



小精靈股份有限公司

Juster Co., Ltd

# 承認書

APPROVAL SHEET

使用機型: BIS-302G

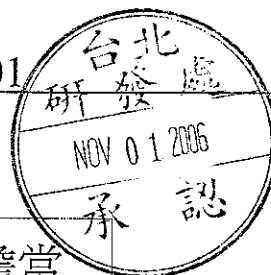
部品名稱: WLAN Antenna Assembly(C935-520002-A)

物料編號: RT-41493

供應廠商: 謹裕實業

發行日期: 2006/11/01

發行單位: 台北研發處



| 核准 | 審核 | 擔當             |
|----|----|----------------|
|    |    | <br>林健斌<br>黃忠一 |

分發單位:

|      |      |      |      |      |      |    |     |
|------|------|------|------|------|------|----|-----|
| 台北業務 | 台北採購 | 台北品管 | 杰特研發 | 杰特工程 | 杰特品管 | 國科 | 供應商 |
|      | V    |      | V    | V    | V    |    | V   |

台北縣三重市中山路 373 號 10 樓

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傳真:(02)8511-4232



WHA YU INDUSTRIAL CO., LTD. (HEAD OFFICE)  
TAI HWA ELECTRONIC CO., LTD.(CHINA)  
SHANGHAI HUA YU ELECTRONIC CO., LTD.(CHINA)  
AEON TECH CO., LTD. (CHINA)

## SPECIFICATION FOR APPROVAL

**CUSTOMER:** 小精靈股份有限公司

**PART NAME:** WLAN Antenna Assembly

**PART NO.:**

**REVISION:**

**W. Y. P/NO.:** C935-520002-A

**REV.:** X1

|                  | MANUFACTURER<br>SIGNATURE                                                          | CUSTOMER<br>SIGNATURE                                                               |
|------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| APPROVED<br>BY : |  |  |
| DATE :           | 2006.7.18                                                                          |                                                                                     |

### WHA YU GROUP

WHA YU INDUSTRIAL CO., LTD.(HEAD OFFICE)

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HUA HONG INTERNATIONAL LTD.

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SHANGHAI HUA YU ELECTRONIC CO., LTD. (CHINA)

上海譚裕電子有限公司

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SU ZHOU AEON TECH CO., LTD. (CHINA)

蘇州華廣電通有限公司

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Wujiang City, Jiangsu Province, China

Tel: + 86-512-63627980

Fax: + 86-512-63627981

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| 7. ....            | 背膠(G9000)材質           | ..... |

# Antenna Assembly

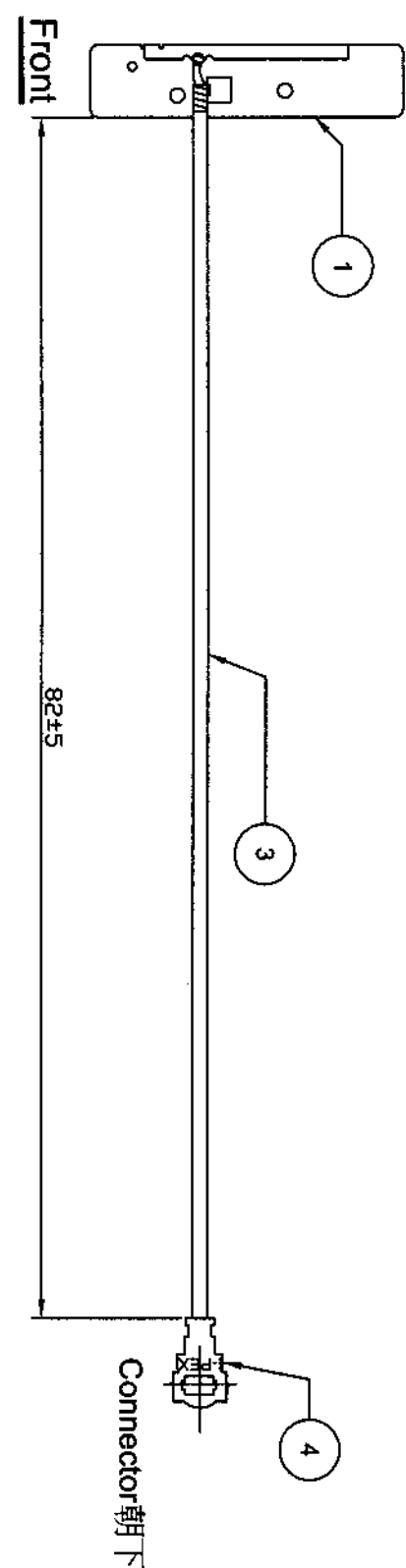
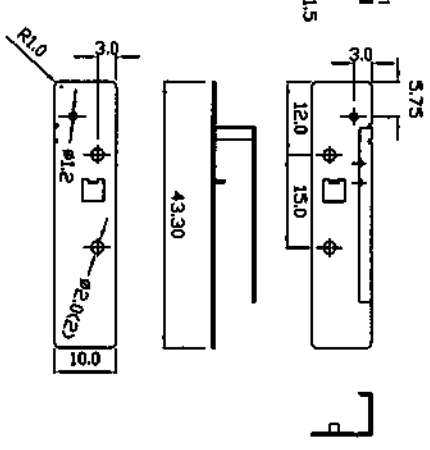
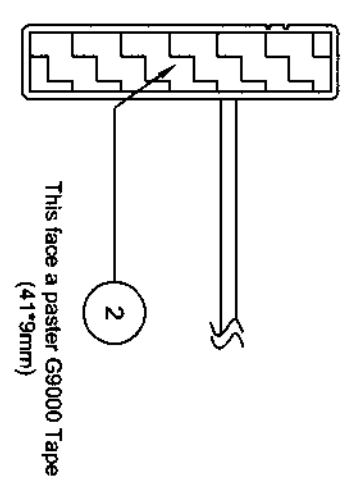
## Specification

### 1. Electrical Properties :

|                          |                       |
|--------------------------|-----------------------|
| 1.1 Frequency Range..... | 2.4~2.5GHz            |
| 1.2 Impedance.....       | 50Ω                   |
| 1.3 Return Loss.....     | <-10dBi               |
| 1.4 VSWR.....            | 2 Max.                |
| 1.5 Peak Gain.....       | <3.0dBi@2.40~2.50GHz  |
| 1.6 Average Gain.....    | >-3.0dBi@2.40~2.50GHz |
| 1.7 Admitted Power.....  | 1W                    |
| 1.8 Antenna Type.....    | PIFA                  |

### 2. Physical Properties :

|                         |               |
|-------------------------|---------------|
| 2.1 Operating Temp..... | -10°C ~ +55°C |
| 2.2 Storage Temp.....   | -30°C ~ +75°C |



NOTE :

- 1.材質如圖所示
- 2.未標示公差為±0.1

Packing : 1pcs/bag  
每10袋用訂書機訂起來  
(以便客戶點收)

釘書針

CUSTOMER'S SIGNATURE

APPROVED  
CHECKED  
余政輝  
余政輝

CUSTOMER: 小精靈

PART NO :  
PARTNAME: W1 AN Antenna Drawing

W. Y PNO : C935-520002-A

REV UNIT FILE :  
A m/m SHEET : 1/1

| NO | DESCRIPTION              | QTY | REMARK |
|----|--------------------------|-----|--------|
| 4  | Connector                | 1   | NA     |
| 3  | Left Side Cable Assembly | 1   | Gray   |
| 2  | G9000 Tape               | 1   | NA     |
| 1  | Left Side Copper Antenna | 1   | NA     |



Wha Yu  
INDUSTRIAL CO.,LTD.

華裕實業股份有限公司  
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## Antenna Test Report

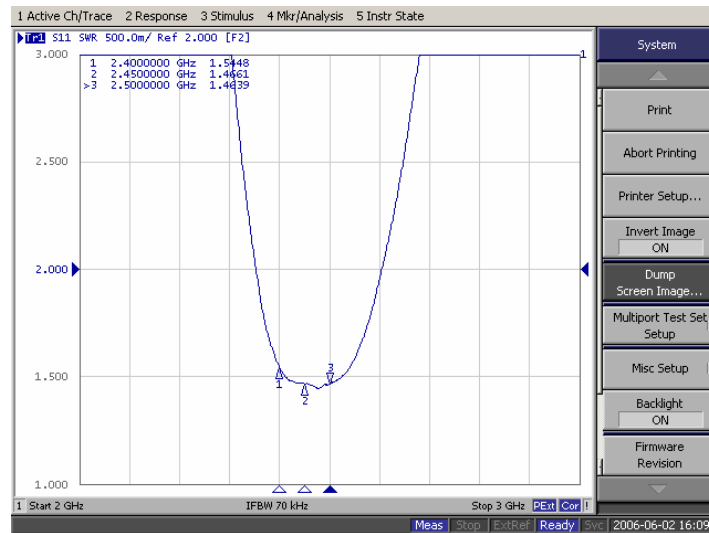
Measurement Time : 2006/07/18

Measurement Instrument :

- 1、Agilent Technologies E5071A 300K~8.5GHz ENASeries Network Analyzer
- 2、Chamber : 3.5m(W) \* 3.25m(H) \* 7.12m(L)  
Gain Horn Antenna : SG-430 1.7~2.6GHz

Measurement Frequency : 2.4 GHz ~ 2.5GHz

### Antenna VSWR



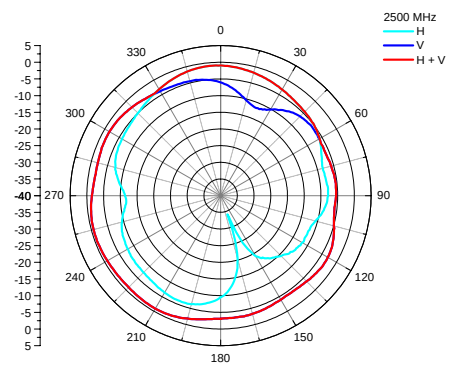
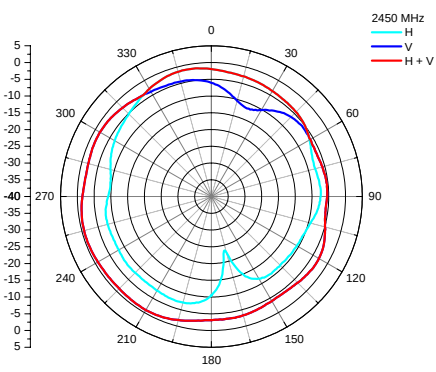
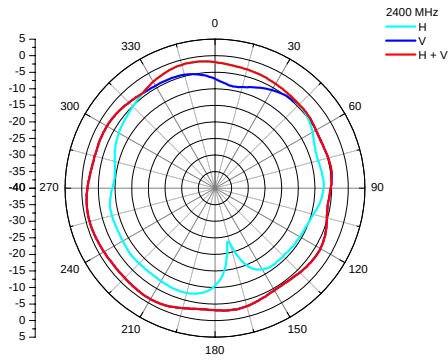
| Antenna VSWR |        |         |        |
|--------------|--------|---------|--------|
| Frequency    | 2.4GHz | 2.45GHz | 2.5GHz |
| VSWR         | 1.54   | 1.46    | 1.46   |

### Antenna Peak Gain & Average Gain Test Result

| Frequency          | Peak Gain (dBi) |         |        | Average Gain (dBi) |         |        |
|--------------------|-----------------|---------|--------|--------------------|---------|--------|
|                    | 2.4GHz          | 2.45GHz | 2.5GHz | 2.4GHz             | 2.45GHz | 2.5GHz |
| Antenna Gain (dBi) | -1.01           | -0.62   | -0.62  | -1.58              | -1.45   | -1.38  |

## Antenna Pattern

2.4GHz~2.5GHz



Date : 2005/07/25

Our Spec. No. WS05-M111

MESSRS.

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SPECIFICATION  
FOR  
HIGH FREQUENCY COAXIAL CABLE  
"KHCX - 32AWG - SB - SA" BLACK

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SHOWA ELECTRIC WIRE & CABLE CO., LTD.

TORANOMON

TOKYO JAPAN

*T. Mori*

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T. Mori  
Manager, Engineering Section  
Engineering Dept.  
Electronic Wire Business Unit