

Antenna specification for approval

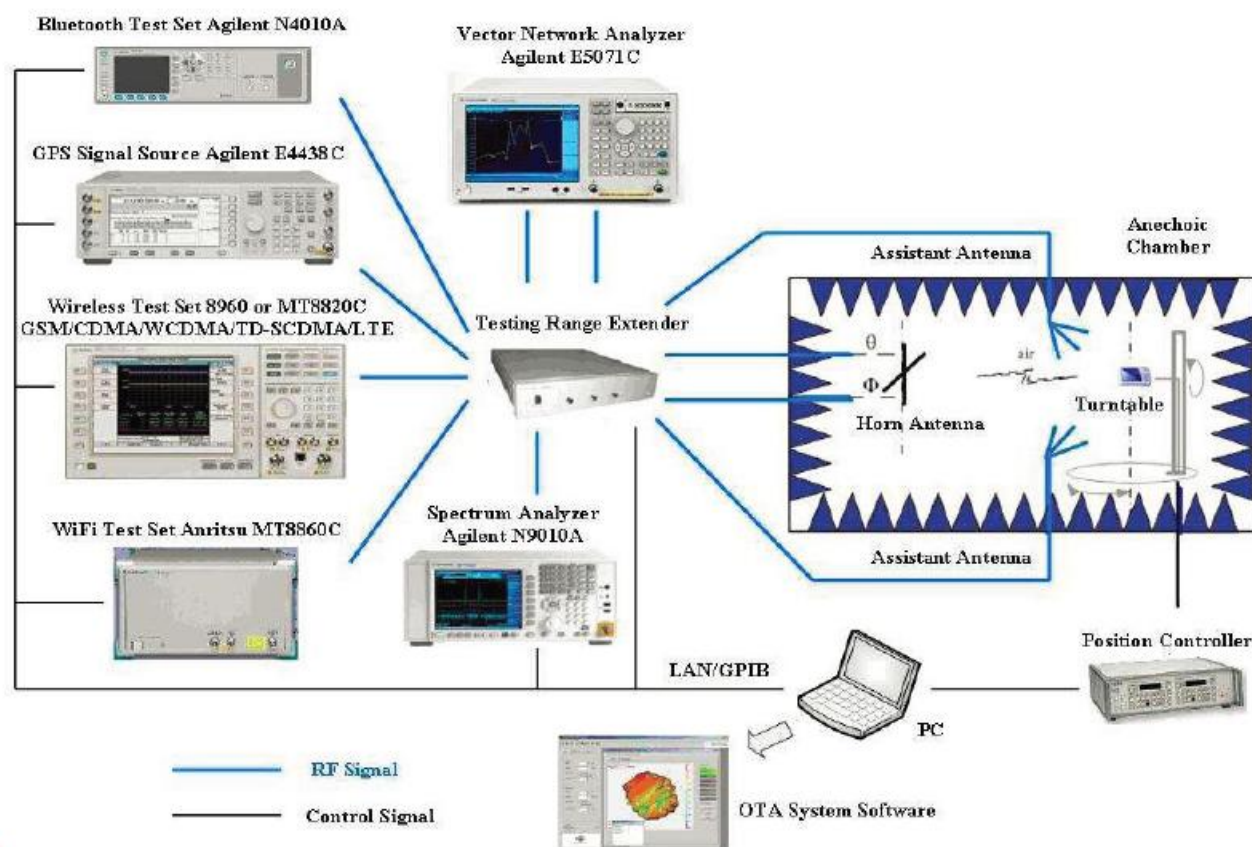
Customer name	Kemei Vision		
Model	C01198		
Antenna band	2.4GHZ&5GHz		
Antenna function	4G Antenna		
Antenna material	ceramics	color	red
model	OA-W03		
Material number	922-003-6B0-A		
Customer Part Number			
structure		Purchase	
Document control		structure	
radio frequency		engineering	
To examine		QC	
Responsible	LTT	To examine	
date 2025.07.14	Seal area	date 2025.07.14	Seal area
Customer name	Xiamen Weizhixing Technology Co., Ltd		

Serial number	Certification number	Material type	Date of issue	Remarks
1	SHAEC24025471005	Tinned copper wire	2024-11-25	One year
2	SHAEC24027284565	halogen	2024-12-06	One year
3	SHAEC24027480902	Adhesive	2024-12-06	One year
4	SHAEC24029171725	FEP sheath	2024-12-26	One year
5	SHAEC24027284563	FEP insulation	2024-12-05	One year
6	SZXEC24002306404	Tin wire	2024-07-24	One year
7	SZXEC24002306408	Tin	2024-07-24	One year
8	ETR25501383	Printing ink	2025-05-20	One year
9	A2250132593101001E	Substrate	2025-03-10	One year
10	CANEC24028865417	EVA foam	2025-01-03	One year
11	A2240439752101001	Conductive cloth	2024-07-29	One year
12	SZXEC24002471802	Gold plating	2024-08-08	One year

Catalogue

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one:Device support&testable antenna types



Antenna function	Frequency Range	test instrument	test method	standard test
2G antenna (GSM)	824MHz-960MHz, 1710MHz-1990MHz	5071B、8960 OTA darkroom	Active test, passive test	Soward standards, customer requirements
3G antenna (WCDMA/TDSCDMA/CDMA-EVDO/2000)	824MHz-960MHz, 1710MHz-2170MHz	5071B、8960 OTA darkroom	Active test, passive test	Soward standards, customer requirements
4G antenna (LTE-FDD/LTE-TDD)		5071B、CMW500、 SP8011、OTA darkroom	Active test, passive test	Soward standards, customer requirements
WIFI antenna	2.4GHz-2.48GHz, 5.15GHz-5.35GHz, 5.725GHz-5.825GHz	5071B、CMW500、OTA darkroom、router、 PC	Active test, passive test, APK actual test, throughput test	Soward standards, customer requirements
BT antenna	2.4GHz-2.48GHz,	5071B、OTA darkroom 、Bluetooth Speaker	Passive test, actual test	Soward standards, customer requirements
Positioning antenna (GPS, GLONASS, Beidou, Galileo)	1.575.42MHz±10MHz 1602MHz±0.5625MHz 1561MHz±2.046MHz	5071B、OTA darkroom 、APK	Passive test, actual test	Soward standards, customer requirements
NFC antenna	13.56MHz	5071B、Dedicated test fixture、OTA darkroom、APK	Passive test, actual test	Soward standards, customer requirements
Remote control antenna	433MHz	5071B、OTA darkroom	Passive test, actual test	Soward standards, customer requirements

two:overview

(1)Antenna performance

- 1.This approval sheet supports for MID project. ceramics antennas include in this project. This report is for the performance of WIFI&BT antenna.
- 2.Antenna shape size: Meet the requirement of MID
- 3.Antenna band: 2.4GHz~5GHz
- 4.Antenna material: Antenna material meet the requirement of MID
- 5.Adhesive performance: Adhesive performance meet the requirement of MID
- 6.Antenna performance meet the spec below:

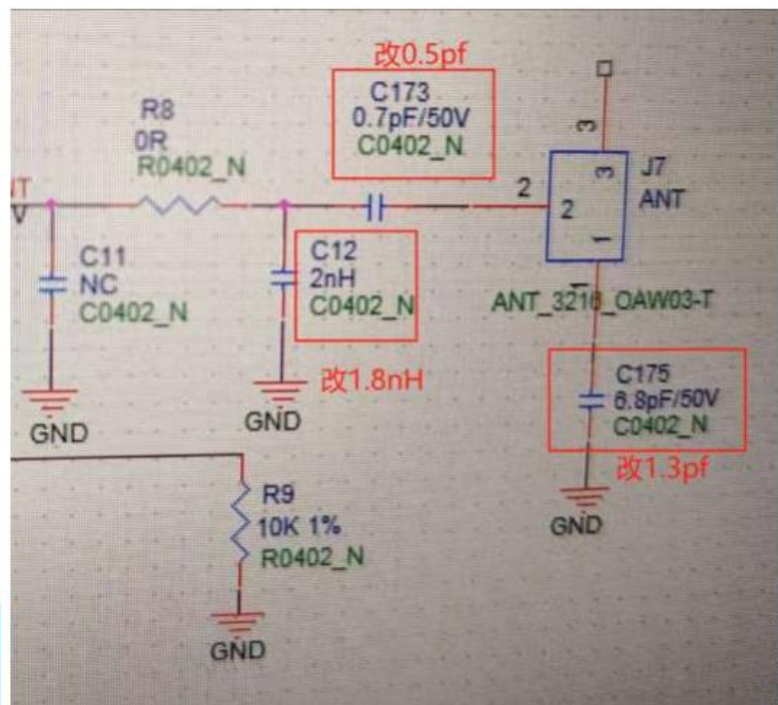
Description	2.4GHz~5GHz	Units
VSWR	≤ 3.5	
Average Antenna Gain	≥ -3.85	dBi
Feed Impedance	50 ohms	
Operating Temperature	-40 to +85 deg C	
Polarization / Azimuth	Linear / Omni-directional	

(2)Mechanical Information

Mechanical Dimension	
Cable Length	NA
Description	WIFI&BT antenna
Material	ceramics
Coaxial Cable	NA
Environmental	
Operation Temperature	-40 to +85 deg C
Storage Temperature	-40 to +85 deg C

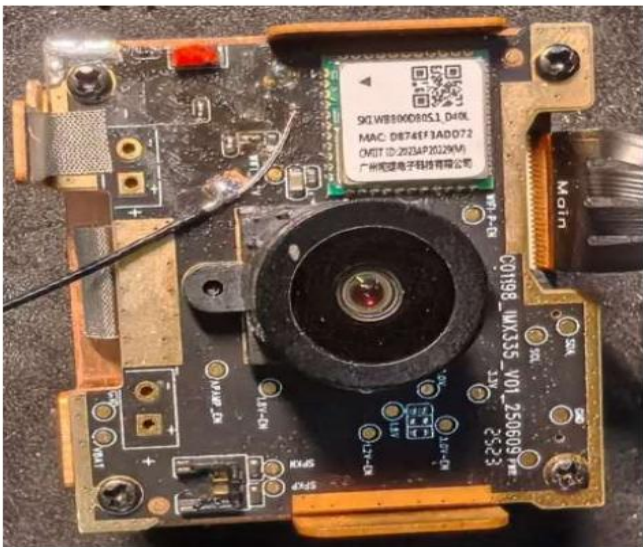
three:Match circuit diagrams, machine images, and antenna images

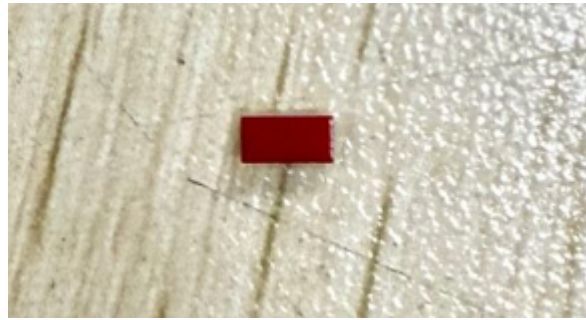
(1)matching circuit



Location indication	C12	C173	C175
Original parameters	2nH	0.7pf	6.8pf
Modified parameters	1.8nH	0.5pf	1.3pf

(2) Machine images&antenna images





four:Antenna Standing Wave Ratio&Antenna Efficiency (VSWR)



Passive Test For 2.4G				
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
2400	32.26	-4.91	-2.73	-4.88
2410	29.32	-5.33	-2.46	-4.61
2420	32.64	-4.86	-1.62	-3.77
2430	36.35	-4.39	-1.11	-3.26
2440	39.41	-4.04	-0.65	-2.8
2450	37.09	-4.31	-0.84	-2.99
2460	37.71	-4.24	-0.69	-2.84
2470	37.84	-4.22	-0.89	-3.04
2480	39.65	-4.02	-0.82	-2.97
2490	40.07	-3.97	-0.61	-2.76
2500	35.81	-4.46	-0.57	-2.72

Passive Test For 5G-WIFI				
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
5100	22.59	-6.46	-1.15	-3.3
5200	26.26	-5.81	-1.14	-3.29
5300	33.29	-4.78	0	-2.15
5400	29.16	-5.35	-1.2	-3.35
5500	28.55	-5.44	-1.8	-3.95
5600	31.77	-4.98	-3.85	-6
5700	28.94	-5.39	-2.41	-4.56
5800	28.55	-5.44	-1.97	-4.12

five:Active data OTA

802.11b : 11Mbps 20M					
1	7	13			
2412	2442	2472			
11.28	11.76	10.83			
-75.82	-75.88	-75.89			
802.11g : 54Mbps 20M					
1	7	13			
2412	2442	2472			
11.13	11.44	9.63			
-63.75	-63.49	-63.95			
802.11n : MCS7 20M			802.11n : MCS7 20M		
1	7	13	36	64	165
2412	2442	2472	5180	5320	5825
12.21	11.94	10.2	11.67	11.59	12.76
-61.39	-60.82	-60.43	-70.52	-69.05	-67.96
802.11a : 54Mbps 20M					
36	64	149	165		
5180	5320	5745	5825		
10.67	10.36	11.11	11.32		
-70.79	-69.68	-70.37	-67.92		

six:Antenna measurement diagram

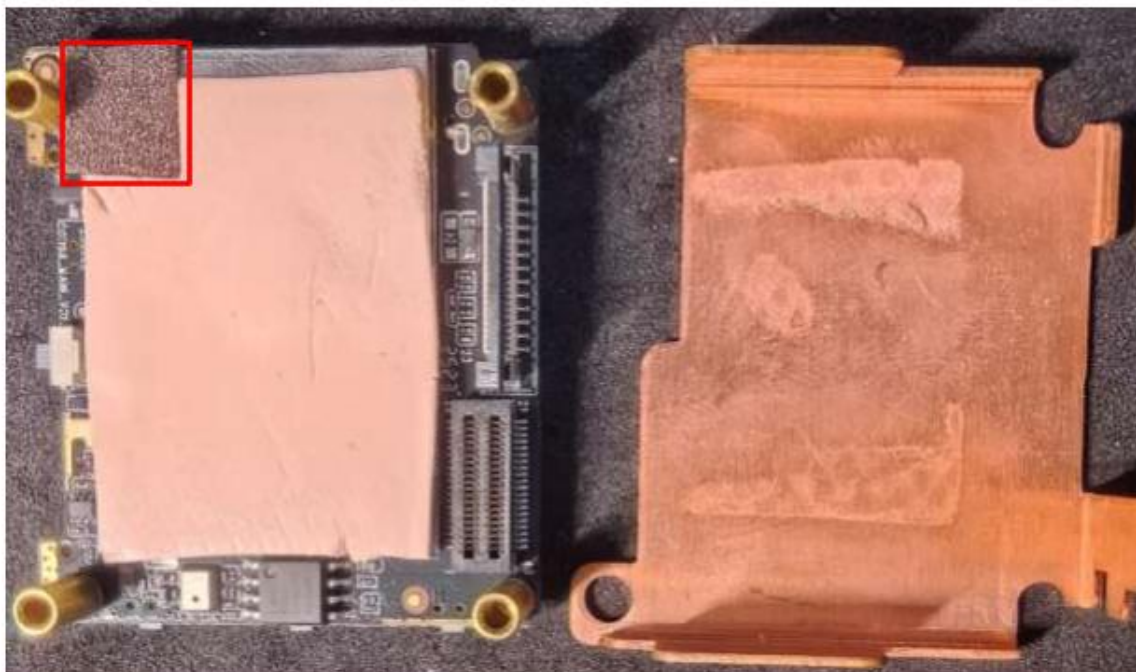
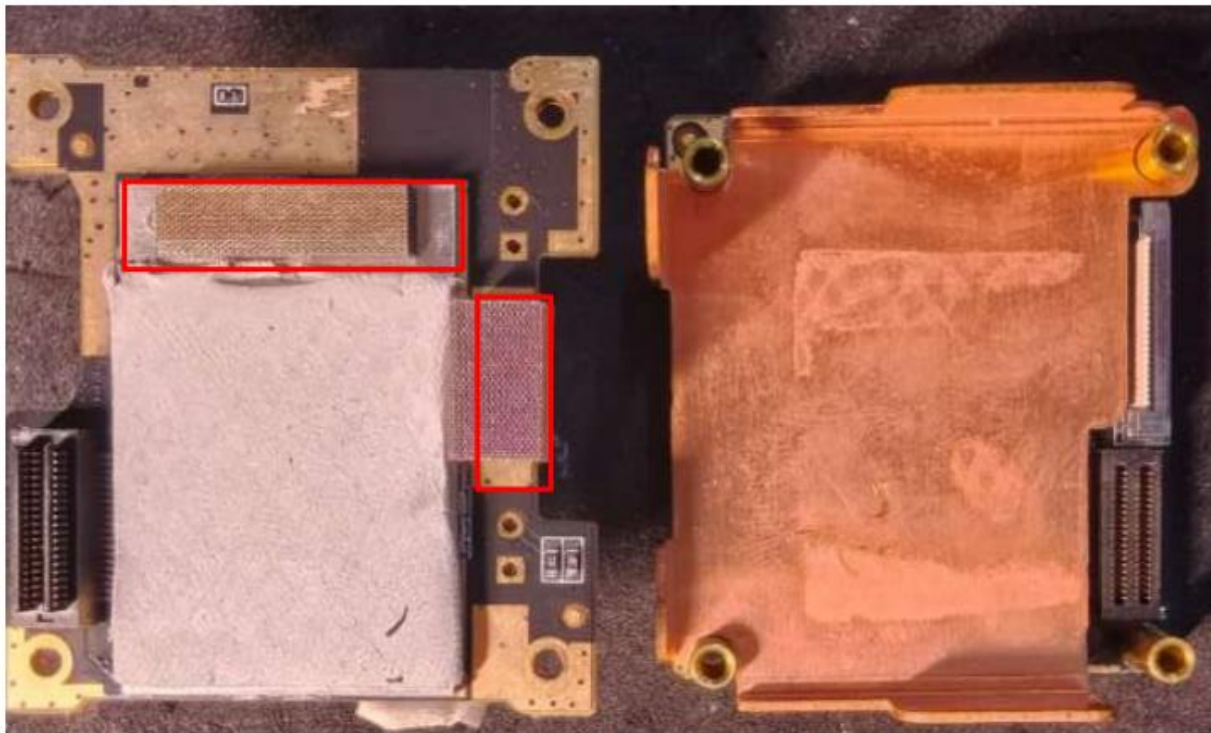
WiFi signal strength test



	distance	Signal strength
5Gwifi	1 meter	-31dBm
5Gwifi	10 meters	-55dBm

6th Floor, Building B, Hexi Hangcheng Industrial Zone, No. 135 Qianjin 2nd Road, Bao'an District, Shenzhen

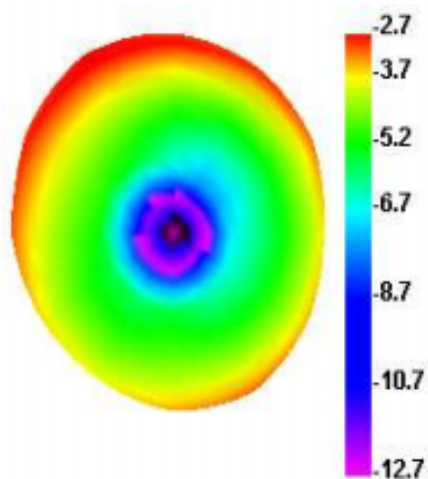
Phone: 0755-29985185 Fax: 0755-27487028

seven:environmental treatment

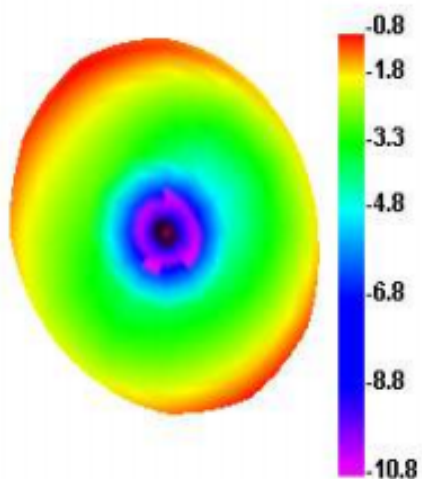
Stick conductive sponge or foam at the red box position to ground the motherboard and heat sink

eight:3D pattern

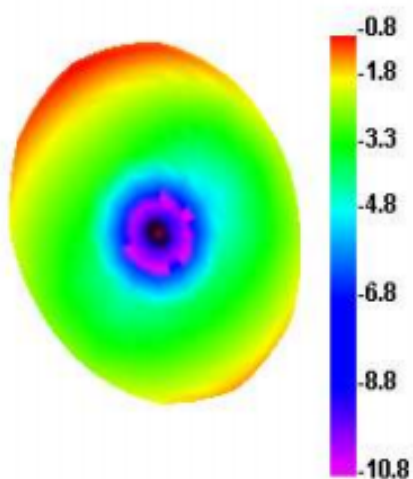
2400.000MHz

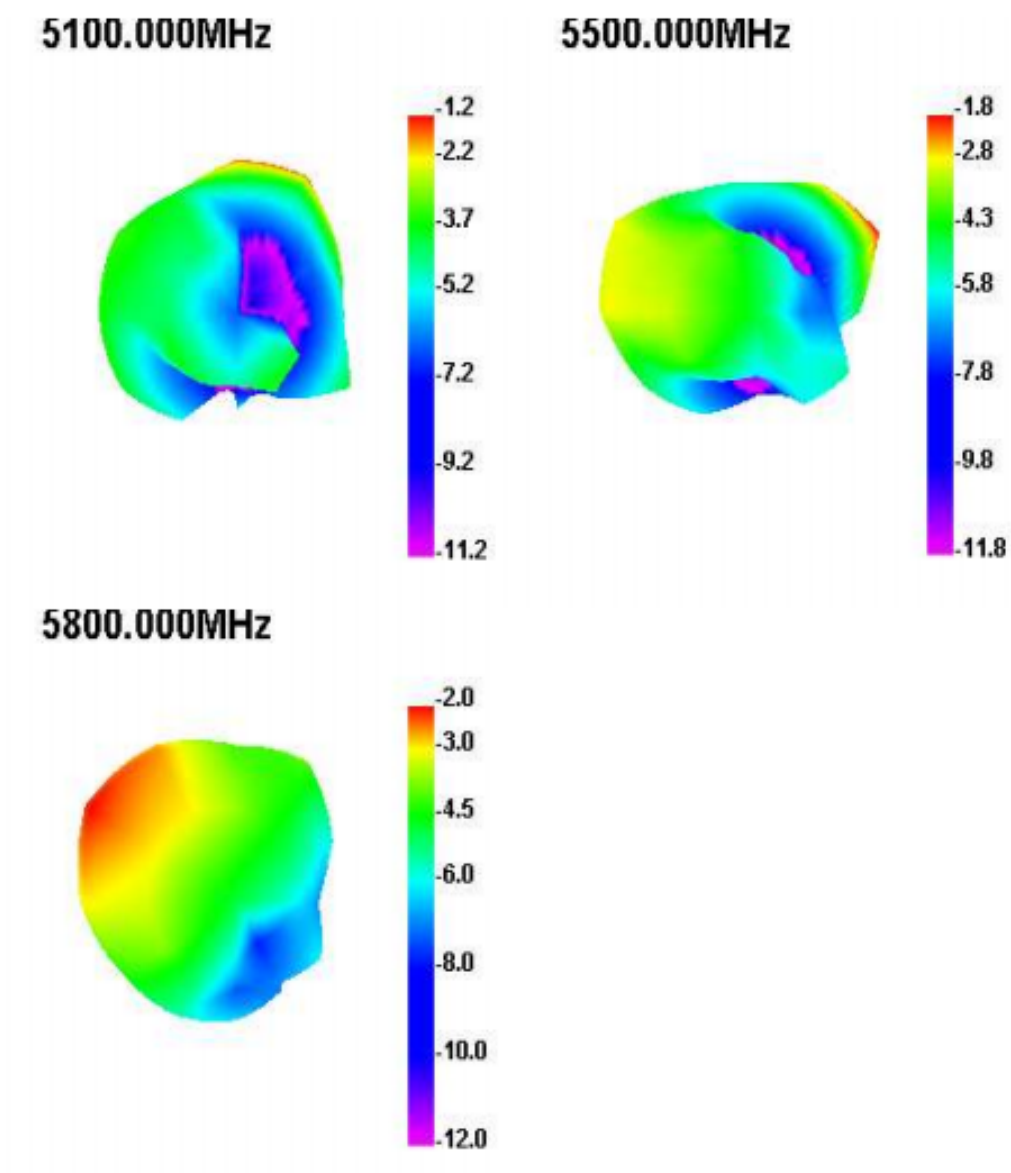


2450.000MHz



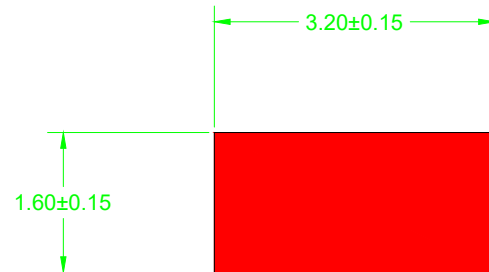
2480.000MHz



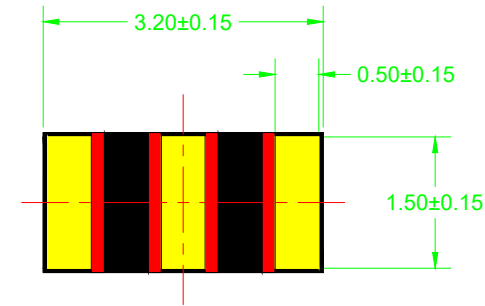


nine: structural drawings

TOP



BOT



Packaging:
Refer to the OA-W03
specification sheet.
Electrical performance:
Refer to the Sward test
report.

SWARD

ShenZhen SWARD
Communication Technology Co.Ltd

922-003-6B0-A

	Signature	Date		Signature	Date	Stage marker				Organization	Ratio
	RD	Joseph	2025. 7. 15			1	2	3	A	mm	N/A
RF											
Process			Approval			Total: 1Number pages:1 Page					

ROHS