

# 百展科技有限公司承認書

## BJTEK NAVIGATION,INC. SPECIFICATION FOR APPROVAL

**Customer :**

**Customer's part number :**

**Product description :** Digital TV Antenna

**Part number :** DA-110A-5M-IEC-USB

**Issue Date :** 2010/7/9

**Note:** V+UHF/主動,  $\phi$  4.4mm 彎頭 4 節伸縮銅管  
-molding(ABS)/黑色+45mm 磁座(黑色),  
20dB LNA, 1.5C-2V\*5M 接 PS-B(USB 接  
頭), IEC(M), PE 袋, ROHS

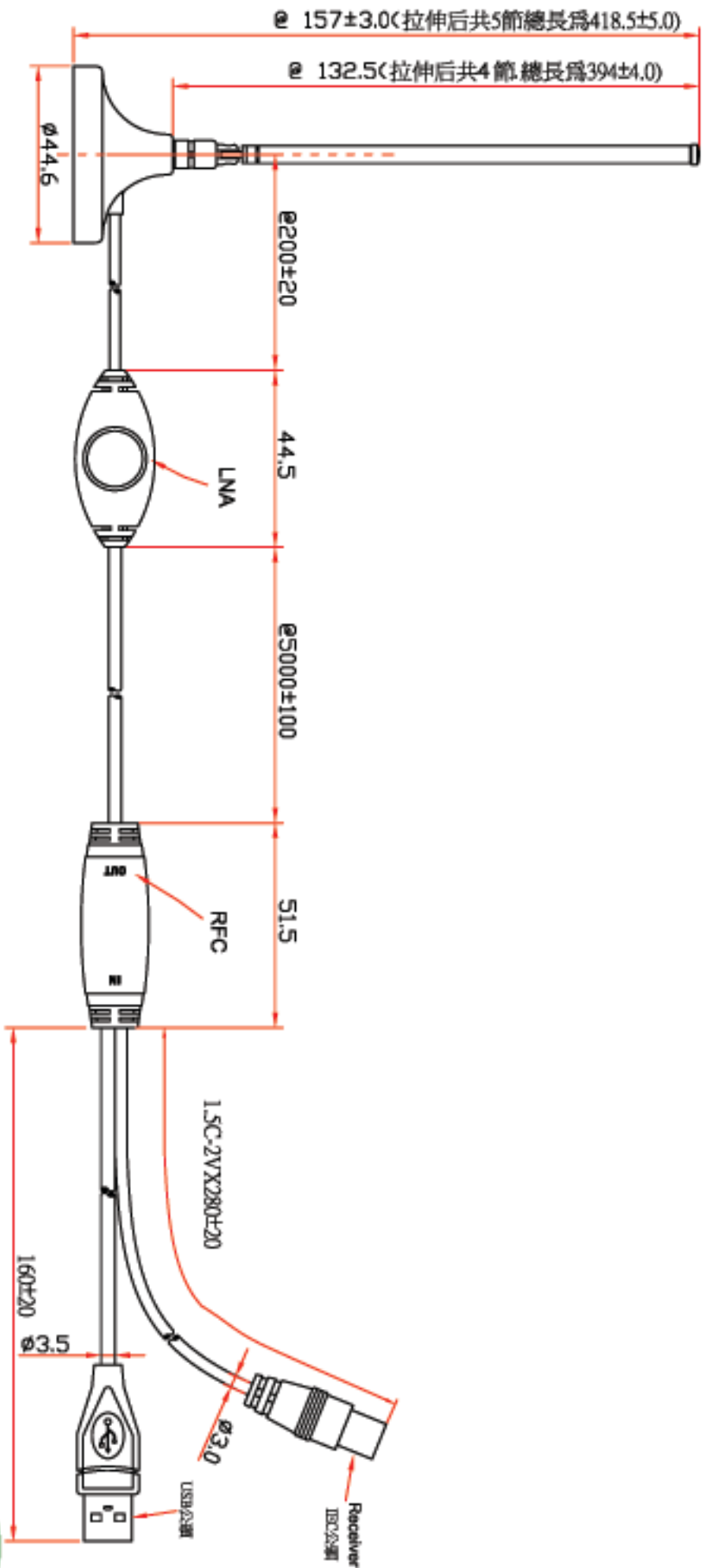
Customer Use	✓	Customer's authorized signature	Remarks
Full approved			
Conditional approved			
Rejected			

Approved: \_\_\_\_\_ Sales : \_\_\_\_\_ Engineer: \_\_\_\_\_

\_\_\_\_\_

## SPECIFICATION

<b>1. Description</b>	<b>Digital TV Antenna</b>
<b>2. Part Number</b>	<b>DA-110A-5M-IEC-USB</b>
<b>3. Mechanical Characteristics</b>	
<b>Connector</b>	<b>IEC(M)</b>
<b>Cable</b>	<b>1.5C-2V×5000±100mm</b>
<b>Color</b>	<b>Black</b>
<b>Appearance</b>	<b>See attached drawing</b>
<b>4. Electrical Characteristics</b>	
<b>Operating Frequency</b>	<b>VHF: 174MHz~230MHz UHF: 470MHz~862MHz</b>
<b>Gain</b>	<b>VHF: 3±2dBi UHF(500~600MHz): 3±2dBi</b>
<b>Impedance</b>	<b>75 ohm</b>
<b>V.S.W.R</b>	<b>VHF: 2:1 max UHF (500~600MHz): 2:1 Max</b>
<b>Polarization</b>	<b>Linear</b>
<b>5.LNA Gain</b>	<b>+20dB</b>
<b>6. Operating Temperature</b>	<b>-20°C ~ +65°C</b>
<b>7. Storage Temperature</b>	<b>-40°C ~ +85°C</b>
<b>8.Helix Tensile Load</b>	<b>1.2kgf (Cable)</b>
<b>9.Magnetic base power</b>	<b>500~600 gauss Tensile ≥ 0.2 kgs</b>
<b>9.Dimensions</b>	<b>H×157mm , W×45mm , D×45mm</b>

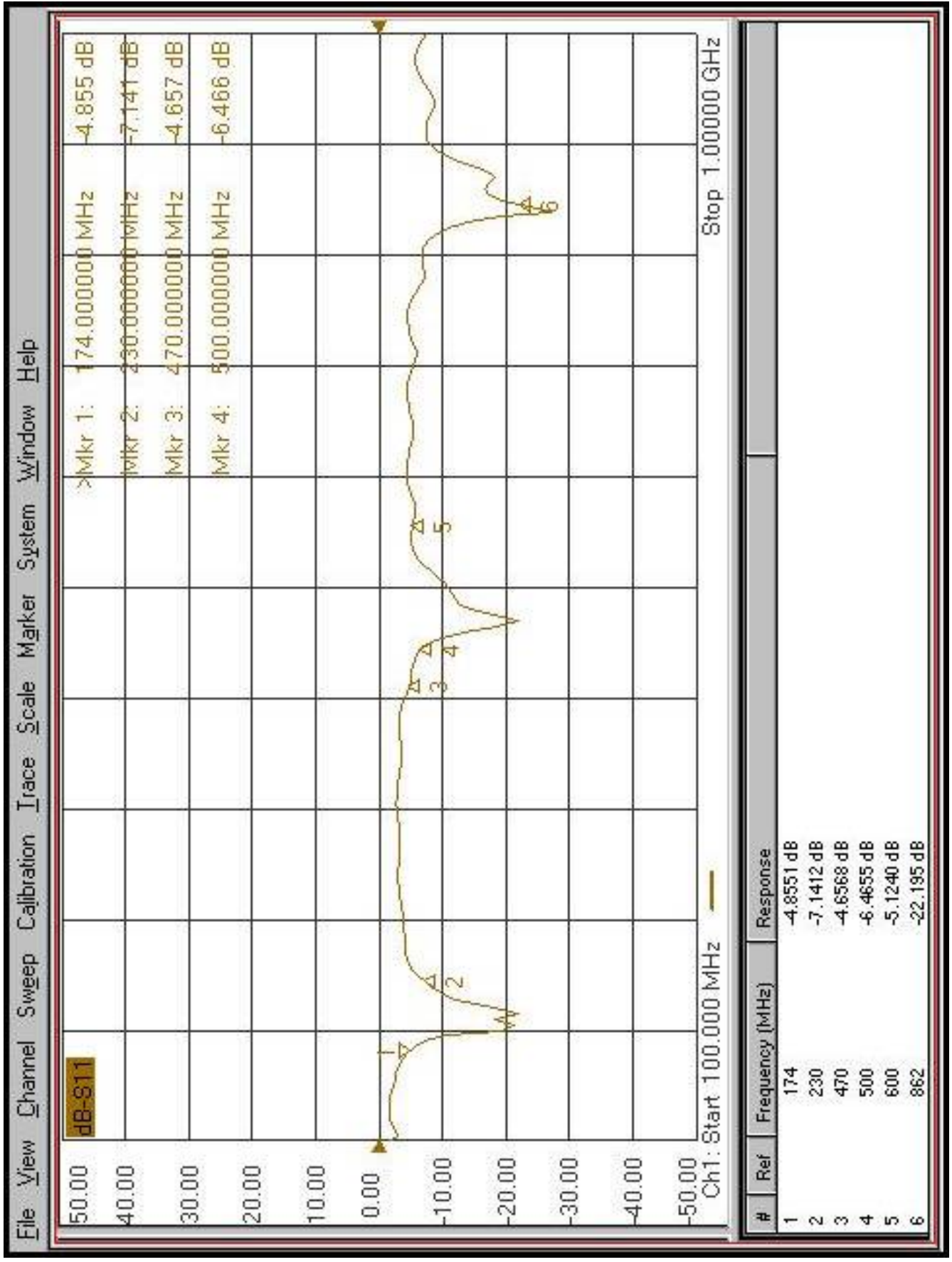


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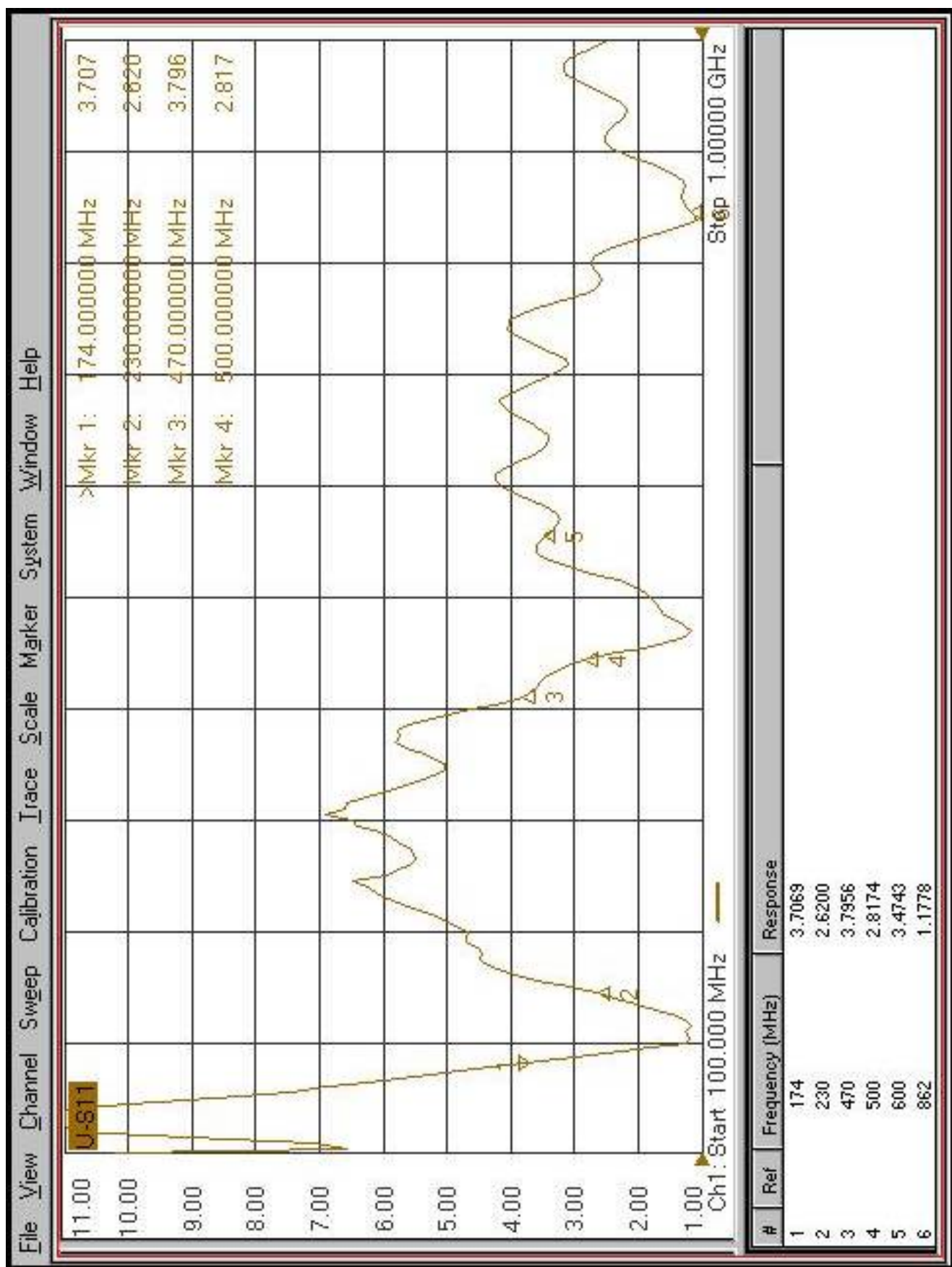
變更記錄/Change record		機種編号/Product number		圖名/Name	
客户編号/Customer's part number				成品外觀圖	
機種編号/Product number		比例/Scale		主要檢驗項目/Critical Check Item	
圖名/Name		1:1.5		@	
版本/Version		核准/Approval		日期/Date	
劉永鋒				2010-07-07	
一般公差(Tolerance)(mm)		度量單位/Unit		MM	
Range	Cable	Metal	Plastic		
0~10	±0.1	±0.05	±0.2		
11~20	±0.5	±0.1	±1		
21~30	±2	±1	±2		
31~100	±5	±2	±5		
101~300	±10	±5	±10		
301~1000	±50	±10	±10		
1001~					

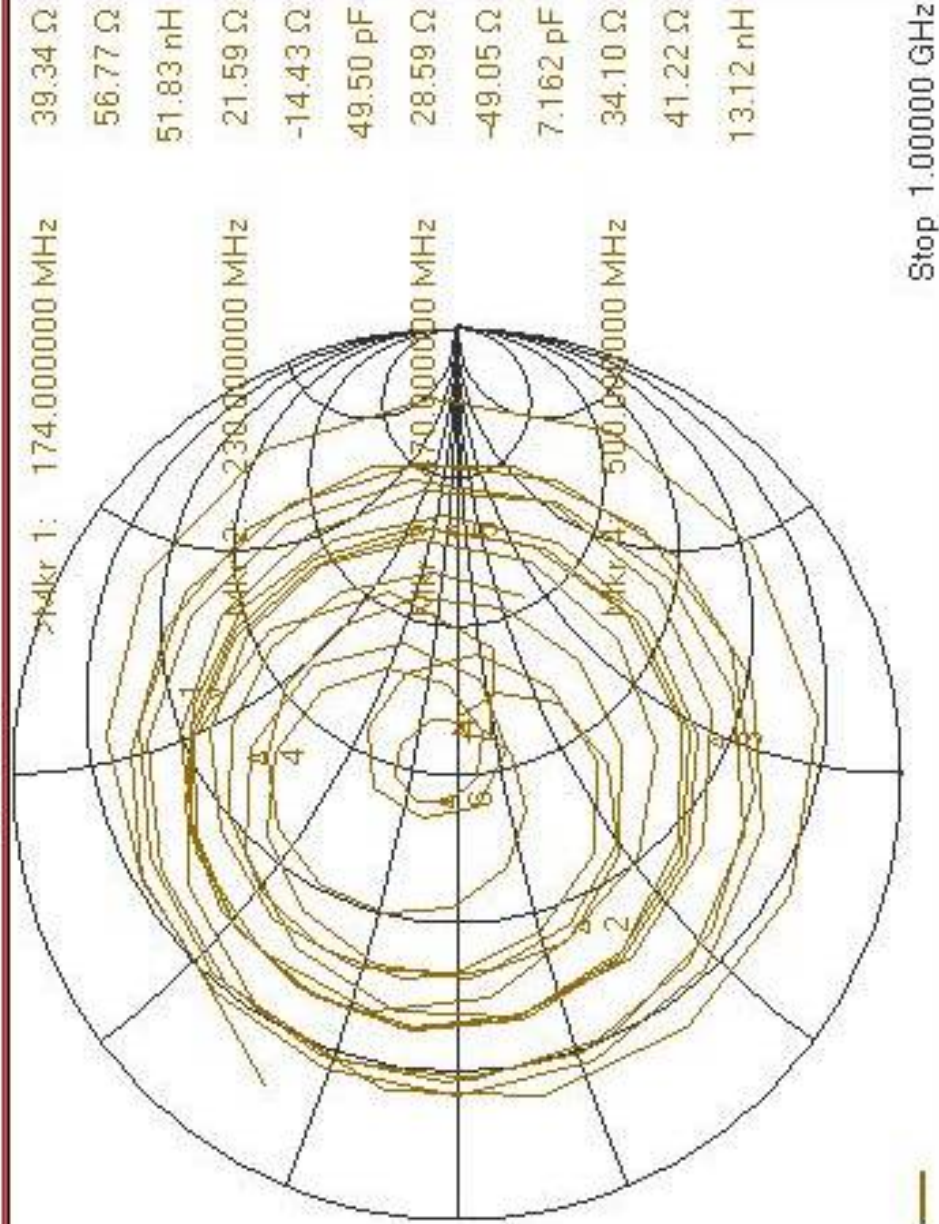
ELECTRONICAL CHARACTERISTICS.電氣特性.

ITEM 項目		TEST CONDITION 測試環境	SPECIFICATION 規格
1	RETURN LOSS 反射損耗	Using Agilent Network Analyzer 8753ET to measure antenna S11 return loss Characteristics. 使用 Agilent 網路分析儀 8753ET 測量天線 S11 之返迴損耗參數	如附圖 1
2	VSWR 電壓駐波比	Using Agilent Network Analyzer 8753ET to measure antenna S11 VSWR characteristics. 使用 Agilent 網路分析儀 8753ET 測量天線 S11 之電壓駐波比參數	如附圖 2
3	Smith Chart 阻抗	Using Agilent Network Analyzer 8753ET to measure antenna S11 Smith Chart characteristics. 使用 Agilent 網路分析儀 8753ET 測量天線 S11 之史密斯阻抗參數	如附圖 3
4	Gain Response 增益響應	Using Agilent Network Analyzer 8753ET to measure antenna S11 Smith Chart characteristics. 使用 Agilent 網路分析儀 8753ET 測量天線 S21 之史密斯阻抗參數	如附圖 4



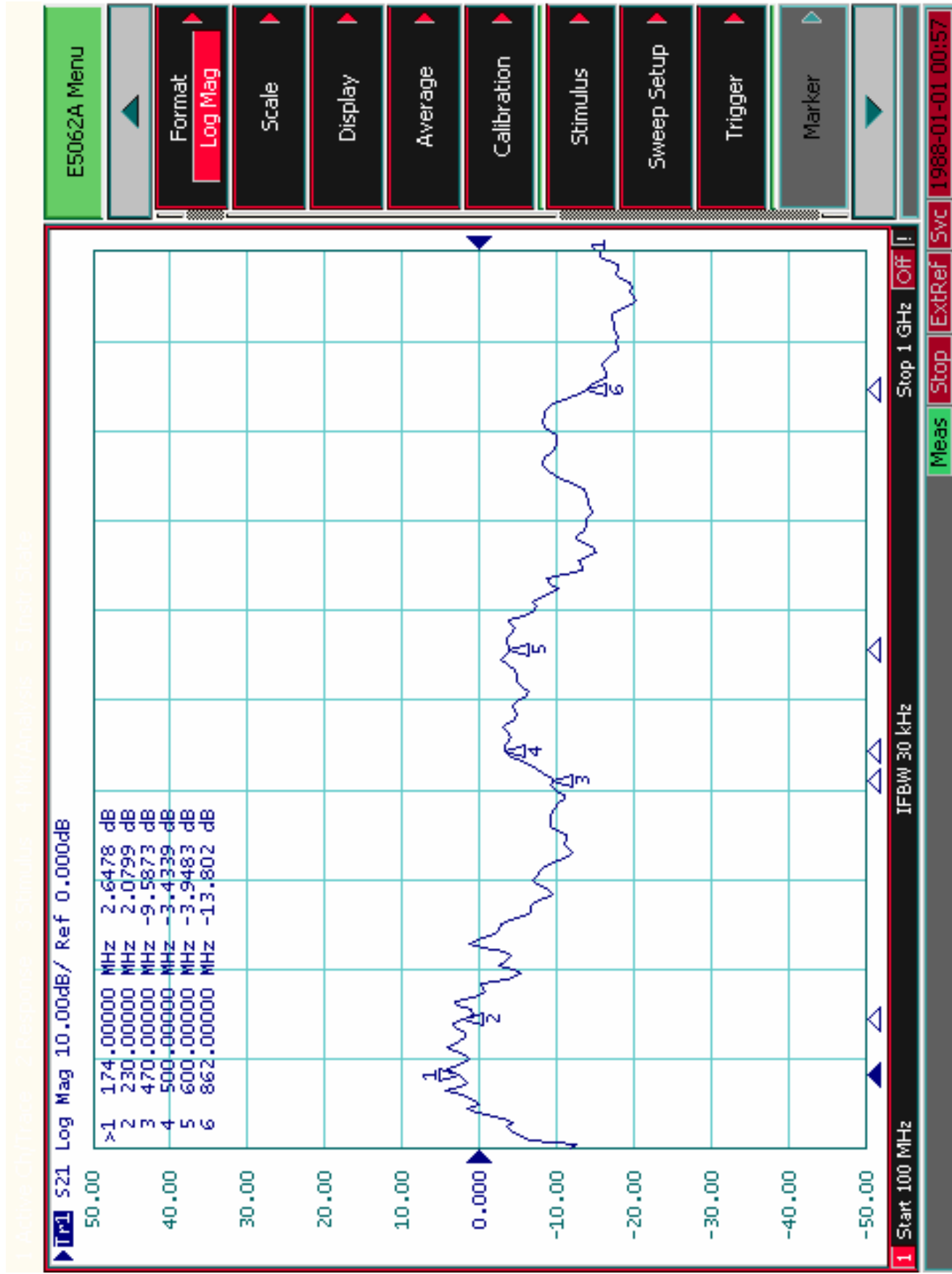
附圖二：VSWR





#	Ref	Frequency [MHz]	Response
1		174	(39.341 Ω, 56.767 Ω) 51.833 nH
2		230	(21.589 Ω, -14.431 Ω) 49.496 pF
3		470	(28.591 Ω, -49.055 Ω) 7.1617 pF
4		500	(34.096 Ω, 41.217 Ω) 13.116 nH
5		600	(164.24 Ω, 18.995 Ω) 7.1005 nF
6		862	(43.994 Ω, 3.8909 Ω) 717.02 pH

附圖四：Gain Response







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PE-LD