

Shenzhen Broadradio RFID Technology Co.,Ltd

Antenna specification

Customer	Honeywell
Customer PN. & M/N	50155177-001
Project Name	IH45-FCC
Product Type	RFID
Release Date	2023-02-08
Version	1.0
Author	
Review	

Customer Signature

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1. Over View

This document is an acknowledgment of the Honeywell IH45 RFID Antenna.

This machine is a RFID Reader, working frequency band is 902~928MHz.

2. Specification

3. Product State



4. Test Environment

Agilent E5071C vector network analyzer was used for Antenna input characteristic testing, as shown in Figure 2

GTS-RZ1800 3D near-field microwave anechoic chamber was used for The antenna radiation characteristic testing, as shown in Figure 1.

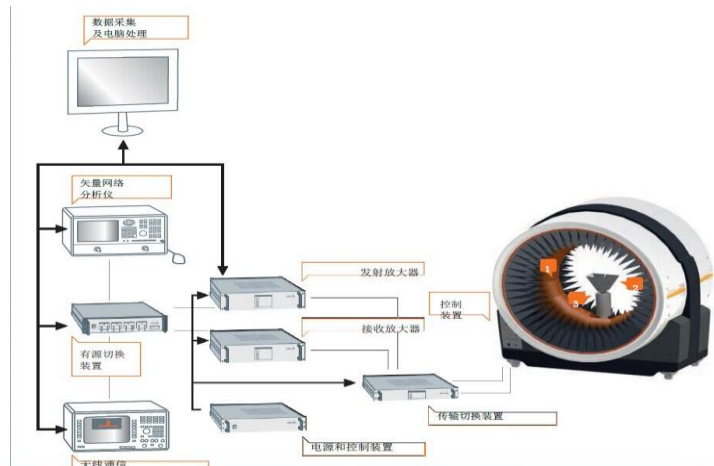


图 1

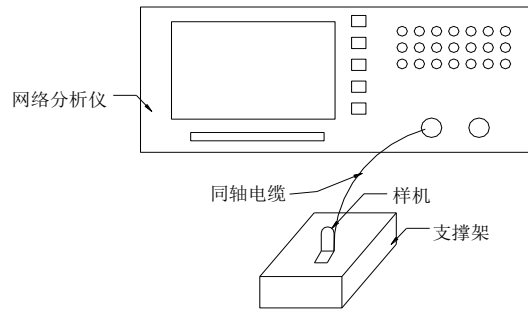
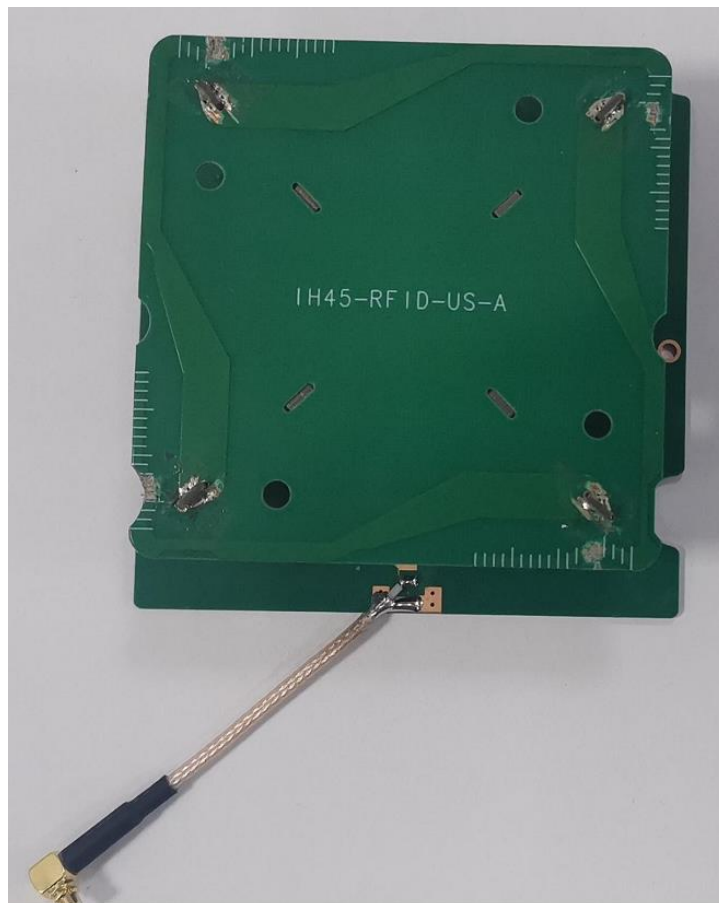


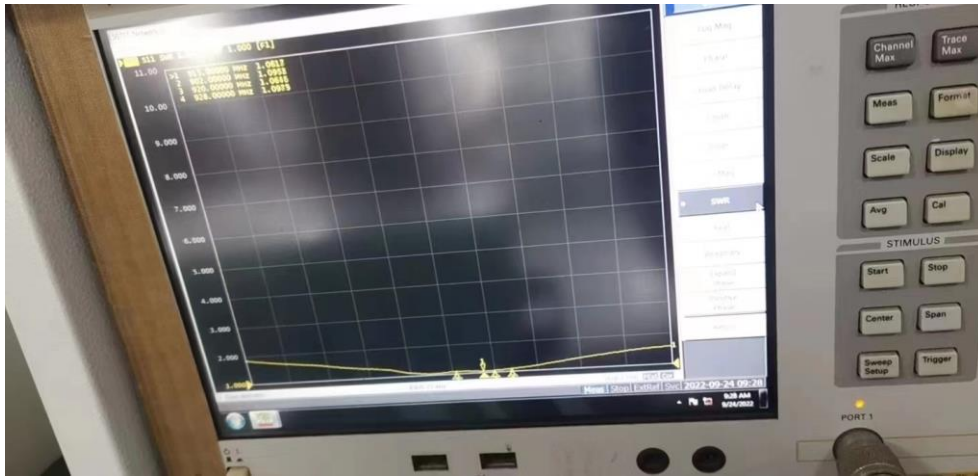
图 2

5. Antenna test result

5.1 Antenna status



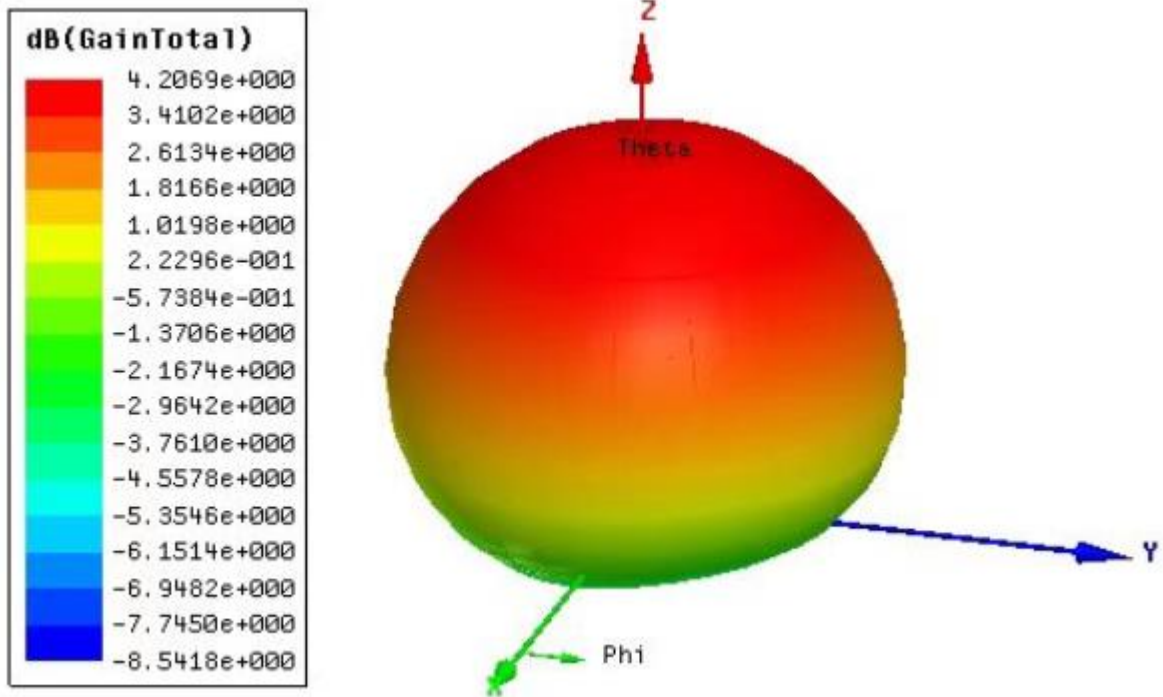
5.2 VSWR



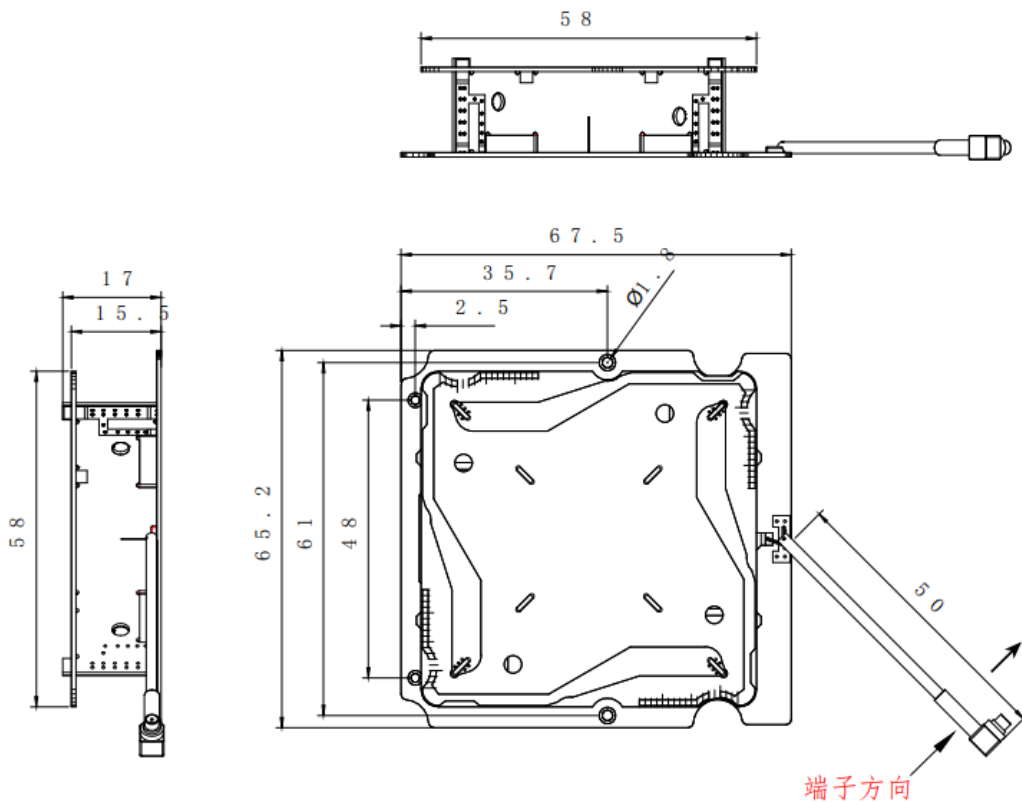
5.3 Efficiency

Frequency (Mhz)	Efficiency (%)	Gain.dB	Frequency (Mhz)	Efficiency (%)	Gain.dB
902	68.2	4.04	916	63	3.8
903	69	4.09	917	62.2	3.77
904	69.7	4.13	918	61.3	3.73
905	70.1	4.16	919	60.4	3.7
906	70	4.15	920	59.4	3.65
907	69.7	4.13	921	58.3	3.6
908	69.2	4.1	922	57.2	3.53
909	68.5	4.06	923	61.4	3.76
910	67.8	4.02	924	60.3	3.7
911	67	3.98	925	59.1	3.62
912	66.2	3.93	926	58	3.52
913	65.4	3.89	927	56.8	3.43
914	64.5	3.86	928	55.9	3.33
915	63.6	3.82			

5.4 Radiation Pattern



6 Structure Diagram



Bluetooth Antenna Specification

Company	Honeywell	Model	IH45_BT_ANT
Project Name	IH45	Frequency	2400-2500MHz
Color	black	Version	A
Antenna Size	12*5mm	Antenna Type	PIFA
Customer PN.			

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1.Specification

2.Electrical performance

2-1 Criterion

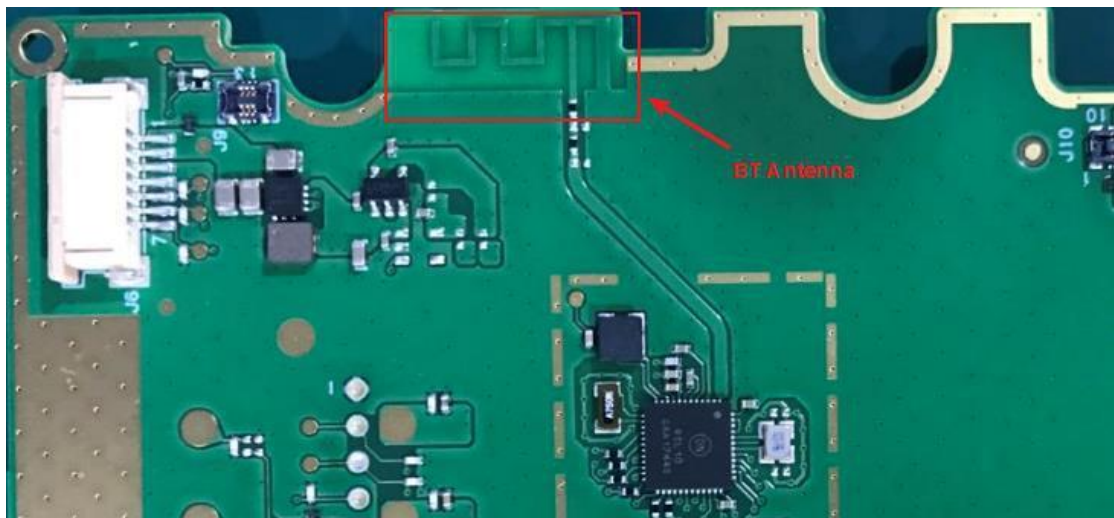
2-2 antenna matching network

3.Efficiency

1.Specification

The report mainly provides the test data of passive performance parameters of BT antenna, the frequency band covered by the antenna

2400-2500MHz. The antenna sample is shown in Figure (1).



图（1）

2 Electrical performance

2-1 Criterion

The working frequency band of BT antenna is 2400-2500MHz. The following table shows the return loss performance of the antenna.

Frequency (MHz)	Return loss (dB)
2400-2500	$\leq -10\text{dB}$

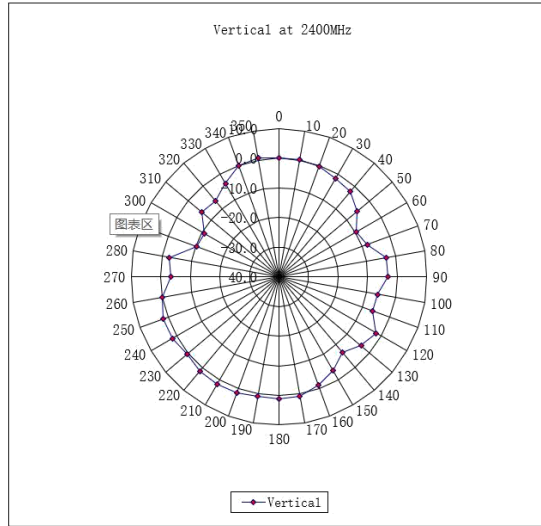
2-2 BT Antenna matching network

No match circuit

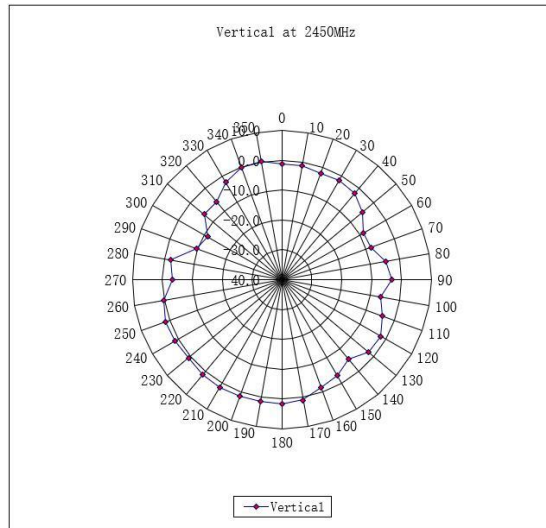


3 Efficiency

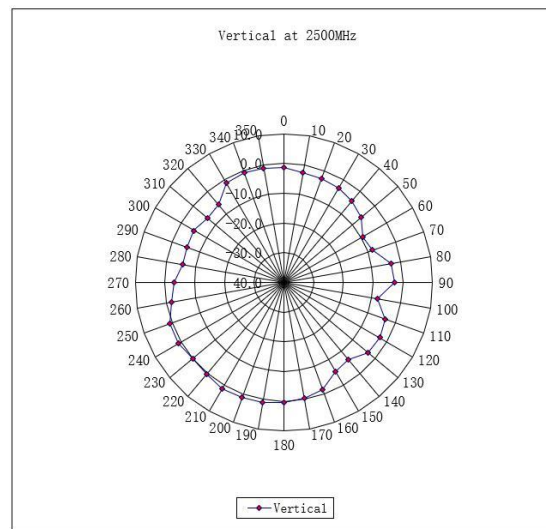
Frequency(MHz)	Efficiency	Efficiency . dB	Gain . dB
2400	40%	-4.02	1.85
2410	40%	-4.00	1.76
2420	40%	-3.97	1.67
2430	41%	-3.92	1.62
2440	41%	-3.85	1.63
2450	42%	-3.72	1.69
2460	43%	-3.62	1.69
2470	44%	-3.57	1.68
2480	44%	-3.58	1.61
2490	43%	-3.65	1.51
2500	42%	-3.79	1.31



2400MHz Max Peak Gain 1.85dBi



2450MHz Max Peak Gain 1.69dBi



2500MHz Max Peak Gain 1.31dBi