

DATE		PART NO.
2024.03.15		CMX-ZG07 Printed Antenna

SPECIFICATION FOR APPROVAL

ITEM	2.4GHz Printed Antenna
PRODUCT NAME	CMX-ZG07 Printed Antenna
REVISION	VER 0.0
CREATION DATE	2024.03.15

		REVIEW	CHECK	APPROVED
RISE CO., Ltd.	SIGNATURE			

Request approval for the above product..

COSTOMER	APPROVAL
	DATE :



#715 ,307, Waryong-ro, Seo-gu, Daegu, Republic of Korea)

TEL : 053-312-1272 FAX : 053-312-1270

E-mail : rise@newrise.co.kr

Homepage : <http://www.newrise.co.kr>

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1. General Features

MODEL	CMX-ZG07 Printed Antenna
TYPE	PCB ANTENNA
APPLICATION	ZigBee ANTENNA
MANUFACTURER	RISE CO., Ltd.
MESASUREMENT COMPANY NAME	Gyeongbuk Research Institute of Vehicle Embedded Technology

2. Electrical Characterristics

FREQUENCY RANGE	2.40~2.48 GHz
V.S.W.R	LESS THEN 2.2 : 1
PEAK.GAIN(dBi)	0.43
INPUT IMPEDANCE (Ω)	50 Ohm
POLRIZATION	LINEAR
RADIATION PATTERN	OMNIDIRECTIONAL

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3. Mechanical Description

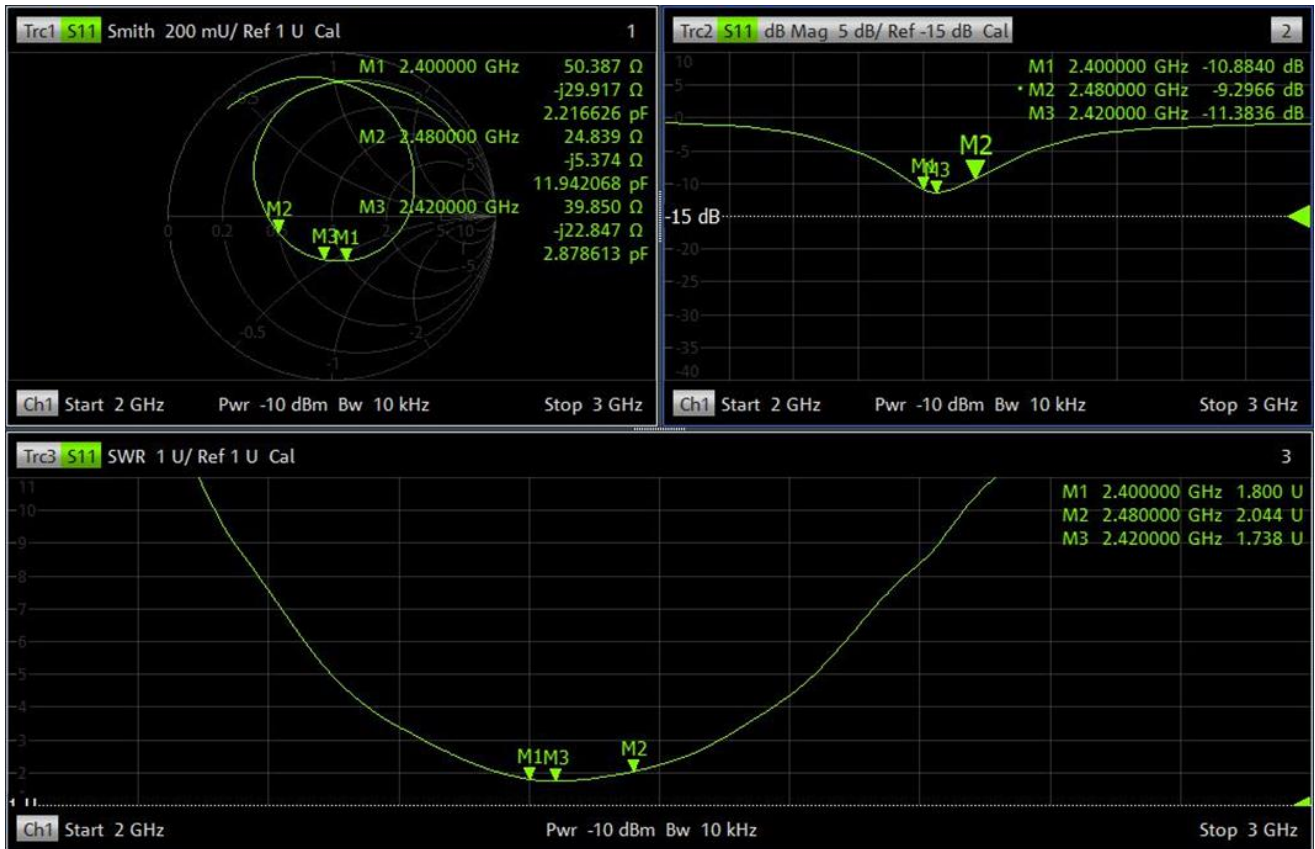
3.1 Product photo

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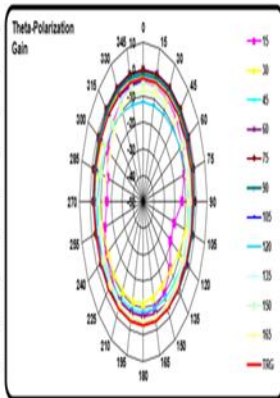
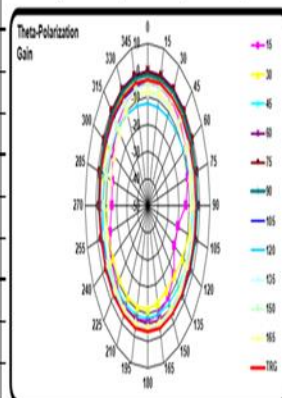
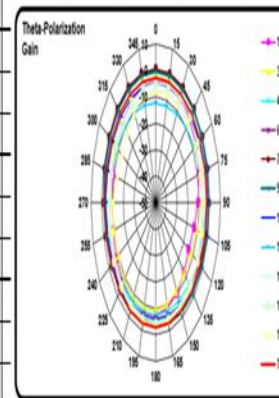
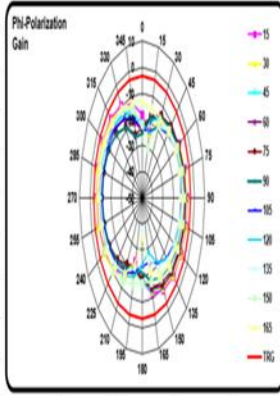
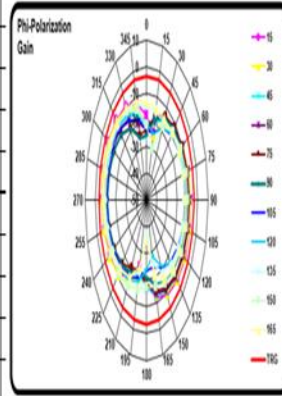
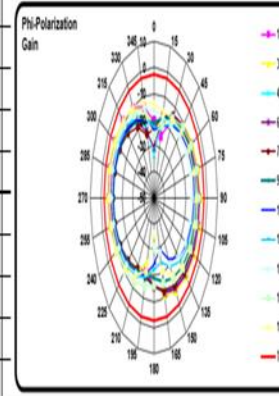
4. Antenna Characteristics

4.1 V.S.W.R



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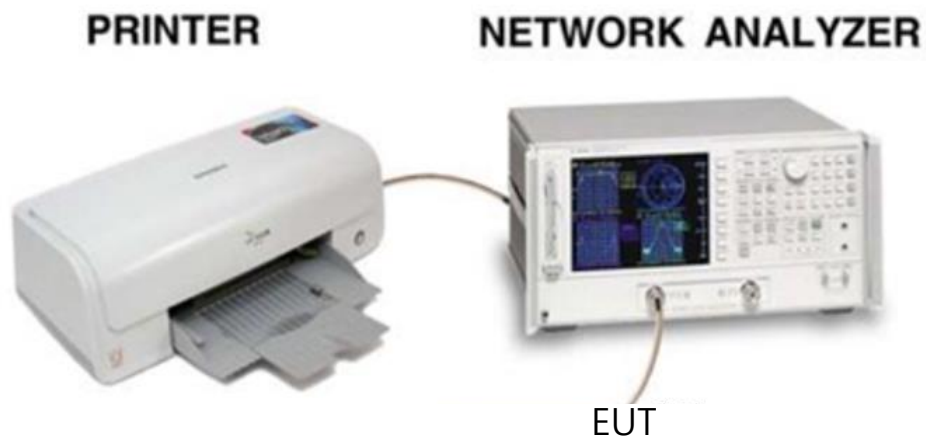
4.2 Passive Measurement

	1	2	3		1	2	3	
Frequency [MHz]	2405	2440	2480		2405	2440	2480	
Efficiency [dB]	-3.37	-2.89	-2.87					
Efficiency [%]	45.98	51.38	51.68					
TRG [dB]	-3.37	-2.89	-2.87					
TRG _θ [dB]	-3.99	-3.50	-3.44					
Gain _{θ Peak} [dB]	0.40	0.38	0.27					
Gain _{θ Min} [dB]	-20.58	-17.04	-17.33					
TRG _φ [dB]	-12.14	-11.75	-11.98					
Gain _{φ Peak} [dB]	-5.88	-5.91	-5.76					
Gain _{φ Min} [dB]	-37.18	-38.63	-35.91					
UHRG [dB]	-5.50	-5.11	-4.97					
UHRG/TRG [%]	61.31	60.06	61.60					
H-Plane	-2.66	-1.93	-1.36					
E1-Plane, AVG [dB]	-4.23	-3.76	-3.80					
E2-Plane, AVG [dB]	-5.37	-4.80	-4.71					
Peak Gain [dB]	0.42	0.43	0.27					
Directivity [dB]	3.79	3.32	3.14					
Minimum Gain [dB]	-12.20	-11.81	-11.97					
Test Condition	FS							
Antenna Type								
FS=Free Space, BHR=Beside Head Right Side, BHL=Beside Head Left Side, HR=Hand Right, HL=Hand Left, BHRH=Beside Head and Hand Right Side, BHHL=Beside Head and Hand Left Side, NB=Notebook								
Average Efficiency	-3.04 dB,		49.68 %					

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5. Measurement Process

5.1 SWR / Pattern loss



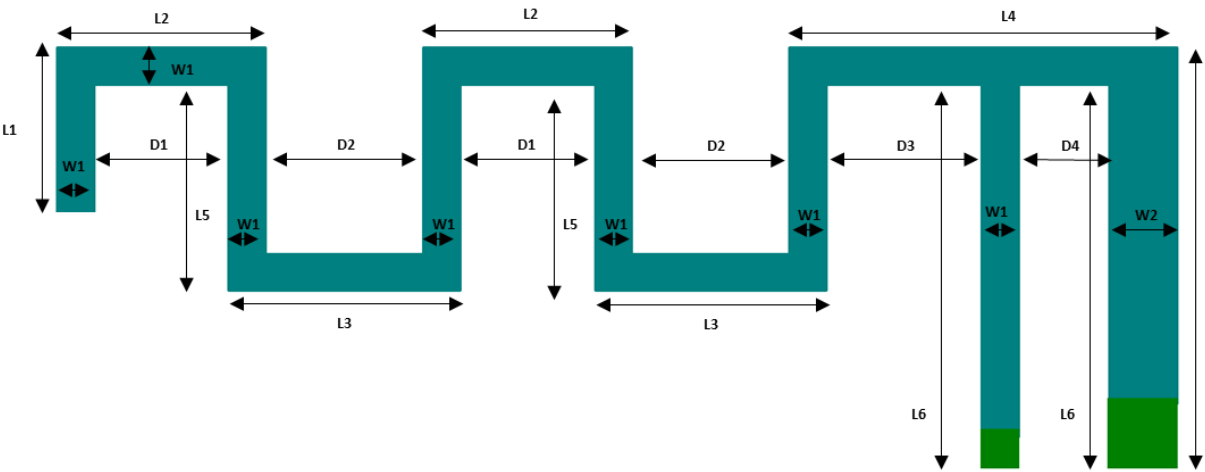
5.2 Antenna gain

Anechoic Chamber for Antenna Gain Measurement



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6. Antenna pattern drawing



Location	Length	Location	Length
D1	1.70 mm	L4	5.00 mm
D2	2.00 mm	L5	2.64 mm
D3	1.97 mm	L6	4.90 mm
D4	1.13 mm	L7	5.40 mm
L1	2.14 mm	W1	0.50 mm
L2	2.70mm	W2	0.90 mm
L3	3.00 mm		