Pletronics, Inc.
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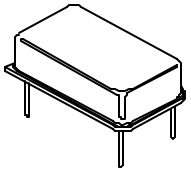
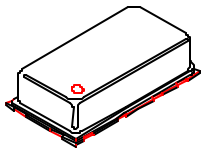
# P1100 SERIES



- TRUE TTL OUTPUT
- LOWER EMI DUE TO LOWER RINGING NOISE (OVERSHOOT/ UNDERSHOOT)
- 14-PIN (FULL SIZE) THRU-HOLE OSCILLATORS IN METAL PACKAGE
- AVAILABLE IN SURFACE MOUNT CONFIGURATION



## STANDARD SPECIFICATIONS:

| | |
|---|---|
| **Frequency Range** | 4.000 – 60.000 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. |
| **Input Voltage (Vcc)** | 5 Volt ± 10% |
| **Symmetry (Duty Cycle) (See next page for definition.)** | 40/60 - 60/40% is standard, but 45/55% symmetry at Vcc=1.4V is also available. |
| **Input Current (Icc) & Rise and Fall Time (Tr & Tf) between 0.4V and 2.4V** | Depends on frequency and output load. See next page. |
| **Logic "1" & Logic "0" (See next page.)** | 2.4V MIN.; 0.4V MAX. |
| **Output Load** | Up to 10 TTL loads +15 pF |
| **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 series oscillator consists of the following 4 elements:**

1. **Overall Frequency Stability over Operating Temperature Range:**
   P1145: ± 50 PPM;
   P1144: ± 25 PPM

2. **Optional Alphabet Designator for Special Requirement:**
   P1145: standard specifications;
   P1145E: operating temperature range of -40 to +85°C;
   P1145P: 45/55% symmetry at Vcc=1.4V;
   (There are other alphabet designators not listed here.)

3. **Frequency of Operation in MHz**

4. **Optional Surface Mount Configuration - SMD**

EXAMPLES: P1145E-10.000 MHz; P1145P-10.000 MHz, P1144-10.000 MHz -SMD

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

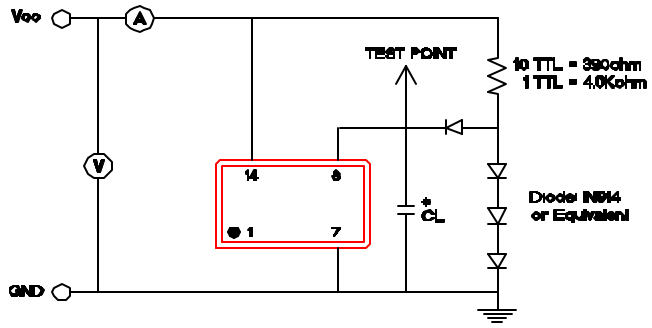
(continued)

# P1100 SERIES

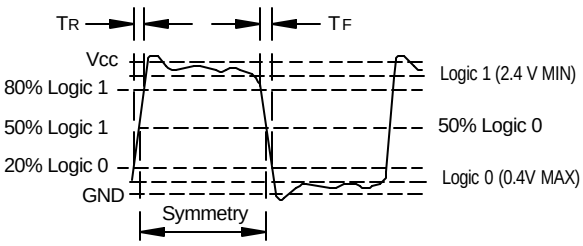
## Input Current (Icc), Rise and Fall time with 15pF Load & Jitter

| Frequency Range (MHz) | Icc (mA) | | Tr & Tf (nS) | | Period Jitter RMS Values ✳contact factory | |
|---|---|---|---|---|---|---|
| | Typical | Maximum | Typical | Maximum | Typical | Maximum |
| 4.000 – 7.999 | 23.0 | 28.0 | 4.0 | 5.0 | ✳ | ✳ |
| 8.000 – 15.999 | 24.0 | 28.0 | 3.0 | 4.0 | ✳ | ✳ |
| 16.000 – 21.999 | 24.0 | 28.0 | 2.5 | 3.5 | ✳ | ✳ |
| 22.000 – 60.000 | 27.0 | 32.0 | 2.0 | 3.0 | ✳ | ✳ |

## Recommended Test Circuit with TTL Load

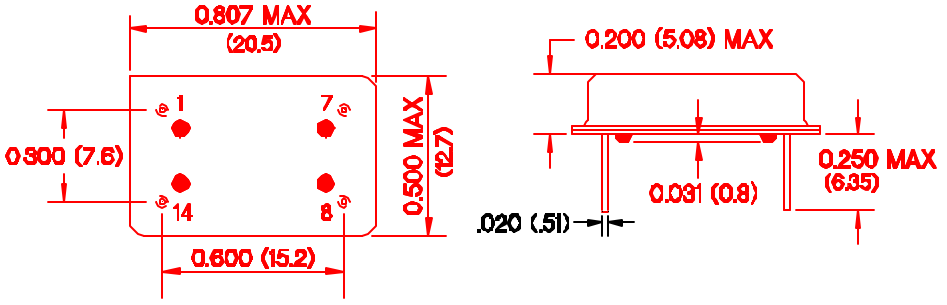



## Waveform



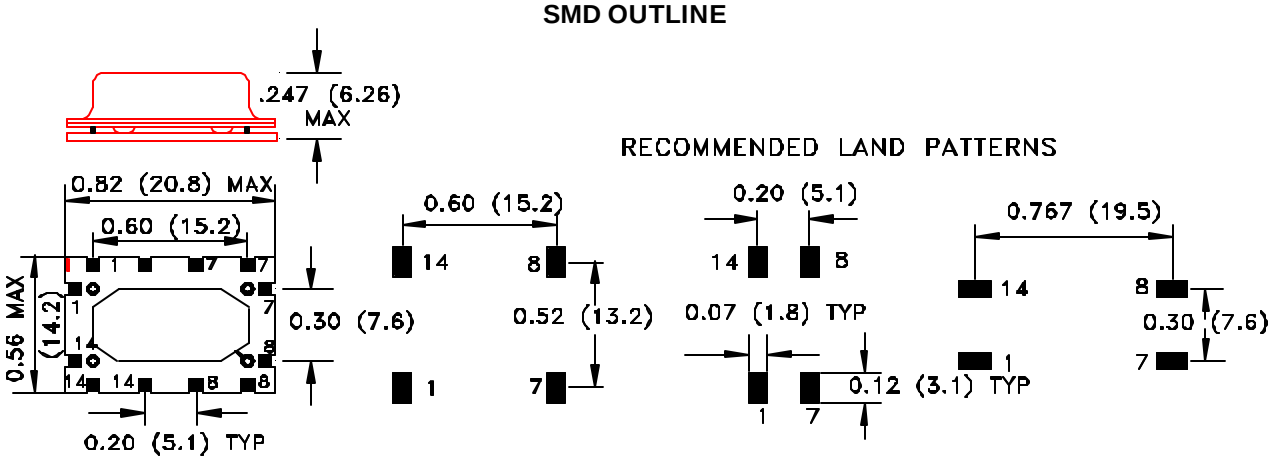

*CL (Capacitive Load): Includes the input capacitance of oscilloscope.

## Package Outlines (NOT TO SCALE)




| PIN CONNECTIONS | |
|---|---|
| PIN | CONNECTION |
| 1 | NO CONNECTION |
| 7 | GROUND |
| 8 | OUTPUT |
| 14 | Vcc |

### SMD OUTLINE




INCHES (MILLIMETERS)

**October 2000**