**Ordering Code**	
		10 MHz		**100 MHz**				
Static	10	- 125	- 128	- 85	- 90	dBc/Hz	Standard: STD	
	100	- 150	- 155	- 115	- 120	dBc/Hz	Ultra-Low: UL	
	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		11.4	12.0		12.6	VDC	12.0	
Supply Current					25	mA		
Input Power	Warm-up, 5 min				6	W		
	Idle, at +25°C				2	W		
RF Output								
Parameter	**Conditions**	**Min**	**Typical**		**Max**	**Units**	**Ordering Code**	
Sine								
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

YH1322	-	N17	-	UL	-	100.0 MHz	-	E
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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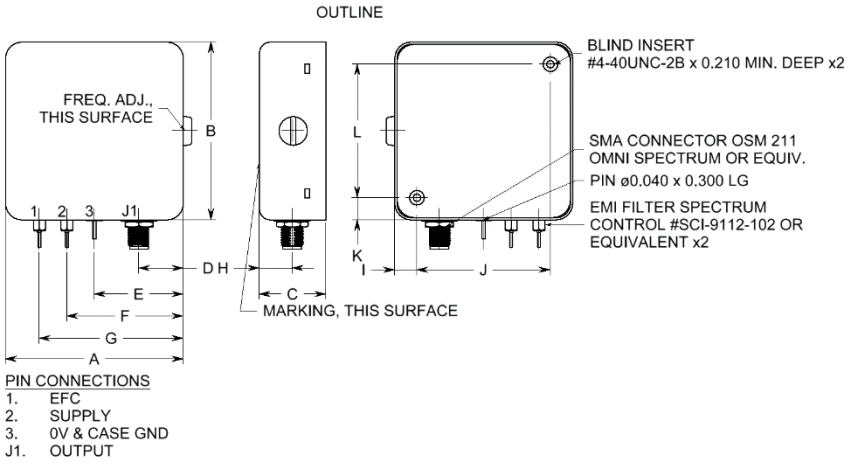
Package information



PIN CONNECTIONS
1. EFC
2. SUPPLY
3. 0V & CASE GND
J1. OUTPUT

DIMENSIONS

	TYP.		MAX.	
DIM	inches	mm	inches	mm
A	2.000	50.80	2.040	51.82
B	2.000	50.80	2.040	51.82
C	0.750	19.05	0.790	20.07
D	0.500	12.70	0.515	13.08
E	1.000	25.40	1.015	25.78
F	1.310	33.27	1.325	33.66
G	1.620	41.15	1.635	41.53
H	0.370	9.40	0.385	9.78
I	0.250	6.35	0.265	6.73
J	1.500	38.10	1.515	38.48
K	0.250	6.35	0.265	6.73
L	1.500	38.10	1.515	38.48

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