

APPROVAL SHEET

Supplier name: Guangzhou Vision enthalpy Technology Co., LTD
/Room 202, Building B, 238 Fuguang East Road, Huangpu District,
Guangzhou


Supplier material name: External antenna

Supplier specifications and model: External antenna Black-2.4G
5.8G 7.12G-SMA-J L=109mm

CVTE Item number: 004.032.0052703

Drawing version number (no drawing): A0

Admission edition: A0

Supplier acknowledgement column		
lay down	examine and verify	ratify
Jack	Lucy	

Supplier Address:

telephone:

portraiture:

Note: Supplier commitment and confirmation, Suppliers to Guangzhou bin electronic technology Co., Ltd., and its affiliated companies (including but not limited to Guangzhou visual source electronic Technology Co., Ltd., Guangzhou electronic Technology Co., Ltd., Guangzhou into information technology Co., Ltd., Guangzhou, medical equipment technology Co., Ltd., Guangzhou yi intelligent electronic technology Co., Ltd., Guangzhou farce ear acoustic technology Co., Ltd., Guangzhou rui xin electronic Technology Co., Ltd., Qingdao source dynamic wisdom sports technology Co., Ltd., Guangzhou radium morning automatic control technology Co., Ltd., Guangzhou Liuhuan Information Technology Co., Ltd.) (known as "CVTE") supply of materials, Are able to meet the standards stipulated in this admission, Without the supplier. The scanned copy, photocopy and faxed copy of this admission letter shall have the same legal effect as the original copy.

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Document revision resume form

Edition	Date	Develop / Modify / Repeal content	Lay Down	Approval
A/0	2023-1-11	New Edition	Yue Ting	Feng Xianqiang

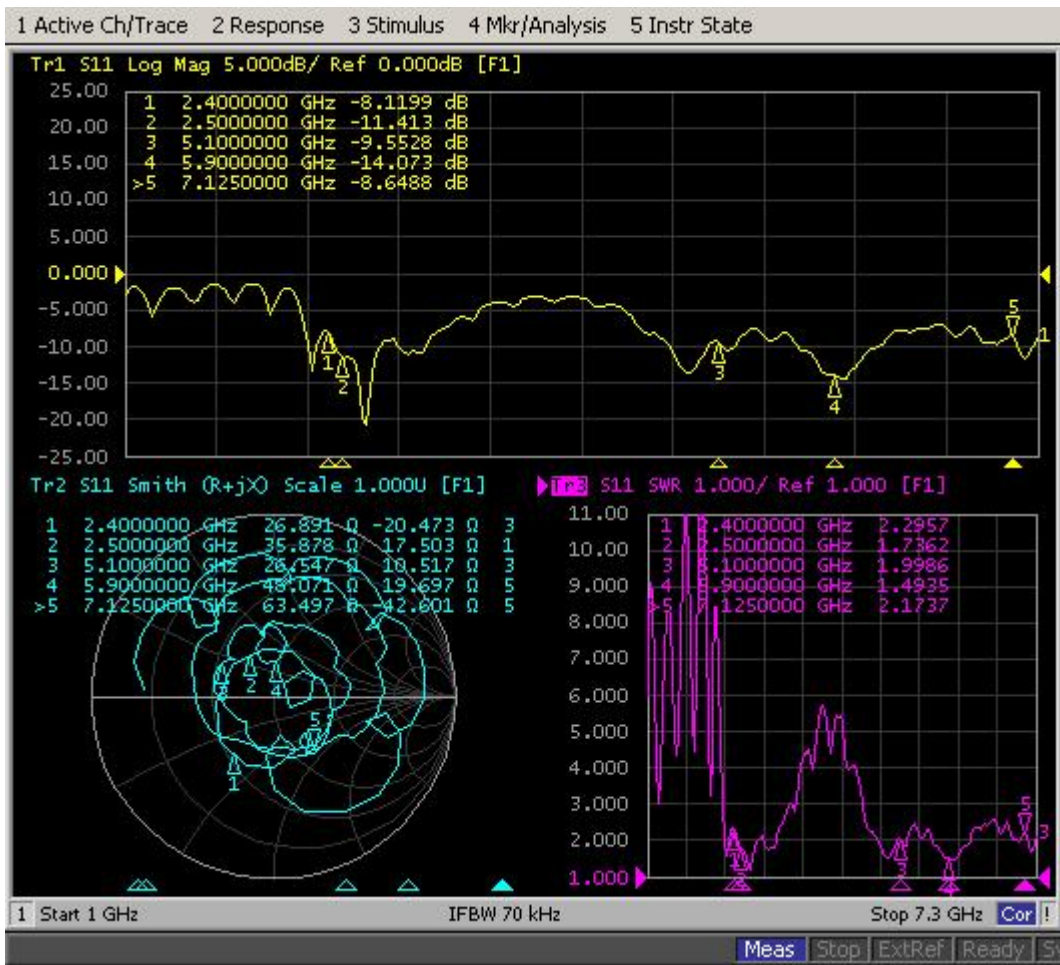
3. performance Parameter

3-1 Performance Parameters

Electrical Parameters	
Frequency Range	2.4-2.5GHz 5.1-5.9GHz 7.12GHz
Input Impedence	50Ω
Standing-wave Ratio	≤3.0
Gain	3dBi
Power Capacity	/
Through The Test	Thoroughfare
Polarization Mode	Linear
Radiation Direction	/
Connector Model	SMA
Mechanical Parameters	
Terminal Maintenance Force	/
Antenna Material	Cu
Coax	GR178
Salt Spray Test	24H
Enviromental Parameter	
Working Temperature	-30℃~65℃

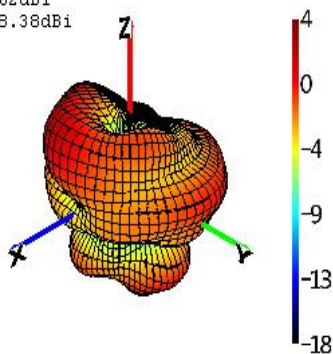
3-2 Performance Test

S11&SWR

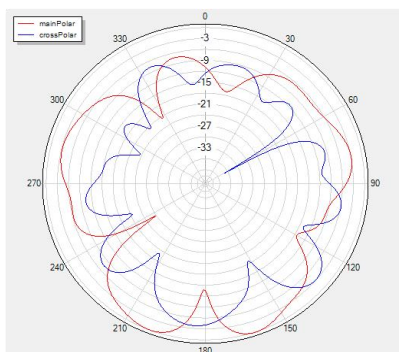


2400 MHz

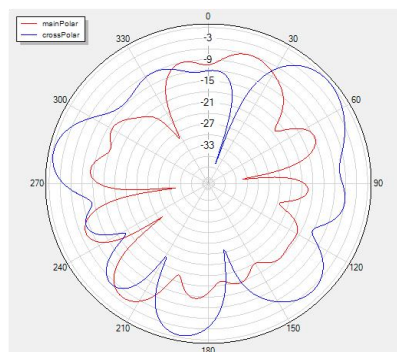
MAX:3.62dBi
MIN:-18.38dBi



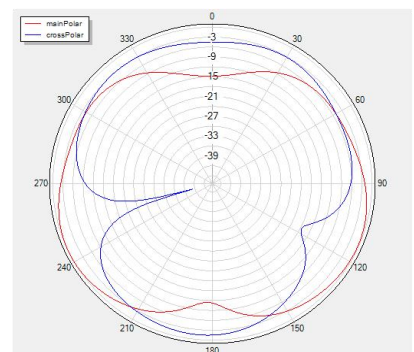
Phi=90 freq=2400MHz



Phi=0 freq=2400MHz

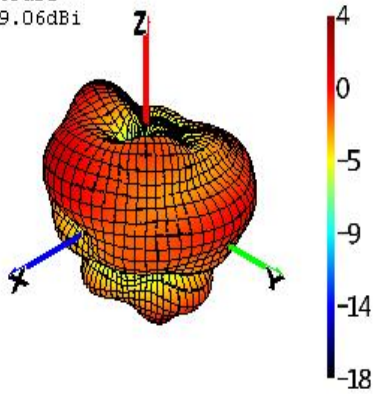


Theta=90 freq=2400MHz

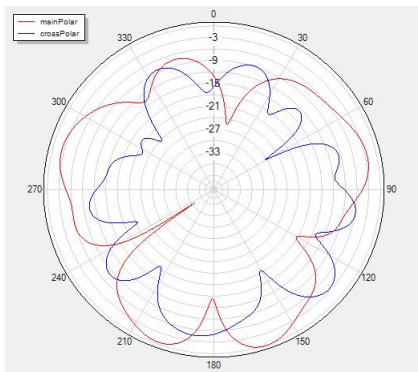


2440 MHz

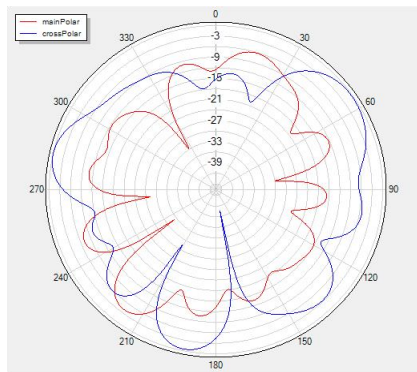
MAX: 3.69dBi
MIN: -19.06dBi



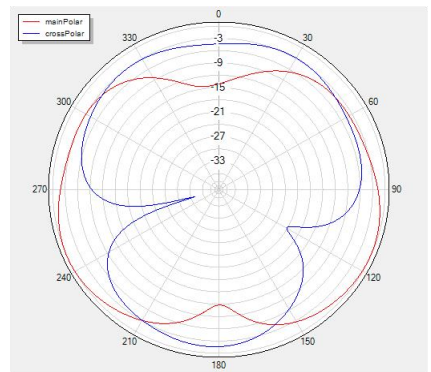
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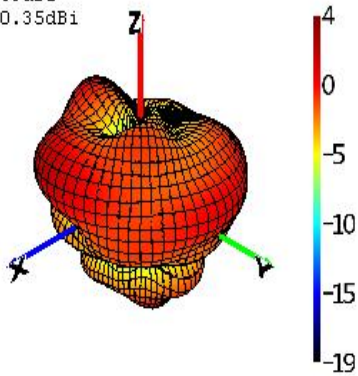


Theta=90 freq=2440MHz

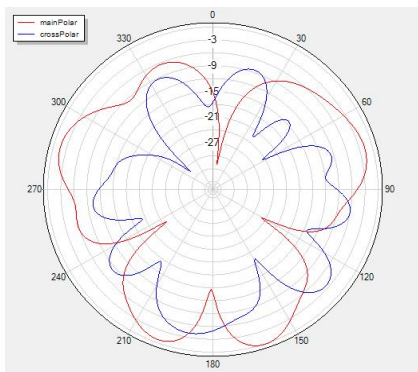


2480 MHz

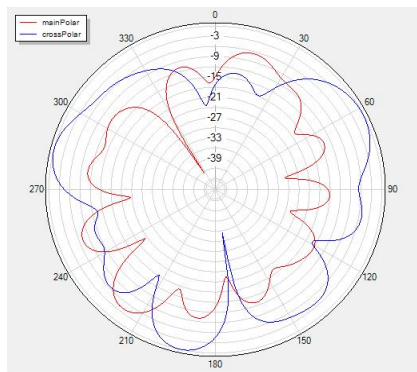
MAX: 3.63dBi
MIN: -20.35dBi



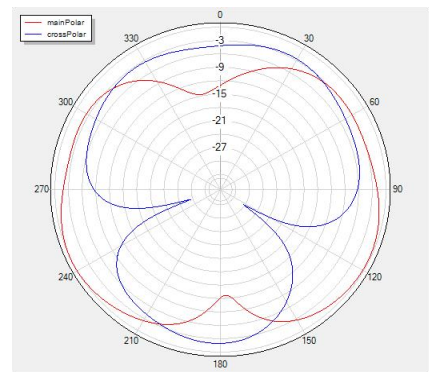
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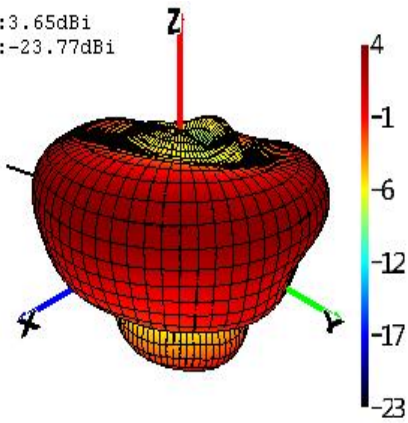


Theta=90 freq=2480MHz

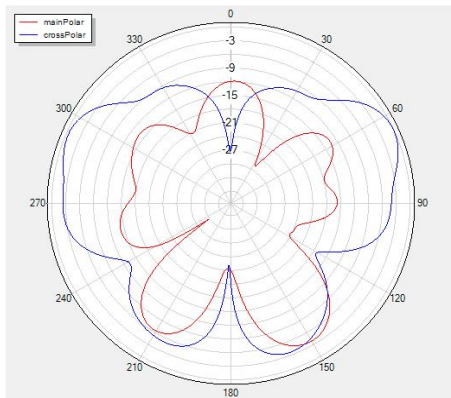


5100 MHz

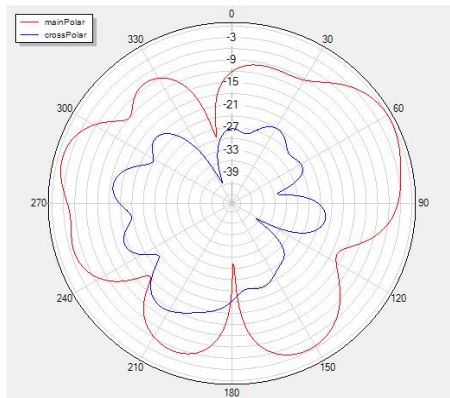
MAX: 3.65dBi
MIN: -23.77dBi



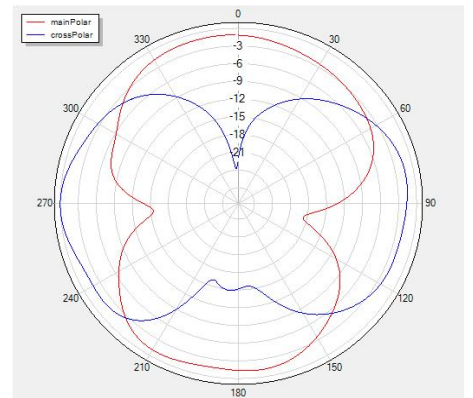
Phi=90 freq=5100MHz



Phi=0 freq=5100MHz

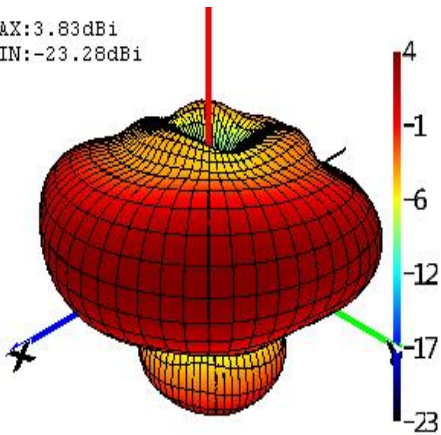


Theta=90 freq=5100MHz

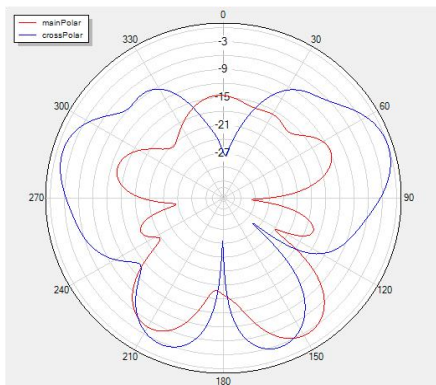


5450 MHz

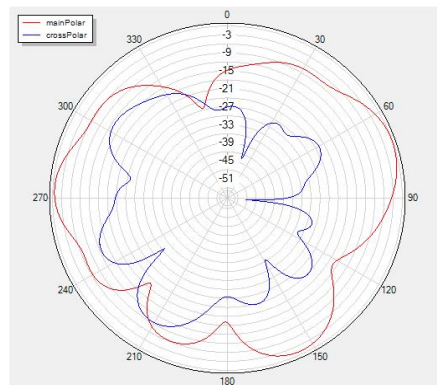
MAX: 3.83dBi
MIN: -23.28dBi



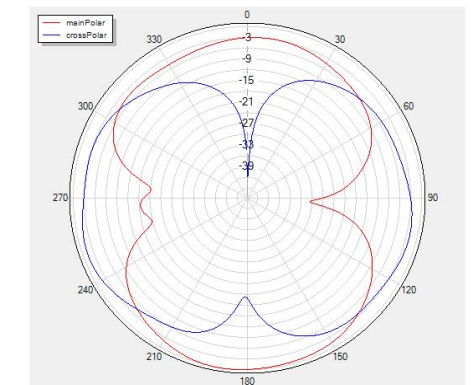
Phi=90 freq=5450MHz



Phi=0 freq=5450MHz

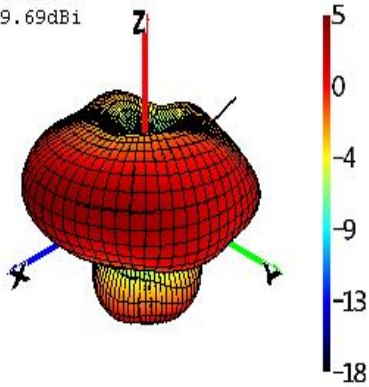


Theta=90 freq=5450MHz

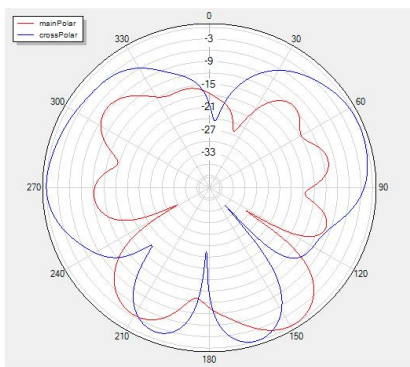


5900 MHz

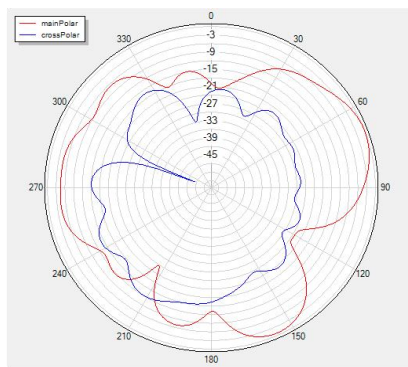
MAX: 4.01dBi
MIN: -19.69dBi



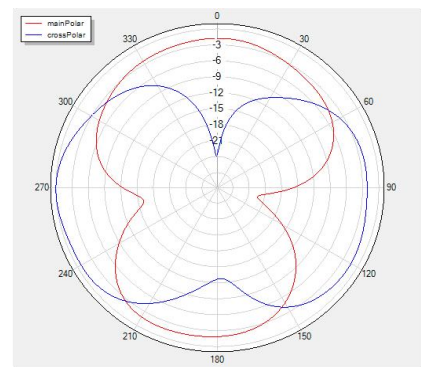
Phi=90 freq=5900MHz



Phi=0 freq=5900MHz

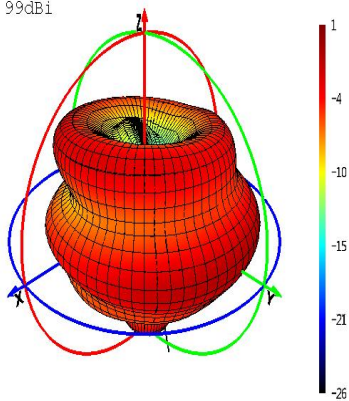


Theta=90 freq=5900MHz

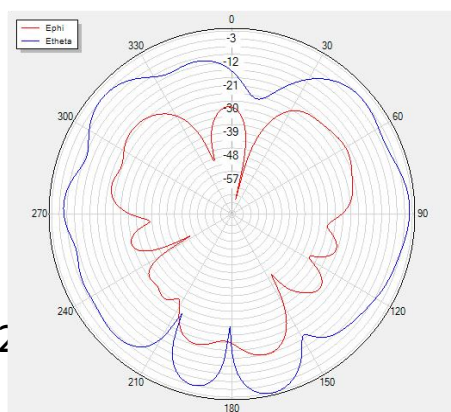


7150Mhz

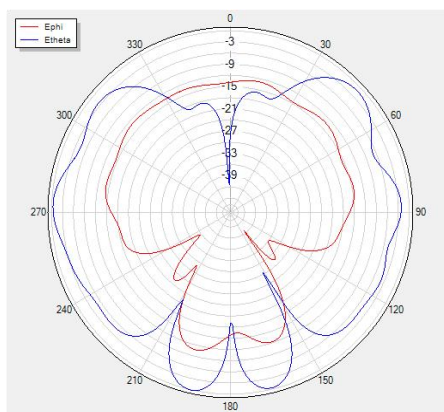
MAX: 0.53dBi
MIN: -26.99dBi



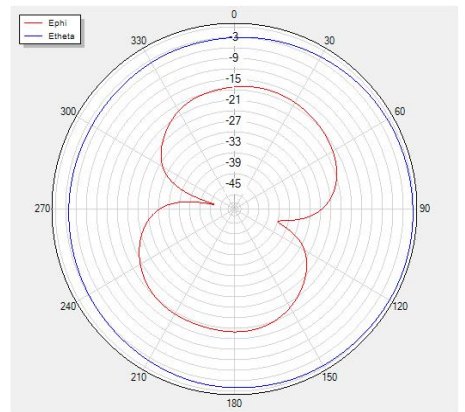
Phi=90 freq=7150MHz



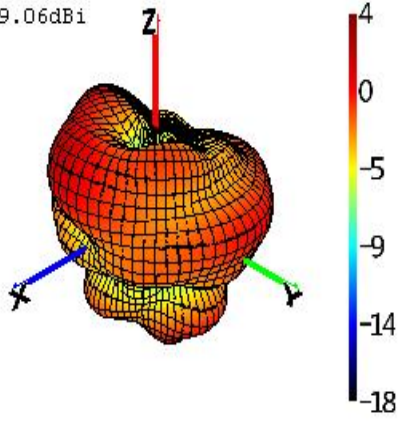
Phi=0 freq=7150MHz



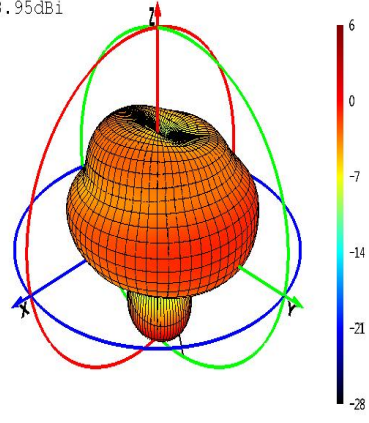
Theta=90 freq=7150MHz



MAX:3.83dBi
MIN:-19.06dBi



MAX:5.84dBi
MIN:-28.95dBi



3-3 Antenna Efficiency

frequency (MHz)	gain (dBi)	efficiency (dB)	efficiency (%)
2400	3.62	-2.48	56.53
2410	3.72	-2.41	57.46
2420	3.83	-2.08	61.98
2430	3.79	-1.92	64.2
2440	3.69	-2.17	60.66
2450	3.53	-2.05	62.32
2460	3.43	-1.77	66.45
2470	3.61	-1.73	67.09
2480	3.63	-1.7	67.53
2490	3.53	-1.91	64.42
2500	3.75	-1.7	67.58

frequency (MHz)	gain (dBi)	efficiency (dB)	efficiency (%)
5000	2.97	-1.32	73.79
5050	3.02	-1.38	72.78
5100	3.65	-1.19	76.01
5150	4.36	-0.58	87.47
5200	4.58	-0.75	84.17
5250	4.09	-0.78	83.63
5300	4.6	-1.03	78.83
5350	4.65	-0.99	79.7
5400	4.39	-1.02	79.14
5450	3.83	-0.93	80.69
5500	3.31	-1.32	73.82
5550	3.03	-1.5	70.79
5600	2.95	-1.65	68.37
5650	3.18	-1.4	72.39
5700	3.05	-1.34	73.38
5750	3.45	-1.53	70.28
5800	3.47	-1.88	64.81
5850	3.55	-1.73	67.13
5900	4.01	-1.61	68.97
6000	4.36	-2.32	58.63
6100	5.39	-2.38	57.81
6200	5.84	-2.52	55.94
6300	5.66	-2.84	51.96
6400	5.47	-3.11	48.82
6500	5.2	-3.25	47.36
6600	4.86	-3.4	45.67
6700	4.22	-3.57	43.99
6800	3.57	-3.81	41.64
6900	2.82	-3.98	40.02
7000	2.13	-4.09	38.96
7150	1.35	-4.2	38.03

4. Packaging Standard

Product Material No. : 004.032.0052703

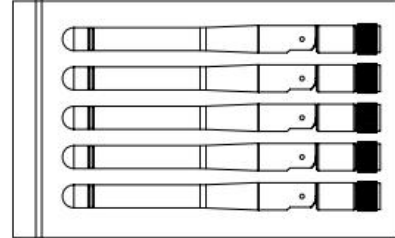
Product specification: External antenna Black-2.4G 5.8G 7.12G-SMA-J
L=109mm

li. Packaging requirements and operation instructions:

1. Internal packaging:

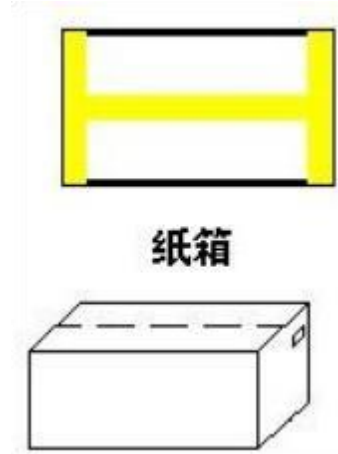
Product 2 PCS into the small PE bag

Product 25 PCS small Pe bag into the big PE bag



2. Packaging:

Quantity / box according to the actual packing



matters need attention:

1. Whether to add a partition board, pearl cotton;
2. Attachment of labels, such as ROHS;

5. Reliability test report

5-1. Reliability test standards

test item		test method	acceptance standard	Judgment results
1	V.S.W.R	Set the network analyzer parameters for testing	According to the specifications to be tested	PASS
2	Plug in damage	Set the network analyzer parameters for testing	According to the specifications to be tested	PASS
3	salt atmosphere	Temperature 35° C humidity 95% saline concentration 5%; test for 24 hours	After 2H, there was no obvious bad appearance: frequency offset of 5%	PASS
4	constant temperature and humidity	Temperature 80° C test 12H to -40° C Test 12H: Humidity 90%; Test 24 hours	After 2H, there was no obvious bad appearance: frequency offset of 5%	PASS
5	strain relief test	Tometer test product connector and terminal tension greater than; 1 Kgf	Visual inspection / measurement meets SOP requirements, no shedding, poor contact	PASS

6.Disabled Material Guarantee

禁用物质保证(Certification of Restricted Substance)

我方保证所提供的物料，完全遵守签核的广州视源电子科技股份有限公司/或其子公司的质量和环保协议中的各项条款，物料中禁用物含量，符合最新版《有害物质管理规范》中的各项标准。

We hereby certify that all the Material fully conform to the requirements of the ShiRuan/or its affiliated companies Declaration of Conformity that had been signed, and the maximum concentration value of restricted substance in Materials comply with the latest 《Regulations on the management of hazardous substances.》

公司盖章