



frequency control solutions

N630

LOW ACCELERATION SENSITIVITY
EXCELLENT PHASE NOISE PERFORMANCE

VCXO

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 $7 \times 10^{-11}/g$
- 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

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

REV: B



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frequency control solutions

N630 SERIES
60 MHz to 100 MHz



| Electrical Characteristics | | | | | | |
|--------------------------------|--|------|---------|------|--------|---------------|
| Parameter | Conditions | Min | Typical | Max | Units | Ordering Code |
| Nominal Frequency | | 60 | | 130 | MHz | (Freq.) |
| Frequency Stability | -20°C to +70°C | | ± 10 | | ppm | N106 |
| | -40°C to +85°C | | ± 20 | | ppm | T206 |
| Aging | 1 st year | | ±1 | | ppm | |
| | 10 years | | ±5 | | ppm | |
| Acceleration Sensitivity | Worst Axis (1) | | 1 | 2 | ppb/g | SD |
| | | | 0.5 | 0.7 | ppb/g | ULG |
| | | | 0.07 | 0.09 | ppb/g | LG |
| Voltage Control | 0 to Supply Voltage @ +25°C Positive Slope | ±30 | | ± 50 | ppm | |
| Absolute Pull Range | All Conditions for 10 years | ±5 | | | ppm | |
| Modulation Bandwidth | | 20 | | | kHz | |
| Phase Noise Performance | | | | | | |
| Parameter | Frequency Offset (Hz) | Min | Typical | Max | Units | |
| Phase Noise (static) @ 100 MHz | 10 | | -82 | | dBc/Hz | |
| | 100 | | -112 | | dBc/Hz | |
| | 1k | | -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 |
| Package Weight | 3 grams |
| Soldering Instruction | Reflow |
| Shipping | Tray Pack, Tape & Reel |
| Marking | Line 1: Greenray logo + Model Line 2: Frequency Line 3: Serial Number + Data Code (YYWW) Line 4: Pin 1 Dot |

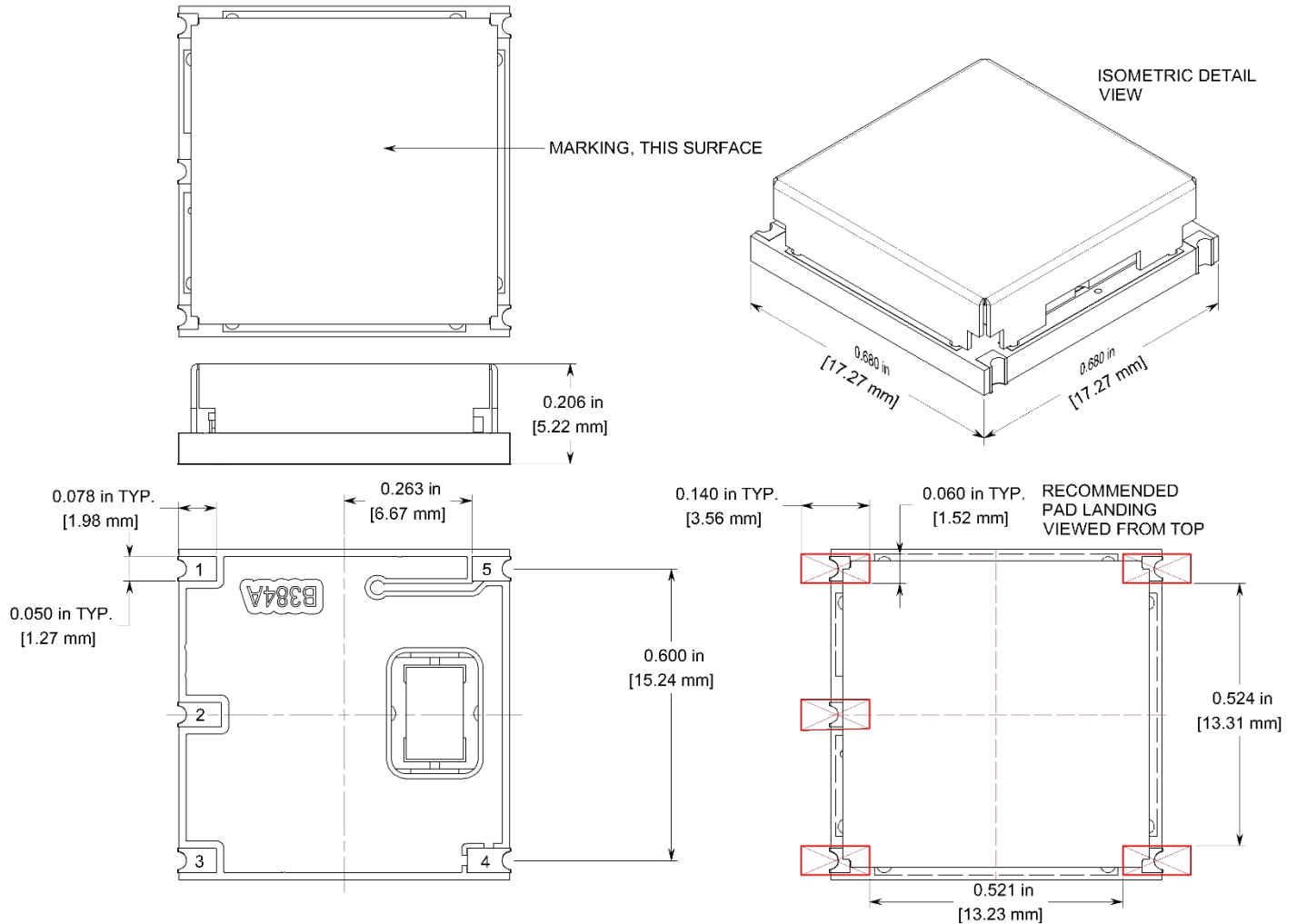
| Ordering Example | | | | | | | | | | | | |
|------------------|---|--|---|-------------|---|----------------|---|--|---|-------------|---|--|
| N630 | - | N106 | - | S | - | 5.0 | - | LG | - | 100 MHz | - | E |
| Model | | Stability | | Output | | Supply Voltage | | G-Sensitivity | | Freq. (MHz) | | Term. Finish |
| | | N106: -20°C to +70°C T206: -40°C to +85°C | | S: Sinewave | | | | SD: STD LG: Low G ULG: Ultra-Low G | | | | E: ENIG LF: Sn, 100% PB: SnPb, <97% Sn |

The Order ID (N630-N106-S-5.0-LG-100MHz-E) 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. Please note that changes to the requested Electrical Characteristics, Screenings, and other options may require a new part number to be issued.





Package Information



| PAD CONNECTIONS | |
|-----------------|-----------------|
| 1 | SUPPLY VOLTAGE |
| 2 | NO CONNECT |
| 3 | OUTPUT |
| 4 | GND |
| 5 | CONTROL VOLTAGE |

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



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