

# EMI TEST REPORT

## FCC CERTIFICATION

**Applicant:**

**SAMSUNG Electronics Co., Ltd.**  
**129, Samsung-ro, Yeongtong-gu, Suwon-si,**  
**Gyeonggi-do, 16677, Korea**

**Date of Issue: December 16, 2021**

**Test Report No. HCT-EM-2112-FC002**

**Test Site: HCT CO., LTD.**

**FCC ID :**

**A3LSMS901B**

Rule Part(s) / Standard(s) : 47 CFR PART 15 Subpart B Class B  
ANSI C63.4-2014

Product Name : Mobile Phone

Model Name : SM-S901B/DS

Date of Test : December 09, 2021 to December 15, 2021

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.

**Tested By**



**Geon-Hee Jeon**  
**Test Engineer**  
**EMC Team**  
**Certification Division**

**Reviewed**



**Jeong-Hyun Choi**  
**Technical Manager**  
**EMC Team**  
**Certification Division**

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## REVISION HISTORY

*The revision history for this document is shown in table.*

Rev No.	Issue Date	Information About Changes
0	December 16, 2021	Initial Release

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS (Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

If this report is required to confirmation of authenticity, please contact to [www.hct.co.kr](http://www.hct.co.kr)



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## 1. GENERAL INFORMATION

### 1.1 Description of EUT

<b>FCC ID</b>	A3LSMS901B
<b>Model Name</b>	SM-S901B/DS
<b>Product Name</b>	Mobile Phone
<b>Frequency Range</b>	GSM 850/1900, WCDMA B2/4/5, LTE B2/4/5/12/13/17/25/26/41/66 NR 5/66, BT BDR/EDR/LE, WLAN a/b/g/n/ac/ax(MIMO), NFC, WPT
<b>Power Supply</b>	Travel adaptor: Input: AC 100 to 240 V, 50 to 60 Hz, 0.7 A Output: (PDO) 5.0 V, 3.0 A or 9.0 V, 2.77 A (PPS) 3.3 to 5.9 V, 3.0 A or 3.3 to 11.0 V, 2.25 A



## 1.2 Tested System Details

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

Device Type	Model Name	Serial Number	Manufacturer
Mobile Phone	SM-S901B/DS	-	SAMSUNG
Notebook PC	ProBook650G2	5CG6331M0P	HP
Notebook PC Adaptor	Series PPP009L-E	-	LITE-ON TECHNOLOGY (CHANGZHOU) CO., LTD.
Gateway	DIR-806M	-	D-Link
Gateway Adaptor	AMS1-0501200FK	-	D-Link
Serial Mouse	Serial 2 Button mouse	02031069	Radio Shack
RJ45 cable	-	-	-
LED Monitor	27UD88	-	LG Electronics
Monitor Adapter	ADS-110CL-19-3	-	SHENZHEN HONOR ELECTRONIC CO., LTD
DP cable	CDP2DPMM1MW	-	STARTECH
TA	EP-TA800	-	SOLUM
Data Cable	EP-DN980	-	RFTECH
Earphone	AMD-20HS	-	ALMUS



### 1.3 Cable Description

Product Name	Port	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (m)
EUT	USB Type C (Data Cable)	Y	Y	(P,D) 1.0
	USB Type C (Earphone)	N/A	N	(D) 1.3
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
LED Monitor	DC IN	N	N/A	(P) 2.0
	DP port	N/A	Y	(D) 1.0

“(D)” Data Cable and “(P)” 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 (Data Cable)	N	N/A	Y	Both End
	USB Type C (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
LED Monitor	DP port	N	N/A	Y	Both End



## 1.5 Test Facility

Test site is located at 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 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 and ANSI C63.4a-2017. Our laboratories are accredited and designated in accordance with the provisions of Radio Waves ACT and International Standard ISO/IEC 17025:2017. (National Radio Research Agency, Designation No. KR0032)

## 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 C63.5:2017.

## 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.

Test Item	Test Site (Chamber)	Expanded Uncertainty
Conducted Emission (0.15 MHz to 30 GHz)	EMI Shield Room	2.0 dB
Radiated Emission (30 MHz to 1 GHz)	3 m Semi Anechoic Chamber #1	5.8 dB
Radiated Emission (1 GHz to 18 GHz)	3 m Semi Anechoic Chamber #1	4.8 dB
Radiated Emission (18 GHz to 40 GHz)	3 m Semi Anechoic Chamber #1	5.8 dB



## 2. LIST OF TEST EQUIPMENT

<u>Type</u>	<u>Model Name</u>	<u>Manufacturer</u>	<u>Serial Number</u>	<u>Calibration Cycle</u>	<u>Calibration Date</u>
<b><u>Conducted Emission</u></b>					
<input checked="" type="checkbox"/> EMI Test Receiver	ESR7	Rohde & Schwarz	101910	1 year	06.17.2021
<input checked="" type="checkbox"/> LISN	ENV216	Rohde & Schwarz	102245	1 year	08.23.2021
<input checked="" type="checkbox"/> LISN	ENV216	Rohde & Schwarz	100073	1 year	04.07.2021
<input checked="" type="checkbox"/> Radio communication analyzer	MT8821C	ANRITSU	6262192376	1 year	10.19.2021
<input checked="" type="checkbox"/> Antenna (for Communication)	HyperLOG7060	Aaronia	66450	-	-
<input type="checkbox"/> Antenna (for Communication)	USLP9142	Schwarzbeck	USLP 9142-200	N/A	-
<input type="checkbox"/> Radio communication analyzer	MT8000A	ANRITSU	6262208294	1 year	12.24.2020
<input type="checkbox"/> Antenna (for Communication)	USLP9142	Schwarzbeck	USLP 9142-201	N/A	-
<input checked="" type="checkbox"/> Software	EMC32	Rohde & Schwarz	-	-	-
<b><u>Radiated Emission</u></b>					
<b>-For measurement below 1 GHz</b>					
<input checked="" type="checkbox"/> EMI Test Receiver	ESU40	Rohde & Schwarz	100524	1 year	05.10.2021
<input checked="" type="checkbox"/> Bi-Log Antenna	VULB9168	Schwarzbeck	255	2 year	03.15.2021
<input checked="" type="checkbox"/> Antenna master	MA4640-XP-ET	INNCO SYSTEM	-	N/A	-
<input checked="" type="checkbox"/> Antenna master controller	CO3000	INNCO SYSTEM	CO3000/870/ 35990515/L	N/A	-
<input checked="" type="checkbox"/> Turn Table	1060	INNCO SYSTEM	-	N/A	-
<input checked="" type="checkbox"/> Turn Table controller	CO2000	INNCO SYSTEM	CO2000/095/ 7590304/L	N/A	-
<input checked="" type="checkbox"/> Radio communication analyzer	MT8821C	ANRITSU	6262192376	1 year	10.19.2021
<input checked="" type="checkbox"/> Antenna (for Communication)	HyperLOG7060	Aaronia	66450	-	-
<input type="checkbox"/> Radio communication analyzer	MT8000A	ANRITSU	6262208294	1 year	12.24.2020
<input type="checkbox"/> Antenna (for Communication)	HyperLOG7060	Aaronia	66451	-	-
<input checked="" type="checkbox"/> Software	EMC32	Rohde & Schwarz	-	-	-
<b>-For measurement above 1 GHz</b>					
<input checked="" type="checkbox"/> EMI Test Receiver	ESU40	Rohde & Schwarz	100524	1 year	05.10.2021
<input checked="" type="checkbox"/> Antenna master	MA4640-XP-ET	INNCO SYSTEM	-	N/A	-
<input checked="" type="checkbox"/> Antenna master controller	CO3000	INNCO SYSTEM	CO3000/870/ 35990515/L	N/A	-
<input checked="" type="checkbox"/> Turn Table	1060	INNCO SYSTEM	-	N/A	-
<input checked="" type="checkbox"/> Turn Table controller	CO2000	INNCO SYSTEM	CO2000/095/ 7590304/L	N/A	-
<input checked="" type="checkbox"/> Low Noise Amplifier	TK-PA18H	TESTEK	170034-L	1 year	03.02.2021
<input checked="" type="checkbox"/> Low Noise Amplifier	TK-PA1840H	TESTEK	170030-L	1 year	03.09.2021
<input checked="" type="checkbox"/> Horn Antenna	BBHA 9120D	Schwarzbeck	01836	1 year	07.20.2021
<input checked="" type="checkbox"/> Horn Antenna	BBHA 9170	Schwarzbeck	BBHA 9170 #786	1 year	11.16.2021
<input checked="" type="checkbox"/> Radio communication analyzer	MT8821C	ANRITSU	6262192376	1 year	10.19.2021
<input checked="" type="checkbox"/> Antenna (for Communication)	HyperLOG7060	Aaronia	66450	-	-
<input type="checkbox"/> Radio communication analyzer	MT8000A	ANRITSU	6262208294	1 year	12.24.2020
<input type="checkbox"/> Antenna (for Communication)	HyperLOG7060	Aaronia	66451	-	-
<input checked="" type="checkbox"/> Software	EMC32	Rohde & Schwarz	-	-	-





### 3. DESCRIPTION OF TEST

#### 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 ranges from 150 kHz to 30 MHz was searched.

#### [ Conducted Emission Limits ]

Frequency (MHz)	Resolution Bandwidth (kHz)	Quasi-Peak (dB( $\mu$ V))	Average (dB( $\mu$ V))
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 ( $\mu\text{V}/\text{m}$ )	Quasi-Peak (dB $\mu\text{V}/\text{m}$ )
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 $\mu\text{V}/\text{m}$ )	Average (dB $\mu\text{V}/\text{m}$ )
Above 1 000	3	74	54

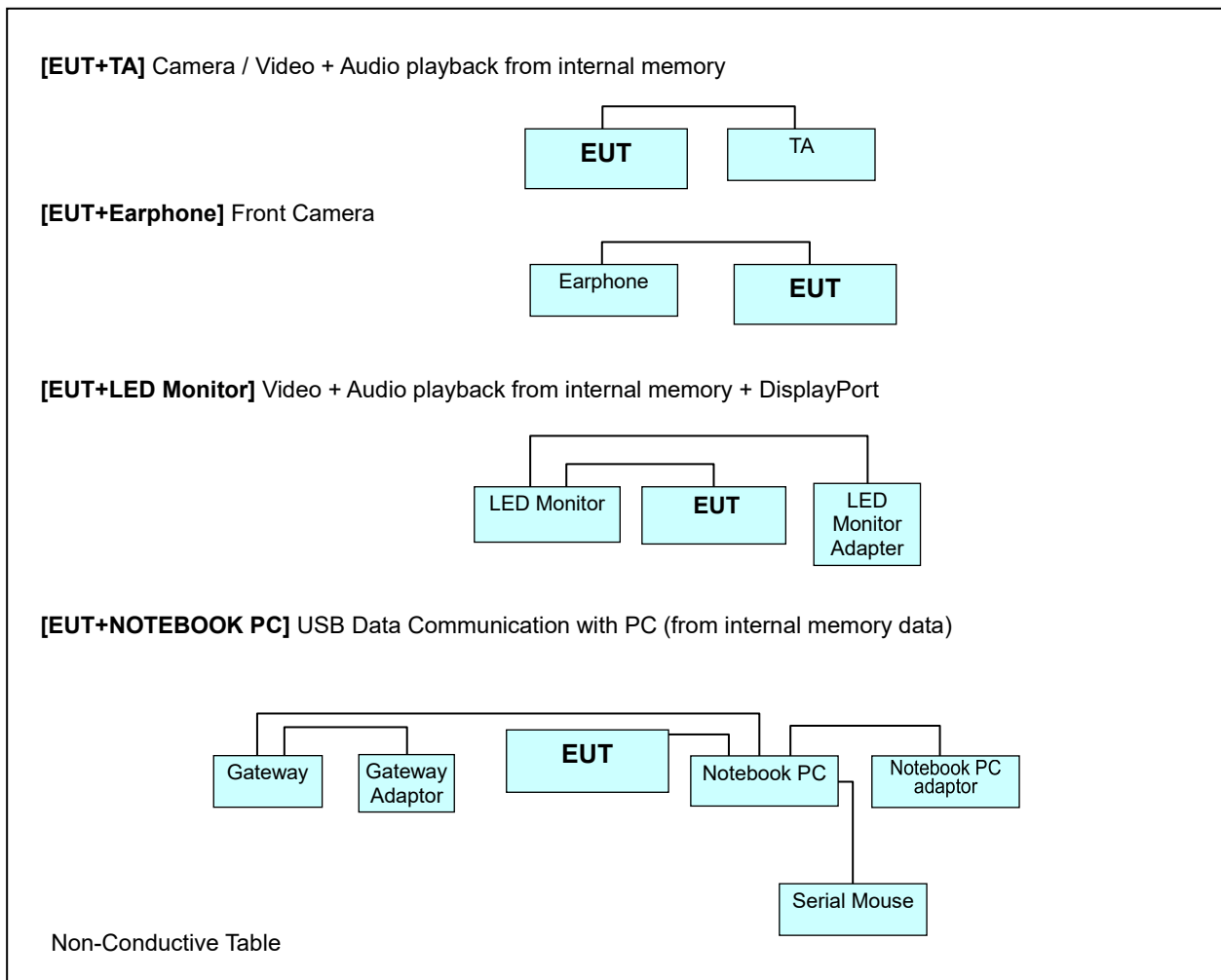


### 3.2.1 Frequency Range of Radiated Measurements

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	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower

### 3.3 Configuration of Tested System





## 4. OPERATION OF THE EUT

During preliminary tests, the following operating mode was investigated.

### **PCB Rev 0.7A+Renesas**

Front/Rear Camera (Preview / Recording) (TA / Earphone)  
 Video + Audio playback from internal memory (TA)  
 Video + Audio playback from internal memory + DisplayPort  
 USB Data Communication with PC (from internal memory data)  
 Receiver mode

### **PCB Rev 0.7A+S.LSI**

Front/Rear Camera (Preview / Recording) (TA / Earphone)  
 Video + Audio playback from internal memory (TA)  
 Video + Audio playback from internal memory + DisplayPort  
 USB Data Communication with PC (from internal memory data)  
 Receiver mode

NOTE. The worst band is tested.

## 4.1 Conducted Emission

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

### **Operating Mode:**

#### **PCB Rev 0.7A+Renesas**

[EUT+TA]	Rear Camera + Cellular receiver (LTE B5 Middle Ch) Front Camera Video + Audio playback from internal memory
[EUT+NOTEBOOK PC]	USB Data Communication with PC (from internal memory data)

#### **PCB Rev 0.7A+S.LSI**

[EUT+TA]	Rear Camera + Cellular receiver (LTE B5 Middle Ch) Front Camera Video + Audio playback from internal memory
[EUT+NOTEBOOK PC]	USB Data Communication with PC (from internal memory data)



## 4.2 Radiated Emission

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

### Operating Mode:

#### Radiated Emission below 1 GHz:

##### PCB Rev 0.7A+Renesas

[EUT+TA]	Rear Camera
[EUT+Earphone]	Front Camera
[EUT+LED Monitor]	Video + Audio playback from internal memory + DisplayPort
[EUT+NOTEBOOK PC]	USB Data Communication with PC (from internal memory data)

##### PCB Rev 0.7A+S.LSI

[EUT+TA]	Rear Camera
[EUT+Earphone]	Front Camera
[EUT+LED Monitor]	Video + Audio playback from internal memory + DisplayPort
[EUT+NOTEBOOK PC]	USB Data Communication with PC (from internal memory data)

#### Radiated Emission above 1 GHz:

##### PCB Rev 0.7A+Renesas

[EUT+TA]	Rear Camera
[EUT+Earphone]	Front Camera
[EUT+LED Monitor]	Video + Audio playback from internal memory + DisplayPort
[EUT+NOTEBOOK PC]	USB Data Communication with PC (from internal memory data)

##### PCB Rev 0.7A+S.LSI

[EUT+TA]	Rear Camera
[EUT+Earphone]	Front Camera
[EUT+LED Monitor]	Video + Audio playback from internal memory + DisplayPort
[EUT+NOTEBOOK PC]	USB Data Communication with PC (from internal memory data)

#### NOTE.

1. Three orientations have been investigated and the worst case orientation (x-axis: The display of EUT placed on the table is facing upwards) 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:

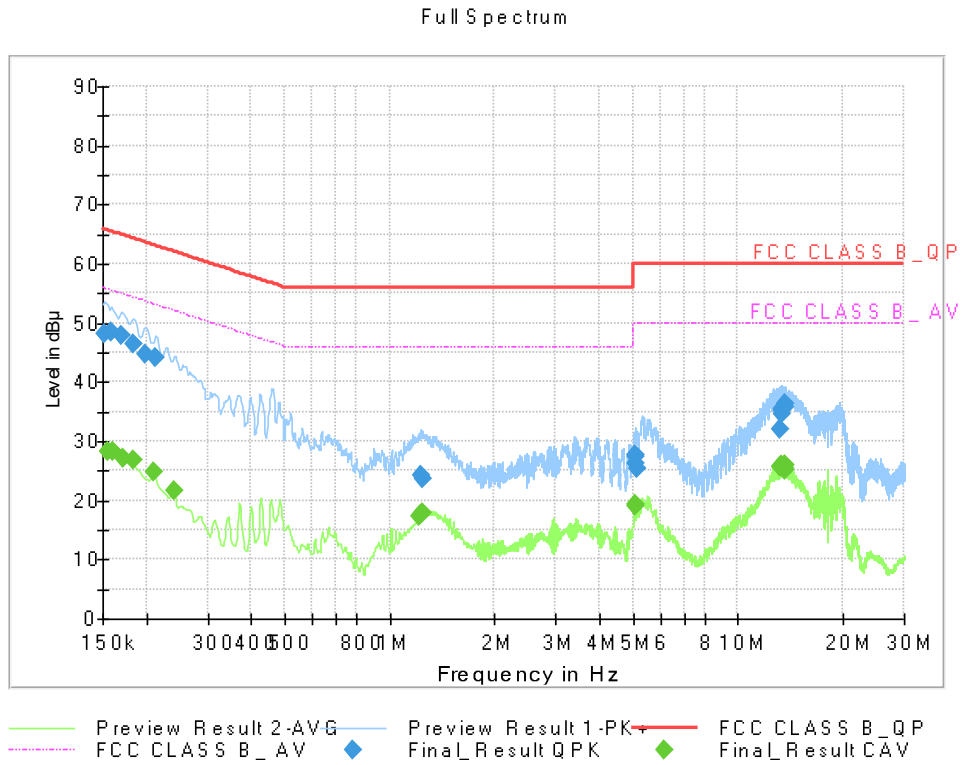
Used Test Standard	47 CFR PART 15 Subpart B Class B ANSI C63.4-2014
Frequency Range	150 kHz to 30 MHz
Detector	Quasi-Peak, CISPR-Average
Bandwidth	9 kHz (6 dB)
Test Site	EMI Shield Room
Temperature	min. 18.8 °C, max. 21.5 °C
Relative Humidity	min. 31.6 % R.H., max. 35.1 % R.H.
Test Date	December 14, 2021

#### - 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: PCB Rev 0.7A+Renesas [EUT+TA] Rear Camera + Cellular receiver (LTE B5 Middle Ch), Line(L1)





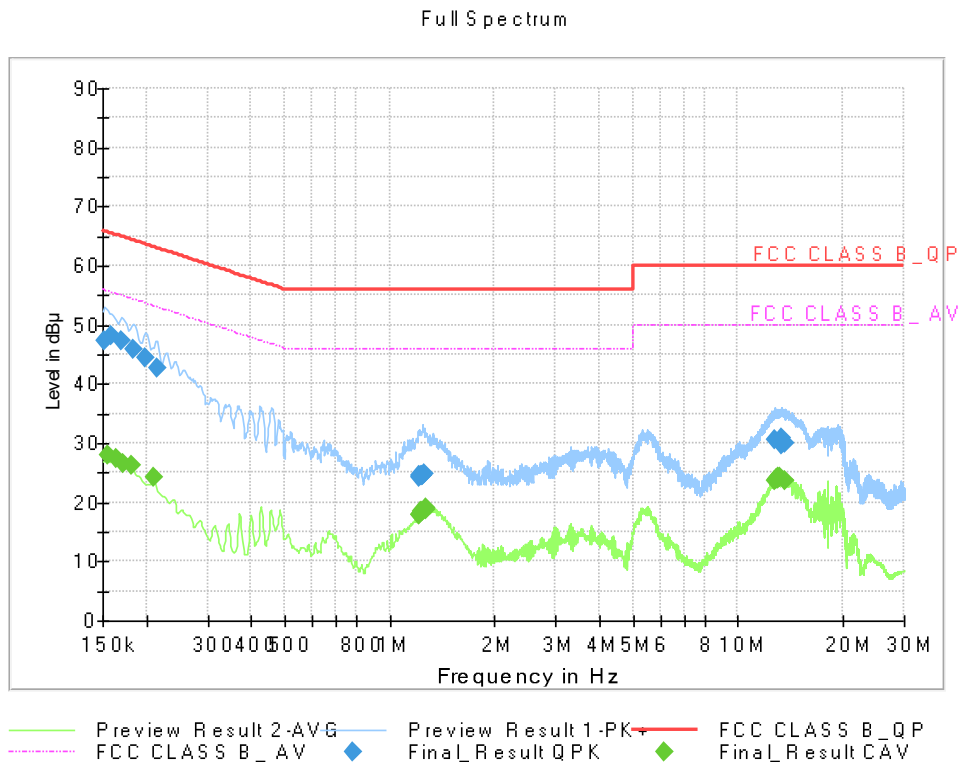
Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	48.09	65.88	17.79	9.000	L1	9.6
0.1590	48.45	65.52	17.07	9.000	L1	9.6
0.1703	47.79	64.95	17.16	9.000	L1	9.6
0.1838	46.36	64.31	17.95	9.000	L1	9.6
0.1995	44.73	63.63	18.90	9.000	L1	9.6
0.2130	44.03	63.09	19.06	9.000	L1	9.6
1.2335	24.09	56.00	31.91	9.000	L1	9.7
1.2380	23.61	56.00	32.39	9.000	L1	9.7
5.0675	27.29	60.00	32.71	9.000	L1	9.9
5.0923	27.81	60.00	32.19	9.000	L1	9.9
5.0968	26.17	60.00	33.83	9.000	L1	9.9
5.1238	25.42	60.00	34.58	9.000	L1	9.9
13.1675	32.06	60.00	27.94	9.000	L1	10.2
13.3790	34.68	60.00	25.32	9.000	L1	10.2
13.3880	35.06	60.00	24.94	9.000	L1	10.2
13.4128	35.41	60.00	24.59	9.000	L1	10.2
13.6558	36.27	60.00	23.73	9.000	L1	10.2
13.6850	35.63	60.00	24.37	9.000	L1	10.2

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	28.34	55.75	27.41	9.000	L1	9.6
0.1613	28.18	55.40	27.22	9.000	L1	9.6
0.1725	27.06	54.84	27.78	9.000	L1	9.6
0.1838	26.90	54.31	27.41	9.000	L1	9.6
0.2108	24.72	53.18	28.46	9.000	L1	9.6
0.2400	21.69	52.10	30.41	9.000	L1	9.6
1.2088	17.26	46.00	28.74	9.000	L1	9.7
1.2335	17.61	46.00	28.39	9.000	L1	9.7
1.2403	17.75	46.00	28.25	9.000	L1	9.7
5.0653	19.24	50.00	30.76	9.000	L1	9.9
5.0923	19.05	50.00	30.95	9.000	L1	9.9
13.1248	25.55	50.00	24.45	9.000	L1	10.2
13.3880	25.56	50.00	24.44	9.000	L1	10.2
13.4150	25.92	50.00	24.08	9.000	L1	10.2
13.6288	25.96	50.00	24.04	9.000	L1	10.2
13.6580	25.96	50.00	24.04	9.000	L1	10.2
13.6850	25.50	50.00	24.50	9.000	L1	10.2
13.7143	25.16	50.00	24.84	9.000	L1	10.2





Figure 2: PCB Rev 0.7A+Renesas [EUT+TA] Rear Camera + Cellular receiver (LTE B5 Middle Ch), Line(N)



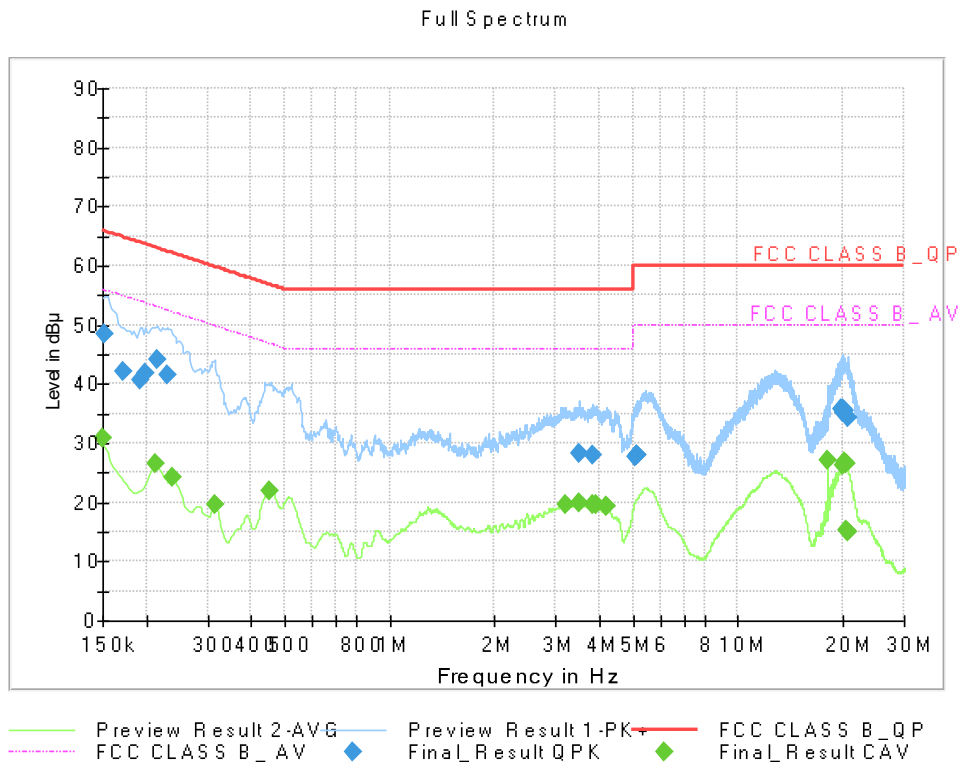


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	47.37	65.88	18.51	9.000	N	9.6
0.1590	48.23	65.52	17.29	9.000	N	9.6
0.1703	47.22	64.95	17.73	9.000	N	9.6
0.1838	45.86	64.31	18.45	9.000	N	9.6
0.1995	44.39	63.63	19.24	9.000	N	9.6
0.2153	42.60	63.00	20.40	9.000	N	9.6
1.2088	24.14	56.00	31.86	9.000	N	9.7
1.2155	24.38	56.00	31.62	9.000	N	9.7
1.2268	24.60	56.00	31.40	9.000	N	9.7
1.2380	24.59	56.00	31.41	9.000	N	9.7
1.2470	24.39	56.00	31.61	9.000	N	9.7
1.2605	24.94	56.00	31.06	9.000	N	9.7
12.8030	30.60	60.00	29.40	9.000	N	10.2
13.1248	30.41	60.00	29.59	9.000	N	10.2
13.3205	30.84	60.00	29.16	9.000	N	10.2
13.3813	30.17	60.00	29.83	9.000	N	10.2
13.4105	29.83	60.00	30.17	9.000	N	10.2
13.6940	29.97	60.00	30.03	9.000	N	10.2

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	28.00	55.75	27.75	9.000	N	9.6
0.1635	27.51	55.28	27.77	9.000	N	9.6
0.1725	26.52	54.84	28.32	9.000	N	9.6
0.1815	26.30	54.42	28.12	9.000	N	9.6
0.2108	24.31	53.18	28.87	9.000	N	9.6
1.2088	17.88	46.00	28.12	9.000	N	9.7
1.2178	17.95	46.00	28.05	9.000	N	9.7
1.2358	18.44	46.00	27.56	9.000	N	9.7
1.2425	18.56	46.00	27.44	9.000	N	9.7
1.2650	19.08	46.00	26.92	9.000	N	9.7
1.2785	18.88	46.00	27.12	9.000	N	9.7
12.8098	23.73	50.00	26.27	9.000	N	10.2
12.8683	23.97	50.00	26.03	9.000	N	10.2
12.8998	24.02	50.00	25.98	9.000	N	10.2
13.0505	24.22	50.00	25.78	9.000	N	10.2
13.0775	24.06	50.00	25.94	9.000	N	10.2
13.2148	24.25	50.00	25.75	9.000	N	10.2
13.6693	23.68	50.00	26.32	9.000	N	10.2



Figure 3: PCB Rev 0.7A+Renesas [EUT+TA] Front Camera, Line(L1)



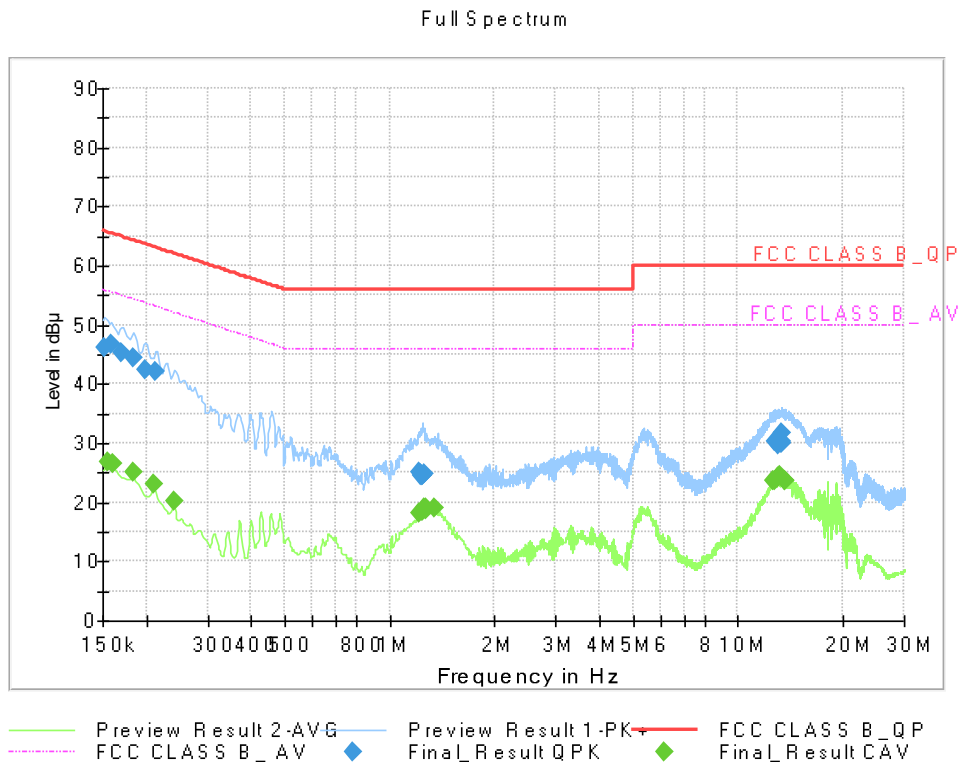


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	48.55	65.88	17.33	9.000	L1	9.6
0.1725	42.21	64.84	22.63	9.000	L1	9.6
0.1928	40.76	63.92	23.16	9.000	L1	9.6
0.1995	41.74	63.63	21.89	9.000	L1	9.6
0.2153	44.06	63.00	18.94	9.000	L1	9.6
0.2288	41.53	62.50	20.97	9.000	L1	9.6
3.5128	28.23	56.00	27.77	9.000	L1	9.8
3.8255	27.95	56.00	28.05	9.000	L1	9.8
5.0833	27.73	60.00	32.27	9.000	L1	9.9
5.1328	27.95	60.00	32.05	9.000	L1	9.9
5.1373	27.97	60.00	32.03	9.000	L1	9.9
5.1530	28.12	60.00	31.88	9.000	L1	9.9
19.8320	35.70	60.00	24.30	9.000	L1	10.4
20.0480	35.27	60.00	24.73	9.000	L1	10.4
20.1110	35.70	60.00	24.30	9.000	L1	10.4
20.1223	35.64	60.00	24.36	9.000	L1	10.4
20.2033	35.55	60.00	24.45	9.000	L1	10.4
20.6083	34.43	60.00	25.57	9.000	L1	10.4

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1500	30.73	56.00	25.27	9.000	L1	9.6
0.2130	26.49	53.09	26.60	9.000	L1	9.6
0.2378	24.18	52.17	27.99	9.000	L1	9.6
0.3143	19.59	49.86	30.27	9.000	L1	9.6
0.4538	21.98	46.81	24.83	9.000	L1	9.6
3.1910	19.66	46.00	26.34	9.000	L1	9.8
3.5173	19.76	46.00	26.24	9.000	L1	9.8
3.8503	19.71	46.00	26.29	9.000	L1	9.8
3.9223	19.60	46.00	26.40	9.000	L1	9.8
4.1923	19.22	46.00	26.78	9.000	L1	9.8
4.2035	19.20	46.00	26.80	9.000	L1	9.8
18.0635	27.02	50.00	22.98	9.000	L1	10.3
20.0413	26.20	50.00	23.80	9.000	L1	10.4
20.2483	26.76	50.00	23.24	9.000	L1	10.4
20.2753	26.46	50.00	23.54	9.000	L1	10.4
20.3653	26.40	50.00	23.60	9.000	L1	10.4
20.4463	15.26	50.00	34.74	9.000	L1	10.4
20.6083	14.86	50.00	35.14	9.000	L1	10.4



Figure 4: PCB Rev 0.7A+Renesas [EUT+TA] Front Camera, Line(N)



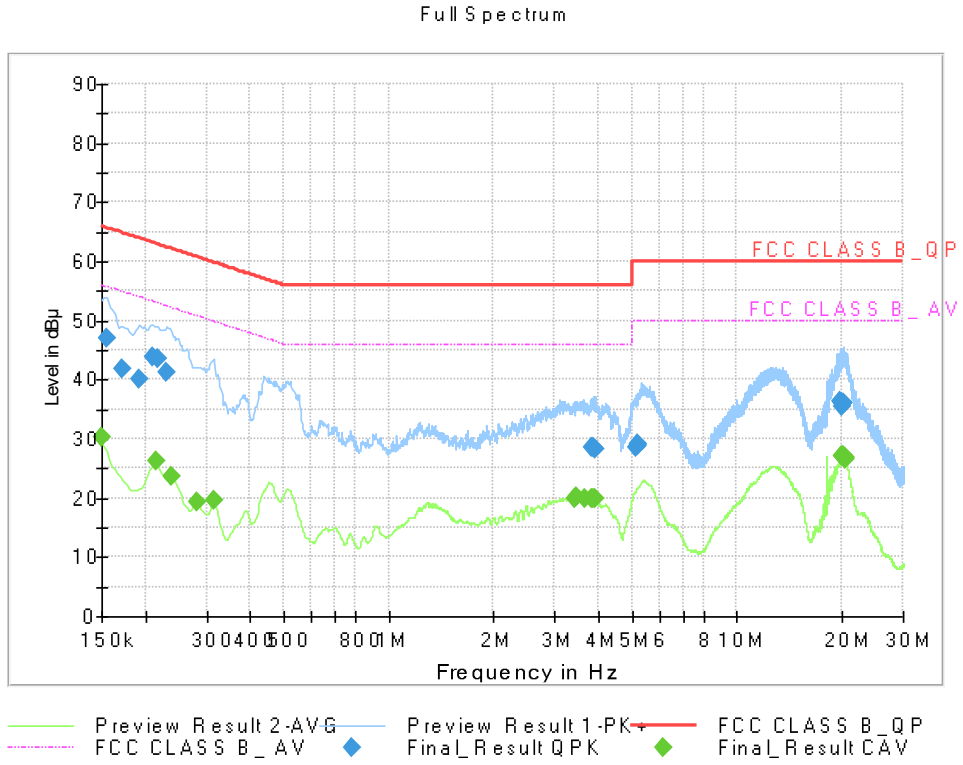


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	46.08	65.88	19.80	9.000	N	9.6
0.1590	46.59	65.52	18.93	9.000	N	9.6
0.1703	45.40	64.95	19.55	9.000	N	9.6
0.1838	44.50	64.31	19.81	9.000	N	9.6
0.1995	42.49	63.63	21.14	9.000	N	9.6
0.2130	42.21	63.09	20.88	9.000	N	9.6
1.2178	25.02	56.00	30.98	9.000	N	9.7
1.2268	24.84	56.00	31.16	9.000	N	9.7
1.2335	24.55	56.00	31.45	9.000	N	9.7
1.2403	24.46	56.00	31.54	9.000	N	9.7
1.2470	24.41	56.00	31.59	9.000	N	9.7
1.2560	24.76	56.00	31.24	9.000	N	9.7
12.8098	30.27	60.00	29.73	9.000	N	10.2
13.1090	29.85	60.00	30.15	9.000	N	10.2
13.3183	31.64	60.00	28.36	9.000	N	10.2
13.3610	30.01	60.00	29.99	9.000	N	10.2
13.3835	30.15	60.00	29.85	9.000	N	10.2
13.3903	30.12	60.00	29.88	9.000	N	10.2

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	26.81	55.75	28.94	9.000	N	9.6
0.1613	26.41	55.40	28.99	9.000	N	9.6
0.1838	25.21	54.31	29.10	9.000	N	9.6
0.2108	23.13	53.18	30.05	9.000	N	9.6
0.2400	20.10	52.10	32.00	9.000	N	9.6
1.2178	18.30	46.00	27.70	9.000	N	9.7
1.2425	18.39	46.00	27.61	9.000	N	9.7
1.2538	19.04	46.00	26.96	9.000	N	9.7
1.2650	18.99	46.00	27.01	9.000	N	9.7
1.2785	18.87	46.00	27.13	9.000	N	9.7
1.3393	18.96	46.00	27.04	9.000	N	9.7
12.5645	23.52	50.00	26.48	9.000	N	10.2
12.8098	23.66	50.00	26.34	9.000	N	10.2
13.0753	24.20	50.00	25.80	9.000	N	10.2
13.1023	24.15	50.00	25.85	9.000	N	10.2
13.2103	24.44	50.00	25.56	9.000	N	10.2
13.6040	23.70	50.00	26.30	9.000	N	10.2
13.6333	23.74	50.00	26.26	9.000	N	10.2



Figure 5: PCB Rev 0.7A+Renesas [EUT+TA] Video + Audio playback from internal memory, Line(L1)





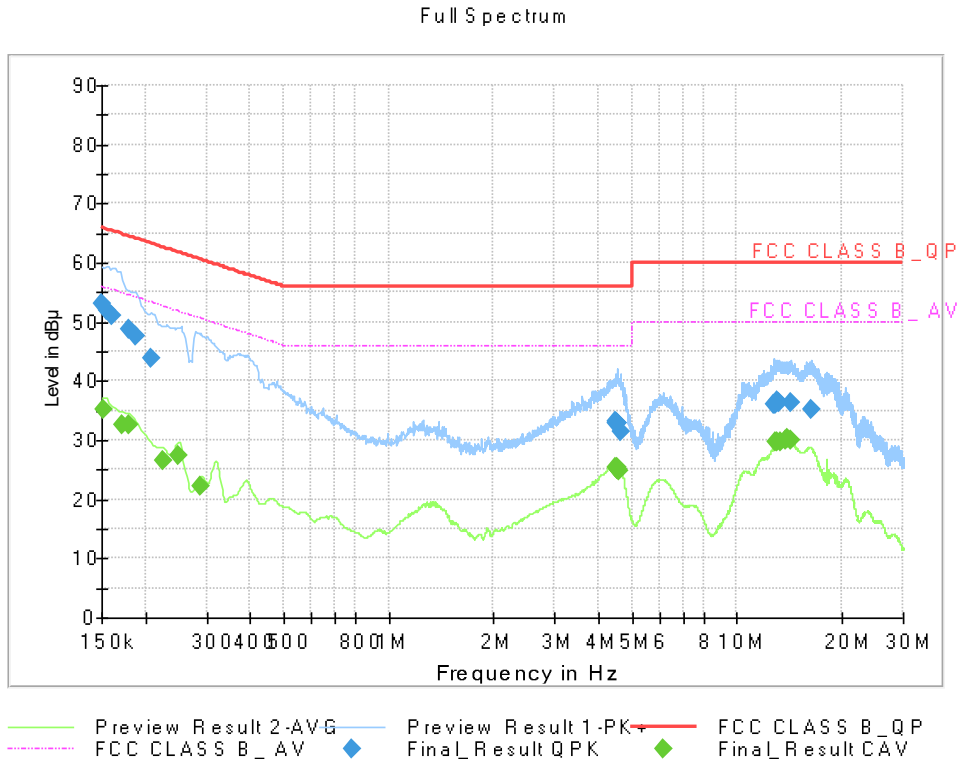
Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	46.97	65.75	18.78	9.000	L1	9.6
0.1725	41.86	64.84	22.98	9.000	L1	9.6
0.1928	40.19	63.92	23.73	9.000	L1	9.6
0.2108	43.75	63.18	19.43	9.000	L1	9.6
0.2175	43.48	62.91	19.43	9.000	L1	9.6
0.2310	41.36	62.41	21.05	9.000	L1	9.6
3.8503	28.46	56.00	27.54	9.000	L1	9.8
3.8570	28.58	56.00	27.42	9.000	L1	9.8
3.9223	28.32	56.00	27.68	9.000	L1	9.8
5.1350	28.57	60.00	31.43	9.000	L1	9.9
5.1710	28.89	60.00	31.11	9.000	L1	9.9
5.1755	29.00	60.00	31.00	9.000	L1	9.9
19.8545	36.25	60.00	23.75	9.000	L1	10.4
19.8995	35.50	60.00	24.50	9.000	L1	10.4
19.9108	36.17	60.00	23.83	9.000	L1	10.4
20.0548	35.92	60.00	24.08	9.000	L1	10.4
20.1043	36.18	60.00	23.82	9.000	L1	10.4
20.2235	36.04	60.00	23.96	9.000	L1	10.4

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1500	30.28	56.00	25.72	9.000	L1	9.6
0.2153	26.15	53.00	26.85	9.000	L1	9.6
0.2378	23.65	52.17	28.52	9.000	L1	9.6
0.2805	19.40	50.80	31.40	9.000	L1	9.6
0.3143	19.53	49.86	30.33	9.000	L1	9.6
3.4385	20.00	46.00	26.00	9.000	L1	9.8
3.4790	20.17	46.00	25.83	9.000	L1	9.8
3.6658	20.01	46.00	25.99	9.000	L1	9.8
3.8480	19.80	46.00	26.20	9.000	L1	9.8
3.8885	19.88	46.00	26.12	9.000	L1	9.8
3.9223	19.80	46.00	26.20	9.000	L1	9.8
19.9310	27.25	50.00	22.75	9.000	L1	10.4
20.1110	27.10	50.00	22.90	9.000	L1	10.4
20.1245	27.08	50.00	22.92	9.000	L1	10.4
20.2213	27.09	50.00	22.91	9.000	L1	10.4
20.3743	26.79	50.00	23.21	9.000	L1	10.4
20.4418	26.71	50.00	23.29	9.000	L1	10.4
20.5138	26.59	50.00	23.41	9.000	L1	10.4





Figure 6: PCB Rev 0.7A+Renesas [EUT+TA] Video + Audio playback from internal memory, Line(N)



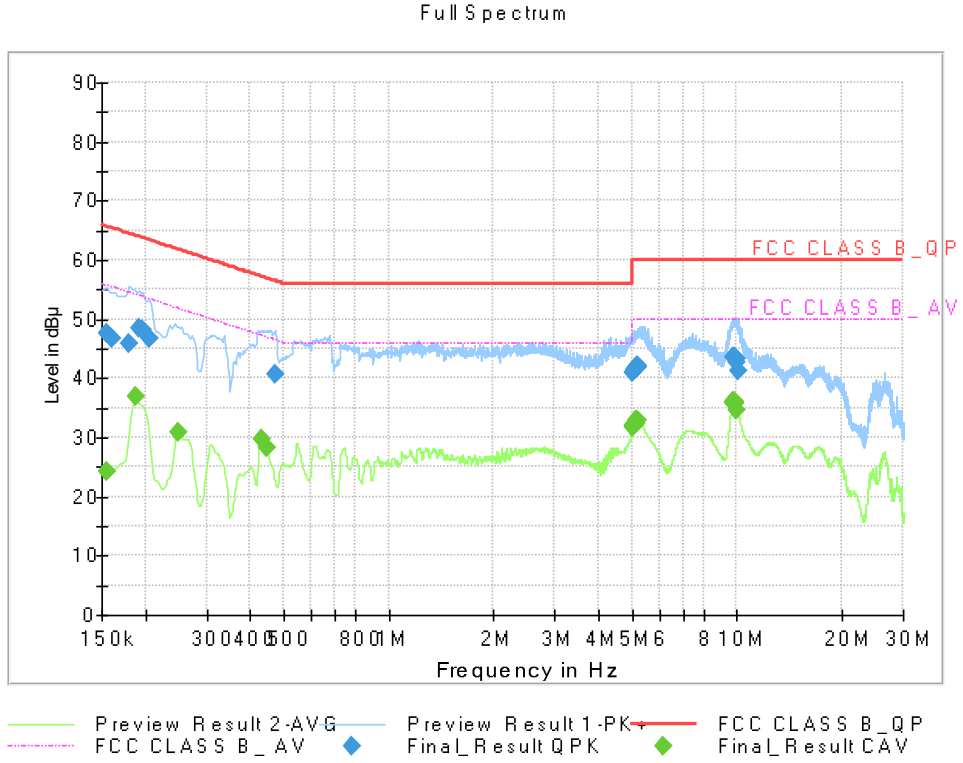


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1500	52.99	66.00	13.01	9.000	N	9.6
0.1545	51.98	65.75	13.77	9.000	N	9.6
0.1613	51.11	65.40	14.29	9.000	N	9.6
0.1793	48.61	64.52	15.91	9.000	N	9.6
0.1883	47.53	64.11	16.58	9.000	N	9.6
0.2085	43.87	63.27	19.40	9.000	N	9.6
4.4735	32.83	56.00	23.17	9.000	N	9.8
4.4938	33.16	56.00	22.84	9.000	N	9.8
4.5185	32.96	56.00	23.04	9.000	N	9.8
4.5388	32.75	56.00	23.25	9.000	N	9.8
4.5478	32.77	56.00	23.23	9.000	N	9.8
4.6400	31.50	56.00	24.50	9.000	N	9.9
12.7625	35.94	60.00	24.06	9.000	N	10.2
12.9133	36.12	60.00	23.88	9.000	N	10.2
13.0978	36.62	60.00	23.38	9.000	N	10.2
13.2508	36.40	60.00	23.60	9.000	N	10.2
14.2790	36.47	60.00	23.53	9.000	N	10.2
16.3153	35.31	60.00	24.69	9.000	N	10.3

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	35.34	55.88	20.54	9.000	N	9.6
0.1725	32.69	54.84	22.15	9.000	N	9.6
0.1793	32.67	54.52	21.85	9.000	N	9.6
0.2243	26.40	52.66	26.26	9.000	N	9.6
0.2490	27.37	51.79	24.42	9.000	N	9.6
0.2895	22.22	50.54	28.32	9.000	N	9.6
4.4758	25.33	46.00	20.67	9.000	N	9.8
4.5163	25.29	46.00	20.71	9.000	N	9.8
4.5230	25.24	46.00	20.76	9.000	N	9.8
4.5320	25.18	46.00	20.82	9.000	N	9.8
4.5433	25.10	46.00	20.90	9.000	N	9.8
4.5703	24.78	46.00	21.22	9.000	N	9.8
12.9133	29.76	50.00	20.24	9.000	N	10.2
13.1023	29.79	50.00	20.21	9.000	N	10.2
13.3318	29.77	50.00	20.23	9.000	N	10.2
13.8223	30.11	50.00	19.89	9.000	N	10.2
14.0270	30.29	50.00	19.71	9.000	N	10.2
14.2790	30.10	50.00	19.90	9.000	N	10.2



Figure 7: PCB Rev 0.7A+Renesas [EUT+ NOTEBOOK PC] USB Data Communication with PC (from internal memory data), Line(L1)



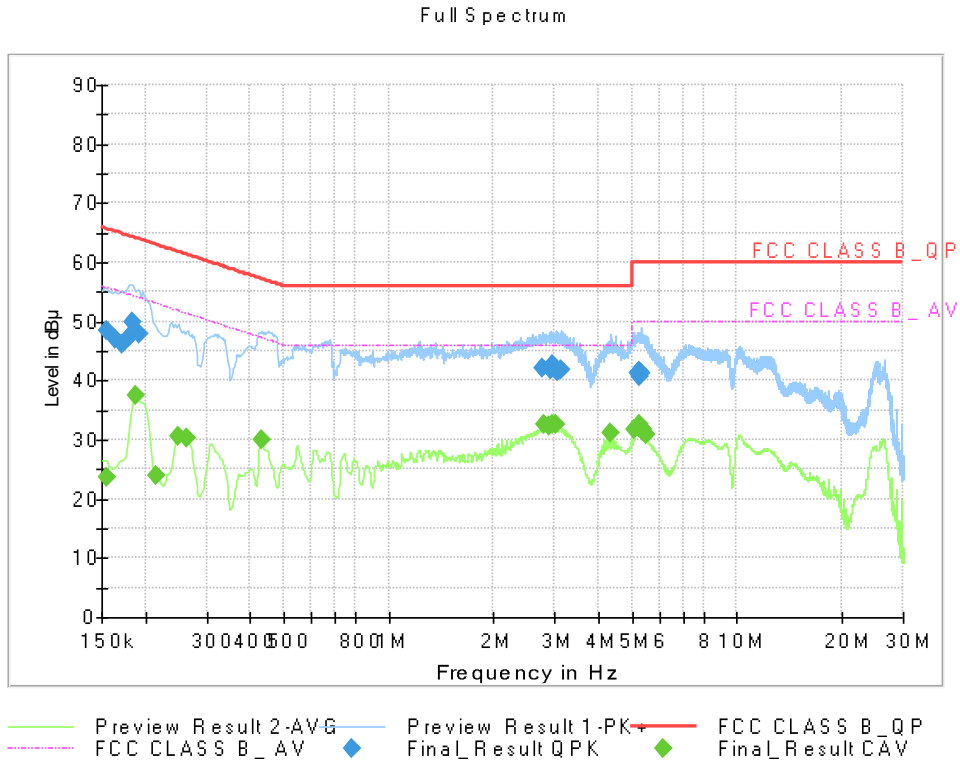


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	47.71	65.75	18.04	9.000	L1	9.6
0.1613	46.78	65.40	18.62	9.000	L1	9.6
0.1793	45.97	64.52	18.55	9.000	L1	9.6
0.1928	48.39	63.92	15.53	9.000	L1	9.6
0.1973	48.23	63.73	15.50	9.000	L1	9.6
0.2063	46.68	63.36	16.68	9.000	L1	9.6
0.4718	40.77	56.48	15.71	9.000	L1	9.6
5.0293	41.03	60.00	18.97	9.000	L1	9.7
5.0923	41.62	60.00	18.38	9.000	L1	9.7
5.1553	41.96	60.00	18.04	9.000	L1	9.7
5.1643	41.96	60.00	18.04	9.000	L1	9.7
5.1755	42.09	60.00	17.91	9.000	L1	9.7
9.7205	43.69	60.00	16.31	9.000	L1	9.8
9.8578	43.46	60.00	16.54	9.000	L1	9.8
9.8870	43.52	60.00	16.48	9.000	L1	9.8
9.9455	43.26	60.00	16.74	9.000	L1	9.8
9.9770	42.68	60.00	17.32	9.000	L1	9.8
10.1143	41.21	60.00	18.79	9.000	L1	9.8

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	24.13	55.75	31.62	9.000	L1	9.6
0.1883	36.97	54.11	17.14	9.000	L1	9.6
0.2490	30.89	51.79	20.90	9.000	L1	9.6
0.4313	29.71	47.23	17.52	9.000	L1	9.6
0.4448	28.15	46.97	18.82	9.000	L1	9.6
5.0248	32.00	50.00	18.00	9.000	L1	9.7
5.0293	31.84	50.00	18.16	9.000	L1	9.7
5.0878	32.12	50.00	17.88	9.000	L1	9.7
5.1193	32.35	50.00	17.65	9.000	L1	9.7
5.1530	32.83	50.00	17.17	9.000	L1	9.7
5.1665	32.87	50.00	17.13	9.000	L1	9.7
9.7363	35.64	50.00	14.36	9.000	L1	9.8
9.7948	36.10	50.00	13.90	9.000	L1	9.8
9.8240	35.90	50.00	14.10	9.000	L1	9.8
9.8510	35.68	50.00	14.32	9.000	L1	9.8
9.8578	35.71	50.00	14.29	9.000	L1	9.8
9.8758	35.94	50.00	14.06	9.000	L1	9.8
10.0108	34.59	50.00	15.41	9.000	L1	9.8



Figure 8: PCB Rev 0.7A+Renesas [EUT+ NOTEBOOK PC] USB Data Communication with PC (from internal memory data), Line(N)



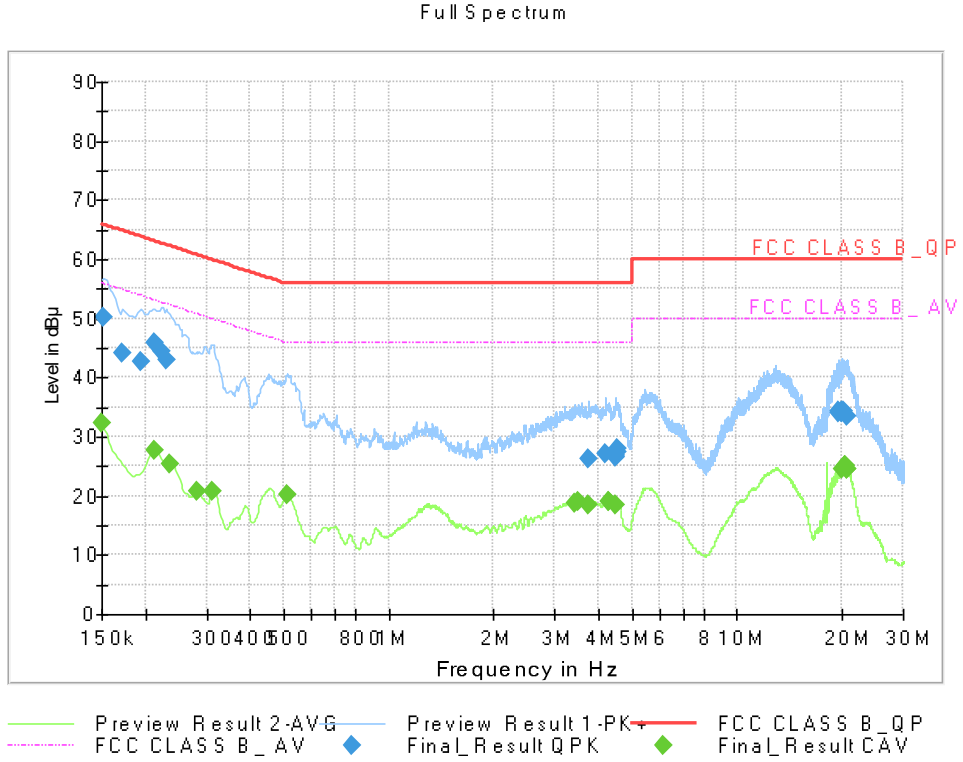


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	48.38	65.75	17.37	9.000	N	9.6
0.1635	47.00	65.28	18.28	9.000	N	9.6
0.1725	46.05	64.84	18.79	9.000	N	9.6
0.1793	47.36	64.52	17.16	9.000	N	9.6
0.1838	49.90	64.31	14.41	9.000	N	9.6
0.1928	47.88	63.92	16.04	9.000	N	9.6
2.7680	41.99	56.00	14.01	9.000	N	9.7
2.9075	41.76	56.00	14.24	9.000	N	9.7
2.9705	42.55	56.00	13.45	9.000	N	9.7
3.0358	41.96	56.00	14.04	9.000	N	9.7
3.0448	41.55	56.00	14.45	9.000	N	9.7
3.1123	41.68	56.00	14.32	9.000	N	9.7
5.1890	41.12	60.00	18.88	9.000	N	9.7
5.2340	41.51	60.00	18.49	9.000	N	9.7
5.2385	40.76	60.00	19.24	9.000	N	9.7
5.2430	41.50	60.00	18.50	9.000	N	9.7
5.2700	41.39	60.00	18.61	9.000	N	9.7
5.3240	41.27	60.00	18.73	9.000	N	9.7

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	23.53	55.75	32.22	9.000	N	9.6
0.1883	37.37	54.11	16.74	9.000	N	9.6
0.2153	24.08	53.00	28.92	9.000	N	9.6
0.2490	30.58	51.79	21.21	9.000	N	9.6
0.2625	30.24	51.35	21.11	9.000	N	9.6
0.4335	29.92	47.19	17.27	9.000	N	9.6
2.7860	32.50	46.00	13.50	9.000	N	9.7
2.9008	32.30	46.00	13.70	9.000	N	9.7
2.9728	32.58	46.00	13.42	9.000	N	9.7
3.0335	32.61	46.00	13.39	9.000	N	9.7
4.3543	31.14	46.00	14.86	9.000	N	9.7
5.0990	31.87	50.00	18.13	9.000	N	9.7
5.2340	32.11	50.00	17.89	9.000	N	9.7
5.2498	32.72	50.00	17.28	9.000	N	9.7
5.3285	31.99	50.00	18.01	9.000	N	9.7
5.3510	31.73	50.00	18.27	9.000	N	9.7
5.3960	31.38	50.00	18.62	9.000	N	9.7
5.4613	31.00	50.00	19.00	9.000	N	9.7



Figure 9: PCB Rev 0.7A+S.LSI [EUT+ TA] Rear Camera + Cellular receiver (LTE B5 Middle Ch), Line(L1)





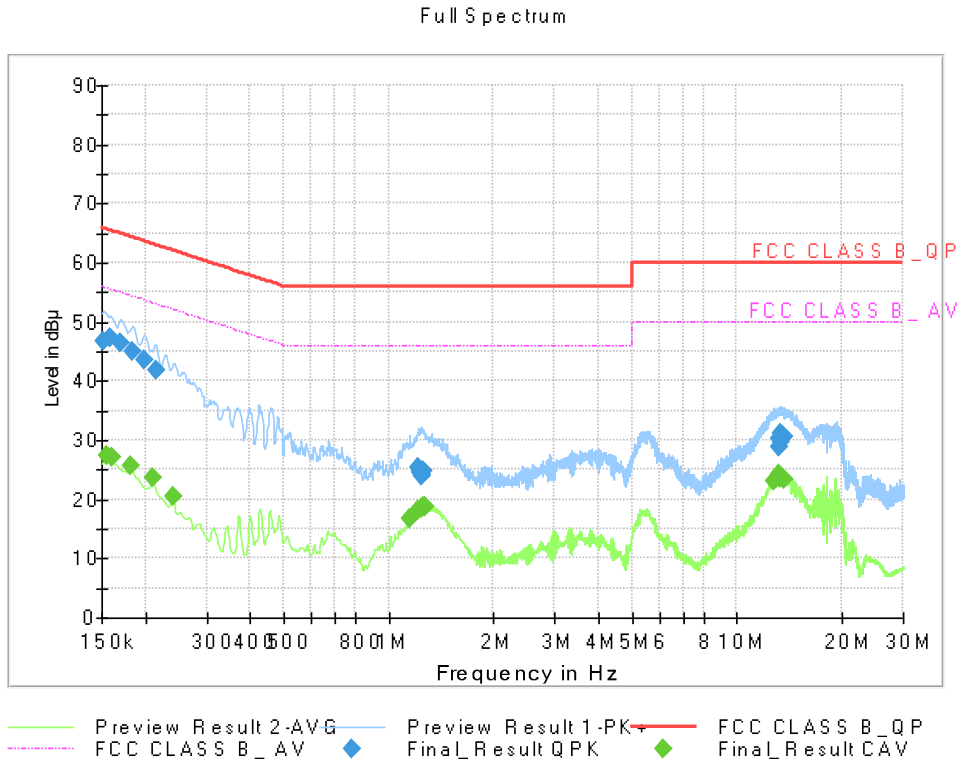
Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	50.30	65.88	15.58	9.000	L1	9.6
0.1725	44.27	64.84	20.57	9.000	L1	9.6
0.1950	42.72	63.82	21.10	9.000	L1	9.6
0.2130	45.89	63.09	17.20	9.000	L1	9.6
0.2220	44.46	62.74	18.28	9.000	L1	9.6
0.2288	42.99	62.50	19.51	9.000	L1	9.6
3.7535	26.17	56.00	29.83	9.000	L1	9.8
4.1990	27.22	56.00	28.78	9.000	L1	9.8
4.4780	26.68	56.00	29.32	9.000	L1	9.8
4.4983	26.94	56.00	29.06	9.000	L1	9.8
4.5298	27.98	56.00	28.02	9.000	L1	9.9
4.5455	27.28	56.00	28.72	9.000	L1	9.9
19.5125	34.24	60.00	25.76	9.000	L1	10.4
19.5958	34.16	60.00	25.84	9.000	L1	10.4
20.1065	34.14	60.00	25.86	9.000	L1	10.4
20.1155	34.26	60.00	25.74	9.000	L1	10.4
20.1808	34.36	60.00	25.64	9.000	L1	10.4
20.7298	33.52	60.00	26.48	9.000	L1	10.4

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1500	32.26	56.00	23.74	9.000	L1	9.6
0.2130	27.73	53.09	25.36	9.000	L1	9.6
0.2355	25.33	52.25	26.92	9.000	L1	9.6
0.2805	20.89	50.80	29.91	9.000	L1	9.6
0.3120	20.69	49.92	29.23	9.000	L1	9.6
0.5113	20.23	46.00	25.77	9.000	L1	9.7
3.4070	18.78	46.00	27.22	9.000	L1	9.8
3.5150	19.10	46.00	26.90	9.000	L1	9.8
3.7535	18.55	46.00	27.45	9.000	L1	9.8
4.2868	19.01	46.00	26.99	9.000	L1	9.8
4.2935	18.97	46.00	27.03	9.000	L1	9.8
4.4848	18.54	46.00	27.46	9.000	L1	9.8
20.0413	24.52	50.00	25.48	9.000	L1	10.4
20.4598	25.03	50.00	24.97	9.000	L1	10.4
20.5048	25.12	50.00	24.88	9.000	L1	10.4
20.5160	25.13	50.00	24.87	9.000	L1	10.4
20.7298	24.65	50.00	25.35	9.000	L1	10.4
20.7613	24.60	50.00	25.40	9.000	L1	10.4





Figure 10: PCB Rev 0.7A+S.LSI [EUT+ TA] Rear Camera + Cellular receiver (LTE B5 Middle Ch), Line(N)



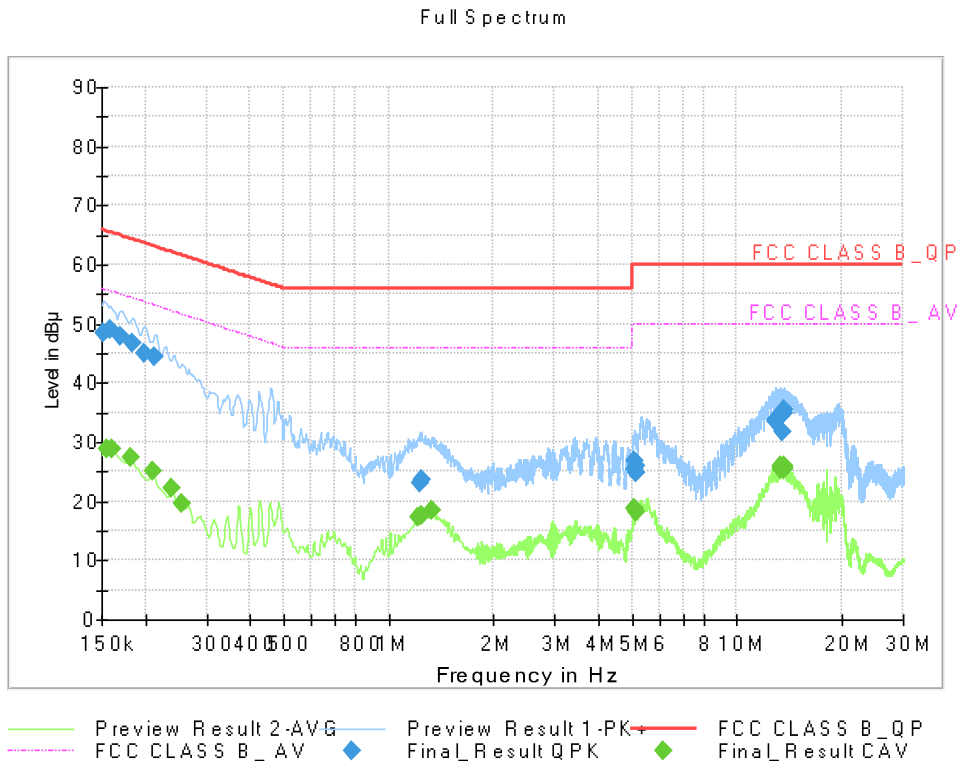


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	46.86	65.88	19.02	9.000	N	9.6
0.1590	47.18	65.52	18.34	9.000	N	9.6
0.1703	46.40	64.95	18.55	9.000	N	9.6
0.1838	45.06	64.31	19.25	9.000	N	9.6
0.1995	43.55	63.63	20.08	9.000	N	9.6
0.2153	41.91	63.00	21.09	9.000	N	9.6
1.2178	25.36	56.00	30.64	9.000	N	9.7
1.2268	24.62	56.00	31.38	9.000	N	9.7
1.2313	24.81	56.00	31.19	9.000	N	9.7
1.2403	24.20	56.00	31.80	9.000	N	9.7
1.2470	23.89	56.00	32.11	9.000	N	9.7
1.2605	24.89	56.00	31.11	9.000	N	9.7
13.1405	28.88	60.00	31.12	9.000	N	10.2
13.2418	30.37	60.00	29.63	9.000	N	10.2
13.3205	31.24	60.00	28.76	9.000	N	10.2
13.3520	30.21	60.00	29.79	9.000	N	10.2
13.3565	29.78	60.00	30.22	9.000	N	10.2
13.6108	30.69	60.00	29.31	9.000	N	10.2

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	27.48	55.75	28.27	9.000	N	9.6
0.1613	27.06	55.40	28.34	9.000	N	9.6
0.1815	25.61	54.42	28.81	9.000	N	9.6
0.2108	23.68	53.18	29.50	9.000	N	9.6
0.2400	20.56	52.10	31.54	9.000	N	9.6
1.1480	16.59	46.00	29.41	9.000	N	9.7
1.2178	18.05	46.00	27.95	9.000	N	9.7
1.2425	18.48	46.00	27.52	9.000	N	9.7
1.2538	18.76	46.00	27.24	9.000	N	9.7
1.2650	18.70	46.00	27.30	9.000	N	9.7
1.2785	18.65	46.00	27.35	9.000	N	9.7
12.8120	23.10	50.00	26.90	9.000	N	10.2
13.0775	23.75	50.00	26.25	9.000	N	10.2
13.1855	24.14	50.00	25.86	9.000	N	10.2
13.3025	23.76	50.00	26.24	9.000	N	10.2
13.3183	23.54	50.00	26.46	9.000	N	10.2
13.3610	23.81	50.00	26.19	9.000	N	10.2
13.6378	23.47	50.00	26.53	9.000	N	10.2



Figure 11: PCB Rev 0.7A+S.LSI [EUT+ TA] Front Camera, Line(L1)



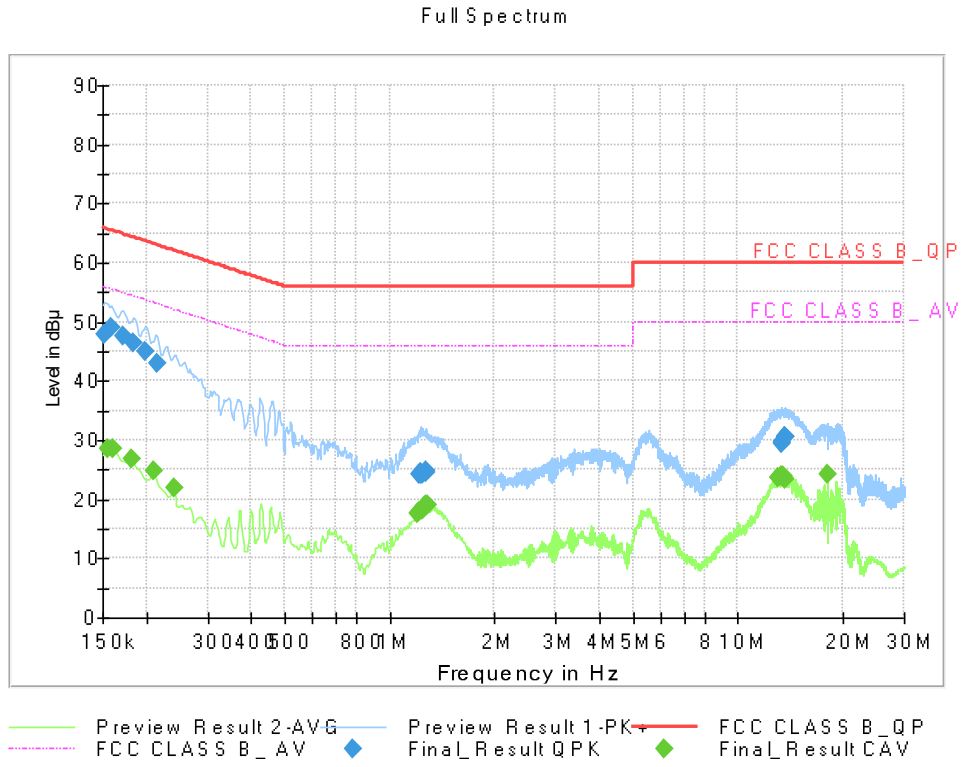


Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	48.35	65.88	17.53	9.000	L1	9.6
0.1590	49.05	65.52	16.47	9.000	L1	9.6
0.1703	48.01	64.95	16.94	9.000	L1	9.6
0.1838	46.81	64.31	17.50	9.000	L1	9.6
0.1995	45.10	63.63	18.53	9.000	L1	9.6
0.2130	44.51	63.09	18.58	9.000	L1	9.6
1.2245	22.97	56.00	33.03	9.000	L1	9.7
1.2380	23.73	56.00	32.27	9.000	L1	9.7
5.0698	25.46	60.00	34.54	9.000	L1	9.9
5.0945	26.79	60.00	33.21	9.000	L1	9.9
5.1035	24.72	60.00	35.28	9.000	L1	9.9
5.1215	26.00	60.00	34.00	9.000	L1	9.9
12.8638	33.80	60.00	26.20	9.000	L1	10.2
12.8728	33.52	60.00	26.48	9.000	L1	10.2
13.3790	34.18	60.00	25.82	9.000	L1	10.2
13.4240	31.73	60.00	28.27	9.000	L1	10.2
13.6265	35.50	60.00	24.50	9.000	L1	10.2
13.6535	35.05	60.00	24.95	9.000	L1	10.2

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	28.86	55.75	26.89	9.000	L1	9.6
0.1613	28.70	55.40	26.70	9.000	L1	9.6
0.1815	27.32	54.42	27.10	9.000	L1	9.6
0.2108	25.16	53.18	28.02	9.000	L1	9.6
0.2378	22.23	52.17	29.94	9.000	L1	9.6
0.2535	19.61	51.64	32.03	9.000	L1	9.6
1.2155	17.32	46.00	28.68	9.000	L1	9.7
1.2403	17.54	46.00	28.46	9.000	L1	9.7
1.3258	18.39	46.00	27.61	9.000	L1	9.7
5.0653	18.81	50.00	31.19	9.000	L1	9.9
5.0923	18.63	50.00	31.37	9.000	L1	9.9
5.1215	18.25	50.00	31.75	9.000	L1	9.9
13.3610	25.27	50.00	24.73	9.000	L1	10.2
13.3880	25.62	50.00	24.38	9.000	L1	10.2
13.4173	25.96	50.00	24.04	9.000	L1	10.2
13.6288	25.83	50.00	24.17	9.000	L1	10.2
13.6580	25.77	50.00	24.23	9.000	L1	10.2
13.6850	25.36	50.00	24.64	9.000	L1	10.2



Figure 12: PCB Rev 0.7A+S.LSI [EUT+ TA] Front Camera, Line(N)



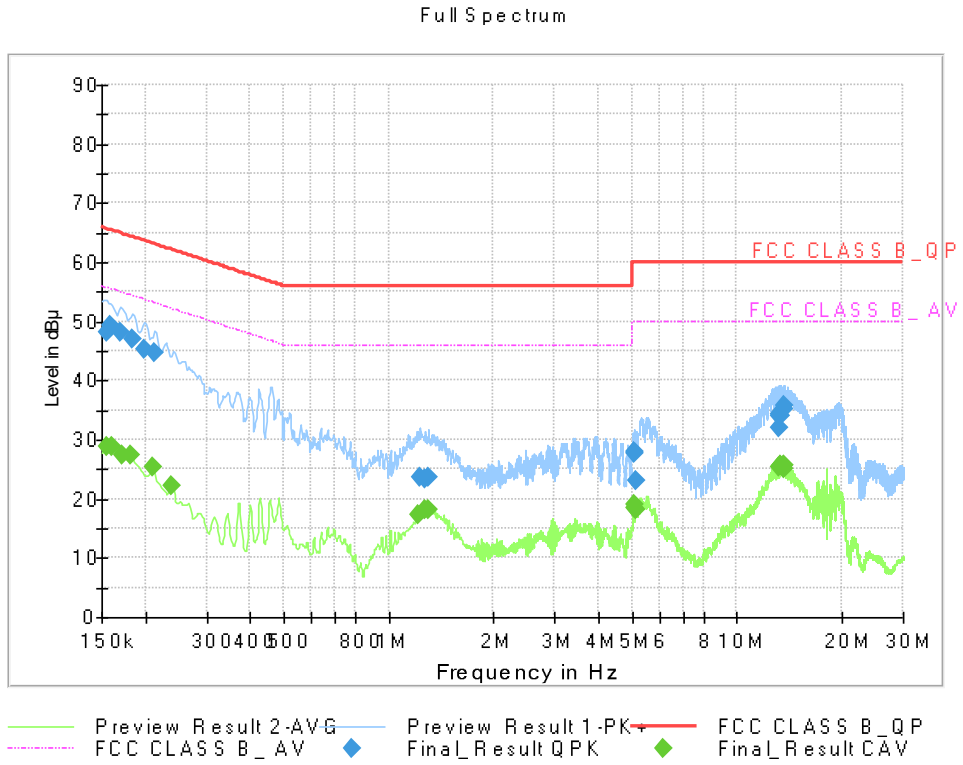


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	48.01	65.88	17.87	9.000	N	9.6
0.1590	49.00	65.52	16.52	9.000	N	9.6
0.1725	47.63	64.84	17.21	9.000	N	9.6
0.1838	46.49	64.31	17.82	9.000	N	9.6
0.1995	45.07	63.63	18.56	9.000	N	9.6
0.2153	43.10	63.00	19.90	9.000	N	9.6
1.2178	24.32	56.00	31.68	9.000	N	9.7
1.2313	24.35	56.00	31.65	9.000	N	9.7
1.2358	24.46	56.00	31.54	9.000	N	9.7
1.2470	24.28	56.00	31.72	9.000	N	9.7
1.2650	24.61	56.00	31.39	9.000	N	9.7
1.2763	24.67	56.00	31.33	9.000	N	9.7
13.3633	29.50	60.00	30.50	9.000	N	10.2
13.3835	29.67	60.00	30.33	9.000	N	10.2
13.6063	30.53	60.00	29.47	9.000	N	10.2
13.6288	30.58	60.00	29.42	9.000	N	10.2
13.6355	30.57	60.00	29.43	9.000	N	10.2
13.6580	30.56	60.00	29.44	9.000	N	10.2

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	28.44	55.75	27.31	9.000	N	9.6
0.1613	28.43	55.40	26.97	9.000	N	9.6
0.1815	26.89	54.42	27.53	9.000	N	9.6
0.2108	24.92	53.18	28.26	9.000	N	9.6
0.2400	21.90	52.10	30.20	9.000	N	9.6
1.1975	17.51	46.00	28.49	9.000	N	9.7
1.2178	17.86	46.00	28.14	9.000	N	9.7
1.2403	18.28	46.00	27.72	9.000	N	9.7
1.2538	18.85	46.00	27.15	9.000	N	9.7
1.2650	19.03	46.00	26.97	9.000	N	9.7
1.2898	19.08	46.00	26.92	9.000	N	9.7
13.0753	23.79	50.00	26.21	9.000	N	10.2
13.1023	23.69	50.00	26.31	9.000	N	10.2
13.3903	23.84	50.00	26.16	9.000	N	10.2
13.4195	23.98	50.00	26.02	9.000	N	10.2
13.4758	23.96	50.00	26.04	9.000	N	10.2
13.6963	23.35	50.00	26.65	9.000	N	10.2
18.0568	24.16	50.00	25.84	9.000	N	10.4



Figure 13: PCB Rev 0.7A+S.LSI [EUT+ TA] Video + Audio playback from internal memory, Line(L1)





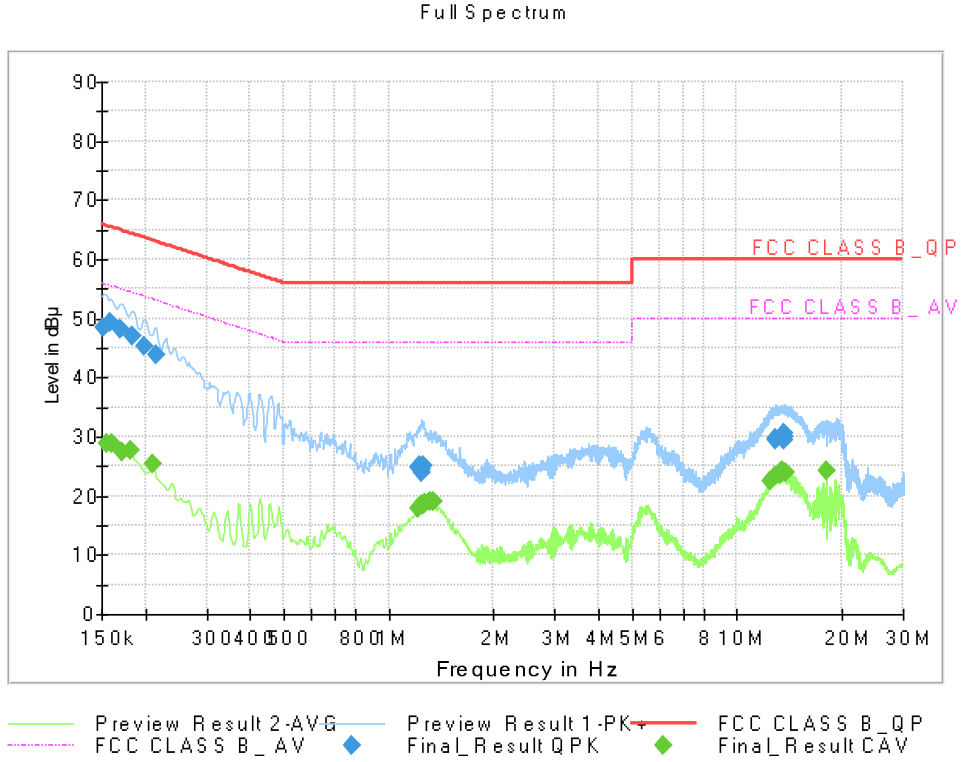
Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	48.27	65.75	17.48	9.000	L1	9.6
0.1590	49.35	65.52	16.17	9.000	L1	9.6
0.1703	48.16	64.95	16.79	9.000	L1	9.6
0.1838	46.99	64.31	17.32	9.000	L1	9.6
0.1995	45.36	63.63	18.27	9.000	L1	9.6
0.2130	44.69	63.09	18.40	9.000	L1	9.6
1.2335	23.58	56.00	32.42	9.000	L1	9.7
1.2763	23.33	56.00	32.67	9.000	L1	9.7
1.3033	23.56	56.00	32.44	9.000	L1	9.7
5.0653	28.04	60.00	31.96	9.000	L1	9.9
5.0923	27.56	60.00	32.44	9.000	L1	9.9
5.1058	23.07	60.00	36.93	9.000	L1	9.9
13.1473	33.97	60.00	26.03	9.000	L1	10.2
13.1675	32.07	60.00	27.93	9.000	L1	10.2
13.1765	34.20	60.00	25.80	9.000	L1	10.2
13.4105	33.91	60.00	26.09	9.000	L1	10.2
13.6558	35.74	60.00	24.26	9.000	L1	10.2
13.6850	35.10	60.00	24.90	9.000	L1	10.2

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	28.81	55.75	26.94	9.000	L1	9.6
0.1613	28.86	55.40	26.54	9.000	L1	9.6
0.1725	27.26	54.84	27.58	9.000	L1	9.6
0.1815	27.46	54.42	26.96	9.000	L1	9.6
0.2108	25.34	53.18	27.84	9.000	L1	9.6
0.2378	22.27	52.17	29.90	9.000	L1	9.6
1.2178	17.39	46.00	28.61	9.000	L1	9.7
1.2785	18.12	46.00	27.88	9.000	L1	9.7
1.3033	18.28	46.00	27.72	9.000	L1	9.7
5.0653	18.91	50.00	31.09	9.000	L1	9.9
5.0923	18.60	50.00	31.40	9.000	L1	9.9
5.1215	18.17	50.00	31.83	9.000	L1	9.9
13.1518	25.36	50.00	24.64	9.000	L1	10.2
13.3880	25.63	50.00	24.37	9.000	L1	10.2
13.4173	25.76	50.00	24.24	9.000	L1	10.2
13.6288	25.81	50.00	24.19	9.000	L1	10.2
13.6580	25.68	50.00	24.32	9.000	L1	10.2
13.6850	25.19	50.00	24.81	9.000	L1	10.2





Figure 14: PCB Rev 0.7A+S.LSI [EUT+ TA] Video + Audio playback from internal memory, Line(N)



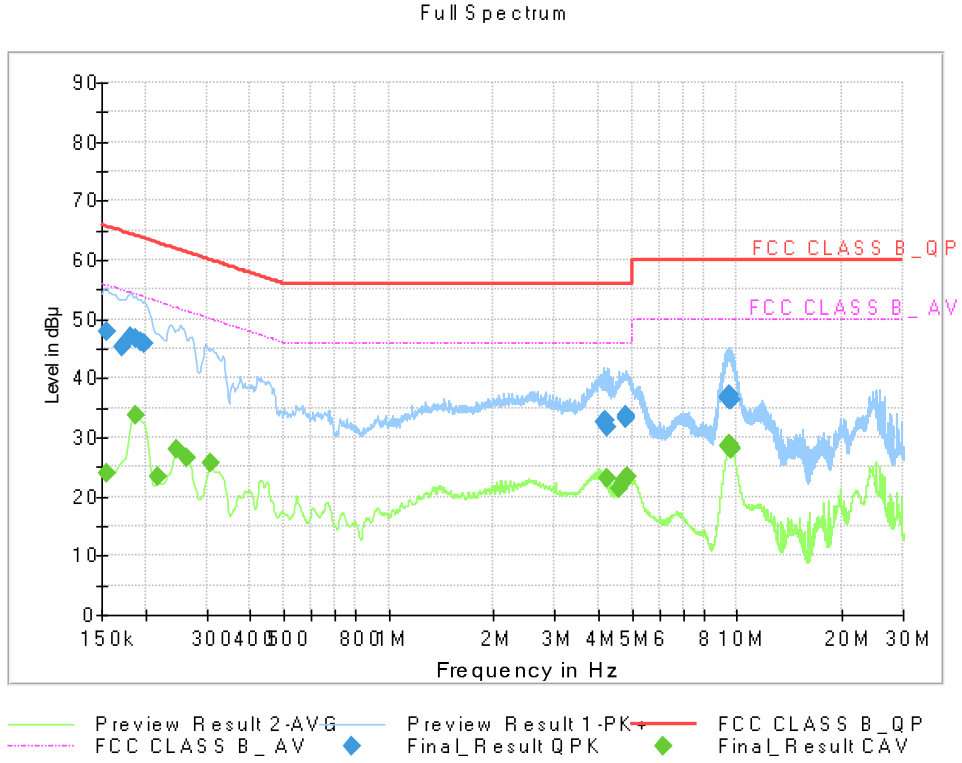


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1523	48.55	65.88	17.33	9.000	N	9.6
0.1590	49.44	65.52	16.08	9.000	N	9.6
0.1703	48.22	64.95	16.73	9.000	N	9.6
0.1838	47.13	64.31	17.18	9.000	N	9.6
0.1995	45.41	63.63	18.22	9.000	N	9.6
0.2153	43.89	63.00	19.11	9.000	N	9.6
1.2178	24.79	56.00	31.21	9.000	N	9.7
1.2268	25.22	56.00	30.78	9.000	N	9.7
1.2335	24.49	56.00	31.51	9.000	N	9.7
1.2403	23.93	56.00	32.07	9.000	N	9.7
1.2493	24.45	56.00	31.55	9.000	N	9.7
1.2538	25.09	56.00	30.91	9.000	N	9.7
12.8413	29.46	60.00	30.54	9.000	N	10.2
12.8975	29.75	60.00	30.25	9.000	N	10.2
13.5995	30.10	60.00	29.90	9.000	N	10.2
13.6378	29.48	60.00	30.52	9.000	N	10.2
13.6603	30.71	60.00	29.29	9.000	N	10.2
13.6873	30.04	60.00	29.96	9.000	N	10.2

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	28.99	55.75	26.76	9.000	N	9.6
0.1613	28.85	55.40	26.55	9.000	N	9.6
0.1725	27.51	54.84	27.33	9.000	N	9.6
0.1815	27.63	54.42	26.79	9.000	N	9.6
0.2108	25.26	53.18	27.92	9.000	N	9.6
1.2155	17.95	46.00	28.05	9.000	N	9.7
1.2425	18.33	46.00	27.67	9.000	N	9.7
1.2538	18.55	46.00	27.45	9.000	N	9.7
1.2650	18.74	46.00	27.26	9.000	N	9.7
1.3145	18.90	46.00	27.10	9.000	N	9.7
1.3505	18.95	46.00	27.05	9.000	N	9.7
12.5375	22.39	50.00	27.61	9.000	N	10.2
12.8998	23.35	50.00	26.65	9.000	N	10.2
13.3610	23.68	50.00	26.32	9.000	N	10.2
13.3903	23.93	50.00	26.07	9.000	N	10.2
13.4758	24.13	50.00	25.87	9.000	N	10.2
13.8515	23.99	50.00	26.01	9.000	N	10.2
18.0568	24.19	50.00	25.81	9.000	N	10.4



Figure 15: PCB Rev 0.7A+S.LSI [EUT+ NOTEBOOK PC] USB Data Communication with PC (from internal memory data), Line(L1)



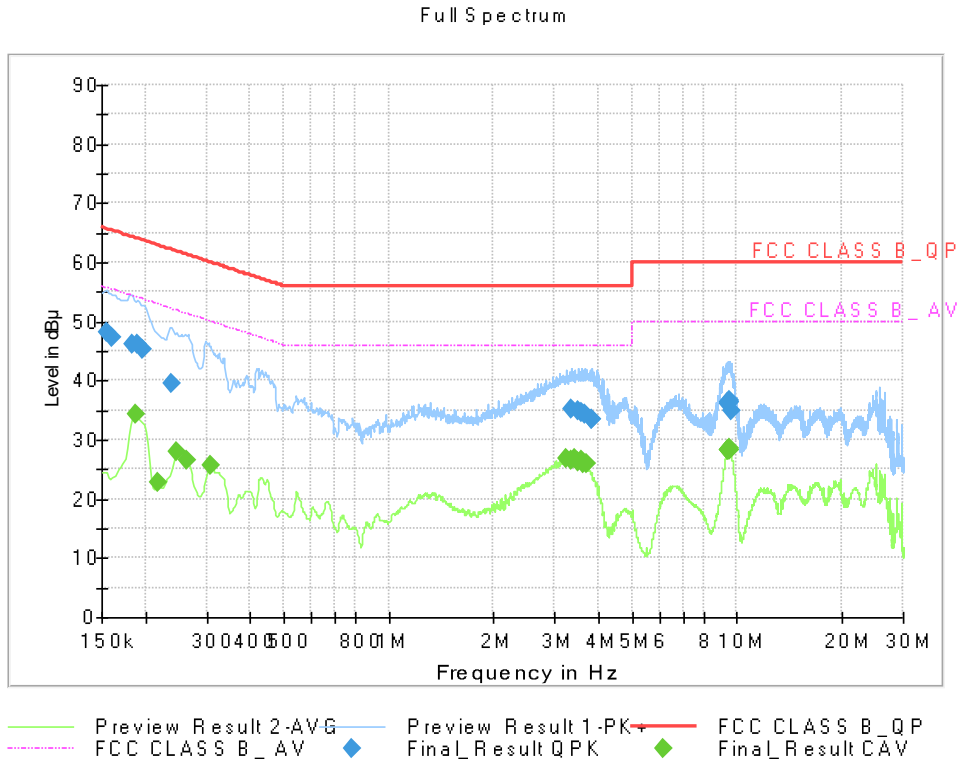


Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	47.82	65.75	17.93	9.000	L1	9.6
0.1725	45.35	64.84	19.49	9.000	L1	9.6
0.1815	46.94	64.42	17.48	9.000	L1	9.6
0.1883	46.77	64.11	17.34	9.000	L1	9.6
0.1950	46.23	63.82	17.59	9.000	L1	9.6
0.1995	45.83	63.63	17.80	9.000	L1	9.6
4.1225	32.64	56.00	23.36	9.000	L1	9.7
4.1810	32.80	56.00	23.20	9.000	L1	9.7
4.2598	31.64	56.00	24.36	9.000	L1	9.7
4.8020	33.60	56.00	22.40	9.000	L1	9.7
4.8065	33.18	56.00	22.82	9.000	L1	9.7
4.8155	33.78	56.00	22.22	9.000	L1	9.7
9.4168	36.93	60.00	23.07	9.000	L1	9.8
9.4505	36.70	60.00	23.30	9.000	L1	9.8
9.4573	36.51	60.00	23.49	9.000	L1	9.8
9.4888	37.18	60.00	22.82	9.000	L1	9.8
9.5090	36.47	60.00	23.53	9.000	L1	9.8
9.6440	36.47	60.00	23.53	9.000	L1	9.8

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	23.85	55.75	31.90	9.000	L1	9.6
0.1883	33.72	54.11	20.39	9.000	L1	9.6
0.2175	23.32	52.91	29.59	9.000	L1	9.6
0.2468	28.09	51.87	23.78	9.000	L1	9.6
0.2625	26.63	51.35	24.72	9.000	L1	9.6
0.3075	25.71	50.04	24.33	9.000	L1	9.6
4.2598	22.99	46.00	23.01	9.000	L1	9.7
4.5950	21.36	46.00	24.64	9.000	L1	9.7
4.6940	22.19	46.00	23.81	9.000	L1	9.7
4.7503	22.66	46.00	23.34	9.000	L1	9.7
4.8065	23.03	46.00	22.97	9.000	L1	9.7
4.8695	23.26	46.00	22.74	9.000	L1	9.7
9.4460	28.47	50.00	21.53	9.000	L1	9.8
9.4955	28.74	50.00	21.26	9.000	L1	9.8
9.5720	28.39	50.00	21.61	9.000	L1	9.8
9.5765	28.54	50.00	21.46	9.000	L1	9.8
9.5900	28.27	50.00	21.73	9.000	L1	9.8
9.6733	27.98	50.00	22.02	9.000	L1	9.8



Figure 16: PCB Rev 0.7A+S.LSI [EUT+ NOTEBOOK PC] USB Data Communication with PC (from internal memory data), Line(N)





Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1545	48.15	65.75	17.60	9.000	N	9.6
0.1613	47.35	65.40	18.05	9.000	N	9.6
0.1838	46.29	64.31	18.02	9.000	N	9.6
0.1905	46.13	64.02	17.89	9.000	N	9.6
0.1973	45.42	63.73	18.31	9.000	N	9.6
0.2378	39.39	62.17	22.78	9.000	N	9.6
3.3598	35.28	56.00	20.72	9.000	N	9.7
3.4970	35.01	56.00	20.99	9.000	N	9.7
3.5960	34.66	56.00	21.34	9.000	N	9.7
3.6748	34.40	56.00	21.60	9.000	N	9.7
3.8210	33.33	56.00	22.67	9.000	N	9.7
3.8368	33.58	56.00	22.42	9.000	N	9.7
9.3898	36.20	60.00	23.80	9.000	N	9.8
9.4303	36.40	60.00	23.60	9.000	N	9.8
9.4753	36.58	60.00	23.42	9.000	N	9.8
9.4978	36.20	60.00	23.80	9.000	N	9.8
9.5293	36.28	60.00	23.72	9.000	N	9.8
9.6440	35.00	60.00	25.00	9.000	N	9.8

Frequency (MHz)	CAverage (dB $\mu$ V)	Limit (dB $\mu$ V)	Margin (dB)	Bandwidth	Line	Corr. (dB)
0.1883	34.20	54.11	19.91	9.000	N	9.6
0.2175	22.78	52.91	30.13	9.000	N	9.6
0.2468	27.99	51.87	23.88	9.000	N	9.6
0.2625	26.65	51.35	24.70	9.000	N	9.6
0.3075	25.72	50.04	24.32	9.000	N	9.6
3.2518	26.80	46.00	19.20	9.000	N	9.7
3.3598	26.67	46.00	19.33	9.000	N	9.7
3.4228	26.84	46.00	19.16	9.000	N	9.7
3.4948	26.37	46.00	19.63	9.000	N	9.7
3.5690	26.55	46.00	19.45	9.000	N	9.7
3.6343	25.94	46.00	20.06	9.000	N	9.7
3.6995	25.85	46.00	20.15	9.000	N	9.7
9.3898	28.21	50.00	21.79	9.000	N	9.8
9.3965	28.27	50.00	21.73	9.000	N	9.8
9.4348	28.36	50.00	21.64	9.000	N	9.8
9.4708	28.42	50.00	21.58	9.000	N	9.8
9.5203	28.28	50.00	21.72	9.000	N	9.8
9.5293	28.37	50.00	21.63	9.000	N	9.8



## 5.2 Radiated Emission

### 5.2.1 For Measurement Below 1 GHz

The test results of radiated emission provide the following information:

Used Test Standard	47 CFR PART 15 Subpart B Class B ANSI C63.4-2014
Frequency Range	30 MHz to 1 000 MHz
Detector	Quasi-Peak
Bandwidth	120 kHz (6 dB)
Measurement Distance	3 m
Test Site	3 m Semi Anechoic Chamber #1
Temperature	min. 19.2 °C, max. 21.9 °C
Humidity	min. 32.8 % R.H., max. 38.6 % R.H.
Test Date	December 09, 2021 - December 15, 2021

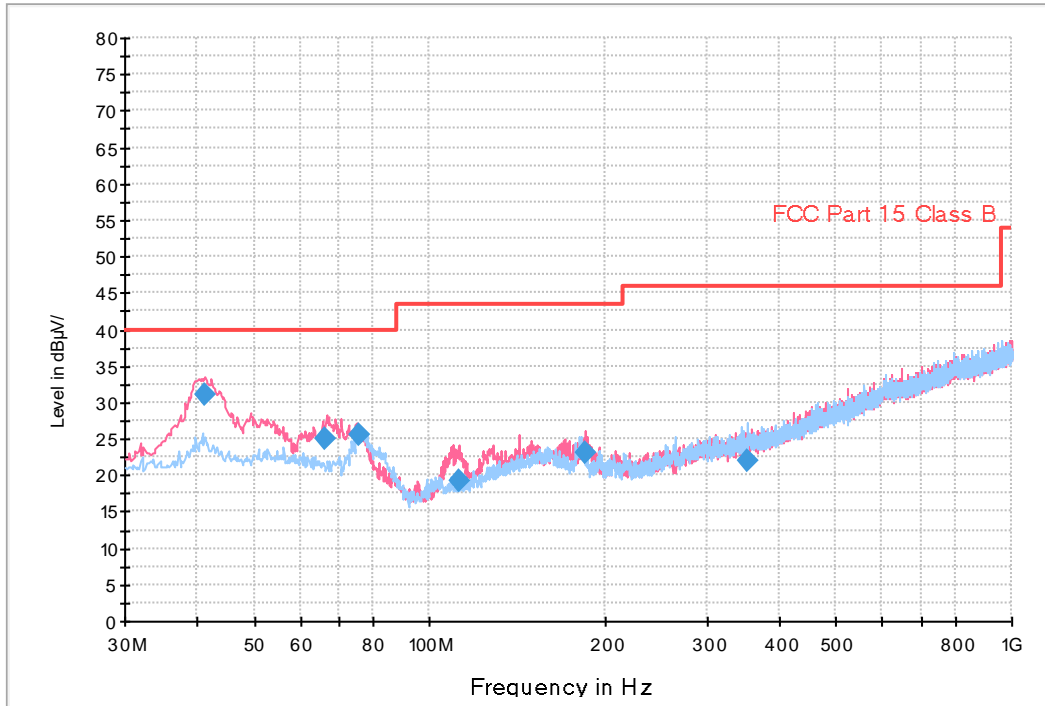
#### - Calculation Formula:

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



Figure 17: PCB Rev 0.7A+Renesas [EUT+TA] Rear Camera

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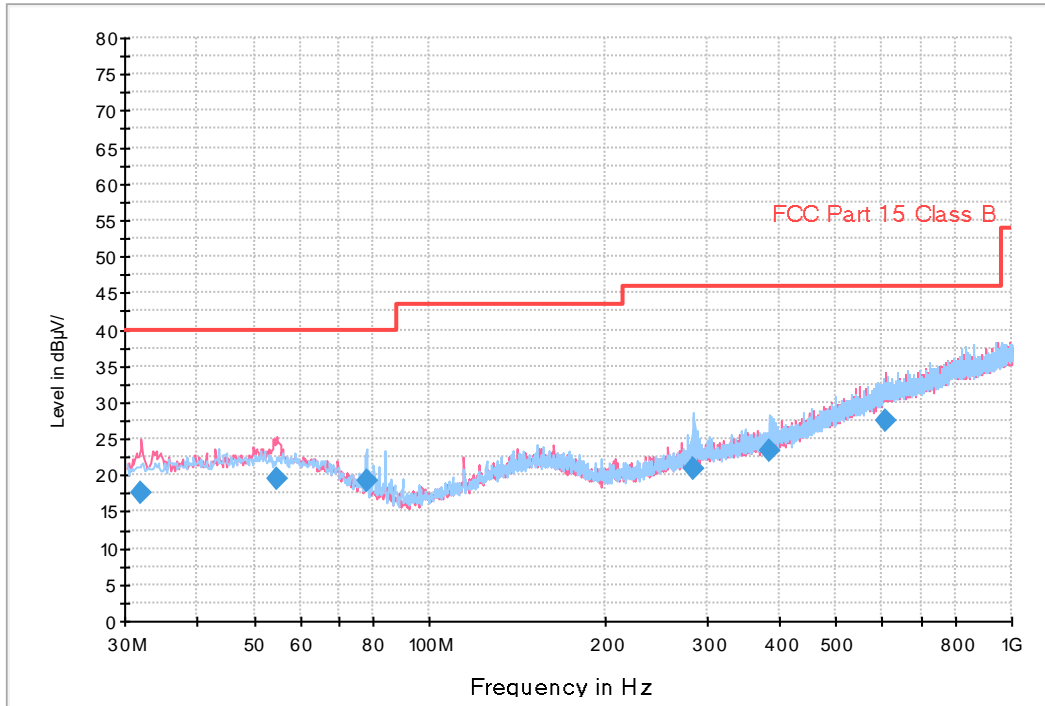
Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
41.2407	30.9	100.0	V	138.0	19.4	9.1	40.0
66.4558	25.0	116.7	V	53.0	18.7	15.0	40.0
75.9749	25.6	100.0	V	226.0	16.6	14.4	40.0
112.2484	19.1	100.0	V	135.0	16.3	24.4	43.5
184.9329	23.0	100.0	V	176.0	17.9	20.5	43.5
352.9049	22.0	100.0	H	198.0	21.7	24.0	46.0





Figure 18: PCB Rev 0.7A+Renesas [EUT+ Earphone] Front Camera

FCC PART 15 CLASS B

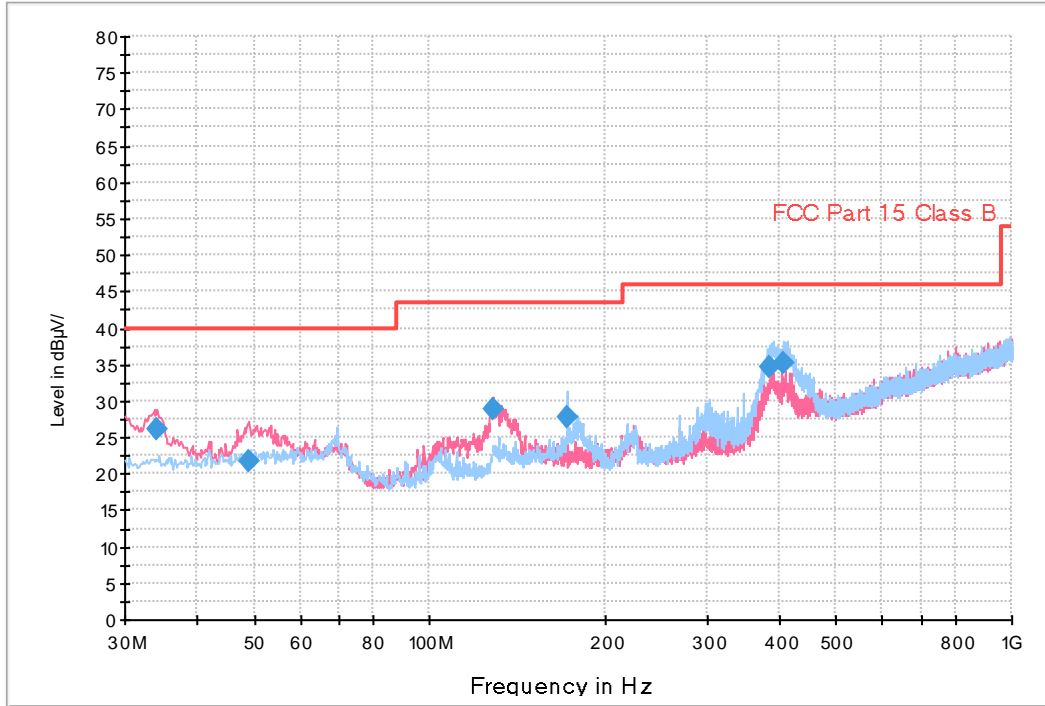


Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
32.0483	17.5	225.1	V	239.0	18.6	22.5	40.0
54.8623	19.5	116.9	V	126.0	19.8	20.5	40.0
77.9485	19.2	306.8	H	335.0	16.1	20.8	40.0
285.0123	20.9	100.0	H	195.0	20.0	25.1	46.0
385.0958	23.2	100.0	H	0.0	22.5	22.8	46.0
609.0179	27.6	225.0	V	217.0	27.5	18.4	46.0



Figure 19: PCB Rev 0.7A+Renesas [EUT+LED Monitor] Video + Audio playback from internal memory + DisplayPort

FCC PART 15 CLASS B

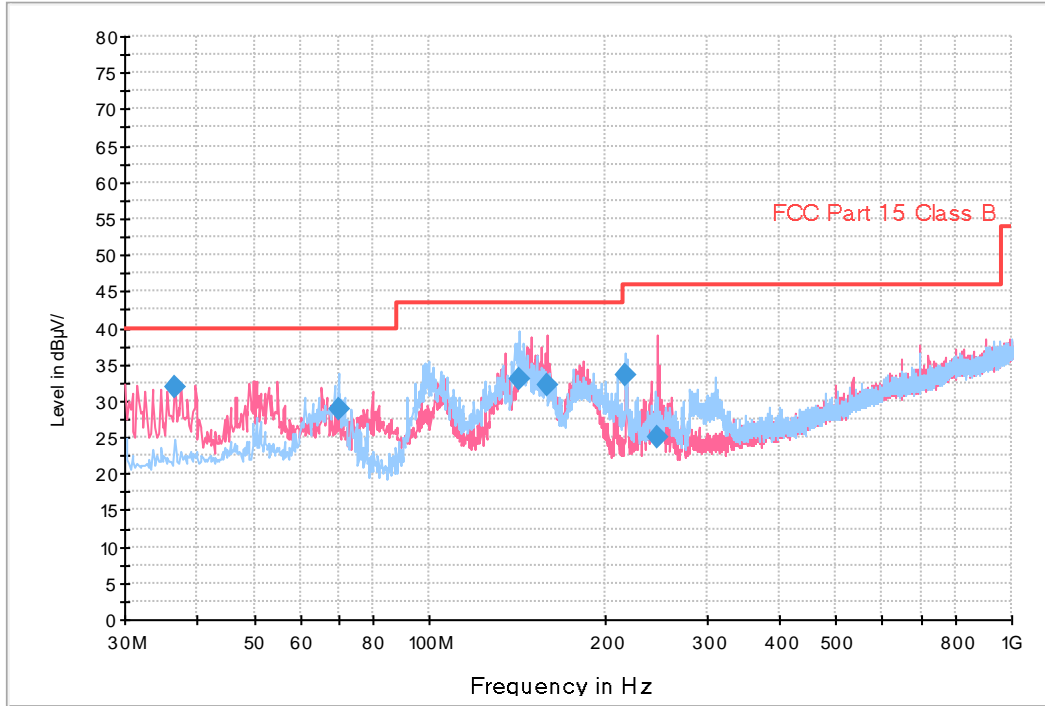


Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
34.1450	26.0	100.0	V	100.0	18.8	14.0	40.0
48.8433	21.6	192.8	V	268.0	20.0	18.4	40.0
128.9344	29.0	100.0	V	326.0	18.0	14.5	43.5
172.6634	27.8	116.7	H	180.0	18.8	15.7	43.5
384.4726	34.6	100.0	H	4.0	22.5	11.4	46.0
406.3515	35.1	100.0	H	0.0	23.0	10.9	46.0



Figure 20: PCB Rev 0.7A+Renesas [EUT+NOTEBOOK PC] USB Data Communication with PC (from internal memory data)

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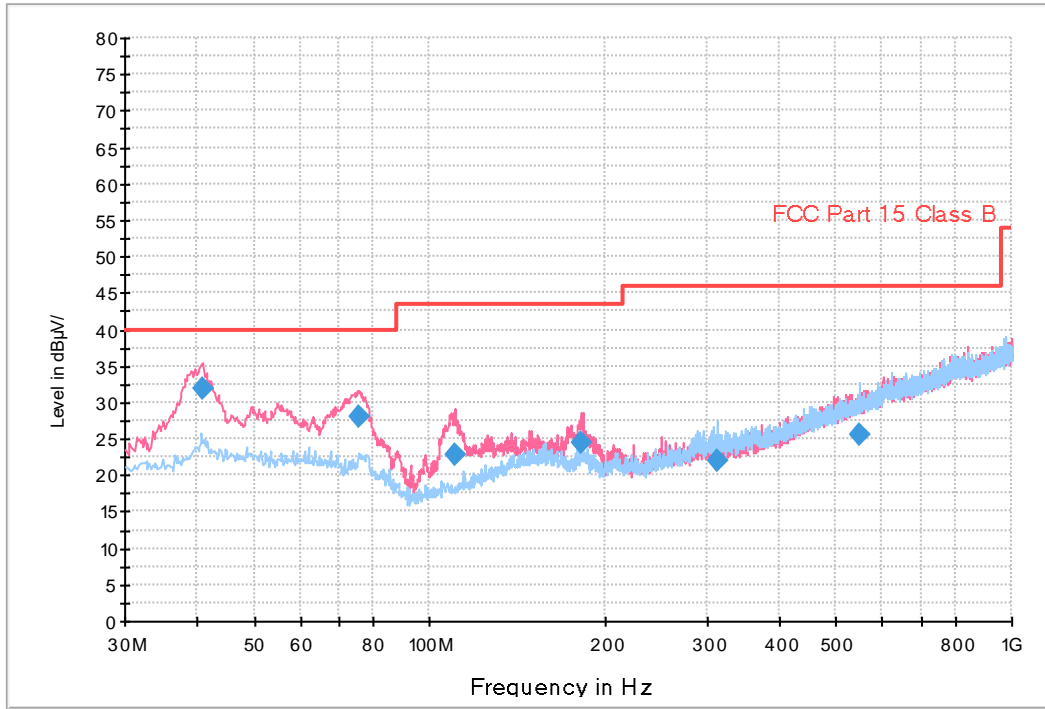


Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
36.4665	31.8	100.0	V	232.0	19.0	8.2	40.0
69.7738	29.0	325.0	H	200.0	18.3	11.0	40.0
142.7796	33.0	207.8	H	80.0	19.3	10.5	43.5
158.9950	32.2	100.0	V	230.0	19.7	11.3	43.5
216.8916	33.6	125.2	H	318.0	17.4	12.4	46.0
245.9482	25.0	100.0	V	226.0	18.6	21.0	46.0



Figure 21: PCB Rev 0.7A+S.LSI [EUT+TA] Rear Camera

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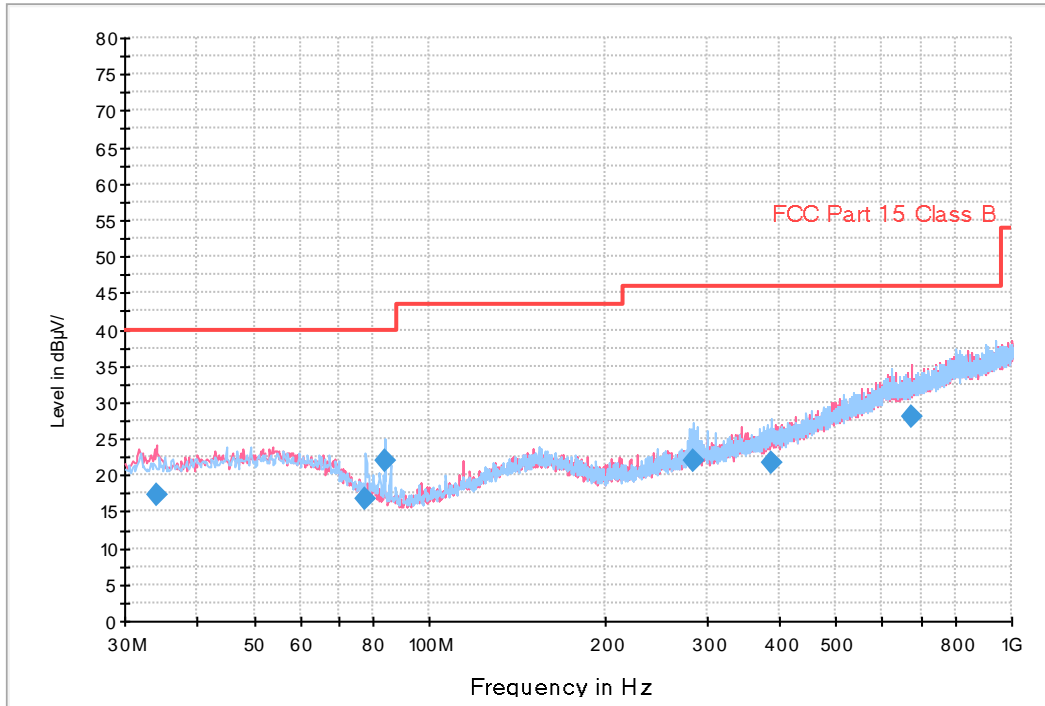


Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
40.7508	32.0	100.0	V	72.0	19.4	8.0	40.0
75.9192	28.0	100.0	V	0.0	16.7	12.0	40.0
110.7446	22.8	100.0	V	111.0	16.1	20.7	43.5
182.1400	24.5	100.0	V	112.0	18.1	19.0	43.5
311.7198	22.0	100.0	H	63.0	20.8	24.0	46.0
548.2716	25.6	100.0	H	134.0	26.4	20.4	46.0



Figure 22: PCB Rev 0.7A+S.LSI [EUT+ Earphone] Front Camera

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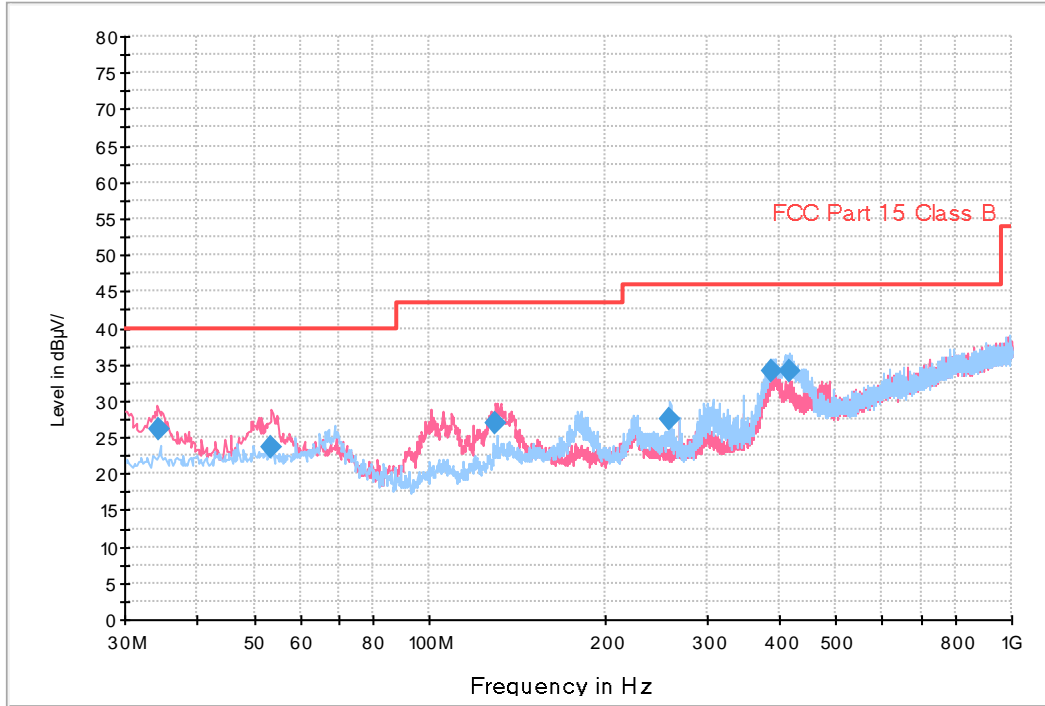


Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
33.9937	17.3	291.8	V	136.0	18.8	22.7	40.0
77.8250	16.7	225.1	H	132.0	16.2	23.3	40.0
83.9054	22.0	225.1	H	132.0	15.0	18.0	40.0
284.2837	22.1	100.0	H	40.0	19.9	23.9	46.0
387.0236	21.7	117.8	H	317.0	22.5	24.3	46.0
672.9229	28.1	325.1	V	337.0	28.3	17.9	46.0



Figure 23: PCB Rev 0.7A+S.LSI [EUT+LED Monitor] Video + Audio playback from internal memory + DisplayPort

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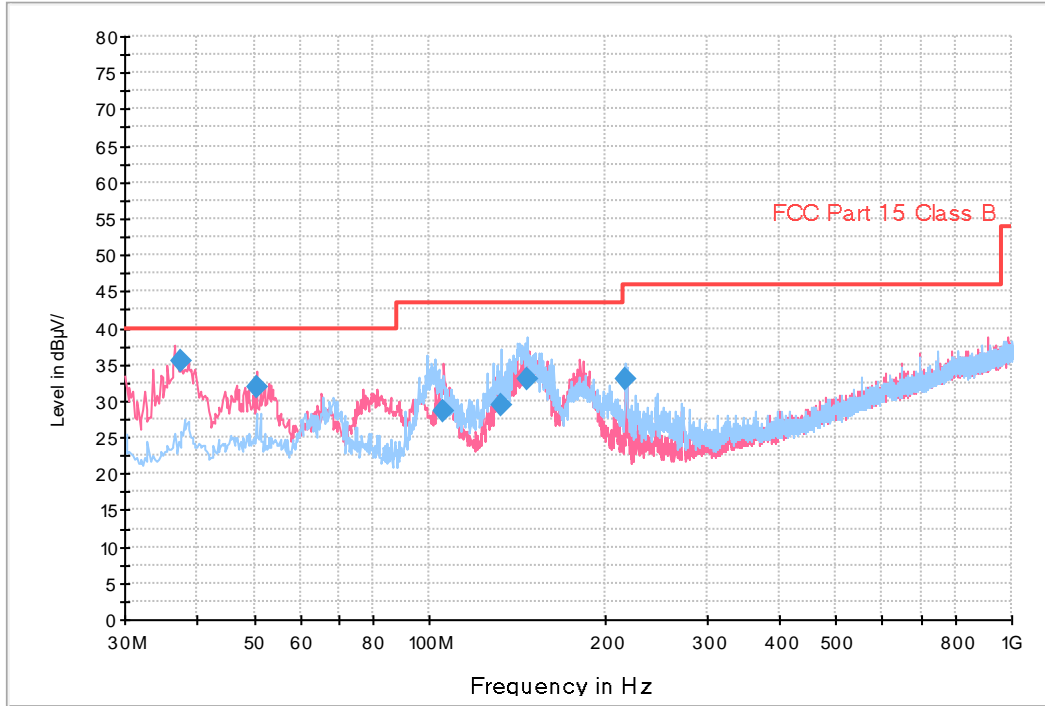


Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
34.2128	26.0	100.0	V	24.0	18.8	14.0	40.0
53.6165	23.8	100.0	V	168.0	19.9	16.2	40.0
129.9195	27.0	100.0	V	240.0	18.1	16.5	43.5
259.2997	27.5	125.2	H	26.0	19.1	18.5	46.0
386.3549	34.0	100.0	H	14.0	22.5	12.0	46.0
413.8935	34.1	100.0	H	4.0	23.2	11.9	46.0



Figure 24: PCB Rev 0.7A+S.LSI [EUT+NOTEBOOK PC] USB Data Communication with PC (from internal memory data)

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Frequency (MHz)	Quasi Peak (dBµV/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
37.5000	35.5	100.0	V	108.0	19.1	4.5	40.0
50.5480	32.0	174.8	V	153.0	20.0	8.0	40.0
105.9789	28.5	100.0	V	326.0	15.7	15.0	43.5
132.7710	29.5	225.0	H	330.0	18.4	14.0	43.5
147.5616	33.0	199.8	H	86.0	19.4	10.5	43.5
216.9825	33.0	116.7	H	313.0	17.5	13.0	46.0



### 5.2.2 For Measurement Above 1 GHz

The test results of radiated emission provide the following information:

Used Test Standard	47 CFR PART 15 Subpart B Class B ANSI C63.4-2014
Detector	Peak (Bandwidth: 1 MHz) CISPR-Average (Bandwidth: 1 MHz)
Highest Frequency	5 895 MHz
Tested Frequency Range	1 GHz to 30 GHz
Measurement Distance	3 m
Test Site	3 m Semi Anechoic Chamber #1
Temperature	min. 19.2 °C, max. 21.9 °C
Humidity	min. 33.1 % R.H., max. 36.8 % R.H.
Test Date	December 13, 2021 - December 14, 2021

#### - Calculation Formula:

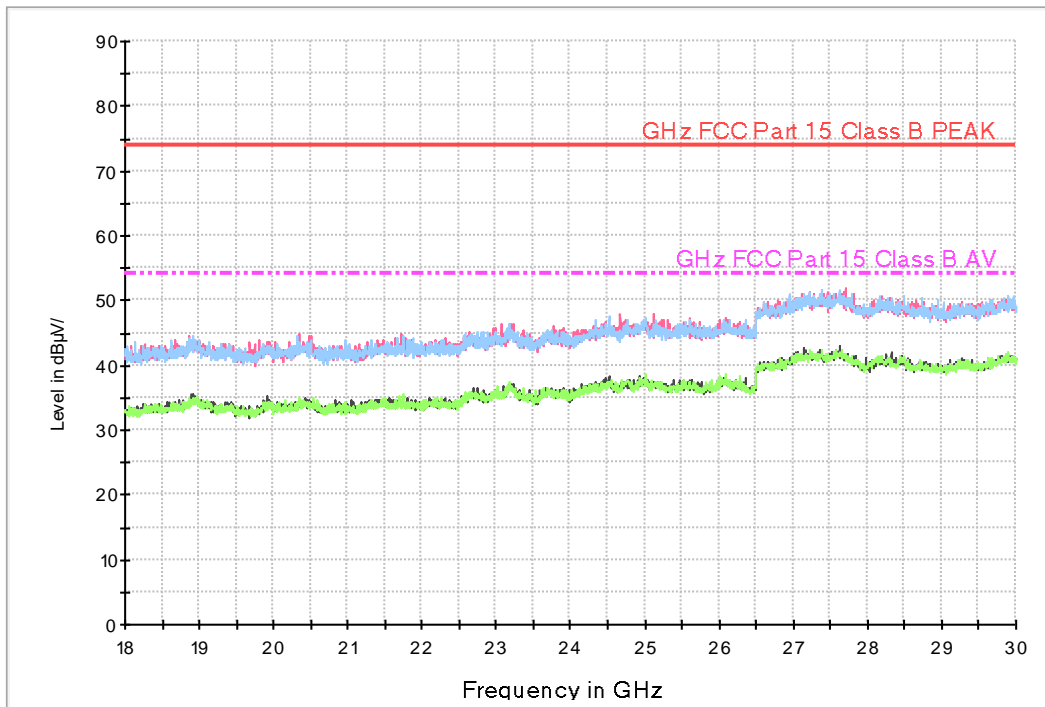
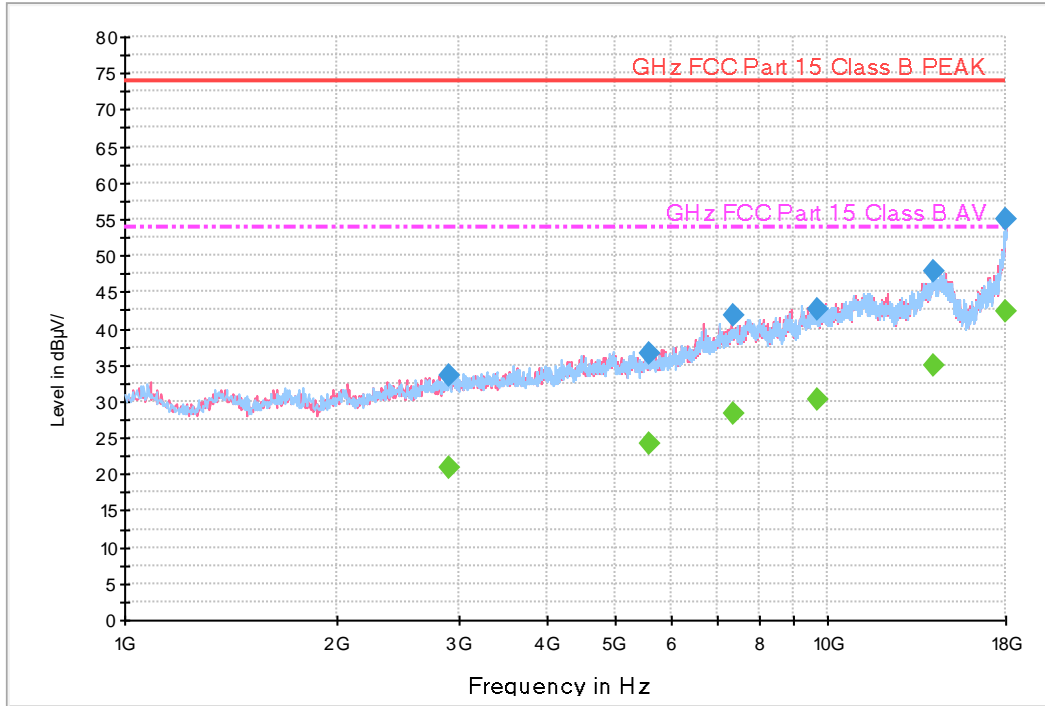
1. POL. H = Horizontal, POL. V = Vertical
2. Peak or CAverage = Reading (Receiver Reading) + Corr.
3. Corr. (Correction Factor) = Antenna Factor+ Cable Loss –Amplifier Gain
4. Margin = Limit - Peak or CAverage





Figure 25: PCB Rev 0.7A+Renesas [EUT+TA] Rear Camera

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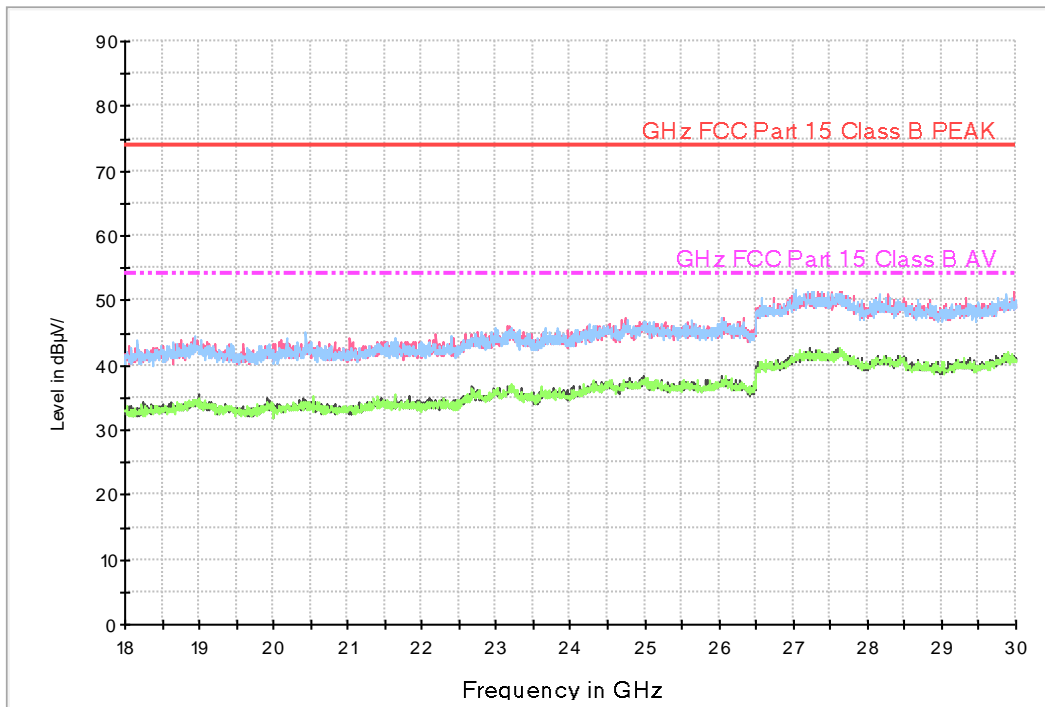
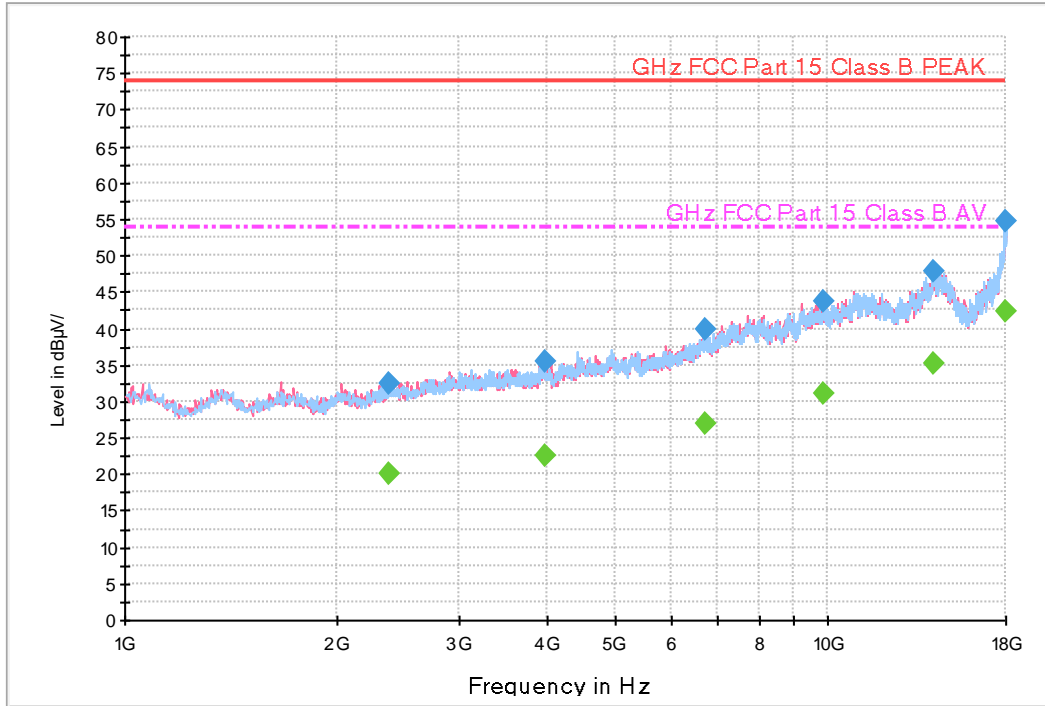
Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
2904.8700	33.6	248.4	V	121.0	-21.8	40.4	74.0
5596.7000	36.6	248.9	H	50.0	-15.8	37.4	74.0
7349.6650	41.7	350.0	V	186.0	-11.1	32.3	74.0
9709.1800	42.7	205.4	V	0.0	-8.0	31.3	74.0
1 4199.3850	47.8	186.4	H	100.0	-0.2	26.2	74.0
1 7977.1341	55.0	149.5	V	91.0	9.2	19.0	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
2904.8700	21.0	248.4	V	121.0	-21.8	33.0	54.0
5596.7000	24.3	248.9	H	50.0	-15.8	29.7	54.0
7349.6650	28.4	350.0	V	186.0	-11.1	25.6	54.0
9709.1800	30.3	205.4	V	0.0	-8.0	23.7	54.0
1 4199.3850	35.0	186.4	H	100.0	-0.2	19.0	54.0
1 7977.1341	42.3	149.5	V	91.0	9.2	11.7	54.0



Figure 26: PCB Rev 0.7A+Renesas [EUT+ Earphone] Front Camera

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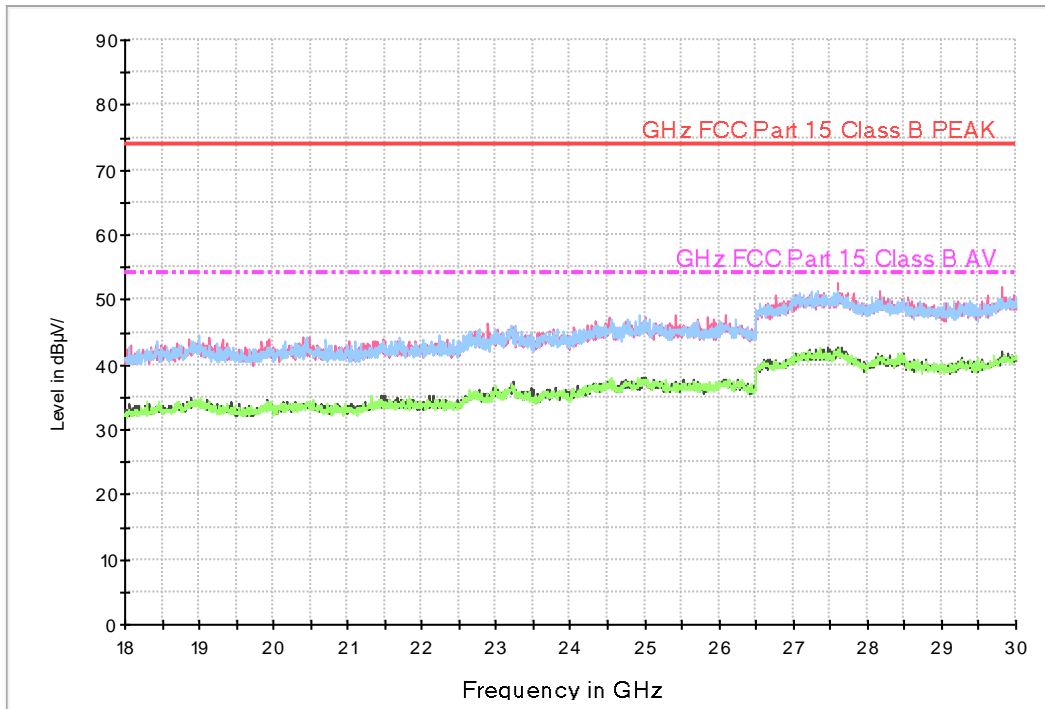
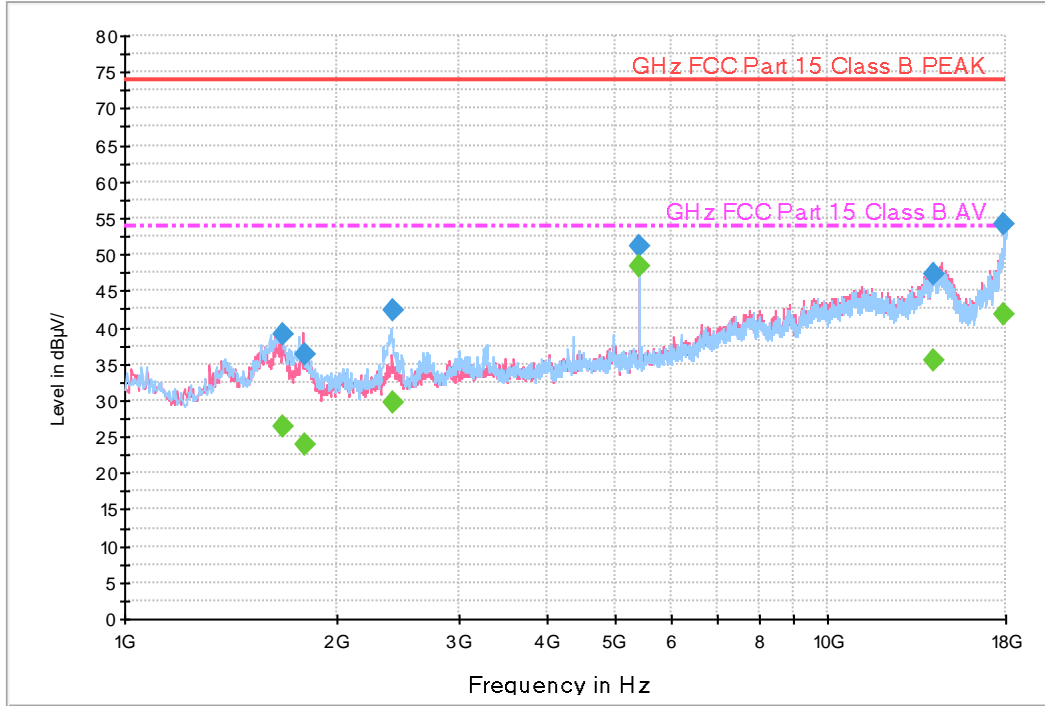
Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
2385.8000	32.4	249.4	V	349.0	-23.8	41.6	74.0
3960.8250	35.6	345.5	V	212.0	-19.2	38.4	74.0
6729.5600	39.8	306.4	V	270.0	-12.7	34.2	74.0
9895.8750	43.7	111.6	H	0.0	-7.6	30.3	74.0
1 4180.1100	47.8	149.5	V	223.0	-0.2	26.2	74.0
1 7999.6749	54.6	150.0	V	37.0	9.6	19.4	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
2385.8000	20.0	249.4	V	349.0	-23.8	34.0	54.0
3960.8250	22.6	345.5	V	212.0	-19.2	31.4	54.0
6729.5600	26.8	306.4	V	270.0	-12.7	27.2	54.0
9895.8750	31.1	111.6	H	0.0	-7.6	22.9	54.0
1 4180.1100	35.1	149.5	V	223.0	-0.2	18.9	54.0
1 7999.6749	42.4	150.0	V	37.0	9.6	11.6	54.0



Figure 27: PCB Rev 0.7A+Renesas [EUT+LED Monitor] Video + Audio playback from internal memory + DisplayPort

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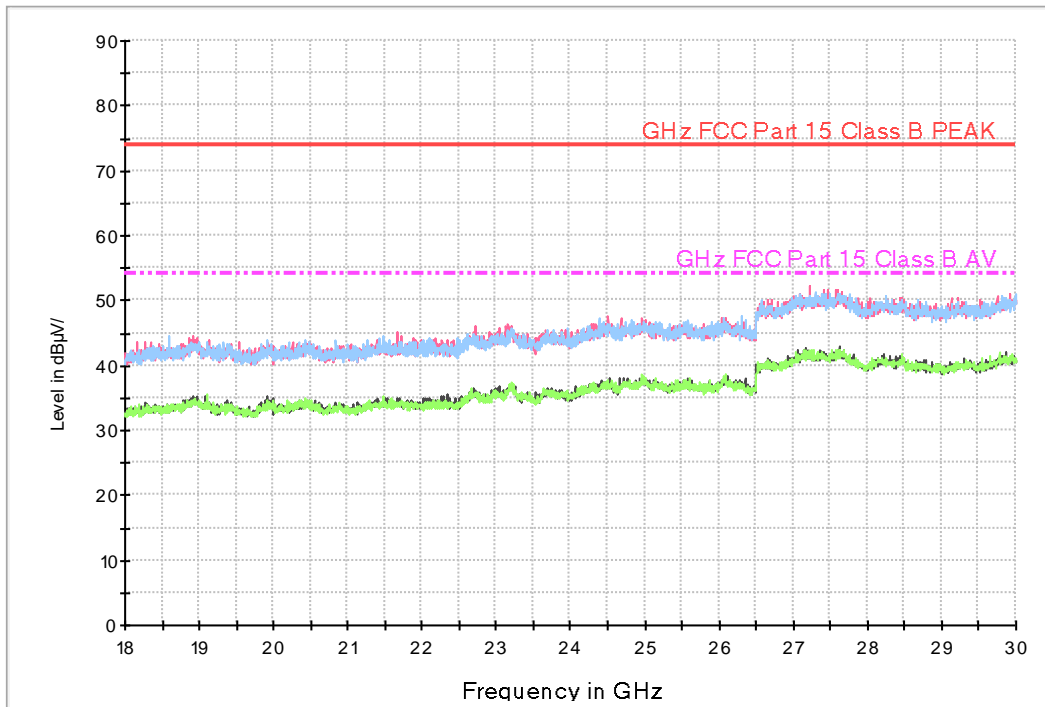
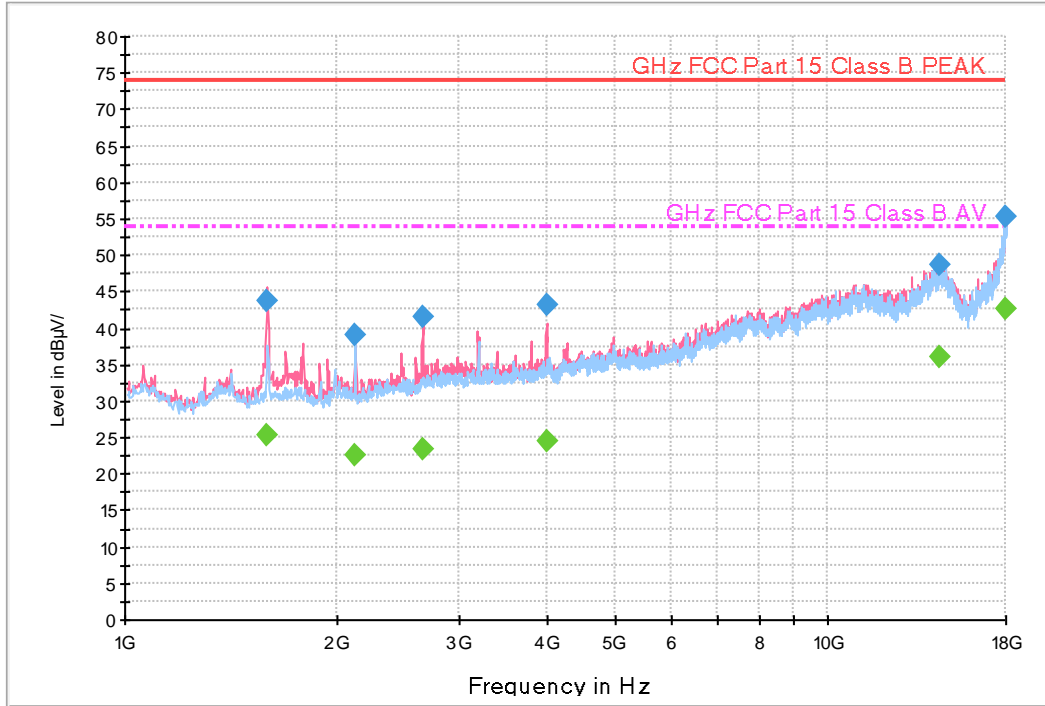
Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1676.2200	38.9	319.5	H	256.0	-26.3	35.1	74.0
1803.8000	36.4	303.7	V	255.0	-26.0	37.6	74.0
2411.8850	42.3	100.0	H	143.0	-23.7	31.7	74.0
5399.8600	51.0	321.5	H	126.0	-16.1	23.0	74.0
1 4171.4600	47.4	147.7	H	118.0	-0.2	26.6	74.0
1 7923.2750	54.2	249.9	V	169.0	8.4	19.8	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1676.2200	26.4	319.5	H	256.0	-26.3	27.6	54.0
1803.8000	23.8	303.7	V	255.0	-26.0	30.2	54.0
2411.8850	29.6	100.0	H	143.0	-23.7	24.4	54.0
5399.8600	48.4	321.5	H	126.0	-16.1	5.6	54.0
1 4171.4600	35.4	147.7	H	118.0	-0.2	18.6	54.0
1 7923.2750	41.9	249.9	V	169.0	8.4	12.1	54.0



Figure 28: PCB Rev 0.7A+Renesas [EUT+NOTEBOOK PC] USB Data Communication with PC (from internal memory data)

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Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1594.9200	43.8	316.7	V	1.0	-26.5	30.2	74.0
2130.2050	39.0	100.0	V	187.0	-24.9	35.0	74.0
2655.6200	41.6	217.4	V	313.0	-22.8	32.4	74.0
3996.4750	43.3	212.4	V	1.0	-19.1	30.7	74.0
1 4459.0500	48.6	213.6	V	2.0	0.4	25.4	74.0
1 7963.9450	55.3	249.4	V	338.0	9.0	18.7	74.0

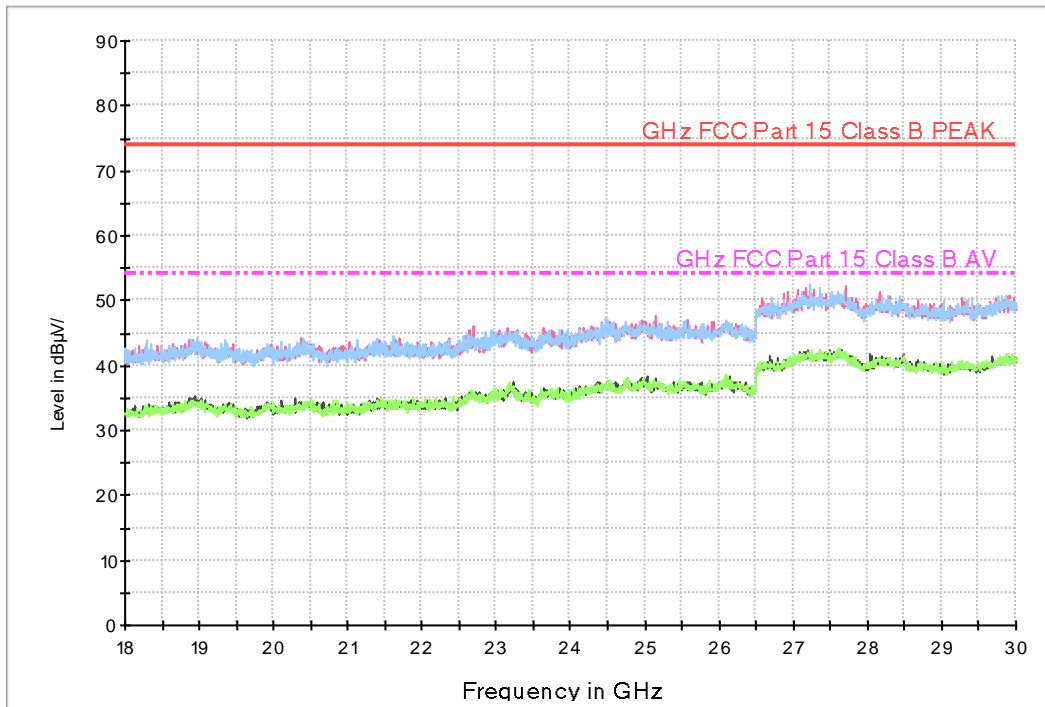
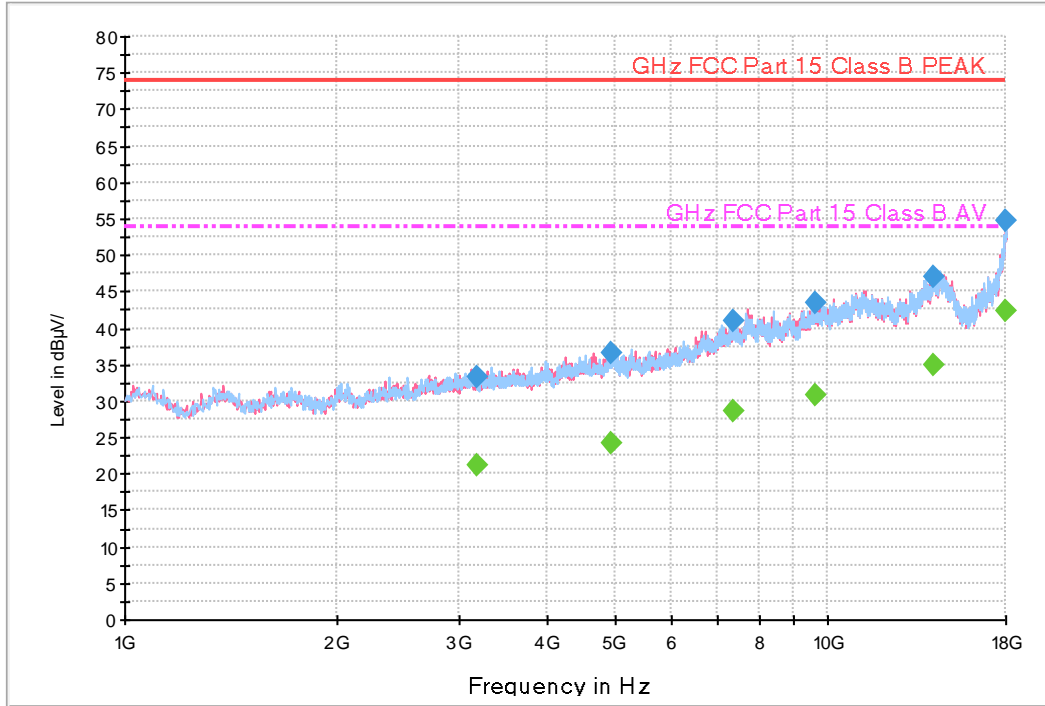
Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1594.9200	25.4	316.7	V	1.0	-26.5	28.6	54.0
2130.2050	22.4	100.0	V	187.0	-24.9	31.6	54.0
2655.6200	23.5	217.4	V	313.0	-22.8	30.5	54.0
3996.4750	24.5	212.4	V	1.0	-19.1	29.5	54.0
1 4459.0500	36.0	213.6	V	2.0	0.4	18.0	54.0
1 7963.9450	42.5	249.4	V	338.0	9.0	11.5	54.0





Figure 29: PCB Rev 0.7A+S.LSI [EUT+TA] Rear Camera

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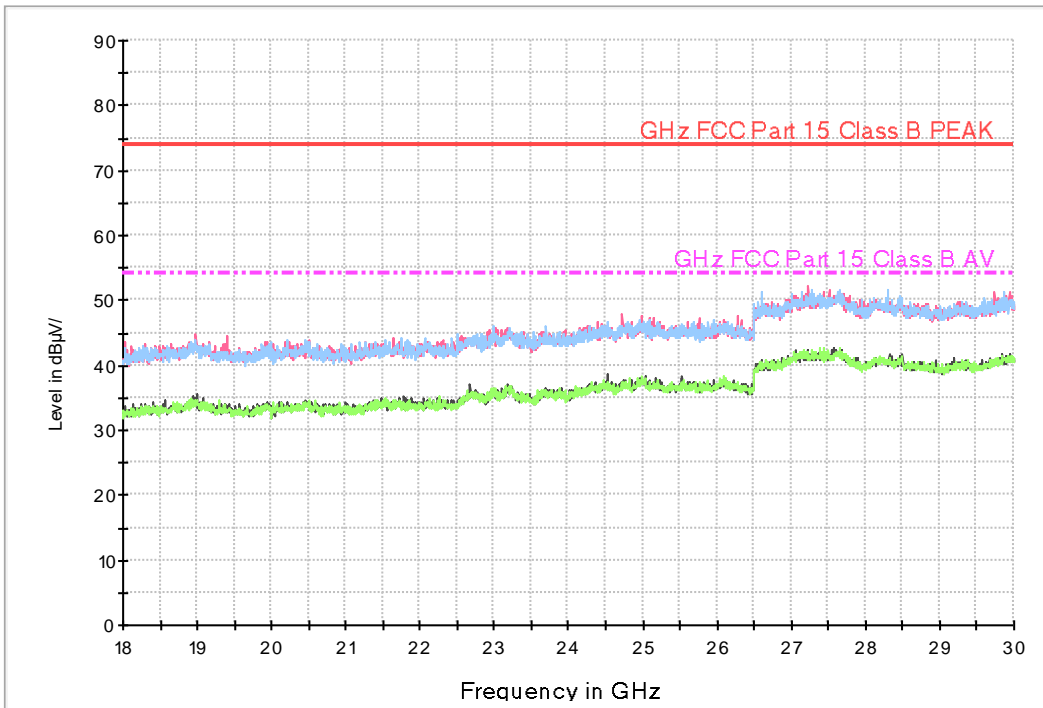
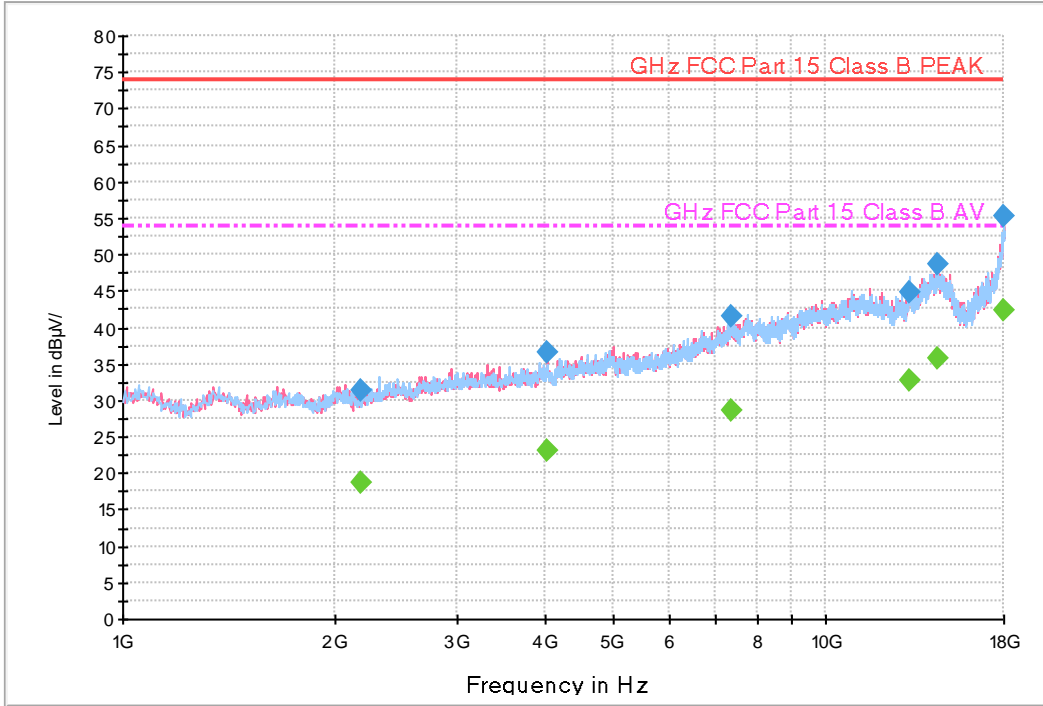
Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
3184.8200	33.2	138.7	H	0.0	-21.1	40.8	74.0
4950.4600	36.6	249.7	H	185.0	-16.6	37.4	74.0
7349.8850	41.0	249.9	H	349.0	-11.1	33.0	74.0
9652.0550	43.4	230.4	H	295.0	-8.1	30.6	74.0
1 4240.0700	47.1	274.4	V	184.0	-0.1	26.9	74.0
1 7976.2750	54.8	199.4	V	0.0	9.2	19.2	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
3184.8200	21.1	138.7	H	0.0	-21.1	32.9	54.0
4950.4600	24.1	249.7	H	185.0	-16.6	29.9	54.0
7349.8850	28.5	249.9	H	349.0	-11.1	25.5	54.0
9652.0550	30.8	230.4	H	295.0	-8.1	23.2	54.0
1 4240.0700	34.8	274.4	V	184.0	-0.1	19.2	54.0
1 7976.2750	42.2	199.4	V	0.0	9.2	11.8	54.0



Figure 30: PCB Rev 0.7A+S.LSI [EUT+ Earphone] Front Camera

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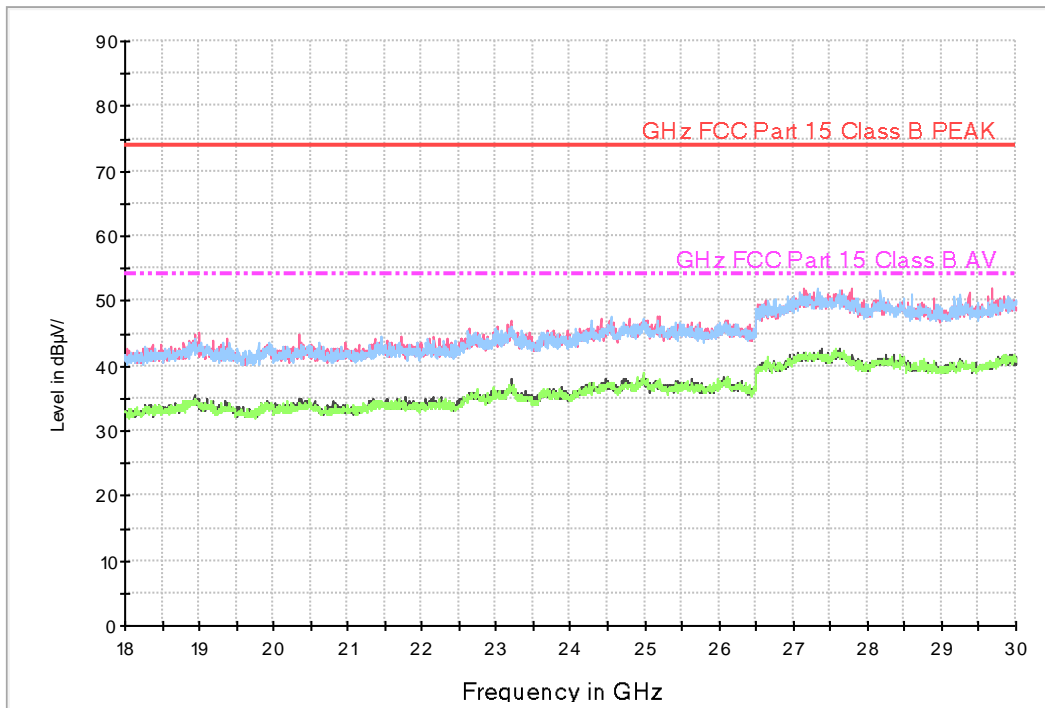
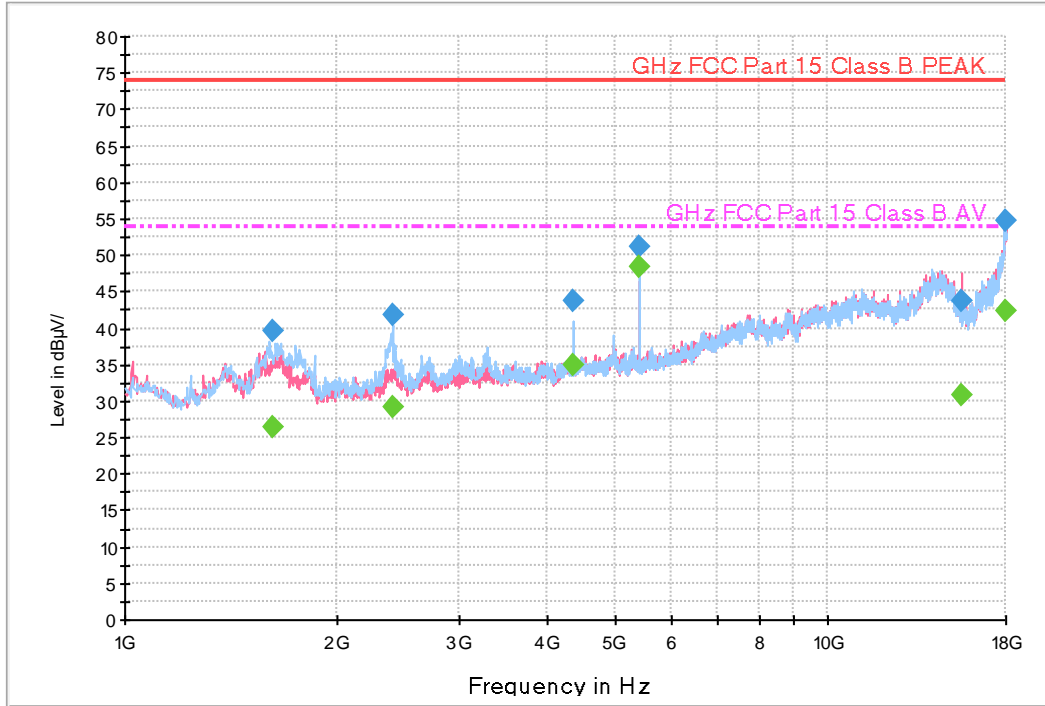
Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
2178.3700	31.4	138.7	V	252.0	-24.7	42.6	74.0
4014.2450	36.4	260.4	V	150.0	-19.0	37.6	74.0
7350.5100	41.5	299.4	V	292.0	-11.1	32.5	74.0
1 3189.9400	44.8	150.0	H	68.0	-2.7	29.2	74.0
1 4480.3500	48.7	243.4	V	219.0	0.4	25.3	74.0
1 7996.1312	55.2	150.0	V	280.0	9.5	18.8	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
2178.3700	18.8	138.7	V	252.0	-24.7	35.2	54.0
4014.2450	23.0	260.4	V	150.0	-19.0	31.0	54.0
7350.5100	28.5	299.4	V	292.0	-11.1	25.5	54.0
1 3189.9400	32.6	150.0	H	68.0	-2.7	21.4	54.0
1 4480.3500	35.7	243.4	V	219.0	0.4	18.3	54.0
1 7996.1312	42.4	150.0	V	280.0	9.5	11.6	54.0



Figure 31: PCB Rev 0.7A+S.LSI [EUT+LED Monitor] Video + Audio playback from internal memory + DisplayPort

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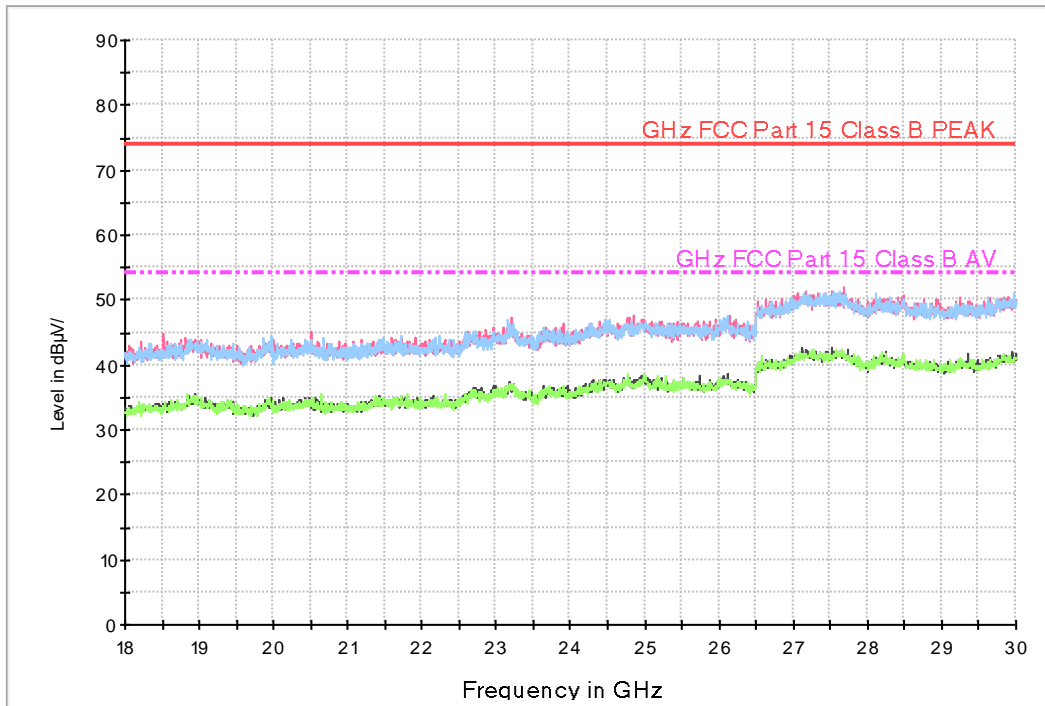
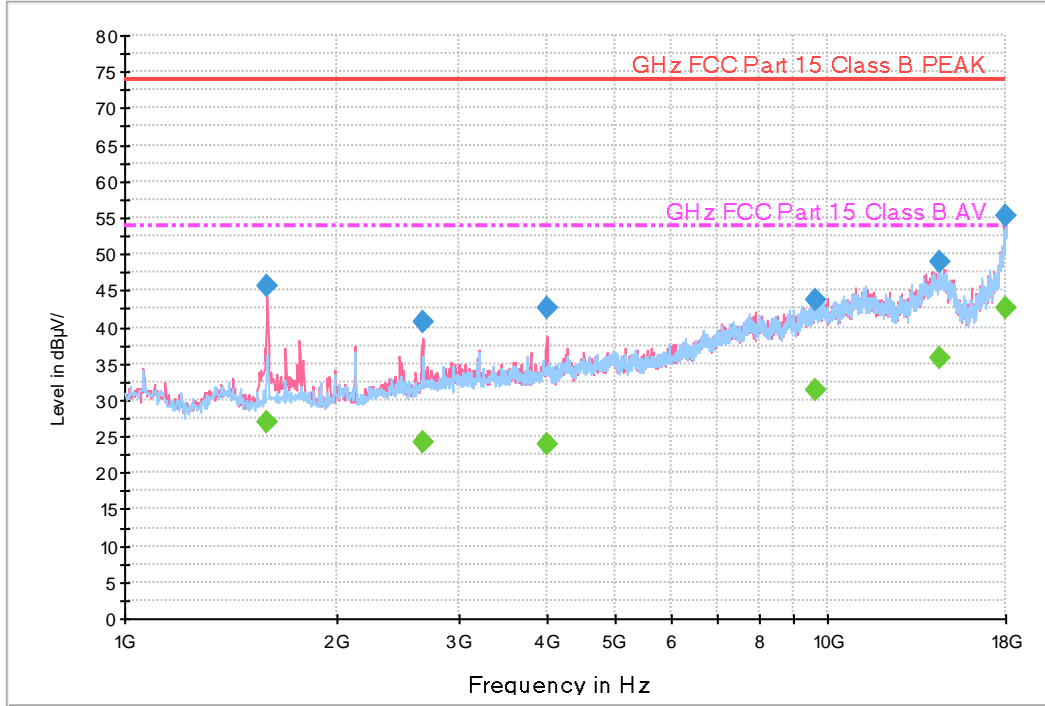
Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1621.5000	39.6	159.6	H	265.0	-26.5	34.4	74.0
2410.3450	41.8	100.0	H	144.0	-23.7	32.2	74.0
4349.4050	43.7	228.4	H	131.0	-18.0	30.3	74.0
5400.0000	51.1	333.6	H	134.0	-16.1	22.9	74.0
1 5606.9200	43.7	226.4	V	356.0	-3.0	30.3	74.0
1 7993.1386	54.7	248.4	V	221.0	9.5	19.3	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1621.5000	26.3	159.6	H	265.0	-26.5	27.7	54.0
2410.3450	29.2	100.0	H	144.0	-23.7	24.8	54.0
4349.4050	35.0	228.4	H	131.0	-18.0	19.0	54.0
5400.0000	48.3	333.6	H	134.0	-16.1	5.7	54.0
1 5606.9200	30.9	226.4	V	356.0	-3.0	23.1	54.0
1 7993.1386	42.4	248.4	V	221.0	9.5	11.6	54.0



Figure 32: PCB Rev 0.7A+S.LSI [EUT+NOTEBOOK PC] USB Data Communication with PC (from internal memory data)

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Frequency (MHz)	Peak (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1597.0850	45.6	199.5	V	212.0	-26.5	28.4	74.0
2658.0550	40.8	293.5	V	38.0	-22.8	33.2	74.0
3988.3600	42.6	235.4	V	1.0	-19.1	31.4	74.0
9627.1900	43.6	149.7	V	237.0	-8.1	30.4	74.0
1 4482.2850	48.8	100.0	H	67.0	0.4	25.2	74.0
1 7994.0025	55.2	149.5	V	11.0	9.5	18.8	74.0

Frequency (MHz)	CAverage (dB $\mu$ V/m)	Antenna Height (cm)	POL. (H/V)	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V/m)
1597.0850	26.8	199.5	V	212.0	-26.5	27.2	54.0
2658.0550	24.2	293.5	V	38.0	-22.8	29.8	54.0
3988.3600	23.8	235.4	V	1.0	-19.1	30.2	54.0
9627.1900	31.2	149.7	V	237.0	-8.1	22.8	54.0
1 4482.2850	35.8	100.0	H	67.0	0.4	18.2	54.0
1 7994.0025	42.5	149.5	V	11.0	9.5	11.5	54.0





## 6. CONCLUSION

The data collected shows that the **Product Name: Mobile Phone and Model Name: SM-S901B/DS** complies with §15.107 and §15.109 of the FCC rules.



## 7. APPENDIX A. TEST SETUP PHOTO

Please refer to EMI Test Setup Photo and test setup photo file no. as follows;

Rev. No.	Issue Date	File No.
0	December 16, 2021	HCT-EM-2112-FC002-P

End of report