

# VLG TECHNOLOGY

VLG Communication Technology Limited

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Name	U45	Frequency	5725-5850MHz
Model	V1516-008-A-04/05		A
	Hushuai		
		2024-12-12	
VLG Communication Technology			

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## 1、Antenna picture

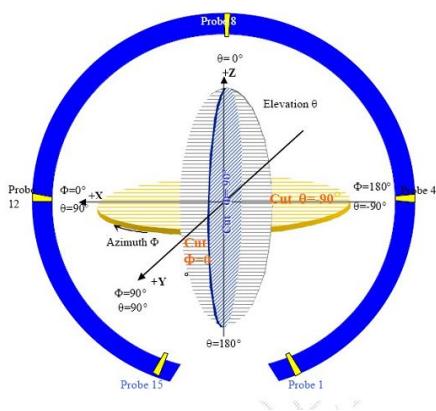
The report mainly provides the test status of various electrical performance parameters of U45 Antenna. U45 antenna is a single frequency antenna, Antenna 5725–5850MHz. The antenna picture is shown below.



Antenna picture

## 2、Antenna testing equipment

The antenna input characteristics were tested using an Agilent E5071C vector network analyzer; Antenna radiation characteristics were measured using a Satimo Starlab 3D near-field microwave antrum chamber, Use the instrument Agilent E5071C comprehensive measuring instrument. The 3D chamber test coordinates are as follows:

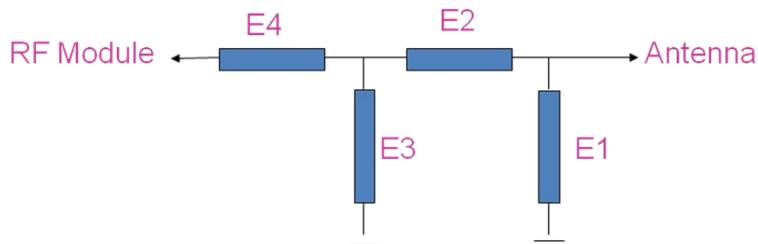


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## The matching circuit of the antenna

antenna matching circuit is provided by the customer.



Element	Value
E1(0402)	NA
E2(0402)	0 Ω
E3(0402)	NA
E4(0402)	0 Ω

## 3、Electrical properties

### 3.1 The standard specifications

U45 antenna operating frequency range of 2400-2500MHz; The following table is the test index of U45 antenna performance by VLG.

	frequency (MHz)	VSWR	frequency (MHz)	VSWR
Frequency	TX		RX	
	5725MHz~5850MHz	≤3.5	5725MHz~5850MHz	≤3.5

## 3.2 S11:

Return loss、VSWR、Smith chart

## ANTENNA 1#



## ANTENNA 2#

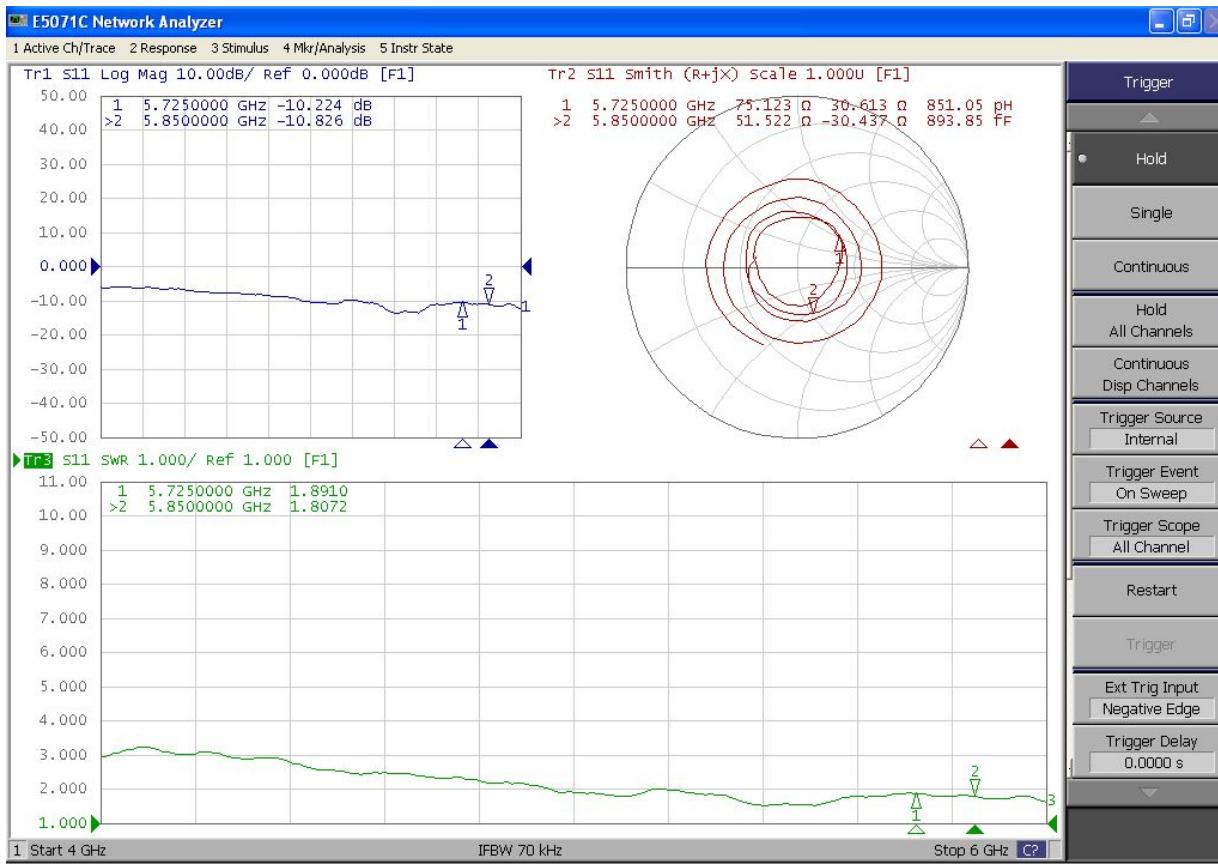


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## ANTENNA

## TX



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### 3.3 The efficiency of the antenna

ANTENNA 1#

U45接收1# RX1		
Frequency (MHZ)	Efficiency	Gain (dBi)
5720	39.98%	2.28
5730	41.55%	2.43
5740	43.20%	1.44
5750	42.70%	2.15
5760	43.31%	2.60
5770	47.83%	3.37
5780	47.86%	2.26
5790	44.04%	2.06
5800	41.59%	2.18
5810	41.72%	2.35
5820	43.37%	1.90
5830	42.09%	1.79
5840	39.61%	2.04
5850	40.22%	2.43

ANTENNA 2#

U45接收2# RX2		
Frequency (MHZ)	Efficiency	Gain (dBi)
5720	37.19%	2.63
5730	37.98%	3.00
5740	38.16%	2.00
5750	36.85%	1.49
5760	37.06%	2.70
5770	40.04%	3.54
5780	39.96%	2.57
5790	38.68%	1.90
5800	36.86%	2.61
5810	36.48%	3.25
5820	36.99%	2.48
5830	35.29%	1.58
5840	33.34%	2.33
5850	32.99%	2.79

## ANTENNA TX

U45发射 TX 1		
Frequency (MHZ)	Efficiency	Gain (dBi)
5720	44.30%	0.74
5730	45.30%	1.27
5740	45.51%	2.15
5750	44.38%	2.06
5760	45.09%	0.85
5770	48.05%	1.78
5780	46.5%	1.85
5790	42.7%	1.63
5800	41.2%	0.51
5810	41.7%	1.01
5820	41.6%	1.61
5830	40.8%	1.24
5840	40.3%	0.17
5850	40.5%	0.55

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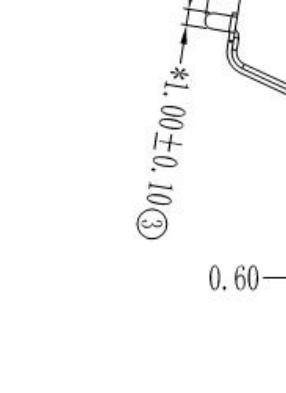
由 Autodesk 教育版产品制作				由 Autodesk 教育版产品制作			
版本		变更履历		设计		日期	
D		① 23.76±0.20		④ 8.44±0.20		A	
注：		② 1.95±0.15		③ *1.00±0.10		⑤ 0.60	
1		2		3		4	
甲		乙		丙		丁	
6		7		8		A	
图幅		比例		单位		页码	
A4		1:1		mm		1/1	
6		7		8		批注	
由 Autodesk 教育版产品制作							



② 1.95±0.15  
③ \*1.00±0.10  
⑤ 0.60



④ 8.44±0.20



① 23.76±0.20



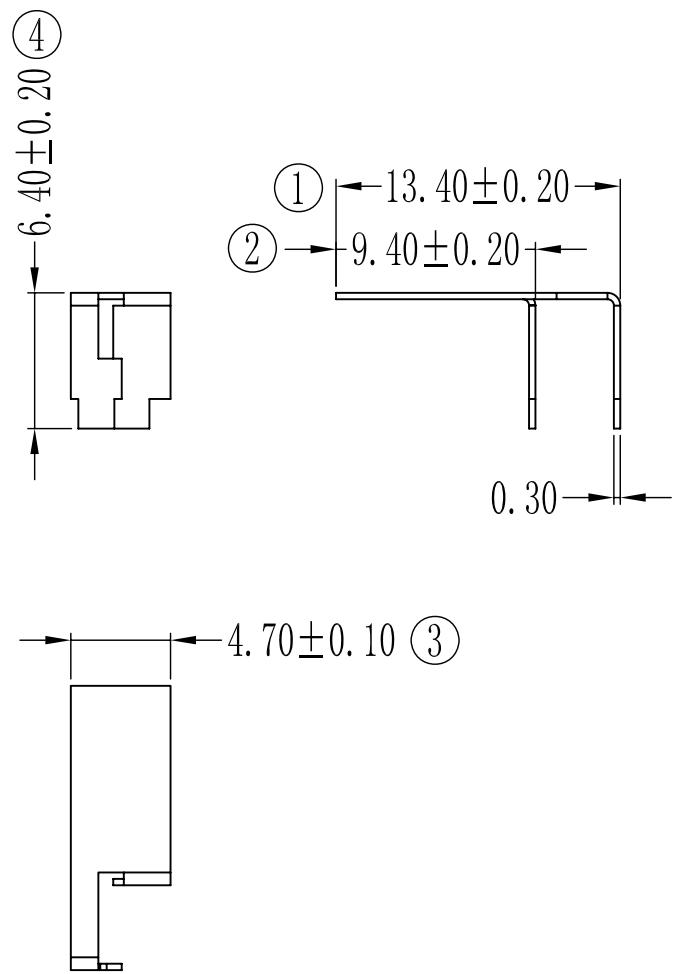
④ 8.44±0.20

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① 三角法	机种号	项目名	品名	料号	审核
0~10	±0.10	U35/A45	U35 TX天线弹片	V1516-008-A-03	申核
11~20	±0.15				
21~40	±0.20				
>40	±0.25				
图幅	比例	单位	R:1	页码	批注
A4	1:1	mm	1/1	批注	A

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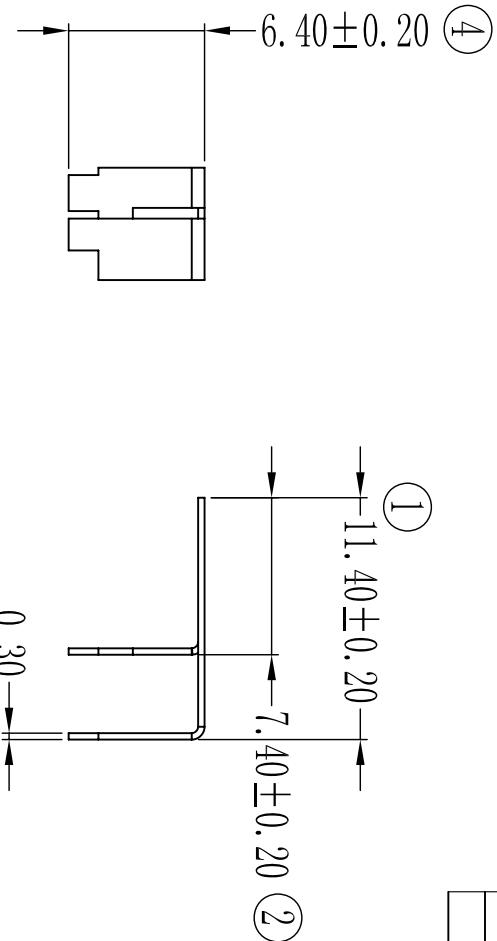
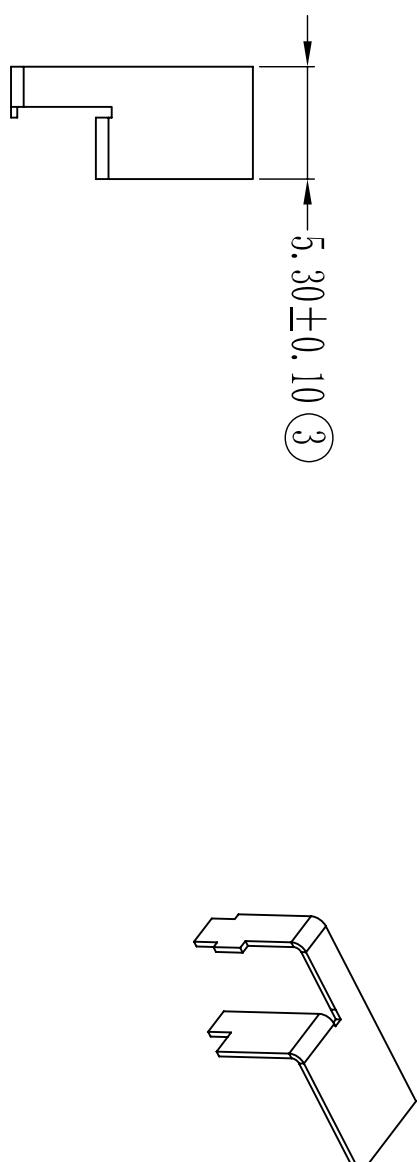
## 注:

- 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、材质: 洋白铜  $T=0.3$ ;
- 3、外观清洁, 无明显折痕, 表面无划伤等不良;
- 4、最大毛刺不能超过0.10mm, 接刀痕不超过0.1mm;
- 5、产品不能有油污、灰尘、残留物等;
- 6、包装和运输过程中, 产品不能撞伤、划伤以及变形等;
- 7、包装以及品质标准分别参考VLG包装规范和VLG品质标准;

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ShenZhen VLG Wireless Technology Co., Ltd

绘图	何发荣
射频	胡艸
品质	余伟
审核	董伟
批准	廖义永
图幅	A4
比例	1:1
单位	mm
页码	1/1

注：  
 1、打“\*”为严格控制尺寸（必测等级A）  
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绘图 何发荣  
审核 胡冲

第 三 角 法 机种号 V1516-008-01 射 频 H.F  
0~10 ±0.10 项目名 U35/U45 品 质 合格  
11~20 ±0.15 品 名 U45 RX天线2弹片  
21~40 ±0.20 料 号 V1516-008-A-05 审 核 龚伟  
>40 ±0.25 版 本 R.A 批 准 廖义永

图幅 A4 比例 1:1 单位 mm 页码 1/1 批准 廖义永  
甲 6 7 8