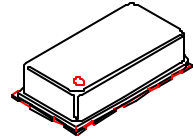
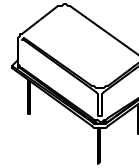




# P1100-HC SERIES



- CMOS COMPATIBLE **WITHOUT** TRI –STATE OUTPUT
- LOWER RINGING NOISE OPTION AVAILABLE TO REDUCE EMI
- 14-PIN (FULL SIZE) THRU-HOLE OSCILLATORS IN METAL PACKAGE
- AVAILABLE IN SURFACE MOUNT CONFIGURATION

## STANDARD SPECIFICATIONS:

Frequency Range	650 kHz – 69.999 MHz (Consult factory for specific available frequencies)
Frequency Stability over Operating Temperature Range	± 50 PPM is standard, but ± 25 PPM is also available.
Operating Temperature Range	0 - 70 °C is standard, but can be extended to -40 to +85°C.
Operable Supply Voltage (Vcc)	5 Volt ± 10% is standard, but 3.3 Volt ± 10% also available
Symmetry (Duty Cycle) (See next page for definition.)	40/60 - 60/40% is standard, but 45/55% symmetry at 50% of Vcc is also available.
Input Current (Icc) & Rise & Fall Time (Tr & Tf) & Jitter	Depends on frequency and output load. See next page.
Logic “1” & Logic “0” (See next page.)	90% of Vcc MIN.; 10% of Vcc MAX.
Output Load	Can drive up to 50 pF load
Ringing Noise	Depends on frequency and output load. See EMI application note.
Packaging	20 parts per tube, SMD: Tape and Reel TBD

## PART NUMBERING GUIDE:

- The Pletronics part number for a P1100-HC series oscillator consists of the following 4 elements:

### 1. Overall Frequency Stability over Operating Temperature Range:

P1145-HC: ± 50 PPM;  
P1144-HC: ± 25 PPM

### 2. Optional Alphabet Designator for Special Requirement:

P1145-HC: standard specifications;  
P1145-HCE: operating temperature range of -40 to +85°C;  
P1145-HCS: 45/55% symmetry at 50% of Vcc;  
P1145-HCV: operates at Vcc = 3.3V;  
P1145-HCN: lower ringing noise  
(There are other alphabet designators not listed here.)

### 3. Frequency of Operation in kHz or MHz

### 4. Optional Surface Mount Configuration – SMD

EXAMPLES: P1145-HCV-50.000 MHz; P1145-HCE-10.000 MHz, P1144-HCS-10.000 MHz-SMD

- When customer’s requirements are non-standard, a special engineering part number will be assigned.

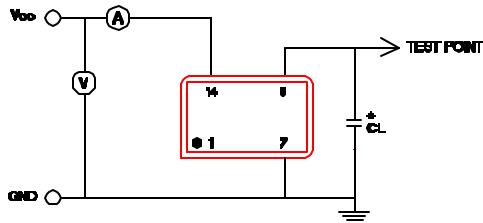
(continued)

# P1100-HC SERIES

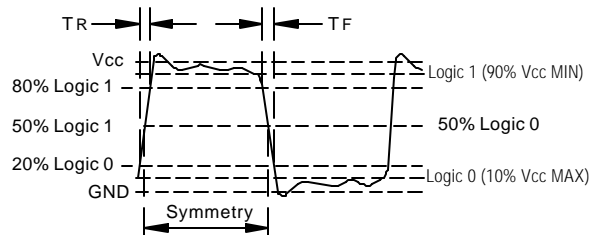
## Input Current (I<sub>cc</sub>), Rise and Fall time with 15pF Load & Jitter

Frequency Range (MHz)	I <sub>cc</sub> (mA)		Tr & Tf (nS)		Period Jitter RMS Values *contact factory	
	Typical	Maximum	Typical	Maximum	Typical	Maximum
0.650 – 7.999	6.0	10.0	3.0	4.0	*	*
8.000 – 23.999	15.0	20.0	3.0	4.0	*	*
24.000 – 29.999	27.0	35.0	2.5	3.5	*	*
30.000 – 34.999	35.0	40.0	2.5	3.5	*	*
35.000 – 39.999	45.0	50.0	2.5	3.5	*	*
40.000 – 50.000	25.0	30.0	2.5	3.5	*	*
50.001 – 69.999	32.0	37.0	2.5	3.5	*	*

### Recommended Test Circuit with CMOS Load

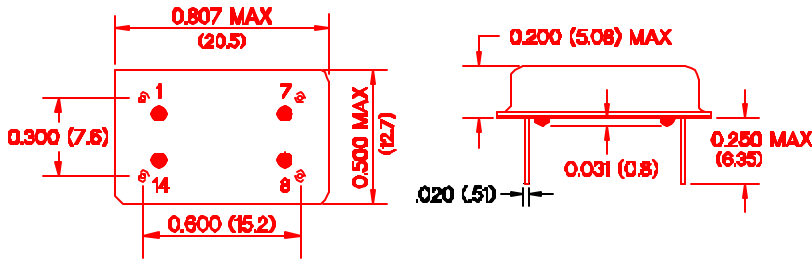


### Waveform



\*CL (Capacitive Load): Includes the input capacitance of oscilloscope.

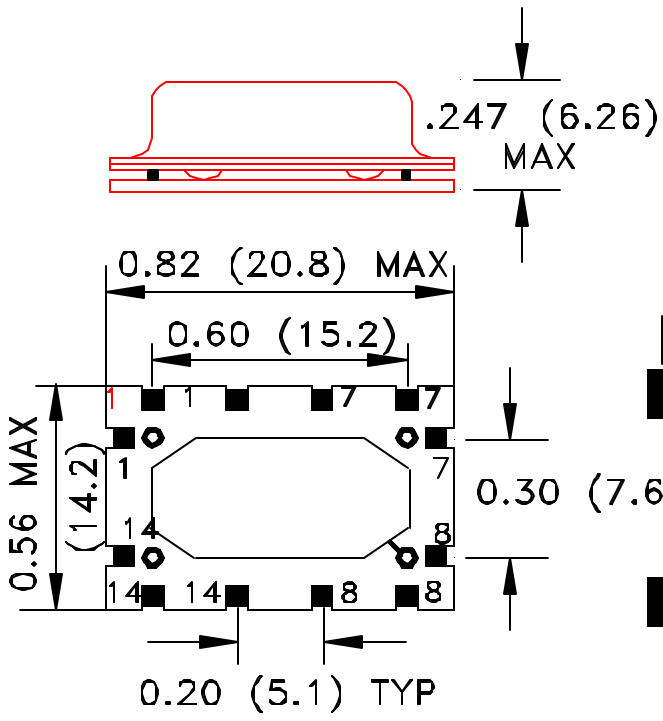
### Thru-Hole Package Outline (NOT TO SCALE):



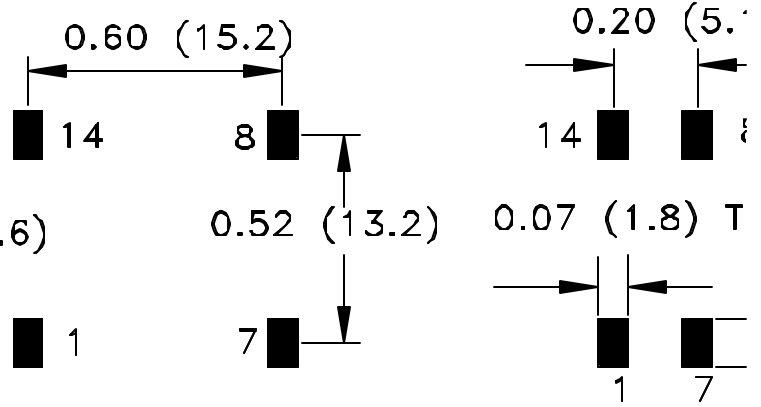
PIN CONNECTIONS	
PIN	CONNECTION
1	NO CONNECTION
7	GROUND
8	OUTPUT
14	V <sub>cc</sub>

INCHES (MILLIMETERS)

### SMD OUTLINE



RECOMMENDED



October 2000