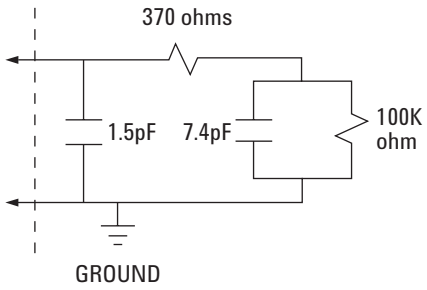
Specifications and Characteristics

Agilent Technologies
1680 and 1690 series



Equivalent Probe Load for the 01650-61608 General-Purpose Lead Set.

Channels	136, 102, 68, 34
State Analysis	
State speed	200 MHz
State memory depth	Standard: 256K Deep: 1M
Minimum state clock pulse width	1.2ns
Time tag resolution	4ns or +/-0.1%, whichever is greater
Maximum time count between states	17 seconds
State clock/qualifiers	4 (2 on 34 channel models)
Minimum master-to-master clock time	5.0 ns
Minimum master-to-slave clock time	2.0 ns
Minimum slave-to-master clock time	5.0 ns
Setup/hold time (Single clock, single edge)	2.5 ns window adjustable from 4.5/-2 ns to -2.0/4.5 ns in 100 ps increments per channel
Setup/hold time (Multiple clock, multi edge)	3.0 ns window adjustable from 5.0/-2 ns to -1.5/4.5 ns in 100 ps increments per channel
Timing Analysis	
Timing speed	400/800 MHz (full/half channel)
Timing memory depth	Standard: 512K/1M (full/half channel) Deep: 2M/4M (full/half channel)
Sample period, full channels	2.5 ns to 1 ms
Sample period, half channels	1.25 ns
Sample period accuracy	+/-(0.01% of Sample period +/- 100 ps)
Channel-to-channel skew	<1.5ns typical
Time interval accuracy	+/-(Sample period accuracy + channel-to-channel skew +0.01% of reading)
Triggering	
Sequencer speed	200 MHz
Maximum occurrence counter	16,777,215
Range width	32 bits
Timer value range	100 ns to 5497 seconds
Timer resolution	5 ns
Timer accuracy	10 ns +/-0.01% of setting
Trigger resources	16 patterns 15 ranges
Timers	3 (136 channels) 2 (102 channels) 1 (68 channels) 0 (34 channels)
Occurrence counters	1 per sequence level
Trigger sequence levels	16
Trigger in arms logic analyzer	15 ns typical delay
Trigger to Trigger out	150 ns typical delay
Probes	
Input resistance	100 K Ohms +/- 2%
Parasitic tip capacitance	1.5 pf
Maximum input voltage	+/- 40V peak
Minimum voltage swing	500 mV p-p
Threshold range	-6V to + 6V in 10 mV increments
Threshold accuracy	+/-(65mV + 1.5% of setting)