



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958

Web: www.zkant.com

Product Specification

Customer Name: Tinyphoton (Wuhan) Technology Co., Ltd.

Project Name: DWARF 3 Smart Telescope

Product Spec: FPC+IPEX 1.0

REV: V1.0

Date: 2024/5/20

drawing	check	approved
Yong peng Wen	Yong jun Huang	Zhen hua Jiang

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

地址:深圳市龙华大浪中核工业园A栋1楼

电话 : 0755-29588096 18975422013



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958
Web: www.zkant.com

Index

1. Electrical Performance Index----page4/7
2. Testing Equipment&Principle--page8/10
3. Product Drawing -----page12
4. Code for product packaging ----page12/13

1. Electrical Performance Index

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

地址:深圳市龙华大浪中核工业园A栋1楼

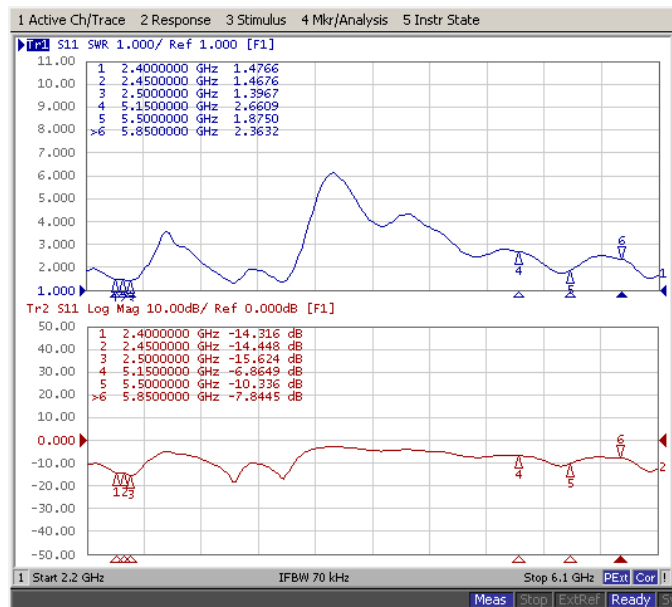
电话 : 0755-29588096 18975422013



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958

Web: www.zkant.com

1)、Passive data:



SWR

Frequency (MHz)	Return Loss (dB)	VSWR	Frequency (MHz)	Return Loss (dB)	VSWR
2400	-14.4	1.47	5150	-9.5	1.99
2450	-18.9	1.25	5500	-16.6	1.34
2500	-25.0	1.11	5850	-7.2	2.53

2)、Efficiency and Gain

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

地址:深圳市龙华大浪中核工业园A栋1楼

电话 : 0755-29588096 18975422013



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958

Web: www.zkant.com

Frequency	Efficiency	Efficiency
2400	-3.51	44.57
2410	-3.64	43.25
2420	-3.41	45.6
2430	-3.62	43.45
2440	-3.38	45.92
2450	-3.51	44.57
2460	-3.54	44.26
2470	-3.51	44.57
2480	-3.65	43.15
2490	-3.4	45.71
2500	-3.83	41.4
5150	-4.38	36.48
5200	-3.81	41.59
5250	-3.68	42.85
5300	-3.8	41.69
5350	-3.61	43.55
5400	-3.7	42.66
5450	-3.99	39.9
5500	-3.95	40.27
5550	-3.59	43.75
5600	-3.63	43.35
5650	-3.55	44.16
5700	-3.69	42.76
5750	-3.82	41.5
5800	-4.01	39.72
5850	-4.31	37.07

Efficiency

Frequency	MaxGain/d	AvgGain/d
2400	2.19	-3.51
2410	1.9	-3.64
2420	2.16	-3.41
2430	1.55	-3.62
2440	2.14	-3.38
2450	1.67	-3.51
2460	1.95	-3.54
2470	1.68	-3.51
2480	1.67	-3.65
2490	2.2	-3.4
2500	1.98	-3.83
5150	1.57	-4.38
5200	1.62	-3.81
5250	1.58	-3.68
5300	1.63	-3.8
5350	1.97	-3.61
5400	1.67	-3.7
5450	1.1	-3.99
5500	1.09	-3.95
5550	1.59	-3.59
5600	1.85	-3.63
5650	1.66	-3.55
5700	2.22	-3.69
5750	2.18	-3.82
5800	1.92	-4.01
5850	1.38	-4.31

Gain

Frequency (MHz)	2400	2450	2500	5150	5500	5850
Efficiency (%)	44.5	44.5	41.4	36.4	40.2	37.0
Gain (dBi)	2.1	1.6	1.9	1.5	1.0	1.3

3)、Apple Chart Direction Chart

E-mail : abcant@126.com

Http: //www.zkant.com

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: //www.zkant.com

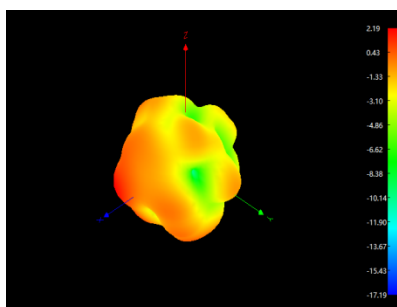
地址:深圳市龙华大浪中核工业园A栋1楼

电话 : 0755-29588096 18975422013

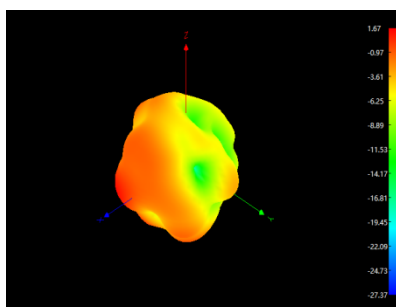


Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958

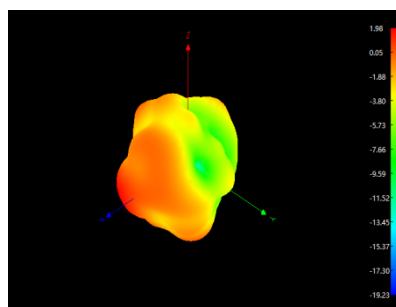
Web: www.zkant.com



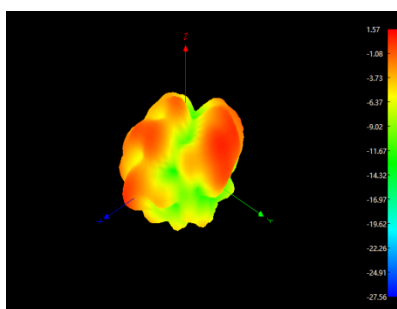
2400MHZ



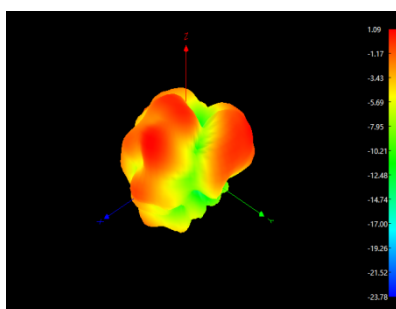
2450MHZ



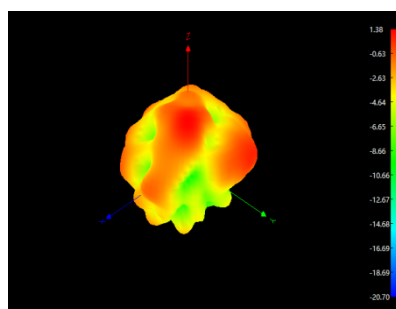
2500MHZ



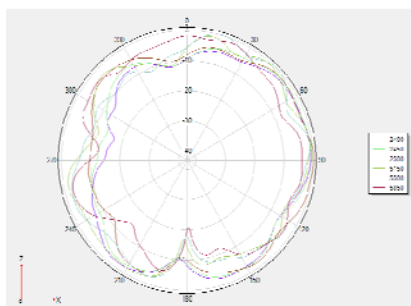
5150MHZ



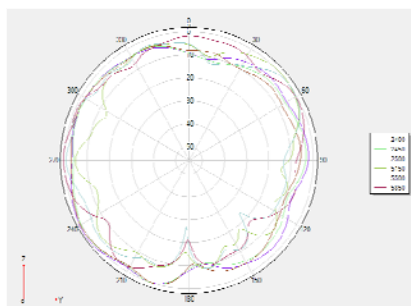
5500MHZ



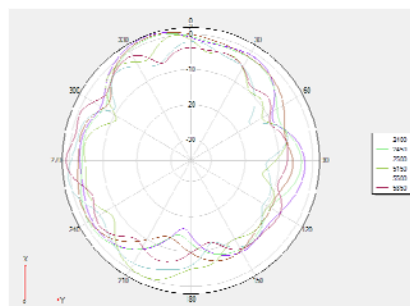
5850MHZ



Z-X



Z-Y



X-Y

4)、Active test data

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

地址:深圳市龙华大浪中核工业园A栋1楼

电话 : 0755-29588096 18975422013



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958

Web: www.zkant.com

Active Test_WIFI_B					
Channel	Frequency	MAX	TRP (11bPS)	MIN	TIS (11Mbps)
1	2412		12.6		-64.1
6	2437		12.7		-81.4
11	2462		12.3		-81.0
Channel	Frequency	MAX	TRP (54bPS)	MIN	TIS (54Mbps)
36	5180		15.7		-71.7
149	5745		14.1		-71.2
165	5825		13.9		-70.7

2. Testing Equipment and Principle

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

地址:深圳市龙华大浪中核工业园A栋1楼

电话 : 0755-29588096 18975422013



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958
Web: www.zkant.com

1. Test equipment:

Network Analyzers :

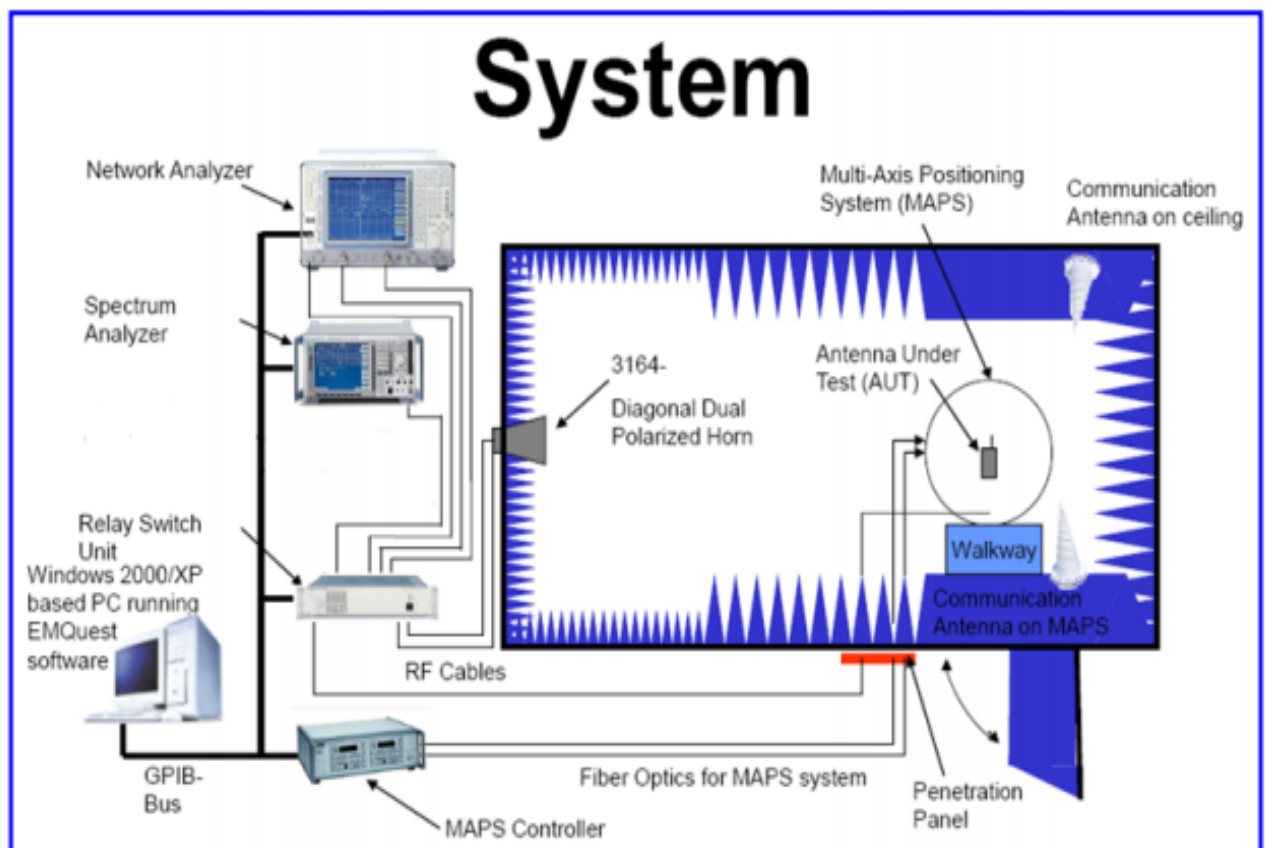
Agilent 8753D 5071B

Communications Test Set:

Agilent E5515C CMW500

3D Chamber Test System:

2. Testing Principles:



E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

地址:深圳市龙华大浪中核工业园A栋1楼

电话 : 0755-29588096 18975422013



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958
Web: www.zkant.com



24 probe microwave darkroom testing equipment

Attach the antenna to this part of the shell according to the diagram

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

地址:深圳市龙华大浪中核工业园A栋1楼

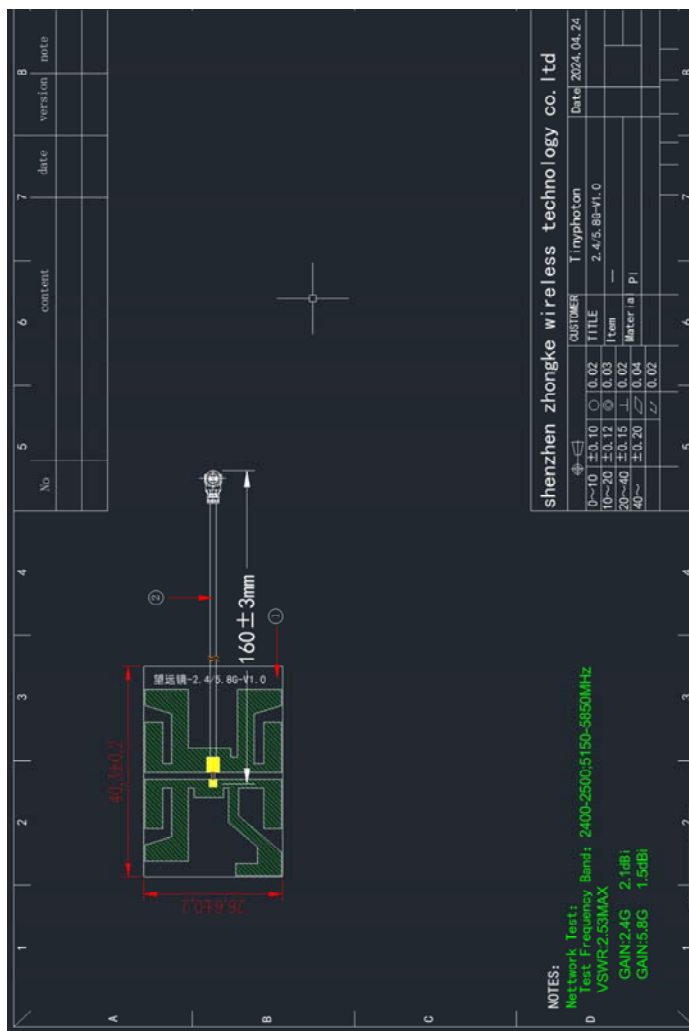
电话 : 0755-29588096 18975422013



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958

Web: www.zkant.com

3. Product Drawing



4. Code for product packaging

Product Name/Specification

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: [//www.zkant.com](http://www.zkant.com)

地址:深圳市龙华大浪中核工业园A栋1楼

电话 : 0755-29588096 18975422013



Shenzhen zhongke wireless technology Co.Ltd tel: 0755-33118958

Web: www.zkant.com

1、labeling requirement

odd numbers	*****
code	*****
Product Name	*****
number	*****
notes	*****

odd numbers	*****
code	*****
Product Name	*****
number	*****
notes	*****

2、Encasement requirements

Job description:

1). Inner packing:

Determine the quantity/bag based on the actual quantity

2). External packing:

Determine the quantity/bag based on the actual quantity

Note:

1) . Do you want to add partitions or pearl cotton;

2) . Labeling, such as ROHS, etc;

E-mail : abcant@126.com

Http: //www.zkant.com

add:1st Floor, Building A, Zhonghe Industrial Park, Dalang, Longhua, Shenzhen

Tel : 0755-29588096

E-mail : abcant@126.com

Http: //www.zkant.com

地址:深圳市龙华大浪中核工业园A栋1楼

电话 : 0755-29588096 18975422013