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Report No.: 1411RSU01405
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MEASUREMENT REPORT

FCC PART 15B

FCC ID: 2AAA6S515
APPLICANT: SENWA MEXICO, S.A.DE C.V

Application Type: Certification
Product: S515
Model No.: S515
Brand Name: SENWA
FCC Classification: FCC Class B Digital Device (JBP)
FCC Rule Part(s): FCC Part 15 Subpart B
Test Procedure(s): ANSI C63.4: 2009
Test Date: Nov. 13 ~ 24, 2014

Reviewed By : Robin Wu
(Robin Wu)
Approved By : Marlin Chen
(Marlin Chen)



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2009. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date
1411RSU01405	Rev. 01	Initial report	12-03-2014

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§2.1033 General Information

Applicant:	SENWA MEXICO, S.A.DE C.V
Applicant Address:	Av. Javier Barros Sierra 540,Torre I, Planta 5; COL. LOMAS DE SANTA FE DELEGACION ALVARO OBREGON C.P. 01210 MEXICO,DISTRITO FEDERAL
Manufacturer:	SHEN ZHEN IMO ELECTRONIC TECHENLOGY CO., LTD
Manufacturer Address:	A807 Haisong Building, 9 Tairan Road, Che Kung Temple, Futian District, Shenzhen
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT FCC Registration No.:	809388
Model No.:	S515
FCC ID:	2AAA6S515
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	FCC Class B Digital Device (JBP)

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 809388) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.



1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	S515
Model No.	S515
Brand Name	SENWA
Wi-Fi	
Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462 MHz 802.11n-HT40: 2422 ~ 2452 MHz
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11b: 1/2/5.5/11 Mbps 802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11n: up to 150 Mbps
Bluetooth (1x, EDR, BLE)	
Bluetooth Frequency	2402~2480MHz
Bluetooth Version	V3.0 + HS, v4.0 LE
Type of modulation	FHSS
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps (8DPSK)

2G	
Support Band	GSM850/PCS1900
GPRS Type	Class B
GPRS Class	Class 12
Uplink	GSM850: 880~915 MHz PCS1900: 1710~1785 MHz
Downlink	GSM850: 925~960 MHz PCS1900: 1805~1880 MHz
Release Version	R99
Type of modulation	GMSK for GSM/GPRS
Antenna Gain	GSM850: 0dBi PCS1900: 1.0dBi
3G	
Support Band	WCDMA Band II/WCDMA Band V
Uplink	WCDMA Band II: 1920 ~ 1980MHz WCDMA Band V: 1920 ~ 1980MHz
Downlink	WCDMA Band I: 2110 ~ 2170MHz WCDMA Band V: 1920 ~ 1980MHz
Release Version	Rel-6
Antenna Gain	WCDMA Band II: 1.0dBi WCDMA Band V: 0dBi
GPS	
GPS Frequency	1575.42MHz
Type of modulation	BPSK

2.2. Device Capabilities

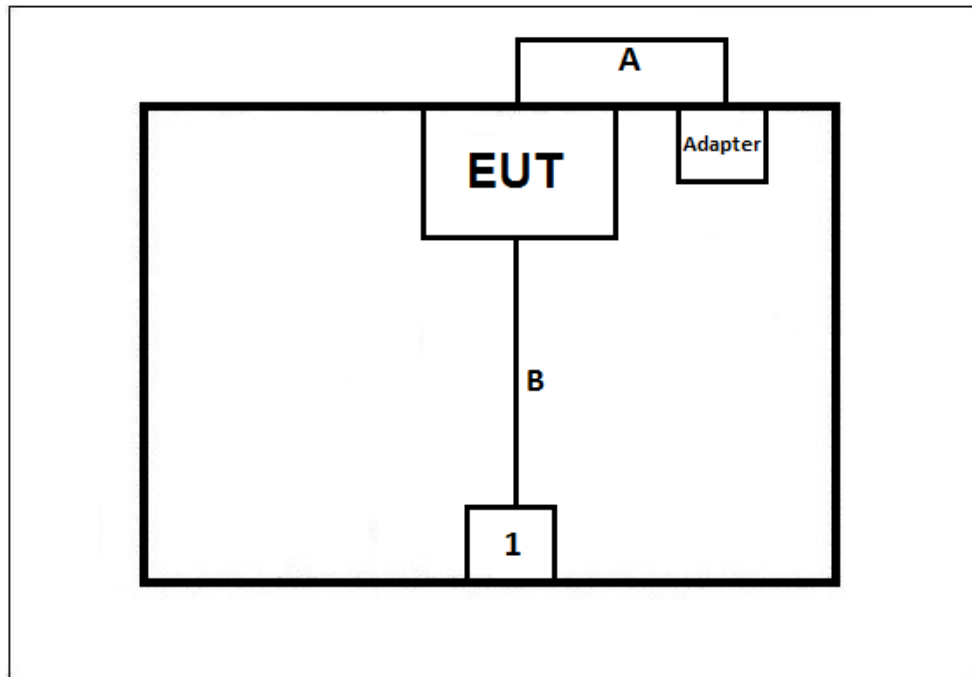
This device contains the following capabilities:

850/1900 GSM/GPRS, 1900 WCDMA/HSDPA/HSUPA, 802.11b/g/n WLAN (DTS), Bluetooth (1x, EDR, BLE)

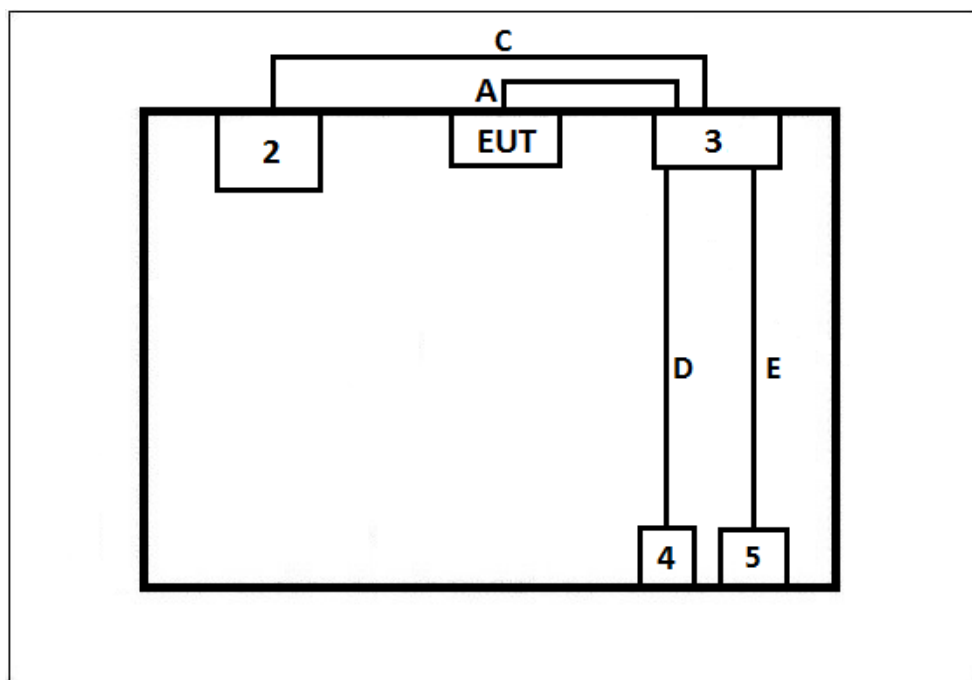
2.3. Test Configuration

The **S515 FCC ID: 2AAA6S515** was tested per the guidance FCC Part 15 Subpart B: 2014 and ANSI C63.4: 2009 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

Connection Diagram (Charging & Camera On)



Connection Diagram (USB Copy With Notebook)



Signal Cable Type		Signal cable Description		
A	USB Cable	Shielding, 1.0m		
B	Earphone Cable	Non-Shielding, 1.2m		
C	VGA Cable	Shielding, 1.5m		
D	USB Cable	Non-Shielding, 1.8m		
E	USB Cable	Non-Shielding, 1.8m		
Product	Manufacturer	Model No.	Power Cord	
1	Earphone	SENAWA	N/A	
2	LCD Monitor	DELL	Non-Shielded, 1.8m	
3	Notebook	Lenovo	Non-Shielded, 1.8m	
4	USB Mouse	DELL	N/A	
5	USB Keyboard	DELL	N/A	

2.4. Test Software

Not applicable.

2.5. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.6. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase.

However, when the device is so small wherein placement of the label with specified statement is not practical, only the trade name and FCC ID must be displayed on the device per Section 15.19(a)(5).

Please see attachment for FCC ID label and label location.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical Equipment in the Range of 9kHz to 40GHz (ANSI C63.4-2009) was used in the measurement of the **S515 FCC ID: 2AAA6S515**.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions is used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2009 at Clause 4.3.

Line conducted emissions test results are shown in Section 6.2.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. An MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 0.8 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beamwidth of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	101209	1 year	2015/11/07
Two-Line V-Network	R&S	ENV216	101683	1 year	2015/11/07
Two-Line V-Network	R&S	ENV216	101684	1 year	2015/11/07
Temperature/ Meter Humidity	Anymetre	TH101B	SR2-01	1 year	2015/11/14

Radiated Emission

Instrument	Manufacturer	Type No.	Serial No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY5144016A	1 year	2015/01/04
Preamplifier	MRT	AP01G18	1310002	1 year	2014/12/13
TRILOG Antenna	Schwarzbeck	VULB9162	9162-047	1 year	2015/11/08
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1167	1 year	2015/11/08
Temperature/Humidity Meter	Anymetre	TH101B	AC1-01	1 year	2015/11/14

5. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Conducted Emissions Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 150kHz~30MHz: $\pm 3.46\text{dB}$
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 30MHz ~ 1GHz: $\pm 4.18\text{dB}$ 1GHz ~ 18GHz: $\pm 4.76\text{dB}$

6. TEST RESULT

6.1. Summary

Product Name: S515
FCC ID: 2AAA6S515
FCC Classification: FCC Class B Digital Device (JBP)
Test Mode: Charging and Camera On; USB Copy with Notebook

Normative References	Test Description	Test Result
FCC Part 15 Subpart B: 2014 ANSI C63.4: 2009	Conducted Emission	Pass
FCC Part 15 Subpart B: 2014 ANSI C63.4: 2009	Radiated Emission	Pass

6.2. Conducted Emission Measurement

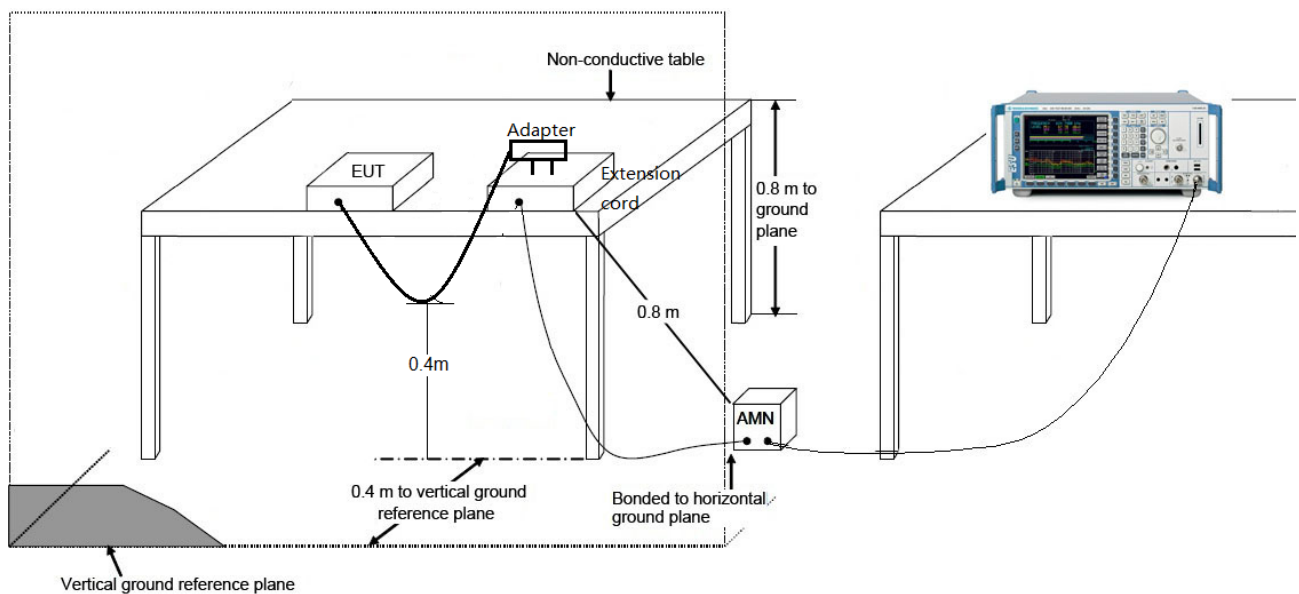
6.2.1. Test Limit

FCC Part 15.107 Limits		
Frequency (MHz)	QP (dB μ V)	AV (dB μ V)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

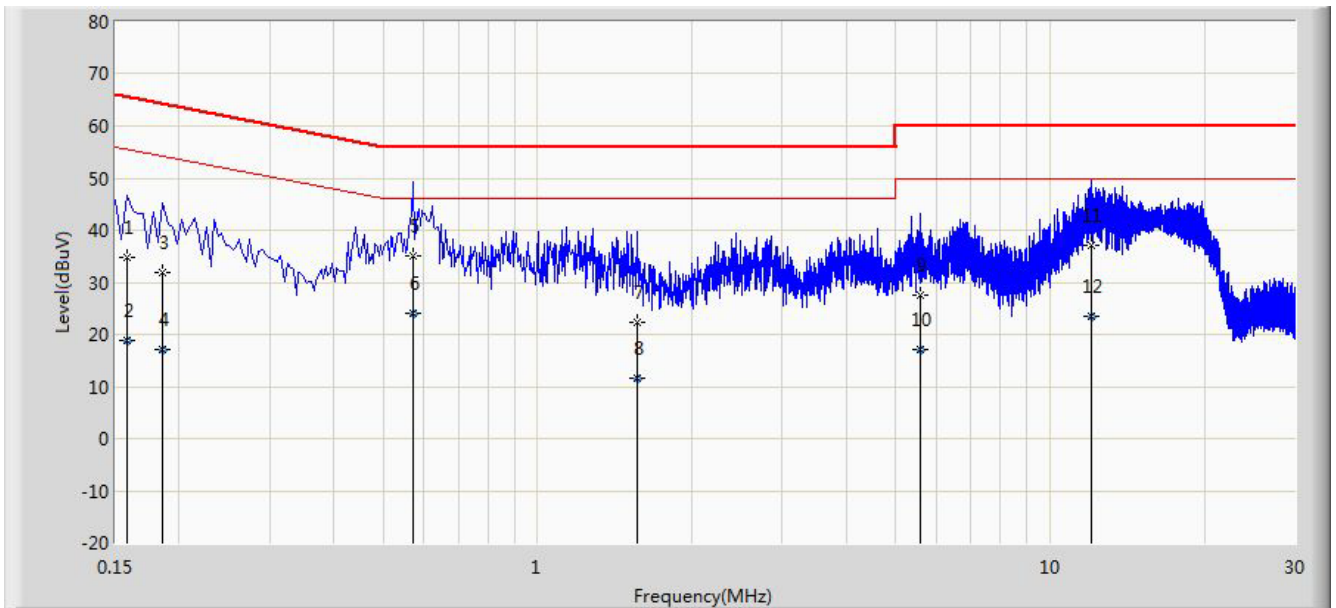
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

6.2.2. Test Setup



6.2.3. Test Result of Conducted Emissions

Site: SR2	Time: 2014/11/19 - 20:44
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: S515	Power: AC 120V/60Hz
Note: Mode 1: Charging and Camera On	

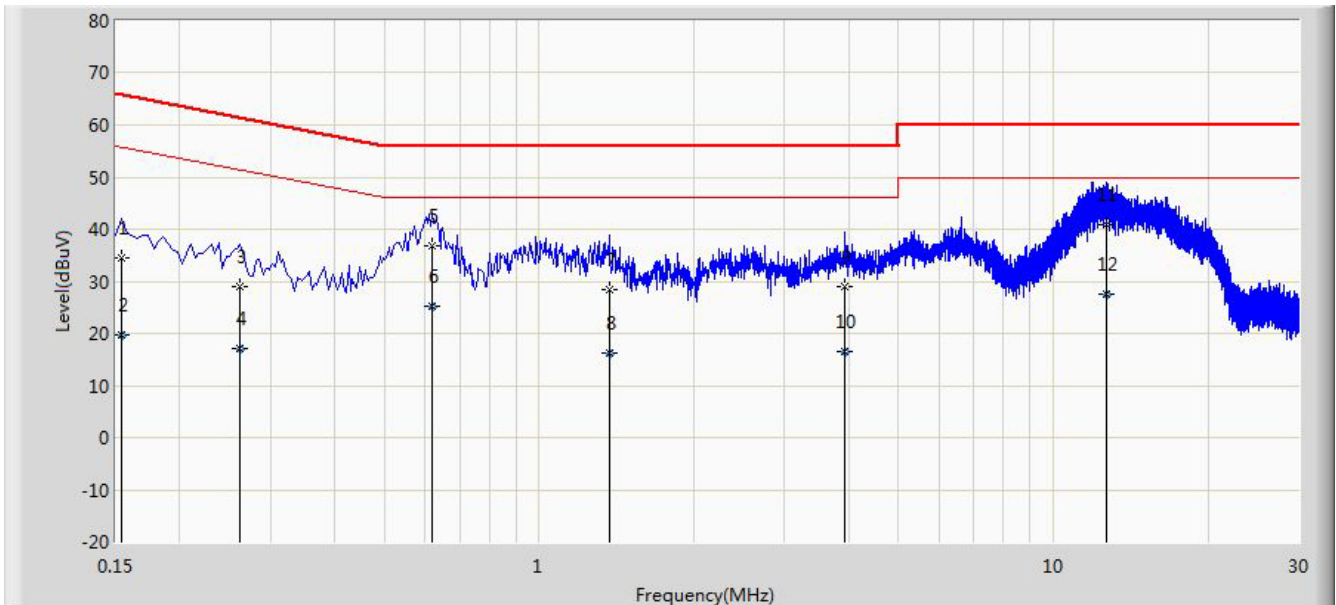


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV)	Reading Level (dBμV)	Over Limit (dB)	Limit (dBμV)	Factor (dB)	Type
1			0.158	34.656	24.346	-30.912	65.568	10.311	QP
2			0.158	18.919	8.608	-36.649	55.568	10.311	AV
3			0.186	31.936	21.898	-32.277	64.213	10.039	QP
4			0.186	17.159	7.120	-37.055	54.213	10.039	AV
5		*	0.570	35.095	24.965	-20.905	56.000	10.130	QP
6			0.570	24.092	13.962	-21.908	46.000	10.130	AV
7			1.566	22.302	12.416	-33.698	56.000	9.886	QP
8			1.566	11.453	1.567	-34.547	46.000	9.886	AV
9			5.594	27.641	17.561	-32.359	60.000	10.080	QP
10			5.594	17.025	6.945	-32.975	50.000	10.080	AV
11			12.018	37.035	26.954	-22.965	60.000	10.080	QP
12			12.018	23.446	13.366	-26.554	50.000	10.080	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2014/11/19 - 21:04
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: S515	Power: AC 120V/60Hz
Note: Mode 1: Charging and Camera On	

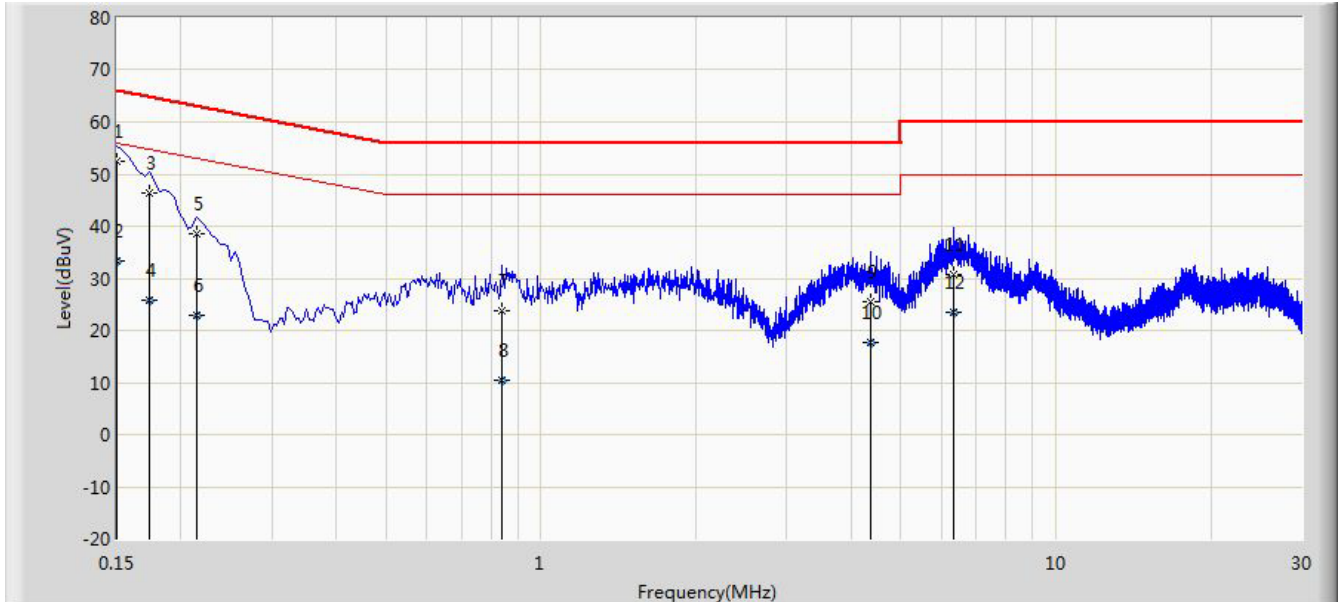


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.154	34.441	23.725	-31.341	65.781	10.716	QP
2			0.154	19.613	8.897	-36.168	55.781	10.716	AV
3			0.262	28.940	18.930	-32.428	61.368	10.010	QP
4			0.262	17.045	7.035	-34.323	51.368	10.010	AV
5		*	0.618	36.941	26.820	-19.059	56.000	10.121	QP
6			0.618	25.109	14.988	-20.891	46.000	10.121	AV
7			1.366	28.398	18.502	-27.602	56.000	9.896	QP
8			1.366	16.136	6.240	-29.864	46.000	9.896	AV
9			3.922	29.070	19.103	-26.930	56.000	9.966	QP
10			3.922	16.539	6.572	-29.461	46.000	9.966	AV
11			12.678	40.858	30.744	-19.142	60.000	10.114	QP
12			12.678	27.554	17.440	-22.446	50.000	10.114	AV

Note: Measure Level (dBuV) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2014/11/19 - 20:34
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: S515	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	

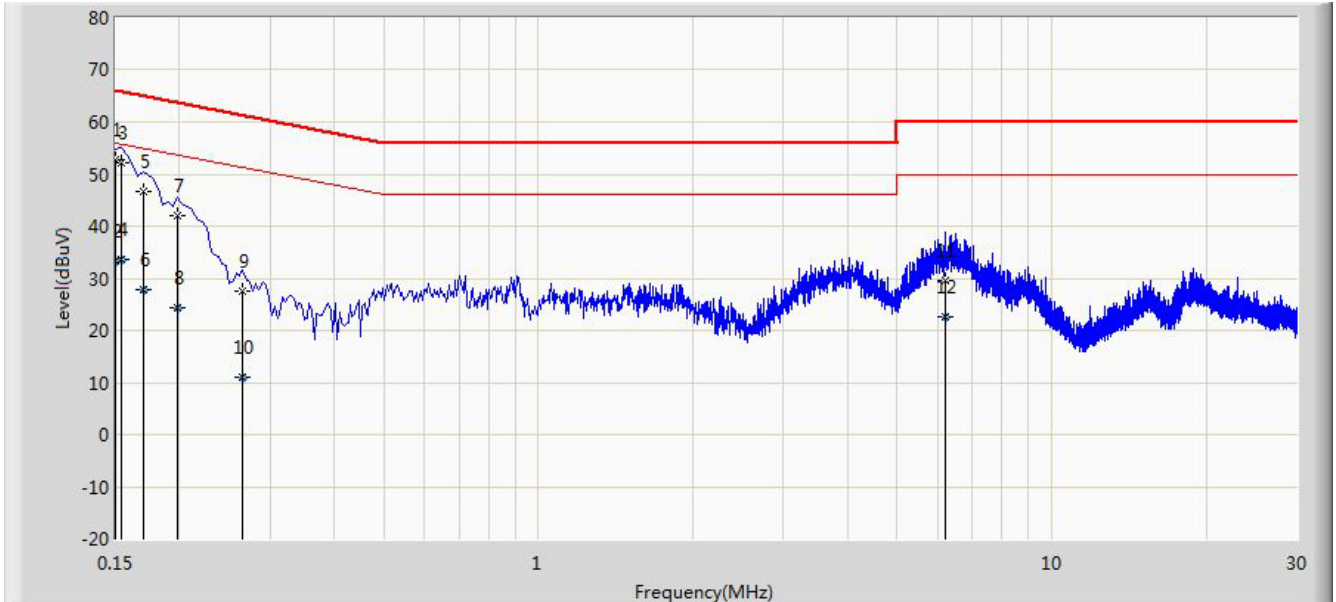


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	52.484	41.315	-13.516	66.000	11.168	QP
2			0.150	33.305	22.137	-22.695	56.000	11.168	AV
3			0.174	46.424	36.357	-18.343	64.767	10.068	QP
4			0.174	25.905	15.837	-28.862	54.767	10.068	AV
5			0.214	38.408	28.452	-24.640	63.049	9.957	QP
6			0.214	22.917	12.960	-30.132	53.049	9.957	AV
7			0.838	23.867	13.875	-32.133	56.000	9.992	QP
8			0.838	10.557	0.565	-35.443	46.000	9.992	AV
9			4.354	25.573	15.593	-30.427	56.000	9.980	QP
10			4.354	17.809	7.829	-28.191	46.000	9.980	AV
11			6.334	30.686	20.557	-29.314	60.000	10.129	QP
12			6.334	23.494	13.365	-26.506	50.000	10.129	AV

Note: Measure Level (dBuV) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2014/11/19 - 20:39
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: S515	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	52.624	41.455	-13.376	66.000	11.168	QP
2			0.150	33.310	22.142	-22.690	56.000	11.168	AV
3			0.154	52.265	41.525	-13.517	65.781	10.740	QP
4			0.154	33.490	22.750	-22.292	55.781	10.740	AV
5			0.170	46.673	36.596	-18.287	64.960	10.078	QP
6			0.170	27.846	17.769	-27.114	54.960	10.078	AV
7			0.198	42.056	32.051	-21.638	63.694	10.005	QP
8			0.198	24.203	14.198	-29.491	53.694	10.005	AV
9			0.266	27.485	17.508	-33.757	61.242	9.977	QP
10			0.266	11.053	1.077	-40.188	51.242	9.977	AV
11			6.210	29.677	19.557	-30.323	60.000	10.120	QP
12			6.210	22.643	12.523	-27.357	50.000	10.120	AV

Note: Measure Level (dBuV) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

6.3. Radiated Emission Measurement

6.3.1. Test Limit

FCC Part 15.109 Limits		
Frequency (MHz)	Distance (m)	Level (dB μ V/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

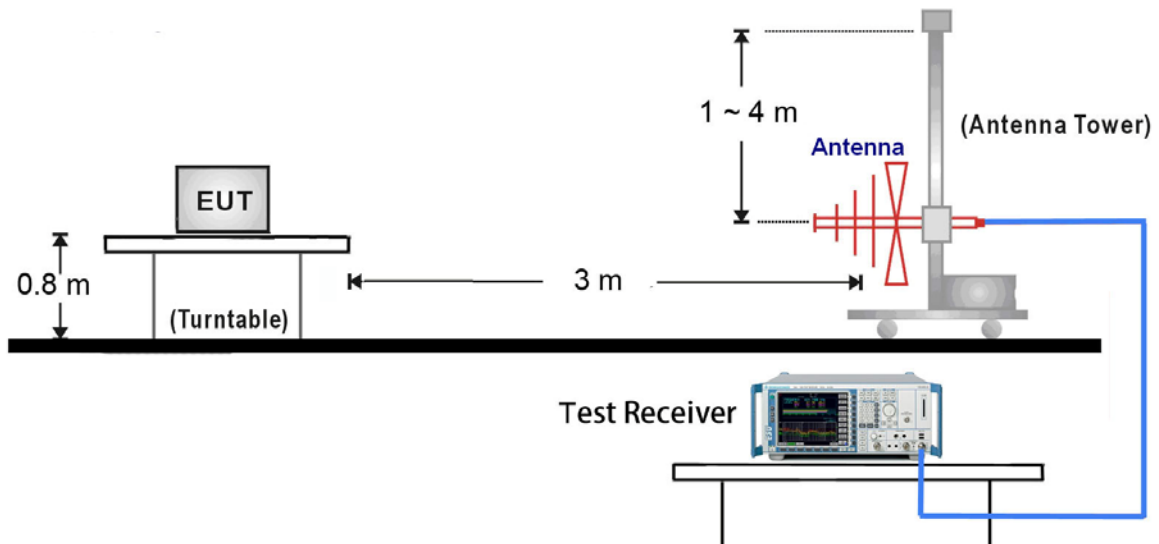
Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

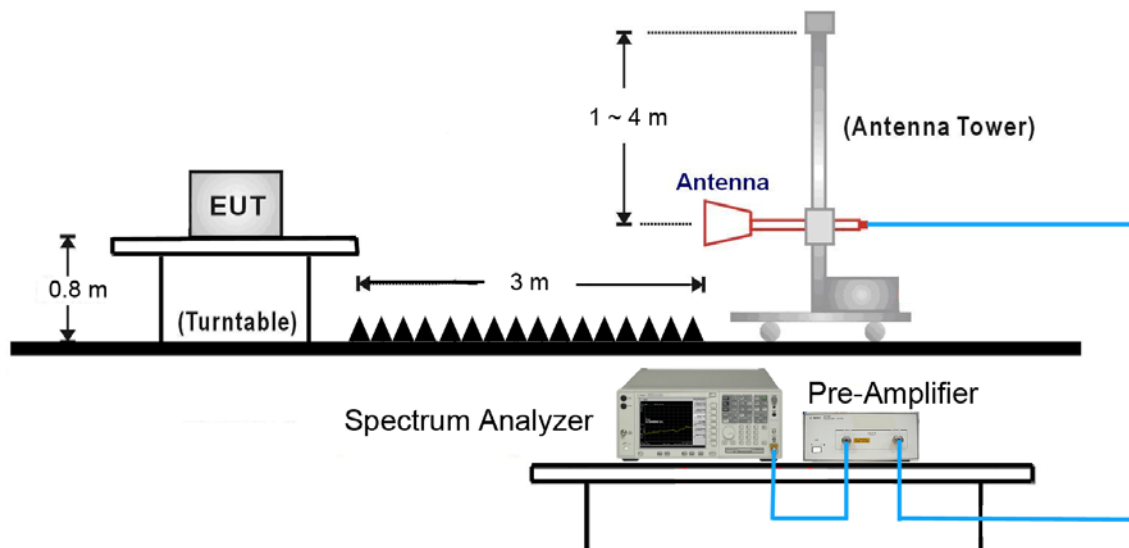
Note 3: E field strength (dB μ V/m) = 20 log E field strength (μ V/m)

6.3.2. Test Setup

30MHz ~ 1GHz Test Setup:

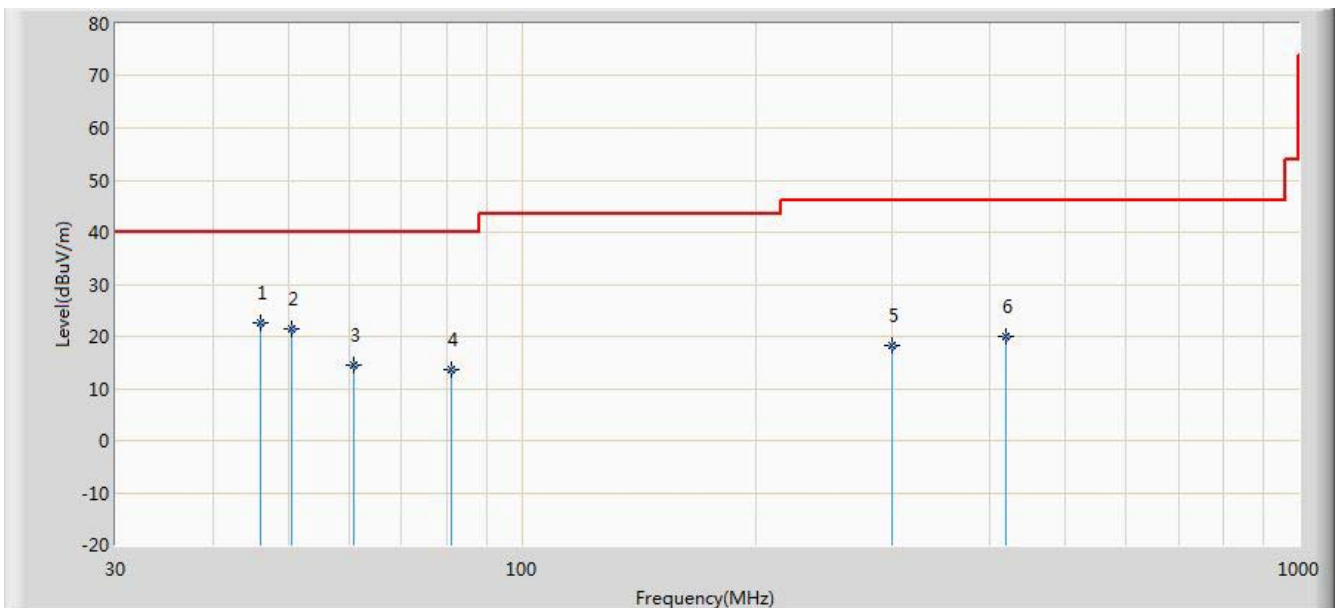


1GHz ~18GHz Test Setup:



6.3.3. Test Result of Radiated Emissions

Site: AC1	Time: 2014/11/28 - 19:36
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: S515	Power: AC 120V/60Hz
Note: Mode 1: Charging + Camera On	

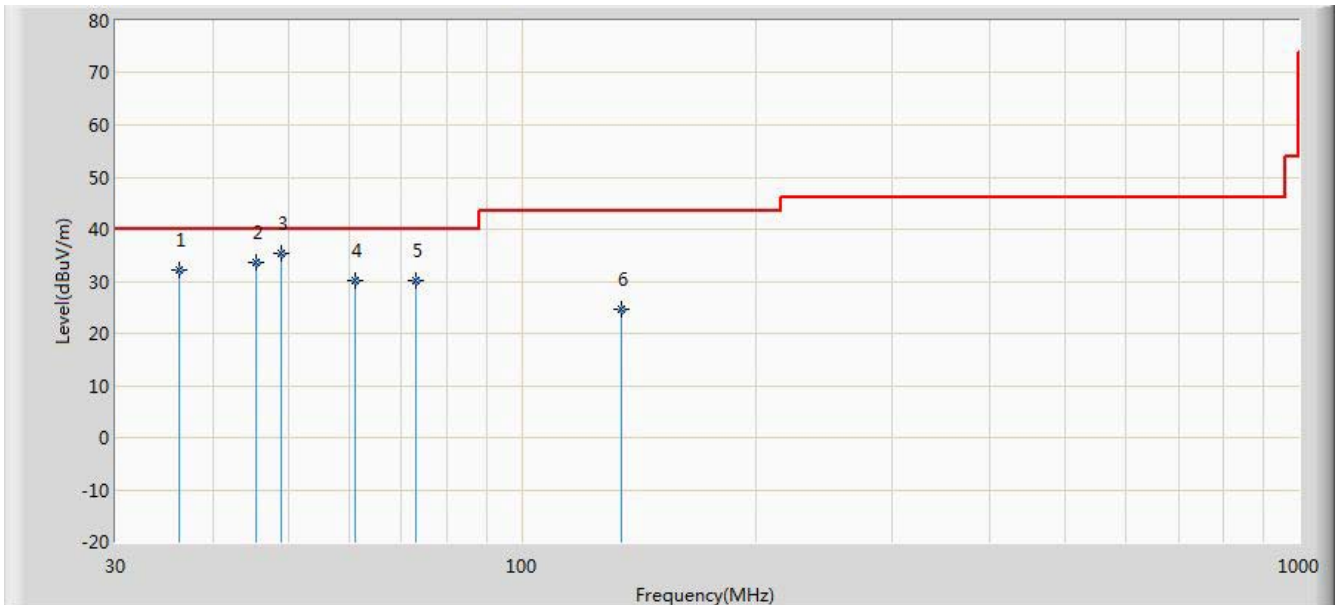


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	46.000	22.556	7.732	-17.444	40.000	14.824	QP
2			50.500	21.376	6.628	-18.624	40.000	14.748	QP
3			60.680	14.615	1.036	-25.385	40.000	13.578	QP
4			81.220	13.633	4.295	-26.367	40.000	9.338	QP
5			300.025	18.392	4.267	-27.608	46.000	14.126	QP
6			420.250	19.871	3.372	-26.129	46.000	16.499	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/28 - 19:37
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: S515	Power: AC 120V/60Hz
Note: Mode 1: Charging + Camera On	

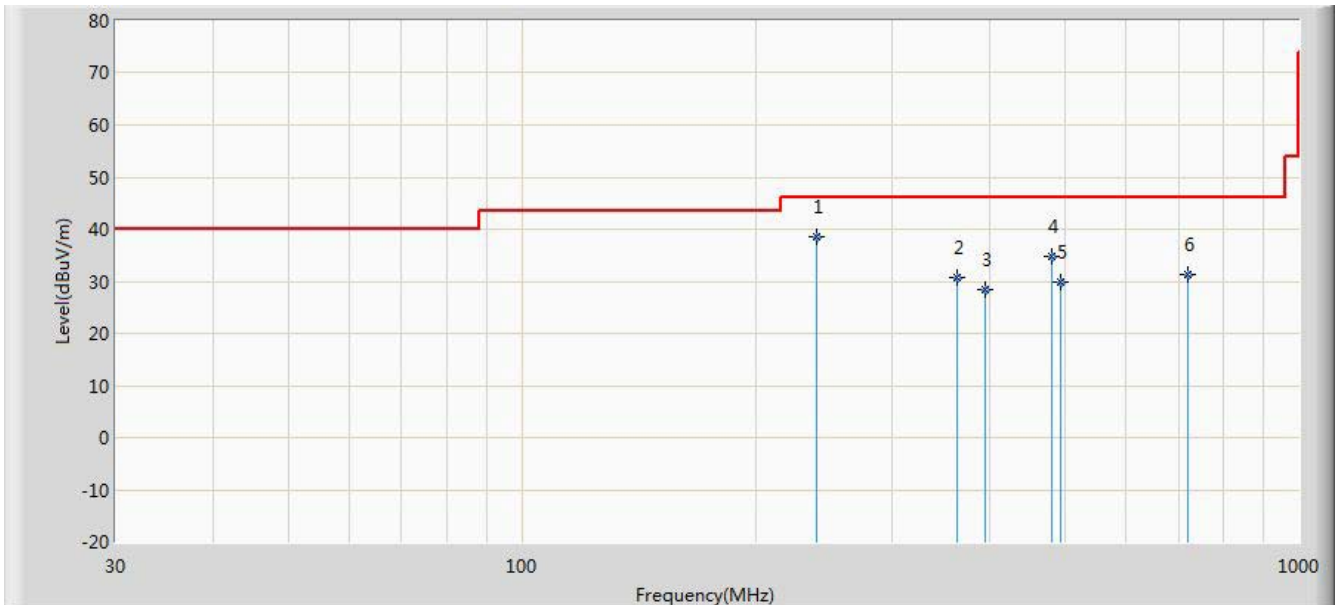


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			36.220	32.182	19.172	-7.818	40.000	13.010	QP
2			45.480	33.600	18.862	-6.400	40.000	14.739	QP
3		*	49.100	35.324	20.552	-4.676	40.000	14.771	QP
4			61.060	30.006	16.489	-9.994	40.000	13.517	QP
5			73.050	30.006	20.026	-9.994	40.000	9.980	QP
6			134.500	24.577	15.128	-18.923	43.500	9.450	QP

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/28 - 19:38
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: S515	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	

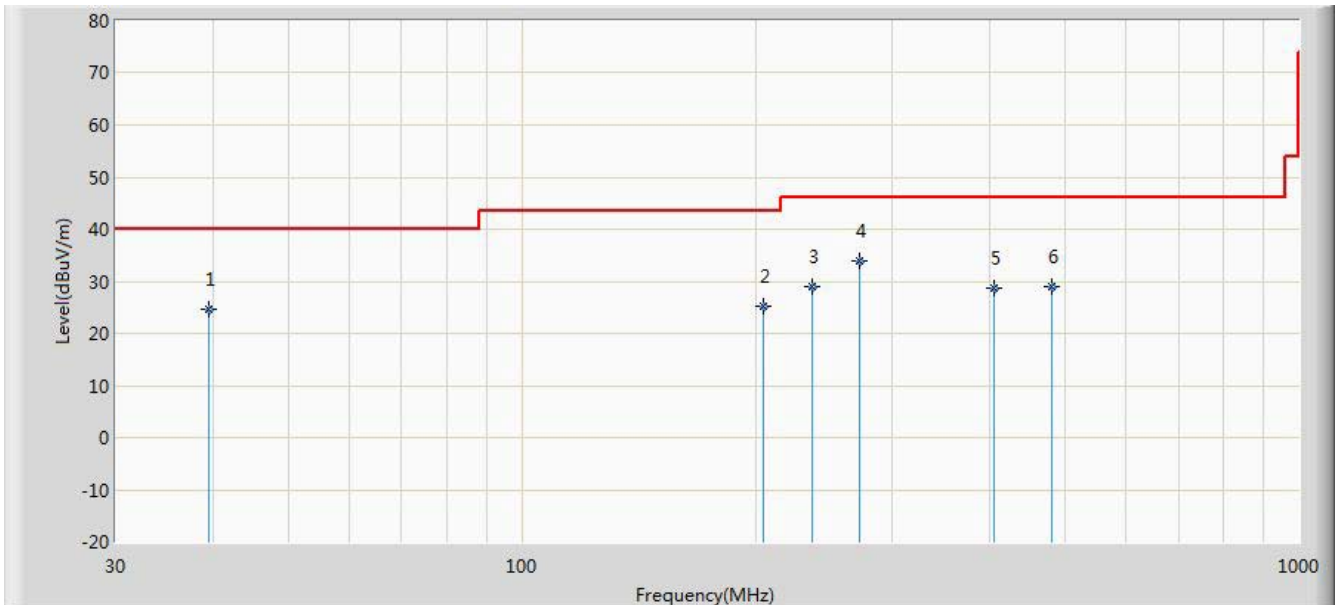


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	239.655	38.545	25.529	-7.455	46.000	13.016	QP
2			363.500	30.689	15.122	-15.311	46.000	15.567	QP
3			395.200	28.274	12.158	-17.726	46.000	16.117	QP
4			480.065	34.712	17.298	-11.288	46.000	17.414	QP
5			493.500	29.787	12.157	-16.213	46.000	17.630	QP
6			720.500	31.397	10.225	-14.603	46.000	21.172	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/28 - 19:38
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: S515	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	

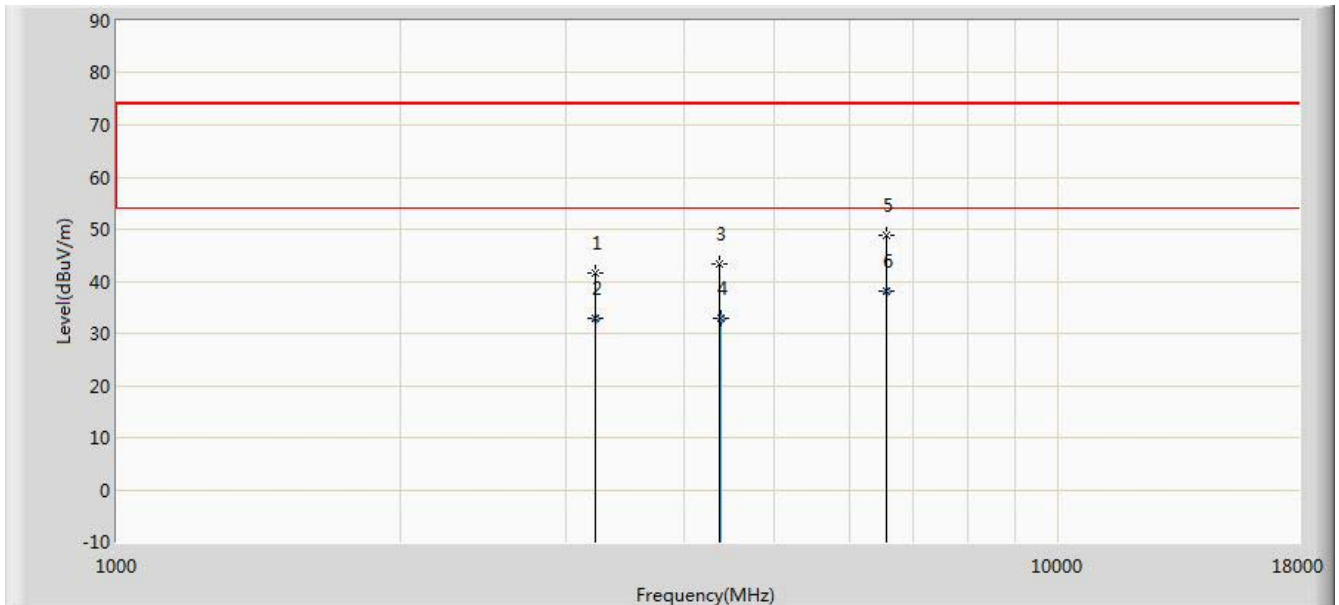


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			39.500	24.756	11.136	-15.244	40.000	13.620	QP
2			205.025	25.226	13.228	-18.274	43.500	11.998	QP
3			235.985	29.074	16.174	-16.926	46.000	12.900	QP
4		*	271.500	33.990	20.336	-12.010	46.000	13.654	QP
5			404.825	28.649	12.359	-17.351	46.000	16.290	QP
6			481.025	29.024	11.594	-16.976	46.000	17.430	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/28 - 19:35
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S515	Power: AC 120V/60Hz
Note: Mode 1: Charging + Camera On	

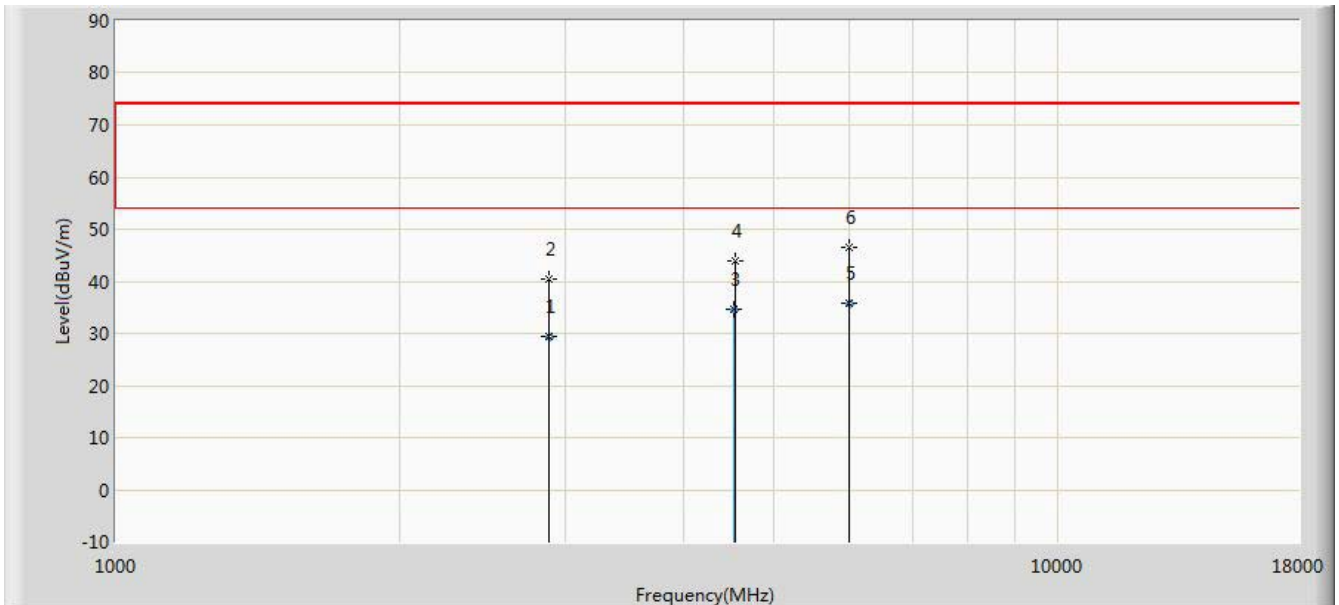


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			3227.000	41.480	38.028	-32.520	74.000	3.452	PK
2			3227.500	32.976	29.526	-21.024	54.000	3.450	AV
3			4374.500	43.314	37.872	-30.686	74.000	5.442	PK
4			4375.000	33.007	27.564	-20.993	54.000	5.444	AV
5			6559.000	48.817	37.917	-25.183	74.000	10.900	PK
6		*	6560.500	38.054	27.158	-15.946	54.000	10.896	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier (dB)

Site: AC1	Time: 2014/11/28 - 19:36
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: S515	Power: AC 120V/60Hz
Note: Mode 1: Charging + Camera On	

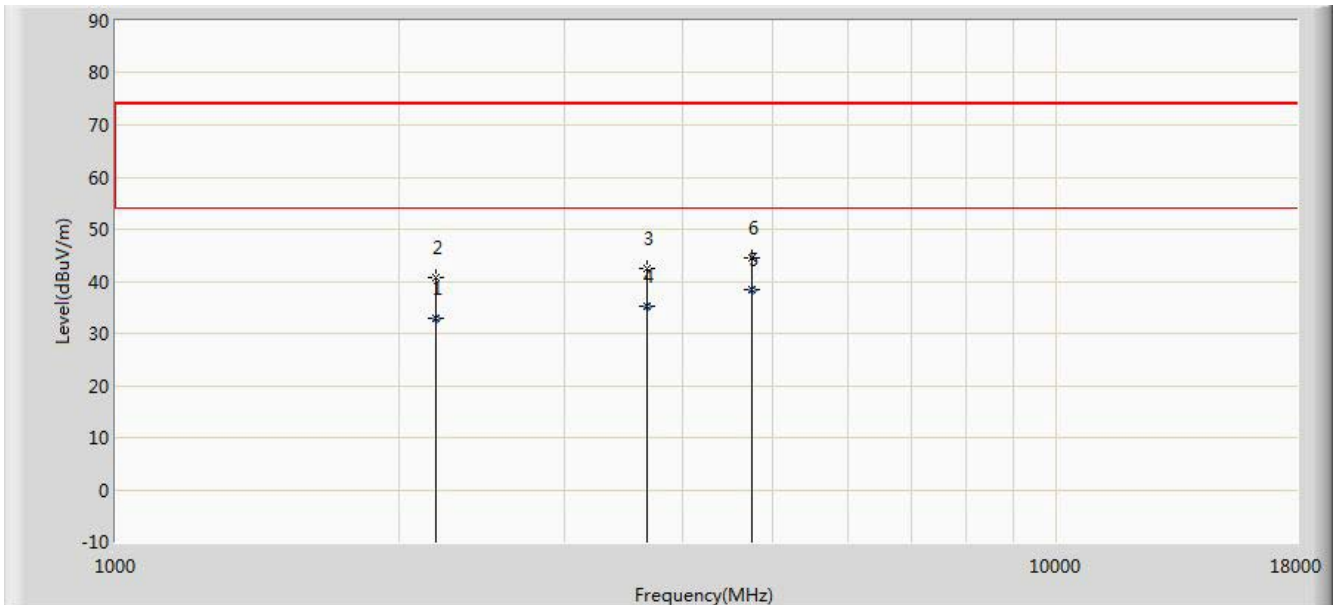


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2886.500	29.506	26.138	-24.494	54.000	3.368	AV
2			2887.000	40.562	37.193	-33.438	74.000	3.369	PK
3			4535.000	34.701	29.017	-19.299	54.000	5.684	AV
4			4536.000	43.786	38.099	-30.214	74.000	5.687	PK
5		*	5997.500	35.913	27.558	-18.087	54.000	8.355	AV
6			5998.000	46.456	38.101	-27.544	74.000	8.355	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier (dB)

Site: AC1	Time: 2014/11/28 - 19:37
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S515	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	

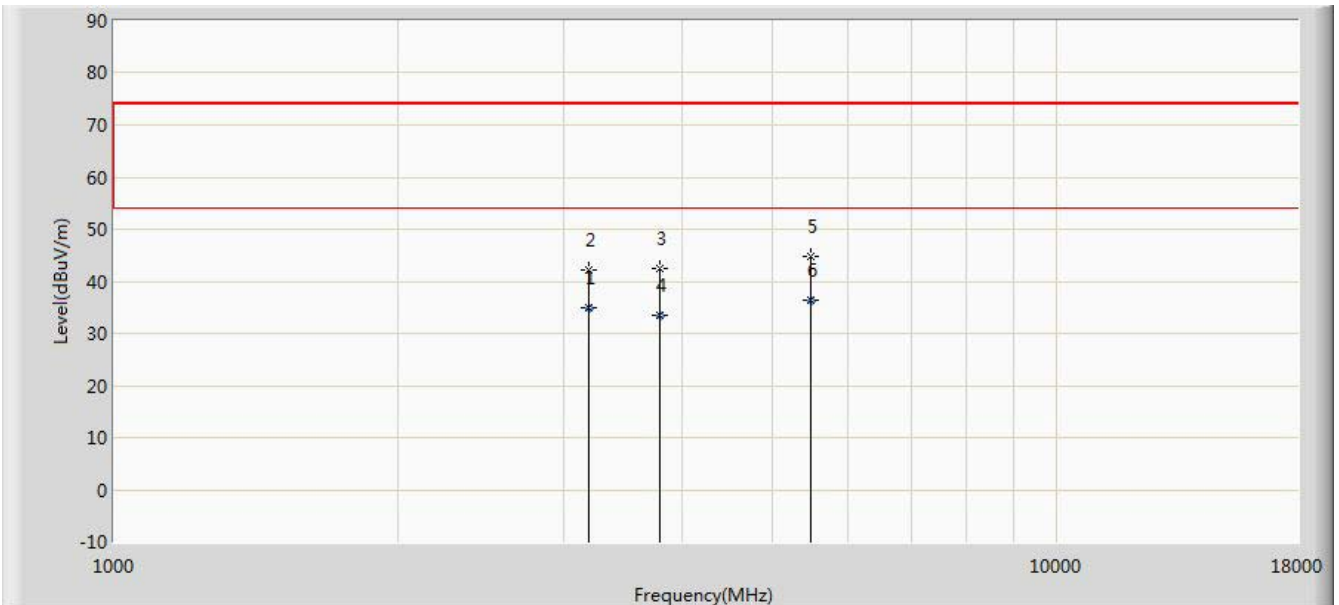


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2189.000	33.000	30.035	-21.000	54.000	2.965	AV
2			2190.000	40.789	37.815	-33.211	74.000	2.974	PK
3			3669.000	42.387	38.396	-31.613	74.000	3.991	PK
4			3670.000	35.248	31.257	-18.752	54.000	3.992	AV
5		*	4739.000	38.546	32.481	-15.454	54.000	6.066	AV
6			4740.000	44.404	38.337	-29.596	74.000	6.067	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier (dB)

Site: AC1	Time: 2014/11/28 - 19:37
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: S515	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			3184.000	34.835	31.259	-19.165	54.000	3.576	AV
2			3184.500	42.242	38.667	-31.758	74.000	3.575	PK
3			3788.000	42.459	38.271	-31.541	74.000	4.188	PK
4			3789.500	33.336	29.146	-20.664	54.000	4.190	AV
5			5479.500	44.883	37.916	-29.117	74.000	6.967	PK
6		*	5480.500	36.437	29.471	-17.563	54.000	6.966	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier (dB)

7. CONCLUSION

The data collected relate only the item(s) tested and show that the **S515 FCC ID: 2AAA6S515** has been tested to comply with the requirements specified in §15.107 and §15.109 of the FCC Rules.

The End