

ANTENNA TEST REPORT

Applicant	Faurecia Clarion Electronics (Xiamen) Co., Ltd.
Address	5F, No. 40, Guanri Road, Software Park Stage II, Xiamen

Supplier	AMOTECH Co., Ltd
Address	57, Gemdan-ro, Seo-gu, Incheo, Korea
Product	Chip Antenna
Part No.	ALA621C4
Model	23M MMC
Peak Gain	3.2 dBi
Date of Test	01. Dec . 2022

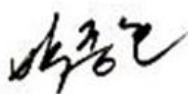
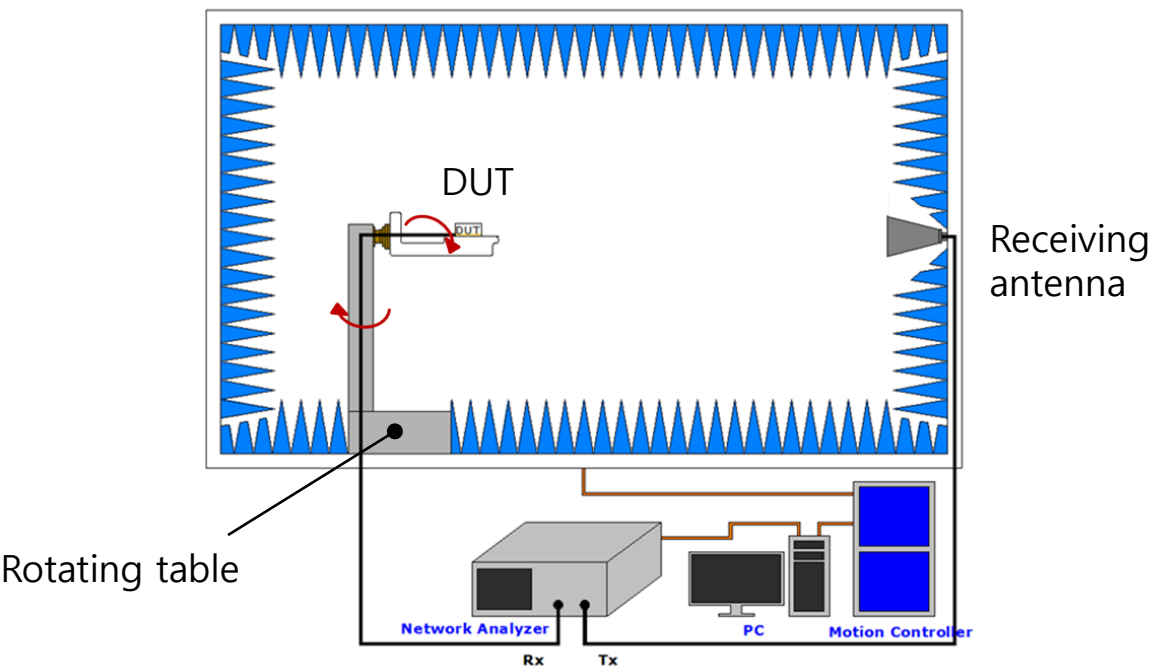
	Written	Reviewed	Approved
Approval			
Date	2022-12-01	2022-12-01	2022-12-01

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1. Measurement Set up



No	Equipment	Maker	MODEL
1	Anechoic Chamber	KSS	8*4*4 (Size)
2	Network Analyzer	Agilent	E5071B

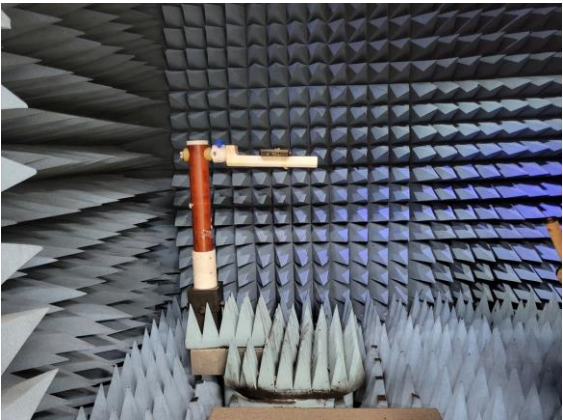


Figure of rotator and DUT

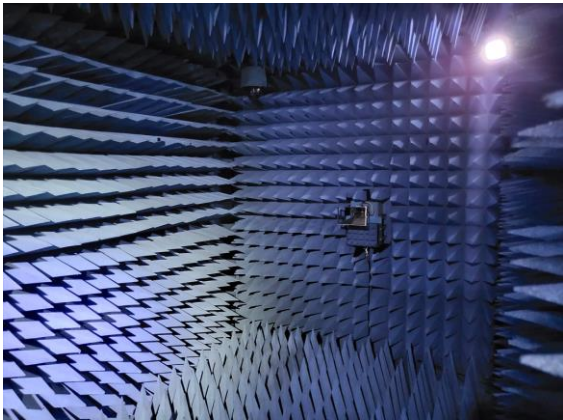


Figure of receiving antenna

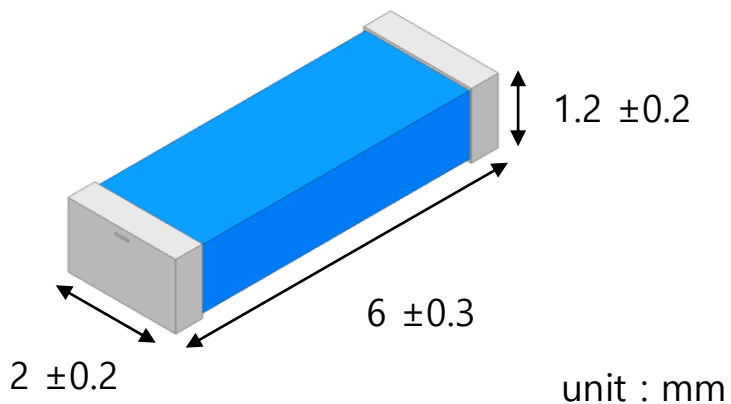
2. Measurement Instruments

Equipment	Manufacturer	Model No.	Remark
Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120D	N/A
Network Analyzer	Agilent	E5071C	SEP. 15, 23
Wireless Connectivity SET	Anritsu	MT8862A	Mar. 10, 23
Bluetooth Tester	TESCOM	TC3000C	Dec. 23, 22
Turn Table	MTG	AP6305	N/A
Controller	MTG	MTG-CK3M	N/A
Test Software	MTG	VisualWave V2.1	N/A
Turn Table	KSS	KSS-3Dsystem	N/A
Controller	KSS	KSS-3Dsystem	N/A
Test Software	KSS	WiFi3DA	N/A

※ The measurement was performed in fully Anechoic chamber.

※ The calibration interval of the above test instrument is 12months.

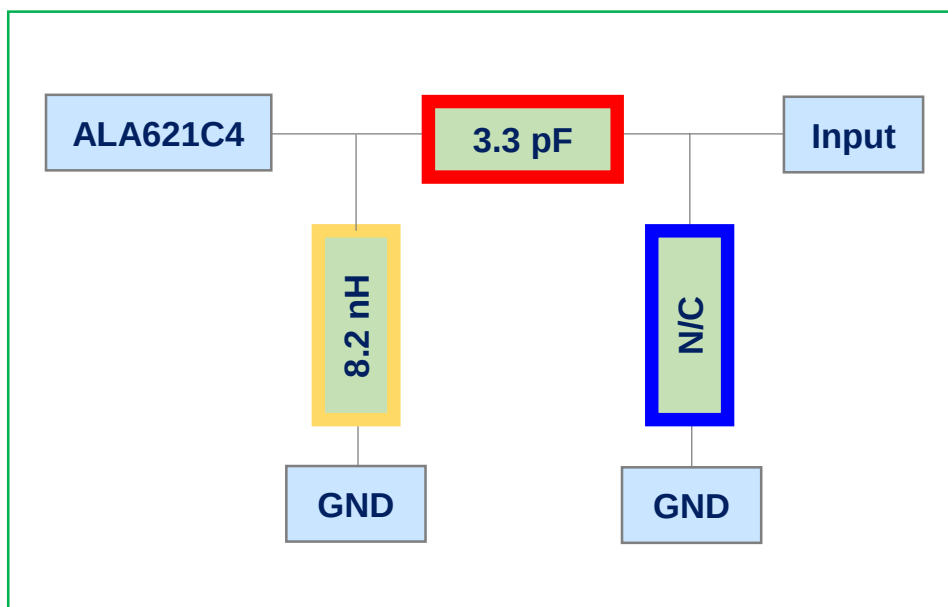
3. Antenna Information



Dimensions of ALA621C4 antenna



ALA621C4 antenna in SET



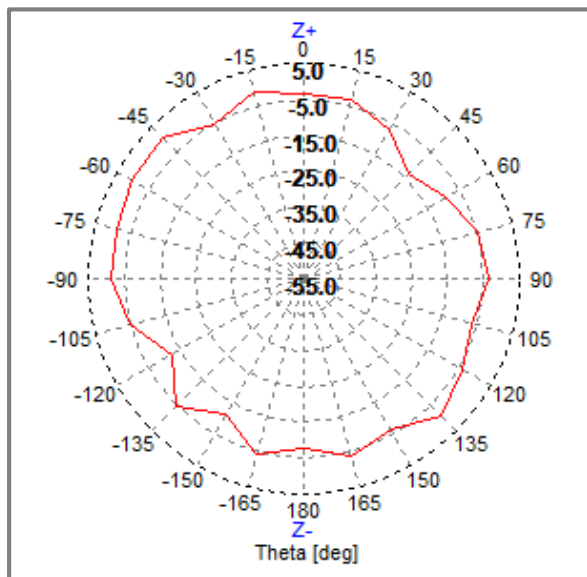
Antenna matching value information in the SET

4. Measurement Results

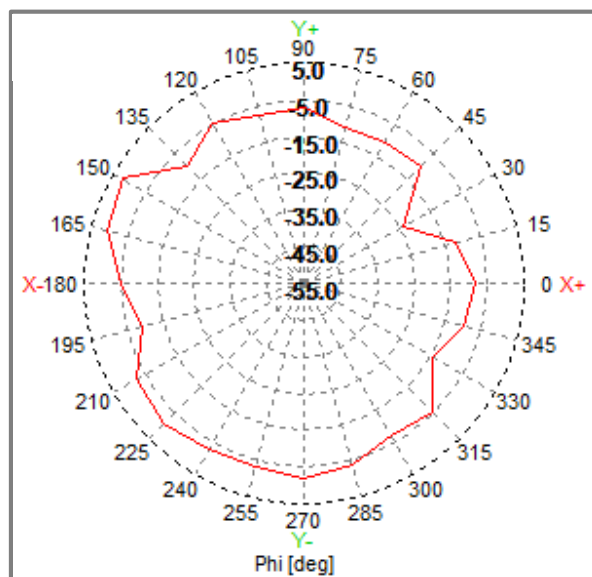
4.1 Antenna gain table

Antenna	Frequency [MHz]	Antenna Polarity	Peak gain [dBi]
ALA621C4	2402	Horizontal	0.43
		Vertical	1.90
	2440	Horizontal	0.94
		Vertical	3.20
	2480	Horizontal	0.27
		Vertical	0.56

4.2 Measured 2D radiation pattern

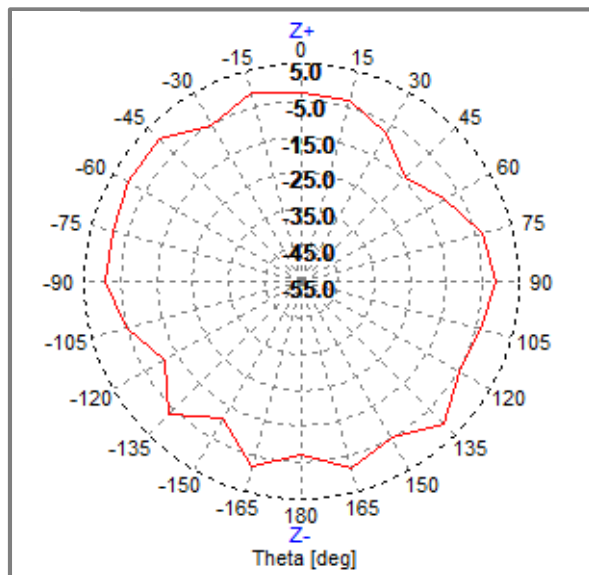


ITEM	Value
Frequency [MHz]	2402
Polarity	Horizontal
Average gain [dB]	-3.79
Max gain [dB]	0.43
Max. gain degree	-45

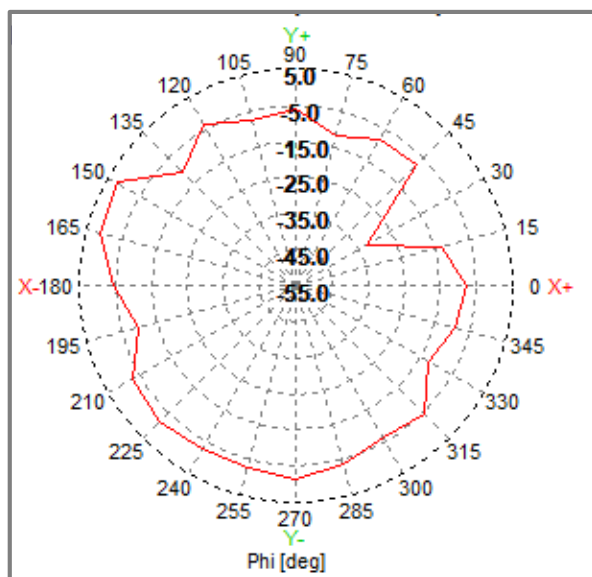


ITEM	Value
Frequency [MHz]	2402
Polarity	Vertical
Average gain [dB]	-4.57
Max gain [dB]	1.90
Max. gain degree	150

4.3 Measured 2D radiation pattern

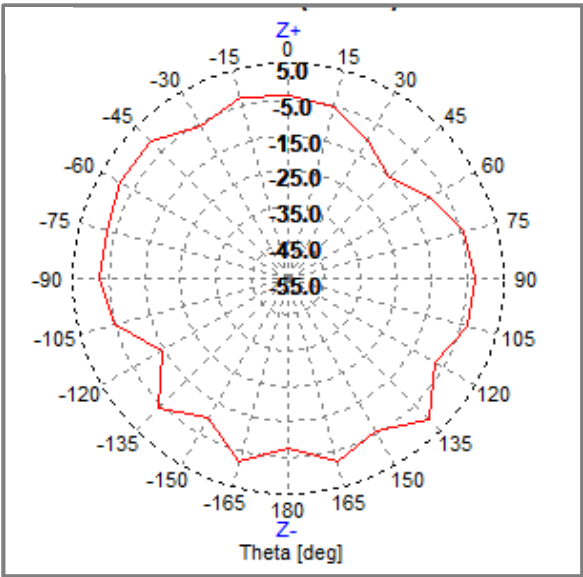


ITEM	Value
Frequency [MHz]	2440
Polarity	Horizontal
Average gain [dB]	-3.06
Max gain [dB]	0.94
Max. gain degree	135

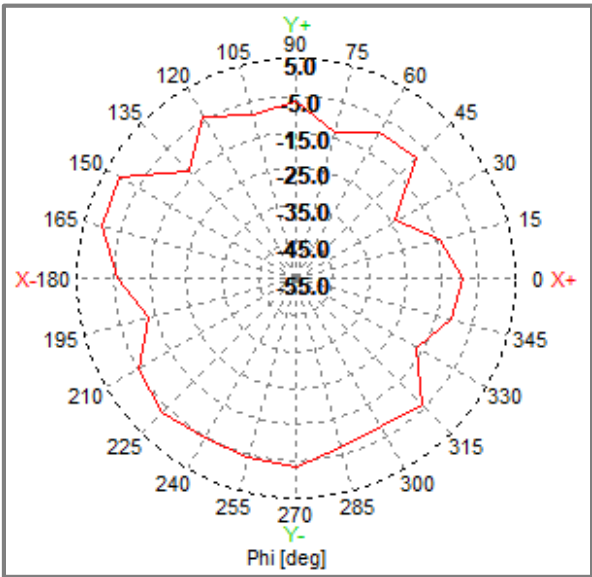


ITEM	Value
Frequency [MHz]	2440
Polarity	Vertical
Average gain [dB]	-4.20
Max gain [dB]	3.20
Max. gain degree	150

4.4 Measured 2D radiation pattern

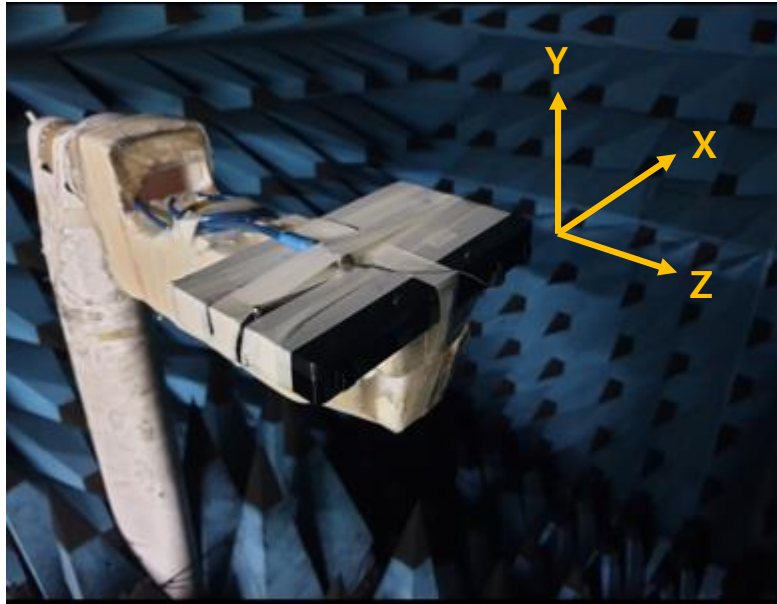


ITEM	Value
Frequency [MHz]	2480
Polarity	Horizontal
Average gain [dB]	-4.11
Max gain [dB]	0.27
Max. gain degree	135



ITEM	Value
Frequency [MHz]	2480
Polarity	Vertical
Average gain [dB]	-5.83
Max gain [dB]	0.56
Max. gain degree	150

5. Photograph of Configuration



Test SET in Anechoic Chamber