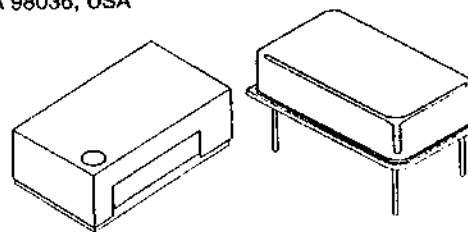




Pletronics, Inc.

19013 36th Ave. West • Suite H • Lynnwood, WA 98036, USA



P1100-LN & SM1100LN

- THRU-HOLE (P1100-LN) OR SURFACE MOUNT (SM1100LN)
- BY USING SPREAD SPECTRUM TECHNOLOGY, THE ENERGY AT THE CLOCK FREQUENCY IS LOWERED SIGNIFICANTLY. THIS REDUCES CLOCK-RELATED EMI UP TO 20 dB AND MAKES IT EASIER TO PASS ELECTRO MAGNETIC CONFORMANCE (EMC) SPECIFICATIONS.
- NOT SUITABLE FOR JITTER-SENSITIVE APPLICATION!

STANDARD SPECIFICATIONS:

Frequency Range	14.000 MHz - 120.000 MHz
Bandwidth of Spectrum Spread	± 2.5% (± 25,000 PPM) around center frequency is standard, but other options also available.
Frequency Stability over Operating Temperature Range	± 100 PPM is standard, but ± 50 and ± 25 PPM 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.
Input Current (Icc)	Depends on frequency and output load. See table on next page.
Symmetry (Duty Cycle) (See next page for definition.)	40/60 - 60/40% is standard, but 45/55% symmetry at 2.5V or at 1.4V also available.
Rise and Fall Time	6 n Seconds Maximum
Logic "1" & Logic "0" (See next page.)	TTL: 2.4V MIN.; 0.4V MAX.; CMOS: 90% of Vcc MIN.; 10% of Vcc MAX.
Tri-state Output Option	Currently under development.
Output Load	CMOS: drive up to 15pF load; TTL: drive up to 6mA (2-3 TTL loads).
Package for Surface Mount Version	Leaded is standard, but leadless also available (just add 'C' after model)

PART NUMBERING GUIDE:

- The Pletronics part number for a Low Noise oscillator consists of the following 4 elements:

1. Model Number:

SM1100LN: Surface Mount;
P1100-LN: Thru-Hole

2. Overall Frequency Stability over Operating Temperature Range:

SM1100LN: ± 100 PPM;
SM1145LN: ± 50 PPM;
SM1144LN: ± 25 PPM

3. Optional Alphabet Designator for Special Requirement:

SM1100LN: standard specifications with leaded package;
SM1100LNC: leadless package (does not apply to P1100-LN);
SM1100LNE: operating temperature range of -40 to +85°C;
SM1100LNP: 45/55% symmetry at Vcc=1.4V (TTL);
SM1100LNS: 45/55% symmetry at 50% of Vcc (CMOS);
SM1100LNV: operates at Vcc = 3.3V
(There are other alphabet designators not listed here.)

4. Frequency of Operation in MHz

EXAMPLES: P1100-LN-25.000 MHz, SM1145LNE-25.000 MHz

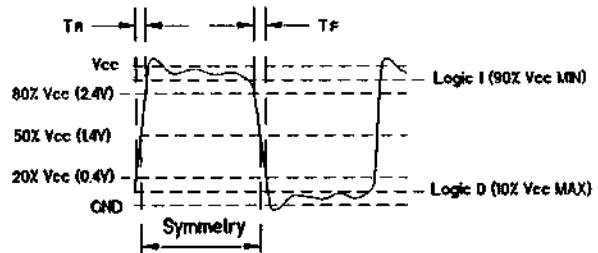
- When customer's requirements are non-standard, a special engineering part number will be assigned.
(continued)

P1100-LN & SM1100LN

Input Current (I_{CC}) and Rise and Fall time with 15pF Load

Waveform

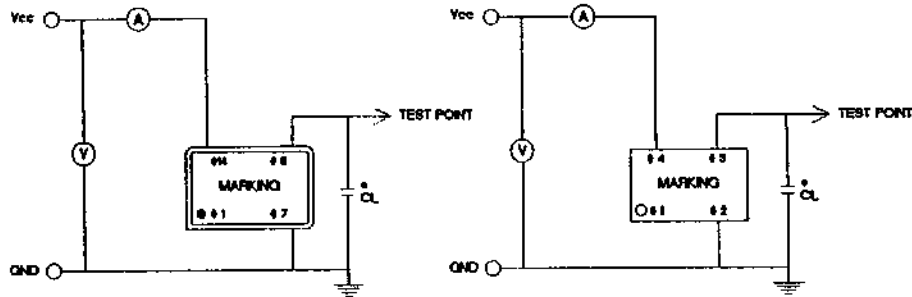
Freq. Range (MHz)	I _{CC} (mA) Maximum
14.000-30.000	25
30.001-60.000	35
60.001-120.000	55



Voltage levels in () refer to TTL level

Recommended Test Circuit

CMOS LOAD



P1100-LN

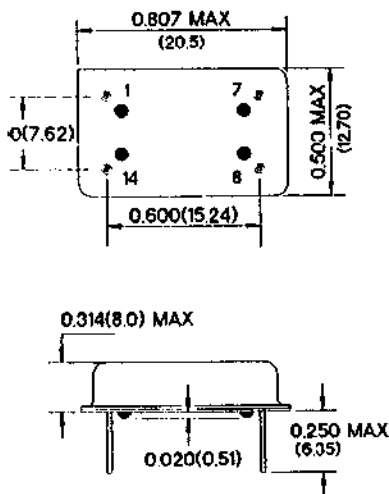
SM1100LN

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

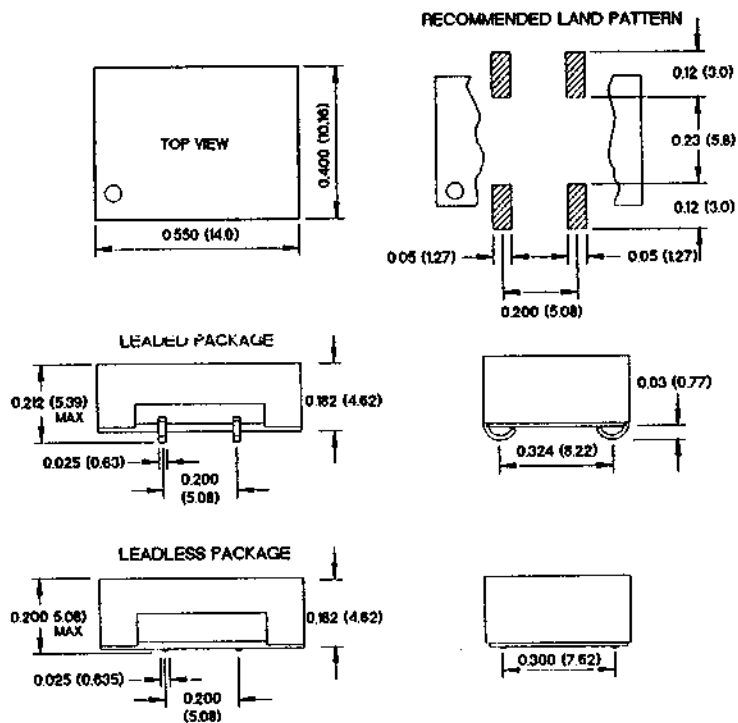
Package Outlines:

PIN CONNECTIONS		
P1100-LN PIN	SM1100LN PIN	CONN.
1	1	N.C.
7	2	GND
8	3	OUTPUT
14	4	Vcc

P1100-LN (THRU-HOLE)



SM1100LN (SURFACE MOUNT)



INCHES (MILLIMETERS)

January 1998

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