

TEST REPORT

Job No. : GPEM2407000509EC
Test Report No. : F690501-RF-EMC002638
Applicant : PRINICS CO.,LTD
Product Name : Polaroid Hi-Print 4x6 Photo Printer
Model Name : 009164
Standards : FCC Part 15 Subpart B
FCC ID : PO5009164
Date of Receipt : July 4, 2024
Date of Test : July 19, 2024
Date of Issue : September 2, 2024
Test Result : Complied

- 1) This test report does not assure KOLAS accreditation.
2) The results of this test report are effective only to the items tested.
3) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.

	Tested by (Name, signature)	Approved by (Name, signature)
Affirmation	DoHyeon Lee 	Paul Kang 

SGS Korea Co., Ltd. Gunpo Laboratory
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Revision History

Revision	Report Number	Description
0	F690501-RF-EMC002638	Initial

1. Test Laboratory

1.1 General information

Name	SGS Korea Co., Ltd.		
- Branch Site	4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Republic of Korea		
	Tel. 82 31 428 5700		Fax. 82 31 427 5370
- Branch Site-3	35, Giheungdanji-ro 121beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea		
	Tel. 82 31 548 0710		Fax. 82 31 548 0719
- Branch Site-4	12, Dongtansandan 10-gil, Hwaseong-si, Gyeonggi-do, 18487, Republic of Korea		
	Tel. 82 31 8007 5302		Fax. 82 31 427 2370
Website	http://www.sgsgroup.kr/ee		

SGS Korea Co., Ltd. has been accredited by the agencies listed in the following table;

Accreditation	Accreditation bodies	Accreditation No.
KC	MSIT- RRA	KR0150
FCC	FCC (MRA)	
IC	IC (MRA)	
Vietnam-MIC	Vietnam-MIC	
Japan EMI	VCCI	C-14102, T-11156, R-13662, G-20037
KOLAS	KATS - KOLAS	Testing No.123
CBTL	IECEE	TL 146
SDPPI	SDPPI	-

2. General Information of E.U.T.

2.1 Applicant Information

Applicant	PRINICS CO.,LTD
Applicant Address	197-50, Saneop-ro 156beon-gil, Gwonseon-gu, Suwon-si, Gyeonggi-do, Republic of Korea
Manufacturer	PRINICS CO.,LTD
Manufacturer Address	197-50, Saneop-ro 156beon-gil, Gwonseon-gu, Suwon-si, Gyeonggi-do, Republic of Korea

2.2 General Information of E.U.T.

Classification	Description
Product Name	Polaroid Hi-Print 4x6 Photo Printer
Model Name	009164
Alt. Model Name	009165, 009166
Model Differences	There is no difference for electric circuit between basic model and alt. models except for the addition of a model name to distinguish sellers.
Serial No.	655340085D0005
EMI Classification	Class B
Internal Clock Frequency	530 MHz (Bluetooth : 2 480 MHz)
Rated Power	Adapter Input : (100~240) V~, 50/60 Hz, 1.2 A Output : DC 24 V, 2.0 A
Tested Power	120 V~, 60 Hz
H/W Version	1.0
S/W Version	1.0
Port	DC IN
Components	EUT, AC-DC Adapter
Function	Photo Printer

2.3 Configurations of E.U.T

Description	Model	Serial No.	Manufacturer	Note
Main Board	-	-	-	-
Sub Board	HP4_MS_V1.5	-	-	-
Motor 1	2T3563232	-	NEOCENE	-
Motor 2	N30VA-12113	2406145601A1	-	-
FPCB 1	HP4_RS_V1.5	-	-	-
FPCB 2	HP4_PS_V1.5	-	-	-
Bluetooth Module	-		Barrot Technology Limited	-
AC-DC Adapter	YL481-2402000T	-	Y&L ELECTRONICS (HK) CO.,LIMITED	China

3. E.U.T. Operation and Test Configuration

3.1 Peripheral Equipments

Description	Model	Serial No.	Manufacturer	Note.
-	-	-	-	-

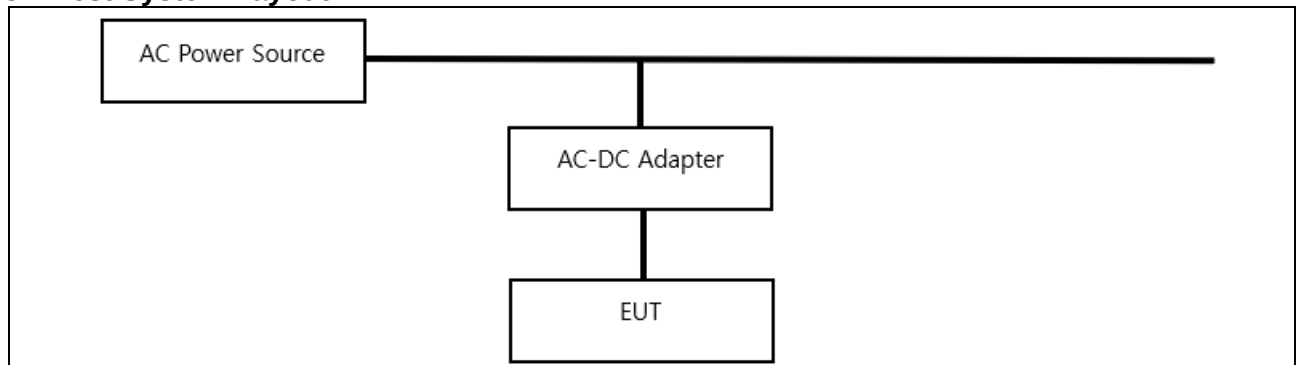
3.2 Cable List

Start		END		Cable Spec.		Used core
Name	I/O Port	Name	I/O Port	Length (m)	Shield	
EUT	DC IN	AC-DC Adapter	DC OUT	1.9	Unshielded	-

3.3 Operating Modes and Conditions

Operating mode	Operating condition
01 Operating + Bluetooth	Bluetooth pairing and photo printing state

3.4 Test System Layout



3.5 Modifications to the test items during testing

- ☒ No modifications done during testing
- ☐ Modification done during testing (see details below)

No. Description of modification (if any)

1

2

4. Test Results

4.1 Summary

Test Items	Standards	Test Results
Conducted Emission	FCC Part 15 Subpart B Section 15.107 ANSI C63.4a:2017	Complied
Radiated Emission	FCC Part 15 Subpart B Section 15.109 ANSI C63.4a:2017	Complied

4.2 Note

- 1 Test Methods of all test items are performed according to the basic standard in subclause 4.1.
- 2

Emission Test

5.1 Test Method and Limits

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 or 3 m
	Above 1 GHz	1 MHz	3 m

5.2 Test Limits

Frequency Range	Limits(dBμV)		Class
	Quasi-peak	CISPR-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 ^{Note1}	56 to 46 ^{Note1}	Class B
0.5 MHz - 5 MHz	56	46	
5 MHz - 30 MHz	60	50	

[Table 2.1 Conducted Emission Limits]

Frequency Range	Limits(dBμV/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	

[Table 2.2 Radiated Emission Limits below 1 GHz]

Frequency Range	Limits(dBμV)		Class
	Quasi-peak	CISPR-Average	
Above 1 GHz	79.5	59.5	Class A
	74.0	54.0	Class B

[Table 2.3 Radiated Emission Limits Above 1 GHz ^{Note2}]

Note 1. The lower limit shall apply at the transition frequencies. The limit decreases linearly with the logarithm of that frequency.

Note 2. 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.

5.3 Conducted Emission

5.3.1 Test Equipments

Description	Model No.	Manufacturer	Serial No	Cal Due. Date
Two-Line V-Network	ENV216	R & S	100190	2025-05-23
Test Receiver	ESCI 7	R & S	100911	2025-02-26
RF Cable	CA-03	-	-	2024-10-04

Note. Measuring software is below

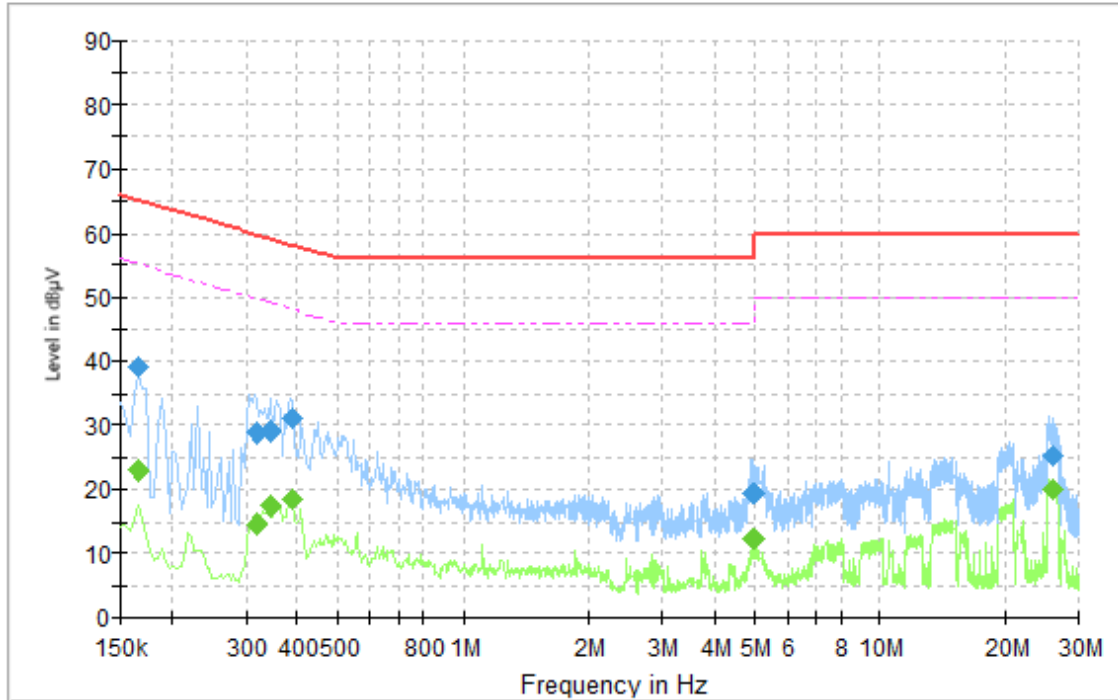
- Branch Site : EMC32(V10.60.20) from R&S
- Branch Site-3 : EMC32(V10.40.10) from R&S
- Branch Site-4 : EMC32(V10.40.00) from R&S

5.3.2 Environment Conditions

Test Site	Shield Room in Branch site
Temperature	(Minimum 23.7, Maximum 23.9) °C
Humidity	(Minimum 55.9, Maximum 56.2) % R.H.
Atmospheric Pressure	(Minimum 100.0, Maximum 100.1) kPa
Test Date	2024-07-19

5.3.3 Test Results

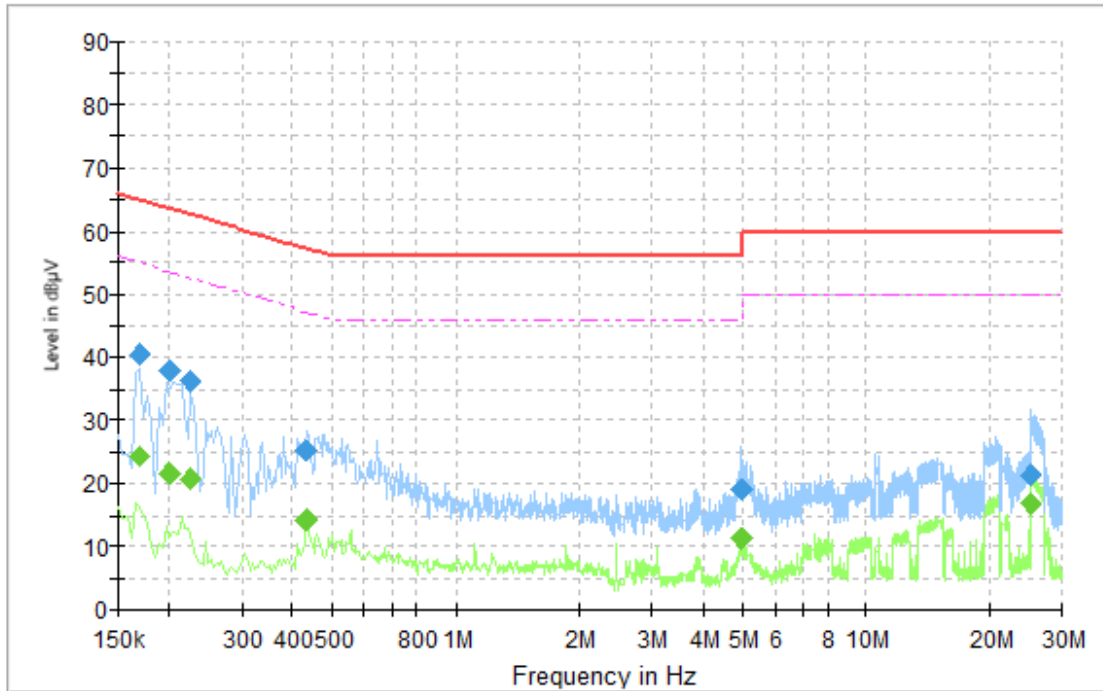
Live Line_01 Mode



Final Result

Frequency (kHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ns)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.166	---	22.91	55.16	32.25	15 000.0	9.000	L1	OFF	9.5
0.166	39.26	---	65.16	25.89	15 000.0	9.000	L1	OFF	9.5
0.318	---	14.52	49.76	35.24	15 000.0	9.000	L1	OFF	9.5
0.318	28.82	---	59.76	30.94	15 000.0	9.000	L1	OFF	9.5
0.346	---	17.59	49.06	31.46	15 000.0	9.000	L1	OFF	9.5
0.346	29.28	---	59.06	29.78	15 000.0	9.000	L1	OFF	9.5
0.390	---	18.41	48.06	29.65	15 000.0	9.000	L1	OFF	9.5
0.390	31.08	---	58.06	26.98	15 000.0	9.000	L1	OFF	9.5
4.946	---	12.39	46.00	33.61	15 000.0	9.000	L1	OFF	9.7
4.946	19.39	---	56.00	36.61	15 000.0	9.000	L1	OFF	9.7
25.814	---	20.21	50.00	29.79	15 000.0	9.000	L1	OFF	9.9
25.814	25.13	---	60.00	34.87	15 000.0	9.000	L1	OFF	9.9

Neutral Line_01 Mode



Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ns)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.170	---	24.24	54.96	30.72	15 000.0	9.000	N	OFF	9.6
0.170	40.35	---	64.96	24.61	15 000.0	9.000	N	OFF	9.6
0.202	---	21.53	53.53	32.00	15 000.0	9.000	N	OFF	9.6
0.202	37.90	---	63.53	25.63	15 000.0	9.000	N	OFF	9.6
0.226	---	20.73	52.60	31.86	15 000.0	9.000	N	OFF	9.6
0.226	36.22	---	62.60	26.37	15 000.0	9.000	N	OFF	9.6
0.434	---	14.34	47.18	32.84	15 000.0	9.000	N	OFF	9.6
0.434	25.36	---	57.18	31.82	15 000.0	9.000	N	OFF	9.6
4.974	---	11.41	46.00	34.59	15 000.0	9.000	N	OFF	9.7
4.974	19.20	---	56.00	36.80	15 000.0	9.000	N	OFF	9.7
25.158	---	16.88	50.00	33.12	15 000.0	9.000	N	OFF	10.2
25.158	21.24	---	60.00	38.76	15 000.0	9.000	N	OFF	10.2

Note. Measurement Uncertainty : See Appendix A

- Line (L1) : Live Line of AC Power
- Margin = Limit – Quasi Peak or CAverage

- Line (N) : Neutral Line of AC Power
- Corr. = LISN Factor + Cable loss + Pulse Limiter factor

Ex) In case

Freq ; 0.5 Mhz, level ; 30 dB(μV), CL ; 0.2 dB, LISN ; 9.5 dB, P/L: 9.8 dB

Result = Level + CL + LISN + P/L

= 30 + 0.2 + 9.5 + 9.8

= 49.5

Margin = Limit – Result

= 79 - 49.5

= 29.5

5.4 Radiated Emission

5.4.1 Test Equipments

Equipment	Model	Manufacturer	Serial No	Cal Due. Date
Horn Antenna	HF906	R & S	100326	2025-02-19
Signal Conditioning Unit	SCU18F	R & S	101058	2024-12-07
Test Receiver	ESU26	R & S	100109	2025-01-16
Amplifier	8447F	HP	2944A03909	2024-08-04
Hybrid ANTENNA	VULB 9163	SCHWARZBECK	9163-396	2025-04-02
RF Cable	CA-04	-	-	2024-10-04
RF Cable	CA-05	-	-	2024-10-04
RF Cable	CA-06	-	-	2024-10-04
RF Cable	CA-08	-	-	2024-10-04

Note. Measuring software is below

- Branch Site : ELECTRA(V5.02.0) from R&S
- Branch Site-3 : EMC32(V10.40.10) from R&S
- Branch Site-4 : EMC32(V10.40.10) from R&S

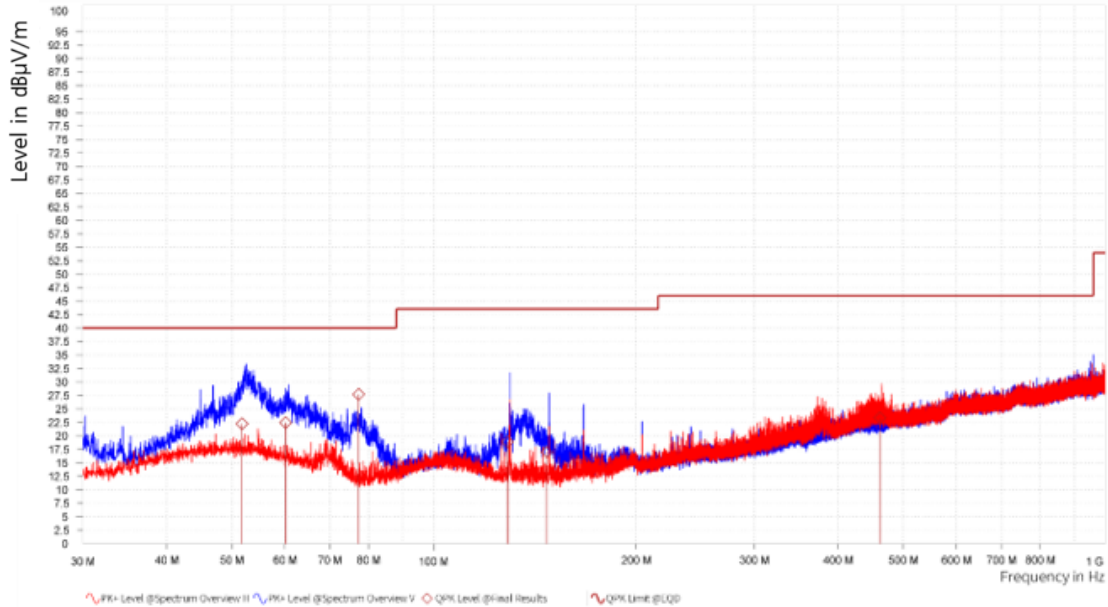
5.4.2 Environment Conditions

Test Site	3 m SEMI-ANECHOIC CHAMBER in Branch site
Temperature	(Minimum 22.1, Maximum 23.1) °C
Humidity	(Minimum 42.0, Maximum 43.0) % R.H.
Atmospheric Pressure	(Minimum 100.0, Maximum 100.0) kPa
Test Date	2024-07-19

5.4.3 Test Result

01 Mode

Spectrum Overview H/V



EMI Final Results

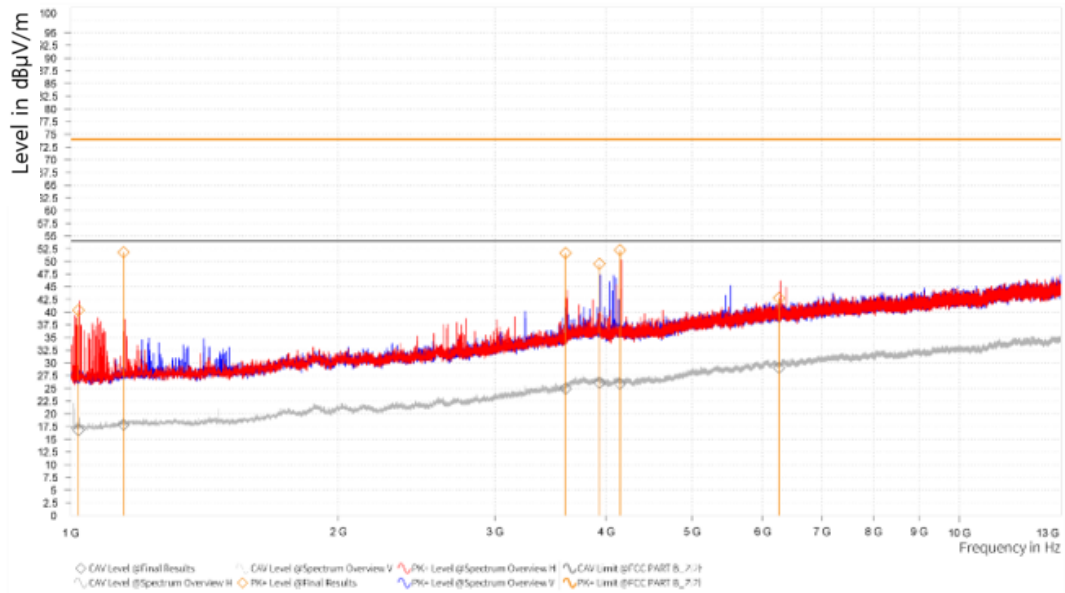
Frequency (MHz)	QPK Level (dBµV/m)	QPK Limit (dBµV/m)	QPK Margin (dB)	Correction (dB)	Polarization	Azimuth (deg)	Antenna Height (m)	Meas. BW (kHz)	Meas. Time (s)
51.823	22.22	40.00	17.78	-7.91	V	155	2.86	120.000	15.000
60.188	22.47	40.00	17.53	-9.28	V	42.4	1.48	120.000	15.000
77.317	27.70	40.00	12.30	-14.95	V	222.4	1.02	120.000	15.000
128.875	18.88	43.50	24.62	-12.88	V	44.6	1.02	120.000	15.000
147.304	17.01	43.50	26.49	-13.39	V	15.4	1.04	120.000	15.000
461.856	23.33	46.00	22.67	-3.61	H	334.2	1.02	120.000	15.000

Note. Measurement Uncertainty: See Appendix A

- POL H = Horizontal
- POL V = Vertical
- Margin = Limit – Quasi Peak
- Corr. = Antenna Factor + Cable loss – Amplifier Gain

01 Mode

Spectrum Overview H/V



EMI Final Results

Frequency (MHz)	PK+ Level (dBµV/m)	PK+: QPK Limit (dBµV/m)	PK+ Margin (dB)	CAV Level (dBµV/m)	CAV Limit (dBµV/m)	CAV Margin (dB)	Correction (dB)	Polarization	Azimuth (deg)	Antenna Height (m)	Meas. BW (MHz)	Meas. Time (S)
1,019.890	40.34	74.00	33.66	16.77	54.00	37.23	-14.74	V	224.5	1.00	1,000.000	15.000
1,146.753	51.80	74.00	22.20	17.85	54.00	36.15	-13.62	H	39.7	1.00	1,000.000	15.000
3,603.400	51.64	74.00	22.36	24.95	54.00	29.05	-1.67	H	122.5	1.00	1,000.000	15.000
3,933.288	49.50	74.00	24.50	26.09	54.00	27.91	-0.25	H	61.2	1.00	1,000.000	15.000
4,147.690	52.23	74.00	21.77	25.93	54.00	28.07	0.12	H	88.1	1.00	1,000.000	15.000
6,262.573	42.76	74.00	31.24	29.08	54.00	24.92	5.62	V	352.3	1.00	1,000.000	15.000

Note. Measurement Uncertainty: See Appendix A

- AF = Antenna Factor
 - POL H = Horizontal
 - H = Height
 - Corr. = AF + CL – AMP
 - CL = Cable Loss
 - POL V = Vertical
 - Margin = Limit – Result
 - AMP = Amplifier Gain
 - A = Angle
- ** The value of 'Level' includes 'Corr.'.

Ex) In case

Freq ; 100 MHz, level ; 30 dB(µV/m), AF ; 10 dB/m, CL ; 4 dB, Amp ; 25 dB

Result = Level + AF + CL – Amp

$$= 30 + 10 + 4 - 25$$

$$= 19$$

Margin = Limit – Result

$$= 43.5 - 19$$

$$= 24.5$$

Appendix A: Measurement Uncertainty

Test Method		Measurement Uncertainty
Conducted Emission	ENV216	3.1 dB (The confidential level is 95 %, $k=2$)
	ESH2-Z5	2.8 dB (The confidential level is 95 %, $k=2$)
	ESH3-Z6	3.0 dB (The confidential level is 95 %, $k=2$)
Conducted Emission - Signal	ISN T800	5.3 dB (The confidential level is 95 %, $k=2$)
	ISNT8-Cat6	5.4 dB (The confidential level is 95 %, $k=2$)
	ISN S751	7.1 dB (The confidential level is 95 %, $k=2$)
Disturbance Voltage at Antenna Terminal		2.2 dB (The confidential level is 95 %, $k=2$)
Radiated Emission	9 kHz - 30 MHz	Horizontal 3.6 dB (The confidential level is 95 %, $k=2$)
		Vertical 3.6 dB (The confidential level is 95 %, $k=2$)
	30 MHz - 1 000 MHz	Horizontal 4.6 dB (The confidential level is 95 %, $k=2$)
		Vertical 4.9 dB (The confidential level is 95 %, $k=2$)
	1 GHz - 18 GHz	Horizontal 3.9 dB (The confidential level is 95 %, $k=2$)
		Vertical 3.8 dB (The confidential level is 95 %, $k=2$)

Table A.1 Measurement Uncertainty of Branch Site

Test Method		Measurement Uncertainty	
Conducted Emission		ENV216	3.2 dB (The confidential level is 95 %, $k=2$)
		ESH3-Z6	3.2 dB (The confidential level is 95 %, $k=2$)
		ESH2-Z5	3.0 dB (The confidential level is 95 %, $k=2$)
		NNLK8129	3.0 dB (The confidential level is 95 %, $k=2$)
Conducted Emission - Signal		ISN T800	5.5 dB (The confidential level is 95 %, $k=2$)
		ISN ST08	6.6 dB (The confidential level is 95 %, $k=2$)
Radiated Emission	9 kHz - 30 MHz	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	Horizontal	4.3 dB (The confidential level is 95 %, $k=2$)
		Vertical	4.6 dB (The confidential level is 95 %, $k=2$)
	1 GHz - 18 GHz	Horizontal	3.9 dB (The confidential level is 95 %, $k=2$)
		Vertical	4.0 dB (The confidential level is 95 %, $k=2$)

Table A.2 Measurement Uncertainty of Branch Site-3

Test Method		Measurement Uncertainty	
Conducted Emission	ENV216	3.5 dB	(The confidential level is 95 %, $k=2$)
	ESH2-Z5	3.3 dB	(The confidential level is 95 %, $k=2$)
	ESH3-Z6	3.3 dB	(The confidential level is 95 %, $k=2$)
	NNLK8129	3.4 dB	(The confidential level is 95 %, $k=2$)
Conducted Emission - Signal	ISN T800	5.6 dB	(The confidential level is 95 %, $k=2$)
	ISN ST08	5.5 dB	(The confidential level is 95 %, $k=2$)
Radiated Emission	9 kHz - 30 MHz (Triple Loop Ant.)	3.7 dB	(The confidential level is 95 %, $k=2$)
	9 kHz - 30 MHz (Loop Ant.)	Horizontal	4.2 dB (The confidential level is 95 %, $k=2$)
		Vertical	4.2 dB (The confidential level is 95 %, $k=2$)
	30 MHz - 1 000 MHz	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	Horizontal	4.5 dB (The confidential level is 95 %, $k=2$)
		Vertical	4.5 dB (The confidential level is 95 %, $k=2$)

Table A.3 Measurement Uncertainty of Branch Site-4

- End of Test Report -