

## GSP-827 (9kHz~2.7GHz)



### FEATURES

- \* Frequency Range : 9kHz ~ 2.7GHz
- \* Input Range : -100dBm ~ +20dBm
- \* Average Noise Floor : -100dBm
- \* Power Measurements : ACPR/OCBW/CH Power
- \* Split Window: Simultaneous Measurements in Two Separate Frequency Spans
- \* 10 Markers : Delta Mode, Peak Search, Peak Track
- \* Trace Function : Dual-Trace Display, Peak Hold, Freeze, Average, Trace Math
- \* Limit Line : Upper/Lower Limit with Pass/Fail Test
- \* Trigger Function : Video/ External
- \* Clock/Calendar : Time/Date Stamp in Saved Data
- \* Wide Range of External Reference Clock : 1MHz~19.2MHz
- \* 100 Trace/State Memories with Date/Time Stamp and File Name
- \* TG : 9kHz ~ 2.7GHz, -50dBm ~ 0dBm (Option)
- \* EMI Filters (Option)
- \* AC/DC/Battery Operation (Option)
- \* Compact Size and Light Weight at 4.5kg

### GKT-006 EMI Probe Kit Set

- ADP-01 Test Lead: BNC(P)-BNC(P) RF Cable x 1
  - ADP-02 Test Lead: SMA(P)-SMA(P) RF Cable x 1
  - ANT-01
  - ANT-02
  - ANT-03
  - PR-03
- For:GSP-810/827/830



GSP-827 Spectrum Analyzer is a very handy instrument for RF measurement application, which delivers a superior combination of easy-to-use design and exceptional price/performance value enclosed within highly portable package. Covering 9kHz to 2.7GHz frequency range, GSP-827 is designed to meet Production/Development test demands of RF products, as well as on-site Maintenance/Installation of wireless communication system. The large memory size of GSP-827 enables storing 100 types of trace/ set-up, making repetitive measurements with a massive amount of test results doable. With AC/DC/ Battery power operation and 4.5kg light weight, GSP-827 makes the field service of RF systems much easier.

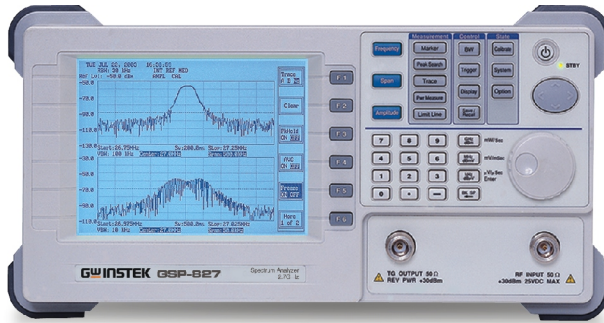
SPECIFICATIONS	
<b>FREQUENCY</b>	
Frequency Range	9kHz~2.7GHz
Aging Rate	±10ppm, 0~50°C, 5ppm/yr
Span Range	2kHz~ 2.5GHz in 1-2-5 sequence, full span, zero span
Phase Noise	-85dBc/Hz @1GHz 20kHz offset typical
Sweep Time Range	50ms~25.6s
<b>RESOLUTION BANDWIDTH</b>	
RBW Range	3kHz, 30kHz, 300kHz, 4MHz
RBW Accuracy	15%
Video Bandwidth Range	10Hz~1MHz in 1-3 steps
<b>AMPLITUDE</b>	
Measurement Range	-100dBm~+20dBm : 1MHz~2.5GHz @3k RBW -95dBm~+20dBm : 2.5GHz~2.7GHz @3k RBW -75dBm~+20dBm : 150kHz~1MHz @3k RBW -65dBm~+20dBm : 50kHz~150kHz @3k RBW
Overload Protection	+30dBm, ±25VDC
Reference Level Range	-30dBm~+20dBm
Amplitude Display Range	75dB
Amplitude Accuracy	±1.5dB @100MHz
Frequency Flatness	±1.5dB
Amplitude Level Linearity	±1.5dB over 70dB
<b>DYNAMIC RANGE</b>	
Average Noise Floor	-100dBm: 1MHz~2.5GHz ; -95dBm: 2.5GHz~2.7GHz -75dBm: 150kHz~1MHz ; -65dBm: 50kHz~150kHz
Third Inter-Modulation	<-70dBc @-40dBm Input, 2MHz apart
Harmonic Distortion	<-60dBc @-40dBm Input
Non-Harmonic Spurious	<-60dBc @typical down from Reference Level 150k~2.7GHz
<b>DISPLAY SYSTEM</b>	
Display Device	640 x 480 high resolution graphical LCD, B&W
Display Function	Contrast, backlight ON/OFF, Invert screen split window: upper and lower
<b>FUNCTIONS</b>	
Marker Mode	Normal and delta mode Number: Up to 10 in multi marker mode
Internal Memory	100 traces and setup for Save/Recall
Peak Search	To peak, to center, next peak, peak right, peak left and peak track
Trace Number	Number:2, tr A and B for display memory Functions: peak hold, average, freeze, math.Detect: sample, peak+, AVG 1/2/3, quasi-peak
Power Measurement	ACPR x 2, OCBW, Channel Power
Trigger	Functions: Video, External; Mode: continuous, single Source: video, external (0~5V rising edge); Setting: Trigger delay, Trigger frequency
Limit Line	Number: 2, high and low Functions: Edit:Insert, Delete, Undo Pass/Fail
Calibrate Signal	100MHz, -30dBm
<b>CONNECTORS</b>	
RF Input	Type : N female, 50Ω nominal; RF input VSWR : <1.5:1, @0dBm Reference Level
External Reference	Type: BNC female
Clock Input	1M, 1.544M, 2.048M, 5M, 10M, 10.24M, 13M, 15.36M, 15.4M, 19.2M
Reference Clock Output	Type:BNC female, 10MHz
DC Input	Jack:5.5mm, 12V
<b>INTERFACE</b>	
RS-232C	Sub-D 9 pins female
Option : GPIB Interface	Fully programmable with IEEE 488.2 compliance
<b>POWER SOURCE</b>	
AC 100 ~ 240V, 50 ~ 60Hz	
<b>DIMENSIONS &amp; WEIGHT</b>	
330(W) x 170(H) x 340(D) mm, Approx. 4.5kg	
Note: Need to Collocate the Optional Accessories.	

### ORDERING INFORMATION

GSP-827 2.7GHz Spectrum Analyzer

ACCESSORIES :

User manual x 1, Power cord x 1



**GSP-827**

**Rear Panel**



**GRA-404 Rack Adapter Panel**

For : GSP-827/830, Rack Mounting (19", 4U)



**GSC-001 Soft Carrying Case**

For : GSP-827/830



**GKT-001 General Kit Set**

ADP-002  
ATN-100  
GTL-303  
GSC-002  
For:GSP-810/827/830



**GKT-002 CATV Kit Set**

ADP-001  
ADP-101  
GTL-304  
GSC-003  
For:GSP-810/827/830



**GKT-003 RLB Kit Set**

GAK-001  
GAK-002  
GTL-302  
GSC-004  
For:GSP-810/827/830



**GTL-401**

DC Power Cord  
with DC Jack and  
Lighter Plug,  
Current 5A  
For:GSP-827/830



**OPTION**

**Opt. 01 Tracking Generator**

Frequency Range 9kHz ~ 2.7GHz  
Amplitude Range -50dBm ~ 0dBm  
Amplitude Accuracy  $\pm 1\text{dB}@100\text{MHz}$ , 0dBm  
Amplitude Flatness  $\pm 1\text{dB}@0\text{dBm}$   
Harmonics  $< -30\text{dBc}$  typical  
Reverse Power  $+30\text{dBm}$   
Impedance Type: N female, 50  $\Omega$  nominal  
RF Output VSWR  $< 1.5 : 1$

**Opt. 02 AC/DC Battery Operation with Battery Pack**

11.1V Li-Ion battery pack x 2

**Opt. 03  $\pm 1\text{ppm}$  Stability**

$\pm 1\text{ppm}$ , 0 ~ 50°C,  $\pm 1\text{ppm/yr}$

**Opt. 06 GPIB Interface**

IEEE 488 bus

**Opt. 12 EMI Filters (\*)**

RBW Selections: 9kHz and 120kHz, 6dB bandwidth ; RBW Accuracy: 15%

**Opt. 13 Demodulator (\*)**

Demodulation: AM, FM ; Output: Internal speaker, 3.5mm stereo jack wired for mono operation

**Opt. 14 EMI Filters and 300Hz RBW (\*)**

RBW Selections: 9kHz and 120kHz, 6dB bandwidth 300Hz, 3dB bandwidth RBW Accuracy: 15%

**Opt. 15 EMI Filters and Demodulator (\*)**

RBW Selections: 9kHz and 120kHz, 6dB bandwidth  
RBW Accuracy: 15% ; Demodulation: AM, FM  
Output: Internal speaker, 3.5mm stereo jack wired for mono operation

**Opt. 16 EMI Filters, 300Hz RBW and Demodulator (\*)**

RBW Selections: 9kHz and 120kHz, 6dB bandwidth 300Hz, 3dB bandwidth  
RBW Accuracy: 15% ; Demodulation: AM, FM  
Output: Internal speaker, 3.5mm stereo jack wired for mono operation

NOTE : 1. (\*) Only one option could be selected among option 12 to 16 for any given GSP-827 unit  
2. All options are factory-installed

**OPTIONAL ACCESSORIES**

**ATA-001 BNC Antenna** (An additional ADP-001 is needed for fitting GSP spectrum analyzers)

**ATA-002 Near Field Probe**

Wideband, 0.1~1000 MHz, Low Noise, 2.9dB Typical

**RLB-001 Return Loss Bridge**

RLB Frequency Range 10MHz ~ 1GHz

**GKT-001 General Kit set**

ADP-002: adaptor, SMA(J/F) ~ N(P/M) x 2  
ATN-100: 10dB attenuator, N(J/F) ~ N(P/M) x 1  
GTL-303: RF cable assembly(SMA(P/M),RD316,600mm) x 2  
GSC-002: Kit box x 1

**GKT-002 CATV Kit set**

ADP-001: adaptor, BNC(J/F) ~ N(P/M) x 2  
ADP-101: adaptor, BNC(J/F) 75  $\Omega$  ~ BNC(P/M) 50  $\Omega$  x 2  
GTL-304: RF cable assembly(RG223, N(P/M)-N(J/F), 300mm) x 2  
GSC-003: Kit box x 1

**GKT-003 RLB Kit set**

GAK-001: termination 50  $\Omega$ , N(P/M) x 1  
GAK-002: Cap with chain, N(P/M) x 1  
GTL-302: RF cable assembly(RG223, N(P/M), 300mm) x 2  
GSC-004: Kit box x 1

**GKT-006 EMI Probe Kit set**

ANT-01: 6cm Loop, H-Field Probe x 1  
ANT-02: 3cm Loop, H-Field Probe x 1  
ANT-03 6mm Stub tip, E-Field Probe x 1  
PR-03: Touch Passive Probe x 1  
Test Lead: BNC(P/M)~BNC(P/M) RF Cable x 1  
Test Lead: SMA(P/M)~SMA(P/M) RF Cable x 1  
ADP-01: N(P/M)~BNC(J/F) Adapter x 1  
ADP-02: N(P/M)~SMA(J/F) Adapter x 1

**GRA-404 Rack Adapter Panel**

Rack Mounting (19", 4U)

**GSC-001 Soft Carrying Case**

**GTL-301 RF Cable**

RG 223 N(P/M), 1000mm

**GTL-401 DC Power Cord**

DC power cord with DC Jack and lighter plug, Current 5A