



# YH1320/1321 Series OCXO

10 MHz – 120 MHz

(Rev F)

GREENRAY INDUSTRIES, INC.

## PRECISION QUARTZ TECHNOLOGY

Very Low Phase Noise  
HCMOS or Sinewave Output  
Ideal for Base Station or Test Equipment Apps

### SPECIFICATIONS

<b>Frequency Output</b>	10.0 MHz to 120.0 MHz				
	YH1320 – Squarewave, HCMOS				
	YH1321 - Sinewave, +10dBm min into 50 ohms				
<b>Harmonics</b>	-20dBc (Sinewave)				
<b>Temp Stability</b>	<b>Temp Range</b>	<b>10MHz Tol</b>	<b>Model</b>	<b>100MHz Tol</b>	<b>Model</b>
	0 to +50°C	± 1x10 <sup>-8</sup>	B18	± 5x10 <sup>-8</sup>	B58
	-10 to +60°C	± 1.5x10 <sup>-8</sup>	G158	± 7x10 <sup>-8</sup>	G78
	-20 to +70°C	± 2x10 <sup>-8</sup>	N28	± 1x10 <sup>-7</sup>	N17
	-40 to +85°C	± 5x10 <sup>-8</sup>	T58	± 3x10 <sup>-7</sup>	T37
<b>Freq vs. Supply Aging</b>	±5x10 <sup>-9</sup> for a 5% change				
<b>Input Voltage</b>	±1x10 <sup>-7</sup> per year (10MHz); ±5x10 <sup>-7</sup> per year (100MHz)				
<b>Input Power</b>	+12 VDC ± 5%				
	Turn-on - ≤ 6W for 5 minutes				
	Idle - ≤ 2.5W @ +25°C				
<b>Warm-up Time</b>	within ± 5x10 <sup>-8</sup> in 5 minutes, ref to 60 minute frequency @ +25°C				
<b>Phase Noise (Sine Max)</b>		<b>10MHz Std</b>	<b>10MHz Ultra-Low</b>	<b>100MHz Std</b>	<b>100MHz Ultra-Low</b>
	10 Hz	-125 dBc/Hz	-128 dBc/Hz	-85 dBc/Hz	-90 dBc/Hz
	100 Hz	-150 dBc/Hz	-155 dBc/Hz	-115 dBc/Hz	-120 dBc/Hz
	1 kHz	-160 dBc/Hz	-163 dBc/Hz	-145 dBc/Hz	-150 dBc/Hz
	10 kHz	-165 dBc/Hz	-168 dBc/Hz	-160 dBc/Hz	-165 dBc/Hz
	100 kHz	-165 dBc/Hz	-168 dBc/Hz	-165 dBc/Hz	-168 dBc/Hz
<b>Frequency Adjust</b>	±1.0 ppm typ, positive slope				
	+0.5 to +5.0V EFC				
<b>Shock</b>	MIL-STD-202, Method 213, Condition C				
<b>Vibration</b>	MIL-STD-202, Method 204, Condition A				

Ordering Example: YH1321 - N28 - UL - 10.0MHz  
(Model# - Stability - Phase Noise Opt - Frequency)

#### PIN CONNECTIONS

- 1 - EFC
- 2 - No Connection
- 3 - Output
- 4 - 0V, Case Gnd
- 5 - Input Voltage

