

Part Approved Sheet

Customer	
Edition P.N	
Product Name	2.4-5.8GHz FPC Antenna
Type Specification	2.4-5.8GHz FPC Antenna L40.6*W11.0mm MHF1 / 1.13 Black line L=150MM

Prepared by	Checked by	Approved by

Customer Approval		Checked by	Approved by
☐ Pass			
☐ Fail			

Supplier Name: Dongguan Songhui Co., LTD

Company address: No. 24, Juxiang 2nd Road, Lane Tail Village, Daliang Town, Dongguan City

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fax: 0769-822261765

Email box: 909095018@qq.com



SPECIFICATION FOR APPROVAL

2025010901
File No. _____
1.0
Revision _____

CUSTOMER: _____

CUSTOMER NO: _____

PART NAME: WIFI Antenna MHF1/1.13Black line L=150mm

SL186P.300067.P01

SUPPLIER NO: _____

Date: _____

Q'TY: PCS

CUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR

SUPPLIER SIGNATURE		
APPROVAL	CHECK	DESIGN
sunny	ZouJie	LuoYi

SH-RD-F04-A

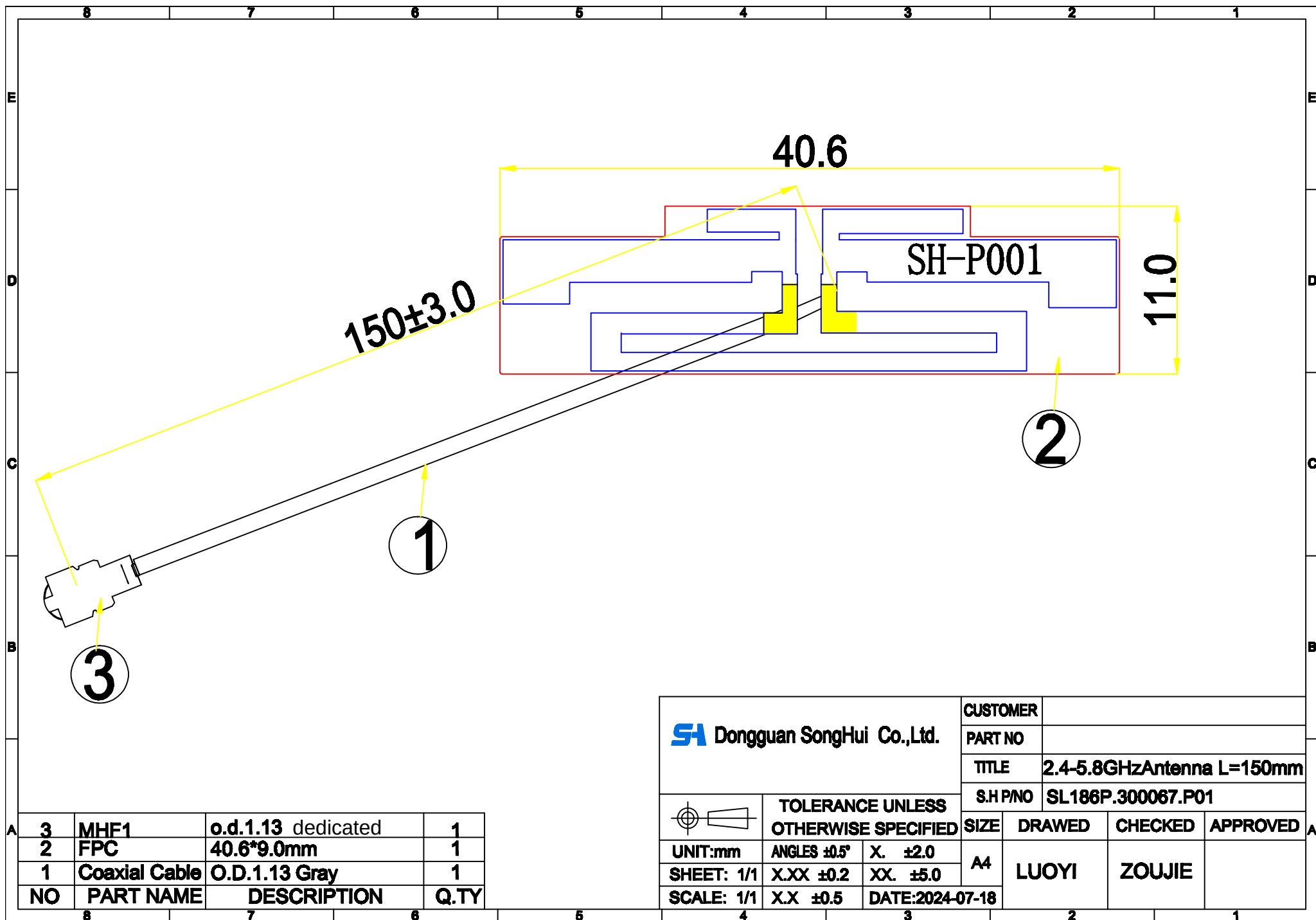
add : No. 24, Juxiang 2nd Road, Lane Tail Village, Daliang Town, Dongguan City



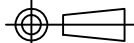
Acknowledgement of Service of Summons

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3	MHF1	o.d.1.13 dedicated	1
2	FPC	40.6*9.0mm	1
1	Coaxial Cable	O.D.1.13 Gray	1
NO	PART NAME	DESCRIPTION	Q.TY

 Dongguan SongHui Co.,Ltd.			CUSTOMER			
			PART NO			
			TITLE		2.4-5.8GHzAntenna L=150mm	
			S.H P/NO		SL186P.300067.P01	
	TOLERANCE UNLESS OTHERWISE SPECIFIED		SIZE	DRAWED	CHECKED	APPROVED
UNIT:mm	ANGLES $\pm 0.5^{\circ}$	X. ± 2.0	A4	LUOYI	ZOUJIE	
SHEET: 1/1	X.XX ± 0.2	XX. ± 5.0				
SCALE: 1/1	X.X ± 0.5	DATE:2024-07-18				



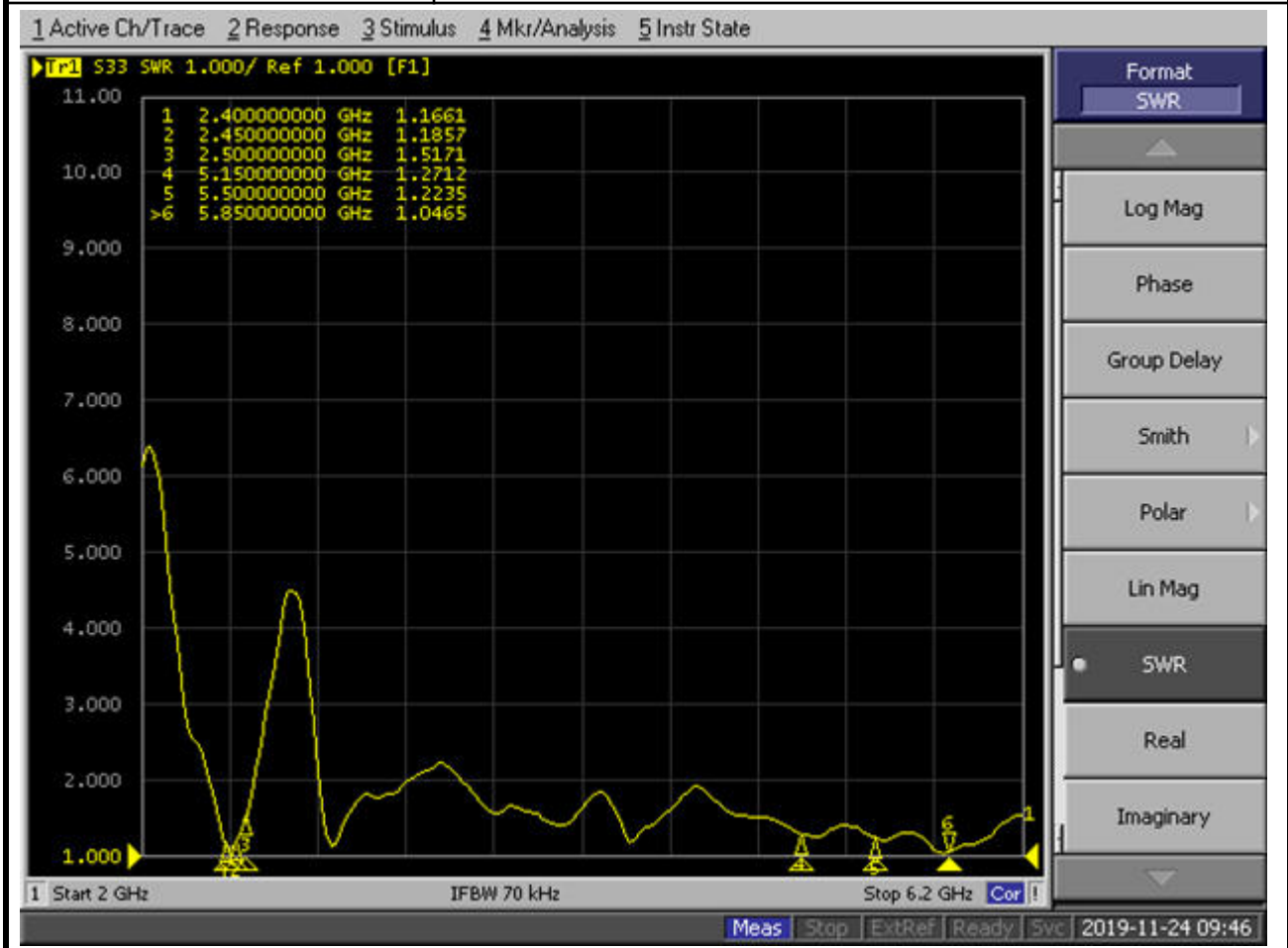
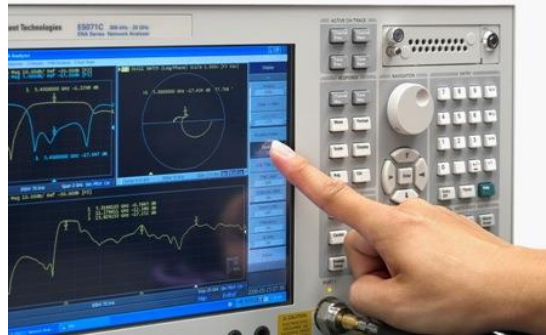
Test Reports

Electrical Properties	
Frequency	2400-2500/5150-5850MHz
Impedance	50 Ohm Nominal
V.S.W.R	1.92 : 1 Max
Return Loss	-10 dB Max
Radiation	Omni-directional
Gain (Peak)	3dBi
Efficiency	>50%
Polarization	Linear, Vertical
Admitted Power	1 W
Connector	MHF1
Physical Properties	
Antenna Material	FPC
Cable Type	O.D. 1.13mm // L=150mm
Operating Temp.	-10 ~ +60 °C
Storage Temp.	-10 ~ +70 °C
Cable Color	Black

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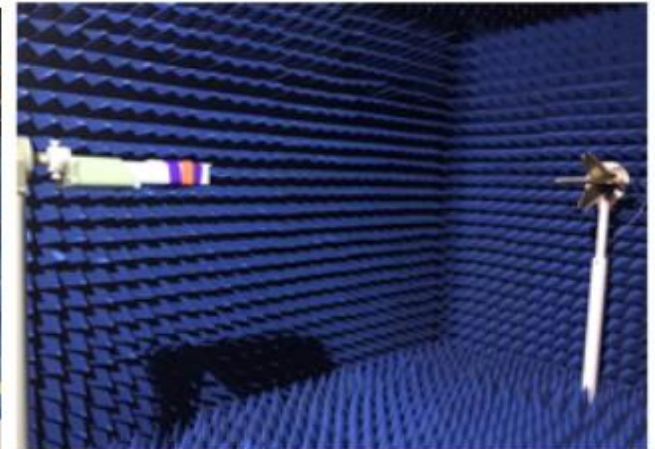
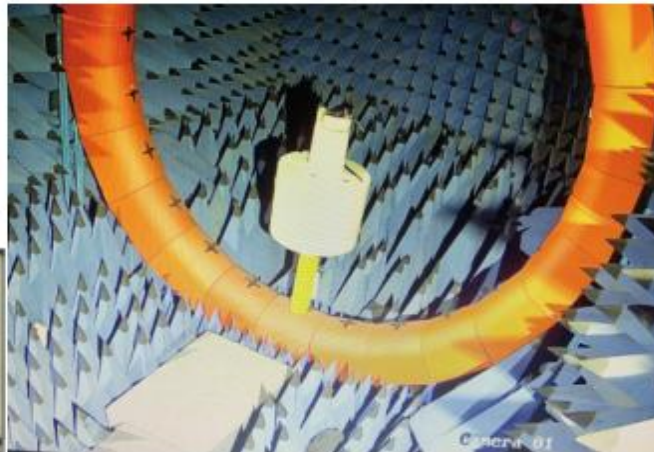
S Parameter Test

Agilent E5071C

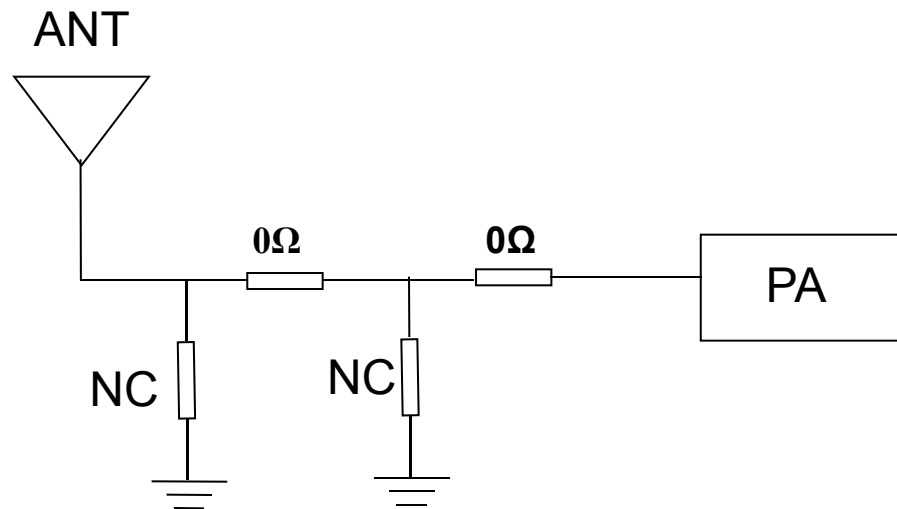


Test Environment

	Test project	equipment
1.S-parameter	1. Return Loss 2. VSWR	Network analyzer: Agilent E5071B ×2 HP 8753D PROTEK A338
2.Active	1. TRP 2. TIS	1. darkroom 7x4x3 m (Single probe 3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Integrated tester: Agilent 8960 ×2 CMW500 ×3/CMU200
3.Passive	1. Gain 2. Efficiency	1. darkroom: 7x4x3 m (24Probe 3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Network analyzer: Agilent E5071B



Matching circuit- Antenna



Circuit matching unchanged

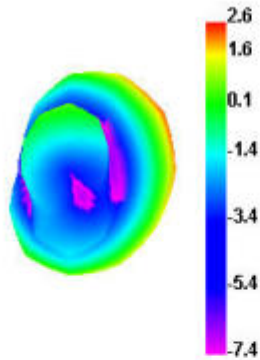
Efficiency/Gain- 1#

Freq (MHz)	Effi (%)	Gain (dBi)
2400	60.82	2.58
2410	63.01	2.76
2420	60.95	2.57
2430	63.58	2.71
2440	61.67	2.63
2450	63.36	2.78
2460	62.82	2.78
2470	64.06	2.74
2480	67.4	2.77
2490	72.73	2.89
2500	68.48	2.48

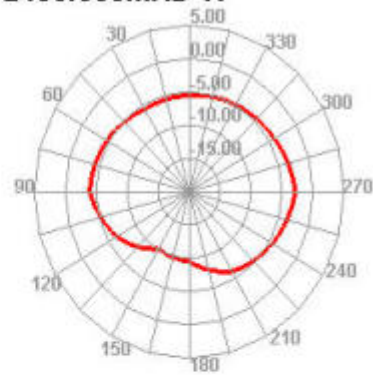
Freq (MHz)	Effi (%)	Gain (dBi)
5150	61.35	2.08
5200	58.81	2.31
5250	58.46	2.2
5300	56.47	1.99
5350	67.23	2.67
5400	73.46	2.35
5450	83.54	3.27
5500	72.25	2.69
5550	69.13	2.35
5600	61.31	1.2
5650	70.67	1.92
5700	83.39	2.54
5750	80.84	2.55
5800	72.25	1.39
5850	64.27	1.22

3D Pattern- 1#

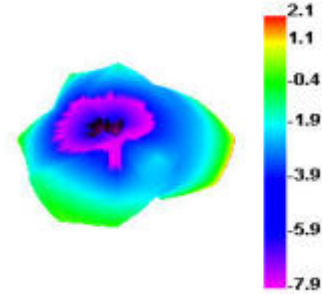
2400.000MHz



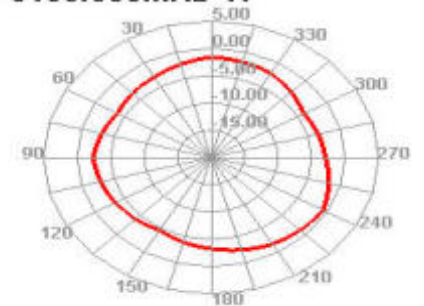
2400.000MHz H



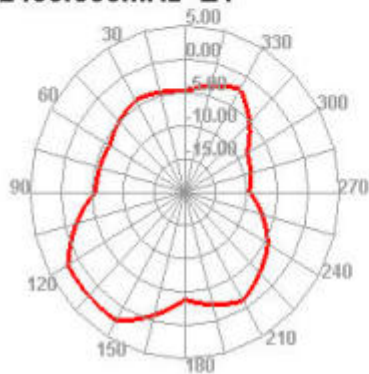
5150.000MHz



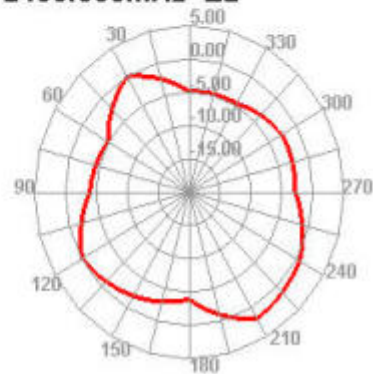
5150.000MHz H



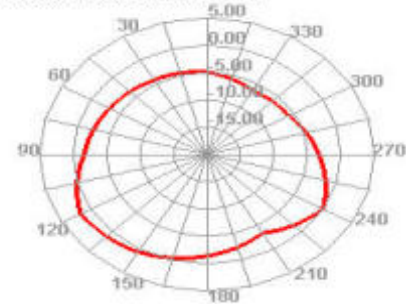
2400.000MHz E1



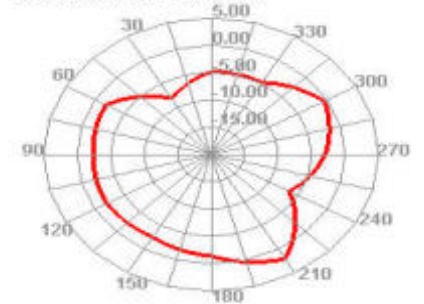
2400.000MHz E2



5150.000MHz E1



5150.000MHz E2



TRP/TIS

bandwidth (MHz)	Test project	pattern	rate(Mbps)	Channel	Frequency(MHz)	Test value (dbm)	Test project
20	TRP	B	11	1	2412	16.72	F35C
				6	2437	15.92	
				11	2462	16.08	
		G	6	1	2412	15.44	
				6	2437	14.36	
				11	2462	14.77	
		N	MCS7	1	2412	14.83	
				6	2437	13.24	
				11	2462	14.44	
		A	6	36	5180	13.72	
				149	5745	14.02	
				165	5825	15.1	
	TIS	B	11	1	2412	-79	
				6	2437	-79	
				11	2462	-79	
		G	54	1	2412	-69	
				6	2437	-69	
				11	2462	-69	
		N	MCS7	1	2412	-65	
				6	2437	-65	
				11	2462	-65	
		A	54	1	2412	-70	
				6	2437	-70	
				11	2462	-70	