

Dongguan Juzhan Hardware & Electronics Co., Ltd.
ADD:NO.31 Beixinle Road, Wushajiang, Chang'an Town,
Dongguan City

SPECIFICATION FOR APPROVAL

Customer Name: Zeyu Electronics



Juzhan Trademark: :

Antenna type: Wire Antenna

Specification description: 2.4G copper tube antenna, wire length L:

180mm

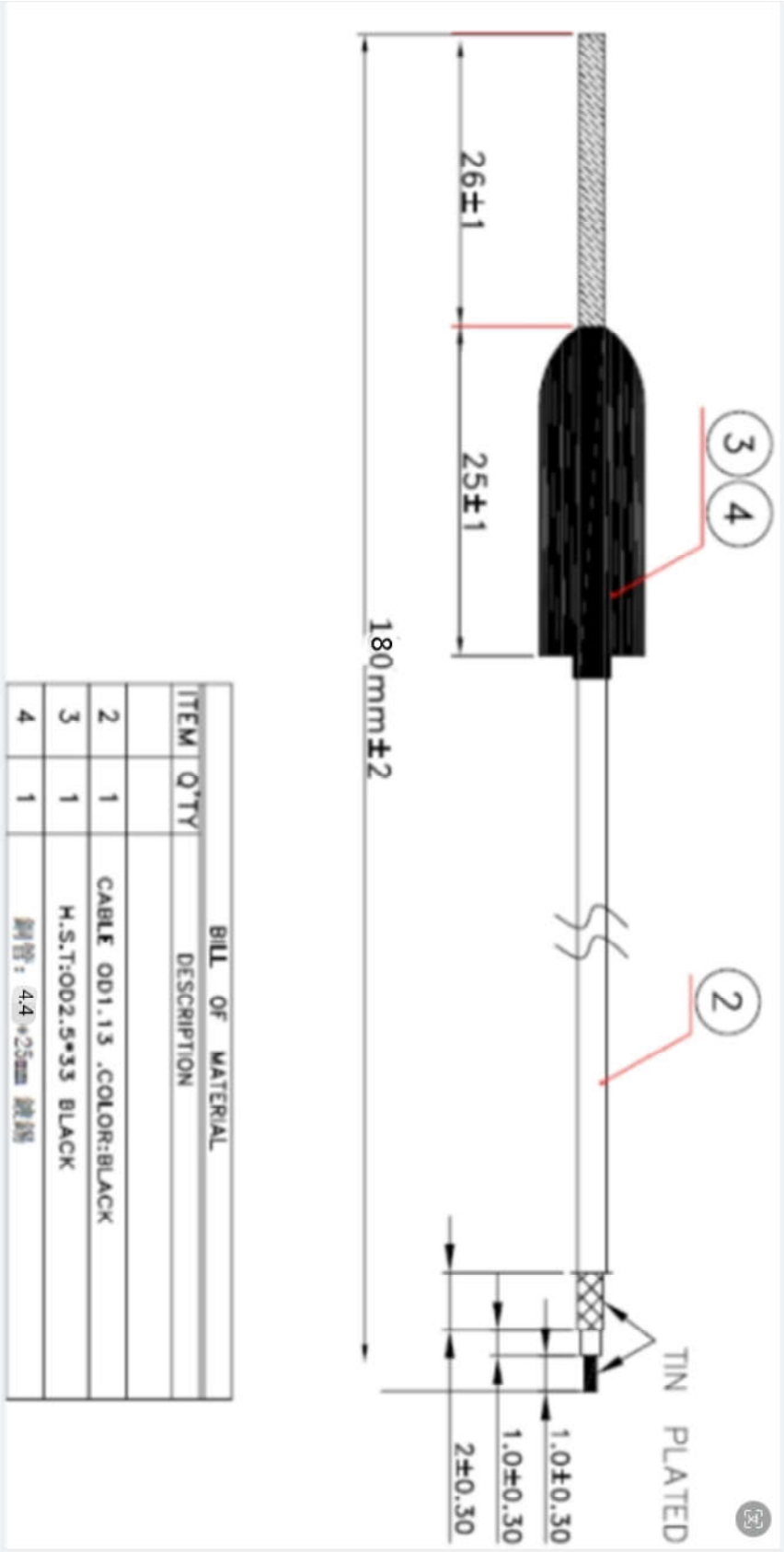
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3、Product drawing



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4. Performance parameters

Parameter	
Frequency	2390–2500MHz
Impedance	50 Ω
VSWR	≤ 2.5
Connector	welding
Mechanical Parameter	
Length	180 $\pm$ 5mm
Cable	RF1.13 Single Silver Line
Salt Spray Test	
Environment Parameter	
Operation Temperature	–20℃~65℃
Storage Temperature	–30℃~75℃

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1. 适用范围:

Scope

本规格书制定了 50 Ω FEP 绝缘射频电缆 YD113 系列的结构和电气特性.

This specification covers the construction and the electrical properties of YD113 series of 50 Ω FEP Insulation Coaxial Cable.

2. 结构/Construction:

单位/Unit:mm

项目/Item		详细资料/Details
导体/Conductor	材料/Material	镀银铜线/Silver-coated Copper Wire
	构成(根/mm) Composition(No./mm)	7/0.083
	标称直径/NOM. O. D	0.246 $\pm$ 0.03
绝缘层 /Insulation	材料/Material	聚全氟乙丙烯(自然色) /FEP(Natural)
	标称绝缘厚度/Nom. Thick. (mm)	0.23
	标称外径/NOM. O. D	0.70 $\pm$ 0.03
屏蔽层/Shield	材料/Material	镀锡铜线/Tinned annealed copper wire
	构成/Composition	16*4/0.05
	编织密度/Coverage (%)	90 $\pm$ 5
	标称外径/NOM. O. D	0.92 $\pm$ 0.03
护套/Jacket	材料/Material	聚全氟乙丙烯/FEP
	标称护套厚度 / Nom. Thick (mm)	0.10
	标称外径/Nom. O. D (mm)	1.13 $\pm$ 0.05
	颜色/Color	按与客户确认的颜色/According to corresponding have approved by the suppliers and customers

3. 电气特性(20℃时)/Electrical Properties(at 20℃)

项目/Item	单位/Unit	详细资料/Details
导体电阻/Conductor Resistance	Ω /km	Max. 581
绝缘电阻/Insulation Resistance	M Ω . km	Min. 200
耐压强度/Dielectric Strength	V(AC)/min	1000
静电容/Capacitance	pF/m	98

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特 性 阻 抗 /Characteristic Impedance	Ω	50 ± 2.0	
衰减/Attenuation	dB/m	1GHz	2.20
		2GHz	3.10
		3GHz	3.90
		4GHz	4.50
		5GHz	5.00
		6GHz	5.50
驻波比/Standing wave (0-6GHz)	/	≤ 1.35	

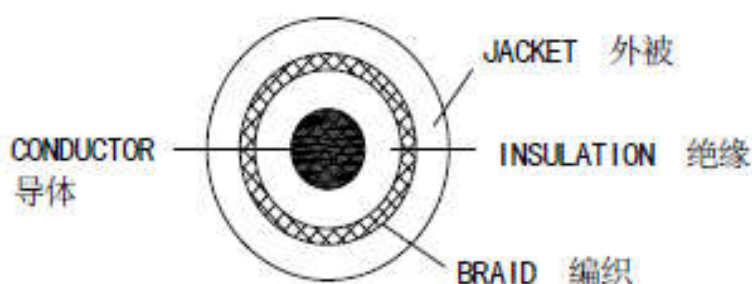
4. 工程特性/Engineering characteristic

项目/Item	单位/Unit	详细资料/Details
额定电压/Rating Voltage	V	30
额定温度/Rating Temperature	℃	-65~+200
敷设温度/Wiring Temperature	℃	-20~+50

5. 包装 Packing

标准单位包装长度为 1000 米/盘, 每盘最多允许 5 个接头, 接头最短长度 20 米, 在搬运过程中不能损坏包装.

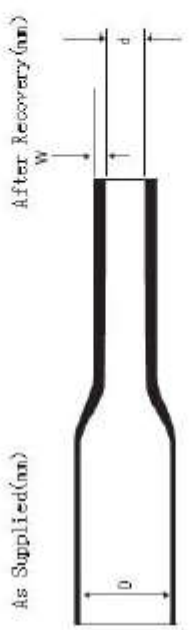
Standard unit length of finished cable shall be 1000m on reel, frequency of joint max.5/reel, the mini length is 20m. The finished cable shall be packed not be damaged during transportation



本产品有时不适合车载用途的情况也有,所以使用前请先和本公司业务部门进行商谈.

This product is not suitable for automobile application in some cases. Please contact with our sales department before you use this product.

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S											
■ SPECIFICATION: ★ Minimum shrink temperature:70℃ ★ Minimum fully recovery temperature:120℃ ★ Shrink ratio 2:1 Vertical ratio≤8% ★ Approvals: 125℃ VW-1 300W ★ Operating temperature:-55℃ to +125℃ ★ Standard colors: White printing/black plastic ★ Standards: UL224 VW-1 C-UL CSA C22.2 0FT ★ Meet standard of RoHS																				ITEM NO. DESCRIPTION TUBE REF: H DWG: APPLE DRAWING NO. NO. REV. EXPLANATIONS CHECK DATE CHK: CREX VPI 01002 DATE: 09.06.15 APP: 朱晓阳									
萬豐興電子科技有限公司 WANFY ELECTRON TECHNOLOGY CO., LTD. 										SCALE: NONE REV: A																			

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1. 环保型热收缩套管

Environment Friendly Flame-retardant Heat Shrinkable Tube

Product Name: Environment Friendly Flame-retardant Normal Wall Heat Shrinkable Tube: black

Product Detail:

1. Product property and application

Environment Friendly Flame-retardant Heat shrinkable tube has excellent un-flammability, flexibility, and insulation. The shrinking temperature is very low and it can shrink very quickly. It is suitable for various electric insulation and bonding of cables and connectors and widely applied for connecting or end-handling, electric wire, insulating and harness of electric wire, corrosion-proof of metallic rods or tubes, and antenna protection. Do not contain 4 metal elements and 2 kinds of bromide (PBB & PBDE), fully conform to RoHS directions. UL File Number: E203950, CSA: 220127 Material: Chemical, cross-linked (by radiation), thermally stabilized flame retarded polyolefin

Standard: UL 224 VW-1

C-UL CSA C 22.2 OFT

Product No: RSFR(CB)

2. Property:

Operating Temperature: -55℃ ~ 125℃

Shrinking Temperature: Start at 70℃, and shrunk totally at 110℃.

Size range: 0.8 ~ 180mm (3/64 ~ 5inch or lager), special size are negotiable.

Shrink Ratio: 2:1

Available Color: Black, Red, Yellow, Green, Blue, White, Purple, and Grey. Can produce upon customer's special requirement.

3. Table-3 Products Characters

PROPERTY		Test Method	Standard Required	Classic Value
Physical	Tensile Strength(Mpa)	GB/T 1040	≥10.4	14.8
	Elongation%	GB/T 1040	≥200	460
	Tensile Strength after Aging (Mpa)	UL 224 158×168hr	≥7.3	14.5
	Elongation after Aging%	UL 224 158℃×168hr	≥100	480
	Heat Resistance	UL 224 250℃×4hr	NO Viscidity NO cracking	PASS
	Cold Blend	UL 224 -30℃×1hr	NO cracking	PASS
Electrical	Dielectric Strength(kV/mm)	GB/1408	≥15	17
	Dielectric Withstand (volts) 300v	UL 224	≥1500v	PASS
	volume resistance(Ω.cm)	GB 1410	≥1×10 ¹⁴	1×10 ¹⁵
Chemical	Corrosion	UL 224 158℃×168hr	PASS	PASS
	Copper stability	UL 224 158℃×168hr	PASS	PASS

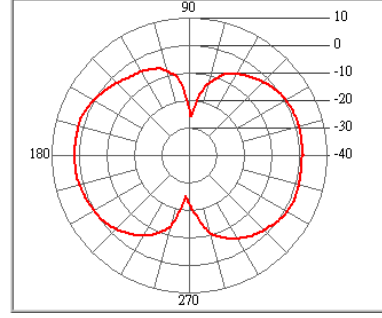
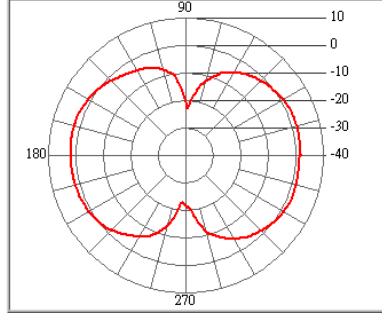
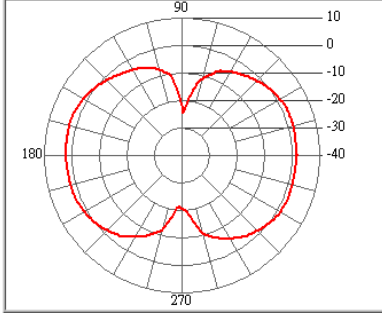
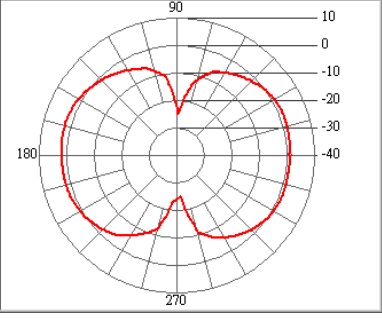
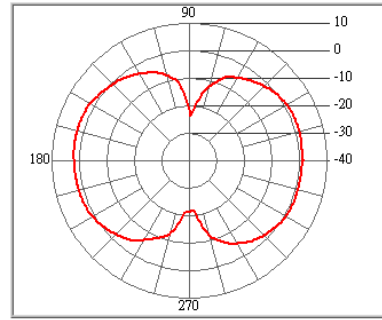
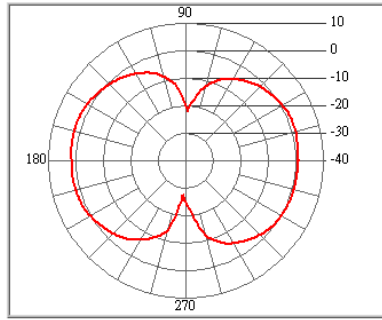
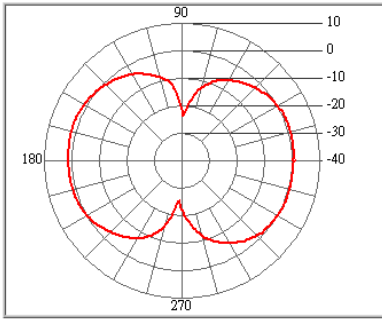
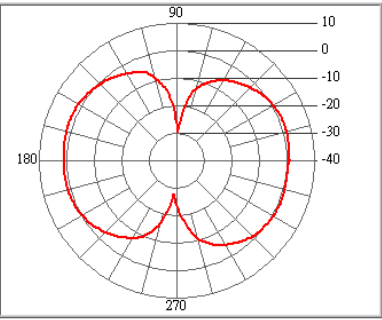
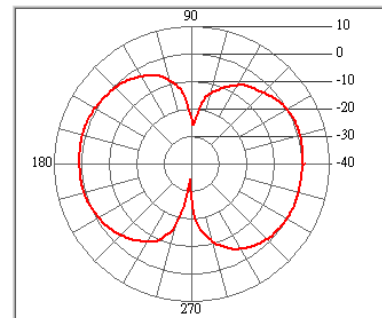
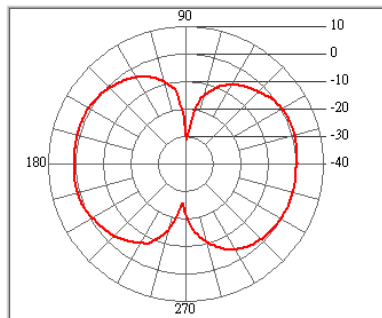
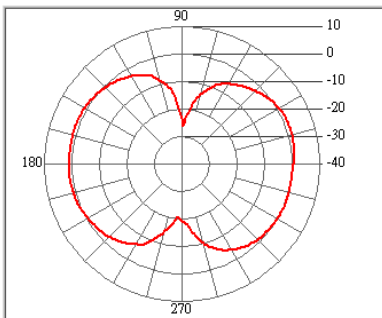
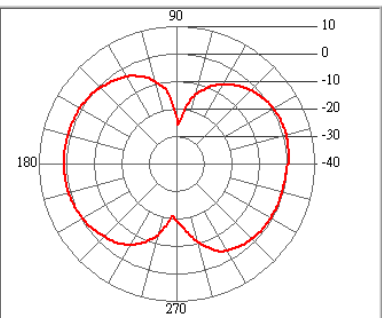
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4.2.Environment Friendly Flame-retardant Normal Wall Heat Shrinkable Tube							
Size (mm) (HCB)	As Supplied(mm)		After Recovery(mm)		Standard Package		Application Range (mm)
	I. D.	Average W. T.	Max. I. D.	Average W. T.	M/spool	Spools carton	
Φ0.6CB	0.9±0.2	0.10±0.05	≤0.40	0.22±0.10	400	23	0.4~0.7
Φ0.8CB	1.0±0.2	0.13±0.05	≤0.50	0.22±0.10	400	23	0.6~0.8
Φ1.0CB	1.50±0.3	0.13±0.05	≤0.65	0.20±0.10	400	19	0.7~1.0
Φ1.5CB	2.00±0.3	0.13±0.05	≤0.85	0.20±0.10	400	13	0.9~1.4
Φ2.0CB	2.50±0.3	0.13±0.05	≤1.00	0.22±0.10	400	18	1.1~1.8
Φ2.5CB	3.00±0.4	0.13±0.05	≤1.30	0.25±0.10	400	15	1.4~2.3
Φ3.0CB	3.50±0.4	0.13±0.05	≤1.50	0.28±0.10	400	13	1.6~2.7
Φ3.5CB	4.00±0.4	0.13±0.05	≤1.80	0.28±0.10	400	10	1.9~3.2
Φ4.0CB	4.50±0.4	0.15±0.05	≤2.00	0.35±0.10	400	8	2.1~3.6
Φ4.5CB	5.00±0.4	0.15±0.05	≤2.30	0.35±0.10	400	10	2.4~4.0
Φ5.0CB	5.50±0.4	0.15±0.05	≤2.5	0.37±0.10	200	10	2.6~4.5
Φ6.0CB	6.50±0.4	0.15±0.05	≤3.0	0.39±0.10	200	8	3.1~5.1
Φ7CB	7.50±0.4	0.15±0.05	≤3.5	0.32±0.10	200	20	3.7~6.6
Φ8CB	8.50±0.5	0.15±0.05	≤4.0	0.32±0.10	200	19	4.2~7.7
Φ9CB	9.50±0.5	0.15±0.05	≤4.5	0.35±0.10	200	18	4.7~8.0
Φ10CB	10.5±0.5	0.15±0.05	≤5.0	0.35±0.10	200	15	5.2~9.0
Φ11CB	11.5±0.5	0.18±0.05	≤5.5	0.40±0.10	200	15	5.7~10.0
Φ12CB	12.5±0.5	0.20±0.05	≤6.0	0.40±0.10	200	10	6.2~11.0
Φ13CB	13.5±0.5	0.20±0.05	≤6.5	0.40±0.10	200	9	6.7~12.0
Φ14CB	14.5±0.5	0.20±0.05	≤7.0	0.40±0.10	200	9	7.3~13.0
Φ15CB	15.5±0.5	0.20±0.05	≤7.5	0.40±0.10	200	8	7.8~14.8
Φ16CB	16.5±0.5	0.22±0.05	≤8.0	0.40±0.10	200	8	8.3~15.8
Φ18CB	18.5±0.5	0.22±0.05	≤9.0	0.45±0.10	200	7	9.3~17.0
Φ20CB	20.5±0.5	0.25±0.05	≤10.0	0.45±0.10	200	6	10.5~19.0
Φ22CB	22.5±0.5	0.25±0.05	≤11.0	0.45±0.10	200	6	11.5~20.5
Φ25CB	25.5±0.5	0.25±0.05	≤12.5	0.45±0.10	100	6	12.5~25.5

Antenna : 2.4G Antenna @ **L=110MM**
Remark : E-Plane // H-Pol
Tested by : Antenna 3D Lab

Location: **Chamber** Date: **2021/5/20** Time: **上午 10:45:23**
Temperatuer (°C): **25.00** Humidity (%): **65.00** Approved by:

Freq. (MHz)	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.24	1.52	1.03	1.17	1.49	1.63	2.03	2.18	2.06	2.33	1.99	1.66
Peak Degree	15	15	15	161	160	161	161	171	161	161	161	161
AV Gain (dBi)	-1.93	-1.75	-1.98	-2.04	-1.7	-1.82	-1.5	-1.24	-1.32	-0.99	-1.17	-1.58



Antenna : 2.4G Antenna @ **L=110MM**
Remark H-Plane //H-Pol
Tested by : Antenna 3D Lab

Location: **Chamber**

Date: **2021/5/20**

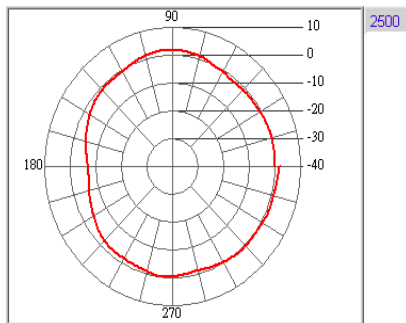
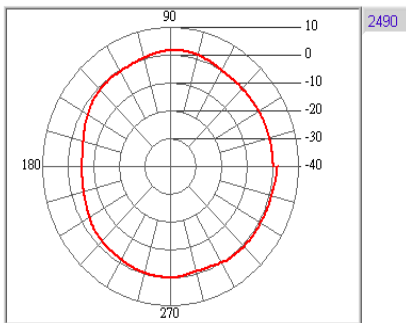
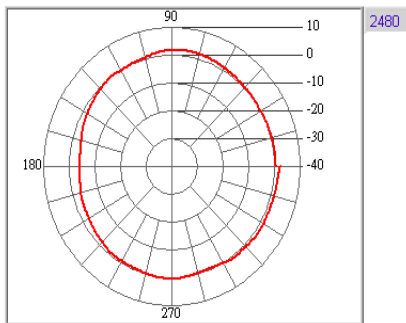
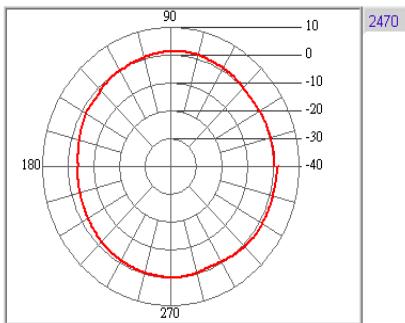
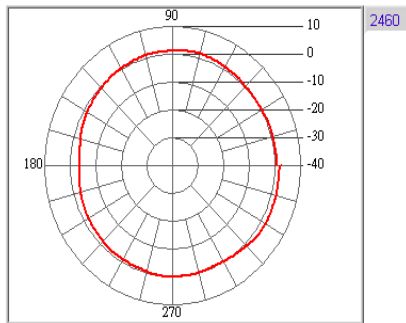
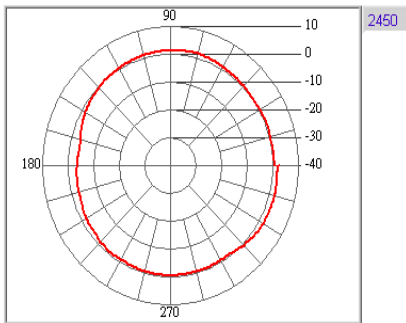
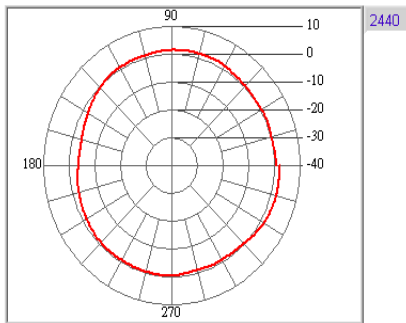
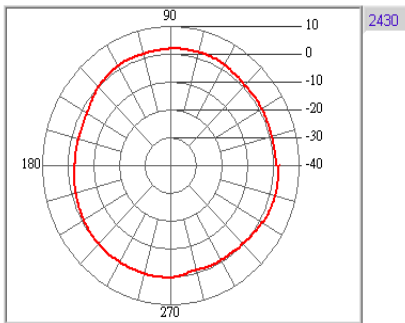
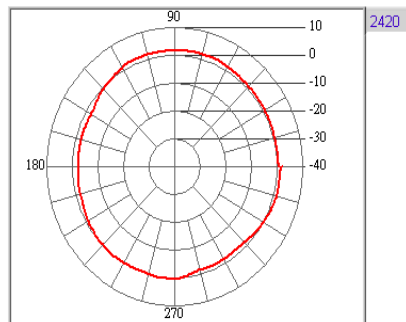
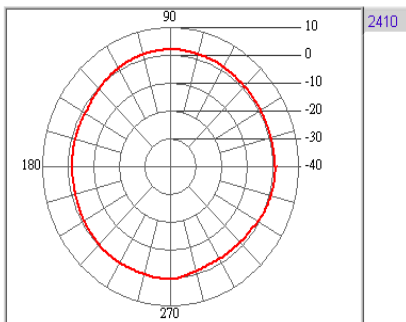
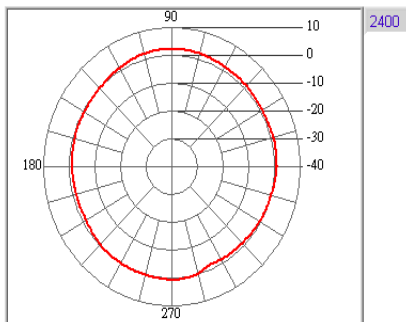
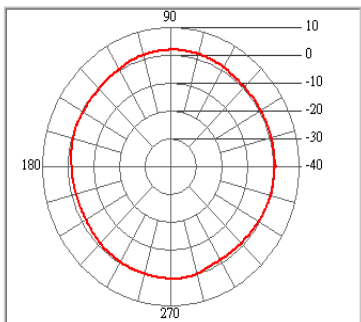
Time: **上午 10:50:08**

Temperatuer (°C): **25.00**

Humidity (%): **65.00**

Approved by:

Freq. (MHz)	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain (dBi)	1.99	2.31	2.1	1.85	2.3	2.16	2.16	2	1.84	2.15	1.89	1.94
Peak Degree	85	86	86	85	346	356	346	360	360	360	85	95
AV Gain (dBi)	0.07	0.31	0.11	0.07	0.42	-0.03	-0.03	0.04	-0.26	-0.07	-0.5	-0.72



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