VLG TECHNOLOGY

VLG Wireless Technology Co., Ltd. sent sample antenna acknowledgement

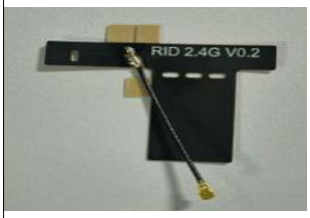
Customer/ project name	Deep Sea Excellence/RID			Band	2400MHZ-2500MHZ		
VLG Part number	V2160-006-A-01			Version	R：A		
RF	You Yanli	Confirm		Quality	Yu Hong	Confirm	
Structure	He Farong			PM	Bai Fenglian		
Date	2023-9-6						
Customer project name & number	**Customer Project Name:**						
	Customer Project Number:						

Customer Confirmation			
RF		Quality	
Structure		PM	
Date			

R&D project customer satisfaction survey (please make a comment on our R&D or PM management personnel work to urge us to better serve you)

RF technicians	□Satisfied	☐Basically satisfied	□Dissatisfied
Structural technicians	□Satisfied	☐Basically satisfied	□Dissatisfied
Project Management (PM Managers)	□Satisfied	☐Basically satisfied	□Dissatisfied
Any advice or suggestion:			

Antenna picture:



Catalogue

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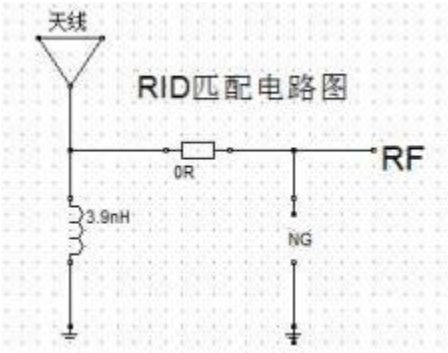
1 Antenna matching diagram

The RID antenna is composed of FPC+ coaxial line, and the matching circuit of this project is as follows:

Antenna Bonding Diagram



2 Antenna test equipment

Antenna input characteristics were tested using the Agilent E5071C vector network analyzer; The antenna radiation characteristics were tested using the Satimo Starlab 3D near-field anechoic chamber and the Agilent 8960 E5515 comprehensive test instrument. The darkroom test coordinates are as follows:

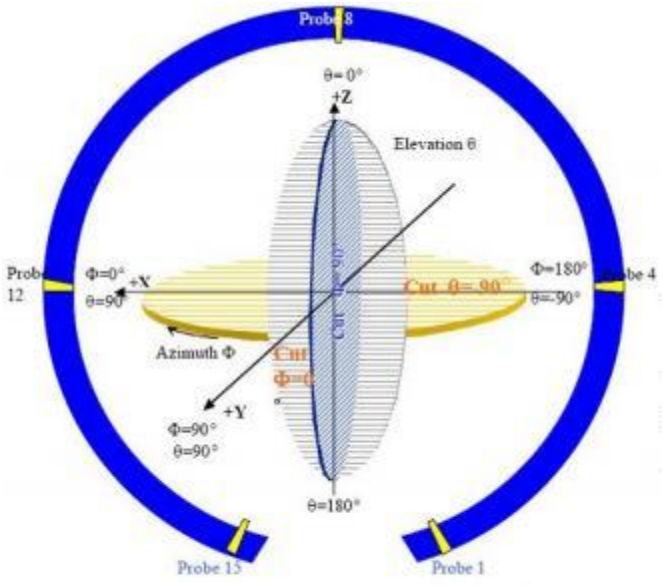


图 4 3D 微波暗室测试坐标系(back view)

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3 Electrical performance

3.1 Specifications

RID antennas operate in the frequency band of 2400-2500MHz; Resonance is generated in this frequency band. The following table is a test specification for the performance of VLG for RID antennas.

	Frequency (MHz)	**VSWR**	**Frequency (MHz)**	**VSWR**
Band	**Transmitter**		**Receiver**	
2400MHZ-2500MHZ		≤2.5		≤2.5

3.2 Passive S11 parameters:

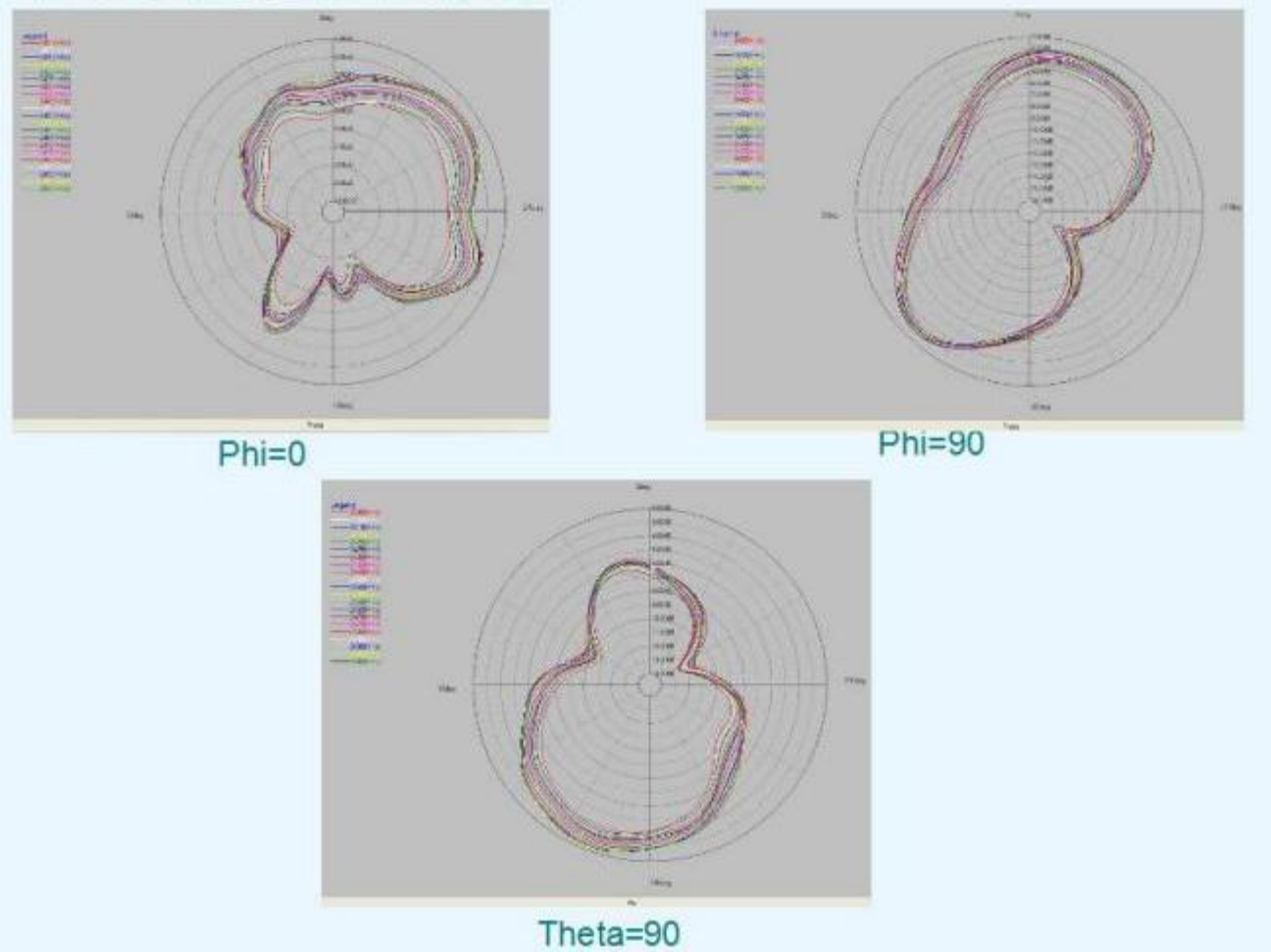
Voltage Standing Wave Ratio (VSWR)

.

3.3 Passive source test data:

Frequency (MHZ)	Efficiency (%)	Efficiency . dB	Peak Gain .dB
2400	23%	-6.35	-3.41
2405	24%	-6.22	-3.29
2410	24%	-6.12	-3.19
2415	25%	-5.97	-3.03
2420	26%	-5.85	-2.94
2425	27%	-5.72	-2.84
2430	27%	-5.62	-2.69
2435	28%	-5.46	-2.51
2440	29%	-5.40	-2.43
2445	29%	-5.33	-2.33
2450	27%	-5.73	-2.25
2455	28%	-5.61	-2.10
2460	27%	-5.68	-2.00
2465	28%	-5.56	-1.86
2470	28%	-5.56	-1.87
2475	28%	-5.54	-1.77
2480	28%	-5.53	-1.72
2485	28%	-5.47	-1.64
2490	29%	-5.45	-1.65
2495	28%	-5.46	-1.65
2500	28%	-5.49	-1.63

3.4 RED Antenna: 2.4G-2.5GHz antenna patterns



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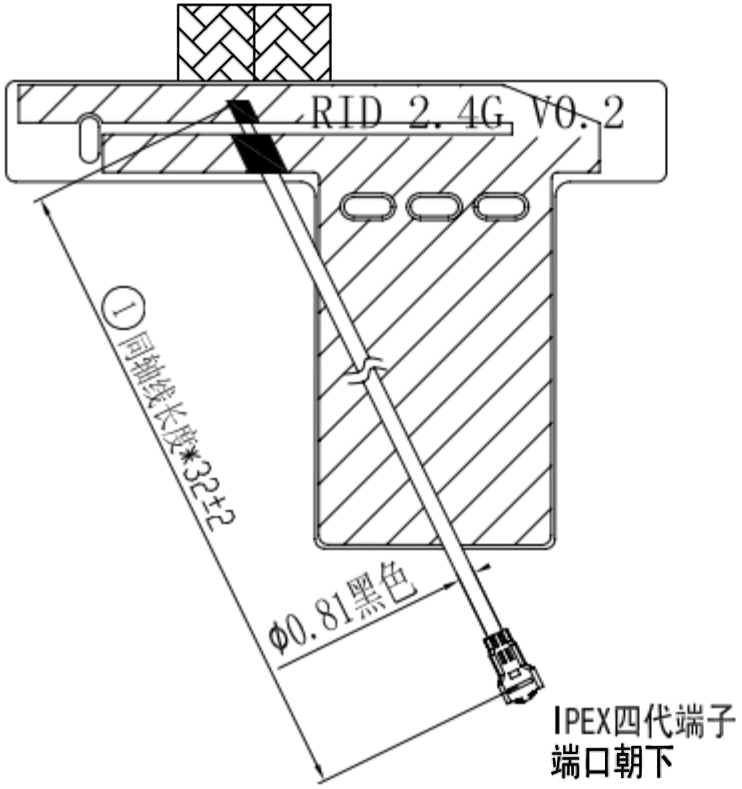
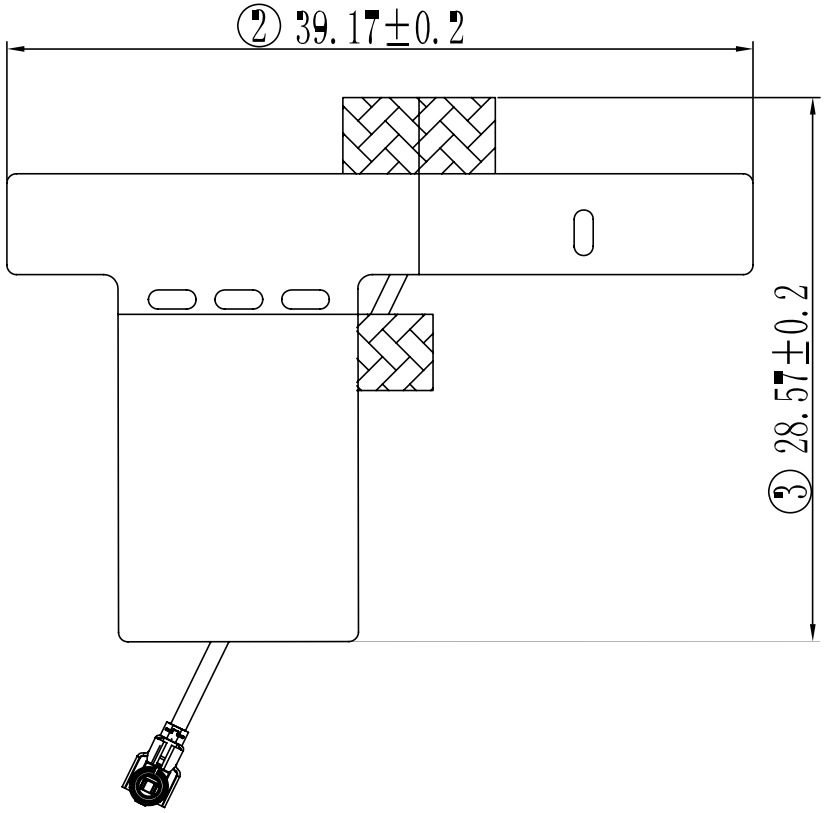
版本	变 更 履 历	设计	日期
R:A	初版	何发荣	20230720

线路区域

焊点

离型纸手撕位





注：

1. 打"*"为严格控制尺寸（必测等级A）
   其它为设计参考尺寸等级C;
2. 没有破损/划伤等外观不良;
3. 需通过VLG品质部门要求的各项测试;
4. 任何用料的修改必须通过VLG研发部的书面同意;

深圳市维力谷无线技术股份有限公司 ShenZhen VLG Wireless Technology Co.,Ltd				绘 图	何发荣
第 三 角 法		机种号	V2160-006-01	射 频	
0～10	±0.10	项目名	RID	品 质	
11～20	±0.15	品 名	FPC-2.4G天线	审 核	
21～40	±0.20	料 号	V2160-006-A-01		
＞40	±0.25	版 本	R:A	批 准	
图幅 A4	比例 1:1	单位 mm	页码 1/1		