



OCXO 44-12

P.O. BOX 3389
CHARLOTTESVILLE, VIRGINIA 22903
PHONE: (804) 295-3101
FAX: (804) 977-1849

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
NONE		BTB	LRB	08-01-89
A	REVISED & REDRAWN, 4.3 WAS 360 mA	TST	WEW	04-01-91
B	REDRAWN TO STANDARDS.	TST	WCB	11-24-92

ISOTEMP RESEARCH INC. CHARLOTTESVILLE, VA. USA	CODE ID.	PART NO.	PAGE OF TOTAL		DWG. NO.	REV.
	31785	OCXO 44-12	1	2	114-347	B

- 1. OUTPUT
 - 1.1. Frequency 10.000 MHz
 - 1.2. Wave form Rectangular
 - 1.3. Level TTL compatible
 - 1.4. Load 5 TTL
 - 1.5. Duty cycle 35% to 65% @ 1.5 VDC
 - 1.6. Rise/fall time < 25 ns with load plus 10 pF shunt
 - 1.7. "1" level > 2.4 VDC @ 2.0 mA source current
 - "0" level < 0.5 VDC @ 8.0 mA sink current

- 2. STABILITY
 - 2.1. Ambient < $\pm 2 \times 10^{-7}$ from 0°C to +70°C (referenced to +30°C)
 - 2.2. Aging
 - a. Daily < $\pm 1 \times 10^{-8}$ at time of shipment
 - b. Weekly < $\pm 4 \times 10^{-8}$ after 30 days of continuous operation
 - c. Yearly < ± 0.8 PPM after 60 days of continuous operation
 - 2.3. Voltage < $\pm 4 \times 10^{-8}$ /5% change
 - 2.4. Short term < 1×10^{-9} /second root Allan variance
 - 2.5. Warm-up < $\pm 2 \times 10^{-7}$ in 10 minutes @ +25°C referenced to 1 hour

- 3. MECHANICAL FREQUENCY ADJUSTMENT
 - 3.1. Range > ± 4.0 PPM
 - 3.2. Resolution < $\pm 2 \times 10^{-8}$
 - 3.3. Control Multi-turn trimmer

- 4. INPUT POWER
 - 4.1. Oscillator & Oven
 - a. Voltage +18 VDC $\pm 10\%$
 - b. Regulation 5%
 - c. Current < 400 mA
 - d. Steady state
 - i. @ +30°C 2.0 watts in still air
 - ii. @ 0°C < 4.0 watts in moving air
 - 4.2. Output
 - a. Voltage +5 VDC $\pm 5\%$
 - b. Current < 25 mA

- 5. MECHANICAL
 - 5.1. Applicable series OCXO 44 series
 - 5.2. Model number OCXO 44-12
 - 5.3. Outline drawing 125-062

ISOTEMP RESEARCH INC. CHARLOTTEVILLE, VA. USA	CODE ID.	PART NO.	PAGE OF TOTAL		DWG. NO.	REV.
	31785	OCXO 44-12	2	2	114-347	B