

## Alltest Instruments, Inc.

500 Central Ave. Farmingdale, NJ 07727

P: (732) 919-3339 F: (732) 919-3332

alltest.net sales@alltest.net

# The test & measurement equipment you need at the price you want.

Alltest carries the world's largest selection of used/refurbished benchtop test & measurement equipment at 50% the price of new.

Our equipment is guaranteed working, warrantied, and available with certified calibration from our in-house staff of technicians and engineers.

- 10+ full time technicians with over 150 years of specialization
- 90 day warranty & 5 day right of return on all equipment
- 1-3 year warranties for new and premium-refurbished equipment
- Every unit tested to OEM specifications
- Satisfaction guaranteed

You have plans, we will help you achieve them. *Any project. Any budget.* 

## Get a quote today!

Call (732) 919-3339 or email sales@alltest.net.

## **Spectrum Analyzers**

## Portable, Rugged with Accessible Performance

2794 2797 2792 2795

TRICTINGS

#### New 2790 Series

The new Tektronix 2790 Series Spectrum Analyzers are proud successors to the venerable Tektronix 490 Series which has proven itself in years of reliable, rugged service around the world. All units provide full IEEE-488 (GPIB) programmability, which means you can change front-panel settings, read data from the CRT display, and send waveforms from internal digital source memory to other GPIB devices. Frequency ranges of the instruments are as follows:

10 kHz to 325 GHz: 2794 10 kHz to 26.5 GHz: 2792 100 Hz to 7.1 GHz: 2797 100 Hz to 1.8 GHz: 2795

Built to rugged MIL-T-28800C environmental specifications, these units can withstand transportation shock and vibration to a remote site. Or they can simply be moved from the engineering lab to the production floor with complete confidence in measurement accuracy.

A wide array of price/performance alternatives are available. If you need 10 Hz resolution for an exacting close-in spectral purity measurement, consider the 2794. For more routine uses, such as microwave transmitter maintenance, the 2792 may be the most cost-effective solution.

#### A WIDE ARRAY OF INTELLIGENT FEATURES

Downloadable programming (macro) capability lets you execute your frequently-used measurement routines from the Spectrum Analyzer's nonvolatile memory. In addition, these Spectrum Analyzers can store up to 10 complete front-panel measurement parameter setups in nonvolatile memory to save you measurement time. You can also save up to 9 waveform displays, a real benefit when data analysis must be delayed.

Tedious, time-consuming, and often incorrect carrier-to-noise ratio calculations are eliminated; the instrument handles it all with a single keystroke, with automatic noise normalization to 1 Hz and automatic conversion for reference units such as dBm, dBmV, dBV, dBµV, and dB/Hz.

An internal high-stability reference provides marker or center frequency accuracy approaching 10-9/day in the 2794. For added confidence in measurements, a built-in microwave signal counter in the 2794 with 134 dB compression-to-noise dynamic range means you can determine the exact frequency of marked signals only 30 Hz apart – or count the exact delta-frequency between two marked signals – even with greatly differing amplitudes. You also have the flexibility of tying in with a system clock, using the external reference lock capacity.

A permanent record of CRT displays can be obtained at the push of a button, without a controller, using the direct plot capability and a GPIB plotter such as the Tektronix HC100.

Menu-selected dynamic markers automatically update frequency and amplitude data with every sweep. Unprecedented signal processing power results when you use these markers in conjunction with the built-in intelligence. With PULSE Mode, you can mark the peak of a main lobe and peaks of side lobes at the push of a button. The CW Mode locates signals that exhibit CW characteristics and ignores all other signals. The SPUR Mode marks all signals that meet user-defined or automatic threshold criteria. User-definable threshold criteria are available for all signal processing modes.

### 2794/2792/ 2797/2795

- 100 Hz to 325 GHz Frequency Coverage
- Continuous-Resolution Frequency Tuning
- Up to 90 dB Viewable Dynamic Range
- Built-in Frequency Counters Provide Frequency Determination to within 0.0000001% (1x10-9/day ref.)
- Sensitivities to –134 dBm
- Built-in Intelligence for Signal Processing/Marker Functions
- Push Button Occupied-Bandwidth/Noise-Normalization Functions
- Macro Capability with Nonvolatile Memory
- Optional Switch-Selectable 50/75  $\Omega$ Impedances
- Nonvolatile Memory for up to Nine Waveforms and Ten Front Panel Settings
- GPIB Programmability with Tektronix Codes and Formats

## **APPLICATIONS**

- Manufacturing ATE
- Avionics
- Broadcasting
- CATV
- · Cellular Radio
- Design and Engineering
- Nuclear Physics
- · Radio Astronomy
- Satellite Communications
- Terrestrial Microwave
- · Two-Way Radio

Accessible performance at your fingertips.

To order, contact your local sales office (listed on the inside back cover) or call the National Marketing Center at 1-800-426-2200, Ext. 99.

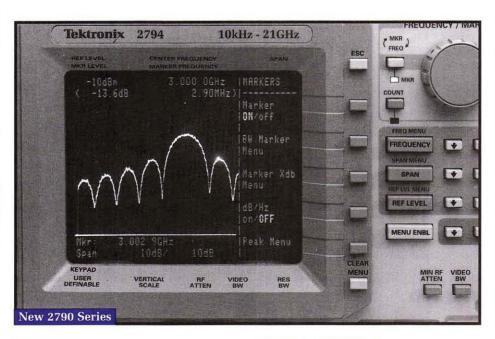


The 2790 Series complies with IEEE Standard 488.1-1987, and with Tektronix Standard Codes and Formats.

2797 2795

# **Spectrum Analyzers**

## Portable, Rugged with Accessible Performance



### **MENU POWER**

The 2790 Series is primarily menu-driven. Pressing one of the four front-panel menu keys brings up a selection menu on the right portion of the display. Each menu selection is assigned to a bezel-mounted selection key; simply press the associated key to make a menu selection. When numeric data is required, it can be entered using the keypad. When menu selection is complete, the menu area is used by the waveform to provide a full-screen display.

Some of the common functions are performed by dedicated function keys or knobs. For example, the FREQUENCY/MARKERS knob provides frequency or marker tuning; the function is shifted between marker or frequency by alternately pressing MKR <-> FREQ.

A unique and powerful feature is the USER DEFINABLE knob which can be assigned to many of the front-panel functions; Span, Reference Level, Resolution Bandwidth, Sweep Speed, Minimum RF Attenuation, plus other functions. This allows you to customize the front panel for measurement convenience.

### **OPERATOR CONVENIENCE**

These instruments also offer operator convenience for measuring the bandwidth of filters, amplifiers, and other networks. Just enter the desired bandwidth point and select BAND-WIDTH Mode, and the markers automatically update to display the new value.

Dedicated direct keypad data entry of major measurement parameters enables fast, accurate instrument setup. The unique marker keypad allows Right and Left Next, Next Higher and Lower, Marker to Ref. Level, and Peak Find and Center operations to be executed directly from the front panel. This makes signal searches much easier.

Optional switch-selectable 50  $\Omega$  and 75  $\Omega$  impedances add versatility. For applications such as baseband and CATV, 75  $\Omega$ /dBmV greatly simplifies spectrum analysis.

### PRICE/PERFORMANCE SELECTION

The performance leader is the 2794, which offers frequency coverage from 10 kHz to 21 GHz with its internal mixer, and to 325 GHz with external mixers such as the Tektronix WM780 Series (each WM780 Series mixer is individually calibrated). Signal sensitivity is an impressive –134 dBm. The 2794 is optimized for use in baseband through millimeter-wave measurements, where the ability to identify and process signal frequencies and amplitudes over wide dynamic ranges with high accuracy is critical. The 2794 offers full high-resolution and frequency coverage for RF/Microwave component design and test.

The 2792 covers the same coaxial frequency range as the 2794, and provides nearly the same set of outstanding features and state-of-the-art specifications. It is designed as a cost-effective and productive solution to engineering needs. The 2792's frequency range of 10 kHz to 21 GHz is ideal for cost-sensitive applications that still require most of the powerful features of the product family, but can get by with slightly-reduced performance specifications. The 2792 is also ideal for personal communications network testing to 26.5 GHz.

The 2795 features the same functionality and high level of performance as the 2794, but over a frequency range of 100 Hz to 1.8 GHz. It is optimized for stand-alone or automated operation in baseband through UHF measurements, where the ability to identify and process weak signals is critical. The 2795 and TR503 Tracking Generator form a swept frequency system for passive and active component design and test.

The 2797 provides the same cost-effective performance as the 2794, but over a frequency range of 100 Hz to 7.1 GHz. The 2797 is well suited for land, sea, and air mobile communications system design and testing.

## REMOTE OPERATION AND COMPLETE SPECTRUM ANALYSIS PACKAGES

Full GPIB-programmability lets you automate your spectrum analysis system needs. Programming is simplified and measurement repeatability ensured. Under program control you can operate the instrument, change front panel settings, read data from the CRT display, and send waveforms from internal memory to other GPIB devices. Tektronix's Standard Codes and Formats keeps commands clear, consistent, and universally understood.

Tektronix spectrum analyzer software lets you use the 2790 Series Spectrum Analyzers as system components, controlling them with popular instrument controllers such as the PC compatibles. Coupling the computer to the Spectrum Analyzer via the IEEE 488 bus lets you take advantage of the PC's capability, as well as the power and versatility of the Spectrum Analyzer.

Tektronix' General RF Applications Software Package (GRASP) offers many different applications and utility routines, which are selected through easy menu-driven operation. Also, EMI software is available for FCC, VDE, CISPR, and MIL-STD testing.

# Spectrum Analyzers Portable, Rugged with Accessible Performance

2794	2797	
2792	2795	

## Characteristics

	2794	2792	2797	2795
Frequency - Related				
Frequency Range with Internal Mixers	10 kHz to 21 GHz	10 kHz to 21 GHz	100 Hz to 7.1 GHz	100 Hz to 1.8 GHz
Frequency Range with External Mixers	10 kHz to 325 GHz	26.5 GHz (Opt. 04)	NA	NA
Frequency Readout Accuracy (center or marker), ±[2% span + (CF x Ref) + (2N + 25) Hz]	±20 kHz @ 1 GHz with 1 MHz span	±30 kHz @ 1 GHz with 1 MHz span	±21 kHz @ 1 GHz with 1 MHz span	±20 kHz @ 1 GHz with 1 MHz span
Frequency Counter Accuracy, ±((CF x Ref) + (5 + N) Hz + 1 LSD]	±7 Hz @ 1 GHz	±10.013 kHz @ 1 GHz, ±9 Hz @ 1 GHz (Opt. 03)	±1 kHz @ 1 GHz, ±7 Hz @ 1 GHz (Opt. 02)	±7 Hz @ 1 GHz
Delta Count Accuracy, ±[(D-F x Ref) + (10 + 2N) + 1 LSD]	±13 Hz for 1 MHz ∆F	±65 Hz for 1 MHz ∆F	±14 Hz for 1 MHz ΔF	±13 Hz for 1 MHz ∆F
Frequency Reference Accuracy	≤1x10 <sup>-9</sup> /day (aging)	≤2x10 <sup>-9</sup> /day (aging) Opt. 0	$3 \le 1 \times 10^{-9} / \text{day (aging) Opt. 02}$	≤1x10 <sup>-9</sup> /day (aging)
Frequency Stability (residual FM)	≤3 Hz @ 1 GHz	≤12 Hz @ 1 GHz	≤3 Hz @ 1 GHz	≤3 Hz @ 1 GHz
Frequency Stability (drift)	<50 Hz/minute	<50 Hz/minute	<50 Hz/minute	<50 Hz/minute
Single Sideband Phase Noise (30 kHz offset and N=1)	-105 dBc/Hz @ 1 GHz	–103 dBc/Hz @ 1 GHz	–105 dBc/Hz @ 1 GHz	–105 dBc/Hz @ 1 GHz
Frequency Span Range (plus 0 Hz and MAX)	100 Hz-150 GHz	2 kHz-12 GHz	100 Hz-4 GHz	100 Hz-1.7 GHz
Frequency Span Accuracy	±5%	±5%	±5%	±5%
Delta Frequency Accuracy Marker Mode	1% of span	1% of span	1% of span	1% of span
Resolution Bandwidth (6 dB) Range	10 Hz to 3 MHz	1 kHz to 3 MHz	10 Hz to 3 MHz	10 Hz to 3 MHz
Resolution Bandwidth Selectivity (–60 dB/–6 dB)	≤7.5:1 except 15:1 @ 10 Hz	≤7.5:1	≤7.5:1 except 15:1 @ 10 Hz	≤7.5:1 except 15:1 @ 10 Hz
Video Bandwidth Range	0.3 Hz to 30 kHz	3 Hz to 30 kHz	0.3 Hz to 30 kHz	0.3 Hz to 30 kHz
Amplitude - Related				***************************************
Reference Level Range	-117 to +30 dBm	-117 to +30 dBm	-117 to +30 dBm	-117 to +30 dBm
Maximum Safe Input Power, CW	1 Watt (+30 dBm)	1 Watt (+30 dBm)	1 Watt (+30 dBm)	1 Watt (+30 dBm)
Maximum Safe Input Power, Pulse	75 W Pk (1 µS pulse, 0.1% duty factor)	75 W Pk (1 µS pulse, 0.1% duty factor)	75 W Pk (1 μS pulse, 0.1% duty factor)	75 W Pk (1 µS pulse) 0.1% duty factor)
CRT Display Range, Log	1 to 15 dB/div	1 to 15 dB/div	1 to 15 dB/div	1 to 15 dB/div
CRT Display Range, Linear	39.6 nV/div to 2.8 V/div	39.6 nV/div to 2.8 V/div	39.6 nV/div to 2.8 V/div	39.6 nV/div to 2.8 V/div
Input Attenuator Range	0 to 60 dB in 10 dB steps	0 to 60 dB in 10 dB steps	0 to 60 dB in 10 dB steps	0 to 60 dB in 10 dB steps
Dynamic Range (maximums): Compression to noise Signal to distortion harmonic Signal to distortion intermod Viewable on CRT screen	134 dB 77 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz 93 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz 90 dB	110 dB 65 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz 76 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz 80 dB	130 dB 75 dB to 1.7 GHz ≥100 dB 1.7 to 21 GHz 90 dB to 1.7 GHz ≥100 dB 1.7 to 7.1 GHz 90 dB	130 dB 75 dB 90 dB 90 dB
Residual Response (no signal and zero RF attenuation)	-100 dBm (input terminated)	-95 dBm (input terminated)	-100 dBm (input terminated)	-100 dBm (input terminated)
Second Harmonic Distortion, RF Frequency Range	-60 dBc (mixer level -40 dBm)	-60 dBc (mixer level -40 dBm)	-60 dBc (mixer level -40 dBm)	-60 dBc (mixer level -30 dBm)
Second Harmonic Distortion Microwave Frequency Range	–100 dBc (mixer level –20 dBm)	–100 dBc (mixer level –20 dBm)	-100 dBc (mixer level -20 dBm)	NA
Third Order Intermodulation Distortion	-70 dBc (mixer level -27 dBm)	-70 dBc (mixer level -27 dBm)	-70 dBc (mixer level -27 dBm)	-70 dBc (mixer level -27 dBm)
Calibrator Accuracy	±0.3 dB	±0.3 dB	±0.3 dB	±0.3 dB
Gain Compression (1 dB)	0 dBm	0 dBm	0 dBm	0 dBm
Frequency Response (10 dB RF attenuation referred to cal signal):  Band 1 (10 kHz to 1.8 GHz)  Band 2 (1.7 GHz to 5.5 GHz)  Band 3 (3.0 GHz to 7.1 GHz)  Band 4 (5.4 GHz to 18 GHz)  Band 5 (15 GHz to 21 GHz)	±2.5 dB ±3.5 dB ±3.5 dB ±4.5 dB ±6.5 dB	±3.0 dB ±4.0 dB ±4.0 dB ±5.0 dB ±7.0 dB	±2.5 dB ±3.5 dB ±3.5 dB NA NA	±2.0 dB (100 Hz to 1.8 GHz) NA NA NA NA NA
In-band Flatness (with 10 dB RF attenuation):  Band 1 (10 kHz to 1.8 MHz)  Band 2 (1.7 GHz to 5.5 GHz)  Band 3 (3.0 GHz to 7.1 GHz)  Band 4 (5.4 GHz to 18 GHz)  Band 5 (15 GHz to 21 GHz)	±1.5 dB ±2.5 dB ±2.5 dB ±3.5 dB ±5.0 dB	±2.0 dB ±3.0 dB ±3.0 dB ±4.0 dB ±5.5 dB		±1.0 dB (100 Hz to 1.8 GHz)  NA  NA  NA  NA  NA

2797 2795

# Spectrum Analyzers Portable, Rugged with Accessible Performance

	2794	2792	2797	2795
Displayed Average Noise Level (input terminated,				
narrowest resolution bandwidth, and video filter):	00 dDm (tunical)	NA	75 dBm (hunical)	75 dDm /tunical)
Band 1 (100 Hz) Band 1 (1 kHz to 10 kHz)	-80 dBm (typical) -90 dBm (typical)	NA -60 dBm (typical)	-75 dBm (typical) -95 dBm	-75 dBm (typical) -95 dBm
Band 1 (1 kHz to 10 kHz)	-90 dBill (typical) -95 dBm	-70 dBm	-115 dBm	-100 dBm
Band 1 (100 kHz to 1 MHz)	-115 dBm	-90 dBm	-120 dBm	-115 dBm
Band 1 (1 MHz to 1.8 GHz)	-134 dBm	-110 dBm	-130 dBm	-131 dBm
Band 2 (1.7 GHz to 5.5 GHz)	-125 dBm	-108 dBm	-127 dBm	NA
Band 3 (3.0 GHz to 7.1 GHz)	-125 dBm	-108 dBm	-126 dBm	NA
Band 4 (5.4 to 12 GHz/12 to 18 GHz)	-111/-107 dBm	-94 / -89 dBm	NA	NA
Band 5 (15 GHz to 21 GHz)	-106 dBm	-88 dBm	NA	NA
IF Gain Uncertainty	±2 dB max over	±2 dB max over	±2 dB max over	±2 dB max over
	107 dB range	107 dB range	107 dB range	107 dB range
Scale Fidelity, Log	±2 dB max/	±2 dB max	±2 dB max/ ±4 dB max	±2 dB max/
(80 dB range/90 dB range)	±4 dB max	LEO/ of full people		±4 dB max
Scale Fidelity, Linear	±5% of full scale	±5% of full scale	±5% of full scale	±5% of full scale
Input Attenuator Switching Accuracy				
(20 dB to 60 dB settings): 0 to 1.8 GHz	±0.5 dB/10 dB:	±0.5 dB/10 dB:	±0.5 dB/10 dB;	±0.5 dB/10 dB;
0 to 1.6 dHz	±1.0 dB max	±1.0 dB max	±1.0 dB max	±1.0 dB max
1.8 to 18 GHz	±1.5 dB/10 dB;	±1.5 dB/10 dB:	±1.5 dB/10 dB:	NA NA
1.0 10 10 01.2	±3.0 dB max	±3.0 dB max	±3.0 dB max (1.8to 7.1 GHz)	
18 to 21 GHz	±3.0 dB/10 dB;	±3.0 dB/10 dB;	ŇA	NA
	±6.0 dB max	±6.0 dB max		
Resolution Bandwidth Switching Uncertainty	±0.4 dB	±0.4 dB	±0.4 dB	±0.4 dB
(reference BW = 3 MHz)				
Time - Related				
Sweep Time Range	200 µsec/div to 100 sec/div	200 µsec/div to 100 sec/div	200 µsec/div to 100 sec/div	200 µsec/div to 100 sec/div
Sweep Time Accuracy	±5%	±5%	±5%	±5%
Marker Time Measurement Accuracy	±10%	±10%	±10%	±10%
Delta Marker Time Measurement Accuracy	±5%	±5%	±5%	±5%
Sweep Trigger	Free Run, Line,	Free Run, Line,	Free Run, Line,	Free Run, Line,
, ,	Video, Single, Ext	Video, Single, Ext	Video, Single, Ext	Video, Single, Ext
External Input				
RF Input Impedance	50 Ω nominal	50 $\Omega$ nominal	50 $\Omega$ nominal	$50 \Omega$ nominal
VSWR (10 dB input attenuation):	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
<2.5 GHz	1.3:1 max	1.3:1 max	1.3:1 max	1.3:1 max
2.5 GHz to 6.0 GHz	1.7:1 max	1.7:1 max	1.7:1 max	NA
6.0 GHz to 18 GHz	2.3:1 max	2.3:1 max	NA	NA
18 GHz to 21 GHz	3.5:1 max	3.5:1 max	NA TO ID	NA
Local Oscillator Emission Level (O dB input attenuation)	≤–70 dBm	≤–70 dBm	≤–70 dBm	≤–70 dBm
External Mixer Input	Approx 2 GHz IF	NA	NA	NA
External Reference Input	1, 2, 5, or 10 MHz	NA NA	1, 2, 5, or 10 MHz	1, 2, 5, or 10 MHz
Horizontal Input/Trigger Input	0 to +10 V/1 to 50 V	0 to +10 V/1 to 50 V	0 to +10 V/1 to 50 V	0 to +10 V/1 to 50 V
Video Input/Marker Input	0 to +4 V/0 to -10 V	0 to +4 V/0 to -10 V	0 to +4 V/0 to -10 V	0 to +4 V/0 to -10 V
External Output	0 t0 14 V/0 t0 -10 V	0 t0 74 V/0 t0 -10 V	0 to 74 V/0 to -10 V	0 to +4 v/0 to -10 v
	100 MHz +10 Hz	100 MHz 11 kHz	100 MHz 1100 Hz	100 MU= ±10 U=
Calibrator	100 MHz ±10 Hz, -20 dBm ±0.3 dB	100 MHz ±1 kHz, -20 dBm ±0.3 dB	100 MHz ±100 Hz, -20 dBm ±0.3 dB	100 MHz ±10 Hz, -20 dBm ±0.3 dB
1st Local Oscillator	2 to 6 GHz, +7.5 to +20 dBm	2 to 6 GHz, +7.5 to +20 dBm	2 to 6 GHz, +6 to +20 dBm	2 to 4 GHz, +6 to +20 dBm
2nd Local Oscillator	-12 dBm to +5 dBm	-12 dBm to +5 dBm	-12 dBm to +5 dBm	-10 dBm to +15 dBm
Video Output	0.5 V of signal	0.5 V of signal	0.5 V of signal	0.5 V of signal
(CRT center reference)	per div of video	per div of video	per div of video	per div of video
Sweep Output (CRT center reference)	0.5 V/div; ±2.5 V max	0.5 V/div; ±2.5 V max	0.5 V/div; ±2.5 V max	0.5 V/div; ±2.5 V max
Owech outhor (our content reference)				

Continued on next page.

## **Spectrum Analyzers**

## Portable, Rugged with Accessible Performance

2794	2797		
2792	2795		

External Output (continued)	2794	2792	2797	2795
2nd IF Output (Opt. 42)	110 MHz, 0 dBm; 3 dB BW is 4.5 MHz	110 MHz, 0 dBm; 3 dB BW is 4.5 MHz	110 MHz, 0 dBm; 3 dB BW is 4.5 MHz	110 MHz, 0 dBm; 3 dB BW is 4.5 MHz
3rd IF Output	10 MHz, -5 dBm			
Probe Power	+5 V, -15 V, +15 V; 100 mA max each	+5 V, -15 V, +15 V; 100 mA max each	+5 V, -15 V, +15 V; 100 mA max each	+5 V, −15 V, +15 V; 100 mA max each
General Specifications				
Power Requirements: Voltage Frequency Power	90-132/180-250 VAC 47-63 Hz 210 W max @ 115 VAC, 60 Hz	90-132/180-250 VAC 47-63 Hz 210 W max @ 115 VAC, 60 Hz	90-132/180-250 VAC 47-63 Hz 210 W max @ 115 VAC, 60 Hz	90-132/180-250 VA0 47-63 Hz 210 W max @ 115 VAC, 60 Hz
Weight (carrying), Nominal	22.2 kg (48 lbs)	21.3 kg (46 lbs)	20.83 kg (45 lbs)	19.44 kg (42 lbs)
Dimensions (without handle, feet, or cover), mm/inches	175 x 327 x 499/ 6.9 x 12.87 x 19.65	175 x 327 x 499/ 6.9 x 12.87 x 19.65	175 x 327 x 499/ 6.9 x 12.87 x 19.65	175 x 327 x 499/ 6.9 x 12.87 x 19.65
Digital Storage	1000 pts horizontal, 250 pts vertical	1000 pts horizontal, 250 pts vertical	1000 pts horizontal, 250 pts vertical	1000 pts horizontal 250 pts vertical
Digitizing Rate	9 μS	9 μS	9 μS	9 μS
Macro Programming	8K	8K	8K	8K
Nonvolatile Memory	9 waveforms, 10 control settings			
Environmental (Per Mil-T-28800C, Type III,Clas	s 3, Style C)			
Electromagnetic Compatibility (consult data sheet for compliance details)	MIL-STD-461B	MIL-STD-461B	MIL-STD-461B	MIL-STD-461B
Calibration Interval	1 Year	1 Year	1 Year	1 Year
EEE 488 (GPIB)				
Interface Functions	SH1, AH1, T5, L3, SR1, RL1, PP1, DC1, DT1, and C0	SH1, AH1, T5, L3, SR1, RL1, PP1, DC1, DT1, and C0	SH1, AH1, T5, L3, SR1, RL1, PP1, DC1, DT1, and C0	SH1, AH1, T5, L3, SR1, RL1, PP1, DC1, DT1, and CO
Direct Plotter Output	Supports Tek HC100, HP7470A	Supports Tek HC100, HP7470A	Supports Tek HC100, HP7470A	Supports Tek HC100, HP7470A
Waveform Transfer Speed	165 msec/1000 pts	165 msec/1000 pts	165 msec/1000 pts	165 msec/1000 pts

#### ORDERING INFORMATION Opt. 10 - (2794) Frequency range extension to 26.5 GHz.....+\$2,000 \$32,450 Programmable Spectrum Analyzer ..... Opt. 11 - (2794) Frequency range extension to 40 GHz......+\$3,500 Includes: Operator's Manual; Programmer's Manual; 6-ft, Opt. 12 - (2794) Frequency range extension to 60 GHz ......+\$5,500 50 $\Omega$ coaxial cable, N-N (012-0114-00); 18-inch, 50 $\Omega$ Opt. 13 - (2794) Frequency range extension to 140 GHz....+\$10,500 coaxial cable, BNC-BNC (012-0076-00); N male to BNC female Opt. 14 - (2794) Frequency range extension to 325 GHz....+\$14,500 adapter (103-0045-00); rear connector shield (337-3274-00); power cord and spare fuses; CRT filter set consisting of amber Opt. 23 - GRASP software (S26RF00). and gray light filters plus mesh filter. PC2A interface, GPIB cable.....+\$1,530 NOTE: The PC2A is a National Instruments GPIB Interface Card. Programmable Spectrum Analyzer ...... Opt. 30 - Rackmount with handles for 19 in. rack ......+\$525 Includes: same as 2794 except gray CRT filter (no filter set). Opt. 39 - Non-lithium (Silver) batteries for battery-backed memory .....+\$50 Programmable Spectrum Analyzer ......\$26,500 Opt. 41 - (2792 and 2794) Digital Microwave Radio Includes: Same as 2794. Measurement Enhancement Package.....+\$450 2795 Opt. 42 - Replaces MARKER/VIDEO input port on the rear Programmable Spectrum Analyzer .....\$22,900 panel with a 110 MHz IF output port that provides a Includes: Same as 2794. 3 dB signal bandwidth ≥4.5 MHz .....+\$750 Opt. 02 - (2797) Precision Frequency Reference. INTERNATIONAL POWER PLUG OPTIONS 1 x 10<sup>-7</sup>/yr aging .....+\$2,200 Opt. A1 - Universal Euro 220 V. 50 Hz......NC Opt. 03 - (2792) Precision Frequency Reference. Opt. A2 - United Kingdom 240 V, 50 Hz ......NC 5 x 10<sup>-7</sup>/yr aging .....+\$1,500 Opt. 04 - (2792) Frequency range extension to 26.5 GHz.....+\$2,000 Opt. 07 - 75 $\Omega$ dBmV input and calibration in addition to the normal 50 $\Omega$ dBm input and calibration. (Not combinable with Opt. A5 – Switzerland 220 V, 50 Hz......NC Opt. 04 and Opts. 10 through 14.) Includes: 42-inch, See Customer Information Section for additional description. 75 Ω BNC-BNC coax cable (012-0074-00) and BNC Continued on next page. male to "F" female adapter (013-0126-00) ......+\$750

To order, contact your local sales office (listed on the inside back cover) or call the National Marketing Center at 1-800-426-2200, Ext. 99.



The 2790 Series complies with IEEE Standard 488.1-1987, and with Tektronix Standard Codes and Formats.

2795

WARRANTY-PLUS SERVICE OPTIONS

## Spectrum Analyzers

## Portable, Rugged with Accessible Performance

## ORDERING INFORMATION

## Contact your local Tektronix sales office for available warranty options. SOFTWARE See pages 209, 210 and 212 for complete description. GRASP (General RF Applications) Software -Order S26RF00 ......\$875 RSM (Host Site) Software - Order S26RM00.....\$300 RSM (Remote Site) Software - Order S26RM01.....\$750 EMI Prequalification Software - Order S26EM00 .....\$1,475 Plotter - Four color. Order HC01 Opt. 01.....\$1,680 **PROBES** See page 423 for complete selection. FET Probe P6201 - DC to 900 MHz. Order P6201 .....\$1,495 FET Probe P6202A - DC to 500 MHz. Order P6202A .....\$995 **50** Ω **Divider Probe P6156** – DC to 3.5 GHz, 6 ft. Order P6156 ......\$255 Current Probe P6022 - 935 Hz to 120 MHz. Order P6022 .......\$585 POWER SPLITTER 75 $\Omega$ /50 $\Omega$ BNC Output, 50 $\Omega$ BNC Input. Order 067-1232-00 ......\$275 CABLES, PADS AND ADAPTERS 50 Ω Coaxial Cable -BNC to BNC 5.5 in. Order 012-0214-00 ......\$60 BNC to BNC 18 in. Order 012-0076-00 ......\$31 BNC to BNC 42 in. Order 012-0057-01 ......\$28 75 O Coaxial Cable -BNC to BNC 42 in. Order 012-0074-00 ......\$31 0.5 m. Order 012-1282-00.....\$150 1 m. Order 012-0991-01 ......\$170 2 m. Order 012-0991-00.....\$170 4 m. Order 012-0991-02 ......\$260 CARTS - K218 Instrument Cart......\$695 **75** $\Omega$ to **50** $\Omega$ Minimum Loss Attenuator – With DC block, 5.7 dB loss. Order 011-0112-00 ......\$85 **75** $\Omega$ to 50 $\Omega$ Matching Attenuator – With 11.25 dB conversion factor from dBm to dBV with DC block. Order 011-0118-00......\$95 "F" Female to BNC Male Adapter - Order 013-0126-00......\$22 BNC Female to "F" Male Adapter - Order 103-0158-00.....\$14 "N" Female to BNC Male Adapter - Order 103-0058-00 ......\$15.50 BNC Female 75 $\Omega$ to N Male 50 $\Omega$ Adapter – Order 103-0273-00 .....\*1 **75** $\Omega$ to **50** $\Omega$ Matching Transformer – 0.5 dB loss.

50 kHz to 300 MHz. Order 120-1883-00 ......\$170 5 MHz to 1 GHz. Order 120-1884-00 ......\$170

N to N - DC Block 015-0509-00 is rated over the coaxial frequency range of 10 kHz to 21 GHz. Its electrical characteristics, rugged construction, and type "N" connectors make it the preferred solution for EMI/RFI and other applications requiring the blocking of 2790 front ends. Characteristics - Operating Frequency: 10 kHz to 21 GHz. Insertion Loss: 1.0 dB maximum, VSWR: 1.4:1 maximum, 10 kHz to 18 GHz; 1.6:1 maximum 18 to 21 GHz. Voltage Rating: 50 VDC maximum. Impedance: 50  $\Omega$  Connectors: Type "N" male and female. Order 015-0509-00 ......\$430 BNC to BNC - Maximum DC potential 50 V. Order 015-0221-00 .......\$130 **GPIB CARDS** PC-GPIB Card - IBM PC, AT, and compatibles. Order S3FG210 ......\$395 AT-GPIB Card - IBM AT Bus (high speed card). MC-GPIB Card - IBM PS2 with Microchannel Bus. Order S3FG230 ......\$495 ADDITIONAL ACCESSORIES EMI Ancillary Devices - See page 214. Service Manuals -2797, Volume I. Order 070-8638-00 ......\*1 2797, Volume II. Order 070-8642-00 ..... 2795, Volume I. Order 070-8637-00 .....\*1 2795, Volume II. Order 070-8641-00 ......\*1 2794, Volume I. Order 070-8636-00 .....\*1 2794, Volume II. Order 070-8640-00 ......\*1 2792, Volume I. Order 070-8635-00 .....\*1 2792, Volume II. Order 070-8639-00 ......\*1 Service Kit - Order 006-3286-01.....\*1 Diplexer Assembly - For 2790 Series and WM780 Waveguide Mixers. Order 015-0385-00......1,765 Diplexer Interconnecting Cable - Required for use with Diplexer Assembly, 50 Ω, SMA-to-SMA, Order 012-0649-00......\$41 Rack Adapter - 19 in. Order 016-0844-01 ......\$670 Rear Panel Connector Cover - Order 337-3274-00.....\$5.00 Soft Side Case - Order 016-0659-00 ......\$155 TV Sideband Analyzer Adapter - 525/60 markers. Order 1405 ......\$5,980 Tracking Generator - 100 Hz to 1800 MHz. Order TR503 ......\$7,080 Microwave Comb Generator - TM500 Series compatible. Order 067-0885-00.....

\*1 Contact your local Tektronix representative for price information.

To order, contact your local sales office (listed on the inside back cover) or call the National Marketing Center at 1-800-426-2200, Ext. 99.

GPIB IEEE-488

The 2790 Series complies with IEEE Standard 488.1-1987, and with Tektronix Standard Codes and