

GNSS full-band Survey Antenna

Product introduction

PM398 is an high precision measuring antenna which can support full bands for GPS, BDS , GLONASS and Galileo.It can be widely used in surveying and mapping, marine surveying, geological monitoring, bridge deformation monitoring, automated harbor, reference station of UAV and unmanned vehicle.

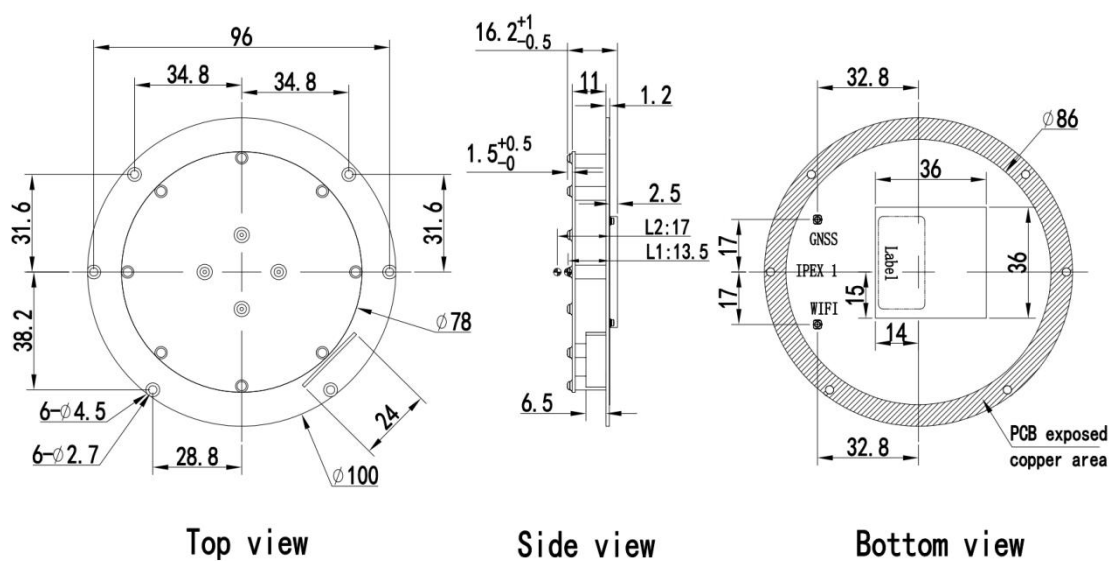
Key Features

- 1、 Small Size, light weight, compact structure;
- 2、 Supports ,Wi-Fi/Bluetooth;
- 3、 Strong anti-interference ability to endure the harsh operating environments;
- 4、 Powerful system compatibility, easy for machine integration;
- 5、 Stable phase center guarantees the accuracy of positioning within millimeter level.

Technical parameters

Passive antenna characteristics		Low Noise Amplifier Characteristics		Structural and environmental adaptability	
Frequency Range	BDS B1/B2/B3	LNA Gain	L2: 30 ± 2 dB L1: 30 ± 2 dB	Dimensions	$\Phi 100\text{*H}16.2\text{mm}$
	GPS L1/L2/L5				
	GLONASS L1/L2/L3				
	GALILEO E1/E5a/E5b/E6				
	L-Band				
WIFI/BT					
Antenna Impedance	50Ω	Noise figure	≤ 2.0 dB	Weight	≤ 200 g
Polarization	GNSS:RHCP WIFI:Linear polarized	VSWR	≤ 2.0	Connector	Ipex-1
Antenna axis ratio	GNSS ≤ 3 dB	Passband ripple	± 2 dB	Mounting	6pcs screws
Horizontal coverage	0° ~360°	Operating voltage	DC3.3~12V	Operating TEMP	-40℃ ~+85℃
VSWR	GNSS ≤ 2.0	Operating current	≤ 50 mA	Storage TEMP	-55℃ ~+85℃
Maximum gain	GNSS ≥ 4.0 dBi			Storage humidity	95%noncondensing
Phase center error	± 2 mm				

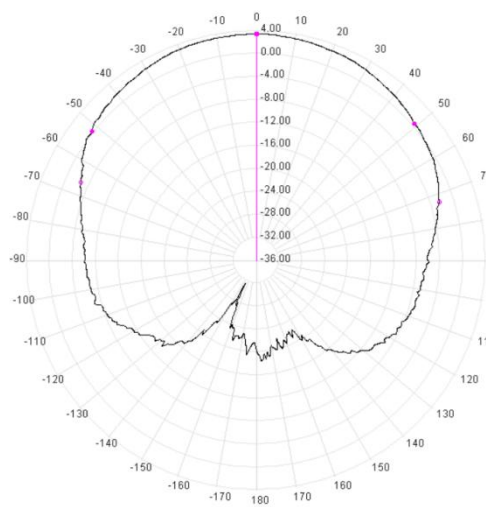
Structural characteristics (dimensional tolerances ± 0.3 mm not noted)



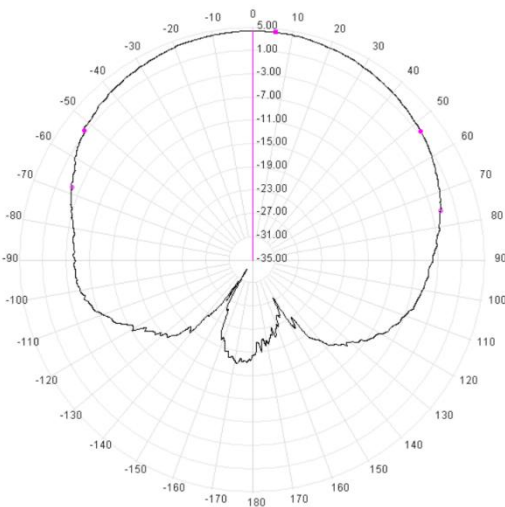
GNSS antenna gain

Frequency (MHz)	Antenna gain (dBi)	Antenna axis ratio (dB)
1175	3.4	1.7
1205	4.5	1.3
1225	4.9	0.8
1240	4.5	0.7
1270	3.5	1.3
1540	3.2	0.4
1560	4.5	0.3
1575	4.2	0.5
1590	3.5	0.3
1600	3.0	0.6

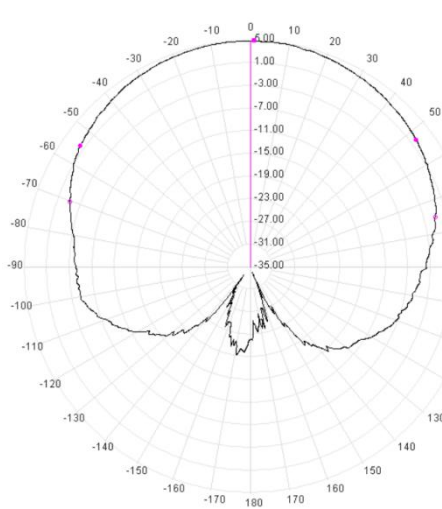
GNSS antenna radiation pattern



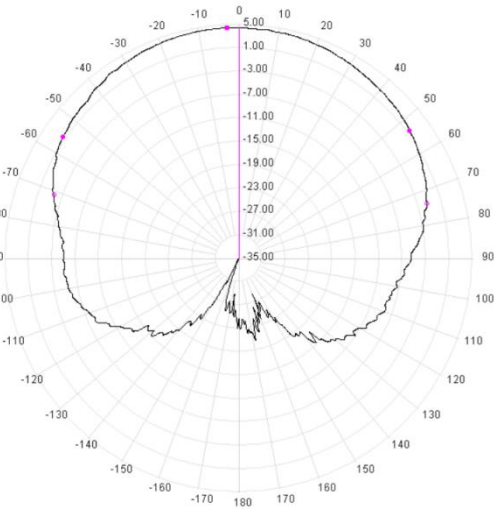
(Freq=1176MHz)



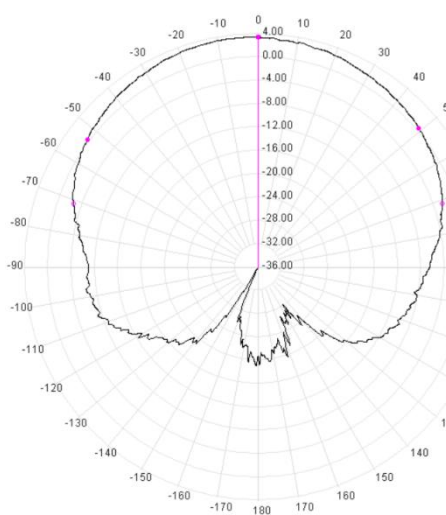
(Freq=1205MHz)



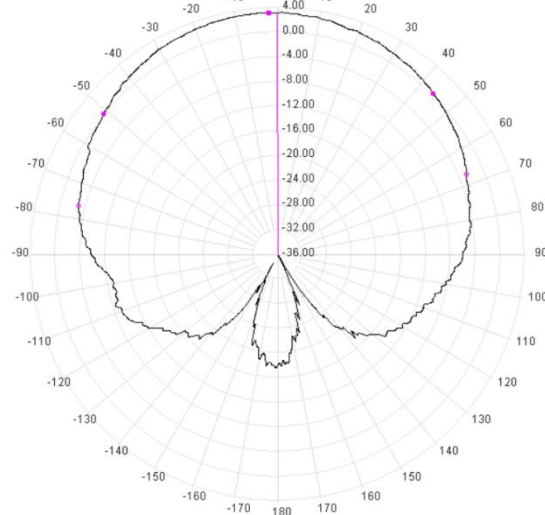
(Freq=1225MHz)



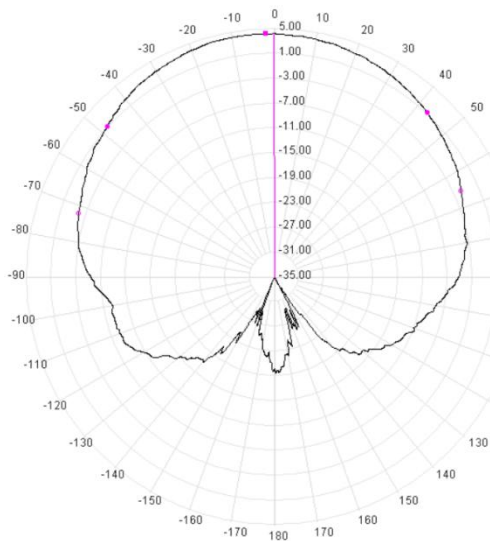
(Freq=1240MHz)



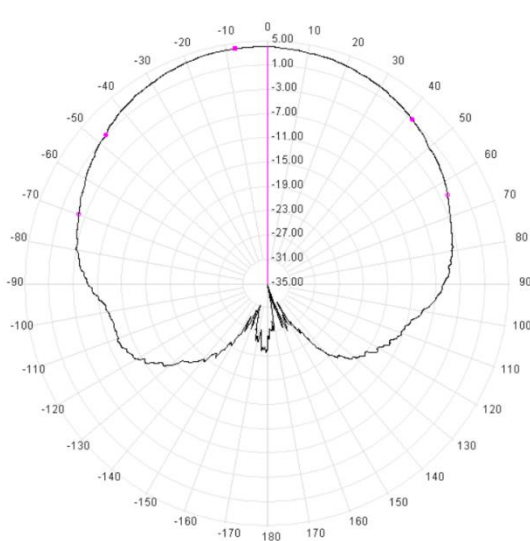
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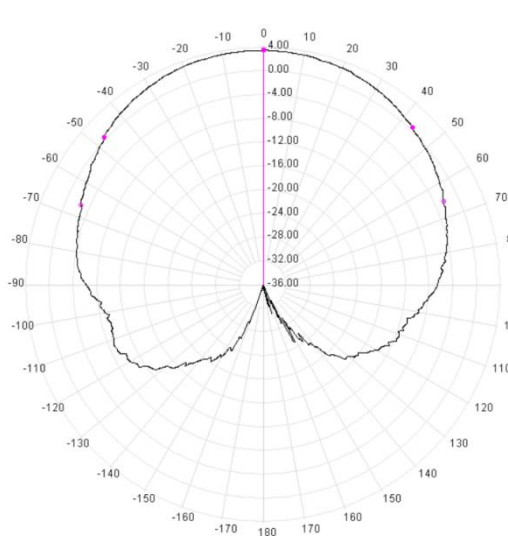
(Freq=1540MHz)



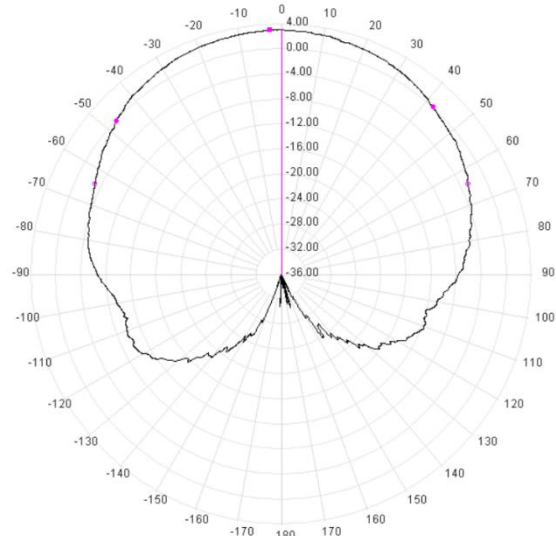
(Freq=1560MHz)



(Freq=1575MHz)



(Freq=1590MHz)

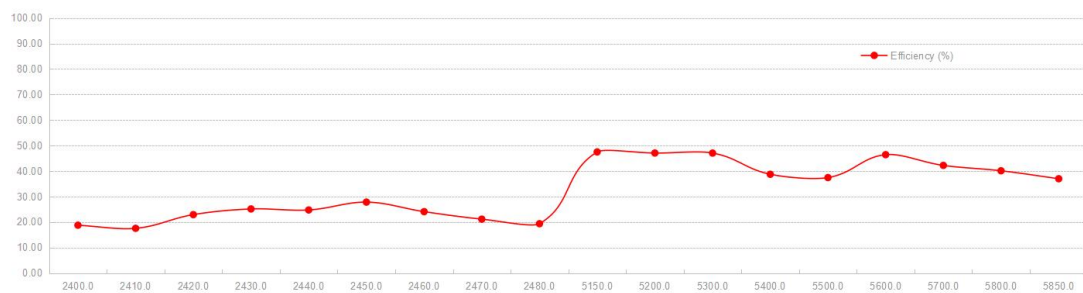


(Freq=1600MHz)

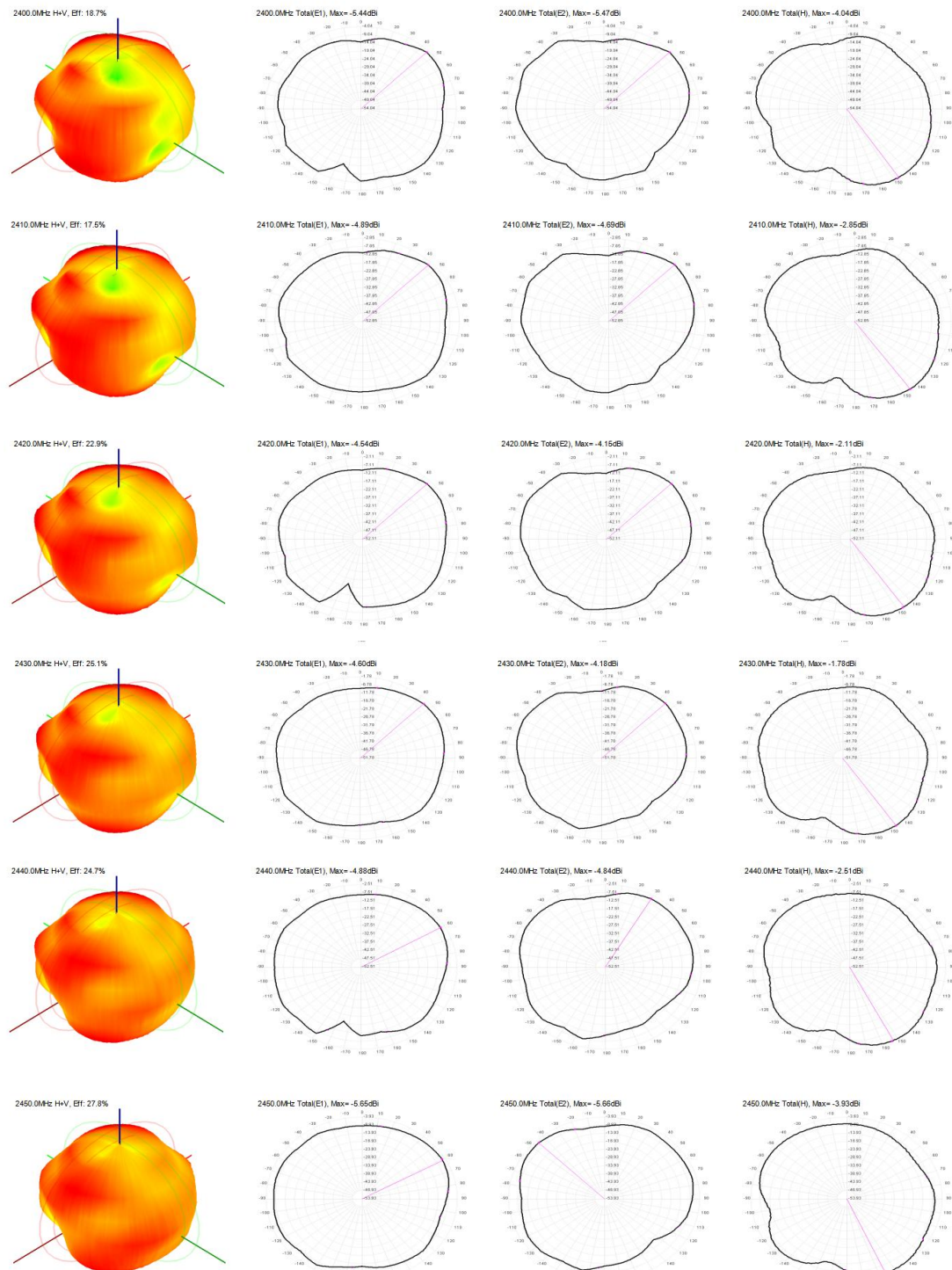
WIFI---Gain & Efficiency (%)

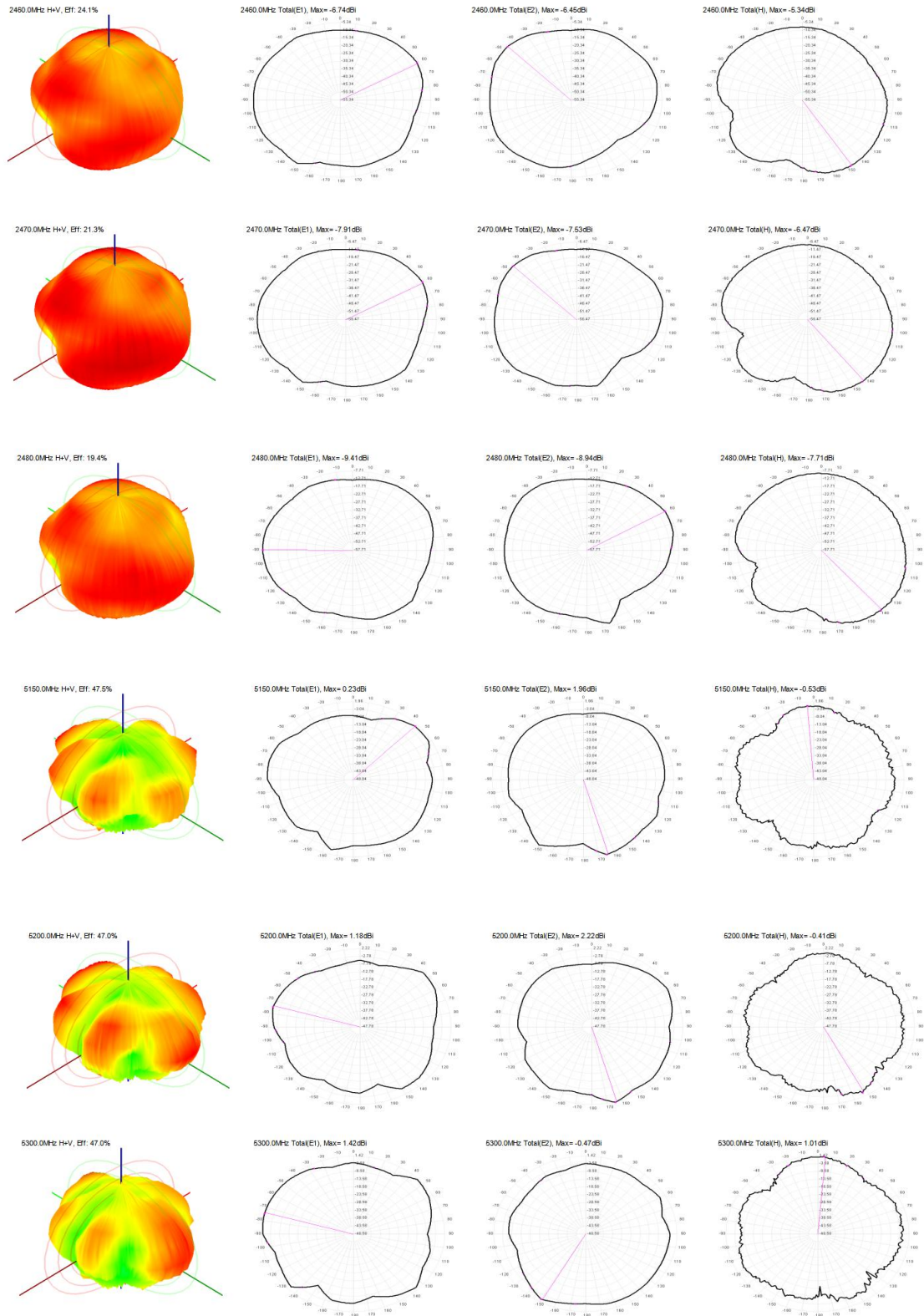
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480
Maximum gain(dBi)	0.33	0.31	0.51	1.03	0.91	1.21	0.76	0.41	0.37
Efficiency (%)	18.7	17.5	22.9	25.1	24.7	27.8	24.1	21.3	19.4

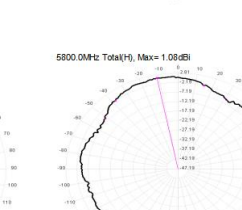
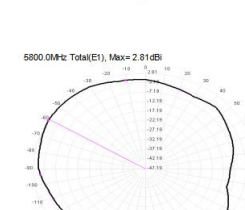
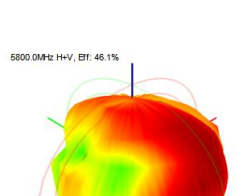
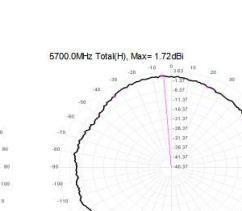
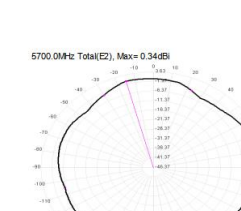
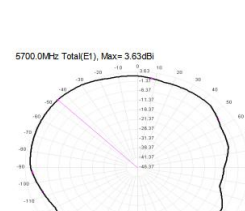
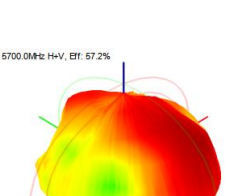
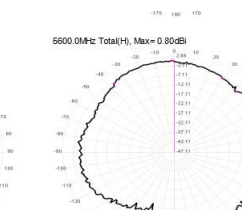
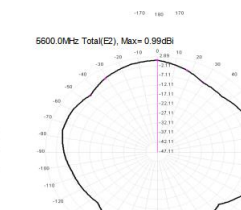
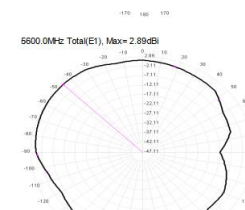
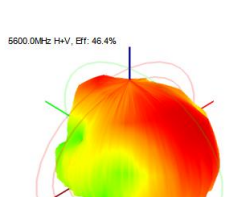
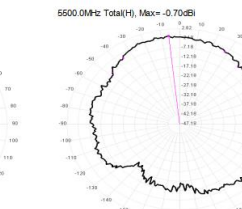
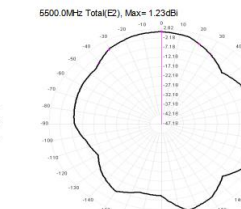
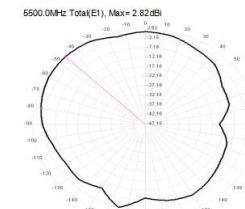
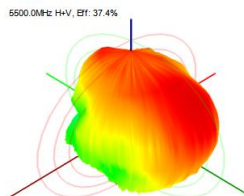
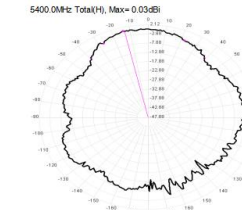
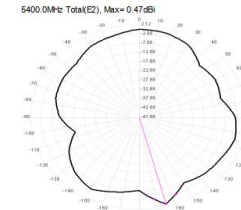
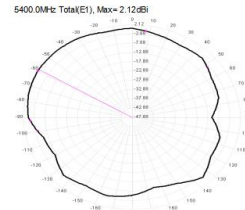
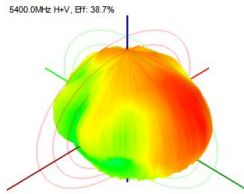
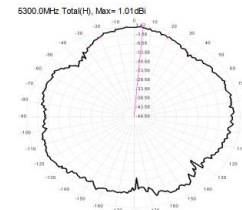
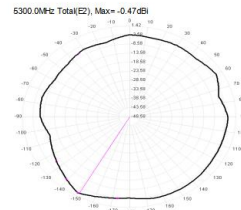
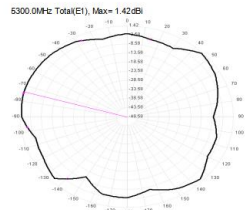
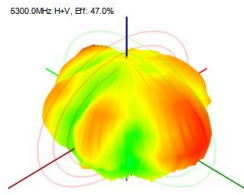
Frequency (MHz)	5150	5200	5300	5400	5500	5600	5700	5800	5850
Maximum gain(dBi)	4.1	4.3	4.1	3.7	3.9	4.2	3.7	3.4	3.0
Efficiency (%)	47.5	47.0	47.1	38.7	37.4	46.4	42.2	40.1	37.0



3D radiation pattern







NFC antenna specification

Manufacturer: Shenzhen Dianchain Technology Co., Ltd.

Address:

Building 36, Chentian Industrial Zone, Chentian Community, Xixiang Subdistrict, Bao'an District, Shenzhen City, Guangdong Province, P.R.China

Model: N060155F

Operating frequency: 13.56MHz

Size: 6×16.5 mm; Antenna plate thickness: 0.13 mm; Total thickness at the vinyl area: approximately 0.70 mm



We statement that All measurements were performed radiated and therefore additional antenna gain documentation is not required.