GREENRAY
frequency control solutions

N630 VCXO

LOW ACCELERATION SENSITIVITY
EXCELLENT PHASE NOISE PERFORMANCE

Product Description

Greenray Industries' N630 High Frequency VCXO offers low phase noise and ultra-low g-sensitivity performance in a compact surface mount package.

Features

- Excellent phase noise performance under high shock/high vibration conditions
- g-Sensitivity down to a typical 7 x 10^{-11}/g
- 17.3 mm sq. package
- +5 Vdc Supply
- +10 dBm High Level Sine Output

Applications

- Communication Systems
- Airborne Instrumentation
- RF Telemetry Systems
- Radar, Test, and Measurement Clock
- References for converters

REV: B

Greenray Industries, Inc., 840 West Church Road, Mechanicsburg, PA 17055
TEL: 717-766-0223 FAX: 717-790-9509 e-mail: sales@greenrayindustries.com
www.greenrayindustries.com

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N630 SERIES
60 MHZ to 100 MHz

VCXO

Electrical Characteristics						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Nominal Frequency	@ +25°C	60		100	MHz	(Freq.)
Frequency Stability	-20°C to +70°C		± 10		ppm	N106
	-40°C to +85°C		± 20		ppm	T206
Absolute Pull Range	All conditions 10 years	± 5			ppm	
Aging	1st year		± 1.0		ppm	
	10 years		± 5.0		ppm	
Acceleration Sensitivity	Worst axis tested @ 90 Hz, 10 g		1.0	2.0	ppb/g	SD
			0.5	0.7	ppb/g	LG
			0.07	0.09	ppb/g	ULG
Voltage Control (EFC)	0 to Supply @ +25°C, Positive Slope	± 30		± 50	ppm	
Modulation Bandwidth		20			kHz	

Phase Noise Performance						
Parameter	Frequency Offset (Hz)	Min	Typical	Max	Units	
Static @ 100 MHz Nom. Freq.	10		-82		dBc/Hz	
	100		-112		dBc/Hz	
	1 k		-135		dBc/Hz	
	10 k		-145		dBc/Hz	
	100 k		-160		dBc/Hz	

DC Supply						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Supply Voltage		4.75	5.0	5.25	Vdc	5.0
Supply Current				30	mA	

RF Output						
Parameter	Conditions	Min	Typical	Max	Units	Ordering Code
Sinewave						S
Output Power	50 Ω Load	+9	+10	+12	dBm	
Harmonics				-30	dBc	
Sub-Harmonics			None			

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Environmental and Mechanical Specifications				
Test	Standard	Method	Condition	Description
Vibration	MIL-STD-202F	214	I.F	0.3 PSD, 20.71 g RMS, 3min/axis
Shock	MIL-STD-202F	213	K	30 g peak, sawtooth, 11 ms

Recommendations and General Information	
Parameter	Notes
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +105°C
Terminal Finish	ENIG (RoHS) (SnPb 63/37 (non-RoHS) Available upon request)
Package Weight	3 grams
Soldering Instruction	Reflow
Shipping	Tape & Reel
Marking	GRI Logo, Model #, Frequency, Serial #, Date Code Addition marking upon request if space is available

Ordering Example

N630 - N 106 - SD - 100.0 MHz

Model	Temp. Range	Stability	G-Sensitivity	Freq. (MHz)
	N: -20 to +70°C T: -40 to +85°C	106: ±10ppm 206: ±20ppm	SG: < 2.0 ppb/g LG: < 0.7 ppb/g ULG: < 0.09 ppb/g HG: Customer-specific	60 to 100

The Order ID (N630-N106 -SD-100.0MHz) is only used to issue the preliminary quote. The Part Number (N630-1) 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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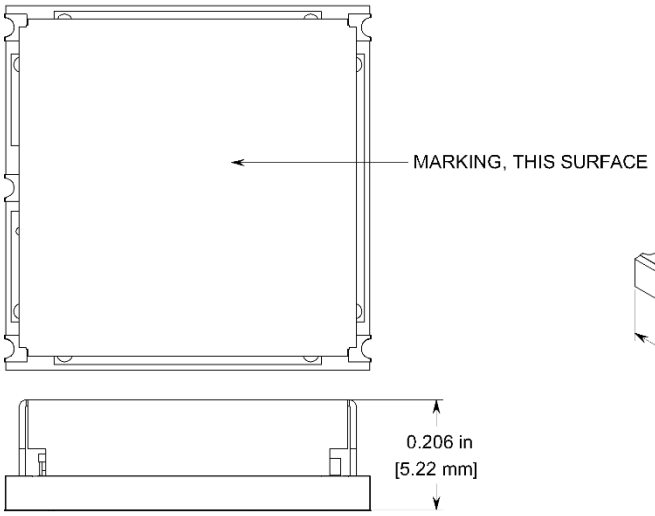
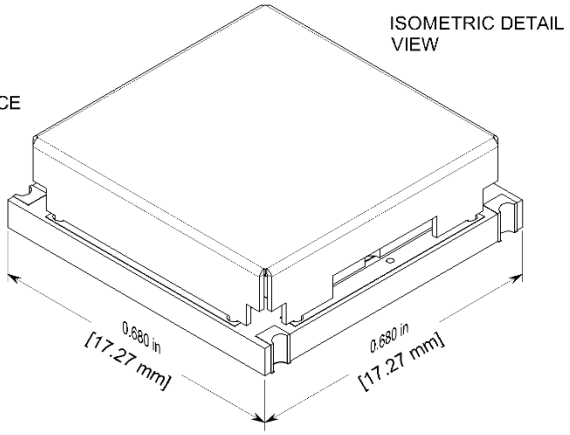
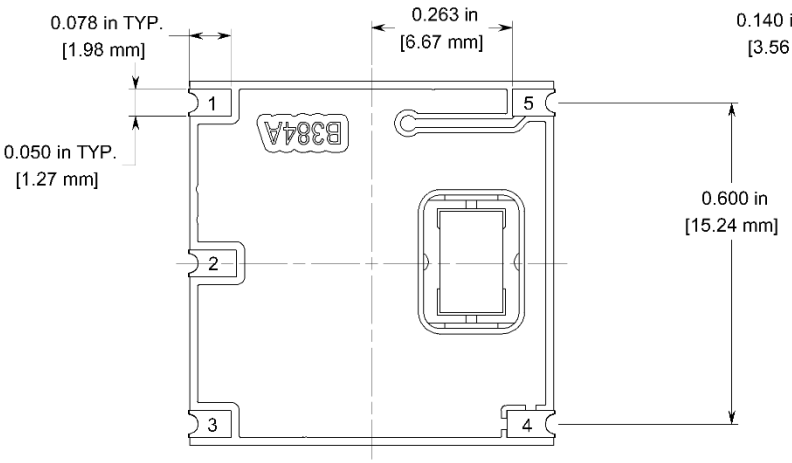
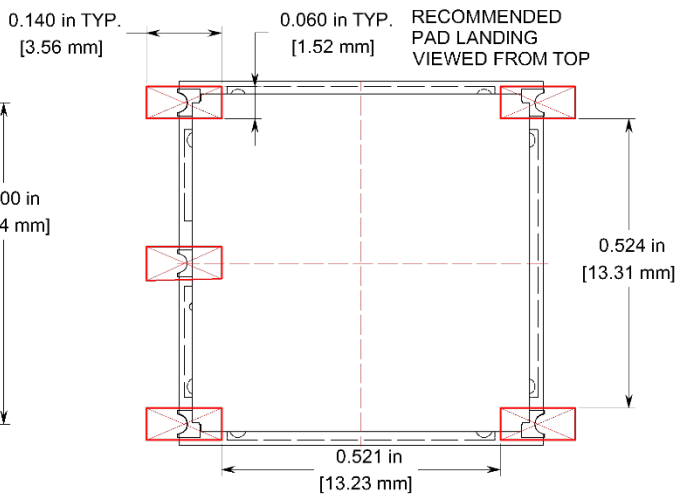
Package Information









PAD CONNECTIONS	
1	SUPPLY VOLTAGE
2	NO CONNECT (NC)
3	OUTPUT
4	GND
5	CONTROL VOLTAGE

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

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