



SPECIFICATION

This instrument will meet the electrical characteristics listed under Performance Requirement in Table 2-1, following complete calibration. The following electrical characteristics apply over an ambient temperature range of 0°C to +50°C, except as otherwise indicated. Warm-up time for given accuracy is 20 minutes.

Table 2-1
ELECTRICAL CHARACTERISTICS

Characteristic	Performance Requirement		Supplemental Information
MAIN TRIGGERING			
Trigger Sensitivity	Triggering Frequency Range	Minimum Triggering Signal Required	
Operating in AUTO, NORM, or SINGLE SWEEP MODE		INT ² (div)	EXT ³ (mV)
COUPLING			
AC	30 Hz to 20 MHz 20 MHz to 500 MHz	0.5 1.0	100 500
AC LF REJ ¹	30 kHz to 20 MHz 20 MHz to 500 MHz	0.5 1.0	100 500
AC HF REJ	30 Hz to 50 kHz	0.5	100
DC	Dc to 20 MHz 20 MHz to 500 MHz	0.5 1.0	100 500
Operating in HF SYNC MODE			
AC AC LF REJ DC	100 MHz to 500 MHz	0.5	100
AC HF REJ	Not recommended for HF SYNC MODE		
External Trigger Input			
Level Range			
EXT	At least + and -3.5 volts		Not applicable in HF SYNC MAIN TRIGGERING MODE
EXT ÷ 10	At least + and -35 volts		
Maximum Safe Input			
1 MΩ Input			250 V (dc + peak ac)
50 Ω Input			1 W average (7 V rms)
Input R and C			
1 MΩ Input			Approximately 1 MΩ paralleled by approximately 20 pF

Table 2-1 (cont)

Characteristic	Performance Requirement		Supplemental Information
50 Ω Input			
Resistance			50 Ω within 7%
Reflection Coefficient (Time Domain)			0.1 p-p (using 1 GHz Reflectometer)
Trigger Jitter			
Internal or External	50 ps or less at 500 MHz		
Delayed Triggering			
Trigger Sensitivity	Triggering Frequency Range	Minimum Triggering Signal Required	
		INT ⁴ (div)	EXT (mV)
COUPLING			
AC	30 Hz to 20 MHz	0.5	100
	20 MHz to 500 MHz	1.0	500
DC	Dc to 20 MHz	0.5	100
	20 MHz to 500 MHz	1.0	500
Trigger Jitter			
Internal or External	50 ps or less at 500 MHz		
External Trigger Input			
Level Range			
EXT	At least +3.5 V to -3.5 V		
Maximum Safe Input			
1 MΩ Input			250 V (dc + peak ac)
50 Ω Input			1 W average (7 V rms)
Input R and C			
1 MΩ Input			Approximately 1 MΩ paralleled by approximately 20 pF
50 Ω Input			
Resistance			50 Ω within 7%
Reflection Coefficient (Time Domain)			0.1 p-p (using 1 GHz Reflectometer)
Normal, Alternate (Delayed Sweep Trace) and Delayed Sweep			
Sweep Rates	0.2 s/div to 0.5 ns/div in 27 calibrated steps		Selected by TIME/D V OR DELAY TIME switch. Steps in a 1-2-5 sequence

Table 2-1 (cont)

Characteristic	Performance Requirement		Supplemental Information
Sweep Accuracy	Measured in 7900-Series Oscilloscope		
Over Center 8 Div	+15°C to +35°C	0°C to +50°C	
.2 s/Div to 20 ns/Div	Within 2%	Within 3%	
10 ns/Div to 5 ns/Div	Within 3%	Within 4%	
2 ns/Div to 1 ns/Div	Within 4%	Within 5%	
.5 ns/Div	Within 5%	Within 6%	
Over Any 2 Div Portion Within Center 8 Div			
.2 s/Div to 10 ns/Div	Within 5%	Within 5%	
5 ns/Div to .5 ns/Div	Within 10%	Within 10%	
Variable Sweep Rate	Continuously variable between calibrated sweep rates		Extends sweep rate to at least 0.5 s. VARIABLE control internally switchable between Delaying and Delayed Sweeps. Variable range at least 2.5:1
Intensified Sweep (Delaying Sweep Trace of Alternate Display)			Selected by TIME/DIV OR DLY TIME switch. Steps in a 1-2-5 sequence
Sweep Rates	0.2 s/div to 10 ns/div in 23 calibrated steps		
Sweep Accuracy	Measured in 7900-Series Oscilloscope		
Over Center 8 Div	+15°C to +35°C	0°C to +50°C	
.2 s Div to 20 ns/Div	Within 2%	Within 3%	
10 ns/Div	Within 3%	Within 4%	
Over Any 2 Div Portion Within 8 Div	Within 5%	Within 5%	
Variable Sweep Rate	Continuously variable between calibrated sweep rates		Extends sweep rate to at least 0.5 s. Variable control internally switchable between Delaying and Delayed Sweeps
Trace Separation	Intensified sweep can be positioned at least 3.5 div above the delayed sweep		
ALT OFF	Intensified sweep of the delaying sweep is displayed when the TIME/DIV OR DELAY TIME switch is pulled out and rotated clockwise, and the TRACE SEP control is in ALT OFF position		Allow Intensified mode of operation
Variable Time Delay			
Delay Time Range			
DLY TIME/DIV Settings			
.2 s/Div to 10 ns/Div	0 to 9.8 times the DLY TIME switch setting (0 to 1.96 s)		

Table 2-1 (cont)

Characteristic	Performance Requirement	Supplemental Information
Differential Delay Time Measurement Accuracy		
+15°C to +35°C		
.2 s/Div to .1 μs/Div		
Both DELAY TIME MULT dial settings at 0.50 or greater	Within 0.75% of measurement +0.25% of full scale	Full scale is 10 times the TIME/DIV OR DLY TIME setting
One or both DELAY TIME MULT dial settings less than 0.50	Within 0.75% of measurement +0.5% of full scale +5 ns	
50 ns/Div to 10 ns/Div		
Both delay times equal to or greater than 25 ns	Within 1.0% of measurement +0.5% of full scale	
One or both delay times less than 25 ns	Within 1.0% of measurement +1.0% of full scale +5 ns	
Delay Time Jitter		Jitter specification does not apply to the first 2% of the maximum available delay time (DELAY TIME MULT dial setting less than .20)
0.2 s/Div to 50 μs/Div	1 part or less in 50,000 of the maximum available delay time (10 times the TIME/DIV OR DLY TIME switch setting)	
20 μs/Div to 10 ns/Div	1 part or less in 50,000 of the maximum available delay time (10 times the TIME/DIV OR DLY TIME switch setting +0.5 ns)	

¹Will not trigger on the sine waves of 8 div amplitude or less (internal), or 3 V or less (external) at 60 Hz or below.

²For Internal Triggering only, the specified -3 dB frequency of the Vertical System replaces any frequencies in the above table when the number in the table is greater than the -3 dB frequency of the Vertical System.

³Triggering signal amplitude requirements increased by factor of 10 for EXT × 10 operation.

⁴The specified -3 dB frequency of the Vertical System replaces any frequencies in the above table when the number in the table is greater than the -3 dB frequency of the Vertical System.

Table 2-2

ENVIRONMENTAL

Refer to the Specification for the associated oscilloscope.

Table 2-3

PHYSICAL

Net Weight	3.062 lbs (1.372 kg)
Dimensions	See Fig. 2-1, Dimensional Drawing

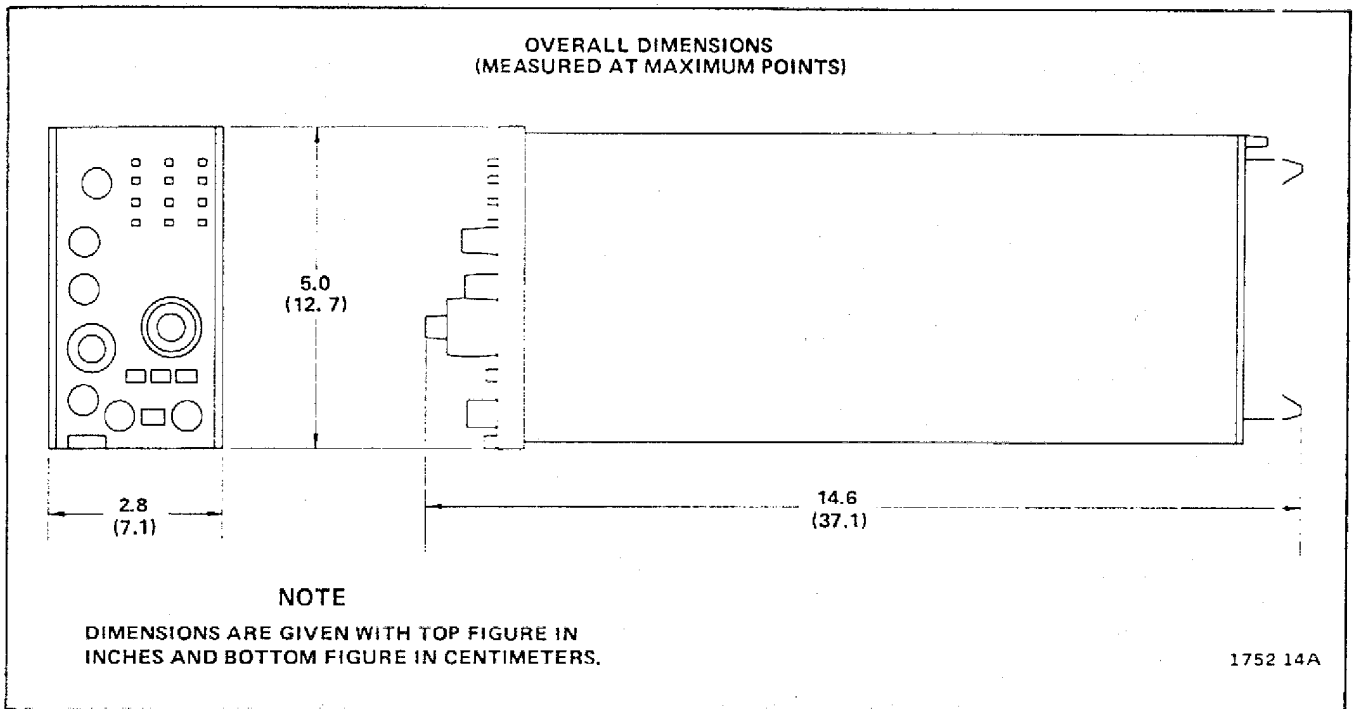


Fig. 2-1. Dimensional drawing.