

AUT Report

Product Model: HB810

Manufacturer: TP-LINK CORPORATION PTE. LTD.

Test Date: 2024.4.25

Tested By: Shao Jinwei *Shao Jinwei*

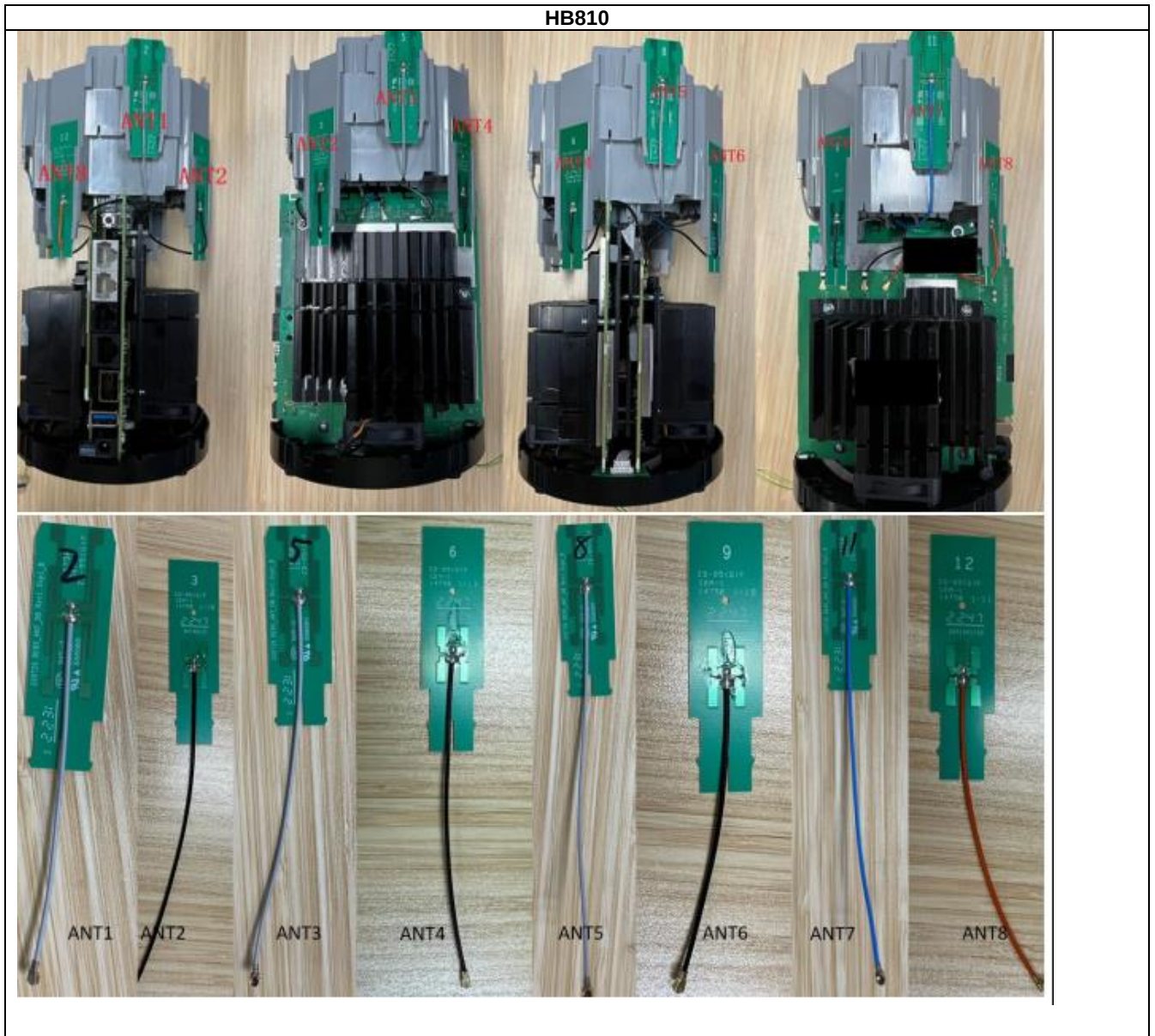
TP-LINK CORPORATION PTE. LTD.

7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987

Index

1. Antenna Distribution.....	3
2. Electrical Characteristics	3
3. Gain and Radiation Pattern	6
3.1 Measurement Procedure	6
3.2 Test Setup	7
3.3 S Parameter Test Data.....	8
3.4 Antenna Peak Gain	10
3.5 Antenna Radiation Pattern.....	11

1. Antenna Distribution



2. Electrical Characteristics

Ant1	
Frequency	2400~2500 & 5150~5895MHz
Impedance	50Ohm
Antenna Type	Dipole
Antenna Gain	1.98dBi@2400~2500MHz 2.99dBi@5150~5250MHz 2.99dBi@5250~5350MHz 2.99dBi@5470~5725MHz 2.99dBi@5725~5895MHz
Radiation pattern	Omni-Directional
P/N	3101505537

Ant2	
Frequency	5925~7125MHz
Impedance	50Ohm

Antenna Type	Dipole
Antenna Gain	2.98dBi@5925~6425MHz 2.98dBi@6425~6525MHz 2.98dBi@6525~6875MHz 2.98dBi@6875~7125MHz
Radiation pattern	Omni-Directional
P/N	3101505936

Ant3	
Frequency	2400~2500 &5150~5895MHz
Impedance	50Ohm
Antenna Type	Dipole
Antenna Gain	1.97dBi@2400~2500MHz 2.98dBi@5150~5250MHz 2.98dBi@5250~5350MHz 2.98dBi@5470~5725MHz 2.98dBi@5725~5895MHz
Radiation pattern	Omni-Directional
P/N	3101505538

Ant4	
Frequency	5925~7125MHz
Impedance	50Ohm
Antenna Type	Dipole
Antenna Gain	2.96dBi@5925~6425MHz 2.96dBi@6425~6525MHz 2.96dBi@6525~6875MHz 2.96dBi@6875~7125MHz
Radiation pattern	Omni-Directional
P/N	3101505937

Ant5	
Frequency	2400~2500 &5150~5895MHz
Impedance	50Ohm
Antenna Type	Dipole
Antenna Gain	1.96dBi@2400~2500MHz 2.98dBi@5150~5250MHz 2.98dBi@5250~5350MHz 2.98dBi@5470~5725MHz 2.98dBi@5725~5895MHz
Radiation pattern	Omni-Directional
P/N	3101505539

Ant6	
Frequency	5925~7125MHz
Impedance	50Ohm
Antenna Type	Dipole

Antenna Gain	2.99dBi@5925~6425MHz 2.99dBi@6425~6525MHz 2.99dBi@6525~6875MHz 2.99dBi@6875~7125MHz
Radiation pattern	Omni-Directional
P/N	3101505938

Ant7	
Frequency	2400~2500 & 5150~5895MHz
Impedance	50Ohm
Antenna Type	Dipole
Antenna Gain	1.99dBi@2400~2500MHz 2.97dBi@5150~5250MHz 2.97dBi@5250~5350MHz 2.97dBi@5470~5725MHz 2.97dBi@5725~5895MHz
Radiation pattern	Omni-Directional
P/N	3101505540

Ant8	
Frequency	5925~7125MHz
Impedance	50Ohm
Antenna Type	Dipole
Antenna Gain	2.98dBi@5925~6425MHz 2.98dBi@6425~6525MHz 2.98dBi@6525~6875MHz 2.98dBi@6875~7125MHz
Radiation pattern	Omni-Directional
P/N	3101505939

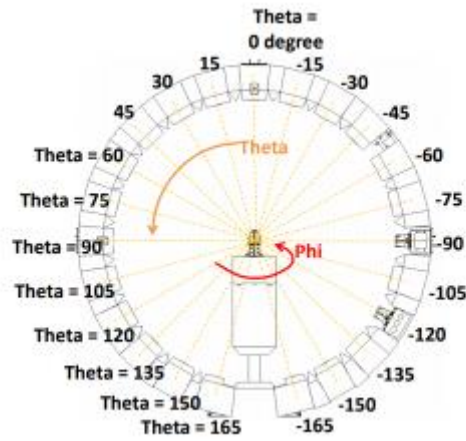


Figure 3-2

Before the measurement, calibrated the vector network analyzer, and then connected the input end of each antenna to the output end of the vector network analyzer, and evenly the antennas to be measured.

Test Equipment listed below:

Equipments	Model	Manufacturer	S/N	Cali. Interval	Cali. Due Date
Chamber	Rayzone2800	GTS(General Test System)	MY5347043 5	12months	2026/01/15
Vector Network Analyzer	E5071C	Keysight	MY46315238	24months	2026/03/13
GTS MaxSign100 Software	V2.1	GTS(General Test System)	/	/	/

3.2 Test Setup

The test setup was shown in Figure 3-3, 3-4:

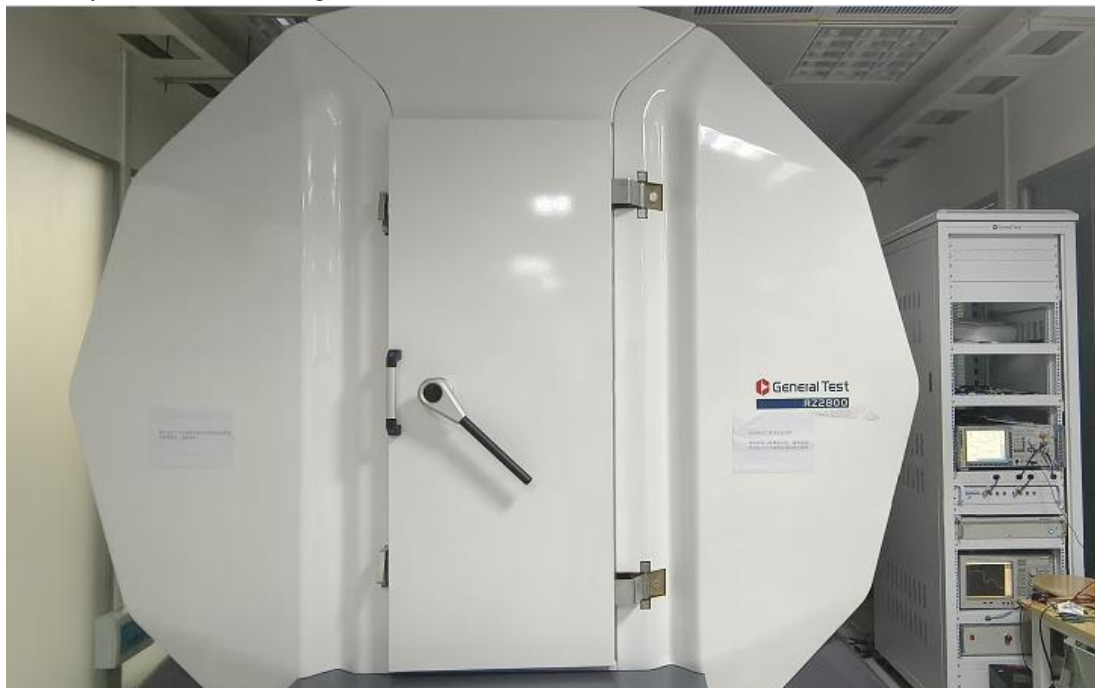


Figure 3-3

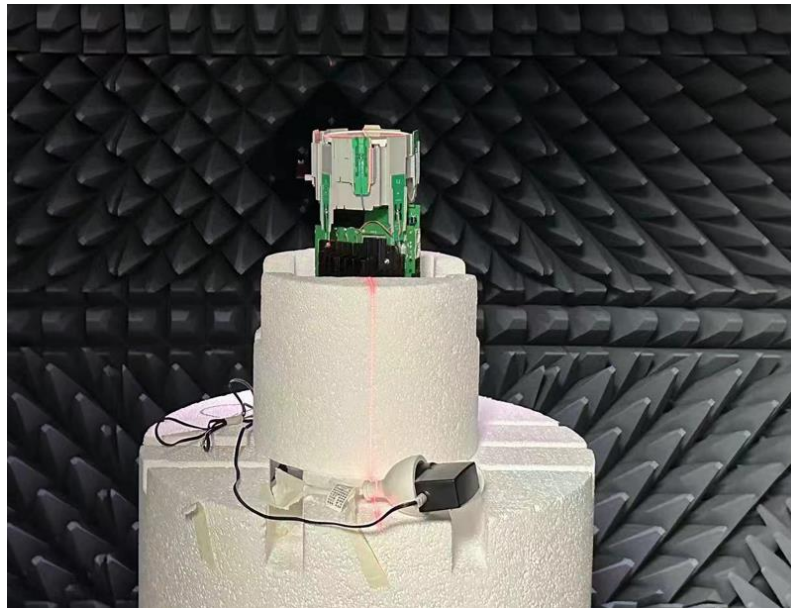
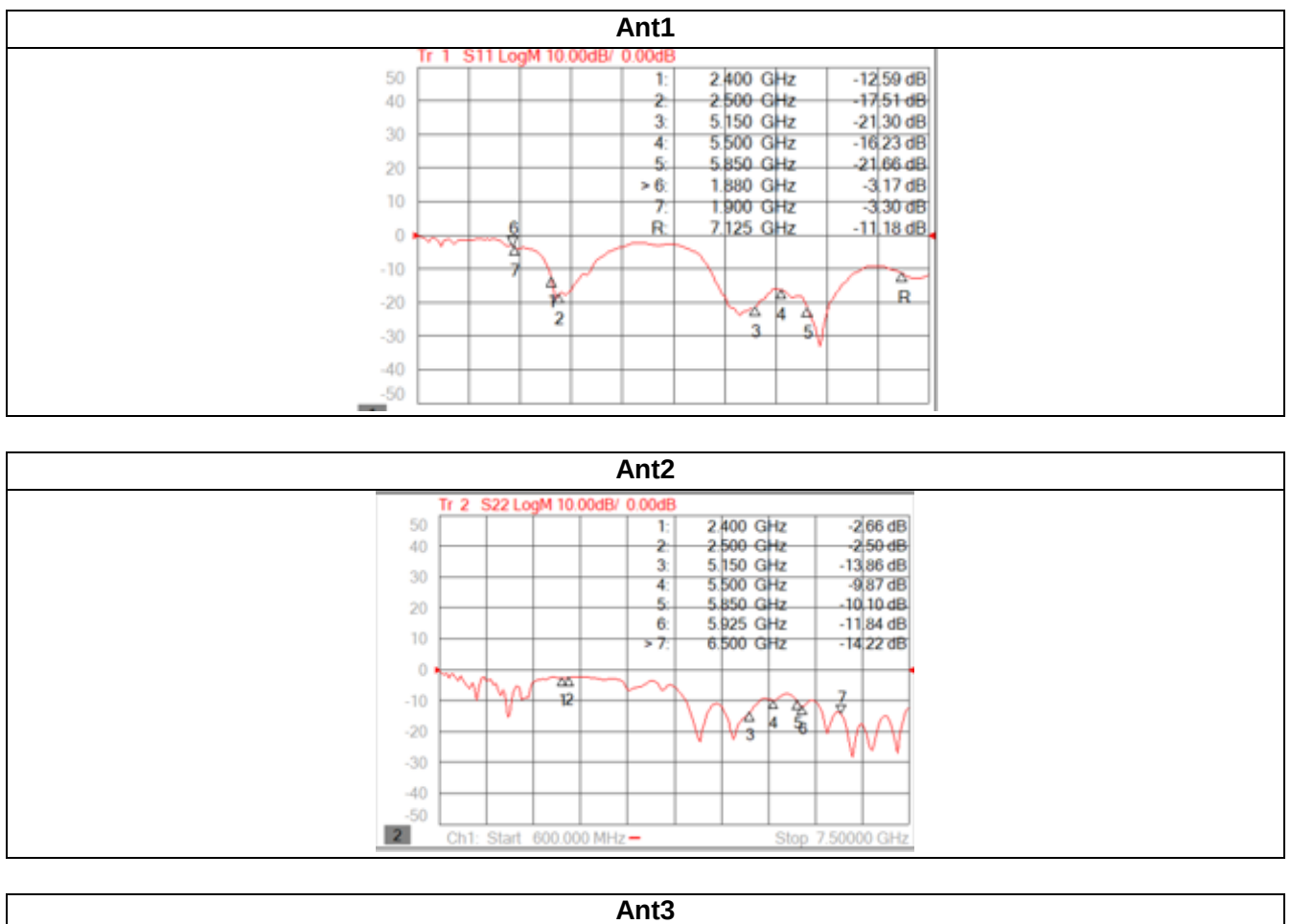
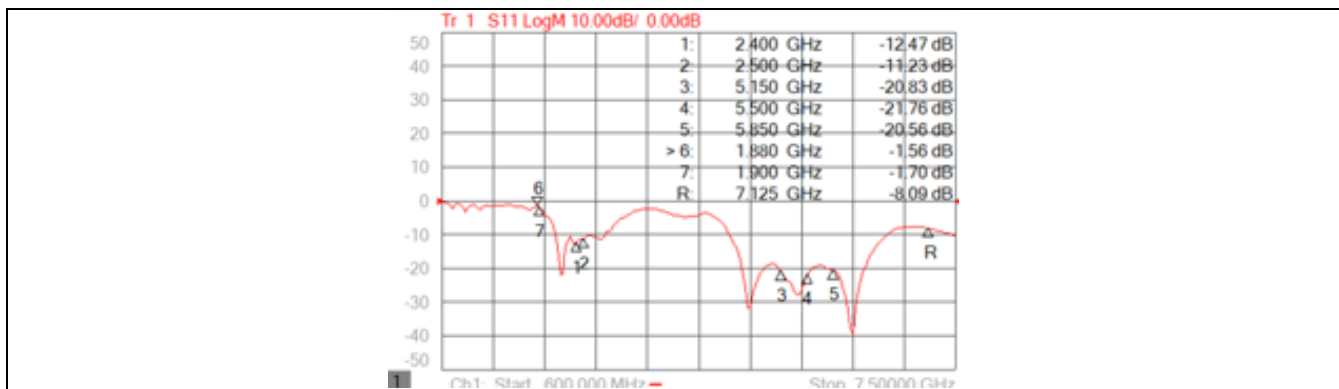


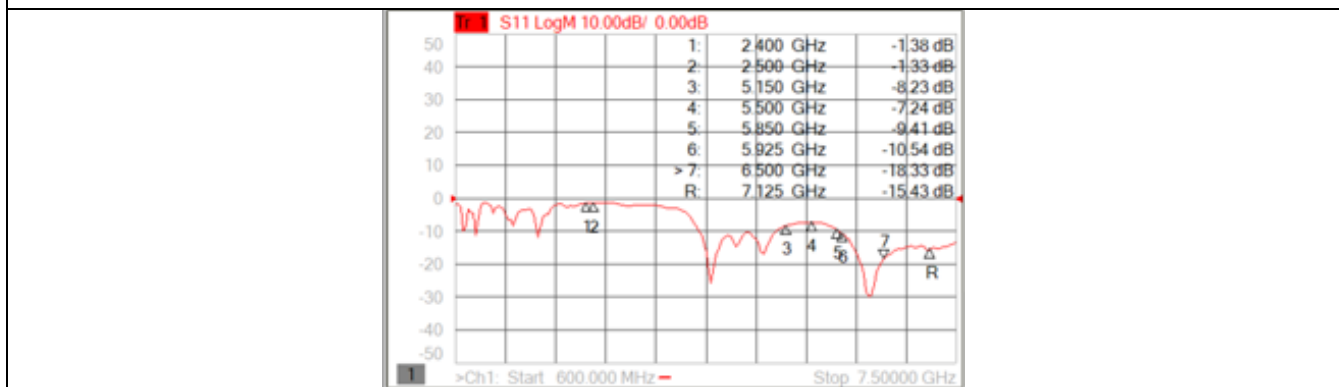
Figure 3-4

3.3 S Parameter Test Data

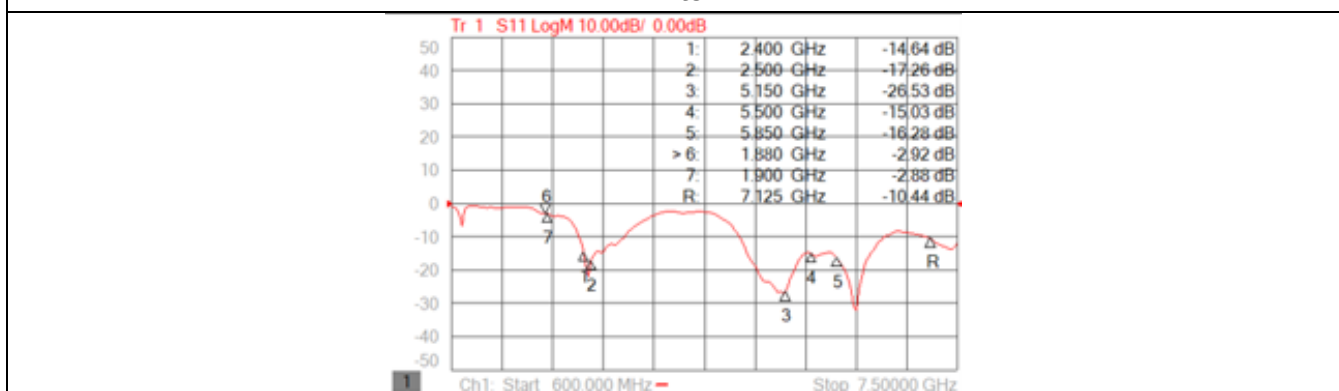




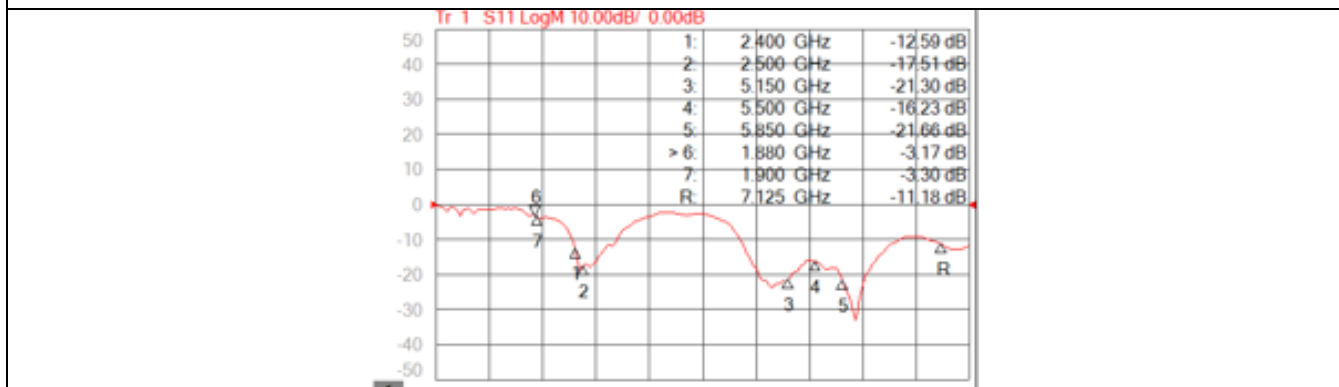
Ant4



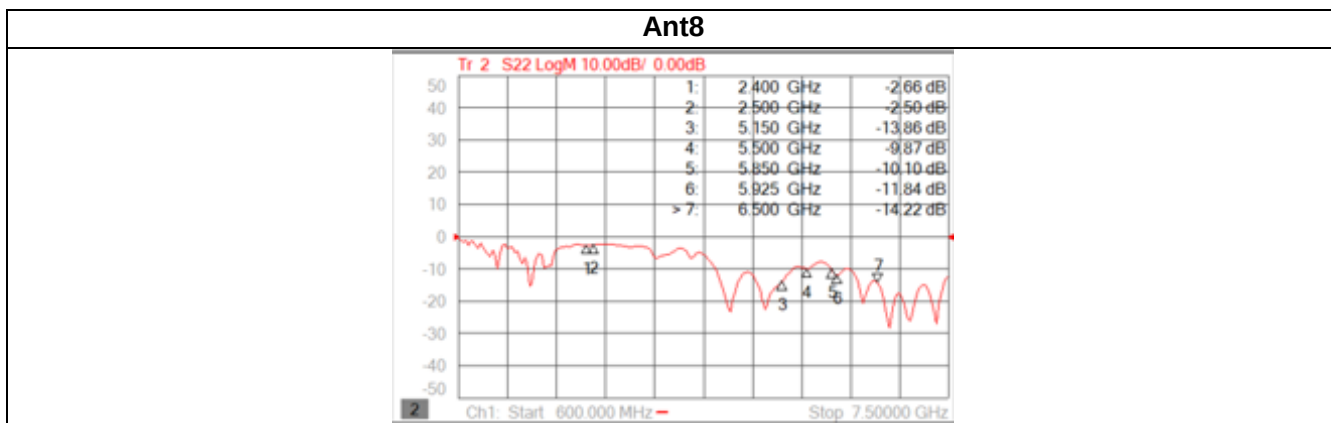
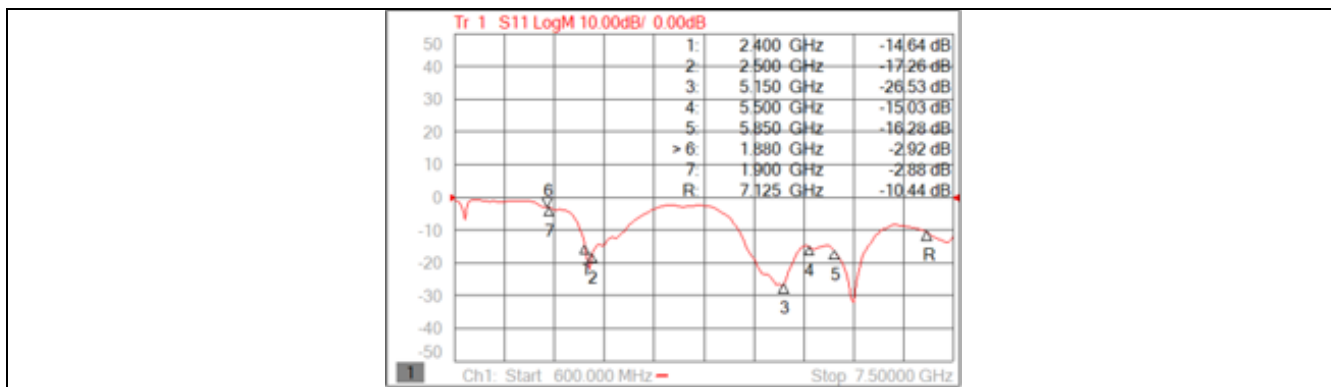
Ant5



Ant6



Ant7



3.4 Antenna Peak Gain

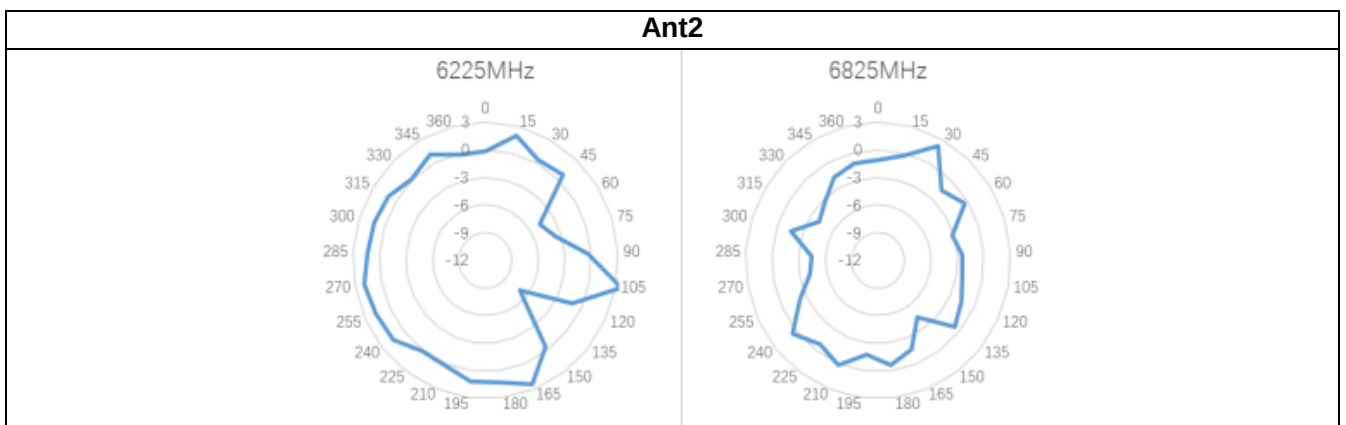
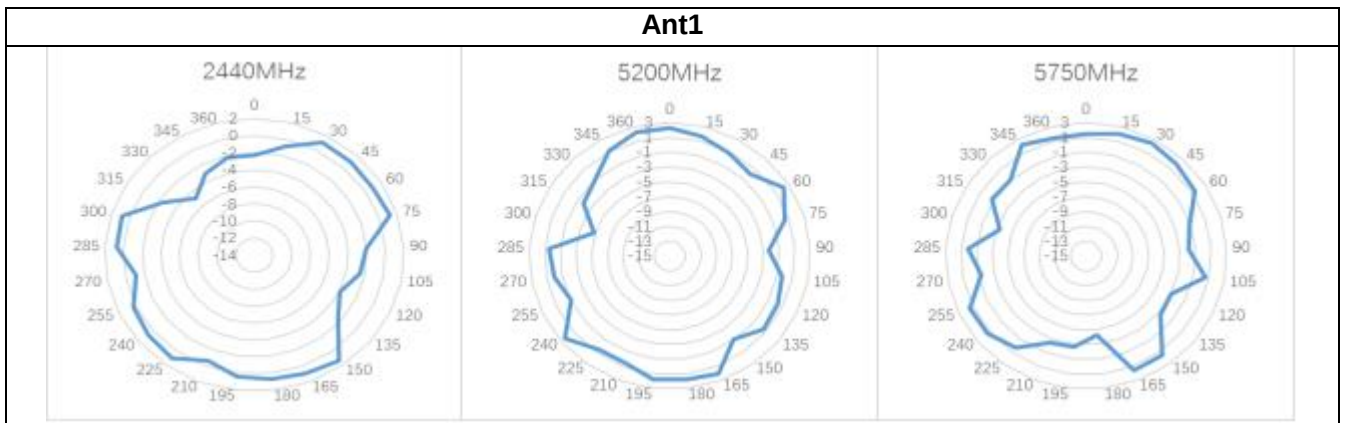
Frequency	2.45GHz 2400~2500MHz	5.2GHz 5150~5250MHz	5.3GHz 5250~5350MHz	5.6GHz 5470~5725MHz
Ant1 MaxGain(dBi)	1.98	2.99	2.99	2.99
Ant3 MaxGain(dBi)	1.97	2.98	2.98	2.98
Ant5 MaxGain(dBi)	1.96	2.98	2.98	2.98
Ant7 MaxGain(dBi)	1.99	2.97	2.97	2.97
Ant1 Polarization/ Φ (°) / θ (°)	Theta/300/90	Theta/0/90	Theta/15/90	Theta/30/90
Ant3 Polarization/ Φ (°) / θ (°)	Theta/60/90	Theta/315/90	Theta/270/90	Theta/255/90
Ant5 Polarization/ Φ (°) / θ (°)	Theta/165/90	Theta/165/90	Theta/225/90	Theta/315/90
Ant5 Polarization/ Φ (°) / θ (°)	Theta/0/90	Theta/315/90	Theta/300/90	Theta/255/90
Max Gain(dBi)	1.99	2.99	2.99	2.99

Frequency	5.8GHz 5725~5895MHz
Ant1 MaxGain(dBi)	2.99
Ant2 MaxGain(dBi)	2.98
Ant3 MaxGain(dBi)	2.98
Ant4 MaxGain(dBi)	2.97
Ant1 Polarization/ Φ (°) / θ (°)	Theta/30/90
Ant3 Polarization/ Φ	Theta/255/90

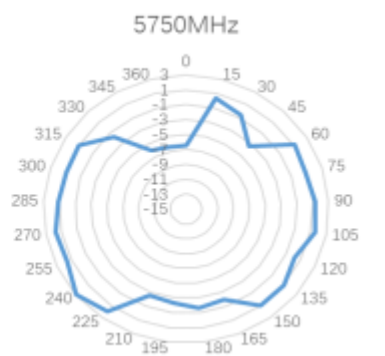
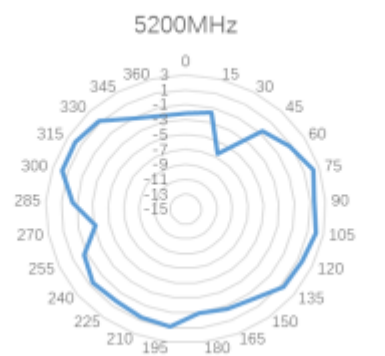
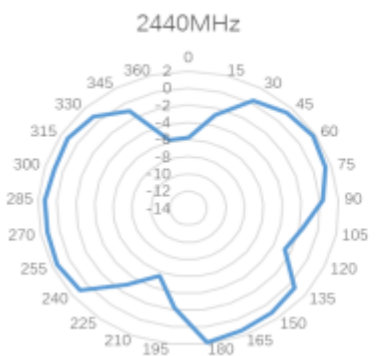
(°) / θ (°)	
Ant5 Polarization/ Φ (°) / θ (°)	Theta/315/90
Ant7 Polarization/ Φ (°) / θ (°)	Theta/255/90
Max Gain(dBi)	2.99

Frequency	6.175GHz 5925~6425MHz	6.475GHz 6425~6525MHz	6.725GHz 6525~6875MHz	7.025GHz 6875~7125MHz
Ant2 MaxGain(dBi)	2.98	2.98	2.98	2.98
Ant4 MaxGain(dBi)	2.96	2.96	2.96	2.96
Ant6 MaxGain(dBi)	2.99	2.99	2.99	2.99
Ant8 MaxGain(dBi)	2.98	2.98	2.98	2.98
Ant1 Polarization/ Φ (°) / θ (°)	Theta/105/90	Theta/240/90	Theta/165/90	Theta/105/90
Ant2 Polarization/ Φ (°) / θ (°)	Theta/345/90	Theta/300/90	Theta/165/90	Theta/105/90
Ant3 Polarization/ Φ (°) / θ (°)	Theta/15/90	Theta/0/90	Theta/15/90	Theta/30/90
Ant4 Polarization/ Φ (°) / θ (°)	Theta/300/90	Theta/165/90	Theta/225/90	Theta/315/90
Max Gain(dBi)	2.99	2.99	2.99	2.99

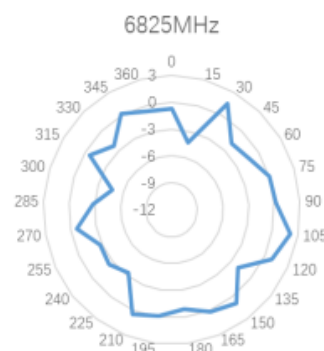
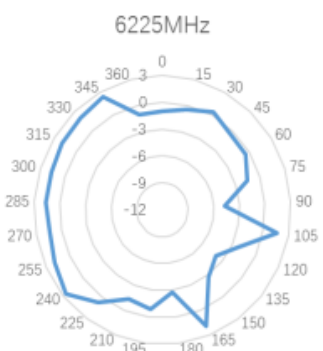
3.5 Antenna Radiation Pattern



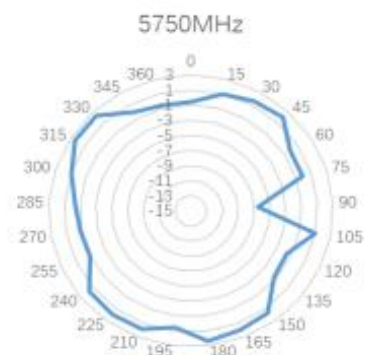
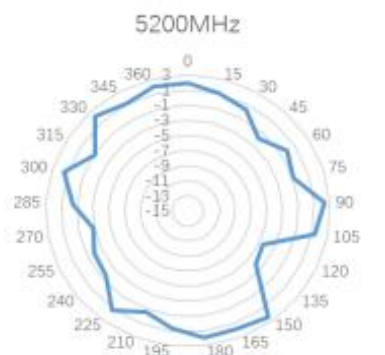
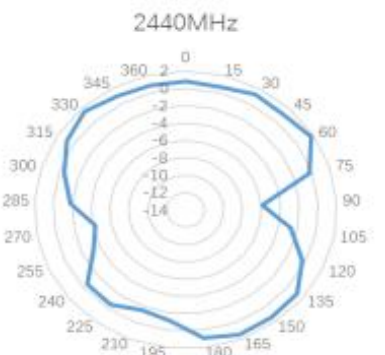
Ant3



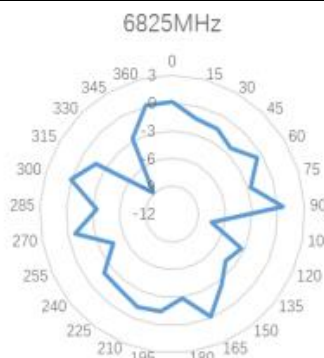
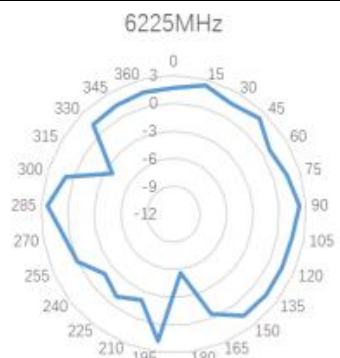
Ant4



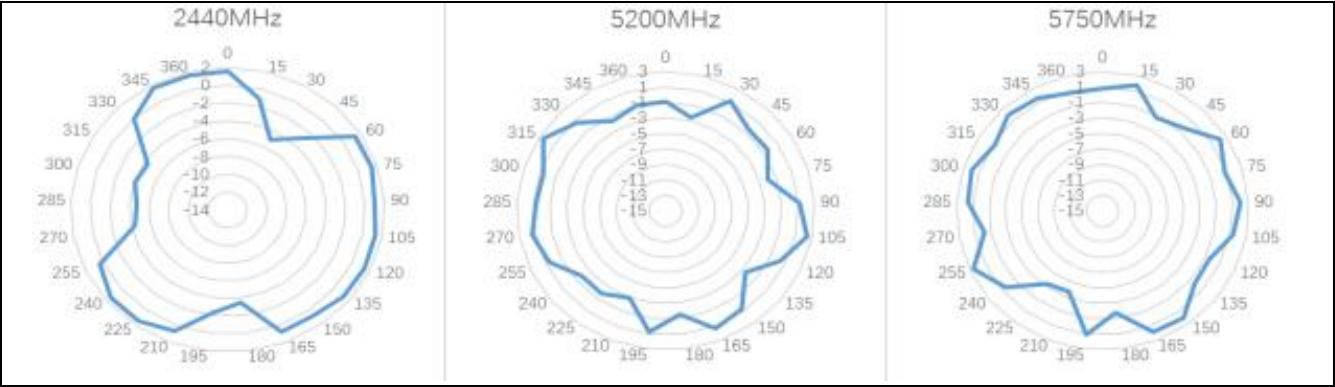
Ant5



Ant6



Ant7



Ant8

