

Technical Data Sheet of BT/WLAN Antenna on Murata Standard PCB

Low Profile ANCG1 series Size: 8x2mm, t2mm max.

Note

Please confirm the latest specification for antenna shape and dimensions.

Capacitors and Inductors used in this report are as follows unless otherwise specified.

The values of each component are mentioned in the report.

In case using different series or manufactures' components, another value may be required to get the proper result.

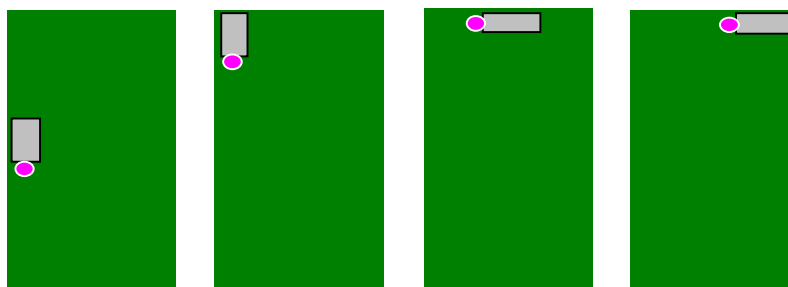
Capacitors: GRM15 series (Murata)

Inductors: LQG15HS series (Murata)

Kanazawa Murata Mfg.Co.,Ltd
Antenna Products Department

Measurement Conclusion

PWB Size: 37x80mm



	Condition1	Condition2	Condition3	Condition4
Sample No.	ANS5CASR0-11	ANS5CASR0-14	ANS5CASR0-12	ANS5CASR0-14
Antenna[mm]	8x2mm, t2mm max.			
PWB size[mm]	37x80mm			
Shunt	None	None	None	None
Fine Tune	None	None	0.3pF	None
Efficiency at 2442MHz	-2.0dB	-3.7dB	-2.2dB	-2.6dB

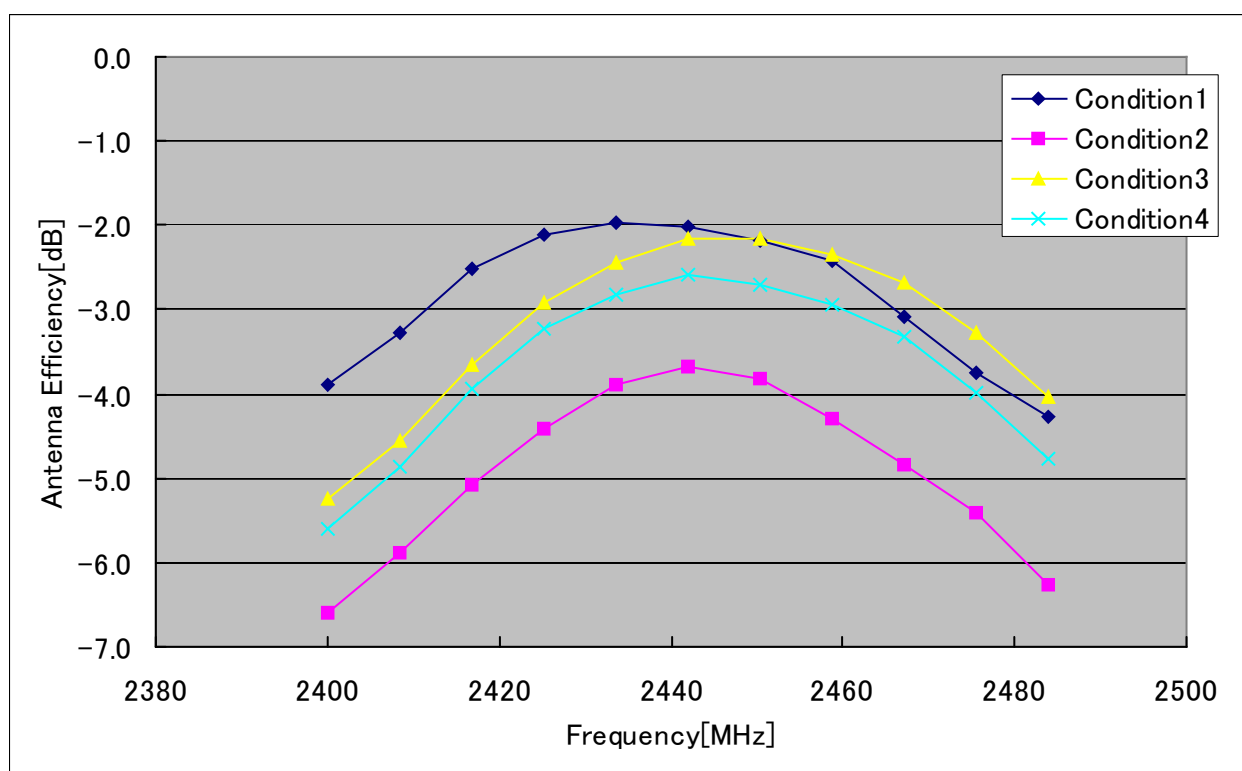


Fig. 1: Antenna efficiency of Condition1-4

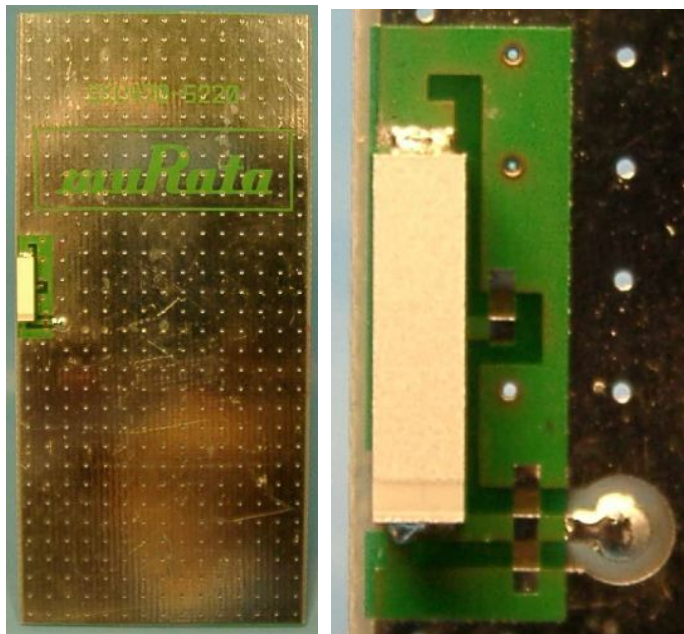
1.Measurement condition

Fig. 2: Condition 1 (ANS5CASR0-11, shunt = none, fine tune = none)

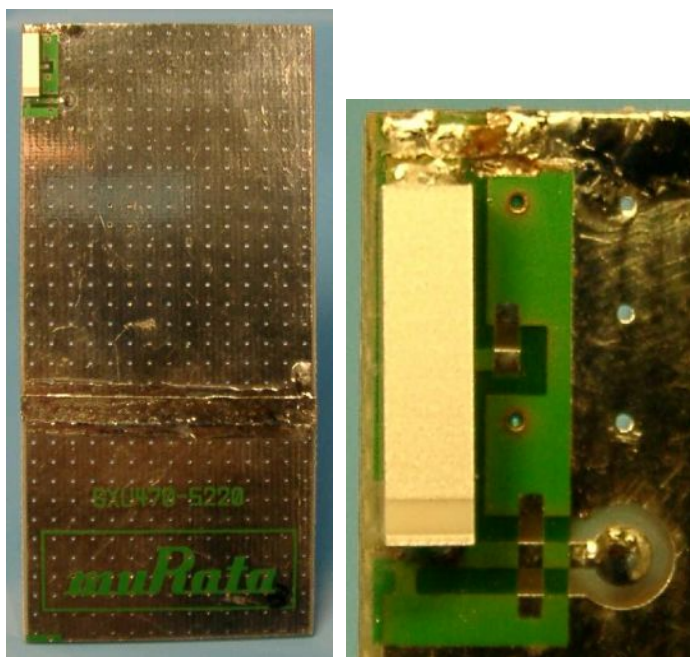


Fig. 3: Condition 2 (ANS5CASR0-14, shunt = none, fine tune = none)

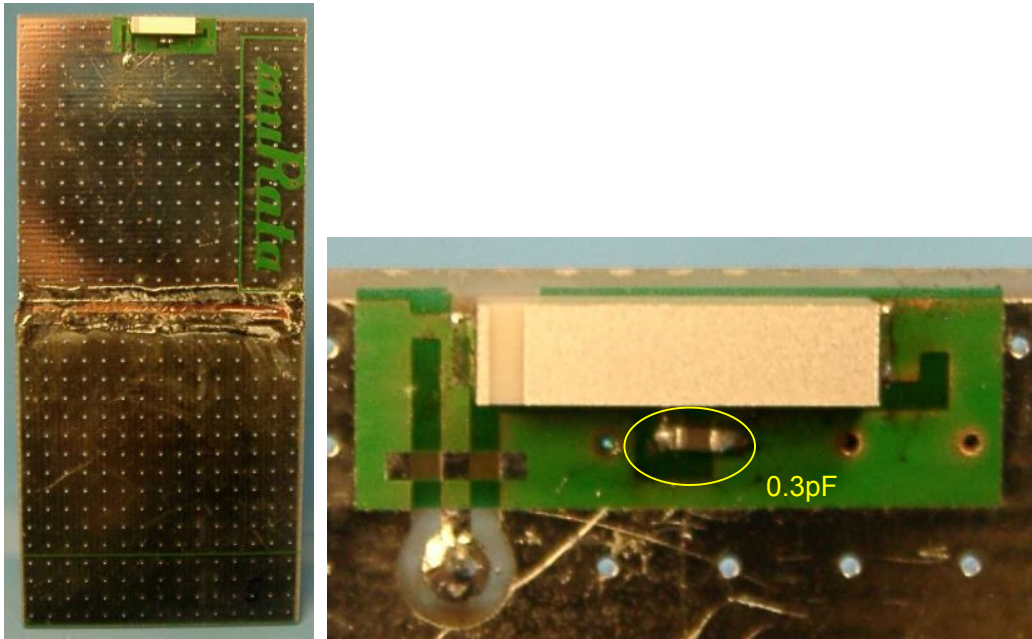
1.Measurement condition

Fig. 4: Condition 3 (ANS5CASR0-12, shunt = none, fine tune = 0.3pF)

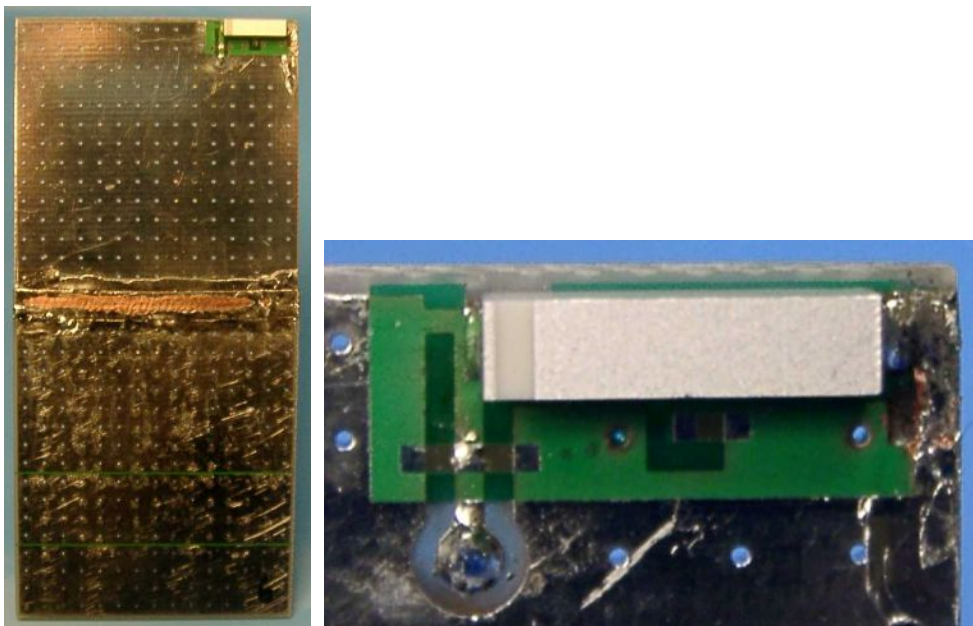


Fig. 5: Condition 4 (ANS5CASR0-14, shunt = none, fine tune = none)

2. Measurement direction

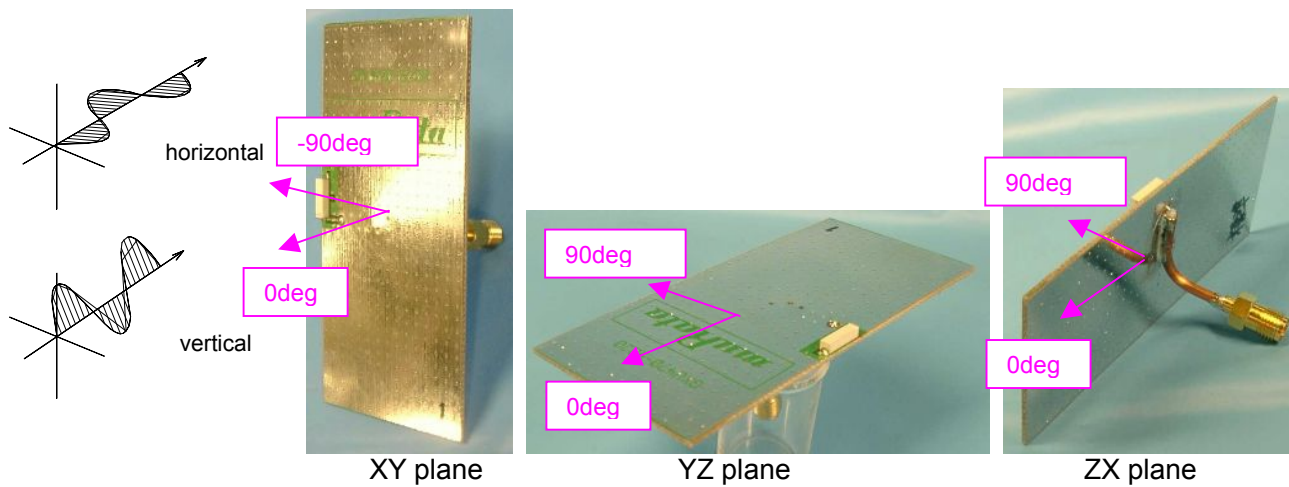
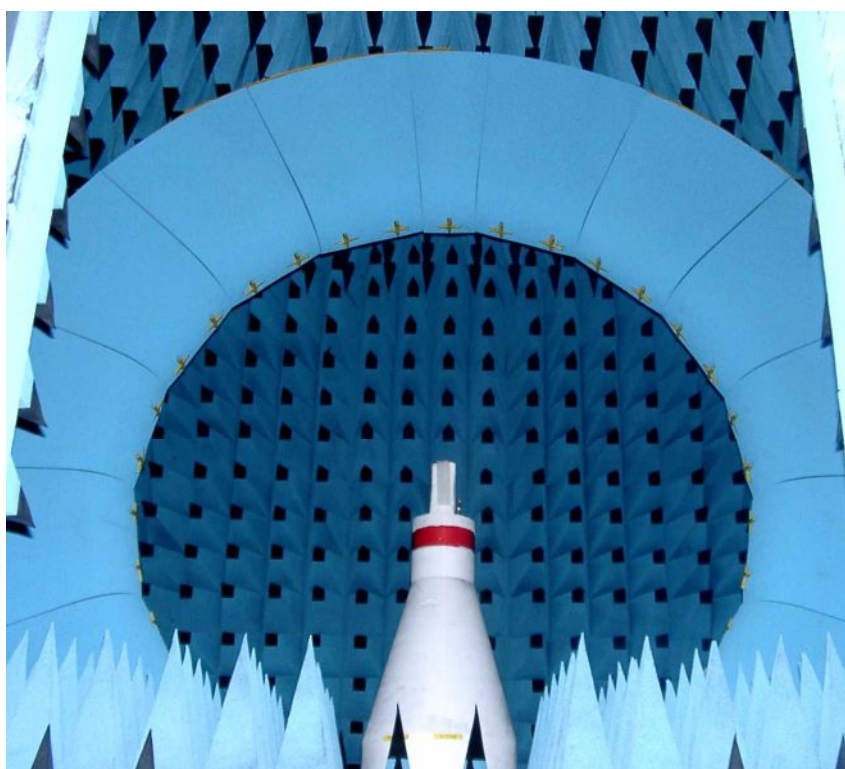


Fig. 6: Measurement direction in Free Space



3D measurement
Stargate32 (Satimo)

3. Measurement results

3.1: Return loss

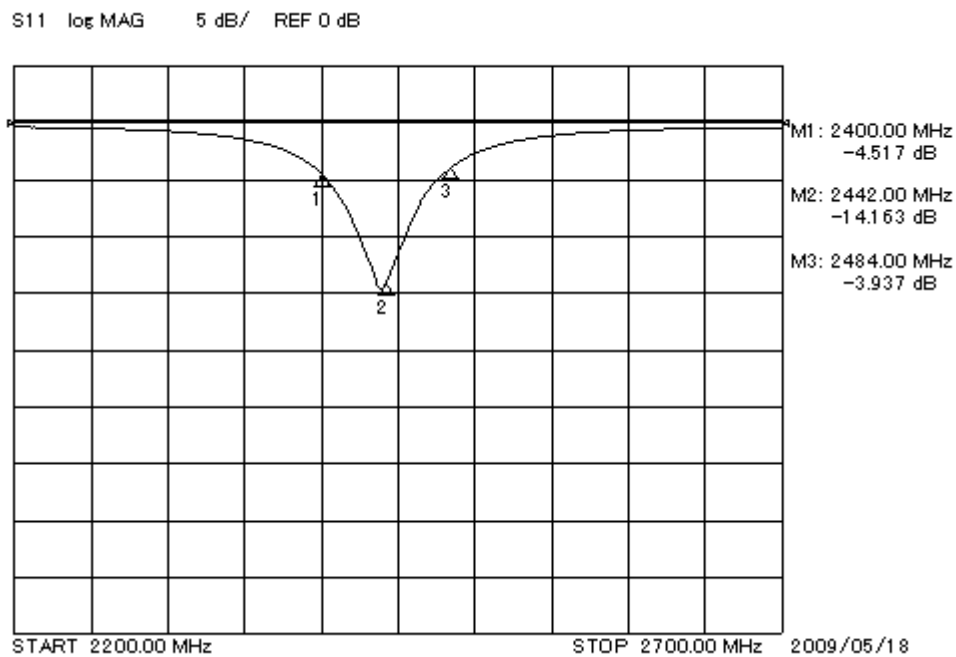


Fig. 7: Condition 1 (ANS5CASR0-11)

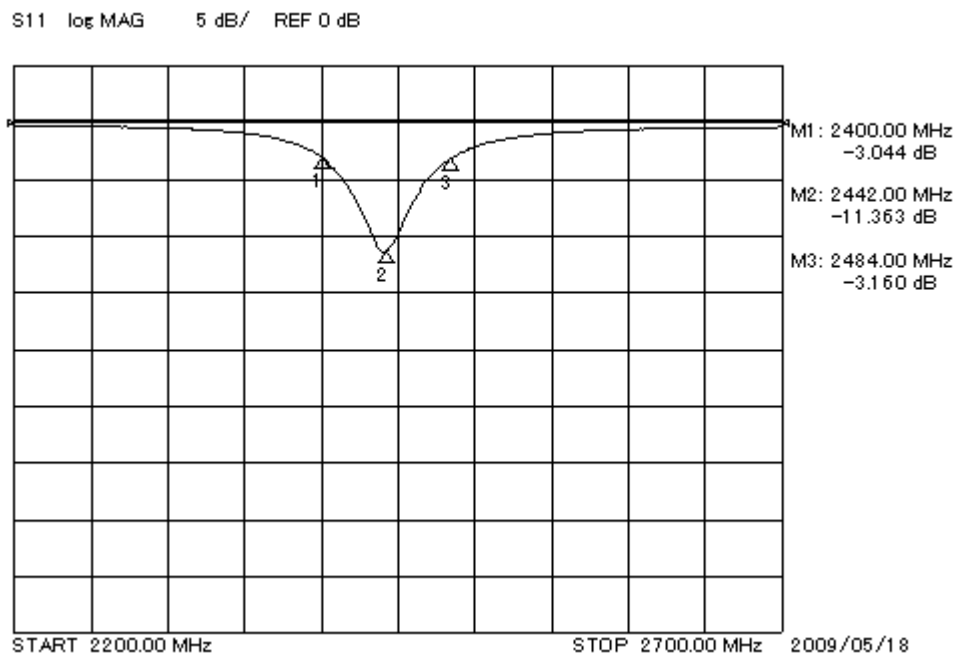


Fig. 8: Condition 2 (ANS5CASR0-14)

3. Measurement results

3.1: Return loss

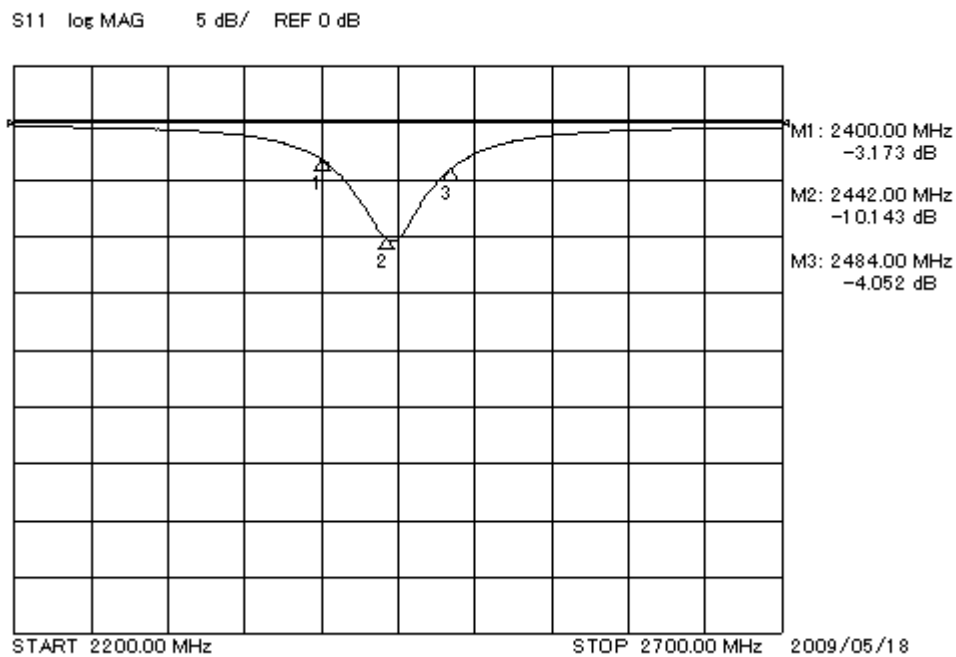


Fig. 9: Condition 3 (ANS5CASR0-12)

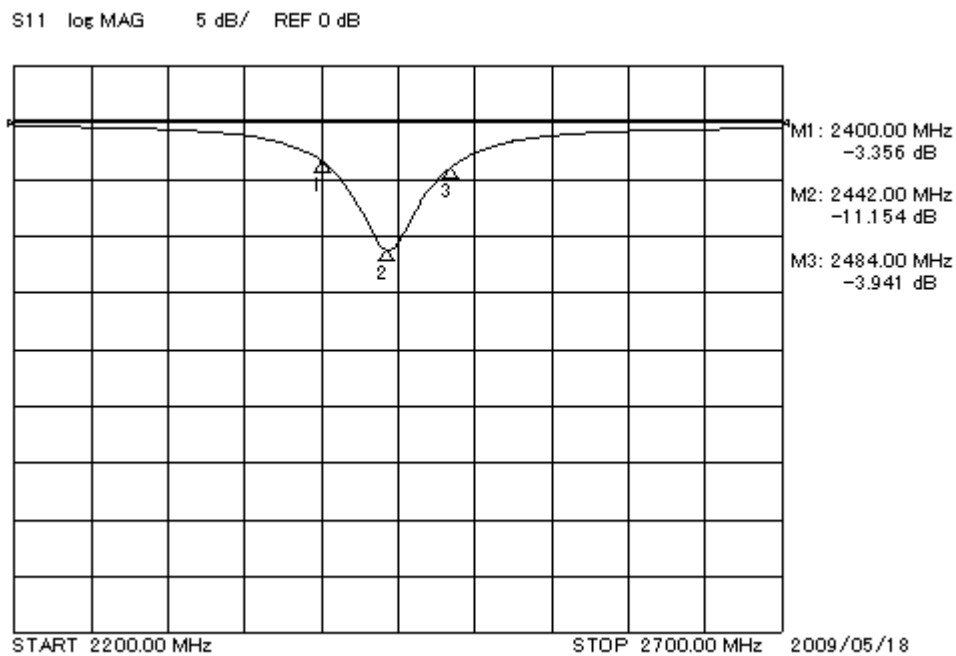


Fig. 10: Condition 4 (ANS5CASR0-14)

3. Measurement results

3.2: Antenna gain

LINEAR POLARIZATION		YZ-plane		ZX-plane		Total	Efficiency
		hor.	ver.	hor.	ver.	Average	
2400 MHz	MAX	-2.3	-9.3	-2.1	-4.8	-4.0	-3.9
	AVE	-5.3	-13.1	-6.5	-7.5		
2442 MHz	MAX	-0.5	-7.4	-0.2	-2.8	-2.1	-2.0
	AVE	-3.5	-11.1	-4.8	-5.2		
2484 MHz	MAX	-2.9	-9.7	-2.5	-4.9	-4.4	-4.3
	AVE	-5.8	-13.3	-7.0	-7.2		

Table 1: Condition 1 (ANS5CASR0-11)

LINEAR POLARIZATION		YZ-plane		ZX-plane		Total	Efficiency
		hor.	ver.	hor.	ver.	Average	
2400 MHz	MAX	-2.8	-8.5	-2.7	-7.7	-7.0	-6.6
	AVE	-8.7	-11.6	-8.7	-9.8		
2442 MHz	MAX	0.4	-5.5	0.2	-4.5	-4.1	-3.7
	AVE	-5.7	-9.0	-6.2	-6.7		
2484 MHz	MAX	-2.0	-7.8	-2.7	-6.0	-6.7	-6.3
	AVE	-8.2	-11.7	-9.0	-8.7		

Table 2: Condition 2 (ANS5CASR0-14)

LINEAR POLARIZATION		YZ-plane		ZX-plane		Total	Efficiency
		hor.	ver.	hor.	ver.	Average	
2400 MHz	MAX	-3.6	-13.6	-14.0	-3.5	-5.2	-5.3
	AVE	-5.8	-17.7	-19.8	-5.3		
2442 MHz	MAX	-0.2	-10.1	-9.9	-0.1	-2.2	-2.2
	AVE	-2.7	-14.6	-15.9	-2.2		
2484 MHz	MAX	-2.3	-11.8	-11.3	-2.1	-4.1	-4.0
	AVE	-4.6	-16.4	-17.0	-4.0		

Table 3: Condition 3 (ANS5CASR0-12)

LINEAR POLARIZATION		YZ-plane		ZX-plane		Total	Efficiency
		hor.	ver.	hor.	ver.	Average	
2400 MHz	MAX	-3.8	-12.5	-14.6	-3.6	-5.5	-5.6
	AVE	-6.4	-17.0	-20.2	-5.3		
2442 MHz	MAX	-0.6	-9.2	-10.5	-0.5	-2.5	-2.6
	AVE	-3.4	-14.0	-16.4	-2.2		
2484 MHz	MAX	-3.0	-11.8	-12.0	-2.7	-4.7	-4.8
	AVE	-5.6	-16.3	-17.6	-4.4		

Table 4: Condition 4 (ANS5CASR0-14)

3. Measurement results

5.3: Radiation Pattern

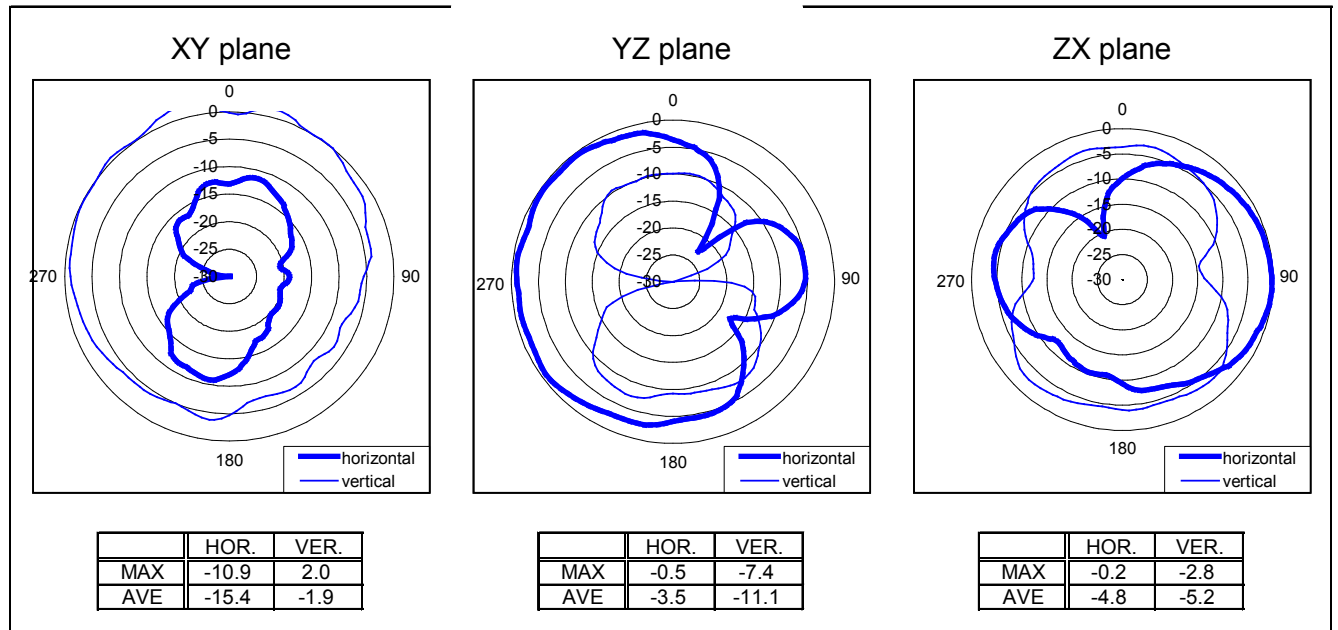


Fig. 2: Condition 1 (ANS5CASR0-11)

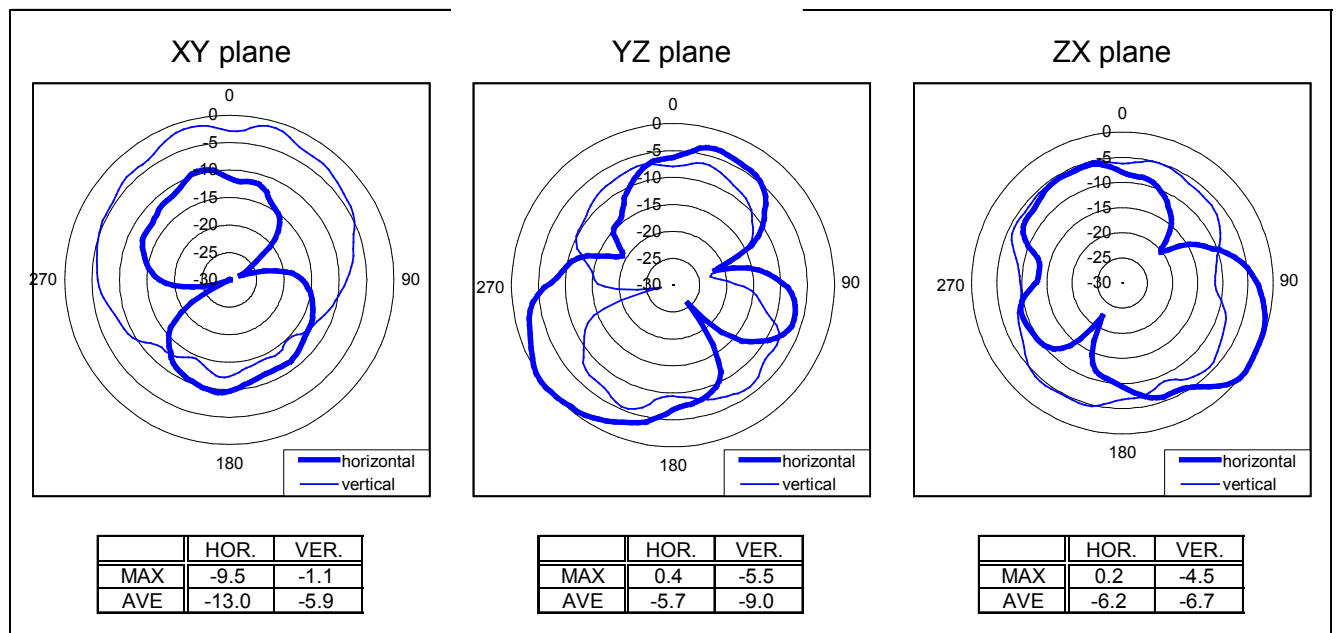


Fig. 3: Condition 2 (ANS5CASR0-14)

3. Measurement results

5.3: Radiation Pattern

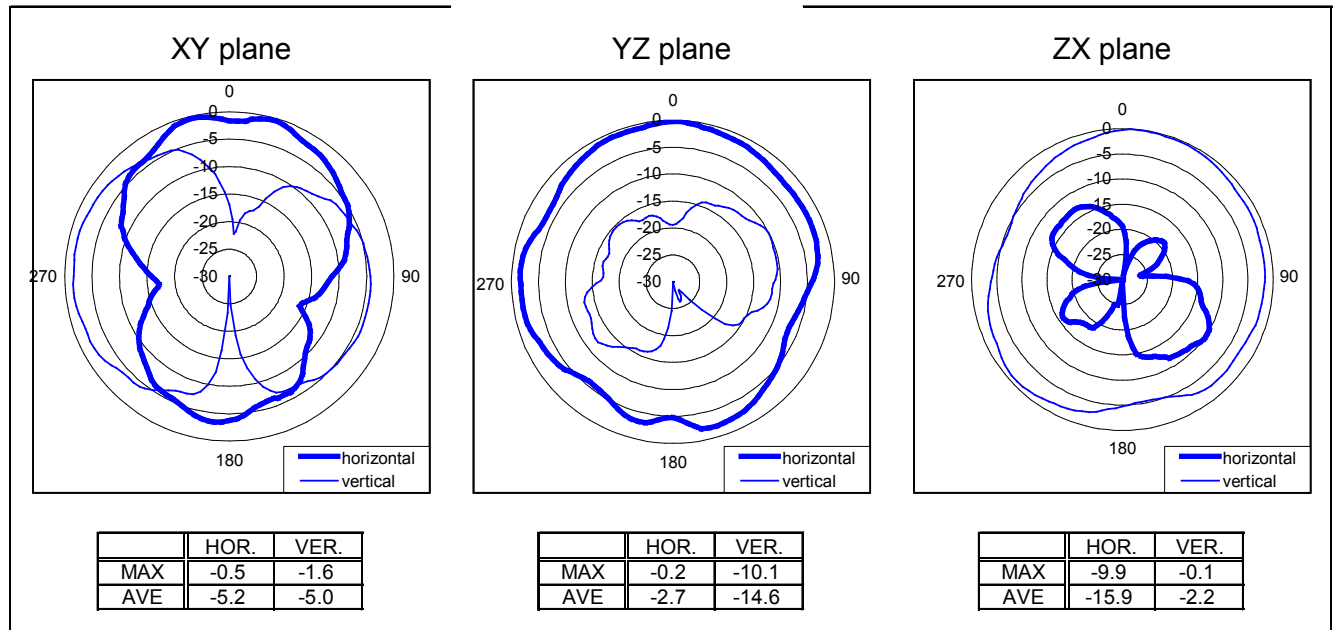


Fig. 4: Condition 3 (ANS5CASR0-12)

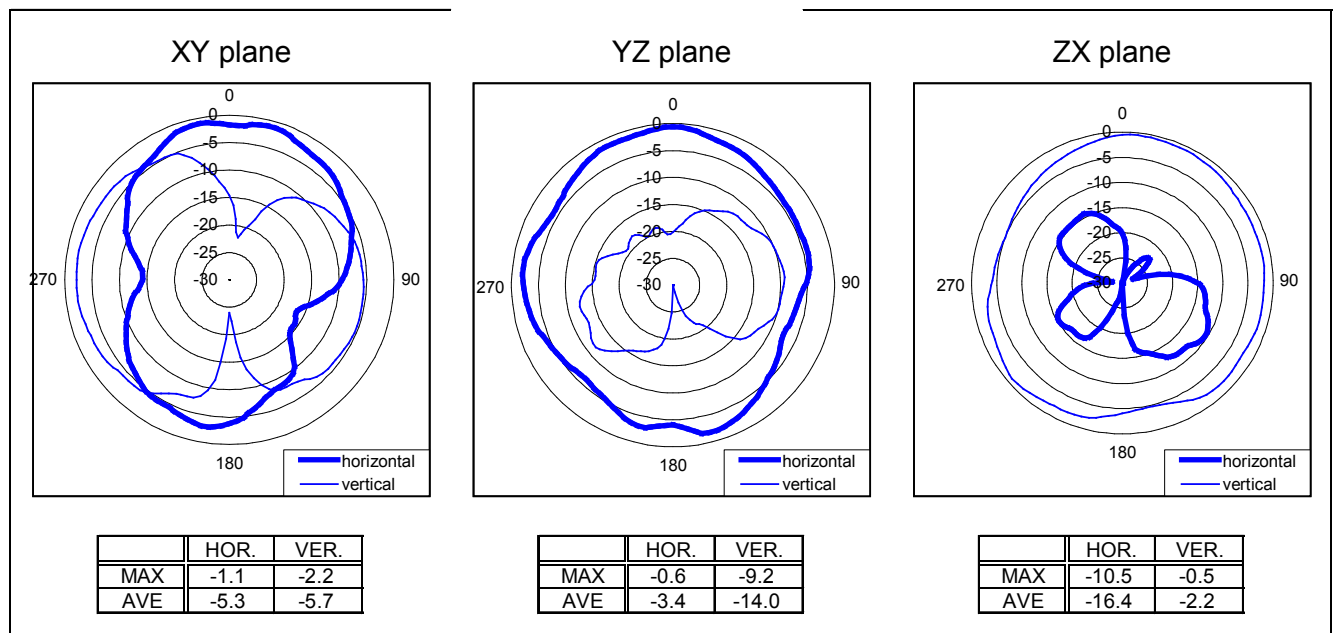


Fig. 5: Condition 4 (ANS5CASR0-14)