

ALLISCOM

GPS/Cellular/Wi-Fi Antenna

Data Sheet



Model No. FLMTA/FLMFA

Feature **Combination**
Easy to install
Low Profile

Benefit **High Performance**
Concealable
GPS/GSM/WiFi/ZigBee

Description **The antenna is a powerful combination of a 27dB GPS and an Wi-Fi 2.4GHz, made suitable also for ZigBee solutions. It can be placed on glass or covertly anywhere in the automobile interior. Cables and connectors are fully customizable.**

1. Electrical Specifications

1.1 Patch Antenna

Frequency	1575.42 ± 3 MHz
VSWR	1.5 max.
Bandwidth	20MHz min. at -10dB
Axial Ratio	3dB typical
Impedance	50Ω
Peak Gain	4dBic min. (7cm x 7cm ground plane)
Gain Coverage	≥ -4dBic at -90° ≤ θ ≤ 90°(over 75% volume)
Polarization	RHCP

1.2 Amplifier Module

Amplifier Gain without cable	Noise Figure	Output VSWR	DC Voltage	DC Current
27dB Typical	1.8dB Typical	2.0 Max.	DC 2.7V to 6.0V	8.5±4.5mA

1.3 Cellular Antenna

Frequency	824~960MHz	1850~1990MHz
Peak Gain	4dBi Typical	3dBi Typical
VSWR	2.0:1	
Impedance	50Ω	
Pattern Type	Omni-direction	

1.4 Wi-Fi Antenna (**only for FLMFA**)

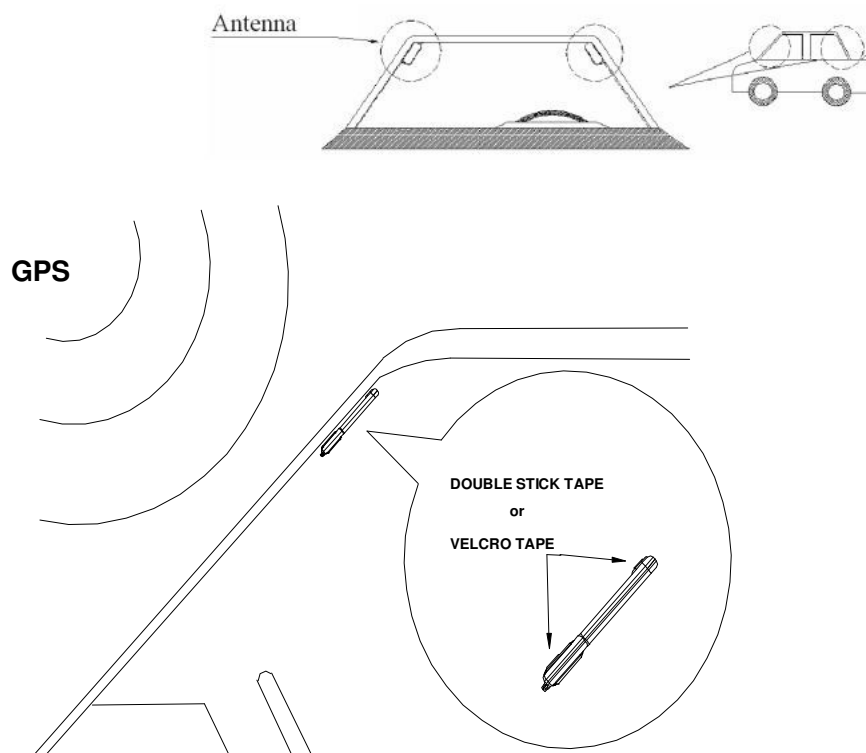
Frequency	2.4~2.4835GHz
Peak Gain	3dBi Typical
VSWR	2.0:1
Impedance	50Ω
Pattern Type	Omni-direction

2. Mechanical Specification

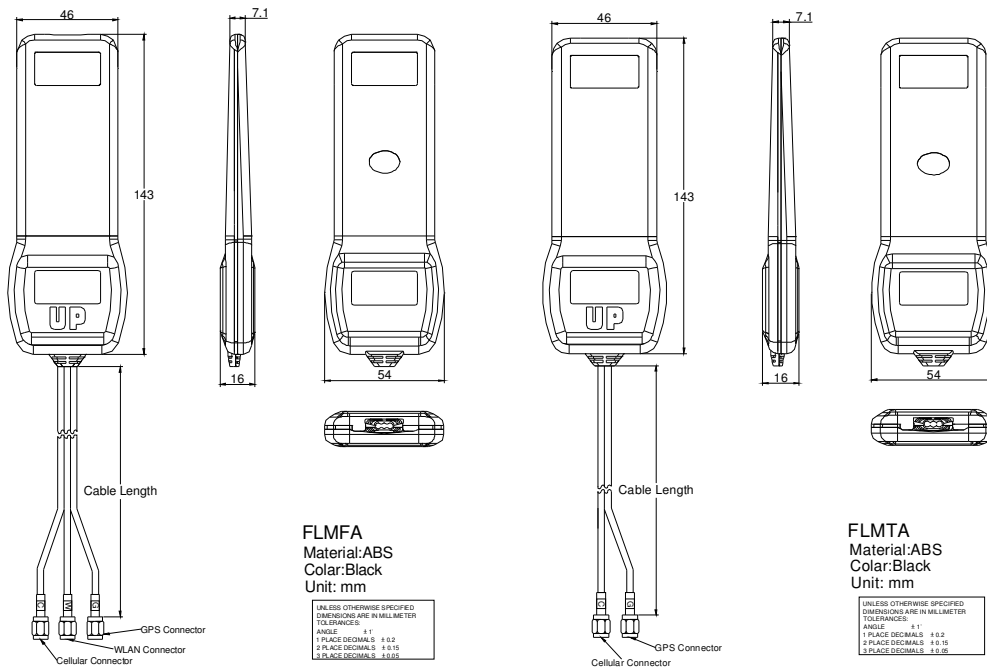
2.1 Mechanical

Item	Specification
Housing Material	Top: ABS Bottom: ABS
Weight (Without Cable)	56 grams max.
Size	143mm x 54mm x 16mm
Mounting	Double stick tape
Housing Color	Black
Waterproof	Indoor Applications

2.2 Installation Location



2.3 Dimensions



3. Appendix: Gain Patterns

Test Equipment : NSI Spherical near-field measurement system

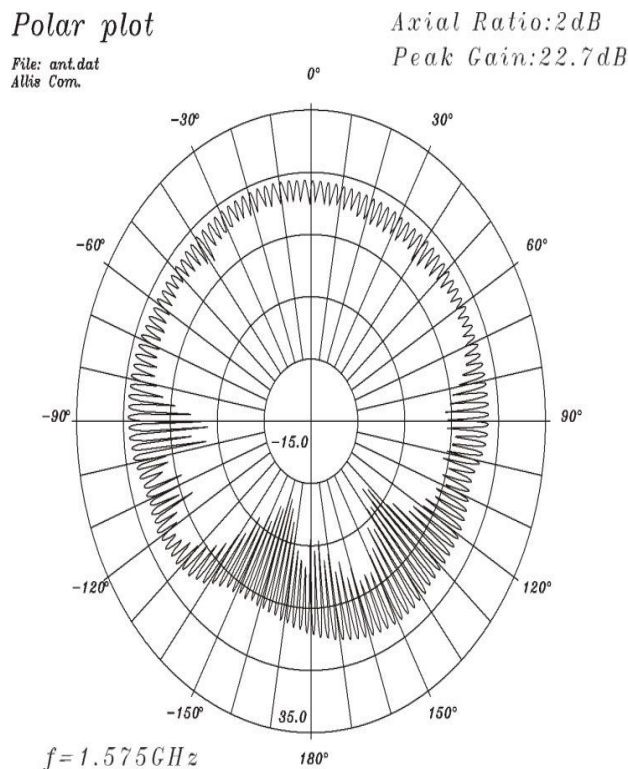
HP8722D Network analyzer

- GPS**

Test Voltage : 5V

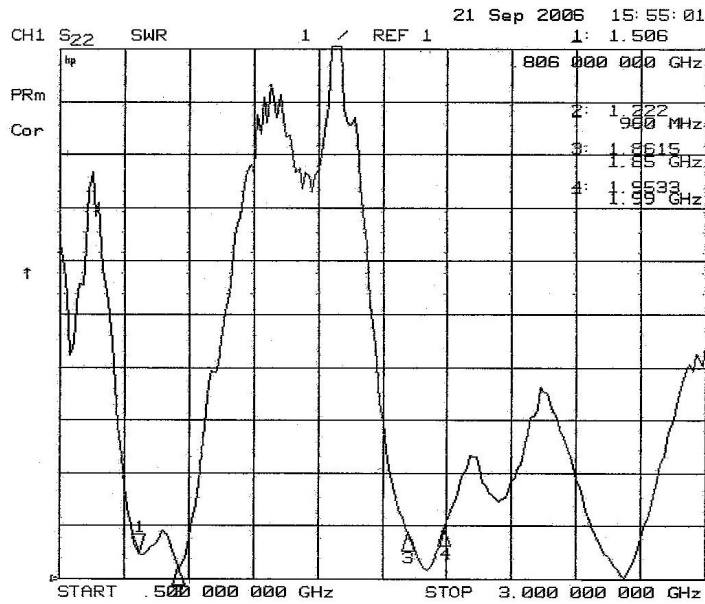
Cable length: 5m

Cable loss \approx 6dB



● Cellular(824~960MHz 1850~1990MHz)

VSWR:

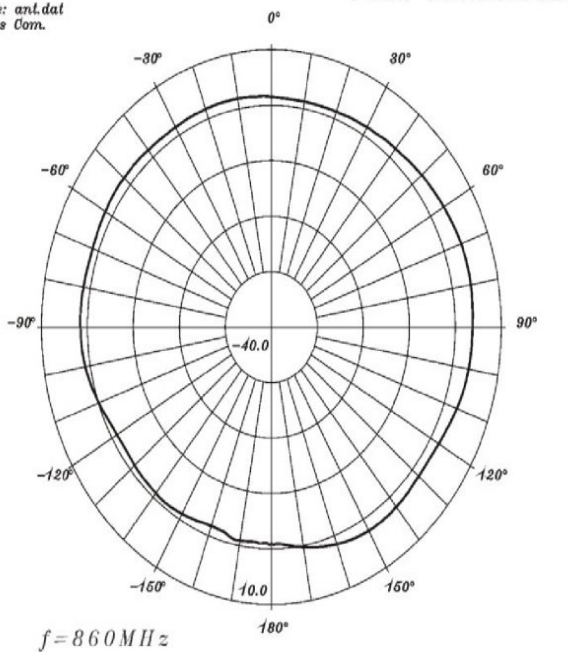


Gain Pattern:

Cable length: 24cm Cable loss \approx 1dB

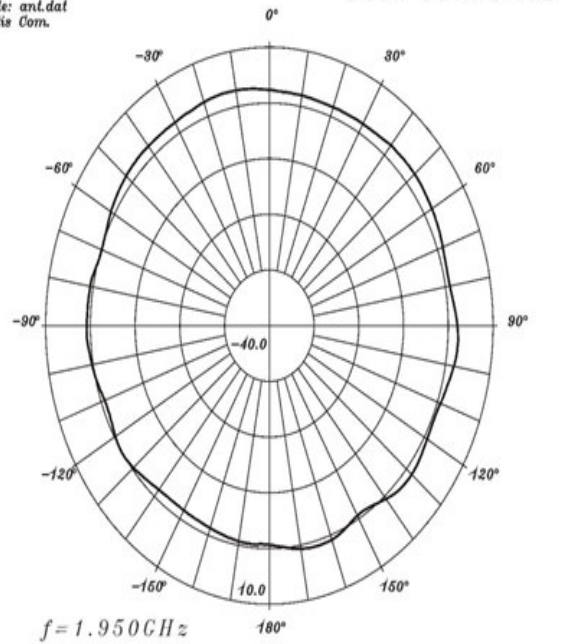
Polar plot

File: anl.dat
Allis Com.



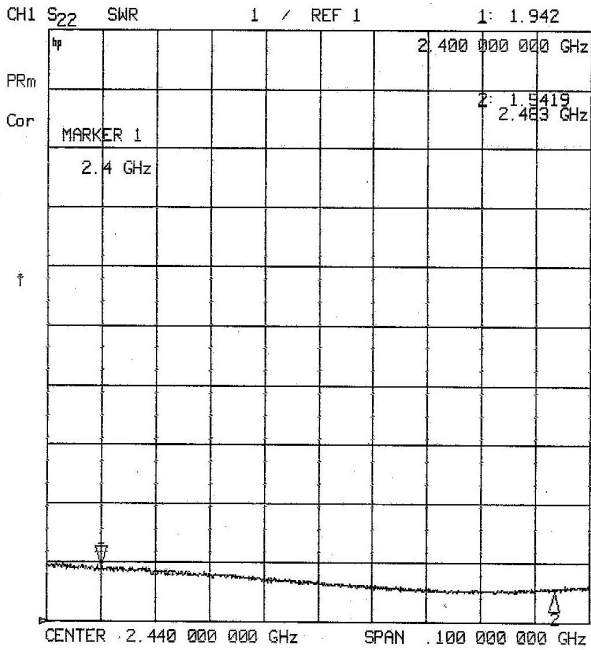
Polar plot

File: anl.dat
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- **Wi-Fi(2.4~2.4835GHz)**

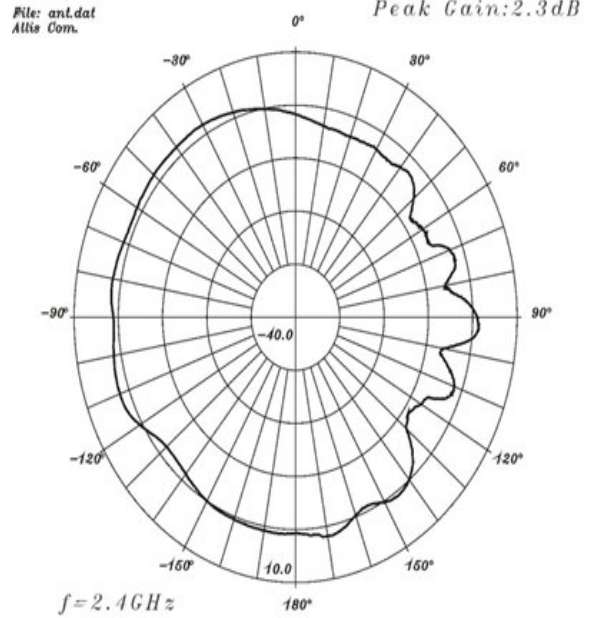
VSWR:



Gain Pattern:

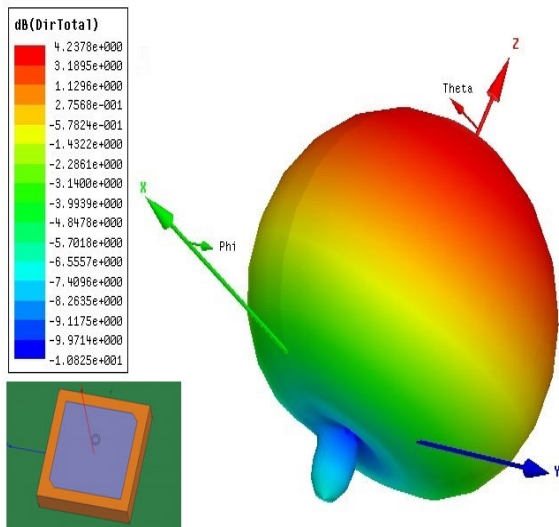
Cable length: 24cm Cable loss \approx 1dB

Polar plot



- **Patch Antenna simulation**

Frequency: 1.575GHz



- **FLMTA/FLMFA Antenna simulation**

Frequency: 860MHz

