

RADIO PERFORMANCE TEST REPORT

Test Report No. : OT-234-RWD-031

Reception No. : 2304001031

Applicant : Samsung Electronics Co Ltd

Address : 19 Chapin Rd., Building D, Pine Brook, New Jersey, United States, 07058

Manufacturer : Samsung Electronics Co., Ltd.

Address : 129 Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677, Korea

Type of Equipment : SMART CONTROL

FCC ID. : A3LVGTM2365E

Model Name : VG-TM2365E

Multiple Model Name : N/A

Serial number : N/A

Total page of Report : 24 pages (including this page)

Date of Incoming : March 31, 2023

Date of issue : April 21, 2023

SUMMARY

The equipment complies with the regulation; *FCC PART 15 SUBPART C Section 15.247*

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.





Tested by
Yun-Bok, Wi / Prj. Engineer
ONETECH Corp.

Reviewed by
Tae-Ho, Kim / Chief Engineer
ONETECH Corp.

Approved by
Jae-Ho, Lee / Chief Engineer
ONETECH Corp.

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※ Please refer to the Annex section for All test plots

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-234-RWD-031	April 21, 2023	Initial Release	All

1. VERIFICATION OF COMPLIANCE

Applicant : Samsung Electronics Co Ltd
 Address : 19 Chapin Rd., Building D, Pine Brook, New Jersey, United States, 07058
 Contact Person : Jenni Chun / General Manager
 Telephone No. : +973-808-6375
 FCC ID : A3LVGTM2365E
 Model Name : VG-TM2365E
 Brand Name : Samsung
 Serial Number : N/A
 Date : April 21, 2023

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM
E.U.T. DESCRIPTION	SMART CONTROL
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247 KDB 558074 D01 15.247 Meas Guidance v05r02
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.247 (a) (2)	Minimum 6 dB Bandwidth	Met the Limit / PASS
15.247 (b) (3)	Maximum Conducted Output Power	Met the Limit / PASS
15.247 (d)	100 kHz Bandwidth Outside the Frequency Band	Met the Limit / PASS
15.247 (d)	Radiated Emission which fall in the Restricted Band	Met the Limit / PASS
15.247 (e)	Power Spectral Density	Met the Limit / PASS
15.209	Radiated Emission Limits	Met the Limit / PASS
15.207	Conducted Limits	Met the Limit / PASS
15.203	Antenna Requirement	Met requirement / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART C Section 15.247.

2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea.

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-20122/ C-14617/ G-10666/ T-11842

ISED (Innovation, Science and Economic Development Canada) – Registration No. Site# 3736A-3

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

3. GENERAL INFORMATION

3.1 Product Description

The Samsung Electronics Co Ltd, Model VG-TM2365E (referred to as the EUT in this report) is a SMART CONTROL.

The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	SMART CONTROL
OPERATING FREQUENCY	2 402 MHz ~ 2 480 MHz
MODULATION TYPE	GFSK
RF OUTPUT POWER	4.35 dBm
ANTENNA TYPE	Chip Antenna
ANTENNA GAIN	0.97 dBi
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)	40 MHz
RATED SUPPLY VOLTAGE	DC 5.0 V

3.2 Alternative type(s)/model(s); also covered by this test report.

-. None

4. EUT MODIFICATIONS

-. None

5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	Samsung Electronics Co., Ltd.	N/A	N/A

5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	Description	Connected to
VG-TM2365E	Samsung Electronics Co., Ltd.	SMART CONTROL (EUT)	-
Pavilion 14	HP	Notebook PC	EUT

5.3 Mode of operation during the test

-. Channel List (Bluetooth LE)

Channel	Frequency[MHz]	Channel	Frequency[MHz]	Channel	Frequency[MHz]
0	2 402.00	14	2 430.00	28	2 458.00
1	2 404.00	15	2 432.00	29	2 460.00
2	2 406.00	16	2 434.00	30	2 462.00
3	2 408.00	17	2 436.00	31	2 464.00
4	2 410.00	18	2 438.00	32	2 466.00
5	2 412.00	19	2 440.00	33	2 468.00
6	2 414.00	20	2 442.00	34	2 470.00
7	2 416.00	21	2 444.00	35	2 472.00
8	2 418.00	22	2 446.00	36	2 474.00
9	2 420.00	23	2 448.00	37	2 476.00
10	2 422.00	24	2 450.00	38	2 478.00
11	2 424.00	25	2 452.00	39	2 480.00
12	2 426.00	26	2 454.00		
13	2 428.00	27	2 456.00		

-. Duty Cycle

Mode	Tx On Time [ms]	Tx Off Time [ms]	Duty Cycle [%]	Correction Factor [dB]
Bluetooth LE	-	-	100	0.00

Note – Duty Cycle : (Tx On Time / (Tx On Time + Tx Off Time)) * 100

Correction Factor : 10 * Log(1 / (Duty Cycle / 100))

5.4 Configuration of Test System

Line Conducted Test: The EUT was connected to adaptor and the power of adaptor was connected to LISN. All supporting equipment were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 meter Semi Anechoic Chamber.
The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.5 Antenna Requirement

For intentional device, according to section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Construction:

The antenna of the EUT is a Chip Antenna on the main board in the EUT, so no consideration of replacement by the user.

6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Charging Mode	X

6.2 General Radiated Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

7. MIMIMUM 6 dB BANDWIDTH

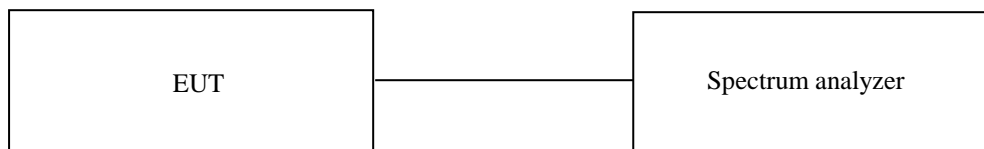
7.1 Operating environment

Temperature : 24 °C

Relative humidity : 52 % R.H.

7.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, and peak detection was used. The 6 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 6 dB.



7.3 Measurement uncertainty

The uncertainty for Minimum 6 dB bandwidth is $\pm 8\,623.60$ Hz

7.4 Test date

April 03, 2023 ~ April 07, 2023

7.5 Test data

-. Test Result : Pass

CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (kHz)	LIMIT (kHz)	Margin (kHz)
Low	2 402.00	709.30	500.00	209.30
Middle	2 440.00	719.30	500.00	219.30
High	2 480.00	719.30	500.00	219.30

Remark. Margin = Measured Value – Limit

8. MAXIMUM CONDUCTED(PEAK) OUTPUT POWER

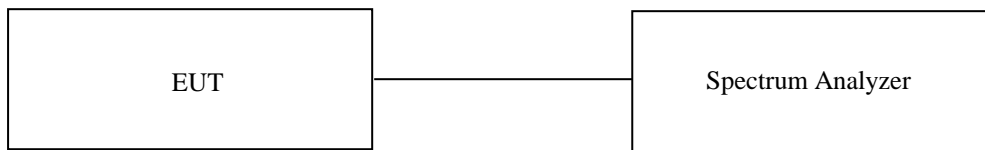
8.1 Operating environment

Temperature : 24 °C
 Relative humidity : 52 % R.H.

8.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to 1 MHz, the video bandwidth is set to 3 times the resolution bandwidth.



8.3 Measurement uncertainty

The uncertainty for Maximum conducted(Peak) output power is ± 1.51 dBm

8.4 Test date

April 03, 2023 ~ April 07, 2023

8.5 Test data

-. Test Result : Pass
 -. Duty Cycle : 100 %

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
LOW	2 402.00	4.35	30.00	25.65
MIDDLE	2 440.00	4.22	30.00	25.78
HIGH	2 480.00	3.97	30.00	26.03

Remark. Margin = Limit – Measured Value

9. 100 kHz BANDWIDTH OUTSIDE THE FREQUENCY BAND

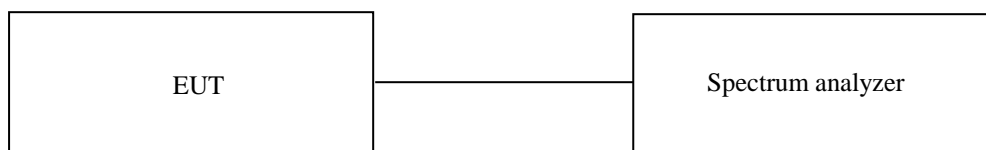
9.1 Operating environment

Temperature : 24 °C

Relative humidity : 52 % R.H.

9.2 Test set-up for conducted measurement

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz and video bandwidth is set to 300 kHz, and peak detection was used.



9.3 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3 m semi anechoic chamber. The EUT was placed on turntable approximately 1.5 m above the ground plane.

The frequency spectrum from 30 MHz to 26.5 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

9.4 Measurement uncertainty

The uncertainty for 100 kHz bandwidth outside the frequency band is ± 1.56 dBm

9.5 Test date

April 03, 2023 ~ April 07, 2023

9.6 Test data for conducted emission

Please refer to the Annex

9.7 Test data for radiated emission

9.7.1 Radiated Emission which fall in the Restricted Band

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 100 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP Factor (dB)	ATT (dB)	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel											
2 324.57	52.83	Peak	H	27.66	6.57	44.97	6.04	-	48.13	74.00	25.87
2 381.00	41.68	Average	H	27.49	6.89	44.95	6.04	-	37.15	54.00	16.85
2 386.15	52.79	Peak	V	27.52	6.92	44.95	6.04	-	48.32	74.00	25.68
2 320.43	41.40	Average	V	27.71	6.57	44.97	6.04	-	36.75	54.00	17.25
Test Data for High Channel											
2484.45	53.90	Peak	H	27.56	6.94	44.91	6.04	-	49.53	74.00	24.47
2483.59	43.46	Average	H	27.57	6.94	44.91	6.04	-	39.10	54.00	14.90
2484.23	54.00	Peak	V	27.56	6.94	44.91	6.04	-	49.63	74.00	24.37
2483.73	42.79	Average	V	27.57	6.94	44.91	6.04	-	38.43	54.00	15.57

Remark: “H”: Horizontal, “V”: Vertical

$$\text{Margin (dB)} = \text{Limits (dB}\mu\text{V/m)} - \text{Total Level (dB}\mu\text{V/m)}$$

$$\text{Total Level} = \text{Reading} + \text{Antenna Factor} + \text{Cable Loss} + \text{ATT} + \text{Duty Factor} - \text{AMP Gain}$$

9.7.2 Spurious & Harmonic Radiated Emission

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Duty Cycle : 100 %
- Result : PASSED

Frequency (MHz)	Reading (dBμV)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP Factor (dB)	Duty Factor (dB)	Total (dBμV/m)	Limits (dBμV/m)	Margin (dB)
Test Data for Low Channel										
4 804.000	54.21	Peak	H	31.30	11.15	44.66	-	52.00	74.00	22.00
4 804.000	47.21	Average	H	31.30	11.15	44.66	-	45.00	54.00	9.00
4 804.000	58.17	Peak	V	31.30	11.15	44.66	-	55.96	74.00	18.04
4 804.000	53.61	Average	V	31.30	11.15	44.66	-	51.40	54.00	2.60
Test Data for Middle Channel										
4 880.000	53.35	Peak	H	31.30	11.15	44.68	-	51.12	74.00	22.88
4 880.000	45.53	Average	H	31.30	11.15	44.68	-	43.30	54.00	10.70
4 880.000	55.77	Peak	V	31.30	11.15	44.68	-	53.54	74.00	20.46
4 480.000	50.55	Average	V	31.30	11.15	44.68	-	48.32	54.00	5.68
Test Data for High Channel										
4 960.000	52.11	Peak	H	31.36	11.35	44.69	-	50.13	74.00	23.87
4 960.000	45.00	Average	H	31.36	11.35	44.69	-	43.02	54.00	10.98
4 960.000	55.28	Peak	V	31.36	11.35	44.69	-	53.30	74.00	20.70
4 960.000	48.98	Average	V	31.36	11.35	44.69	-	47.00	54.00	7.00

Remark: "H": Horizontal, "V": Vertical

$$\text{Margin (dB)} = \text{Limits (dB}\mu\text{V/m)} - \text{Total Level (dB}\mu\text{V/m)}$$

$$\text{Total Level} = \text{Reading} + \text{Antenna Factor} + \text{Cable Loss} + \text{Duty Factor} - \text{AMP Factor}$$

10. POWER SPECTRAL DENSITY

10.1 Operating environment

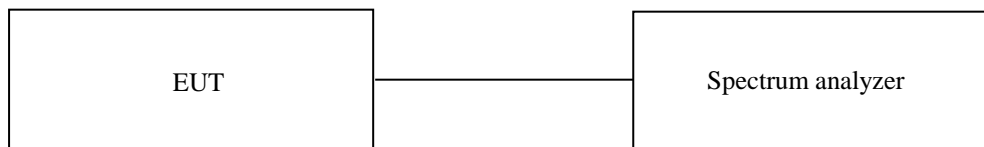
Temperature : 24 °C

Relative humidity : 52 % R.H.

10.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$, the video bandwidth is set to 3 times the resolution bandwidth.



10.3 Measurement uncertainty

The uncertainty for Power spectral density is $\pm 1.51 \text{ dB}$

10.4 Test date

April 03, 2023 ~ April 07, 2023

10.5 Test data

-. Test Result : Pass

-. Duty Cycle : 100 %

CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	LIMIT (dBm / 3 kHz)	MARGIN (dB)
LOW	2 402.00	-8.01	8.00	16.01
MIDDLE	2 440.00	-8.49	8.00	16.49
HIGH	2 480.00	-7.85	8.00	15.85

Remark. Margin = Limit – Measured Value

11. RADIATED EMISSION TEST

11.1 Operating environment

Temperature : 24 °C

Relative humidity : 52 % R.H.

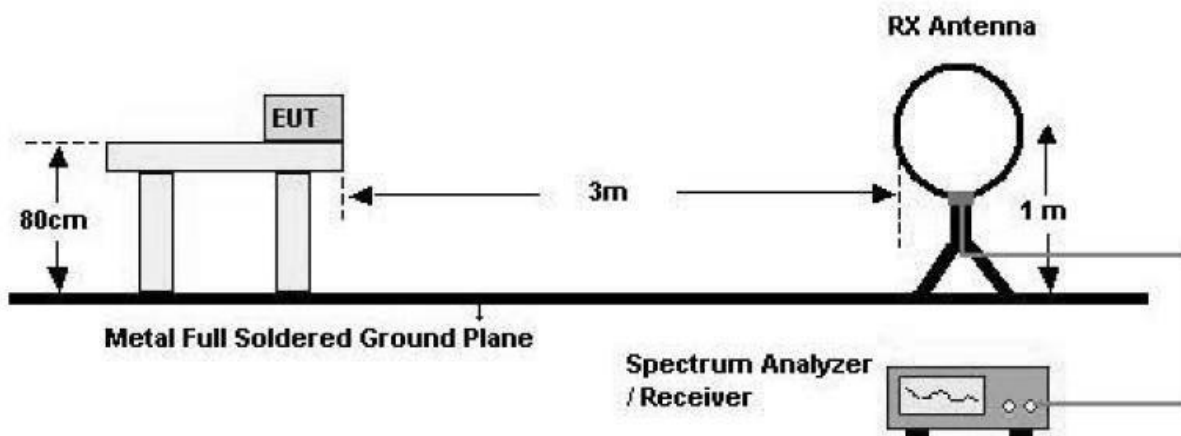
11.2 Test set-up

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

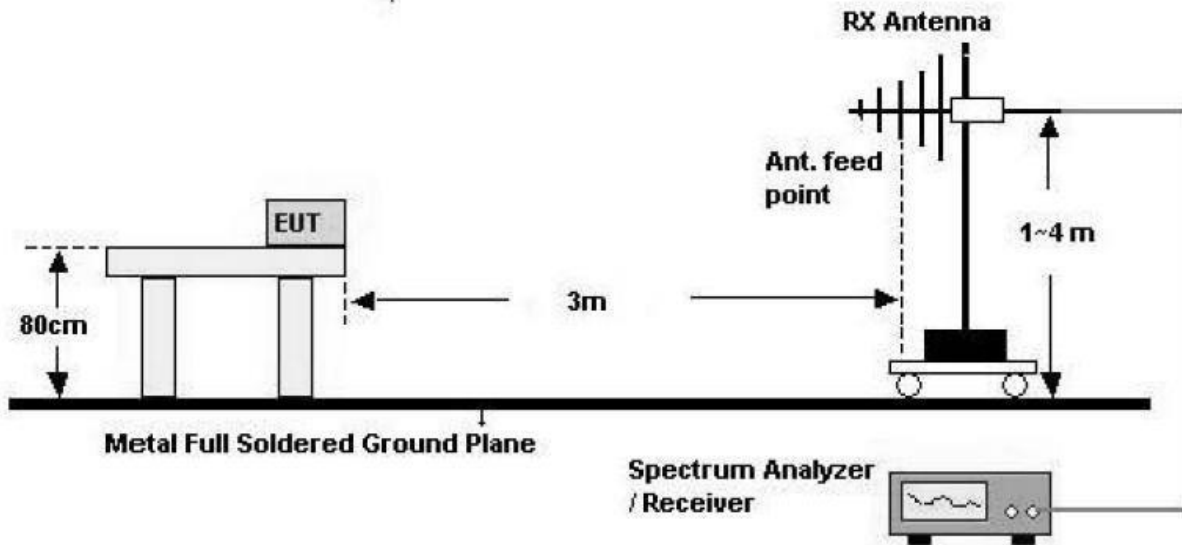
The frequency spectrum from 30 MHz to 26.5 GHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

- Test Configuration

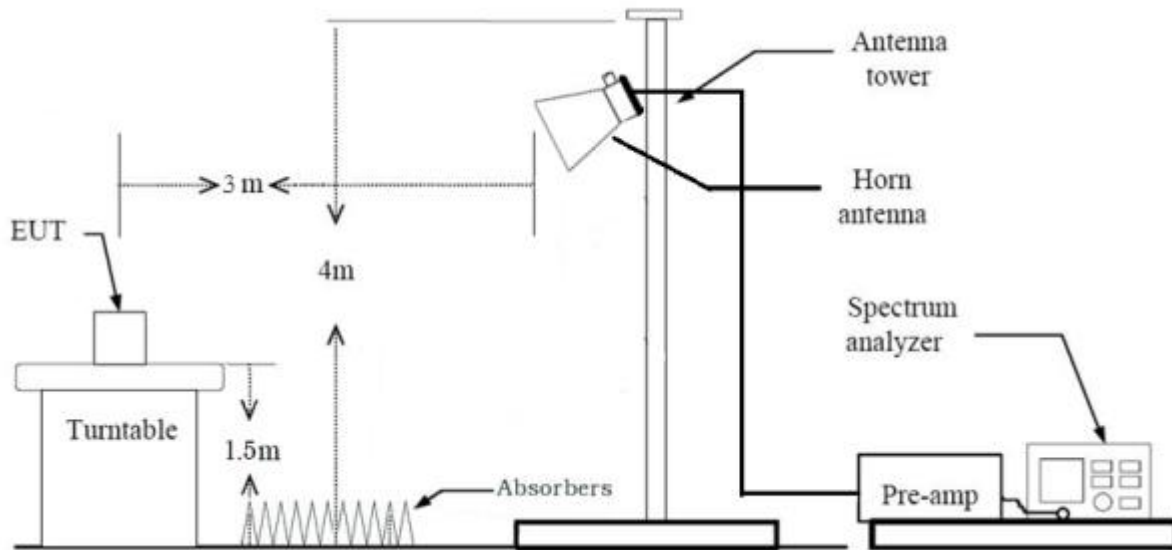
1. Below 30 MHz



2. 30 MHz - 1 GHz



3. Above 1 GHz



11.3 Measurement uncertainty

The uncertainty for Radiated emission test is ± 3.83 dB below 30 MHz

The uncertainty for Radiated emission test is ± 3.71 dB in 30 MHz ~ 1GHz

The uncertainty for Radiated emission test is ± 4.86 dB above 1 GHz

11.4 Test date

April 03, 2023 ~ April 07, 2023

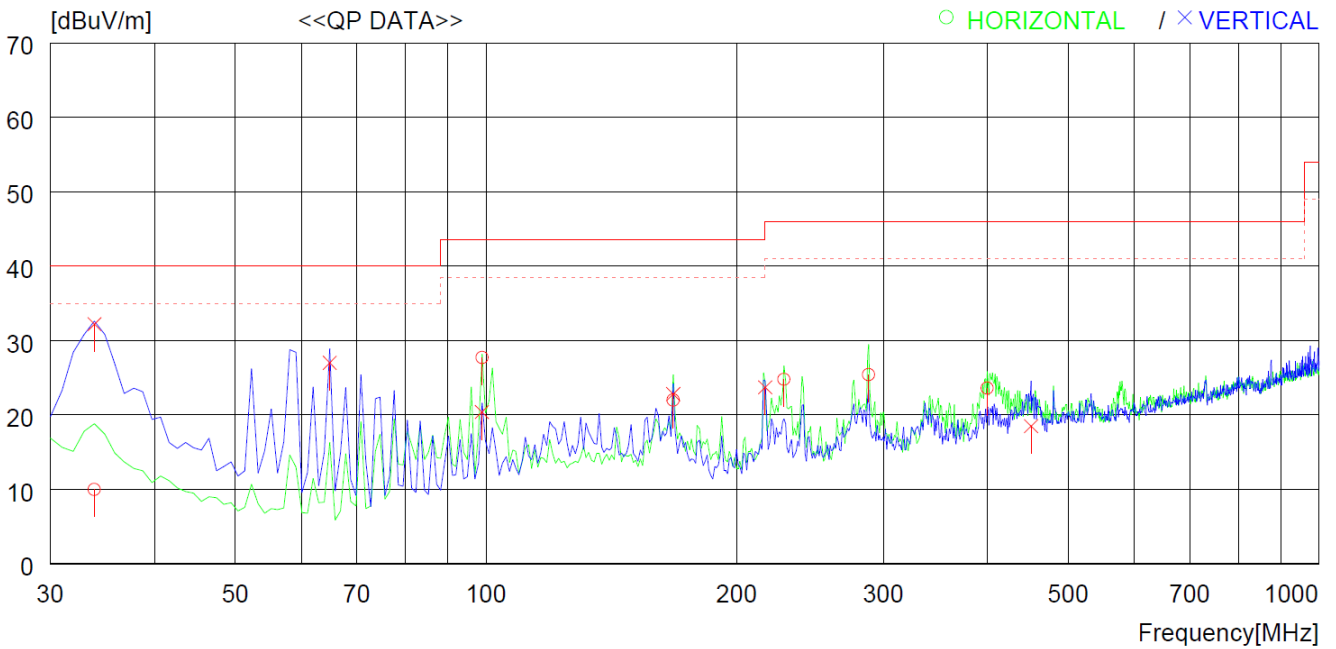
11.5 Test data for 30 MHz ~ 1 000 MHz

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : SMART CONTROL

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	33.880	22.3	19.7	1.1	33.1	10.0	40.0	30.0	200	0
2	98.870	43.6	15.2	2.0	33.1	27.7	43.5	15.8	400	0
3	167.740	35.2	17.3	2.5	33.0	22.0	43.5	21.5	200	81
4	227.880	38.3	16.6	2.9	33.0	24.8	46.0	21.2	100	359
5	288.020	36.2	18.7	3.4	32.9	25.4	46.0	20.6	100	359
6	399.570	31.9	20.7	3.9	32.9	23.6	46.0	22.4	100	359
----- Vertical -----										
7	33.880	44.5	19.7	1.1	33.1	32.2	40.0	7.8	100	319
8	64.920	46.0	12.5	1.6	33.1	27.0	40.0	13.0	100	0
9	98.870	36.3	15.2	2.0	33.1	20.4	43.5	23.1	400	359
10	167.740	36.0	17.3	2.5	33.0	22.8	43.5	20.7	100	0
11	216.240	37.8	16.1	2.8	33.0	23.7	46.0	22.3	200	19
12	450.981	24.8	22.7	4.2	33.2	18.5	46.0	27.5	100	161

11.6 Test data for Below 30 MHz

- Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)
- Frequency range : 9 kHz ~ 30 MHz
- Measurement distance : 3 m
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

11.7 Test data for above 1 GHz

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 26.5 GHz
- Measurement distance : 3 m
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dBμV)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dBμV/m)	Limits (dBμV/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

12. CONDUCTED EMISSION TEST – CHARGING MODE

12.1 Operating environment

Temperature : 24 °C

Relative humidity : 52 % R.H.

12.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μ H + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

12.3 Measurement uncertainty

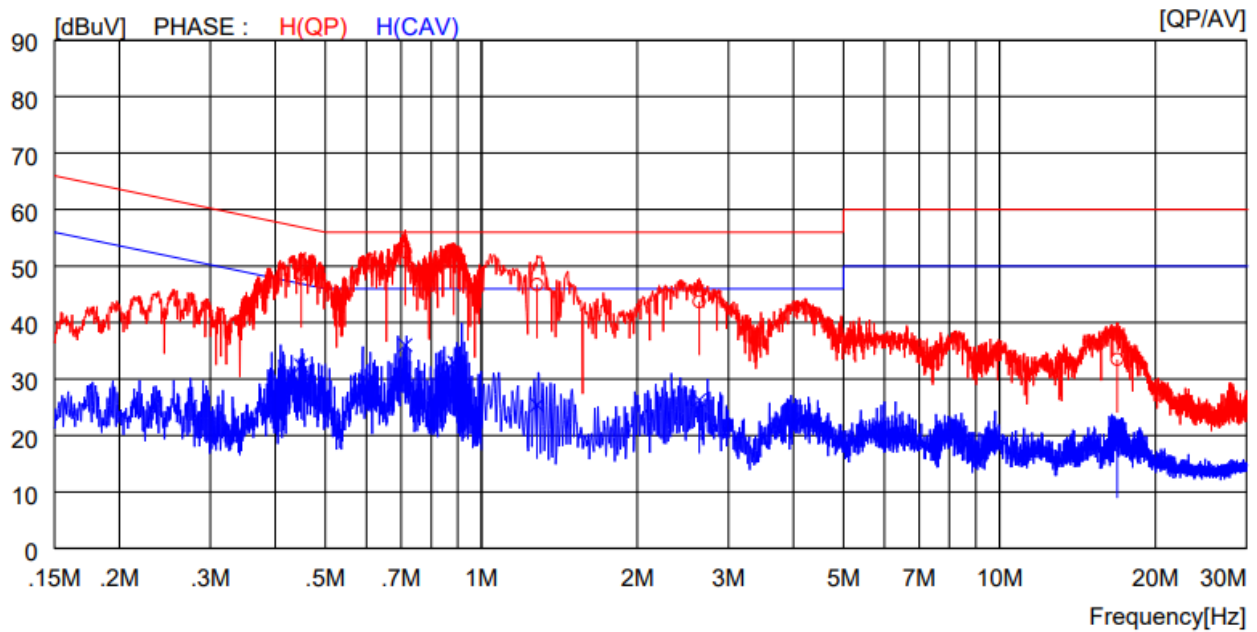
The uncertainty for Conducted emission test is ± 1.6 dB

12.4 Test date

April 03, 2023 ~ April 07, 2023

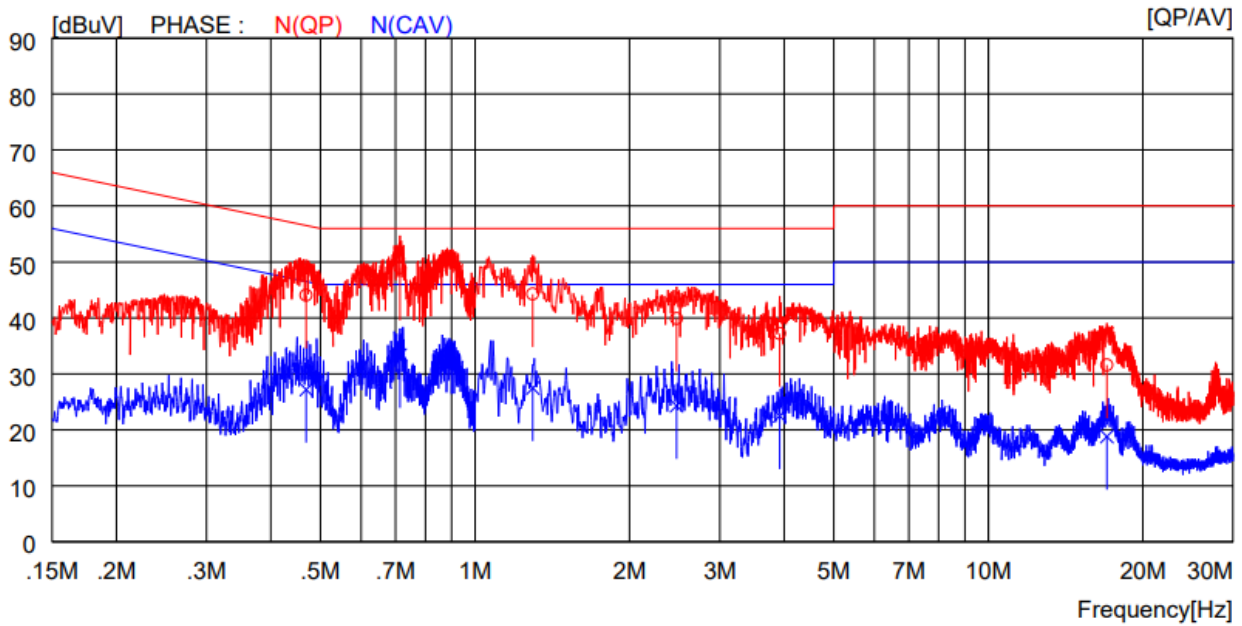
12.5 Test data

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : HOT LINE



NO	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.44900	38.5	----	10.1	48.6	----	56.9	----	8.3	----	H (QP)
2	0.71300	42.4	----	10.1	52.5	----	56.0	----	3.5	----	H (QP)
3	0.88500	40.7	----	10.1	50.8	----	56.0	----	5.2	----	H (QP)
4	1.28000	36.5	----	10.2	46.7	----	56.0	----	9.3	----	H (QP)
5	2.63200	33.4	----	10.3	43.7	----	56.0	----	12.3	----	H (QP)
6	16.87000	23.1	----	10.4	33.5	----	60.0	----	26.5	----	H (QP)
7	0.44900	----	22.3	10.1	----	32.4	----	46.9	----	14.5	H (CAV)
8	0.71300	----	25.9	10.1	----	36.0	----	46.0	----	10.0	H (CAV)
9	0.88500	----	22.8	10.1	----	32.9	----	46.0	----	13.1	H (CAV)
10	1.28000	----	15.2	10.2	----	25.4	----	46.0	----	20.6	H (CAV)
11	2.63200	----	16.0	10.3	----	26.3	----	46.0	----	19.7	H (CAV)
12	16.87000	----	8.0	10.4	----	18.4	----	50.0	----	31.6	H (CAV)

- Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.46900	34.0	----	10.1	44.1	----	56.5	----	12.5	----	N(QP)
2	0.71400	38.9	----	10.1	49.0	----	56.0	----	7.0	----	N(QP)
3	1.29600	34.1	----	10.2	44.3	----	56.0	----	11.7	----	N(QP)
4	2.46800	29.6	----	10.3	39.9	----	56.0	----	16.1	----	N(QP)
5	3.92400	26.9	----	10.3	37.2	----	56.0	----	18.8	----	N(QP)
6	17.01000	21.2	----	10.4	31.6	----	60.0	----	28.4	----	N(QP)
7	0.46900	----	17.1	10.1	----	27.2	----	46.5	----	19.3	N(CAV)
8	0.71400	----	23.3	10.1	----	33.4	----	46.0	----	12.6	N(CAV)
9	1.29600	----	17.3	10.2	----	27.5	----	46.0	----	18.5	N(CAV)
10	2.46800	----	14.0	10.3	----	24.3	----	46.0	----	21.7	N(CAV)
11	3.92400	----	12.2	10.3	----	22.5	----	46.0	----	23.5	N(CAV)
12	17.01000	----	8.4	10.4	----	18.8	----	50.0	----	31.2	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

13. LIST OF TEST EQUIPMENT

Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
FSV40-N	Rohde & Schwarz	Signal Analyzer	102196	Mar. 03, 2023 (1Y)
ESR	Rohde & Schwarz	EMI Test Receiver	101470	Oct. 18, 2022 (1Y)
310N	Sonoma Instrument	Pre-Amplifier	312544	Mar. 14, 2023 (1Y)
SCU18	Rohde & Schwarz	Signal Conditioning unit	102266	Jul. 12, 2022 (1Y)
SCU40A	Rohde & Schwarz	Signal Conditioning unit	100436	Jan. 18, 2023 (1Y)
HPF 3GHz	Rohde & Schwarz	High Pass Filter (1-3 GHz)	N/A	Jan. 17, 2023 (1Y)
FMZB 1513	Schwarzbeck	Loop Antenna	1513-235	Mar. 24, 2022 (2Y)
HLP-2008	TDK	Hybrid Antenna	131314	Mar. 07, 2023 (2Y)
BBHA9120D	Schwarzbeck	Horn Antenna	9120D-1349	Jul. 08, 2022 (1Y)
BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170179	Jan. 25, 2023 (1Y)
ESCI	Rohde & Schwarz	EMI Test Receiver	101012	Oct. 12, 2022 (1Y)
ESH3-Z2	Rohde & Schwarz	Pulse Limiter	100655	Mar. 13, 2023 (1Y)
NSLK8128	Schwarzbeck	LISN	8128216	Mar. 14, 2023 (1Y)
DT3000	Innco System	Turn Table	DT3000/093	N/A
MA4000-EP	Innco System	Antenna Master	MA4000/332	N/A
CO3000	Innco System	Controller	CO3000/904	N/A