Design Specifications	Typical	Units
Antenna form	FPC+ terminal wire	
Operating frequency	2400-2500 ,5150-5850	MHz
Gain	-0.48~ 0.38,1.00~3.37	dBi
Antenna efficiency	35.31~40.64,29.17~52.76	%
Return Loss	<-10	
Polarization mode	Line polarization	
Axial Ratio	When the antenna is circularly polarized, note the size of the axis ratio within the operating bandwidth	N/A
Radiation direction	Omnidirectional	
Feed-in impedance	50 ohm	
Power capacity	33	dBm
Antenna Interface	IPEX	
Antenna size	See the drawings section	
Weight	No requirements	
Operating temperature	-30 ----- 70	℃
Storage Temp	-30 ----- 70	℃

DWGW-093 WIFI antenna datasheet

1. **Specifications: The** report mainly provides the test status of various electrical performance parameters of DWGW-093 WIFI antenna. (Figure 1 below).

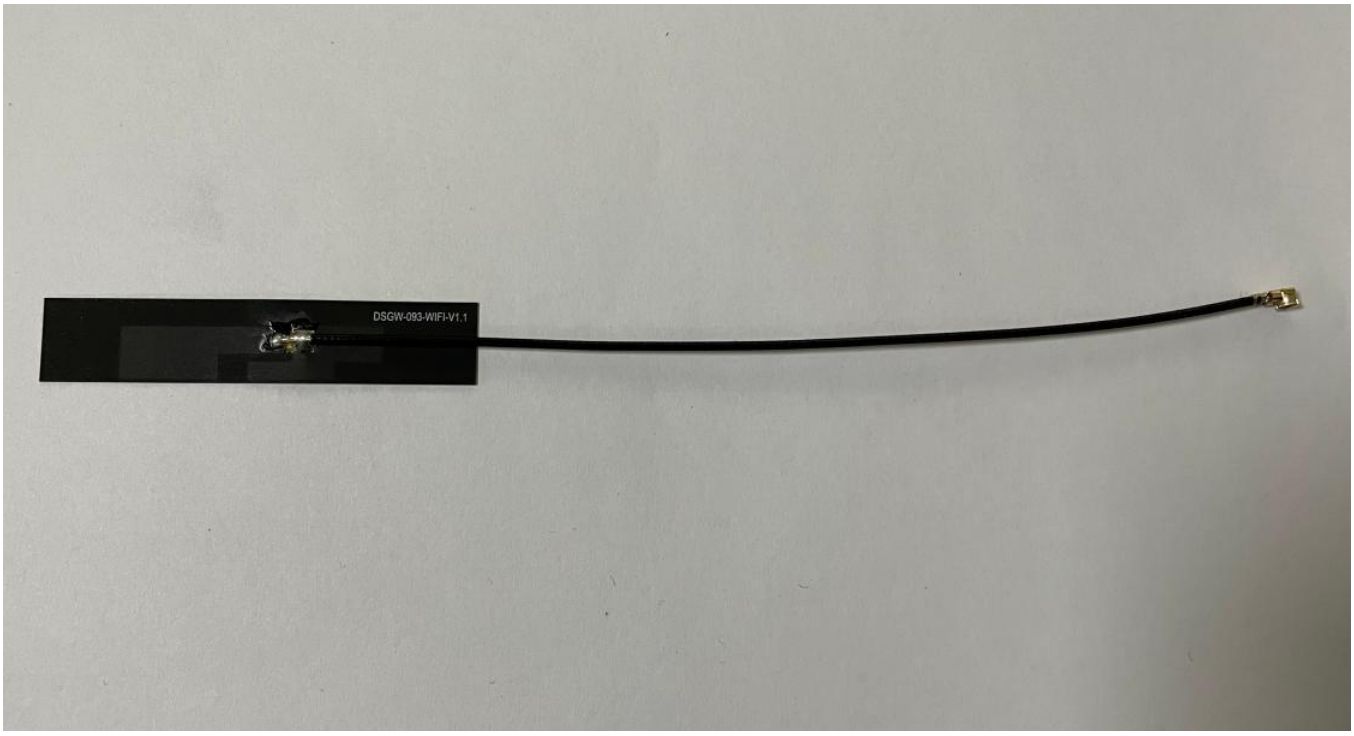

Figure 1 DWGW-093 WIFI antenna

2. Electrical performance

2.1 Specifications

DWGW-093 WIFI antenna operates in the frequency band **of 2400-2500, 5150-5850MHz.**

2.2 Antenna matching circuit

DWGW-093 WIFI antenna matching motherboard comes with matching.

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2.3 Test of Return Loss

The settings for the test

The Return Loss test set is connected sequentially as follows: 8714ET Network Analyzer → 50 ohm coaxial cable → 120mm long copper Tube → EUT.

Handling of the test fixture: from the antenna 50 ohm test point, a cable leads out the SMA connector, connects it with a copper tube with a choke, and then connects the other devices in turn.

B. Return Loss

The following table shows the return loss values of the edge frequency of the DWGW-093 WIFI antenna operating band. The return loss obtained from the test , the relevant waveform plot is shown in the annex.

Band	Frequency (MHz).	Return Loss
WIFI2.4G	2400	-18.16
	2500	-13.93
WIFI5.8G	5200	-15.20
	5800	-15.31

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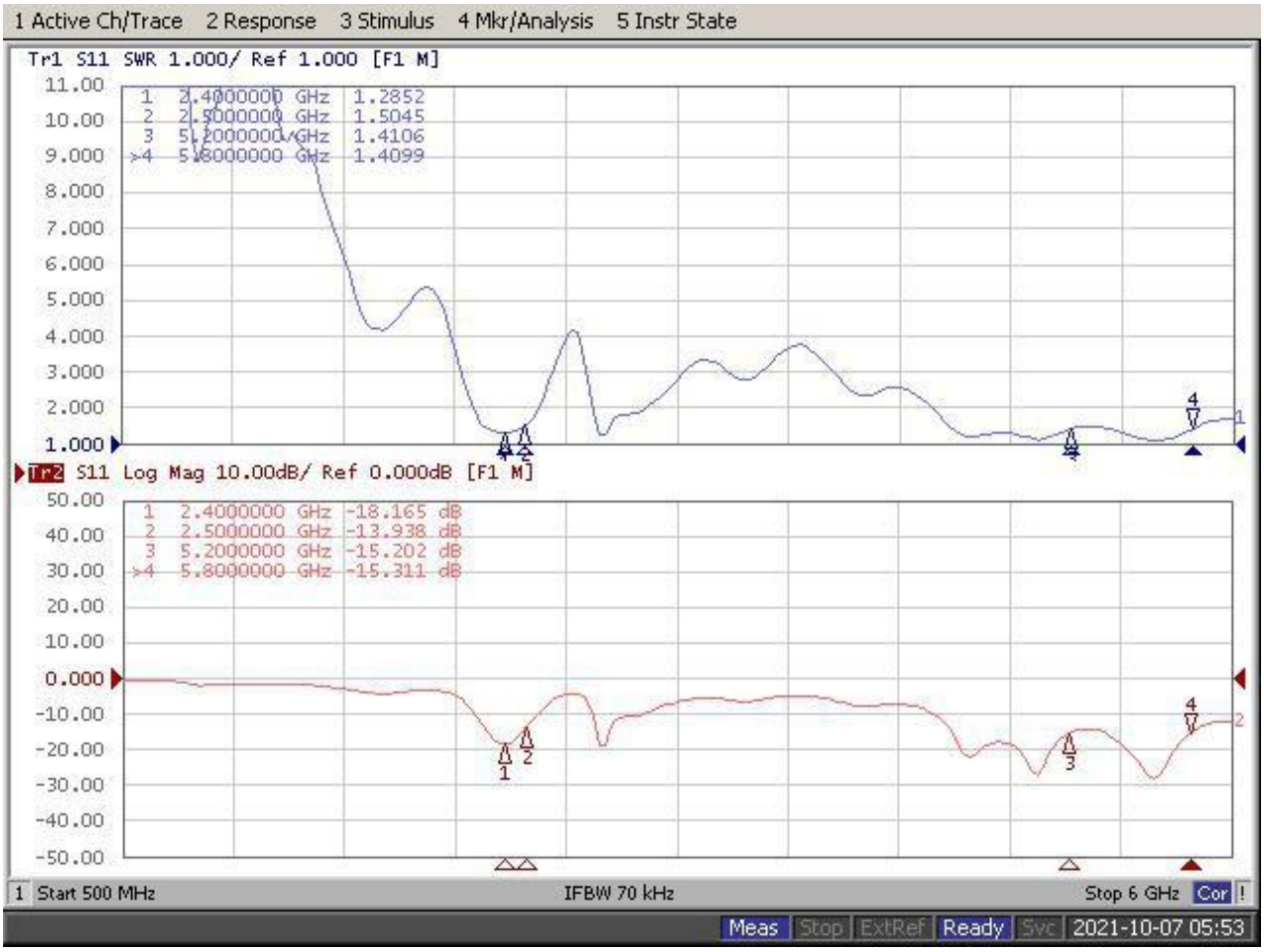
2.3.1 S11 parameters



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2.3.2 Passive antenna efficiency

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
2400	-0.48	-4.52	35.31
2410	-0.32	-4.46	35.78
2420	-0.10	-4.35	36.76
2430	0.02	-4.26	37.50
2440	0.20	-4.19	38.10
2450	0.30	-4.04	39.44
2460	0.38	-3.96	40.22
2470	0.38	-3.92	40.56
2480	0.29	-3.91	40.64
2490	0.18	-3.94	40.35
2500	0.02	-4.08	39.09
5150	1.13	-5.08	31.07
5190	1.00	-5.35	29.17
5230	1.04	-5.23	29.98
5270	1.15	-5.09	30.97
5310	1.41	-4.79	33.21
5350	1.78	-4.28	37.35
5390	2.48	-3.84	41.27
5430	2.85	-3.50	44.71
5470	3.13	-3.18	48.12
5510	3.37	-3.07	49.34
5550	3.36	-2.91	51.17
5590	2.83	-2.78	52.76
5630	2.74	-2.84	51.98
5670	2.58	-2.91	51.19
5710	2.09	-3.12	48.73
5750	1.97	-3.37	46.02
5790	1.82	-3.58	43.86
5830	1.84	-3.64	43.24
5850	1.99	-3.70	42.64

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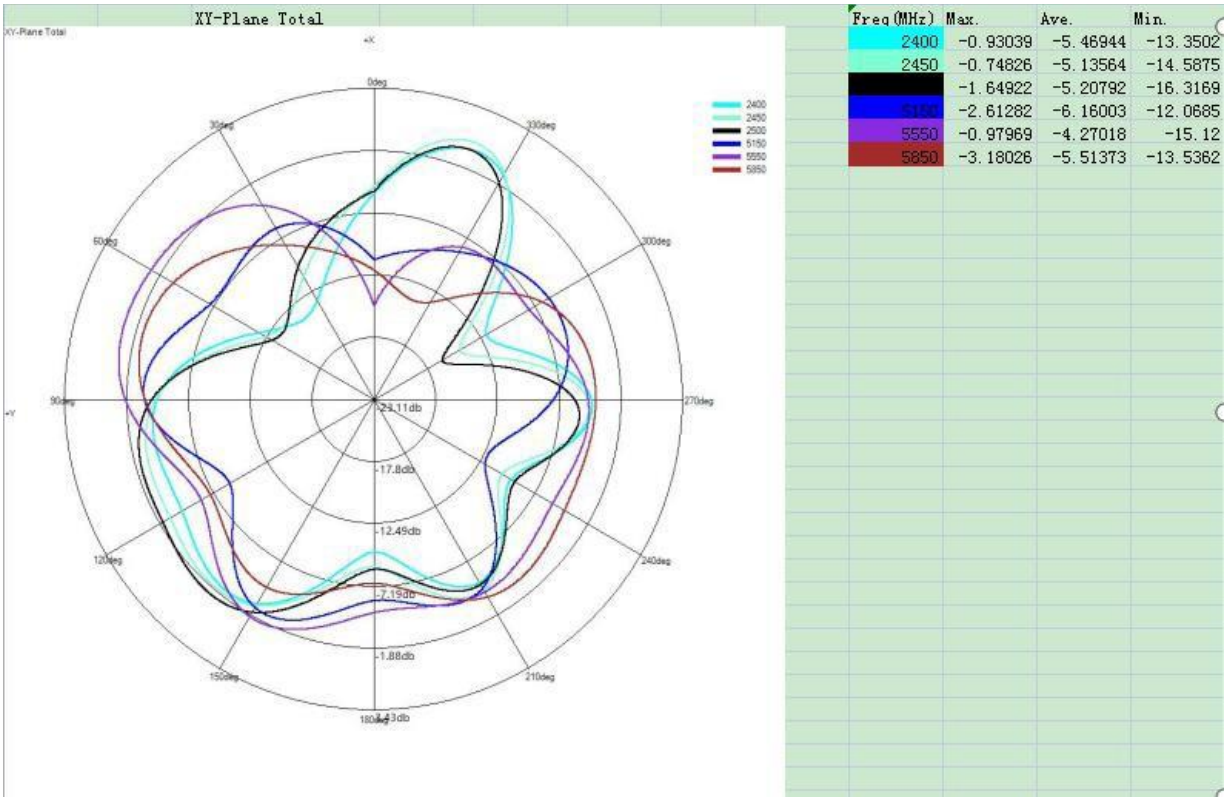
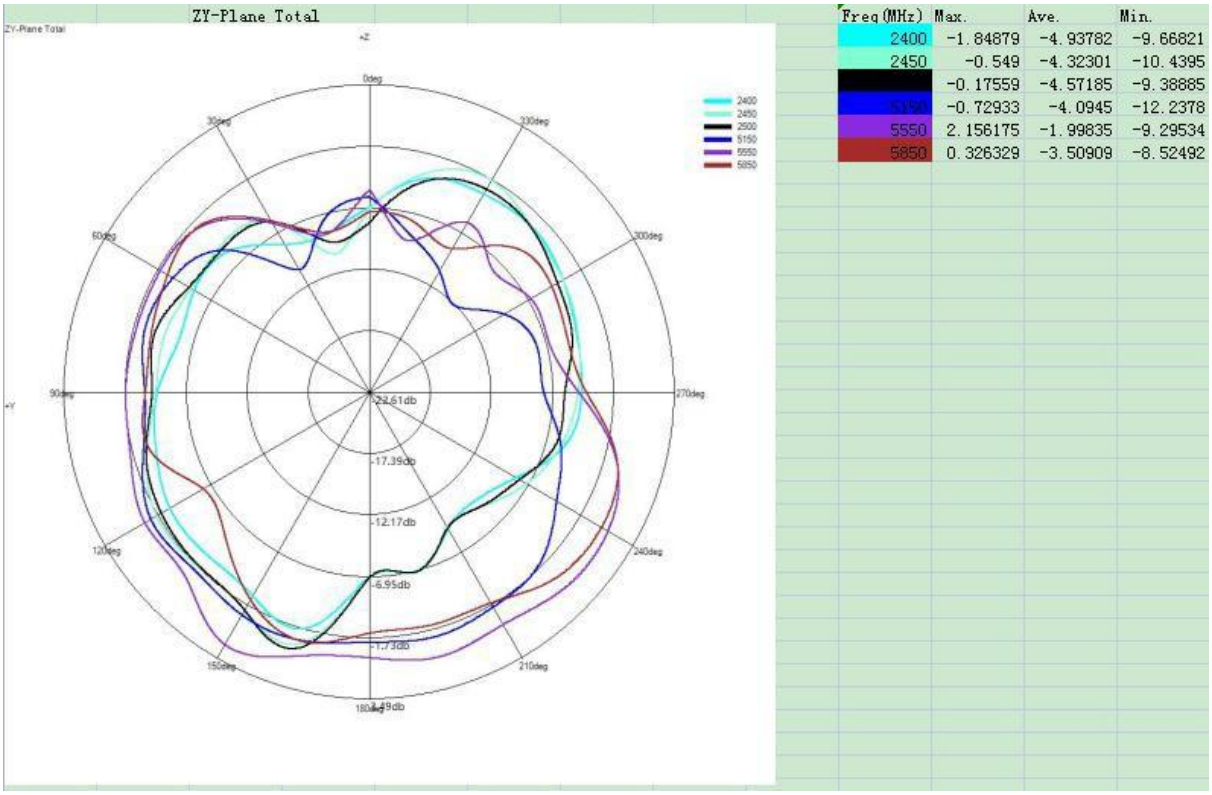
2.3.3 Directional diagram



Freq(MHz)	Max.	Ave.	Min.
2400	-0.93039	-5.46944	-13.3502
2450	-0.74826	-5.13564	-14.5875
	-1.64922	-5.20792	-16.3169
	-2.61282	-6.16003	-12.0685
5550	-0.97969	-4.27018	-15.12
5850	-3.18026	-5.51373	-13.5362



Freq(MHz)	Max.	Ave.	Min.
2400	-1.84879	-4.93782	-9.66821
2450	-0.549	-4.32301	-10.4395
	-0.17559	-4.57185	-9.38885
	-0.72933	-4.0945	-12.2378
5550	2.156175	-1.99835	-9.29534
5850	0.326329	-3.50909	-8.52492

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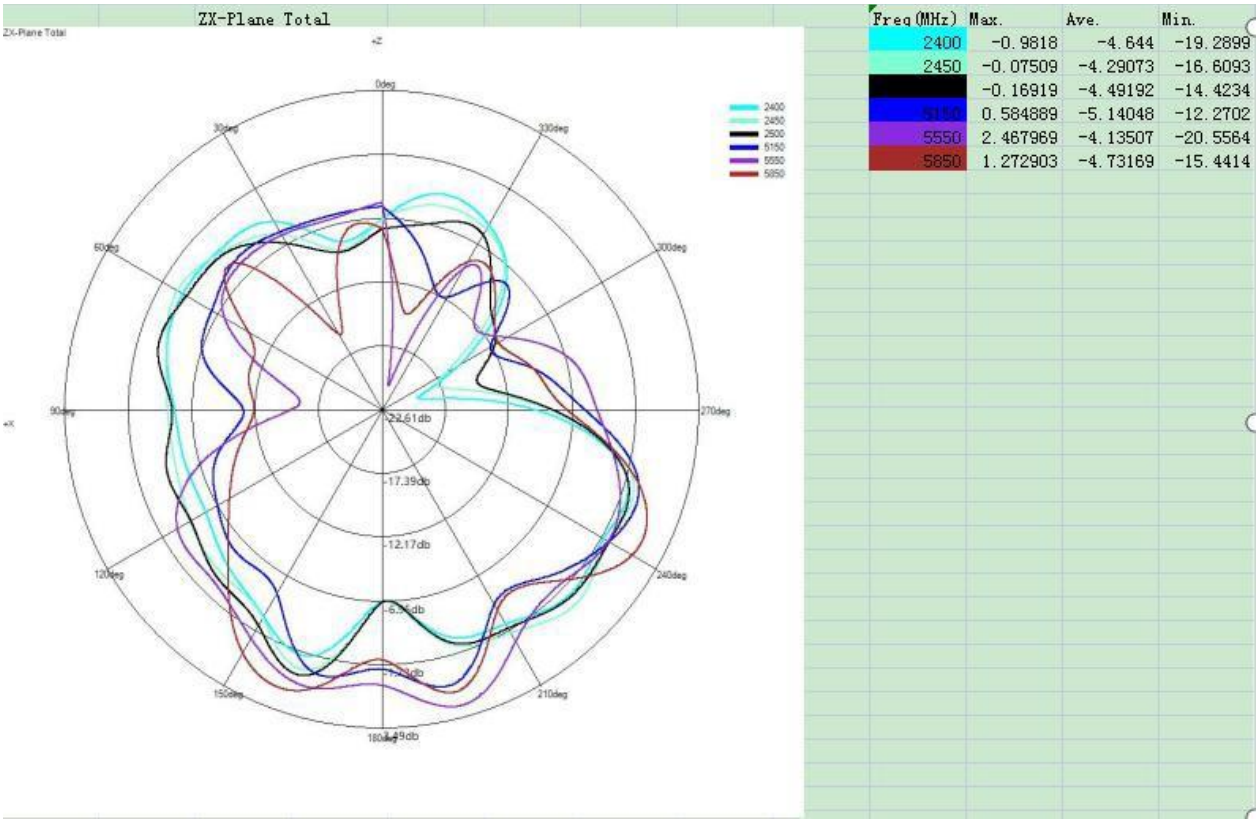

3. Recommendations and conclusions

This report is provided by customersDWGW-093 WIFIThe electrical performance of the antenna measured in the final version of the antenna。 As can be seen from the above test data, this antenna provides good electrical performance。 Weili Valley R&D looks forward to your confirmation, thank you for your cooperation！

4. See the attached file for drawing samples and appearance

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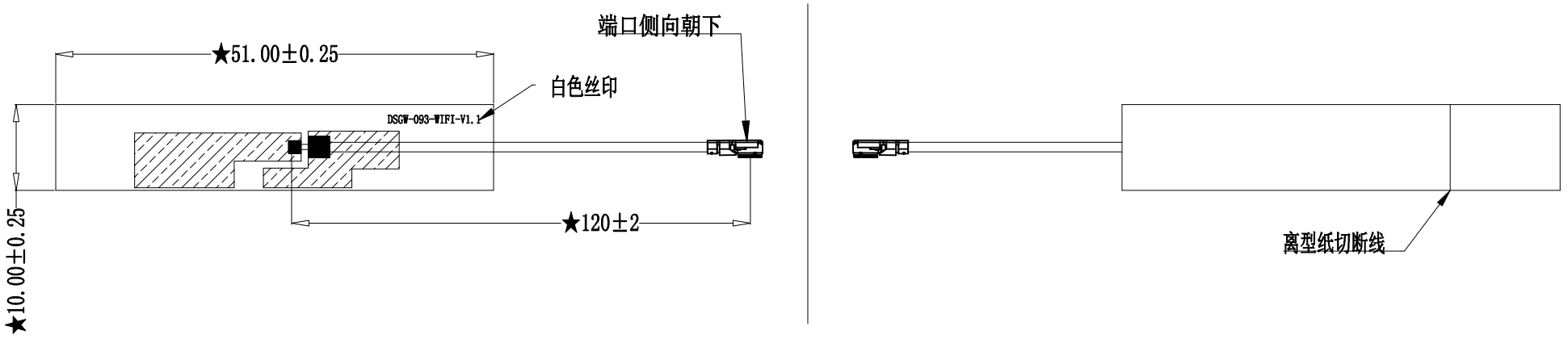

注：

1、打※为配合尺寸,打*为重点尺寸；

2、打★为必测尺寸，其它尺寸以实配为准；

3、外观不得有色差、划伤、毛边，露铜，丝印不良，撕手未切断等缺陷；

4、具体质量要求见VLG质量文件VLG/JY8.2-08中第六条款规定。

2	端子线	一代镀金端子+RG113线材	黑色		1	
1	FPC	PI	黑色		1	
	Name	Material	Color	Treatment	Amount	Remark

			收回：
序号	修改内容	版本	备注

VLG 深圳市维力谷无线技术股份有限公司
ShenZhen VLG Wireless Technology Co,.Ltd

第三角法				机种	DSGW-093	日期	2023.01.09	页码	1/1
0～10	±0.10	○	0.02	品名	WIFI天线成品	绘图		RF确认	
10～20	±0.15	◎	⌀0.03	料号	V2183-007-A-01	品质审核			
20～40	±0.20	⊥	0.02	材质		结构审核		批准	
＞40	±0.25	▱	0.04	模面处理					
		∠	0.02	外观处理		单位	mm	比例	版本 R:A

请勿实测图纸位置