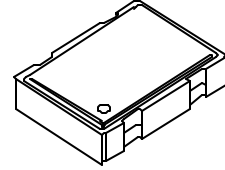




SM7700H SERIES



- 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.

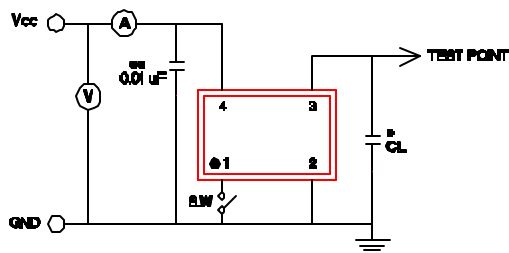
(continued)

SM7700H SERIES

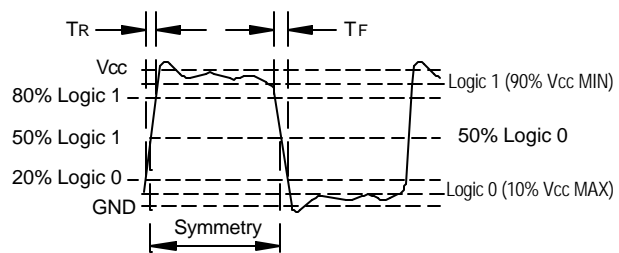
Input Current (I_{cc}), Rise and Fall time with 15pF Load & Jitter

| 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



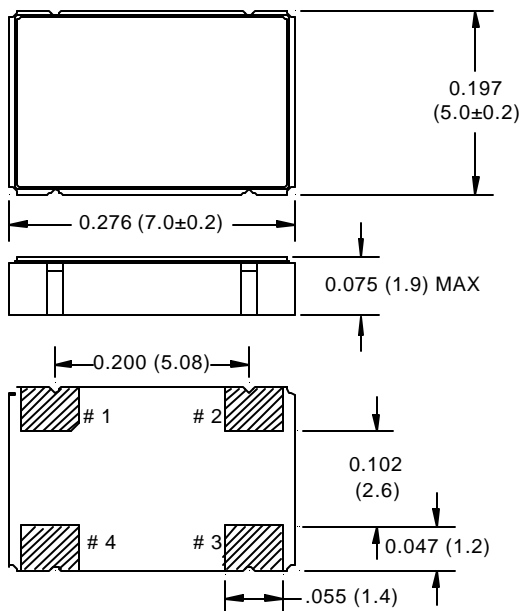
Waveform



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

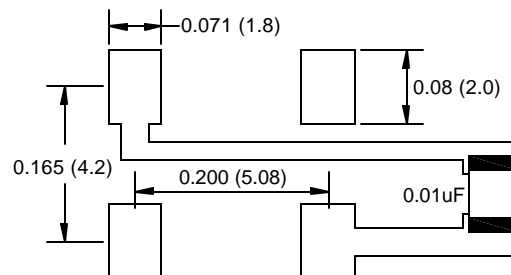
** 0.01μF external by-pass filter is recommended.

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