

3GHz Spectrum Analyzer

PSA-3000



- High Performance digital synthesizer mode
- Wide range frequency
- Wide input dynamic range
- Digital mobile(CDMA) Measurement
- Storage memory of large size
- Bright Color TFT-LCD(6.4")
- High-quality with reasonable price
- Various Interfaces such as USB Host and LAN
- Pre Amp as standard



Full Digital synthesizer mode – PSA 3000, 3GHz Spectrum Analyzer of wide

PSA-3000 is digital synthesizer method Spectrum Analyzer of wide-band frequency and dynamic range. It is popular spectrum analyzer widely applicable to the mobile telecommunications (CDMA / WCDMA), RF system, broadcastings, EMI/EMC and so on. It provides various state of the art functions like 6.4 inch color TFT LCD, Centronics Printer, USB Host for data storage, CDMA measuring functions (ACP, Channel Power, Occupied bandwidth) with its reasonable prices. It can be used for education authorities for mobile telecommunications and RF, production lines for terminal and telecom equipment as well as for maintenance purposes.

Features

- High-performance digital synthesizer method
- Wide Frequency Coverage : 9 kHz ~ 3.0 GHz
- Superior Resolution : Minimum 1 Hz
- Compact & Portable size
- Pre Amp as standard
- Wide Input Dynamic Range : -130 ~ 20 dBm
- Ease-of-Use Key Buttons
- CDMA Measurement : ACP, ACLR, OCBW, Channel Power
- Various and Convenient Interfaces : USB, LAN
- 0.5 ppm high precision reference

■ Various and convenient interfaces



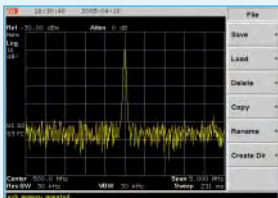
GPIB(Optional), LAN(Optional), RS-232C, Printer, EXT Trigger REF I/O (10 MHz)

■ Remote control function



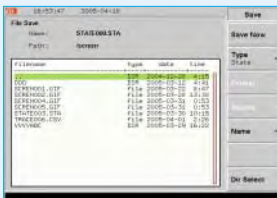
Remote controls the analyzer and manages data thru PC or Internet

■ Auto set function

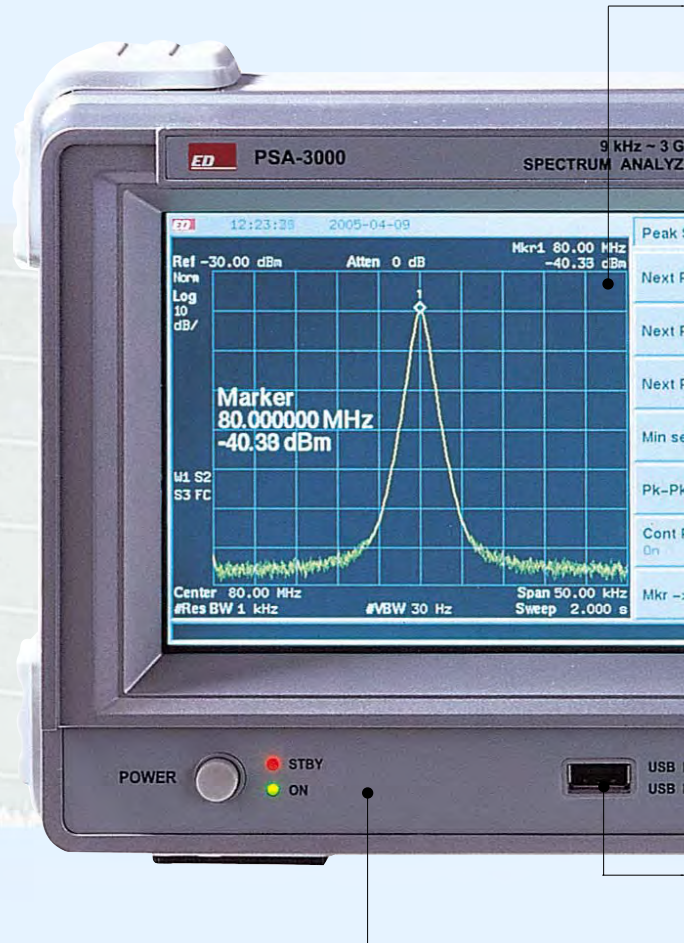


Automatically displays and sets maximum signal trace

■ Save / Recall functions



Saves and manages measurement trace and its state in the internal memory



① High definition 640 x 480 color TFT LCD

With its high definition color TFT LCD, users rarely feel fatigues on their eyes even after long-hours of use. It provides high precision measurement as well as natural data output

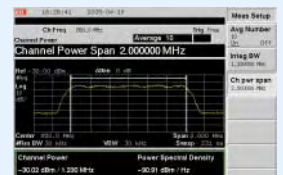
② Simple and easy to use KEY

Keys are allocated for user's conveniences so that users can be easily familiar with them. And they provide various functions.

③ CDMA Measurement

• **Channel Power (CHP) Measurement** : It measures the power of mobile telecommunications channel. It screens out the output data automatically with its simple menu operation.

• **OBW Measurement** : It measures the Occupied Bandwidth of modulation

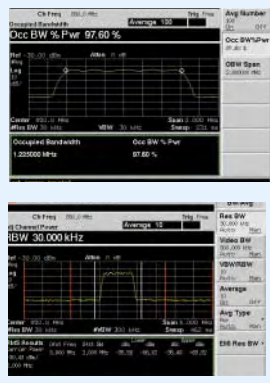


frequency and dynamic range



signal by %.

• **ACP Measurement** : It measures the effects on Adjacent Channel caused by transmitted power or the power rates with Adjacent Channel in Mobile Telecommunication Systems using multi channels. It checks all measured values and waveforms on one screen.



downloading the upgraded Firmware provided in ED company website.

5 Internal memory of large storage capacity

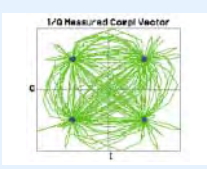
- Storage capacity for waveforms: Maximum 900 waveforms
- Storage capacity for states: Maximum 3,000 states
- Easily stores waveforms and states of equipments according to the various application and use

4 USB Interface

- Stores measured data in USB memory with USB Host supporting USB 1.1, 2.0 (GIF Format)
- Converts measured data into MS Excel by supporting CSV file format
- Supports all types of printer not only Centronics printer but USB Interface printer
- Upgrade the Firmware of Analyzer through USB by

6 CDMA Signal Generator (Option)

CDMA Signal Generator(CDMA 2000; Pilot Channel, WCDMA; 1 CPICH) has not only built-in CW Signal but also digital internal modulation signal and IQ modulator. It can be used as a strong signal generator in overall CDMA application such as module, element test, amplifier test and AS field.



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Specifications

Frequency	Range	9 kHz to 3.0 GHz		
	Resolution	Minimum 1 Hz		
	Span Range	100 Hz/div to 300 MHz/div		
		1,2,5steps selection(Automatic), ZERO Span, FULL Span (9kHz to 3.0GHz)		
	Frequency Selection	Start, Stop, Center Span setup		
	Span Accuracy	±3% within a designated Span range		
	Readout Accuracy	≤±(Indicated frequency × reference frequency accuracy + span × span accuracy + 50% of RBW)		
	Phase Noise	≤ -90 dBc/Hz (based on 10 kHz Offset)		
Amplitude	Range	+20 dBm ~ -105 dBm, +20 dBm ~ -130 dBm(Pre Amp ON)		
	Average Noise Level (1 kHz RBW, 10 Hz VBW)	≤ -105 dBm	150 kHz ~ 2.7 GHz	
		≤ -127 dBm(Pre Amp On)	20 MHz ~ 2.7 GHz	
		≤ -100 dBm, -123 dBm(Pre Amp On)	2.7 GHz ~ 3 GHz	
		≤ -130dBm(Pre Amp On) ; Typically		
	Amplitude Unit	dBm, dBmV, dBμV, V, mV, μV, W, mW, μW		
	Display Scale	≤ ±1.5 dB / 70 dB (10 dB / div), ≤ ±1.5 dB / 40 dB (5 dB / div)		
	Linearity	≤ ±0.5 dB / 8 dB (1 dB / div), ≤ ±0.5 dB / 16 dB (2 dB / div)		
	Frequency response (Based on 0dB atten)	-3.5~1.5 dB(100 kHz ~ 10 MHz)		
		±1.5 dB(10 MHz ~ 3GHz)		
	Reference Level	Range	20 dBm ~ -90 dBm	
		Resolution	0.1 dB	
		Accuracy	+/-1.5 dB	
	2nd Harmonic Distortion	≤ -60 dBc, -40 dBm input		
	Intermodulation Distortion	≤ -70 dBc, -40 dBm input		
Residual spurious	≤ -85 dBm (Input terminated 0dB Attenuate)			
Other Input Spurious	≤ -60 dBc, -30 dBm input			
Resolution Bandwidth	Selections	1kHz, 3kHz, 10kHz, 30kHz, 100kHz, 300kHz, 1MHz, 3MHz, 9kHz, 120kHz		
	Accuracy	±20%		
	Selectivity	60 dB / 3 dB ratio <15 : 1		
		60 dB / 6 dB ratio <12 : 1 (9 kHz, 120 kHz)		
Switching Error	≤ ±1.0 dB (1 kHz Reference RBW)			
Video Bandwidth	10 Hz to 3 MHz in 1-3-10 step			
SWEEP	Rate	100 ms to 1000 sec, 40 ms to 1000 sec (Zero span)		
	Accuracy	≤ ±20%		
	Trigger Source	External(rear), Video, Freerun, Line		
	Trigger Modes	continuous, single		
	Trigger Level	TTL level		
Memory	Trace • Setup Storage	Trace Storage : Maximum 900 waveforms Setup Storage : Maximum 3000 states		
Screen Display	Type	6.4" color TFT LCD		
	Display Resolution	640(H) x 480(V) active display area		
	Marker Modes	Peak search, Delta marker, Marker to Center		
Marker to Reference (8 markers maximum)				
Input	RF Input Connector	N type Female, 50 ohm nominal		
	VSWR	150 kHz ~ 3.0 GHz, VSWR < 1.5 : 1 (based on 0 dBm Ref Level)		
	Maximum input level	0 VDC, +20 dBm		



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Standard Frequency (10MHz, Ref.)	Temperature Stability	± 0,5 ppm		
	Aging	± 0,5 ppm / Year		
	Connector	BNC female		
	Input Level	-5 dBm to +15 dBm		
	Output Level	10 MHz, +8 dBm nominal		
Interface	RS-232C	-		
	Printer	Driver	PCL Command, HP, EPSON, Laser-Jet, Desk-Jet	
		Connector	Standard 25 pin female D-Sub using parallel connector	
	USB Host	Printer Driver	PCL Command, HP, EPSON, Laser-Jet, Desk-Jet	
		USB Storage Device	Supports 1,1 and 2,0, image file for storage, GIF format	
	Ethernet(Optional)	10-Base-T Ethernet	Supports internet remote control	
	GPIB Interface(Optional)	IEEE 488 bus		
	General Specifications	Dimensions	350(W) X 195(H) X 375(D)mm	
		Weight	10 kg	
		Warming up time	20 minutes for the precision measurement	
Power		Source Voltage and Frequency	100-240 VAC at 50/60Hz	
		Power Consumption	80 watts maximum without option	
Operating Temperature		0 °C to 40 °C		
Storage Temperature		-20 °C to 70 °C		
RF Emissions, Immunity		RF emissions	EN 55011, FCC PART15 Section 15.101	
	RF Immunity	EN 61326		

Options

- TRACKING GENERATOR
- CDMA (CDMA2000, WCDMA) SIGNAL GENERATOR
- GPIB Interface (IEEE 488 Bus)
- ETHERNET Interface ; for Internet Remote Control
- SOFT CARRYING CASE
- General KIT SET
- CATV KIT SET
- RETURN LOSS BRIDGE KIT SET