

# PLLC SERIES

- 50 pS RMS PERIOD JITTER
- FULL SIZE METAL THRU-HOLE (**P1100-PL**), HALF SIZE METAL THRU-HOLE (**SQ3300PL**), OR LEADLESS SURFACE MOUNT (**SM1100PL**)
- HIGH FREQUENCY CLOCK OUTPUT GENERATED, USING PHASE-LOCKED LOOP (PLL) CIRCUIT
- ECONOMICAL OPTION FOR JITTER-TOLERANT HIGH-FREQUENCY CLOCK APPLICATION

## STANDARD SPECIFICATIONS:

Frequency Range	72.000 MHz - 160.000 MHz (Consult factory for specific available frequencies)
Overall Frequency Stability over Operating Temperature Range	± 50 PPM is standard, but ± 25 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% is standard, but 3.3 Volt ± 10% also available.
Symmetry (Duty Cycle) (See next page for definition.)	45/55- 55/45% when measured at 1.4 volt level
Input Current (Icc) & Rise and Fall Time between 0.8 and 2.0 volts	Depends on frequency and output load. See table on next page
Logic "1" & Logic "0" (See next page)	Logic "1": 2.4 V Min.; Logic "0": 0.4 V Max.
Tri-state Output Option	Standard
Output Load	2 pF/10kΩ
Packaging (see page R1, Figure 3)	(P11) 20 parts per tube, (SQ) 33 parts per tube, (SM) 28 parts per tube or 24 mm tape, 330mm reel: 500 parts per reel

## PART NUMBERING GUIDE:

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

### 1. Model Number Series:

SM1145PL: Leadless Surface Mount;  
 P1145-PL: Full Size Metal Thru-Hole;  
 SQ3345PL: Half Size Metal Thru-Hole

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

SM1145PL: ± 50 PPM;  
 SM1144PL: ± 25 PPM

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

SM1145PL: standard specifications;  
 SM1145PLE: operating temperature range of -40 to +85°C;  
 SM1145PLV: operates at Vcc = 3.3V  
 (There are other alphabet designators not listed here.)

### 4. Frequency of Operation in MHz

EXAMPLES: P1145-PL-125.000 MHz, SM1145PLE-150.000 MHz, SQ3344PLV-72.000 MHz

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

(continued)

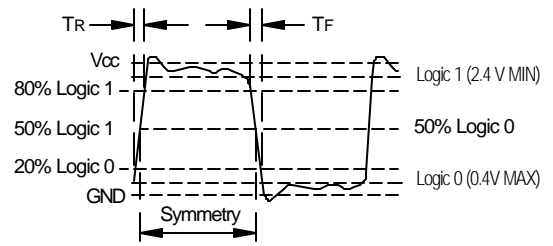
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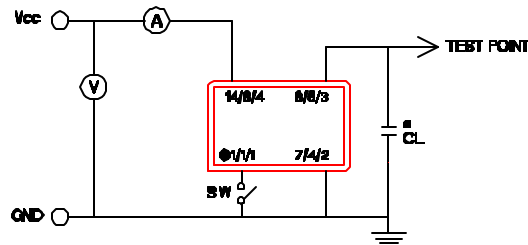
## Input Current (I<sub>cc</sub>) and Rise and Fall Time with 2.0pF/10KW Load

Freq. Range (MHz)	I <sub>cc</sub> (mA) Maximum	Tr & Tf (nS) Maximum
72.000 - 99.999	30	1
100.00 - 129.99	35	1
130.00 - 160.00	40	1

## Waveform



## Recommended Test Circuit with CMOS Load

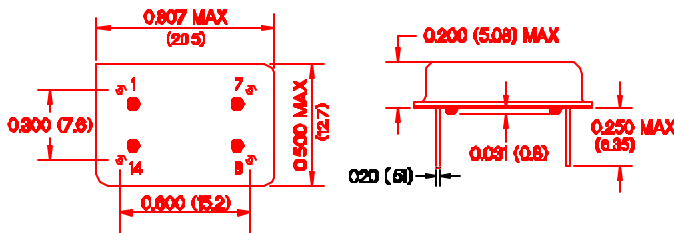


P1100-PL / SQ3300PL / SM1100PL

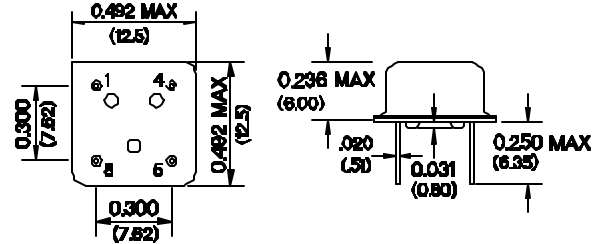
\*CL (Capacitive Load): Includes the input capacitance of oscilloscope.

## PACKAGE OUTLINES (NOT TO SCALE):

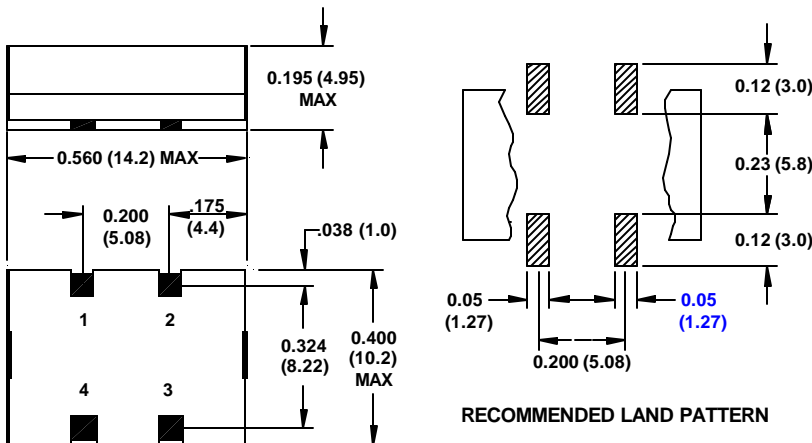
### P1100-PL (FULL SIZE THRU-HOLE)



### SQ3300PL (HALF SIZE THRU-HOLE)



### SM1100PL (LEADLESS SURFACE MOUNT)



PIN CONNECTIONS	
P11/SQ/SM1100 PIN	CONNECTIONS
1/1/1	ENABLE/DISABLE INPUT
7/4/2	GROUND
8/5/3	OUTPUT
14/8/4	V <sub>cc</sub>

INCHES (MILLIMETERS)

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