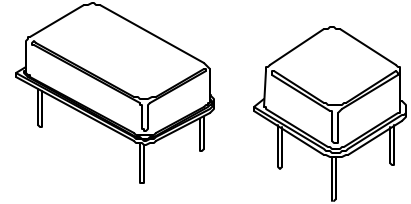




# HIGH FREQUENCY THRU-HOLE SERIES

- CMOS COMPATIBLE WITH TRI-STATE OUTPUT
- THRU-HOLE OSCILLATORS IN METAL PACKAGE AVAILABLE IN 14-PIN/ FULL SIZE (**P1100-3SD**) OR 8-PIN/ HALF SIZE (**SQ3300D**)
- 3<sup>RD</sup> OVERTONE CRYSTAL USED
- LOW JITTER (SEE TABLE NEXT PAGE)



## STANDARD SPECIFICATIONS:

Frequency Range	70.000 MHz – 160.000 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% 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 and 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.
Tri-state Output	Normal output when pin #1 is open (no connection); Normal output when pin #1 is at logic “1”; High-impedance output when pin #1 is at logic “0”.
Output Load	Can drive up to 50pF load
Packaging (mounted on ESD pads)	(P11) 50 parts per pad, (SQ) 70 parts per pad, 10 pads per bundle

## PART NUMBERING GUIDE:

- The Pletronics part number for this third overtone oscillator series consists of the following 4 elements:

### 1. Model Number Series:

P1145-3SD: 14-Pin (Full Size) Thru-Hole;

SQ3345D: 8-Pin (Half Size) Thru-Hole

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

P1145-3SD: ± 50 PPM;

P1144-3SD: ± 25 PPM

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

P1145-3SD: standard specifications;

P1145-3SDE: operating temperature range of -40 to +85°C;

P1145-3SDS: 45/55% symmetry at 50% of Vcc (CMOS);

P1145-3SDV: operates at Vcc = 3.3V

(There are other alphabet designators not listed here.)

### 4. Frequency of Operation in MHz

EXAMPLES: P1145-3SDV-70.000MHz; SQ3344DE-70.000MHz, SQ3345DS-70.000MHz

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

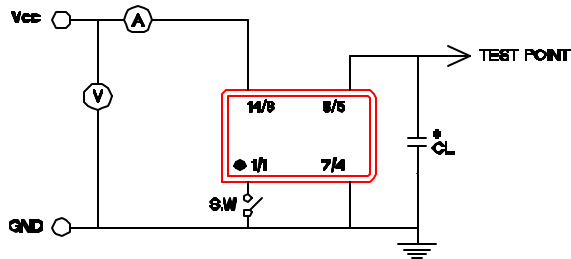
(continued)

# HIGH FREQUENCY THRU-HOLE SERIES

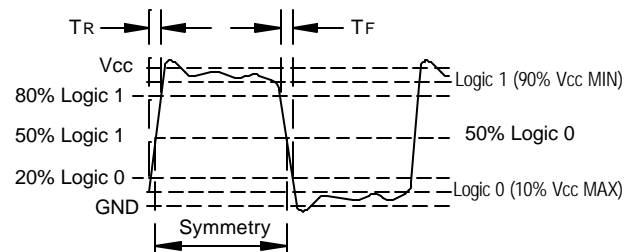
## Input Current (I<sub>cc</sub>), Rise and Fall time with 15pF Load & Jitter

Frequency Range (MHz)	I <sub>cc</sub> (mA)		Tr & Tf (nS)		Period Jitter RMS Values (pS) *contact factory	
	Typical	Maximum	Typical	Maximum	Typical	Maximum
70.000 – 79.999	40.0	45.0	2.0	3.0	*	*
80.000 – 110.000	75.0	80.0	0.5	1.0	2.6	2.9
110.001 – 119.999	80.0	90.0	0.5	1.0	*	*
120.000 – 160.000	90.0	95.0	0.5	1.0	1.8	1.9

### Recommended Test Circuit with CMOS Load



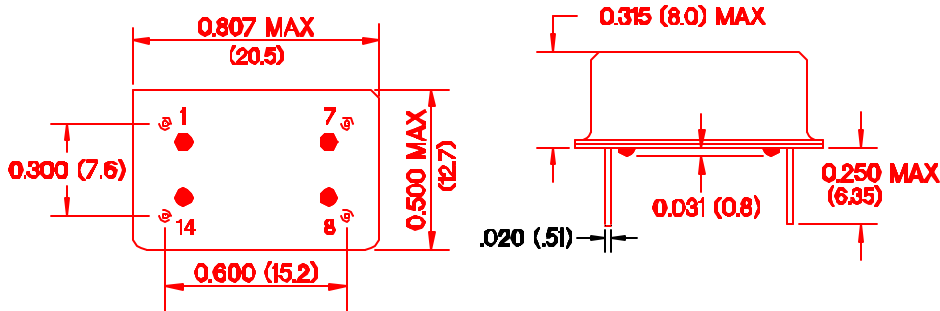
### Waveform



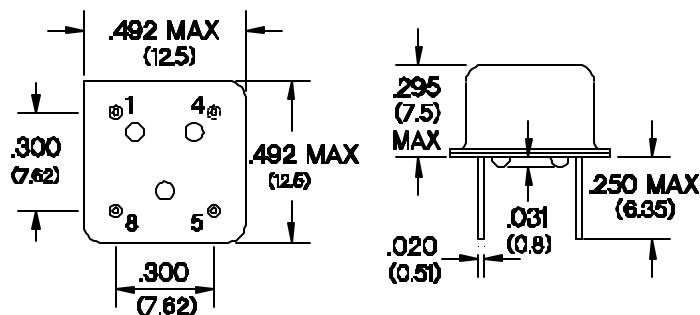
### P1100-3SD/SQ3300D

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

### Package Outlines (NOT TO SCALE):



P1100-3SD PIN CONNECTIONS	
PIN	CONNECTION
1	ENABLE/DISABLE INPUT
7	GROUND
8	OUTPUT
14	Vcc



SQ3300D PIN CONNECTIONS	
PIN	CONNECTION
1	ENABLE/DISABLE INPUT
4	GROUND
5	OUTPUT
8	Vcc

INCHES (MILLIMETERS)

October 2000