Shenzhen CTV Int Cloud Technology Co., Ltd

Sample acknowledgement

Supplier name: Shenzhen Yingjia Chuang electronic technology Co., LTD

Material code: YJC-6N065-B82

Material name: Black FPC built-in antenna

Specification description: 2.4G/5G black FPC Internal antenna 1.13 Black line L=65MM

Confirmation field:

Identifying person	examine	Give permission to

APPROVAL SHEET

CUSTOMER NAME	
CUSTOMER P/N	
PART NAME	2.4G/5G black FPC Internal antenna 1.13 Black line L=65MM
P/ N	YJC-6N065-B82
APPROVAL REV.	A0
DELIVERY DATE	July 29, 2023
PREPARED BY	Yin Feijie
CHECKED BY	Fang Wenfeng
APPROVED BY	Chauhan

Customer Approved		
Prepared By	Checked By	Approved By

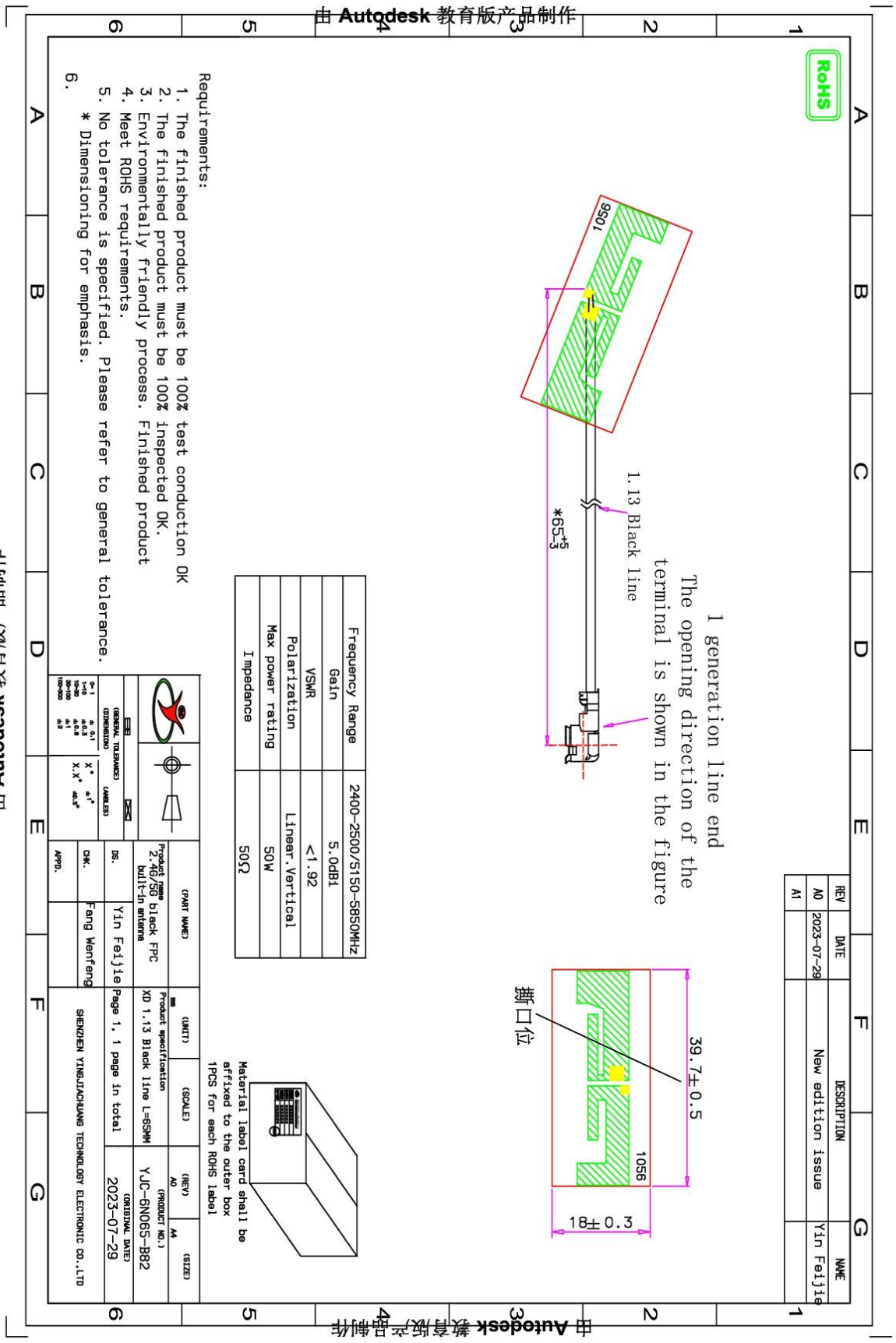
Contact Information (factory) :
Company address: building A.C, guangming valley, hongyu guangming valley, no. 11, jiangyou magang, shiwei community, matantian office, guangming district, shenzhen
Hangzhou Office: 212, Building B, Dahua Jianghong International Innovation Park, No. 369, Internet of Things Street, Binjiang District, Hangzhou
Phone + 86-755-27810060/23192199; Fax: + 86-0755-27810057
Company website: http://www.szsyjc.com E-mail: yjc@szsyjc.com

Catalogue

resume：

edition	Content of change and reasons for change	date	release
A/0	Initial release	July 29, 2023	

Antenna plan：



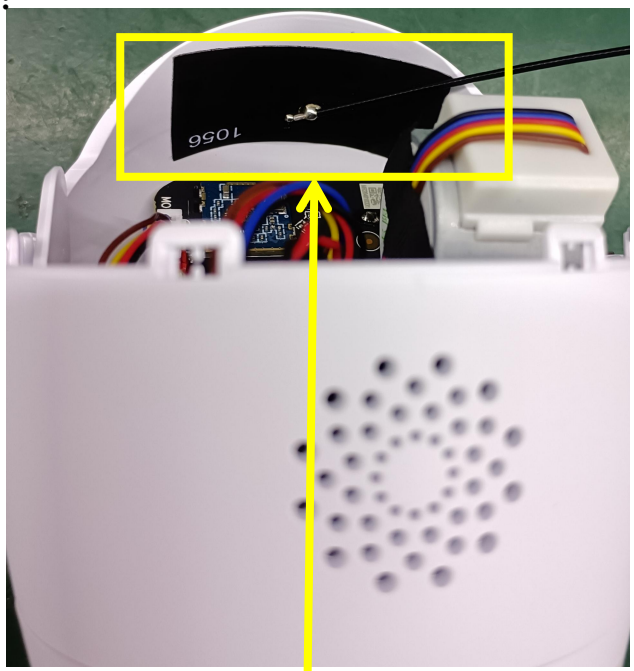
Antenna technical parameters and environmental testing：

Electrical technical parameter			
Electrical Specifications		Mechanical Specifications	
Frequency Range	2400-2500/5150-5850MHz	Antenna Color	Black
VSWR	＜1.92	Input connector	XD
Input Impedance	50 Ω	Wire length	65mm
Direction	All	Working Temperature	-20℃~+70℃
Gain	5.0dBi	Working Humidity	20%~80%

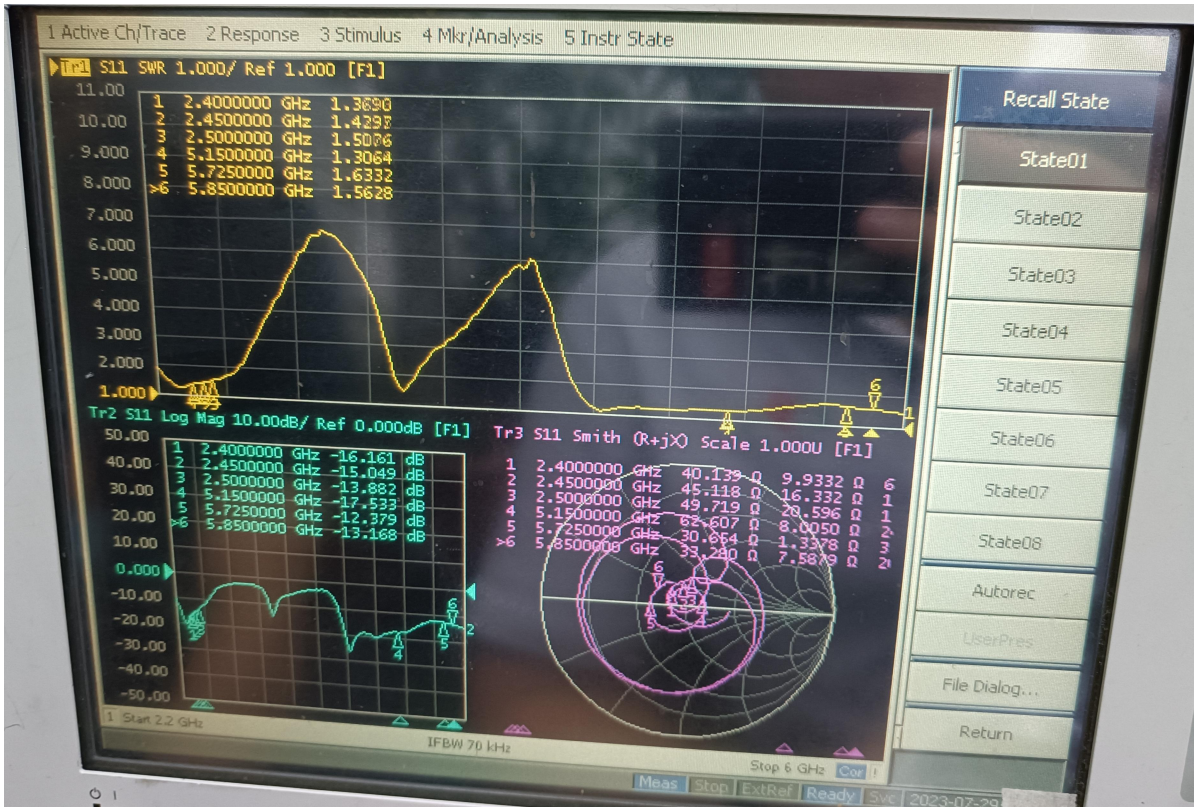
Environmental performance test:

Project	Test condition	Standard
Storage Conditions	In the absence of specified test temperature, humidity, air pressure is as follows:: 1. Temperature is - 30 ℃ ~ + 80 ℃ 2. Relative humidity of 45% to 45% 3. Air pressure is 86 kpa to 106 kpa	Electrical and mechanical performace is normal
High and low temperature test	Between 70 ℃ and -20 ℃ for 5 loops, then 1-2 h under normal conditions, check the appearance quality.	Size should meet the requirements and meet the performance of mechinery and electric.
Constant damp and hot resistance test	95 + / - 3% relative humidity, temperature test: 40 ℃. Lasts 2 h after, try to take out the determination of electrical properties, within 5 min after try 1-2 h under article normal thing, check the appearance quality	Size should meet the requirements and meet the performance of mechinery and electric.
vibration test	10-55 hz, vibration frequency range of displacement amplitude: 0.35 MM, acceleration amplitude: 50.0 M/S, sweep cycles: 30 times	Electrical and mechanical performace is normal
Fall down test	1 m high altitude in accordance with the perpendicular axis free drop 3 times	Electrical and mechanical performace is normal

Antenna physical diagram and attached location diagram：



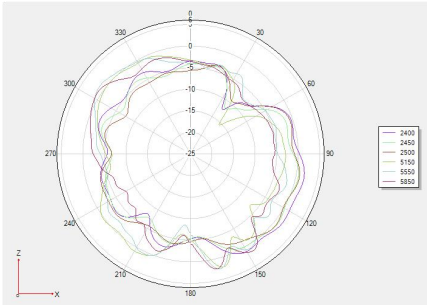
Antenna performance test diagram：



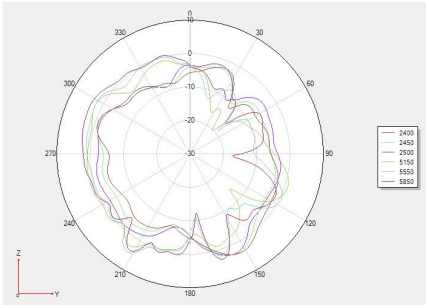
2D and 3D test data (2.4G/5G)：

Frequency	Efficiency (%)	Gain.(dBi)
2400MHz	68.48	3.48
2410MHz	60.95	2.86
2420MHz	61.39	3.14
2430MHz	60.81	2.99
2440MHz	65.66	3.35
2450MHz	63.39	3.27
2460MHz	62.26	3.18
2470MHz	61.09	2.92
2480MHz	62.75	3.19
2490MHz	63.43	3.26
2500MHz	67.33	3.47
5150MHz	52.37	4.03
5250MHz	57.45	4.79
5350MHz	53.39	4.19
5450MHz	54.57	4.41
5550MHz	58.46	4.94
5650MHz	55.52	4.52
5750MHz	53.66	4.29
5850MHz	53.24	4.4

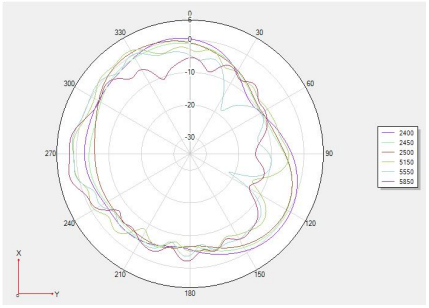
Phi 0 2D:

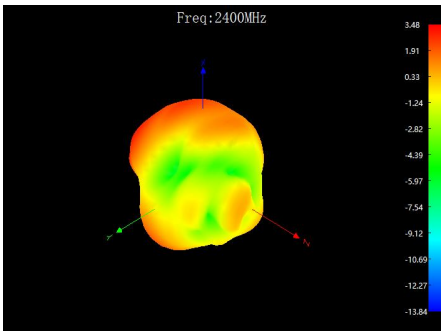


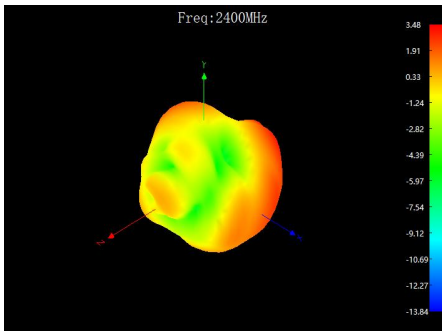
Phi 90 2D

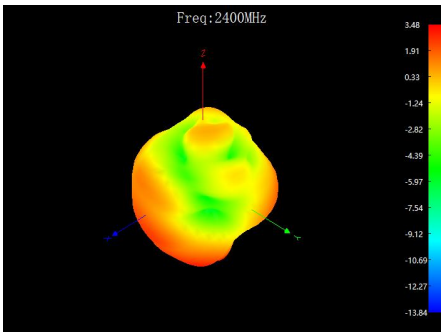


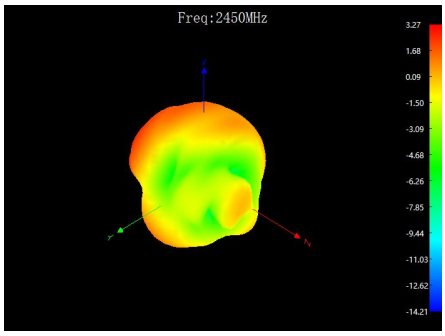
Theta 90 2D

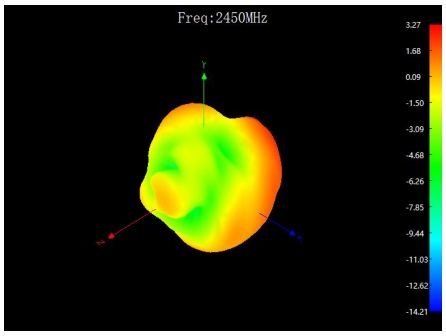


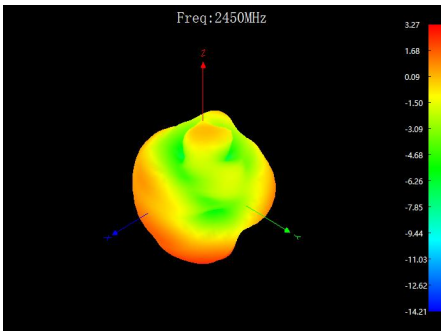


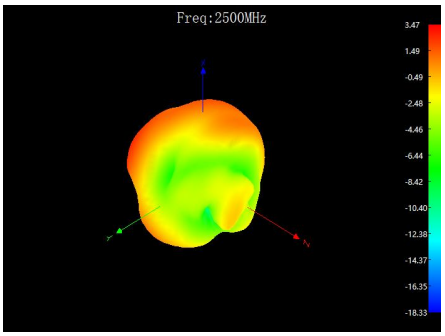


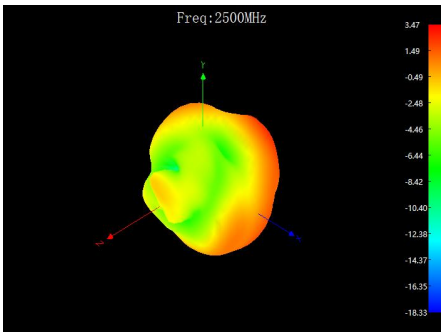


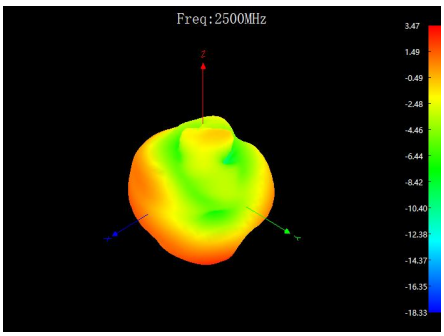








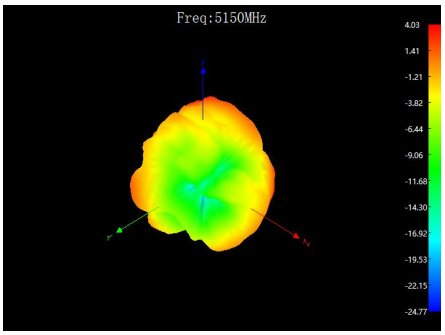


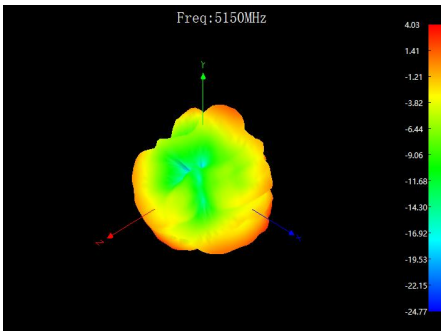


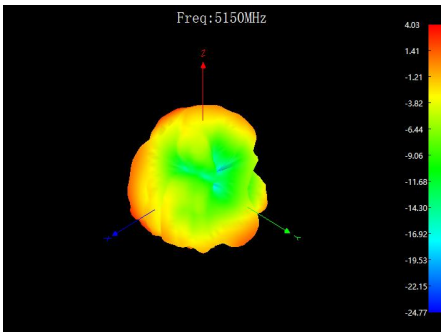
3D 2400:

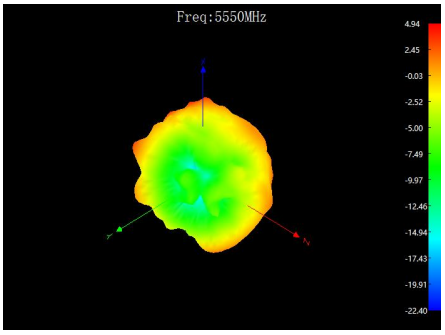
3D 2450:

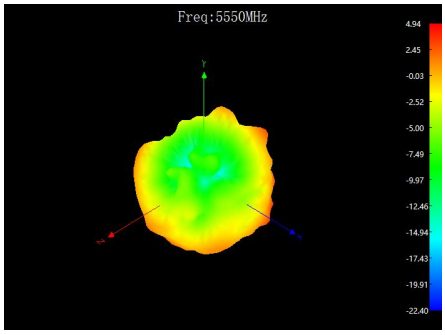
3D 2500:

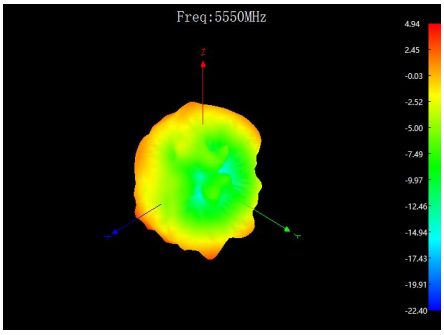


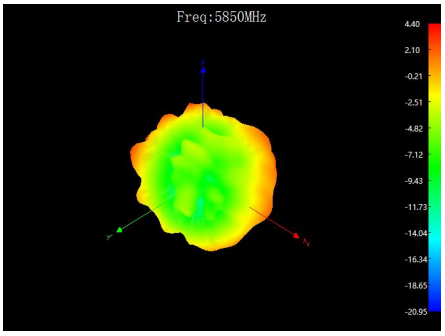


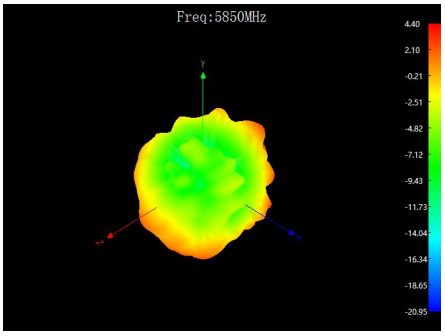


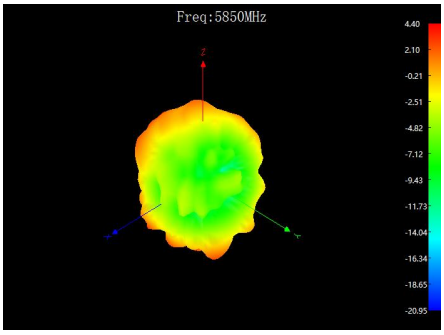












3D 5150：

3D 5550：

3D 5850：

OTA active test data statistics: (300W lamp machine)

Item	Measurement	Band	Channel	Frequency	Total
1	TRP	WIFI_B (11M)	1	2412	16.13
2	TRP	WIFI_B (11M)	6	2437	17.05
3	TRP	WIFI_B (11M)	11	2462	16.39
4	TIS(EIRP)	WIFI_B (11M)	1	2412	-86.77
5	TIS(EIRP)	WIFI_B (11M)	6	2437	-87.28
6	TIS(EIRP)	WIFI_B (11M)	11	2462	-85.43
7	TRP	WIFI_G (54M)	1	2412	15.6
8	TRP	WIFI_G (54M)	6	2437	15.99
9	TRP	WIFI_G (54M)	11	2462	15.46
10	TIS(EIRP)	WIFI_G (54M)	1	2412	-71.68
11	TIS(EIRP)	WIFI_G (54M)	6	2437	-74.7
12	TIS(EIRP)	WIFI_G (54M)	11	2462	-74.06
13	TRP	WIFI_A (54M)	36	5180	17.67
14	TRP	WIFI_A (54M)	149	5745	19.2
15	TRP	WIFI_A (54M)	165	5825	19.21
16	TIS(EIRP)	WIFI_A (54M)	36	5180	-76.53
17	TIS(EIRP)	WIFI_A (54M)	149	5745	-76.32
18	TIS(EIRP)	WIFI_A (54M)	165	5825	-77.75

OTA active test data statistics: (300W moving head machine)

Item	Measurement	Band	Channel	Frequency	Total
1	TRP	WIFI_B (11M)	1	2412	17.82
2	TRP	WIFI_B (11M)	6	2437	18.26
3	TRP	WIFI_B (11M)	11	2462	17.8
4	TIS(EIRP)	WIFI_B (11M)	1	2412	-85.38
5	TIS(EIRP)	WIFI_B (11M)	6	2437	-87.6
6	TIS(EIRP)	WIFI_B (11M)	11	2462	-85.94
7	TRP	WIFI_G (54M)	1	2412	16.51
8	TRP	WIFI_G (54M)	6	2437	16.82
9	TRP	WIFI_G (54M)	11	2462	17.15
10	TIS(EIRP)	WIFI_G (54M)	1	2412	-70.46
11	TIS(EIRP)	WIFI_G (54M)	6	2437	-75.36
12	TIS(EIRP)	WIFI_G (54M)	11	2462	-75.06
13	TRP	WIFI_A (54M)	36	5180	17.56
14	TRP	WIFI_A (54M)	149	5745	19.88
15	TRP	WIFI_A (54M)	165	5825	19.99
16	TIS(EIRP)	WIFI_A (54M)	36	5180	-76.84
17	TIS(EIRP)	WIFI_A (54M)	149	5745	-78.08
18	TIS(EIRP)	WIFI_A (54M)	165	5825	-77.94

OTA active test data statistics: (500W lamp machine)

Item	Measurement	Band	Channel	Frequency	Total
1	TRP	WIFI_B (11M)	1	2412	18.22
2	TRP	WIFI_B (11M)	6	2437	18.25
3	TRP	WIFI_B (11M)	11	2462	18.76
4	TIS(EIRP)	WIFI_B (11M)	1	2412	-83.42
5	TIS(EIRP)	WIFI_B (11M)	6	2437	-85.5
6	TIS(EIRP)	WIFI_B (11M)	11	2462	-83.25
7	TRP	WIFI_G (54M)	1	2412	17.66
8	TRP	WIFI_G (54M)	6	2437	16.89
9	TRP	WIFI_G (54M)	11	2462	16.65
10	TIS(EIRP)	WIFI_G (54M)	1	2412	-68.3
11	TIS(EIRP)	WIFI_G (54M)	6	2437	-69.54
12	TIS(EIRP)	WIFI_G (54M)	11	2462	-67.46
13	TRP	WIFI_A (54M)	36	5180	18.69
14	TRP	WIFI_A (54M)	149	5745	20.73
15	TRP	WIFI_A (54M)	165	5825	20.63
16	TIS(EIRP)	WIFI_A (54M)	36	5180	-75
17	TIS(EIRP)	WIFI_A (54M)	149	5745	-78.48
18	TIS(EIRP)	WIFI_A (54M)	165	5825	-77.66

OTA active test data statistics: (500W moving head machine)

Item	Measurement	Band	Channel	Frequency	Total
1	TRP	WIFI_B (11M)	1	2412	17.77
2	TRP	WIFI_B (11M)	6	2437	18.38
3	TRP	WIFI_B (11M)	11	2462	17.78
4	TIS(EIRP)	WIFI_B (11M)	1	2412	-81.22
5	TIS(EIRP)	WIFI_B (11M)	6	2437	-84.05
6	TIS(EIRP)	WIFI_B (11M)	11	2462	-81.59
7	TRP	WIFI_G (54M)	1	2412	17.51
8	TRP	WIFI_G (54M)	6	2437	17.43
9	TRP	WIFI_G (54M)	11	2462	17.13
10	TIS(EIRP)	WIFI_G (54M)	1	2412	-69.17
11	TIS(EIRP)	WIFI_G (54M)	6	2437	-71.53
12	TIS(EIRP)	WIFI_G (54M)	11	2462	-70.78
13	TRP	WIFI_A (54M)	36	5180	18.54
14	TRP	WIFI_A (54M)	149	5745	19.92
15	TRP	WIFI_A (54M)	165	5825	20.16
16	TIS(EIRP)	WIFI_A (54M)	36	5180	-75.03
17	TIS(EIRP)	WIFI_A (54M)	149	5745	-78.4
18	TIS(EIRP)	WIFI_A (54M)	165	5825	-77.46

Product Type	1.13 Wire
Structure Drawing	

Structure Characteristics

Structure	Item	Standard Value
Inner Conductor	Material	Silver plated copper wire
	(mm/Composition(No./mm)	7/0.08±0.005
	Nom.Dia(mm)	Φ0.24±0.01
Insulation	Material	FEP
	Nom.Dia(mm)	Φ0.7±0.03
Outer Conductor	Material	Tinned copper
	From	Weaving
	Shielding rate	≧90%
	Nom.Dia(mm)	Φ0.92±0.03
Jacket	Material	FEP
	Nom.Dia(mm)	Φ1.13±0.05

电气性能 Electrical Characteristics

Item	Standard Value	Item	Frequency	Standard Value
Impedance (Ω)	50±3	Attenuation@20 ℃ (dB/100m)	1GHz	≤2.23
Capacitance(pF/m)	98		2GHz	≤3.15
Tensile strengthkgf/mm²	1.76		3GHz	≤3.96
VSWR	≤1.40@0-6GHz		4GHz	≤4.6
Dielectric Strength(A.C V/1min)	1000		5GHz	≤5.15
(MHz) Max.oper. frequency	6000		6GHz	≤5.7

Dependability

Min.Bending Radius/Single	mm	4
Min.Bending Radius/Repeated	mm	8
Operating Temperature	℃	-20~+80

Packing

Packing Mode	1000 (m/disc)Reel

Trips for Use

Storage Environment	Temperature: below 30℃, humidity: 20-65%
Teflon Shrink	Insulation shrinkage ≦0.2mm; Sheath shrinkage ≦0.3mm
Processing temperature	Under the condition of 250℃~260℃, it can withstand for a short time; Thermal decomposition occurs above 300℃
The best save cycle	After 2 months, the effect of tin becomes worse after 2 months, but the soon as possible after peeling in the high temperature and high humidity environment in summer

Material RoHS conformity declaration form

This is to certify that the delivery to your company's components, raw materials, auxiliary materials used and the additives in the production engineering are accord with RoHS environmental requirements of the restrictions on the use of hazardous substances directive (RoHS directive 2011/65 / EU)

About components used raw materials, packaging materials, auxiliary materials and additives used in the production process such as composition of the report is as follows:

Component /Part Name	Material Composition	ICP report #	Test Org.	Test Date	Content of harmful substances (ppm)						PASS?
					Cd	Pb	Hg	Cr $^{6+}$	PBB	PBDE	PASS
FPC	FPC soft board	FTS2302160201-01C1	SGS	23/02/20	ND	ND	ND	ND	ND	ND	PASS
Wire rod	Teflon coaxial cable	SZXEC2202766604	SGS	22/08/18	ND	ND	ND	ND	ND	ND	PASS
terminal	Phosphor bronze	CANEC2301145810	SGS	23/02/08	ND	5	ND	ND	ND	ND	PASS
	Gold coating	A2220404860101001C	CTI	22/09/17	ND	ND	ND	ND	ND	ND	PASS
	Rubber core	A2230035037101002E	SGS	23/02/06	ND	ND	ND	ND	ND	ND	PASS
Eco-friendly tin wire	Eco-friendly tin wire	ZXEC2203054802	SGS	22/09/19	ND	46	ND	ND	ND	ND	PASS