NIADHDWHNF(OCXO 131-1006)

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CRYSTAL OSCILLATOR SPECIFICATION

This specification defines the operating characteristics of an ovenized crystal oscillator. Long term stability is assured through use of premium components.

REV.	DESCRIPTION OF REVISION	DWN. BY	APV. BY	DATE
-		TST	TST	12-28-2008
-	Updated to actual performance	SZ	TST	01-17-2011
A	4.2. was 300 mA	TST	TST	08-11-2011

1. OUTPUT(PIN = "R.F. OUTPUT")	
1.1. Frequency	100.000000 MHz
1.2. Initial Accuracy	< $\pm 2 \times 10^{-7}$
a. @ Temperature	+25 ±1°C
b. After time on power	30 ±5 minutes
c. Within time period following date code	≤ 90 days
d. @ VCO Input voltage	+4.0 ±0.001 V
1.3. Waveform	Sine wave
1.4. Level	+9 ±2 dBm
1.5. Load	50 Ω
1.6. Harmonics	< -30 dBc
1.7. Spurious	< -70 dBc
2. FREQUENCY STABILITY	
2.1. Ambient	< $\pm 1 \times 10^{-7}$, -30°C to +70°C (referenced to +25°C)
2.2. Aging	
a. At time of shipment	< $\pm 3 \times 10^{-9}$/day
b. After indefinite storage	
i. Daily	< $\pm 3 \times 10^{-9}$ after 30 days
ii. Yearly	< $\pm 3 \times 10^{-7}$
iii. 10 years	< $\pm 1.2 \times 10^{-6}$
2.3. Voltage	< $\pm 2 \times 10^{-8}$/±5% change
2.4. Load	< $\pm 5 \times 10^{-8}$/±5% change
2.5. Warm-up	< $\pm 1 \times 10^{-7}$ in 10 minutes @ +25 ±1°C (referenced to 1 hour)
2.6. Phase Noise	
a. @ 10 Hz	< -90 dBc
b. @ 100 Hz	< -120 dBc
c. @ 1 kHz	< -150 dBc
d. @ 10 kHz	< -155 dBc
e. @ 100 kHz	< -160 dBc

3. ELECTRICAL FREQUENCY ADJUSTMENT (PIN = "VCO INPUT")

3.1. Range	> $\pm 1.5 \times 10^{-6}$
	Referenced to frequency at nominal Center Voltage
3.2. Control	+0 to Vref +8 V
3.3. Slope	Positive
3.4. Center Voltage	+4 V
NOTE: When not connected, VCO INPUT is internally held at this voltage.	
3.5. Linearity	< ±10%
3.6. Input impedance	> 25 kΩ

4. INPUT POWER (PIN = "+VDC")

4.1. Voltage	+12 V ±5%
4.2. Current	< 350 mA @ turn on
4.3. Steady state	< 1.5 Watts @ +25°C

5. REFERENCE VOLTAGE (PIN = "REFERENCE VOLTAGE"), an output

5.1. Voltage	+8 V ±5%
5.2. Load	> 9 kΩ
5.3. Temperature stability	< ±0.02 V
	(Over temperature range in 2.1)

6. ENVIRONMENTAL

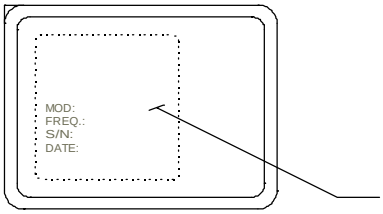
6.1. Storage temperature	-40°C to +85°C
6.2. Vibration (non-operating)	MIL-STD-202, Method 201 (0.06" Total p-p, 10 to 55 Hz)
6.3. Shock (non-operating)	MIL-STD-202, Method 213, Test Condition J (30 g, 11 ms half-sine)

7. RoHS

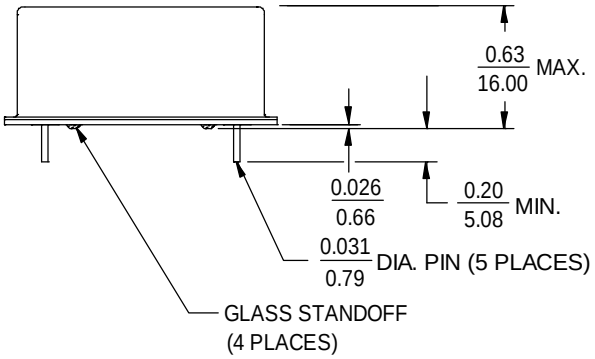
All units supplied under this MODEL NUMBER are RoHS compliant.

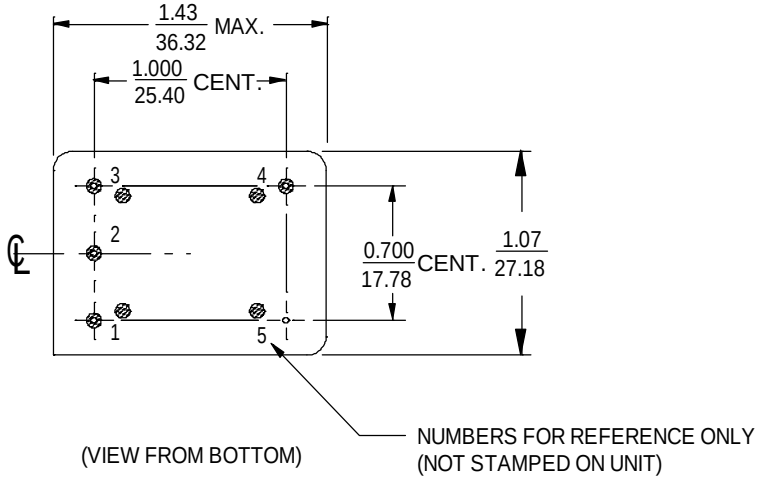
8. MECHANICAL(Outline drawing)

8.1. Applicable series	OCXO 131 series
8.2. Model number	OCXO 131-1006
8.3. Coding	NIADHDWHNF-100.000000
8.4. Outline drawing	125-586



(VIEW FROM TOP)



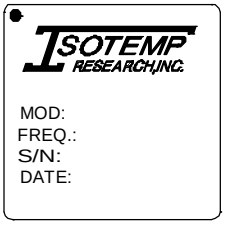


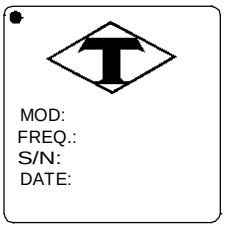
(VIEW FROM BOTTOM)

PIN CONNECTIONS	
PIN	FUNCTION
1 (See Note 1)	VCO INPUT or NOT CONNECTED
2 (See Note 1)	REFERENCE VOLTAGE or OVEN MONITOR or NOT CONNECTED
3	+VDC
4	R. F. OUTPUT
5	0 VOLTS & CASE

Note 1. If the specification does not specify parameters for either PIN1 or PIN2 then that respective PIN is NOT internally CONNECTED.

MARKING





INCH / mm (REFERENCE ONLY)

Form NO. 120-081E

ISOTEMP RESEARCH,INC. — OSCILLATORS — Charlottesville, Virgina USA

NAME: OUTLINE DRAWING

(TCXO 141 & OCXO 131 SERIES)

CODE I.D. NO. 31785 | SCALE: 1:1 | DATE: 12-04-2000 | DWN. BY: LRB | APPR'D. BY: DAG

DWG: 125-586 REV: B SHT: 1 OF 1

LET	REVISION	BY	APP	DATE
A	0.63 MAX. WAS 0.64 MAX. 1.07 WAS 1.07 MAX.	DAG	TST	12-06-2001
B	NEW FORM AND UPDATED MARKING.	BTG	TST	01-05-2011

TOLERANCES

UNLESS OTHERWISE SPECIFIED:
ANGES: ±1 DEGREE
FRACTIONS: ±1/32 INCH
DECIMALS: .XX ± .015, .XXX ± .010 INCH

MATERIAL: STEEL

FINISH: NICKEL

MARK: LABEL