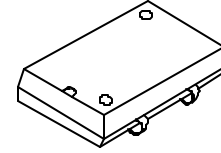




# SM1100T SERIES



- CMOS COMPATIBLE WITH TRI-STATE OUTPUT
- SURFACE MOUNT OSCILLATORS IN PLASTIC PACKAGE
- LAND PATTERN COMPATIBLE TO OUR ENTIRE SM1100X SERIES, EPSON SG615 & SG8002J
- RECOMMENDED FOR **NON-STD SPECS & FREQUENCIES** UNAVAILABLE IN SM1100C SERIES

## STANDARD SPECIFICATIONS:

Frequency Range	1.000 MHz – 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	15 pF is standard. Contact factory for heavier loads.
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 2)	24 mm tape, 330 mm reel: 1000 parts per reel. For quantities <250: 25 parts per tube.

## PART NUMBERING GUIDE:

- The Pletronics part number for an SM1100T series oscillator consists of the following 3 elements:

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

SM1145T: ± 50 PPM;  
SM1144T: ± 25 PPM

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

SM1145TY: standard specifications;  
SM1145TE: operating temperature range of -40 to +85°C;  
SM1145TS: 45/55% symmetry at 50% of Vcc;  
SM1145TV: operates at Vcc = 3.3V  
(There are other alphabet designators not listed here.)

### 3. Frequency of Operation in MHz

EXAMPLES: SM1145TV-50.000 MHz; SM1145TE-10.000 MHz; SM1144TY-10.000MHz

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

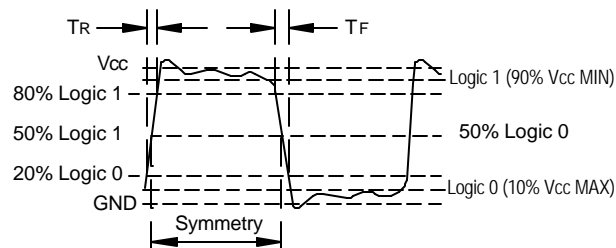
(continued)

# SM1100T SERIES

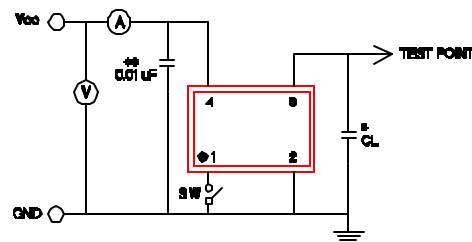
## Input Current (I<sub>cc</sub>), Rise and Fall time with 15pF Load & Jitter

Frequency Range (MHz)	I <sub>cc</sub> (mA)		Tr & Tf (nS)		Period Jitter RMS Values *contact factory	
	Typical	Maximum	Typical	Maximum	Typical	Maximum
1.000 – 7.999	5.0	10.0	4.5	5.5	*	*
8.000 – 29.999	10.0	15.0	4.5	5.5	*	*
30.000 – 39.999	20.0	25.0	4.5	5.5	*	*
40.000 – 45.999	25.0	30.0	4.5	5.5	*	*
46.000 – 59.999	30.0	35.0	2.5	3.5	*	*
60.000 – 69.999	35.0	40.0	2.5	3.5	*	*

### Waveform



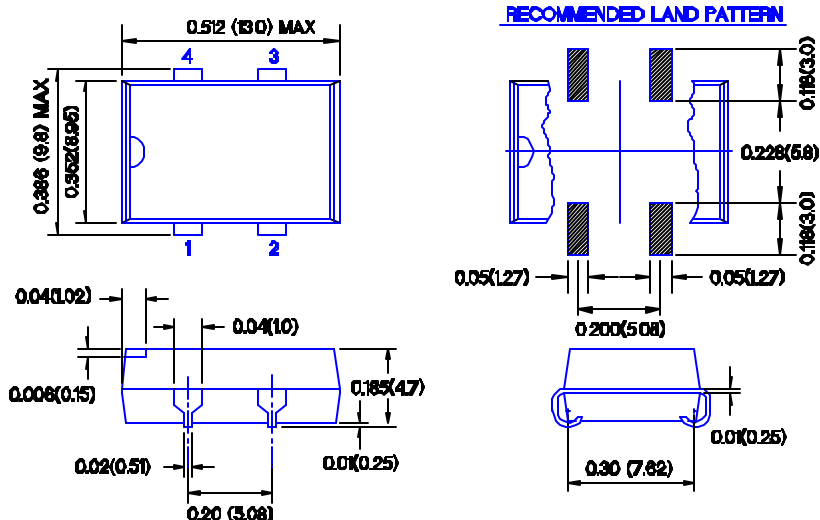
### Recommended Test Circuit with CMOS Load



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

\*\* 0.01μF external by-pass filter is recommended.

### Package Outline (NOT TO SCALE):



PIN CONNECTIONS	
PIN	CONNECTION
1	ENABLE/DISABLE INPUT
2	GROUND
3	OUTPUT
4	V <sub>cc</sub>

INCHES (MILLIMETERS)

October 2000