

ALLISCOM

GC Series

GPS/Cellular/Wi-Fi Antenna

Data Sheet



Model No. GC Series

Features Delivers high performance for
GPS /GSM / DCS / PCS / WCDMA /Wi-Fi
1575.42MHz/ 824~960/ 1710~2170MHz/ 2.4G
RoHS Compliant

Benefits Resistant to harsh outdoor environment
High Performance
Concealable, Flat structure
Omni directional for cellular system

Description The GC Series is a high performance and quality antenna for GPS / Cellular/ Wi-Fi applications. The antenna features high efficiency. The RF connector and cable length can be customized as required.

1. Electrical Specifications

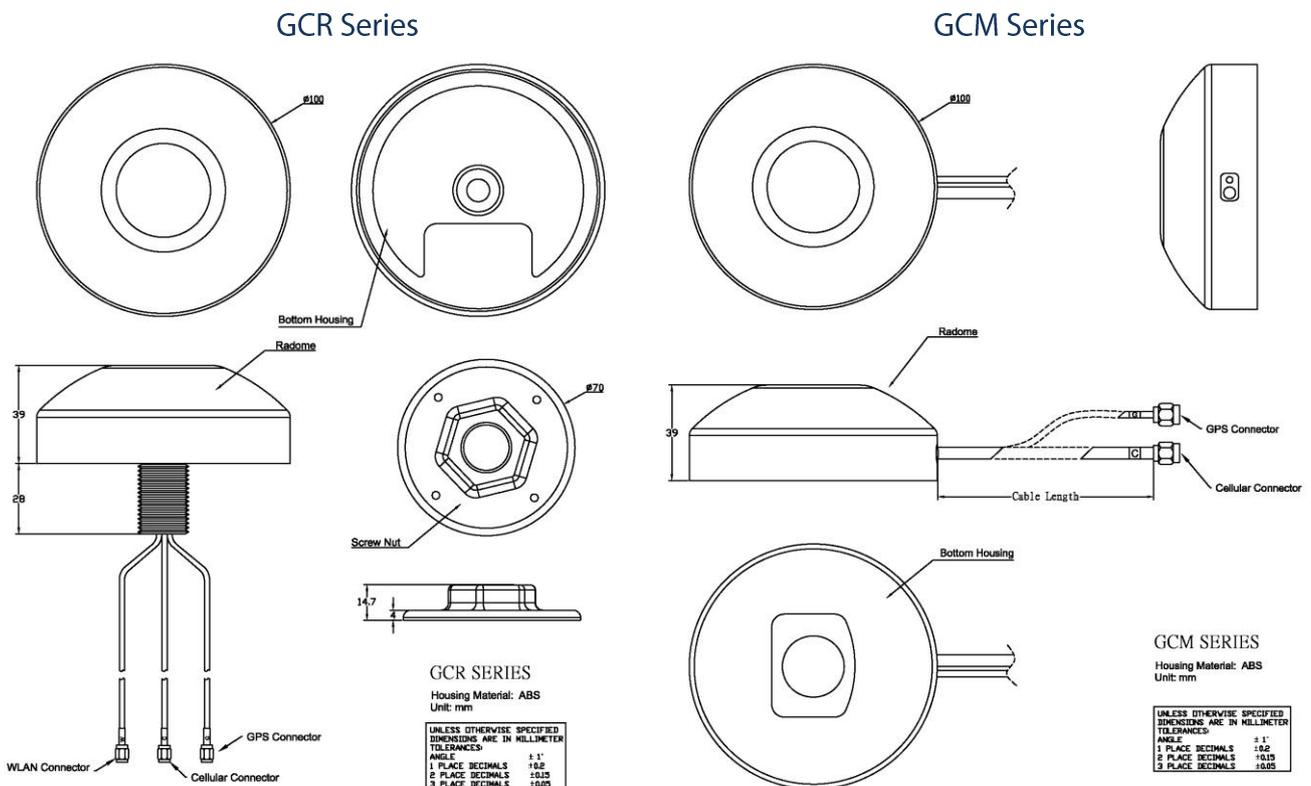
GPS Active Antenna:					
Patch Antenna					
Frequency	1575.42 ± 3 MHz				
VSWR	1.5 Max				
Bandwidth	20 MHz Min. at -10 dB				
Axial Ratio	3 dB Typical				
Impedance	50 Ω				
Peak Gain	4 dBic Min. (7 cm×7 cm ground plane)				
Gain Coverage	≥ -4dB at -90° ≤ θ ≤ 90°(over 75% volume)				
Polarization	RHCP				
Amplifier Module					
Type	Amplifier Gain without cable	Noise Figure	Output VSWR	DC Voltage	DC Current
A	27dB Typical	1.4dB Typical	2.0 Max.	DC 3.0V to 5.5V	22±5mA
B		1.8dB Typical		DC 2.7V to 6.0V	8.5±4.5mA
Cellular Antenna:					
Frequency	AMPS 804~896MHz	GSM 880~960MHz	Cellular 824~960MHz 1710~1880MHz 1850~1990MHz 1920~2170MHz		
VSWR	2.0 : 1				
Impedance	50Ω				
Pattern Type	Omni-direction				
Power Handling	25 watt				
Wi-Fi Antenna:					
Frequency	2.4~2.4835GHz				
VSWR	2.0 : 1				
Peak Gain	2.5dBic				
Impedance	50Ω				
Pattern Type	Omni-direction				
Power Handling	25 watt				

2. Mechanical Specification

2.1 Mechanical

Item	Specification
Weight (Without Cable)	280 grams Max.
Housing Material	ABS
Size	100mm Dia.x 39mm
Mounting	Permanent mount or Magnetic base
Housing Color	White
Waterproof	IP56

2.2 Dimension



3. Gain Patterns and VSWR

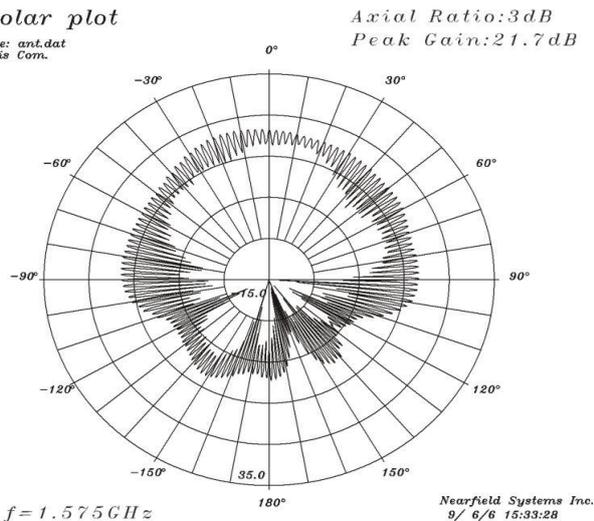
Test Equipment : NSI Spherical near-field measurement system
HP8722D Network analyze

● GPS Type A

Test Voltage : 5V
Cable length: 5m
Cable loss \approx 6dB

Polar plot

File: ant.dat
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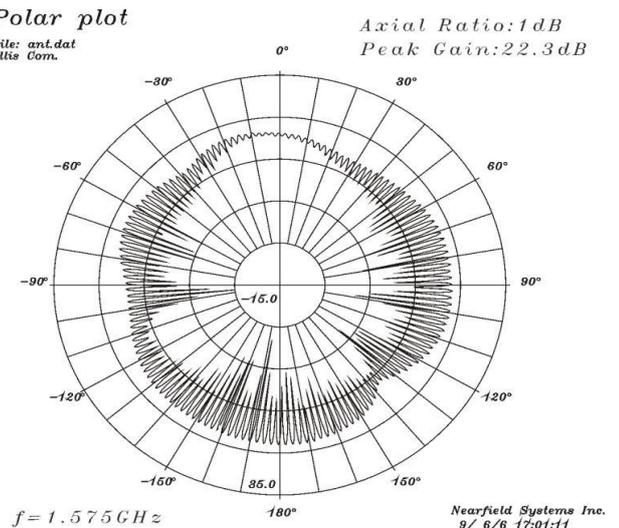


● GPS Type B

Test Voltage : 5V
Cable length: 5m
Cable loss \approx 6dB

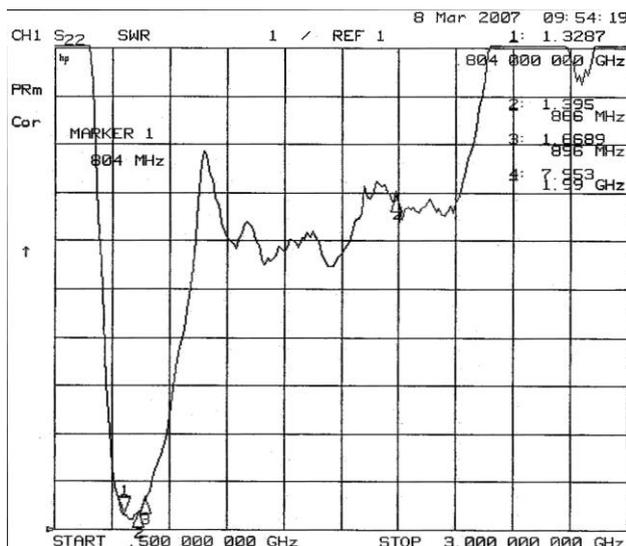
Polar plot

File: ant.dat
Allis Com.



● AMPS(804~896MHz)

VSWR:

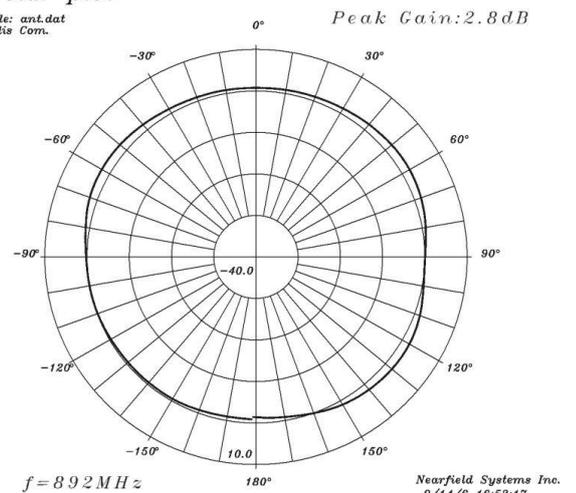


Gain Pattern:

Cable length: 24cm Cable loss \approx 1dB

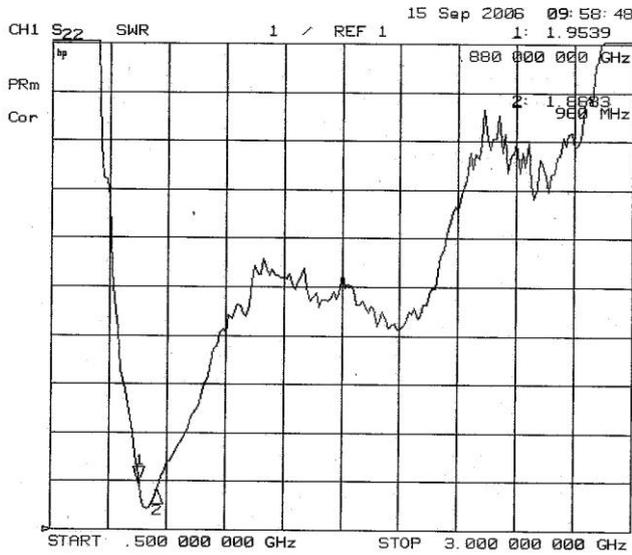
Polar plot

File: ant.dat
Allis Com.



● **GSM(880~960MHz)**

VSWR:



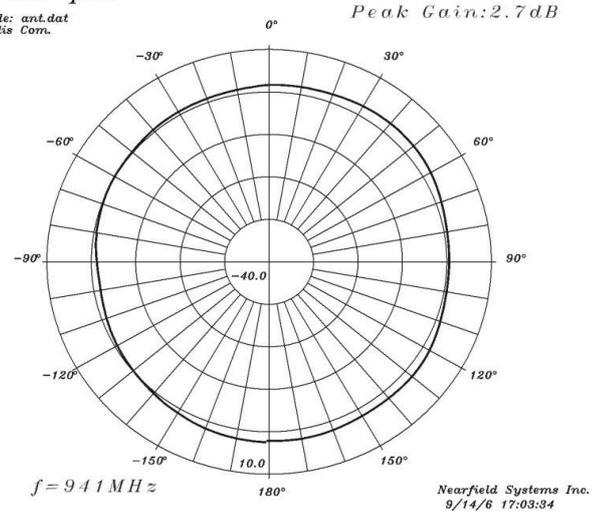
Gain Pattern:

Cable length: 24cm

Cable loss \approx 1dB

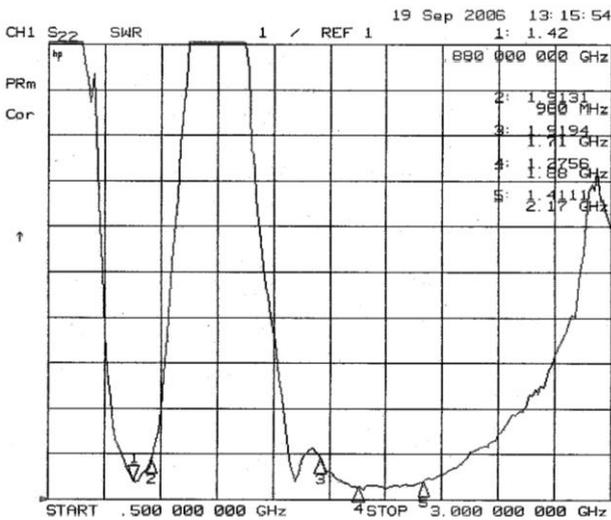
Polar plot

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● **Cellular (824~960MHz ,1710~1880MHz ,1880~1990MHz ,1920~2170MHz)**

VSWR:



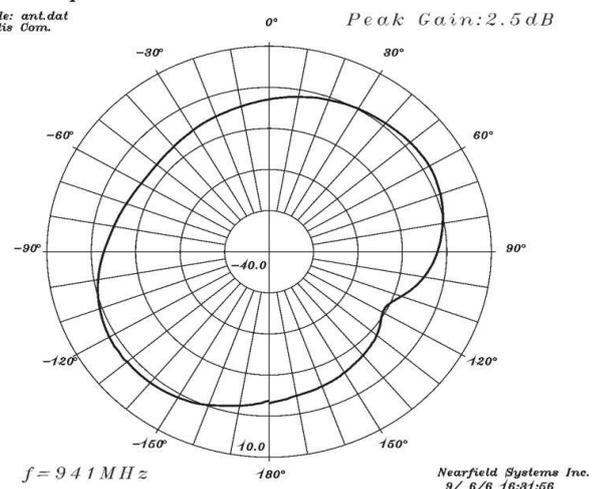
Gain Pattern:

Cable length: 24cm

Cable loss \approx 1dB

Polar plot

File: ant.dat
Allis Com.



Gain Pattern:

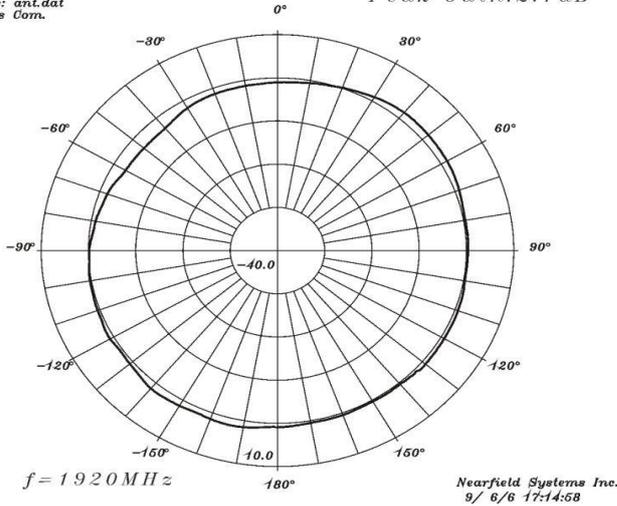
Cable length: 24cm

Cable loss \approx 1dB

Polar plot

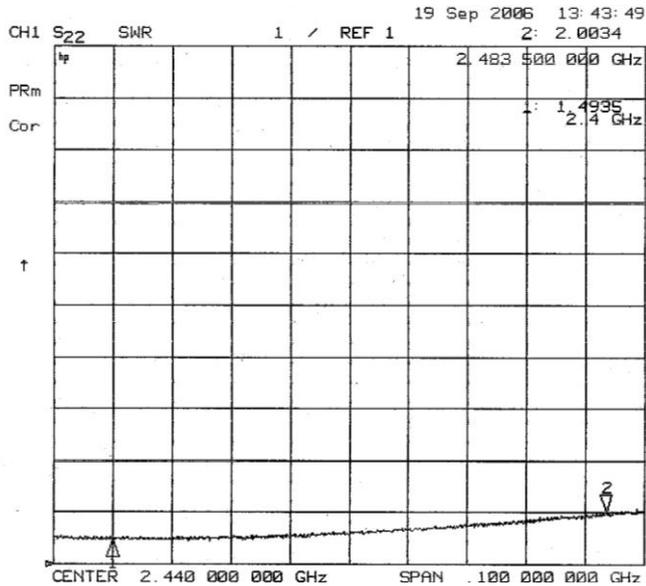
File: ant.dat
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Peak Gain: 2.7dB



● **Wi-Fi(2.4~2.4835GHz)**

VSWR:



Gain Pattern:

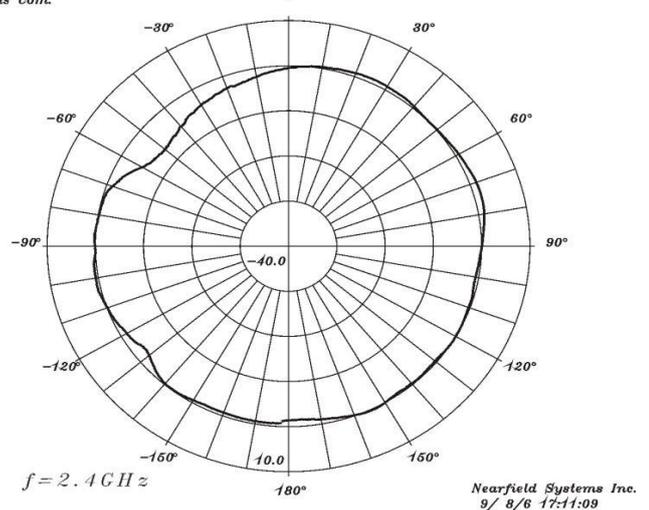
Cable length: 24cm

Cable loss \approx 1dB

Polar plot

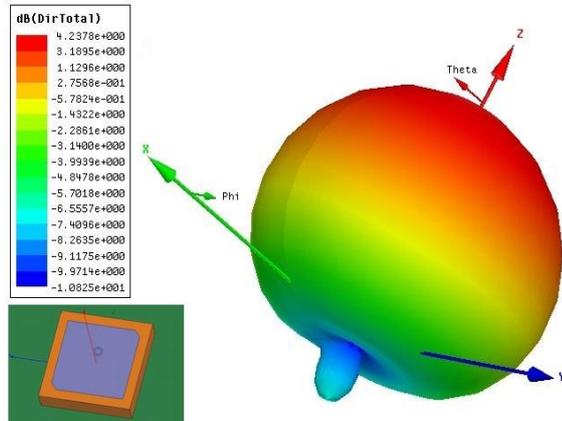
File: ant.dat
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Peak Gain: 2.5dB



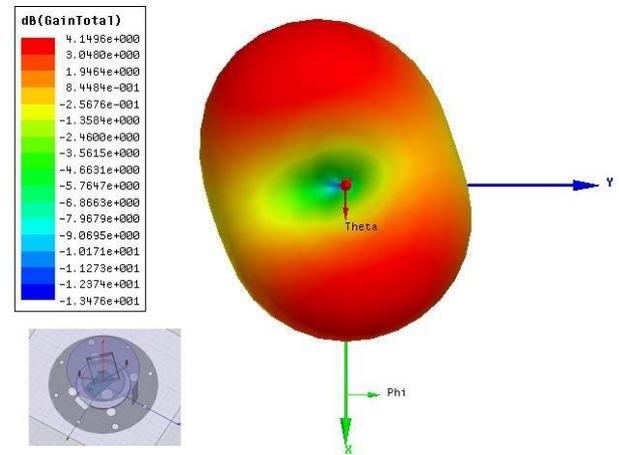
● Patch Antenna simulation

Frequency: 1.575GHz



● GC Series Antenna simulation

Frequency: 941MHz



4. Model NO. Information

Type	Model NO.	GPS Type		AMPS 804~896MHz	GSM 880~960MHz	Cellular 824~960MHz 1710~1880MHz 1850~1990MHz 1920~2170MHz	Wi-Fi 2.4~2.4835GHz
		A	B				
Dual-Band Antenna	GCMDA	√		√			
	GCMDC	√			√		
	GCRDA	√		√			
	GCRDC	√			√		
Tri-Band Antenna	GCMTA	√				√	
	GCMTB		√			√	
	GCRTA	√				√	
	GCRTB		√			√	
Four-Band Antenna	GCRFA	√				√	√
WiFi Only	GCRWF						√

GPS Type	Amplifier Gain without cable	Noise Figure	Output VSWR	DC Voltage	DC Current
A	27dB Typical	1.4dB Typical	2.0 Max.	DC 3.0V to 5.5V	22±5mA
B		1.8dB Typical		DC 2.7V to 6.0V	8.5±4.5mA