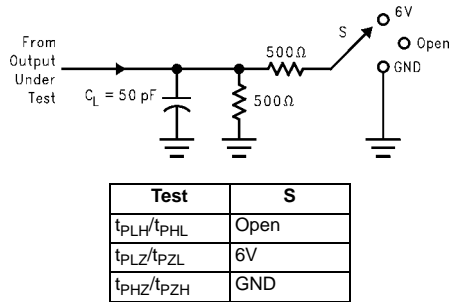


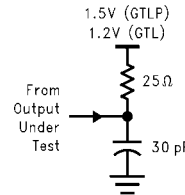
## GTLP AC Loading Circuits and Waveforms

### Loading Circuits



Note:  $C_L$  includes probes and Jig capacitance.

FIGURE 1. Test Circuit for A Outputs



Note: For B Port  $C_L = 10$  or  $30$  pF.  $C_L$  includes load and stray capacitance.

FIGURE 2. Test Circuit for B Outputs

### Waveforms

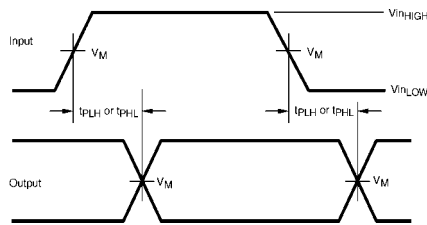


FIGURE 3. Voltage Waveform - Propagation Delay Times

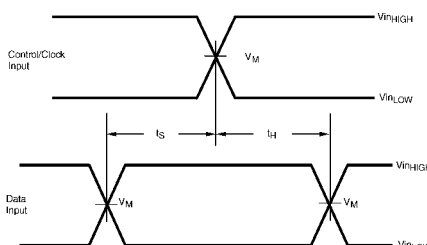


FIGURE 4. Voltage Waveform - Setup and Hold Times

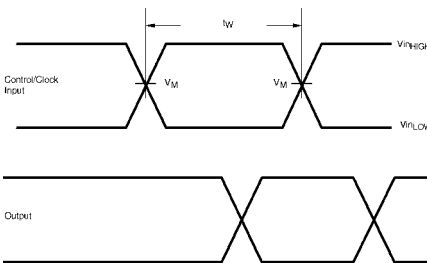
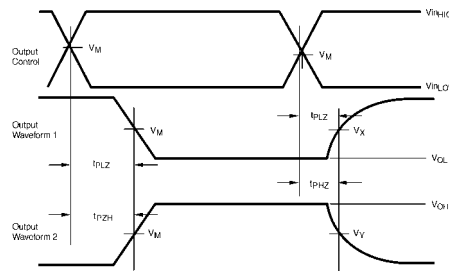


FIGURE 5. Voltage Waveform - Pulse Width



Output Waveform 1 is for an output with internal conditions such that the output is LOW except when disabled by the control output. Output Waveform 2 is for an output with internal conditions such that the outputs is HIGH except when disabled by the control output.

FIGURE 6. Voltage Waveform - Enable and Disable Times

#### Input and Measure Conditions

	A or LVTTL Pins	B or GTLP Pins
$V_{inHIGH}$	3.0	1.5
$V_{inLOW}$	0.0	0.0
$V_M$	1.5 or $V_{CC}/2$ (Note 1)	1.0
$V_X$	$V_{OL} + 0.3V$	N/A
$V_Y$	$V_{OH} - 0.3V$	N/A

All input pulses have the following characteristics: Frequency = 10MHz,  $t_{RISE} = t_{FALL} = 2$  ns (10% to 90%),  $Z_O = 50\Omega$ . The outputs are measured one at a time with one transition per measurement.

Note 1:  $V_M = 1.5$  for GTLP16612, GTLP16616, GTLP16617, GTLP16T1655, GTLP6C816A, and GTLP18T612.

$V_M = V_{CC}/2$  for GTLP8T306, GTLP6C816, GTLP6C817, GTLP17T616, GTLP10B320, GTLP1B151, GTLP2T152.



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