



frequency control solutions

YH1310

LOW PHASE NOISE
COMPACT EURO PACKAGE

OCXO

Product Description

Greenray Industries' YH1310 Series OCXOs offer superior stability in a compact, Euro package.

Features

- 36.1 x 26.9 mm Euro package
- Frequency Range: 10 - 100 MHz
- Excellent stability
- SC-cut Crystal
- Euro Package CO-8 OCXO
- Sinewave Output (YH1310); CMOS Output (YH1311)



Applications

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

REV: K



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YH1310 SERIES
10 MHz to 100 MHz



Electrical Characteristics						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Nominal Frequency	@ +25°C	10		100	MHz	(FREQ.)
Frequency Stability	0°C to +50°C		± 20		ppb	B28
	-20°C to +70°C		± 30		ppb	N38
	-40°C to +85°C		± 50		ppb	T58
Aging	1 st year			± 0.1	ppm	
	10 years			± 0.5	ppm	
Frequency vs Voltage	For a 5% change			± 5.0	ppb	
Frequency vs Load	For a 10% change			± 5.0	ppb	
Voltage Control (EFC)	0.5 to Supply, Positive Slope		± 1.0		ppm	
Warm-up Time	Within ± 50 ppb		5		min	
Phase Noise Performance						
Parameter	Frequency Offset (Hz)	Min	Typical	Max	Units	Ordering Code
Static @ 10 MHz Nom. Freq.	10		-118		dBc/Hz	
	100		-140		dBc/Hz	
	1 k		-150		dBc/Hz	
	10 k		-157		dBc/Hz	
	100 k		-158		dBc/Hz	
	1 M		-160		dBc/Hz	
DC Supply						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Supply Voltage		4.75	5.0	5.25	Vdc	E
		11.4	12.0	12.6	Vdc	D
Supply Current				25	mA	
Input Power	Warm-up, 5 min			6	W	
	Idle @ +25°C			2	W	
RF Output						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
CMOS Load	YH1311		15		pF	C
Level		0.8 Vdd "1" Level		0.2 Vdd "0" Level	V	
Sinewave	YH1310					S
Output Power	50 Ω Load	+ 8	+ 10	+ 12	dBm	
Harmonics				-20	dBc	



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Environmental and Mechanical Specifications				
Test	Standard	Method	Condition	Description
Vibration	MIL-STD-202	204	A	50 g, 20 to 2,000 Hz, swept sine
Shock	MIL-STD-202	213	C	1,500 g, 0.5 ms half-sine
	MIL-STD-810	541	A	

Recommendations and General Information	
Parameter	Notes
Operating Temperature	-40°C to +85°C
Storage Temperature	-45°C to +90°C
Terminal Finish	Sn 100 (Lead-free), SnPb 63/37 (non-RoHS)
Package Weight	14 grams
Package Finish	Stainless Steel and Ni plated Kovar
Soldering Instruction	Hand Solder
Shipping	Tray Pack
Marking	GRI Logo, Model #, Frequency, Serial #, Date Code Addition marking upon request if space is available

Ordering Example					
YH1310	T	58	E	10.0 MHz	LF
Model	Temp. Range	Stability	Supply Voltage	Freq. (MHz)	Term. Finish
YH1310: Sine YH1311: CMOS	B: 0 to +50°C N: -20 to +70°C T: -40 to +85°C	28: ±0.02ppm 38: ±0.03ppm 58: ±0.05ppm	E: 5.0V D: 12V	10 to 100	LF: Sn 100 (Lead-free) PB: SnPb 63/37 (non-RoHS)

The Order ID (YH1310-T58-E-10.0MHz-LF) is only used to issue the preliminary quote. The Part Number (YH1310-1) for the quoted Electrical Characteristics, Screenings, and other options, will be provided with the Greenray Sales Order.

Other specification options are available, please use the contact information below for more information.



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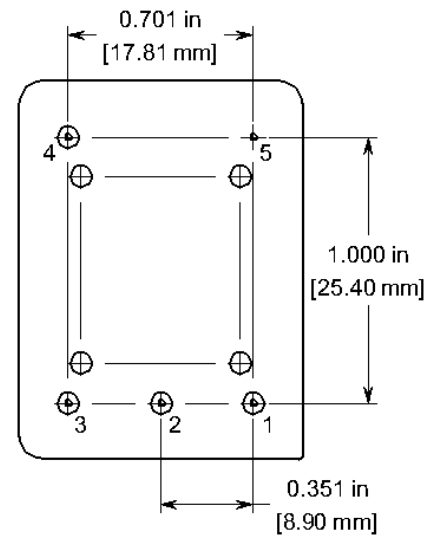
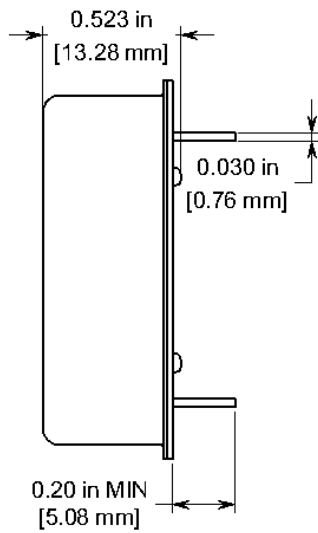
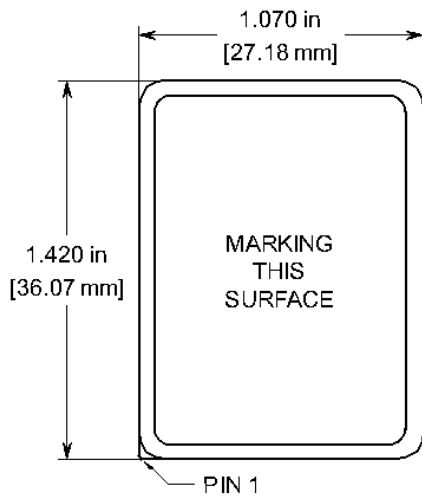


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Package Information



PIN CONNECTIONS	
1	CONTROL VOLTAGE (EFC)
2	VREF
3	SUPPLY VOLTAGE (Vdd)
4	OUTPUT
5	GND

(NC PINs may have internal connections and should be isolated)



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