ISOTEMP RESEARCH, INC.

OCXO 59-21

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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	REQ. BY	DWN. BY	DATE
-		ADB	TST	02-11-97
A	Added 2.1. Total Stability	TST	TST	02-12-97

ISOTEMP RESEARCH INC. CHARLOTTESVILLE, VA. USA	CODE ID.	PART NO.	PAGE OF TOTAL		DWG. NO.	REV.
	31785	OCXO 59-21	1	2	114-716	A

OCXO 59-21

1. OUTPUT

1.1. Frequency	50.000 MHz (±0.5 PPM @ +25°C @ time of shipment)
1.2. Waveform	Rectangular
1.3. Level	ACMOS
1.4. Load	3 HCMOS/TTL loads
1.5. Duty cycle	40% to 60% @ +2.5 VDC
1.6. Spurious	< -60 dBc

2. FREQUENCY STABILITY

2.1. Total

This oscillator will meet the Clock Stratum Level 3 requirements for the Free-Run Accuracy and Holdover Accuracy as outlined in BELLCORE specification: GR-1244-CORE.

2.2. Ambient	< ±0.14 PPM from 0°C to +70°C (referenced to +25°C)
2.3. Aging	
a. At time of shipment	< $\pm 5 \times 10^{-9}$/day
b. After indefinite storage	
i. Daily	< $\pm 5 \times 10^{-9}$ after 30 days
ii. Yearly	< ±1 PPM
iii. 20 years	< ±4 PPM
2.4. Voltage	< $\pm 3 \times 10^{-8}$/±5% change
2.5. Warm-up	< ±0.1 PPM in 5 minutes @ +25°C (referenced to 2 hours)

3. INPUT POWER

3.1. Voltage	+5 VDC ±5%
3.2. Current	< 800 mA
3.3. Steady state	< 1.4 Watts @ +25°C

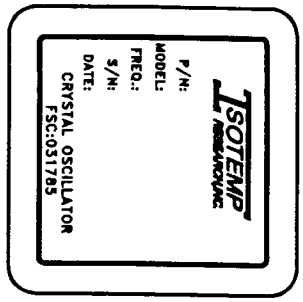
4. ENVIRONMENTAL

4.1. Storage temperature	-55°C to +105°C
4.2. Vibration (non-operating)	MIL-STD-202F Method 201A. (0.06" Total p-p, 10 to 55 Hz)
4.3. Shock (non-operating)	MIL-STD-202F, Method 213B, Test Condition J. (30 g, 11 ms half-sine)
4.4. Seal	MIL-STD-202F, Method 112C, Test Condition D.
4.5. Temperature cycling	Unit must be able to withstand 10 cycles over the storage temperature range with maximum time between temperature endpoints of 15 minutes, without any degradation in performance or device seals.

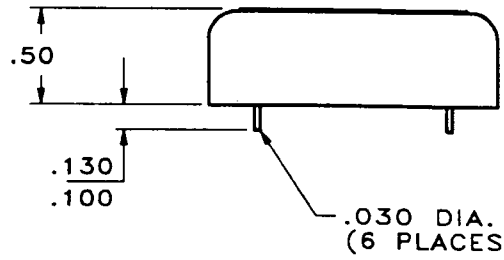
5. MECHANICAL

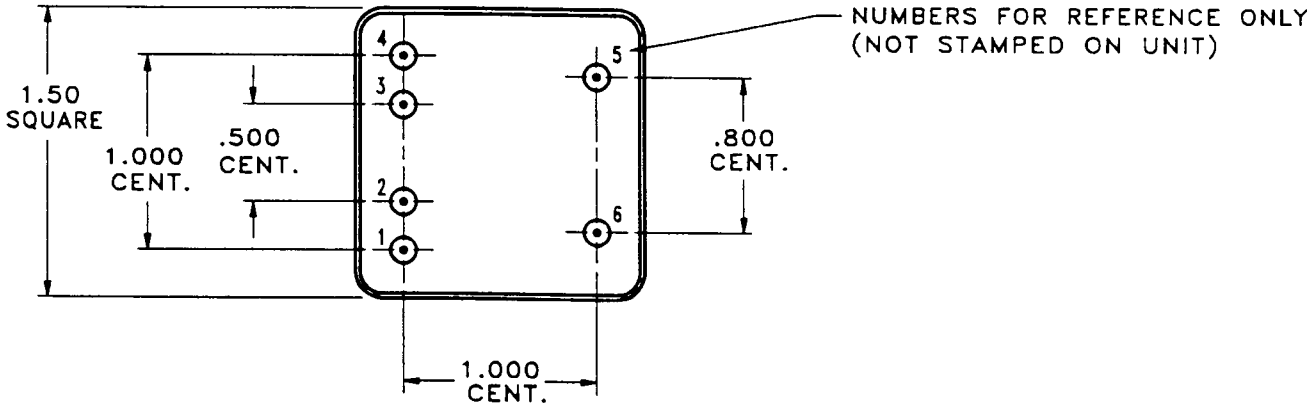
5.1. Applicable series	OCXO 59 series
5.2. Model number	OCXO 59-21
5.3. Outline drawing	125-510

ISOTEMP RESEARCH INC. CHARLOTTESVILLE, VA. USA	CODE ID.	PART NO.	PAGE OF TOTAL		DWG. NO.	REV.
	31785	OCXO 59-21	2	2	114-716	A



PIN CONNECTIONS	
PIN	FUNCTION
1	RF OUTPUT
2	NOT CONNECTED
3	NOT CONNECTED
4	+VDC
5	0 VDC & CASE
6	0 VDC & CASE





FORM NO. 120-081C

ISOTEMP RESEARCH INC. — OSCILLATORS — CHARLOTTESVILLE, VIRGINIA

NAME: OUTLINE DRAWING
(OCXO 59 SERIES)

CODE I.D. NO.	SCALE: 1:1	DATE: 02-11-97
31785	DWN. BY: PEH	APPR'D. BY: DAG

DWG: 125-510 REV: A SHT: 1 OF 1

LET	REVISION	BY	APP	DATE
A	PIN LENGTHS .130/.100 WERE .20 MIN.	BTG	DAG	05-08-98

TOLERANCES
UNLESS OTHERWISE SPECIFIED:
ANGLES: ±1 DEGREE
FRACTIONS: ±1/32 INCH
DECIMALS: .XX ±.015, .XXX ±.010
MAT'L: COLD ROLLED STEEL
FINISH: BRIGHT NICKEL
MARK: LABEL