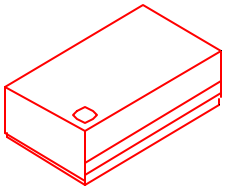
Pletronics, Inc.
19013 36th Ave. West • Suite H • Lynnwood, WA 98036, USA

SM1100B SERIES



- CMOS COMPATIBLE **WITH** TRI–STATE OUTPUT
- LEADLESS SURFACE MOUNT PACKAGE WITH GROUNDED PC BOARD BASE AND METAL COVER FOR LOW EMI
- IDEAL FOR **CUSTOM-DESIGNED** CLOCK OSCILLATORS OF **NON-STANDARD FREQUENCIES AND UNUSUAL SPECIFICATIONS**
- LAND PATTERN COMPATIBLE TO OUR ENTIRE SM1100X SERIES AND EPSON SG615

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 for certain frequencies.
Operating Temperature Range	0 - 70°C is standard, but can be extended to –40 to +85°C for certain frequencies
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 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.
Output Load	Depends on the design.
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".
Packaging (see page R1, Figure 3)	28 parts per tube or 24 mm tape, 330mm reel: 500 parts per reel

PART NUMBERING GUIDE:

- **The Pletronics part number for an SM1100B series oscillator consists of the following 3 elements:**

1. **Overall Frequency Stability over Operating Temperature Range:**
   SM1145B: ± 50 PPM;
   SM1144B: ± 25 PPM
2. **Optional Alphabet Designator for Special Requirement:**
   SM1145BY: standard specifications;
   SM1145BE: operating temperature range of -40 to +85°C;
   SM1145BS: 45/55% symmetry at 50% of Vcc;
   SM1145BV: operates at Vcc = 3.3V
   (There are other alphabet designators not listed here.)
3. **Frequency of Operation in kHz or MHz**

EXAMPLES: SM1145BV-50.000 MHz, SM1145BE-25.000 MHz, SM1144BY-50.000 MHz

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

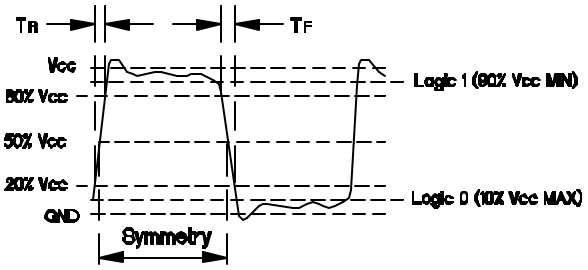
(continued)

SM1100B SERIES

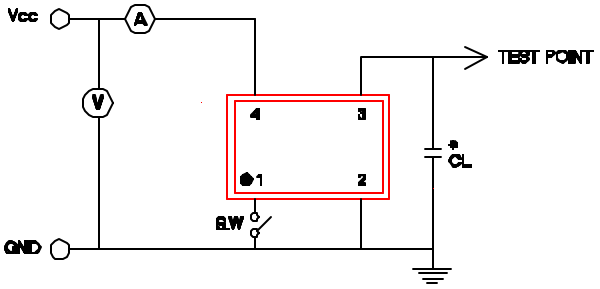
Input Current (Icc), Rise and Fall time with 15pF Load & Jitter

Frequency Range (MHz)	Icc (mA)		Tr & Tf (nS)		Period Jitter RMS Values ✳contact factory	
	Typical	Maximum	Typical	Maximum	Typical	Maximum
0.650 – 19.999	8.0	10.0	4.0	5.0	✳	✳
20.000 – 27.999	13.0	15.0	2.0	3.0	✳	✳
28.000 – 34.999	15.0	20.0	2.0	3.0	✳	✳
35.000 – 49.999	20.0	25.0	2.0	3.0	✳	✳
50.000 – 69.999	33.0	37.0	2.0	3.0	✳	✳

Waveform

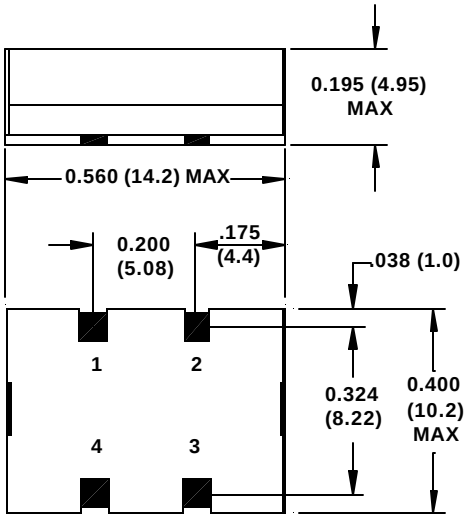


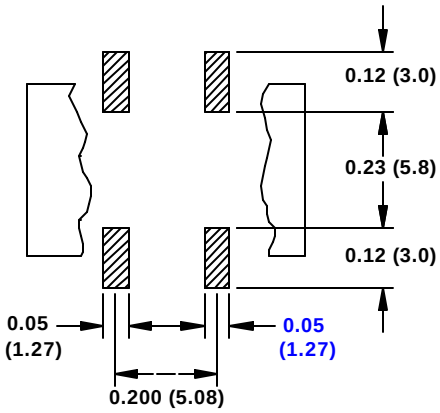
Recommended Test Circuit with CMOS Load



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

Package Outline (NOT TO SCALE):





RECOMMENDED LAND PATTERN

PIN CONNECTIONS	
PIN	CONNECTION
1	ENABLE/DISABLE INPUT
2	GROUND
3	OUTPUT
4	Vcc

INCHES (MILLIMETERS)