Multiplelabs™
Turnkey Laboratories Solutions

Analytical®
Technologies Limited

Portable Spectrum Analyzer
SA-3495

EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

Product Overview :

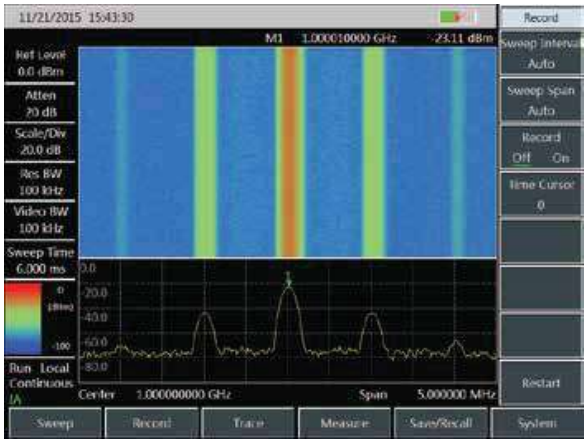
ATL SA-3495 series spectrum analyzer has many advantages: wide frequency range, high perofformance index, high sweep speed, various functions, and easy operation. In terms of performance index, it has excellent displayed average noise level, low phase noise, and high sweep speed. In terms of measur ment functions, it has measurement functions of spectrum analyzer, inteference analyzer, AM/FM/PM analyzer, power meter, channel scanner etc. as well as intelligent measurement functions of channel power, occupied bandwidth, adjacent-channel power ratio, tune&listen, emission mask, and carrier-to-noise ratio etc. ATL SA-3495 apots the integrated design of 8.4 inch LCD and capative touch screen, which improves the display definition and operation convinience. It is handheld, compact and light, with flexible power supply, which is very suitable for field work.

ATL SA-3495 can be used for signal and equipment test in the fields of aerospace, microwave & stallite communication, radio communication, radar monitoring, electronic countermeasures & reconnaissance, and precision guidance.

Main Characteristics :

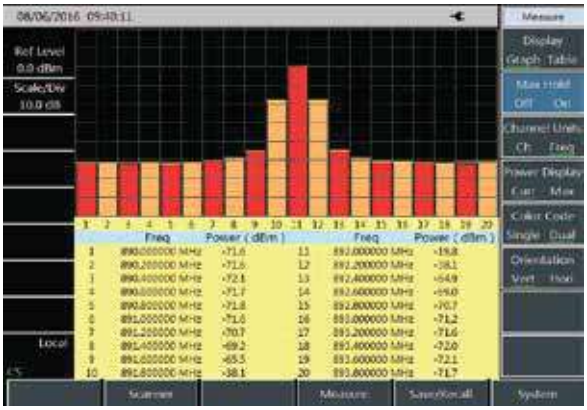
- Wide frequency range: from 9kHz to 44GHz, 4 models
- Low displayed average noise level: -163dBm@1Hz RBW(typical)
- Excellent phase noise performance: -106dBc/Hz@100kHz frequency offset@1GHz carrier
- High sweep speed: for 1GHz span, shortest sweep time <20ms
- Resolution bandwidth: 1Hz ~ 10MHz
- Full-band pre-amplifier: standard configuration
- Various measurement functions: spectrum analyzer, interference analyzer (spectrogram, RSSI), AM/FM/PM analyzer, channel scanner, high accuracy power meter etc.
- Various intelligent measurement functions: field strength measurement, channel power, occupied bandwidth, adjacent-channel power ratio, tune&listen, carrier-to-noise ratio, emission mask.
- Various auxiliary test interface: 10MHz reference input/output interface, GPS antenna interface, zero span IF output interface, external triggering input interface etc.
- Easy & convenient user operation: 8.4 inch high definition LCD and large font display, convenient capacitive touch screen operation, combination of LCD and touch screen, various display modes, and automatic adjustment of backlight brightness etc.
- Working temperature range: -10℃ ~55℃ ; Power supplied by battery or adapter.

Various measurement functions :



Interference analyzer (spectrogram)

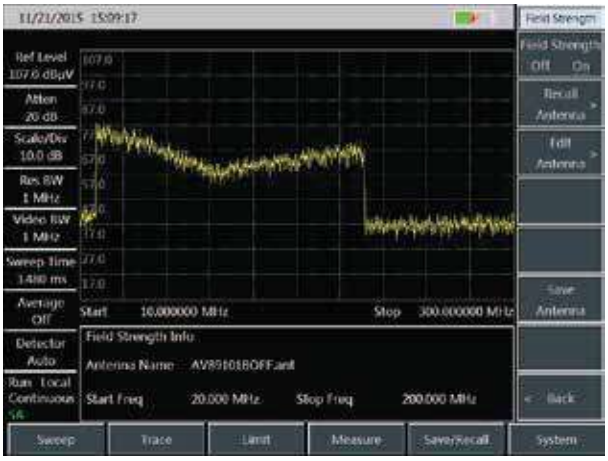
AM/FM/PM demodulation



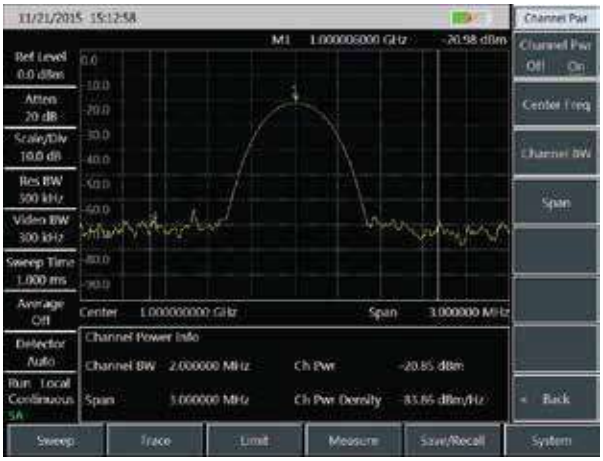
Channel scanner

Power meter (USB power probe)

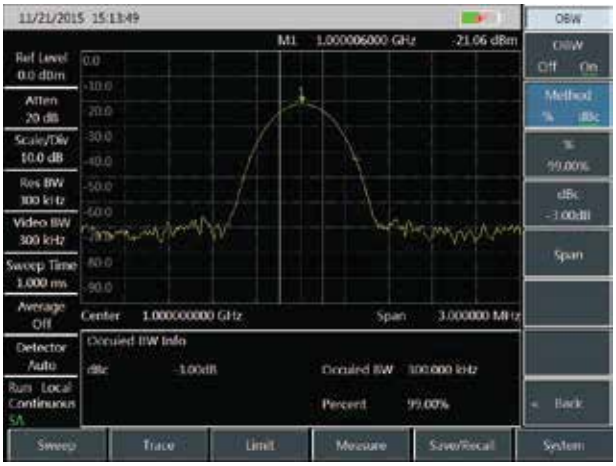
Comprehensive intelligent measurement function



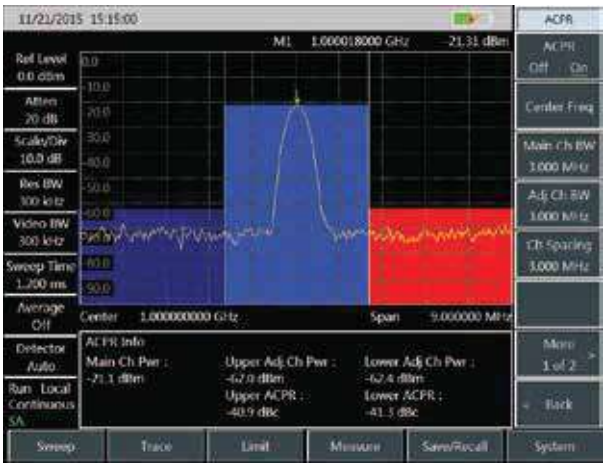
Field strength measurement



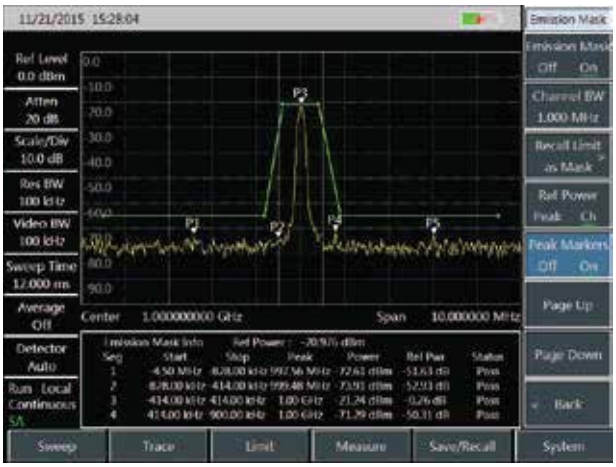
Channel power



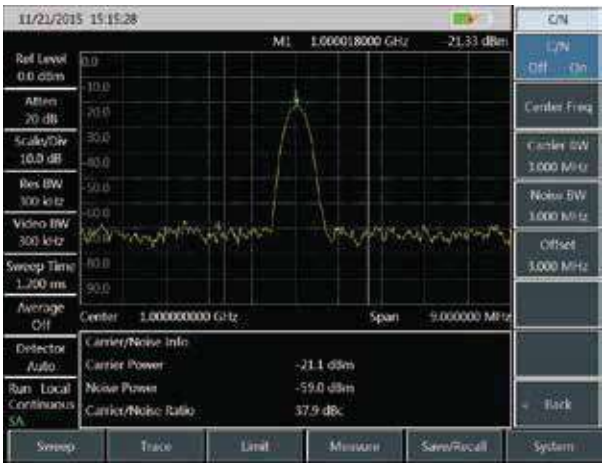
Occupied bandwidth



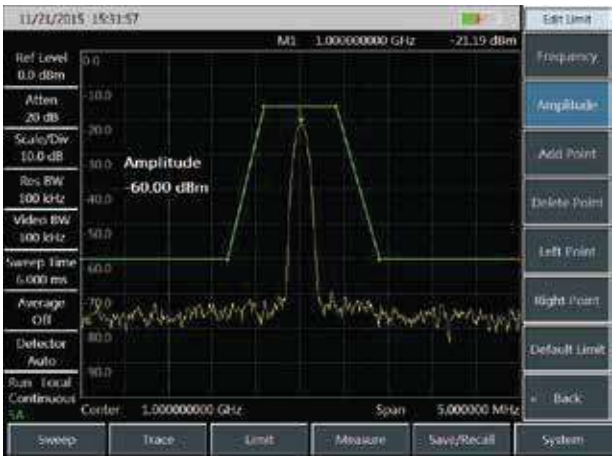
Adjacent-channel power ratio



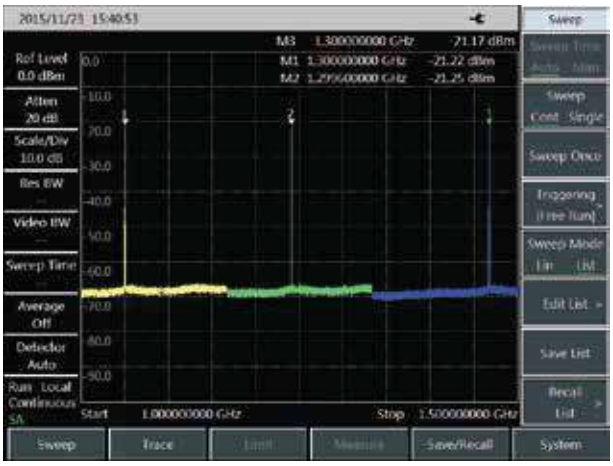
Emission mask



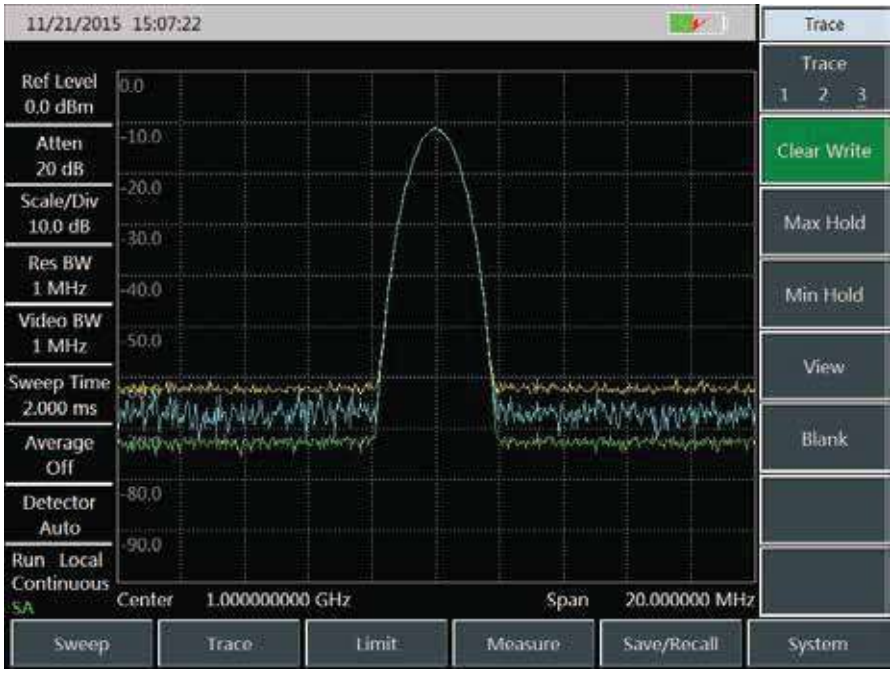
Carrier-to-noise ratio



Limit line

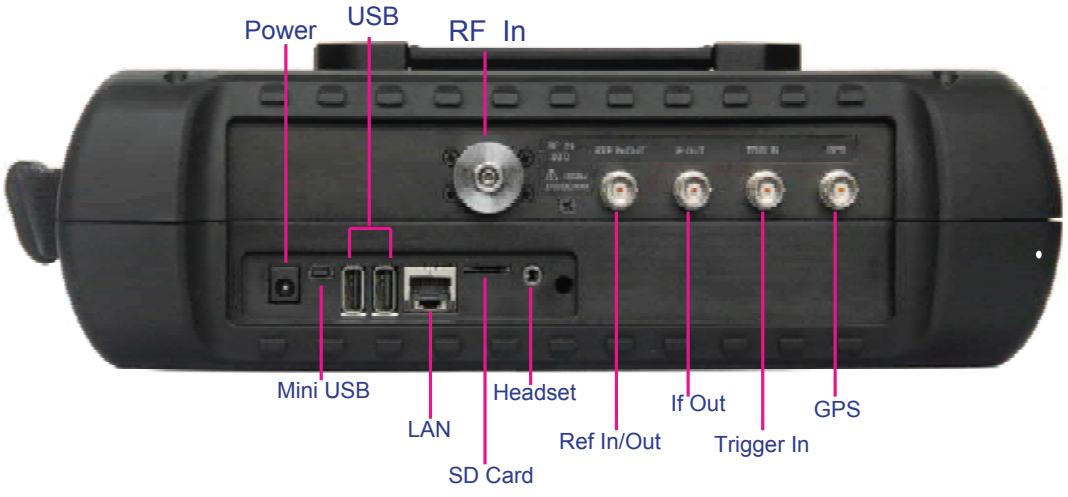


List sweep



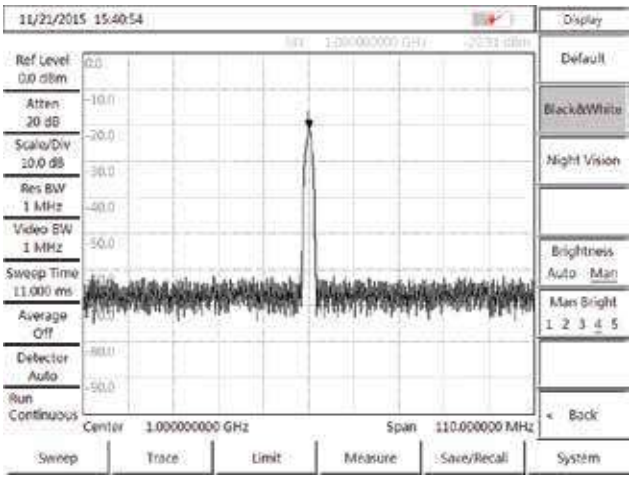
Multi-traces

Various auxiliary test interfaces :

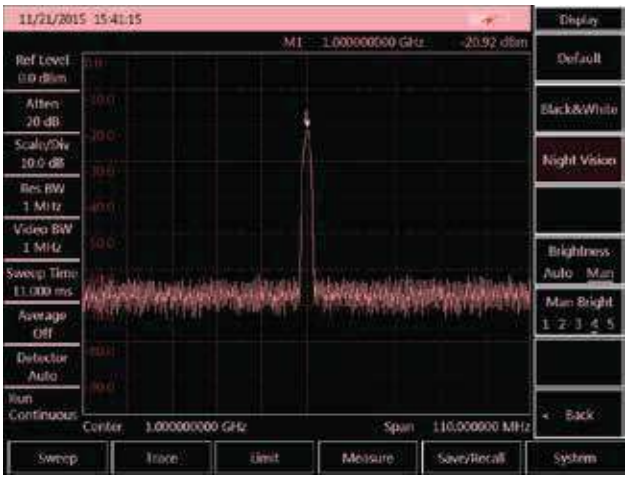


Easy & convenient user operation :

- One-click quick measurement
- Storage and invocation of state and data
- Combination of 8.4 inch LCD and capacitive touch screen; smaller light refraction and clearer display.
- Convenient capacitive touch screen operation.
- Various display modes: better experience under outdoor light and night vision.
- Automatic adjustment of backlight brightness.



Outdoor mode



Night vision

Various auxiliary test interfaces :

• Comprehensive performance evaluation of electonic weapon equipment

ATL SA-3495 series spectrum analyzer has advantages of wide frequency range, high perofor-mance index, high sweep speed, multiple test functions, and easy operation. It is handheld, compact and light, which can be power supplied by battery. It can be used for the field installation & calibration, repaire & maintenance of electonic weapon equipment in fields of radar, communic-ation, electronic countermeasures & reconnaissance, and precision guidance etc. .

• Field test and diagnosis of transmitter and receiver

ATL SA-3495 serious spectrum analyzers have various measurement function modes like spectrum analyzer, inteference analyzer, AM/FM/PM analyzer, power meter, channel scanner etc. as well as various intelligent measurement functions such as channel power, occupied bandwidth, adjacent-channel power ratio, carrier-to-noise ratio, field strength measurement, emission mask etc. It can provide comprehensive spectrum analysis and diagnosis service for the field test of transmitter and receiver.

• Broadband spectrum monitoring, interference recognition

Connected with external directive antenna, ATL SA-3495 series spectrum analyzer can be used for electromagnetic environment detection, radio inteference analysis, eletromagnetic environment background assessment, sepctrum monitoring and illegal channel intefrence signal recognition.

Technical Specifications :

Model	ATL 3495
Frequency range	SA3495A：9kHz～20GHz　SA3495B：9kHz～26.5GHz SA3495C：9kHz～32GHz　SA3495D：9kHz～44GHz Tuning resolution:1Hz
Frequency reference	Frequency: 10MHz Aging: ±0.5ppm/year Initial frequency accuracy: ±0.3ppm Temperature stability:±0.1ppm(-10～50℃, comparative to 25℃)
Sweep time	Range: 10μs～600s (zero span) Accuracy: ±2.00% (zero span)
Frequency readout accuracy	Frequency readout accuracy = ±(frequency readout× frequency reference error +2%× span +10%× resolution bandwidth)
Frequency span	Range: 100Hz～upper frequency limit of corresponding model or 0Hz Accuracy: ±2.0%
Resolution bandwidth	1Hz～10MHz (1-3 times of stepping)
Video bandwidth	1Hz～10MHz (1-3 times of stepping)
SSB phase noise (carrier 1GHz)	≤-102dBc/Hz@ frequency offset 10kHz ≤-106dBc/Hz@ frequency offset 100kHz ≤-111dBc/Hz@ frequency offset 1MHz ≤-123dBc/Hz@ frequency offset 10MHz
Displayed average noise level	Preamp off: ≤-138dBm(10MHz～4GHz)　≤-135dBm(4GHz～6GHz) ≤-138dBm(6GHz～20GHz)　≤-135dBm(20GHz～32GHz) ≤-127dBm(32GHz～40GHz) Preamp on: ≤-157dBm(10MHz～4GHz)　≤-152dBm(4GHz～6GHz) ≤-157dBm(6GHz～20GHz)　≤-154dBm(20GHz～32GHz) ≤-148dBm(32GHz～40GHz)
Residual response	Preamp off: ≤-90dBm (10MHz～13GHz)　≤-85dBm (13GHz～20GHz) ≤-80dBm (20GHz～44GHz) Preamp on: ≤-100dBm (10MHz～32GHz)　≤-95dBm (32GHz～44GHz) (exceptional frequency: 1100MHz, 3200MHz)
Second harmonic distortion	<-60dBc (attenuation 0dB, -30dBm input signal)
Absolute amplitude accuracy (20□~30□, 30 minutes of preheating)	±2.3dB (10MHz～40GHz)
Input attenuator	Attenuation range: 0dB～50dB, 10dB stepping
Maximum Continuous Input	+30dBm Peak typical(≥10dB attenuation) +23dBm Peak typical(<10dB attenuation) +13dBm Peak typical(Preamp = ON)
Reference level	Range: -120dBm～+30dBm Conversion uncertainty: ±1.20dB
Battery power supply	About 3.0hours
Dimension	314mm (W)×218mm (H)×91mm (D) (excluding handle, stand) 338mm(W)×218mm (H)×100mm (D) (excluding handle, stand)
Weight	About 5kg (excluding battery)

Working temperature	-10℃~+55℃
Storage temperature	-40℃~+70℃
Electromagnetic compatibility	Conforms to GJB3947A-2009 3.9.1 requirements
Power consumption	≤30W (no charging to the battery)
Test interface	SA3495A/B: N type connector SA3495C/D: 2.4mm connector
Other interfaces	10MHz reference input/output: BNC female connector External triggering input: BNC female connector IF output: BNC female connector GPS antenna input: BNC female connector

Order Information :

- Main unit: SA3495A spectrum analyzer (9kHz～20GHz)
- Main unit: SA3495B spectrum analyzer (9kHz～26.5GHz)
- Main unit: SA3495C spectrum analyzer (9kHz～32GHz)
- Main unit: SA3495D spectrum analyzer (9kHz～44GHz)
- Standard configuration:

Item	Description
Standard configuration accessories	Standard 3-phase power cord Power adapter Quick guide USB cable Built-in rechargeable lithium ion battery Certificate of conformity

No.	Description	Function
SA3495-001	Optional accessories of English version	English signs、keys、menu
SA3495-003	User manual (English)	
SA3495-005	Programming manual (English)	
SA3495-006	Power adapter	Power adapter
SA3495-007	Rechargeable lithium ion battery	Standby battery
SA3495-008	Purple cat5e cable	Point to point, 2 meters
SA3495-009	MicroSD card	Class4, capacity: 8G
SA3495-010	GPS antenna	GPS exposed antenna
SA3495-011	USB power meter option	Provide USB power measurement function
SA3495-012	SA87230 USB CW power probe	9kHz～6GHz power probe
SA3495-001	SA87231 USB CW power probe	10MHz～18GHz power probe
SA3495-013	SA87232 USB CW power probe	50MHz～26.5GHz power probe
SA3495-014	SA87233 USB CW power probe	50MHz～40GHz power probe
SA3495-015	Interference analyzer option	Provide spectrogram, RSSI measurement etc. functions
SA3495-016	AM/FM/PM analyzer option	To realize modulation characteristics analysis of AM/FM/PM signals

SA3495-017	AM/FM/PM analyzer option	To realize modulation characteristics analysis of AM/FM/PM signals.
SA3495-018	Channel scanner option	To realize signal power measurement of multiple channels and frequency.
SA3495-019	List sweep option	To realize continuous sweep measurement of various frequency bands.
SA3495-020	Zero span IF output	Output the third or fourth IF signal
SA3495-021	SA89101A antenna	Frequency range:10kHz～20MHz
SA3495-022	SA89101B antenna	Frequency range:20MHz～200MHz
SA3495-023	SA89101C antenna	Frequency range:200MHz～500MHz
SA3495-024	SA89101D antenna	Frequency range:500MHz～4GHz
SA3495-025	SA89401 antenna amplifier	Frequency range:10kHz～4GHz,N(f)
SA3495-026	SA89901 antenna	Frequency range:1GHz～18GHz,N(f)
SA3495-027	SA89902 antenna	Frequency range:18GHz～ 40GHz,2.4mm(f)
SA3495-028	Functional bag	Protect the instrument
SA3495-029	Backpack	Easy to carry
SA3495-030	Safety instrument carrying case	Used to carry

SA3495 spectrum analyzer optional accessories (pictures) :


Power adapter

HY-2040 Rechargeable lithium ion battery


Purple cat5e cable(2m)

MicroSD card Class4(8G)


USB CW power probe


GPS antenna


SA89101A


SA89101B


SA89101C


SA89101D


SA89901 Antenna


SA89902 Antenna


Safety instrument carrying case

Foreign instrument to be substituted :

- **ATL SA-3495 series handheld spectrum analyzer can substitute below instrument :**
- **Anritsu MS2720T :**
- **Performance comparisons as below :**

Index	ATL 3495	Anritsu MS2720T
Frequency range	SA3495A：9kHz～20GHz SA3495B：9kHz～26.5GHz SA3495C：9kHz～32GHz SA3495D：9kHz～44GHz Tuning resolution: 1Hz	MS2720T-0720：9kHz～20GHz MS2720T-0732：9kHz～32GHz MS2720T-0743：9kHz～43GHz Tuning resolution: 1Hz
Frequency reference	Aging: ±0.5ppm/year Initial frequency accuracy: ±0.3ppm Temperature stability: ±0.1ppm (-10℃~55℃ comparative to 25℃)	Aging: ±1.0ppm/10 years Accuracy: ±0.3ppm(0℃~50℃) + aging
Sweep time	Range: 10μs～600s (zero span) Accuracy: ±2.00% (zero span)	Range: 10μs～600s (zero span) Accuracy: ±2.00% (zero span)
Resolution bandwidth	1Hz～10MHz (1-3 times of stepping)	1Hz～10MHz (1-3 times of stepping)
Video bandwidth	1Hz～10MHz (1-3 times of stepping)	1Hz～10MHz (1-3 times of stepping)
SSB phase noise (carrier 1GHz)	≤-102dBc/Hz@ frequency offset 10kHz ≤-106dBc/Hz@ frequency offset 100kHz ≤-111dBc/Hz@ frequency offset 1MHz ≤-123dBc/Hz@ frequency offset 10MHz	≤-102dBc/Hz@ frequency offset 10kHz ≤-106dBc/Hz@ frequency offset 100kHz ≤-111dBc/Hz@ frequency offset 1MHz ≤-123dBc/Hz@ frequency offset v10MHz
Displayed average noise level (DANL)	Preamp off ≤-138dBm(10MHz～4GHz) ≤-135dBm(4GHz～6GHz) ≤-138dBm(6GHz～20GHz) ≤-135dBm (20GHz～ 32GHz) ≤-127dBm(32GHz～40GHz) Preamp on ≤-157dBm(10MHz～4GHz) ≤-152dBm(4GHz～6GHz) ≤-157dBm(6GHz～20GHz) ≤-154dBm(20GHz～32GHz) ≤-148dBm(32GHz～40GHz)	Pre-amplifier off ≤-145dBm(10MHz～4GHz) ≤-142dBm(4GHz～9GHz) ≤-136dBm(9GHz～13GHz) ≤-135dBm (13GHz～ 32GHz) ≤-127dBm (32GHz～ 40GHz) Pre-amplifier on ≤-161dBm(10MHz～4GHz)\ ≤-159dBm(4GHz～9GHz) ≤-156dBm(9GHz～13GHz) ≤-154dBm (13GHz～32GHz) ≤-148dBm (32GHz～40GHz)
Residual response	Pre-amplifier off: ≤-90dBm (10MHz ～ 13GHz) ≤-85dBm (13GHz ～ 20GHz) ≤-80dBm (20GHz～44GHz) Pre-amplifier on: ≤-100dBm (10MHz～32GHz) ≤-95dBm (32GHz ～ 44GHz) (exceptional frequency: 1.1GHz, 3.2GHz)	Pre-amplifier off: ≤-90dBm (10MHz～13GHz) ≤-85dBm (13GHz～20GHz) ≤-80dBm (20GHz～43GHz) Pre-amplifier on: ≤-100dBm (10MHz～32GHz) ≤-95dBm (32GHz～43GHz)
Second harmonic distortion	<-60dBc (attenuation 0dB, -30dBm input signal)	-54dBc (attenuation 0dB, -30dBm input signal)

Absolute amplitude accuracy(20℃ ~ 30℃, 30 minutes pre-heating)	±2.3dB (10MHz～40GHz)	±2.3dB (100kHz～40GHz)
Input attenuator	Range: 0～50dB, 10dB stepping	Range: 0～60dB, 5dB stepping
Reference level	-120dBm～+30dBm	-120dBm～+30dBm
Working temperature	-10℃ ~+55℃	-10℃ ~+55℃
Storage temperature	-40℃ ~+70℃	-51℃ ~+71℃
Battery capability	3.0h	3.0h
Dimension	314mm×218mm×91mm 338mm×218mm×100mm	315mm×211mm×77mm
Weight	About 5kg (excluding battery)	≤4.4kg (excluding battery)
Display screen	8.4 inch	8.4 inch
Touch screen	Capacitive touch screen	Resistance touch screen
Appearance		

Analytical®
Technologies Limited

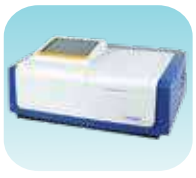
Servicing, Validation, Trainings and Preventive Maintenance :

Servicing	: We have team of service engineers who can attend to any make of instrument promptly @the most affordable cost.
Trainings	:We also take up preventive maintenance to reduce downtime of instrument's Trainings.
AMC's/CMC	: We offer user training both in-House and at customer sites on instrument principles, operations, troubleshooting.
Validations	: We have protocols for carrying out periodic Validations as per GLP/ GMP/USFDA norms.
Instruments	: We offer instruments/Renting Services Modules like pumps, detector etc. on Rent.

About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the globe. Analytical Technologies Limited is an ISO :9001 Certified Company engaged in Designing, Manufaturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

Our Products & Technologies



UV/VIS Spectro 2080+ Double Beam

Infra FTIR

Optima Gas Chromatograph 3007

Optima Gas Chromatograph 2979 Plus

Flash Chromatograph

Atomic Absorption Spectrophotometer

Liquid Partical Counter

Optical Emission Spectrophotometer

DSC/TGA

Semi Auto Bio Chemistry Analyzer

HEMA 2062 Hematology Analyzer

Micro Plate Reader/Washer

URINOVA 2800 Urine Analyzer

Total Organic Carbon 3800

Fully Automated CLIA

NOVA-2100 Chemistry Analyzer

PCR/Gradient PCR/ RTPCR

TOC Analyzer

Laser Particle Size Analyzer

Ion Chromatograph

Water purification system

Regulatory compliances

Corporate Social Responsibility

Analytical Foundation

Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:

1.Research & Innovation Scientist's awards / QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personallities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXIFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

Reach us @

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