



W

Series

GPS Antenna



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Allis Communications Co., Ltd. GPS Antenna Specifications

**RoHS
Compliant**

Rev. 03/2007



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1. Electrical Specification

1.1 Electrical Data

Patch Antenna:

Frequency	1575.40 ± 3 MHz
VSWR	1.5 max.
Bandwidth	20MHz min. at -10dB
Axial Ratio	3dB typical
Impedance	50Ω
Peak Gain	4dBic min. at 0° (7cm x 7cm ground plane)
Gain Coverage	≥ -4dBic at -90° ≤ θ ≤ 90°(over 75% volume)
Power Handling	1 watt
Polarization	RHCP

Amplifier Module:

Model No.	Amplifier Gain without cable	Noise Figure	Output VSWR	DC Voltage	DC Current
W527R	27dB typical	2dB typical	2.0 max.	DC 5V to 12V	21±3mA
W540C	40dB typical	2dB typical		DC 4.5V to 5.5V	25±5mA
W827A	27dB typical	1.5dB typical		DC 3V to 5.5V	20±5mA

* Specifications subject to change without notice.

1.2 Gain Pattern

Test Equipment : NSI Spherical near-field measurement system

Type	Peak Gain (at 0°)	Axial Ratio (at 0°)	Voltage: 5V
W527R	28.3dB	2dB	
W540C	40.1dB	2dB	
W827A	27.6dB	1dB	

* Polar plot see appendix 2.

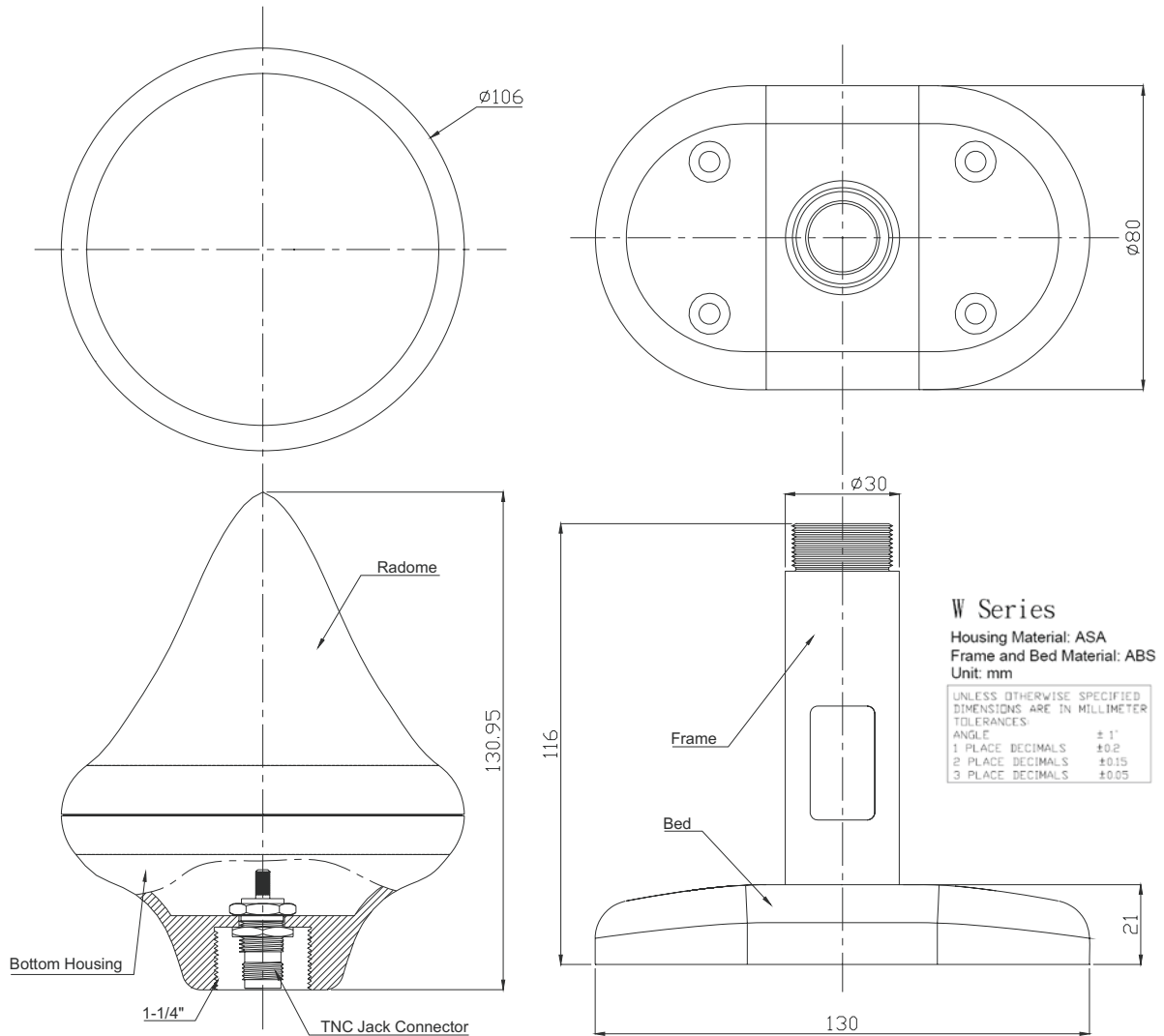
2. Mechanical Specifications

2.1 Mechanical Data

Item	Specification
Weight (Without Cable)	280 grams max.
Size	106mm Dia. x 235 mm
Connector	TNC Jack (Female)
Label	See 3.6
Mounting	1" X 14 Thread male
Housing Color	White



2.2 Dimensions





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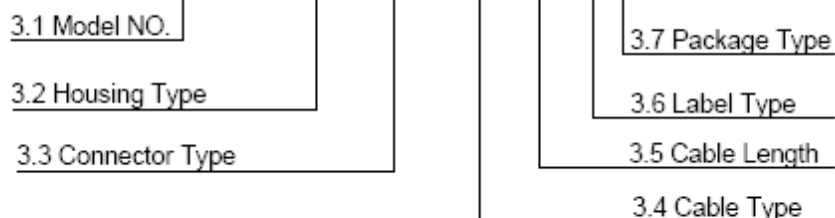
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3. Ordering Information

Item No.

XXXXX-SWFGWXLXXX



3.1 Model No. Item No.: XXXXX-SWFGWXLXXX

Model No.	Amplifier Gain without cable	Noise Figure	Output VSWR	DC Voltage	DC Current
W527R	27dB typical	2dB typical	2.0 max.	DC 5V to 12V	21±3mA
W540C	40dB typical	2dB typical		DC 4.5V to 5.5V	25±5mA
W827A	27dB typical	1.5dB typical		DC 3V to 5.5V	20±5mA

* Specifications subject to change without notice.

3.2 Housing Type Item No.: XXXXX-SWFGWXLXXX

NO.	Specification
SW	White

* "S" means RoHS, please see appendix 1

3.3 Connector Type Item No.: XXXXX-SWFGWXLXXX

NO.	Specification
FG	TNC Jack

3.4 Cable Type Item No.: XXXXX-SWFGWXLXXX

NO.	Specification
WX	Without Cable

3.5 Cable Length Item No.: XXXXX-SWFGWXLXXX

NO.	Length
LX	Without Cable



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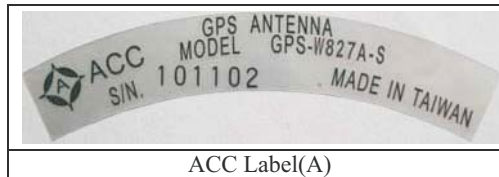
Rev. 04/2007



3.6 Label Type

Item No.: XXXXX-SWFGWXLXXX

NO.	Specification	NO.	Specification
X	Without Label	C	Customer Label
A	ACC Label		



ACC Label(A)

3.7 Package Type

Item No.: XXXXX-SWFGWXLXXX

NO.	Specification	NO.	Specification
S	Standard	C	Non-Standard

Standard





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4. Appendix

4.1 Appendix 1: W Series RoHS Report

Component	Original Report No.	Report refer to	Cadmium (Cd)	Lead(Pb)	Mercury (Hg)	Hex.Chromium (Cr+6)	PBB	PBDE
Patch antenna	ET940-02-013	Taiwan ETC	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	SHEC0051237898-1	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
	SHEC0050719293-1	SGS Ltd.	N.D.	6.0 N.D.	N.D.	N/A	N/A	
	GZ050606340EC-2.	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
	GZ050606340EC-2.	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
Housing	CE/2005/C5096	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Frame and Bed	CE/2005/74220	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
Silicon Rubber Packing	CE/2005/42477	SGS Ltd.	N/A	N.D.	N.D.	N.D.	N.D.	N.D.
	CE/2005/44452	SGS Ltd.	N.D.	N/A	N/A	N/A	N/A	N/A
Shield	CE/2005/90520	SGS Ltd.	N.D.	13.0 N.D.	N.D.	N/A	N/A	
	CE/2004/A2010	SGS Ltd.	N.D.	64.6	N.D.	N.D.	N/A	N/A
	CE/2005/31757	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
Screw	CE/2004/C5772	SGS Ltd.	N/A	N/A	N/A	N/A	N.D.	N.D.
	CE/2004/B1320	SGS Ltd.	N.D.	86.9 N.D.	N.D.	N.D.	N.D.	
	C418489	Intertek Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
PCB SMT	CE/2005/72610	SGS Ltd.	N/A	N/A	N/A	N/A	N.D.	N.D.
	CE/2004/B2398	SGS Ltd.	N.D.	12.70	N.D.	N.D.	N/A	N/A
PCB	CE/2005/63784	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	CE/2005/63784A	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Filter	ET940-02-013	Taiwan ETC	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	SH304686/CHEM	SGS Ltd.	N.D.	40.0 N.D.	N.D.	N/A	N/A	N/A
Transistor	CE/2004/83087	SGS Ltd.	N.D.	33.9 N.D.	N.D.	N.D.	N.D.	
Capacitor	CE/2005/21030	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Resistor	KA/2005/70988	SGS Ltd.	N/A	10.80 N/A	N/A	N/A	N/A	
	KA/2005/70978	SGS Ltd.	N/A	N/A	N/A	59.3 N/A	N/A	
	KA/2005/70989	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
LNA IC	LPCE/2373/04	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
	CE/2004/30804	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
	M/0026B/04	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
	4U07059A	NABBIR Lab.	0.70	5.39	0.02	4.41	N/A	N/A
			0.04	2.39	0.05	1.97	N/A	N/A
1.64			1.52	0.03	0.71	N/A	N/A	
0.44	0.36	0.14	3.29	N/A	N/A			
Solder	CE/2004/C0246A	SGS Ltd.	N.D.	327.0	N.D.	N.D.	N/A	N/A
Connector	CE/200483645	SGS Ltd.	N.D.	3751.8	N.D.	N.D.	N/A	N/A
	CE/200480306	SGS Ltd.	37.7	26092.0	N.D.	N.D.	N/A	N/A
	CE/2004/30164	SGS Ltd.	N.D.	N.D.	N.D.	36.3	N/A	N/A
	CE/2004/83004A	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	CE/2004/30165	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
	CE/2004/11176	SGS Ltd.	N.D.	16.7 N.D.	N.D.	N/A	N/A	
Cartons	CE/2004/51058A	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A
	CE/2004/A0493C	SGS Ltd.	N.D.	17.2 N.D.	N.D.	N/A	N/A	
	CE/2004/A0490C	SGS Ltd.	N.D.	16.2 N.D.	N.D.	N/A	N/A	
PE Bag	CE/2005/94309	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
	CE/2004/C1701	SGS Ltd.	N.D.	N.D.	N.D.	N.D.	N/A	N/A

N.D. :None detect

N/A :Not available

Results: Compliant with 2005/618/EC Article



4.2 Appendix 2: Gain Patterns

Test Equipment: NSI Spherical near-field measurement system

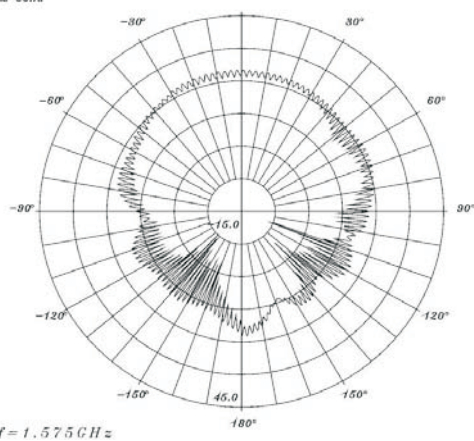
W527R

DC Voltage: 5V
DC Current: 21.6mA

Polar plot

File: ant.dat
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Axial Ratio: 2dB
Peak Gain: 28.3dB



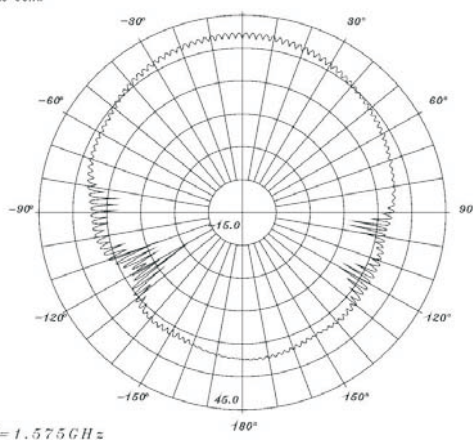
W540C

DC Voltage: 5V
DC Current: 26.2mA

Polar plot

File: ant.dat
Allis Com.

Axial Ratio: 2dB
Peak Gain: 40.1dB



W827A

DC Voltage: 5V
DC Current: 20.1mA

Polar plot

File: ant.dat
Allis Com.

Axial Ratio: 1dB
Peak Gain: 27.6dB

