

# Spectrum Analyzer



## 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)
- \* AC/DC/Battery Operation (Option)
- \* Compact Size and Light Weight at 4.5kg

### 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

### SPECIFICATIONS

<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, Delect, Undo Pass/Fail
Calibrate Signal	100MHz, -30dBm
Interface	RS-232C standard

<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
RS-232C	Sub-D 9 pins female

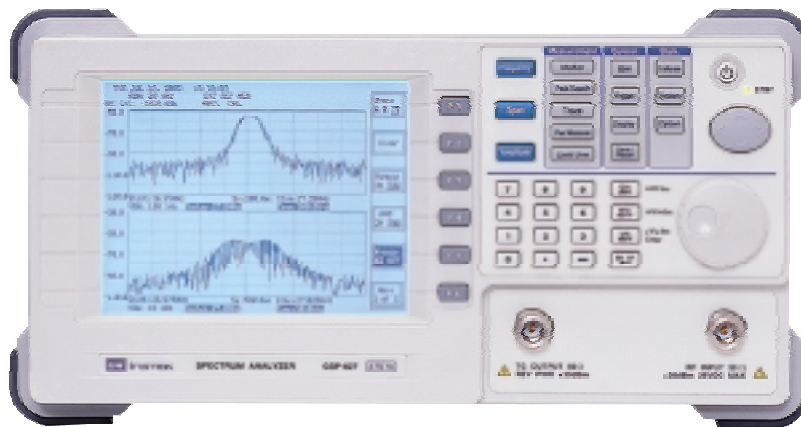
<b>POWER SOURCE</b>	AC 100 ~ 240V, 48 ~ 63Hz
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<b>ACCESSORIES</b>	Instruction manual x 1, Power cord x 1
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<b>DIMENSIONS &amp; WEIGHT</b>	330(W) x 170(H) x 340(D) mm, Approx. 4.5kg
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Note: Need to Collocate the Optional Accessories.

# Spectrum Analyzer



**GSP-827**

## ORDERING INFORMATION

**GSP-827** 2.7GHz Spectrum Analyzer

### Option

#### Opt. 01 Tracking Generator

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

**Opt. 02 AC/DC/Battery Operation with Battery pack**  
 AC 100V ~ 240V , DC 12V and 10.8V Li-Ion battery pack x 2)

**Opt. 03  $\pm 1$  ppm Stability**  
 $\pm 1$ ppm , 0 ~ 50°C,  $\pm 1$ ppm/yr

**Opt. 06 GPIB Interface**  
 IEEE 488 bus

**Opt. 07 Soft Carrying Case**  
 GSC-001

**Opt. 08 General Kit set**  
 ADP-002: adaptor, SMA(J/F) ~ N(P/M) x 2  
 ATN-100: 10dB attenuator, N(J) ~ N(P) x 1  
 GTL-303: RF cable assembly(SMA(P),RD316,600mm)x2  
 GSC-002: Kit box x 1

**Opt. 09 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)-N(J),300mm)x2  
 GSC-003: Kit box x 1

**Opt. 10 RLB Kit set**  
 GAK-001: termination 50  $\Omega$  , N(P) x 1  
 GAK-002: Cap with chain, N(P) x 1  
 GTL-302: RF cable assembly(RG223, N(P),300mm)x2  
 GSC-004: Kit box x 1

**Opt. 11 DC Power Line**  
 GTL-401: DC power cord with DC Jack and lighter plug, Current 5A

**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 (\*): Only one option could be selected among option 12 to 16 for any given GSP-827 unit.**