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EMI TEST REPORT
FCC CERTIFICATION / ISED

Applicant: **SAMSUNG Electronics Co., Ltd.** **129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea**	**Date of Issue: March 05, 2019** **Test Report No. HCT-EM-1903-FI001** **Test Site: HCT CO., LTD.**

FCC ID	**A3LSMT510**
IC	**649E-SMT510**

Applicable Standards	:	FCC CFR 47 PART 15 Subpart B Class B ANSI C63.4-2014
EUT Type	:	Tablet
Model Name	:	SM-T510
Date of Test	:	February 22, 2019 to March 04, 2019

The device bearing the trade name and model specified above, has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2014. (See Test Report if any modifications were made for compliance)
I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.
HCT certifies that no party to application has been denial the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 862

Tested By

Na-Eun Song
Test Engineer
EMC Team
Certification Division

Reviewed By

Jin-Pyo Hong
Technical Manager
EMC Team
Certification Division

REVISION HISTORY

The revision history for this document is shown in table.

Report No.	Issue Date	Information About Changes
HCT-EM-1903-FI001	March 05, 2019	Initial Release

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1. GENERAL INFORMATION

1.1 Description of EUT

Its basic purpose is used for communications.

FCC ID	A3LSMT510
IC	649E-SMT510
Model name	SM-T510
EUT type	Tablet
Frequency band	BT BDR/EDR/LE, WLAN a/b/g/n/ac (HT20/40/80), ANT
Power rating	Travel adaptor: Input: AC 100 to 240 V, 50/60 Hz, 0.3 A Output: DC 5.0 V 1.55 A

1.2 Equipment Units Tested

All equipment descriptions used in the tested system (including inserted cards) are:

Device Type	Model Name	Serial Number	Manufacturer	FCC ID / DoC
EUT	SM-T510	-	SAMSUNG	A3LSMT510
Notebook PC	ProBook6560b	5CB2053MXF	HP	-
Notebook PC adaptor	Series PPP009L-E	-	LITE-ON TECHNOLOGY (CHANGZHOU)	-
Gateway	TL-WR747N	-	TP Link	-
Gateway adaptor	T090060-2H1	-	TP Link	-
Serial mouse	Serial 2 Button mouse	02031069	Radio Shack	FSUGMZE3
RJ45 cable	-	-	-	-
TA	EP-TA50EWE	-	DONGYANG E&P	-
Data Cable	ECB-DU68WE	-	RFTech	-
Earphone	EO-EG920BW	-	BUJEON	-
Micro SD card (64 GB)	-	-	SAMSUNG	-

1.3 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
EUT	USB Type C	Y	Y	(P,D) 1.0
	Earphone	N/A	N	(D) 1.2
Notebook PC	RJ 45	N/A	N	(D) 1.6
	Serial(Mouse)	N/A	Y	(D) 1.8
	DC IN	N	N/A	(P) 1.8
Gateway	DC IN	N	N/A	(P) 1.8

* The marked “(D)” means the data cable and “(P)” means the power cable.

1.4 Noise Suppression Parts on Cable (I/O Cable)

Product Name	Port	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
EUT	USB Type C	N	N/A	Y	Both End
	Earphone	N	N/A	Y	EUT End
Notebook PC	RJ 45	N	N/A	N	N/A
	Serial(Mouse)	N	N/A	Y	Notebook End

1.5. Test Facility

Test site is located at 74, SEOICHEON-RO, 578BEON-GIL, MAJANG-MYEON, ICHEON-SI, GYEONGGI-DO, SOUTH KOREA. Those measurement facilities are constructed in conformance with the requirements of ANSI C63.4-2014. The Normalized site attenuations (30 MHz to 1 GHz) and Site validation (1 GHz to 18 GHz) were performed in accordance with the standard in ANSI C63.4-2014

Measurement Facilities	Registration Number
Radiated Field strength measurement facility 3 m Semi Anechoic chamber	90661
Radiated Field strength measurement facility 10 m Semi Anechoic chamber	
Filing the EMI Measurement Facility (3 m Semi Anechoic Chamber and Shielded Room)	IC 5944A-4
Filing the EMI Measurement Facility (10 m Semi-Anechoic Chamber)	IC 5944A-2

1.6 Calibration of Measuring Instrument

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturers recommendations for utilizing calibration equipment, which is traceable to recognized national standards.
Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2006).

1.7 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014.
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 Emission (0.15 MHz to 30 MHz)	1.82 dB
Radiated Emissions (30 MHz to 1 GHz)	5.20 dB
Radiated Emissions (1 GHz to 18 GHz)	5.24 dB
Radiated Emissions (18 GHz to 40 GHz)	5.40 dB

2. LIST OF TEST EQUIPMENT

	Type	Manufacturer	Model Name	Serial Number	Calibration Cycle	CAL Date
Conducted Emission						
☒	EMI Test Receiver	Rohde & Schwarz	ESCI	100584	1 year	06.25.2018
☒	LISN	Rohde & Schwarz	ENV216	102245	1 year	12.12.2018
☒	LISN	Rohde & Schwarz	ENV216	100073	1 year	05.03.2018
☒	Radio communication analyzer	ANRITSU	MT8820C	6201138643	1 year	08.21.2018
☒	Antenna (for Communication)	Schwarzbeck	USLP9142	VSLP 9142-200	-	-
☒	Software	Rohde & Schwarz	EMC32 VER8.54.0	-	-	-
Radiated Emission						
-For measurement below 1 GHz						
☒	EMI Test Receiver	Rohde & Schwarz	ESU40	100524	1 year	07.27.2018
☐	Trilog Antenna	Schwarzbeck	VULB 9168	00847	2 year	04.13.2018
☒	Trilog Antenna	Schwarzbeck	VULB 9168	760	2 year	04.06.2017
☒	Antenna master	INNCO Systems	MA4640-XP-ET	-	N/A	-
☒	Antenna master controller	INNCO Systems	CO 3000	CO3000/870/ 35990515/L	N/A	-
☒	Turn Table	INNCO Systems	1060	-	N/A	-
☒	Turn Table controller	INNCO Systems	CO2000	CO2000/095/ 7590304/L	N/A	-
☒	Radio communication analyzer	ANRITSU	MT8820C	6201138643	1 year	08.21.2018
☒	Antenna (for Communication)	Schwarzbeck	USLP9142	VSLP 9142-200	-	-
☒	Software	Rohde & Schwarz	EMC32 VER8.40.0	-	-	-
-For measurement above 1 GHz						
☒	EMI Test Receiver	Rohde & Schwarz	ESU40	100524	1 year	07.27.2018
☒	Antenna master	INNCO Systems	MA4640-XP-ET	-	N/A	-
☒	Antenna master controller	INNCO Systems	CO3000	CO3000/870/ 35990515/L	N/A	-
☒	Turn Table	INNCO Systems	1060	-	N/A	-
☒	Turn Table controller	INNCO Systems	CO2000	CO2000/095/ 7590304/L	N/A	-
☒	Horn Antenna	Schwarzbeck	BBHA 9120D	01836	2 year	05.14.2018
☒	Low Noise Amplifier	TESTEK	TK-PA18H	170034-L	1 year	03.06.2018
☐	Low Noise Amplifier	TESTEK	TK-PA18H	170034-L	1 year	03.04.2019
☒	Power Amplifier	TESTEK	TK-PA1840H	170030-L	1 year	12.17.2018
☒	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170#786	2 year	12.05.2017
☒	Radio communication analyzer	ANRITSU	MT8820C	6201138643	1 year	08.21.2018
☒	Antenna (for Communication)	Schwarzbeck	USLP9142	VSLP 9142-200	-	-
☐	Highpass Filter	Wainwright Instruments	WHKX1.0/15G-12SS	42	1 year	08.02.2018
☒	Software	Rohde & Schwarz	EMC32 VER8.40.0	-	-	-

3. DESCRIPTION OF MEASUREMENTS

3.1 Measurement of Conducted Emission

The test procedure was in accordance with ANSI C63.4-2014, Clause 7.3

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN).
If the EUT is connected to the PC through USB, the AC power-line adapter of the PC is directly connected to a line impedance stabilization network (LISN).
Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Both conducted lines are measured in Quasi-Peak and Average mode, including the worst-case data points for each tested configuration.
c. The frequency range from 150 kHz to 30 MHz was searched.

[Conducted Emission Limits]

Frequency (MHz)	Resolution Bandwidth (kHz)	Quasi-Peak (dB(μV))	Average (dB(μV))
0.15 to 0.5	9	66 to 56*	56 to 46*
0.5 to 5	9	56	46
5 to 30	9	60	50

**Decreases with the logarithm of the frequency.*

3.2 Measurement of Radiated Emission

The test procedure was in accordance with ANSI C63.4-2014, Clause 8.3

a. The EUT was placed on the top of a turn table 0.8 meters above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 m away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from 1 m to 4 m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 m to 4 m and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Quasi-Peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f. The test-receiver system was set to Peak and Average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
g. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.(1 GHz to 40 GHz)

[Radiated Emission Limits]

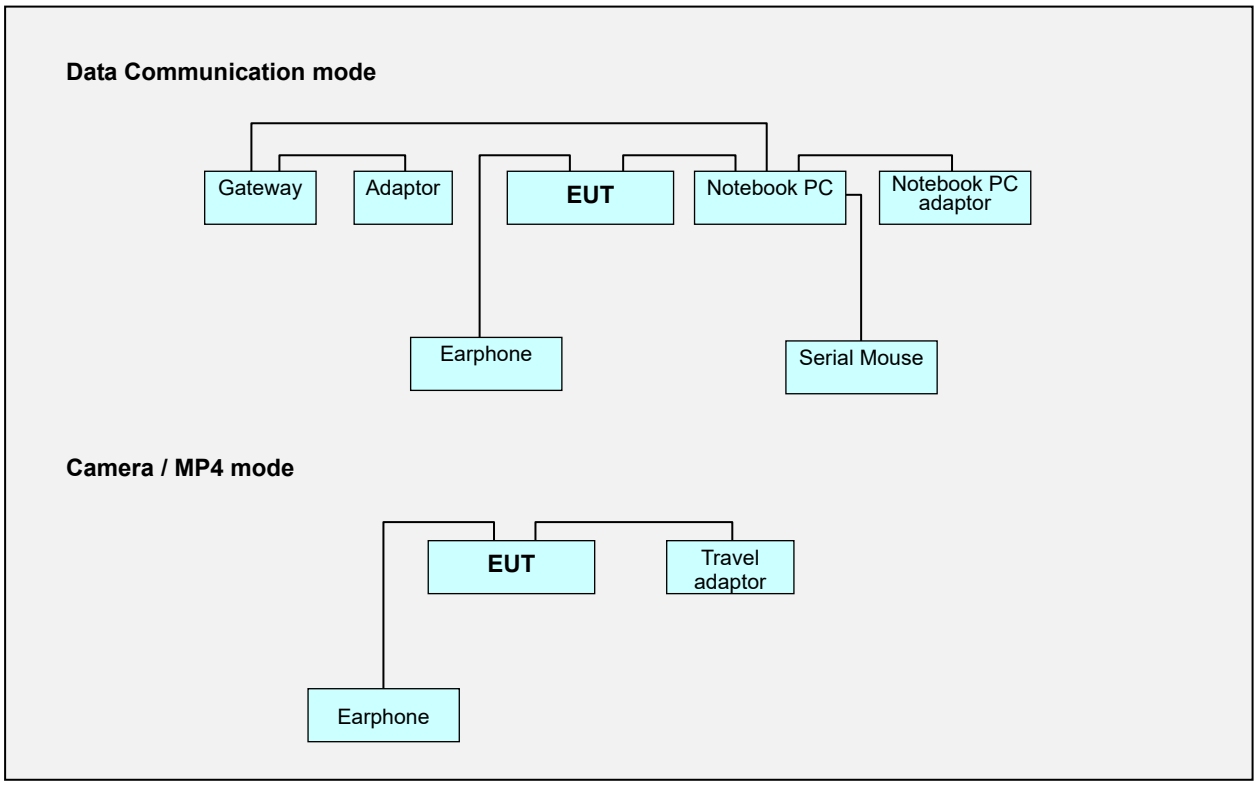
Frequency (MHz)	Antenna Distance (m)	Field Strength (μV/m)	Quasi-Peak (dB(μV)/m)
30 to 88	3	100	40.0
88 to 216	3	150	43.5
216 to 960	3	200	46.0
Above 960	3	500	54.0
Frequency (MHz)	Antenna Distance (m)	Peak (dB(μV)/m)	Average (dB(μV)/m)
Above 1 000	3	74	54

3.2.1 Frequency Range of Radiated Measurements

An unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a Radiated Emission limit is specified, up to the frequency shown in the following table

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 to 108	1 000
108 to 500	2 000
500 to 1 000	5 000
Above 1 000	5th harmonic of the highest frequency or 40 ㎓, whichever is lower

3.3 Configuration of Tested System



Non-Conductive Table
Power Line: 120 VAC, 60 Hz

4. PRELIMINARY TEST

During preliminary tests, the following operating mode was investigated.

Data Communication
Rear Camera (Preview / Recording)
Front Camera (Preview / Recording)
MP4 Play

4.1 Conducted Emission

It was tested the following operating mode, after connecting all peripheral devices.

Operating Modes:

Data Communication mode
MP4 Play mode
Rear / Front Camera Preview mode
Rear / Front Camera Recording mode

NOTE.
1. The worst case of operating mode is reported.

4.2 Radiated Emission

It was tested the following operating mode, after connecting all peripheral devices.

Operating Modes:

Data Communication mode
MP4 Play mode
Rear / Front Camera Preview mode
Rear / Front Camera Recording mode

NOTE.
1. Three orientations have been investigated and the worst case orientation is reported.
2. The worst case of operating mode is reported.

5. CONDUCTED AND RADIATED EMISSION TEST SUMMARY

5.1 Conducted Emission

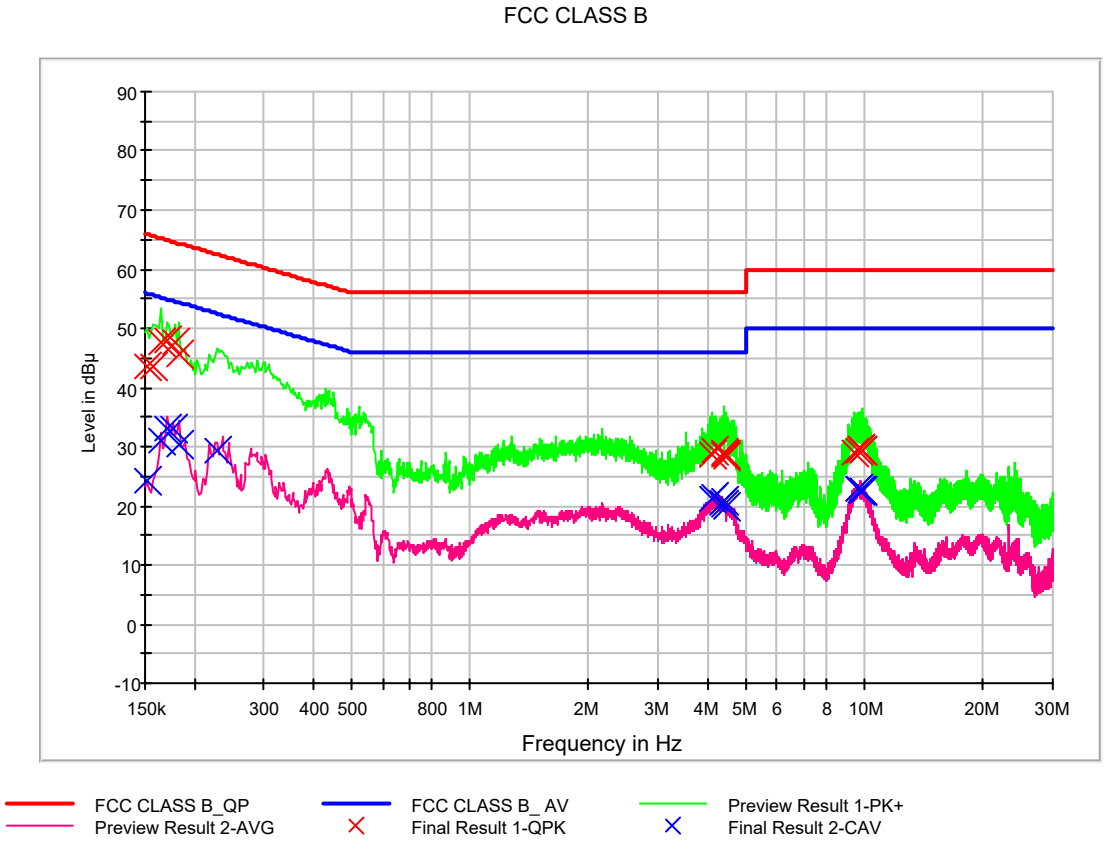
The test results of conducted emission at mains ports provide the following information:

Applicable Standards	FCC PART 15 Subpart B Class B ICES-003 Issue 6 Class B ANSI C63.4-2014
Detector	Quasi-Peak, CISPR-Average
Bandwidth	9 kHz (6 dB)
Worst Case of Operating Mode	Data Communication Rear Camera Preview mode Front Camera Preview mode
Kind of Test Site	Shielded Room
Temperature	21.3 °C
Relative Humidity	42.5 %
Test Date	February 22, 2019

- Calculation Formula:

1. Conductor L1 = Hot, Conductor N = Neutral
2. Corr. = LISN Factor + Cable Loss
3. QuasiPeak or CAverage= Receiver Reading + Corr.
4. Margin = Limit – QuasiPeak or CAverage

Figure 1: Conducted Emission, Data Communication, Line (L1)



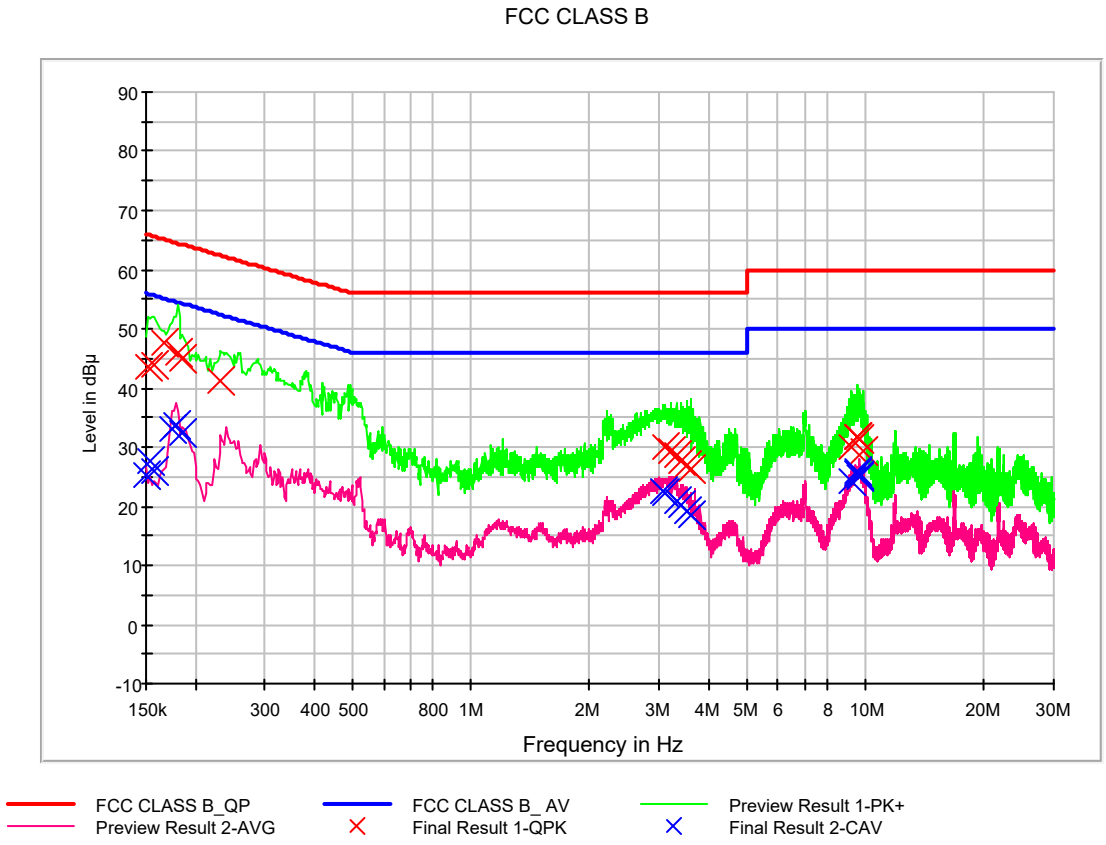
QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	43.7	9.000	L1	9.6	22.2	65.9
0.158000	43.6	9.000	L1	9.6	22.0	65.6
0.164000	47.5	9.000	L1	9.6	17.7	65.3
0.170000	48.0	9.000	L1	9.6	16.9	65.0
0.178000	47.6	9.000	L1	9.6	17.0	64.6
0.182000	45.7	9.000	L1	9.6	18.7	64.4
4.124000	28.7	9.000	L1	9.8	27.3	56.0
4.176000	29.2	9.000	L1	9.8	26.8	56.0
4.414000	28.9	9.000	L1	9.8	27.1	56.0
4.422000	28.5	9.000	L1	9.8	27.5	56.0
4.452000	28.2	9.000	L1	9.8	27.8	56.0
4.482000	28.6	9.000	L1	9.8	27.4	56.0
9.462000	29.0	9.000	L1	10.0	31.0	60.0
9.652000	29.4	9.000	L1	10.0	30.6	60.0
9.704000	29.7	9.000	L1	10.0	30.3	60.0
9.794000	29.6	9.000	L1	10.0	30.4	60.0
9.830000	29.2	9.000	L1	10.0	30.8	60.0
9.878000	29.5	9.000	L1	10.0	30.5	60.0

CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	24.1	9.000	L1	9.6	31.8	55.9
0.164000	31.0	9.000	L1	9.6	24.3	55.3
0.170000	33.1	9.000	L1	9.6	21.9	55.0
0.176000	33.2	9.000	L1	9.6	21.5	54.7
0.184000	30.5	9.000	L1	9.6	23.8	54.3
0.228000	29.3	9.000	L1	9.6	23.3	52.5
4.094000	21.1	9.000	L1	9.8	24.9	46.0
4.176000	21.5	9.000	L1	9.8	24.5	46.0
4.368000	20.5	9.000	L1	9.8	25.6	46.0
4.414000	20.7	9.000	L1	9.8	25.3	46.0
4.422000	20.1	9.000	L1	9.8	25.9	46.0
4.482000	19.8	9.000	L1	9.8	26.2	46.0
9.652000	22.8	9.000	L1	10.0	27.2	50.0
9.666000	22.9	9.000	L1	10.0	27.1	50.0
9.716000	22.7	9.000	L1	10.0	27.3	50.0
9.830000	22.5	9.000	L1	10.0	27.5	50.0
9.878000	22.6	9.000	L1	10.0	27.4	50.0
9.882000	22.5	9.000	L1	10.0	27.5	50.0

Figure 2: Conducted Emission, Data Communication, Line (N)



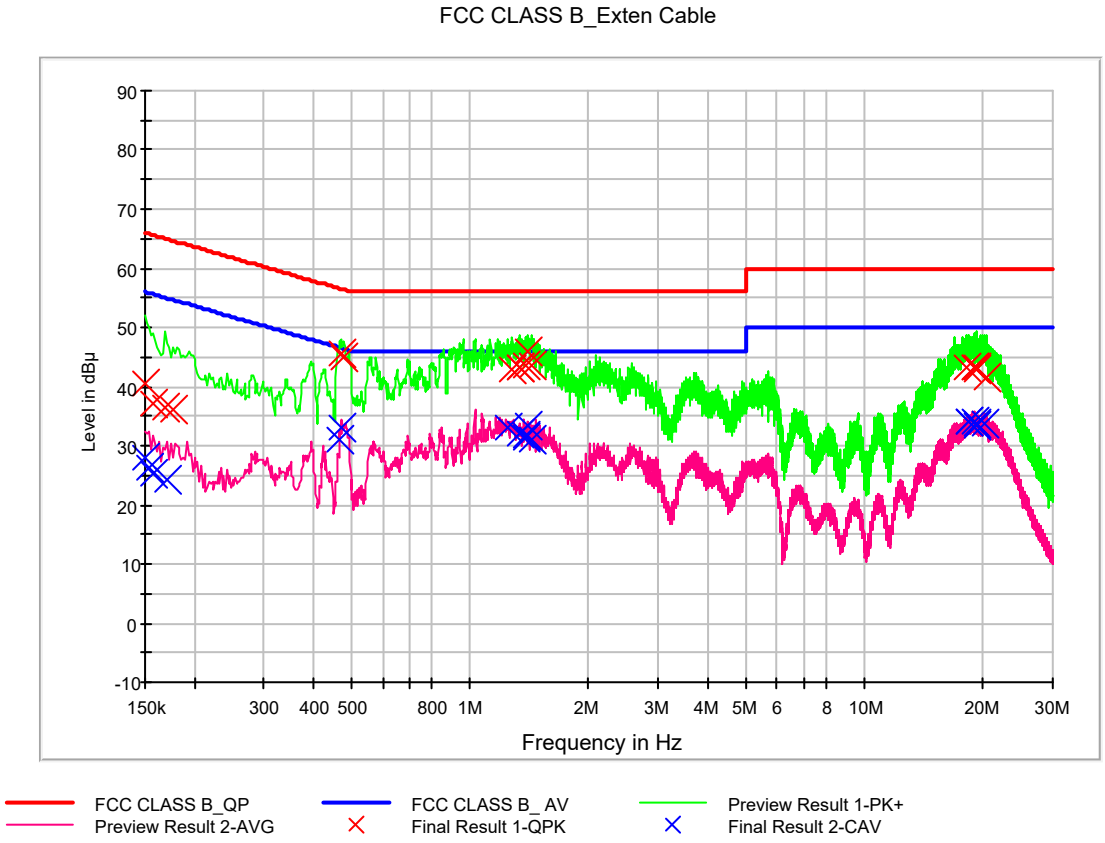
QuasiPeak Final Result, Line (N)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	43.5	9.000	N	9.6	22.4	65.9
0.158000	43.9	9.000	N	9.6	21.7	65.6
0.166000	47.7	9.000	N	9.6	17.5	65.2
0.180000	45.9	9.000	N	9.6	18.6	64.5
0.186000	45.0	9.000	N	9.6	19.2	64.2
0.232000	41.1	9.000	N	9.6	21.2	62.4
3.098000	30.0	9.000	N	9.8	26.0	56.0
3.214000	29.3	9.000	N	9.8	26.7	56.0
3.310000	28.5	9.000	N	9.8	27.5	56.0
3.402000	27.7	9.000	N	9.8	28.3	56.0
3.540000	27.0	9.000	N	9.8	29.0	56.0
3.614000	26.2	9.000	N	9.8	29.8	56.0
9.156000	30.1	9.000	N	9.9	29.9	60.0
9.486000	31.9	9.000	N	9.9	28.1	60.0
9.514000	31.6	9.000	N	9.9	28.4	60.0
9.532000	31.8	9.000	N	9.9	28.2	60.0
9.682000	31.2	9.000	N	9.9	28.8	60.0
9.884000	29.2	9.000	N	9.9	30.8	60.0

CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	25.2	9.000	N	9.6	30.8	56.0
0.154000	27.5	9.000	N	9.6	28.3	55.8
0.158000	26.1	9.000	N	9.6	29.5	55.6
0.174000	33.2	9.000	N	9.6	21.6	54.8
0.178000	33.7	9.000	N	9.6	20.9	54.6
0.186000	32.3	9.000	N	9.6	21.9	54.2
3.082000	22.4	9.000	N	9.8	23.6	46.0
3.098000	22.3	9.000	N	9.8	23.7	46.0
3.310000	21.0	9.000	N	9.8	25.0	46.0
3.402000	20.1	9.000	N	9.8	25.9	46.0
3.540000	19.0	9.000	N	9.8	27.0	46.0
3.614000	18.5	9.000	N	9.8	27.5	46.0
9.156000	24.2	9.000	N	9.9	25.8	50.0
9.486000	25.6	9.000	N	9.9	24.4	50.0
9.514000	26.0	9.000	N	9.9	24.0	50.0
9.532000	25.5	9.000	N	9.9	24.5	50.0
9.682000	25.3	9.000	N	9.9	24.7	50.0
9.686000	25.1	9.000	N	9.9	25.0	50.0

Figure 3: Conducted Emission, Rear Camera Preview, Line (L1)



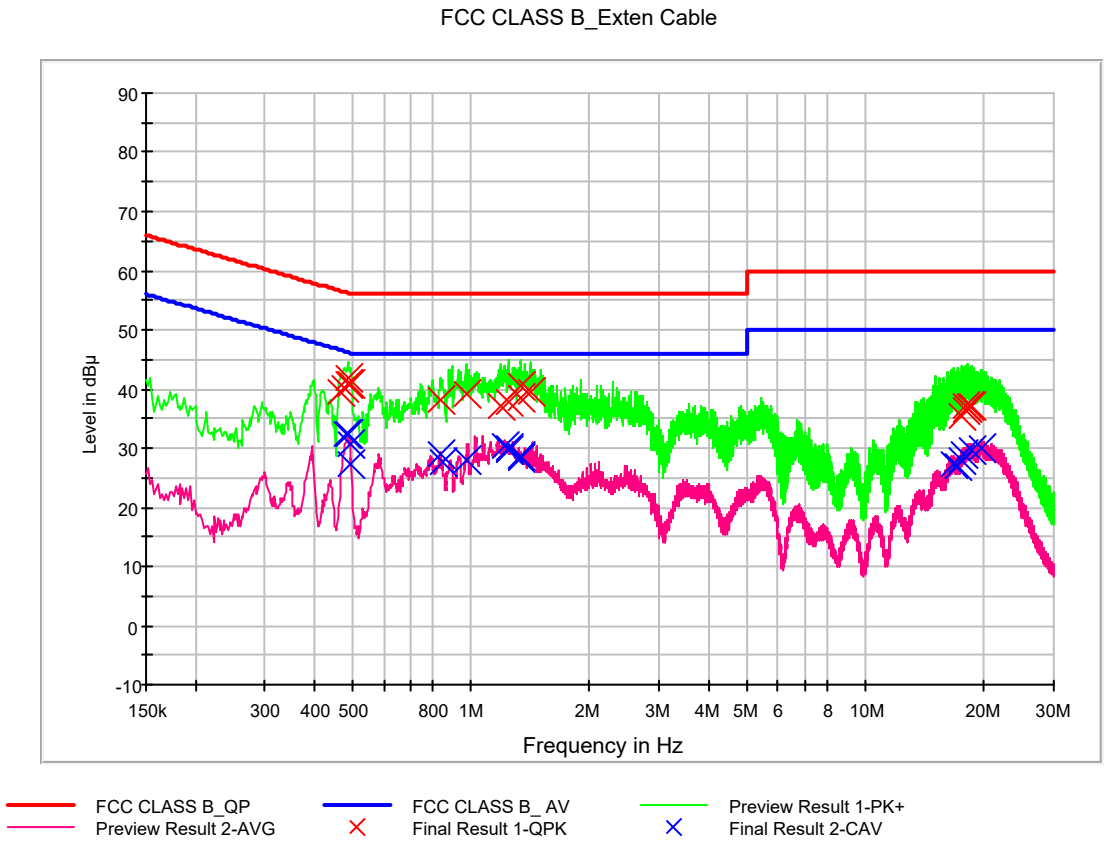
QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	40.6	9.000	L1	9.7	25.4	66.0
0.158000	37.0	9.000	L1	9.7	28.6	65.6
0.168000	36.5	9.000	L1	9.7	28.5	65.1
0.176000	36.3	9.000	L1	9.7	28.4	64.7
0.470000	45.5	9.000	L1	9.8	11.0	56.5
0.480000	44.9	9.000	L1	9.8	11.5	56.3
1.282000	42.8	9.000	L1	9.9	13.2	56.0
1.332000	43.2	9.000	L1	9.9	12.8	56.0
1.338000	43.3	9.000	L1	9.9	12.7	56.0
1.380000	43.6	9.000	L1	9.9	12.4	56.0
1.406000	45.8	9.000	L1	9.9	10.2	56.0
1.440000	43.5	9.000	L1	9.9	12.5	56.0
18.130000	43.2	9.000	L1	10.5	16.8	60.0
18.934000	43.1	9.000	L1	10.6	16.9	60.0
18.972000	43.2	9.000	L1	10.6	16.8	60.0
19.160000	42.8	9.000	L1	10.6	17.2	60.0
19.210000	43.1	9.000	L1	10.6	16.9	60.0
20.488000	41.5	9.000	L1	10.6	18.5	60.0

CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	28.0	9.000	L1	9.7	28.0	56.0
0.154000	26.4	9.000	L1	9.7	29.4	55.8
0.158000	25.3	9.000	L1	9.7	30.3	55.6
0.170000	24.3	9.000	L1	9.7	30.7	55.0
0.466000	31.1	9.000	L1	9.8	15.5	46.6
0.470000	33.2	9.000	L1	9.8	13.3	46.5
1.246000	32.9	9.000	L1	9.9	13.1	46.0
1.332000	31.9	9.000	L1	9.9	14.1	46.0
1.380000	31.7	9.000	L1	9.9	14.3	46.0
1.392000	31.2	9.000	L1	9.9	14.8	46.0
1.406000	33.3	9.000	L1	9.9	12.7	46.0
1.440000	31.1	9.000	L1	9.9	14.9	46.0
18.252000	34.1	9.000	L1	10.5	15.9	50.0
18.290000	34.2	9.000	L1	10.5	15.8	50.0
18.934000	34.1	9.000	L1	10.6	16.0	50.0
19.192000	33.8	9.000	L1	10.6	16.2	50.0
19.210000	33.6	9.000	L1	10.6	16.4	50.0
20.100000	33.8	9.000	L1	10.6	16.2	50.0

Figure 4: Conducted Emission, Rear Camera Preview, Line (N)



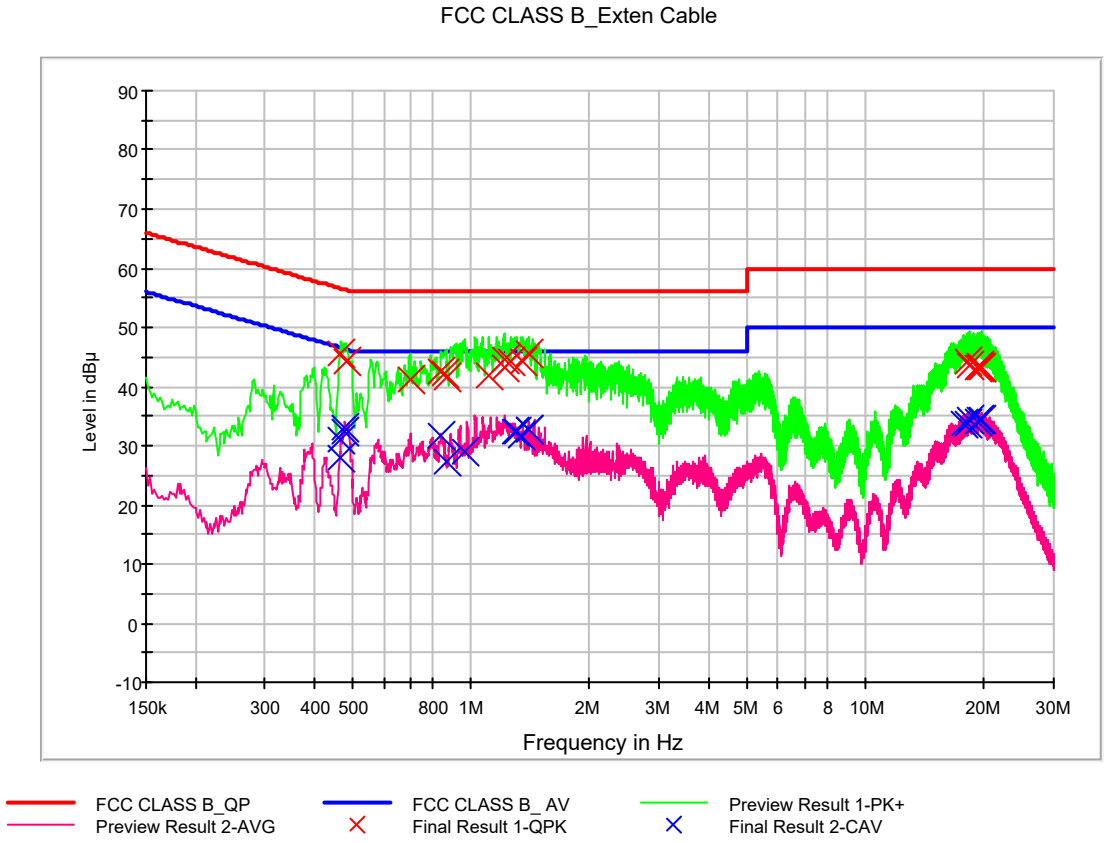
QuasiPeak Final Result, Line (N)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.468000	39.6	9.000	N	9.9	17.0	56.5
0.478000	40.2	9.000	N	9.9	16.2	56.4
0.486000	41.9	9.000	N	9.9	14.3	56.2
0.490000	40.8	9.000	N	9.9	15.3	56.2
0.494000	40.9	9.000	N	9.9	15.2	56.1
0.836000	38.2	9.000	N	10.0	17.8	56.0
0.970000	39.2	9.000	N	10.0	16.8	56.0
1.194000	37.0	9.000	N	10.0	19.0	56.0
1.242000	37.9	9.000	N	10.0	18.1	56.0
1.338000	38.6	9.000	N	10.1	17.4	56.0
1.342000	40.4	9.000	N	10.1	15.6	56.0
1.410000	39.4	9.000	N	10.1	16.6	56.0
17.450000	35.5	9.000	N	10.8	24.5	60.0
17.938000	36.6	9.000	N	10.8	23.4	60.0
18.032000	37.2	9.000	N	10.8	22.8	60.0
18.200000	36.9	9.000	N	10.8	23.1	60.0
18.352000	37.1	9.000	N	10.8	22.9	60.0
18.474000	37.1	9.000	N	10.8	22.9	60.0

CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.484000	32.4	9.000	N	9.9	13.9	46.3
0.488000	32.3	9.000	N	9.9	13.9	46.2
0.492000	30.5	9.000	N	9.9	15.6	46.1
0.496000	27.3	9.000	N	9.9	18.8	46.1
0.836000	28.9	9.000	N	10.0	17.1	46.0
0.844000	27.7	9.000	N	10.0	18.3	46.0
0.970000	28.0	9.000	N	10.0	18.0	46.0
1.212000	30.3	9.000	N	10.0	15.7	46.0
1.242000	29.8	9.000	N	10.0	16.2	46.0
1.248000	30.0	9.000	N	10.0	16.0	46.0
1.338000	28.2	9.000	N	10.1	17.8	46.0
1.342000	28.7	9.000	N	10.1	17.3	46.0
16.660000	27.2	9.000	N	10.7	22.8	50.0
17.052000	26.9	9.000	N	10.8	23.1	50.0
17.450000	27.9	9.000	N	10.8	22.1	50.0
17.818000	29.1	9.000	N	10.8	20.9	50.0
18.536000	29.8	9.000	N	10.8	20.2	50.0
19.640000	30.0	9.000	N	10.9	20.0	50.0

Figure 5: Conducted Emission, Front Camera Preview, Line (L1)



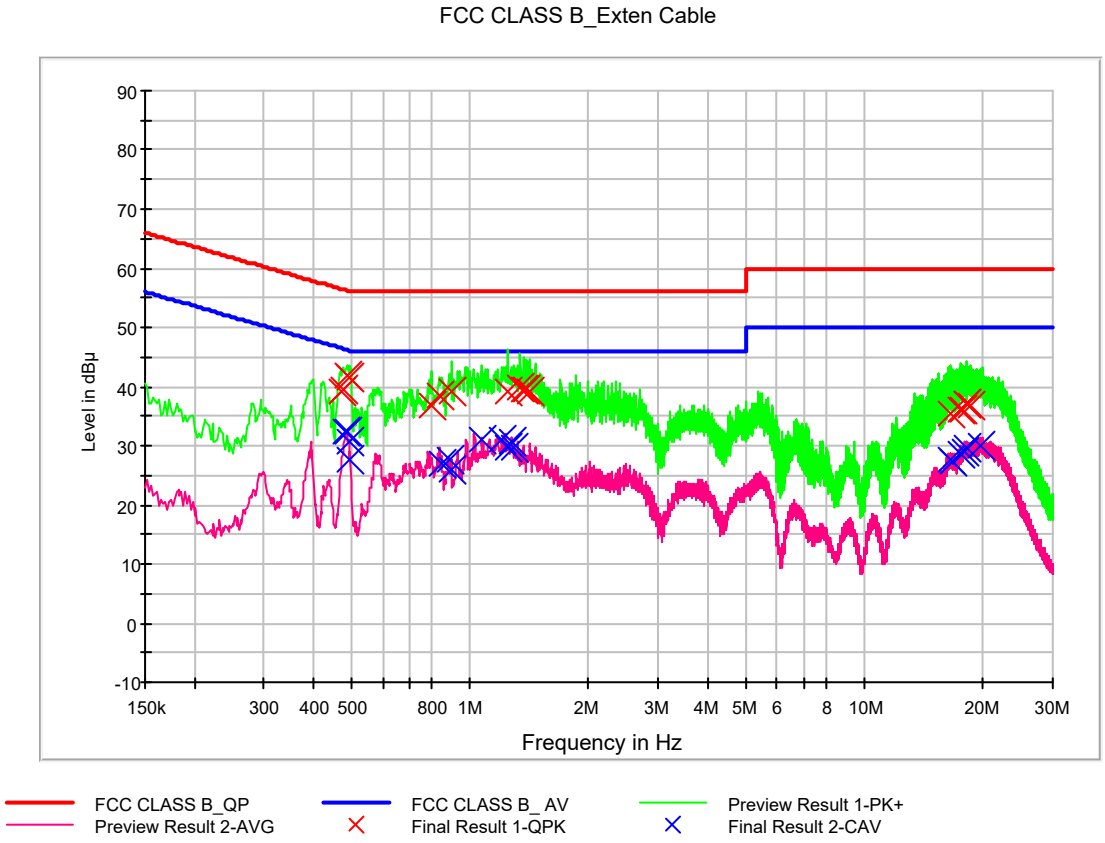
QuasiPeak Final Result, Line (L1)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.468000	45.5	9.000	L1	9.8	11.0	56.5
0.482000	44.3	9.000	L1	9.8	12.0	56.3
0.700000	41.2	9.000	L1	9.8	14.8	56.0
0.842000	42.6	9.000	L1	9.8	13.4	56.0
0.860000	42.0	9.000	L1	9.8	14.0	56.0
0.866000	41.7	9.000	L1	9.8	14.3	56.0
1.108000	41.9	9.000	L1	9.8	14.1	56.0
1.212000	44.4	9.000	L1	9.8	11.6	56.0
1.216000	43.4	9.000	L1	9.8	12.6	56.0
1.260000	44.3	9.000	L1	9.9	11.7	56.0
1.346000	44.3	9.000	L1	9.9	11.7	56.0
1.398000	45.8	9.000	L1	9.9	10.2	56.0
18.184000	44.1	9.000	L1	10.5	15.9	60.0
18.288000	43.6	9.000	L1	10.5	16.4	60.0
19.202000	43.2	9.000	L1	10.6	16.8	60.0
19.380000	43.3	9.000	L1	10.6	16.7	60.0
19.496000	43.6	9.000	L1	10.6	16.4	60.0
19.596000	43.3	9.000	L1	10.6	16.7	60.0

CAverage Final Result, Line (L1)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.464000	28.1	9.000	L1	9.8	18.5	46.6
0.468000	31.1	9.000	L1	9.8	15.5	46.5
0.476000	32.4	9.000	L1	9.8	14.0	46.4
0.480000	33.2	9.000	L1	9.8	13.2	46.3
0.842000	31.7	9.000	L1	9.8	14.3	46.0
0.866000	27.4	9.000	L1	9.8	18.6	46.0
0.962000	29.1	9.000	L1	9.8	16.9	46.0
1.296000	32.4	9.000	L1	9.9	13.6	46.0
1.300000	32.3	9.000	L1	9.9	13.7	46.0
1.344000	31.7	9.000	L1	9.9	14.3	46.0
1.396000	32.6	9.000	L1	9.9	13.4	46.0
1.400000	32.9	9.000	L1	9.9	13.1	46.0
17.700000	33.7	9.000	L1	10.5	16.3	50.0
18.114000	33.9	9.000	L1	10.5	16.1	50.0
18.380000	34.3	9.000	L1	10.5	15.7	50.0
19.274000	33.9	9.000	L1	10.6	16.1	50.0
19.496000	34.4	9.000	L1	10.6	15.6	50.0
19.616000	34.4	9.000	L1	10.6	15.6	50.0

Figure 6: Conducted Emission, Front Camera Preview, Line (N)



QuasiPeak Final Result, Line (N)

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.470000	39.2	9.000	N	9.9	17.3	56.5
0.476000	39.5	9.000	N	9.9	16.9	56.4
0.488000	41.8	9.000	N	9.9	14.4	56.2
0.496000	41.5	9.000	N	9.9	14.5	56.1
0.798000	36.9	9.000	N	9.9	19.1	56.0
0.838000	38.4	9.000	N	10.0	17.6	56.0
0.896000	39.2	9.000	N	10.0	16.8	56.0
1.246000	39.2	9.000	N	10.0	16.8	56.0
1.342000	40.0	9.000	N	10.1	16.0	56.0
1.368000	39.4	9.000	N	10.1	16.6	56.0
1.392000	39.6	9.000	N	10.1	16.4	56.0
1.412000	39.1	9.000	N	10.1	16.9	56.0
16.492000	35.5	9.000	N	10.7	24.5	60.0
17.584000	36.2	9.000	N	10.8	23.8	60.0
17.702000	36.2	9.000	N	10.8	23.8	60.0
18.192000	37.1	9.000	N	10.8	22.9	60.0
18.242000	37.2	9.000	N	10.8	22.8	60.0
18.482000	36.9	9.000	N	10.8	23.1	60.0

CAverage Final Result, Line (N)

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.484000	32.4	9.000	N	9.9	13.9	46.3
0.488000	32.5	9.000	N	9.9	13.7	46.2
0.492000	30.6	9.000	N	9.9	15.6	46.1
0.496000	27.6	9.000	N	9.9	18.5	46.1
0.848000	26.8	9.000	N	10.0	19.2	46.0
0.884000	27.7	9.000	N	10.0	18.3	46.0
0.896000	25.8	9.000	N	10.0	20.2	46.0
1.070000	31.0	9.000	N	10.0	15.0	46.0
1.208000	30.9	9.000	N	10.0	15.1	46.0
1.248000	29.7	9.000	N	10.0	16.3	46.0
1.274000	30.5	9.000	N	10.0	15.5	46.0
1.296000	29.5	9.000	N	10.0	16.5	46.0
16.492000	27.8	9.000	N	10.7	22.2	50.0
16.740000	27.2	9.000	N	10.7	22.8	50.0
17.584000	28.5	9.000	N	10.8	21.5	50.0
17.868000	29.1	9.000	N	10.8	20.9	50.0
18.242000	29.8	9.000	N	10.8	20.2	50.0
19.642000	30.0	9.000	N	10.9	20.0	50.0

5.2 Radiated Emission

The test results of radiated emission provide the following information:

-For Measurement Below 1 GHz

Applicable Standards	FCC PART 15 Subpart B Class B ICES-003 Issue 6 Class B ANSI C63.4-2014
Detector	Quasi-Peak
Bandwidth	120 kHz (6 dB)
Worst Case of Operating Mode	Data Communication Rear Camera Preview Front Camera Preview
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.7 / 22.3 °C
Relative Humidity	41.7 / 39.8 %
Test Date	February 28 / March 04, 2019

- Calculation Formula:

1. POL. H = Horizontal, POL. V = Vertical
2. QuasiPeak = Reading (Receiver Reading) + Corr.
3. Corr. (Correction Factor) = Antenna Factor + Cable Loss
4. Margin = Limit - QuasiPeak

Data Communication

Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
50.426400	31.5	100.0	V	233.0	20.3	8.5	40.0
74.544800	30.9	325.1	H	312.0	16.9	9.1	40.0
199.870400	35.2	117.7	H	150.0	16.8	8.3	43.5
265.537600	32.8	116.8	H	150.0	19.4	13.2	46.0
800.026400	40.0	100.0	H	57.0	30.2	6.0	46.0
875.020800	39.5	100.0	H	241.0	30.9	6.5	46.0

Rear Camera Preview

Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
30.186400	20.2	207.9	V	312.0	18.7	19.8	40.0
45.478400	25.4	100.0	V	50.0	20.0	14.6	40.0
60.096800	32.9	100.0	V	64.0	19.7	7.1	40.0
88.676800	28.5	225.2	H	7.0	14.5	15.0	43.5
144.783200	30.0	225.1	H	189.0	19.8	13.5	43.5
804.703200	30.3	275.0	V	97.0	30.3	15.7	46.0

Front Camera Preview

Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
35.868000	18.5	100.0	V	101.0	19.2	21.5	40.0
59.390400	32.3	100.0	V	40.0	19.8	7.7	40.0
88.127200	28.4	225.0	H	3.0	14.6	15.1	43.5
103.724800	26.0	100.0	V	303.0	15.9	17.5	43.5
148.476000	29.0	191.9	H	190.0	19.9	14.5	43.5
807.276800	30.4	100.0	H	30.0	30.3	15.6	46.0

-For Measurement Above 1 GHz

Applicable Standards	FCC PART 15 Subpart B Class B ICES-003 Issue 6 Class B ANSI C63.4-2014
Detector	Peak mode: Peak (RBW: 1 MHz, VBW: 3 MHz) CISPR-Average mode: Peak (RBW: 1 MHz, VBW: 10 Hz)
Highest Frequency	5 825 MHz
Tested Frequency Range	1 GHz to 30 GHz
Worst Case of Operating Mode	Data Communication Rear Camera Preview Front Camera Preview
Kind of Test Site	3 m semi anechoic chamber
Temperature	23.9 / 24.1 / 22.3 °C
Relative Humidity	43.6 / 42.4 / 39.8 %
Test Date	February 25 / February 26 / March 04, 2019

- Calculation Formula:

1. POL. H = Horizontal, POL. V = Vertical
2. Peak or CAverage = Reading (Receiver Reading) + Corr.
3. Corr. (Correction Factor) = Antenna Factor+ Cable Loss –Amplifier Gain
4. Margin = Limit - Peak or CAverage

Data Communication

Frequency (MHz)	Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1400.175000	50.4	335.5	V	213.0	-28.2	23.6	74.0
1994.500000	47.1	100.0	V	48.0	-26.7	26.9	74.0
2664.930000	45.9	113.3	V	0.0	-24.2	28.1	74.0
4489.580000	42.0	204.6	V	38.0	-19.5	32.0	74.0
5986.430000	42.0	100.0	V	118.0	-17.1	32.0	74.0
14809.830000	46.6	261.4	H	253.0	-1.4	27.4	74.0

Frequency (MHz)	CAverage (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1400.175000	48.8	335.5	V	213.0	-28.2	5.2	54.0
1994.500000	19.9	100.0	V	48.0	-26.7	34.1	54.0
2664.930000	20.3	113.3	V	0.0	-24.2	33.7	54.0
4489.580000	26.6	204.6	V	38.0	-19.5	27.4	54.0
5986.430000	26.3	100.0	V	118.0	-17.1	27.7	54.0
14809.830000	33.8	261.4	H	253.0	-1.4	20.2	54.0

Rear Camera Preview

Frequency (MHz)	Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
4018.445000	35.0	150.0	V	225.0	-20.9	39.0	74.0
5594.705000	36.4	124.6	V	102.0	-17.7	37.6	74.0
7279.940000	39.8	189.6	H	320.0	-13.6	34.2	74.0
9963.115000	43.3	141.6	V	240.0	-9.4	30.7	74.0
11307.295000	45.4	260.5	V	134.0	-5.1	28.6	74.0
14526.650000	46.9	249.7	V	250.0	-1.6	27.1	74.0

Frequency (MHz)	CAverage (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
4018.445000	22.6	150.0	V	225.0	-20.9	31.4	54.0
5594.705000	24.0	124.6	V	102.0	-17.7	30.0	54.0
7279.940000	27.4	189.6	H	320.0	-13.6	26.6	54.0
9963.115000	30.7	141.6	V	240.0	-9.4	23.3	54.0
11307.295000	32.5	260.5	V	134.0	-5.1	21.5	54.0
14526.650000	33.9	249.7	V	250.0	-1.6	20.1	54.0

Front Camera Preview

Frequency (MHz)	Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
2920.465000	33.0	150.0	H	249.0	-23.1	41.0	74.0
5649.890000	37.1	249.4	H	161.0	-17.6	36.9	74.0
7452.470000	40.8	138.8	V	289.0	-12.8	33.2	74.0
9864.595000	43.1	100.0	V	45.0	-9.5	30.9	74.0
11920.225000	43.4	277.4	V	300.0	-5.4	30.6	74.0
14361.935000	45.7	100.0	V	352.0	-2.0	28.3	74.0

Frequency (MHz)	CAverage (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
2920.465000	20.7	150.0	H	249.0	-23.1	33.3	54.0
5649.890000	23.6	249.4	H	161.0	-17.6	30.4	54.0
7452.470000	28.1	138.8	V	289.0	-12.8	25.9	54.0
9864.595000	30.5	100.0	V	45.0	-9.5	23.5	54.0
11920.225000	31.0	277.4	V	300.0	-5.4	23.0	54.0
14361.935000	33.2	100.0	V	352.0	-2.0	20.8	54.0

6. CONCLUSION

The data collected shows that the **EUT Type: Tablet, Model: SM-T510**
complies with §15.107 and §15.109 of the FCC rules and ICES-003 Issue 6 of the IC rules.

7. APPENDIX A. TEST SETUP PHOTOGRAPHS

Please refer to Appendix A