SPECIFICATION

SPECNO. ：RXD-5739

PARTNO. ：MAIN：03.005.0001.0228；ANT2：03.005.0001.0229；

ANT4：03.005.0001.0230； NFC天线：03.005.0001.0156；

支架：03.006.0001.0392

PRODUCT NAME ：F12

DESCRIPTION ： **LDS FPC PIAntenna**

ROHSCompliantProduct

REVISIONSTATUS

VERSION	DATE	PAGE	REVISIONDESCRIPTION	PREPARED	CHECKED	APPROVED
01	2024.09.12	Whole	NewIssued	代庆蓉	龙超群	曹光平
02	2024.10.13	Whole	AntennaDimension	代庆蓉	龙超群	曹光平
03	2024.11.12	Whole	AntennaDimension	代庆蓉	龙超群	曹光平
04	2024.11.15	Whole	Position1MatchingCircuit	代庆蓉	龙超群	曹光平
05	2024.11.18	Whole	Antenna Dimension	代庆蓉	龙超群	曹光平
06	2025.01.08	Whole	Deliverymode	代庆蓉	龙超群	曹光平

PreparedBy	CheckedBy	ApprovedBy

代庆蓉	龙超群	曹光平

2025.1.8 B400-010.04

CIROCOMMTECHNOLOGY.

PARTNUMBER:03. 005. 0001. 0228

1 SCOPE

Thisspecificationcoversthedielectricchipantenna

2 Nameofthe product

Thisproductisnamed“ChipAntenna”.

3. Electrical characteristics

3-1 Electricalcharacteristicsofantenna

The antenna has the electrical characteristics given in Table 1 under the *cirocomm*standardinstallationconditionsshowninthefigureofEvaluation Board.

Table1

No	Parameter	Specification
1	WorkingBand	GSM:B2/3/5/8 WCDMA:1/2/4/5/6/8 LTE:1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28AB/66 N1/3/5/8/20/38/41/77/78
2	Allowable power	< 5W
3	Impedance	50 Ω
4	OperatingTemperature	-40 ~ +85 ℃

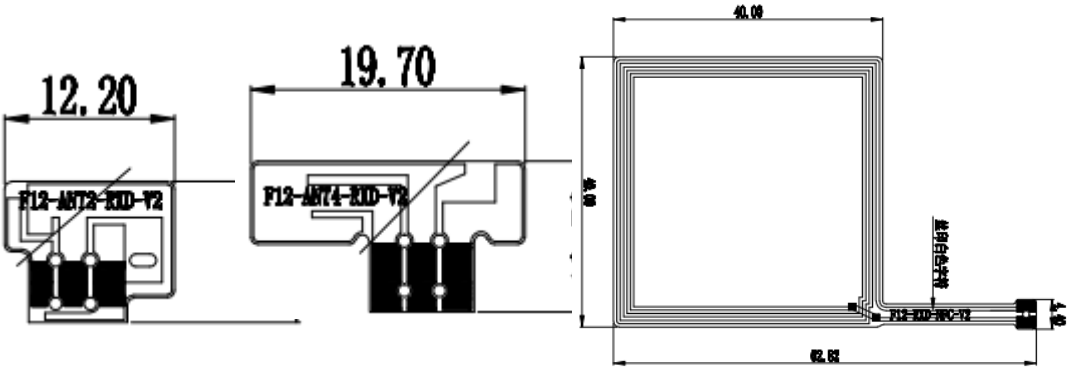
. DataismeasuredonCirocommSTDPCB.

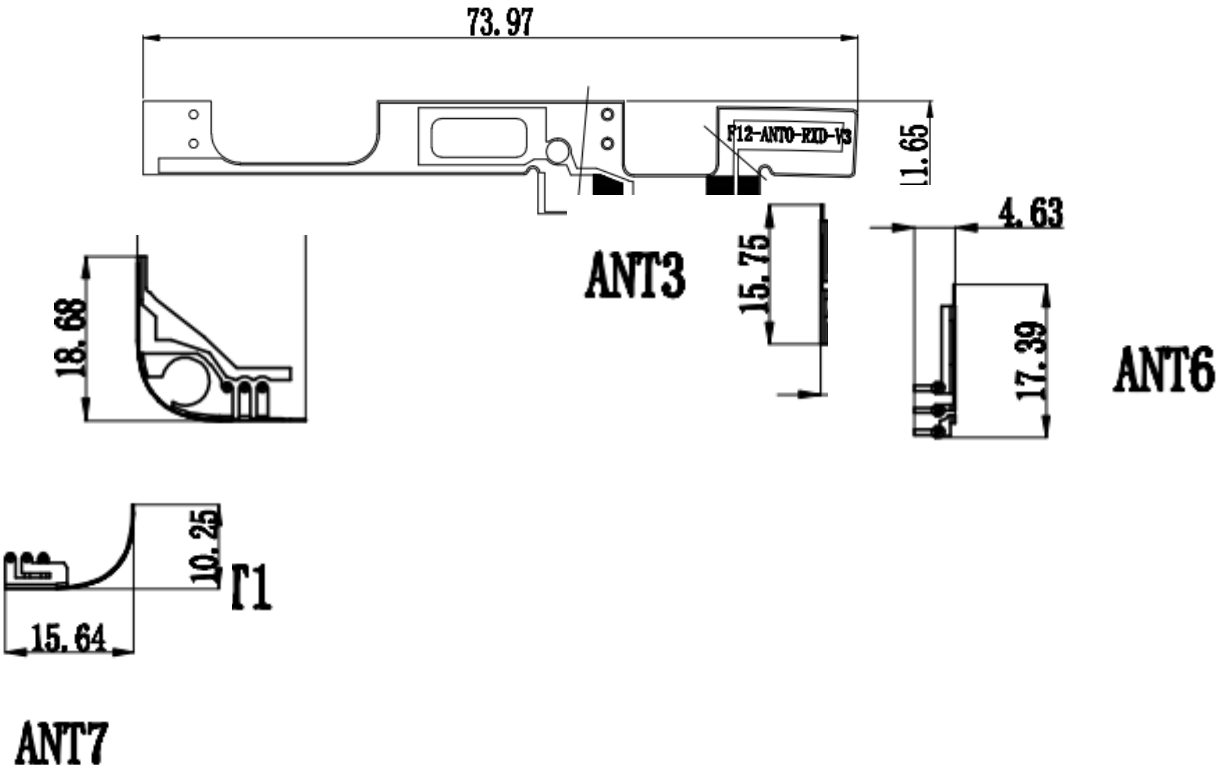
Gain

Band	Max Gain (dBi)	Band	Max Gain(dBi)
GSM850(824-894MHZ)	-1.23	LTE-B38(2570-2620MHZ)	1.26
GSM900 (880-960MHZ)	-1.36	LTE-B40(2300-2400MHZ)	0.63
DCS1800 (1710-1880MHZ)	-0.59	LTE-B41(2500-2700MHZ)	1.26
PCS1900 (1850-1990MHZ)	-0.41	N-1 (1920-2170MHZ)	-0.38
WCDMA1 (1920-2170MHZ)	-0.38	N-3 (1710-1880MHZ)	-0.59
WCDMA2 (1850-1990MHZ)	-0.36	N-5 (824-894MHZ)	-1.23
WCDMA4 (1710-2170MHZ)	-0.38	N-8 (880-960MHZ)	-1.36
WCDMA5 (824-894MHZ)	-1.47	N-20 (791-862MHZ)	-1.18
WCDMA6 (830-883MHZ)	-1.47	N-38 (2570-2620MHZ)	1.26
WCDMA8 (880-960MHZ)	-1.36	N-41(2500-2700MHZ)	1.26
LTE-B1(1920-2170MHZ)	-0.38	N-77(3300-4200HZ)	1.43
LTE-B2(1850-1990MHZ)	-0.36	N-78(3300-3800HZ)	1.37
LTE-B3 (1710-1880MHZ)	-0.59		
LTE-B4 (1710-2170MHZ)	-0.38		
LTE-B5(824-894MHZ)	-1.23		
LTE-B7 (2500-2690MHZ)	1.26		
LTE-B8 (880-960MHZ)	-1.36		
LTE-B12 (699-746MHZ)	-0.26		
LTE-B13 (746-787MHZ)	-0.26		
LTE-B17 (704-746MHZ)	-0.26		
LTE-B18 (815-875MHZ)	-1.23	Bluetooth(2400-2483.5MHZ)	-0.52
LTE-B19 (830-890MHZ)	-1.23	WIFI-2.4G(2400-2495MHZ)	-0.52
LTE-B20 (791-862MHZ)	-1.18	WIFI-5.3G(5.3GHZ)	1.29
LTE-B25(1850-1990MHZ	-0.41	WIFI-5.6G (5.6GHZ)	1.48
LTE-B26(824-894MHZ)	-1.23	WIFI-5.2G(5.17-5.33GHZ)	1.29
LTE-B28 (704-746MHZ)	-0.26	WIFI-5.8G (5.490-5.835GHZ)	1.48
LTE-B66(1710-2170MHZ)	-0.36	GPS (1575.4MHZ)	1.01

4. Antenna＆Demo BoardDimension

4-1 Antenna Dimension



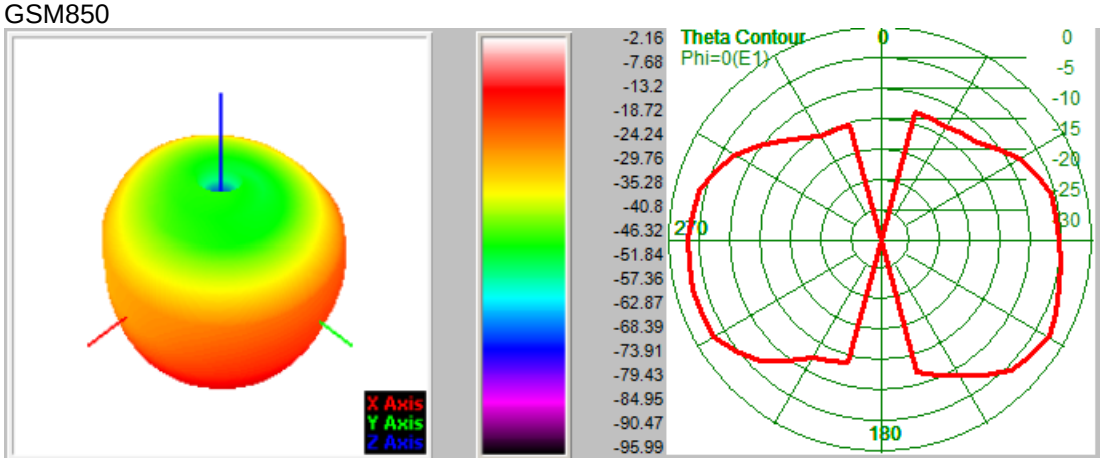


RIGHT

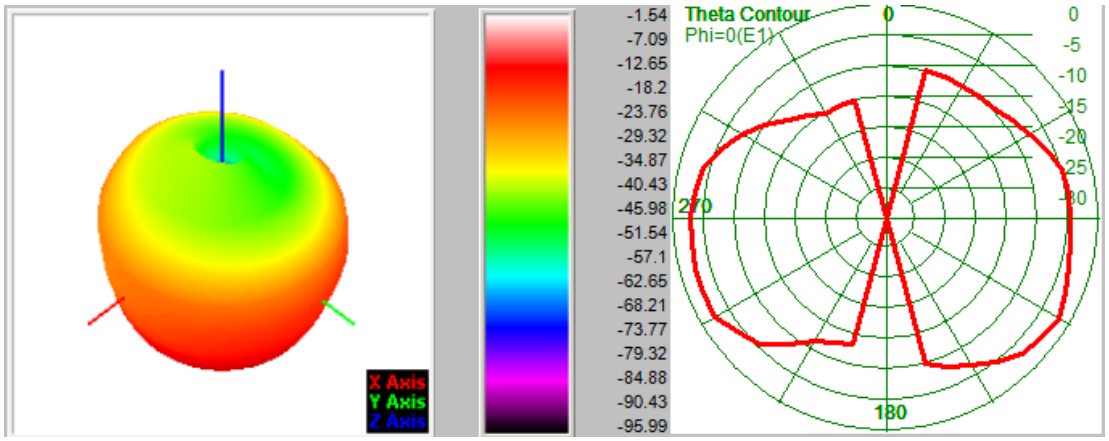
Position1

Electricalperformance

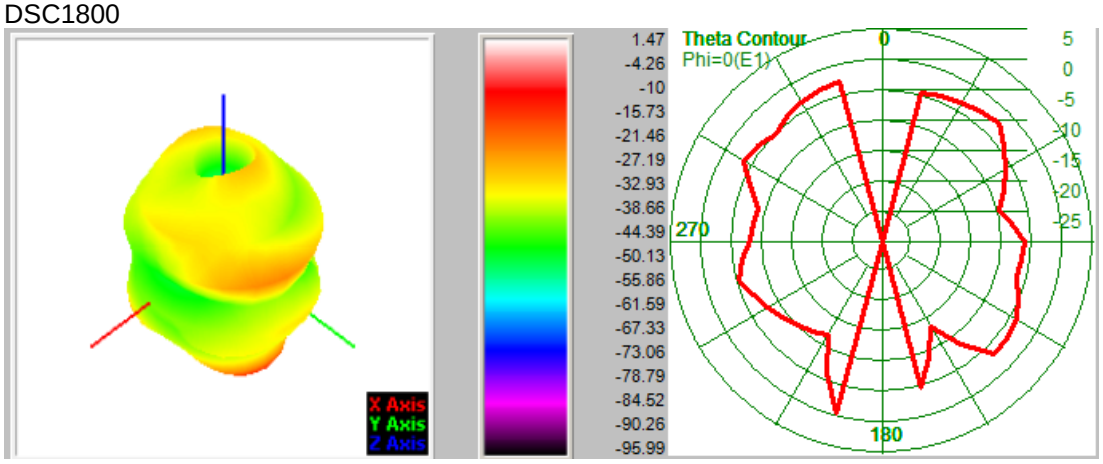
GSM850



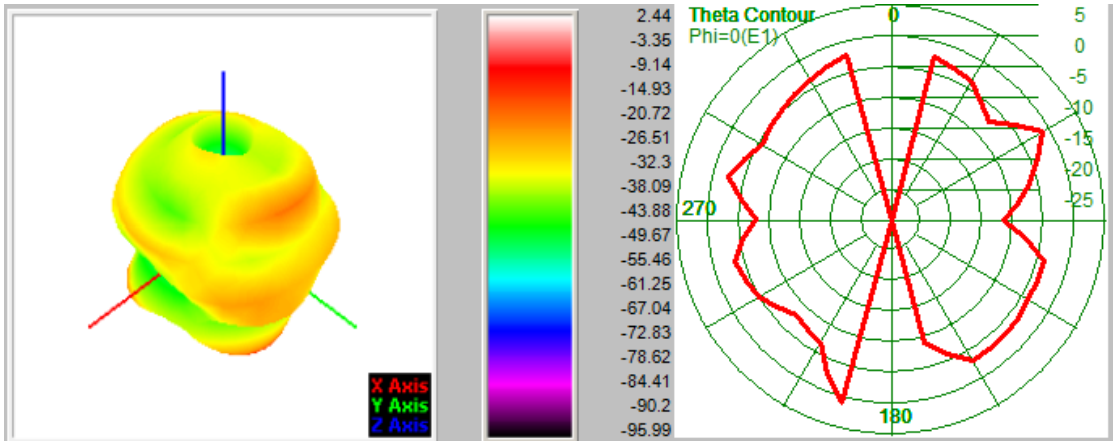
GSM900



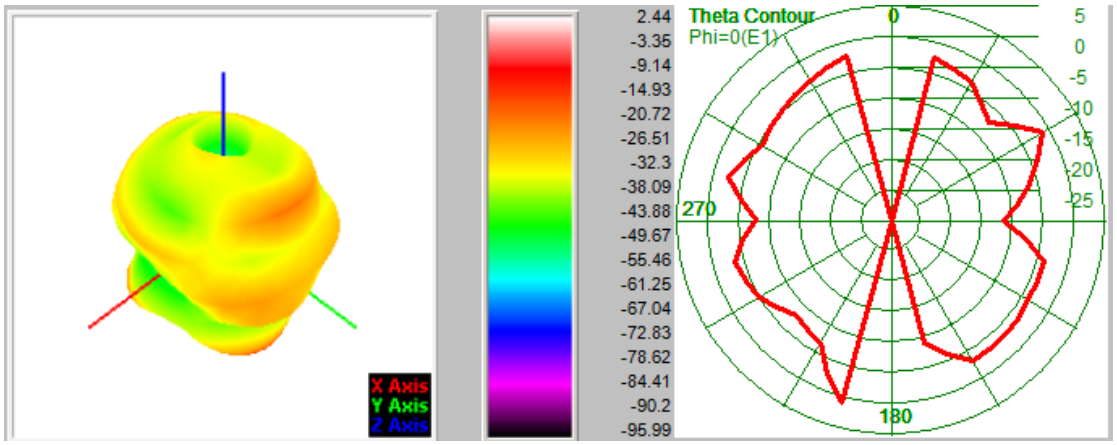
DSC1800



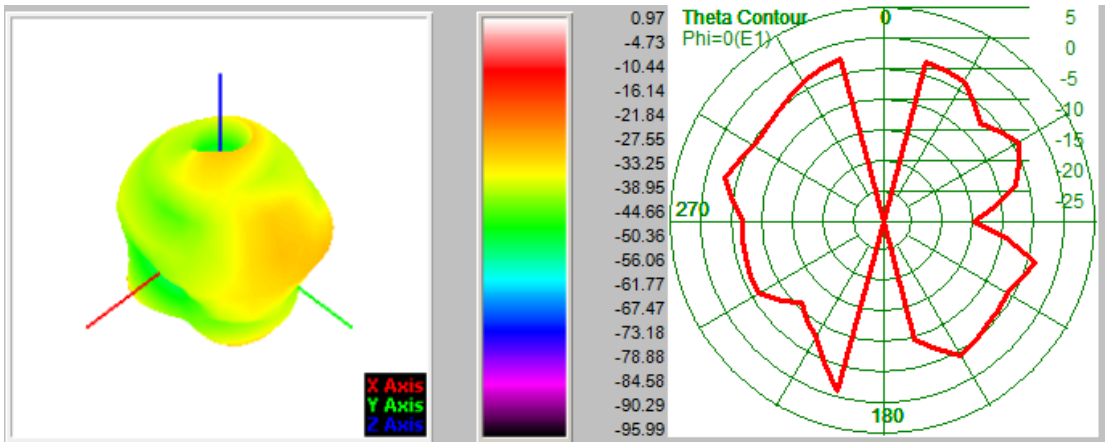
PCS1900



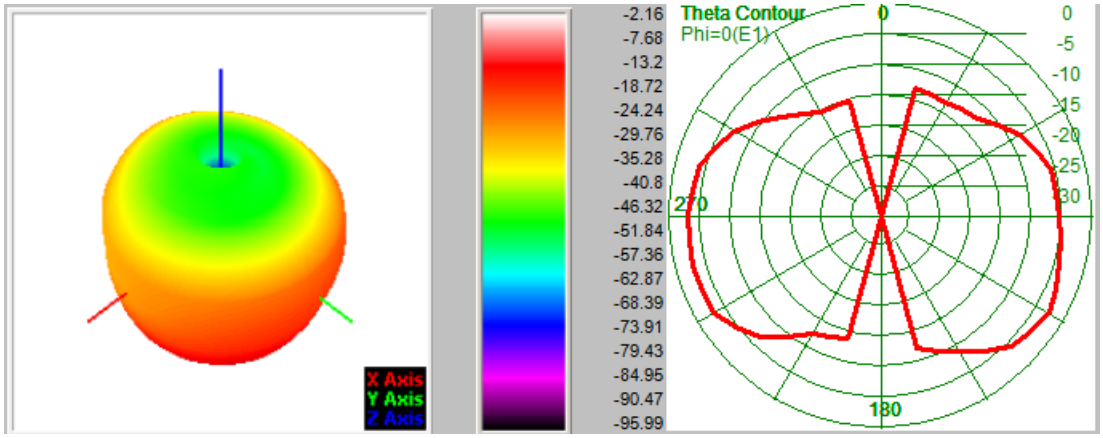
W2



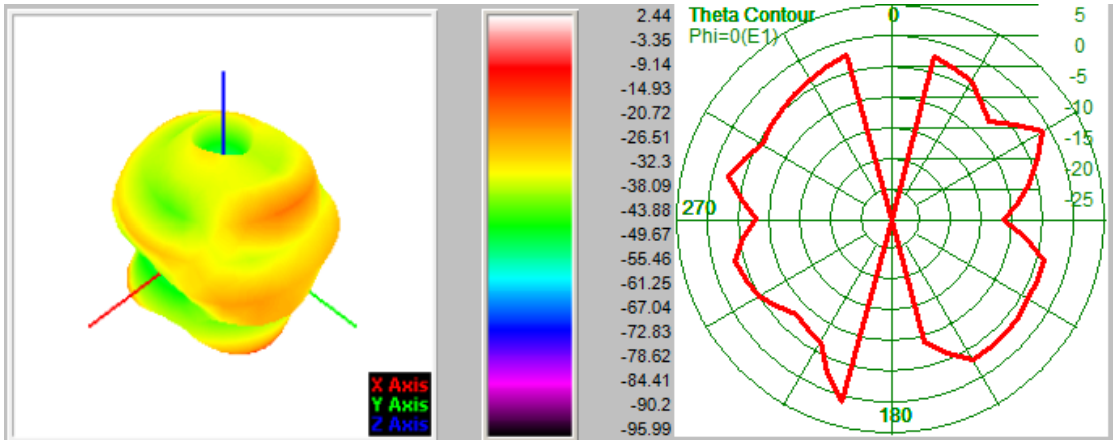
W4



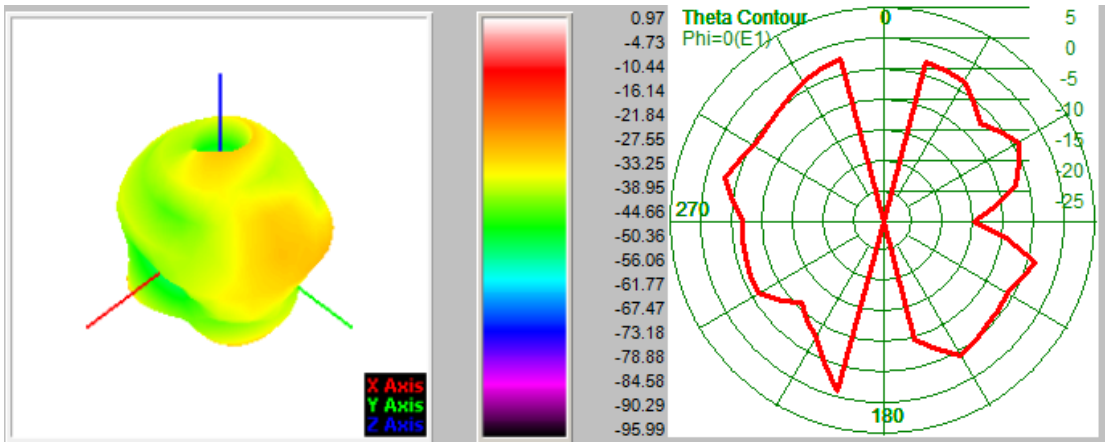
W5



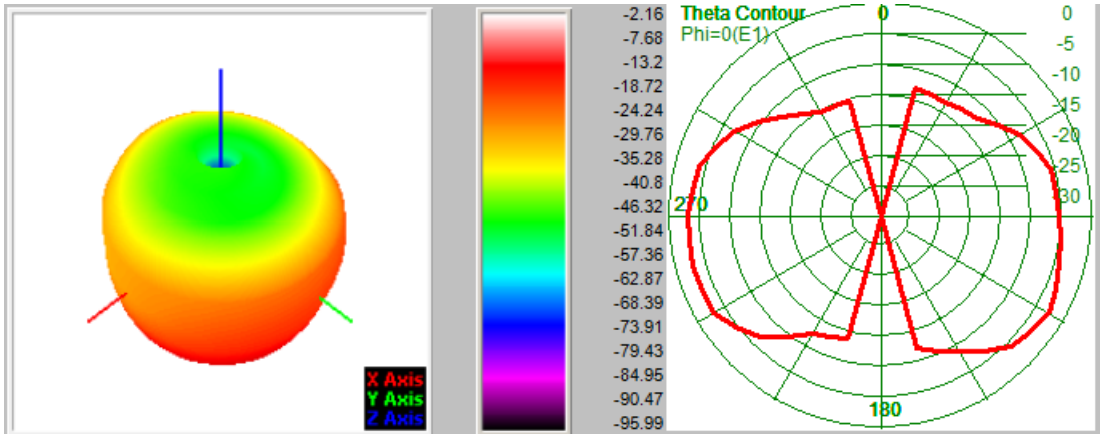
FDD-B2



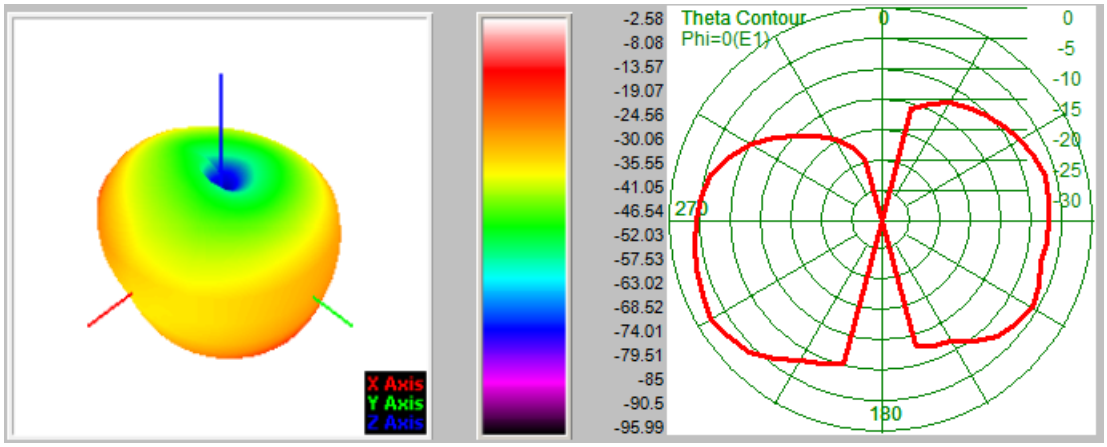
FDD-B4



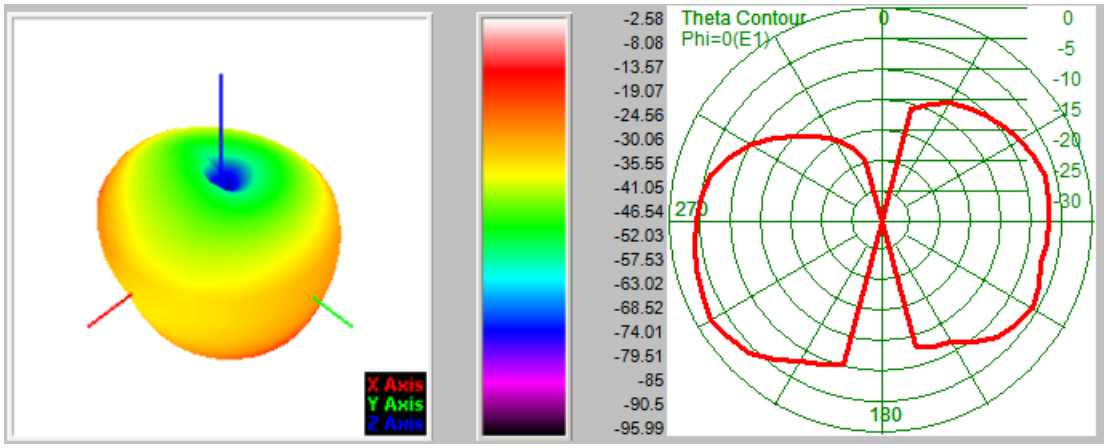
FDD-B5



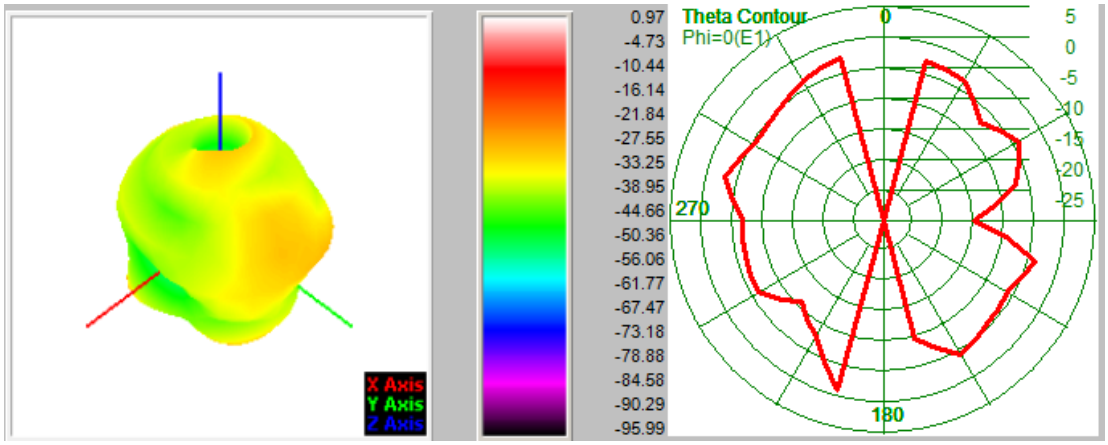
FDD-B12



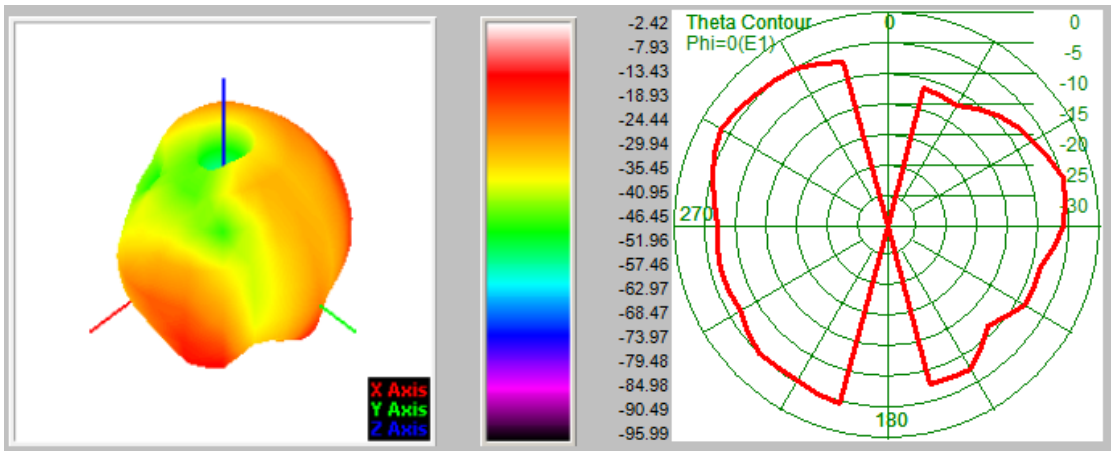
FDD-B17



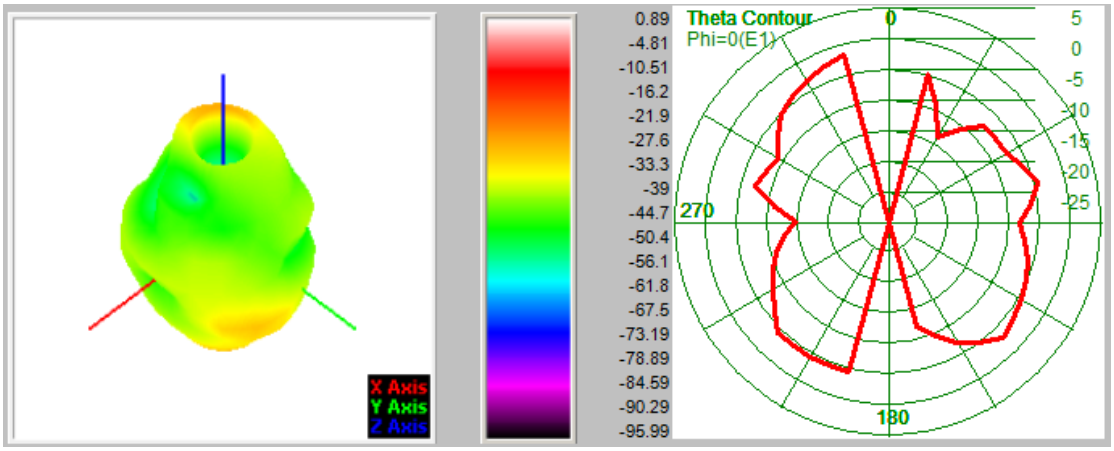
FDD-B66



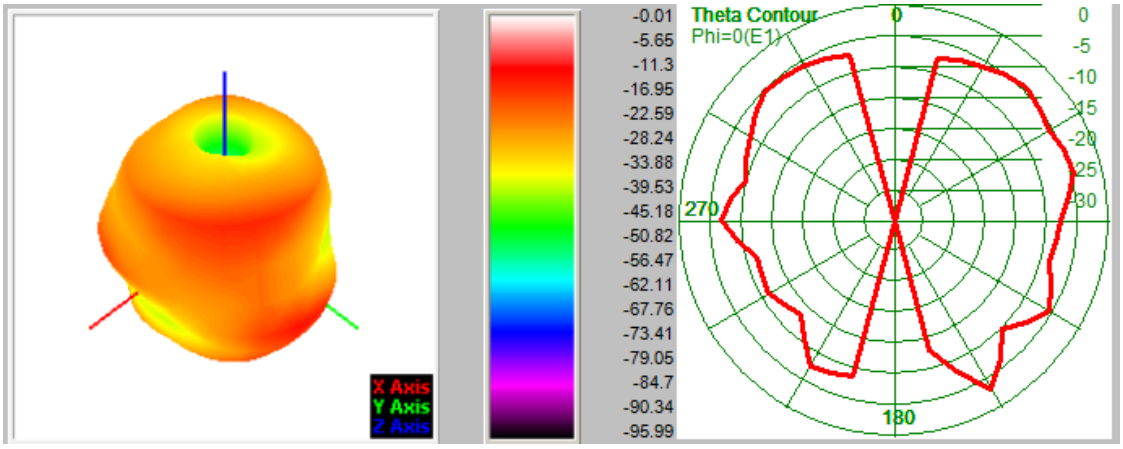
FDD-B71



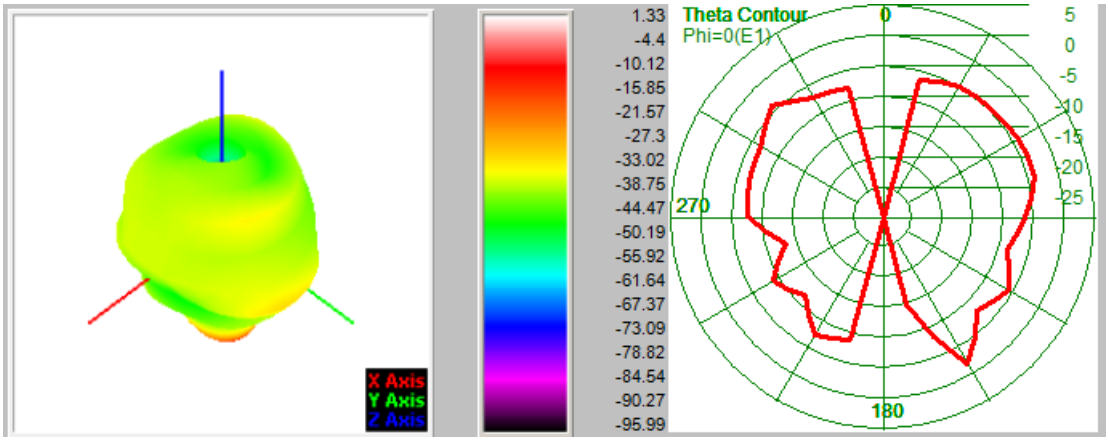
TDD-B41



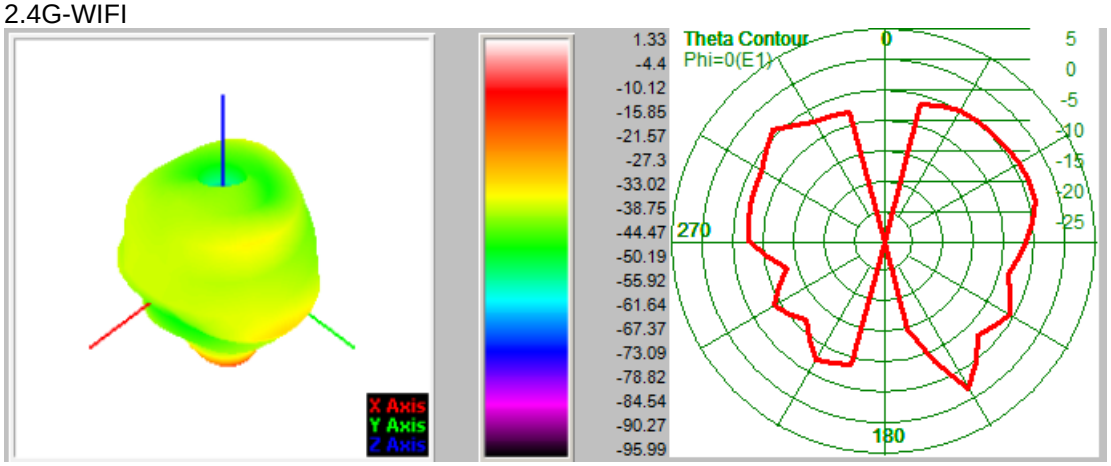
GPS



BT



2.4G-WIFI



5. Environmentalconditions

5-1 Operatingconditions

Theantennahastheelectricalcharacteristicsgiveninthetemperature range of -40℃to +85℃and under the environmental conditions of +40℃and 0-95%relativehumidity.

5-2 Storagetemperaturerange

Thestoragetemperaturerangeofproductis-40℃to+85℃.

6. Reliabilitytests

6-1 Low-temperaturetest

Expose the specimen to -40℃ for 500 hours and then to normal temperature/ humidityfor24hoursormore.Afterthistest,examineitsappearanceandfunctions.

6-2 High-temperaturetest

Exposethespecimento+85℃for500hoursandthentonormaltemperature /humidityfor24hoursormore.Afterthistest,examineitsappearanceandfunctions.

6-3 High-temperature/high-humiditytest

Subject the object to the environmental conditions of +85℃and 90-95% relative humidity for 96 hours, then expose it to normal temperature/humidity for 24 hours or more.After this test, examine its appearance and functions.

6-4 Thermalshocktest

Subject the object to cyclic temperature change (-40℃, 30 minutes⇔+85℃, 30 minutes) for 5 cycles, then expose to normal temperature/ humidity for 24 hours or more.

6-5 Vibrationtest

6-5-1 Sinusoidal vibration test

Subject the object to vibrations of 5 to 200 to 5Hz swept in 10 minutes, 4.5G at maximum (2mm amplitude), in X and Y directions for two hours each and in Z direction for four hours.After this test, examine its appearance functions.

6-5-2 Vibrationtestinpackagedcondition

Subject the object, which is packaged as illustrated, to vibrations of 15 to 60 to 15Hz swept in 6 minutes, 4G at maximum (2mm amplitude at maximum), applied in X, Y and Z directions for two hours each, i.e. six hours in total. After this test, examine its appearance and functions.

6-6 Freefalltestinpackaged condition

Drop the object, which is packaged as illustrated, to a concrete surface from the heightof90cm,ononecomer,threeedgesandsixfacesonceeach,i.e.10timesin total.After this test, examine its appearance and functions.

6-7 Solderingheatresistancetest

Theleadpinsoftheunitaresoakedinsolderbathat260±5℃for10seconds. After this test, examine its appearance and functions.

6-8 Adhesiontest

Thedeviceissubjectedtobesolderedontest PCB.Thenapply0.5Kg(5N)offorce for 5±1 seconds in the direction of parallel to the substrate. (The soldering should be done by reflow and be conducted with care so that the soldering is uniform and free of defect by stress such as heat shock).

7. Warranty

Ifanydefectoccursformtheproductduringproperusewithinayearafterdelivery,itwill be repaired or replaced free of charge.

8. Other

Anyquestionarisingfromthisspecificationmanualshallbesolvedbyarrangement made by both parties.

9. Precautionsfor use

- AntennapatternuseanAg/Ni/Sn electrode.
- Pleasedon’tusethecorrosiongas(sulfurgas,chlorinegas)intheatmosphere.
- Pleasedon’tdirectsolderontothesilverelectrodeofantennapattern.