

FCC/IC TEST REPORT

Job No. : GPEM2202000082EC

Applicant : iRevo-ASSA ABLOY Korea

Equipment Under Test (EUT) :

Product Name : Digital Door Lock

Model Name : YRD450

Alt. Model Name : YRD430, YRD420, YRD410

FCC Authorization Type : Certification

Applied Standards : FCC Part 15 Subpart B, Class B

ICES-003 Issue 7:2020

ANSI C63.4a:2017

FCC ID : 2ABFG-YRD450BLEV1

IC Certification : 11626A-YRD450BLEV1

Date of Receipt : February 9, 2022

Date of Test : March 11, 2022 ~ March 28, 2022

Date of Issue : March 31, 2022

Test Results : Complied

Tested by :



DoHyeon Lee

Reviewed by :



Paul Kang

This test report does not assure KOLAS accreditation.

1) The results of this test report are effective only to the items tested.

2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.

Remarks :

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The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.

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Revision History

Revision	Report number	Description
0	F690501-RF-EMC000508	Initial
1		

1. General Information

1.1 Client Information

Applicant	iRevo-ASSA ABLOY Korea
Applicant Address	10f of JEI PLATZ Bldg., 186, Gasandigital 1-ro, Geumcheon-gu, Seoul, 08502, Korea
Manufacturer	iRevo-ASSA ABLOY Korea
Manufacturer Address	10f of JEI PLATZ Bldg., 186, Gasandigital 1-ro, Geumcheon-gu, Seoul, 08502, Korea
Factory	ASSA ABLOY SMART PRODUCT VIETNAM CO., LTD.
Factory Address	Lot A10, Ba Thien 2 Industrial Park, Thien Ke Ward, Binh Xuyen District, Vinh Phuc Province, Vietnam

1.2 Test Laboratory

Name and Address	SGS Korea Co., Ltd.
- Giheung 1 Laboratory	35, Giheungdanji-ro 121beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea
- Gunpo 1 Laboratory	4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, 15807, Republic of Korea
FCC Registration No.	KR0150
IC Registration No.	7837B
Phone	+ 82 31 548 0710
Fax	+ 82 31 548 0719
e-mail	julia.choi@sgs.com

1.3 General Information of E.U.T.

Classification	Specification
Product Name	Digital Door Lock
Model Name	YRD450
Alt. Model Name	YRD430, YRD420, YRD410
Model Differences	- Same to basic model except below - Variation models differ in the authentication method that opens the door
Serial No.	None
EMI Classification	Class B
Test Voltage	DC 6 V
Rated Voltage	DC 6 V
Highest Internal Frequency	64 Mhz
H/W Version	PV02 (MAIN)
S/W Version	V1.0.33
Function	This product is an electronic door locking equipment.

1.4 Operating Modes and Conditions

Operating mode	Operating Condition
Dial	Unlock to press a number.

1.5 Peripheral Equipments

Description	Model	Serial No.	Manufacturer	Note.
Mobile Phone	SM-G973N	R93M205JV7J	SAMSUNG	Korea

1.6 Cable List

Start		END		Cable Spec.		Used core
Name	I/O Port	Name	I/O Port	Length (m)	Shield	
EUT	-	-	-	-	-	-

1.7 System Configurations

- Test Model : YRD450 (Basic Model)

Description	Model	Serial No.	Manufacturer	Note
Main Board	400series MAIN PV02 211214	PC4M-D100S-E2	-	-
Key Pad Board	400series TS KEYLESS FRONT PV01 211008	PC2F-D100S-E1	-	-
Motor	-	-	-	-
Speaker	-	-	-	-
Sub Board	400series SUB PV02 211214	PC4N-D100S-E2	-	-

- Test Model : YRD430 (Alt. Model)

Description	Model	Serial No.	Manufacturer	Note
Main Board	400series MAIN PV02 211214	PC4M-D100S-E2	-	-
Key Pad Board	400series PB KEYLESS FRONT PV01 211007	PC2F-D110S-E1	-	-
Motor	-	-	-	-
Speaker	-	-	-	-
Sub Board	400series SUB PV02 211214	PC4N-D100S-E2	-	-

- Test Model : YRD420 (Alt. Model)

Description	Model	Serial No.	Manufacturer	Note
Main Board	400series MAIN PV02 211214	PC4M-D100S-E2	-	-
Key Pad Board	400series TS KEYED FRONT PV01 211008	PC2F-D200S-E1	-	-
Motor	-	-	-	-
Speaker	-	-	-	-
Sub Board	400series SUB PV02 211214	PC4N-D100S-E2	-	-

- Test Model : YRD410 (Alt. Model)

Description	Model	Serial No.	Manufacturer	Note
Main Board	400series MAIN PV02 211214	PC4M-D100S-E2	-	-
Key Pad Board	400series PB KEYED FRONT PV01 211006	PC2F-D210S-E1	-	-
Motor	-	-	-	-
Speaker	-	-	-	-
Sub Board	400series SUB PV02 211214	PC4N-D100S-E2	-	-

1.8 Test System Layout

Test System Layout
EUT

1.9 Modifications/Notes

- There was no modified item during the test.

1.10 Applicable Standards for Testing

Standards	Status	Deviation
FCC Part 15 Subpart B ICES-003 Issue 7:2020 ANSI C63.4a:2017	Applicable	No Deviation

1.11 Summary of Test Results

Test Item	Standards	Results
Conducted Emission	FCC Part 15 Subpart B Section 15.107 ICES-003 Issue 7:2020 ANSI C63.4a:2017	N/A
Radiated Emission	FCC Part 15 Subpart B Section 15.109 ICES-003 Issue 7:2020 ANSI C63.4a:2017	Complied

Note : Test methods of all test items are performed according to the basic standards in this table.

EMISSION

2.1 Test Results

Test Items	Standards	Test Results
Conducted Emission	FCC Part 15 Subpart B Section 15.107 ICES-003 Issue 7:2020 ANSI C63.4a:2017	N/A
Radiated Emission	FCC Part 15 Subpart B Section 15.109 ICES-003 Issue 7:2020 ANSI C63.4a:2017	Complied

2.2 Test Method and Limits

2.2.1 Test Method

Test Items	Measuring Frequency Range	RBW	Measuring Distance
Conducted Emission	0.15 MHz ~ 30 MHz	9 kHz	-
Radiated Emission	30 MHz ~ 1 GHz	120 kHz	10 m & 3 m
	Above 1 GHz	1 MHz	3 m

Note : 10 m method of radiated emission measurement is only applied to Class A equipment over the frequency range of 30 MHz ~ 1 GHz. Except this, 3 m method is applied to Class B equipment over the frequency range of 30 MHz ~ 1 GHz and Class A and Class B equipment above 1 GHz.

2.2.2 Test Limits

-Conducted Emission Limits

Frequency Range	Limits(dB μ V)		Class
	Quasi-peak	Average	
0.15 MHz ~ 0.5 MHz	79	66	Class A
0.5 MHz ~ 30 MHz	73	60	
0.15 MHz ~ 0.5 MHz	66 to 56	56 to 46	Class B
0.5 MHz ~ 5 MHz	56	46	
5 MHz ~ 30 MHz	60	50	

Note : The lower limit shall apply at the transition frequencies. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

-Radiated Emission Limits below 1 GHz

[FCC Part 15 Subpart B]

Frequency Range	Limits(dB μ V/m)	Class
	Quasi-peak	
30 MHz ~ 88 MHz	39.0	Class A (10 m method)
88 MHz ~ 216 MHz	43.5	
216 MHz ~ 960 MHz	46.4	
960 MHz ~ 1 GHz	49.5	
30 MHz ~ 88 MHz	40.0	Class B (3 m method)
88 MHz ~ 216 MHz	43.5	
216 MHz ~ 960 MHz	46.0	
960 MHz ~ 1 GHz	54.0	

[ICES-003 Issue 7 : 2020]

Frequency Range	Limits(dB μ V/m)	Class
	Quasi-peak	
30 MHz ~ 88 MHz	40.0	Class A (10 m method)
88 MHz ~ 216 MHz	43.5	
216 MHz ~ 230 MHz	46.4	
230 MHz ~ 960 MHz	47.0	
960 MHz ~ 1 GHz	49.5	
30 MHz ~ 88 MHz	50.0	Class A (3 m method)
88 MHz ~ 216 MHz	54.0	
216 MHz ~ 230 MHz	56.9	
230 MHz ~ 960 MHz	57.0	
960 MHz ~ 1 GHz	60.0	
30 MHz ~ 88 MHz	30.0	Class B (10 m method)
88 MHz ~ 216 MHz	33.1	
216 MHz ~ 230 MHz	35.6	
230 MHz ~ 960 MHz	37.0	
960 MHz ~ 1 GHz	43.5	
30 MHz ~ 88 MHz	40.0	Class B (3 m method)
88 MHz ~ 216 MHz	43.5	
216 MHz ~ 230 MHz	46.0	
230 MHz ~ 960 MHz	47.0	
960 MHz ~ 1 GHz	54.0	

-Radiated Emission Limits above 1 GHz (3 m method)

[FCC Part 15 Subpart B]

Frequency Range	Limits(dB μ V/m)		Class
	Average	Peak	
Above 1 GHz	59.5	79.5	Class A
Above 1 GHz	54.0	74.0	Class B

Note : The limits of class A equipment is extrapolated using an extrapolation factor of 20 dB/decade because it was measured at 3 m distance not 10 m distance.

[ICES-003 Issue 7 : 2020]

Frequency Range	Limits(dB μ V/m)		Class
	Average	Peak	
Above 1 GHz	60.0	80.0	Class A
Above 1 GHz	54.0	74.0	Class B

2.3 Radiated Emission

The initial preliminary exploratory scans were performed over the measuring frequency range (30 MHz to 18 GHz) using a max hold mode incorporating a Peak detector by using the EMI measuring software. The final test data was measured using a Quasi-Peak detector below 1 GHz, Peak and CISPR-Average detector above 1 GHz. Measurements were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna height was varied from 1 m to 4 m and the EUT was rotated 360° to find the maximum emitting point for each frequency.

Note. Measuring software
 -Giheung 1Lab.: EMC32(V9.26.01) from R&S
 -Gunpo 1Lab.: EP5RE(V5.3.70) from TOYO

2.3.1 Test Equipments

Equipment	Model	Manufacturer	Serial No	Cal Due. Date
Horn Antenna	HF906	R & S	100326	2023.02.18
Signal Conditioning Unit	SCU 18	R & S	10117	2022.06.09
Test Receiver	ESU26	R & S	100109	2023.01.18
Hybrid Antenna	VULB9163	SCHWARZBECK	01126	2023.02.07
Hybrid Antenna	VULB9163	SCHWARZBECK	396	2022.03.18
Amplifier	8447F	HP	2944A03909	2022.08.06

Note: The calibration period of every equipment is 1 year.

2.3.2 Test Site

3 m SEMI-ANECHOIC CHAMBER in Gunpo 1 Laboratory (Below 1 GHz, Above 1 GHz)

2.3.3 Environment Conditions

Below 1 GHz

[FCC Part 15 Subpart B]

Temperature	(Minimum 17.2, Maximum 17.6) °C
Humidity	(Minimum 32.0, Maximum 34.0) % R.H.
Atmospheric Pressure	(Minimum 102.3, Maximum 102.3) kPa
Test Date	March 11, 2022

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Temperature	(Minimum 17.8, Maximum 17.8) °C
Humidity	(Minimum 28.0, Maximum 28.0) % R.H.
Atmospheric Pressure	(Minimum 101.5, Maximum 101.5) kPa
Test Date	March 28, 2022

Above 1 GHz

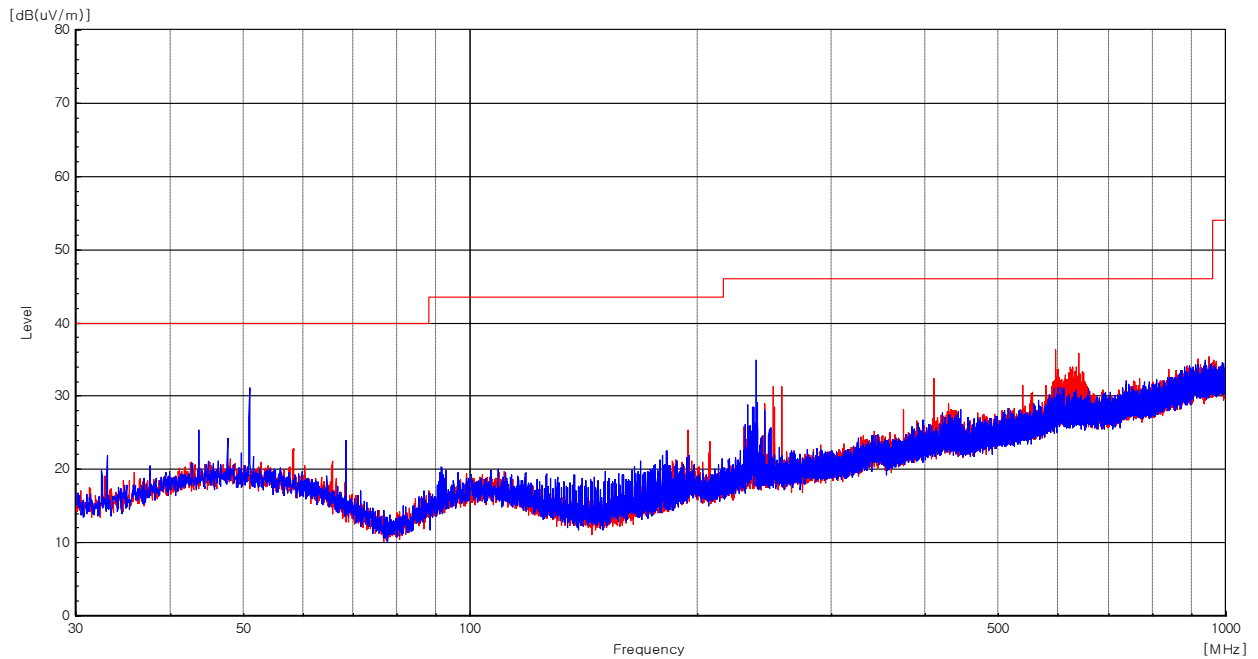
Temperature	(Minimum 17.2, Maximum 17.6) °C
Humidity	(Minimum 32.0, Maximum 34.0) % R.H.
Atmospheric Pressure	(Minimum 101.5, Maximum 102.3) kPa
Test Date	March 11, 2022 ~ March 30, 2022

2.3.4 Test Results

Below 1 GHz (3 m method)

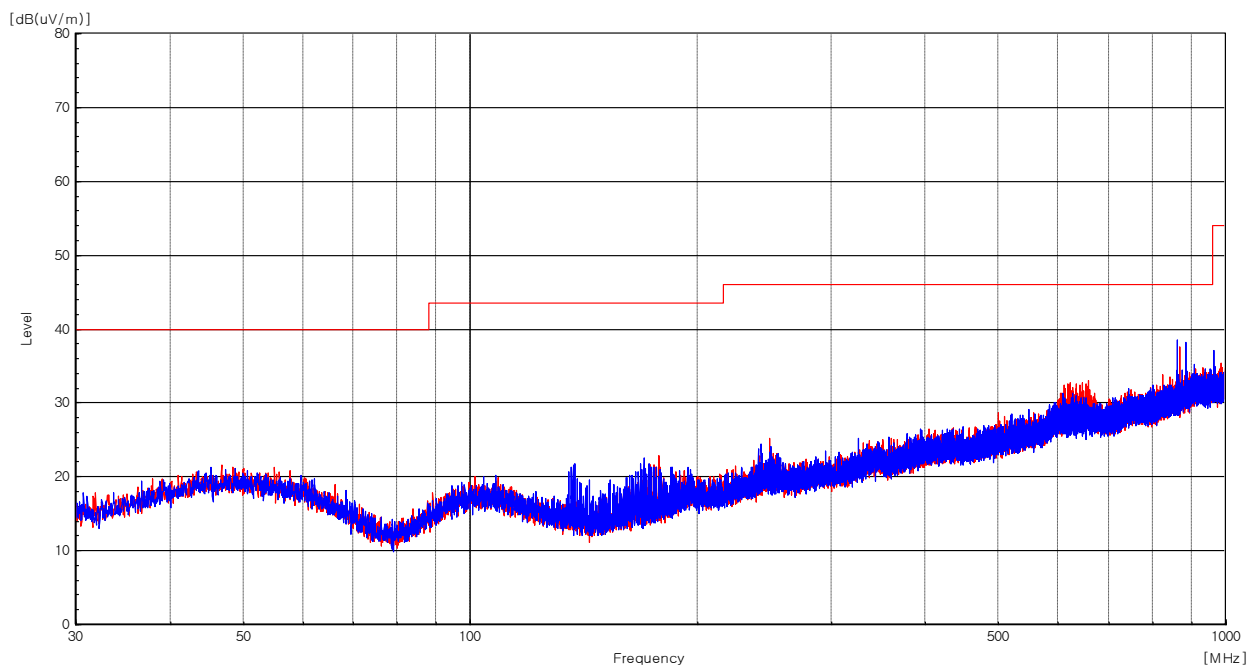
[FCC Part 15 Subpart B]

- Test Model : YRD450 (Basic Model)



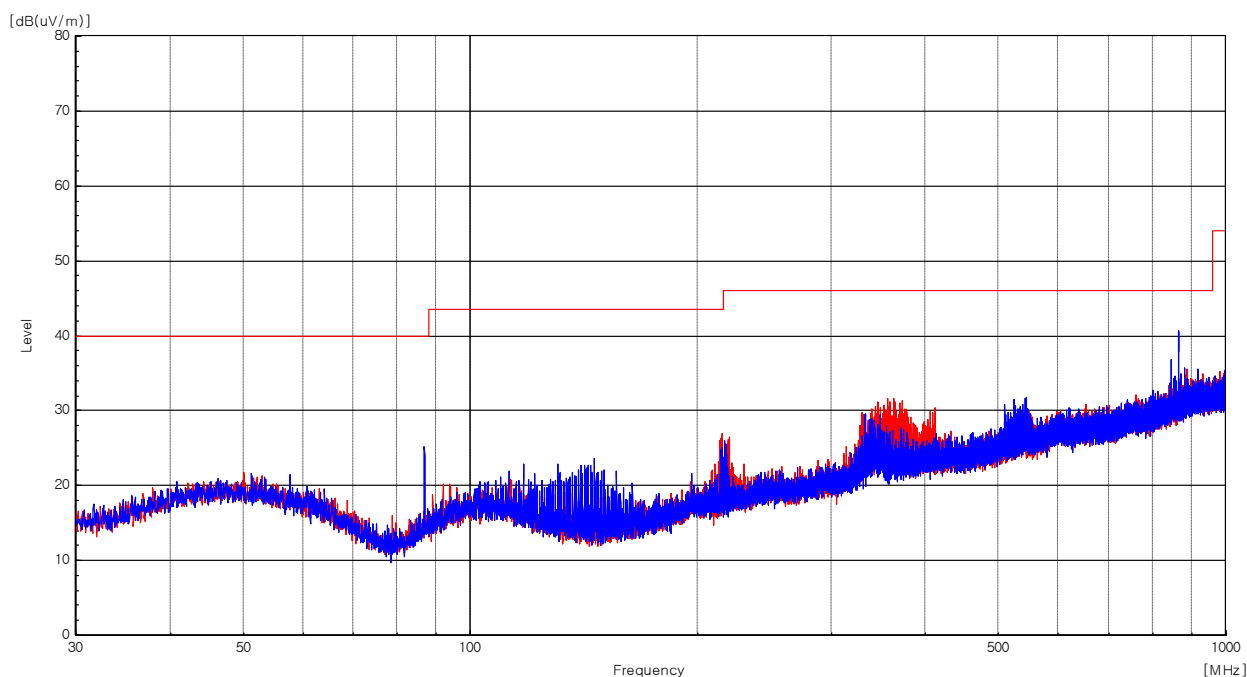
Freq. (MHz)	Reading (dBμV)	Pol. (H/V)	A (°)	H (cm)	AF (dB/m)	CL (dB)	Amp. (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
50.94	38.30	V	2	198	20.01	1.11	28.20	31.22	40.00	8.78
238.87	42.20	V	28	204	17.95	2.40	27.68	34.87	46.00	11.13
257.95	38.00	H	189	105	18.36	2.50	27.63	31.23	46.00	14.77
410.24	35.60	H	135	189	21.80	3.10	28.08	32.42	46.00	13.58
595.15	36.20	H	227	209	25.00	3.78	28.70	36.28	46.00	9.72
603.63	30.90	V	289	100	25.17	3.82	28.71	31.18	46.00	14.82

- Test Model : YRD430 (Alt. Model)



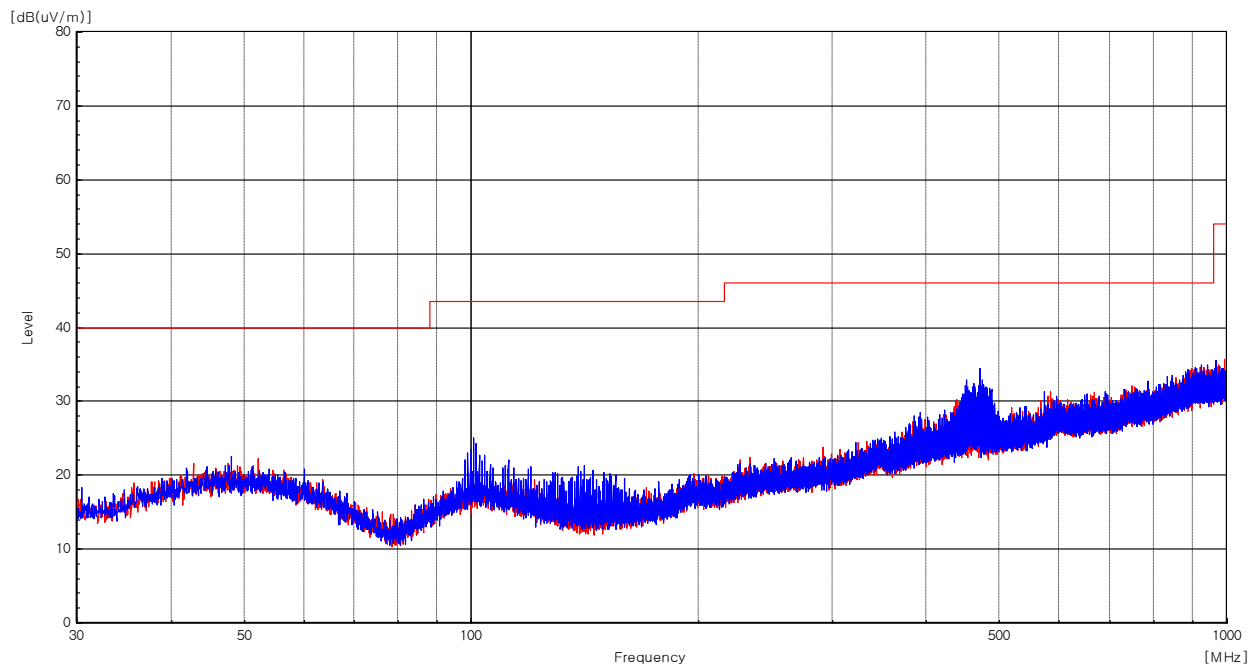
Freq. (MHz)	Reading (dBμV)	Pol. (H/V)	A (°)	H (cm)	AF (dB/m)	CL (dB)	Amp. (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
242.71	31.60	V	316	204	18.11	2.41	27.67	24.45	46.00	21.55
248.86	32.10	H	111	105	18.28	2.44	27.65	25.17	46.00	20.83
656.54	32.70	H	286	200	25.20	3.97	28.87	33.00	46.00	13.00
862.87	35.40	V	349	101	27.36	4.52	28.65	38.63	46.00	7.37
868.28	34.20	H	212	118	27.47	4.54	28.63	37.58	46.00	8.42
962.70	32.40	V	151	109	28.05	4.93	28.37	37.01	54.00	16.99

- Test Model : YRD420 (Alt. Model)



Freq. (MHz)	Reading (dBμV)	Pol. (H/V)	A (°)	H (cm)	AF (dB/m)	CL (dB)	Amp. (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
86.83	37.20	V	358	105	14.77	1.45	28.13	25.29	40.00	14.71
215.35	35.50	H	32	215	16.92	2.28	27.75	26.95	43.50	16.55
217.09	34.40	V	226	204	17.03	2.29	27.75	25.97	46.00	20.03
363.72	36.00	H	20	189	20.32	2.96	27.71	31.57	46.00	14.43
524.58	31.70	H	327	100	23.39	3.54	28.70	29.93	46.00	16.07
865.29	37.50	V	359	106	27.41	4.53	28.64	40.80	46.00	5.20

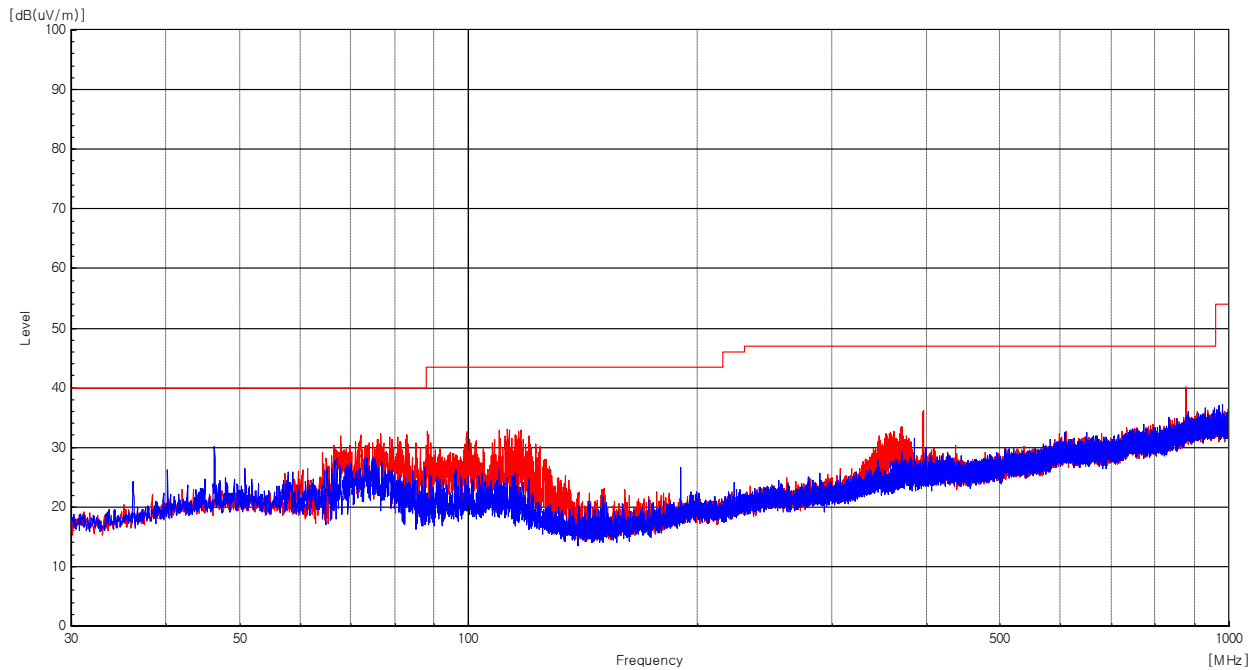
- Test Model : YRD410 (Alt. Model)



Freq. (MHz)	Reading (dBμV)	Pol. (H/V)	A (°)	H (cm)	AF (dB/m)	CL (dB)	Amp. (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
48.07	29.40	V	226	201	20.19	1.08	28.19	22.48	40.00	17.52
52.15	29.30	H	202	189	19.97	1.12	28.20	22.19	40.00	17.81
100.57	34.10	V	84	111	17.56	1.54	28.10	25.10	43.50	18.40
101.42	29.90	H	3	105	17.60	1.55	28.10	20.95	43.50	22.55
463.11	35.10	H	282	200	22.12	3.31	28.48	32.05	46.00	13.95
471.35	37.30	V	15	105	22.33	3.34	28.53	34.44	46.00	11.56

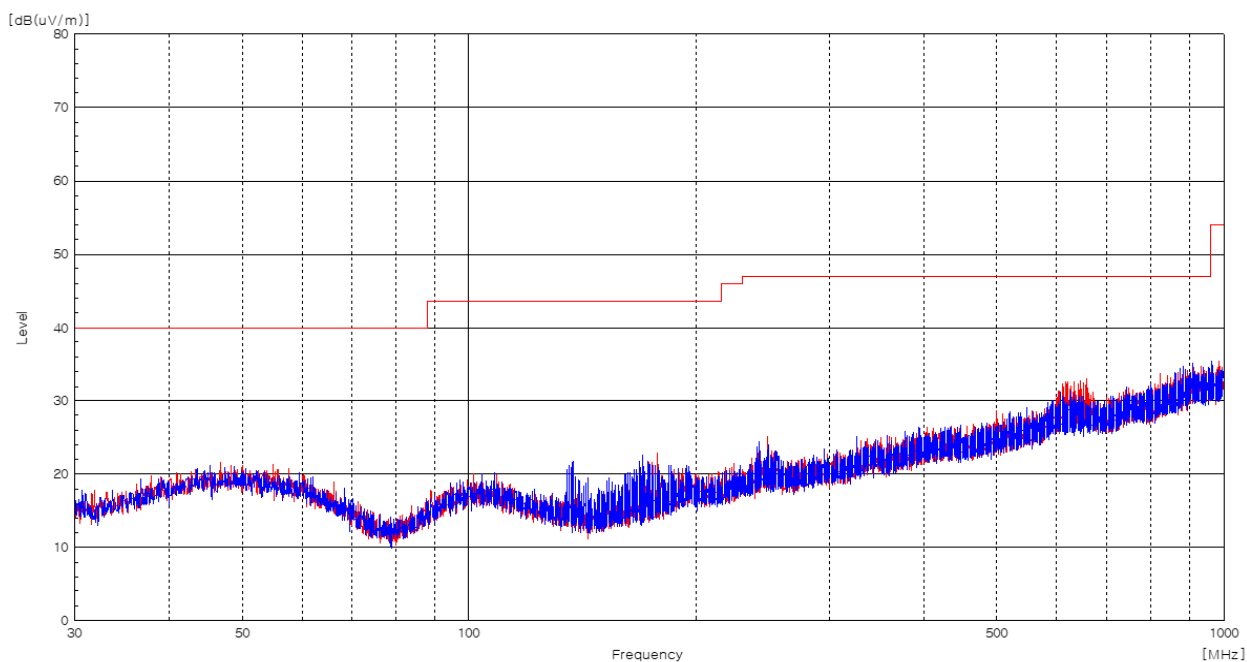
[ICES-003 Issue 7 : 2020]

- Test Model : YRD450 (Basic Model)



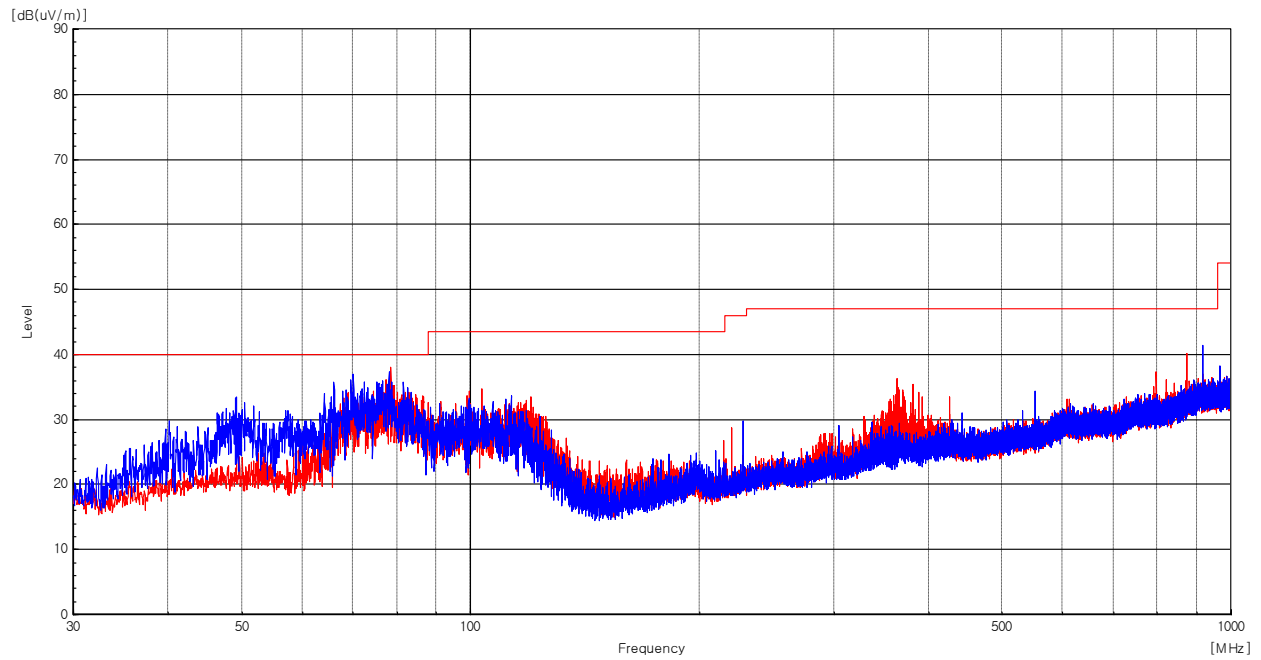
Freq. (MHz)	Reading (dBμV)	Pol. (H/V)	A (°)	H (cm)	AF (dB/m)	CL (dB)	Amp. (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
46.21	29.90	V	19	105	19.62	1.21	28.18	22.55	40.00	17.45
73.33	32.40	H	1	215	14.10	1.49	28.15	19.84	40.00	20.16
112.45	33.80	H	260	103	17.21	1.76	28.08	24.69	43.50	18.81
385.06	31.50	V	19	100	21.10	3.07	27.88	27.79	46.00	18.21
395.53	34.80	H	141	200	21.51	3.14	27.96	31.49	46.00	14.51
876.53	36.10	H	141	189	27.63	4.67	28.59	39.81	46.00	6.19

- Test Model : YRD430 (Alt. Model)



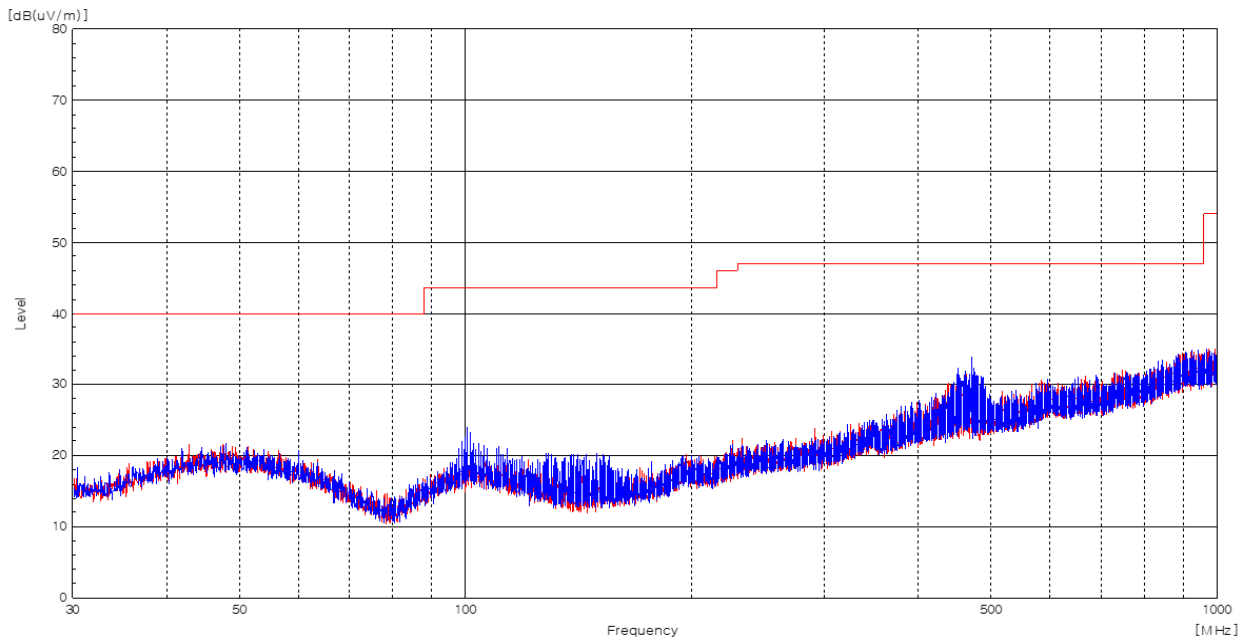
Freq. (MHz)	Reading (dBμV)	Pol. (H/V)	A (°)	H (cm)	AF (dB/m)	CL (dB)	Amp. (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
148.85	28.80	V	2	204	13.78	1.91	28.00	16.49	43.50	27.01
179.85	29.80	H	28	191	15.28	2.20	27.88	19.40	43.50	24.10
242.71	32.10	V	189	102	18.21	2.47	27.67	25.11	46.00	20.89
248.86	31.50	H	135	201	18.45	2.46	27.65	24.76	46.00	21.24
656.54	36.80	H	227	199	25.23	4.08	28.87	37.24	46.00	8.76
862.87	38.10	V	289	100	27.40	4.41	28.65	41.26	46.00	4.74

- Test Model : YRD420 (Alt. Model)



Freq. (MHz)	Reading (dBμV)	Pol. (H/V)	A (°)	H (cm)	AF (dB/m)	CL (dB)	Amp. (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
78.02	34.50	V	163	105	13.00	1.55	28.14	20.91	40.00	19.09
78.50	33.10	H	234	215	12.95	1.56	28.14	19.47	40.00	20.53
228.04	29.50	V	16	194	17.62	2.46	27.72	21.86	46.00	24.14
363.44	30.20	H	278	100	20.41	3.01	27.71	25.91	46.00	20.09
873.42	35.80	H	131	112	27.57	4.60	28.61	39.36	46.00	6.64
918.40	36.40	V	356	104	28.30	4.63	28.46	40.87	46.00	5.13

- Test Model : YRD410 (Alt. Model)



Freq. (MHz)	Reading (dB μ V)	Pol. (H/V)	A ($^{\circ}$)	H (cm)	AF (dB/m)	CL (dB)	Amp. (dB)	F/S (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
48.07	29.40	V	226	203	19.70	1.22	28.19	22.13	40.00	17.87
52.15	29.30	H	202	194	19.59	1.23	28.20	21.92	40.00	18.08
100.57	31.50	V	84	109	17.76	1.67	28.10	22.83	43.50	20.67
101.42	26.80	H	3	100	17.80	1.68	28.10	18.18	43.50	25.32
463.11	31.20	H	282	200	22.16	3.46	28.48	28.34	46.00	17.66
471.35	35.50	V	15	111	22.35	3.48	28.53	32.80	46.00	13.20

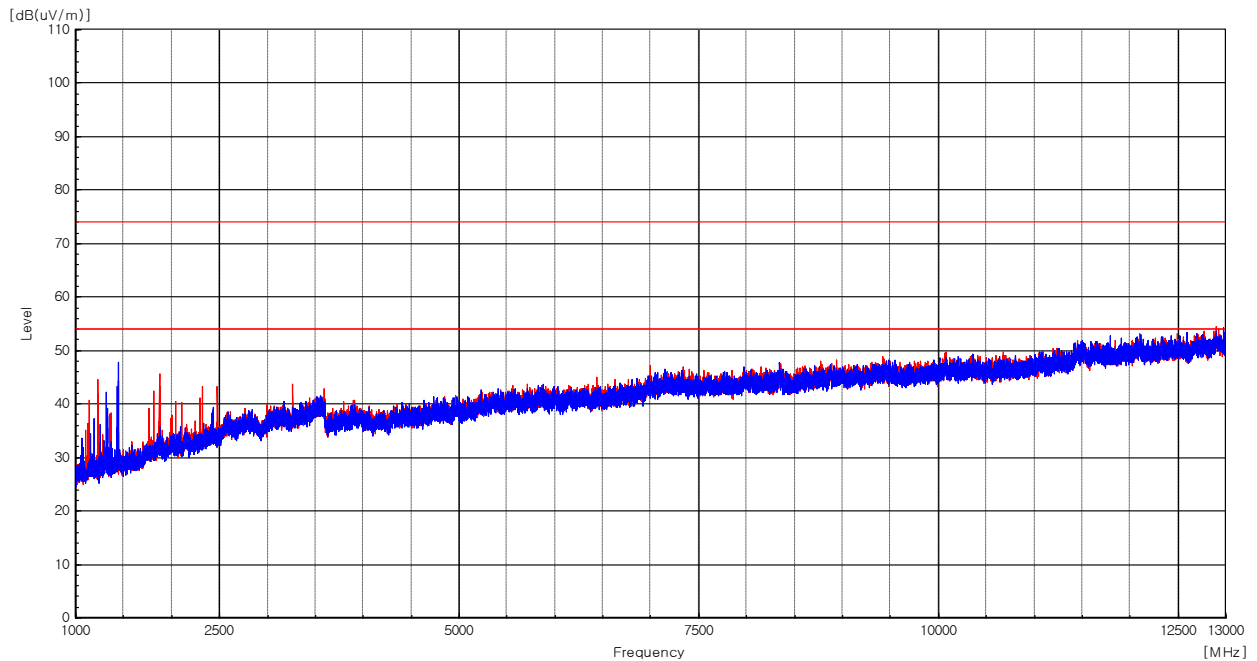
Measurement Uncertainty : See the Appendix A

- Note:
- AF = Antenna Factor
 - CL = Cable Loss
 - Amp. = Amplifier Gain
 - Pol. H = Horizontal
 - Pol. V = Vertical
 - A = Angle
 - H = Height
 - Margin = Limit – Result
 - F/S = Level + AF + CL – AMP

Above 1 GHz (1 GHz - 18 GHz)(3 m method)

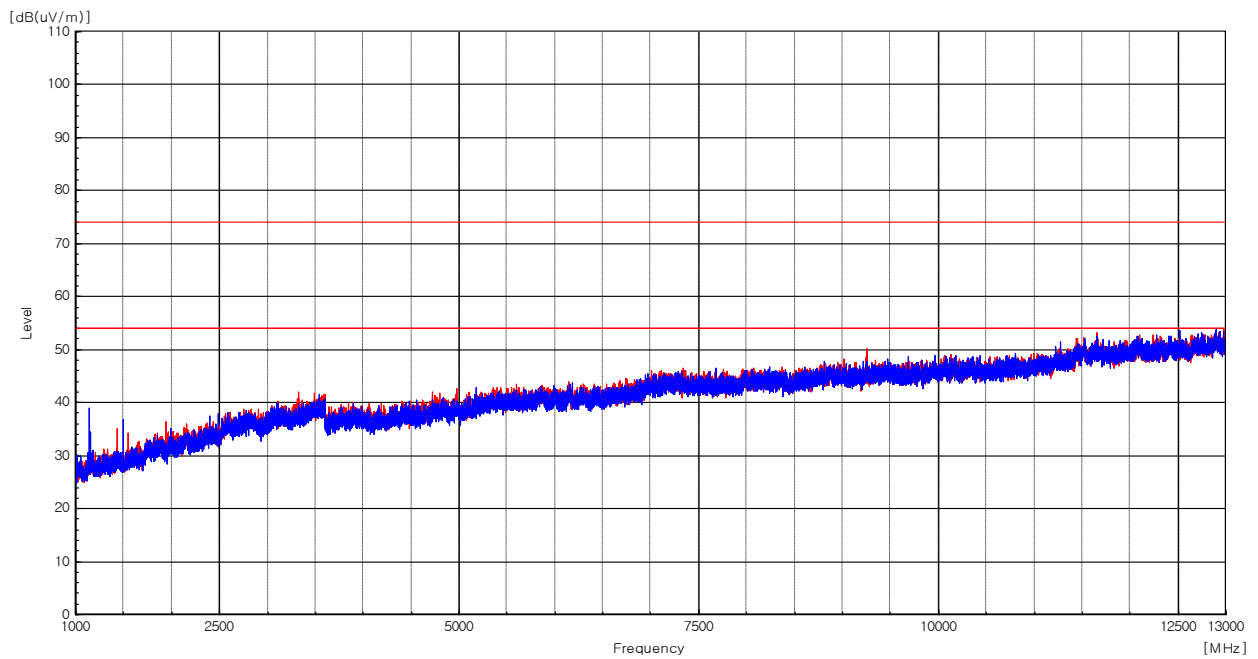
[FCC Part 15 Subpart B]

- Test Model : YRD450 (Basic Model)



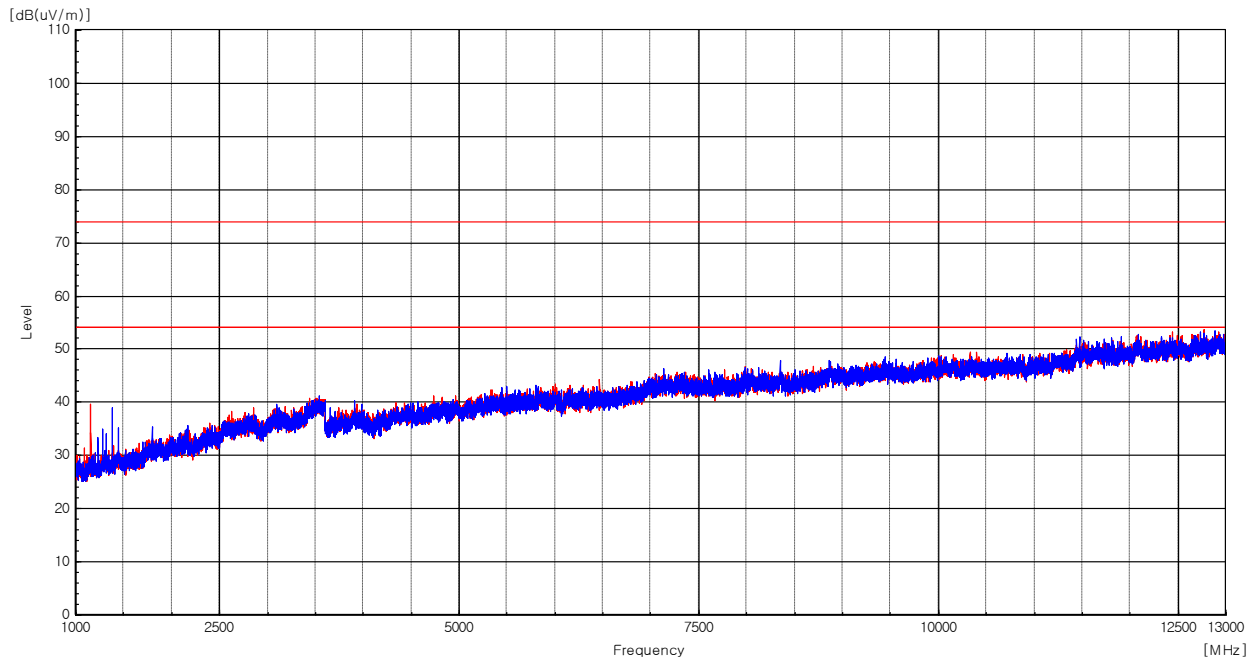
Freq. (MHz)	Level (dBμV)		Pol. (H/V)	A (°)	H (cm)	AF (dB)	CL (dB)	Amp. (dB)	CF (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Peak	C-AV										
1 449.50	61.70	-	V	129	102	25.40	6.66	45.52	0.00	48.24	74.00	25.76
1 449.50	-	47.70	V	129	102	25.40	6.66	45.52	0.00	34.24	54.00	19.76
1 870.00	56.20	-	H	157	115	27.66	7.84	45.44	0.00	46.27	74.00	27.74
1 870.00	-	45.70	H	157	115	27.66	7.84	45.44	0.00	35.77	54.00	18.24
3 266.00	48.40	-	H	212	100	30.34	10.74	45.20	0.00	44.28	74.00	29.72
3 266.00	-	43.70	H	212	100	30.34	10.74	45.20	0.00	39.58	54.00	14.42
7 145.50	42.70	-	V	32	106	35.69	14.57	43.10	0.00	49.86	74.00	24.14
7 145.50	-	29.70	V	32	106	35.69	14.57	43.10	0.00	36.86	54.00	17.14
11 798.00	41.20	-	V	246	113	38.60	18.15	43.82	0.00	54.13	74.00	19.87
11 798.00	-	28.40	V	246	113	38.60	18.15	43.82	0.00	41.33	54.00	12.67
12 093.00	41.70	-	H	104	104	38.50	18.30	43.89	0.00	54.61	74.00	19.39
12 093.00	-	28.70	H	104	104	38.50	18.30	43.89	0.00	41.61	54.00	12.39

- Test Model : YRD430 (Alt. Model)



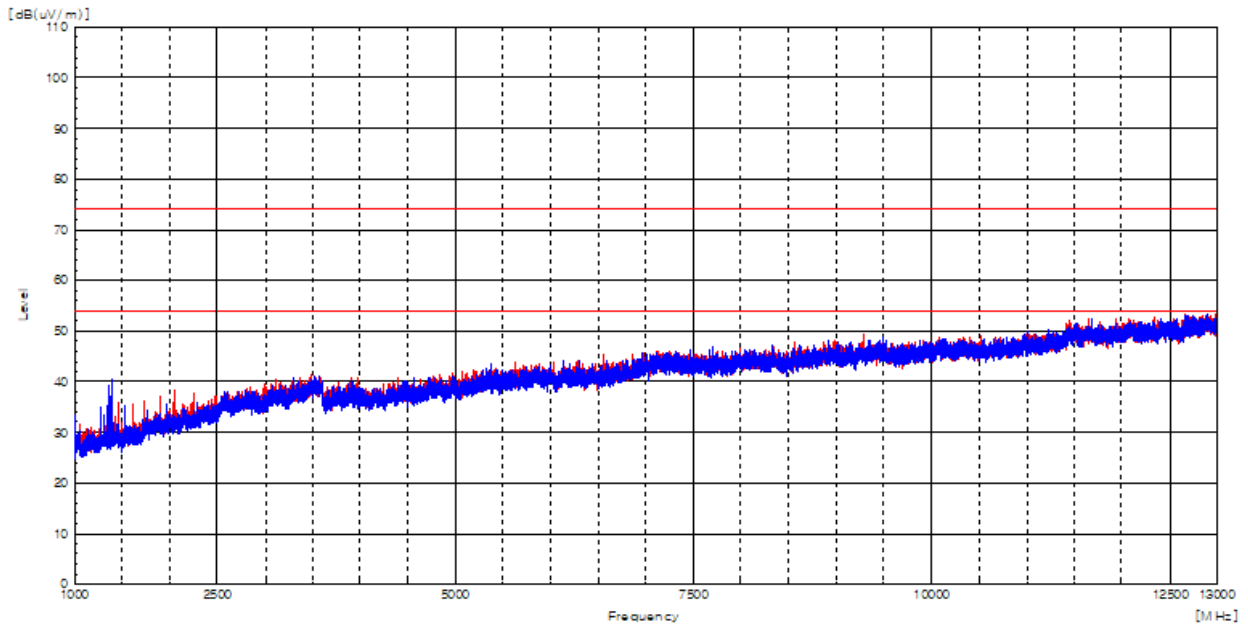
Freq. (MHz)	Level (dB μ V)		Pol. (H/V)	A (°)	H (cm)	AF (dB)	CL (dB)	Amp. (dB)	CF (dB)	F/S (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Peak	C-AV										
1 144.50	47.30	-	V	307	100	24.43	5.62	45.38	0.00	31.97	74.00	42.03
1 144.50	-	33.80	V	307	100	24.43	5.62	45.38	0.00	18.47	54.00	35.53
2 601.00	47.70	-	H	179	105	28.91	9.45	45.30	0.00	40.76	74.00	33.24
2 601.00	-	33.90	H	179	105	28.91	9.45	45.30	0.00	26.96	54.00	27.04
5 849.50	43.30	-	V	280	106	34.20	13.99	43.00	0.00	48.49	74.00	25.51
5 849.50	-	30.00	V	280	106	34.20	13.99	43.00	0.00	35.19	54.00	18.81
9 256.50	42.20	-	H	359	115	37.23	16.61	43.40	0.00	52.64	74.00	21.36
9 256.50	-	29.10	H	359	115	37.23	16.61	43.40	0.00	39.54	54.00	14.46
11 651.50	41.60	-	H	292	100	38.80	18.45	43.76	0.00	55.09	74.00	18.91
11 651.50	-	28.60	H	292	100	38.80	18.45	43.76	0.00	42.09	54.00	11.91
11 654.00	42.00	-	V	3	109	38.80	18.45	43.76	0.00	55.49	74.00	18.51
11 654.00	-	28.50	V	3	109	38.80	18.45	43.76	0.00	41.99	54.00	12.01

- Test Model : YRD420 (Alt. Model)



Freq. (MHz)	Level (dB μ V)		Pol. (H/V)	A (°)	H (cm)	AF (dB)	CL (dB)	Amp. (dB)	CF (dB)	F/S (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
	Peak	C-AV										
1 155.83	37.60	-	H	226	105	25.05	5.66	45.37	0.00	22.94	74.00	51.06
1 155.83	-	24.90	H	226	105	25.05	5.66	45.37	0.00	10.24	54.00	43.76
1 385.33	36.20	-	V	192	120	25.03	6.37	45.49	0.00	22.11	74.00	51.89
1 385.33	-	23.10	V	192	120	25.03	6.37	45.49	0.00	9.01	54.00	44.99
7 050.58	34.00	-	H	166	100	35.50	14.43	43.10	0.00	40.83	74.00	33.17
7 050.58	-	19.40	H	166	100	35.50	14.43	43.10	0.00	26.23	54.00	27.77
8 346.12	31.20	-	V	356	105	36.40	15.92	43.20	0.00	40.32	74.00	33.68
8 346.12	-	18.70	V	356	105	36.40	15.92	43.20	0.00	27.82	54.00	26.18
11 469.87	31.80	-	V	42	110	38.50	19.23	43.69	0.00	45.84	74.00	28.16
11 469.87	-	18.50	V	42	110	38.50	19.23	43.69	0.00	32.54	54.00	21.46
11 815.54	31.60	-	H	5	103	38.57	18.02	43.83	0.00	44.36	74.00	29.64
11 815.54	-	18.70	H	5	103	38.57	18.02	43.83	0.00	31.46	54.00	22.54

- Test Model : YRD410 (Alt. Model)



Freq. (MHz)	Level (dBμV)		Pol. (H/V)	A (°)	H (cm)	AF (dB)	CL (dB)	Amp. (dB)	CF (dB)	F/S (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Peak	C-AV										
1 453.00	40.50	-	V	139	110	25.01	6.67	45.53	0.00	26.65	74.00	47.35
1 453.00	-	32.70	V	139	110	25.01	6.67	45.53	0.00	18.85	54.00	35.15
2 056.00	40.90	-	H	151	109	27.62	8.15	45.50	0.00	31.17	74.00	42.83
2 056.00	-	31.40	H	151	109	27.62	8.15	45.50	0.00	21.67	54.00	32.33
5 375.50	41.80	-	V	5	142	33.95	12.73	43.00	0.00	45.48	74.00	28.52
5 375.50	-	29.90	V	5	142	33.95	12.73	43.00	0.00	33.58	54.00	20.42
9 294.00	42.00	-	H	300	100	37.38	16.42	43.40	0.00	52.40	74.00	21.60
9 294.00	-	29.00	H	300	100	37.38	16.42	43.40	0.00	39.40	54.00	14.60
11 651.00	40.70	-	H	333	115	38.80	18.45	43.76	0.00	54.19	74.00	19.81
11 651.00	-	28.60	H	333	115	38.80	18.45	43.76	0.00	42.09	54.00	11.91
11 689.00	40.50	-	V	317	107	38.80	18.20	43.78	0.00	53.72	74.00	20.28
11 689.00	-	28.40	V	317	107	38.80	18.20	43.78	0.00	41.62	54.00	12.38

Measurement Uncertainty: See the Appendix A

Note: • AF = Antenna Factor

• Pol.(H) = Horizontal

• Margin = Limit – F/S

• A: Angle

• CL = Cable Loss

• Pol.(V) = Vertical

• F/S = Level + AF + CL – Amp.

• H: Height

• F/S = Field Strength

• Amp. = Amplifier Gain

Appendix A : Measurement Uncertainty

- Giheung 1 Laboratory

Test Method		Measurement Uncertainty	
Conducted Emission		ENV216	3.5 dB (The confidential level is 95 %, $k=2$)
		ESH2-Z5	3.2 dB (The confidential level is 95 %, $k=2$)
		ESH3-Z6	3.2 dB (The confidential level is 95 %, $k=2$)
		NNLK8129	3.2 dB (The confidential level is 95 %, $k=2$)
Conducted Emission - Signal		ISN T800	5.6 dB (The confidential level is 95 %, $k=2$)
		ISNT8-Cat6	5.4 dB (The confidential level is 95 %, $k=2$)
		ISN S751	5.6 dB (The confidential level is 95 %, $k=2$)
Discontinuous		3.4 dB (The confidential level is 95 %, $k=2$)	
Disturbance Voltage at Antenna Terminal		2.0 dB (The confidential level is 95 %, $k=2$)	
Radiated Emission	9 kHz ~30 MHz (3m chamber)	Horizontal	3.4 dB (The confidential level is 95 %, $k=2$)
		Vertical	3.4 dB (The confidential level is 95 %, $k=2$)
	30 MHz ~ 1 000 MHz (10m chamber)	Horizontal	4.4 dB (The confidential level is 95 %, $k=2$)
		Vertical	4.6 dB (The confidential level is 95 %, $k=2$)
	1 GHz ~ 18 GHz (3m chamber)	Horizontal	4.0 dB (The confidential level is 95 %, $k=2$)
		Vertical	4.0 dB (The confidential level is 95 %, $k=2$)

- Gunpo 1 Laboratory

Test Method		Measurement Uncertainty	
Conducted Emission		ENV216	3.4 dB (The confidential level is 95 %, $k=2$)
		ESH2-Z5	3.2 dB (The confidential level is 95 %, $k=2$)
		ESH3-Z6	3.4 dB (The confidential level is 95 %, $k=2$)
Conducted Emission - Signal		ISN T800	5.6 dB (The confidential level is 95 %, $k=2$)
		ISNT8-Cat6	5.6 dB (The confidential level is 95 %, $k=2$)
		ISN S751	7.3 dB (The confidential level is 95 %, $k=2$)
Disturbance Voltage at Antenna Terminal		2.4 dB (The confidential level is 95 %, $k=2$)	
Radiated Emission	9 kHz ~30 MHz (3 m chamber)	Horizontal	3.3 dB (The confidential level is 95 %, $k=2$)
		Vertical	3.3 dB (The confidential level is 95 %, $k=2$)
	30 MHz ~ 1 000 MHz (3 m chamber)	Horizontal	4.8 dB (The confidential level is 95 %, $k=2$)
		Vertical	5.2 dB (The confidential level is 95 %, $k=2$)
	1 GHz ~ 18 GHz (3 m chamber)	Horizontal	3.9 dB (The confidential level is 95 %, $k=2$)
		Vertical	4.0 dB (The confidential level is 95 %, $k=2$)

- End of Test Report -