Shenzhen Qianmu Communication Technology Co., Ltd

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Focus on antenna solutions
design and production

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item:D26E
day Period: March 19, 2024
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1. Test the environment

2. Description of previous debugging records

3. Description of the matching circuit

4. Active test data

5. Conduction test data

6. Talk current sound simulation test

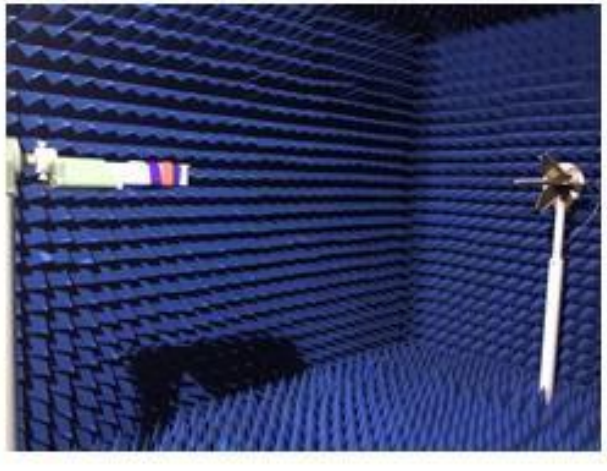
7. Environmental Handling Instructions

8. GPS/WIFI/BTPassive parameters

9. GPS/WIFI/BT measured effect

10. Summary

	Test items	equipment
1. S-parameters （S-parameter）	1. Return loss （Return Loss） 2. Voltage Standing Wave Ratio (VSWR)	Network analyzers: Agilent E5071B HP 8753D
2. Active testing （Active ）	1. Transmit Power (TRP). 2. Reception sensitivity (TIS). 3. Frequency error 4. The screen is off and the screen is on	1. Dark room:ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.Comprehensive Tester: Agilent 8960 E5515B ×2 StarPoint SP6011
3. Passive testing （Passive）	1. Antenna Gain (Gain). 2.Antenna efficiency （Efficiency）	1. dark room： ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Network Analyzers:Agilent E5071B HP 8753D

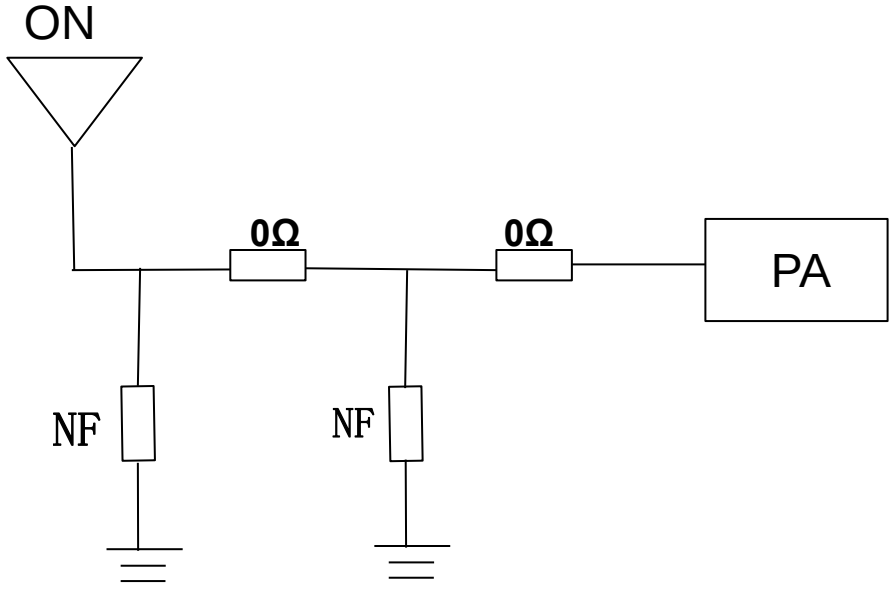


Description of previous debugging records

date	version	Debugging record description
2024-3-19	A	FPC modification sample, test prototype

Models	Bluetooth watch						
Version	mainboard						
Antenna profile		Antenna status		Antenna	Antenna	Design	Match the
	Bluetooth	BT	2.4GHz~2.5GHz	FPC modificati	Monopoly	bracket	not
Prototype status	Commissioning the machine			Environmental			

Matching circuit-BT antenna



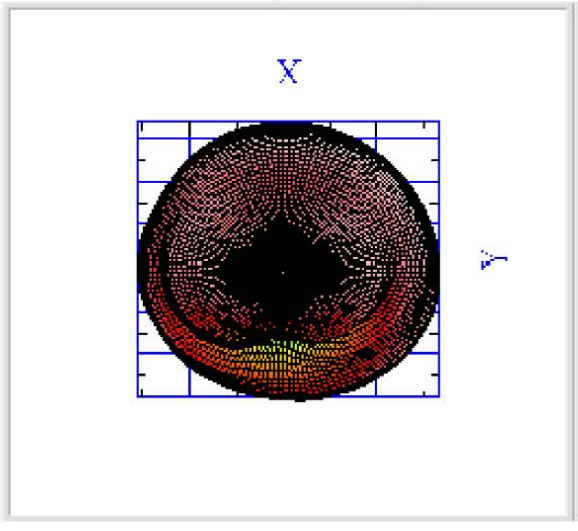
The original match has not changed

Bluetooth antenna benefits

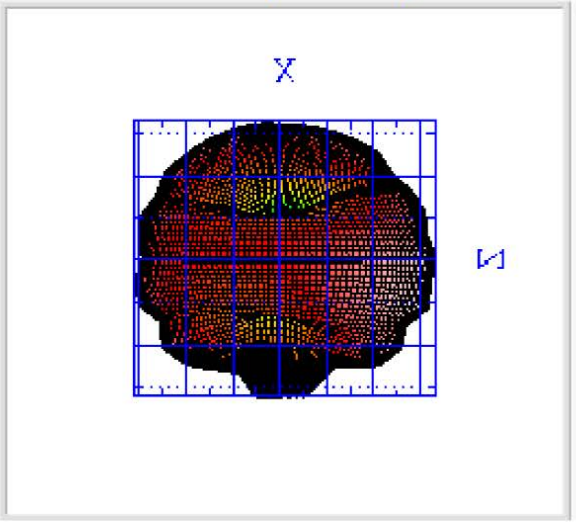
FEITUKEJI											
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-10.30	-10.28	-10.24	-10.00	-9.93	-9.63	-9.75	-9.97	-9.99	-9.86	-9.84
Peak EIRP (dBm)	-4.42	-4.55	-4.65	-4.52	-4.45	-4.16	-4.22	-4.31	-4.16	-3.96	-4.05
Directivity (dBi)	5.88	5.73	5.58	5.48	5.48	5.48	5.53	5.66	5.82	5.90	5.79
Efficiency (dB)	-10.30	-10.28	-10.24	-10.00	-9.93	-9.63	-9.75	-9.97	-9.99	-9.86	-9.84
Efficiency (%)	9.30	9.40	9.50	10.00	10.20	10.90	10.60	10.10	10.00	10.30	10.40
Gain (dBi)	-4.42	-4.55	-4.65	-4.52	-4.45	-4.16	-4.22	-4.31	-4.16	-3.96	-4.05
NHPRP ±Pi/4 (dBm)	-12.26	-12.22	-12.15	-11.90	-11.81	-11.49	-11.59	-11.80	-11.82	-11.70	-11.67
NHPRP ±Pi/6 (dBm)	-14.34	-14.28	-14.20	-13.93	-13.84	-13.52	-13.64	-13.89	-13.95	-13.86	-13.82
NHPRP ±Pi/8 (dBm)	-15.80	-15.74	-15.63	-15.34	-15.24	-14.93	-15.07	-15.34	-15.42	-15.34	-15.29
Upper Hem. PRP (dBm)	-15.28	-15.28	-15.24	-15.03	-15.01	-14.76	-14.92	-15.17	-15.20	-15.11	-15.09
Lower Hem. PRP (dBm)	-11.96	-11.94	-11.89	-11.64	-11.55	-11.23	-11.32	-11.53	-11.54	-11.41	-11.38
Upper Hem. PRP (%)	2.96	2.97	2.99	3.14	3.16	3.34	3.22	3.04	3.02	3.09	3.10
Lower Hem. PRP (%)	6.37	6.40	6.48	6.85	7.00	7.54	7.38	7.03	7.01	7.23	7.28


QM-D26C
天线位置

XY Plane (+ Z View)



XZ Plane (- Y View)



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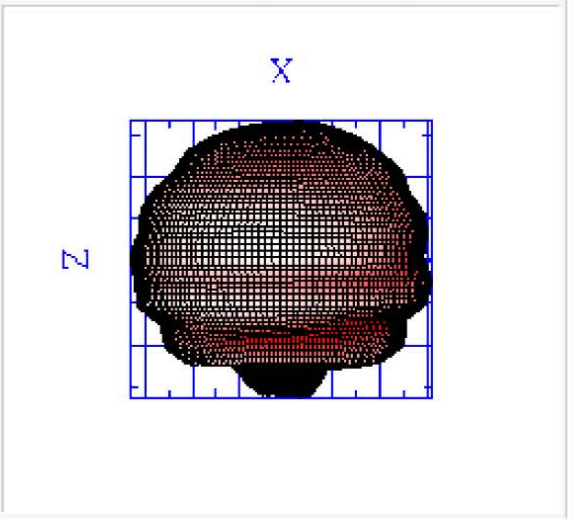
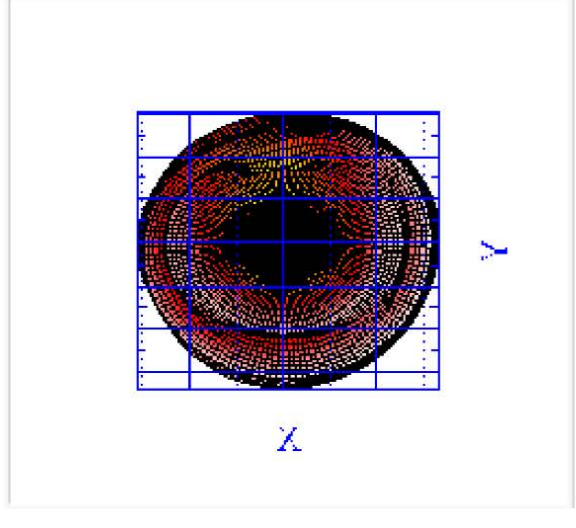
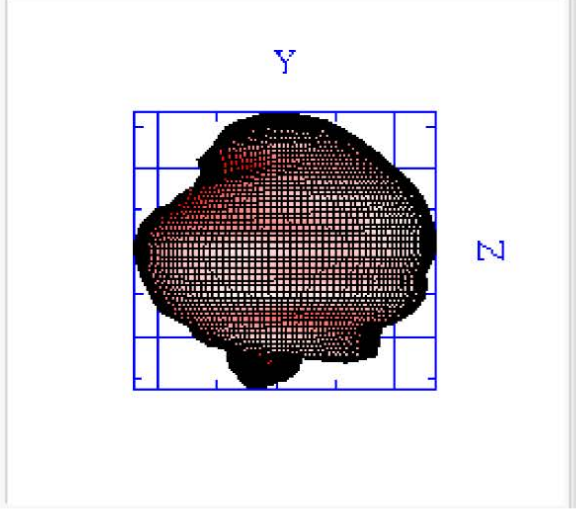


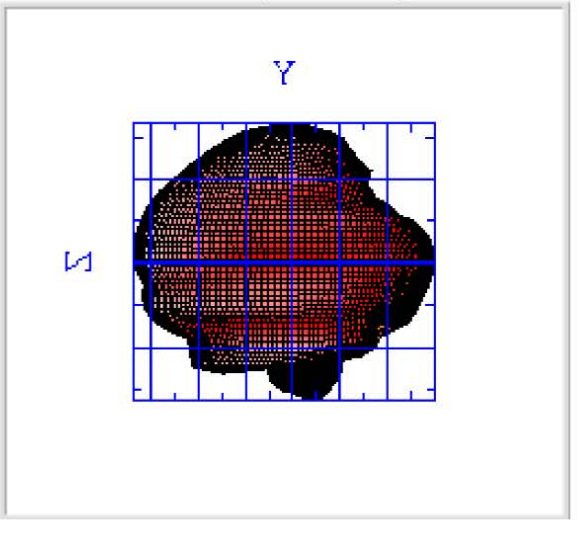
XY Plane (- Z View)



YZ Plane (+ X View)



YZ Plane (- X View)



Indoor test: APP Find Bracelet straight line test 50 meters on the front and 35 meters on the back. 0utdoor test: APP Find Bracelet straight line test 20 meters on the front and 16 meters on the back

Thank you!