



*Patent Pending*

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# *Approval Sheet*

**DVB-T Monopole Antenna**



**921ZE1B104XX00D3**

**Ver. 1.01**

**2006/10/25**

**CHANT SINCERE CO.,LTD.**

## **DESCRIPTIONS**

The exciting **921ZE1B104XX00D3** is one of the world's high-performance UHF470~860MHz small antennas. It is for Note Book, PC, Car and Home TV applications. This DVB-T antenna comprises a radiating structure of multiple meandered conducting strips, which are developed on a tiny piece of Printed Circuit Board (PCB) and packed with a Thermal Plastic dielectric composite material to achieve size, performance characteristics and cost effectiveness superior to other designs. The dimension is 155 mm (H) / 41.5 mm (OD).

## **FEATURES**

- Weight (53g)
- Miniaturized Size ( H=155mm / OD=41.5mm )
- Omni-Directional Antenna Pattern
- Wide Bandwidth
- Favorable Linear Polarization
- Thermal Plastic Insert Molding Technology
- Cost-Effective

## **APPLICATIONS**

- PC
- Note Book
- Car
- Home TV

## SPECIFICATIONS

### ■ 921ZE1B104XX00D3



#### KEY FEATURES:

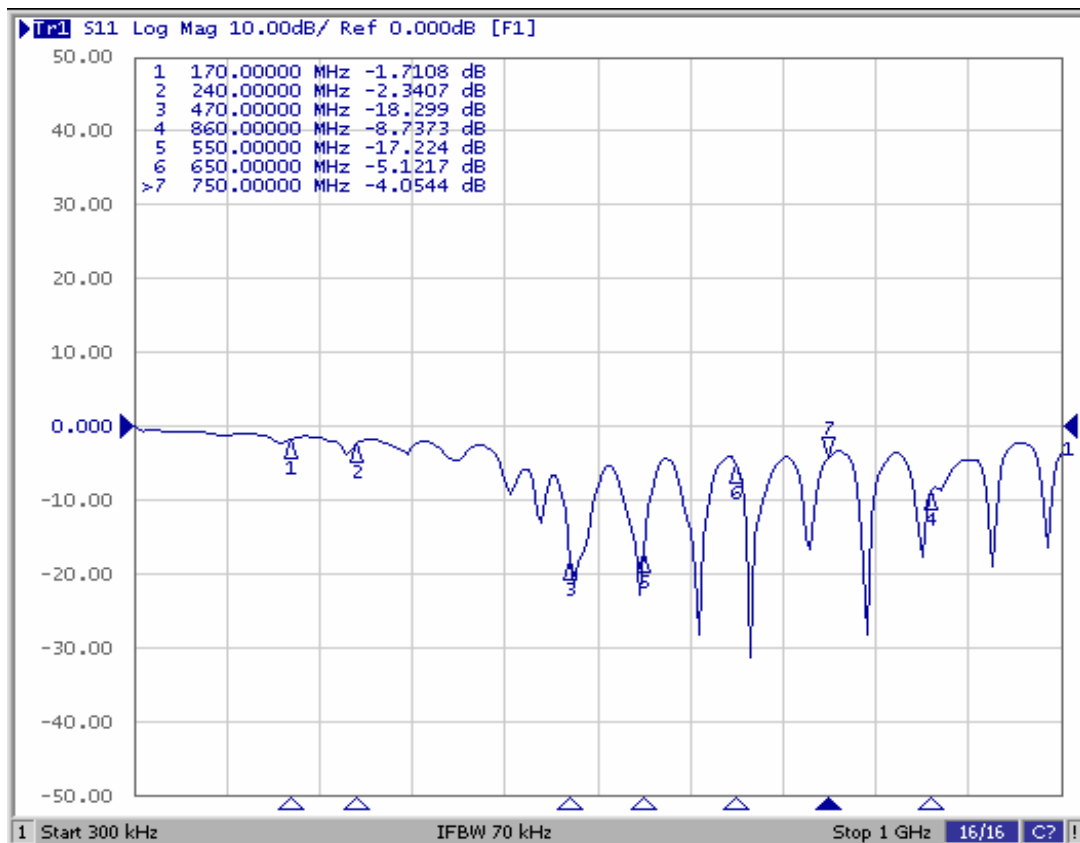
- Weight (53g)
- Size (H=155mm / OD=41.5mm)
- Wide Bandwidth
- Cost-Effective

#### MAIN APPLICATIONS:

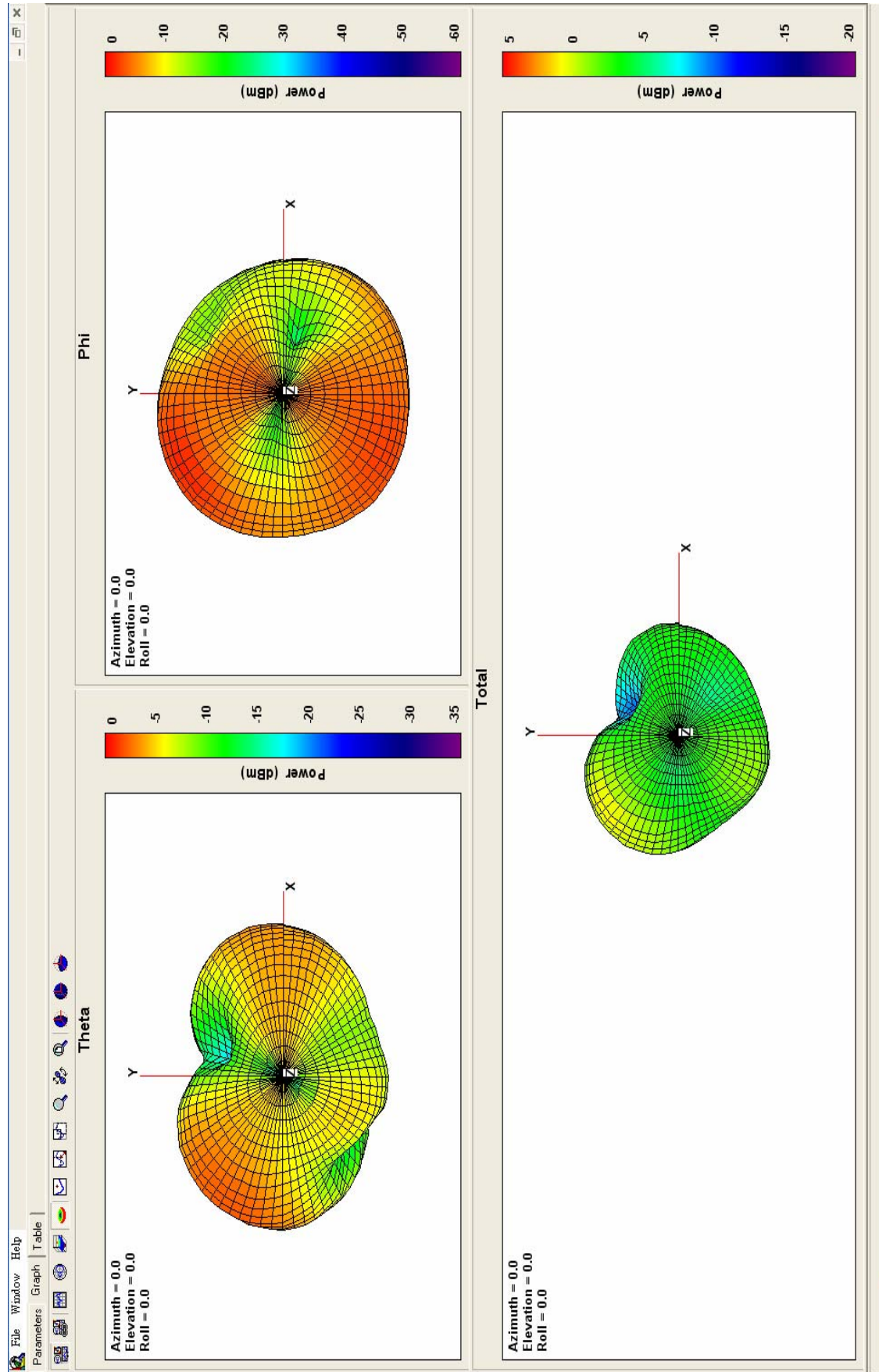
- Car
- Home TV

	DVB-T Monopole Antenna
Dimension (mm)	H=155 / OD=41.5
Frequency (MHz)	UHF 470~860 MHz
Return Loss (dB)	-3 dB
Polarization	Linear
Pattern	Omni-Directional
Impedance ( $\Omega$ )	50 or 75
Construction	Thermal Plastic Insert Molding

### Return Loss and Bandwidth (Cable Length= 1.5M)



# 3D Pattern



## Summarization Table1 (Channel : 470 500 533 557 MHz)

Channel (MHz)	470	500	533	557
Tot. Rad. Pwr. (dBm)	-1.59864	-1.52446	-3.433	-4.0904
Peak EIRP (dBm)	2.92288	2.96109	1.24979	0.980533
Directivity (dBi)	4.52152	4.48555	4.68279	5.07093
Efficiency (dB)	-1.59864	-1.52446	-3.433	-4.0904
Efficiency (%)	69.2048	70.397	45.3628	38.9906
Gain (dBi)	2.92288	2.96109	1.24979	0.980533
NHPRP $\pm$ Pi/4 (dBm)	-3.44699	-3.5661	-5.43136	-6.04926
NHPRP $\pm$ Pi/6 (dBm)	-5.51367	-5.81189	-7.71019	-8.34167
NHPRP $\pm$ Pi/8 (dBm)	-7.06883	-7.4587	-9.42153	-10.0737
Upper Hem. PRP (dBm)	-4.433	-4.42897	-6.26291	-6.72679
Lower Hem. PRP (dBm)	-4.79231	-4.64319	-6.63152	-7.50985
NHPRP4 / TRP Ratio (dB)	-1.84836	-2.04164	-1.99836	-1.95886
NHPRP4 / TRP Ratio (%)	65.3378	62.4937	63.1196	63.6963
NHPRP6 / TRP Ratio (dB)	-3.91504	-4.28743	-4.27719	-4.25127
NHPRP6 / TRP Ratio (%)	40.5972	37.2612	37.3492	37.5728
NHPRP8 / TRP Ratio (dB)	-5.47019	-5.93424	-5.98853	-5.98335
NHPRP8 / TRP Ratio (%)	28.3779	25.5021	25.1853	25.2154
UHPRP / TRP Ratio (dB)	-2.83436	-2.90451	-2.82991	-2.63639
UHPRP / TRP Ratio (%)	52.0671	51.2329	52.1206	54.4955
LHPRP / TRP Ratio (dB)	-3.19367	-3.11873	-3.19851	-3.41946
LHPRP / TRP Ratio (%)	47.9329	48.7671	47.8794	45.5045
Front/Back Ratio (dB)	6.74442	3.69362	2.20946	2.1406
Phi BW (°)	65	67	69	69
+ Phi BW (°)	37	40	42	40
- Phi BW (°)	28	27	27	29
Theta BW (°)	43	40	43	42
+ Th. BW (°)	26	24	24	24
- Th. BW (°)	17	16	19	18
Maximum Power (dBm)	2.92288	2.96109	1.24979	0.980533
Minimum Power (dBm)	-14.028	-15.6295	-21.9885	-19.27
Average Power (dBm)	-1.35307	-1.06655	-3.05517	-3.80567
Max/Min Ratio (dB)	16.9509	18.5906	23.2383	20.2506
Max/Avg Ratio (dB)	4.27594	4.02764	4.30496	4.78621
Min/Avg Ratio (dB)	-12.6749	-14.563	-18.9333	-15.4644
Average Gain (dB)	-1.59864	-1.52446	-3.433	-4.0904
E-Plane BW (°)	47	45	51	56
+ E-Plane BW (°)	18	18	20	24
- E-Plane BW (°)	29	27	31	32
H-Plane BW (°)	126	115	53	43
+ H-Plane BW (°)	33	29	27	26
- H-Plane BW (°)	93	86	26	17

## Summarization Table2 (Channel : 590 650 750 860 MHz)

Channel (MHz)	590	650	750	860
Tot. Rad. Pwr. (dBm)	-6.44744	-6.96572	-5.20005	-2.95667
Peak EIRP (dBm)	-1.53181	-3.0505	-0.836175	2.29604
Directivity (dBi)	4.91563	3.91522	4.36388	5.2527
Efficiency (dB)	-6.44744	-6.96572	-5.20005	-2.95667
Efficiency (%)	22.6598	20.1107	30.1992	50.6213
Gain (dBi)	-1.53181	-3.0505	-0.836175	2.29604
NHPRP $\pm\pi/4$ (dBm)	-8.40246	-8.75156	-6.83247	-5.19795
NHPRP $\pm\pi/6$ (dBm)	-10.6718	-10.864	-8.82484	-7.44501
NHPRP $\pm\pi/8$ (dBm)	-12.2938	-12.3479	-10.2816	-8.9048
Upper Hem. PRP (dBm)	-8.983	-9.77013	-7.56097	-6.20445
Lower Hem. PRP (dBm)	-9.99081	-10.1922	-8.9742	-5.7418
NHPRP4 / TRP Ratio (dB)	-1.95503	-1.78584	-1.63242	-2.24128
NHPRP4 / TRP Ratio (%)	63.7525	66.2852	68.6686	59.6859
NHPRP6 / TRP Ratio (dB)	-4.22438	-3.89832	-3.62479	-4.48835
NHPRP6 / TRP Ratio (%)	37.8061	40.7538	43.4032	35.5767
NHPRP8 / TRP Ratio (dB)	-5.84635	-5.38215	-5.08152	-5.94813
NHPRP8 / TRP Ratio (%)	26.0235	28.9591	31.0347	25.4207
UHPRP / TRP Ratio (dB)	-2.53556	-2.80441	-2.36091	-3.24778
UHPRP / TRP Ratio (%)	55.7756	52.4275	58.0642	47.3393
LHPRP / TRP Ratio (dB)	-3.54338	-3.22644	-3.77415	-2.78513
LHPRP / TRP Ratio (%)	44.2244	47.5725	41.9358	52.6607
Front/Back Ratio (dB)	3.30726	1.89346	6.0617	3.94891
Phi BW (°)	71	54	62	43
+ Phi BW (°)	46	31	37	22
- Phi BW (°)	25	23	25	21
Theta BW (°)	44	59	42	42
+ Th. BW (°)	20	18	22	14
- Th. BW (°)	24	41	20	28
Maximum Power (dBm)	-1.53181	-3.0505	-0.836175	2.29604
Minimum Power (dBm)	-15.975	-19.0367	-15.2523	-13.3717
Average Power (dBm)	-6.42776	-7.15903	-5.51385	-3.02977
Max/Min Ratio (dB)	14.4432	15.9862	14.4161	15.6678
Max/Avg Ratio (dB)	4.89595	4.10853	4.67767	5.32581
Min/Avg Ratio (dB)	-9.54724	-11.8776	-9.73841	-10.3419
Average Gain (dB)	-6.44744	-6.96572	-5.20005	-2.95667
E-Plane BW (°)	55	53	67	42
+ E-Plane BW (°)	28	32	43	23
- E-Plane BW (°)	27	21	24	19
H-Plane BW (°)	42	58	41	40
+ H-Plane BW (°)	19	40	19	26
- H-Plane BW (°)	23	18	22	14

## HOW TO ORDER

**921Z E 1B1 04 X X 0 0D3**

**1            2            3            4            5            6            7**

### **1. SERIED NO.**

**921Z=DVB-T ANTENNA**

### **2. ENVIRONMENT PROTECTION MATERIAL**

**E=RoHS**

### **3. FREQUENCY**

**1B1=UHF 470 ~ 860 MHz**

### **4. TYPE**

**04=(H=155mm / OD=41.5mm)**

### **5. CONNECTOR TYPE**

**1=F TYPE**

**2=IEC TYPE**

**3=SMA TYPE**

**4=MCX TYPE**

**5=MMCX TYPE**

### **6. CABLE LENGTH.**

**1=1.5M**

**2=5.0M**

### **7. ACCESSORY**

**0=STANDARD (W/ MAGNET)**

**Change:**

**Modify the P/N.**

CHANT SINCERE CO., LTD.

7F.-2, No.188, Datong Rd., Sec. 3

Sijhih City, Taipei County 221, Taiwan

TEL : 886-2-8647-1251

FAX : 886-2-8647-1744

E-MAIL : aaron.hu@coxoc.com.tw

[www.coxoc.com.tw](http://www.coxoc.com.tw)