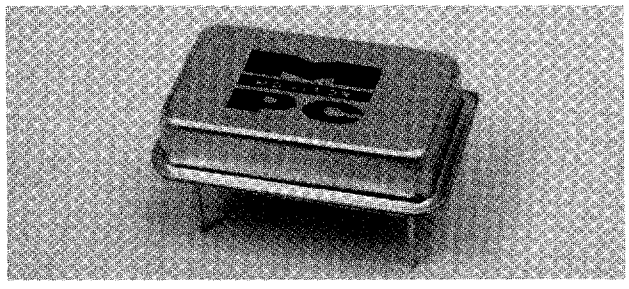
MONITOR PRODUCTS

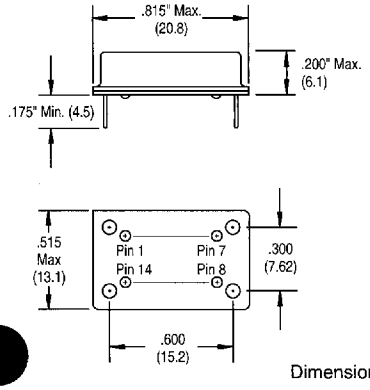
970HHT

HIGH SPEED CMOS TRI-STATE ENABLE-DISABLE CLOCK OSCILLATOR

(HIGH ENABLE CMOS INPUT)



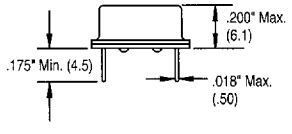
PACKAGE DIMENSIONS



970HHT:

Pin Connection

#1	Control	#8	Output
#7	GND	#14	+5VDC



Dimensions in inches and (mm)

FEATURES

- RUGGED RESISTANCE WELD PACKAGE
- LOW PROFILE DESIGN
- HCMOS COMPATIBLE
- STABILITY TO .005%
- SURFACE MOUNT OPTION
- LOW CURRENT DRAIN

The MONITOR 970HHT series oscillators are HCMOS compatible and 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 RF radiation, helping to reduce EMI/RFI.

MONITOR PRODUCTS also offers clock oscillators in TTL, LSTTL, and ECL in the following configurations:

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

ELECTRICAL SPECIFICATIONS

• Frequency Range	1.5 MHz to 100.0 MHz
• Operating Temp. Range	0°C to 70°C
• Storage Temp. Range	-55°C to 125°C
• Supply Voltage	+5V ± 10% (VCC)
• Frequency Stability	±100ppm (All conditions)
• Output Voltage (VCC=5V)	"0" Level 0.5V (min) "1" Level 4.0V (min)
• Waveform Symmetry	55/45 (VCC = 5V, 50% VCC)
• Rise and Fall Time	5 nS (max — TTL Levels) 10 nS (max — CMOS Levels)
• Enable Input	"1" Level 4.0V (min — 10% VCC)
• Disable Input	"0" Level 0.5V (min — 90% VCC)
• Input Current	25 mA @ 25 MHz (typ)
• Driving Ability	TTL 10: LS-TTL 20: CMOS 50 pF (max)
• Enable/Disable Display Time	100 nS (max)
• Start Up Time	10 mS (max)

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

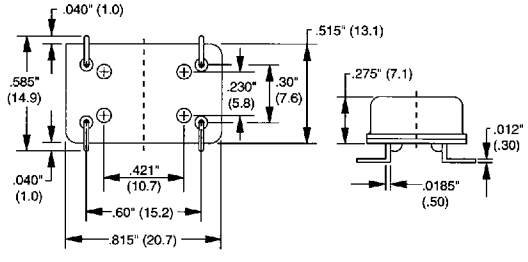
502 Via Del Monte • Oceanside, CA 92054
Western Phone (619) 433-4510 Eastern Phone (904) 725-4384
Western FAX (619) 434-0255 Eastern FAX (904) 725-4584

ENVIRONMENTAL PERFORMANCE SPECIFICATIONS

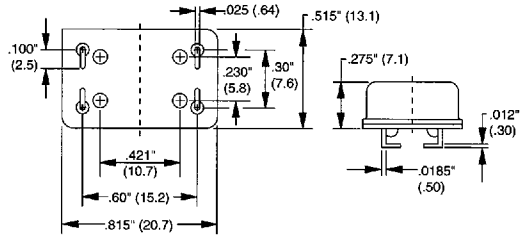
Ambient Temperature Range	
Operating	0°C to 70°C Standard
Storage	-55°C to 125°C
Vibration	MIL-STD-202F Method 204, 35G, 50 to 2000 Hz
Shock	MIL-STD-202F Method 213B Test Cond. E, 1000G, $^1/_2$ Sine Wave
Humidity	85% RH, 85°C, 48 Hours
Hermetic Seal	Leak Rate 2 x 10^{-8} ATM, CC/Sec of helium
Solderability	MIL-STD-202F Method 208E

SURFACE MOUNT OPTIONS

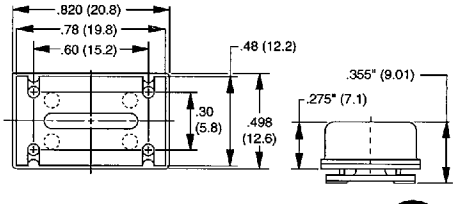
TYPE 1 "GULLWING"



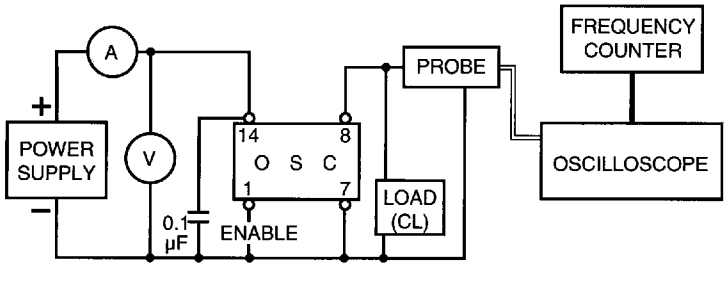
TYPE 2 "J" LEAD



TYPE 4 "GLASS EPOXY BASE"

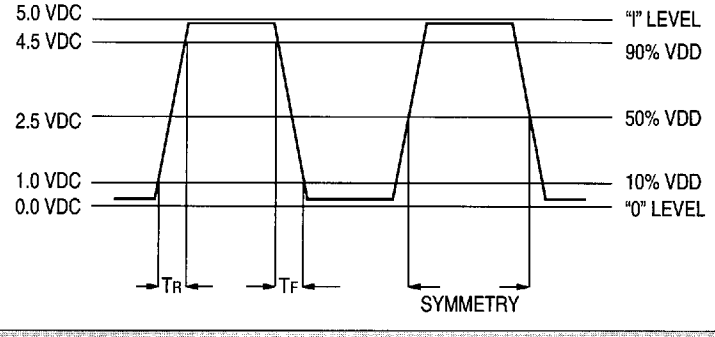


TEST CIRCUIT



cl = 50 pF MAX

TYPICAL OUTPUT WAVEFORM



HOW TO ORDER

EXAMPLE: 970HHT2B2A-6.000

FAMILY: (970HHT) [ ] [ ] [ ] [ ] — FREQUENCY (MHz)

Expressed as MHz when > 1.0 MHz
KHz < 1.0 MHz

SYMMETRY
1 = 60/40*
2 = 55/45

FREQUENCY STABILITY
B = 0.01%

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.