

G980HMC Project antenna specification

Customer name: 360

Customer name: G980HMC

Product name: G980HMC-Steel-sheet antenna

Size of product: WIFI

Material code:

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order number	edition	state	Start and end date	person liable	page number	remarks
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The Supplier acknowledges the signature of the following documents:

Responsible person / date		IQC/ date	Review / Date	Approval / Date
MD				
RF				

The Demander acknowledges the signature (please send it back after the confirmation):

The demander's judgment result: ☐ qualified ☐ unqualified			
Development & Design Engineer / Date	SQE Engineer / Date	Purchasing Leader / Date	Development Manager approval / date

Catalogue

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1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications for G980HMC products.

This requirement applies to the selection, testing and acceptance of G980HMC antennas.

1.2 Project basic information

Antenna name:	<u>G980HMC</u>
Antenna frequency:	WIFI:2400-2500MHZ/5100-5800MHZ
Antenna material:	steel disc

2. Technical index requirements

2.2.1 Introduction of test items and equipment

inventory	test item	equipment
Active test	TRP,TIS	Integrated tester, microwave darkroom

2.2.2 Test instructions

Test tools: Agilent8960 instrument, R & SCMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test method: DUT is fixed in the center of the turntable on the same horizontal line as the center of the horn antenna.

The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.3 Active parameters of WIFI antenna

		信道号	TRP (db)	TIS (dbm)
WIFI	11B	CH1	15. 01	-74. 85
		CH6	15. 16	-74. 73
		CH11	15. 23	-72. 36
	11G	CH1	14. 24	-63. 47
		CH6	14. 47	-63. 14
		CH11	14. 69	-60. 75
	11N	CH1	14. 03	-59. 23
		CH6	14. 25	-58. 46
		CH11	14. 56	-56. 58
	11A	CH36	12. 74	-65. 49
		CH64	13. 47	-67. 34
		CH165	14. 28	-70. 92

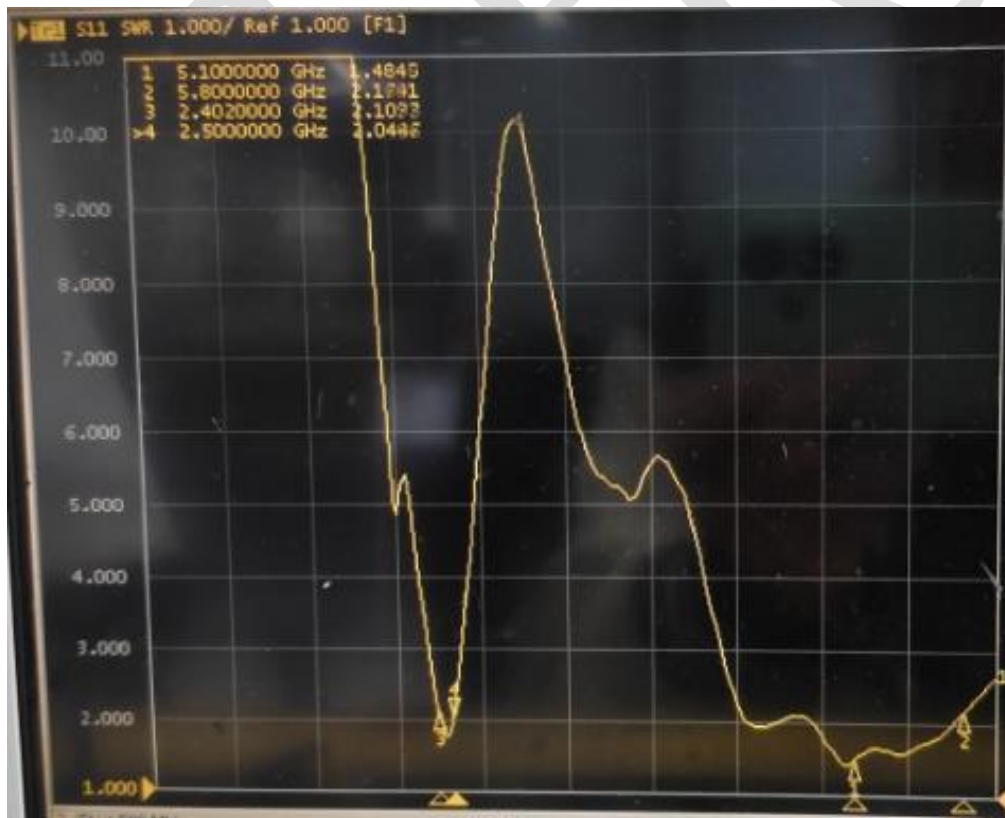
The motherboard uses a split shield cover

		信道号	TRP (db)	TIS (dbm)
WIFI	11B	CH1	15. 02	-75. 5
		CH6	15. 34	-73. 86
		CH11	15. 55	-72. 65
	11G	CH1	14. 75	-64. 69
		CH6	14. 93	-63. 57
		CH11	15. 15	-62. 55
	11N	CH1	14. 48	-60. 08
		CH6	14. 67	-59. 55
		CH11	14. 94	-58. 18
	11A	CH36	12. 91	-71. 33
		CH64	13. 86	-72. 78
		CH165	15. 24	-74. 31

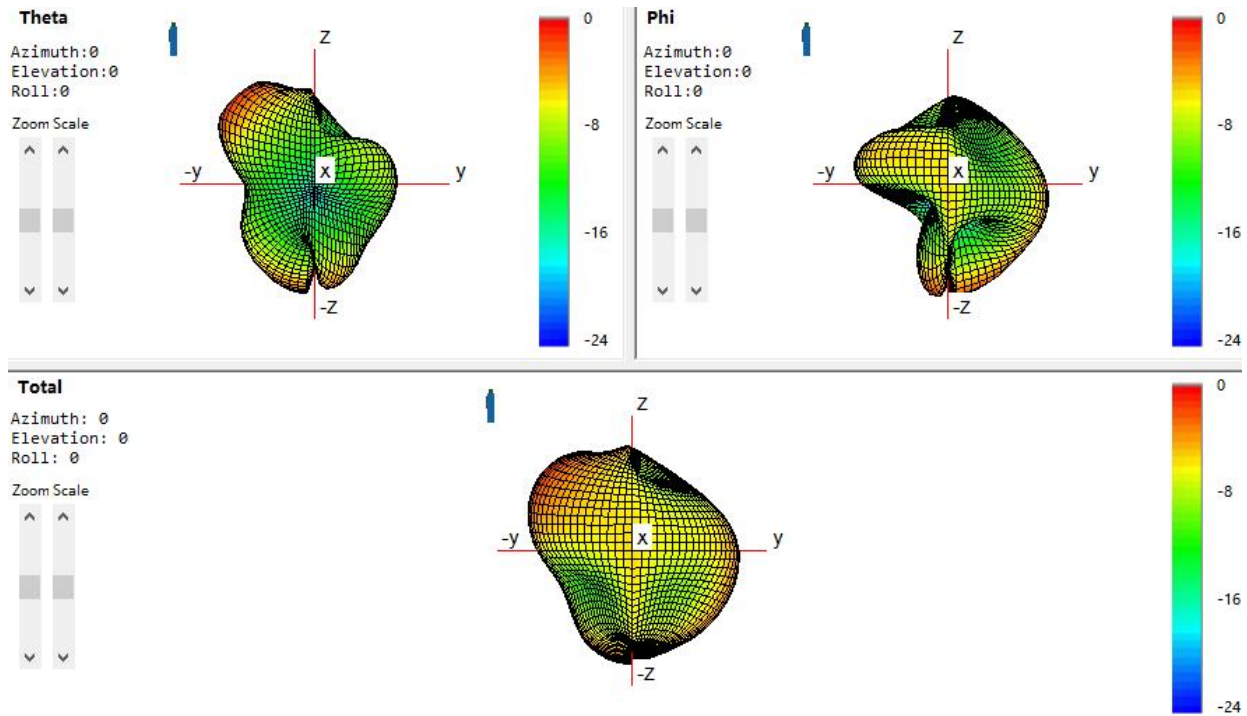
The motherboard uses an integrated shield cover

2.2.4 WIFI antenna passive parameters

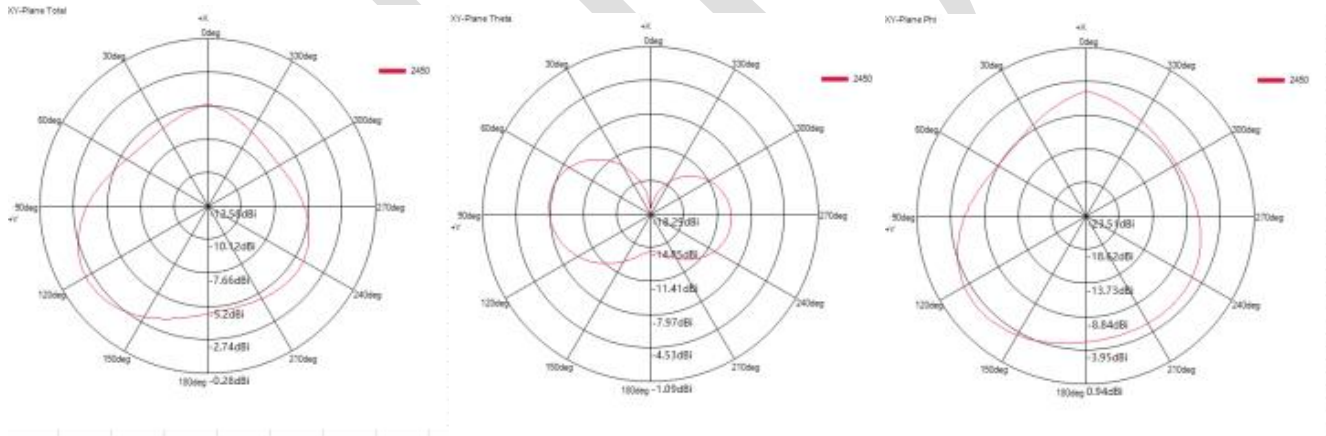
Freq	Effi (%)	Effi (dB)	GAIN (dBi)	Freq	Effi (%)	Effi (dB)	GAIN (dBi)
2400.0	34.2%	-4.66	1.08	5100.0	43.6%	-3.61	1.04
2410.0	35.3%	-4.52	1.12	5200.0	45.3%	-3.44	1.22
2420.0	36.6%	-4.37	1.14	5300.0	46.8%	-3.30	1.48
2430.0	37.2%	-4.29	1.15	5400.0	45.9%	-3.38	1.39
2440.0	38.8%	-4.11	1.20	5500.0	43.2%	-3.65	1.37
2450.0	40.1%	-3.97	1.21	5600.0	42.7%	-3.70	1.25
2460.0	37.4%	-4.27	1.28	5700.0	41.7%	-3.80	1.13
2470.0	36.8%	-4.34	1.30	5800.0	41.3%	-3.84	1.10
2480.0	35.5%	-4.50	1.19				
2490.0	34.7%	-4.60	1.11				
2500.0	34.1%	-4.67	1.03				



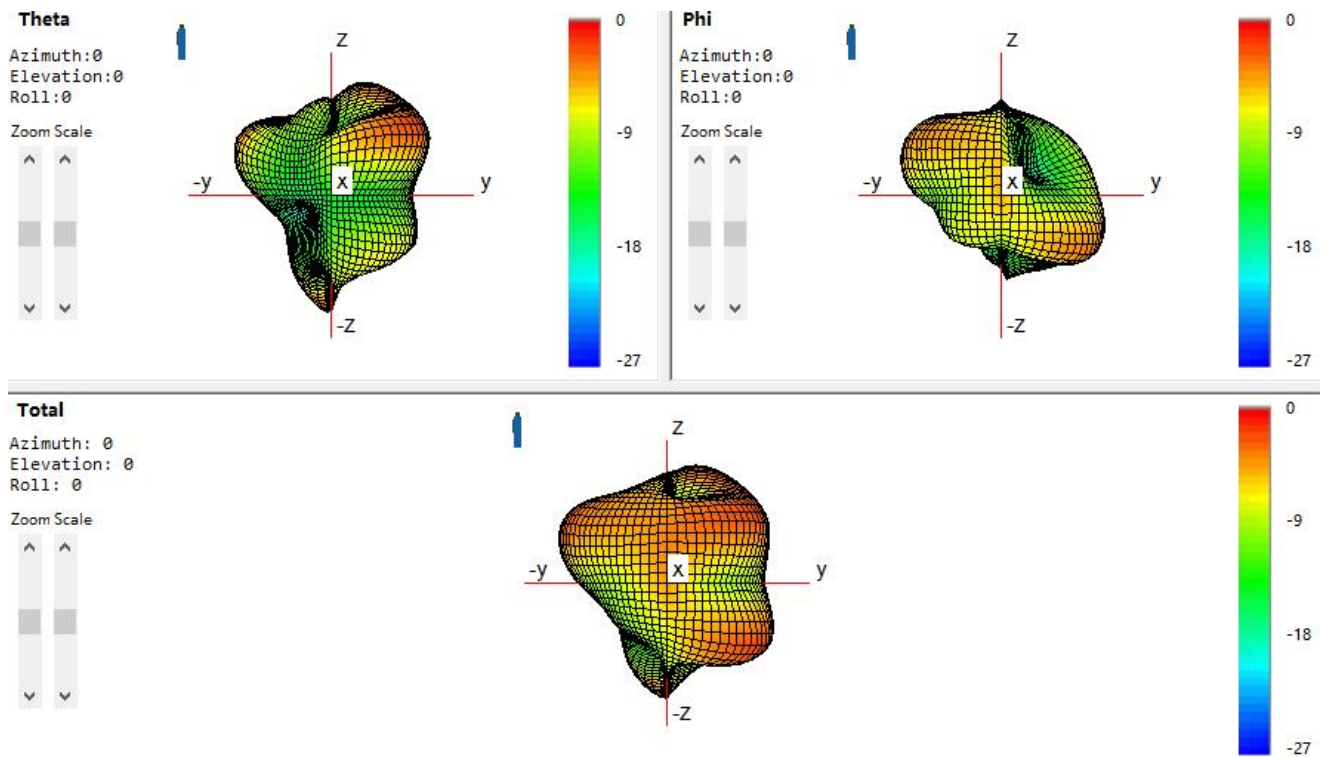
2.2.5 WIFI 2.4G antenna direction



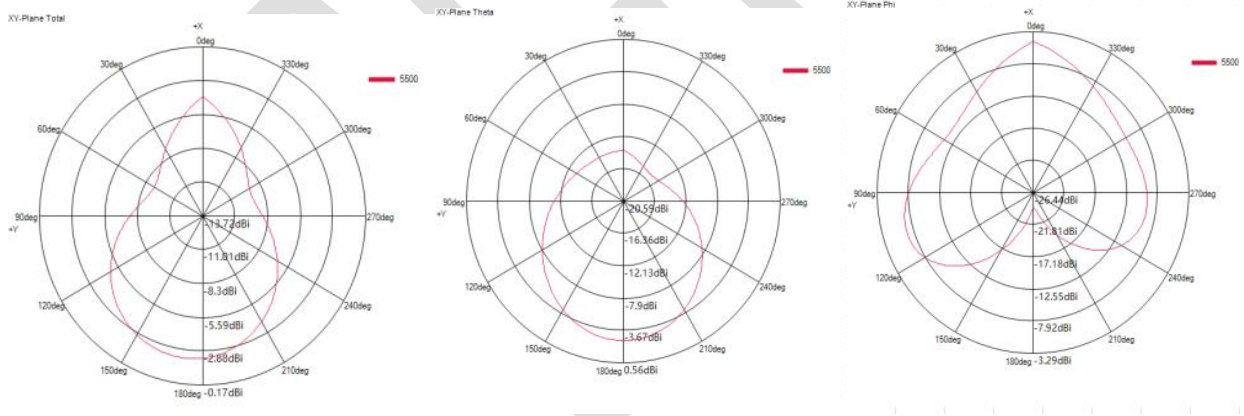
2.2.6 WIFI 2.4G antenna plan



2.2.7 WIFI 5.8G antenna direction



2.2.8 WIFI 5.8G antenna plan

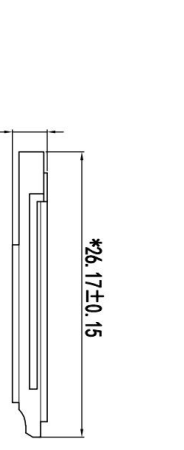
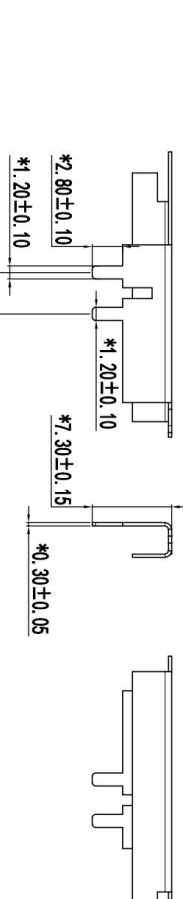
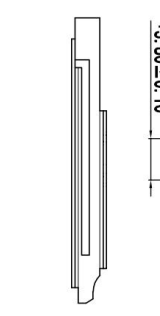


2.2.9 Environmental treatment

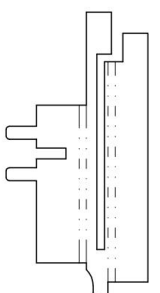
- 1.The cooling aluminum block is attached to the conductive sponge and the shielding cover is grounded, and the cooling silicon only retains the core area
- 2.Cato affixed conductive cloth to shield cover
- 3.The WIFI module is grounded to the screen with a conductive sponge of appropriate height

3.Engineering drawing

3.1 Sheet steel antenna

A 	B 	C 	D Technical requirements: 1. Material: SUS304 Plated with nickel, thickness 0.30mm; 2. The size with * and the size with tolerance are the key control sizes, and other sizes are controlled according to the tolerance of the detail column; 3. The raw edge is not more than 1/4 of the material thickness, and the difference between the knife edge and the joint is not more than 0.1mm; 4. Clean surface, no oil, dirt, etc.; 5. No indentation, fracture, deformation and other bad; 6. The product needs to undergo 48-hour salt spray test. 7. Products meet ROHS standards and reliability test requirements. <table border="1"> <tr> <td data-bbox="181 436 470 571">DATE</td><td data-bbox="181 571 470 705">Modify the content</td><td data-bbox="181 705 470 840">1</td><td data-bbox="181 840 470 974">2</td><td data-bbox="181 974 470 1108">3</td><td data-bbox="181 1108 470 1243">Version</td><td data-bbox="181 1243 470 1377">Revise</td><td data-bbox="181 1377 470 1512">4</td><td data-bbox="181 1512 470 1646">5</td><td data-bbox="181 1646 470 1780">6</td><td data-bbox="181 1780 470 1915">7</td><td data-bbox="181 1915 470 2049">8</td></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>	DATE	Modify the content	1	2	3	Version	Revise	4	5	6	7	8												
DATE	Modify the content	1	2	3	Version	Revise	4	5	6	7	8																

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4. Bill of Materials

233080 (G980HMC) BOM表

edition: T:B

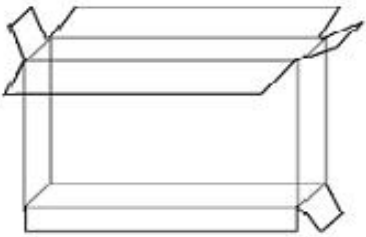
client: 233

Machine kind: 233080

Make the date: 2025/3/10

项次	*material code	*name of material	Material category	*type	specifications and models	pigment	*measure ment	dosage	remarks
1	233080-IA-TB	steel antenna		G980HMC	SUS304 nickelage 26.17*3.19*7.30*0.3mm	true qualiti	PCS	1	
1.1	233080-IA-01-TB	steel antenna		G980HMC	SUS304 nickelage 26.17*3.19*7.30*0.3mm	true qualiti	PCS	1	
affirm: examine and verify: fabrication: BYZ									

5.Package drawing

Packaging method diagram		
product name	Steel antenna	
P / N	233080	
Project model	G980HMC	
File details	Carton Size 1: 270*260*200MM Carton Size 2: 260*200*200MM Carton Size 3: Depending on the order quantity / volume	
	Boating method	Packaging by order quantity
	Total number of binning	Packaging by order quantity
labeling requirement	Tag Size 1: Universal use 100 * 100mm Tag Size 2: According to customer requirements	
matters need attention		
1. Due to the limitation of order quantity, the packing method of each material is the size of the box according to the total quantity of the order or the physical volume		
2. Storage temperature: room temperature		
3. Preservation conditions: store them in a cool and dry place		

THOT