



惠州硕贝德汽车智联科技有限公司

HUIZHOU SPEED AUTOIN TELCHNOLOGY CO.LTD

APPROVAL SHEET

PRODUCT NAME	SPEED Part Number	CUSTOMER APPROVED
Onboard Antenna		
CUSTOMER Part Number		APPROVED DATE

SPECIFICATION

Product Name: 板载天线

Description: Onboard Antenna

地址：惠州市仲恺高新区东江高新科技产业园惠泽大道138号厂房A栋四、五楼
Address: A Building, 4th and 5th Floor, No. 138, Huize Avenue, Dongjiang High-Tech Industrial Park, Zhongkai High-Tech Zone, Huizhou City

I Electrical Characteristics

1.1 Passive Antenna

No.	ITEM	SPEC
1	Frequency Range	315MHz 433MHz
2	Impedance	50 Ω

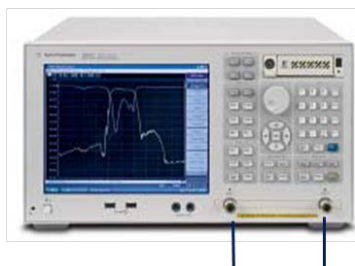
II Test Method

2.1 Chamber



2.2 Network analyzer

Network Analyzer

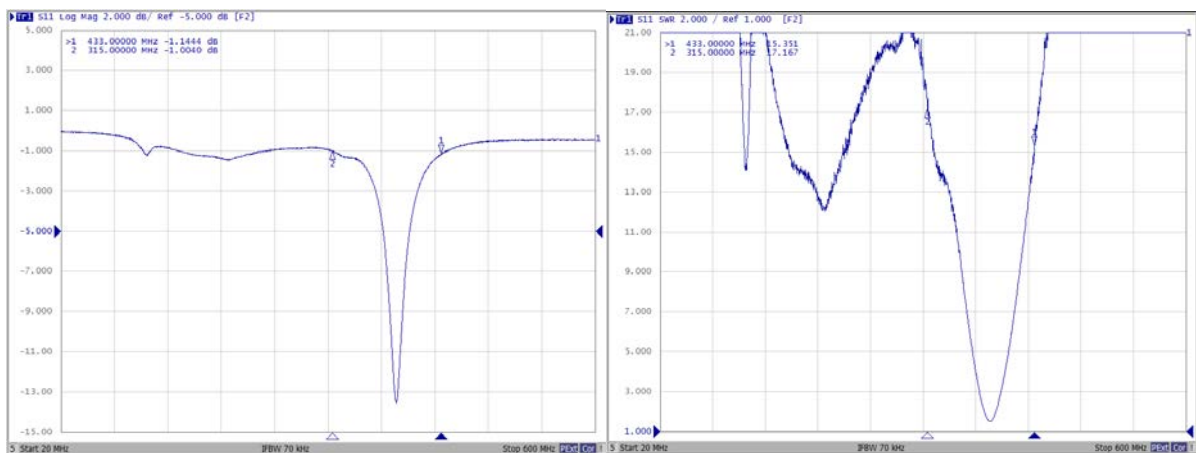


III Test Items

Passive Antenna

- | |
|-------------------------|
| 1.S Parameter with VSWR |
| 2.Efficiency and Gain |
| 3.radiation pattern |

3.1 S Parameter with VSWR Test Data



S Parameter

VSWR

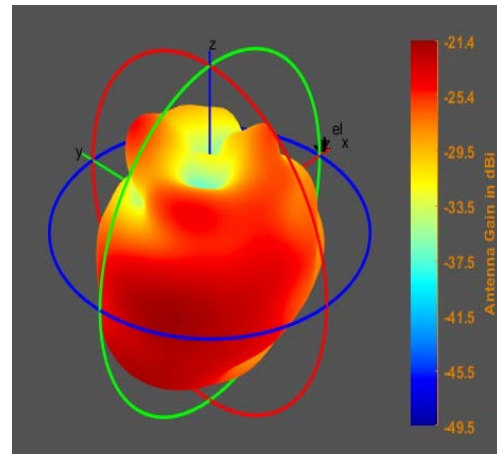
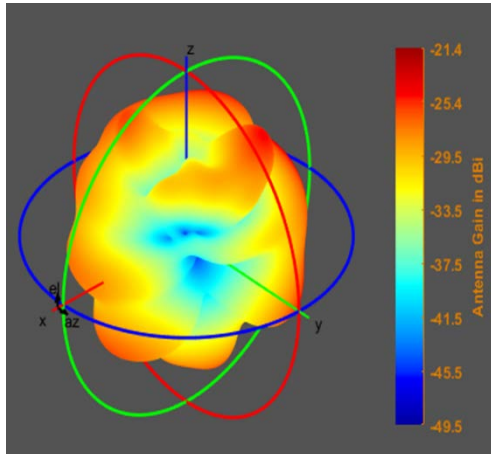
Frequency (MHz)	Return Loss(dB)	VSWR
315	1.00	15.35
433	1.14	17.16

3.2 Efficiency and Gain

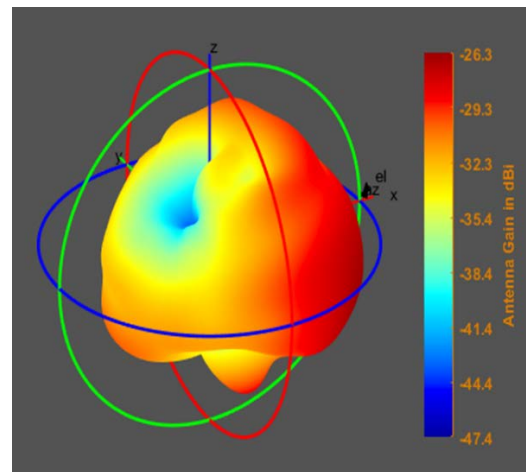
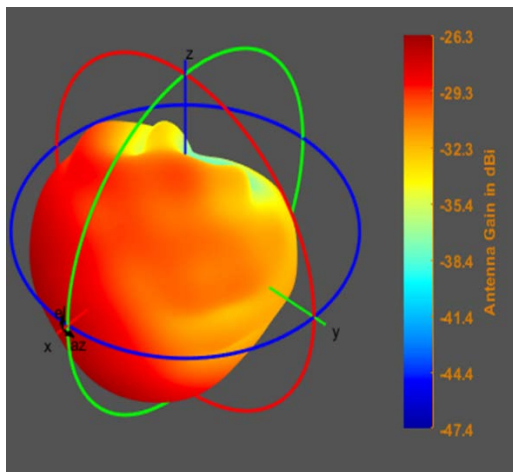
Frequency (MHz)	315	433
Efficiency (%)	0.172	0.078
Gain (dBi)	-21.43	-26.30

3.3 radiation pattern Test Data

(1) Antenna 3D Radiation Pattern

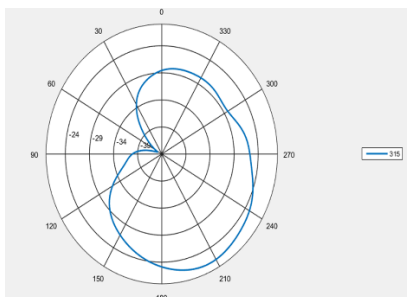


315MHz

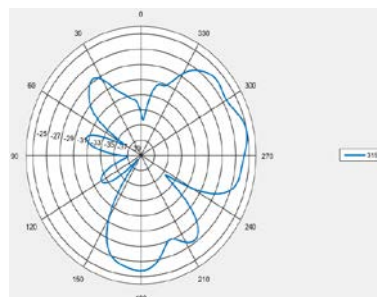


433MHz

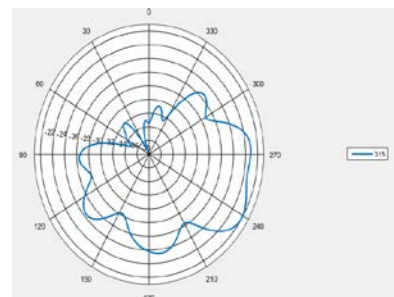
(2) Antenna 3D Radiation Pattern



H-XY

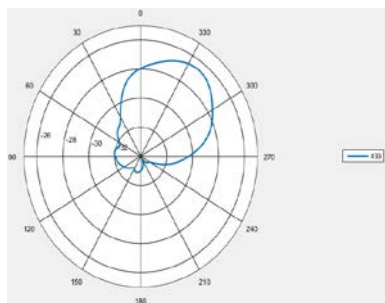


E1-XZ

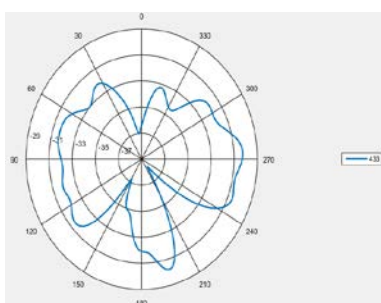


E2-YZ

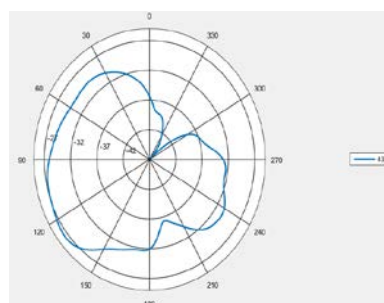
315MHz



H-XY



E1-XZ



E2-YZ

433MHz

Top view of the SK2431 V1 PCB. The board is populated with various components including resistors (R1-R10), capacitors (C1-C4), and integrated circuits (U1, U2). A 1mm scale bar is shown for reference.

