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TEL: +82-31-645-6300 **FAX: +82-31-645-6401**

FCC WPT REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

Address:
129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Date of Issue:
July 15, 2020

Test Site/Location:
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA

Report No.: HCT-RF-2007-FC018

FCC ID:	**A3LSMT878U**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model:	SM-T878U
EUT Type:	Tablet
Frequency of Operation & Max. Transmit Power:	530 kHz(S-pen Charging) : -29.30 dBuV/m @300 m
FCC Classification:	Part 15 Low Power Transmitter Below 1705 kHz (DCD)
FCC Rule Part(s):	FCC Part 15, Subpart C (15.209)

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

REVIEWED BY

Report prepared by : Jeong Ho Kim Engineer of Telecommunication Testing Center	Report approved by : Jong Seok Lee Manager of Telecommunication Testing Center

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

This test results were applied only to the test methods required by the standard.

This laboratory is not accredited for the test results marked *.
The above Test Report is the accredited test result by KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (HCT Accreditation No.: KT197)

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2007-FC018	July 15, 2020	- First Approval Report

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1. EUT DESCRIPTION

Model	SM-T878U
Additional Model	-
EUT Type	Tablet
Power Supply	DC 3.85 V
Battery Information	Model: EB-BT875ABY Type: Li-ion Battery
Travel Adapter Information	Model : EP-TA200 Manufacture: RFTech
Data Cable Information	Model : EP-DT725BBE Manufacture: KSDCO
S-PEN Information	Model : EJ-PT870 Manufacture: WACOM
Keyboard Information	Model : EF-DT870 Manufacture: SAMSUNG
Frequency of Operation	530 kHz (S-pen Charging / S-Pen : Rx Only)
Max. Transmit Power	-29.30 dBuV/m @300 m (S-pen Charging)
Date(s) of Tests	May 28, 2020 ~ July 01, 2020

2. TEST METHODOLOGY

The measurement procedure described in the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Device (ANSI C63.10-2013) is used in the measurement of the test device.

EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10. (Version :2013) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane below 1GHz. Above 1GHz with 1.5m using absorbers between the EUT and receive antenna. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 6.6.5 of ANSI C63.10. (Version: 2013).

3. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

4. FACILITIES AND ACCREDITATIONS

FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil,

Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.

The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2014) and CISPR Publication 22.

Detailed description of test facility was submitted to the Commission and accepted dated April 02, 2018 (Registration Number: KR0032).

EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

5. ANTENNA REQUIREMENTS

According to FCC 47 CFR §15.203:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

(1) The antennas of this E.U.T are permanently attached.

(2) The E.U.T Complies with the requirement of §15.203

6. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013.

All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence.

The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.82
Radiated Disturbance (9 kHz ~ 30 MHz)	3.40
Radiated Disturbance (30 MHz ~ 1 GHz)	4.80
Radiated Disturbance (1 GHz ~ 18 GHz)	5.70
Radiated Disturbance (18 GHz ~ 40 GHz)	5.05

7. Worst case configuration

Mode	EUT State	Position of Client device	Battery of Client device	Client device
S-pen Charging (attached on the back of EUT)	Charging from EUT to Client device	Aligned	Non-fully charged condition	S-pen (530kHz Rx Only)
	Charging from EUT(Charging from TA) to Client device			

Note:

1. Client device:

   Of Phone and Wearable device, we tested on Phone.

2. Client device:

S-pen(Rx Only)
- Model : EJ-PT870 - Manufacturer : SAMSUNG - FCC ID : A3LEJPT870

3. All position of loop antenna were investigated and the worst position results are reported.

   - Position : Horizontal, Vertical, Parallel to the ground plane
   - Worst Position : Horizontal

4. The EUT was tested in three orthogonal axis(X, Y, Z) and the worst position results are reported.

   - Axis : X, Y, Z
   - Worst Axis : X

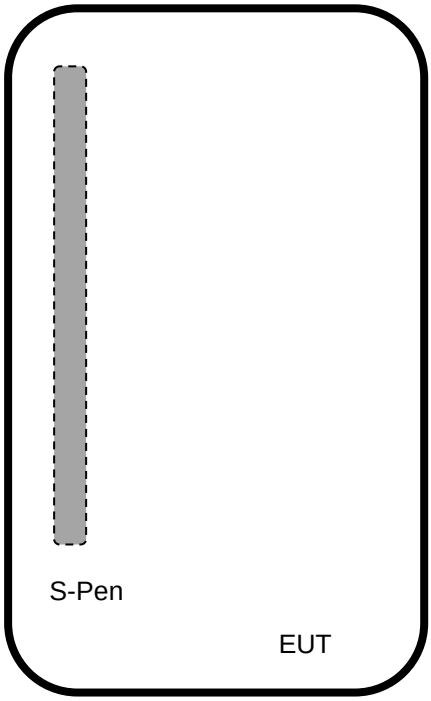
AC Power line Conducted Emissions

1. All modes of operation were investigated and the worst case configuration results are reported.

   - Mode : EUT + External accessories(Earphone, etc) + Travel Adapter + S-Pen(Client device)
     EUT + Travel Adapter + S-Pen(Client device)
   - Worstcase : EUT + Travel Adapter + S-Pen(Client device)

Test Setup Diagram:

1. S-pen charging mode



8. TEST SUMMARY

Test Description	FCC Rule	Limit	Condition	Result
Radiated emission	§15.209	cf. Section 9	Radiated	Pass
AC Power Line Conducted Emission	§15.207	cf. Section 10		Pass

Note:

1. For reporting purposes only.

9. RADIATED EMISSION MEASUREMENT

Test Settings

1. Analyzer frequency set to the frequency of the radiated spurious emissipn of interst
2. RBW :
   9kHz – 150kHz : 300Hz
   150kHz – 30MHz : 10kHz
   30MHz – 1GHz : 100kHz
3. VBW : ≥ 3 x RBW
4. Sweep time : Auto couple
5. Detector : Peak
6. Trace : Maxhold
7. Trace was allowed to stabilize

Limit(FCC)

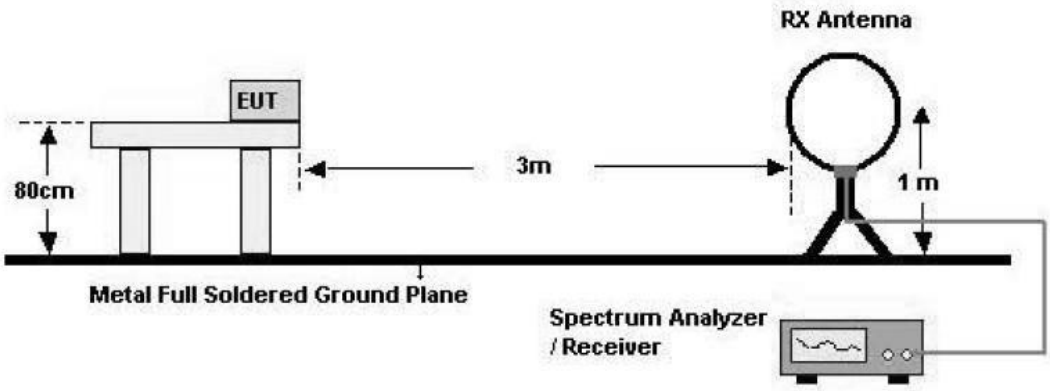
Except as provided elsewhere in this paragraph the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Rule Part	Frequency (MHz)	Limit
Part 15.209	0.009 ~ 0.490	2400/F(kHz) uV/m@300 m
	0.490 ~1.705	24000/F(kHz) uV/m@30 m
	1.705 ~ 30	30 uV/m@30 m
	30 ~ 88	100 ** uV/m@3 m
	88 ~ 216	150 ** uV/m@3 m
	216 ~ 960	200 ** uV/m@3 m
	Above 960	500 uV/m@3 m

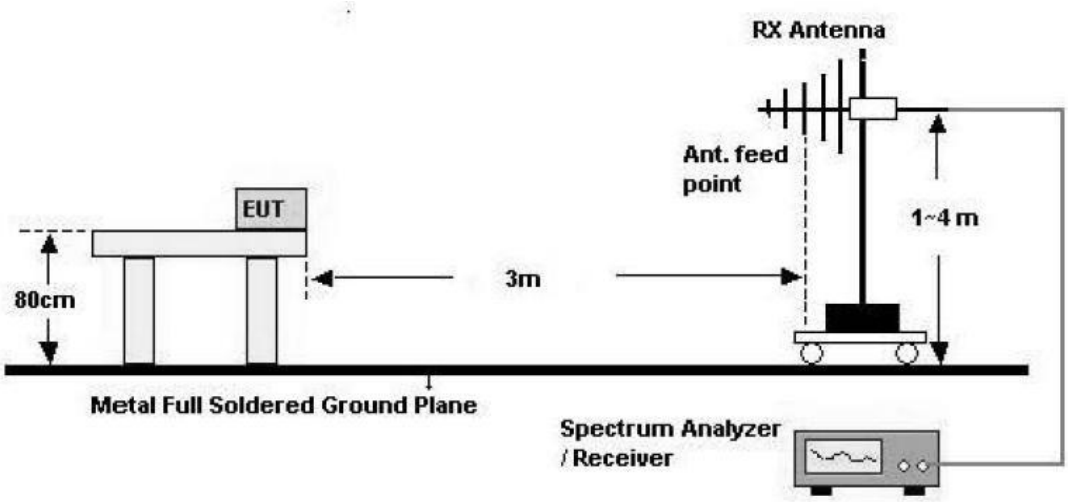
** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

Test Set-up

Below 30 MHz



30 MHz - 1 GHz



Test Procedure of Radiated spurious emissions(Below 30 MHz)

1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
2. The loop antenna was placed at a location 3 m from the EUT.
3. The EUT is placed on a turntable, which is 0.8m above ground plane.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization and Parallel to the ground plane in detecting antenna.
5. The limit is converted from microvolts/meter to decibel microvolts/meter. Sample Calculation:
   * Result level(dBµV/m@30m)
     = Reading level(dBµV/m@3m) + Ant factor(dB/m) + Cable Loss(dB) – Distance Correction Factor.
6. Distance Correction
   * 0.009 MHz – 0.490 MHz :
     40log(3 m/300 m) = - 80 dB
   * 0.490 MHz – 30MHz :
     40log(3 m/30 m) = - 40 dB
7. Plots were taken without using any correction factors.
8. The worst case plots are reported.

KDB 414788 OFS and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Test Procedure of Radiated spurious emissions(Below 1GHz)

1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
2. The EUT is placed on a turntable, which is 0.8m above ground plane.
3. The Hybrid antenna was placed at a location 3m from the EUT, which is varied from 1m to 4m to find out the highest emissions.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
6. Spectrum Setting

   (1) Measurement Type(Peak):

   - Measured Frequency Range : 30 MHz – 1 GHz
   - Detector = Peak
   - Trace = Maxhold
   - RBW = 100 kHz
   - VBW ≥ 3 x RBW

7. Total = Reading Value + Antenna Factor(A.F) + Cable Loss(C.L)
8. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

▣Test Result

Frequency (kHz)	Reading Level (dBuV/m)@3m	Ant.Factor (dB/m)	Cable Loss (dB)	Distance Correction (dB)	Result Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
9.955	8.07	17.90	0.66	-80	-53.37	47.64	101.01
115.26	8.50	17.10	0.66	-80	-53.74	26.58	80.32
**530.1	32.84	17.20	0.66	-80	-29.30	33.11	62.41
4335	13.58	18.00	0.66	-80	-47.76	29.54	77.30

Note

1. "#" Fundamental Frequency
2. EUT Mode: Charging from EUT to S-pen
3. Position: Aligned
4. 30 MHz – 1GHz : No Critical peaks found

Frequency (kHz)	Reading Level (dBuV/m)@3m	Ant.Factor (dB/m)	Cable Loss (dB)	Distance Correction (dB)	Result Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
9.773	8.03	17.90	0.66	-80	-53.41	47.80	101.21
114.86	9.16	17.10	0.66	-80	-53.08	26.39	79.47
**530.1	32.79	17.20	0.66	-80	-29.35	33.11	62.46
3823	15.37	18.00	0.66	-80	-45.97	29.54	75.51

Note

1. "#" Fundamental Frequency
2. EUT Mode: Charging from EUT(Charging from TA) to S-pen
3. Position: Aligned
4. 30 MHz – 1GHz : No Critical peaks found

▣Test Plot

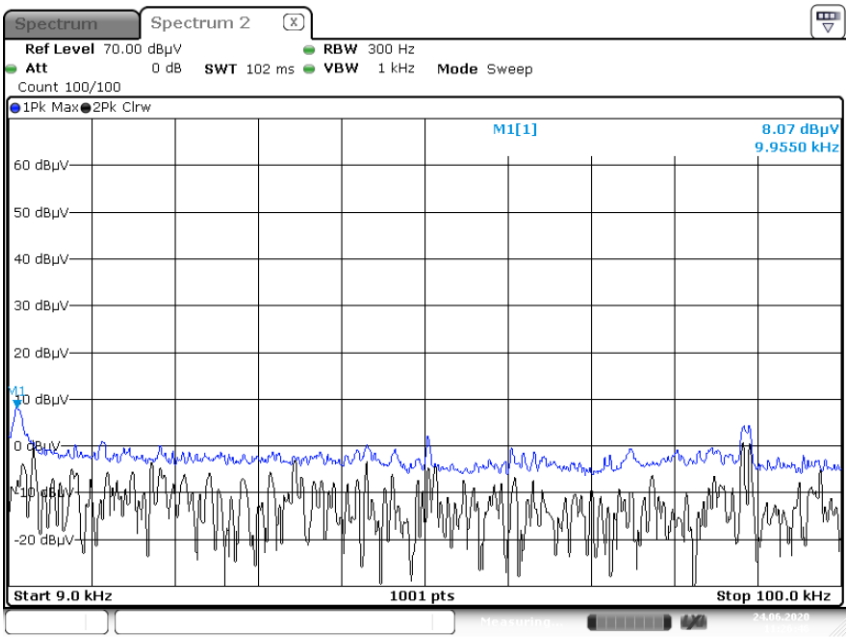
In order to simplify the report, the worst case results are reported.

1. S-pen Charging

Worst case

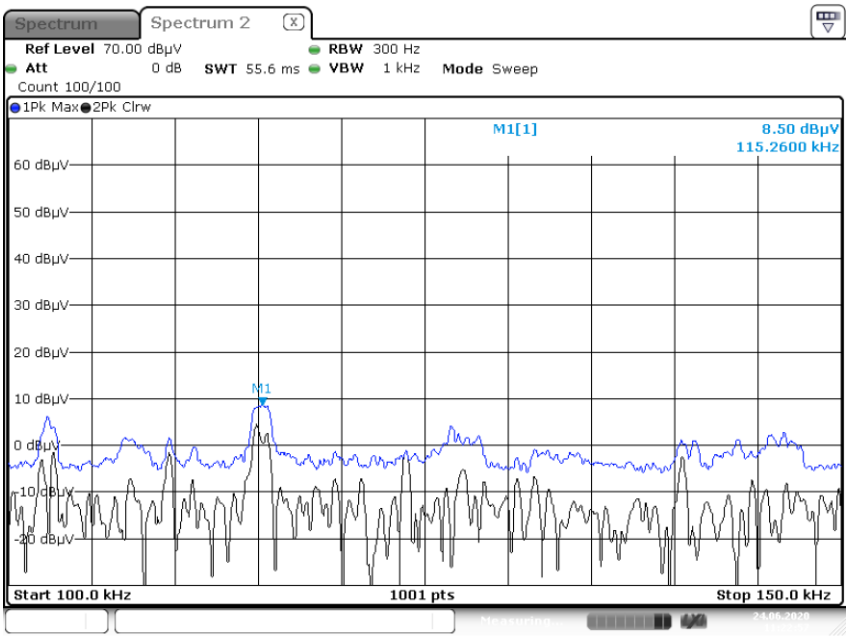
- EUT Mode: Charging from EUT to Client device(S-pen)
- Position: Aligned

Frequency Range : 9 kHz – 100kHz



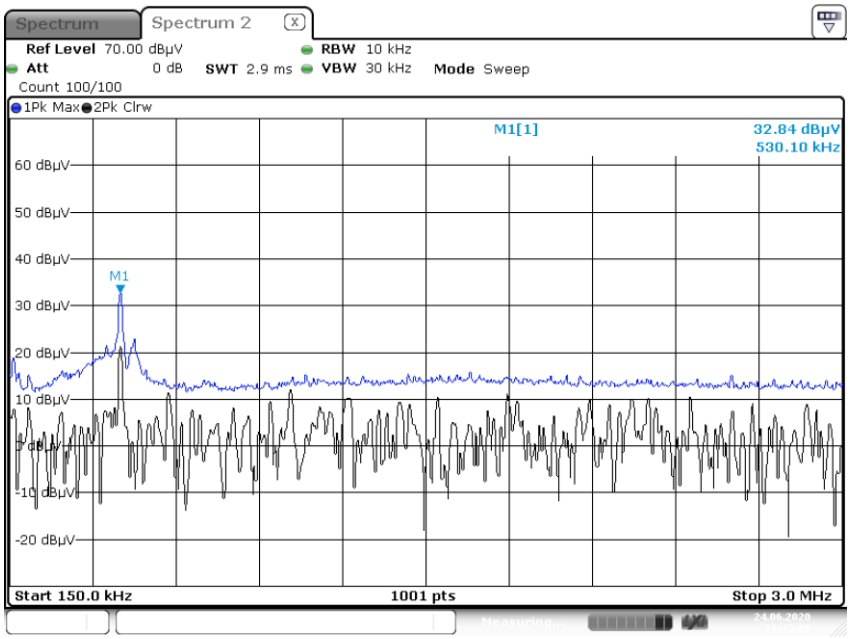
Date: 24.JUN.2020 11:26:47

Frequency Range : 100 kHz – 150kHz



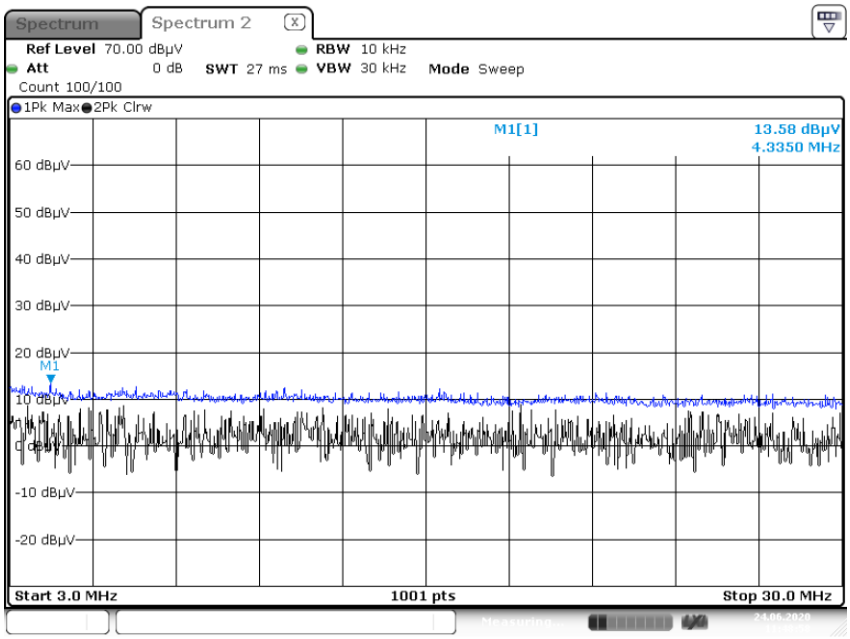
Date: 24.JUN.2020 11:22:57

Frequency Range : 150 kHz – 3 MHz



Date: 24.JUN.2020 11:32:06

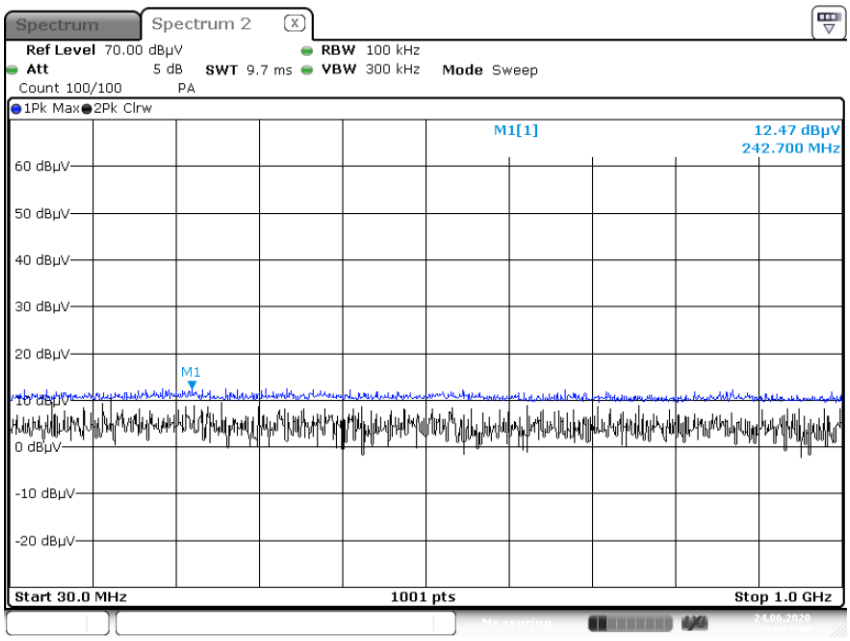
Frequency Range : 3 MHz – 30 MHz



Date: 24.JUN.2020 11:48:59

Frequency Range : 30 MHz – 1 GHz

(30 MHz – 1GHz : No Critical peaks found)



Date: 24.JUN.2020 14:07:40

Note :

In order to simplify the report, attached plots were only the worstcase

10. POWERLINE CONDUCTE EMISSIONS

Limit

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN).

Frequency Range (MHz)	Limits (dBµV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56[(a)]	56 to 46[(a)]
0.50 to 5	56	46
5 to 30	60	50

[(a)]Decreases with the logarithm of the frequency.

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Annex A for the actual connections between EUT and support equipment.

Test Procedure

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors : Quasi Peak and Average Detector.
5. The EUT is the device operating below 30 MHz.
   - For unterminated the Antenna, the AC line conducted tests are performed with the antenna connected
   - For terminated the Antenna, the AC line conducted tests are performed with a dummy load connected to the EUT antenna output terminal.

Sample Calculation

Quasi-peak(Final Result) = Reading Value + Correction Factor

Test Result & Plot (Mode: S-pen Charging)

Conducted Emissions (Line 1)

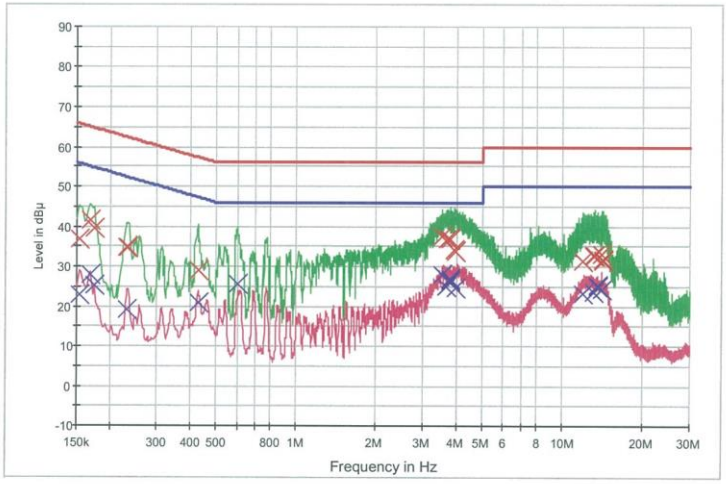
S-PEN CHARGING MODE_L1 1 / 2

HCT TEST Report

Common Information

EUT:	SM-T878U
Manufacturer:	SAMSUNG
Test Site:	SHIELD ROOM
Operating Conditions:	S-PEN CHARGING MODE_L1

FCC CLASS B_Exten Cable



FCC CLASS B_QP
Preview Result 2-AVG
FCC CLASS B_ AV
Final Result 1-QPK
Preview Result 1-PK+
Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154000	36.8	9.000	Off	L1	9.8	28.9	65.8
0.168000	41.6	9.000	Off	L1	9.8	23.4	65.1
0.174000	39.4	9.000	Off	L1	9.8	25.4	64.8
0.230000	34.9	9.000	Off	L1	9.8	27.6	62.4
0.234000	34.8	9.000	Off	L1	9.8	27.5	62.3
0.428000	29.1	9.000	Off	L1	9.8	28.2	57.3
3.546000	37.4	9.000	Off	L1	9.9	18.6	56.0
3.700000	36.7	9.000	Off	L1	10.0	19.3	56.0
3.788000	36.6	9.000	Off	L1	10.0	19.4	56.0
3.928000	34.2	9.000	Off	L1	10.0	21.8	56.0
3.934000	34.0	9.000	Off	L1	10.0	22.0	56.0
3.954000	33.9	9.000	Off	L1	10.0	22.1	56.0
11.914000	31.2	9.000	Off	L1	10.3	28.8	60.0
13.026000	32.5	9.000	Off	L1	10.3	27.5	60.0
13.246000	32.7	9.000	Off	L1	10.3	27.3	60.0
14.026000	32.9	9.000	Off	L1	10.3	27.1	60.0
14.134000	31.8	9.000	Off	L1	10.3	28.2	60.0
14.156000	31.5	9.000	Off	L1	10.3	28.5	60.0

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S-PEN CHARGING MODE_L1 2 / 2

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154000	23.0	9.000	Off	L1	9.8	32.7	55.8
0.168000	27.8	9.000	Off	L1	9.8	27.2	55.1
0.174000	25.3	9.000	Off	L1	9.8	29.4	54.8
0.232000	19.3	9.000	Off	L1	9.8	33.1	52.4
0.428000	21.0	9.000	Off	L1	9.8	26.3	47.3
0.604000	25.6	9.000	Off	L1	9.8	20.4	46.0
3.546000	27.9	9.000	Off	L1	9.9	18.1	46.0
3.648000	25.0	9.000	Off	L1	9.9	21.0	46.0
3.788000	26.9	9.000	Off	L1	10.0	19.1	46.0
3.794000	26.5	9.000	Off	L1	10.0	19.5	46.0
3.798000	26.2	9.000	Off	L1	10.0	19.8	46.0
3.954000	24.6	9.000	Off	L1	10.0	21.4	46.0
11.914000	23.2	9.000	Off	L1	10.3	26.8	50.0
13.026000	23.7	9.000	Off	L1	10.3	26.3	50.0
13.494000	25.2	9.000	Off	L1	10.3	24.8	50.0
13.578000	25.2	9.000	Off	L1	10.3	24.8	50.0
13.596000	24.9	9.000	Off	L1	10.3	25.1	50.0
14.026000	24.1	9.000	Off	L1	10.3	25.9	50.0

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Conducted Emissions (Line 2)

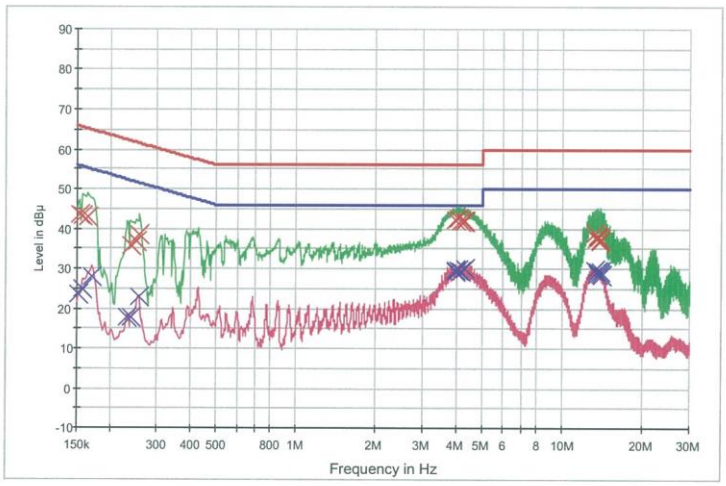
S-PEN CHARGING MODE_N 1 / 2

HCT TEST Report

Common Information

EUT:	SM-T878U
Manufacturer:	SAMSUNG
Test Site:	SHIELD ROOM
Operating Conditions:	S-PEN CHARGING MODE_N

FCC CLASS B_Exten Cable



FCC CLASS B_QP
Preview Result 2-AVG
FCC CLASS B_ AV
Final Result 1-QPK
Preview Result 1-PK+
Final Result 2-CAV

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154000	43.5	9.000	Off	N	9.8	22.2	65.8
0.158000	43.2	9.000	Off	N	9.8	22.4	65.6
0.164000	42.9	9.000	Off	N	9.8	22.4	65.3
0.240000	35.9	9.000	Off	N	9.8	26.2	62.1
0.250000	36.9	9.000	Off	N	9.8	24.9	61.8
0.258000	38.4	9.000	Off	N	9.8	23.1	61.5
3.978000	42.3	9.000	Off	N	10.0	13.7	56.0
3.982000	42.1	9.000	Off	N	10.0	13.9	56.0
4.064000	42.4	9.000	Off	N	10.0	13.6	56.0
4.132000	42.0	9.000	Off	N	10.0	14.0	56.0
4.242000	41.9	9.000	Off	N	10.0	14.1	56.0
4.318000	41.8	9.000	Off	N	10.0	14.2	56.0
13.256000	38.7	9.000	Off	N	10.4	21.3	60.0
13.370000	37.4	9.000	Off	N	10.4	22.6	60.0
13.560000	38.2	9.000	Off	N	10.4	21.8	60.0
13.744000	37.7	9.000	Off	N	10.4	22.3	60.0
13.834000	37.3	9.000	Off	N	10.4	22.7	60.0
13.838000	36.8	9.000	Off	N	10.4	23.2	60.0

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	23.4	9.000	Off	N	9.8	32.5	55.9
0.158000	24.7	9.000	Off	N	9.8	30.8	55.6
0.170000	27.8	9.000	Off	N	9.8	27.1	55.0
0.232000	17.7	9.000	Off	N	9.8	34.7	52.4
0.240000	17.7	9.000	Off	N	9.8	34.4	52.1
0.256000	22.9	9.000	Off	N	9.8	28.7	51.6
3.978000	29.6	9.000	Off	N	10.0	16.4	46.0
3.982000	29.2	9.000	Off	N	10.0	16.8	46.0
4.050000	29.5	9.000	Off	N	10.0	16.5	46.0
4.064000	29.7	9.000	Off	N	10.0	16.3	46.0
4.138000	29.4	9.000	Off	N	10.0	16.6	46.0
4.318000	29.8	9.000	Off	N	10.0	16.2	46.0
13.256000	29.6	9.000	Off	N	10.4	20.4	50.0
13.538000	28.8	9.000	Off	N	10.4	21.2	50.0
13.560000	29.4	9.000	Off	N	10.4	20.6	50.0
13.834000	28.8	9.000	Off	N	10.4	21.2	50.0
13.838000	29.3	9.000	Off	N	10.4	20.7	50.0
14.048000	28.2	9.000	Off	N	10.4	21.8	50.0

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11. LIST OF TEST EQUIPMENT

Conducted Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	09/11/2019	Annual	102245
Rohde & Schwarz	ESCI / Test Receiver	06/10/2020	Annual	100584
ESPAC	SU-642 /Temperature Chamber	08/14/2019	Annual	0093000718
Agilent	N9020A / Signal Analyzer	05/11/2020	Annual	MY51110085
Agilent	N9030A / Signal Analyzer	03/23/2020	Annual	MY49432108
Agilent	N1911A / Power Meter	04/07/2020	Annual	MY45100523
Agilent	N1921A / Power Sensor	03/23/2020	Annual	MY52260025
Agilent	87300B / Directional Coupler	11/11/2019	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	02/24/2020	Annual	10545
Hewlett Packard	E3632A / DC Power Supply	09/27/2019	Annual	MY40004427
Agilent	8493C / Attenuator(10 dB)	07/02/2019	Annual	07560
Rohde & Schwarz	18N-20dB / Attenuator(20 dB)	03/23/2020	Annual	8
Rohde & Schwarz	EMC32 / Software	N/A	N/A	N/A
HCT CO., LTD.	FCC WLAN&BT&BLE Conducted Test Software v3.0	N/A	N/A	N/A
Rohde & Schwarz	CBT / Bluetooth Tester	03/02/2020	Annual	100808

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

Radiated Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640/800-XP-EP / Antenna Position Tower	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Audix	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	05/18/2020	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	08/02/2019	Biennial	01039
Weinschel	2-3 / Attenuator (3 dB)	10/08/2019	Annual	BR0617
Rohde & Schwarz	FSV(10 Hz ~ 40 GHz) / Spectrum Analyzer	05/13/2020	Annual	101055

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
3. Espectially, all antenna for measurement is calibrated in accordance with the requirements of C63.5(Version : 2017).

12. Annex A_TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2007-FC018-P