

VLG TECHNOLOGY

VLG Communication Technology Limited

Address: 4th Floor, Building B5, Taohuayuan Technology Innovation Ecological Park, Tiegang Community, Xixiang Street, Bao'an District, Shenzhen, China

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

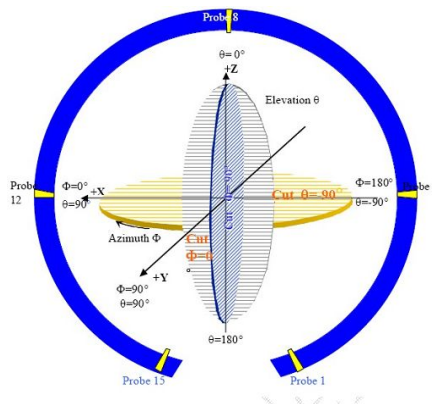
The report mainly provides the test status of various electrical performance parameters of U45 Antenna. U45 antenna is a single frequency antenna, Antenna 5725–5850MHz. The antenna picture is shown below.



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 chambertest coordinates are as follows:

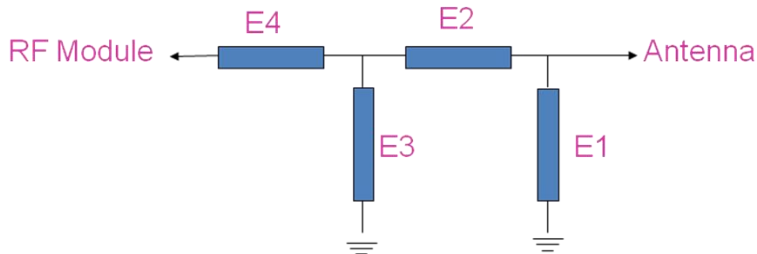


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The matching circuit of the antenna

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

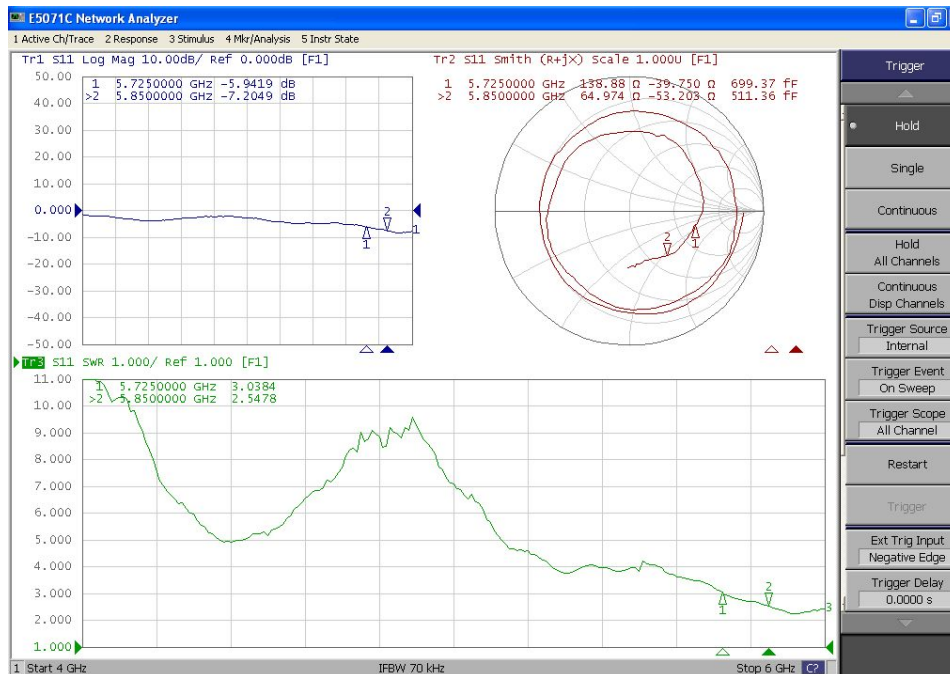
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3.2 S11:

Return loss, VSWR, Smith chart

ANTENNA 1#



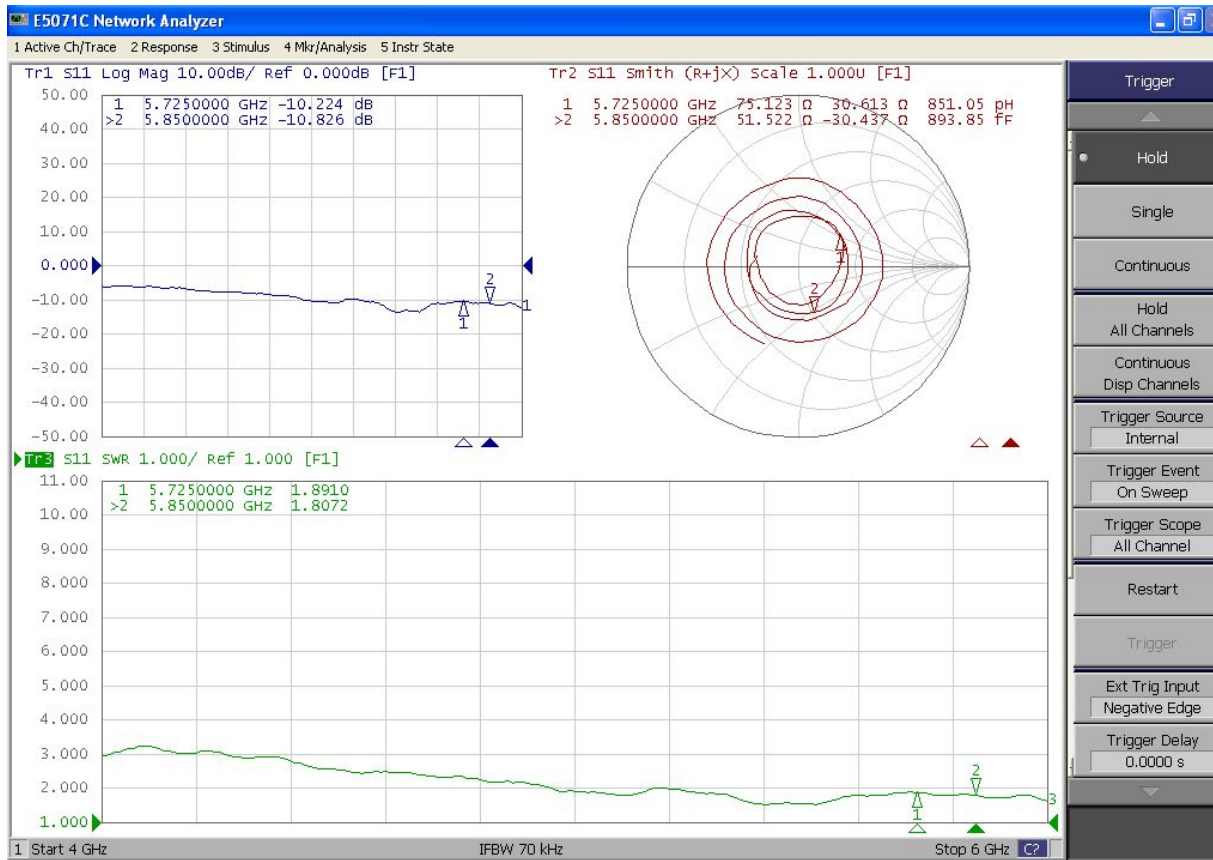
ANTENNA 2#


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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

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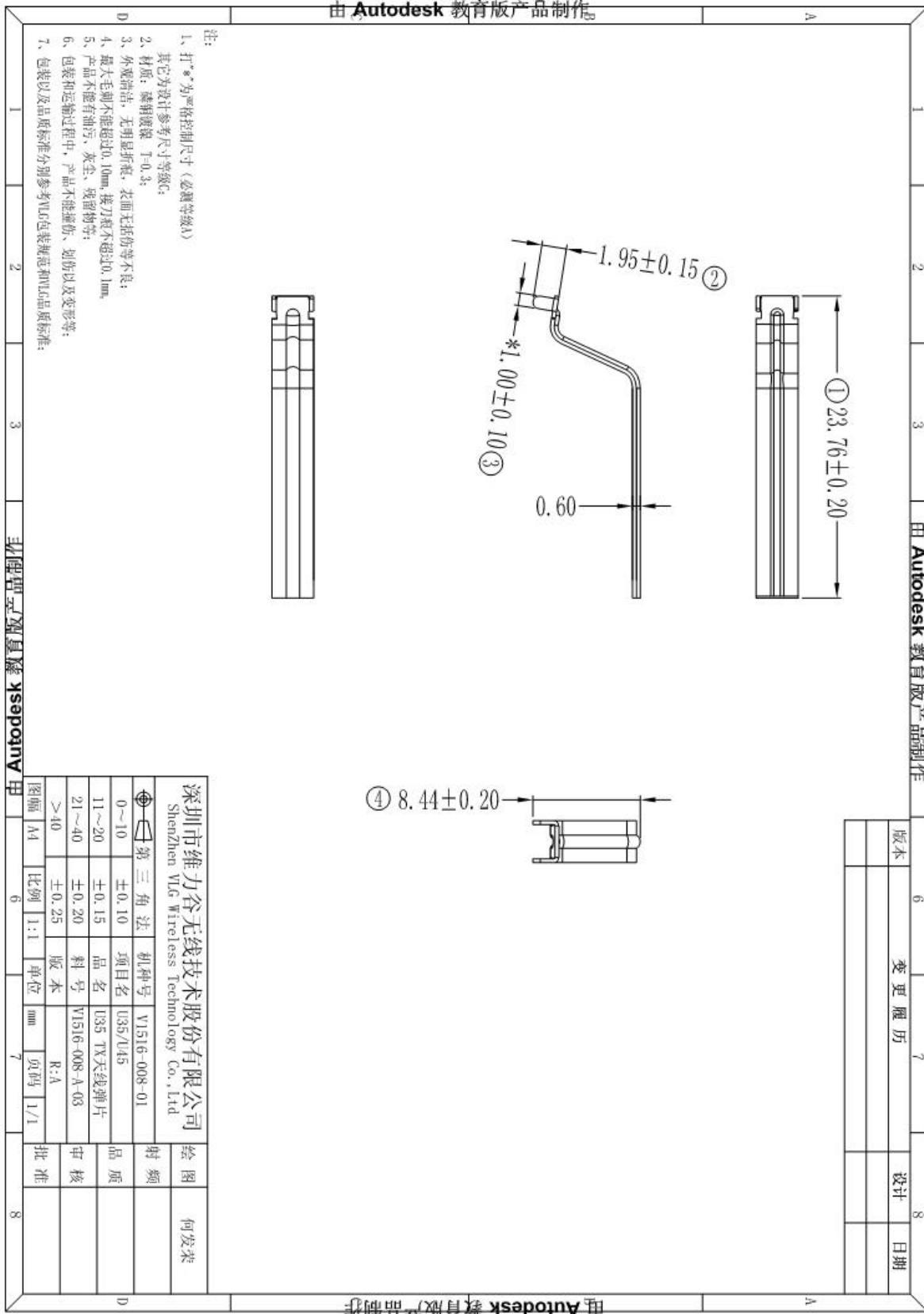
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ANTENNA**TX**

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

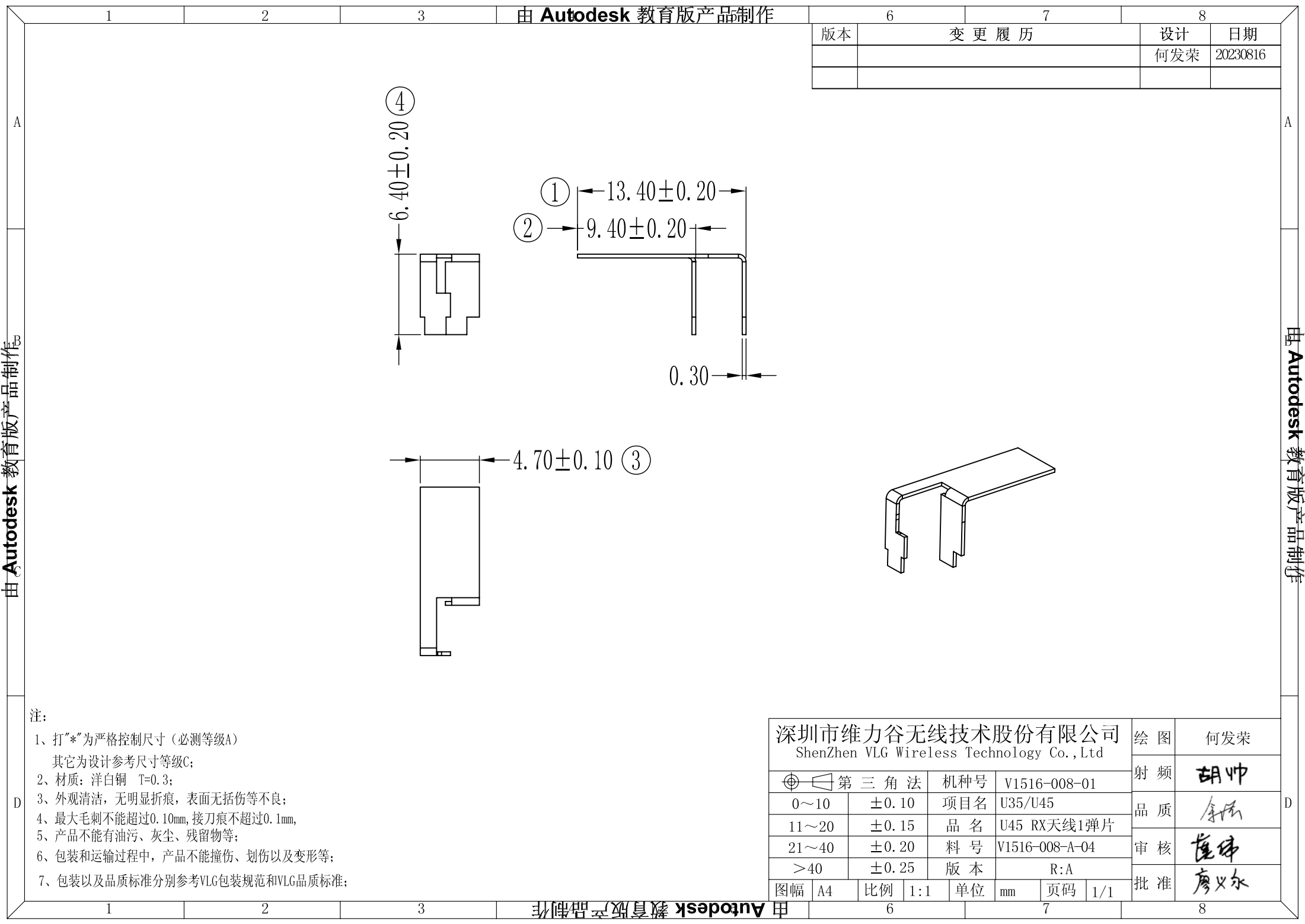
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注:

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，表面无括伤等不良;

4、最大毛刺不能超过0.10mm, 接刀痕不超过0.1mm,

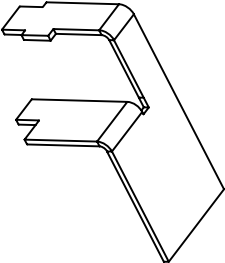
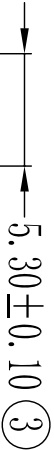
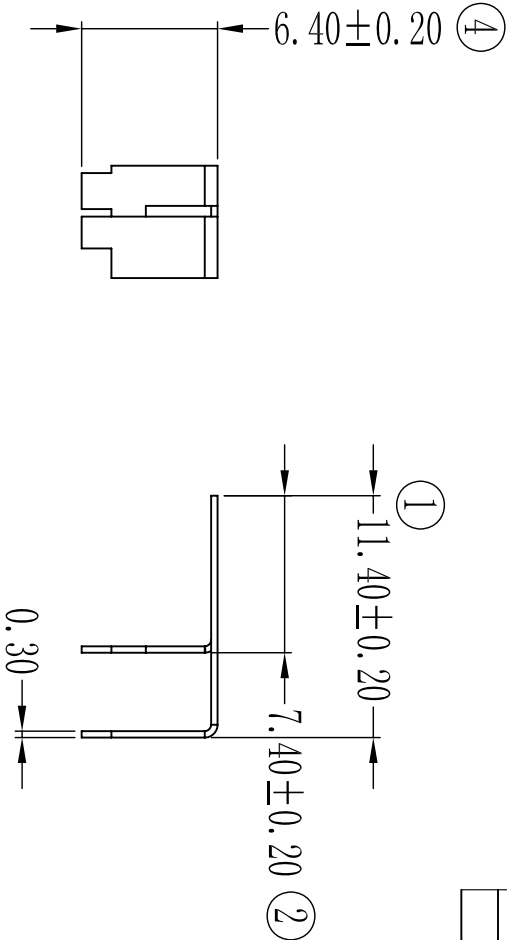
5、产品不能有油污、灰尘、残留物等;

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							射 频	胡 帅
 第 三 角 法		机种号		V1516-008-01			品 质	余 浩
0~10		±0.10		项目名		U35/U45		
11~20		±0.15		品 名		U45 RX天线1弹片		
21~40		±0.20		料 号		V1516-008-A-04		
>40		±0.25		版 本		R:A		
图幅	A4	比例	1:1	单位	mm	页码	1/1	批 准
								廖 义 尔

6	7	8
版本	变更履历	设计日期
		何发荣20230816



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第三角法	机种号	VI516-008-01	射频	胡帅		
0~10	项目名	U35/U45	品质	余林		
11~20	品名	U45 RX天线2弹片	审核	廖伟		
21~40	料号	VI516-008-A-05	批准	廖永尔		
>40	版本	R:A				
图幅	A4	比例	1:1	单位	mm	页码
						1/1