



TESTING LABORATORY
CERTIFICATE #4820.01



FCC PART 15 B TEST REPORT

For

MOVILTELCO TRADE, S.L.

Street: ABTAO,25-1Floor A-office MADRID-SPAIN MADRID, Spain

FCC ID: 2ACQKTELCO019

Report Type: Original Report	Product Type: Mobile Phone
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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

Product Type:		Mobile Phone
EUT Name:		L506
EUT Model:		L506 Single SIM
Multiple Model:		L506 Dual SIM
Rated Input Voltage:		DC3.7V from Battery or DC5V from adapter
Adapter #1 Information	Model Name:	HJ-0500500B2-AR
	Input:	AC 100-240V, 50/60Hz 0.15A
	Output:	DC5V, 500mA
Adapter #2 Information	Model Name:	L506
	Input:	AC100-240V, 50/60Hz, 150mA
	Output:	DC 5V, 500mA
External Dimension:		145mm(L)* 75mm(W)* 12 mm(H)
Serial Number:		181210009
EUT Received Date:		2018.12.13

Note: The series product, models L506 Single SIM, L506 Dual SIM are electrically identical, The difference between them please refer to the declaration letter for details. For marketing purpose, we selected L506 Single SIM for fully test.

Objective

This test report is prepared on behalf of *MOVILTELCO TRADE, S.L.* in accordance with Part 2, Subpart J, and Part 15-Subparts 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 15C DSS submissions with FCC ID: 2ACQKTELCO019.
 FCC Part 15C DTS submissions with FCC ID: 2ACQKTELCO019.
 FCC Part 22H, 24E, 27 PCE submissions with FCC ID: 2ACQKTELCO019.

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 °C
Humidity	±5%
AC Power Lines Conducted Emission	3.12 dB (150 kHz to 30 MHz)

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.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in operating and downloading mode.

EUT Exercise Software

The software “Winthrax.exe” was used during test.

Equipment Modifications

No modification was made to the EUT tested.

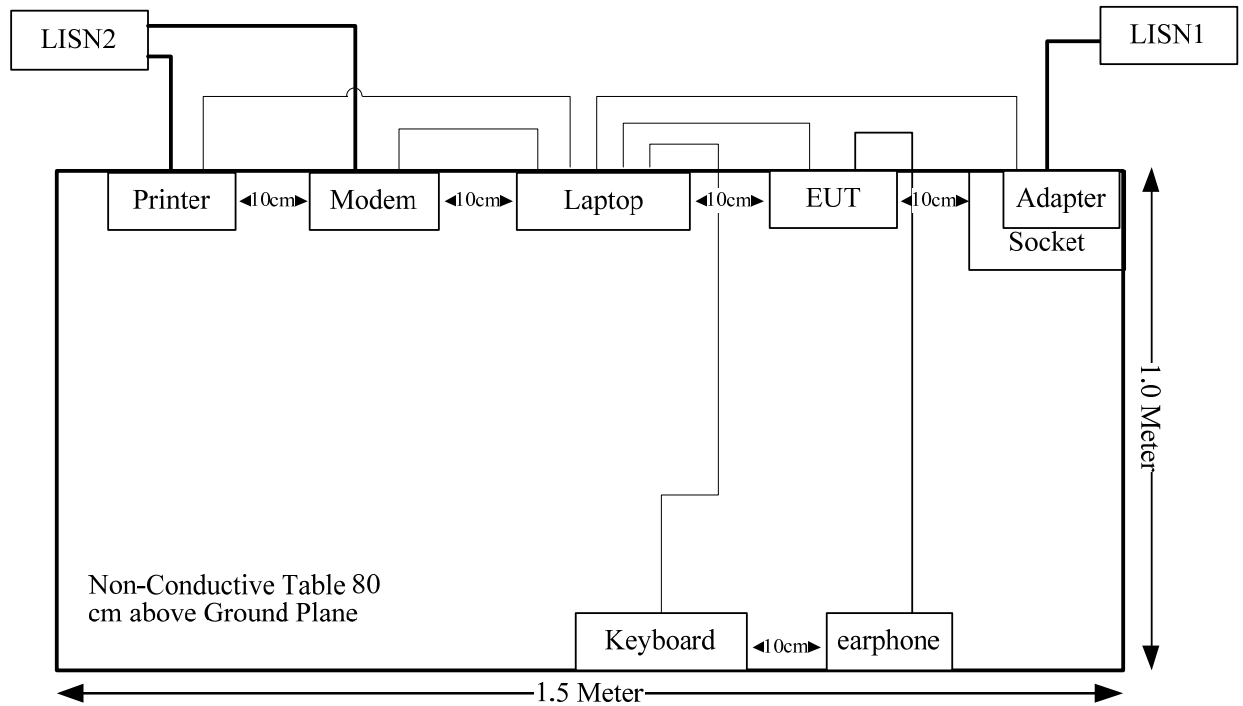
Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	Laptop	PP11L	QDS-BRCM1017
HP	Printer	C3941A	JPTVOB2337
DELL	Keyboard	L100	CNORH656658907BL05DC
SAST	Modem	AEM-2100	0293

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	yes	1.8	USB Port of Laptop	Keyboard
USB Cable	yes	no	1.0	EUT	Laptop
Earphone Cable	No	No	1.2	EUT	Earphone

Configuration of Test Setup

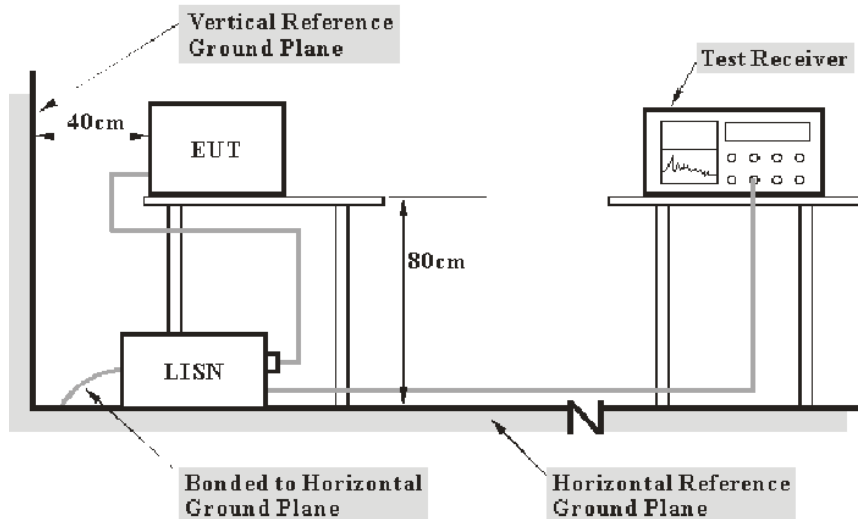


SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Compliance
§15.109	Radiated Emissions	Compliance

FCC§15.107 - 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 Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCS 30	830245/006	2018-12-10	2019-12-10
Unknown	Coaxial Cable	C-NJNJ-50	C-0200-01	2018-09-05	2019-09-05
R&S	Test Software	EMC32	Version8.53.0	N/A	N/A
R&S	Two-line V-network	ENV 216	101614	2018-12-10	2019-12-10

* **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).

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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15 B Class B.

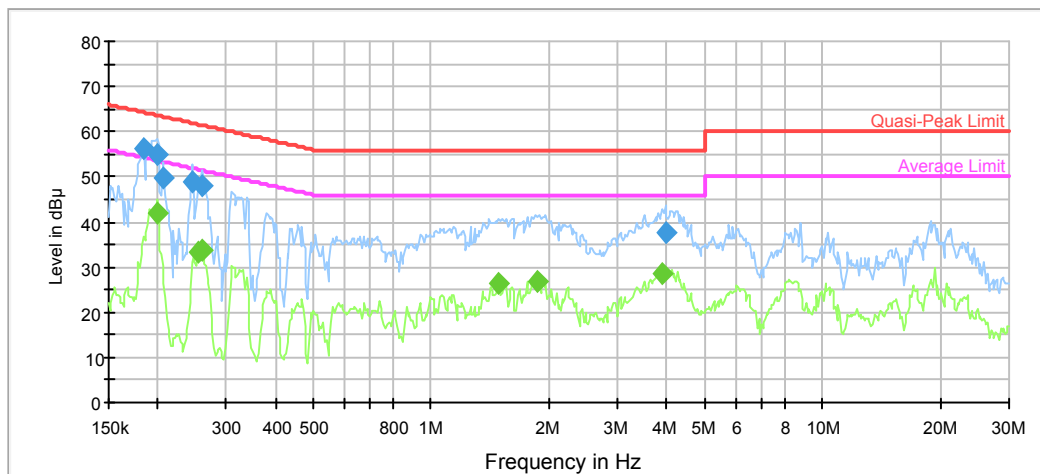
Test Data**Environmental Conditions**

Temperature:	23.2°C
Relative Humidity:	35 %
ATM Pressure:	99.9 kPa

The testing was performed by Lily Xie on 2018-12-14.

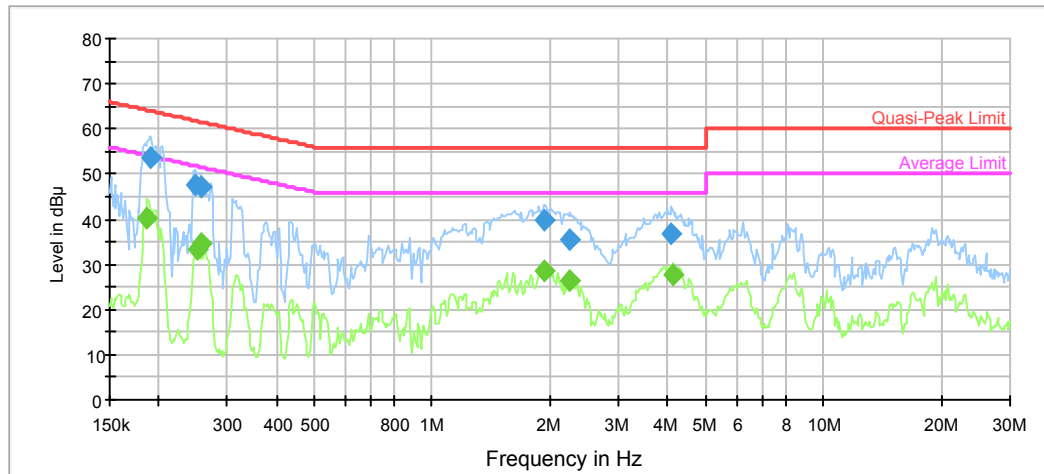
Test Mode: Downloading

AC120V, 60Hz, Line:



Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.184529	56.0	9.000	L1	10.8	8.3	64.3	Compliance
0.199835	54.8	9.000	L1	10.6	8.8	63.6	Compliance
0.206306	49.8	9.000	L1	10.6	13.6	63.4	Compliance
0.245835	48.9	9.000	L1	10.3	13.0	61.9	Compliance
0.259937	47.8	9.000	L1	10.3	13.6	61.4	Compliance
3.966160	37.8	9.000	L1	9.8	18.2	56.0	Compliance

Frequency (MHz)	Average (dBμV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.199835	41.8	9.000	L1	10.6	11.8	53.6	Compliance
0.253797	33.4	9.000	L1	10.3	18.2	51.6	Compliance
0.259937	33.8	9.000	L1	10.3	17.6	51.4	Compliance
1.488418	26.2	9.000	L1	9.8	19.8	46.0	Compliance
1.875341	26.9	9.000	L1	9.7	19.1	46.0	Compliance
3.903455	28.6	9.000	L1	9.8	17.4	46.0	Compliance

AC120V, 60Hz, Neutral:

Frequency (MHz)	QuasiPeak (dB μ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)	Comment
0.190505	53.6	9.000	N	10.7	10.4	64.0	Compliance
0.247802	47.4	9.000	N	10.3	14.4	61.8	Compliance
0.255827	47.0	9.000	N	10.3	14.6	61.6	Compliance
1.936076	39.6	9.000	N	9.8	16.4	56.0	Compliance
2.252540	35.4	9.000	N	9.8	20.6	56.0	Compliance
4.094608	36.6	9.000	N	9.8	19.4	56.0	Compliance

Frequency (MHz)	Average (dB μ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)	Comment
0.187494	40.4	9.000	N	10.7	13.7	54.1	Compliance
0.251783	33.1	9.000	N	10.3	18.6	51.7	Compliance
0.255827	34.5	9.000	N	10.3	17.1	51.6	Compliance
1.936076	28.5	9.000	N	9.8	17.5	46.0	Compliance
2.234662	26.2	9.000	N	9.8	19.8	46.0	Compliance
4.127365	27.9	9.000	N	9.8	18.1	46.0	Compliance

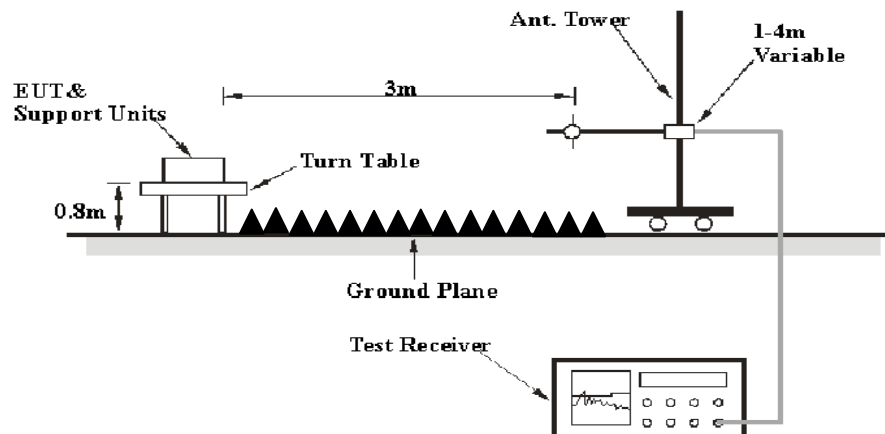
FCC §15.109 - RADIATED SPURIOUS EMISSIONS

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site A for the range 30MHz to 1GHz and the 3 meters chamber test site A for above 1GHz, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 13.5 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 VBW	/	AVG

If the maximized peak measured value complies with the QP/Average limit, 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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI Test Receiver	ESCI	100224	2018-12-10	2019-12-10
Sunol Sciences	Antenna	JB3	A060611-1	2017-11-10	2020-11-10
HP	Amplifier	8447D	2727A05902	2018-09-05	2019-09-05
R&S	Spectrum Analyzer	FSP 38	100478	2018-12-10	2019-12-10
TDK RF	Horn Antenna	HRN-0118	130 084	2016-01-05	2019-01-04
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2018-09-05	2019-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2018-09-05	2019-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2018-09-05	2019-09-05
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2018-05-06	2019-05-06
MICRO-COAX	Coaxial Cable	UFA147-1-2362-10 0100	64639 231029-001	2018-02-24	2019-02-28
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).

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Data

Environmental Conditions

Temperature:	21.3~21.5 °C
Relative Humidity:	30~35 %
ATM Pressure:	99.9 kPa

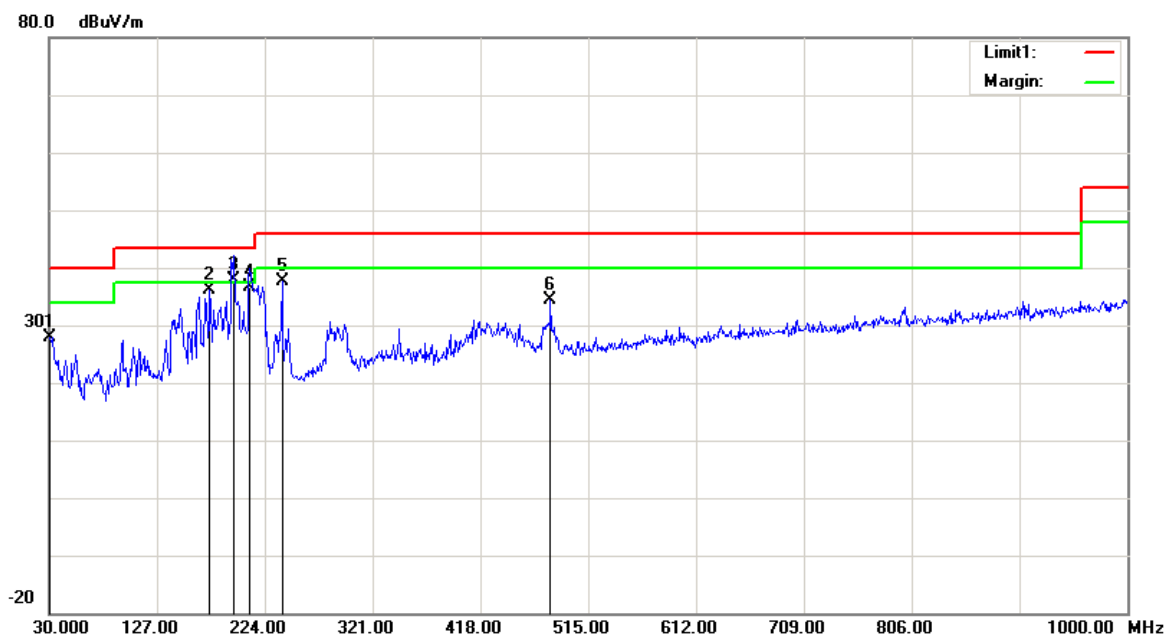
* The testing was performed by Vern Shen & Neil Liao on 2018-12-14.

Test Result: Compliance

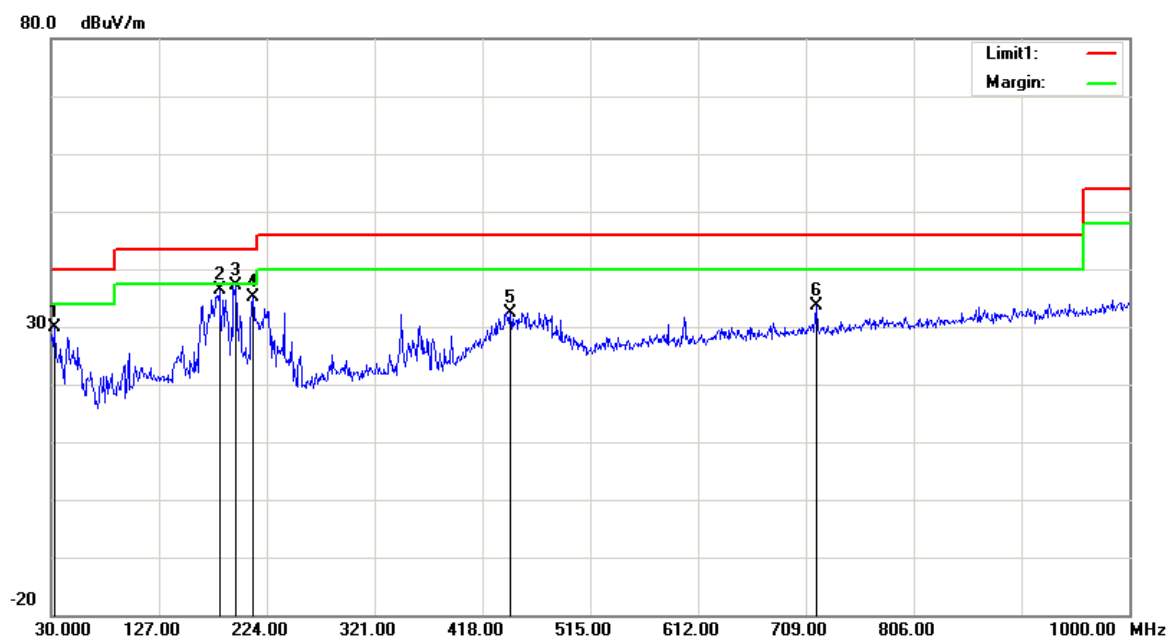
Test Mode: Downloading

1) Below 1GHz:

Horizontal



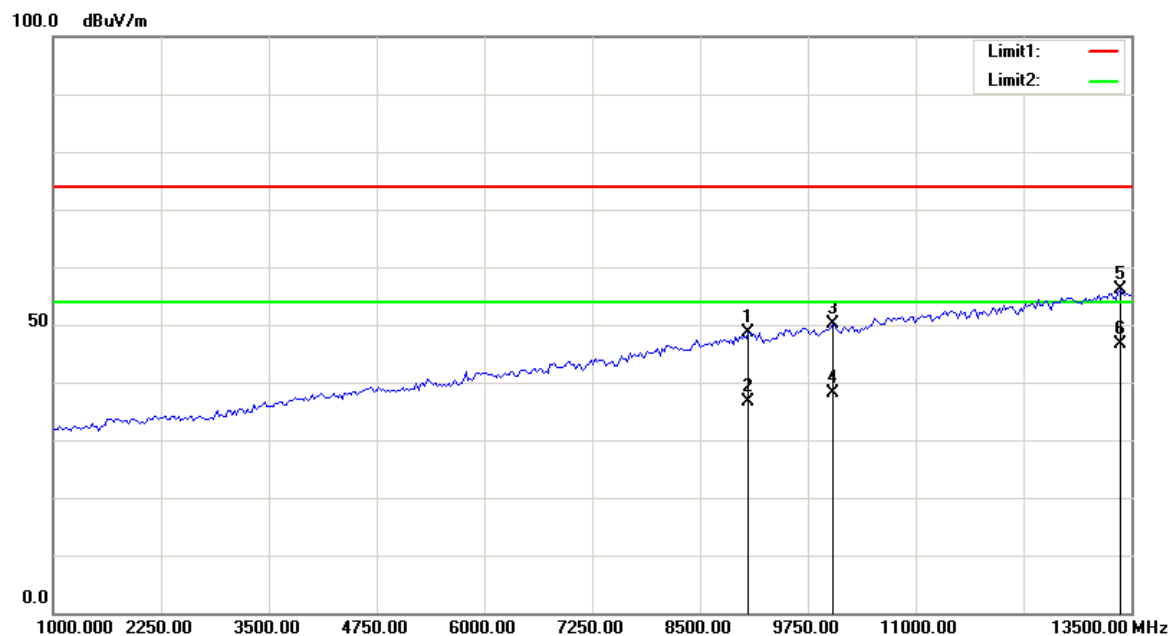
Frequency (MHz)	Receiver Reading (dBμV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
30.9700	27.02	peak	0.95	27.97	40.00	12.03
174.5300	42.98	peak	-6.87	36.11	43.50	7.39
195.8700	44.40	QP	-6.60	37.80	43.50	5.70
210.4200	44.06	QP	-7.36	36.70	43.50	6.80
239.5200	43.63	peak	-5.98	37.65	46.00	8.35
481.0500	34.66	peak	-0.24	34.42	46.00	11.58

Vertical

Frequency (MHz)	Receiver Reading (dBμV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
32.9100	30.49	peak	-0.50	29.99	40.00	10.01
181.3200	43.68	peak	-7.27	36.41	43.50	7.09
195.8700	43.84	peak	-6.60	37.24	43.50	6.26
211.3900	42.38	peak	-7.37	35.01	43.50	8.49
443.2200	33.62	peak	-1.15	32.47	46.00	13.53
718.7000	30.18	peak	3.33	33.51	46.00	12.49

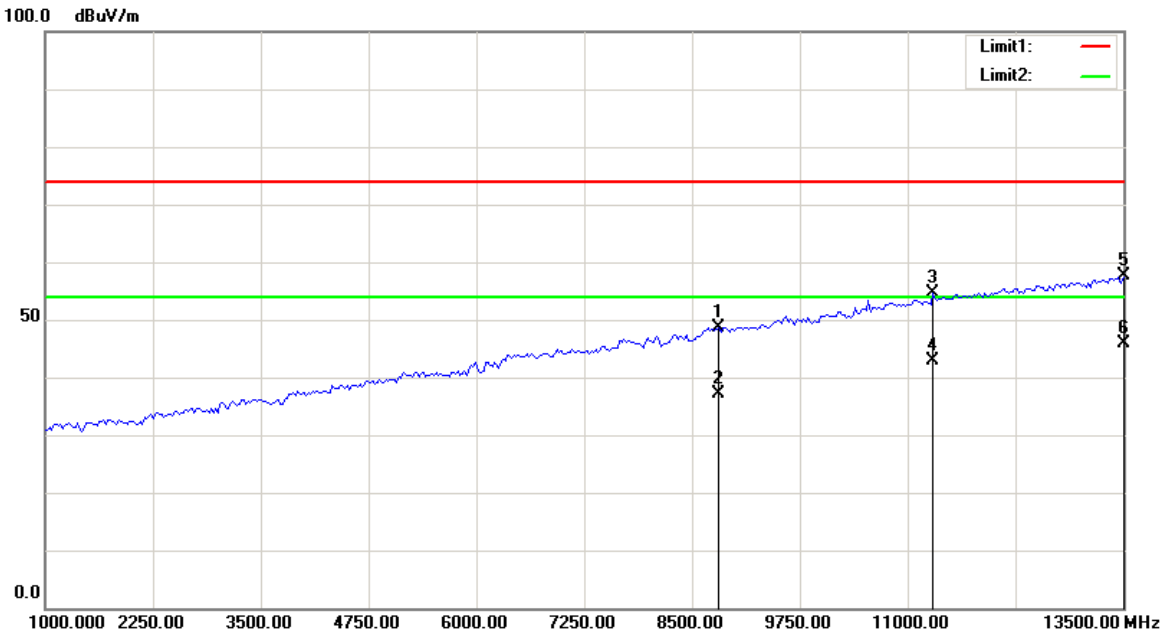
2) Above 1GHz:

Horizontal



Frequency (MHz)	Receiver Reading (dBμV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
9066.132	33.41	peak	15.29	48.70	74.00	25.30
9066.132	21.42	AVG	15.29	36.71	54.00	17.29
10043.086	33.45	peak	16.56	50.01	74.00	23.99
10043.086	21.64	AVG	16.56	38.20	54.00	15.80
13374.749	34.08	peak	21.99	56.07	74.00	17.93
13374.749	24.63	AVG	21.99	46.62	54.00	7.38

Vertical



Frequency (MHz)	Receiver Reading (dBμV)	Detector	Correction Factor (dB/m)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
8815.631	33.81	peak	14.87	48.68	74.00	25.32
8815.631	22.36	AVG	14.87	37.23	54.00	16.77
11295.591	36.27	peak	18.37	54.64	74.00	19.36
11295.591	24.57	AVG	18.37	42.94	54.00	11.06
13500.000	35.35	peak	22.20	57.55	74.00	16.45
13500.000	23.66	AVG	22.20	45.86	54.00	8.14

END OF REPORT