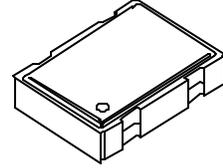




SM7700H SERIES



- CMOS COMPATIBLE WITH TRI-STATE OUTPUT
- SURFACE MOUNT OSCILLATORS IN CERAMIC PACKAGE (7x5x1.9 mm)

STANDARD SPECIFICATIONS:

Frequency Range	1.500 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 & 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 4)	16 mm tape, 178 mm, 254 mm or 330 mm reel: 1000 parts per reel. For quantities <250: 100 parts per tray

PART NUMBERING GUIDE:

- The Pletronics part number for an SM7700H series oscillator consists of the following 3 elements:

1. Overall Frequency Stability over Operating Temperature Range:

SM7745H: ± 50 PPM;
SM7744H: ± 25 PPM

2. Optional Alphabet Designator for Special Requirement:

SM7745HY: standard specifications;
SM7745HE: operating temperature range of -40 to +85°C;
SM7745HS: 45/55% symmetry at 50% of Vcc (CMOS);
SM7745HV: operates at Vcc = 3.3V
(There are other alphabet designators not listed here.)

3. Frequency of Operation in MHz

EXAMPLES: SM7745HV-50.000 MHz; SM7745HE-10.000 MHz; SM7744HY-50.000 MHz

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

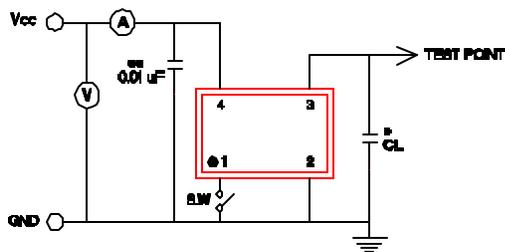
(continued)

SM7700H SERIES

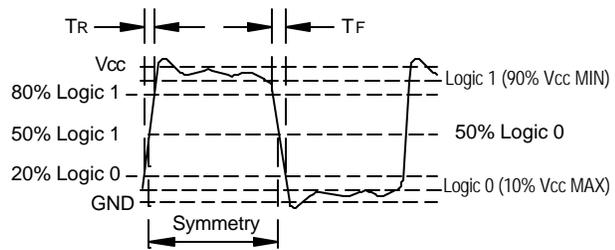
Input Current (I_{cc}), Rise and Fall time with 15pF Load & Jitter

Frequency Range (MHz)	I _{cc} (mA)		Tr & Tf (nS)		Period Jitter RMS Values * contact factory	
	Typical	Maximum	Typical	Maximum	Typical	Maximum
1.500 – 10.999	5.0	10.0	4.0	5.0	*	*
11.000 – 23.999	10.0	15.0	4.0	5.0	*	*
24.000 – 29.999	15.0	20.0	3.0	5.0	*	*
30.000 – 45.999	20.0	30.0	3.0	5.0	*	*
46.000 – 69.999	37.0	45.0	3.5	4.5	*	*

Recommended Test Circuit with CMOS Load



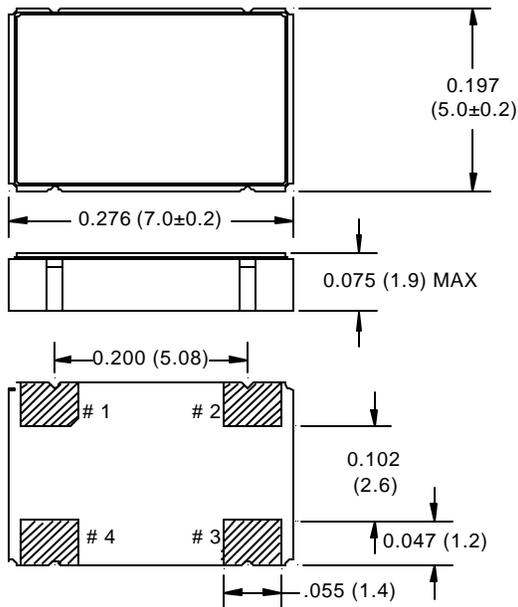
Waveform



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

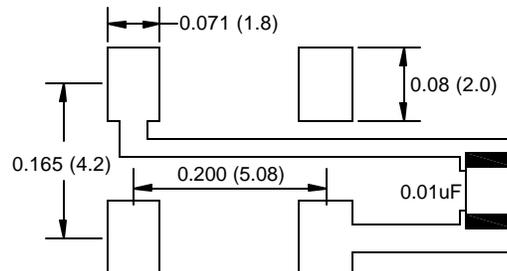
** 0.01μF external by-pass filter is recommended.

Package Outline (NOT TO SCALE):



PIN CONNECTIONS	
PIN	CONNECTION
1	ENABLE/DISABLE INPUT
2	GROUND
3	OUTPUT
4	V _{cc}

RECOMMENDED LAND PATTERN



INCHES (MILLIMETERS)

October 2000