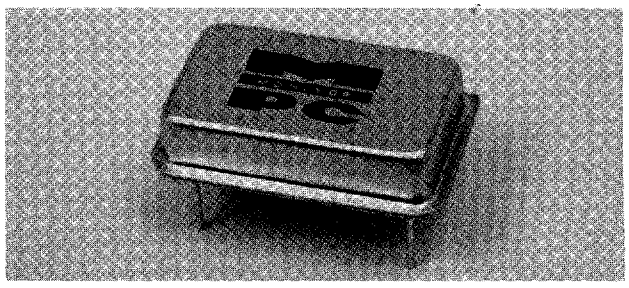
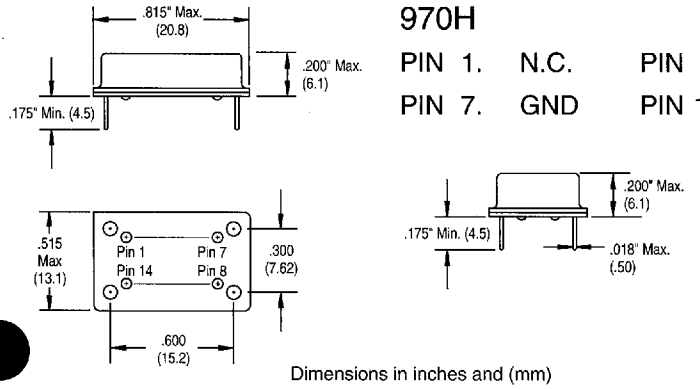
MONITOR PRODUCTS

970H
HIGH SPEED CMOS OSCILLATORS



PACKAGE DIMENSIONS



970H

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

Dimensions in inches and (mm)

ELECTRICAL SPECIFICATIONS

• Frequency Range	1.0 MHz to 100.0 MHz
• Frequency Stability	±0.01% STD
• Operating Temperature Range	0°C to 70°C
• Storage Temperature Range	-55°C to 125°C
• Input Voltage	+5 VDC ± 0.5 V
• Input Current	6 mA (typ), 12 mA (max) — 4.000 MHz-20.999 MHz 8 mA (typ), 30 mA (max) — 21.000 MHz-100.000 MHz
• Symmetry	45/55%
• Rise and Fall Time (0.5 V to 4.5 VDC)	5 nS (typ), 10 nS (max)
• Start Up Time	5.0 mS (typ), 10 mS (max)
• Logic "0" Level	0.5 V (max)
• Logic "1" Level	4.5 V (min)
• Output Load C_L	15 pF (typ), 50 pF (max)

FEATURES

- RUGGED RESISTANCE WELD PACKAGE
- LOW PROFILE
- LOW POWER CONSUMPTION
- SUPERIOR QUALITY
- THICK FILM TECHNOLOGY
- SURFACE MOUNT OPTION

The MONITOR 970H clock oscillators are manufactured using the latest hybrid technology and feature hermetically sealed, welded packages that offer superior resistance to environmental extremes. In addition, the metal package provides shielding to minimize RFI/EMI. Many options are available.

MONITOR PRODUCTS also offers clock oscillators in TTL, LSTTL, and ECL. Function logic configurations also available are:

- INDEPENDENT DUAL OUTPUTS
- DUAL OUTPUT DIVIDE BY 2
- DUAL OUTPUT DIVIDE BY 4
- ENABLE/DISABLE
- TRISTATE GATE
- COMPLIMENTARY OUTPUTS
- SURFACE MOUNTING

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

502 Via Del Monte • Oceanside, CA 92054
Western Phone (619) 433-4510 Eastern Phone (904) 725-4384
Western FAX (619) 434-0255 Eastern FAX (904) 725-4584

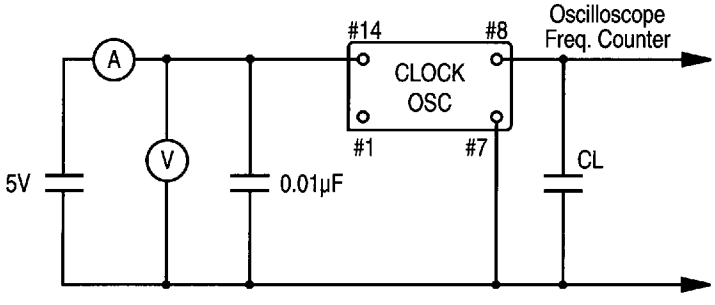
ENVIRONMENTAL PERFORMANCE SPECIFICATIONS

Ambient Temperature Range	
Operating	0°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
Hermetic Seal	Leak Rate 2 x 10^{-8} ATM, CC/Sec of helium
Solderability	MIL-STD-202F Method 208E

POPULAR FREQUENCIES (MHZ)

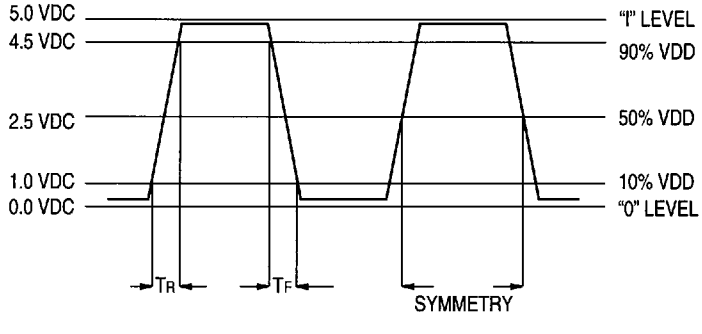
4.0	12.0	32.0
4.9152	14.31818	36.0
6.0	15.0	40.0
6.144	16.0	48.0
7.3728	18.432	50.0
8.0	19.6608	66.666
10.0	22.1184	80.0
	24.0	100.0

TEST CIRCUIT



CL = 15pf (50 pf 17AX)
Includes probe & test jig

TYPICAL OUTPUT WAVEFORM



HOW TO ORDER

EXAMPLE: 970H1B2A

FAMILY: (970H--) [ ] [ ] [ ] [ ] – FREQUENCY (MHz)

SYMMETRY
2 = 55/45*

B = 0.01% Standard

TEMPERATURE RANGE
2 = 0° to 70 °C

PACKAGING

A = Standard	SURFACE MOUNT OPTIONS:
C = Insertion Tube	TYPE 1: Gullwing
D = Anti-Static	TYPE 2: "J" Lead
G = Type 1 Surface Mount	TYPE 4: Glass Epoxy Base
J = Type 2 Surface Mount	
S = Type 4 Surface Mount	X = Customer Specification**

* Standard
** Suffix "x" indicates a customer specification applies to device. Factory will assign part number.
Parts will be marked with Family and Frequency only. When ordering, use the full descriptive part number.
Not all options available in all product families, check family data sheet or call factory.
Specifications subject to change without notice.