



ANTENNA DATASHEET

AOT PN: ANT-AP1571-AT06

REVISION HISTORY

REV.	Description	Date
1.0	First release	Jun.13/2025

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└ AOT Wireless Technology Co., Limited ┘

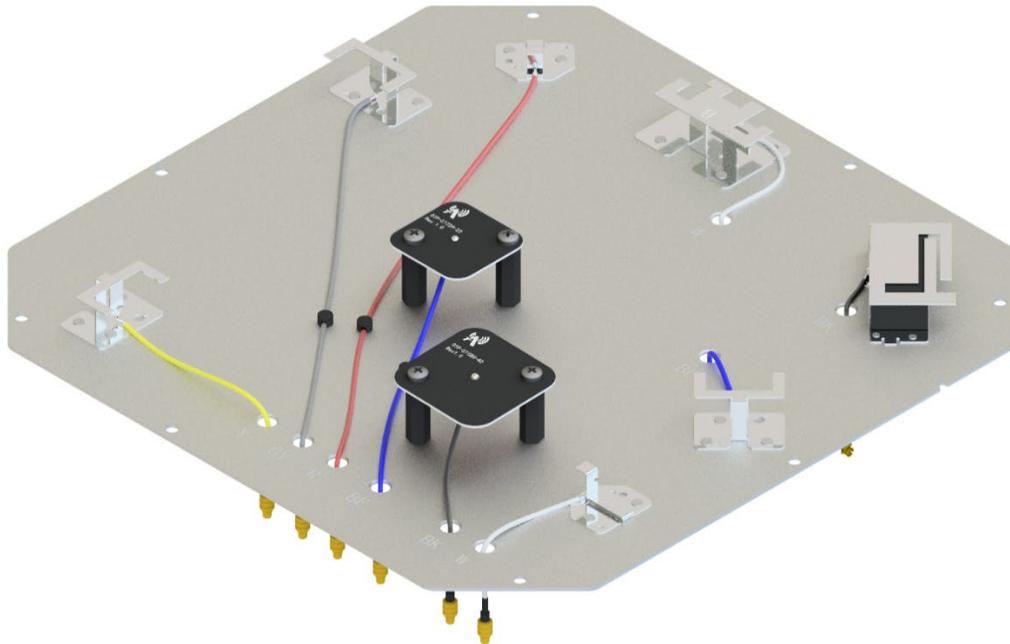


ANT-AP1571-AT06 Antenna

Based on AOT's patented technology, the Model ANT-AP1571-AT06 Antenna features provides a high performance, internal antenna solution. The antenna supports IEEE 802.11 a/b/g/n/ac/ax/be/BLE/gnss wireless standards and is intended for access points. The solution is suitable for low-cost, high-performance antenna applications.

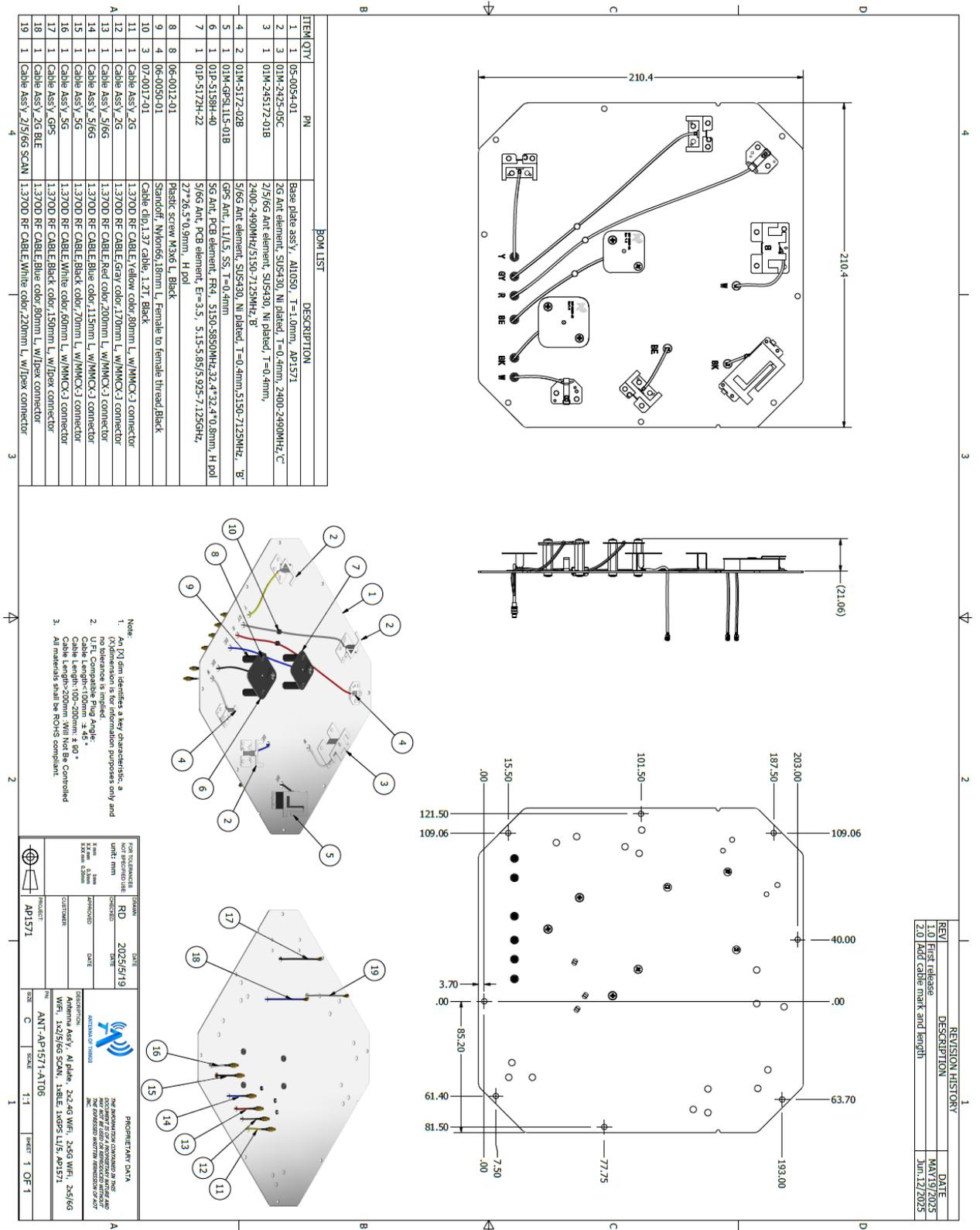
Features Overview

- Covering 1176/1575/2400-2490/5150-5850/5925-7125MHz frequency
- Off-board, Cable-fed
- Low Cost, High performance
- RoHS compliant.

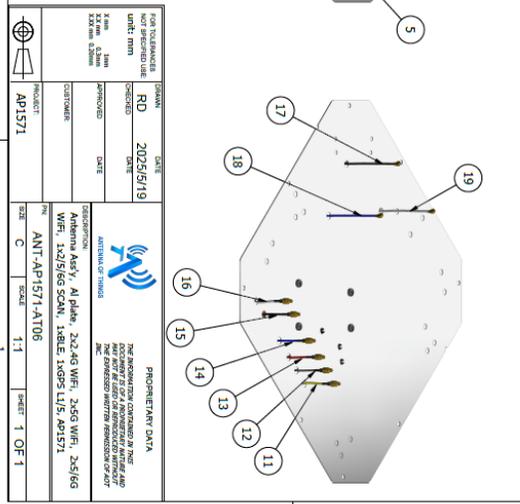
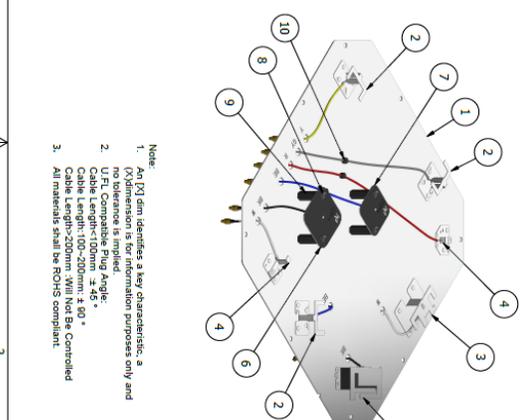




Assembly Drawing



ITEM QTY	PN	DESCRIPTION
1	05-0054-01	Base plate Assy, Al1050, T=1.0mm, AP1571
2	01M-2425-06C	26 Ant element, SUS430, NI plated, T=0.4mm, 2400-2490MHz, C
3	01M-245172-01B	2/5/66 Ant element, SUS430, NI plated, T=0.4mm, 2400-2490MHz/5150-7125MHz, B
4	01M-5172-02B	5/66 Ant element, SUS430, NI plated, T=0.4mm, 5150-7125MHz, B
5	01M-GP9L11.5-01B	GPS Ant, 11/1.5, SS, T=0.4mm
6	01P-5158H-40	56 Ant, PCB element, FR4, 5150-5850MHz, 22.4*32.4*0.8mm, H pol
7	01P-5172H-22	5/66 Ant, PCB element, FR-3.5, 5.15-5.85/5.925-7.125GHz, 27*26.5*0.9mm, H pol
8	06-0012-01	Plastic screw M3x6 L, Black
9	06-0050-01	Spanrolf Nylon6, 18mm L, Female to female thread/Black
10	07-0017-01	Cable clip, 1.37 cable, 1.2T, Black
11	1370D RF CABLE, Grey color, 80mm L, W/MNCK-3 connector	
12	1370D RF CABLE, Grey color, 70mm L, W/MNCK-3 connector	
13	1370D RF CABLE, Red color, 200mm L, W/MNCK-3 connector	
14	1370D RF CABLE, Blue color, 115mm L, W/MNCK-3 connector	
15	1370D RF CABLE, Blue color, 70mm L, W/MNCK-3 connector	
16	1370D RF CABLE, White color, 60mm L, W/MNCK-3 connector	
17	1370D RF CABLE, Black color, 150mm L, W/Ipex connector	
18	1370D RF CABLE, Blue color, 80mm L, W/Ipex connector	
19	1370D RF CABLE, White color, 220mm L, W/Ipex connector	



Note:
 1. All DI dim identifies a key characteristic, a no tolerance is implied.
 2. UFL Connector Ring Angle
 3. Cable Lengths >200mm, Will Not Be Controlled
 All materials shall be RoHS compliant.

REV	DATE	DESCRIPTION
1.0	MAY 19 / 2025	First release
2.0	JUN 12 / 2025	Add Cable Mark and length

FORMA	DATE	PROBATIONARY DATA
RD	2025/5/19	THE INFORMATION CONTAINED IN THIS DATASHEET IS UNCLASSIFIED AND IS NOT TO BE RELEASED TO THE PUBLIC WITHOUT THE EXPRESS WRITTEN PERMISSION OF AOT
APPROVED	DATE	
CUSTOMER		
PROJECT	ANT-AP1571-A106	
SIZE	C	SCALE
	1:1	SHEET
		1 OF 1



Specifications and Interface

Wireless Standard	IEEE 802.11 a/b/g/n/ac/ax/be/BLE/gnss
Frequency Bands	1176MHz /1575MHz/2400-2490MHz/5150-5850MHz/5925-7125MHz
Peak Realized Gain	1.6dBi@1.176GHz/2.1dBi@1.575GHz/6.0dBi@2.4GHz/8.6dBi@5GHz/ 7.2dBi@6GHz/6.8dBi@BLE/9.0dBi@Scan
Realized Efficiency	>28%@1.176GHz/>49%@1.575GHz />80%@2.4GHz/>58%@5GHz/ >63%@6GHz/>81%@BLE/>60%@Scan
VSWR	<2.0@1.176GHz/<2.0@1.575GHz /<2.0@2.4GHz/<2.0@5GHz/ <2.0@6GHz/<2.0@BLE/<2.0@Scan
Polarization	Linear Polarization
Radiation Pattern	Omni-directional
Feed Impedance	50Ω
Power Handling	30dBm
Antenna Structure	PCB/Metal stamping Antenna
Feeding Description	Cable Feeding
Antenna Dimensions	210.4x 210.4 x 22.06(mm)
Weight	139.5 g
Temperature Range	Operating temperature: -40° C to +85° C (-40° F to +185° F) Storage temperature: -40° C to +85° C (-40° F to +185° F)

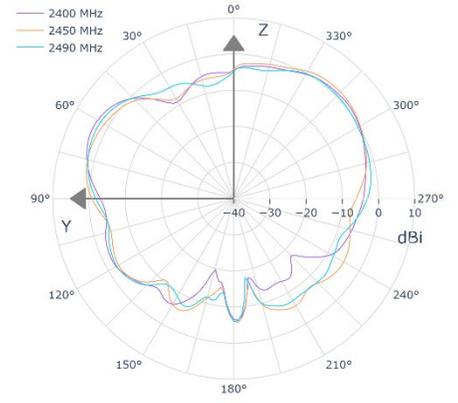
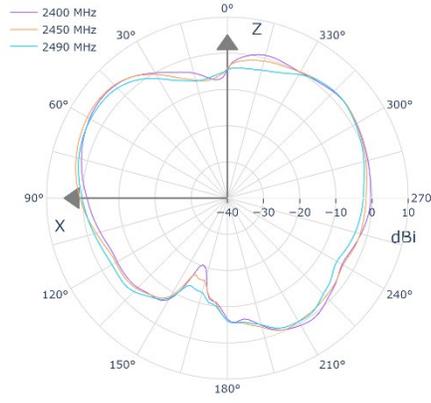
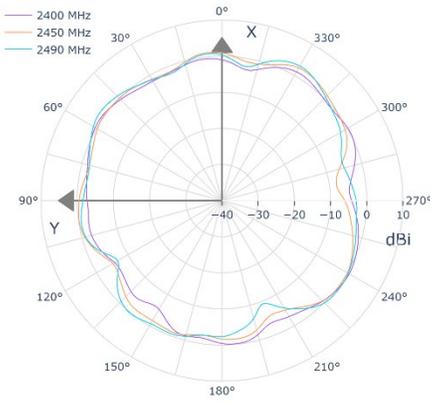


Radiation Patterns

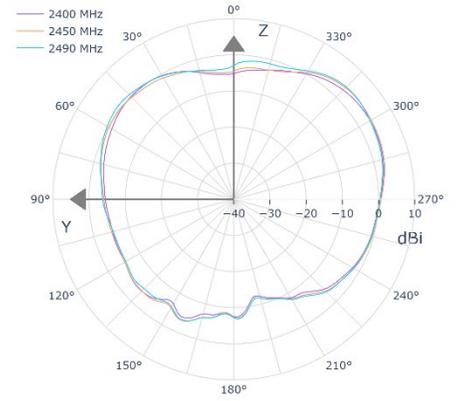
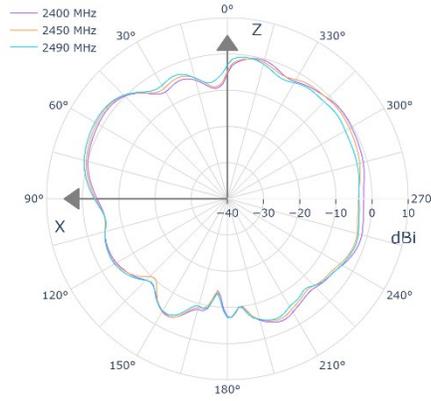
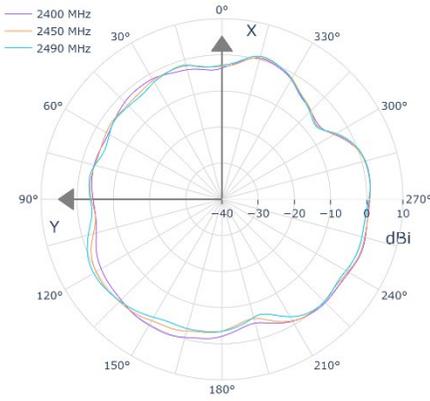
Radiation patterns were taken with the antenna in testing Chamber



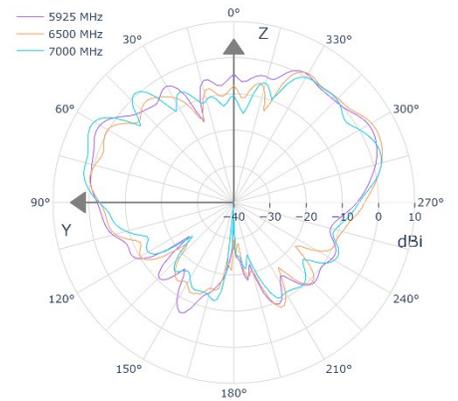
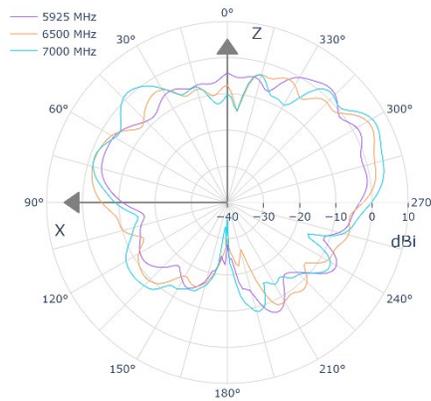
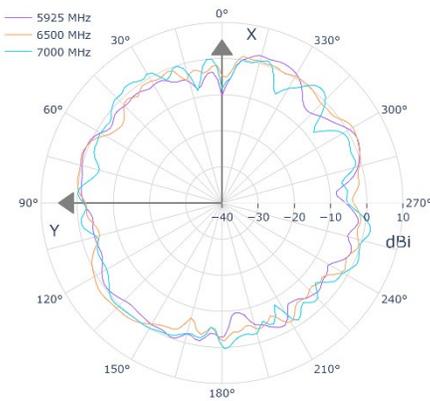
Antenna integrated in customer's housing for radiation pattern



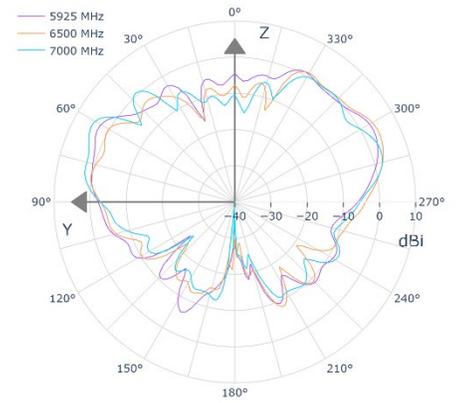
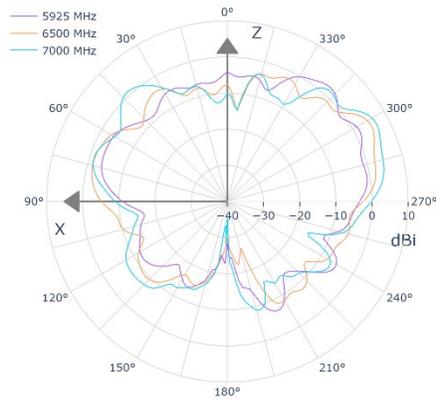
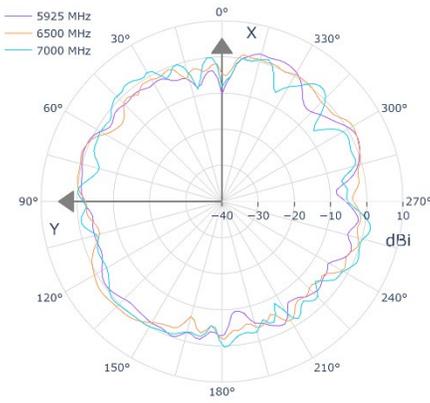
Model ANT-AP1571-AT06 Antenna Radiation Patterns at A1-2G4



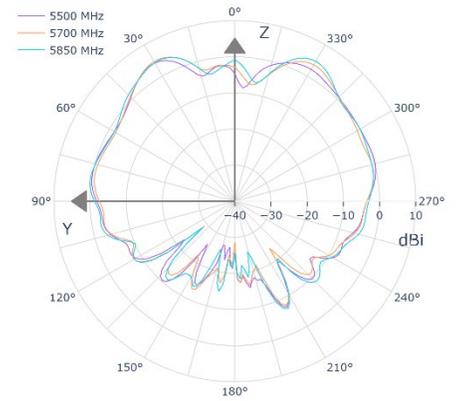
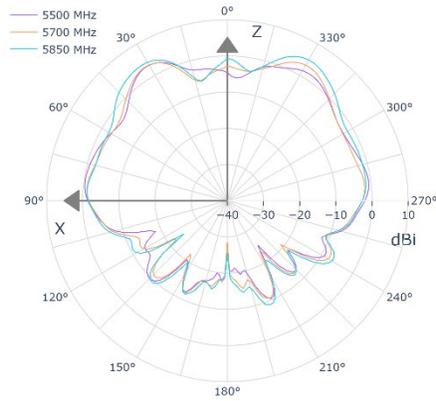
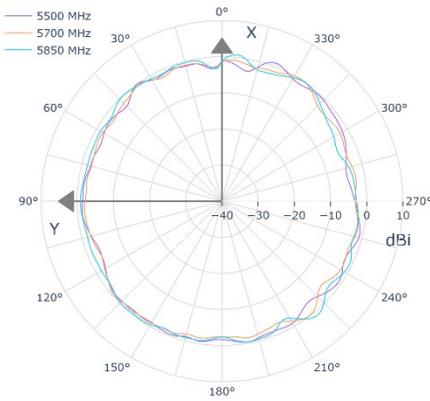
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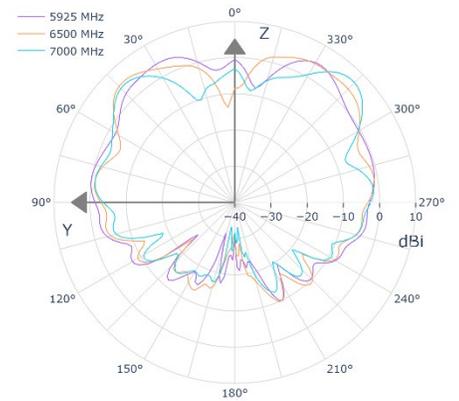
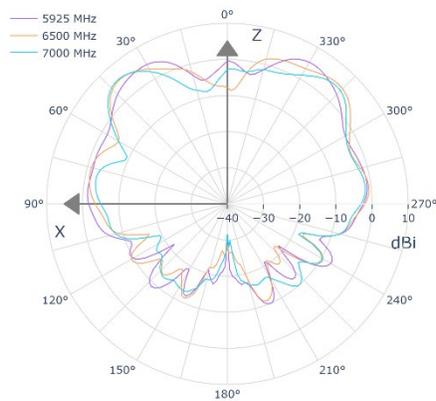
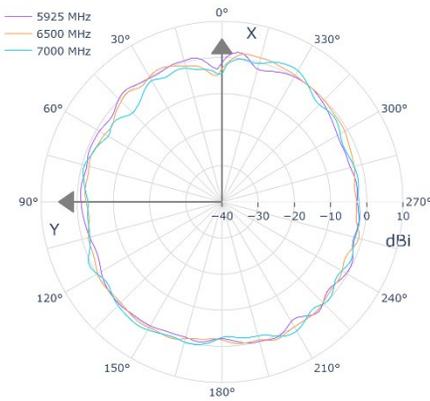
Model ANT-AP1571-AT06 Antenna Radiation Patterns at A3-5GH



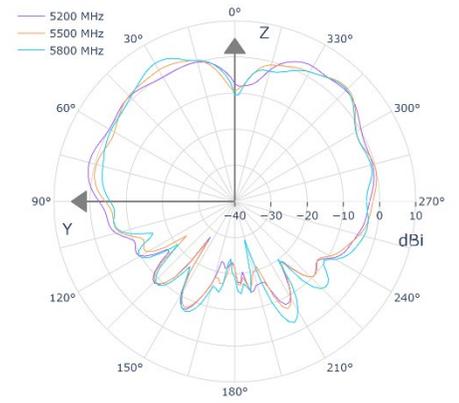
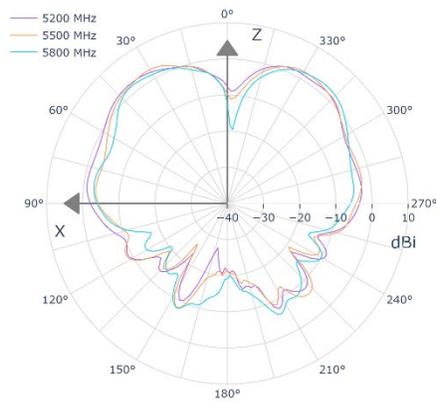
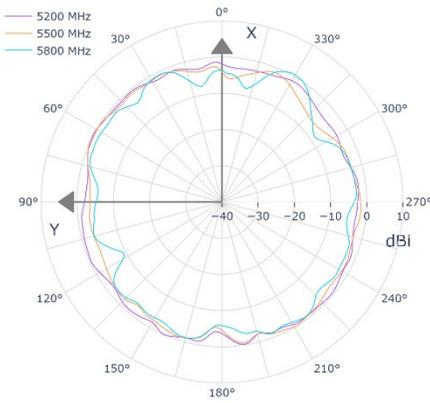
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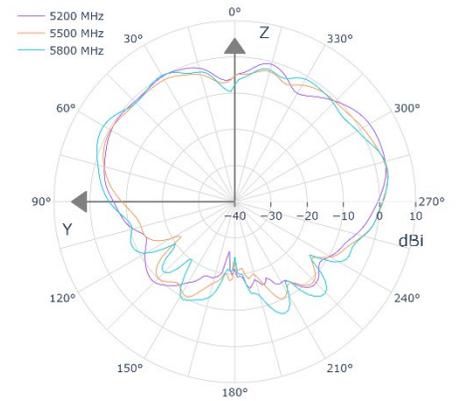
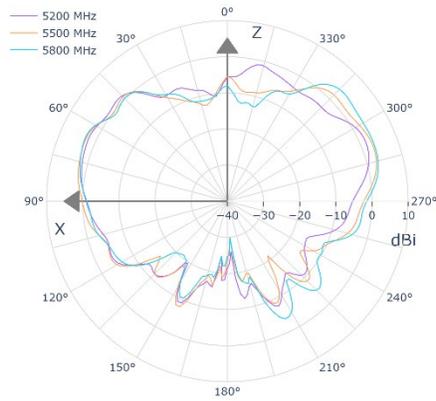
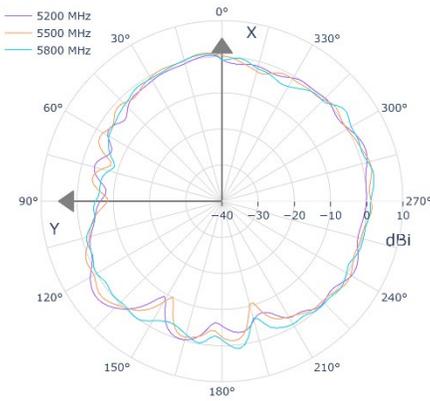
Model ANT-AP1571-AT06 Antenna Radiation Patterns at A4-5GH



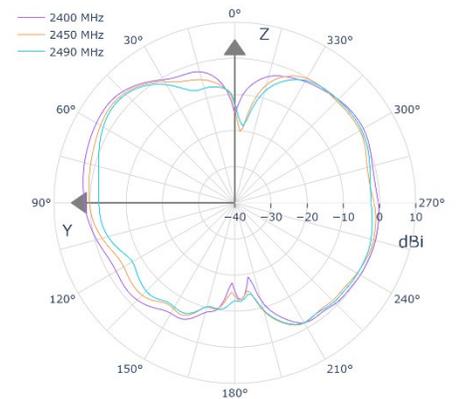
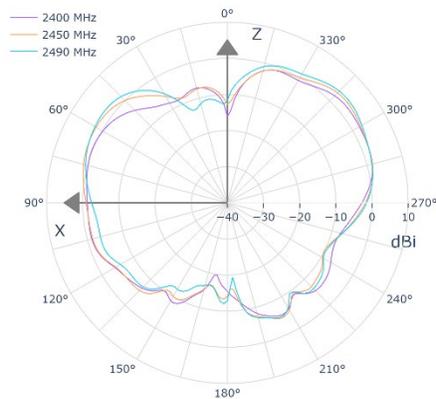
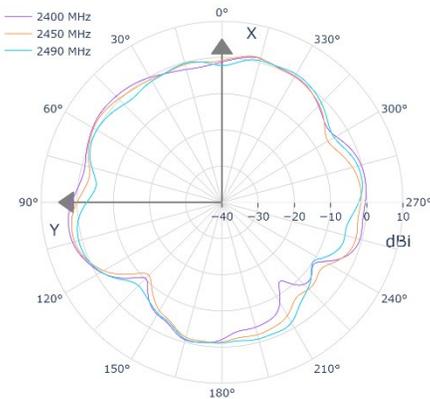
Model ANT-AP1571-AT06 Antenna Radiation Patterns at A4-6G



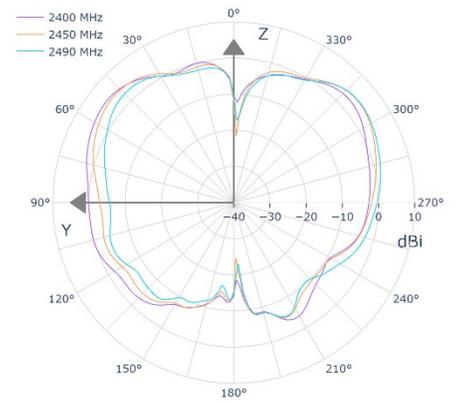
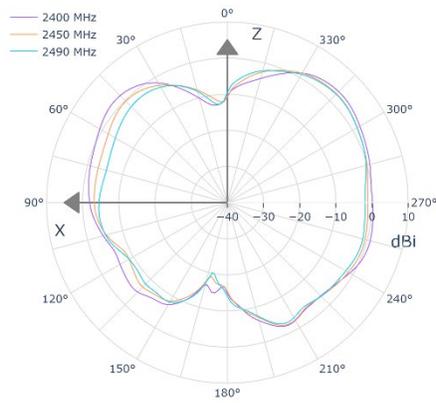
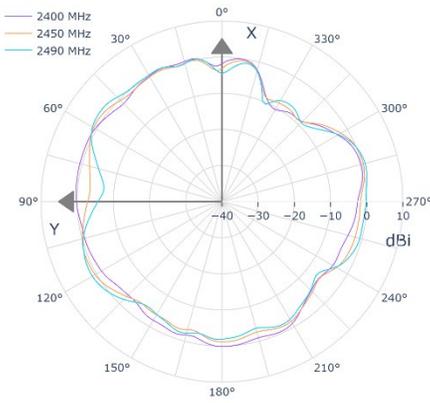
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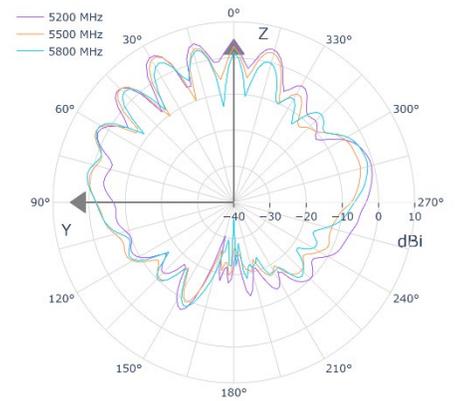
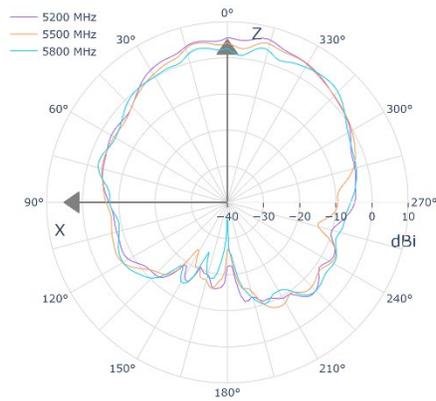
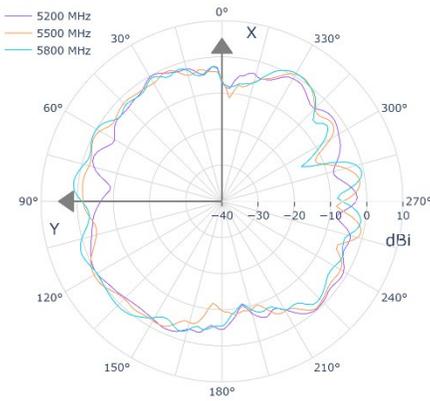
Model ANT-AP1571-AT06 Antenna Radiation Patterns at A6-5G



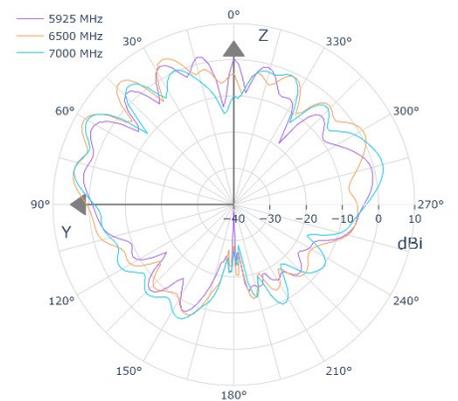
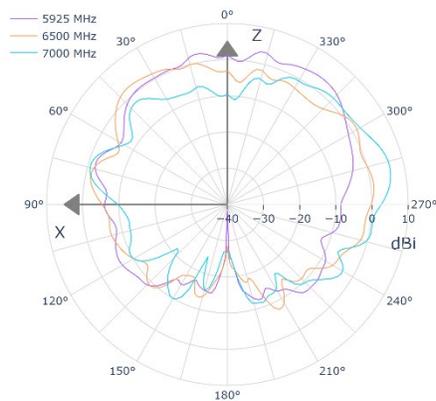
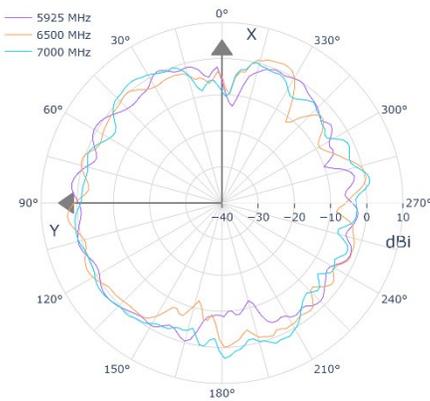
Model ANT-AP1571-AT06 Antenna Radiation Patterns at A7-BLE



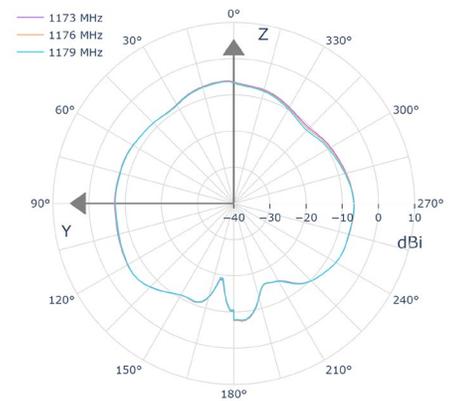
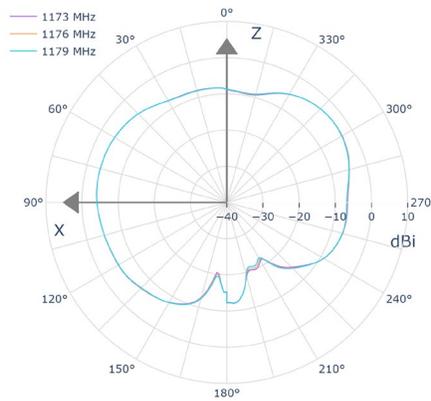
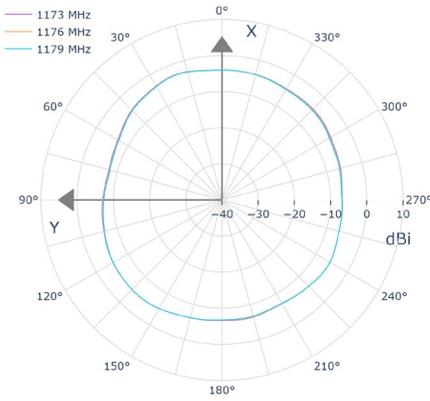
Model ANT-AP1571-AT06 Antenna Radiation Patterns at A8-Scan-2G4



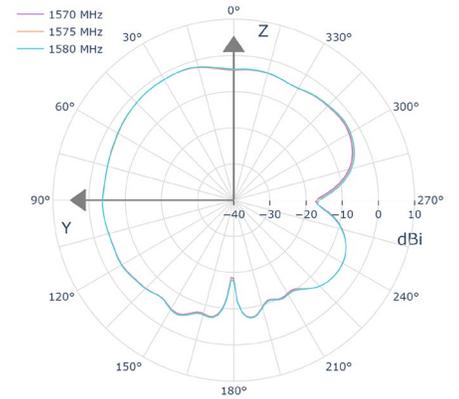
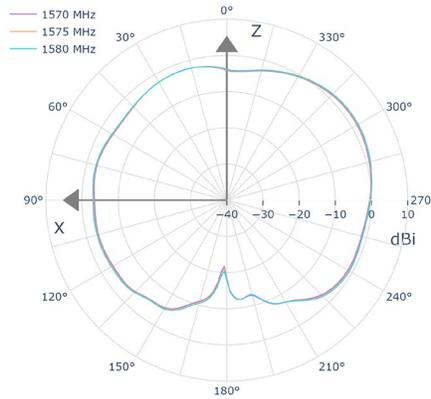
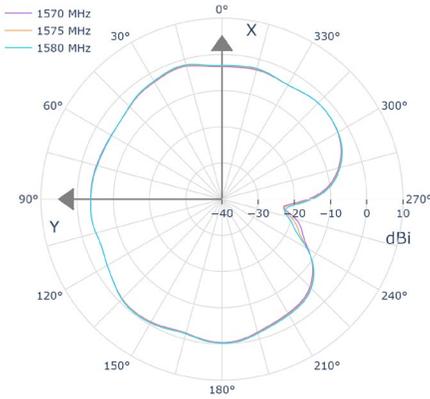
Model ANT-AP1571-AT06 Antenna Radiation Patterns at A8- Scan-5G



Model ANT-AP1571-AT06 Antenna Radiation Patterns at A8- Scan-6G



Model ANT-AP1571-AT06 Antenna Radiation Patterns at A9-GNSS-L1



Model ANT-AP1571-AT06 Antenna Radiation Patterns at A9-GNSS-L5



Realized Efficiency & Peak Realized Gain

Frequency	Efficiency			
(MHz)	A1-2G4	A2-2G4	A7-BLE	A8-Scan
2400	80	83	81	84
2410	82	84	82	84
2420	82	84	82	84
2430	82	84	81	84
2440	83	84	81	84
2450	83	83	81	84
2460	83	83	83	84
2470	83	82	84	84
2480	83	81	84	83
2490	83	80	84	83

Frequency	Peak Gain			
(MHz)	A1-2G4	A2-2G4	A7-BLE	A8-Scan
2400	5.5	5.0	5.3	5.0
2410	5.8	5.0	5.6	5.0
2420	5.9	5.0	5.8	5.1
2430	5.9	5.0	5.9	5.1
2440	6.0	5.0	5.9	5.1
2450	5.9	5.0	6.4	5.4
2460	5.6	5.0	6.6	5.5
2470	5.7	5.0	6.8	5.5
2480	5.8	5.0	6.8	5.3
2490	5.9	5.0	6.8	5.1



Frequency (MHz)	Efficiency				
	A3-5GH	A4-5GH	A5-5G	A6-5G	A8-Scan
5150	/	/	68	74	65
5200	/	/	66	74	62
5300	/	/	64	75	60
5400	/	/	60	74	61
5500	72	61	57	72	64
5600	71	62	56	72	63
5700	71	60	55	70	61
5800	71	71	54	74	64
5850	68	72	51	73	62

Frequency (MHz)	Peak Gain				
	A3-5GH	A4-5GH	A5-5G	A6-5G	A8-Scan
5150	/	/	3.8	8.6	7.2
5200	/	/	3.5	8.3	7.1
5300	/	/	3.6	7.7	6.4
5400	/	/	4.0	6.7	7.0
5500	6.5	4.2	4.3	6.0	6.4
5600	6.7	4.5	4.8	5.2	6.1
5700	6.3	4.3	5.3	5.5	6.9
5800	6.1	5.3	4.9	5.7	7.3
5850	5.9	5.7	4.7	5.9	6.7



Frequency (MHz)	Efficiency		
	A3-6G	A4-6G	A8-Scan
5925	65	75	63
6000	65	76	63
6100	67	74	63
6200	63	73	61
6300	64	75	63
6400	63	76	63
6500	67	78	64
6600	62	74	65
6700	62	72	65
6800	66	73	66
6900	67	68	66
7000	63	68	63
7125	65	71	60

Frequency (MHz)	Peak Gain		
	A3-6G	A4-6G	A8-Scan
5925	5.9	6.2	6.4
6000	5.8	6.4	6.1
6100	5.9	6.4	6.3
6200	5.4	6.2	6.4
6300	5.2	6.1	7.1
6400	5.7	5.6	8.5
6500	5.8	6.0	9.0
6600	5.2	6.4	8.1
6700	4.9	6.3	7.9
6800	5.6	6.3	7.5
6900	5.8	6.5	7.0
7000	5.8	7.1	7.5
7125	5.3	7.5	7.1



Frequency (MHz)	Efficiency A9-GNSS-L1
1171	29
1172	29
1173	29
1174	29
1175	29
1176	29
1177	29
1178	29
1179	28
1180	28

Frequency (MHz)	Efficiency A9-GNSS-L5
1570	49
1571	49
1572	50
1573	50
1574	50
1575	50
1576	51
1577	51
1578	51
1579	52
1580	52

Frequency (MHz)	Peak Gain A9-GNSS-L1
1171	1.6
1172	1.6
1173	1.5
1174	1.5
1175	1.5
1176	1.5
1177	1.5
1178	1.5
1179	1.5
1180	1.5

Frequency (MHz)	Peak Gain A9-GNSS-L5
1570	1.6
1571	1.7
1572	1.7
1573	1.7
1574	1.8
1575	1.8
1576	1.9
1577	1.9
1578	2.0
1579	2.0
1580	2.1