

Sample specification

The following contents shall be filled in by the sample manufacturer: Production company: Changfeng Electronic product No. CF-002-HDRFID Product name: 80 * 80 _ UHF _ ANT Customer model: H3100RFID Make WEIXING Examine and verify WEIXING Ratify LCY	
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The following contents shall be completed by the customer:

Recognize the project

☐part

☐end product

☐packing material

☐raw and processed material

Recognize the purpose:

Approver Signatures			
engineer	Project responsible	QC	ratify
☐qualified ☐unqualified ☐else	☐qualified ☐unqualified ☐else	☐qualified ☐unqualified ☐else	

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Amendant record

Revision	Date	Change Notification	Description
T:A	20231013	shakedown test	

Technical requirement	Qualification
Model Type	80*80_UHF_ANT
Frequency range	902MHZ-928MHZ
Gain	4.5dBi@915MHz
Antenna Efficiency	55%@915MHz
SWR	≤ 1.5
Axial Ratio	0.86dB@915MHz
Polarization	right-handed circular polarization
3dB Beamwidth	$111 \pm 6@Phi=0^\circ$, $122 \pm 6@Phi=90^\circ$
Radiation Pattern	directional
Impedance	50Ω
Power Handling	10W
Interface	MMCX1.78
Cable Length	65mm
Dimensions	80mm*80mm*10.26mm
Operation Temp	-35 - 70° C
Storing Temp	-35 - 70° C

Antenna test environment

Antenna input characteristics were tested using a Agilent E5071B vector network analyzer.



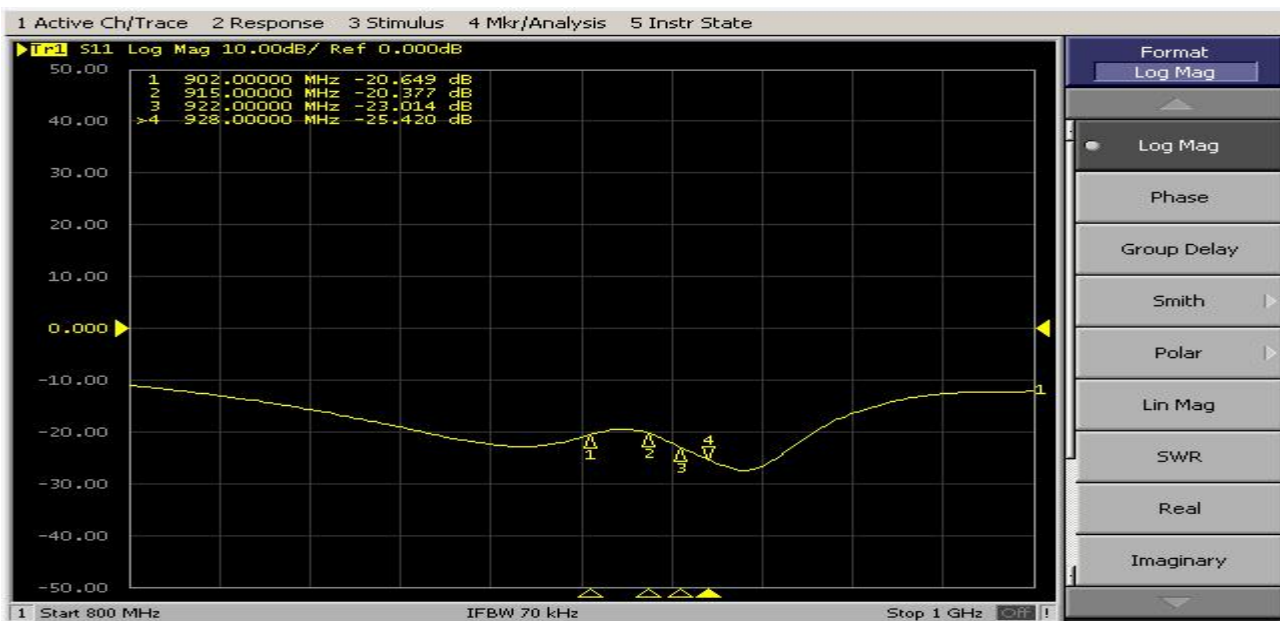
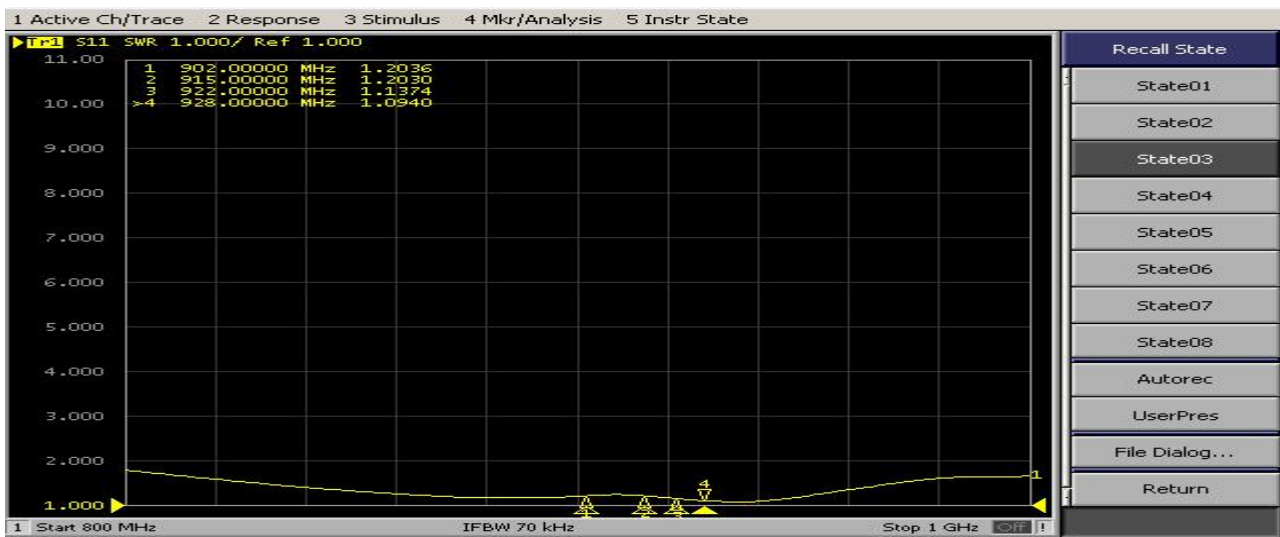
Antenna radiation characteristics test using the antenna dark chamber test



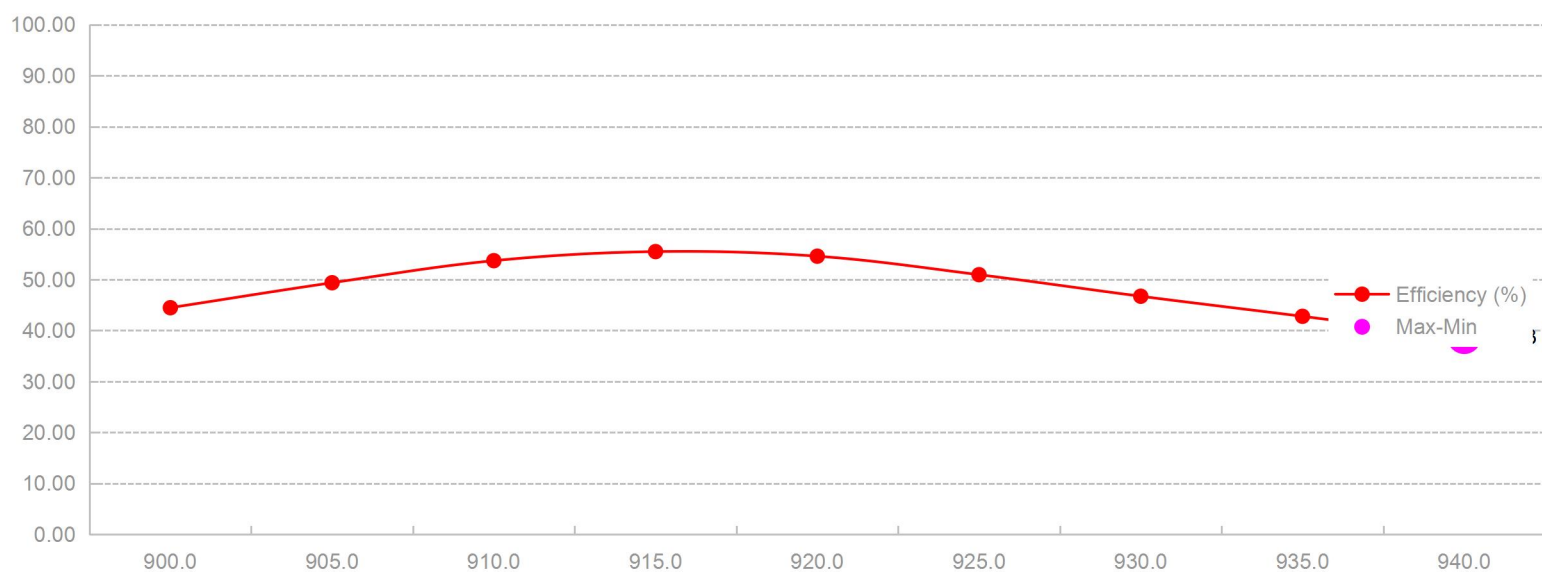
Antenna test results

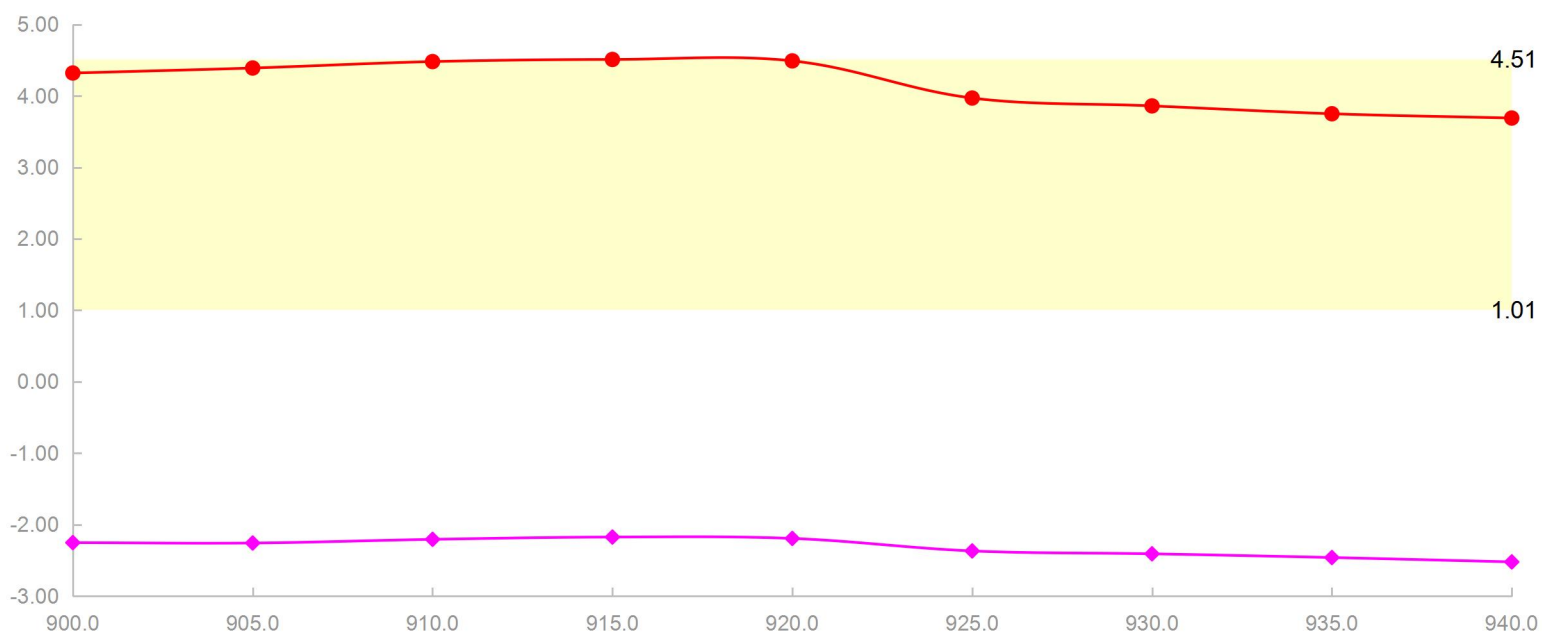
1、Reflectance coefficient and voltage standing wave ratio

Frequency range	reflection coefficient	SWR
915MHz	-20.3dB	1.2

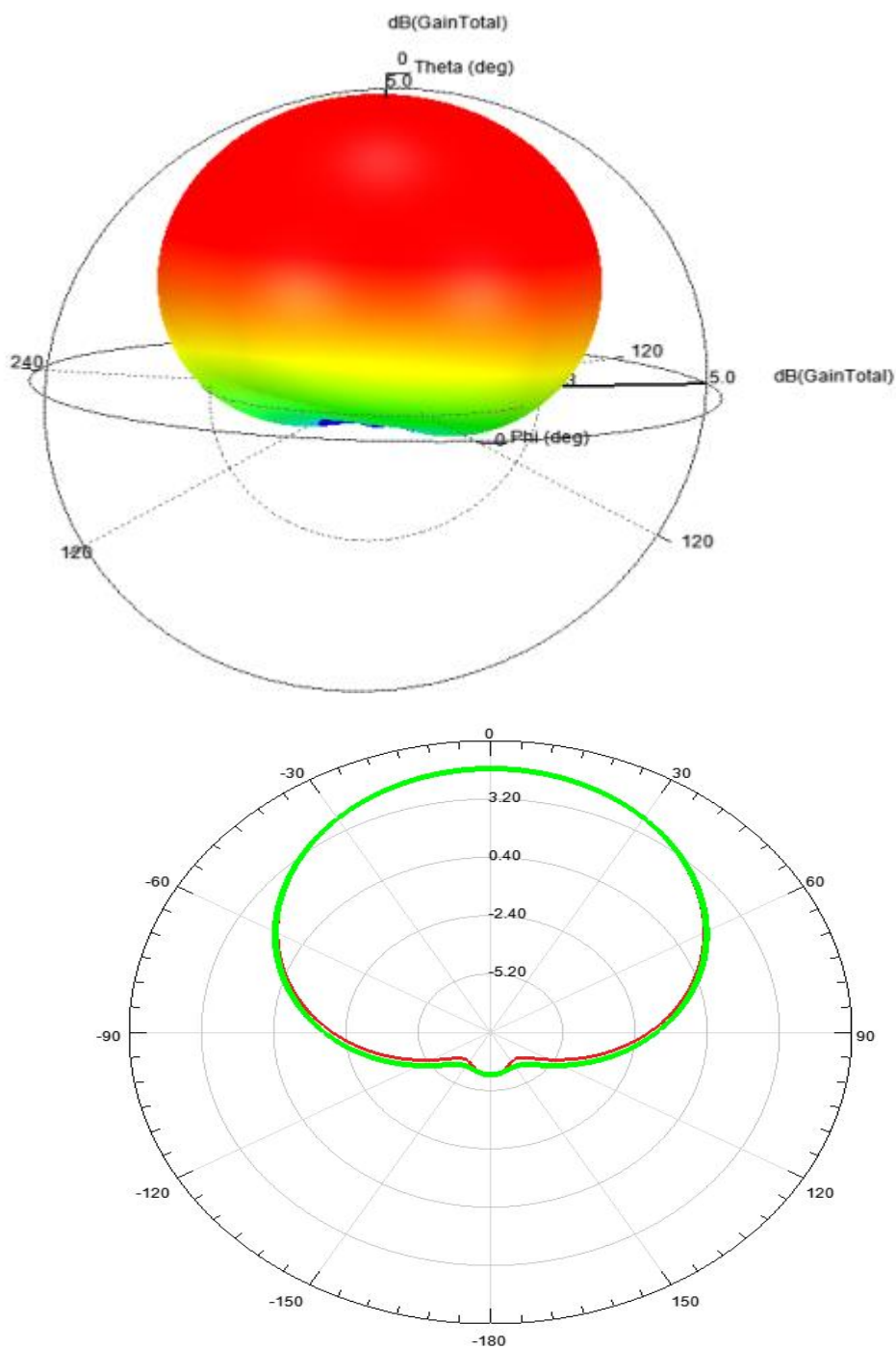


Frequency ID	9	10	11	12	13	14	15	16	17
Frequency (MHz)	900.0	905.0	910.0	915.0	920.0	925.0	930.0	935.0	940.0
Efficiency (dBi)	-2.25	-2.26	-2.21	-2.17	-2.19	-2.37	-2.41	-2.46	-2.52
Gain (dBi)	4.32	4.39	4.48	4.51	4.49	3.97	3.86	3.75	3.69
Efficiency (%)	44.47	49.37	53.70	55.48	54.58	50.95	46.72	42.78	38.73
Directivity (dB)	4.01	4.07	4.16	4.30	4.40	4.51	4.57	4.59	4.58
Peak Gain Position (Theta)	6.00	5.00	5.00	22.00	7.00	8.00	9.00	10.00	10.00
Peak Gain Position (Phi)	83.00	74.00	62.00	227.00	43.00	43.00	44.00	45.00	50.00
Efficiency ThetaPol (%)	29.08	29.53	30.16	30.52	30.26	28.89	28.27	27.54	26.68
Efficiency PhiPol (%)	30.46	29.94	30.01	30.10	30.09	29.08	29.17	29.21	29.28
Upper Hem. Efficiency (%)	41.65	41.63	42.13	42.45	42.26	40.55	40.10	39.47	38.72
Lower Hem. Efficiency (%)	17.89	17.83	18.05	18.17	18.09	17.41	17.33	17.27	17.23

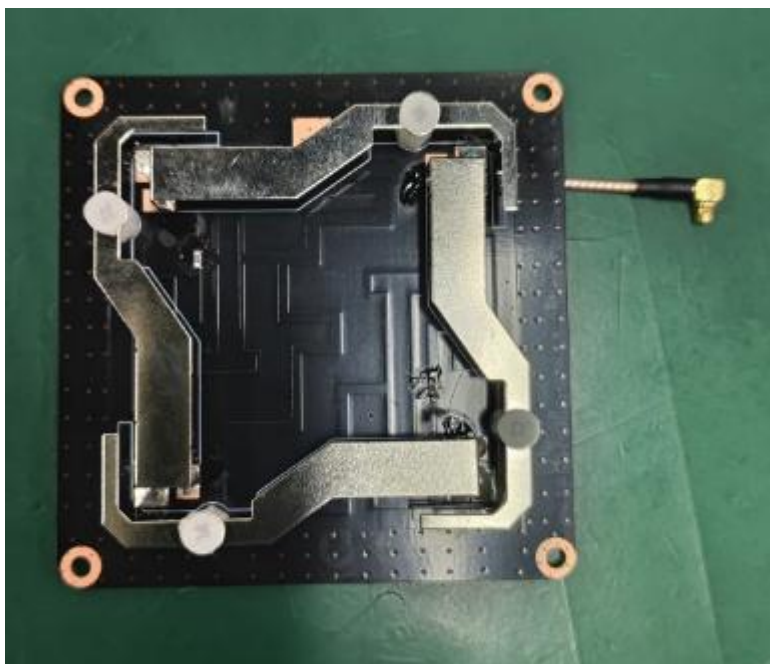




Radiation direction diagram of the antenna



Antenna physical picture



Engineering structure diagram

