

# APPROVAL SHEET

**Customer Name: CLEVO****Date: 08/06/2008****Doc. Version: 0**

<b>Smart Approach P/N :</b>	<b>PE-150050-1</b>
<b>Customer P/N :</b>	<b>6-23-7M770-041</b>
<b>Product Description :</b>	<b>CLEVO M770SU BT Antenna</b>
<b>Version</b>	<b>A01</b>

<b>Provided By S.A NeWeb Corp</b>	<b>Reviewed By S.A NeWeb Corp</b>	<b>Approved By Customer</b>
<b>Alvin</b>	<b>CH</b>	

速碼波科技股份有限公司

新竹縣竹東鎮中興路四段 669 號 3F

電話：(03) 583-0303

傳真：(03) 583-0011

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## 1. Introduction

Antennas for Wimax system  
antenna (PIFA type)



## 2. Revision History

Date	Version	Revision History
08/06/2008	A01	New Release

## 3. Product Specifications

### 3.1 Specifications of Antenna Design

Measurement condition: LCD angle 110 degree

#### 3.1.1 VSWR

VSWR	2G4 (2.400 GHz - 2.500 GHz)	
	2.40 GHz	2.50GHz
MAIN/AUX	<2.0	

#### 3.1.2 Average gain and peak gain

Antenna Gain		2G4 (2.300 GHz - 2.700 GHz)		
		2.40 GHz	2.45 GHz	2.50GHz
MAIN/AUX	Peak dBi	<2.5		
	Avg dBi	>-4.0		

### 3.2 Mechanical Drawing

S.A PART NO.	PE-AB0350-1
Clevo PART NO.	6-23-7M770-041

**Note:**  
 Cable 剝線尺寸為  
 Pin:1mm, 絕緣層:2mm, 編織網:2mm  
 出線方向為:右側出線  
 注意熱縮尺寸

ITEM	PART NO.	DESCRIPTION	QTY
7		Heat-Shrinking Tube F34 φ3x12mm(Blue)	1
6		Lable 4.5x13mm	1
5		Lable 4.5x13mm	1
4		AL Foil tape 21x23mm	1
3		Spong 4x3.5x8mm	1
2		IPEX con. compatible / φ 1.13mm(573 <sup>±0.2</sup> ) - Black	1
1		BT Antenna	1

GENERAL TOLERANCE RANGE	
PCB(電路板)	±1MIL
MACHINING(加工?)	X=±0.5 X.X=±0.2 X.XX=±0.1
STAMP(???)	X=±0.6 X.X=±0.3 X.XX=±0.1
INJECTION(射出?)	X=±1 X.X=±0.5 X.XX=±0.15
CASTING(???)	X=±1 X.X=±0.5 X.XX=±0.15
PACKING(包材)	X=±6 X.X=±3 X.XX=±1
ASSEMBLY(???)	X=±4 X.X=±2 X.XX=±0.5

ANGLES: X=±2° X.X=±1° X.XX=±0.5°

Surface Treatment		MTL	
		DRAWN	Alvin 07.25.08
DRW TITLE Clevo M770SU BT ASSEMBLY		ENGR	
		APVD	
LTR	REV. RECORD	Date	Drawing
DWG.NO		SCALE	1:1 UNIT mm

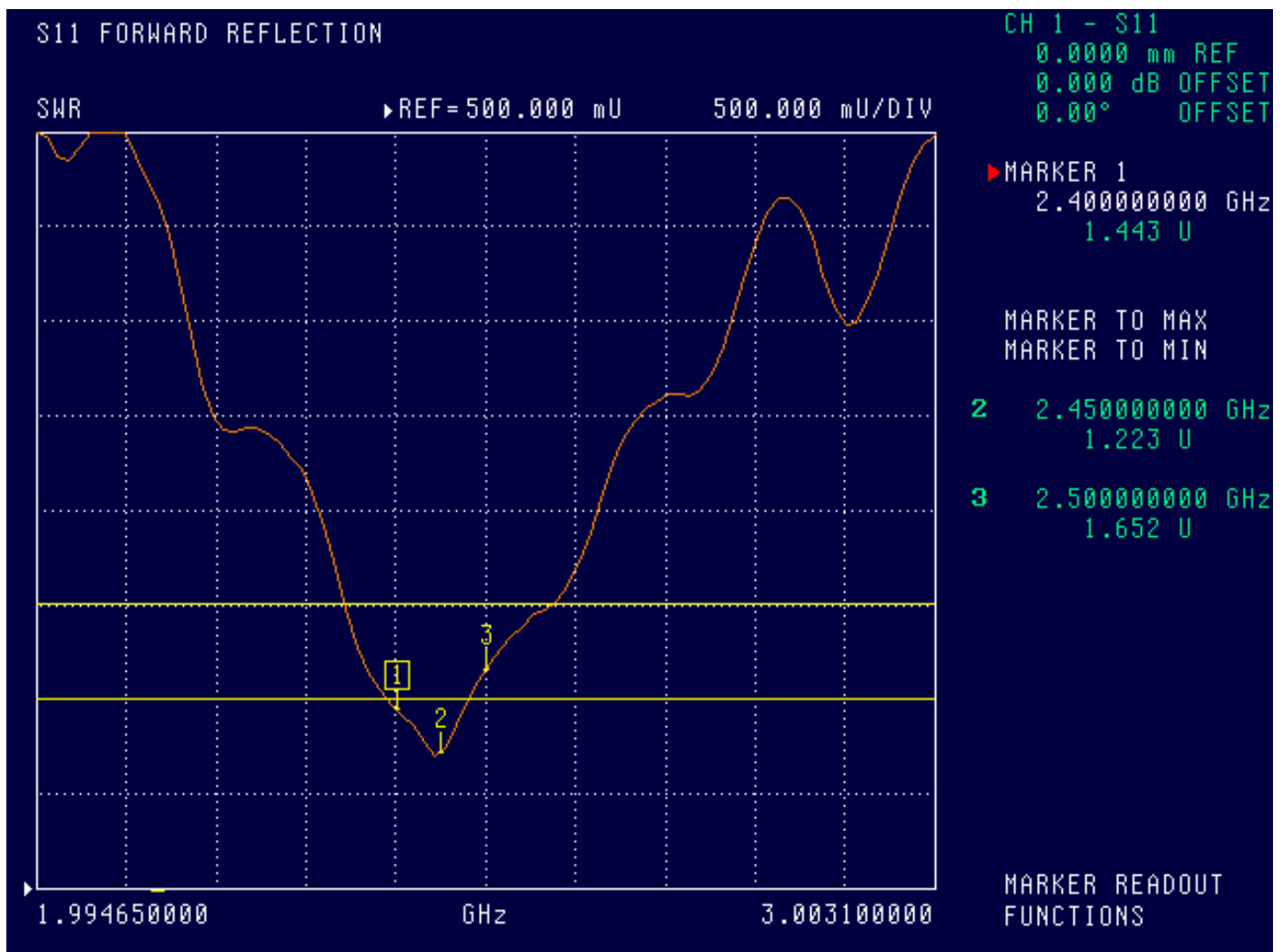
### 3.3 Antenna Material List

**antenna**

1. Tinfoil antenna
2. Coaxial cable and IPEX connector
3. Label
4. Spong
5. AL Foil tape
6. Heat-Shrinking Tube
7. Weight: 1.6g

## 4 Antenna Performance

### 4.1 VSWR



## 4.2 Peak Gain and Average Gain

### 4.2-1 Peak Gain

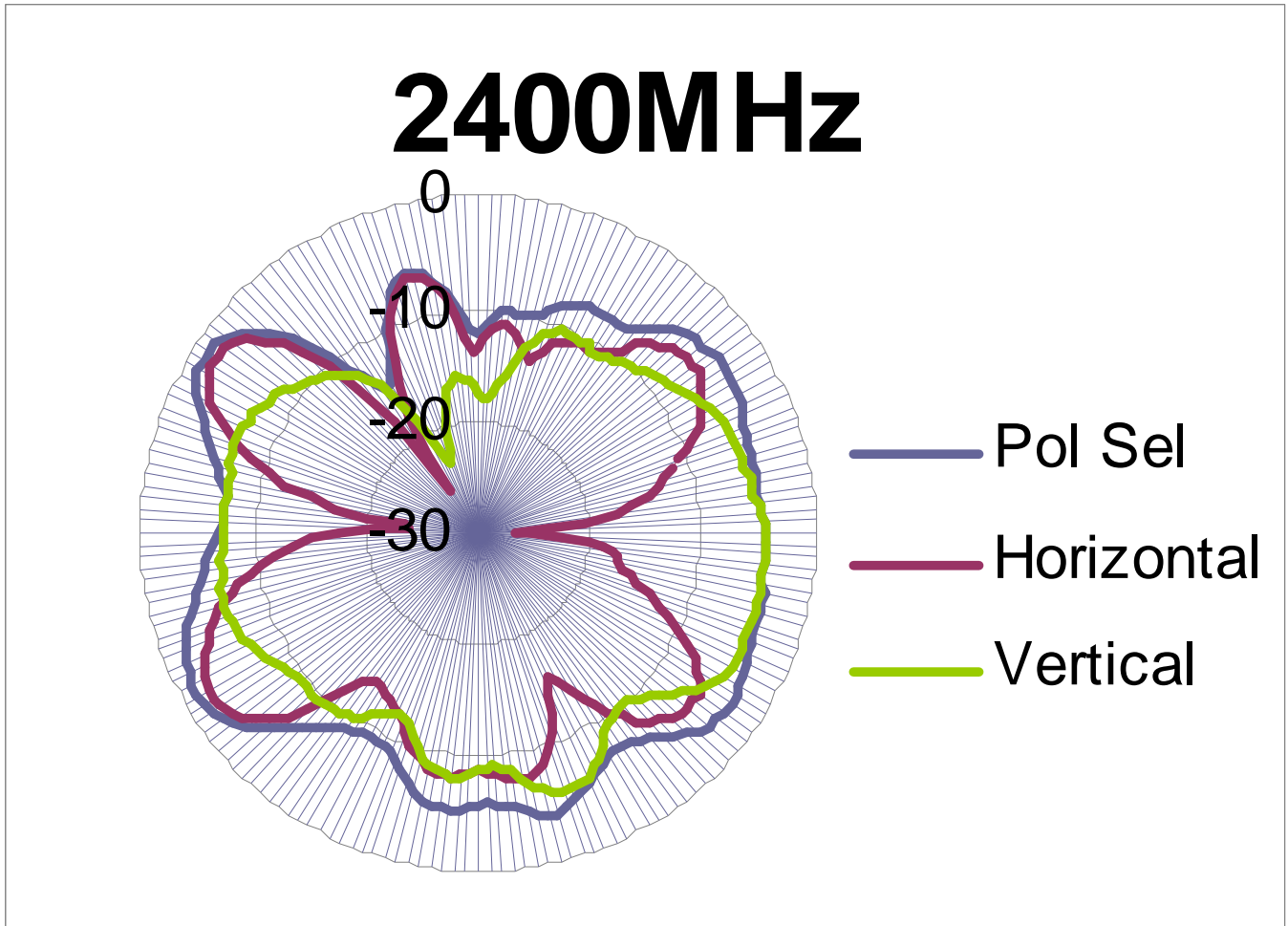
frequency(MHz)	Horizontal (dB)Peak	Vertical(dB)Peak	H+V (E total)Peak
2400	-4.44	-1.99	-1.10
2450	-3.92	-0.87	-0.21
2500	-2.63	-1.51	-0.77

### 4.2-2 Average Gain

frequency(MHz)	E total average(dB)
2400	-4.89
2450	-4.38
2500	-4.48

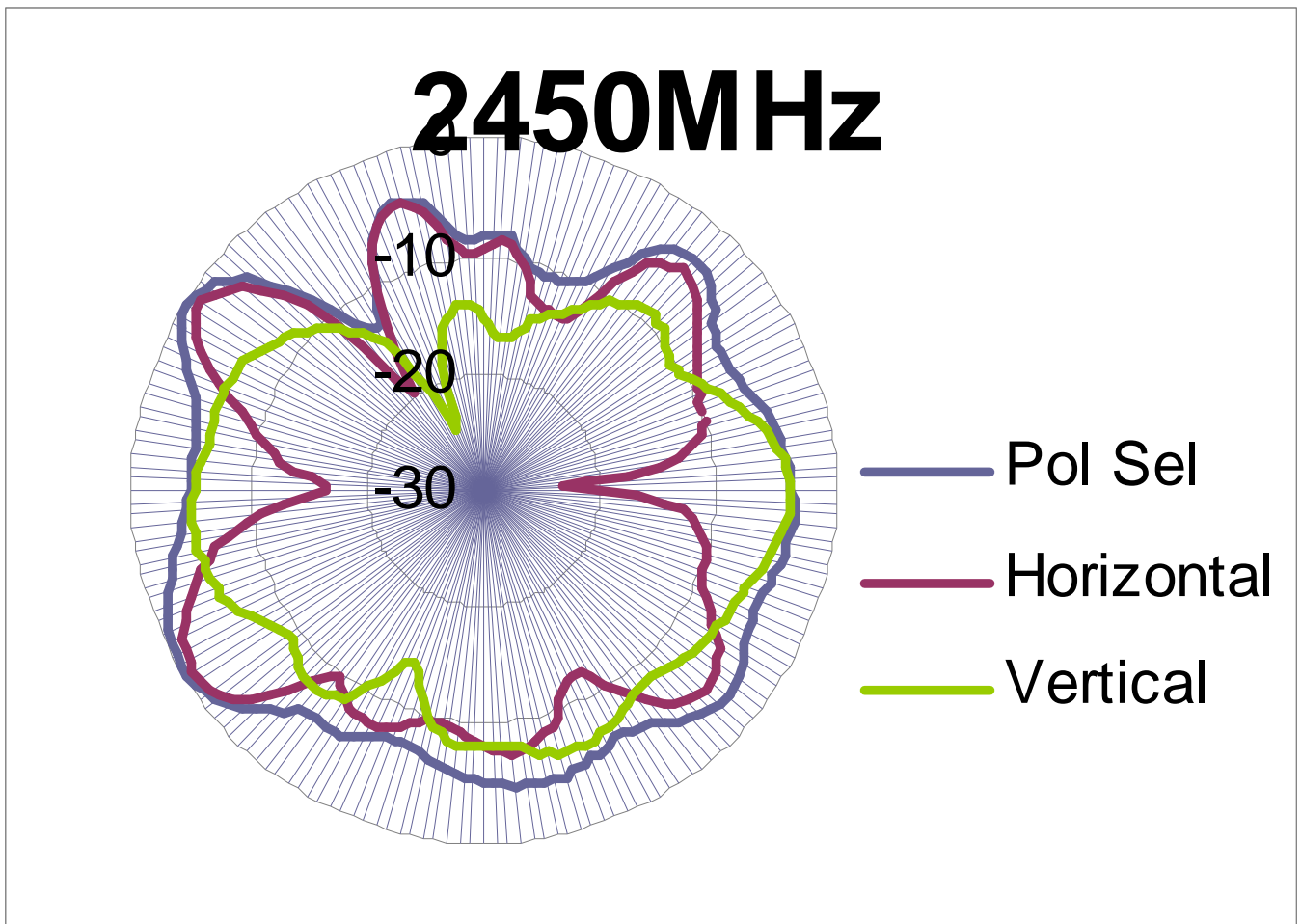
## 4.3 Antenna Pattern

### 2.4G



frequency(MHz)	Horizontal (dB)Peak	Vertical(dB)Peak	H+V (E total)Peak
2400	-4.44	-1.99	-1.10

2.45G

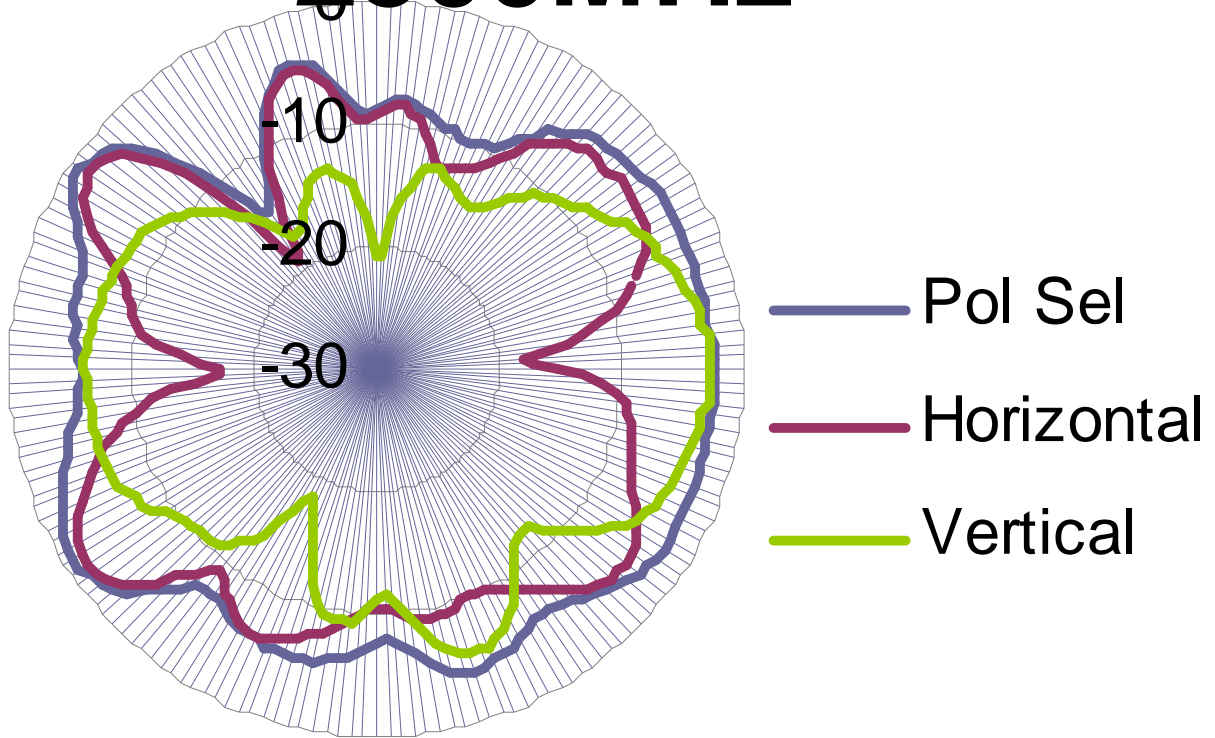


frequency(MHz)	Horizontal (dB)Peak	Vertical(dB)Peak	H+V (E total)Peak
2450	-3.92	-0.87	-0.21



2.5G

# 2500MHz



frequency(MHz)	Horizontal (dB)Peak	Vertical(dB)Peak	H+V (E total)Peak
2500	-2.63	-1.51	-0.77