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*1	2%	2%	2%	2%	2%	1.5%	3%
7104 (0 to 35°C)	Bandwidth	1 GHz	600 MHz	400 MHz	200 MHz	100 MHz	105 MHz	1 MHz±10%
	Rise Time*3	0.35 ns	0.6 ns	0.9 ns	1.8 ns	3.5 ns	3.4 ns	350 ns±9%
7904A or 7934 (0 to 30°C)	Bandwidth	500 MHz	500 MHz	350 MHz	200 MHz	100 MHz	105 MHz	1 MHz±10%
	Rise Time*3	0.7 ns*2	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%
R7844 (0 to 35°C)	Bandwidth	400 MHz	400 MHz	300 MHz	180 MHz	75 MHz	100 MHz	1 MHz±10%
	Rise Time*3	0.9 ns	0.9 ns	1.2 ns	1.9 ns	4.7 ns	3.5 ns	350 ns±9%
7600 Series (0 to 50°C)	Bandwidth	100 MHz	100 MHz	100 MHz	100 MHz	75 MHz	75 MHz	1 MHz±10%
	Rise Time*3	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%

*1 *Accuracy percentages apply to all deflection factors. Accuracy is without probes.*
*2 *R7903 with 7A29; rise time is 0.8 ns.*
*3 *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 **+$600**

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 A6902B – See page 328.

7A13 AMPLIFIER
7A13 Differential Comparator Amplifier **$4,795**
Includes:
Instruction Manual (070-1948-00).
Isolator A6902B – 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.

7000 SERIES PROBE SELECTION GUIDE

All bandwidths given in MHz*1

		Passive 1 MΩ Input Probes				Low-Z, 50 Ω Input Probes		Active 50 Ω / 1 MΩ Input Probes			Differential Probes		High-Voltage Probes	
	Plug-in	P6062B*2 (6 ft.)	P6101A, Opt. 01 (1 m)	P6105A (2 m)	P6130, Opt. 01 (1.5 m) P6106A, Opt. 01 (1 m)	P6156, 10X (1.5 m)	P6156, Opt. 25, 100X (1.5 m)	P6201*3 (6 ft.)	P6202A*3 (2 m)	P6230*3 (1.5 m)	P6046 (6 ft.)	P6135A	P6009 (9 ft.)	P6015 (10 ft.)
7100 Family	7A13	—	34	75	105	NC	NC	105	105	105	70	90	85	—
	7A19	NC	NC	NC	NC	550	550	430	300	480	100	NC	NC	NC
	7A24	NC	NC	NC	NC	375	375	310	300	350	100	NC	NC	NC
	7A26	—	34	100	175	NC	NC	195	185	200	90	—	125	75
	7A29	NC	NC	NC	NC	950	925	660	450	800	100	NC	NC	NC
7900 Family	7A13	—	34	75	105	NC	NC	105	105	105	70	90	85	—
	7A18A	75	34	75	75	NC	NC	75	75	75	60	—	70	60
	7A19	NC	NC	NC	NC	500	500	430	300	480	95	NC	NC	NC
	7A22	1	1	NC	NC	NC	NC	—	—	—	—	1	—	—
	7A24	NC	NC	NC	NC	350	350	310	290	350	90	NC	NC	NC
	7A26	—	34	100	175	NC	NC	185	185	190	85	—	125	75
	7A29	NC	NC	NC	NC	500	500	450	350	500	700	—	NC	NC
7800 Family	7A13	—	34	100	100	NC	NC	100	100	100	70	90	85	60
	7A18A	85	34	85	85	NC	NC	90	75	90	65	—	80	60
	7A19	NC	NC	NC	NC	400	400	360	320	400	95	NC	NC	NC
	7A22	1	1	1	NC	NC	NC	—	—	—	—	1	1	1
	7A24	NC	NC	NC	NC	300	300	280	270	300	90	NC	NC	NC
	7A26	—	34	100	145	NC	NC	155	150	180	85	—	105	75
	7A29	NC	NC	NC	NC	400	400	400	350	400	100	—	NC	NC
7600 Family	7A13	70	34	70	75	NC	NC	75	75	75	55	65	65	55
	7A18A	70	34	70	70	NC	NC	75	75	75	55	—	65	55
	7A22	1	1	1	NC	NC	NC	—	—	—	—	1	—	—
	7A26	95	34	95	95	NC	NC	100	100	100	70	—	85	65

*1 *The values in the top table represent the approximate useful frequency response for the measurement systems at the probe tip. NC = Not Compatible.*

If there is no bandwidth specified, the probe/plug-in combination is compatible but not recommended.

*2 *Bandwidths given for 10X switch position.*

*3 *Requires 1101/1101A Power Supply or other external source of power when used with 7603.*

7000 SERIES CAMERA SELECTION GUIDE

Mainframe	Camera/Features DCS01*1 Digitizing	C-53 General Purpose	C-9 Low Cost
7104	yes	yes	yes
7934	N.R.	yes	yes
7904A	yes	yes	yes
R7844	N.R.	yes	yes
7623B/R7623B	N.R.	yes	yes
7603/R7603	N.R.	no	yes

*1 *N.R. = Not Recommended*