TESTING LABORATORY
CERTIFICATE #4820.01

FCC PART 15B

TEST REPORT

For

G-TOUCH LLC.

1750 NW 107TH AVENUE, STE P-411, MIAMI, FLORIDA, UNITED STATES

FCC ID: 2AJDZSTELLAOMEGA

Report Type: Original Report	**Product Type:** Smart phone
Report Number:	RDG191108020-00C
Report Date:	2019-11-19
Reviewed By:	Jerry Zhang EMC Manager
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

EUT Name:		Smart phone
EUT Model:		Stella Omega
Highest Operation Frequency:		2480 MHz
Rated Input Voltage:		DC 3.7V from battery or DC 5V from adapter
Adapter Information	**Model:**	Stella Omega
	Input:	100-240V 50/60Hz 0.15A
	Output:	5V 1A
External Dimension:		144mm(L)*73mm(W)*11mm(H)
Serial Number:		RDG191108020-RF-S1
EUT Received Date:		2019/11/11
EUT Received Status:		Good

Objective

This report is prepared on behalf of G-TOUCH LLC. in accordance with FCC Part 15B Part 2, subpart J, and Part 15, Subpart A and B of the Federal Communications Commission's rules.

The objective of the manufacturer is to determine the compliance of EUT with FCC Part 15 B Class B.

Related Submittal(s)/Grant(s)

FCC Part 22H, 24E PCE submissions with FCC ID: 2AJDZSTELLAOMEGA
FCC Part 15C DSS submissions with FCC ID: 2AJDZSTELLAOMEGA
FCC Part 15C DTS submissions with FCC ID: 2AJDZSTELLAOMEGA

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Dongguan).

Measurement Uncertainty

Parameter	Measurement Uncertainty
Unwanted Emissions, radiated	30M~200MHz: 4.55 dB,200M~1GHz: 5.92 dB,1G~6GHz: 4.98 dB, 6G~18GHz: 5.89 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB
Temperature	±1℃
Humidity	±5%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 897218, the FCC Designation No. : CN1220.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

Declarations

BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "Δ". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in downloading mode.

Equipment Modifications

No modification was made to the EUT.

EUT Exercise Software

The software "Winthrax.exe" was used during test.

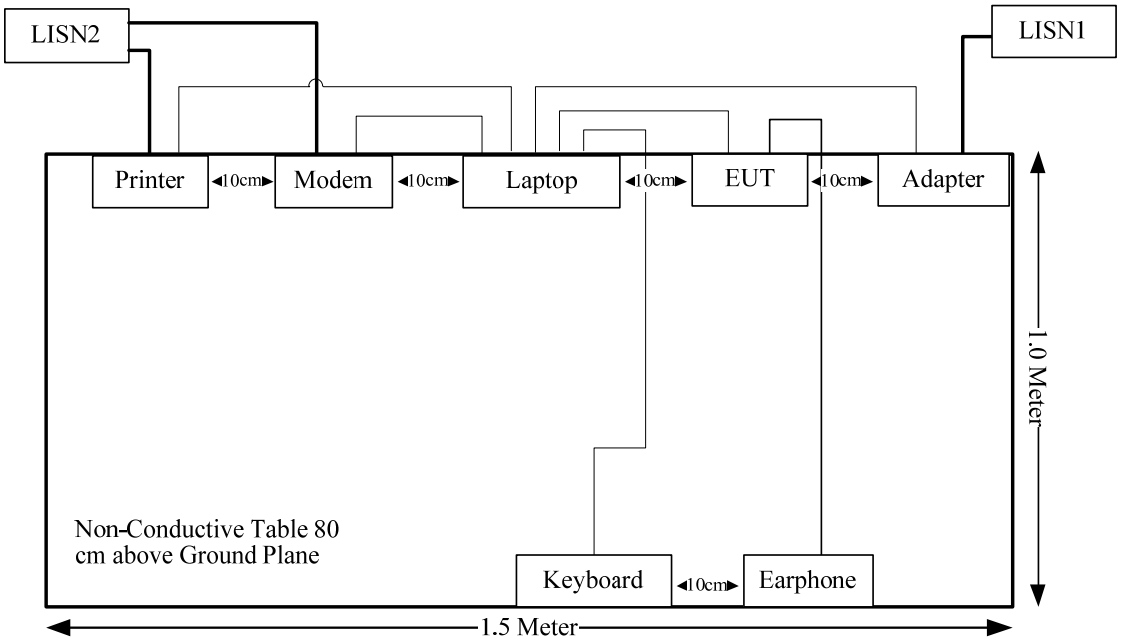
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP11L	QDS-BRCM1017
HP	Printer	C3941A	JPTVOB2337
DELL	Keyboard	L100	CNORH656658907BL05DC
SAST	Modem	AEM-2100	293

Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Serial Cable	yes	No	1.2	Serial Port of Laptop	Modem
Parallel Cable	yes	No	1.2	Parallel Port of Laptop	Printer
Keyboard Cable	yes	No	1.8	USB Port of Laptop	Keyboard
USB Cable	Yes	No	0.8	Adapter	EUT
Earphone	No	No	1.2	EUT	Earphone

Block Diagram of Test Setup



Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted emissions					
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-01	2019-09-05	2020-09-05
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A
R&S	Two-line V-network	ENV 216	101614	2019-09-12	2020-09-12
R&S	EMI Test Receiver	ESCI	101121	2019-05-09	2020-05-09
Radiated emissions Below 1GHz					
R&S	EMI Test Receiver	ESR3	102453	2019-09-12	2020-09-12
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A
Sunol Sciences	Antenna	JB3	A060611-1	2017-11-10	2020-11-10
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2019-09-05	2020-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2019-09-05	2020-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2019-05-06	2020-05-06
HP	Amplifier	8447D	2727A05902	2019-09-05	2020-09-05
Radiated emissions Above 1GHz					
R&S	Spectrum Analyzer	FSP 38	100478	2019-05-09	2020-05-09
TDK RF	Horn Antenna	HRN-0118	130 084	2018-10-12	2021-10-12
MICRO-COAX	Coaxial Cable	UFA147-1-2362-100100	64639 231029-001	2019-02-24	2020-02-24
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2019-09-05	2020-09-05
Farad	Test Software	EZ-EMC	V1.1.4.2	N/A	N/A

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Environmental Conditions

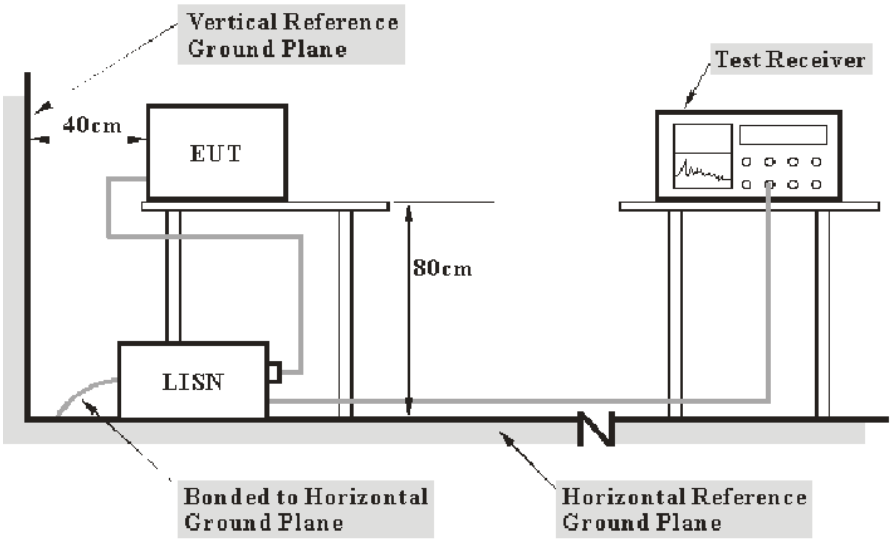
Test Item:	Conducted emissions	Radiated emissions Below 1GHz	Radiated emissions Above 1GHz
Test Date:	2019-11-13	2019-11-13	2019-11-13
Tester:	Sem Xing	Tyler Pan	Jakson Zhang
Temperature:	26.4℃	25.6℃	25.6℃
Relative Humidity:	54 %	44 %	44 %
ATM Pressure:	100.9kPa	100.9 kPa	100.9 kPa

SUMMARY OF TEST RESULTS

Rule and Clause	Description of Test	Test Result
FCC §15.107	Conducted emissions	Compliance
FCC §15.109	Radiated emissions	Compliance

CONDUCTED EMISSIONS

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15 B Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The adapter was connected to the Main LISN with 120V/60Hz AC power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the Adapter of Laptop was connected to the outlet of the first LISN and the other support equipments were connected to the outlet of the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$V_C = V_R + A_C + VDF$

Herein,
V_C: corrected voltage amplitude

V_R: reading voltage amplitude

A_c: attenuation caused by cable loss

VDF: voltage division factor of AMN or ISN

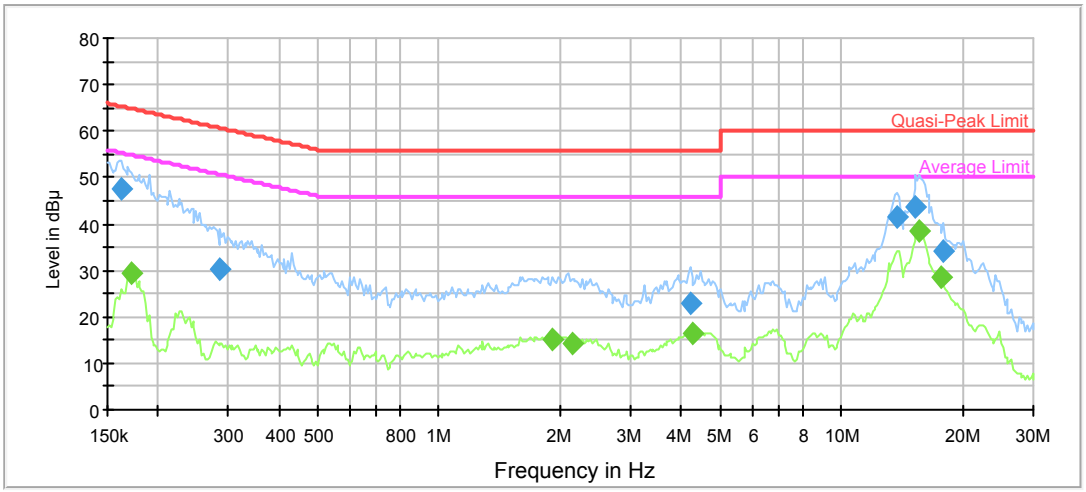
The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Data

Please refer to following table and plots:

Port:	L
Test Mode:	Downloading
Power Source:	AC 120V/60Hz
Note:	



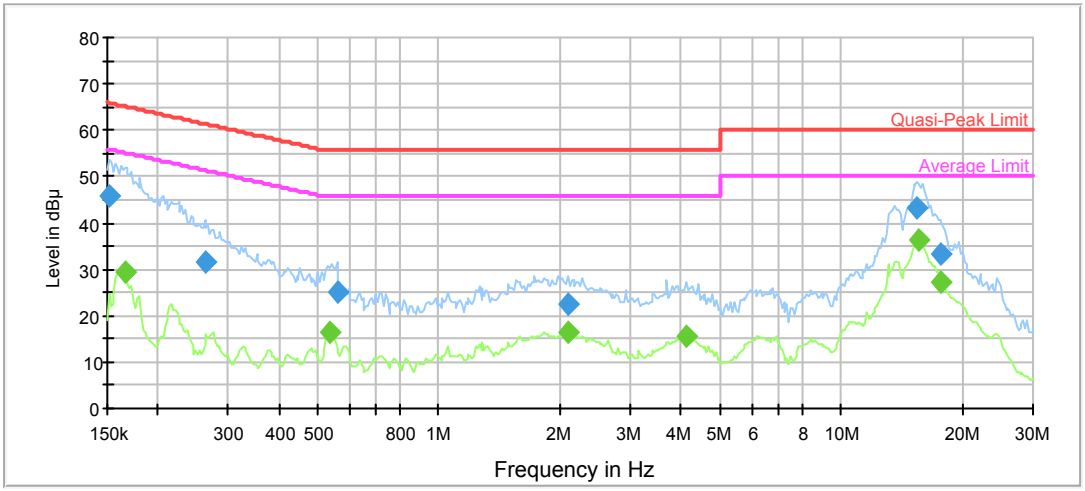
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.162429	47.7	9.000	L1	11.0	17.6	65.3
0.286405	30.4	9.000	L1	10.2	30.2	60.6
4.204862	23.0	9.000	L1	9.8	33.0	56.0
13.740269	41.6	9.000	L1	9.9	18.4	60.0
15.329584	43.8	9.000	L1	9.9	16.2	60.0
17.975142	34.1	9.000	L1	10.0	25.9	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.172421	29.2	9.000	L1	10.9	25.6	54.8
1.915858	15.1	9.000	L1	9.7	30.9	46.0
2.137462	14.4	9.000	L1	9.7	31.6	46.0
4.246911	16.6	9.000	L1	9.8	29.4	46.0
15.637708	38.4	9.000	L1	9.9	11.6	50.0
17.797171	28.5	9.000	L1	10.0	21.5	50.0

Port: N
Test Mode: Downloading
Power Source: AC 120V/60Hz
Note:



Final Result 1

Frequency (MHz)	QuasiPeak (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.151500	45.7	9.000	N	11.1	20.2	65.9
0.261872	31.7	9.000	N	10.3	29.7	61.4
0.557844	25.0	9.000	N	9.8	31.0	56.0
2.095345	22.6	9.000	N	9.8	33.4	56.0
15.482879	43.2	9.000	N	9.9	16.8	60.0
17.797171	33.4	9.000	N	10.0	26.6	60.0

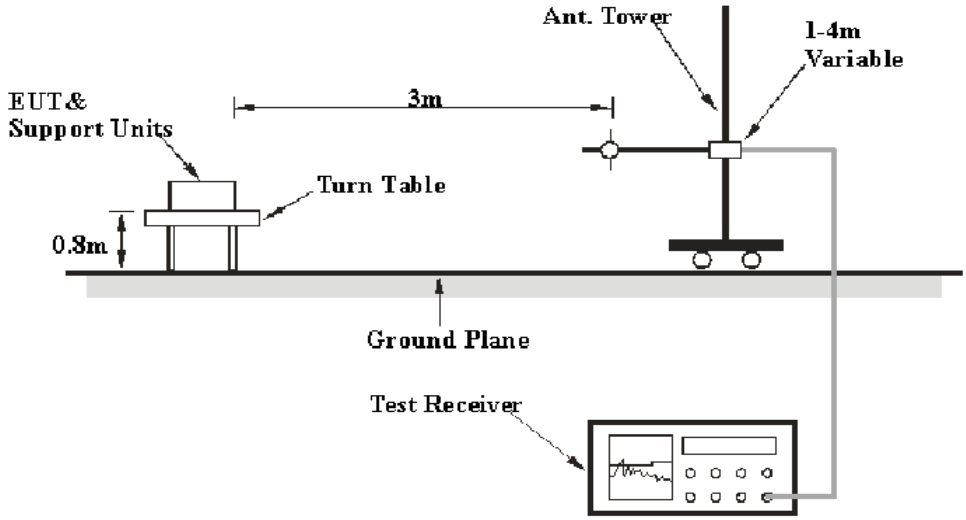
Final Result 2

Frequency (MHz)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.165693	29.6	9.000	N	10.9	25.6	55.2
0.536077	16.6	9.000	N	9.9	29.4	46.0
2.095345	16.4	9.000	N	9.8	29.6	46.0
4.122010	15.6	9.000	N	9.8	30.4	46.0
15.637708	36.5	9.000	N	9.9	13.5	50.0
17.797171	27.2	9.000	N	10.0	22.8	50.0

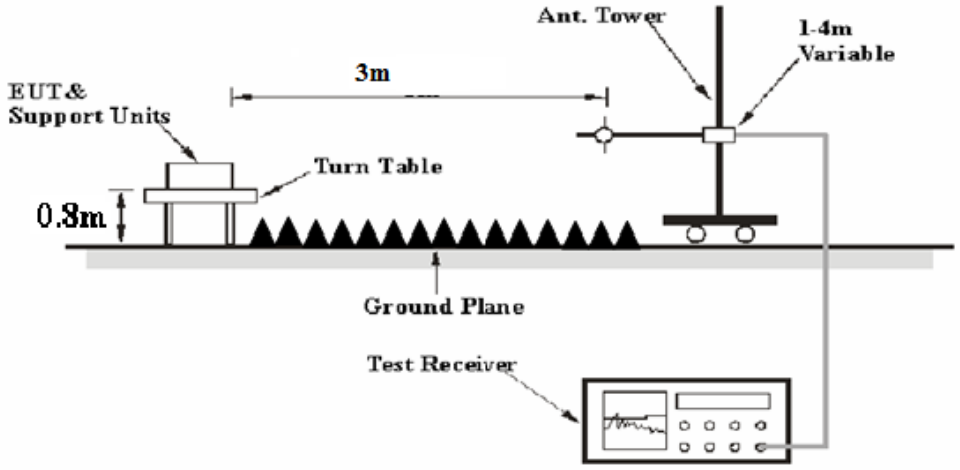
RADIATED EMISSIONS

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission below 1GHz tests were performed in the 3 meters chamber test site A, above 1GHz tests were performed in the 3 meters chamber test site A, using the setup accordance with the ANSI C63.4-2014. The specification used was with the FCC Part 15 B Class B limits.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 13 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	Reduced video bandwidth	/	AVG

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

Test Procedure

During the radiated emissions, the adapter of laptop was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode for below 1 GHz, peak and average detection mode above 1 GHz.

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Meter Reading+ Corrected

Note:
Corrected = Antenna Factor + Cable Loss - Amplifier Gain

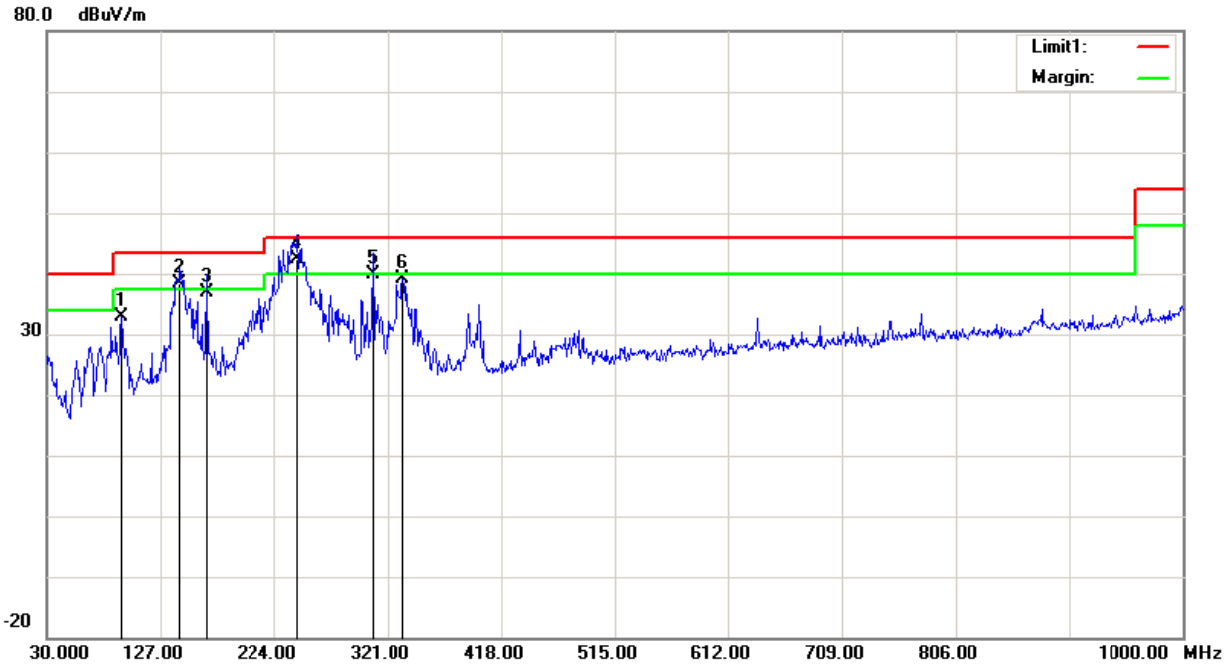
The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation
is as follows:

Margin = Limit – Result

Test Data

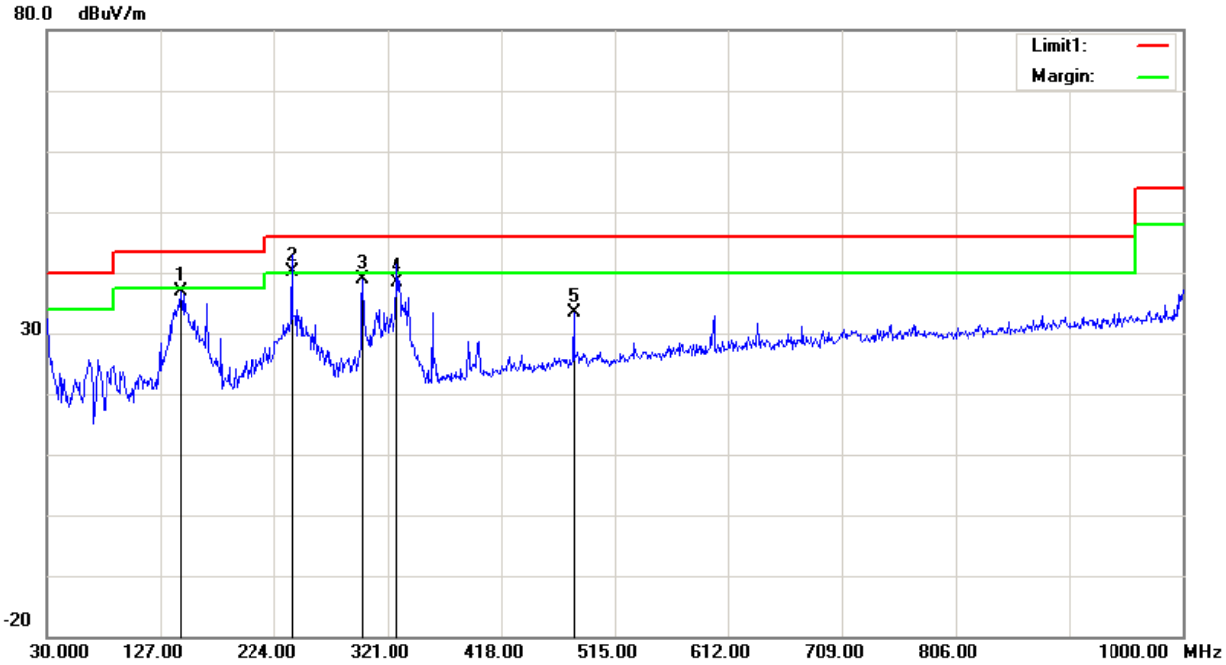
Please refer to following table and plots:

Condition:	**FCC Part 15B Class B**	**Polarization:**	**Horizontal**
EUT:	Smart phone	**Power:**	**AC 120V/60Hz**
Model:	**Stella Omega**	**Distance:**	3m
Test Mode:	**Downloading**		
Note:			



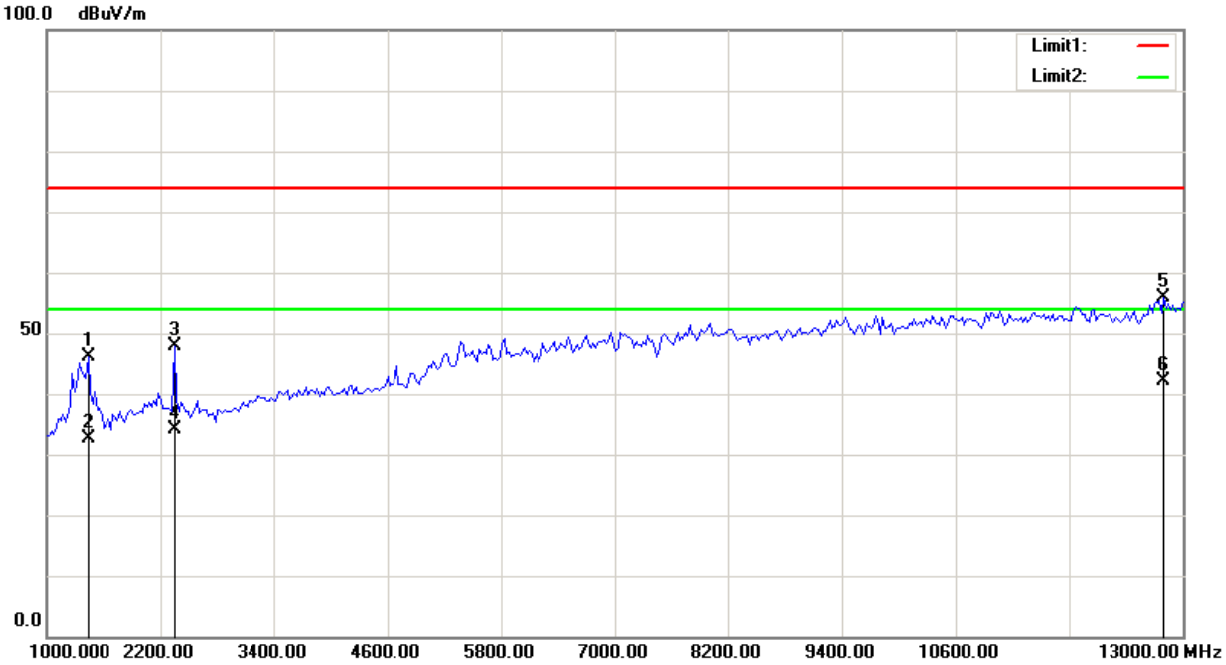
Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
94.0200	43.43	peak	-10.46	32.97	43.50	10.53
143.4900	44.24	QP	-5.95	38.29	43.50	5.21
165.8000	43.08	QP	-6.21	36.87	43.50	6.63
244.3700	48.30	QP	-5.96	42.34	46.00	3.66
308.3900	43.54	QP	-3.63	39.91	46.00	6.09
334.5800	42.37	peak	-3.35	39.02	46.00	6.98

Condition:	**FCC Part 15B Class B**	**Polarization:**	**Vertical**
EUT:	Smart phone	**Power:**	**AC 120V/60Hz**
Model:	**Stella Omega**	**Distance:**	3m
Test Mode:	**Downloading**		
Note:			



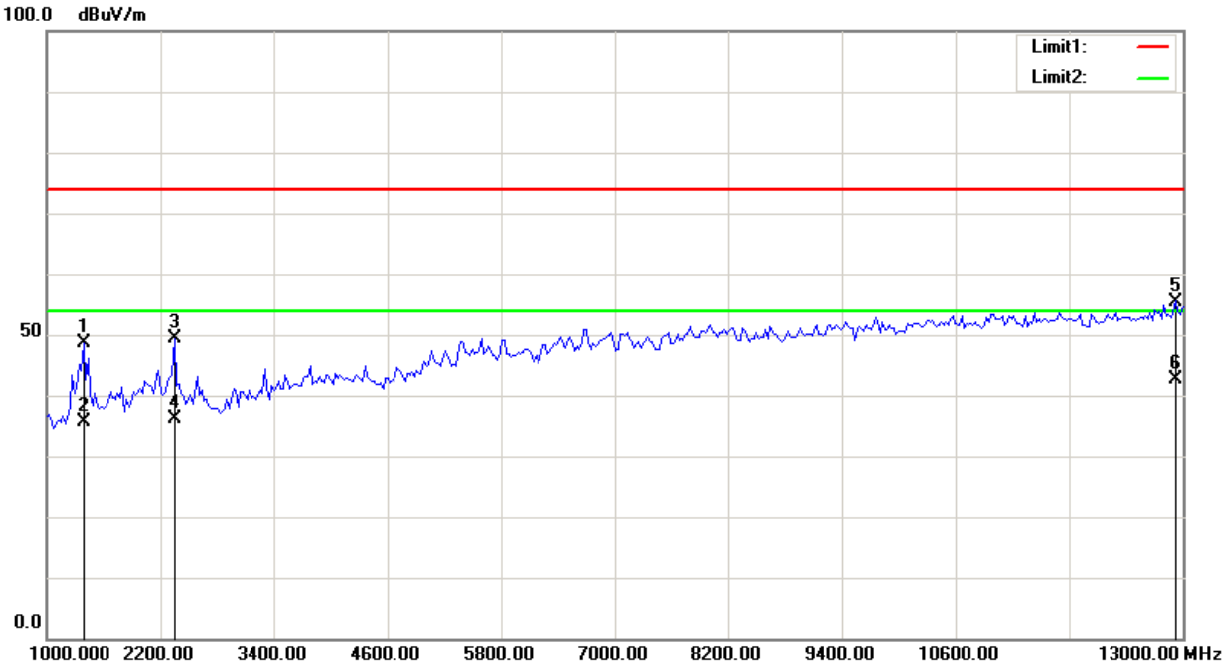
Frequency (MHz)	Reading (dBuV)	Detector	Corrected (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
144.4600	42.85	peak	-5.98	36.87	43.50	6.63
239.5200	46.20	QP	-6.02	40.18	46.00	5.82
299.6600	42.60	peak	-3.83	38.77	46.00	7.23
329.7300	41.65	QP	-3.37	38.28	46.00	7.72
480.0800	33.56	peak	-0.27	33.29	46.00	12.71

Condition:	**FCC Part 15B Class B Peak**	**Polarization:**	**Horizontal**
EUT:	Smart phone	**Power:**	**AC 120V/60Hz**
Model:	**Stella Omega**	**Distance:**	3m
Test Mode:	**Downloading**		
Note:			



Frequency (MHz)	Reading (dBµV)	Detector	Corrected (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1432.866	47.56	peak	-1.34	46.22	74.00	27.78
1432.866	33.87	AVG	-1.34	32.53	54.00	21.47
2346.693	47.71	peak	0.09	47.80	74.00	26.20
2346.693	34.10	AVG	0.09	34.19	54.00	19.81
12807.615	35.92	peak	19.98	55.90	74.00	18.10
12807.615	22.24	AVG	19.98	42.22	54.00	11.78

Condition:	**FCC Part 15B Class B Peak**	**Polarization:**	**Vertical**
EUT:	Smart phone	**Power:**	**AC 120V/60Hz**
Model:	**Stella Omega**	**Distance:**	3m
Test Mode:	**Downloading**		
Note:			



Frequency (MHz)	Reading (dBµV)	Detector	Corrected (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)
1384.770	50.08	peak	-1.47	48.61	74.00	25.39
1384.770	37.21	AVG	-1.47	35.74	54.00	18.26
2346.693	49.21	peak	0.09	49.30	74.00	24.70
2346.693	36.10	AVG	0.09	36.19	54.00	17.81
12927.856	34.76	peak	20.74	55.50	74.00	18.50
12927.856	21.99	AVG	20.74	42.73	54.00	11.27

*******END OF REPORT*******