SLEing® DONGGUAN SLEing INTEL-TECH CO.,LTD

SPECIFICATION APPROVAL SHEET

客　　户：
CUSTOMER _____

CUS PART NO _____ REV X1

SPECIFICATION 2.4~2.5/5.15~5.85GHz WIFI+BT Antenna L=90mm(Ø0.81 +MHF) weight _____

SUP PART NO SLEingB223410090

DATE 2023.04.10

SUP APPROVED

APPROVED	CHECKED	QA CHECKED	DESIGNED
Jaughm	HZY	LSY	XIcuf

CUS APPROVED

APPROVED	CHECKED	QA CHECKED	DESIGNED

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DONGGUAN SLEing INTEL-TECH CO.,LTD

MODIFICATION RECORD SHEET

REV.	Modification date	Summary of modification content	Signature	Approval
X1	2023.04.10	First Issue	Jerry	Jongrei

DONGGUAN SLEing INTEL-TECH CO.,LTD

承认书项目表 (Spec Item)

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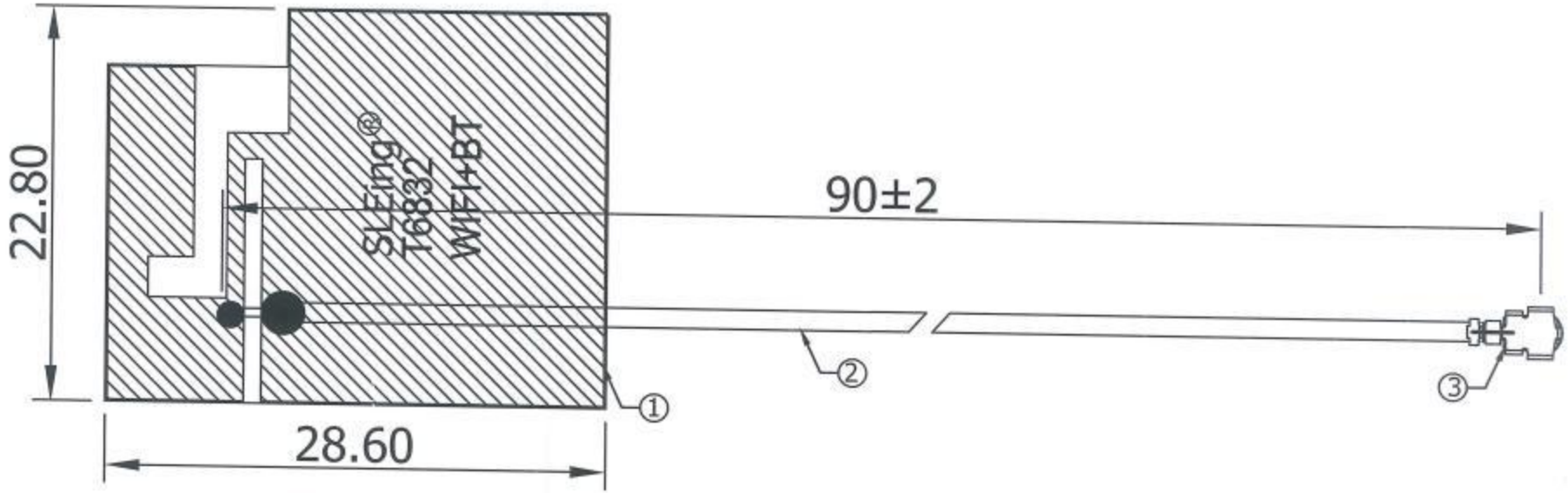
Give clear indication of:
1. The contents of the acknowledgement shall be arranged in order according to the items in the check sheet.
2. The number of copies of the acceptance letter shall be printed according to the customer's requirements, and the SGS report shall be stamped with the engineering seal.
3. All materials shall be confirmed by the customer. Any material/process/changes that may affect product quality and environmental quality must be re-sent to the customer for confirmation before import.
4. SGS report is valid for one year.
5. According to the contents attached to the actual acknowledgement, check the check form: "Yes" is provided, "no" is provided according to customer requirements.

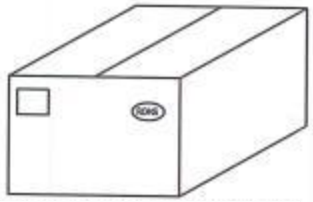
REV.	CONTENT	DATE
X1	First Sample	2023.04.10



Paster：3M 300LSE

Specification:
Frequency Rang:2.4~2.5/5.15~5.85GHz
Return Loss:-10dB or less
VSWR:1.92 Max

25pcs/Bundle
Packing:50pcs/bag



The outer box shall be labeled with the ROHS label and the material label each 1PCS

NO	PART NAME	DESCRIPTION	REMARK	Q'TY
3	Connector	MHF Plug for Φ0.81 Cable		1
2	Cable	Φ0.81mm Coaxial Cable Black,50Ω		1
1	FPCB	FPC,L28.6*W22.8*T0.1mm ,Color:Black	300LSE Adhesive	1

SLEing®
DONGGUAN SLEing INTEL-TECH CO.,LTD

UNIT:mm	ANGLES ±0.5°	X. ±0.3
SHEET: 1/1	0.XX ±0.05	XX. ±0.5
SCALE: 1/1		XXX. ±2.0

TOLERANCE UNLESS OTHERWISE SPECIFIED

CUSTOMER	
PART NO	
TITLE	WIFI+BT ANTENNA
S.L P/NO	SLEingB223410090

SIZE	DRAWED	CHECKED	APPROVED
A4	Jouyin	H Z4	Jerry

Test Reports

Electrical Properties	
Frequency	2.4~2.5/5.15~5.85GHz(带机测试)
Impedance	50 Ohm Nominal
V.S.W.R	≤1.92
Return Loss	-10 dB Max
Radiation	Omni-directional
Gain (Peak)	1.82 dBi
Polarization	Linear, Vertical
Admitted Power	2 W
Connector	MHF
Physical Properties	
Antenna Material	FPCB
Cable Type	Φ0.81mm Black
Operating Temp	-20℃-75℃
Storage Temp.	-20℃-75℃

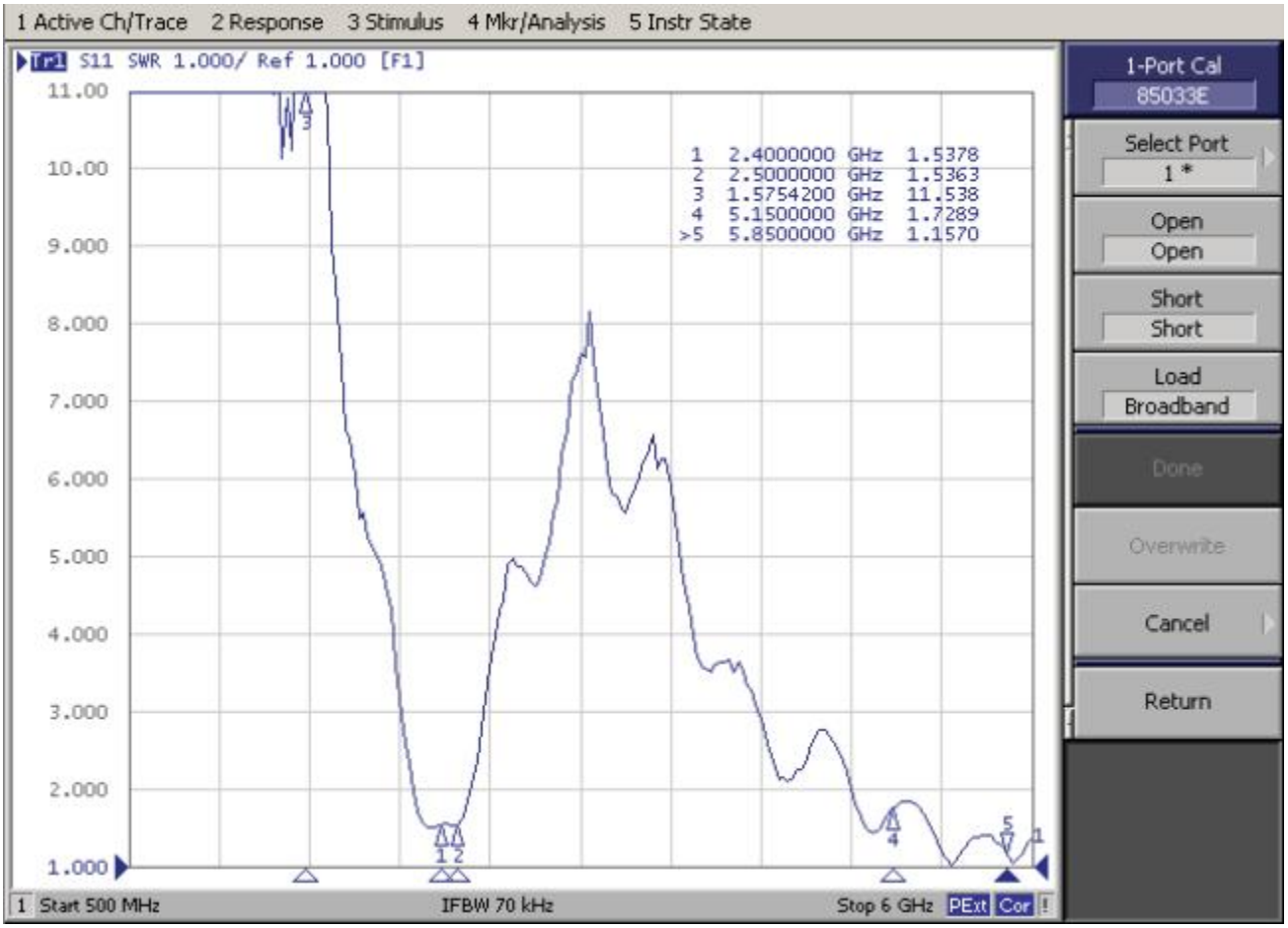
Antenna assembly diagram

Device	
Antenna	

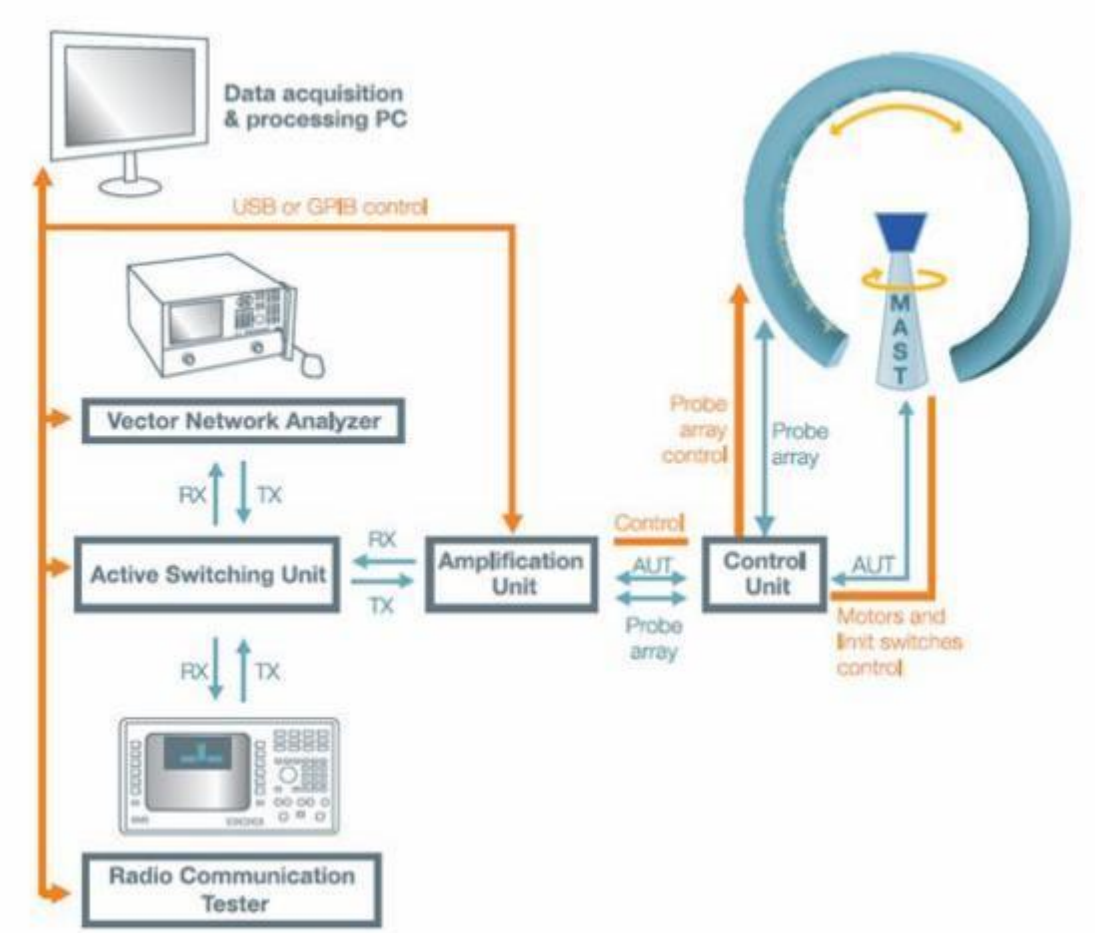
S Parameter Test

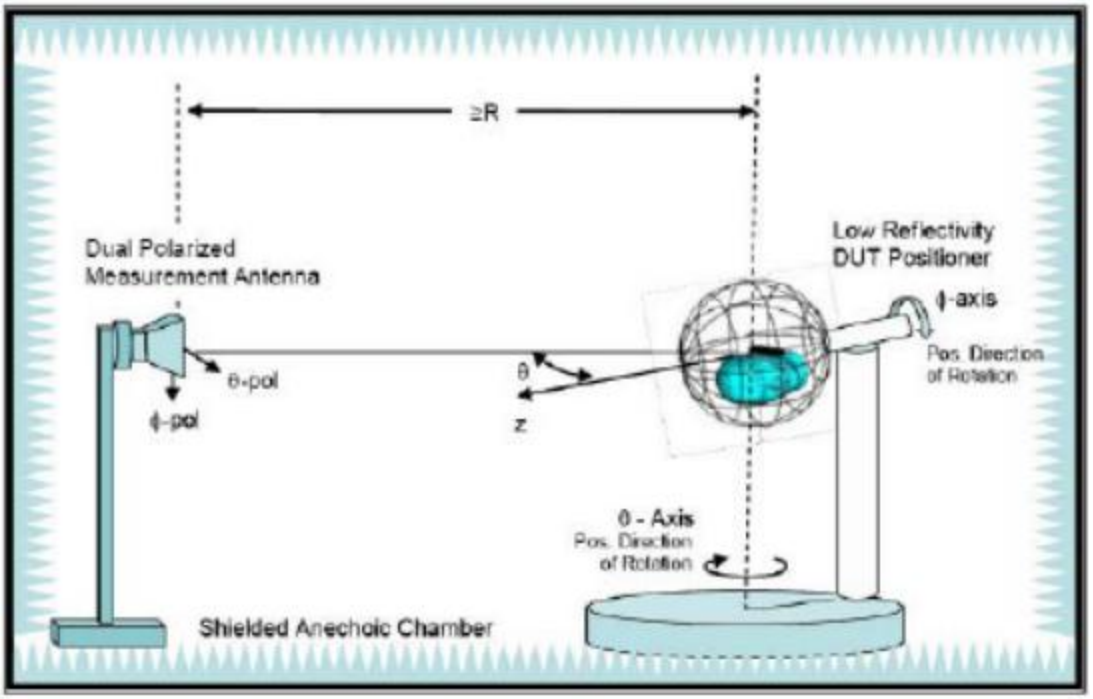
Agilent E5071C Network Analyzer	

RF Antenna(Return Loss)



Test Setup

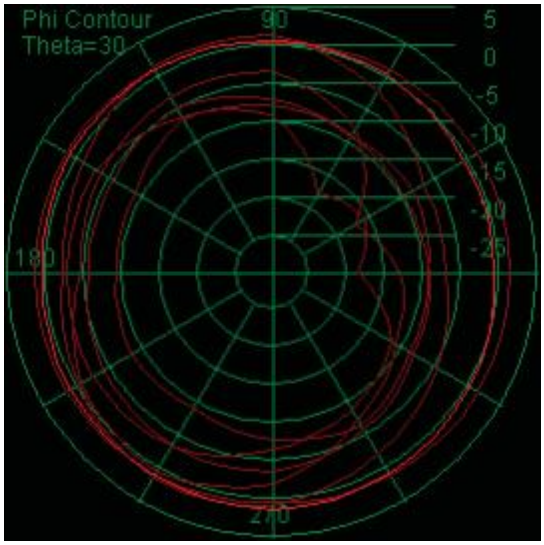

Data acquisition & processing PC
USB or GPIB control
Vector Network Analyzer
RX
TX
Active Switching Unit
RX
TX
Amplification Unit
Control
AUT
Probe array
Control Unit
AUT
Probe array control
Probe array
MAST
Motors and limit switches control
RX
TX
Radio Communication Tester


≥R
Dual Polarized Measurement Antenna
θ-pol
ϕ-pol
θ
z
Low Reflectivity DUT Positioner
ϕ-axis
Pos. Direction of Rotation
θ - Axis
Pos. Direction of Rotation
Shielded Anechoic Chamber

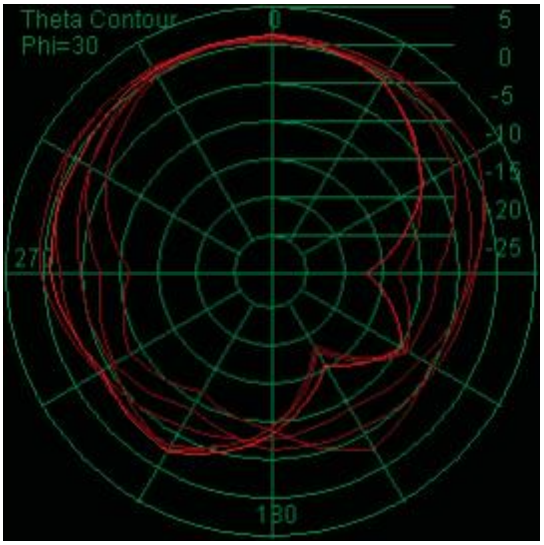
2.4G
Patten

1.3 2D Radiation patterns test results (Passive Antenna)

XZ Plane

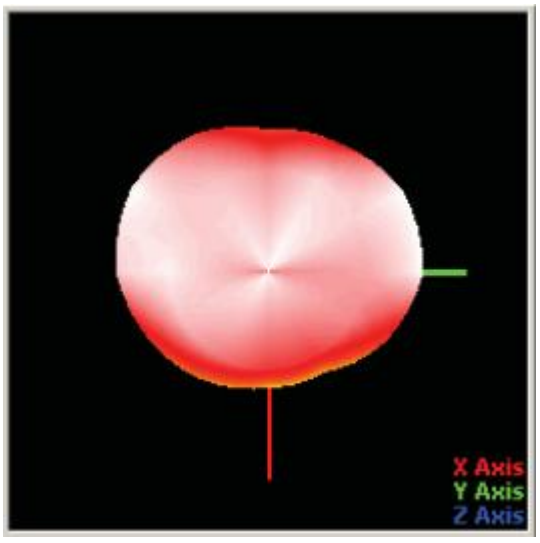


YZ Plane



1.5 3D Radiation patterns test results (Passive Antenna)

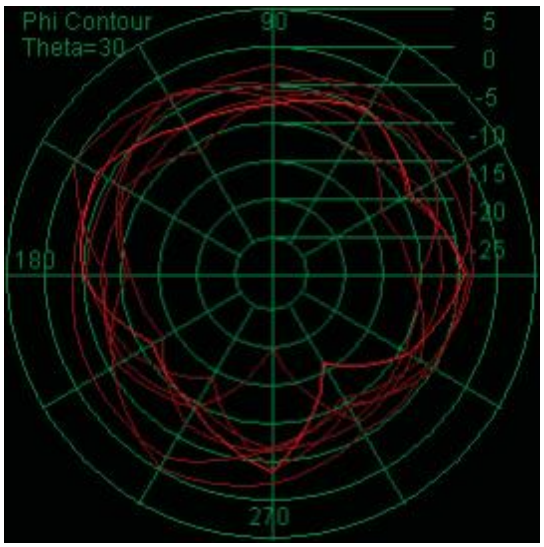
3D



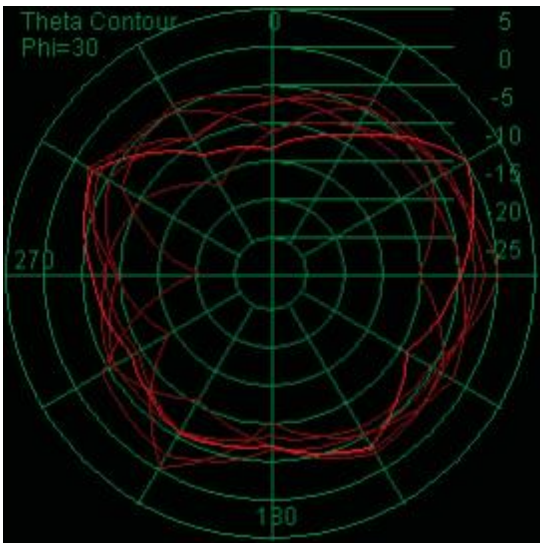
5.8G
Patten

1.3 2D Radiation patterns test results (Passive Antenna)

XZ Plane

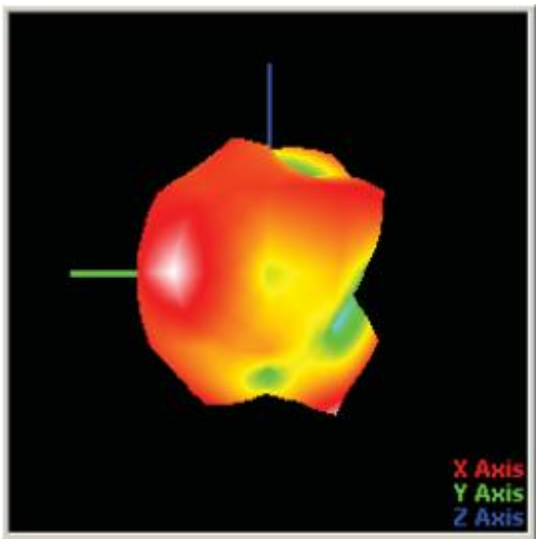


YZ Plane



1.5 3D Radiation patterns test results (Passive Antenna)

3D



Test Efficiency

2.4G

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dB)	Max (dBm)	Theta of Max	Phi of Max	Min (dBm)	Theta of Min	Phi of Min	AVG (dBm)	Max/Min (dB)	Max/AVG (dB)	Min/AVG (dB)
1	2412.0	2412.00	1.47	3.43	53.6%	-1.97	1.47	90	210	-24.44	0	120	-3.11	25.90	4.57	-21.33
2	2417.0	2417.00	1.39	3.35	53.7%	-1.96	1.39	90	210	-21.20	0	150	-2.99	22.59	4.38	-18.21
3	2422.0	2422.00	1.47	3.81	58.4%	-2.33	1.47	90	150	-22.83	0	120	-3.36	24.30	4.84	-19.46
4	2427.0	2427.00	1.33	3.73	57.7%	-2.39	1.33	90	150	-20.51	0	90	-3.51	21.84	4.85	-16.99
5	2432.0	2432.00	1.71	3.96	59.5%	-2.25	1.71	90	150	-19.78	0	60	-3.42	21.49	5.13	-16.36
6	2437.0	2437.00	1.31	3.70	57.7%	-2.39	1.31	90	150	-22.81	0	90	-3.48	24.12	4.79	-19.33
7	2442.0	2442.00	1.06	3.55	56.4%	-2.49	1.06	90	150	-18.25	0	30	-3.60	19.32	4.66	-14.66
8	2447.0	2447.00	1.02	3.43	57.5%	-2.41	1.02	90	150	-16.70	0	120	-3.65	17.72	4.67	-13.05
9	2452.0	2452.00	0.95	3.42	56.6%	-2.47	0.95	90	210	-18.81	150	0	-3.74	19.76	4.68	-15.07
10	2457.0	2457.00	1.57	3.88	58.8%	-2.31	1.57	90	150	-20.05	0	30	-3.43	21.61	5.00	-16.62
11	2462.0	2462.00	1.82	4.17	60.7%	-2.17	1.82	90	150	-18.55	0	60	-3.23	20.56	5.23	-15.32
12	2467.0	2467.00	1.16	3.47	58.7%	-2.31	1.16	90	150	-17.56	0	90	-3.54	18.72	4.70	-14.02
13	2472.0	2472.00	1.10	3.51	57.3%	-2.42	1.10	90	330	-19.15	0	0	-3.76	20.25	4.86	-15.39
14	2484.0	2484.00	0.94	3.24	58.8%	-2.30	0.94	90	30	-18.52	0	120	-3.54	19.46	4.48	-14.98

5.8G

Test Point ID	Freq. (MHz)	TRP (dBm)	Gain (dBi)	Directivity (dBi)	Efficiency (%)	Efficiency (dB)	Max (dBm)	Theta of Max	Phi of Max	Min (dBm)	Theta of Min	Phi of Min	AVG (dBm)	Max/Min (dB)	Max/AVG (dB)	Min/AVG (dB)
1	5120.0	5120.00	1.13	3.51	45.8%	-3.50	1.13	90	150	-20.48	90	270	-6.41	20.49	5.42	-15.07
2	5240.0	5240.00	0.85	4.44	43.9%	-3.72	0.85	90	30	-16.85	180	120	-4.97	17.67	5.70	-11.87
3	5360.0	5360.00	1.36	4.47	46.2%	-3.38	1.36	60	120	-18.88	150	180	-4.32	19.97	5.40	-14.56
4	5480.0	5480.00	1.23	4.49	48.5%	-3.29	1.23	90	120	-15.53	120	330	-3.76	16.73	4.95	-11.78
5	5560.0	5560.00	1.00	6.41	48.6%	-3.08	1.00	60	120	-12.84	0	120	-3.65	16.16	6.98	-9.18
6	5680.0	5680.00	1.57	4.31	41.3%	-3.01	1.57	90	120	-12.02	120	240	-3.71	13.32	5.02	-8.30
7	5760.0	5760.00	1.83	3.38	45.3%	-1.37	1.83	150	60	-11.98	150	180	-2.03	14.00	4.05	-9.94
8	5840.0	5840.00	0.90	3.50	48.4%	-3.40	0.90	150	330	-13.02	90	180	-4.33	13.12	4.43	-8.69
9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--