

MRT Technology (Suzhou) Co., Ltd Phone: +86-512-66308358 Fax: +86-512-66308368 Web: www.mrt-cert.com Report No.: 1410RSU02905 Report Version: V01 Issue Date: 11-20-2014

# MEASUREMENT REPORT FCC PART 15B

FCC ID: 2AAA6S950SL

APPLICANT: SENWA MEXICO, S.A.DE C.V

Application Type:	Certification
Product:	S950SL
Model No.:	S950SL
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. 03 ~ 17, 2014

**Reviewed By** 

: Robin Wu )

Approved By

Marlinchen :

(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
1410RSU02905	Rev. 01	Initial report	11-20-2014



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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.:	S950SL	
FCC ID:	2AAA6S950SL	
Test Device Serial No.:	N/A Droduction Pre-Production Engineering	
FCC Classification:	FCC Class B Digital Device (JBP)	
Date(s) of Test:	Nov. 03 ~ 17, 2014	
Test Report S/N:	1410RSU02905	

#### **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.

American Association for Laboratory Accreditation
Accredited Laboratory
A2IA him soredued
MRT TECHNOLOGY (SUZHOU) CO., LTD.
Suzhou, China for technical competence in the field of
Electrical Testing
This laboratory is scoredized in secondance with the receiptived International Standard ISO IEE 17025-2005 General requirements for the improvement of texture and collocation indexemption. This second tation demonstrates technical competences for a defined speem and the operations of a districtive quality immagnetic strates systems (QPA as July 100 2724, JCL VIC Communique data IA Junney 2007).
Presented this 17th day of Anne 2014.
Peter Meloge- Product A CIVI J Configure Namer N.S.01 Visit & August 31, 2016
For the nets to which this accordination applies, places right to the laboratory's Electrical Scope of Accordination.



## 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	S950SL	
Model No.	S950SL	
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	
Antenna Type	Internal	
Antenna Gain	0dBi	
Bluetooth (1x, EDR, BLE)		
Bluetooth Frequency	2402~2480MHz	
Bluetooth Version	v2.1 + EDR, v4.0	
Type of modulation	FHSS	
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps (8DPSK)	
Antenna Type	Internal	
Antenna Gain	0dBi	



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 **S950SL FCC ID: 2AAA6S950SL** 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.





Sig	nal Cable Type		Signal cable Description		
A	USB Cable		Shielding, 1.0m		
В	Earphone Cable		Non-Shielding, 1.2m		
С	VGA Cable		Shielding, 1.5m		
D	USB Cable		Non-Shielding, 1.8m		
Е	USB Cable		Non-Shielding, 1.8m		
Pro	duct	Manufacturer	Model No.	Power Cord	
1	Earphone	SENWA	N/A	N/A	
2	LCD Monitor	DELL	IN1930C	Non-Shielded, 1.8m	
3	Notebook	Lenovo	E430C	Non-Shielded, 1.8m	
4	USB Keyboard	DELL	KB212-B	N/A	
5	USB Mouse	DELL	MS111-7	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 **S950SL FCC ID: 2AAA6S950SL**.

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,  $50\Omega/50$ uH 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	Туре No.	Serial No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	101209	1 year	2015/11/06
Two-Line V-Network	R&S	ENV216	101683	1 year	2015/11/06
Two-Line V-Network	R&S	ENV216	101684	1 year	2015/11/06
Temperature/ Meter Humidity	Anymetre	TH101B	SR2-01	1 year	2015/11/13

#### Radiated Emission

Instrument	Manufacturer	Туре No.	Serial No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY5144016A	1 year	2015/01/04
Preamplifier	MRT	AP01G18	1310002	1 year	2015/10/05
TRILOG Antenna	Schwarzbeck	VULB9162	9162-047	1 year	2015/11/07
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1167	1 year	2015/11/07
Temperature/Humidity Meter	Anymetre	TH101B	AC1-01	1 year	2015/11/13



## 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=2Uc(y)):
150kHz~30MHz: ± 3.46dB
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)):
30MHz ~ 1GHz: ± 4.18dB
1GHz ~ 18GHz: ± 4.76dB



## 6. TEST RESULT

#### 6.1. Summary

Company Name:	SENWA MEXICO,S.A.DE C.V
FCC ID:	2AAA6S950SL
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

Note: For Radiated Emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.



#### 6.2. Conducted Emission Measurement

#### 6.2.1. Test Limit

FCC Part 15.107 Limits							
Frequency (MHz)	QP (dBµV)	AV (dBµV)					
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: 2014/10/31 - 16:17			
Limit: FCC_Part15.107_CE_AC Power_ClassB					sB	Engineer: Kni	ght Lu		
Prot	be: EN	V216_1	01683_Filter	On		Polarity: Line			
EUT	: S950	SL				Power: AC 12	0V/60Hz		
Note	e: Mod	e 1: Cha	arging and Ca	amera On					
	80								
	70								
	60								
	50								
	50		1.8	1	( Bala		and the second s		al tradition
BuV	40	mm	mammin	P ENTRANKALITY VILL	* WINNING AND			12	
welfd	30	2	* *	*	8		10	*	
-	20	*			*				
	10								
	0								
	-10								
	-20								
	0.15			1	Free	and (MILIA)		10	30
	<b>F</b> lam	Maria	<b>F</b>	Manager	Deedine		1 instit	Fastar	Trance
INO	Flag	Mark	Frequency	Measure	Reading			Factor	туре
			(MHZ)	Level	Level	(dB)	(dBuV)	(dB)	
				(dBuV)	(dBuV)				
1			0.234	31.922	21.971	-30.385	62.307	9.951	QP
2			0.234	21.431	11.480	-30.876	52.307	9.951	AV
3			0.478	35.275	25.126	-21.099	56.374	10.149	QP
4			0.478	24.914	14.765	-21.460	46.374	10.149	AV
5		*	0.598	41.371	31.255	-14.629	56.000	10.116	QP
6			0.598	31.007	20.891	-14.993	46.000	10.116	AV
7			1.214	32.963	23.062	-23.037	56.000	9.901	QP
8			1.214	22.798	12.897	-23.202	46.000	9.901	AV
9			6.402	34.411	24.289	-25.589	60.000	10.122	QP
10			6.402	23.522	13.400	-26.478	50.000	10.122	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB)

40.289

27.568

30.214

17.493

-19.711

-22.432

60.000

50.000

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

12.386

12.386

11

12

QP

AV

10.075

10.075



Site: SR2	Time: 2014/10/31 - 16:29
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: S950SL	Power: AC 120V/60Hz

Note: Mode 1: Charging and Camera On



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV)	(dB)	
				(dBuV)	(dBuV)				
1			0.490	36.856	26.677	-19.312	56.168	10.179	QP
2			0.490	27.479	17.300	-18.689	46.168	10.179	AV
3			0.586	45.178	35.039	-10.822	56.000	10.139	QP
4		*	0.586	36.432	26.293	-9.568	46.000	10.139	AV
5			1.194	38.215	28.312	-17.785	56.000	9.903	QP
6			1.194	26.281	16.378	-19.719	46.000	9.903	AV
7			6.274	35.463	25.322	-24.537	60.000	10.141	QP
8			6.274	25.195	15.054	-24.805	50.000	10.141	AV
9			12.602	43.879	33.781	-16.121	60.000	10.098	QP
10			12.602	31.773	21.675	-18.227	50.000	10.098	AV
11			18.726	40.877	30.739	-19.123	60.000	10.138	QP
12			18.726	30.827	20.689	-19.173	50.000	10.138	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB)

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



Site: SR2	Time: 2014/11/02 - 15:56
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: S950SL	Power: AC 120V/60Hz

Note: Mode 2: USB Copy



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV)	(dB)	
				(dBuV)	(dBuV)				
1			0.206	50.152	40.171	-13.213	63.365	9.981	QP
2			0.206	41.416	31.435	-11.949	53.365	9.981	AV
3			0.222	50.536	40.595	-12.208	62.744	9.941	QP
4			0.222	41.604	31.663	-11.140	52.744	9.941	AV
5			0.262	47.400	37.426	-13.968	61.368	9.974	QP
6			0.262	34.393	24.419	-16.975	51.368	9.974	AV
7		*	0.598	46.016	35.900	-9.984	56.000	10.116	QP
8			0.598	34.599	24.483	-11.401	46.000	10.116	AV
9			2.314	41.359	31.496	-14.641	56.000	9.863	QP
10			2.314	32.571	22.708	-13.429	46.000	9.863	AV
11			4.414	41.430	31.445	-14.570	56.000	9.985	QP
12			4.414	34.697	24.712	-11.303	46.000	9.985	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB)

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



Site: SR2	Time: 2014/11/02 - 16:00
Limit: FCC_Part15.107_CE_AC Power_ClassB	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: S950SL	Power: AC 120V/60Hz

Note: Mode 2: USB Copy



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV)	(dB)	
				(dBuV)	(dBuV)				
1			0.218	49.861	39.880	-13.034	62.895	9.981	QP
2			0.218	41.202	31.221	-11.693	52.895	9.981	AV
3			0.258	48.605	38.598	-12.891	61.496	10.007	QP
4			0.258	37.247	27.240	-14.249	51.496	10.007	AV
5			0.626	44.380	34.263	-11.620	56.000	10.117	QP
6			0.626	33.816	23.699	-12.184	46.000	10.117	AV
7			2.746	42.190	32.337	-13.810	56.000	9.853	QP
8			2.746	34.169	24.316	-11.831	46.000	9.853	AV
9			2.982	41.563	31.697	-14.437	56.000	9.866	QP
10			2.982	34.375	24.509	-11.625	46.000	9.866	AV
11			4.970	41.608	31.573	-14.392	56.000	10.035	QP
12		*	4.970	35.128	25.093	-10.872	46.000	10.035	AV

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + 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 (dBµV/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  $(dB\mu V/m) = 20 \log E$  field strength (uV/m)

#### 6.3.2. Test Setup

<u>30MHz ~ 1GHz Test Setup:</u>





#### 1GHz ~18GHz Test Setup:







#### 6.3.3. Test Result of Radiated Emissions

Site: AC1					Т	Time: 2014/11/17 - 20:24			
Limit: FCC_Part15.109_RE(3m)_ClassB					E	Engineer: Knig	ght Lu		
Probe: VULB9162_0.03-8GHz					F	Polarity: Horiz	ontal		
EUT	: S950	SL			F	Power: AC 120	0V/60Hz		
Note	e: Mod	e 1: Cha	arging + Cam	era On	ł				
	80								
	70								
	60								
	50								
e	40								6
n//n	40				3		4	5	*
velídE	30		*	*	*				
ē	20								
	10								
	0								i
	-10								
	-20			100					1000
	50			100	Freque	ncy(MHz)			1000
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			47.103	25.315	10.510	-14.685	40.000	14.805	QP
2			100.209	24.377	11.620	-19.123	43.500	12.757	QP
3			126.803	27.598	17.528	-15.902	43.500	10.070	QP
4			384.225	32.421	16.528	-13.579	46.000	15.893	QP
5			466.623	31.284	14.118	-14.716	46.000	17.166	QP
6		*	936.201	35.599	12.060	-10.401	46.000	23.539	QP

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

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



Site: AC1	Time: 2014/11/17 - 20:24				
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu				
Probe: VULB9162_0.03-8GHz	Polarity: Vertical				
EUT: S950SL	Power: AC 120V/60Hz				
Note: Mode 1: Charging + Camera On					



No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре
			(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
				(dBuV/m)	(dBuV)				
1			30.141	33.396	21.470	-6.604	40.000	11.925	QP
2		*	47.745	34.995	20.200	-5.005	40.000	14.794	QP
3			49.160	34.876	20.105	-5.124	40.000	14.771	QP
4			100.221	24.429	11.670	-19.071	43.500	12.758	QP
5			318.321	26.888	12.310	-19.112	46.000	14.578	QP
6			389.162	31.231	15.240	-14.769	46.000	15.991	QP

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



Site: AC1	Time: 2014/11/17 - 20:25
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	



		(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)	
			(dBuV/m)	(dBuV)				
1		89.204	30.897	20.090	-12.603	43.500	10.806	QP
2	*	239.997	44.096	31.070	-1.904	46.000	13.026	QP
3		314.204	41.412	26.940	-4.588	46.000	14.472	QP
4		324.385	41.220	26.470	-4.780	46.000	14.750	QP
5		407.310	38.189	21.870	-7.811	46.000	16.319	QP
6		480.014	43.803	26.390	-2.197	46.000	17.413	QP

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



Site: AC1	Time: 2014/11/17 - 20:25
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: S950SL	Power: AC 120V/60Hz



33.916

42.006

33.390

38.477

36.999

21.570

28.980

18.640

17.310

13.700

-6.084

-3.994

-12.610

-7.523

-9.001

40.000

46.000

46.000

46.000

46.000

12.346

13.026

14.750

21.167

23.299

QP

QP

QP

QP QP

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

32.441

240.014

324.384

720.162

895.694

2

3

4

5

6



Site: AC1						Time: 2014/11/17 - 20:25					
Limi	Limit: FCC_Part15.109_RE(3m)_ClassB						Engineer: Knight Lu				
Prob	Probe: BBHA9120D_1-18GHz						Polarity: Horizontal				
EUT	EUT: S950SL						Power: AC 120V/60Hz				
Note	e: Mode	e 1: Cha	arging + Cam	era On							
	90							-			
	80										
	70										
	60										
(B)	50				4	5					
dBuV	40			2	* 	6					
Level	30			1	*	*					
	20										
	10										
	0										
	-10										
	1000				Freque	ency(MHz)		10000	18000		
No	Flag	Mark	Frequency	Measure	Reading	Over Limit	Limit	Factor	Туре		
	U		(MHz)	Level	Level	(dB)	(dBuV/m)	(dB)			
				(dBuV/m)	(dBuV)						
1			2274.840	28.008	24.947	-25.992	54.000	3.060	AV		
2			2275.000	40.424	37.364	-33.576	74.000	3.060	PK		
3			3966.480	34.484	30.060	-19.516	54.000	4.424	AV		
4			3966.500	44.382	39.958	-29.618	74.000	4.424	РК		
5			5139.500	45.709	38.529	-28.291	74.000	7.180	РК		
6		*	5139.510	36.100	28.920	-17.900	54.000	7.180	AV		

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)



Site	AC1					Time: 2014/11/17 - 20:25					
Limi	Limit: ECC. Part15 109 RE(3m) ClassB										
Drok	Brobo: BBHA0120D 1 18CHz						/ortio				
EUI	EU1: \$950SL					Power: A	0 120	JV/60HZ			
Note	e: Mode	e 1: Cha	arging + Cam	era On							
	90					Î.					
	80										
	70							s de la companya de la			
	60										
Ē	50				3	5					
BuV/	40				* *	6					
evelíc	20					*					
_	50				1						
	20										
	10										
	0						_				
	-10								10000	18000	
	1000				Frequ	iency(MHz)			10000	10000	
No	Flag	Mark	Frequency	Measure	Reading	Over L	imit	Limit	Factor	Туре	
			(MHz)	Level	Level	(dB)		(dBuV/m)	(dB)		
				(dBuV/m)	(dBuV)						
1			2989.000	41.236	37.837	-32.764	4	74.000	3.399	PK	
2			2989.040	29.329	25.930	-24.67	1	54.000	3.399	AV	
3			3754.000	44.100	39.950	-29.900	0	74.000	4.150	PK	
4			3754.921	32.691	28.540	-21.309		54.000	4.151	AV	
5			5165.000	45.804	38.652	-28.196	6	74.000	7.152	PK	
6		*	5165.210	34.944	27.793	-19.056	6	54.000	7.151	AV	

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)



Site: AC1	Time: 2014/11/17 - 20:25
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	



4153.480

4153.500

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier (dB)

31.518

43.838

26.890

39.210

-22.482

-30.162

54.000

74.000

4.628

4.628

AV PK

\*

5

6



Site: AC1	Time: 2014/11/17 - 20:25
Limit: FCC_Part15.109_RE(3m)_ClassB	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: S950SL	Power: AC 120V/60Hz
Note: Mode 2: USB Copy	



			(dBuV/m)	(dBuV)				
1		1603.480	33.319	34.400	-20.681	54.000	-1.081	AV
2		1603.500	44.233	45.314	-29.767	74.000	-1.080	PK
3		3201.500	44.138	40.603	-29.862	74.000	3.535	PK
4		3201.510	34.982	31.447	-19.018	54.000	3.535	AV
5		4791.000	48.101	41.796	-25.899	74.000	6.305	PK
6	*	4791.057	40.005	33.699	-13.995	54.000	6.305	AV

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 S950SL FCC ID: 2AAA6S950SL

has been tested to comply with the requirements specified in §15.107 and §15.109 of the FCC

Rules.