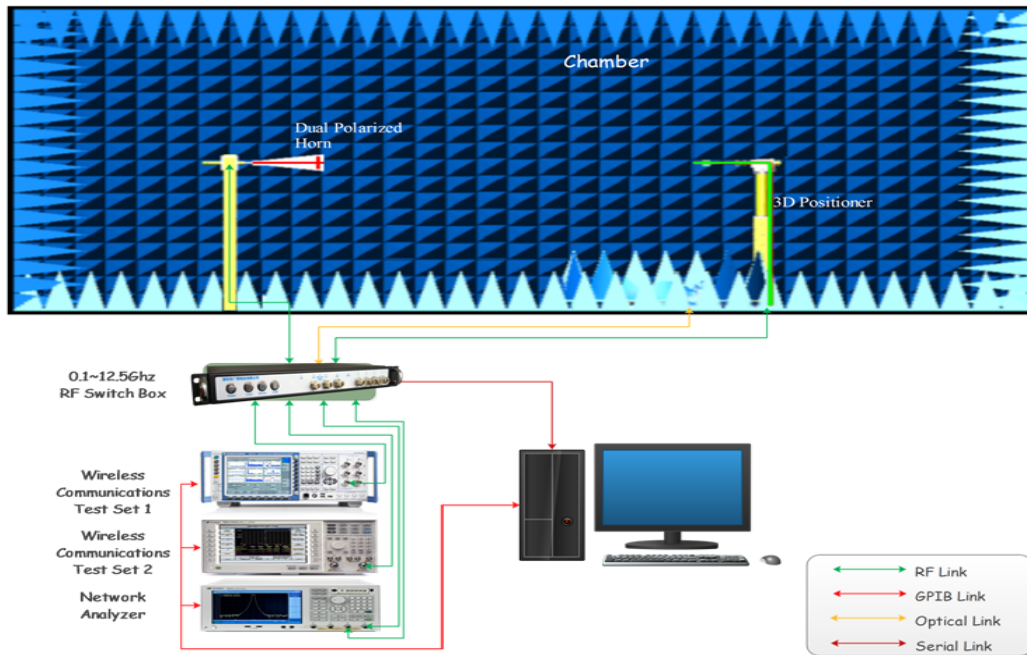




WS659F Antenna SPEC

Test Address	Shenzhen3Good Wireless Communications CO.,LTD Room501,Jinfulai Building,No.49-1,Dabao Road,Baoan District,Shenzhen
Test Date	April 14(th), 2023
Test Instrument	vector network analyzer -Agilent Technologies E5071B

Facility description Measurement procedure





Antenna information

Customer	Boat of wealth
Antenna Model	LTE main antenna: LTE SH 59B-4-5-F11 LTE diversity antenna: LTE-B G/W/B antenna: SH-G/W
Antenna Type	PIFA Antenna

Matching circuits

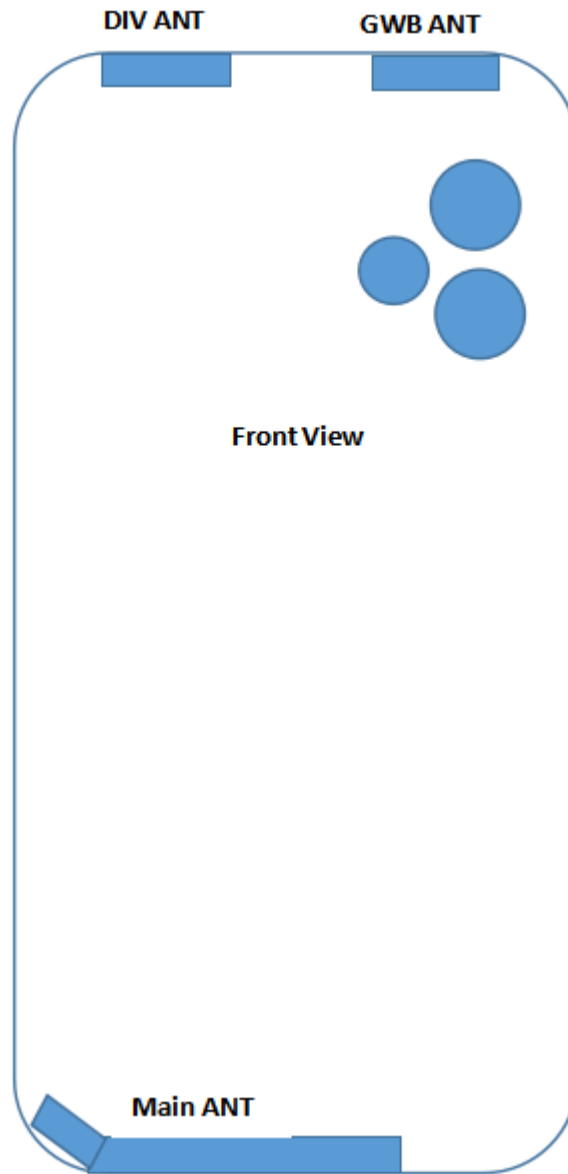
Main Antenna		Aux Antenna	
Element	Value	Element	Value
E1(0402)		E1(0402)	
E2(0402)		E2(0402)	
E3(0402)		E3(0402)	
E4(0402)			

Passive performance figure

Frequency(MHZ)	617~960	1710~2690
VSWR	<3.5	<3.5



Antenna position picture





All of Implementation antenna

Main antenna(Antenna Label:A):

LTE B5/B8/B12/B17/B28AB/B71 RX&TX

B1/B2/B3/B4/B7/B66RX

WCDMA B5/B8 RX&TX

B1/B2/B4 RX

GSM B5/B8 RX&TX

B2/B3 RX

DIV antenna(Antenna Label:B):

LTE B1/B2/B3/B4/B7/B66 RX&TX

WCDMA B2/B4 RX&TX

GSM B2/B3 RX&TX

WiFi-B/BT 2.4~2.5GHZ/WIFI-A5150~5850MHZ& GPS: 1575.42 MHz ;

Antenna Max. Peak Gain:

EGSM900:-1.5dBi

GSM850: -2.3dBi

DCS1800: -0.6dBi

PCS1900: 1.3dBi

WCDMA2100: -0.7dBi

WCDMA1900:1.3dBi

WCDMA1700: -0.6dBi

WCDMA900: -1.5dBi

WCDMA850: -2.3dBi

LTE-B1: -0.7dBi

LTE-B2: 1.3dBi

LTE-B3: -0.6dBi

LTE-B4: -0.6dBi

LTE-B5: -2.3dBi

LTE-B7: -1.5dBi

LTE-B12: -2.7dBi

LTE-B17: -2.7dBi

LTE-B28: -2.7dBi

LTE-B66: -0.6dBi

LTE-B71:- 2.3dBi

WIFI-2.4G/BT:1.3dBi

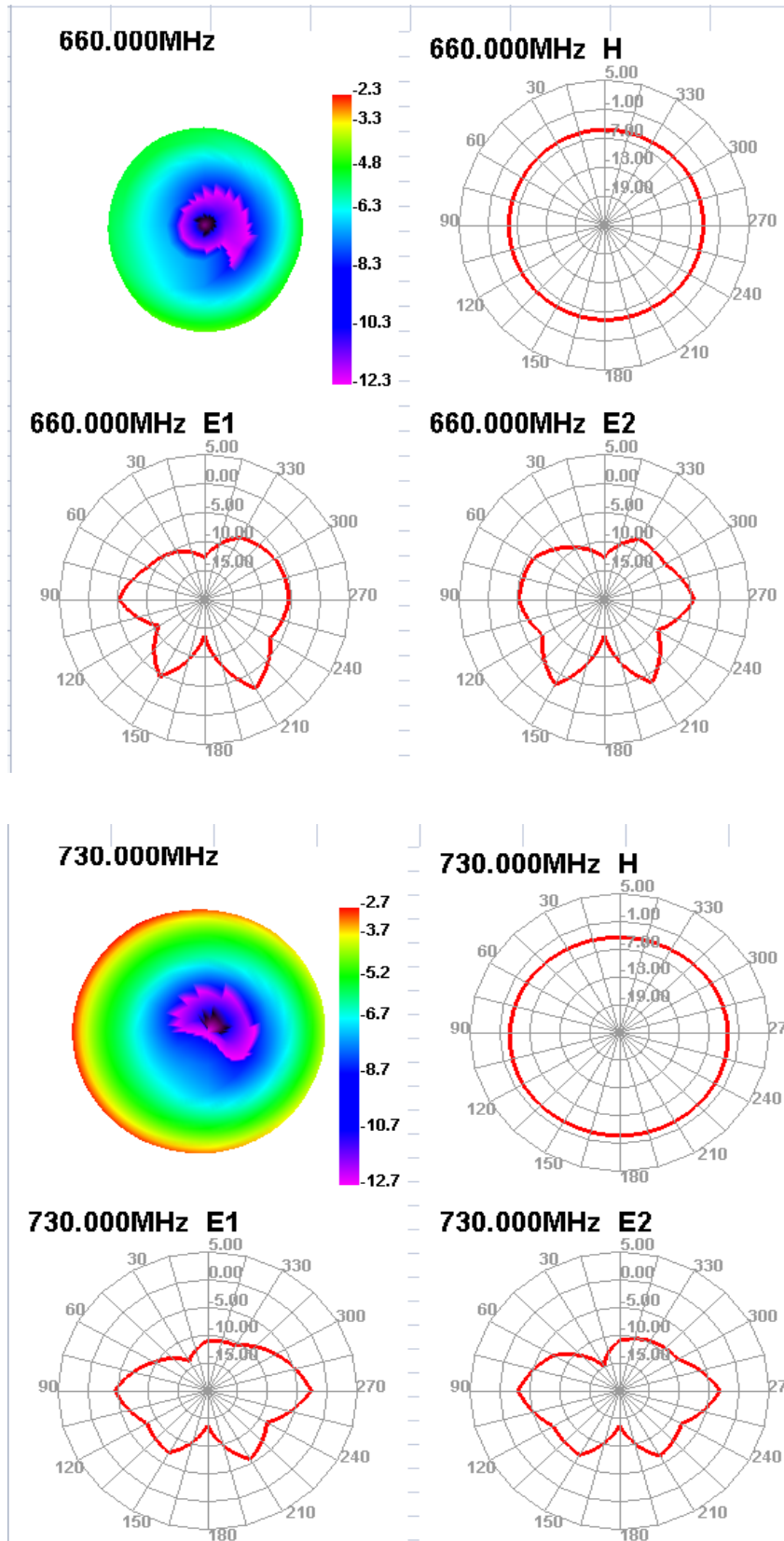
WIFI-5G:-1.4dBi

GPS: 0.9dBi



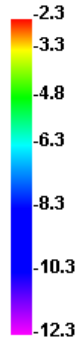
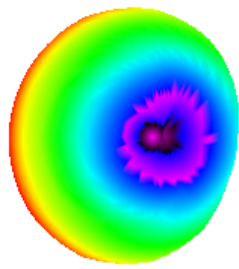
3-D Patten Plots

Main ANT:

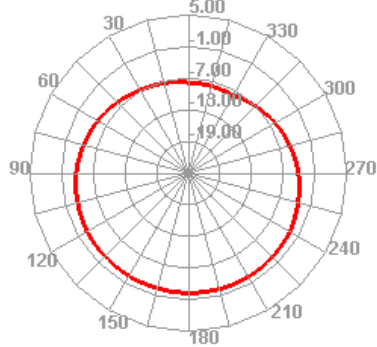




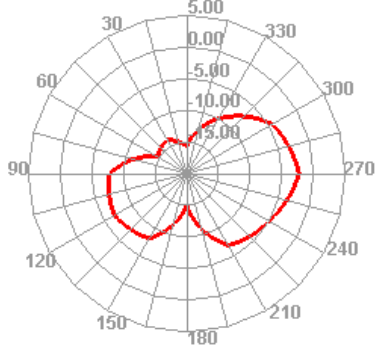
850.000MHz



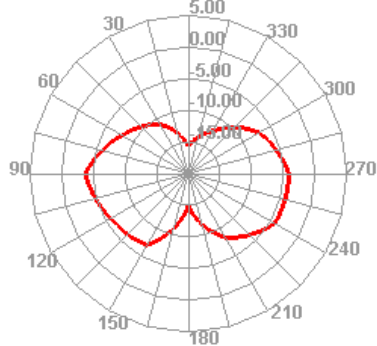
850.000MHz H



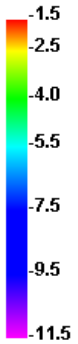
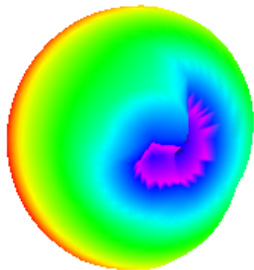
850.000MHz E1



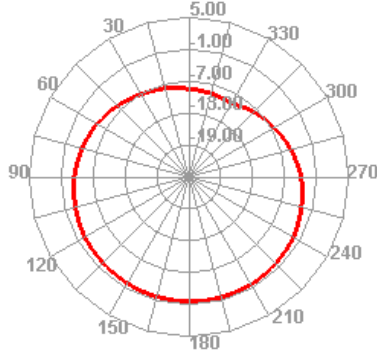
850.000MHz E2



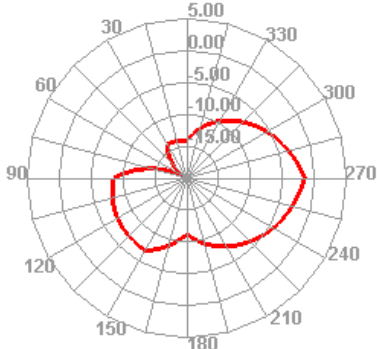
900.000MHz



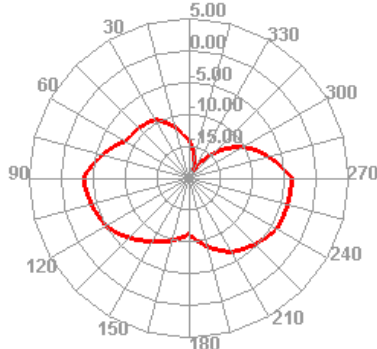
900.000MHz H



900.000MHz E1



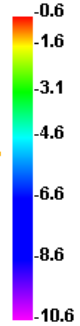
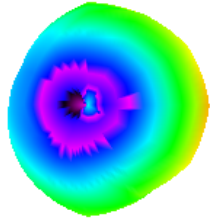
900.000MHz E2



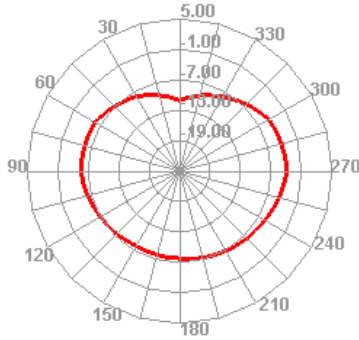


DIVANT:

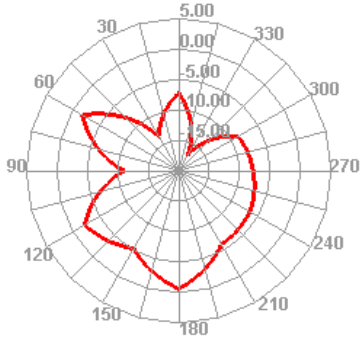
1800.000MHz



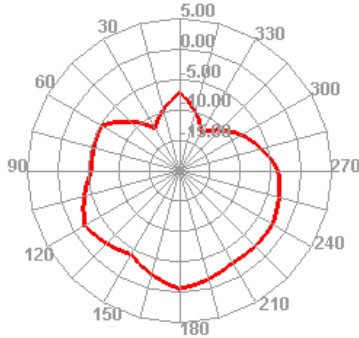
1800.000MHz H



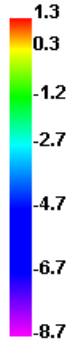
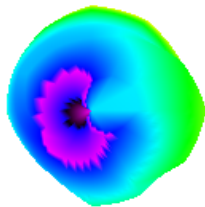
1800.000MHz E1



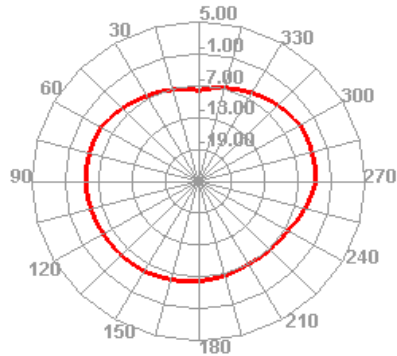
1800.000MHz E2



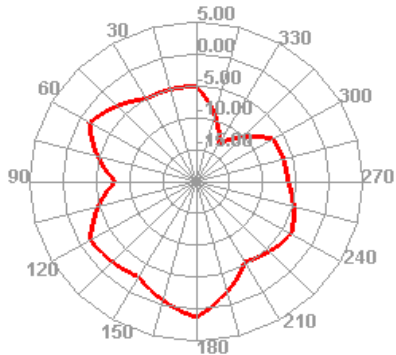
1900.000MHz



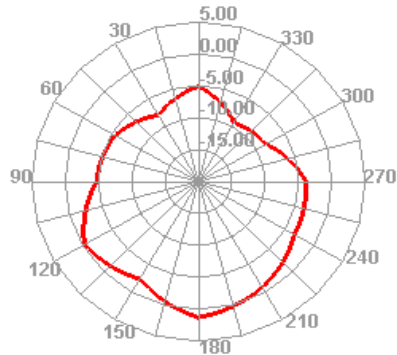
1900.000MHz H



1900.000MHz E1

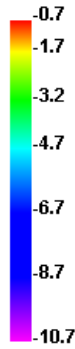
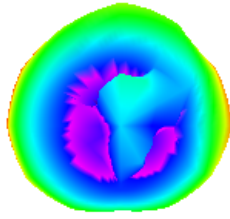


1900.000MHz E2

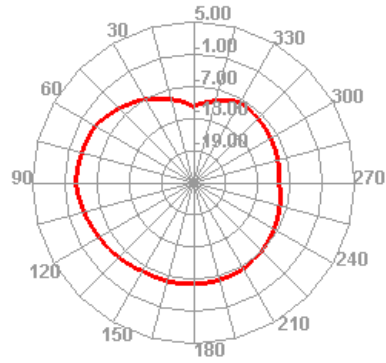




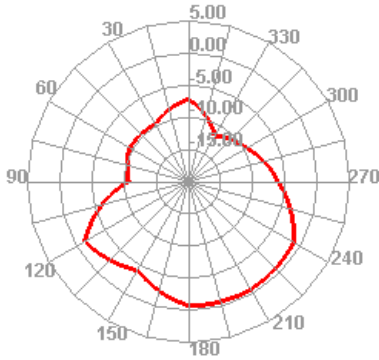
2100.000MHz



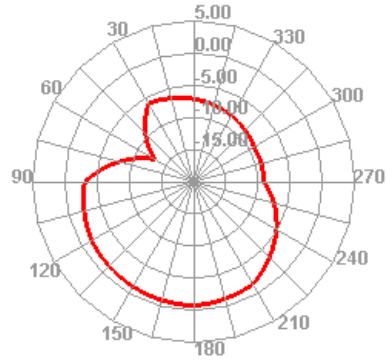
2100.000MHz H



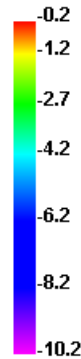
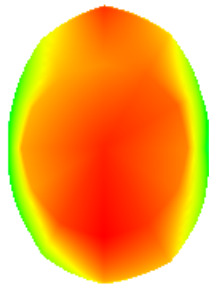
2100.000MHz E1



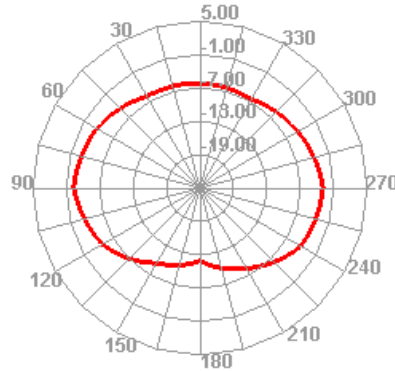
2100.000MHz E2



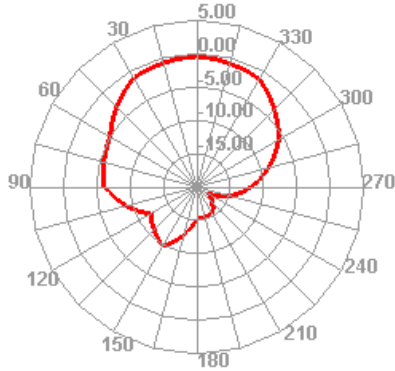
2500.000MHz



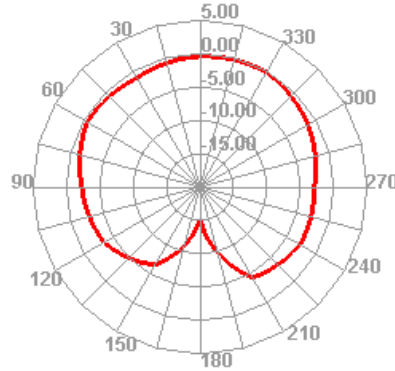
2500.000MHz H



2500.000MHz E1

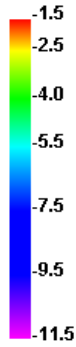
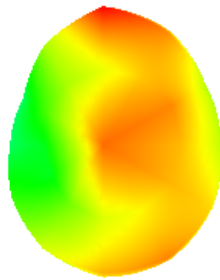


2500.000MHz E2

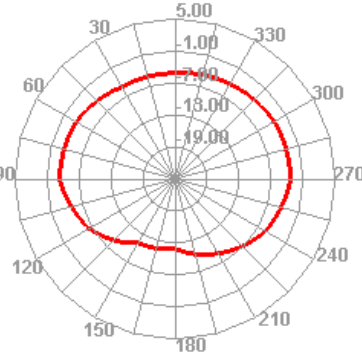




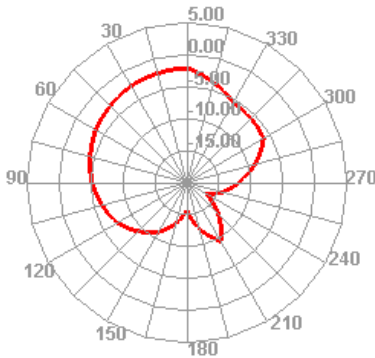
2690.000MHz



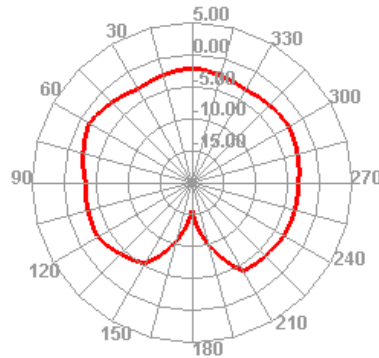
2690.000MHz H



2690.000MHz E1

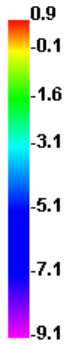
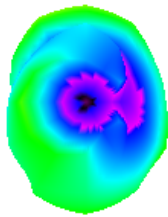


2690.000MHz E2

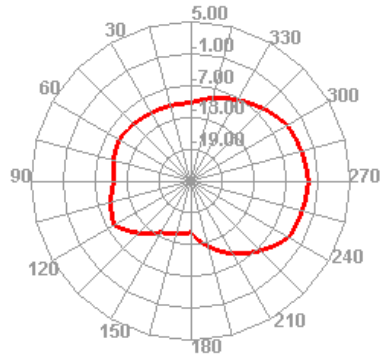


GWB ANT:

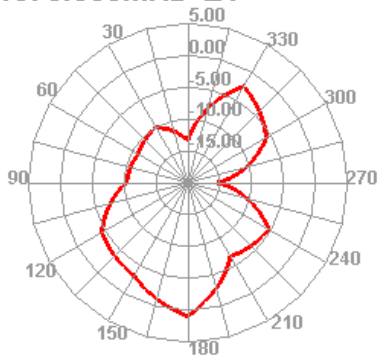
1575.000MHz



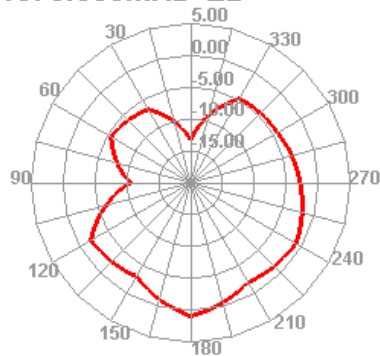
1575.000MHz H



1575.000MHz E1

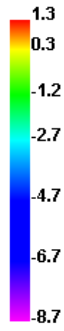
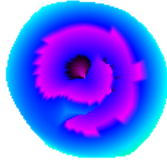


1575.000MHz E2

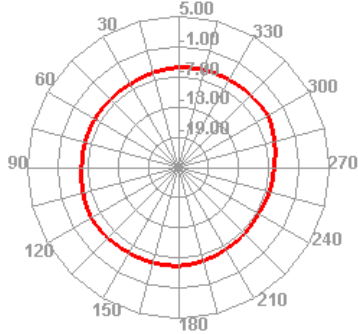




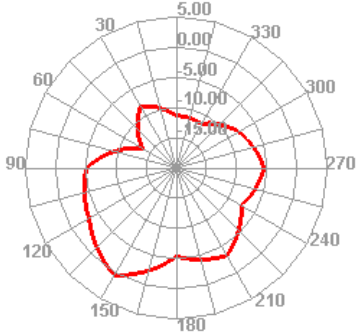
2400.000MHz



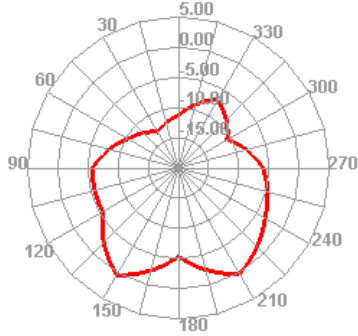
2400.000MHz H



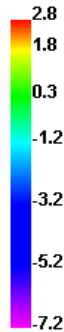
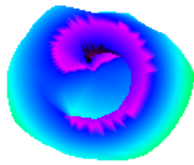
2400.000MHz E1



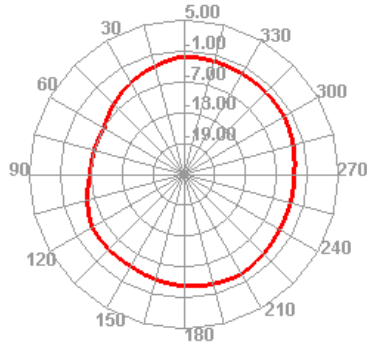
2400.000MHz E2



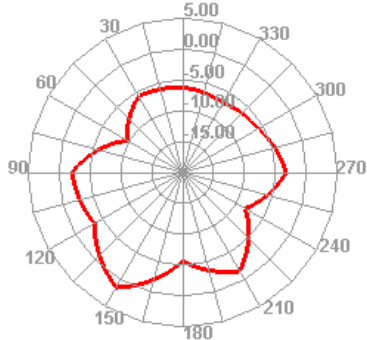
2500.000MHz



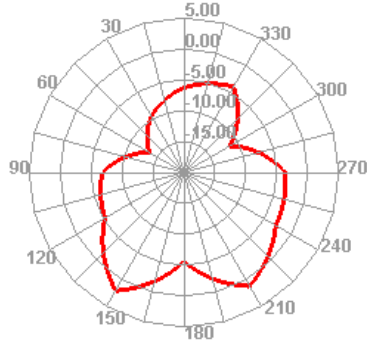
2500.000MHz H



2500.000MHz E1

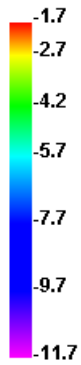
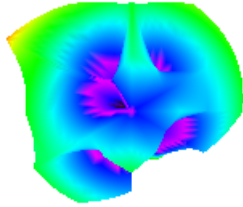


2500.000MHz E2

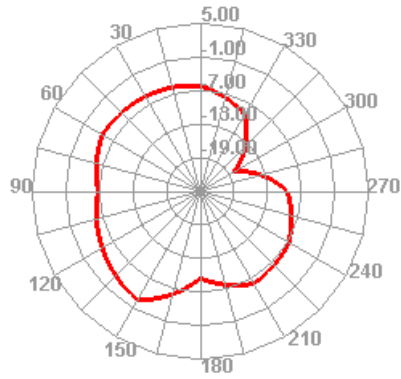




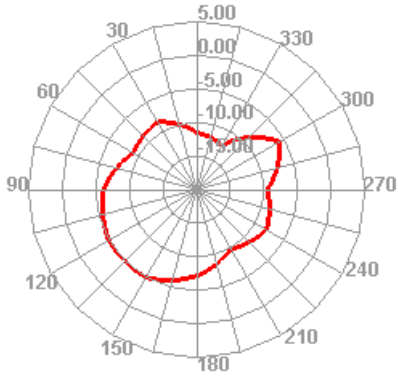
5180.000MHz



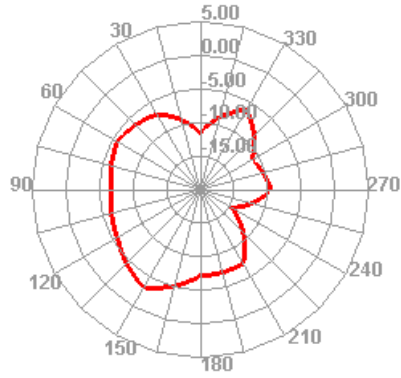
5180.000MHz H



5180.000MHz E1

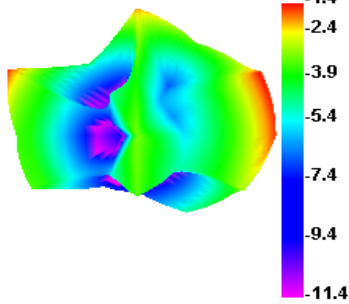


5180.000MHz E2

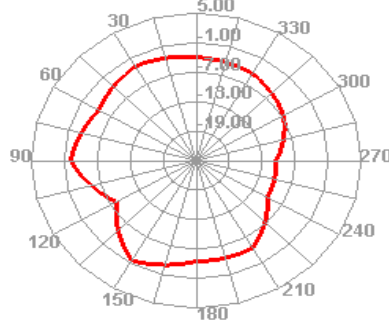




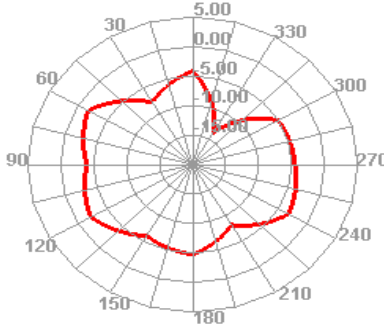
5500.000MHz



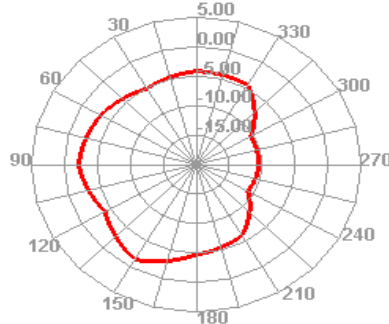
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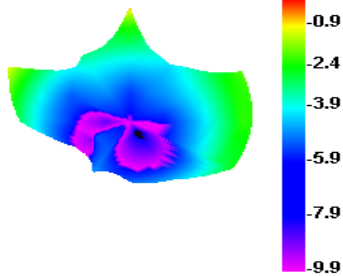
5500.000MHz E1



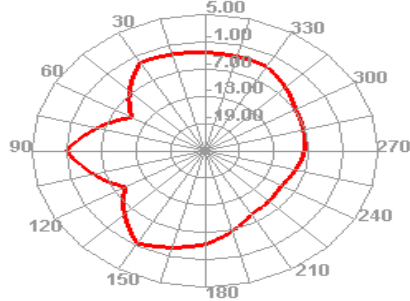
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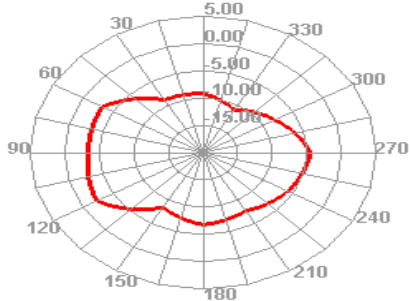
5850.000MHz



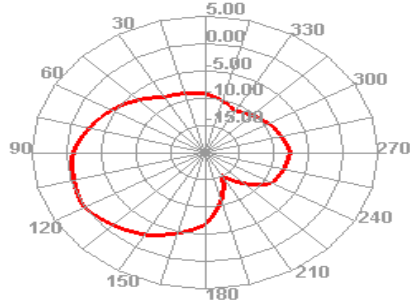
5850.000MHz H



5850.000MHz E1



5850.000MHz E2



Test Engineer:

Xi'ao hu