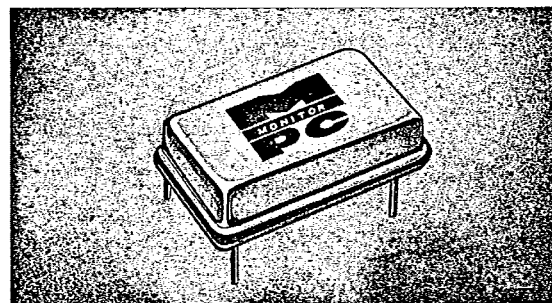




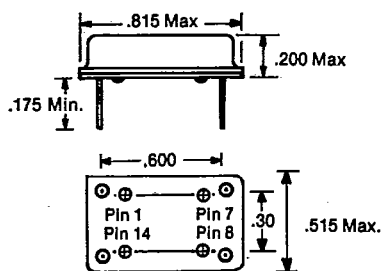
MONITOR PRODUCTS

970L

LSTTL CLOCK OSCILLATORS

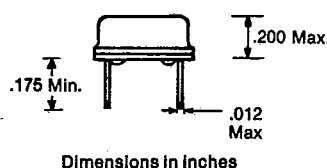


PACKAGE DIMENSIONS (INCHES)



970L:

PIN 1. N.C. PIN 8. Output
PIN 7. GND. PIN 14. +5VDC



FEATURES

- RISE AND FALL TIME LESS THAN 5 NANOSECONDS
- RUGGED RESISTANCE WELD PACKAGE
- LOW PROFILE DESIGN
- LSTTL COMPATIBLE
- STABILITY TO .005%
- SURFACE MOUNT OPTION
- WAVE SOLDERABLE

ELECTRICAL SPECIFICATIONS

- | | |
|-------------------------|---|
| • Frequency Range | 4.0 MHz to 80 MHz |
| • Frequency Stability | $\pm 0.01\%$ (MAX) |
| • Operating Temp. Range | -10°C to $+70^{\circ}\text{C}$ |
| • Storage Temp. Range | -55°C to $+125^{\circ}\text{C}$ |
| • Input Voltage | $+5 \text{ VDC} \pm 0.5\text{VDC}$ |
| • LSTTL Output: | |
| Symmetry | 55/45% @ 1.4VDC |
| Rise & Fall Times | 4ns typical
8ns max. 4.0 - 20 MHz
3ns typical
5ns max. 20.0 - 80.0 MHz |
| • Logic '0' Level | $+0.5\text{Vmax.}$ |
| • Logic '1' Level | $+2.4\text{Vmin.}$ |
| • Start Up Time | 10ms max. |
| • Start Up Vcc | 3.0V max. |
| • Output Load | 10 LSTTL 4.0 MHZ-50 MHZ
5 LSTTL 50 MHZ-80 MHZ |
| • Input Current | 4.0-20.0 MHz 10mA max.
20.0-50.0 MHz 18mA max.
50.0-80.0 MHz 25mA max. |

All specifications subject to change without notice.

970L SERIES OSCILLATORS are LSTTL compatible and are manufactured using the latest hybrid technology and feature hermetically sealed, welded packages that offer excellent resistance to environmental extremes. In addition, the metal package provides shielding to minimize RF radiation, helping to reduce EMI/RFI.

MONITOR CLOCK OSCILLATORS are also available in TTL, CMOS, HCMOS, NMOS, and ECL in the following configurations:

- INDEPENDENT DUAL OUTPUTS
- DUAL OUTPUT DIVIDE BY 2
- DUAL OUTPUT DIVIDE BY 4
- ENABLE/DISABLE/TRI-STATE
- COMPLIMENTARY OUTPUTS
- SURFACE MOUNTING

MONITOR PRODUCTS COMPANY, INC. OVER HALF A CENTURY IN FREQUENCY CONTROL

502 Via Del Monte • Oceanside, CA 92054
Western Phone (619) 433-4510 Eastern FAX (904) 246-9019
Western FAX (619) 434-0255 Telex 62950858

ENVIRONMENTAL PERFORMANCE SPECIFICATIONS

Ambient Temperature Range

Operating - 10°C to 70°C Standard

Storage - 55°C to 125°C

Vibration

MIL-STD-202F Method 204, 35G, 50 to 2000 Hz

Shock

MIL-STD-202F Method 213B Test Cond. E, 1000G, 1/2 Sine Wave

Humidity

85% RH, 85°C, 48 Hours

Hermetical Seal

Leak Rate 2×10^{-8} atoms, CC/Sec of Helium

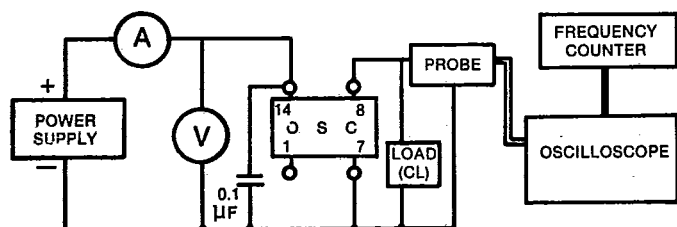
Solderability

MIL-STD-202F Method 208E

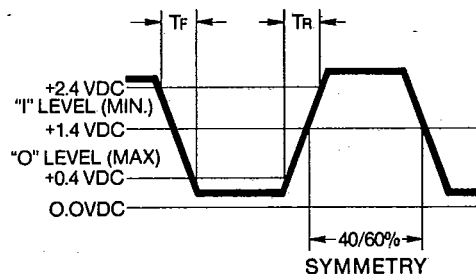
STANDARD FREQUENCIES

4.0	7.3728	16.257	32.0
4.9152	8.0	18.432	36.00
5.0	10.0	19.6608	40.00
5.0688	12.0	20.0	48.00
6.0	14.31818	22.1184	60.00
6.144	16.0	24.0	80.00

OSCILLATOR TEST CIRCUIT



TYPICAL OUTPUT WAVEFORM



HOW TO ORDER

FAMILY: (970L---)

SYMMETRY
2 = 55/45*

FREQUENCY STABILITY
B = 0.01%*
C = 0.005%

TEMPERATURE RANGE

7 = -10 + 70°C*

9 = Customer's Specification

FREQUENCY (MHz)

Expressed as MHz when >1.0 MHz
KHz < 1.0 MHz

PACKAGING

A = Standard
B = Tape & Reeled
C = Insertion Tube
D = Anti-Static
X = Special Packaging

*Standard

Not all options available in all product families, check family datasheet or call factory

Parts will be marked with Family and Frequency only. When ordering, use the full descriptive part number.

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