

Attention: Pentaone Co., Ltd


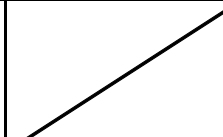

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|--------------|--|-------|-----|
| Approval No. |  | Issue | 1.0 |
|--------------|--|-------|-----|

## Approval Document

|             |                       |
|-------------|-----------------------|
| Description | SLEEVE DIPOLE ANTENNA |
| Model No.   | LBE-2405T             |
| Item No.    |                       |

|                      |  |
|----------------------|--|
| Conditional approval |  |
| 1.                   |  |
| 2.                   |  |
| 3.                   |  |

The Product addressed above is approved

| Approved<br>by<br>ALOGICS CO., LTD. | Description |             | Written by   | Reviewed by   | Approved by   |
|-------------------------------------|-------------|-------------|--|---|---|
|                                     | H/W         | Dept/name   |  |   |   |
|                                     |             | Signature   |  |   |   |
|                                     | Mechanical  | Dept/name   |  |   |   |
|                                     |             | Signature   |  |   |   |
|                                     |             |             |  |   |   |
| Approved by supplier                |             | Description | Written by   | Reviewed by   | Approved by   |
|                                     |             | Dept./name  | Shin Seong-Yo  |   | Choi Pak - Sik  |
|                                     |             | Signature   |  |  |  |

|              |   |
|--------------|---|
| Company name | LTUBI Co., Ltd.                                     |
| Address      | 362-12 Daeya-dong, Siheung-city, Kyueonggi-do Korea |
| Telephone    | 031-311-2856  |

## History list of approval document

Model No. : LBE-2405T

| Description            | Date        | Item | Content          | Evidence |
|------------------------|-------------|------|------------------|----------|
| Issue 1.0              | 2008. 4. 28 | –    | Original release | –        |
| From issue<br>to issue |             |      |                  |          |
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| From issue<br>to issue |             |      |                  |          |
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## 1. Specification

| Electrical Specifications |                    |
|---------------------------|--------------------|
| Frequency Range           | 2400 ~ 2484MHz     |
| V.S.W.R                   | 1.9 : 1 (below)    |
| Gain(Max)                 | 4.5 dBi            |
| Nominal Impedance         | 50 ohm             |
| Radiation Pattern         | Omni – Directional |
| Polarization              | Linear             |
| Power Handling            | 3 watts (Max)      |

| Mechanical Specifications |                         |
|---------------------------|-------------------------|
| Dimensions                | 160.0 (mm) x Ø10.0 (mm) |
| Weight                    | about 12.0g             |
| Operating Temperature     | -30℃ ~ 70℃              |
| Operating Humidity        | 0 ~ 95 %                |
| Option                    | N/A                     |



## 2. Measurement Setup

### 2-1. Test Equipments

|                        |                            |
|------------------------|----------------------------|
| Network Analyzer       | Agilent E8362B             |
| Calibration Kit        | Agilent 85052D             |
| Base Station Simulator | Agilent 8960               |
| Adaptor                | SMA Type Female ↔ SMA male |
| Measurement Cable      | 2803 (Cable P/N)           |

### 2-2. Test Equipments Setting

|             |   |
|-------------|---|
| 2.1 Display | Dual channel : On<br>Split display : On |
| 2.2 Menu    | Number of points : 801<br>Power : 0 dBm |
| 2.3 Measure | Channel 1 : S11                         |

### 2-3. Calibration

Calibration— Cal. Kit : 50  $\Omega$   
Calibration menu → Full-2-Port  
Reflection  
Forward : Open → Short → Load  
Reverse : Open → Short → Load  
Done  
Transmission  
Do Both → FWD + REV  
Done  
Isolation  
Omit Isolation  
Done

## 3. Test Procedures

### 3-1. V.S.W.R

Step1. Connect Ant Port With Cable included Adaptor to Port1 of Network Analyzer.

Step2. Point out Markers on Network Analyzer Display

At 824MHz, 849MHz, 869MHz, 894MHz

Step3. Inspect V.S.W.R < 1.9

Step4. Measurement

### 3-2. Gain and Pattern (Far Field Chamber)

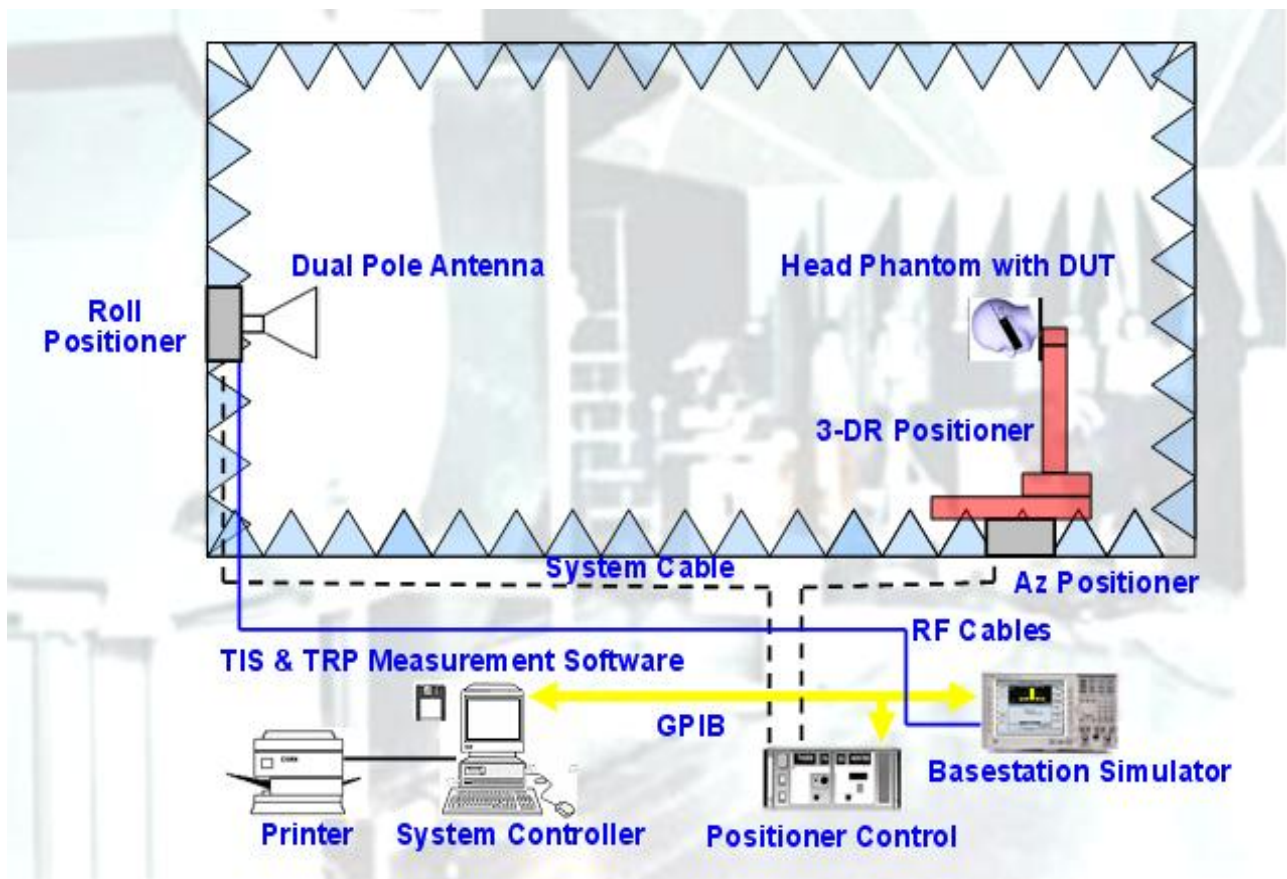
Chamber Size : 5.5 (L)m x 5.5 (W)m x 5 (H)m

Frequense Range : 800MHz ~ 6GHz (Far Field)

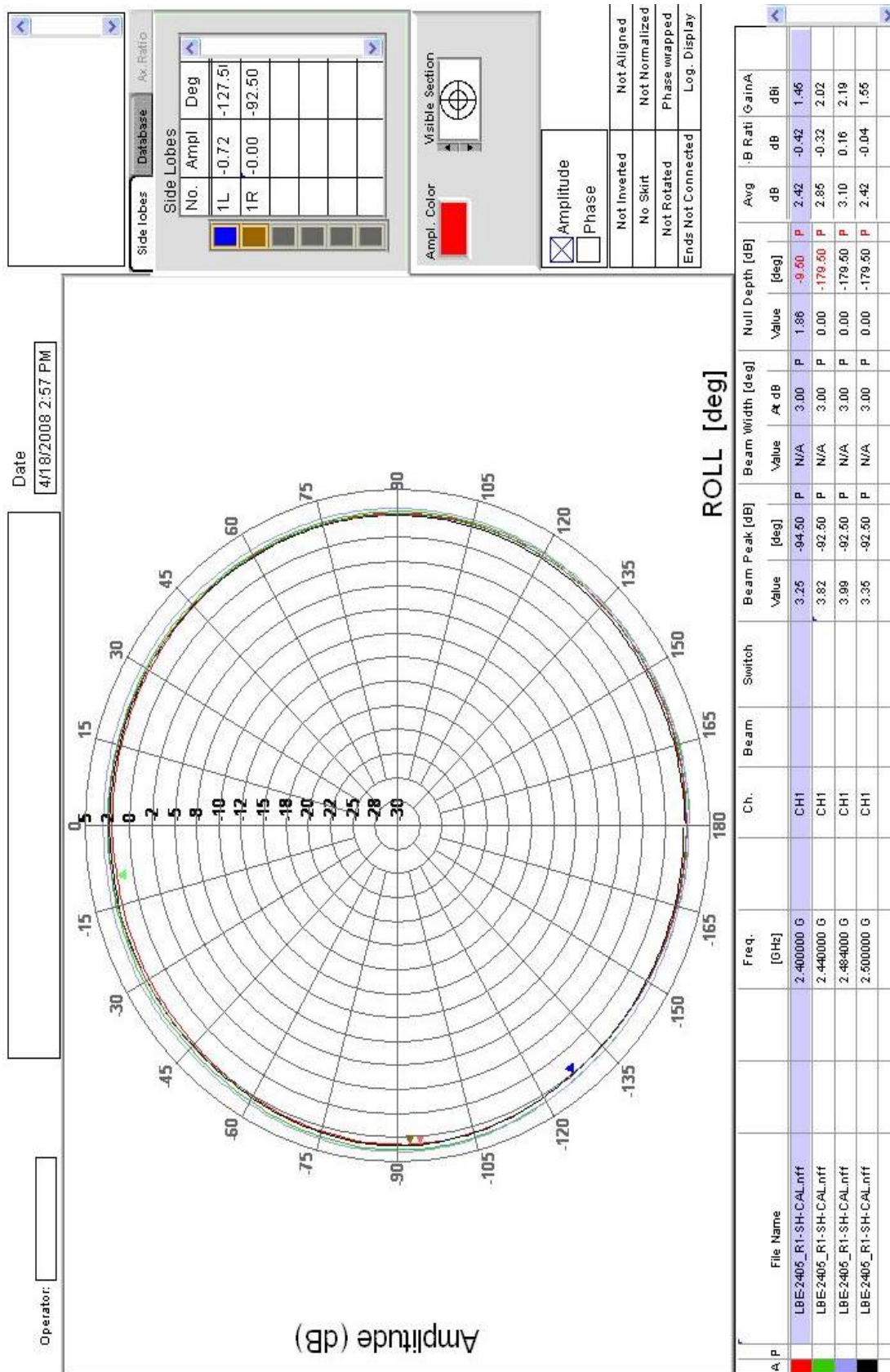
Quiet Zone : 0.8m x 0.8m @ 800MHz

Chamber Type : Rectangular

Measurement weight : ≤12kg



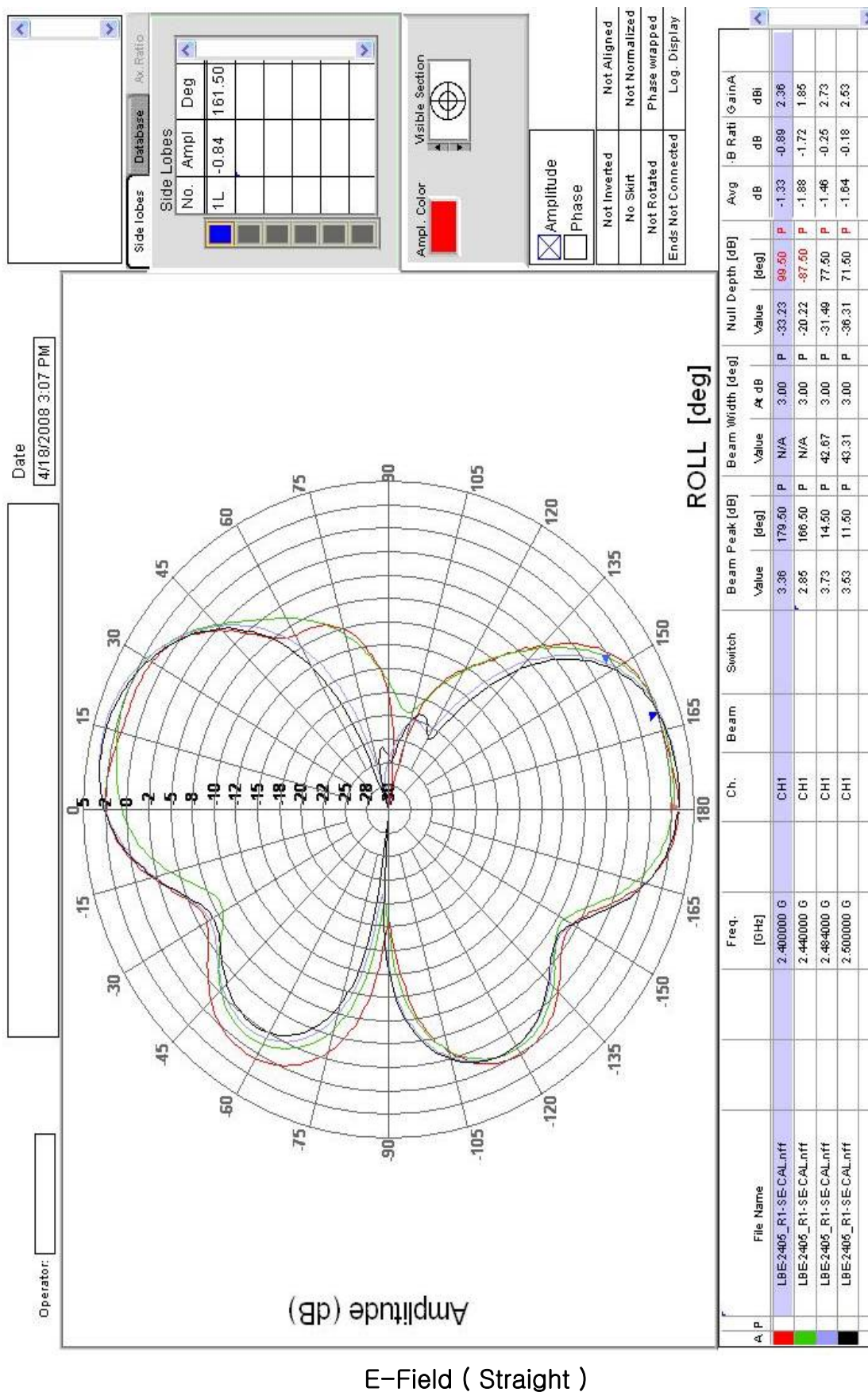
## 4. Electrical Specification Data



H-Field ( Straight )

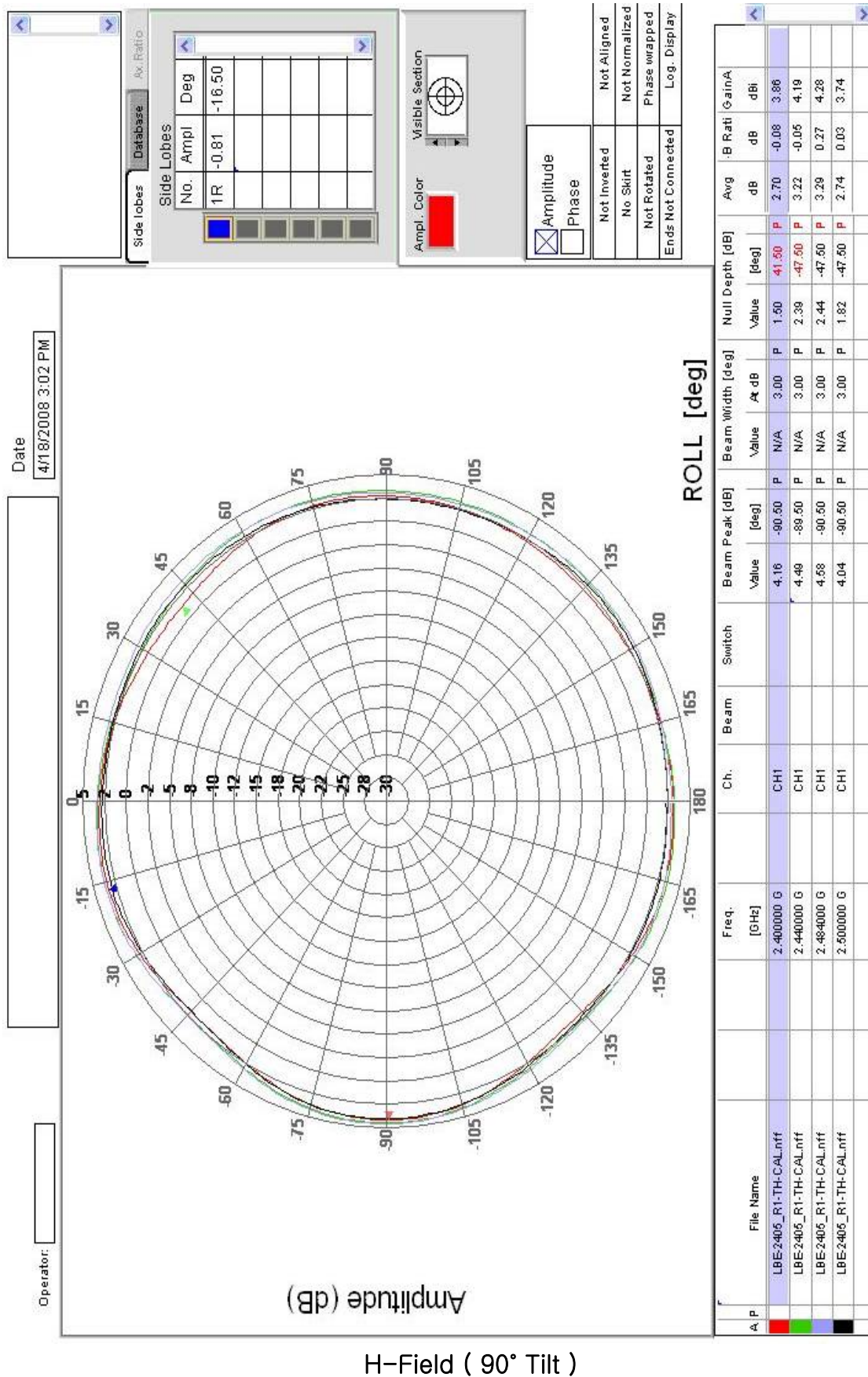


## 4. Electrical Specification Data

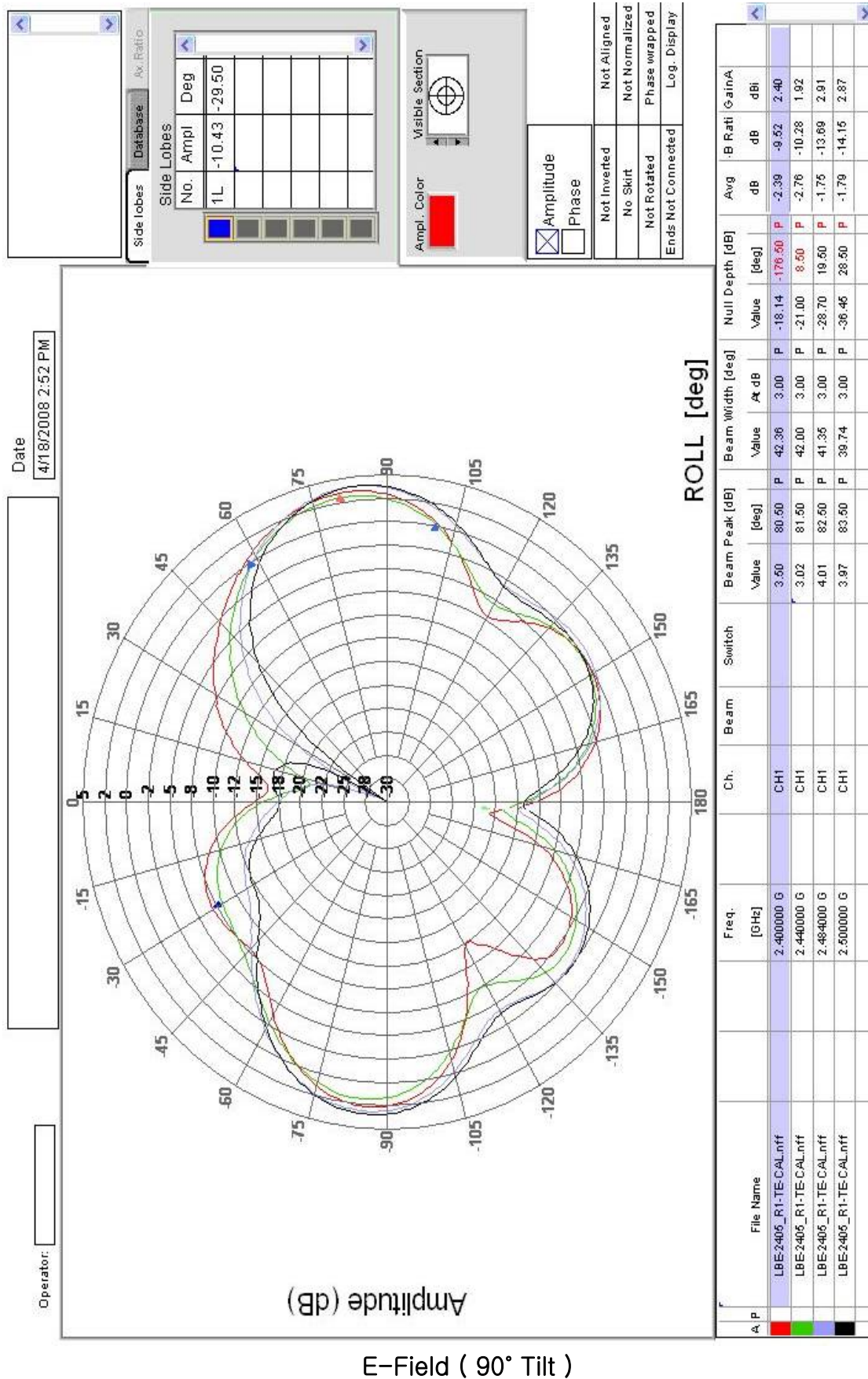




## 4. Electrical Specification Data



## 4. Electrical Specification Data



## 5. Mechanical Drawing

