

Editorial Contact:

Tamra L. Richen
(503) 627-4225

Kenneth L. Dawson
(503) 627-1858

For Release:

June 15, 1989

**Tektronix Sets New Performance
Levels for Spectrum Analyzers**

Beaverton, OR - Tektronix' new 2782 Microwave Spectrum Analyzer sets the new standard for how spectrum analyzers look, feel, and perform. Among its many industry firsts, the 2782 offers a coaxial frequency range of 100 Hz to 33 GHz with fundamental mixing to 28 GHz, full-range sweep from 100 Hz to 33 GHz, resolution bandwidths from 3 Hz to 10 MHz, 100-dB display dynamic range, and substantial improvements in phase noise and sensitivity performance. These capabilities are further enhanced with simultaneous digital and analog waveform displays, a color display system using a liquid-crystal color-shutter display, and front-panel simplicity. All this adds up to better measurements with greater speed and ease than ever before available for pulsed RF, broadband communications, and close-in phase noise applications.

For example, the 33-GHz coaxial frequency range of the 2782

-more-

means broader coverage before resorting to external waveguide mixers. At the same time, direct fundamental mixing to 28 GHz reduces internal conversion losses. This results in substantial sensitivity gains and improved basic stability (residual FM) over other mixing methods. With improved sensitivity, 1-dB compression point, and 100-Hz to 33-GHz full-range sweeping, larger frequency ranges can be swept much faster than ever before.

Faster, broader frequency sweeps simplify frequency searches and monitoring. This is further supported with the widest available resolution bandwidth selection for viewing broadband spectral detail. At the high end, a 10-MHz resolution bandwidth provides more dynamic range for broadband signals, increases speed on wide spans, and enhances spectral purity for demodulating signals. At the low end, a 3-Hz resolution bandwidth--which is usable to 28 GHz--improves close-in spur, sideband, and phase noise measurements.

Beyond a broader range of resolution bandwidths (3 Hz to 10 MHz), the 2782 offers still other significant contributions to overall dynamic range. Reduction of single-sideband phase noise by up to 30-dB at higher frequencies allows direct, easy

measurement of phase noise. A 100-dB display dynamic range allows larger amplitude differences to be seen. A 0-dBm, 1-dB compression point allows mixer overdriving by as much as 30 dB. This provides greater dynamic range for measuring phase noise and finding spurs in the presence of high-level signals. And a +15-dBm, third-order intercept point (TOI) (<6.5 GHz) offers 10 to 15-dB more dynamic range for TOI distortion measurements.

Taking advantage of the 2782's high performance is a simple matter too. Direct frequency measurements can be made quickly and easily with a built-in microwave counter that provides synthesizer accuracy to 7×10^{-9} /day. This is further supported with numerous built-in marker and signal processing functions that include automatic frequency searches and occupied bandwidth measurements.

Instrument and measurement setup is done through a combination of dedicated function keys, on-screen menus, and assignable function knobs. Often-used operations are permanently assigned to convenient and familiar front-panel keys. Less-used or optional functions are readily available through a menu system that rarely goes to three layers. Moreover, all menu layers appear simultaneously on screen in an overlaid format that

-more-

makes menu position immediately obvious. For applications demanding frequent use of one or two menu items, the items can be assigned in most cases to "soft" knobs on the front panel. This, in essence, allows engineers to customize the 2782's front panel to special measurement needs.

The ability to display multiple waveforms--both analog and digital--along with associated readouts and key instrument operating parameters would present a confusing array of information on a conventional spectrum analyzer. But not on the Tektronix 2782. That's because the 2782 uses a liquid-crystal, color-shutter display. Critical information is highlighted with color. This includes use of color to distinguish different waveforms. Additionally, color mixing highlights areas where waveforms cross or overlay each other. The result is quicker and simpler interpretation of complex measurement displays.

While the 2782's built-in performance and automation features simplify a wide range of measurements, there will always be applications where full automation is desirable. The 2782 fully supports such ATE needs with total programmability of every function and control. This is further supported with two

-more-

GPIB interfaces, allowing the 2782 to be controlled by the ATE host as well as act as a secondary controller for other instruments.

The Tektronix 2782 Microwave Spectrum Analyzer is base priced at \$65,000 (US dollars), and will be available for ordering on June 15, 1989. For ordering information or further technical details, write on company letterhead to Microwave and RF Instruments Division, D/S 58-183, Tektronix, Inc., P.O. Box 500, Beaverton, OR 97077. Or call toll-free 1-800-TEK-WIDE.

In the area of Microwave and RF Test Instrumentation, Tektronix offers microwave and RF spectrum analyzers, real-time digital spectrum analyzers, FFT analyzers, digitizers, digital sampling oscilloscopes, microwave probes, waveguide mixers, tracking generators, EMI software, and MMIC packaging.

Tektronix is a leading manufacturer of electronic products and systems in the areas of test and measurement, computer graphics, and communications. Sales in fiscal 1988 totalled \$1.4 billion. The company has approximately 16,000 employees worldwide.

#