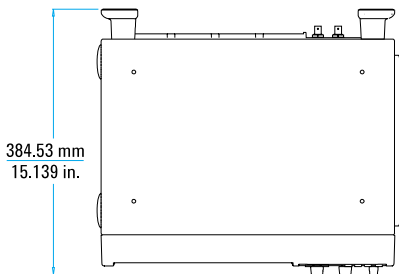# Specifications, Characteristics, and Probe Compatibility
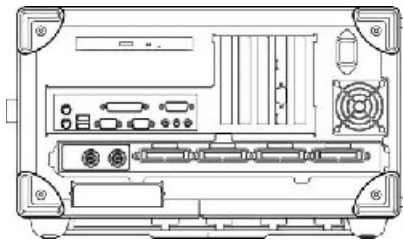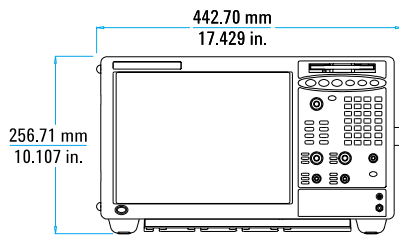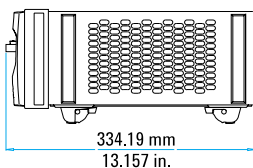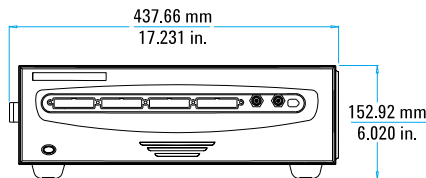
Channels	136, 102, 68, 34
State Analysis	
State speed	200 MHz
State memory depth	Standard ('A' Series): 256 K Deep ('AD' Series): 1 M
Minimum state clock pulse width	1.2 ns
Time tag resolution	4 ns or ± 0.1%, whichever is greater
Maximum time count between states	17 seconds
State clock/qualifiers	4 (2 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	800/400 MHz (half/full channel)
Timing memory depth	Standard ('A' Series): 1 M/512 K (half/full channel) Deep 'AD' Series: 4 M/2 M (half/full 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	< 1.5 ns 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
Probe Compatibility **(Probes ordered separately)**	
E5383A E5346A E5394A E5385A E5339A E5351A	17-channel flying lead probe 34-channel Mictor probe 34-channel soft touch connectorless probe 34-channel Samtec probe 34-channel low voltage Mictor probe 34-channel unterminated Mictor probe

442.70 mm
17.429 in.

256.71 mm
10.107 in.

384.53 mm
15.139 in.

1680 Series dimensions

437.66 mm
17.231 in.

152.92 mm
6.020 in.

334.19 mm
13.157 in.

1690 Series dimensions