



ShenZhen City FeiMin Technology CO.,LTD.

SPECIFICATION FOR APPROVED

CUSTOMER: Shenzhen Kuai Zhi Technology Co., Ltd.

PRODUCTS: Chip antenna

PART NO: _____

Spec. : FM-S2430-S2

Data: 2025. 10. 9

—

SUPPLIER		
PREPARED BY	CHECKED BY	APPROVED BY

CUSTOMER		
ACCEPTED BY	CHECKED BY	APPROVED BY

REMARK:Please send us one(or copy)of this approval with stamp after accepting,other copies filed by the customer.

ADD: Room 801, 8th Floor, Keyunda E-commerce Base, No. 4 Shenghui Road, Guxing Community, Xixiang Subdistrict, Baoan District, Shenzhen.

Tel: 0755-23035723

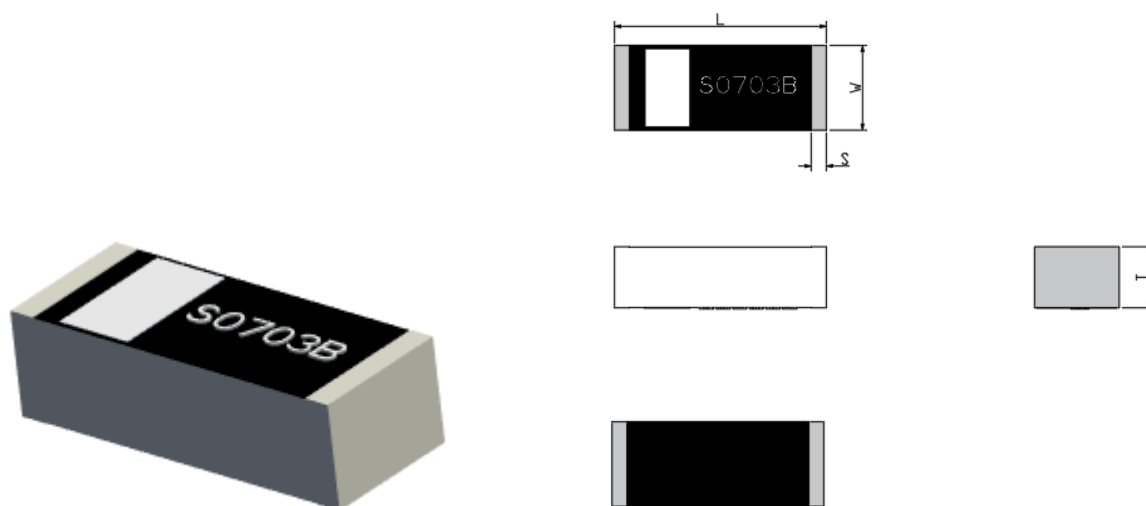
Fax: 0755-23036702

E-mail: ant001@fmant.cn

HTTP:[www. fmant. cn](http://www.fmant.cn)

1. Project Information

1.1. Appearance and Dimensions

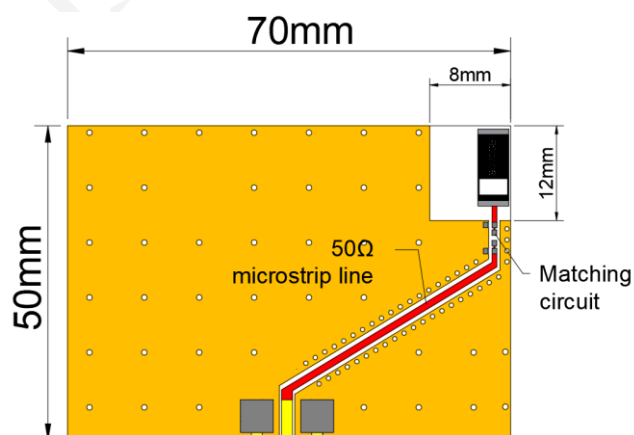


Symbol	Dimension (mm)
L (length)	7.0± 0.20
W (width)	3.0± 0.20
T (thickness)	2.0± 0.20
S (Electrode width)	0.5± 0.20

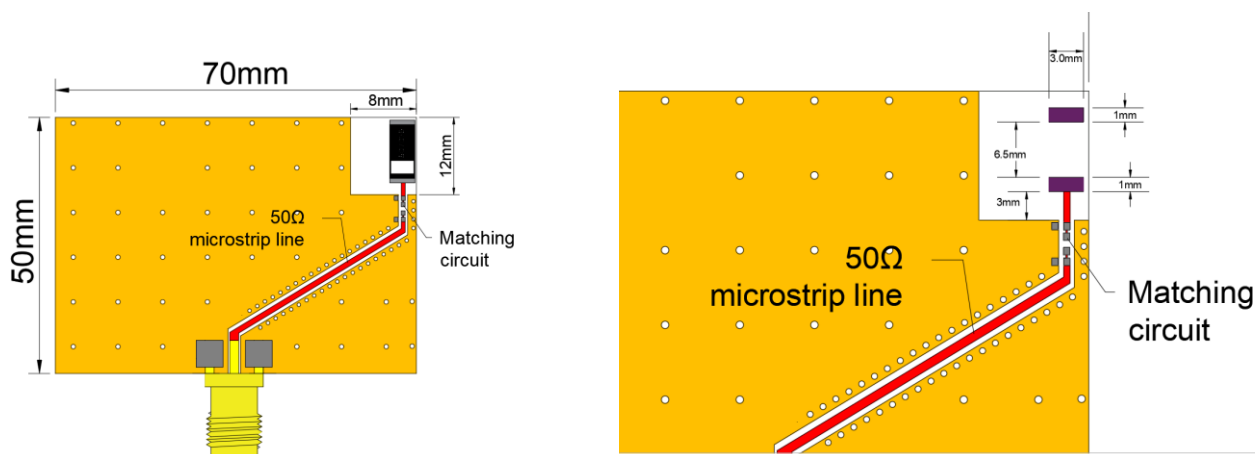
1.2. antenna Clearance area

When designing the antenna, it should be far away from metal components and irrelevant components such as batteries, oscillators, shields, cameras, etc. to leave a clean space for the antenna. This interval is called clearance area. The following is the size of clearance area we recommend to reserve.

Model	size	Clearance area L*W(mm)
A1 (2.4Guni-polar)	5.5*1.2*1.2	9.1*5.6
X5 (2.4Guni-polar)	5.2*2.2*1.0	8.7*6.5
X6 (2.4G pifa)	3.2*1.6*1.0	7.0*6.0
D1 (2.4Guni-polar)	5.2*2.2*1.0	8.7*6.5
D2 (2.4Guni-polar)	5.2*2.2*1.0	8.7*6.5
D3 (2.4Guni-polar)	3.4*1.7*1.2	7.2*6.0
F01 (2.4G pifa)	3.2*1.6*0.4	7.0*6.0
S2 (2.4/5.8Gdua I-frequency)	7.0*3.0*2.0	8.0*12.0
U1 (UHFuni-polar)	15.0*3.0*1.0	19.0*8.0
G2 (GPSuni-polar)	9.5*3.0*1.0	13.5*7.5

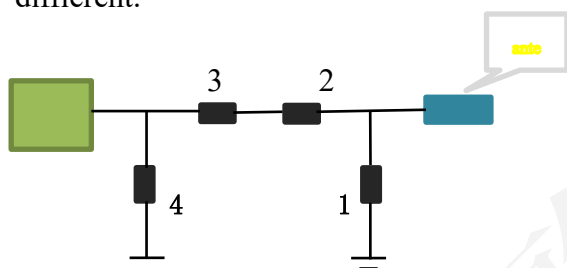


1.3.Demo Test Board with Antenna(Unit:mm)



1.4. Matching Circuit

With the following recommended values of matching and tuning components,the center frequencies will be about 2440 MHz at our standard 30*40 mm evaluation board.However,these are typical reference values which may need to be changed when circuit boards or part vendors are different.



System Matching Circuit Component (Murata)		
Location	Description	Tolerance
1	8.2nH(0402)	±0.2nH
2	5.1nH(0402)	±0.2nH
3	1.2nH(0402)	±0.2nH
4	NC	/

2. Electrical Characteristics

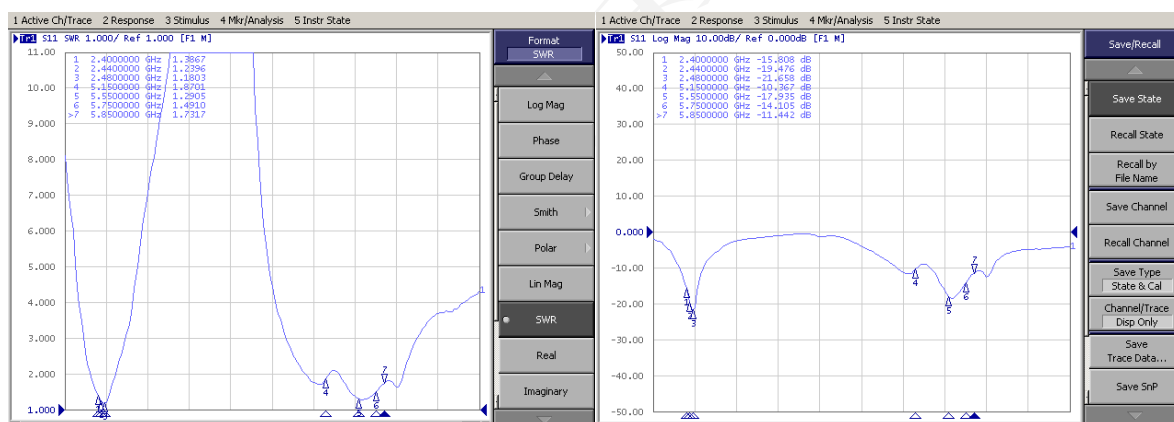
2.1. Electrical Table

Characteristics		Specifications	Unit
Outline Dimensions		7.0*3.0*2.0	mm
Working Frequency		2400-2500/5150-5850	MHz
VSWR		<2	/
Impedance		50	Ω
Polarization		linear polarization	/
Gain	Peak	3	dBi
	效率 Efficiency	55	%

2.2. VSWR & return loss

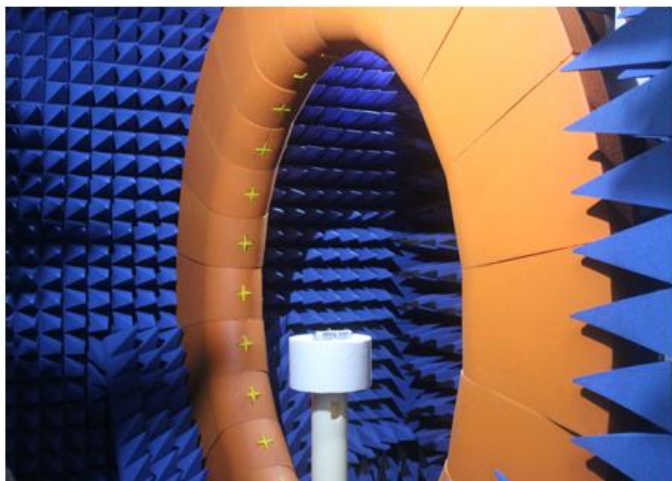
VSWR

return loss



2.3. Gain and Efficiency

Test system



Probe microwave anechoic chamber

➤ Frequency : 0.4GHz~6GHz

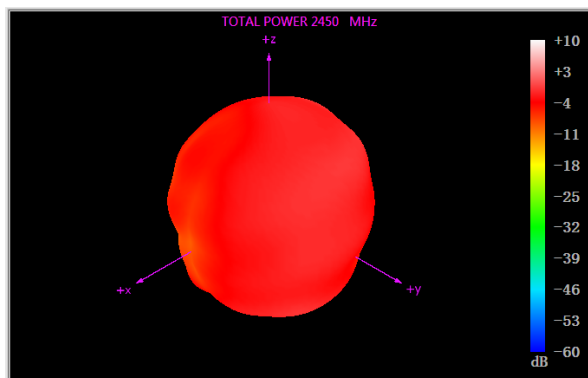
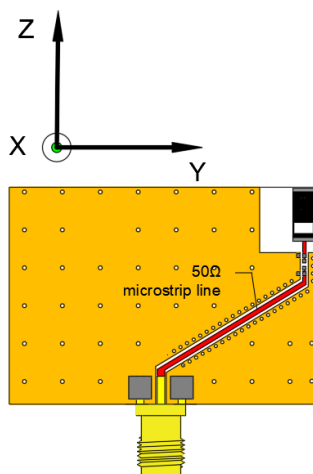
The main test indicators

- ◆ Passive parameters
- ◆ gain
- ◆ efficiency
- ◆ 3D direction diagram

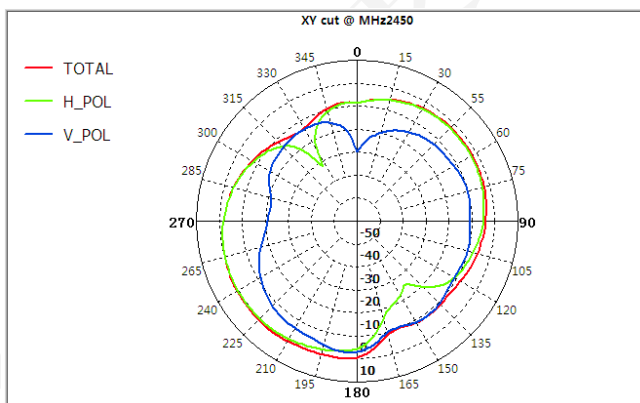
- Active metrics:
- TRP (Total Radiated Power),
- TIS (Total Received Sensitivity)

Frequency (MHz)	Gain (dBi)	Efficiency (%)
2400 MHz	1.16	42.35
2410 MHz	1.17	43.43
2420 MHz	1.74	48.12
2430 MHz	1.83	49.82
2440 MHz	1.94	50.94
2450 MHz	1.86	52.98
2460 MHz	2.08	56.65
2470 MHz	2.41	50.32
2480 MHz	2.88	54.87
2490 MHz	2.7	49.91
2500 MHz	2.25	53.11
5150 MHz	0.32	40.57
5200 MHz	0.8	41.93
5250 MHz	1.78	46.26
5300 MHz	2.1	44.23
5350 MHz	2.46	46.64
5400 MHz	2.95	50.35
5450 MHz	3.09	43.02
5500 MHz	2.88	42.78
5550 MHz	2.5	42.37
5600 MHz	1.99	48.95
5650 MHz	1.18	43.9
5700 MHz	1.55	49.34
5750 MHz	2.17	44.66
5800 MHz	2.23	49.52
5850 MHz	2.87	48.46

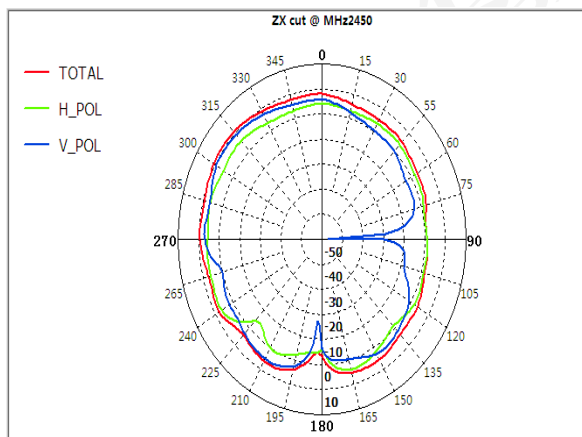
2.4. Antenna radiation pattern



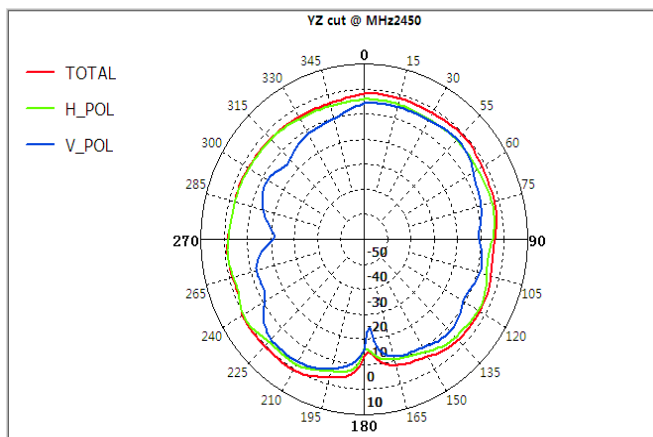
3D-plane@2.45GHz



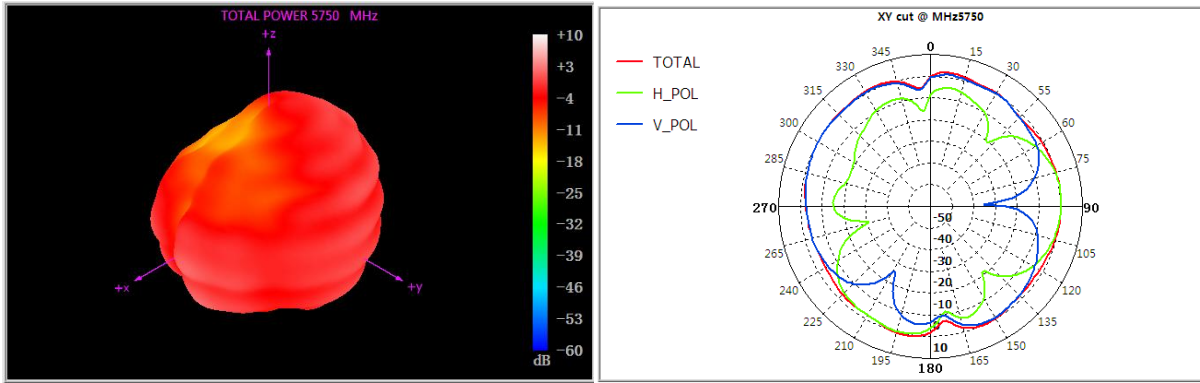
2D-plane XOY @2.45GHz



2D-plane XOZ@2.45GHz

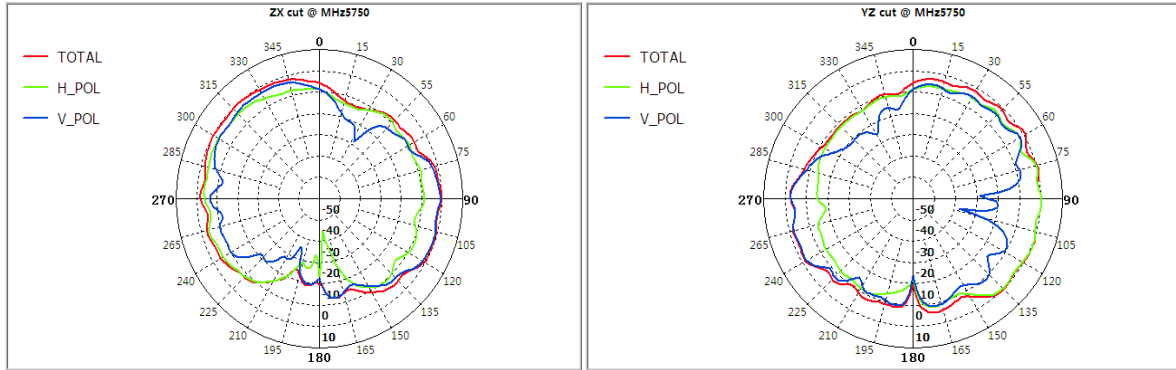


2D-plane YOZ @2.45GHz



3D-plane@5.75GHz

2D-plane XOY @5.75GHz

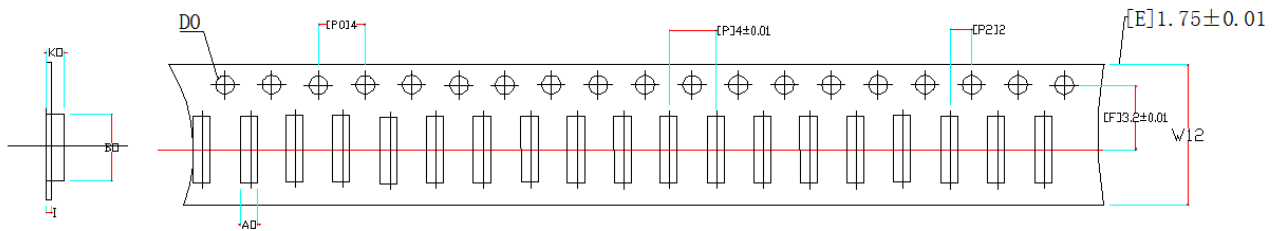


2D-plane XOZ@5.75GHz

2D-plane YOZ @5.75GHz

3.Packaging Information

3.1. Tape specification

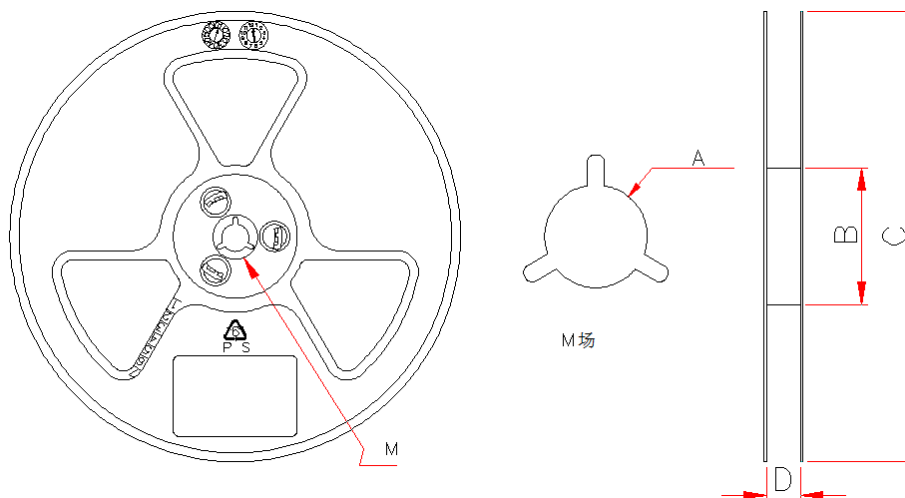


Index	A0	B0	K0	P0	P	P2	φ D0	W	E	F	T
Dimension (mm)	2.5 ± 0.1	5.5 ± 0.1	1.3 ± 0.1	4.0 ± 0.1	8.0 ± 0.1	2.0 ± 0.1	1.5 +0.1	12.0 ±0.3	1.75 ±0.1	5.5 ± 0.1	0.3 ± 0.05

- 10 sprocket hole pitch cumulative tolerance ± 0.20 .
- Carrier camber is within 1 mm in 250 mm.
- All dimensions meet EIA-481-C requirements.
- Material :Transparent PS.
- Packing length per 7" reel :24.6Meters.

6. Component load per 7" reel : 3000 pcs.

3.2. Reel specification



Index	A	B	C	D
Dimension (mm)	13.3 ± 0.3	100 ± 0.3	330 ± 0.3	24.5 ± 0.3

4. Notes

- 1) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- 2) The use of tweezers or vacuum pick up is strongly recommended for individual components.

5. Storage Conditions

- 1) Recommended products should be used within 6 months form the time of delivery.
- 2) Storage environment condition
 - Temperature and humidity conditions:-10~40℃ and 30~70%RH.
 - The packaging material should be kept where no chlorine or sulfur exists in the air.
 - Products should be storage in the warehouse without heat shock,vibration,direct sunlight and so on