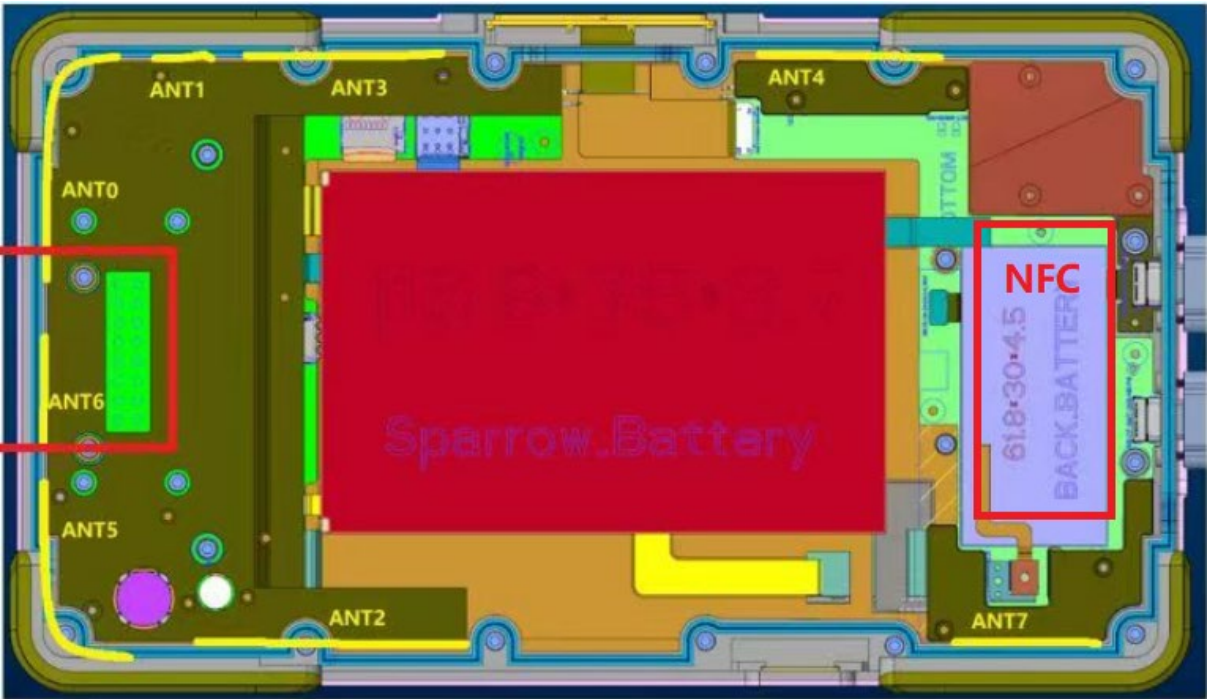


Product General Information:

Project Name	Juniper Alta
Antenna Model Name	BMZ50003162
Type and shape of antenna	PIFA Antenna
Directional characteristics	Omni-directional
Deflection Characteristics Of Antenna	Linear
Type of connection with transmitter	Antenna shrapnel
Manufacturer	Haitong Communication Electronics Co., Ltd. Room A405, Building A, Jingmeng Hi-Tech, No. 5, Shangdi East Road, Haidian District, Beijing, China
Produced by	Haitong Communication Electronics Co., Ltd. Room A405, Building A, Jingmeng Hi-Tech, No. 5, Shangdi East Road, Haidian District, Beijing, China
Tested by	Haitong Communication Electronics Co., Ltd. Room A405, Building A, Jingmeng Hi-Tech, No. 5, Shangdi East Road, Haidian District, Beijing, China

1. Antenna Distribution



Antenna No.	LTE or FR1 SA UL SISO mode	Frequency	RF Bands/frequency
Ant 0	LB TRX	617 - 960 MHz	LTE: B5/B26, B8, B12, B13, B14, B19, B20, B28, B29, B71, B106 FR1: n5, n8, n28, n29, n71

	MHB TRX0	1710–2200 MHz	LTE: B1, B2 (25), B3, B4 (B66), B7, B30, B38, B40, B41 FR1: n1, n2, n3, n7, n25, n30, n38, n41, n66,
	n77/n78/n79 TRX1 (MIMO PRX)	3300 – 5000 MHz	LTE: B42, B48 FR1: n48, n77, n78, n79
Ant 1	n77/n78/n79 TRX0	3300 – 5000 MHz	LTE: B42, B48 FR1: n48, n77, n78, n79
Ant 2	LB DRx	617 – 960 MHz	LTE: B5/B26, B8, B12, B13, B14, B19, B20, B28, B29, B71, B106 FR1: n5, n8, n28, n29, n71
	MHB TRX1 (DRX)	1710–2690 MHz	LTE: B1, B2 (25), B3, B4 (B66), B7, B30, B38, B40, B41 FR1: n1, n2, n3, n7, n25, n30, n38, n41, n66,
Ant 3	MHB MIMO DRX	1710–2690 MHz	LTE: B1, B2 (25), B3, B4 (B66), B7, B30, B38, B40, B41 FR1: n1, n2, n3, n7, n25, n30, n38, n41, n66,

	n77/n78/n79 MIMO DRX	3300 – 5000 MHz	LTE: B42, B48 FR1: n48, n77, n78, n79
Ant 4	n77/n78/n79 DRX	3300 – 5000 MHz	LTE: B42, B48 FR1: n48, n77, n78, n79
	MHB MIMO PRX	1710–2690 MHz	LTE: B1, B2 (25), B3, B4 (B66), B7, B30, B38, B40, B41 FR1: n1, n2, n3, n7, n25, n30, n38, n41, n66,
Ant 5	GPS	1559–1605 MHz	B1, L1, E1, GLONASS L1
	GPS	1166–1186 MHz	L5
Ant 6	2.4G WLAN CH0/BT	2401 – 2495 MHz	2.4G WIFI
	5G WLAN CH0	5150 – 7125 MHz	5G WIFI
Ant 7	2.4G WLAN CH1/BT	2401 – 2495 MHz	2.4G WIFI
	5G WLAN CH1	5150 – 7125 MHz	5G WIFI
NFC	NFC	13.56 MHz	

2. Antenna Gain: (Main frequency)

ANT0		
Frequency Band		Antenna Gain
LTE-FDD-B1	1920-1980	0.38
LTE-FDD-B2	1850-1910	-0.5
LTE-FDD-B3	1710-1785	-0.56
LTE-FDD-B4	1710-1755	-0.56
LTE-FDD-B5	824-849	-1.14
LTE-FDD-B7	2500-2570	-0.59
LTE-FDD-B8	880-915	-2.07
LTE-FDD-B12	699-716	-4.27
LTE-FDD-B13	777-787	-2.98
LTE-FDD-B14	788-798	-3.12
LTE-FDD-B19	830-845	-1.14
LTE-FDD-B20	832-862	-1.35
LTE-FDD-B25	1850-1915	-0.55
LTE-FDD-B26	814-849	-1.14
LTE-FDD-B28	703-748	-4.04
LTE-FDD-B30	2305-2315	-0.5
LTE-FDD-B66	1710-1780	-0.56
LTE-FDD-B71	663-698	-5.31
LTE-FDD-B106	896-901	-2.86
LTE-TDD-B38	2570-2620	-0.44
LTE-TDD-B40	2300-2400	-0.18
LTE-TDD-B41	2496-2690	-0.44
LTE-TDD-B42	3400-3600	-4.38
LTE-TDD-B48	3550-3700	-6.54
NR-TDD-N77	3300-4200	-1.89
NR-TDD-N78	3300-3800	-1.89
NR-TDD-N79	4400-5000	-3.58

ANT1		
Frequency Band		Antenna Gain
LTE-TDD-B42	3400-3600	-0.9
LTE-TDD-B48	3550-3700	-1.5
NR-TDD-N77	3300-4200	3.12
NR-TDD-N78	3300-3800	1.6
NR-TDD-N79	4400-5000	0.32

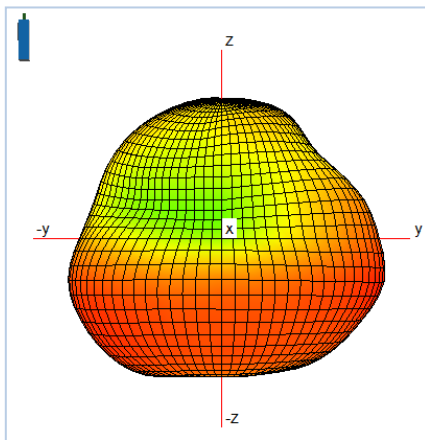
ANT2		
Frequency Band		Antenna Gain
LTE-FDD-B1	1920-1980	-0.13
LTE-FDD-B2	1850-1910	-2.64
LTE-FDD-B3	1710-1785	-4.48
LTE-FDD-B4	1710-1755	-5.01
LTE-FDD-B5	824-849	-1.82
LTE-FDD-B7	2500-2570	1.94
LTE-FDD-B8	880-915	-1.91
LTE-FDD-B12	699-716	-4.91
LTE-FDD-B13	777-787	-3.65
LTE-FDD-B14	788-798	-4.4
LTE-FDD-B19	830-845	-1.82
LTE-FDD-B20	832-862	-1.88
LTE-FDD-B25	1850-1915	-2.64
LTE-FDD-B26	814-849	-1.82
LTE-FDD-B28	703-748	-6.55
LTE-FDD-B30	2305-2315	-0.8
LTE-FDD-B66	1710-1780	-4.48
LTE-FDD-B71	663-698	-6.5
LTE-FDD-B106	896-901	-3.54
LTE-TDD-B38	2570-2620	0.79
LTE-TDD-B40	2300-2400	2.15
LTE-TDD-B41	2496-2690	1.94

ANT6(WLAN-CH0 and BT)		
Frequency Band		Antenna Gain (Max)
WIFI-B/BT	2400-2500	-0.24
WIFI-A	5150-5850	0.52
WIFI-6E	5925-6425	1.17
	6425-6525	0.36
	6525-6875	1.15
	6875-7125	2.71

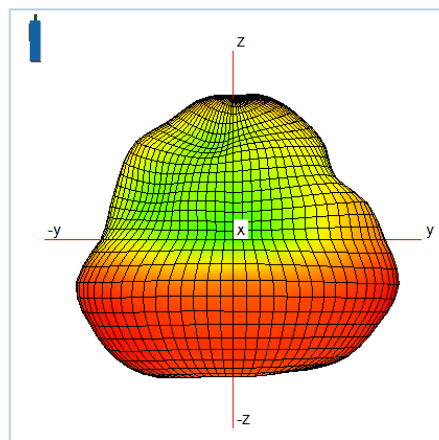
ANT7 (WLAN-CH1 and BT)		
Frequency Band		Antenna Gain
WIFI-B/BT	2400-2500	-1.55
WIFI-A	5150-5850	0.86
WIFI-6E	5925-6425	0.65
	6425-6525	-1.06
	6525-6875	-2.08
	6875-7125	-0.78

3.3D Map

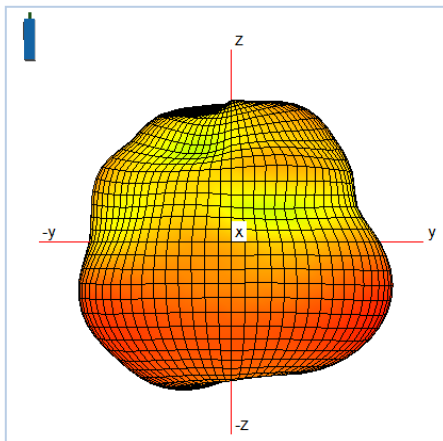
680MHz



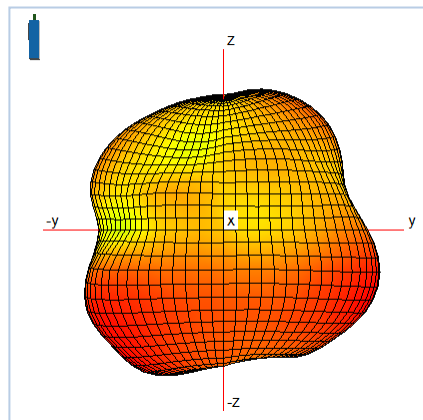
700MHz



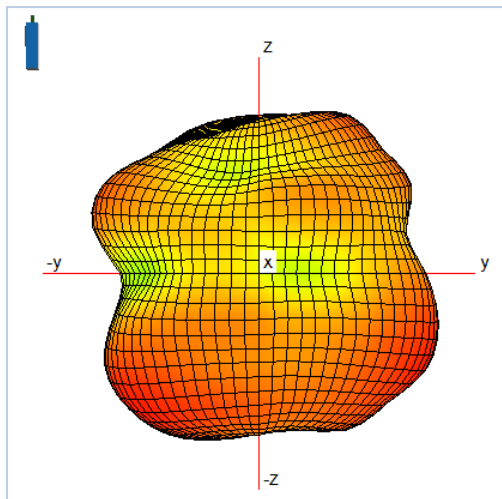
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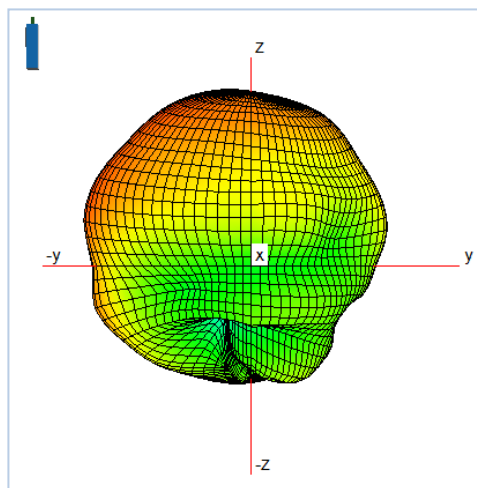
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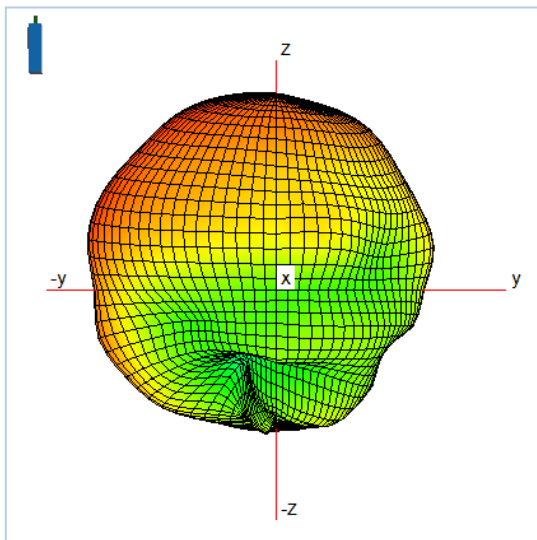
900MHz



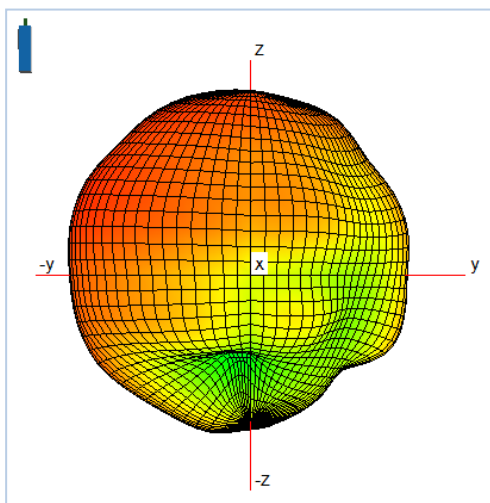
1720MHz



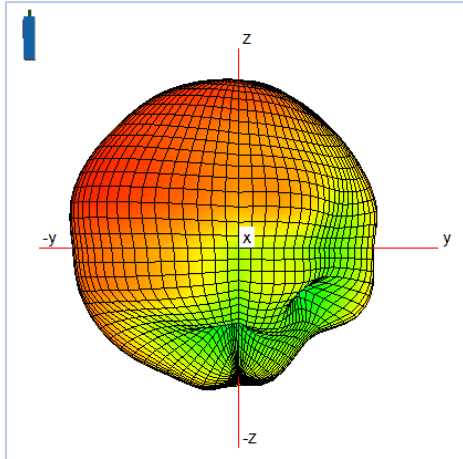
1740MHz



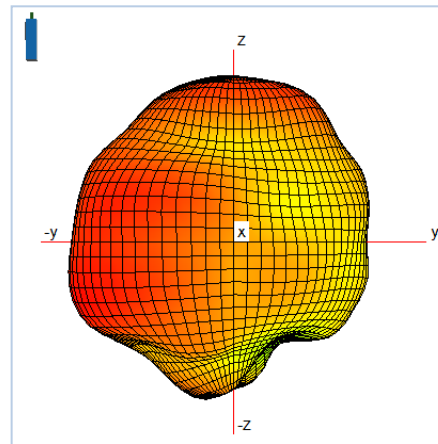
1880MHz



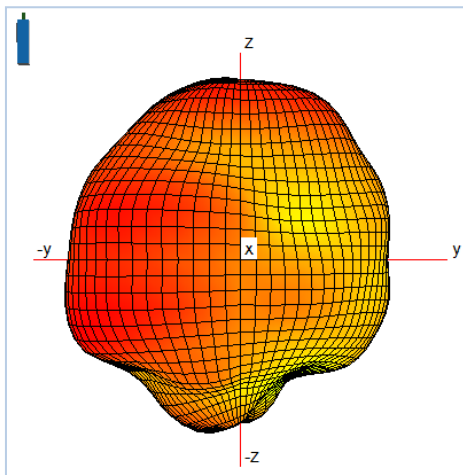
1940MHz



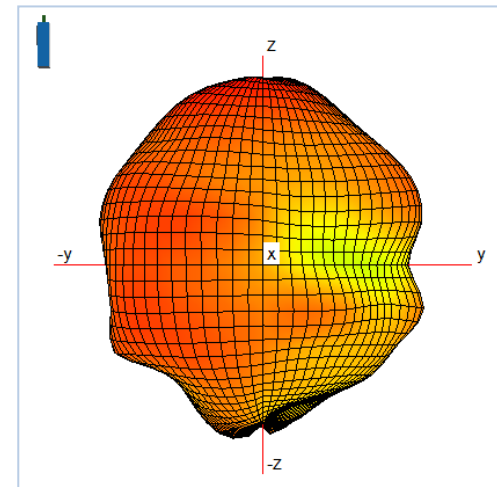
2320MHz



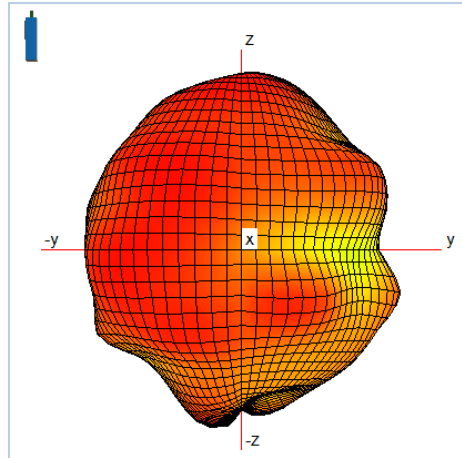
2340MHz



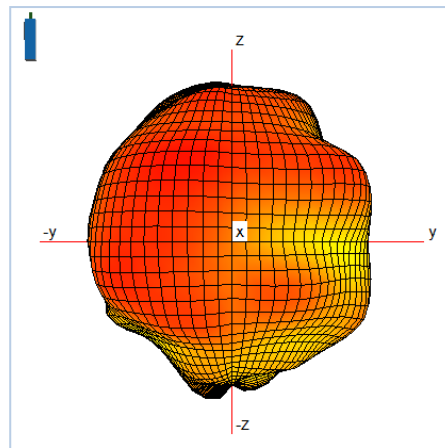
2500MHz



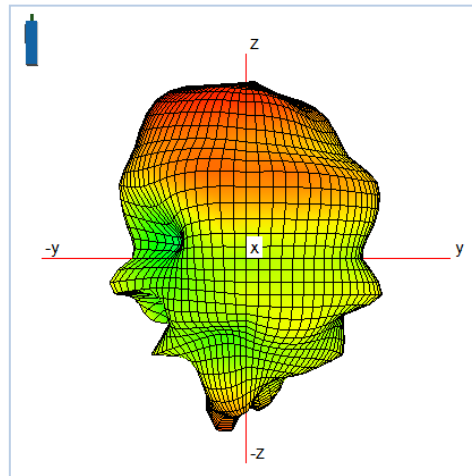
2580MHz



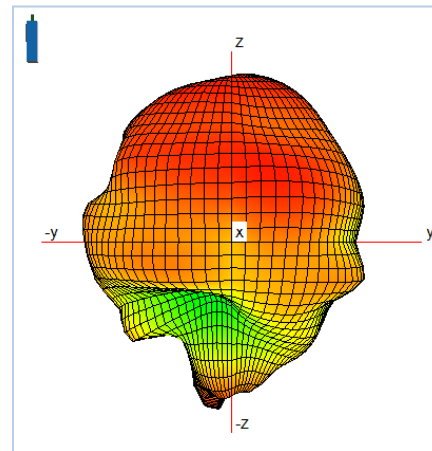
2680MHz



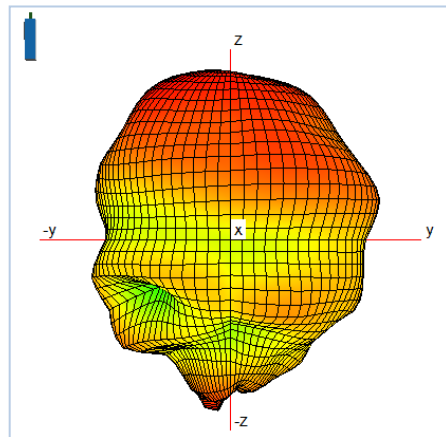
3350MHz



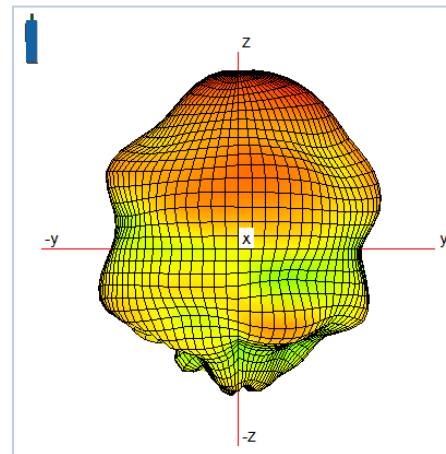
3550MHz



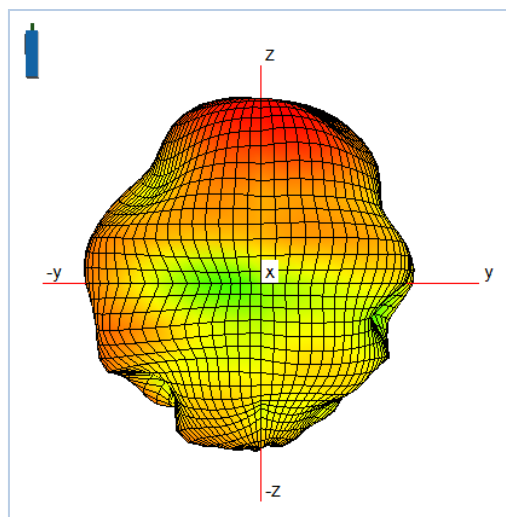
3750MHz



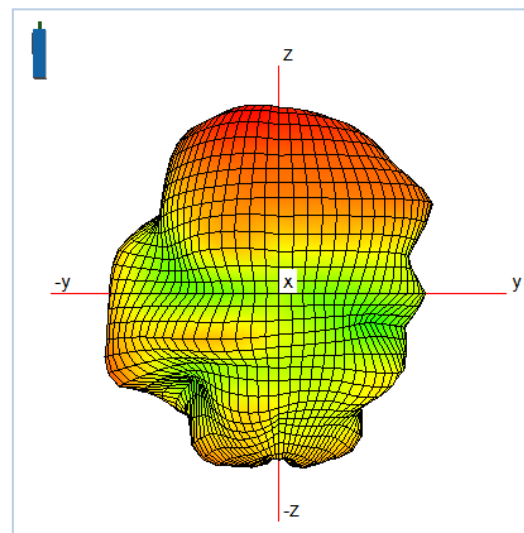
4150MHz



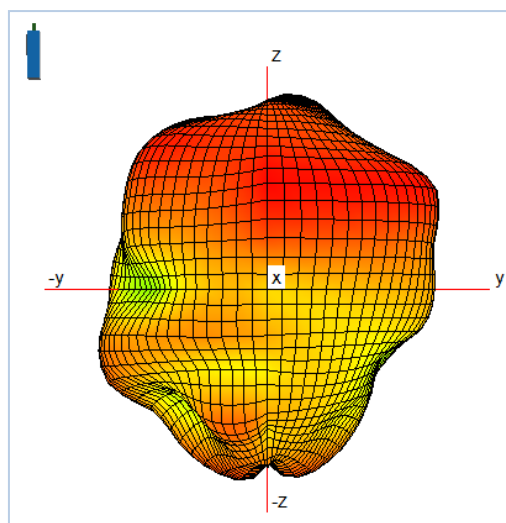
4450MHz



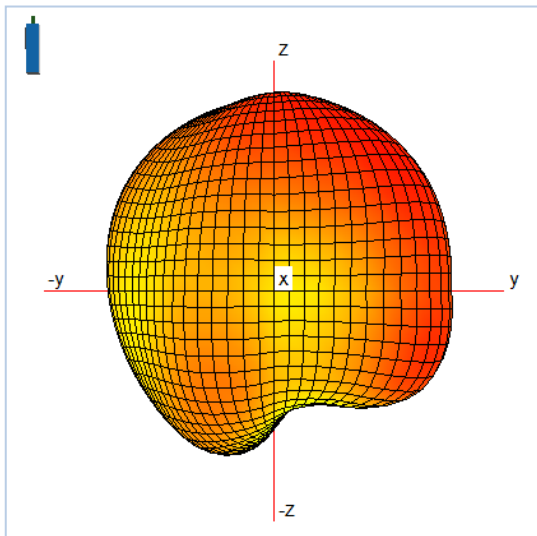
4700MHz



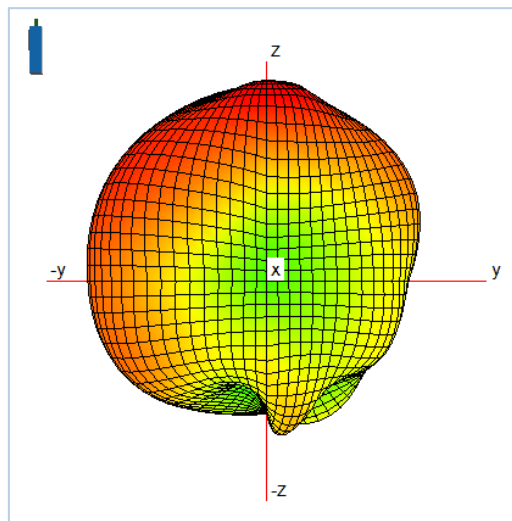
4950MHz



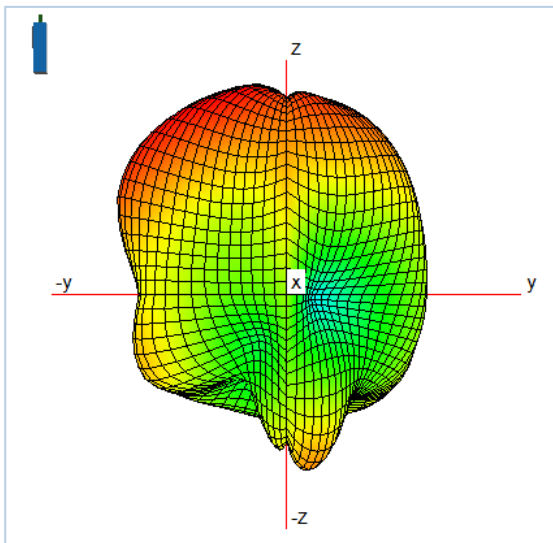
2450MHz(WLAN-CH0)



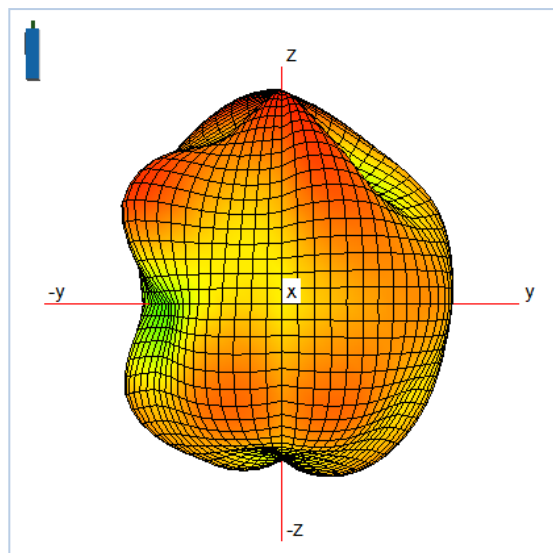
5500MHz(WLAN-CH0)



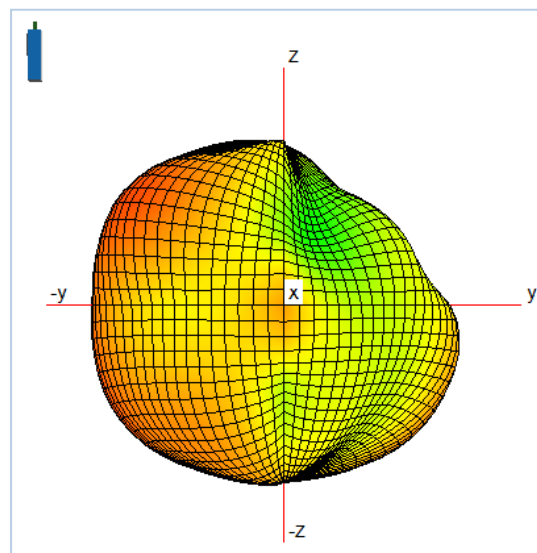
6520MHz(WLAN-CH0)



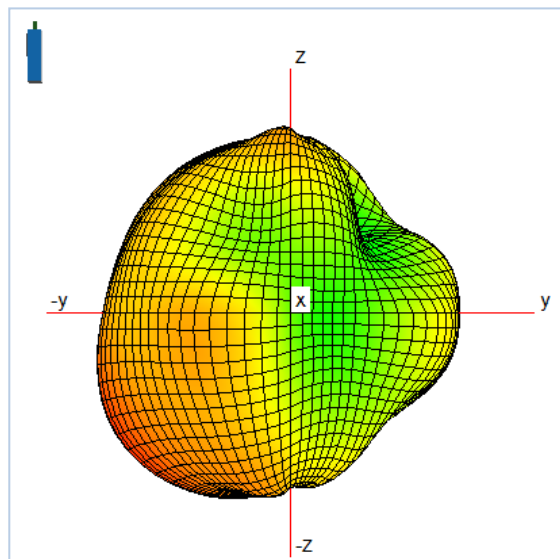
2450MHz(WLAN-CH1)



5500MHz(WLAN-CH1)

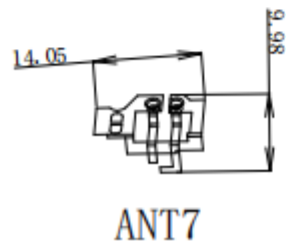
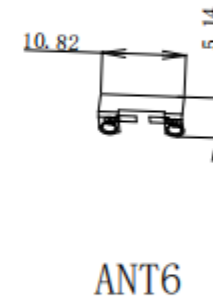
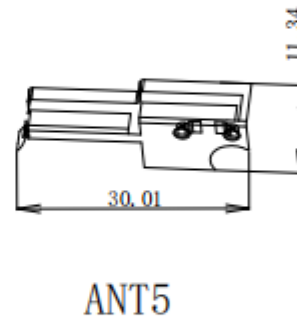
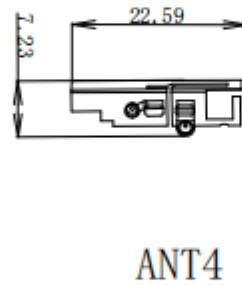
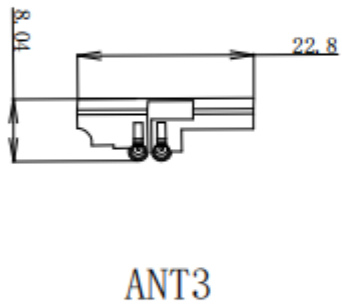
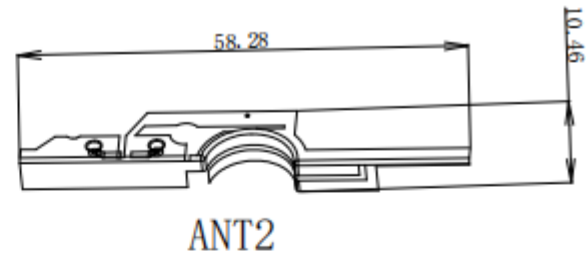
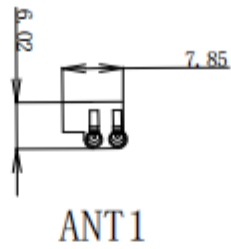
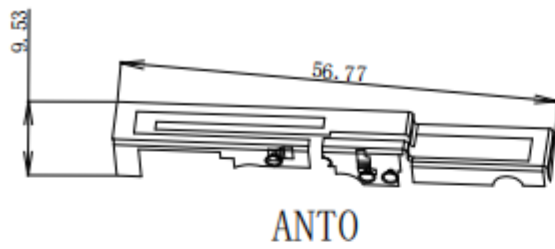


6520MHz(WLAN-CH1)

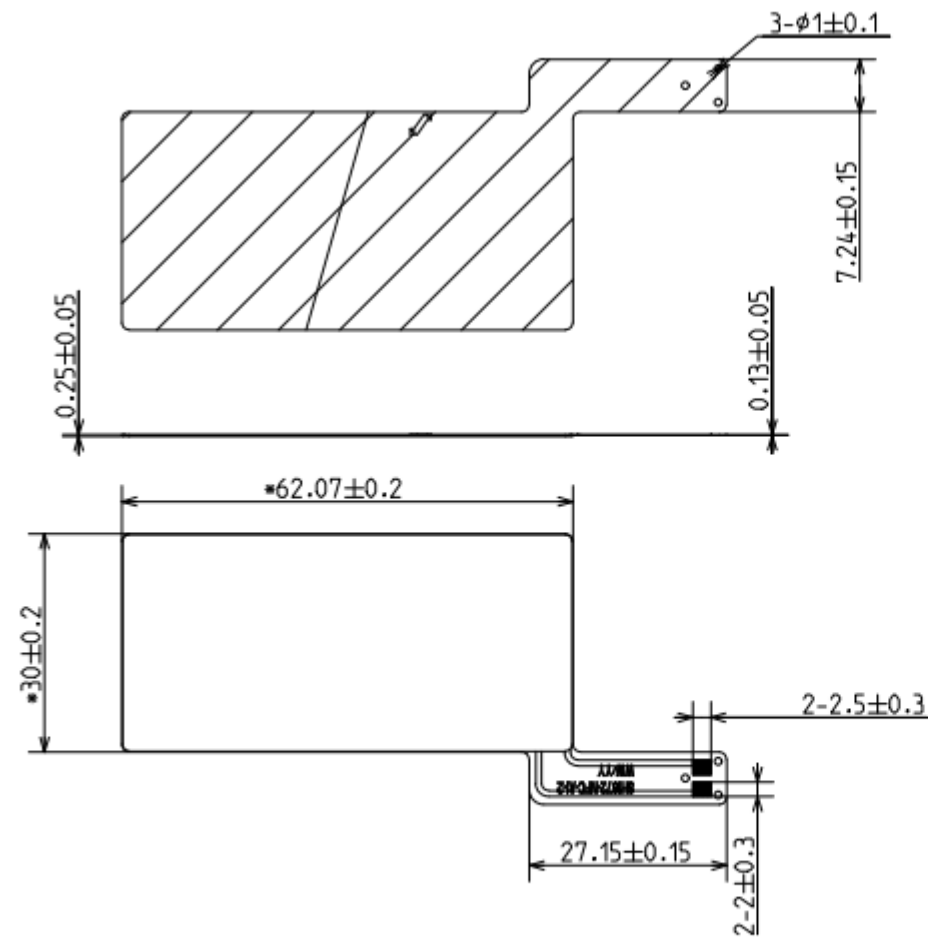


4. Antenna Pattern

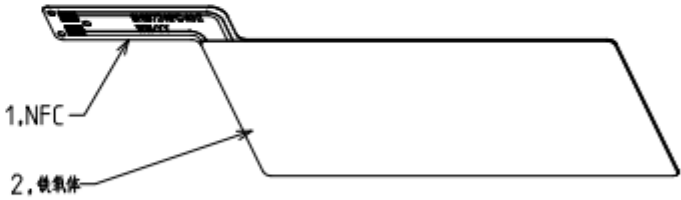
WWAN, WLAN and GPS antenna Pattern



NFC Antenna Pattern



NFC



5. Antenna Placement

WWAN, WLAN and GPS antenna (Rear View)

