




Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	1/17

APPROVAL SPECIFICATION				Prepared by	Reviewed by	Check by	Approved by
							
TITLE	Fixed Antenna	Model	PX500	CUSTOMER	CURITEL		
DOCUMENT							
NO.	CONTENTS					SHEETS	
1	APPROVAL SPECIFICATION					1	
2	ANTENNA SPECIFICATION					1	
<p>We want to approval the suited product.</p> <p style="text-align: right;"><u>Approved date: May 03, 2006.</u></p>							

Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	2/17

ANTENNA SPECIFICATION

ace antenna **A**

Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	3/17

- CONTENTS –

- 1. Revision LIST**
 - 2. Technical Items.**
 - 2.1 Electrical Spec.
 - 2.2 Mechanical Spec.
 - 2.3 Packing Spec.
 - 3. Test Equipment.**
 - 4. Electrical Demands.**
 - 4.1 V.S.W.R.
 - 4.2 Radiation Pattern.
 - 4.3 Gain.
 - 5. Mechanical Demands.**
 - 5.1 Dimensions
 - 6. Environmental demands.**
 - 6.1 Operation Temperature Test
 - 6.2 Temperature Change Test
 - 6.3 High Humidity Test
 - 7. Antenna Data**
 - 7.1 V.S.W.R
 - 7.2 GAIN
 - 7.3 Matching circuit diagram
 - 8. Antenna Drawing**
 - 9. Packing specification (drawing)**
 - 10. Notice or handing antenna (Box or Antenna)**
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Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	4/17

1. REVISION LIST

REVISION LIST				
NO	DATE	CHANGE CONTENTS	CHANGE CAUSE	REV
1	2006-05-03	-	Temp. Approval	IR
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	5/17

2. Technical Items

2.1 Electrical Spec.

Electrical Spec.				
Frequency Range (MHz)	CDMA		US PCS	
	Tx1	Rx1	Tx2	Rx2
	824 - 849 MHz	869 - 894 MHz	1850 - 1910 MHz	1930 - 1990 MHz
V.S.W.R (Max)	2.5	2.5	3.0	3.0
GAIN (E1 Peak , min)	-4.0 dBi	-1.5 dBi	-4.5 dBi	-2.0 dBi
Impedance (Nominal)	50 ohms			
Polarization	VERTICAL			
Radiation Pattern	OMNI-DIRECTIONAL			
Maximum Power	2 Watts			

2.2 Mechanical Spec.

Mechanical Spec.	
Connector	Contact Pin Type
Overall length	See drawing
Operation Temperature	-30°C ~ +80°C
Weight	4.1 g

Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	6/17

2.3 Packing Spec.

Packing Spec.		
PRODUCT	QUALITY	MATERIAL
TRAY	50 EA	P.S (0.5t)
CARTON BOX	1,000 EA	DW 2 type (AB corrugated paper)

3. Test Equipment

The test equipments for antenna are as follows

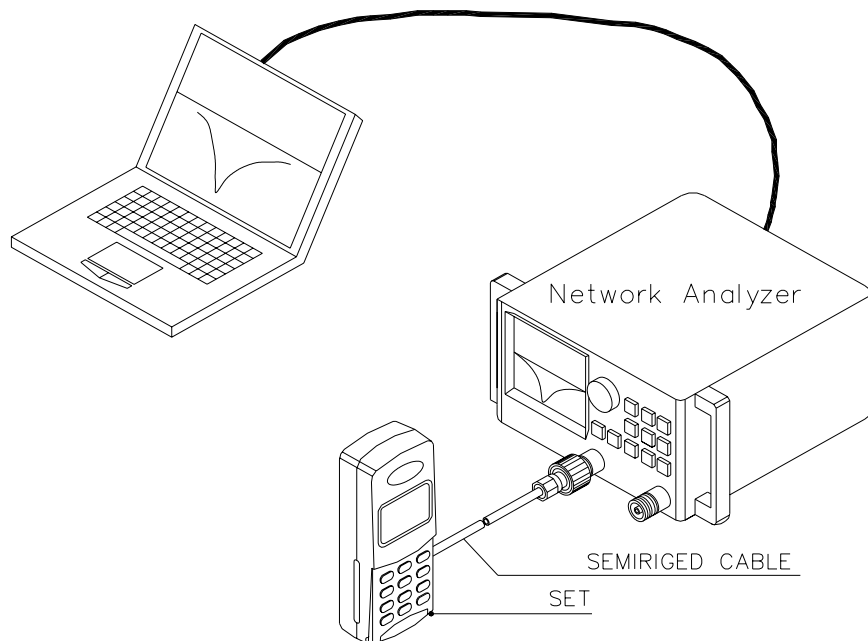
- * Network Analyzer (HP8753ET) to measure the V.S.W.R and impedance of antenna
 - * Spectrum Analyzer to measure the receiving signal intensity
 - * Standard Horn antenna that is adjustable in the CDMA band
 - * Standard Horn antenna that is adjustable in the US PCS band
 - * Anechoic Chamber installed the cables, connectors and equipments for measurement
 - * Dogmatic Caliper to measure the dimensions
 - * Push/Pull gauge to measure the pulling force
 - * Climatic Chamber for environmental test
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Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	7/17

4. Electrical Demands

4.1 V.S.W.R

The V.S.W.R characteristics must satisfy the electrical demands. With Antenna Up condition, the V.S.W.R of antenna must be less than 2.5:1(Tx1), 2.5:1(Rx1) in the free space and CDMA band. With folder open condition, the V.S.W.R of antenna must be less than 3.0:1(Tx2), 3.0:1(Rx2) in the free space and US PCS band.



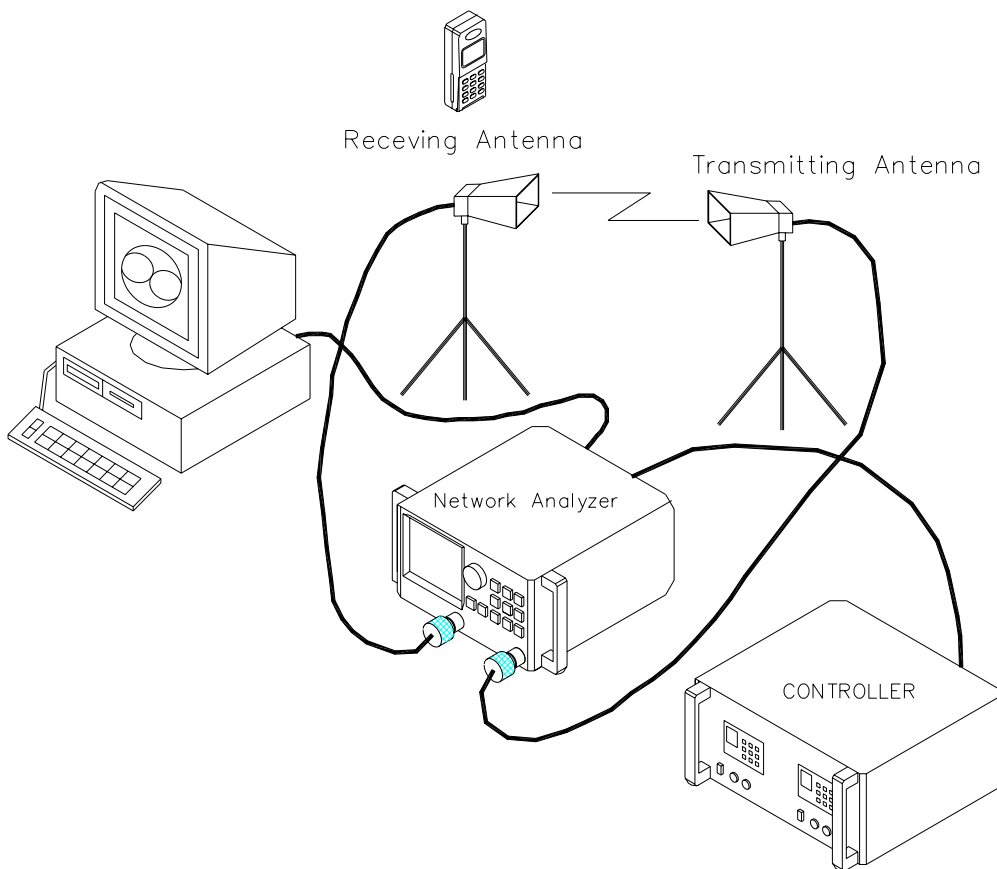
Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	8/17

4.2 Radiation Pattern

The H-radiation pattern must have the omni-directional characteristics in CDMA/US PCS Band.

4.3 Gain

The gain is expressed as dBi that standardizes the half-wave length dipole antenna. With antenna Up condition (E1-Plane), the minimum Gain of antenna must be -4.0 dBi(Tx1,2), -1.5 dBi(Rx1,2) in CDMA band. With same condition, the minimum Gain of antenna must be -4.5 dBi(Tx2), -2.0 dBi(Rx2) in US PCS band.



Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	9/17

5. Mechanical Demands

5.1 Dimensions

See the drawing.



Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	10/17

6. Environmental Demands

6.1 Operation Temperature Test

- # Test A: Place the antennas for testing in chamber. The chamber condition should be as follows: 1hours at -30°C
- # Final measurements : The antenna shall be visually inspected and electrically and also mechanically checked as required by products standard.
- # Test B: Place the antennas for testing in chamber. The chamber condition should be as follows: 1hours at 80°C
- # Final measurements : The antenna shall be visually inspected and electrically and also mechanically checked as required by products standard.

6.2 Temperature Change Test

The object of temperature test is to evaluate the reliability of antenna component at temperature change.

- # Test: Temperature cycle is as follows. 2 hours at -40°C ,
2 hours at $+85^{\circ}\text{C}$.
Temperature increase/decrease time (Temperature change time) is
2 hours. 10 cycles.
 - # Final measurements: The antenna shall be visually inspected and electrically and mechanically checked as required by products standard.
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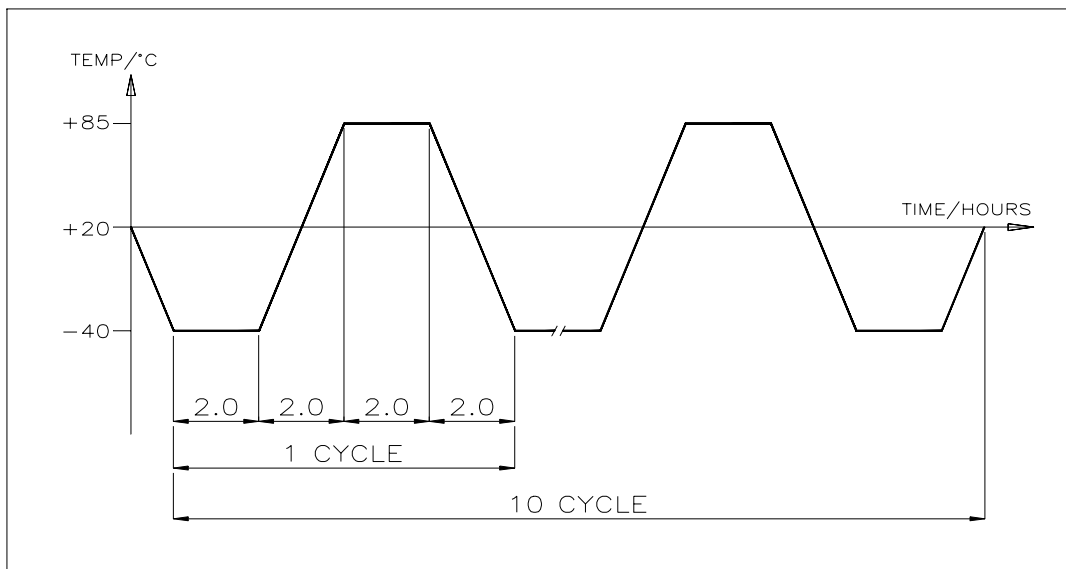
Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	11/17

6.3 High Humidity Test

Test: Place the antennas for testing in chamber. The chamber condition should be as follows:

24hours at +55°C, Relative humidity is 95%.

Final measurements : The antenna shall be visually inspected and electrically



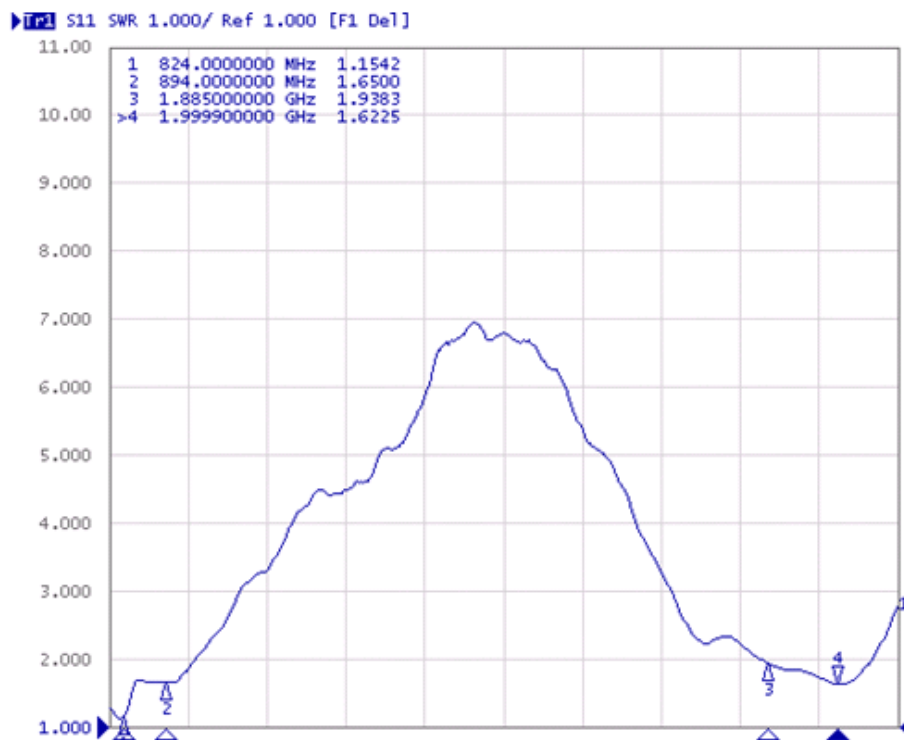
and also mechanically checked as required by products standard.

Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	12/17

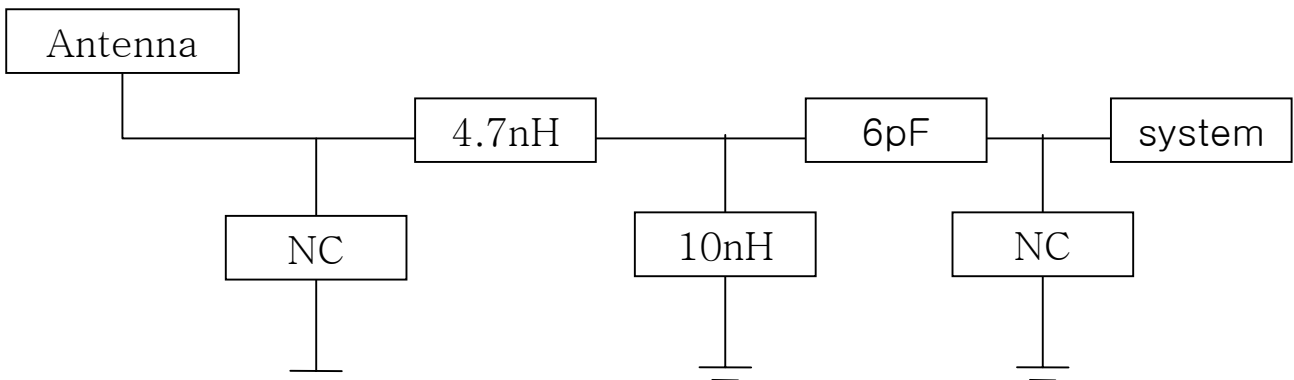
7. Electrical data

(V.S.W.R, GAIN & Matching Circuit Diagram)

7.1 Antenna Up V.S.W.R



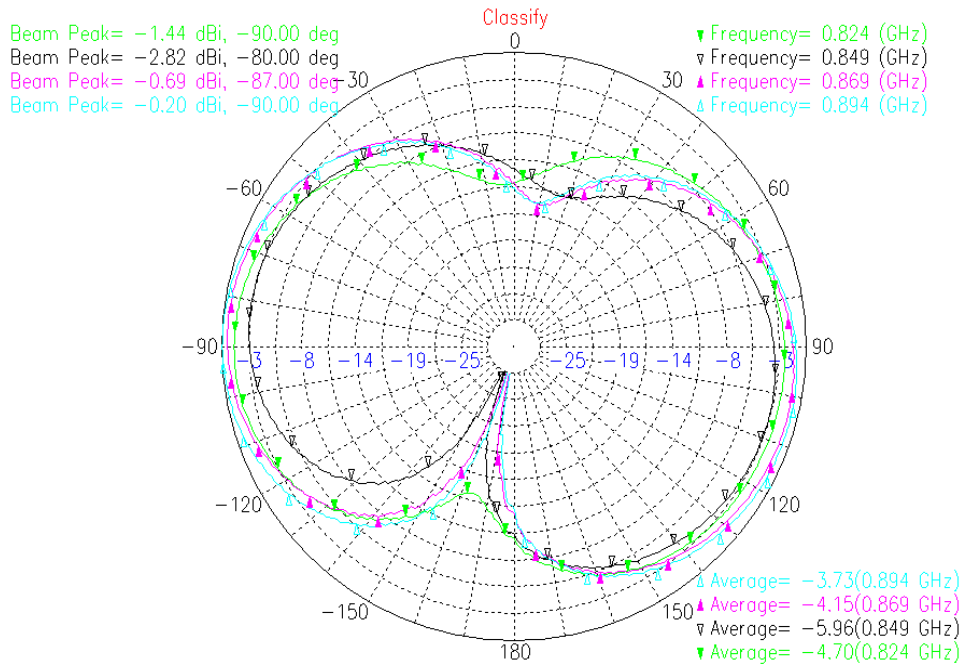
→ Matching Network



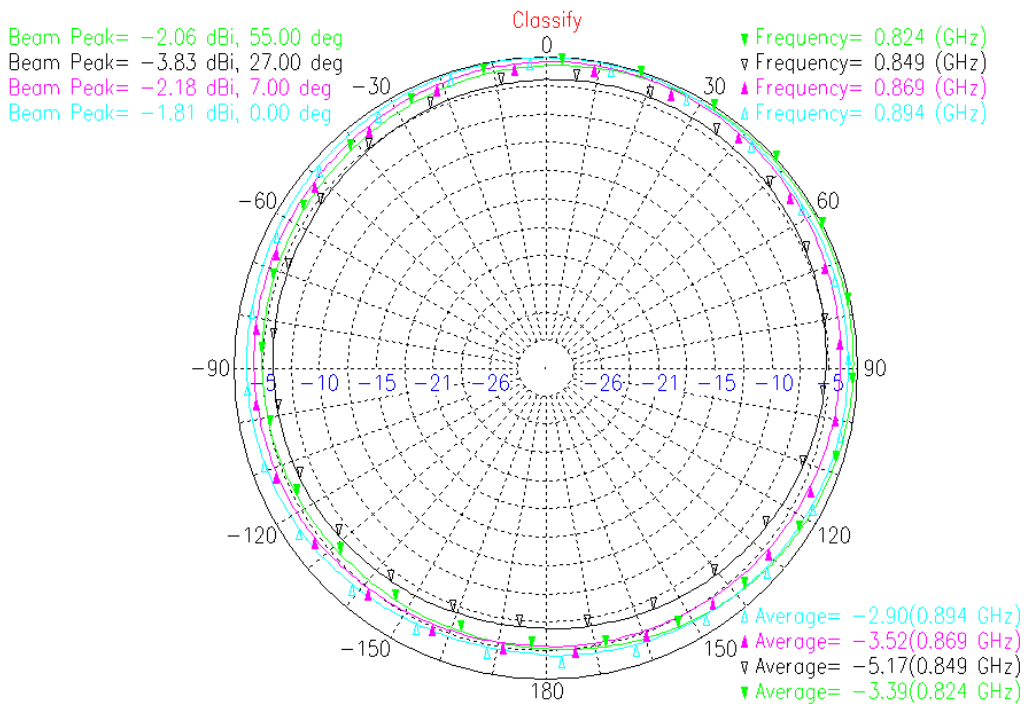
Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	13/17

7.2 GAIN (with Matching Circuit)

Antenna Up E1-Radiation Pattern data[CDMA]

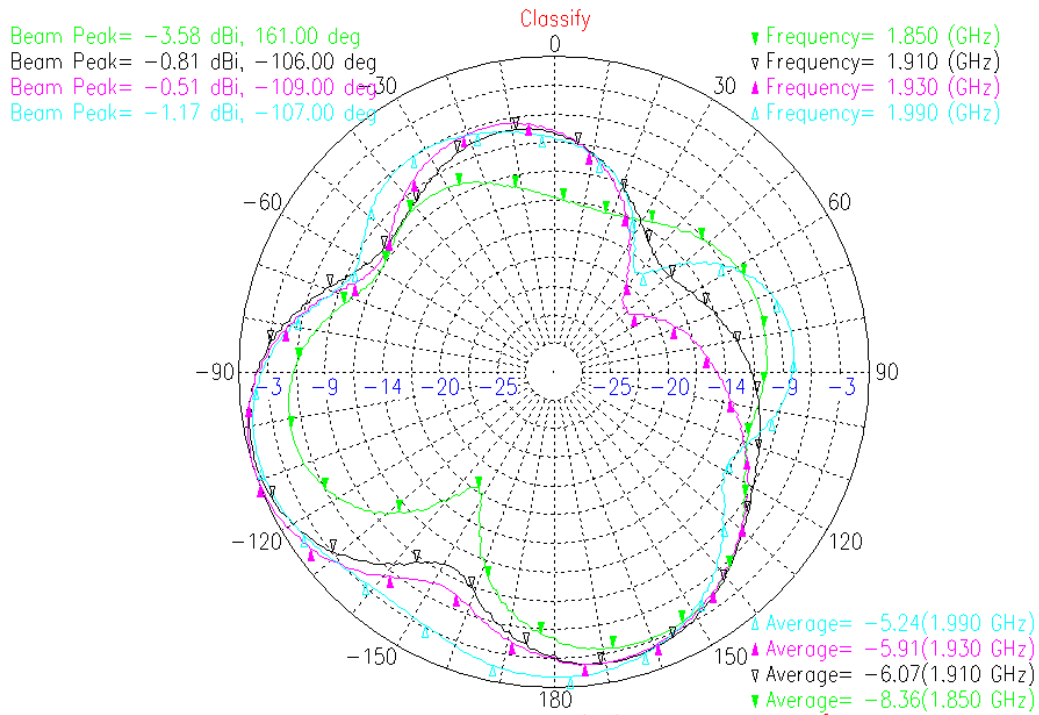


Antenna Up H-Radiation Pattern data[CDMA]

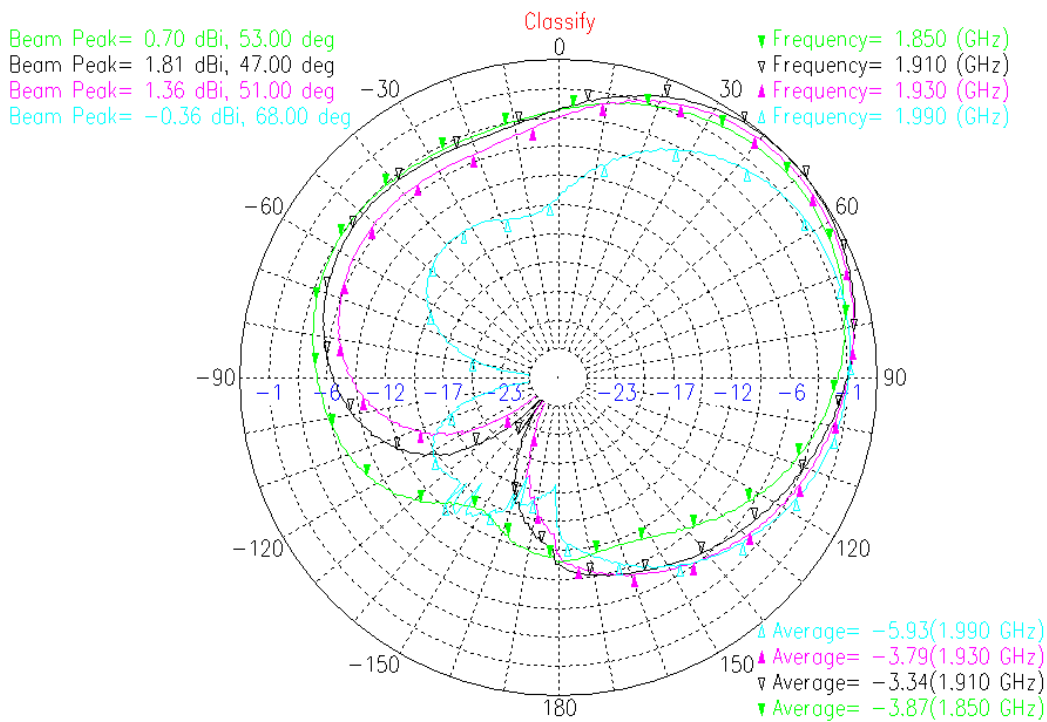


Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	14/17

Antenna Up E1-Radiation Pattern data[US PCS]

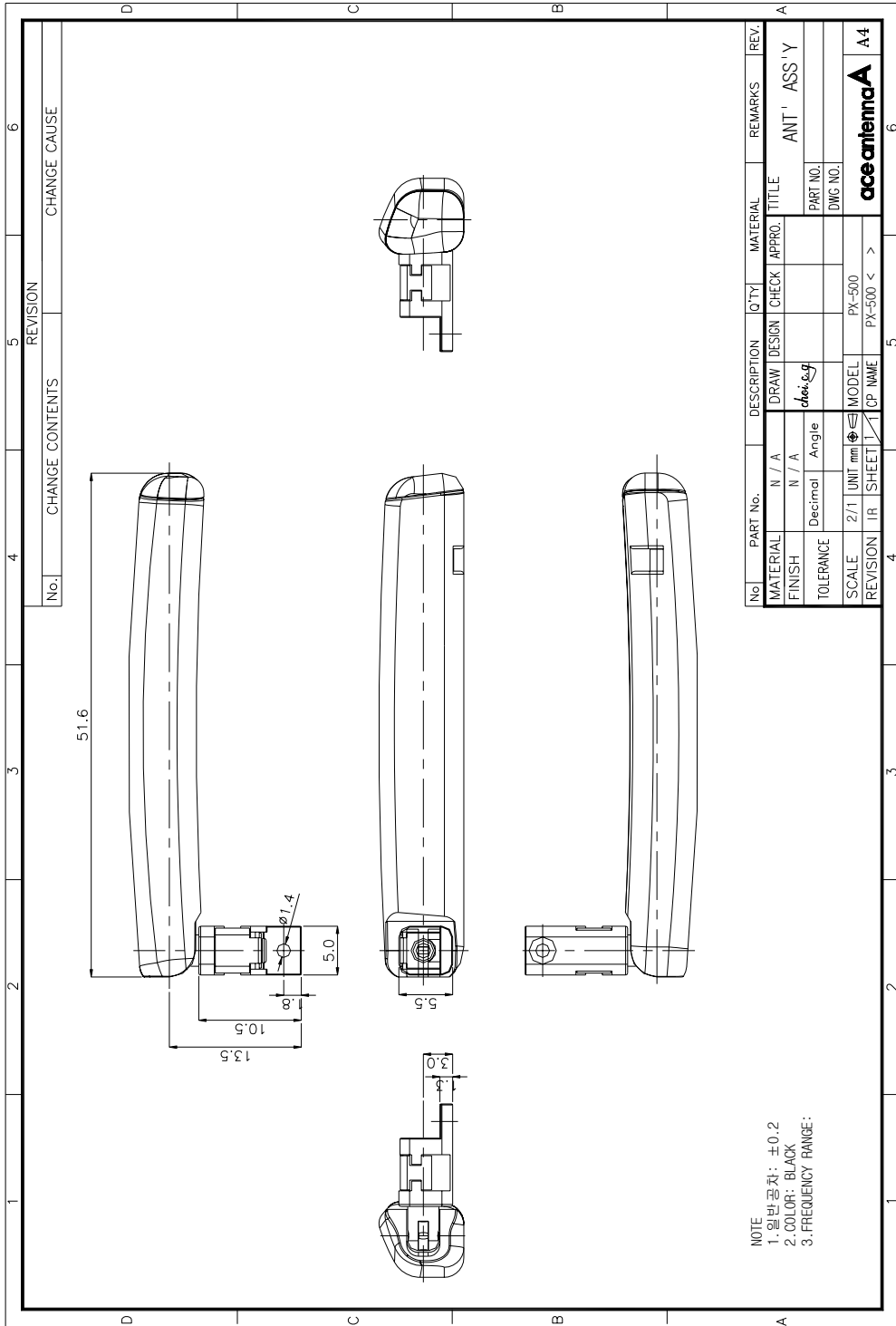


Antenna Up H-Radiation Pattern data[US PCS]



Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	15/17

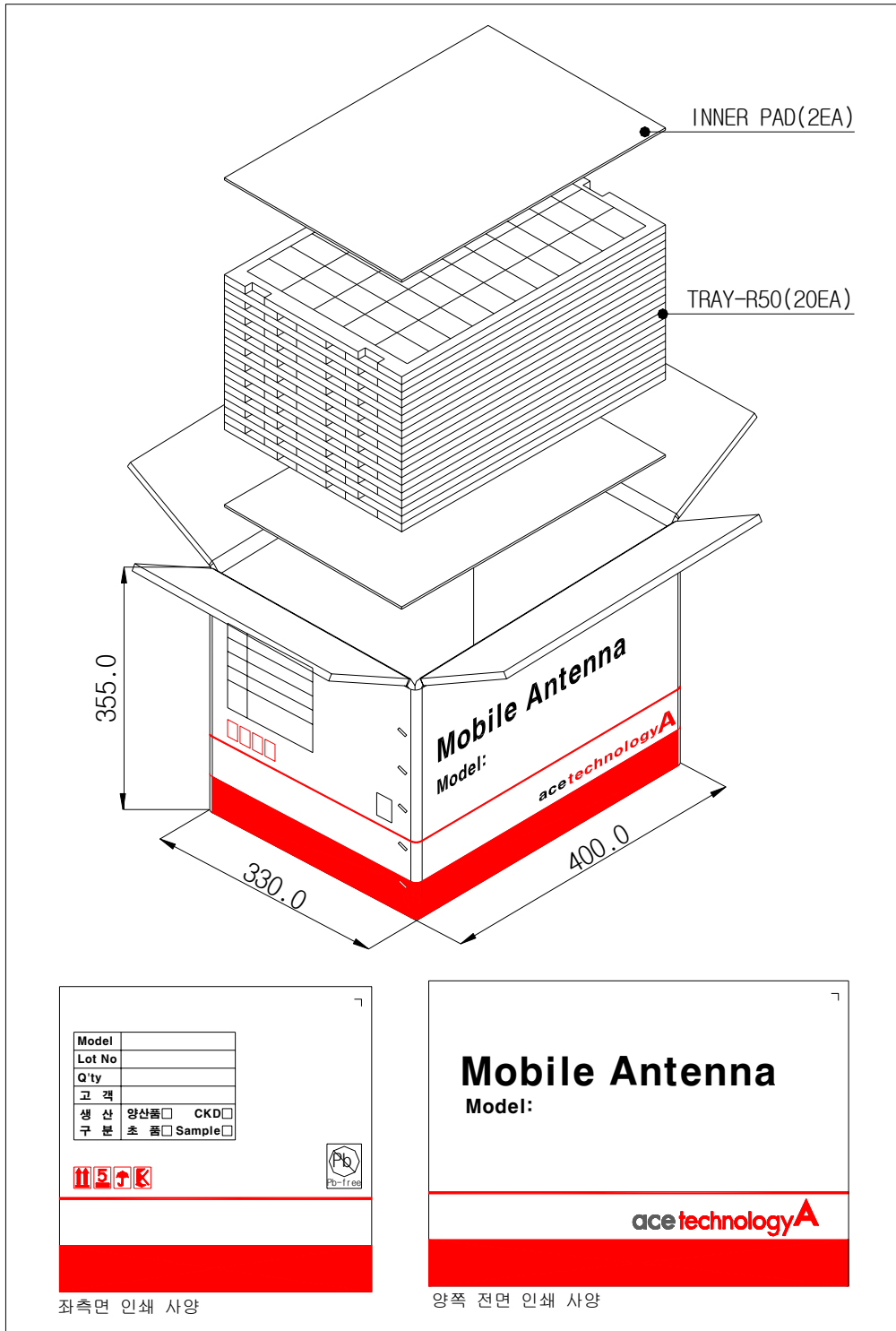
8. Antenna Drawing



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Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	16/17

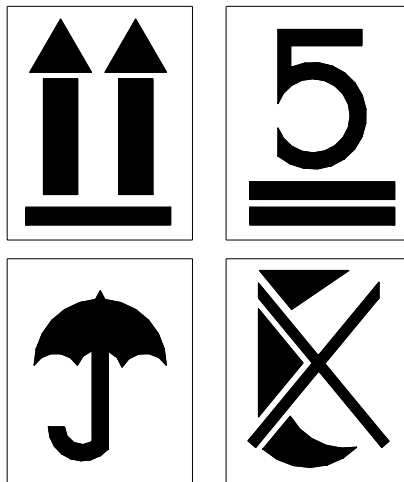
9. Packing Specification (Drawing)



Antenna Specifications		DATA	2006-05-03	REV.	IR
MODEL	PX500	TYPE	Fixed type	PAGE	17/17

10. Notice of Handing Antenna(Carton Box or Antenna)

1. Box Packing : Less 5 Stories.
2. Storage (Carton Box or Antenna) : Normal Temperature / Normal Humidity
(20~30℃ / RH 45~65%)
3. Keep dry (Carton Box or Antenna)
4. Fragile (Carton Box or Antenna)



Expression of Carton Box