Amphenol-Socapex

TELECOM BUSINESS UNIT
Antennas Activity

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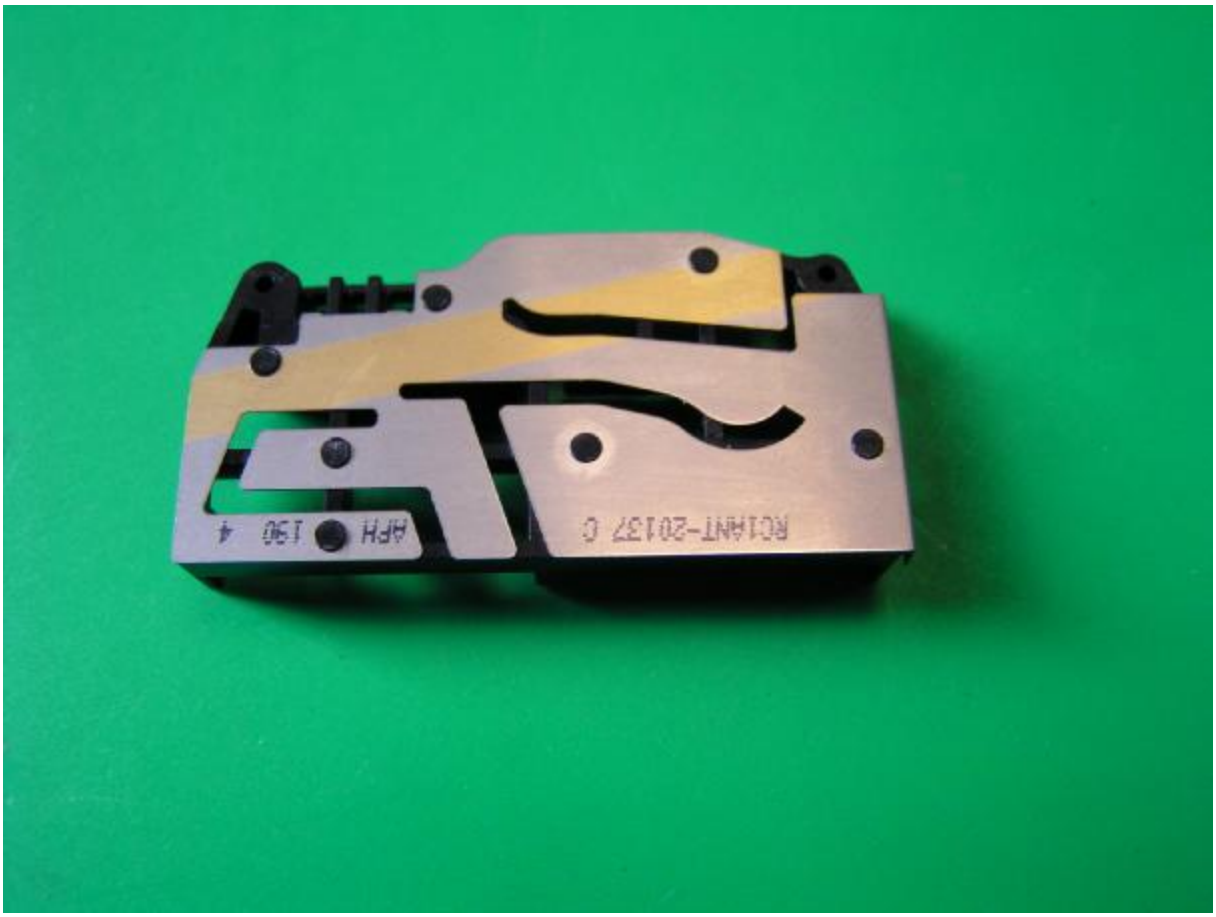
ANTENNA PRODUCT



GSM 850/900 _ 1800 MHz
Quad Band internal antenna
for Ricola Cellular PC card

UMTS 1900/2100

OPTION

Specification
File under Antenna Products, 3E 542 01

2004 July 8

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Features

- This quad-band internal antenna has been designed using Amphenol patented technology, providing superior efficiency and gain directivity in a very small volume.
- Designed for GSM and UMTS frequency bands (multiband operation)
- Omni directional
- PIFA technology
- One plastic support antenna and only two contacts (feeder & short circuit).

Electrical Specifications

Frequency range	825 MHz - 890 MHz AMPS 880 MHz – 960 MHz EGSM 1.71 GHz – 1.88 GHz DCS 1.91 GHz – 1.99 GHz UMTS FDD 2110 MHz – 2170 MHz UMTS FDD
Nominal Impedance	50 Ohms
Peak Gain	1 to 4 dBi
Radiation pattern	Omni-directionnal
Polarization	Linear

VSWR	< 3.14 :1 across all bands

Connector Type

2 flexible contacts

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Mechanical Specifications

Radiating Element Size without radome	46 x 22 x 6.2 mm

Physical Mass

3 grams

Temperature Range

-40° C to +80° C

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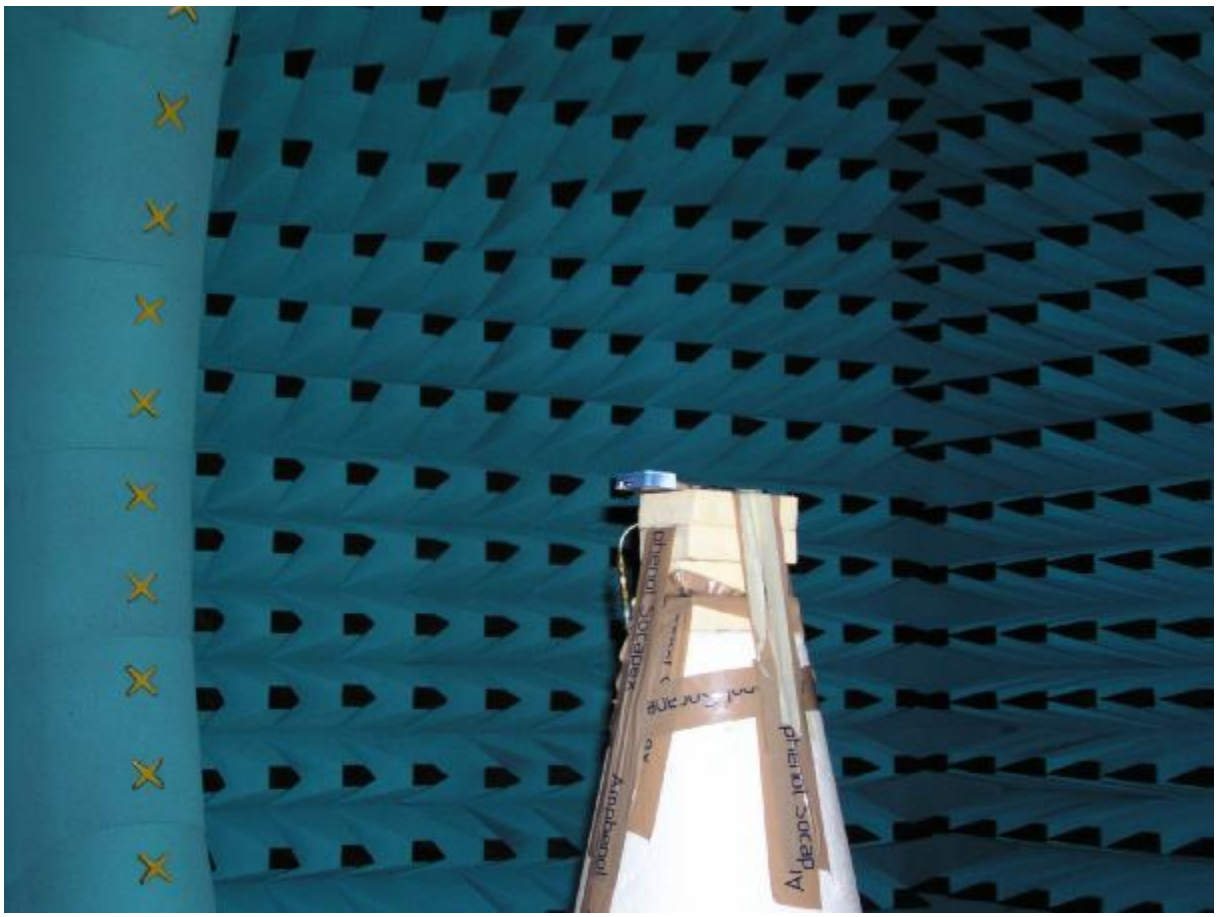

Figure I: Ricola Cellular PC card in horizontal position during the measurements in anechoïc chamber.

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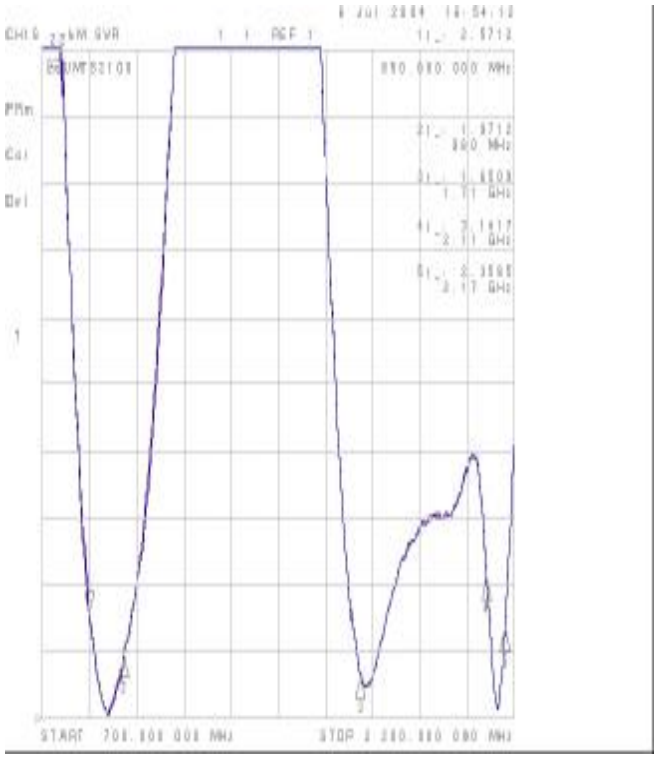
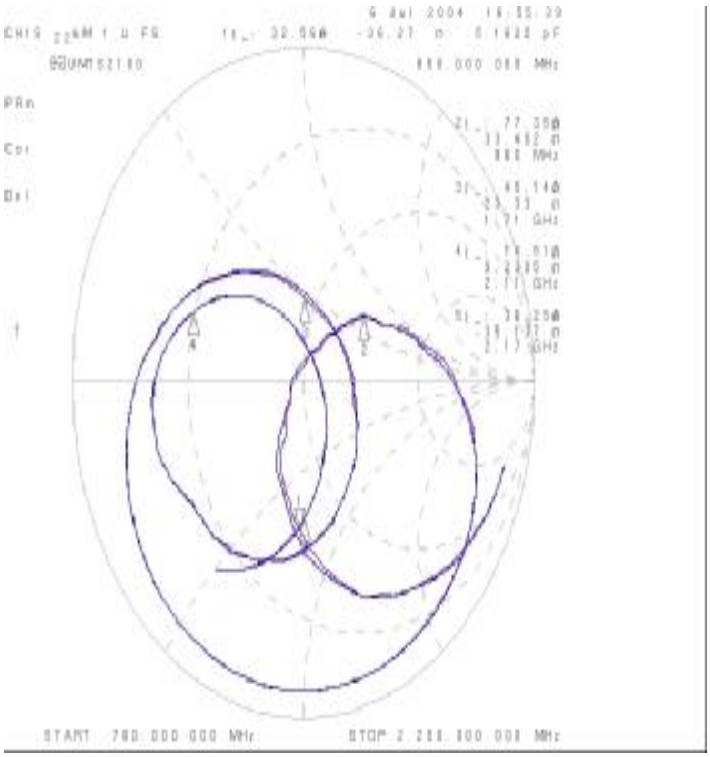


- VSWR graph.



- Smith chart.

Figure II : Electrical characteristics
VSWR & Smith chart.

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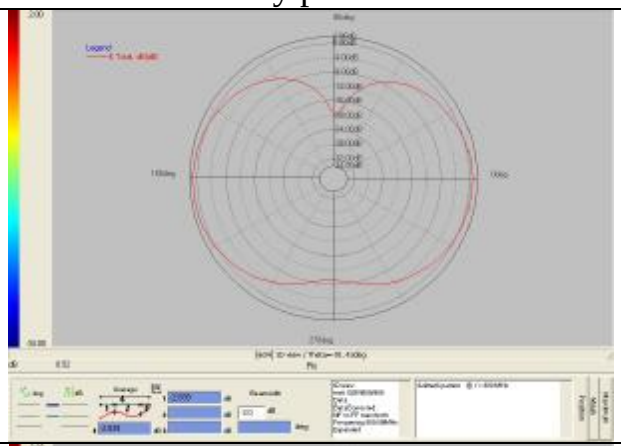
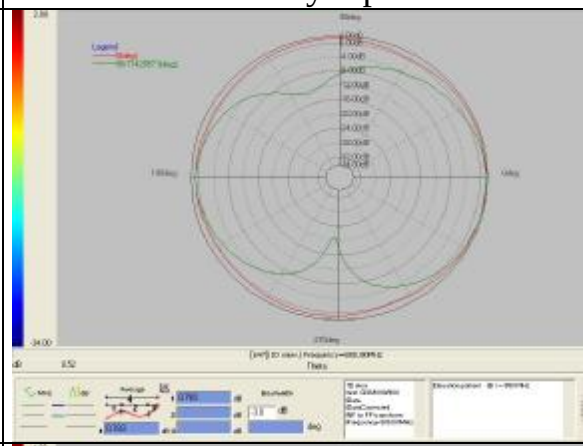
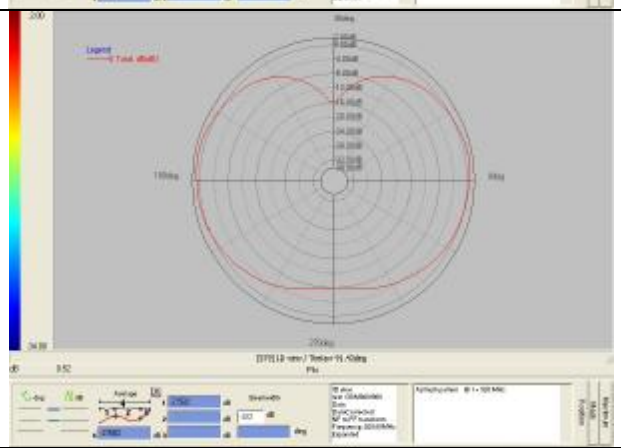
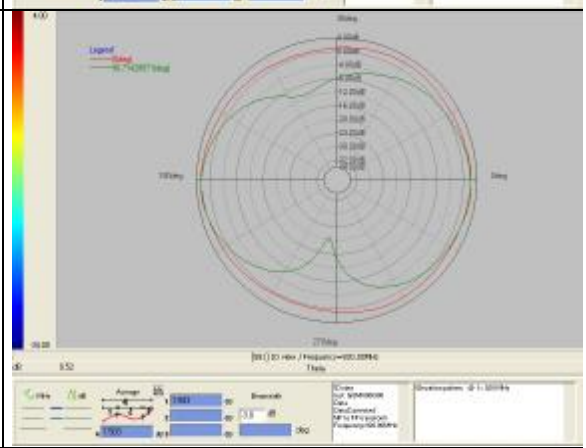
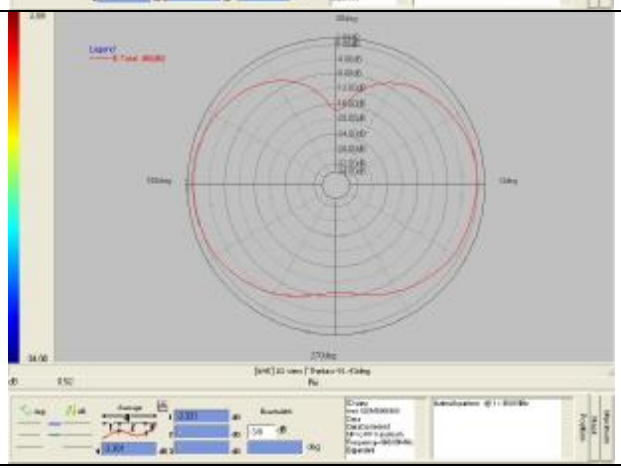
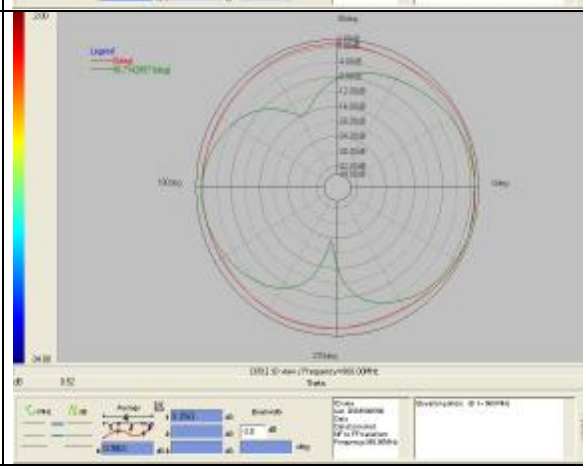
Radiation Pattern Polar Plot

EGSM 900

Plane	x-y plane	x-z and y-z plane
880MHz		
920MHz		
960MHz		

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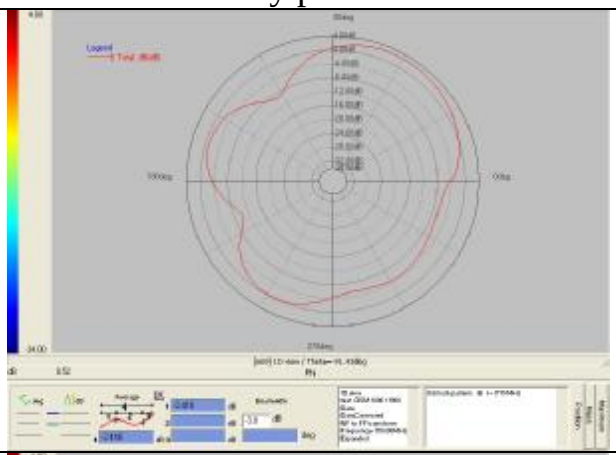
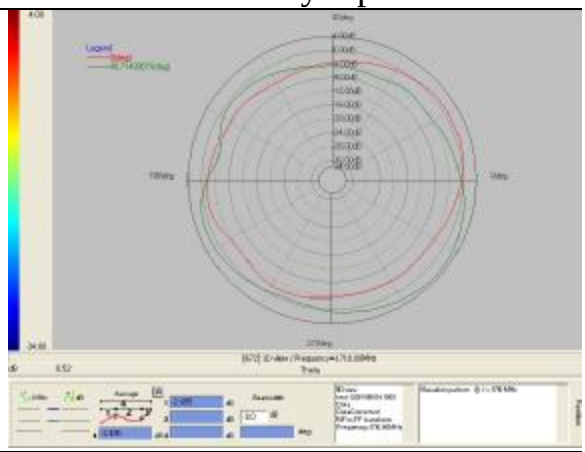
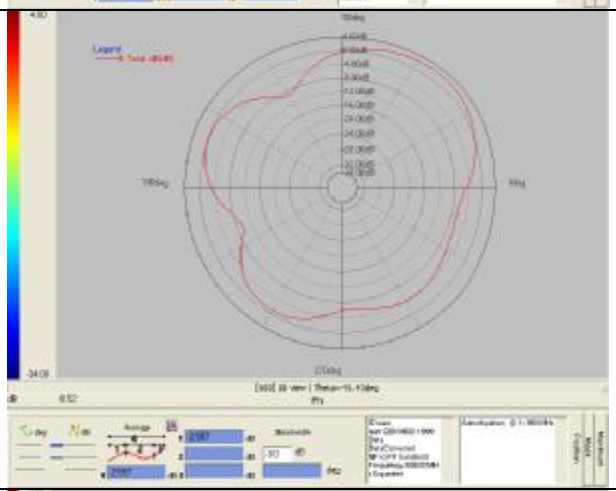
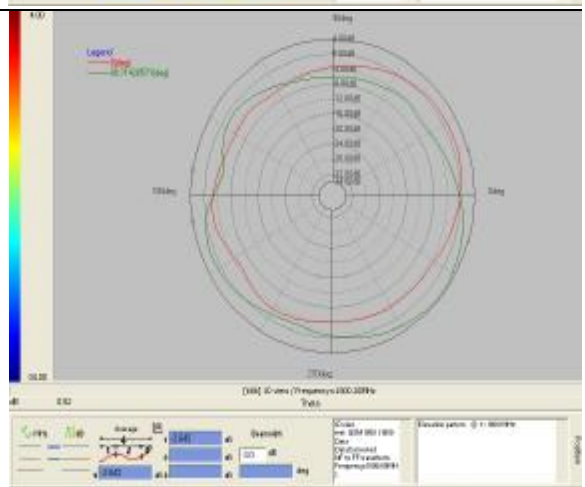
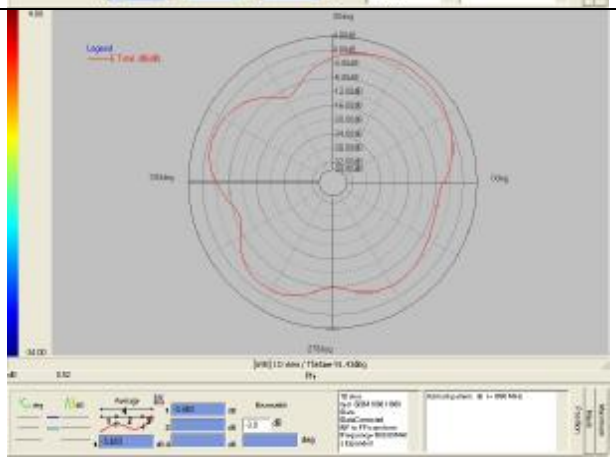
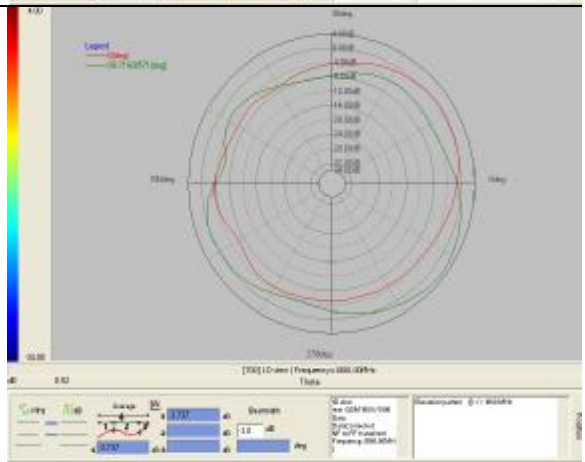
GSM 1800 DCS Frequency band

Plane	x-y plane	x-z and y-z plane
1710MHz		
1800MHz		
1880MHz		

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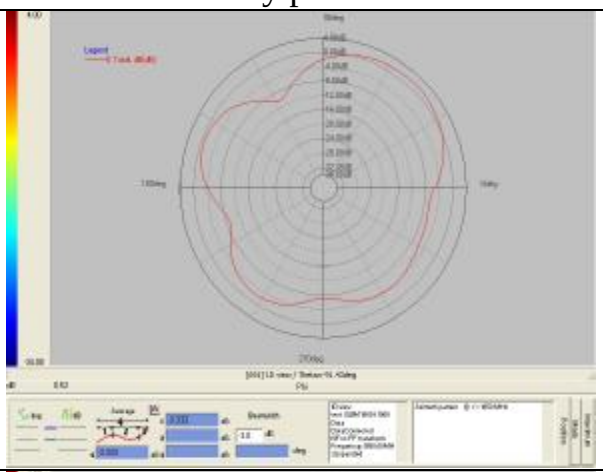
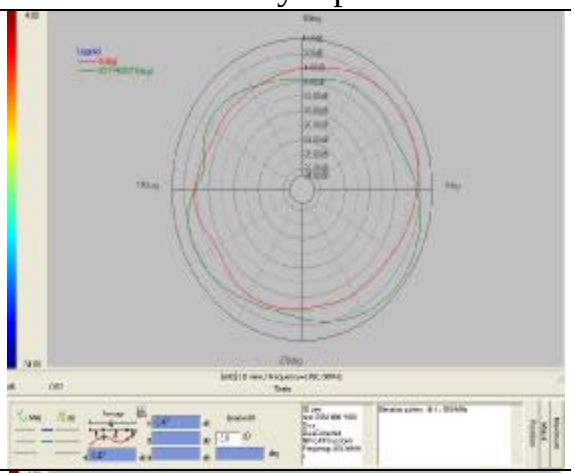
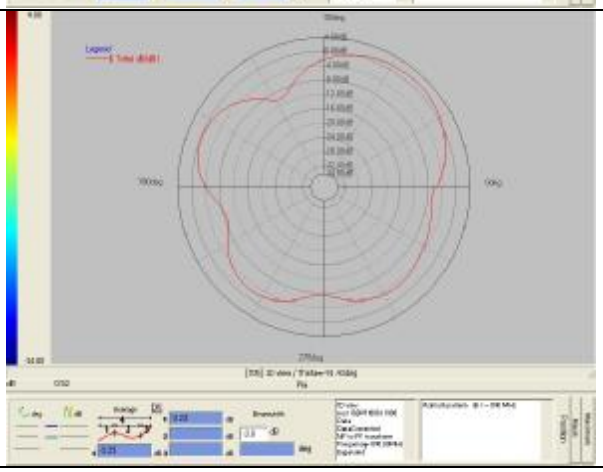
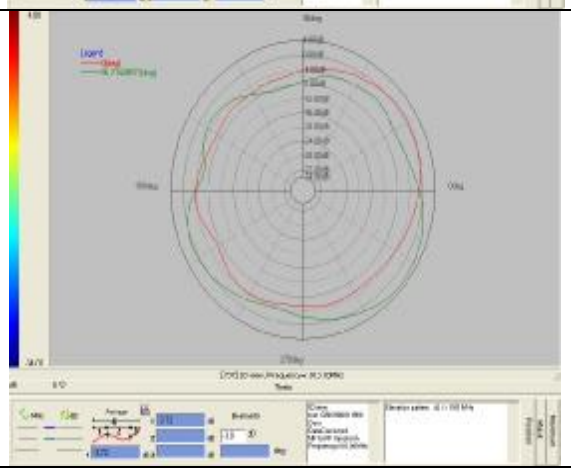
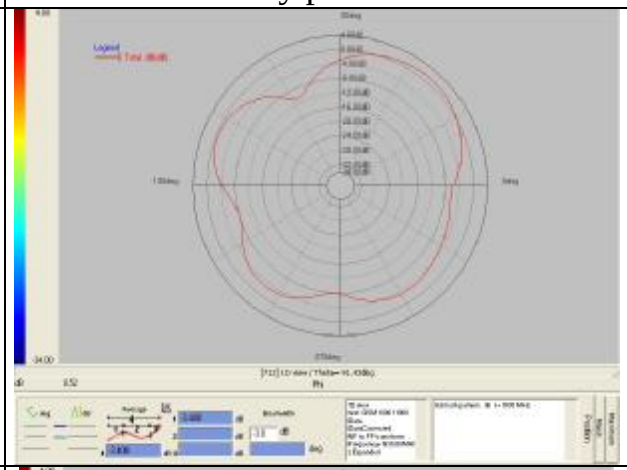
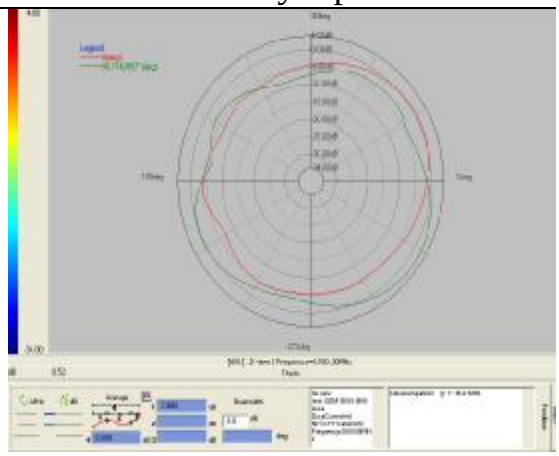
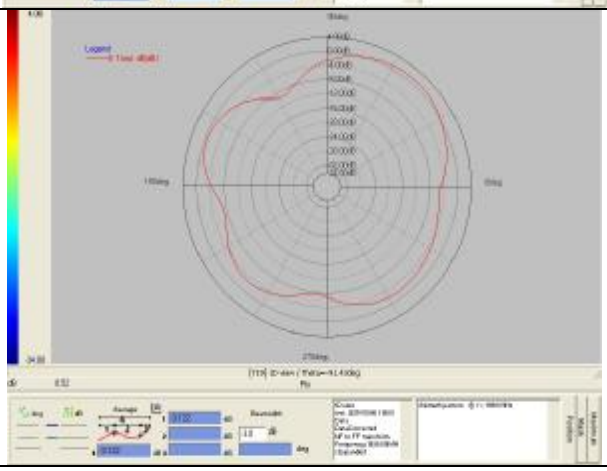
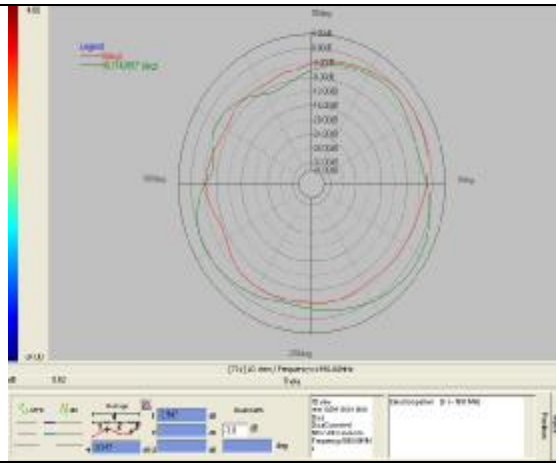
UMTS1900 Frequency band UL

Plane	x-y plane	x-z and y-z plane
1850MHz		
1910MHz		

UMTS2100 Frequency band UL

Plane	x-y plane	x-z and y-z plane
1930MHz		
1990MHz		

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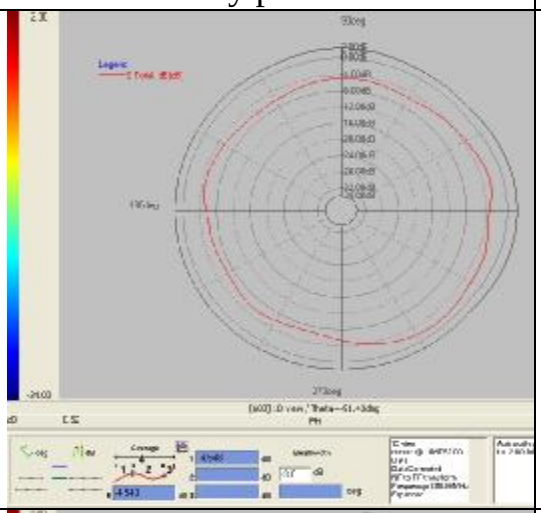
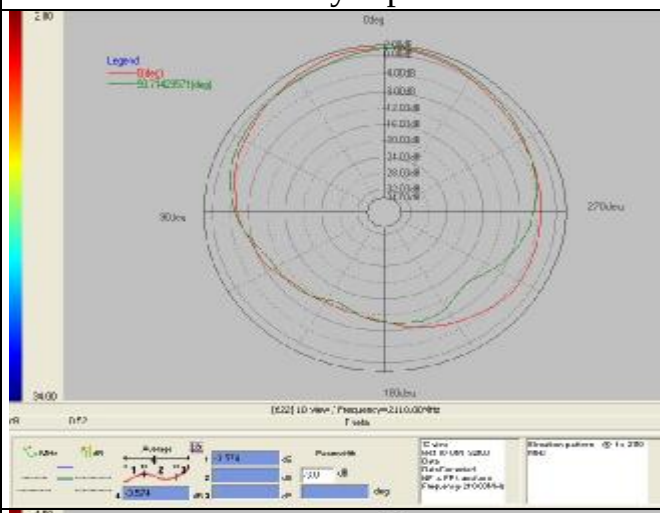
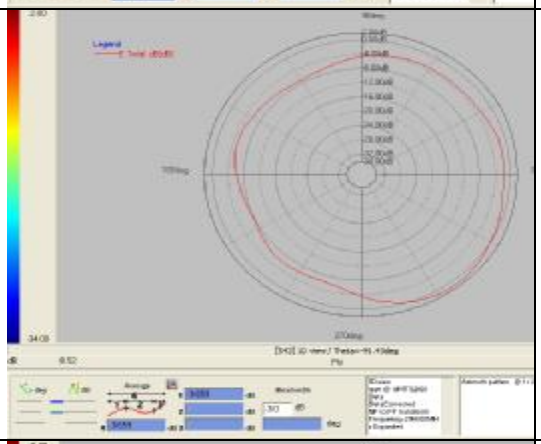
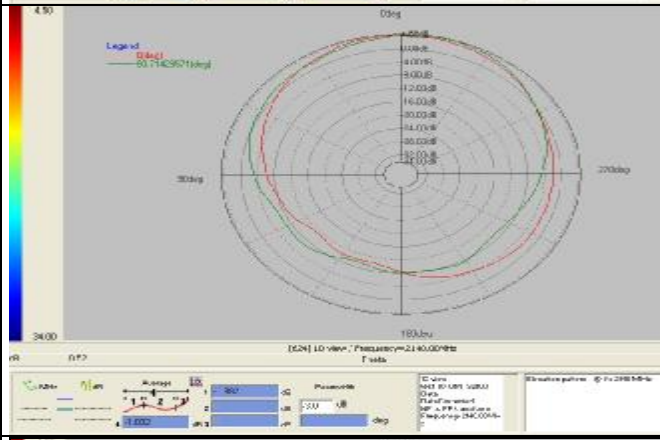
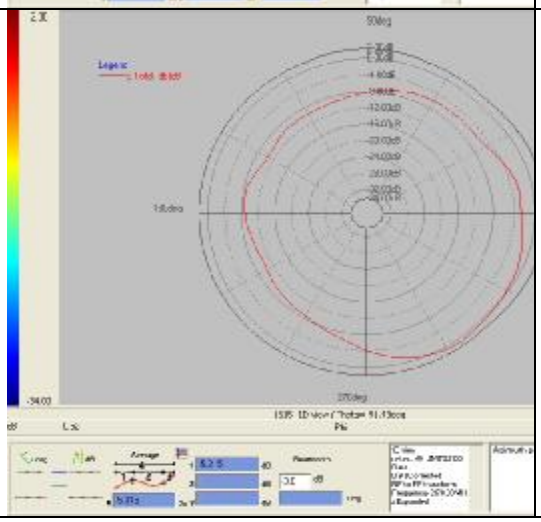
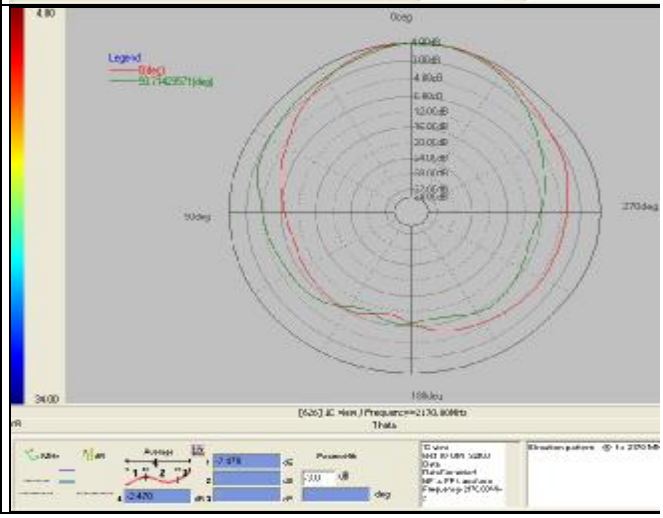
UMTS2100 Frequency band DL

Plane	x-y plane	x-z and y-z plane
2110MHz		
2140MHz		
2170MHz		

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