

## 7000 SERIES VERTICAL AMPLIFIER SPECIFICATIONS

Mainframes	Features	7A29	7A19	7A24	7A26	7A18A	7A13	7A22
		Widest bandwidth, single trace	High bandwidth, 50 Ω input	Dual trace, 50 Ω	Dual trace	Dual trace	Differential dc offset, 20,000:1 CMRR	DC coupled, differential, high-gain
	Deflection Factor (min)	10 mV/div	10 mV/div	5 mV/div	5 mV/div	5 mV/div	1 mV/div	10 μV/div
	Accuracy <sup>1</sup>	2%	2%	2%	2%	2%	1.5%	3%
<b>7104</b> (0 to 35°C)	Bandwidth	1 GHz	600 MHz	400 MHz	200 MHz	100 MHz	105 MHz	1 MHz ±10%
	Rise Time <sup>3</sup>	0.35 ns	0.6 ns	0.9 ns	1.8 ns	3.5 ns	3.4 ns	350 ns ±9%
<b>7904A or 7934</b> (0 to 30°C)	Bandwidth	500 MHz	500 MHz	350 MHz	200 MHz	100 MHz	105 MHz	1 MHz ±10%
	Rise Time <sup>3</sup>	0.7 ns <sup>2</sup>	0.8 ns	1.0 ns	1.8 ns	3.5 ns	3.4 ns	350 ns ±9%
	SIG OUT	300 MHz	300 MHz	140 MHz	140 MHz	90 MHz	100 MHz	1 MHz ±10%
<b>R7844</b> (0 to 35°C)	Bandwidth	400 MHz	400 MHz	300 MHz	180 MHz	75 MHz	100 MHz	1 MHz ±10%
	Rise Time <sup>3</sup>	0.9 ns	0.9 ns	1.2 ns	1.9 ns	4.7 ns	3.5 ns	350 ns ±9%
<b>7800 Series</b> (0 to 50°C)	Bandwidth	100 MHz	100 MHz	100 MHz	100 MHz	75 MHz	75 MHz	1 MHz ±10%
	Rise Time <sup>3</sup>	3.5 ns	3.5 ns	3.5 ns	3.5 ns	4.7 ns	4.8 ns	350 ns ±9%
	SIG OUT	65 MHz	65 MHz	60 MHz	60 MHz	50 MHz	55 MHz	1 MHz ±10%

<sup>1</sup> Accuracy percentages apply to all deflection factors. Accuracy is without probes.

<sup>2</sup> R7903 with 7A29; rise time is 0.8 ns.

<sup>3</sup> Rise time is calculated from the bandwidth.

## 7000 SERIES TIME BASE SELECTION GUIDE

Performance Feature	7B15	7B92A	7B85	7B53A
Single-trace time base	yes	no	yes	no
Dual-trace time base	no	yes	no	yes
With mixed sweep	no	no	no	yes
TV Sync Triggering	no	no	no	yes (Opt. 05)
Can also use as delayed time base	yes	yes	yes	no
Delaying/ΔDelay sweep	yes	no	yes	no

## 7000 SERIES TIME BASE/MAINFRAME RECOMMENDATION

Mainframe	7B15	7B92A	7B85	7B53A
7104	yes	yes	no	no
7904A	yes	yes	yes	no
R7844	yes	yes	yes	no
7934	yes	yes	yes	no
7603/R7603	no	no	no	yes
7623B/R7623B	no	no	no	yes

## 7D20 INFORMATION

The 7D20 is a GPIB programmable plug-in compatible with all 7000 Series mainframes except the 7104. With a 7000 Series mainframe, it creates a fully programmable, digitizing oscilloscope.

The 7D20 offers signal averaging to reduce uncorrelated noise, envelope displays to compare dynamic characteristics of changing signals, pretrigger for viewing prior to the trigger event, storage of six independent waveforms plus a reference waveform, cursors for more accurate two-dot measurements, and user prompting menu displays to improve user-interface effectiveness.

A 40 MHz maximum sampling rate provides approximately 10 MHz single-shot bandwidth and up to 70 MHz repetitive signal bandwidth.

Since the 7D20 is completely programmable, fully automated measurement and testing is possible. Interactive test procedures, text messages, waveforms, and front-panel set-ups may be transmitted and received from the 7D20 to a controller or computer.

## ORDERING INFORMATION

**7A29 AMPLIFIER**  
**7A29** – 1 GHz Amplifier **\$3,990**  
 Includes:  
 Instruction Manual (070-2320-00).  
**Opt. 04** – Variable Delay Line **+\$800**

**7A19 AMPLIFIER**  
**7A19** – 600 MHz Amplifier **\$3,995**  
 Includes:  
 Instruction Manual (070-2129-00).  
**Opt. 04** – Variable Delay Line **+\$550**

**7A24 AMPLIFIER**  
**7A24** – 400 MHz Amplifier **\$3,550**  
 Includes:  
 Instruction Manual (070-1485-00).

**7A26 AMPLIFIER**  
**7A26** – 200 MHz Amplifier **\$3,450**  
 Includes:  
 Instruction Manual (070-1484-01).

**7A18A AMPLIFIER**  
**7A18A** – 100 MHz Amplifier **\$2,225**  
 Includes:  
 Instruction Manual (070-4329-00).  
**Opt. 06** – DC Offset **+\$275**  
**Isolator A8902B** – See page 328.

**7A13 AMPLIFIER**  
**7A13** Differential Comparator Amplifier **\$4,795**  
 Includes:  
 Instruction Manual (070-1948-00).  
**Isolator A8902B** – See page 328. **\$2,200**  
**P6135A** – See page 70. **\$695**

**7A22 AMPLIFIER**  
**7A22** Differential Amplifier **\$2,785**  
 Includes:  
 Instruction Manual (070-0931-00).  
**P6135A** – See pages 70. **\$695**

**7B15 TIME BASE**  
**7B15** ΔDelaying Time Base **\$3,775**  
 Includes:  
 Instruction Manual (070-2318-00).

**7B92A TIME BASE**  
**7B92A** Dual Time Base **\$5,100**  
 Includes:  
 Instruction Manual (070-1751-02).

**7B85 TIME BASE**  
**7B85** ΔDelaying Time Base **\$2,800**  
 Includes:  
 Instruction Manual (070-1961-01).

**7B53A TIME BASE**  
**7B53A** Dual Time Base **\$3,025**  
 Includes:  
 Instruction Manual (070-1342-01).  
**Opt. 05** – TV Triggering **+\$210**  
 Includes:  
 Instruction Manual (070-1471-00).

**7D20 PROGRAMMABLE DIGITIZER**  
**7D20** Programmable Digitizer **\$10,750**  
 Includes:  
 Operator Manual (070-3857-01),  
 Pocket Reference Guide (070-3205-01),  
 Service Manual (070-3858-01),  
 Instrument Interface Guide (070-1728-00).

**ACCESSORIES**  
 See page 70.