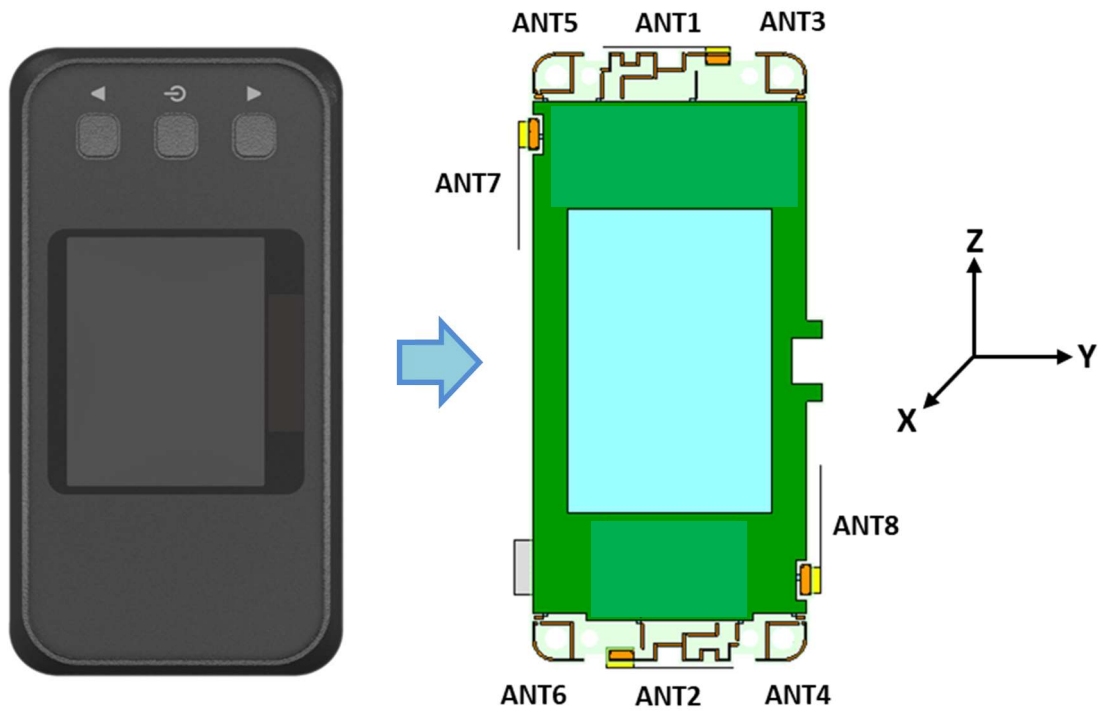


Antenna specification

1. Antenna layout



2. Bands

Band	Japan				Roaming (FCC)				Roaming (CE)			
	5G	4G	3G	Wi-Fi	5G	4G	3G	Wi-Fi	5G	4G	3G	Wi-Fi
B1	n1	B1	B1							B1	B1	
B2						B2	B2					
B3/n3	n3	B3								B3		
B4						B4	B4					
B5						B5	B5					
B6												
B8		B8	B8							B8	B8	
B11		B11										
B12						B12						
B17						B17						
B18		B18										
B19		B19										
B21		B21										
B26		B26				B26						
B28/n28	n28	B28								B28		
B38										B38		
B41/n41	n41	B41				B41						
B42		B42										
n77	n77											
n78	n78											
n79	n79											
Wi-Fi_2.4G				2.4G				2.4G				2.4G

3. Tx Antenna

	5G	4G	3G	Wi-Fi
ANT 1	n28 (Tx/Rx)	B5 (Tx/Rx) B8 (Tx/Rx) B12 (Tx/Rx) B17 (Tx/Rx) B18 (Tx/Rx) B19 (Tx/Rx) B26 (Tx/Rx) B28 (Tx/Rx)	B5 (Tx/Rx) B8 (Tx/Rx)	
ANT 2	n28 (Rx)	B5 (Rx) B8 (Rx) B12 (Rx) B17 (Rx) B18 (Rx) B19 (Rx) B26 (Rx) B28 (Rx)	B5 (Rx) B8 (Rx)	
ANT 3	n1 (Rx) n3 (Rx) n41 (Rx) n77 (Tx/Rx) n78 (Tx/Rx) n79 (Tx/Rx)	B1 (Tx/Rx) B2 (Tx/Rx) B3 (Tx/Rx) B4 (Tx/Rx) B38 (Tx/Rx) B41 (Tx/Rx) B42 (Rx)	B1 (Tx/Rx) B2 (Tx/Rx) B4 (Tx/Rx)	
ANT 4	n1 (Rx) n3 (Rx) n41 (Rx) n77 (Tx/Rx) n78 (Tx/Rx) n79 (Tx/Rx)	B1 (Rx) B2 (Rx) B3 (Rx) B4 (Rx) B38 (Rx) B41 (Rx) B42 (Rx)		
ANT 5	n1 (Tx/Rx) n3 (Tx/Rx) n41 (Tx/Rx) n77 (Tx/Rx) n78 (Tx/Rx) n79 (Tx/Rx)	B1 (Rx) B2 (Rx) B3 (Rx) B4 (Rx) B38 (Rx) B41 (Rx) B42 (Tx/Rx)	B1 (Rx) B2 (Rx) B4 (Rx)	
ANT 6	n1 (Rx) n3 (Rx) n41 (Rx) n77 (Tx/Rx) n78 (Tx/Rx) n79 (Tx/Rx)	B1 (Rx) B2 (Rx) B3 (Rx) B4 (Rx) B38 (Rx) B41 (Rx) B42 (Rx)		
ANT 7		B11 (Tx/Rx) B21 (Tx/Rx)		2.4G (Tx/Rx)
ANT 8		B11 (Rx) B21 (Rx)		2.4G (Tx/Rx)

4. Antenna specification (1/3)

Antenna	Parameter	Specification	Note	
ANT1	Support band	B5,B8,B12,B17,B18,B19,B26,B28/n28		
	Antenna type	Inverted F Antenna (Omni-directional)		
	Impedance	50ohm		
	Antenna Peak gain	B5	+0.3 dBi	Fig.1
		B8	+0.7 dBi	Fig.2
		B12	-1.1 dBi	Fig.3
		B17	-1.1 dBi	Fig.4
		B18	0.0 dBi	Fig.5
B19		+0.1 dBi	Fig.6	
B26		+0.2 dBi	Fig.7	
B28/n28	-1.1 dBi	Fig.8		
ANT2	Support band	B5,B8,B12,B17,B18,B19,B26,B28/n28		
	Antenna type	Inverted F Antenna (Omni-directional)		
	Impedance	50ohm		
	Antenna Peak gain	Rx only		
ANT3	Support band	B1/n1,B2,B3/n3,B4,B38,B41/n41,B42, n77,n78,n79		
	Antenna type	Inverted L Antenna (Omni-directional)		
	Impedance	50ohm		
	Antenna Peak gain	B1	+0.1 dBi	Fig.9
		n1	Rx only	
		B2	+0.3 dBi	Fig.10
		B3	-0.8 dBi	Fig.11
		n3	Rx only	
		B4	-0.8 dBi	Fig.12
		B38	-0.2 dBi	Fig.13
		B41	-0.2 dBi	Fig.14
		n41	Rx only	
		B42	Rx only	
n77		+0.4 dBi	Fig.15	
n78		+0.4 dBi	Fig.16	
n79	+1.7 dBi	Fig.17		

4. Antenna specification (2/3)

Antenna	Parameter	Specification	Note	
ANT4	Support band	B1/n1,B2,B3/n3,B4,B38,B41/n41,B42, n77,n78,n79		
	Antenna type	Inverted L Antenna (Omni-directional)		
	Impedance	50ohm		
	Antenna Peak gain	B1	Rx only	
		n1	Rx only	
		B2	Rx only	
		B3	Rx only	
		n3	Rx only	
		B4	Rx only	
		B38	Rx only	
		B41	Rx only	
		n41	Rx only	
		B42	Rx only	
n77	+2.6 dBi	Fig.18		
n78	+1.4 dBi	Fig.19		
n79	+1.9 dBi	Fig.20		
ANT5	Support band	B1/n1,B2,B3/n3,B4,B38,B41/n41,B42, n77,n78,n79		
	Antenna type	Inverted L Antenna (Omni-directional)		
	Impedance	50ohm		
	Antenna Peak gain	B1	Rx only	
		n1	-0.5 dBi	Fig.21
		B2	Rx only	
		B3	Rx only	
		n3	-2.3 dBi	Fig.22
		B4	Rx only	
		B38	Rx only	
		B41	Rx only	
		n41	-1.5 dBi	Fig.23
		B42	-0.7 dBi	Fig.24
n77	+0.1 dBi	Fig.25		
n78	-0.7 dBi	Fig.26		
n79	-0.3 dBi	Fig.27		

4. Antenna specification (3/3)

Antenna	Parameter	Specification	Note	
ANT6	Support band	B1/n1,B2,B3/n3,B4,B38,B41/n41,B42, n77,n78,n79		
	Antenna type	Inverted L Antenna (Omni-directional)		
	Impedance	50ohm		
	Antenna Peak gain	B1	Rx only	
		n1	Rx only	
		B2	Rx only	
		B3	Rx only	
		n3	Rx only	
		B4	Rx only	
		B38	Rx only	
		B41	Rx only	
		n41	Rx only	
B42		Rx only		
n77	+2.1 dBi	Fig.28		
n78	+2.0 dBi	Fig.29		
n79	+2.6 dBi	Fig.30		
ANT7	Support band	B11,B21 Wi-Fi 2.4GHz		
	Antenna type	Inverted L Antenna (Omni-directional)		
	Impedance	50ohm		
	Antenna Peak gain	B11	+0.1 dBi	Fig.31
		B21	+0.1 dBi	Fig.32
WI-Fi 2.4GHz		-0.4 dBi	Fig.33	
ANT8	Support band	B11,B21 Wi-Fi 2.4GHz		
	Antenna type	Inverted L Antenna (Omni-directional)		
	Impedance	50ohm		
	Antenna Peak gain	B11	Rx only	
		B21	Rx only	
WI-Fi 2.4GHz		+0.2 dBi	Fig.34	

5. Radiation pattern, Peak gain (1/17)

Blue : Horizontal Red : Vertical

ANT1

Fig.1

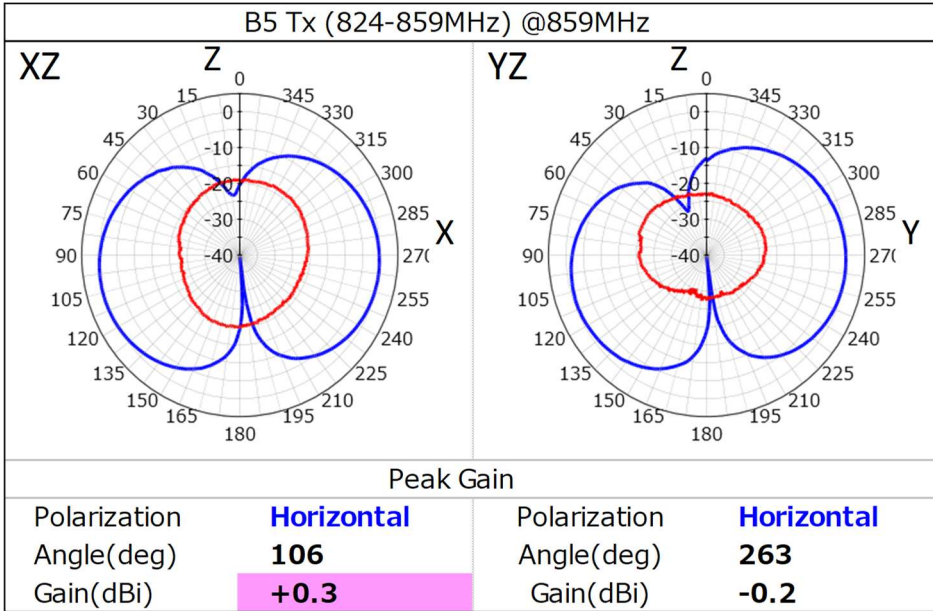
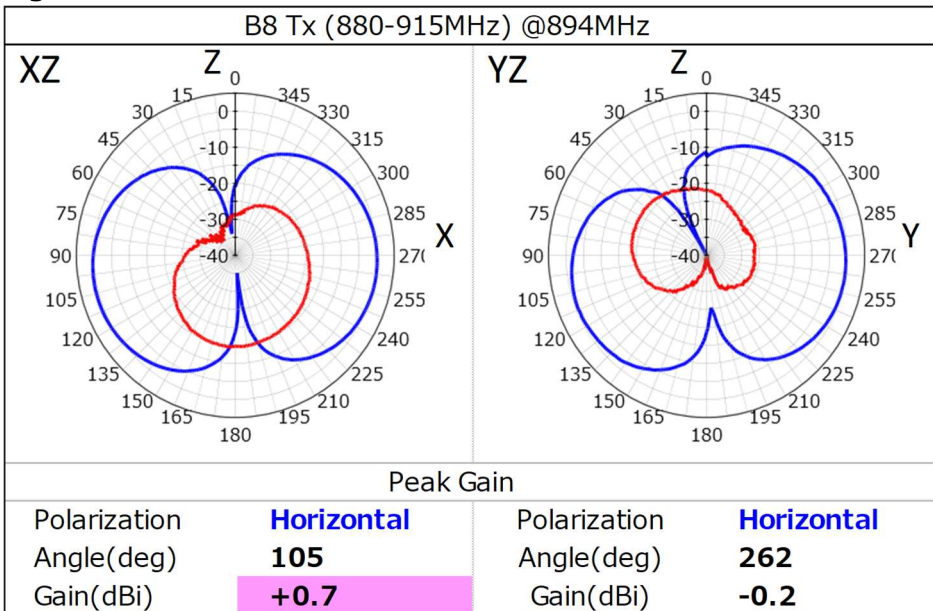


Fig.2



5. Radiation pattern, Peak gain (2/17)

Blue : Horizontal Red : Vertical

Fig.3

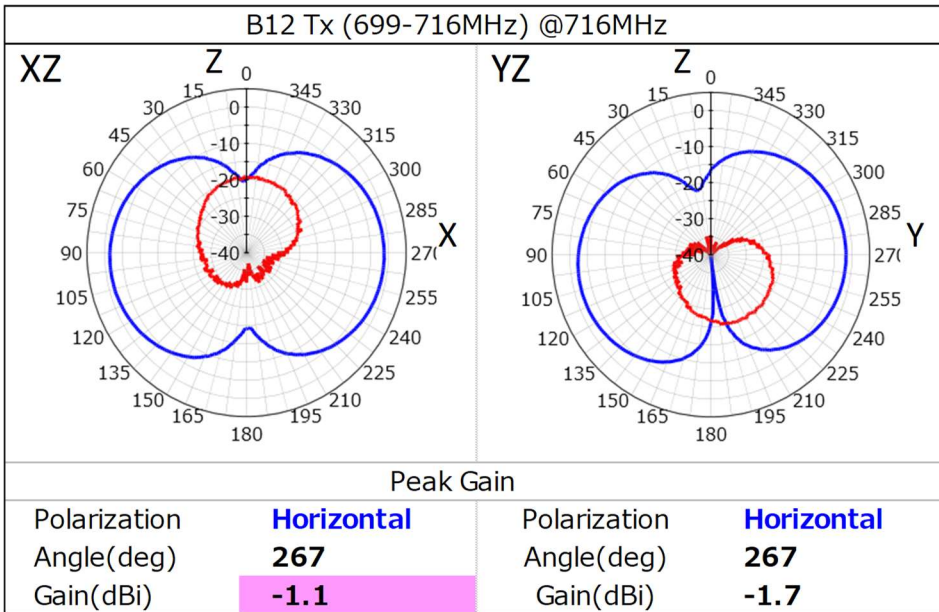
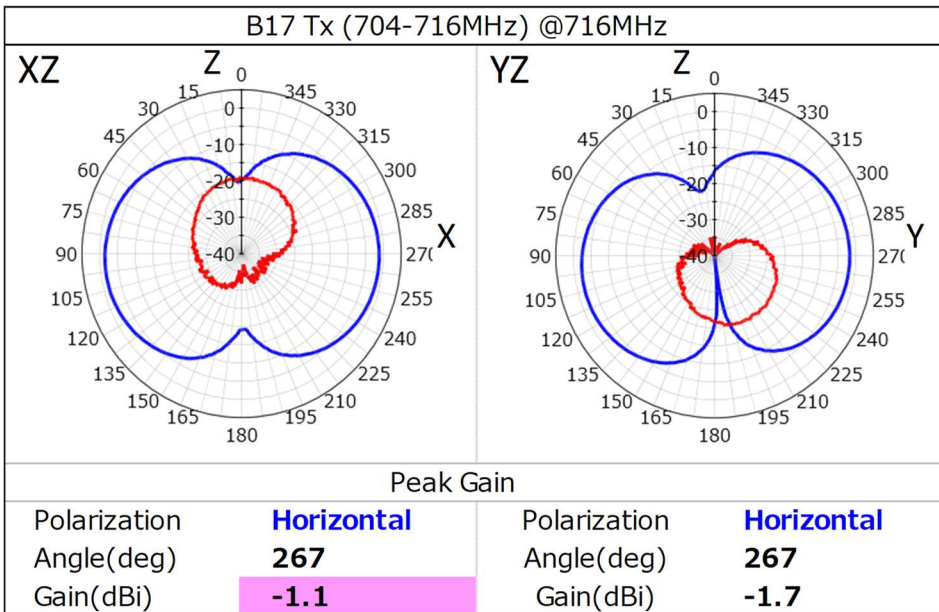


Fig.4



5. Radiation pattern, Peak gain (3/17)

Blue : Horizontal Red : Vertical

Fig.5

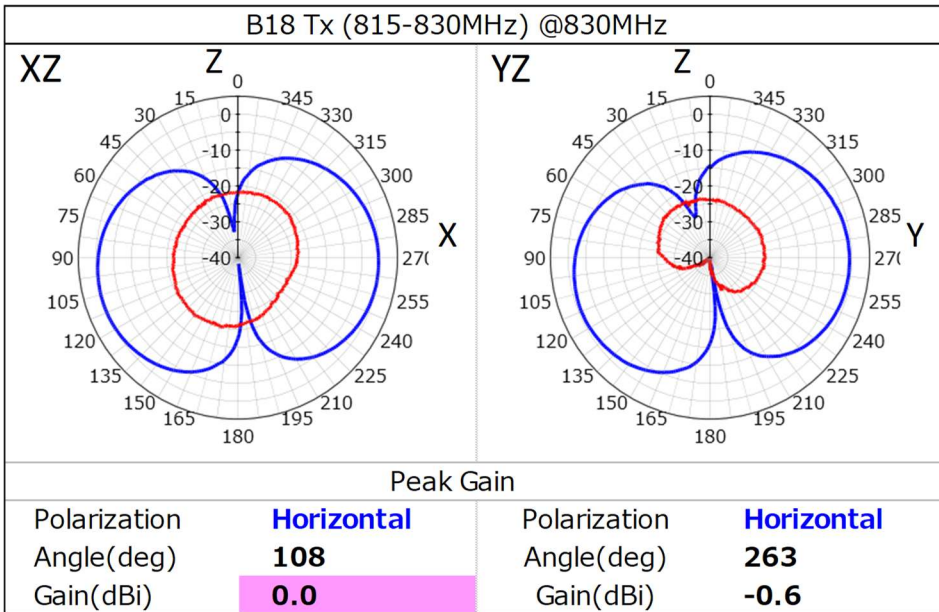
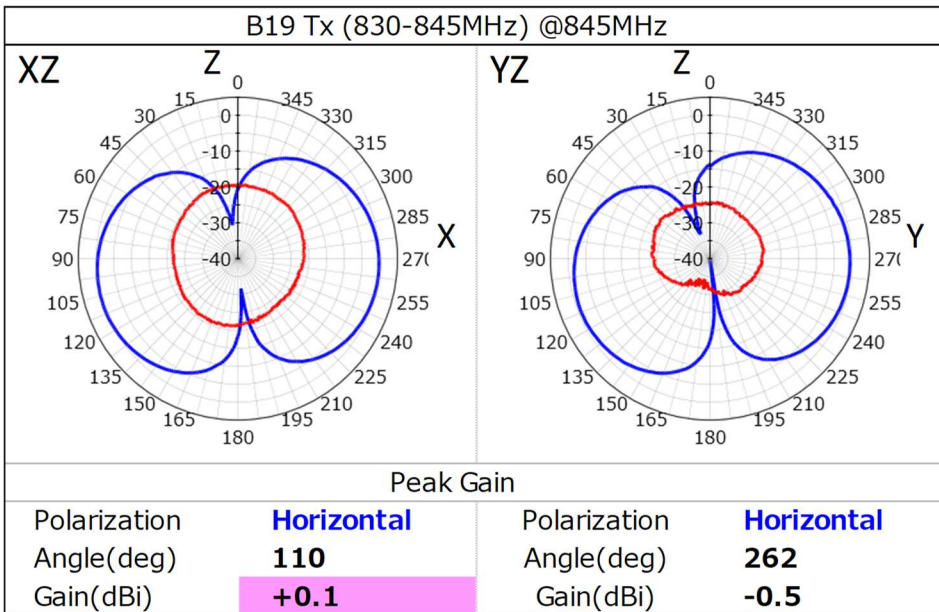


Fig.6



5. Radiation pattern, Peak gain (4/17)

Blue : Horizontal Red : Vertical

Fig.7

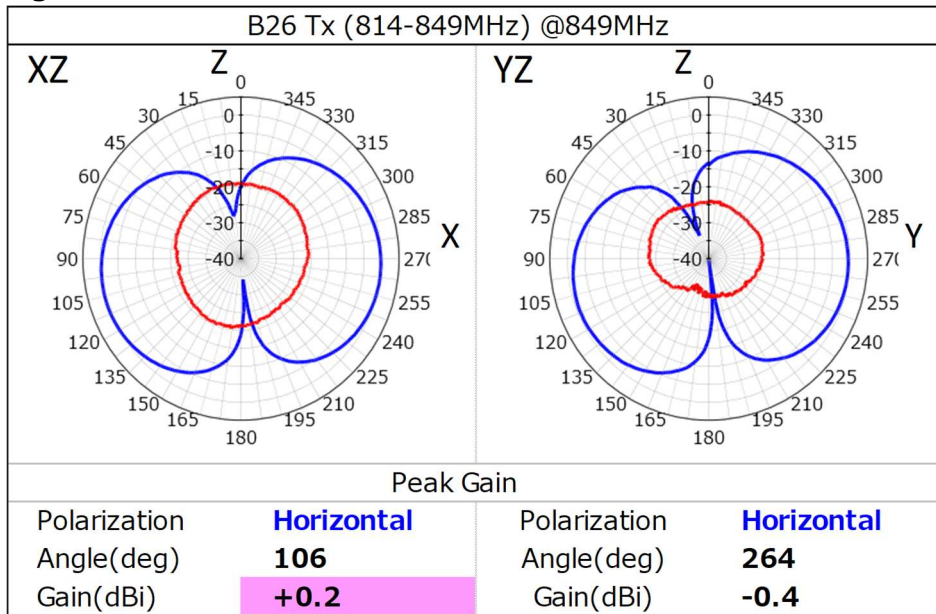
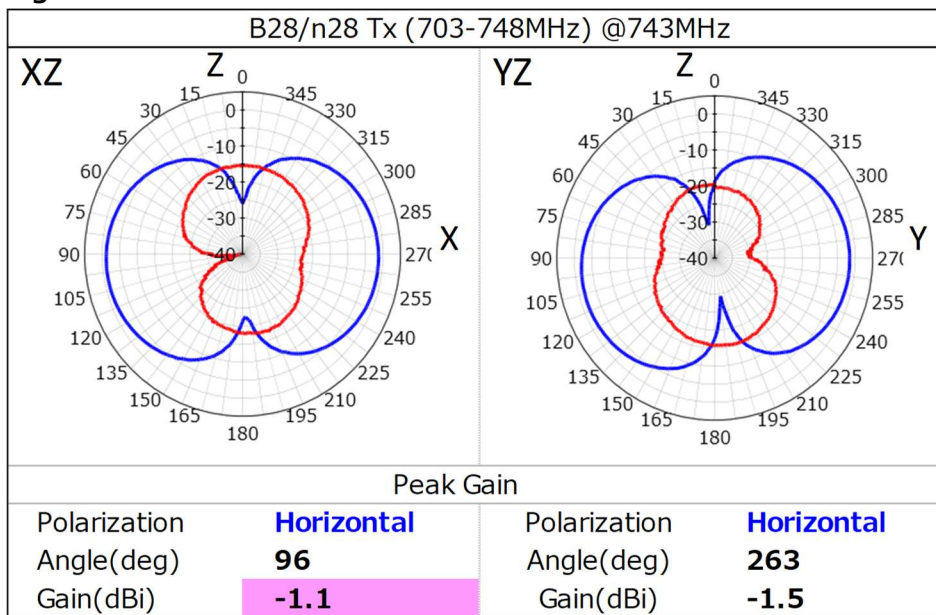


Fig.8



5. Radiation pattern, Peak gain (5/17)

Blue : Horizontal Red : Vertical

ANT2

Rx Only

ANT3

Fig.9

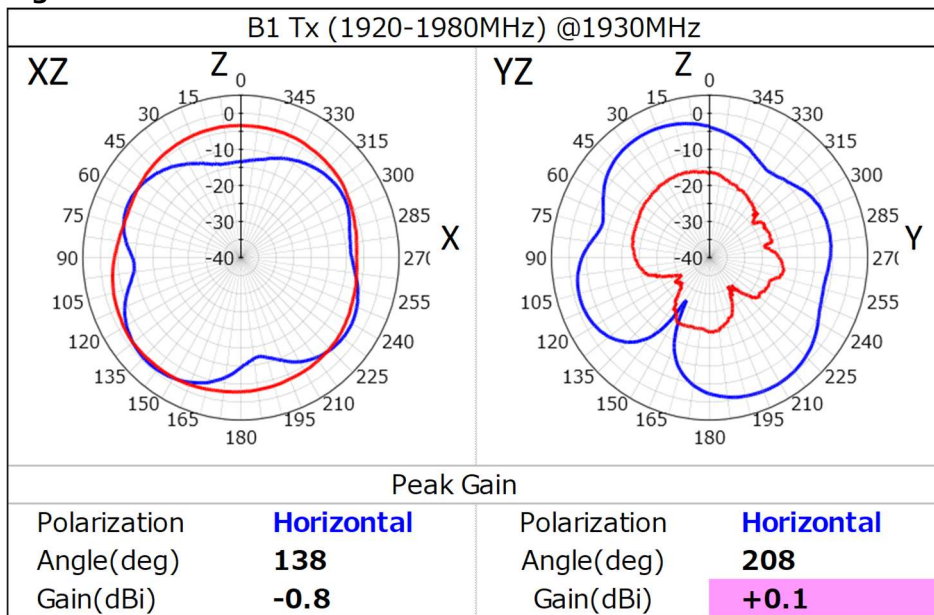
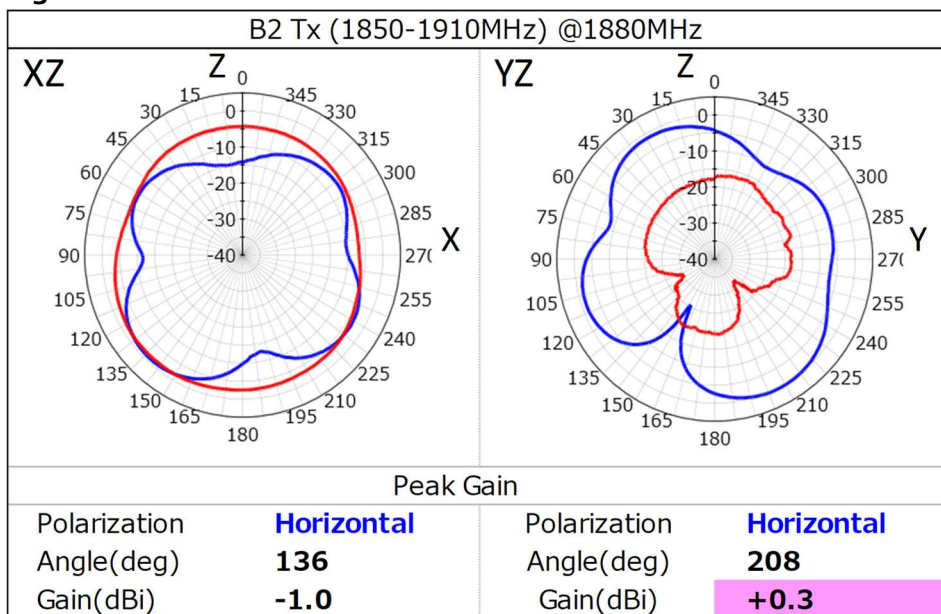


Fig.10



5. Radiation pattern, Peak gain (6/17)

Blue : Horizontal Red : Vertical

Fig.11

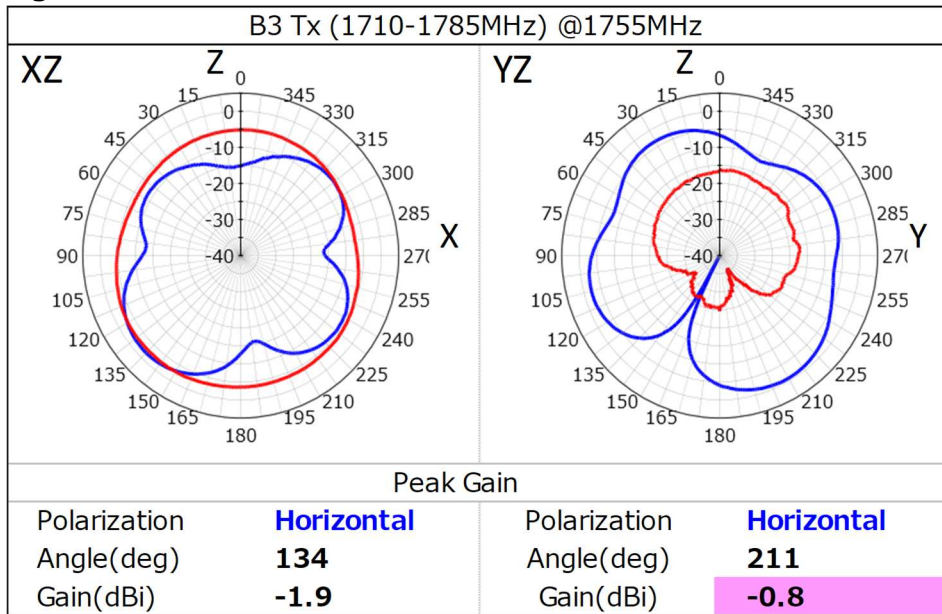
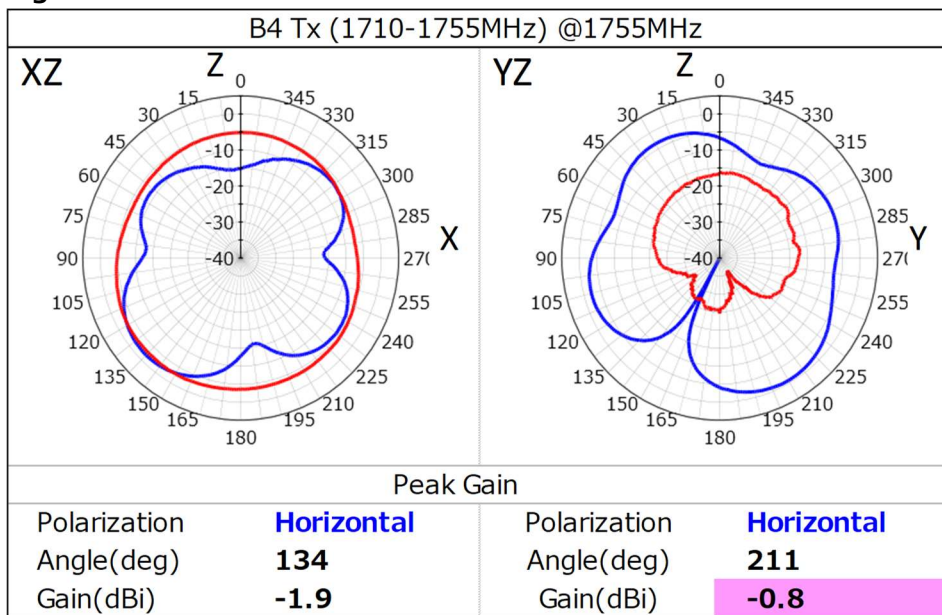


Fig.12



5. Radiation pattern, Peak gain (7/17)

Blue : Horizontal Red : Vertical

Fig.13

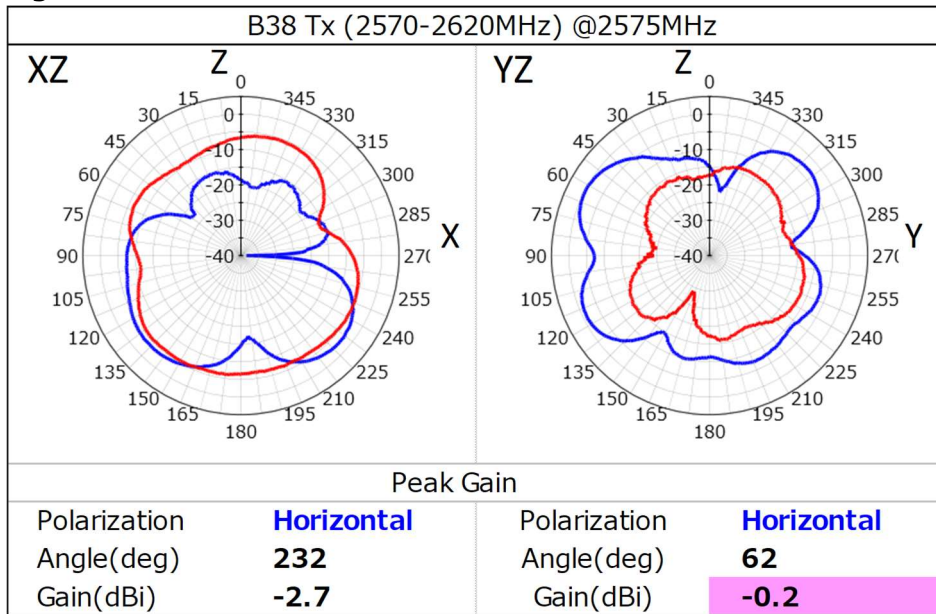
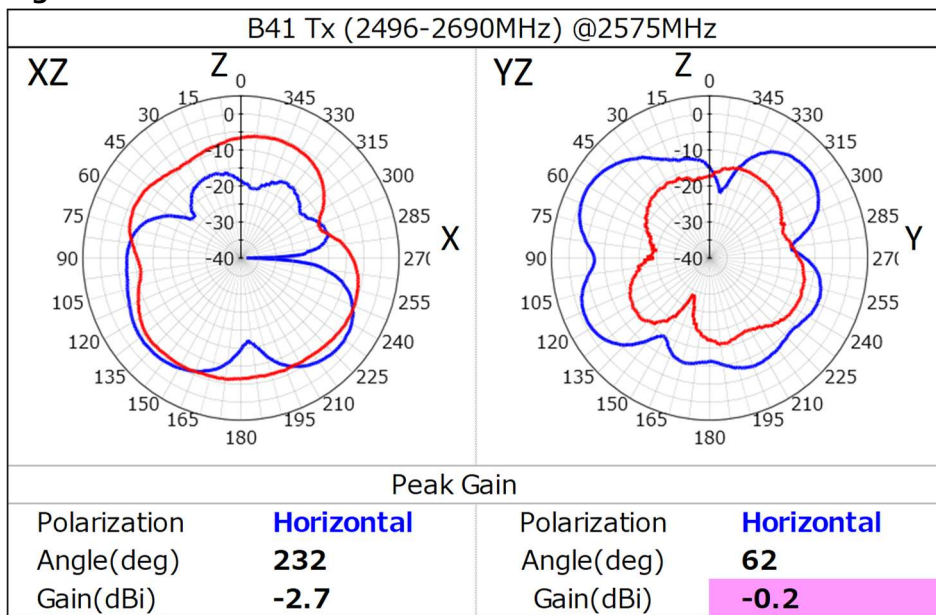


Fig.14



5. Radiation pattern, Peak gain (8/17)

Blue : Horizontal Red : Vertical

Fig.15

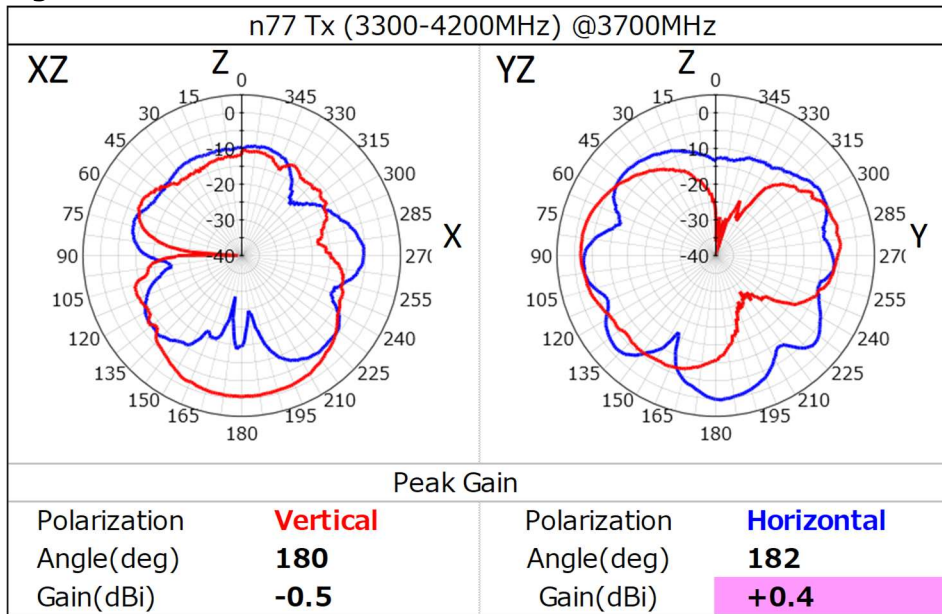
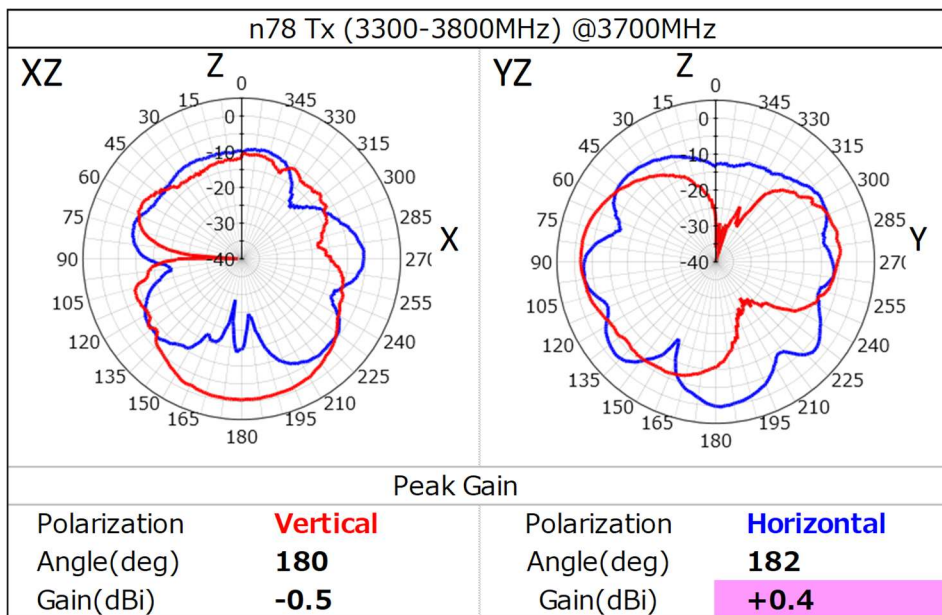


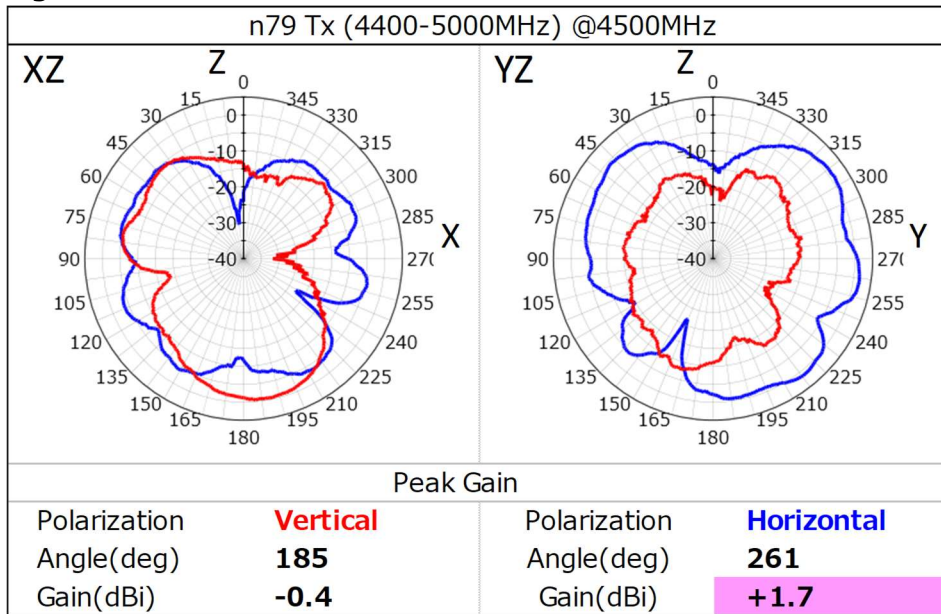
Fig.16



5. Radiation pattern, Peak gain (9/17)

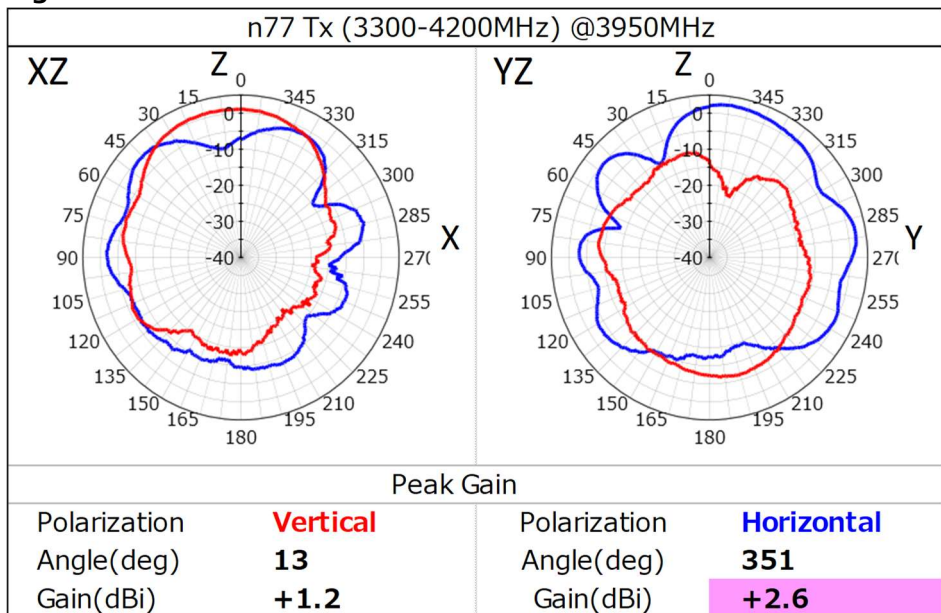
Blue : Horizontal Red : Vertical

Fig.17



ANT4

Fig.18



5. Radiation pattern, Peak gain (10/17)

Blue : Horizontal Red : Vertical

Fig.19

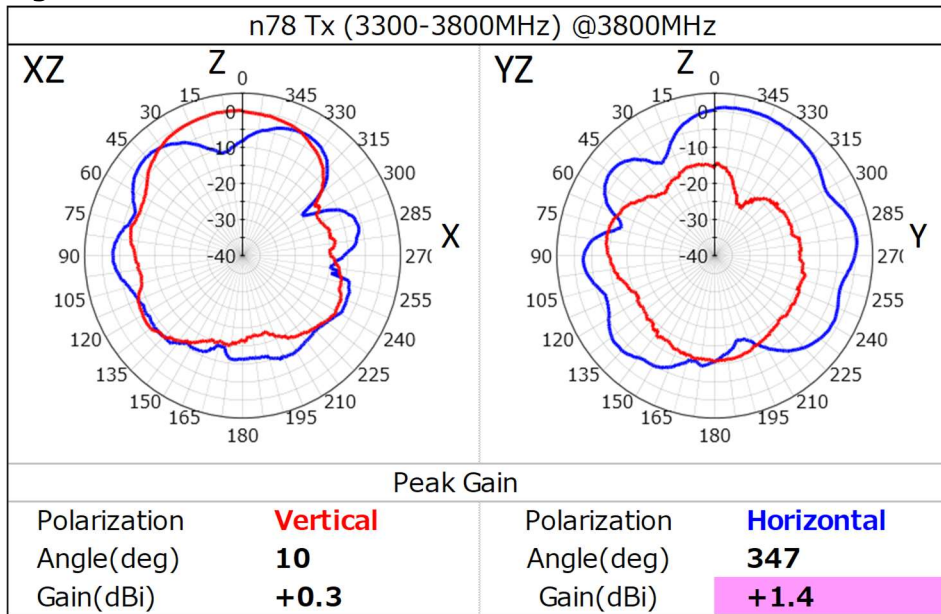
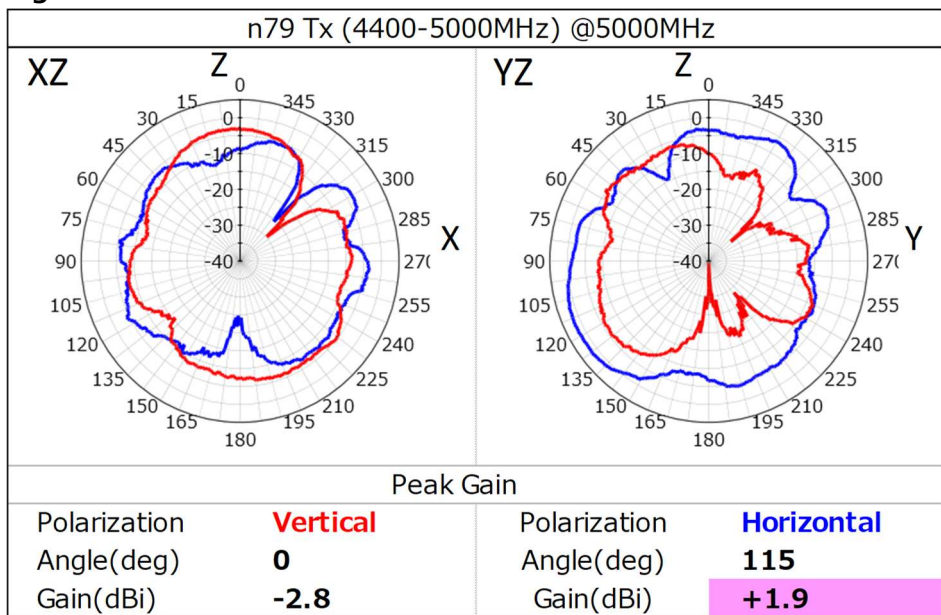


Fig.20



5. Radiation pattern, Peak gain (11/17)

Blue : Horizontal Red : Vertical

ANT5

Fig.21

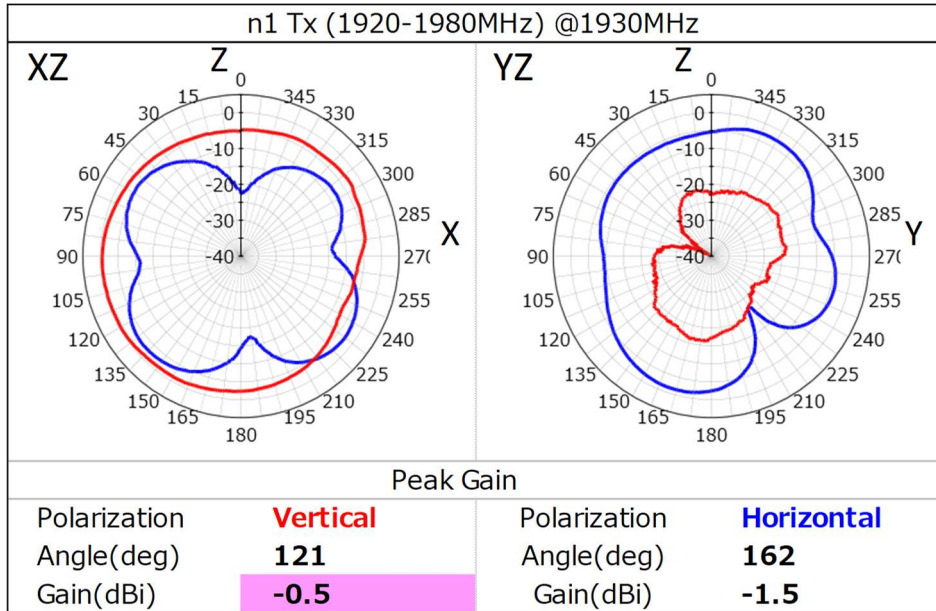
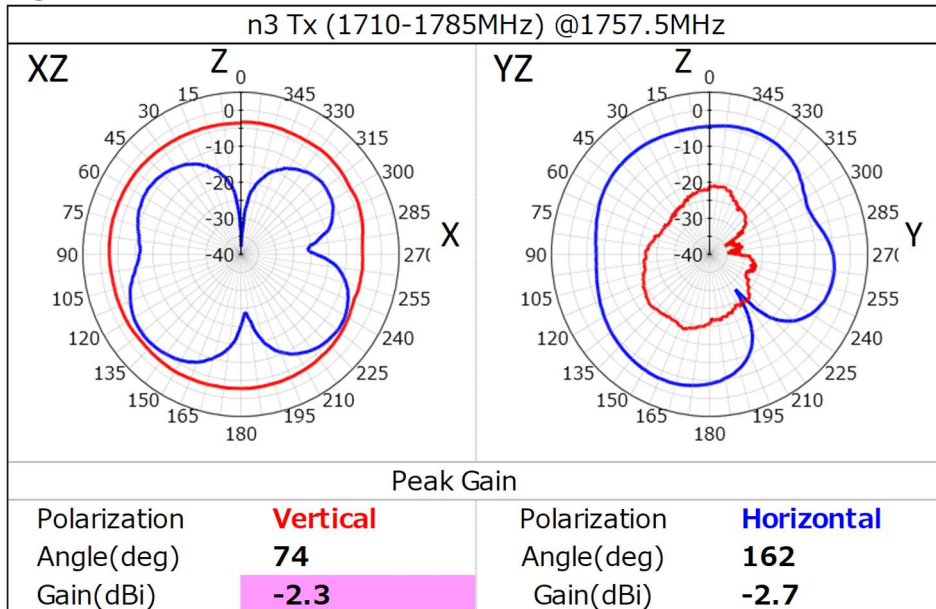


Fig.22



5. Radiation pattern, Peak gain (12/17)

Blue : Horizontal Red : Vertical

Fig.23

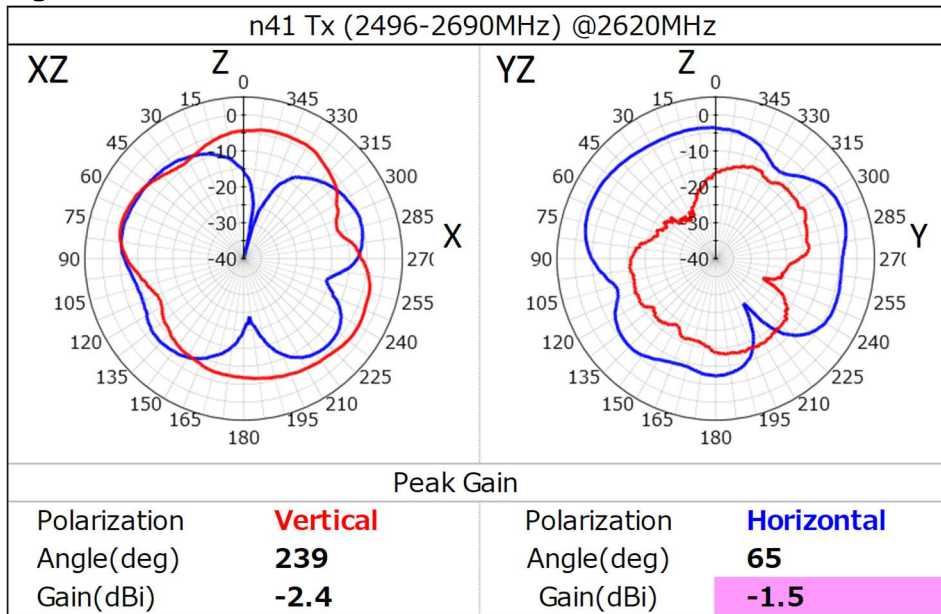
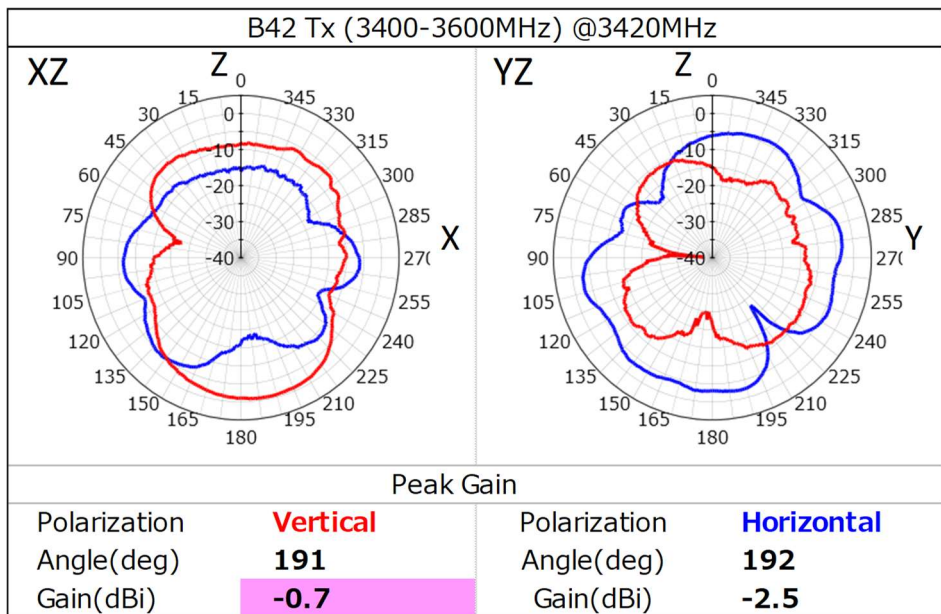


Fig.24



5. Radiation pattern, Peak gain (13/17)

Blue : Horizontal Red : Vertical

Fig.25

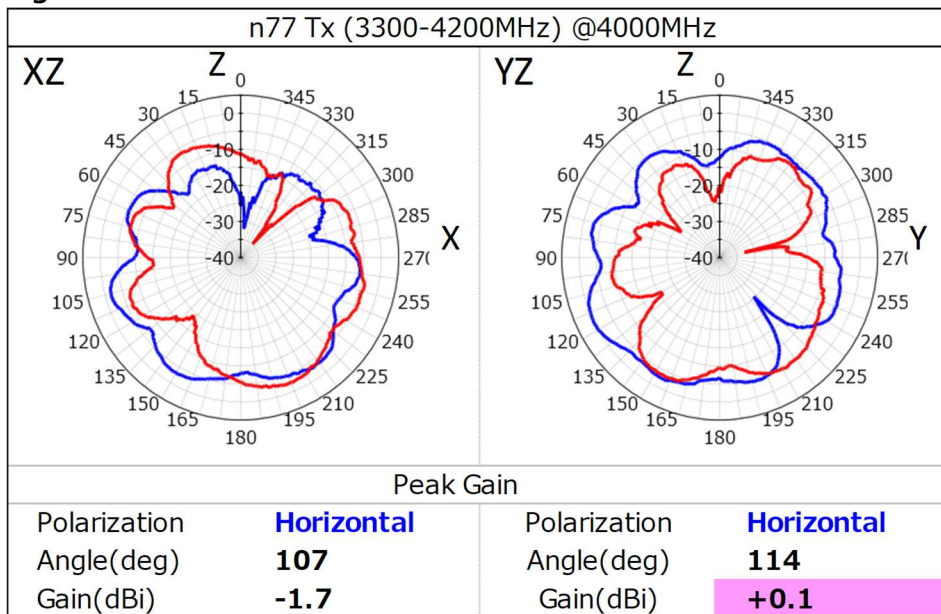
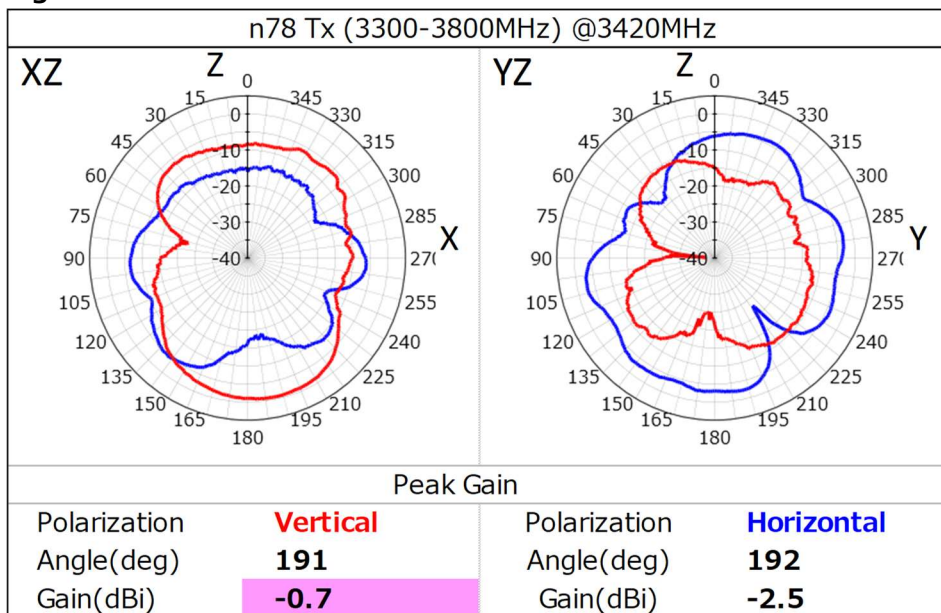


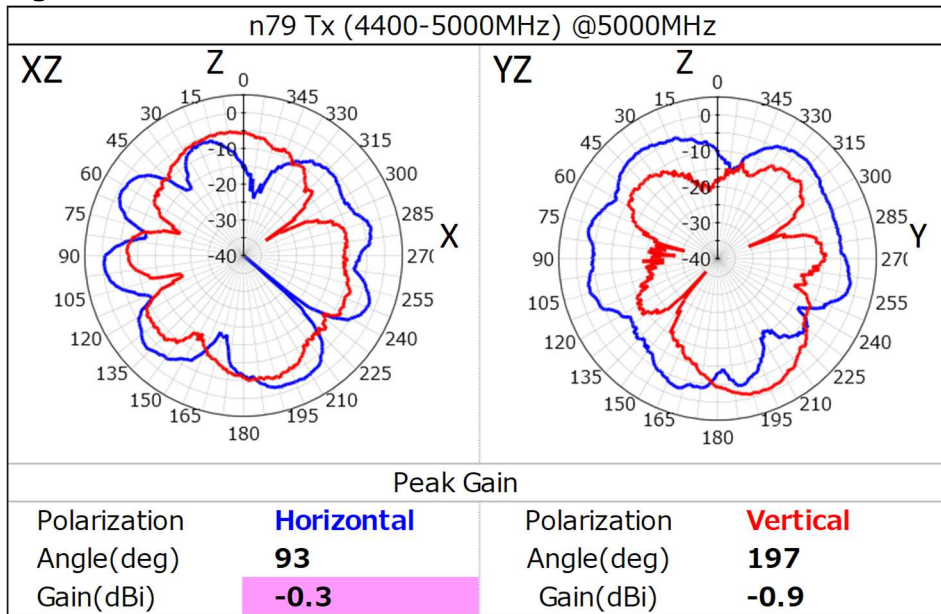
Fig.26



5. Radiation pattern, Peak gain (14/17)

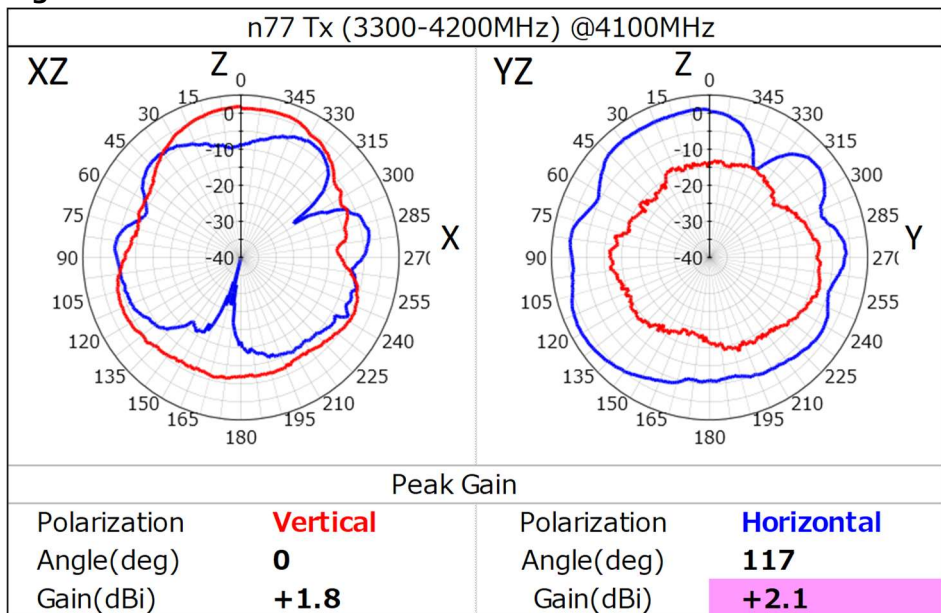
Blue : Horizontal Red : Vertical

Fig.27



ANT6

Fig.28



5. Radiation pattern, Peak gain (15/17)

Blue : Horizontal Red : Vertical

Fig.29

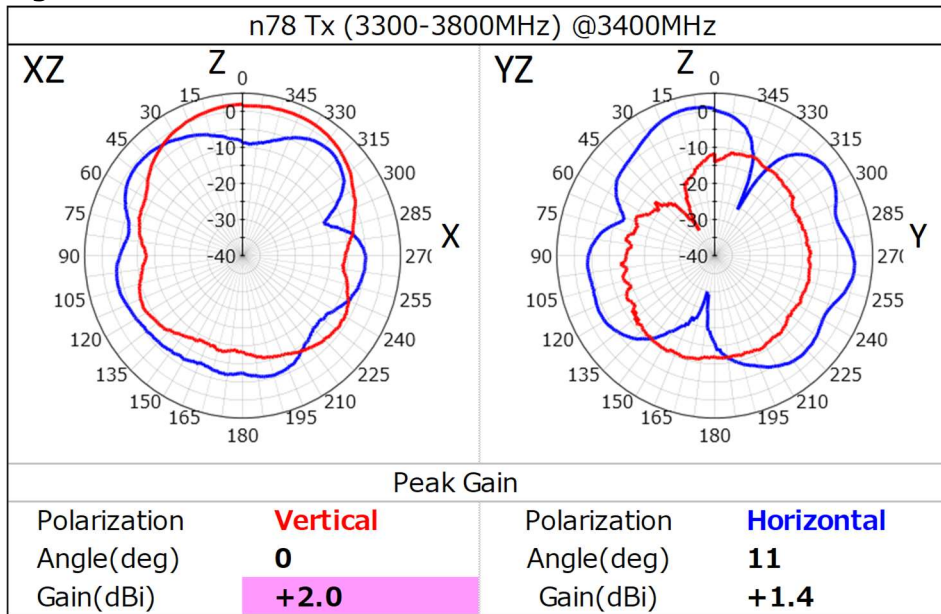
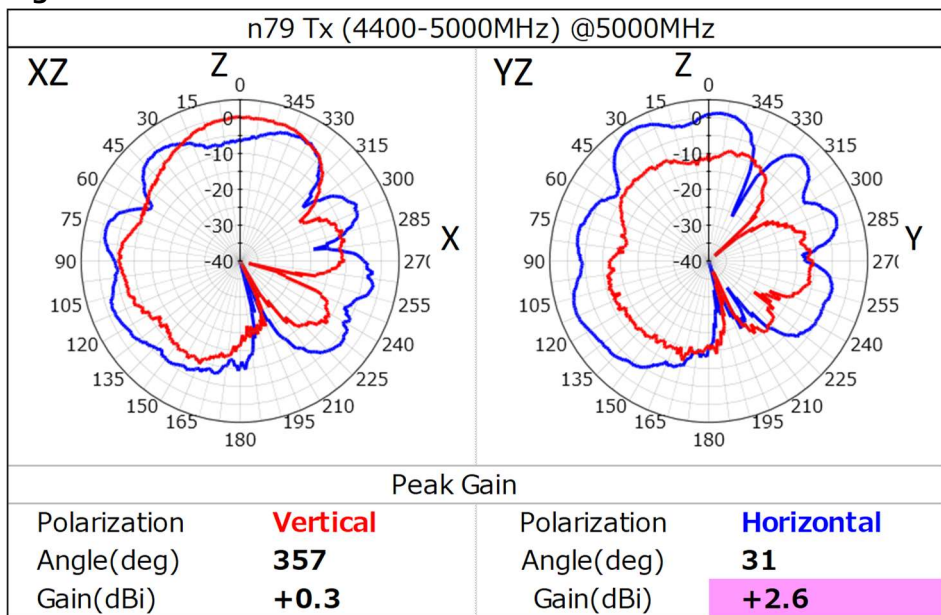


Fig.30



5. Radiation pattern, Peak gain (16/17)

Blue : Horizontal Red : Vertical

ANT7

Fig.31

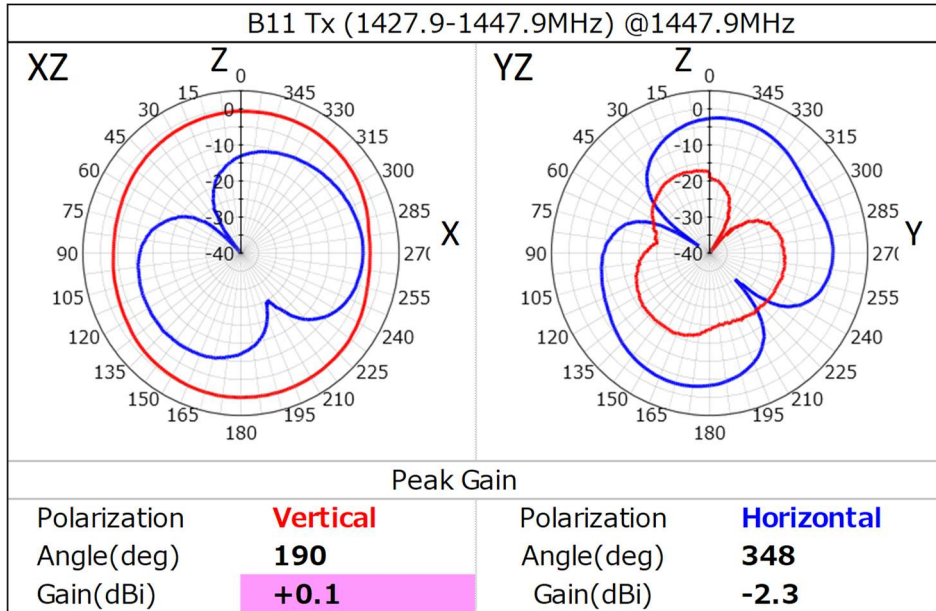
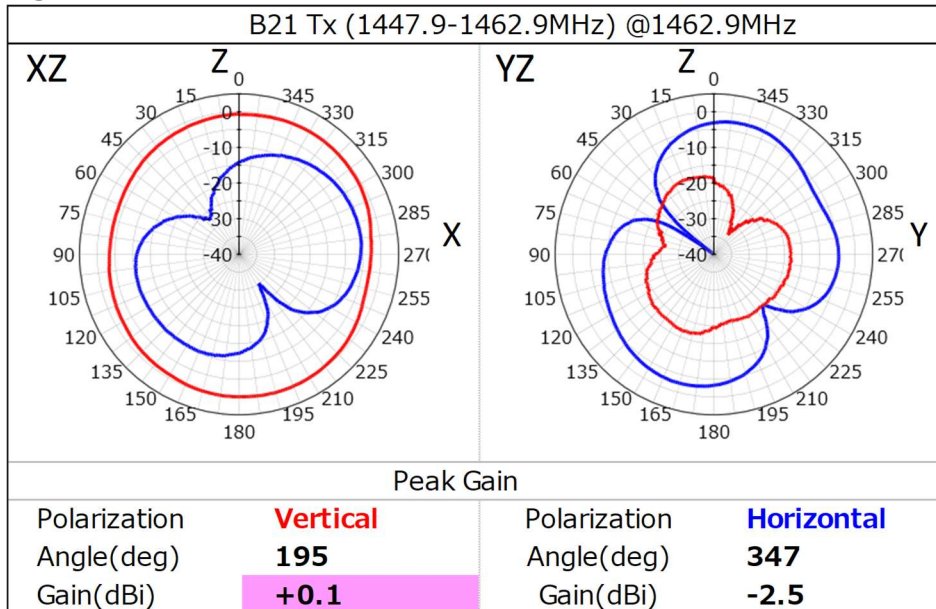


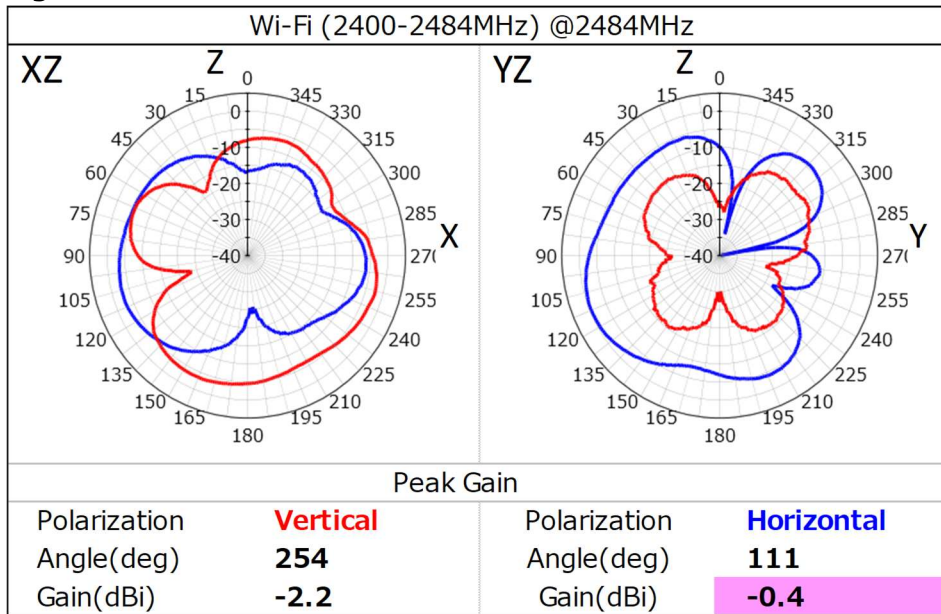
Fig.32



5. Radiation pattern, Peak gain (17/17)

Blue : Horizontal Red : Vertical

Fig.33



ANT8

Fig.34

