



OCXO 59-21

P.O. BOX 3389
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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

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

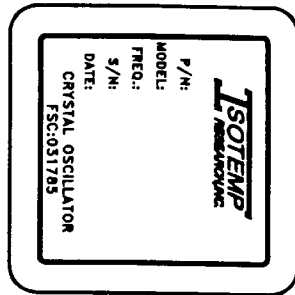
2. FREQUENCY STABILITY
 - 2.1. Total
This oscillator will meet the Clock Stratum Level 3 requirements for the Free-Run Accuracy and Holdover Accuracy as outlined in BELLCORE specification: GR-1244-CORE.
 - 2.2. Ambient < ±0.14 PPM from 0°C to +70°C
(referenced to +25°C)
 - 2.3. Aging
 - a. At time of shipment < ±5x10⁻⁹/day
 - b. After indefinite storage
 - i. Daily < ±5x10⁻⁹ after 30 days
 - ii. Yearly < ±1 PPM
 - iii. 20 years < ±4 PPM
 - 2.4. Voltage < ±3x10⁻⁸/±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

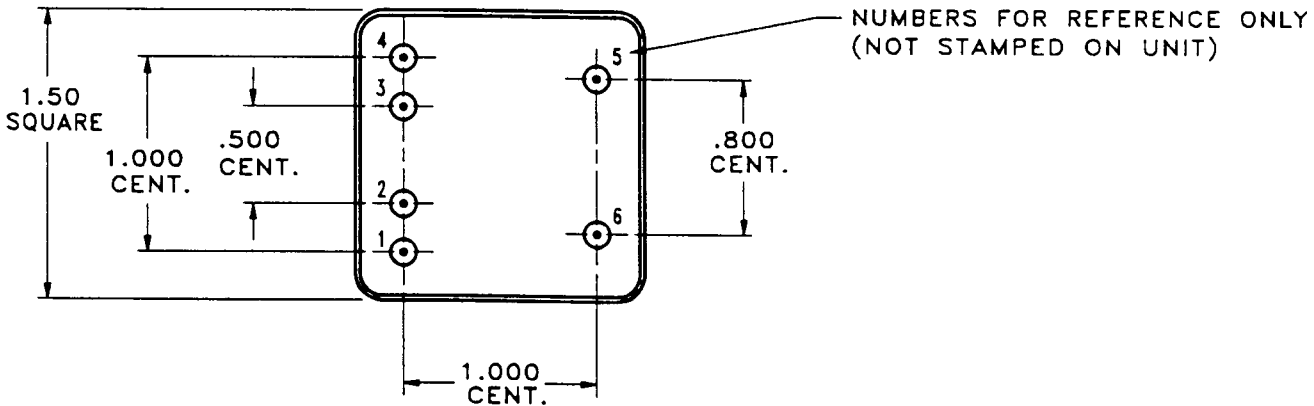
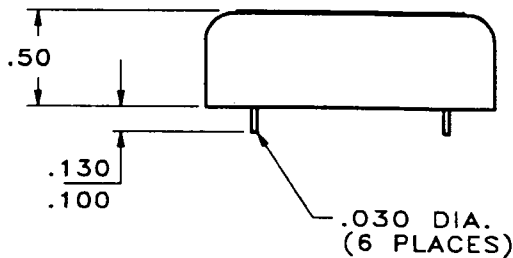
4. ENVIRONMENTAL
 - 4.1. Storage temperature -55°C to +105°C
 - 4.2. Vibration (non-operating) MIL-STD-202F Method 201A. (0.06" Total p-p, 10 to 55 Hz)
 - 4.3. Shock (non-operating) MIL-STD-202F, Method 213B, Test Condition J.
(30 g, 11 ms half-sine)
 - 4.4. Seal MIL-STD-202F, Method 112C, Test Condition 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

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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



OSCILLATORS

CHARLOTTEVILLE, VIRGINIA

NAME: OUTLINE DRAWING
(OCXO 59 SERIES)

CODE I.D. NO.

31785

SCALE: 1:1

DATE: 02-11-97

DWN. BY: PEH

APPR'D. BY: DAG

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

LET REVISION

BY APP DATE

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