

## Full-Size and Half-Size, TTL-Compatible Clock Oscillators

# 970T • 975T

Monitor Products' 970T and 975T series of full-size and half-size clock oscillators combine state-of-the-art, thick film, hybrid technology with precision manufacturing, resulting in products of unsurpassed accuracy and reliability. Their all-metal, resistance-welded cases ensure environmental protection and shielding to minimize EMI/RFI.

### FEATURES

- Low power consumption
- Surface mount options
- Tristate gates
- Independent dual outputs

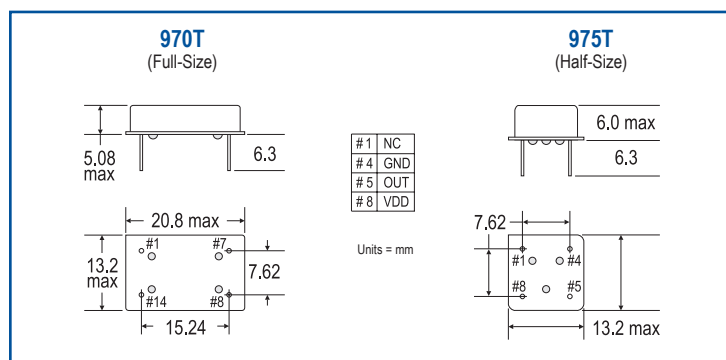
### APPLICATIONS

- Systems clock
- Disk drives
- Cameras
- Computer applications
- Measuring instruments
- Communications equipment



Monitor Products has a proven track record as a pioneer manufacturer in the frequency control market. If our extensive selection of standard and engineered crystals and oscillators does not meet your spec, we will work with you towards a customized solution.

ELECTRICAL SPECIFICATIONS	970T Full-size	975T Half-size
Frequency Range	1.0 ~ 100.0 MHz	
Frequency Stability	$\pm 100$ ppm std ( $\pm 25$ ppm avail)	
Supply Voltage	5.0 VDC $\pm 0.5$ V	
Operating Temperature Range	0°C ~ 70°C standard (extended temp ranges avail - call for other options)	
Load Capacitance	10 TTL	
Symmetry	60%/40% @ $\frac{1}{2}$ VDD max	
Input Current (MHz: mA max)	1.0 ~ 25.0 MHz : 30 mA 25.1 ~ 70.0 MHz : 70 mA 70.1 ~ 100.0 MHz : 80 mA	
Rise & Fall Time (MHz: nS max)	1.0 ~ 25.0 MHz : 10 nA 25.1 ~ 70.0 MHz : 5 nA 70.1 ~ 100.0 MHz : 4 nA	
Logic 0 Level (MHz: V max)	1.0 ~ 25.0 MHz : +0.4 V 25.1 ~ 100.0 MHz : +0.5 V	
Logic 1 Level (min)	+2.4V	

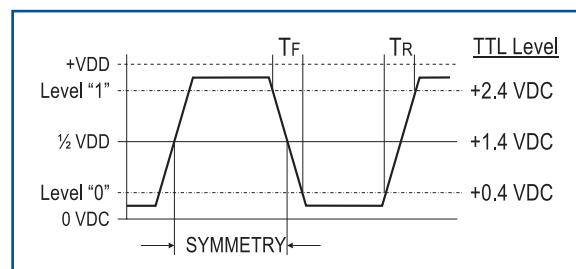


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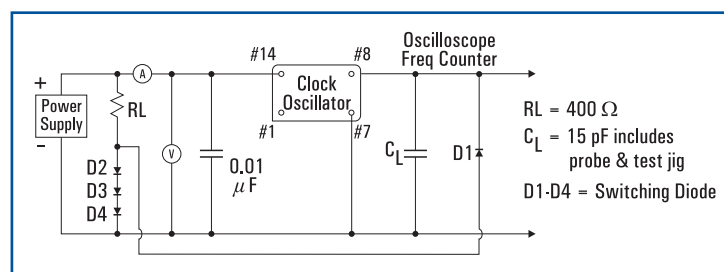
## ENVIRONMENTAL PERFORMANCE SPECIFICATIONS

Oper Temp Range	0°C~70°C
Storage Temp Range	-55°C~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 $2 \times 10^{-8}$ ATM-cm <sup>3</sup> /sec max
Reflow Solderability	260°C, 10 secs max
Solderability	MIL-STD-202F, Method 208E

## TYPICAL OUTPUT WAVEFORM



## TEST CIRCUIT



## PART NUMBERING KEY

Sample Part Numbers:

970T1B2A @ 14.31818 MHz =

SERIES	SYMMETRY	FREQUENCY STABILITY	TEMPERATURE RANGE	PACKAGING	FREQUENCY (MHz)
970T or 975T			2 = 0°C~70°C*		
	1 = 60%/40%*	B = 100ppm* C = 50ppm E = 25ppm		A = Anti-static insertion tubes* G = SMD (gull-wing) J = SMD (J-lead) S = SMD (glass epoxy base) X = Customer spec	
970T	1	B	2	A	14.31818
975T	1	E	2		40.0

\* Standard

Call factory for additional options. Use full descriptive part number when ordering. Parts will be marked with series and frequency only.