

FCC Test Report

FCC ID:QISE8231S-81

Project No. : 1502C141
Equipment : HUAWEI Wingle E8231
Model Name : E8231s-81
Applicant : Huawei Technologies Co.,Ltd.
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen China

Date of Receipt : Feb. 16, 2015
Date of Test : Feb. 16, 2015 ~ Mar. 03, 2015
Issued Date : Mar. 04, 2015
Tested by : BTL Inc.

Testing Engineer : Kevin Kao
(Kevin Kao)

Technical Manager : Jeff Yang
(Jeff Yang)

Authorized Signatory : Andy Chiu
(Andy Chiu)

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

BTL's reports must not be used by the client to claim product endorsement by the authorities or any agency of the Government.

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BTL's laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCE-1-1502C141	Original Issue.	Mar. 04, 2015

1. CERTIFICATION

Equipment : HUAWEI Wingle E8231
Brand Name : HUAWEI
Model Name : E8231s-81
Applicant : Huawei Technologies Co.,Ltd.
Manufacturer : Huawei Technologies Co.,Ltd.
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District Shenzhen China
Factory : Huawei Technologies Co.,Ltd.
Address : Administration Building, Huawei Base, Bantian, Longgang District ,Shenzhen
518129, P.R.China
Date of Test : Feb. 16, 2015 ~ Mar. 03, 2015
Standard(s) : FCC Part 15, Subpart B :2013
ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCE-1-1502C141) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

EMC Emission				
Standard(s)	Test Item	Limit	Judgment	Remark
FCC Part15, Subpart B:2013	Conducted Emission	Class B	PASS	
	Radiated Emission	Class B	PASS	

NOTE:

(1) " N/A" denotes test is not applicable in this test report.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **C02/CB08** at the location of 1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR16-4-2:

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
C02	CISPR	150 KHz~30MHz	2.59	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)	NOTE
CB08	CISPR	30MHz~200MHz	V	3.22	
		30MHz~200MHz	H	3.55	
		200MHz~ 1,000MHz	V	3.24	
		200MHz~ 1,000MHz	H	3.11	
		1,000MHz~18,000MHz	V	4.05	
		1,000MHz~18,000MHz	H	3.97	
		18,000MHz~40,000MHz	V	4.04	
		18,000MHz~40,000MHz	H	4.01	

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	HUAWEI Wingle E8231
Brand Name	HUAWEI
Model Name	E8231s-81
Model Difference	N/A
PowerSource	#1 DC voltage supplied from AC adapter. Brand: HUAWEI Model: HW-050100B4W (UK) HW-050100U4W (US) HW-050100E4W (EU) HW-050100A4W (AU) #2 DC voltage supplied from car charger. Brand /Model: HUAWEI / HWCC02
Power Rating	#1 I/P: AC 100-240V~50/60Hz 0.2A O/P: DC 5V 1.0A #2 I/P: DC 12V-24V 1A MAX O/P: DC 5V 1A

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. The maximum operating frequency is 3GHz

3.2 DESCRIPTION OF TEST MODES

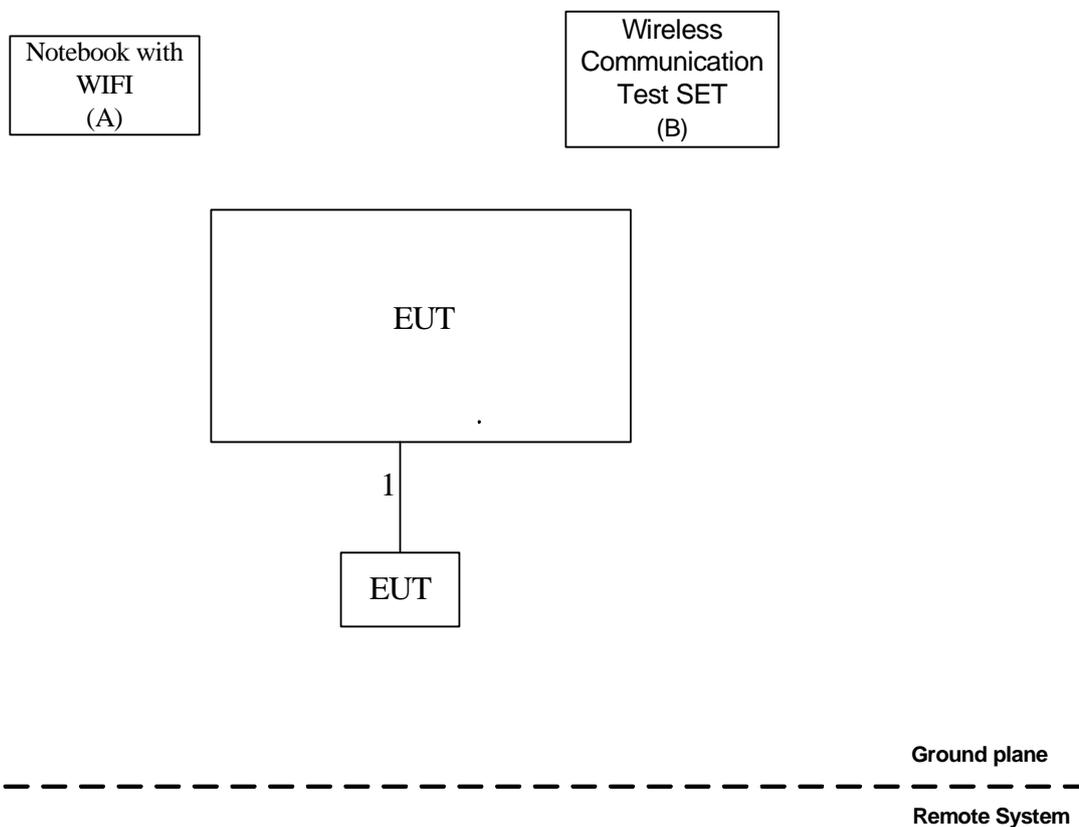
To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	GSM850+WIFI
Mode 2	GSM1900+WIFI
Mode 3	WCDMA1900+WIFI

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted / Radiated Test	
Final Test Mode	Description
Mode 1	GSM850+WIFI
Mode 2	GSM1900+WIFI
Mode 3	WCDMA1900+WIFI

3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
A	Notebook	DELL	latitude E5510	DOC	N/A	
B	Wireless Communication Test SET	Agilent	(8960 Series) E5515C	N/A	MY48364183	

Item	Shielded Type	Ferrite Core	Length	Note
1	YES	NO	0.8/0.17m	USB Cable

Note:

- (1) For detachable type I/O cable should be specified the length in m in 『Length』 column.

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (FREQUENCY RANGE 150KHZ-30MHZ)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:
 Measurement Value = Reading Level + Correct Factor
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
 Margin Level = Measurement Value - Limit Value

4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	100087	Dec. 07, 2015
2	Test Cable	TIMES	CFD300-NL	C02	Jun. 15, 2015
3	EMI Test Receiver	Agilent	N9038A	MY51210215	Apr. 21, 2016
4	Measurement Software	EZ	EZ_EMCC (Version NB-03A)	N/A	N/A

Remark: " N/A" denotes no model name, serial No. or no calibration specified.

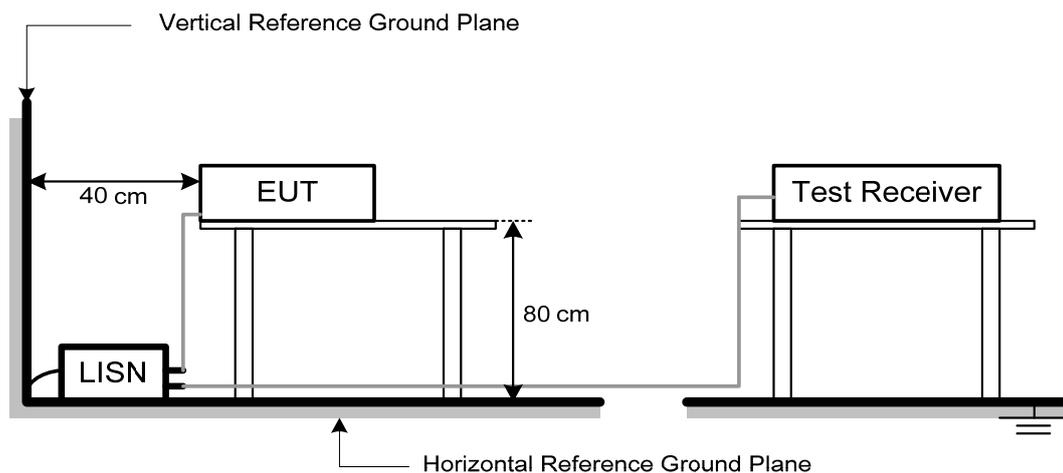
4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



4.1.6 EUT OPERATING CONDITIONS

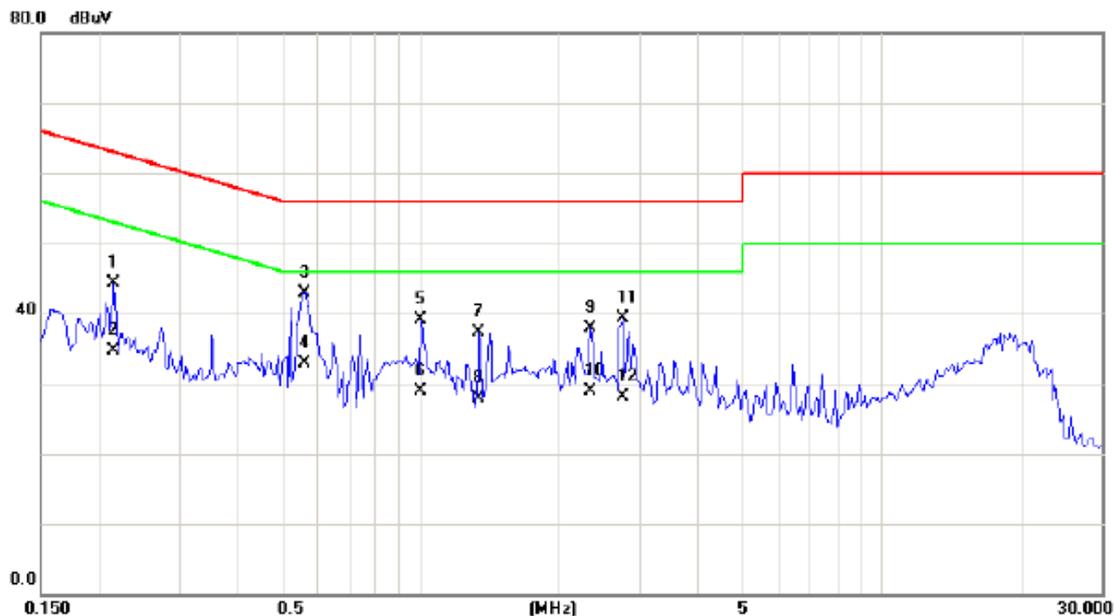
The EUT exercise program used during radiated and/or conducted emission measurement was designed to exercise the various system components in a manner similar to a typical use.

4.1.7 TEST RESULTS

Remark:

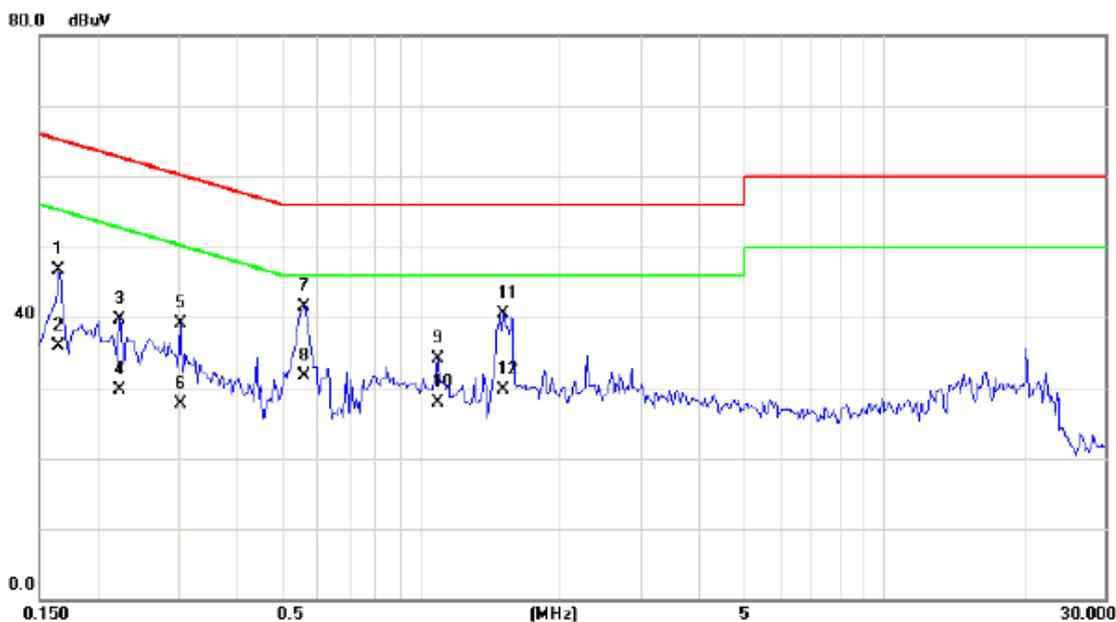
- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz; SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.3 sec./MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz,VBW=10KHz, Swp. Time =0.3 sec./MHz.
- (2) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a “ * ” marked in AVG Mode column of Interference Voltage Measured.
- (3) Measuring frequency range from 150KHz to 30MHz.

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: BYD	Phase:	Line



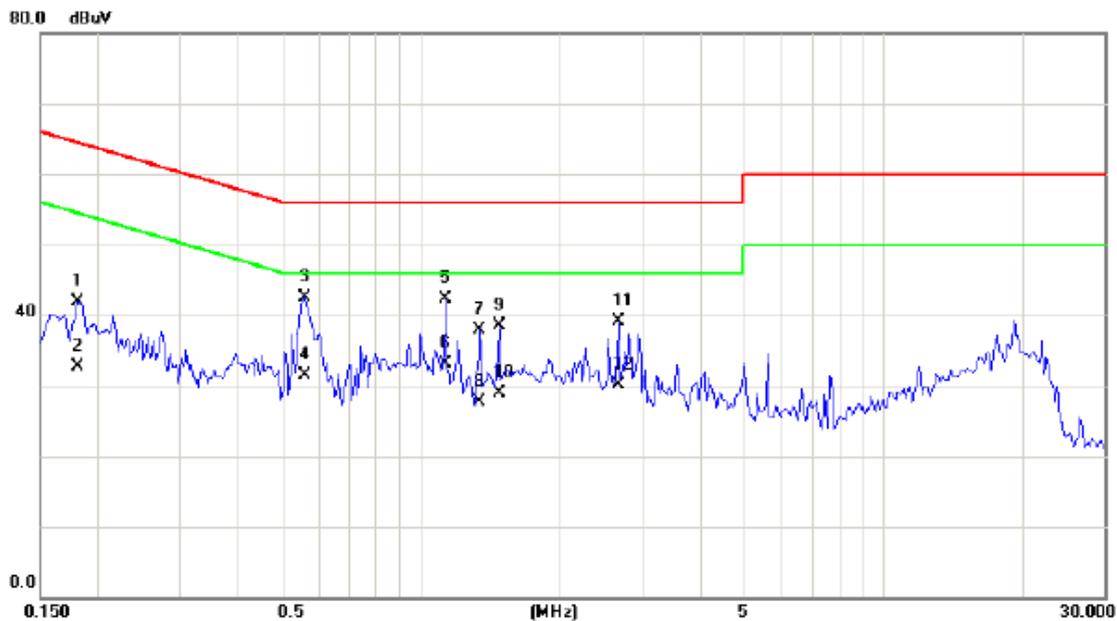
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2164	34.71	9.67	44.38	62.96	-18.58	QP	
2		0.2164	24.97	9.67	34.64	52.96	-18.32	AVG	
3		0.5640	33.09	9.89	42.98	56.00	-13.02	QP	
4	*	0.5640	23.11	9.89	33.00	46.00	-13.00	AVG	
5		1.0015	29.46	9.70	39.16	56.00	-16.84	QP	
6		1.0015	19.14	9.70	28.84	46.00	-17.16	AVG	
7		1.3413	27.65	9.73	37.38	56.00	-18.62	QP	
8		1.3413	18.13	9.73	27.86	46.00	-18.14	AVG	
9		2.3374	28.15	9.79	37.94	56.00	-18.06	QP	
10		2.3374	19.15	9.79	28.94	46.00	-17.06	AVG	
11		2.7515	29.53	9.82	39.35	56.00	-16.65	QP	
12		2.7515	18.35	9.82	28.17	46.00	-17.83	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: BYD	Phase:	Neutral



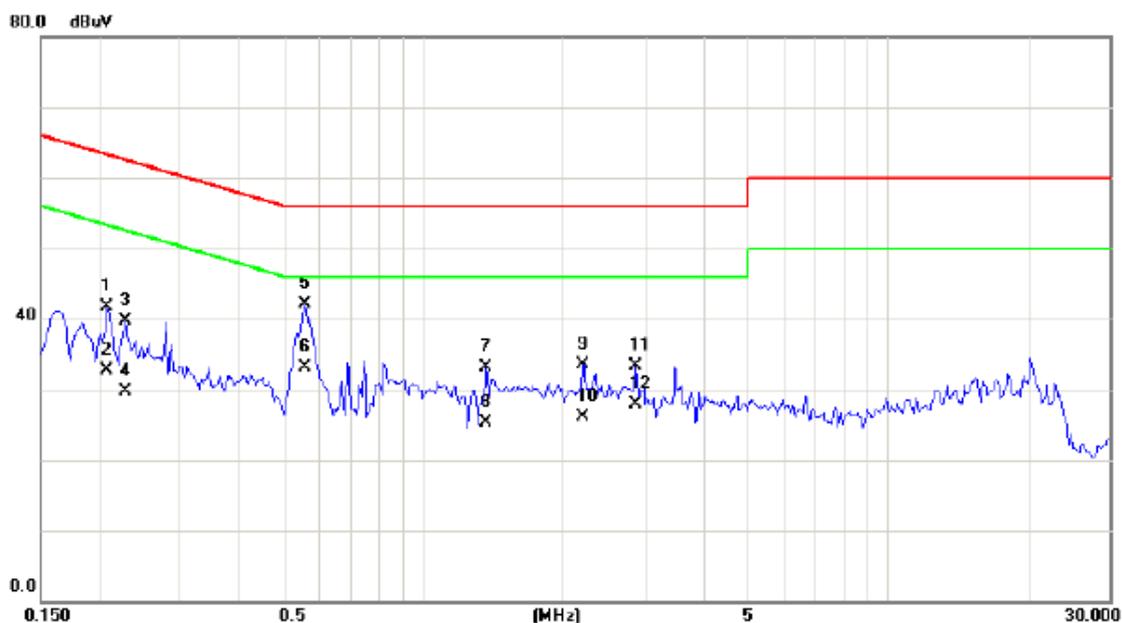
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1655	37.07	9.65	46.72	65.18	-18.46	QP	
2		0.1655	26.17	9.65	35.82	55.18	-19.36	AVG	
3		0.2242	29.95	9.68	39.63	62.66	-23.03	QP	
4		0.2242	19.95	9.68	29.63	52.66	-23.03	AVG	
5		0.3023	29.26	9.77	39.03	60.18	-21.15	QP	
6		0.3023	17.98	9.77	27.75	50.18	-22.43	AVG	
7		0.5640	31.60	9.89	41.49	56.00	-14.51	QP	
8	*	0.5640	21.80	9.89	31.69	46.00	-14.31	AVG	
9		1.0913	24.45	9.70	34.15	56.00	-21.85	QP	
10		1.0913	18.13	9.70	27.83	46.00	-18.17	AVG	
11		1.5093	30.71	9.74	40.45	56.00	-15.55	QP	
12		1.5093	20.03	9.74	29.77	46.00	-16.23	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI – Adapter: BYD	Phase:	Line



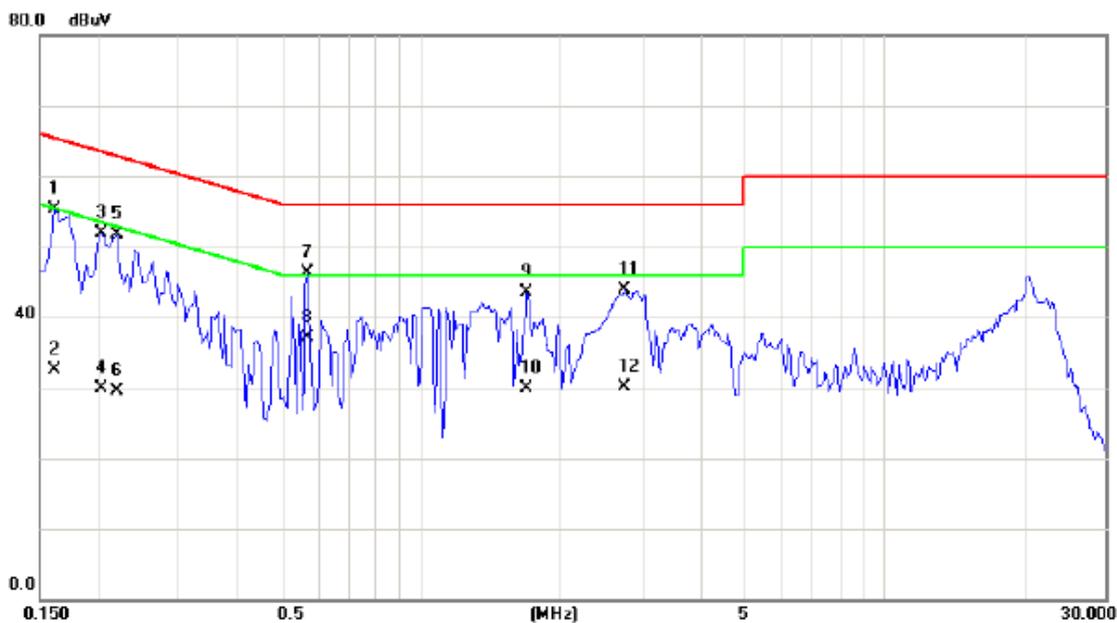
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1812	32.20	9.65	41.85	64.43	-22.58	QP	
2	0.1812	22.98	9.65	32.63	54.43	-21.80	AVG	
3	0.5601	32.70	9.90	42.60	56.00	-13.40	QP	
4	0.5601	21.70	9.90	31.60	46.00	-14.40	AVG	
5	1.1304	32.68	9.71	42.39	56.00	-13.61	QP	
6 *	1.1304	23.44	9.71	33.15	46.00	-12.85	AVG	
7	1.3414	28.13	9.73	37.86	56.00	-18.14	QP	
8	1.3414	18.03	9.73	27.76	46.00	-18.24	AVG	
9	1.4781	28.68	9.73	38.41	56.00	-17.59	QP	
10	1.4781	19.14	9.73	28.87	46.00	-17.13	AVG	
11	2.6773	29.28	9.80	39.08	56.00	-16.92	QP	
12	2.6773	20.36	9.80	30.16	46.00	-15.84	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI – Adapter: BYD	Phase:	Neutral



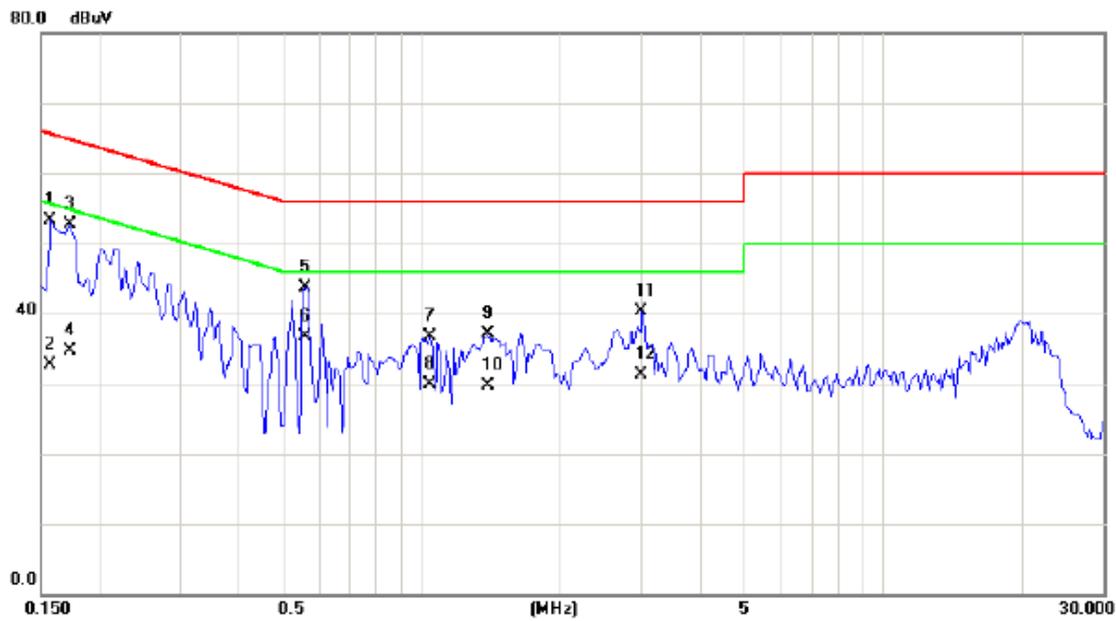
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2085	32.13	9.66	41.79	63.26	-21.47	QP	
2		0.2085	22.97	9.66	32.63	53.26	-20.63	AVG	
3		0.2281	29.95	9.68	39.63	62.52	-22.89	QP	
4		0.2281	19.95	9.68	29.63	52.52	-22.89	AVG	
5		0.5562	32.17	9.90	42.07	56.00	-13.93	QP	
6	*	0.5562	23.19	9.90	33.09	46.00	-12.91	AVG	
7		1.3687	23.30	9.73	33.03	56.00	-22.97	QP	
8		1.3687	15.52	9.73	25.25	46.00	-20.75	AVG	
9		2.2124	23.81	9.78	33.59	56.00	-22.41	QP	
10		2.2124	16.33	9.78	26.11	46.00	-19.89	AVG	
11		2.8726	23.53	9.82	33.35	56.00	-22.65	QP	
12		2.8726	18.13	9.82	27.95	46.00	-18.05	AVG	

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Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI - Adapter: BYD	Phase:	Line



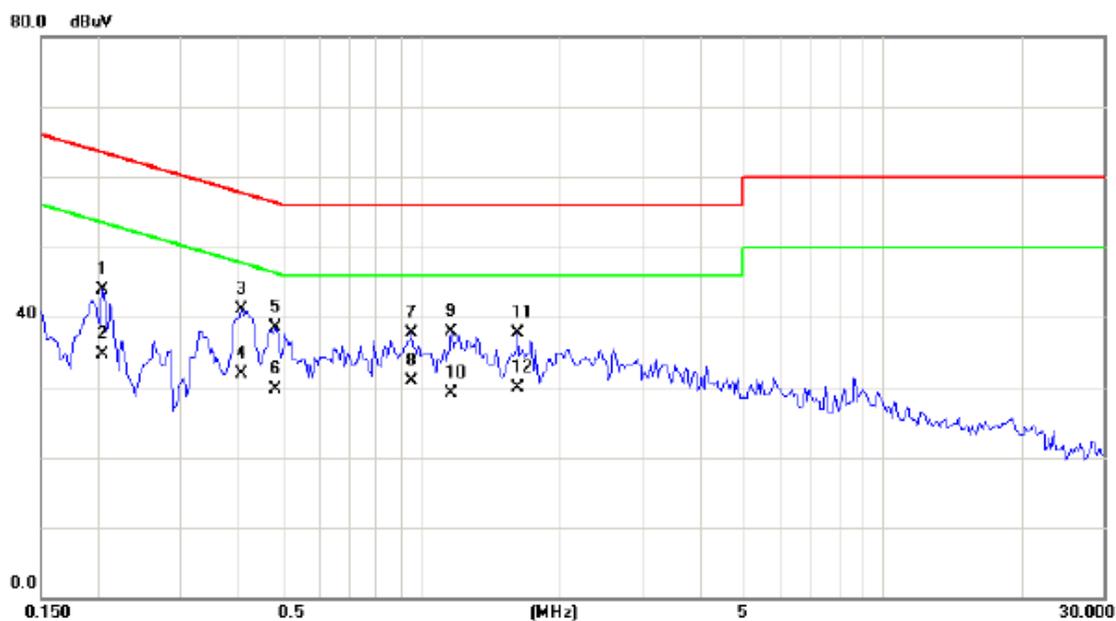
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1617	45.65	9.65	55.30	65.38	-10.08	QP	
2		0.1617	22.87	9.65	32.52	55.38	-22.86	AVG	
3		0.2047	42.26	9.66	51.92	63.42	-11.50	QP	
4		0.2047	20.18	9.66	29.84	53.42	-23.58	AVG	
5		0.2203	42.11	9.67	51.78	62.81	-11.03	QP	
6		0.2203	19.77	9.67	29.44	52.81	-23.37	AVG	
7		0.5680	36.42	9.88	46.30	56.00	-9.70	QP	
8	*	0.5680	27.22	9.88	37.10	46.00	-8.90	AVG	
9		1.6970	33.70	9.74	43.44	56.00	-12.56	QP	
10		1.6970	20.26	9.74	30.00	46.00	-16.00	AVG	
11		2.7398	34.08	9.80	43.88	56.00	-12.12	QP	
12		2.7398	20.26	9.80	30.06	46.00	-15.94	AVG	

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Test Mode :	WCDMA1900+WIFI - Adapter: BYD	Phase:	Neutral



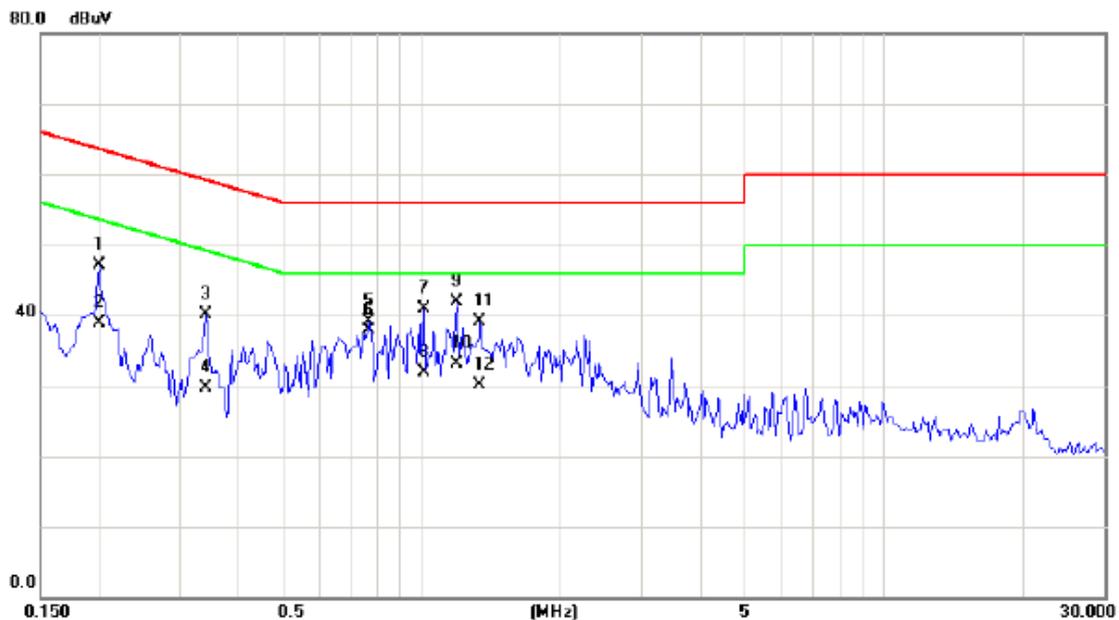
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1578	43.71	9.65	53.36	65.58	-12.22	QP	
2		0.1578	23.07	9.65	32.72	55.58	-22.86	AVG	
3		0.1734	43.03	9.65	52.68	64.80	-12.12	QP	
4		0.1734	24.97	9.65	34.62	54.80	-20.18	AVG	
5		0.5641	33.76	9.89	43.65	56.00	-12.35	QP	
6	*	0.5641	26.80	9.89	36.69	46.00	-9.31	AVG	
7		1.0444	26.98	9.70	36.68	56.00	-19.32	QP	
8		1.0444	20.12	9.70	29.82	46.00	-16.18	AVG	
9		1.3960	27.46	9.73	37.19	56.00	-18.81	QP	
10		1.3960	20.02	9.73	29.75	46.00	-16.25	AVG	
11		3.0040	30.54	9.82	40.36	56.00	-15.64	QP	
12		3.0040	21.54	9.82	31.36	46.00	-14.64	AVG	

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Test Mode :	GSM850+WIFI – Adapter: FUHUA	Phase:	Line



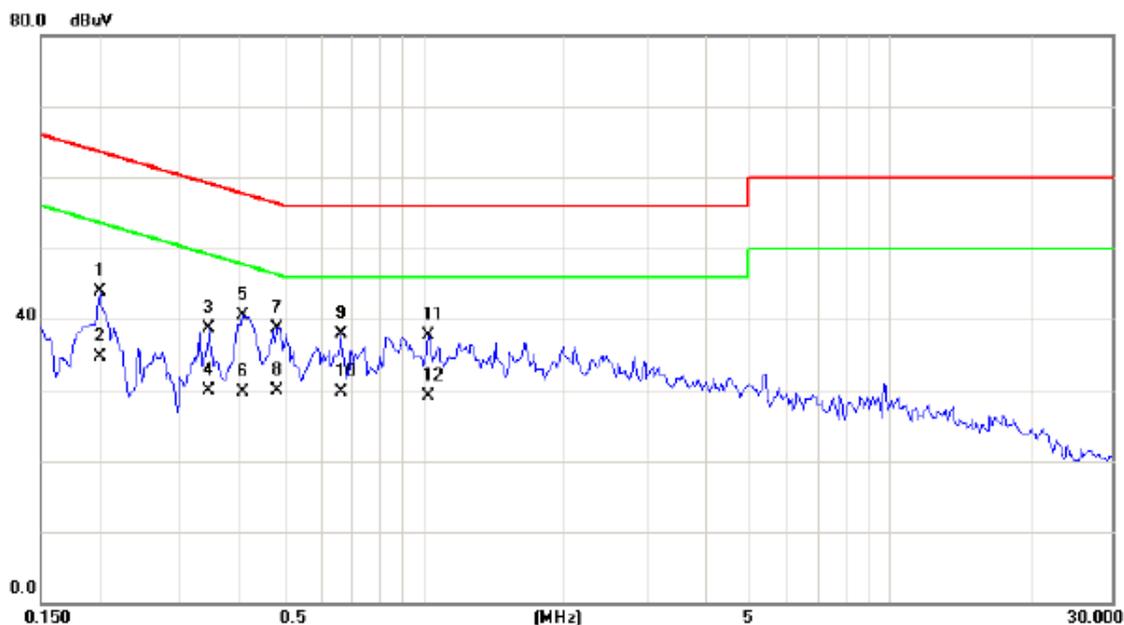
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2047	34.18	9.66	43.84	63.42	-19.58	QP	
2		0.2047	24.98	9.66	34.64	53.42	-18.78	AVG	
3		0.4078	31.21	9.88	41.09	57.69	-16.60	QP	
4		0.4078	21.99	9.88	31.87	47.69	-15.82	AVG	
5		0.4860	28.45	9.98	38.43	56.24	-17.81	QP	
6		0.4860	19.71	9.98	29.69	46.24	-16.55	AVG	
7		0.9547	28.08	9.70	37.78	56.00	-18.22	QP	
8	*	0.9547	21.24	9.70	30.94	46.00	-15.06	AVG	
9		1.1617	28.14	9.71	37.85	56.00	-18.15	QP	
10		1.1617	19.44	9.71	29.15	46.00	-16.85	AVG	
11		1.6266	27.97	9.74	37.71	56.00	-18.29	QP	
12		1.6266	20.25	9.74	29.99	46.00	-16.01	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: FUHUA	Phase:	Neutral



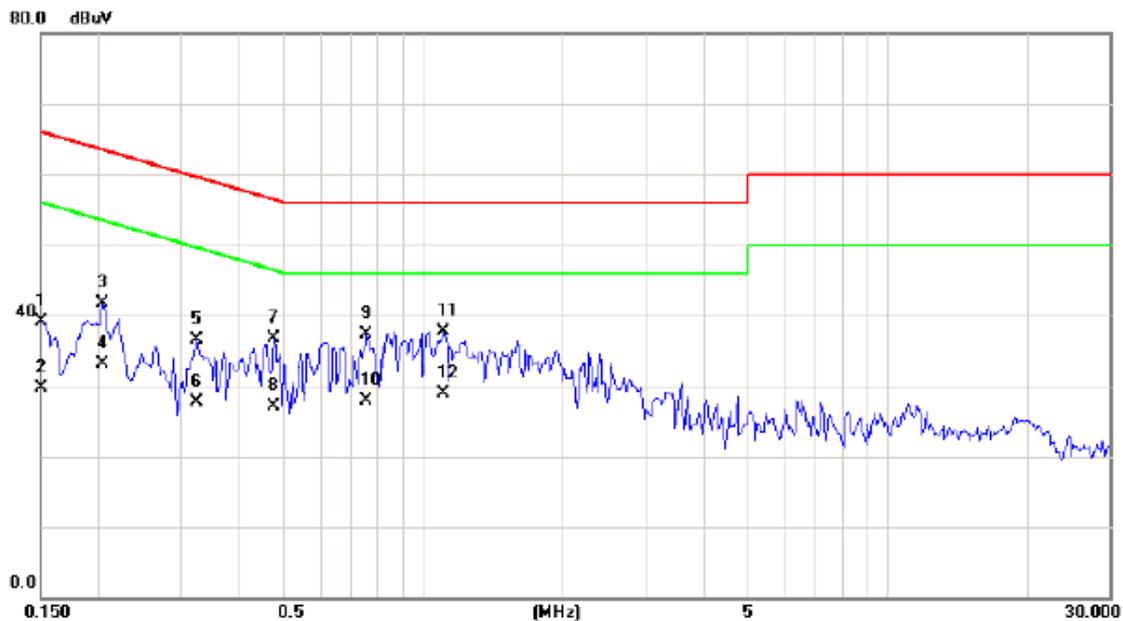
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2007	37.42	9.65	47.07	63.58	-16.51	QP	
2		0.2007	29.18	9.65	38.83	53.58	-14.75	AVG	
3		0.3414	30.26	9.81	40.07	59.17	-19.10	QP	
4		0.3414	19.84	9.81	29.65	49.17	-19.52	AVG	
5		0.7750	29.46	9.69	39.15	56.00	-16.85	QP	
6	*	0.7750	28.22	9.69	37.91	46.00	-8.09	AVG	
7		1.0132	31.22	9.70	40.92	56.00	-15.08	QP	
8		1.0132	22.22	9.70	31.92	46.00	-14.08	AVG	
9		1.1930	32.28	9.71	41.99	56.00	-14.01	QP	
10		1.1930	23.42	9.71	33.13	46.00	-12.87	AVG	
11		1.3414	29.31	9.73	39.04	56.00	-16.96	QP	
12		1.3414	20.31	9.73	30.04	46.00	-15.96	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI - Adapter: FUHUA	Phase:	Line



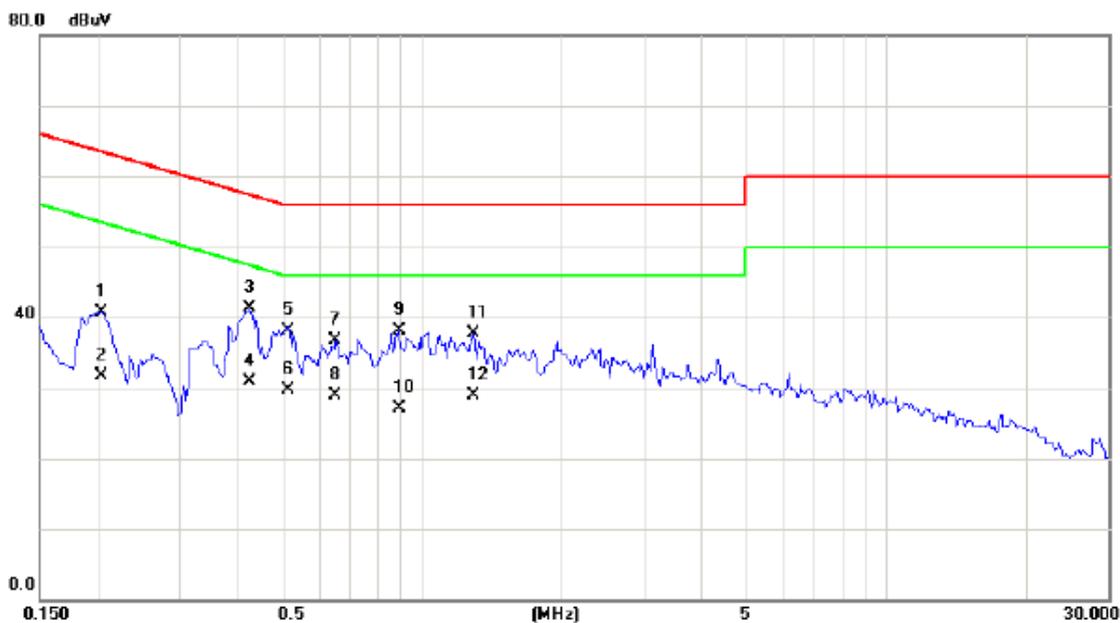
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2007	34.25	9.65	43.90	63.58	-19.68	QP	
2		0.2007	24.99	9.65	34.64	53.58	-18.94	AVG	
3		0.3453	28.81	9.81	38.62	59.07	-20.45	QP	
4		0.3453	20.15	9.81	29.96	49.07	-19.11	AVG	
5		0.4078	30.63	9.88	40.51	57.69	-17.18	QP	
6		0.4078	19.79	9.88	29.67	47.69	-18.02	AVG	
7		0.4820	28.82	9.97	38.79	56.30	-17.51	QP	
8		0.4820	20.02	9.97	29.99	46.30	-16.31	AVG	
9		0.6617	28.07	9.75	37.82	56.00	-18.18	QP	
10	*	0.6617	19.97	9.75	29.72	46.00	-16.28	AVG	
11		1.0250	28.00	9.70	37.70	56.00	-18.30	QP	
12		1.0250	19.44	9.70	29.14	46.00	-16.86	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI - Adapter: FUHUA	Phase:	Neutral



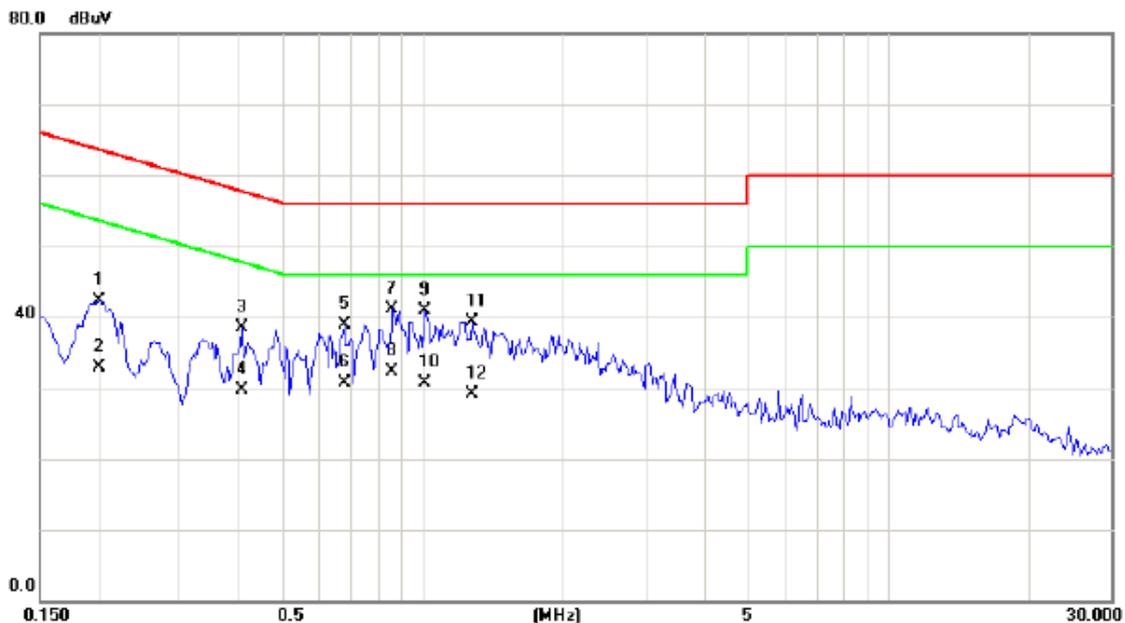
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1500	29.47	9.65	39.12	66.00	-26.88	QP	
2		0.1500	19.97	9.65	29.62	56.00	-26.38	AVG	
3		0.2047	32.09	9.66	41.75	63.42	-21.67	QP	
4		0.2047	23.37	9.66	33.03	53.42	-20.39	AVG	
5		0.3258	26.70	9.79	36.49	59.56	-23.07	QP	
6		0.3258	17.96	9.79	27.75	49.56	-21.81	AVG	
7		0.4781	26.79	9.97	36.76	56.37	-19.61	QP	
8		0.4781	17.21	9.97	27.18	46.37	-19.19	AVG	
9		0.7555	27.56	9.69	37.25	56.00	-18.75	QP	
10		0.7555	18.12	9.69	27.81	46.00	-18.19	AVG	
11		1.1070	28.02	9.71	37.73	56.00	-18.27	QP	
12	*	1.1070	19.12	9.71	28.83	46.00	-17.17	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI - Adapter: FUHUA	Phase:	Line



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.2047	31.10	9.66	40.76	63.42	-22.66	QP	
2		0.2047	21.98	9.66	31.64	53.42	-21.78	AVG	
3	*	0.4273	31.37	9.91	41.28	57.31	-16.03	QP	
4		0.4273	20.97	9.91	30.88	47.31	-16.43	AVG	
5		0.5181	28.06	9.96	38.02	56.00	-17.98	QP	
6		0.5181	19.73	9.96	29.69	46.00	-16.31	AVG	
7		0.6540	26.96	9.76	36.72	56.00	-19.28	QP	
8		0.6540	19.06	9.76	28.82	46.00	-17.18	AVG	
9		0.8922	28.50	9.70	38.20	56.00	-17.80	QP	
10		0.8922	17.44	9.70	27.14	46.00	-18.86	AVG	
11		1.2906	27.96	9.72	37.68	56.00	-18.32	QP	
12		1.2906	19.14	9.72	28.86	46.00	-17.14	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI - Adapter: FUHUA	Phase:	Neutral



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.2007	32.68	9.65	42.33	63.58	-21.25	QP	
2	0.2007	23.28	9.65	32.93	53.58	-20.65	AVG	
3	0.4078	28.56	9.88	38.44	57.69	-19.25	QP	
4	0.4078	19.88	9.88	29.76	47.69	-17.93	AVG	
5	0.6773	29.27	9.73	39.00	56.00	-17.00	QP	
6	0.6773	21.07	9.73	30.80	46.00	-15.20	AVG	
7	0.8610	31.33	9.69	41.02	56.00	-14.98	QP	
8 *	0.8610	22.53	9.69	32.22	46.00	-13.78	AVG	
9	1.0054	31.30	9.70	41.00	56.00	-15.00	QP	
10	1.0054	20.92	9.70	30.62	46.00	-15.38	AVG	
11	1.2710	29.68	9.72	39.40	56.00	-16.60	QP	
12	1.2710	19.42	9.72	29.14	46.00	-16.86	AVG	

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Below 1 GHz

Measurement Method and Applied Limits:

ANSI C63.4:

Frequency(MHz)	Class A (at 10m)		Class B (at 3m)	
	(uV/m) Field strength	(dBuV/m) Field strength	(uV/m) Field strength	(dBuV/m) Field strength
30 - 88	90	39	100	40
88 - 216	150	43.5	150	43.5
216 - 960	210	46.4	200	46
Above 960	300	49.5	500	54

CISPR 22 or CAN/CSA-CISPR 22-10:

Frequency (MHz)	Class A (at 10m)		Class B (at 10m)	
	dBuV/m		dBuV/m	
30 - 230	40		30	
230 - 1000	47		37	

Above 1 GHz

Measurement Method and Applied Limits:

ANSI C63.4:

Frequency (MHz)	Class A				Class B	
	(dBuV/m) (at 3m)		(dBuV/m) (at 10m)		(dBuV/m) (at 3m)	
	Peak	Average	Peak	Average	Peak	Average
Above 1000	80	60	69.5	49.5	74	54

FREQUENCY RANGE OF RADIATED MEASUREMENT (FOR UNINTENTIONAL RADIATORS)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

NOTE:

- (1) The limit for radiated test was performed according to as following:
FCC Part 15, Subpart B: 2013;
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
3m Emission level = 10m Emission level + 20log(10m/3m).
- (4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value

4.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9168	9168-352	Jul. 09, 2015
2	Pre-Amplifier	Anritsu	MH648A	M92649	Apr. 17, 2015
3	Test Cable	TIMES	LMR-400	12M	May. 13, 2015
4	Test Cable	TIMES	LMR-400	3M	May. 13, 2015
5	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 13, 2015
6	EMI Test Receiver	Agilent	N9038A	MY51210215	Apr. 21, 2016
7	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	1M	May. 12, 2015
8	Horn Antenna (1G)	Schwarzbeck	BBHA 9120 D	9120D-325	Jan. 12, 2016
9	Pre_Amplifier	Agilent	8449B	3008A01714	Apr. 15, 2015
10	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	1M	May. 12, 2015
11	Microflex Cable	AISI	S104-SMAP-1	10M	May. 14, 2015
12	Microflex Cable	HARBOUR INDUSTRIES	27478 LL142	3M	May. 12, 2015
13	Spectrum Analyzer	R&S	FSP-40	100129	Oct. 13, 2015
14	EMI Test Receiver	Agilent	N9038A	MY51210215	Apr. 21, 2016
15	Measurement Software	EZ	EZ_EMCC (Version NB-03A)	N/A	N/A

Remark: " N/A" denotes no model name, serial No. or no calibration specified.

4.2.3 TEST PROCEDURE

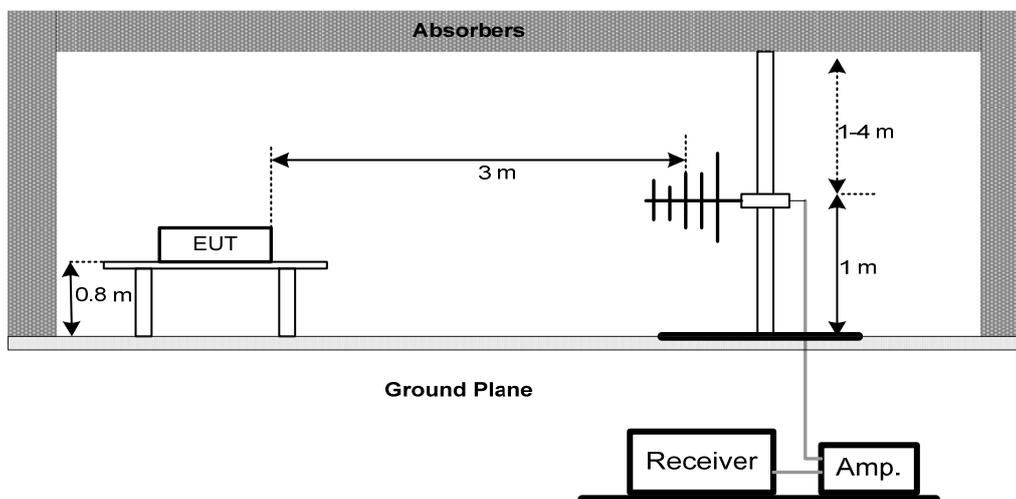
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then QuasiPeak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.4 DEVIATION FROM TEST STANDARD

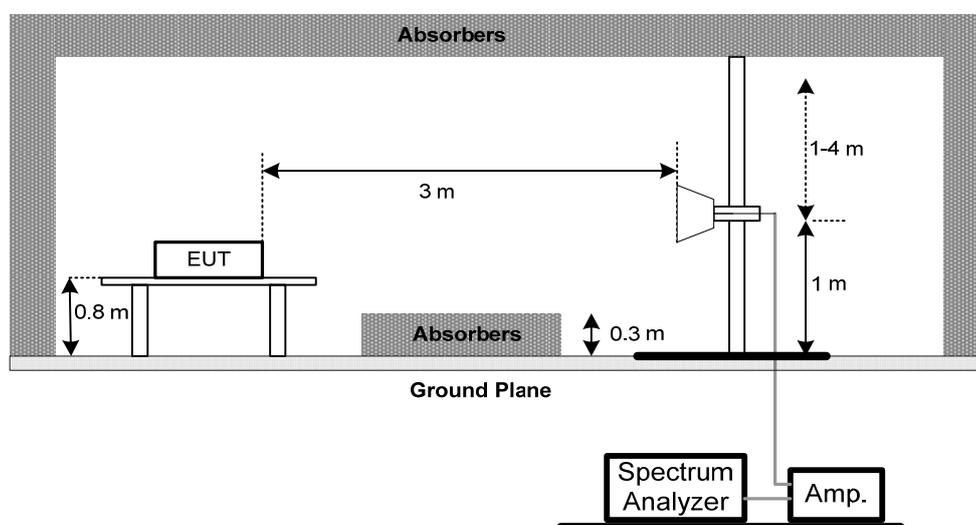
No deviation

4.2.5 TESTSETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



4.2.6 EUT OPERATING CONDITIONS

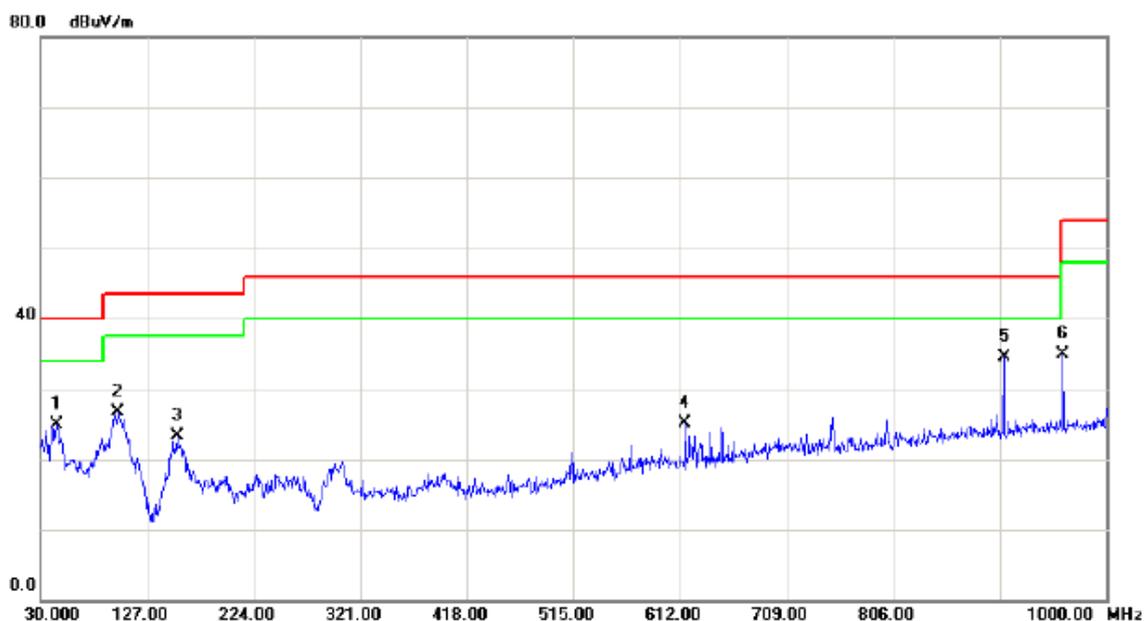
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.7 TEST RESULTS-BETWEEN 30MHZ AND 1000MHZ

Remark:

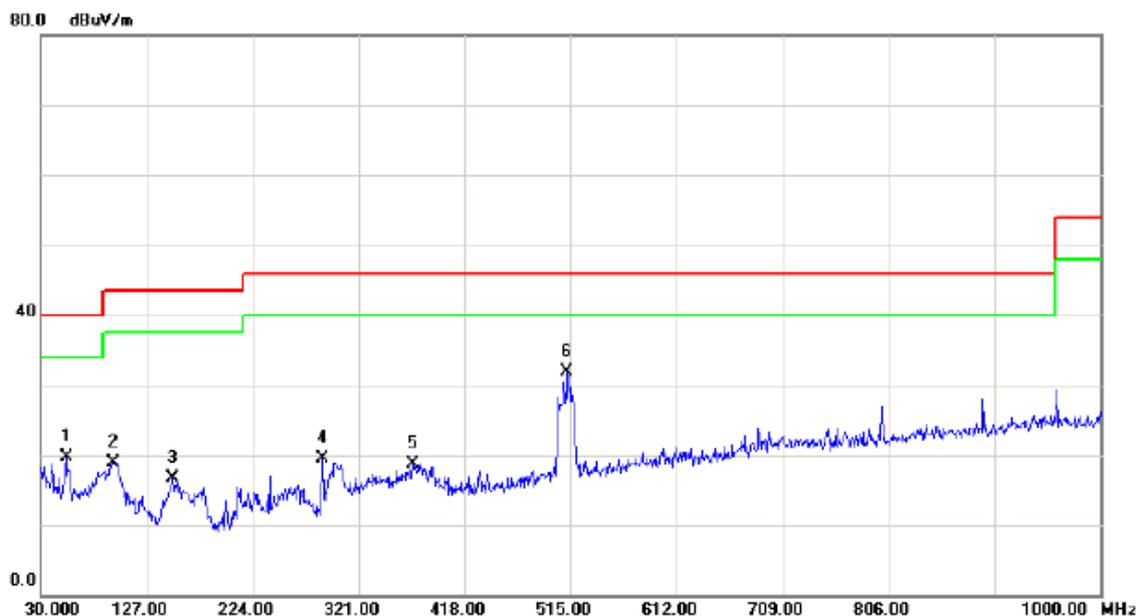
- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz.
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz.
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



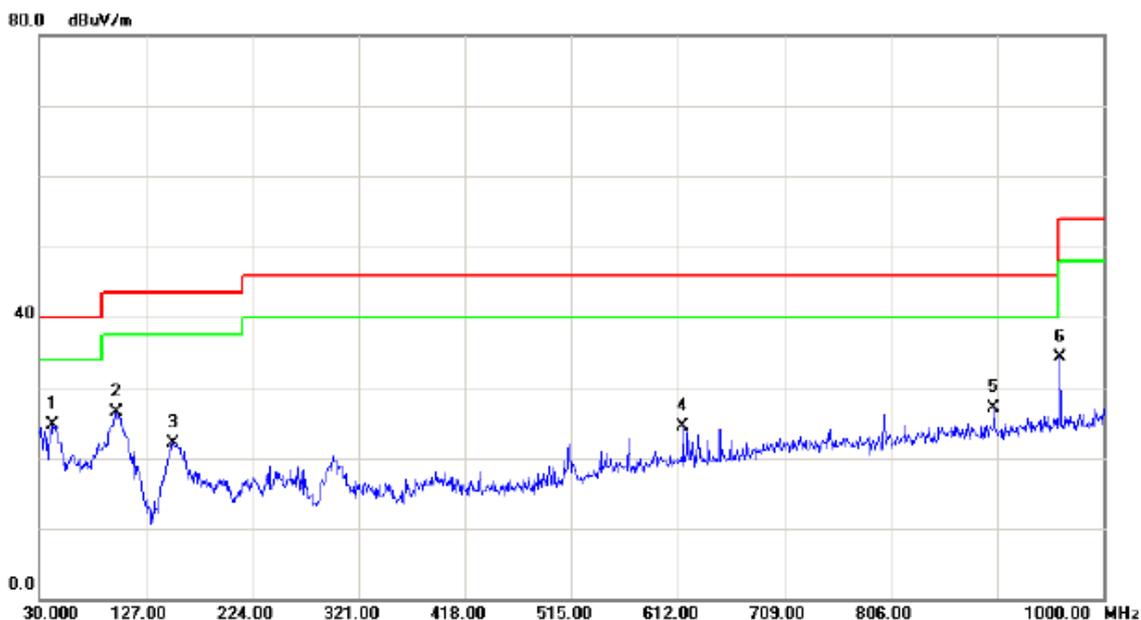
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		44.5500	38.69	-13.73	24.96	40.00	-15.04	QP	
2		100.8100	45.48	-18.70	26.78	43.50	-16.72	QP	
3		154.1600	37.29	-14.00	23.29	43.50	-20.21	QP	
4		616.8500	32.47	-7.28	25.19	46.00	-20.81	QP	
5	*	906.8800	37.14	-2.67	34.47	46.00	-11.53	QP	
6		960.2300	36.54	-1.67	34.87	54.00	-19.13	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



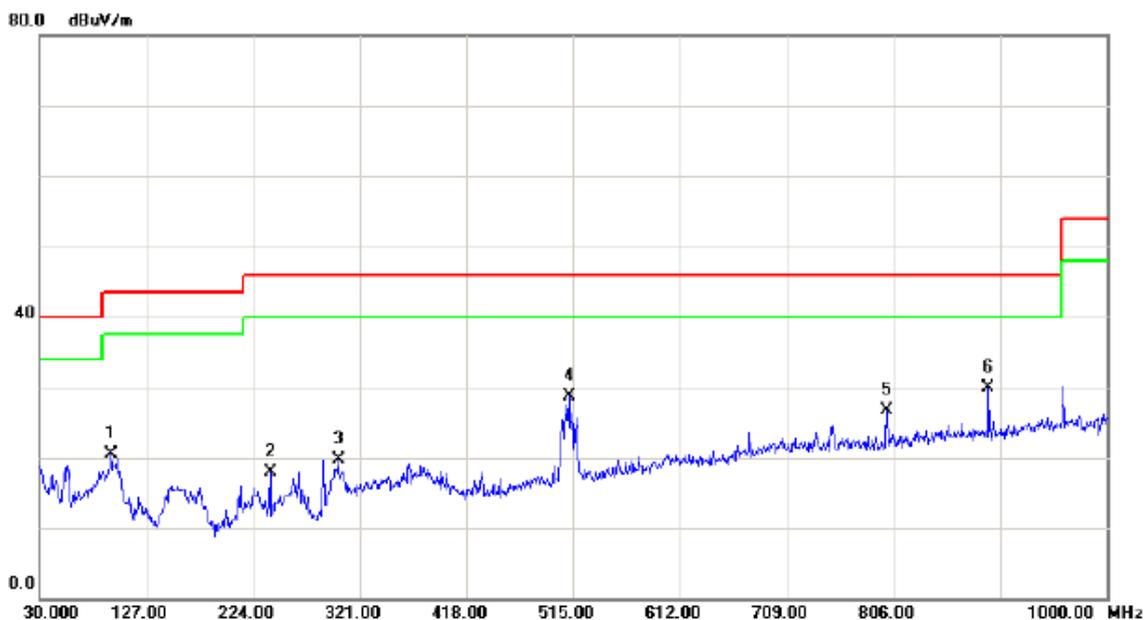
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	53.2800	33.74	-14.03	19.71	40.00	-20.29	QP	
2	96.9300	38.11	-19.28	18.83	43.50	-24.67	QP	
3	151.2500	30.79	-14.04	16.75	43.50	-26.75	QP	
4	288.0200	33.35	-13.75	19.60	46.00	-26.40	QP	
5	370.4700	30.57	-11.83	18.74	46.00	-27.26	QP	
6 *	512.0900	40.98	-8.99	31.99	46.00	-14.01	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI – Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



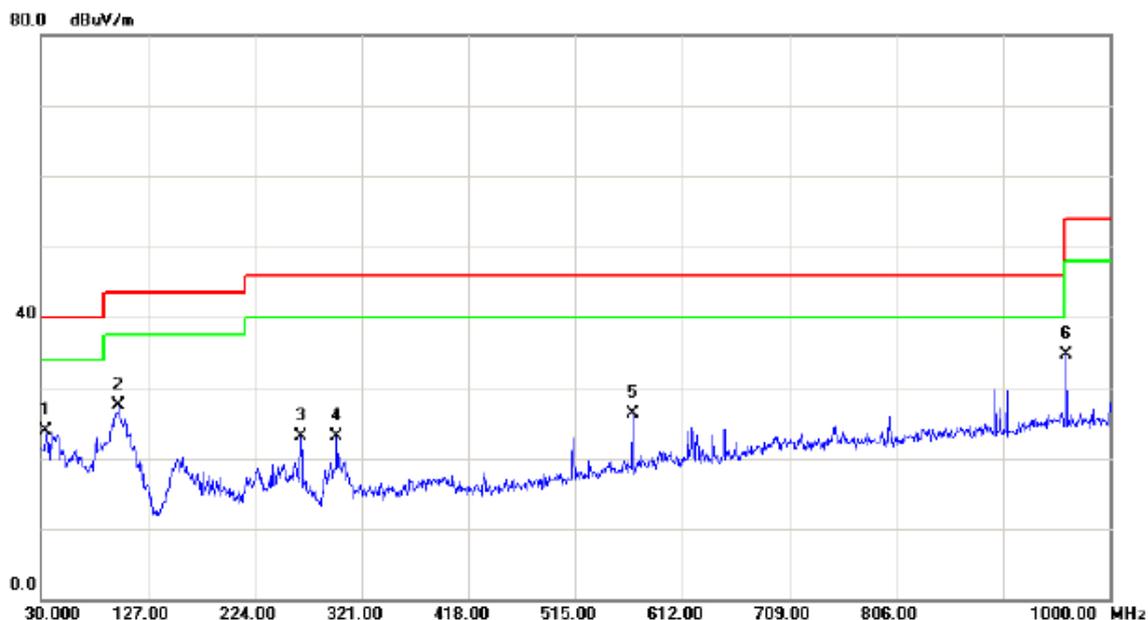
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	42.6100	38.63	-13.92	24.71	40.00	-15.29	QP	
2		99.8400	45.43	-18.84	26.59	43.50	-16.91	QP	
3		152.2200	36.15	-14.03	22.12	43.50	-21.38	QP	
4		616.8500	31.78	-7.28	24.50	46.00	-21.50	QP	
5		900.0900	30.02	-2.83	27.19	46.00	-18.81	QP	
6		960.2300	35.88	-1.67	34.21	54.00	-19.79	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI – Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



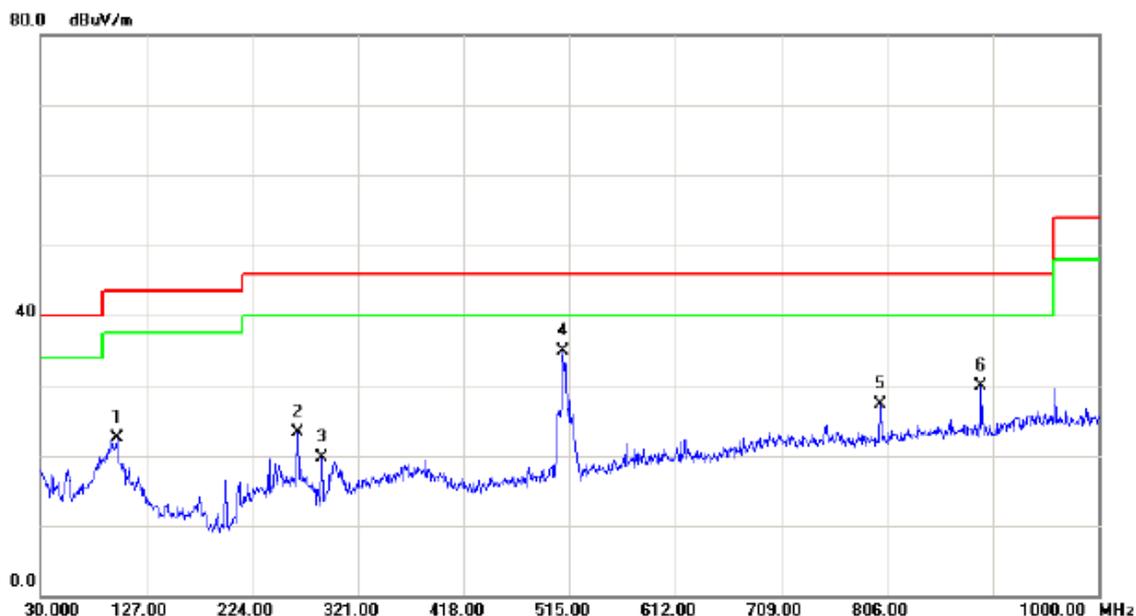
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	94.9900	40.18	-19.58	20.60	43.50	-22.90	QP	
2	239.5200	33.17	-15.28	17.89	46.00	-28.11	QP	
3	301.6000	33.23	-13.44	19.79	46.00	-26.21	QP	
4	511.1200	37.67	-9.01	28.66	46.00	-17.34	QP	
5	800.1800	31.37	-4.74	26.63	46.00	-19.37	QP	
6 *	892.3300	32.88	-2.98	29.90	46.00	-16.10	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



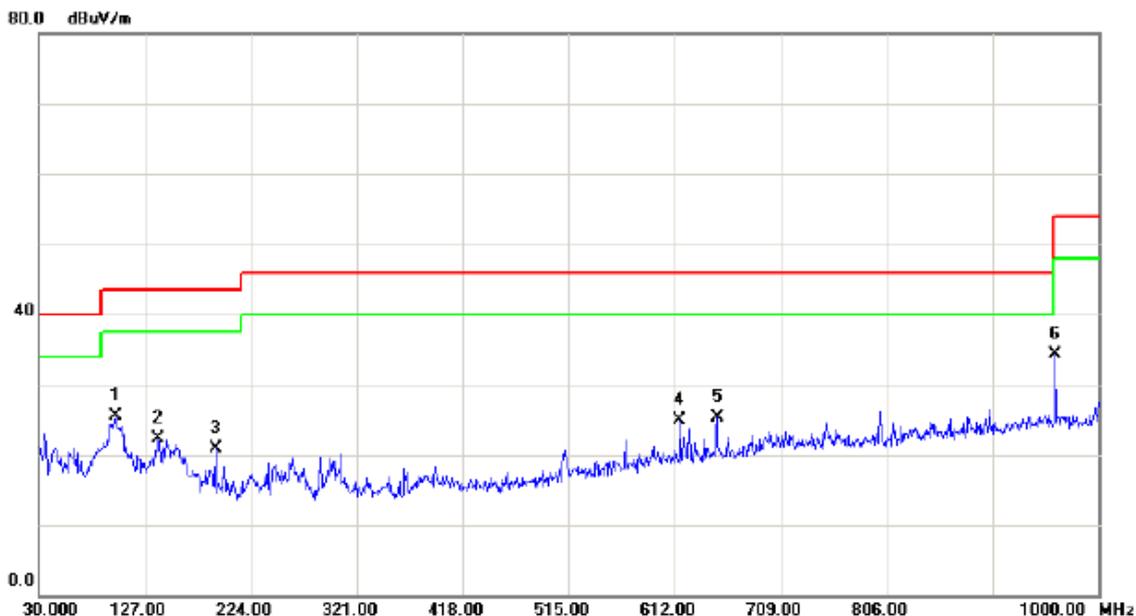
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		34.8500	38.97	-15.15	23.82	40.00	-16.18	QP	
2	*	100.8100	46.14	-18.70	27.44	43.50	-16.06	QP	
3		265.7100	37.53	-14.36	23.17	46.00	-22.83	QP	
4		298.6900	36.58	-13.52	23.06	46.00	-22.94	QP	
5		567.3800	34.03	-7.79	26.24	46.00	-19.76	QP	
6		960.2300	36.37	-1.67	34.70	54.00	-19.30	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



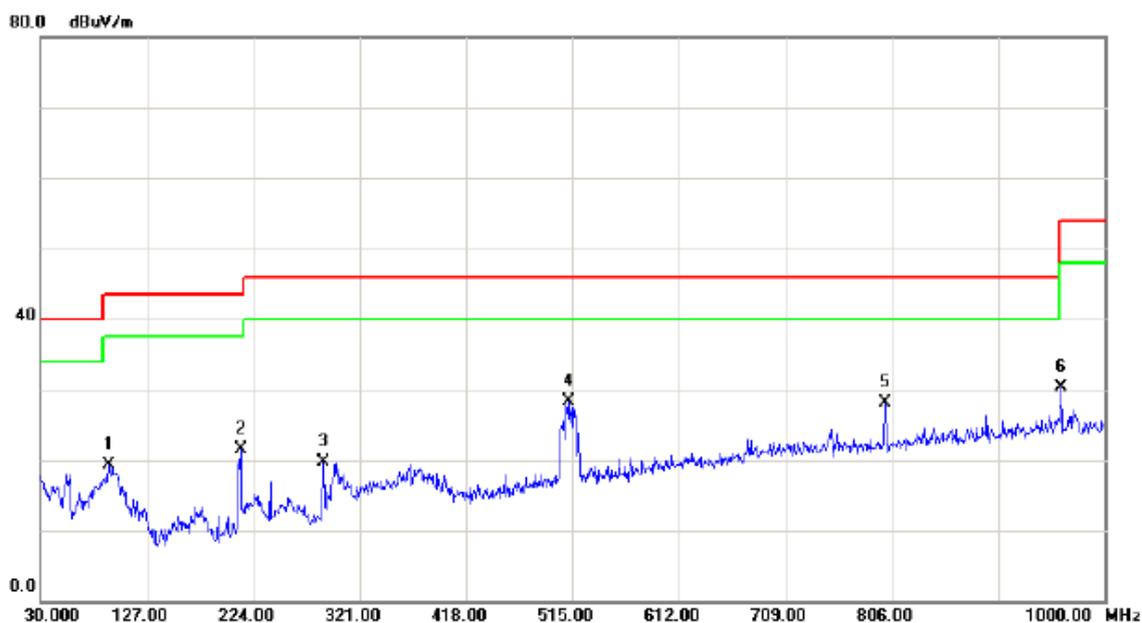
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		99.8400	41.28	-18.84	22.44	43.50	-21.06	QP	
2		265.7100	37.68	-14.36	23.32	46.00	-22.68	QP	
3		288.0200	33.44	-13.75	19.69	46.00	-26.31	QP	
4	*	509.1800	43.98	-9.06	34.92	46.00	-11.08	QP	
5		800.1800	32.10	-4.74	27.36	46.00	-18.64	QP	
6		892.3300	32.79	-2.98	29.81	46.00	-16.19	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI - Adapter: BYD / USB Cable: 0.17m	Polarization:	Vertical



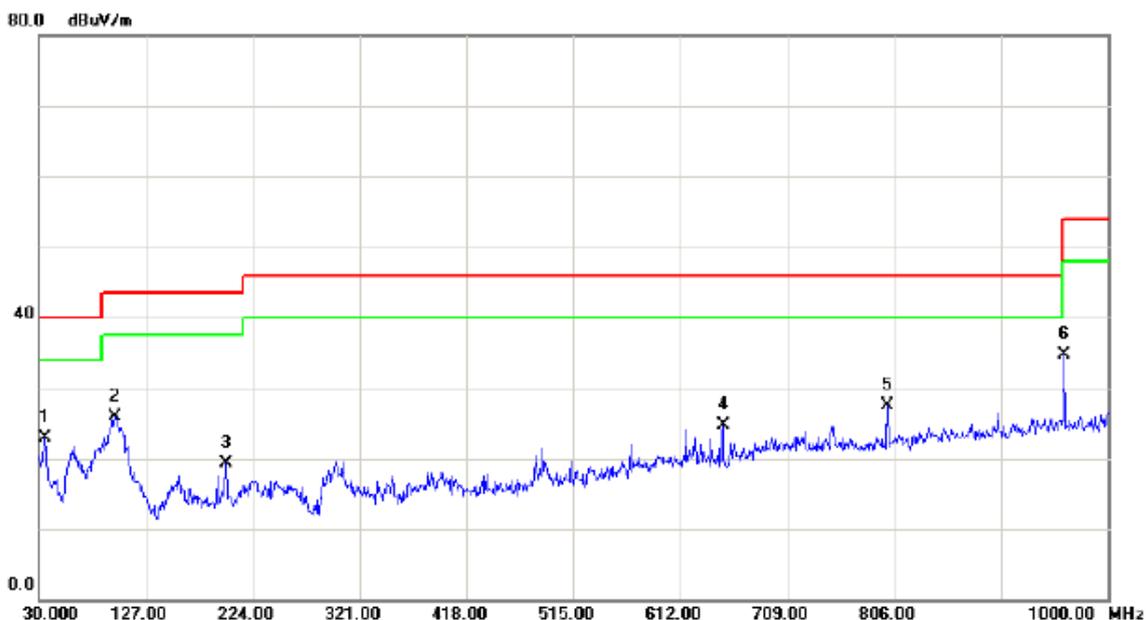
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	99.8400	44.43	-18.84	25.59	43.50	-17.91	QP	
2		139.6100	36.73	-14.48	22.25	43.50	-21.25	QP	
3		191.9900	37.68	-16.68	21.00	43.50	-22.50	QP	
4		616.8500	32.21	-7.28	24.93	46.00	-21.07	QP	
5		650.8000	32.14	-6.88	25.26	46.00	-20.74	QP	
6		960.2300	35.97	-1.67	34.30	54.00	-19.70	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: BYD / USB Cable: 0.17m	Polarization:	Horizontal



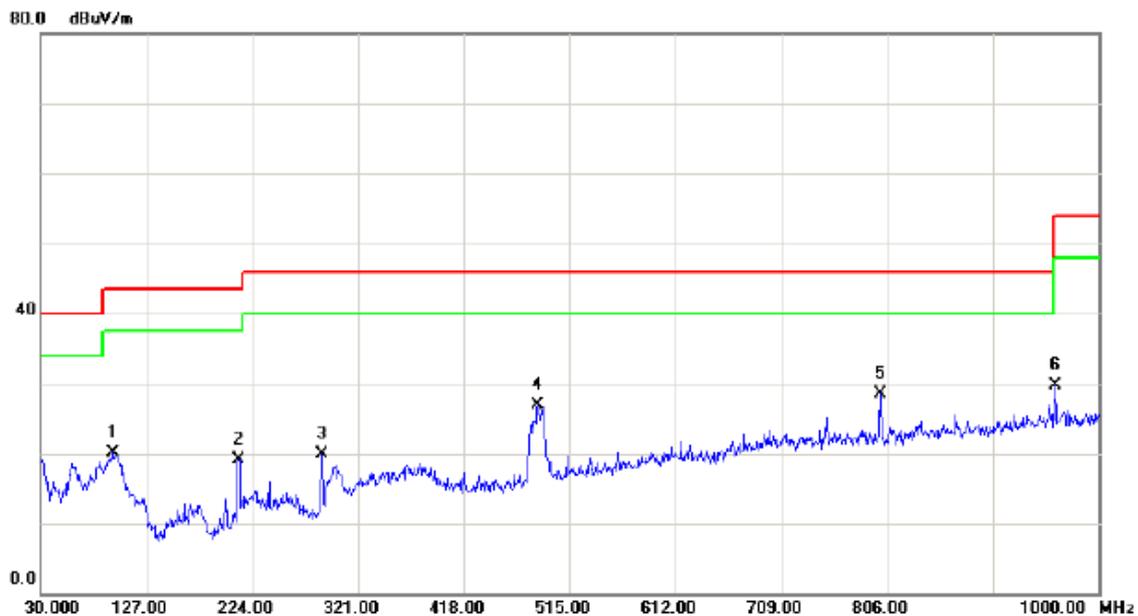
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		92.0800	39.32	-20.00	19.32	43.50	-24.18	QP	
2		212.3600	37.99	-16.56	21.43	43.50	-22.07	QP	
3		288.0200	33.42	-13.75	19.67	46.00	-26.33	QP	
4	*	512.0900	37.39	-8.99	28.40	46.00	-17.60	QP	
5		800.1800	32.84	-4.74	28.10	46.00	-17.90	QP	
6		960.2300	31.88	-1.67	30.21	54.00	-23.79	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



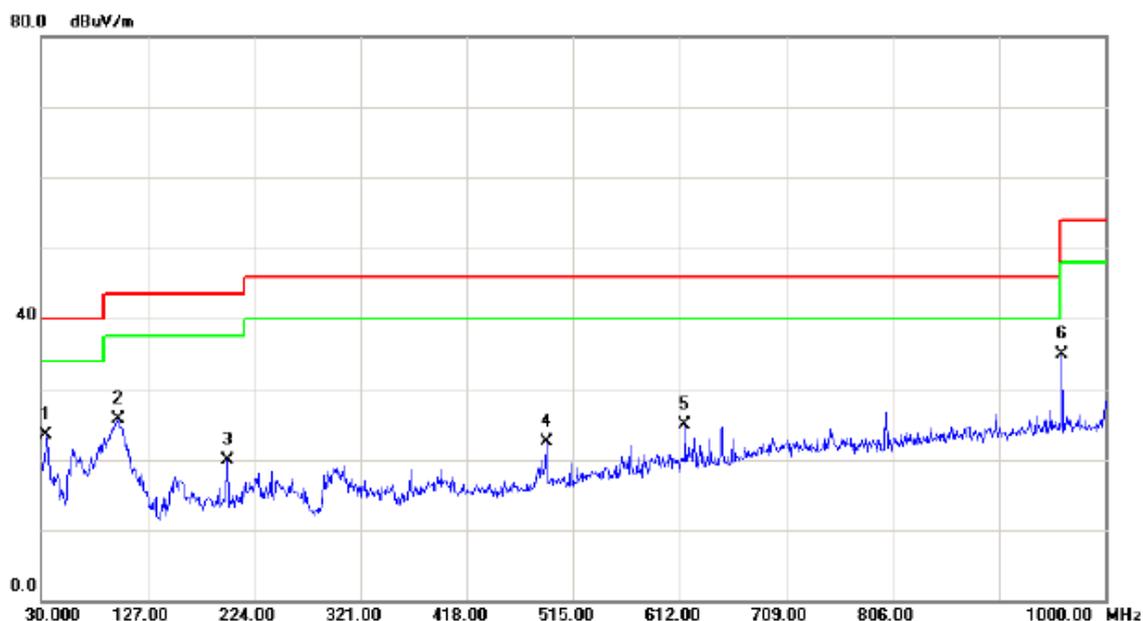
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	35.8200	37.85	-14.99	22.86	40.00	-17.14	QP	
2		98.8700	44.90	-18.99	25.91	43.50	-17.59	QP	
3		199.7500	36.07	-16.72	19.35	43.50	-24.15	QP	
4		650.8000	31.67	-6.88	24.79	46.00	-21.21	QP	
5		800.1800	32.15	-4.74	27.41	46.00	-18.59	QP	
6		960.2300	36.35	-1.67	34.68	54.00	-19.32	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



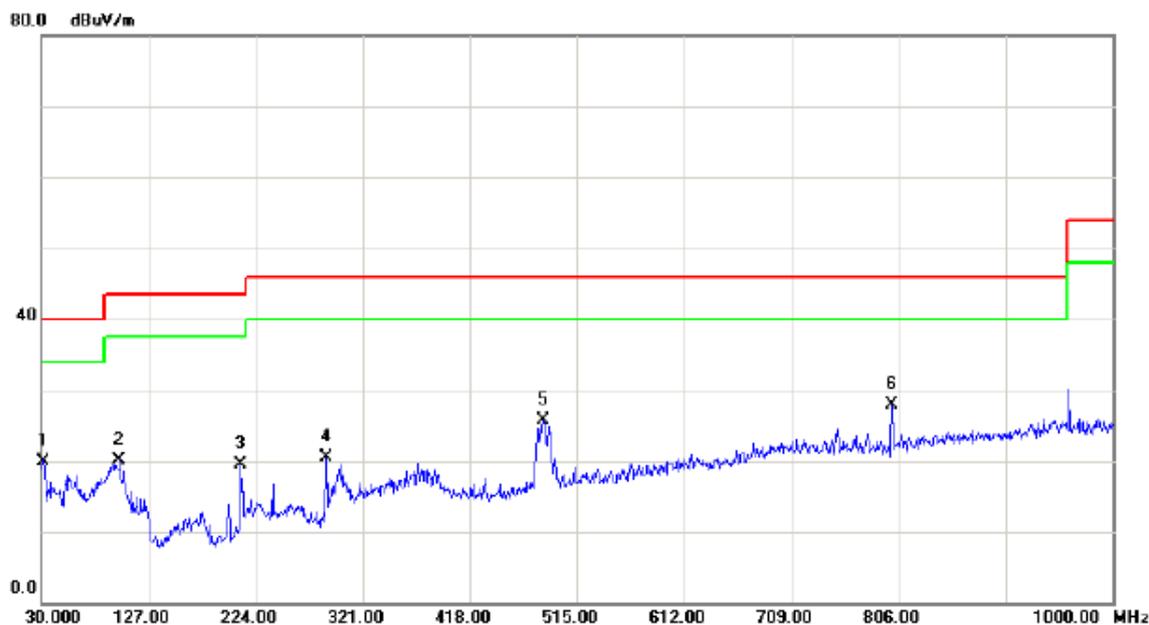
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		96.9300	39.31	-19.28	20.03	43.50	-23.47	QP	
2		211.3900	35.62	-16.55	19.07	43.50	-24.43	QP	
3		288.0200	33.74	-13.75	19.99	46.00	-26.01	QP	
4		485.9000	36.28	-9.41	26.87	46.00	-19.13	QP	
5	*	800.1800	33.22	-4.74	28.48	46.00	-17.52	QP	
6		960.2300	31.28	-1.67	29.61	54.00	-24.39	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI- Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



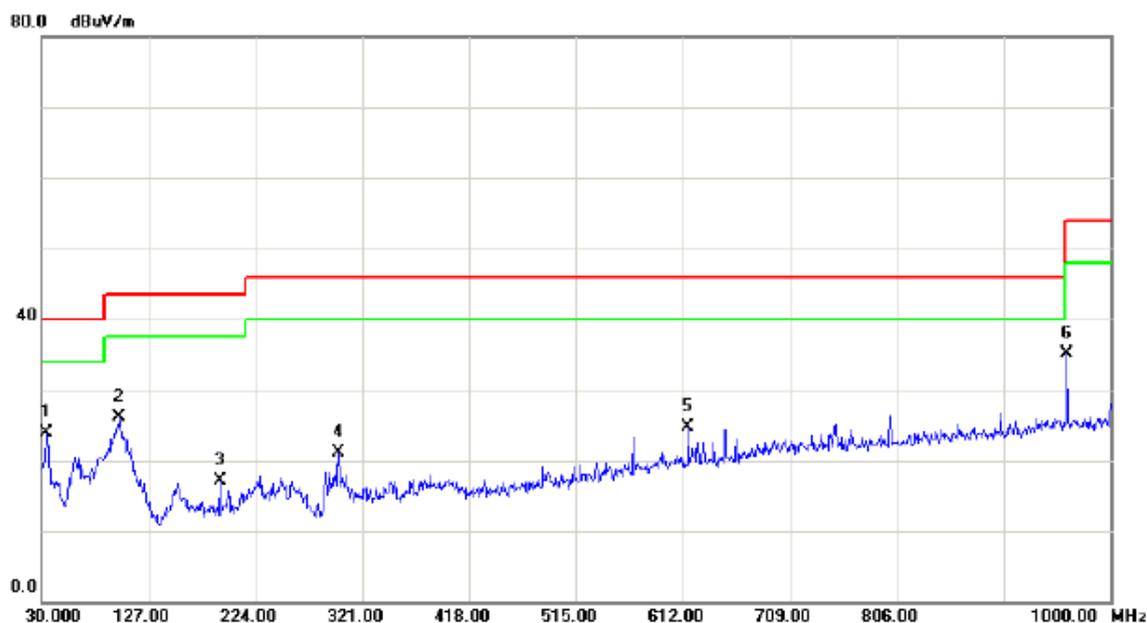
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	34.8500	38.64	-15.15	23.49	40.00	-16.51	QP	
2		99.8400	44.61	-18.84	25.77	43.50	-17.73	QP	
3		199.7500	36.71	-16.72	19.99	43.50	-23.51	QP	
4		490.7500	31.89	-9.37	22.52	46.00	-23.48	QP	
5		616.8500	32.10	-7.28	24.82	46.00	-21.18	QP	
6		960.2300	36.62	-1.67	34.95	54.00	-19.05	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



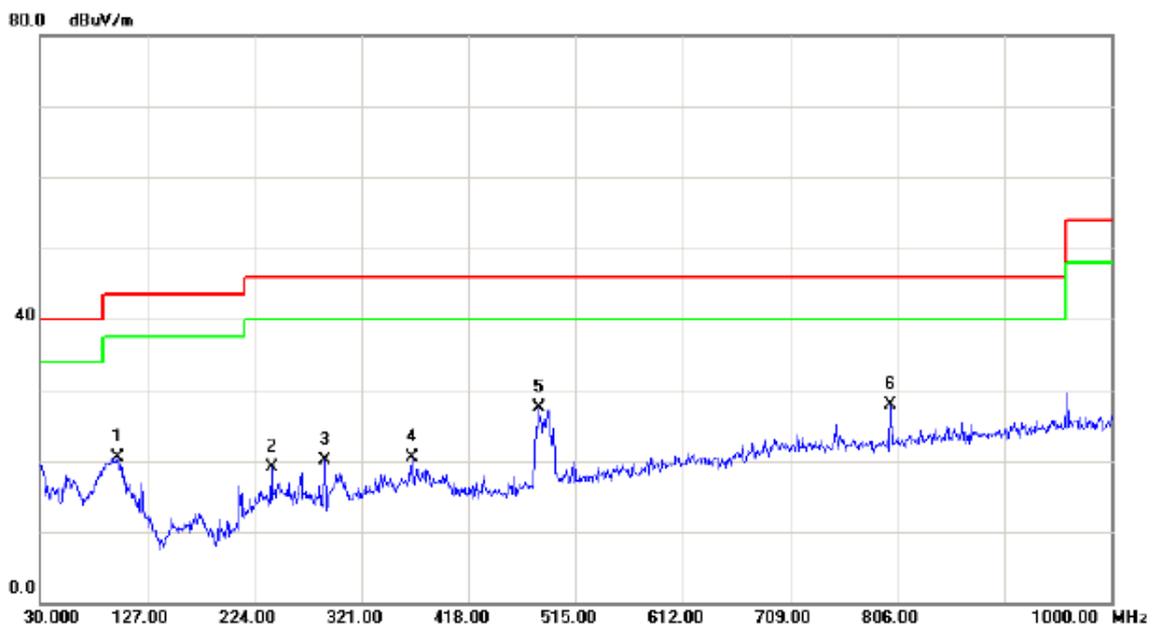
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		31.9400	35.10	-15.10	20.00	40.00	-20.00	QP	
2		100.8100	38.82	-18.70	20.12	43.50	-23.38	QP	
3		210.4200	36.12	-16.56	19.56	43.50	-23.94	QP	
4		288.0200	34.33	-13.75	20.58	46.00	-25.42	QP	
5		484.9300	35.04	-9.41	25.63	46.00	-20.37	QP	
6	*	800.1800	32.68	-4.74	27.94	46.00	-18.06	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



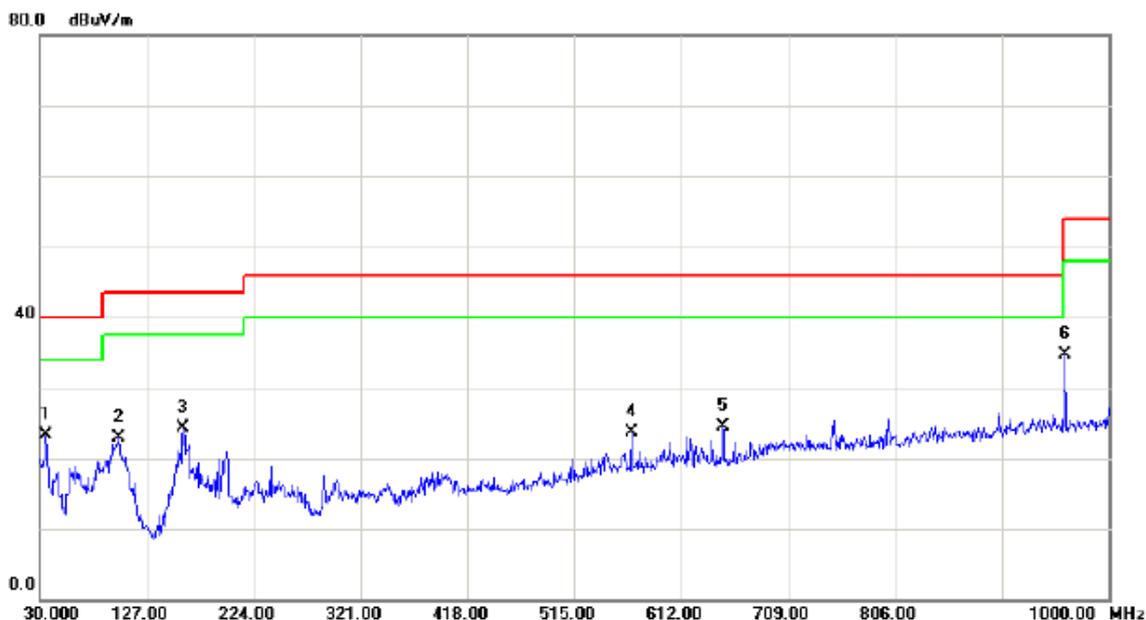
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	34.8500	39.10	-15.15	23.95	40.00	-16.05	QP	
2		100.8100	44.75	-18.70	26.05	43.50	-17.45	QP	
3		191.9900	33.84	-16.68	17.16	43.50	-26.34	QP	
4		299.6600	34.70	-13.50	21.20	46.00	-24.80	QP	
5		616.8500	31.98	-7.28	24.70	46.00	-21.30	QP	
6		960.2300	36.69	-1.67	35.02	54.00	-18.98	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



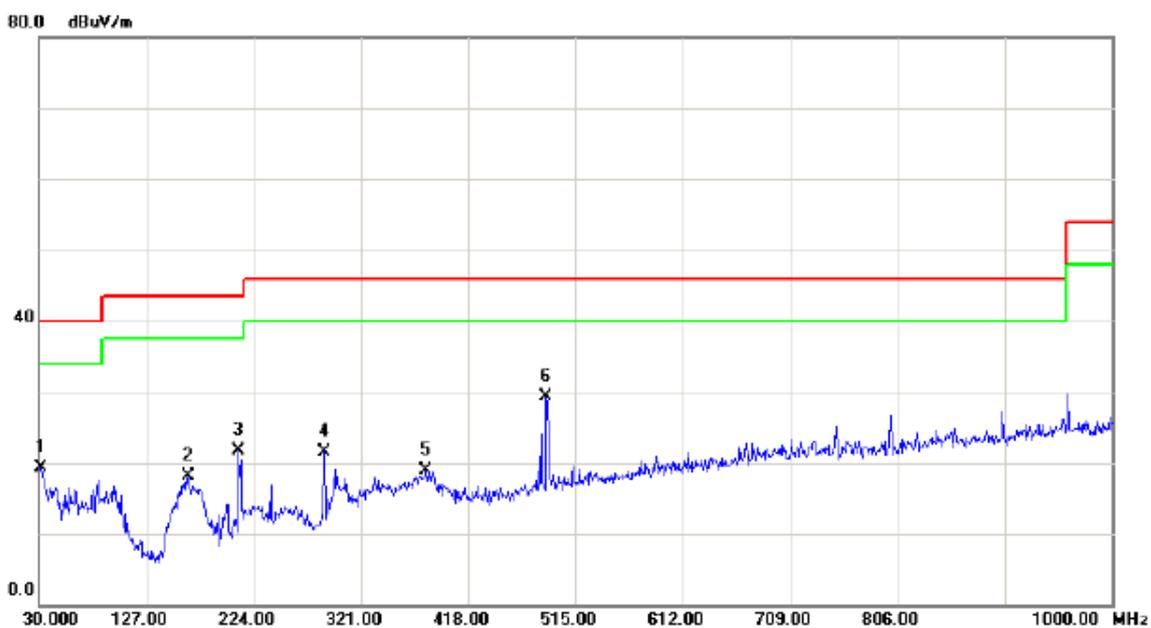
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	99.8400	39.34	-18.84	20.50	43.50	-23.00	QP	
2	239.5200	34.47	-15.28	19.19	46.00	-26.81	QP	
3	288.0200	33.79	-13.75	20.04	46.00	-25.96	QP	
4	366.5900	32.36	-11.93	20.43	46.00	-25.57	QP	
5	482.0200	36.87	-9.44	27.43	46.00	-18.57	QP	
6 *	800.1800	32.58	-4.74	27.84	46.00	-18.16	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.17m	Polarization:	Vertical



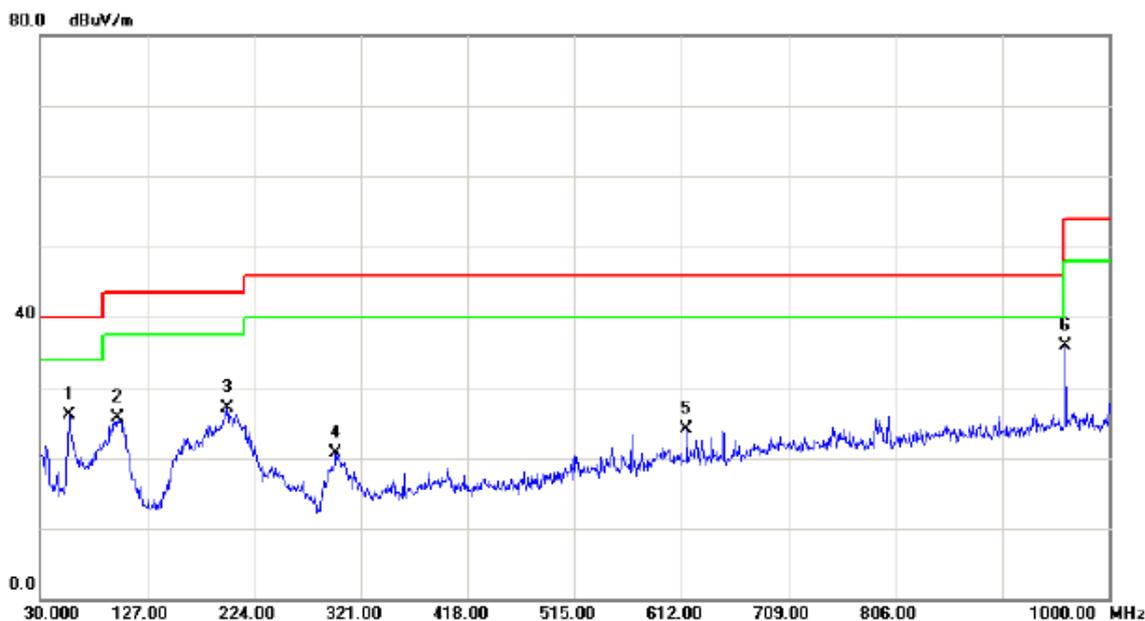
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	35.8200	38.26	-14.99	23.27	40.00	-16.73	QP	
2		101.7800	41.36	-18.55	22.81	43.50	-20.69	QP	
3		159.9800	38.15	-13.92	24.23	43.50	-19.27	QP	
4		567.3800	31.57	-7.79	23.78	46.00	-22.22	QP	
5		649.8300	31.35	-6.91	24.44	46.00	-21.56	QP	
6		960.2300	36.45	-1.67	34.78	54.00	-19.22	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.17m	Polarization:	Horizontal



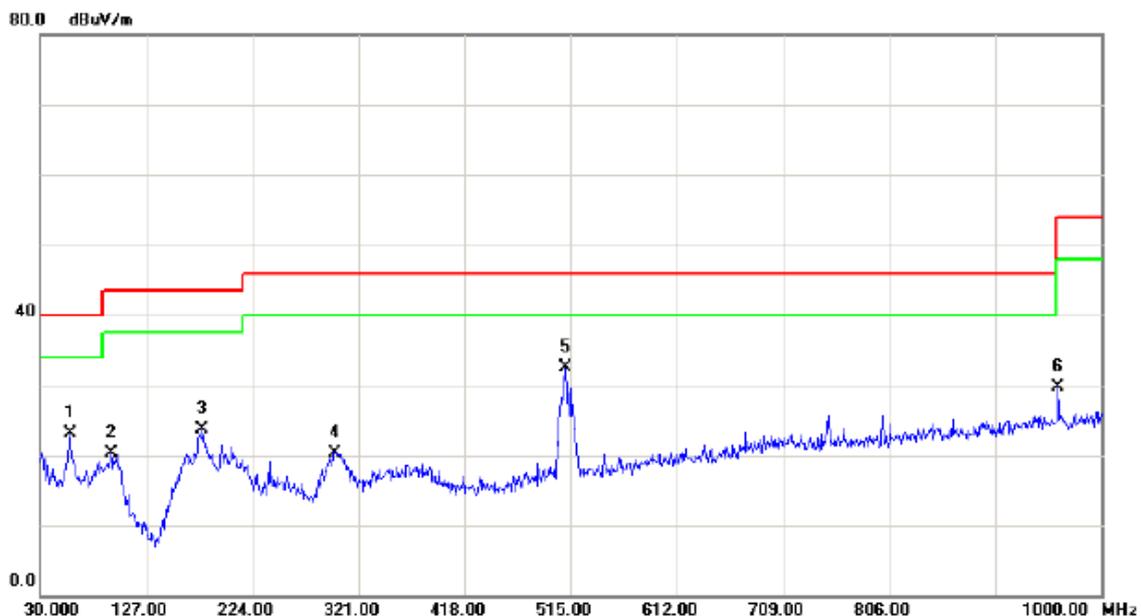
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	31.9400	34.47	-15.10	19.37	40.00	-20.63	QP	
2	164.8300	32.24	-14.16	18.08	43.50	-25.42	QP	
3	210.4200	38.30	-16.56	21.74	43.50	-21.76	QP	
4	288.0200	35.35	-13.75	21.60	46.00	-24.40	QP	
5	380.1700	30.58	-11.60	18.98	46.00	-27.02	QP	
6 *	488.8100	38.68	-9.38	29.30	46.00	-16.70	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI – Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



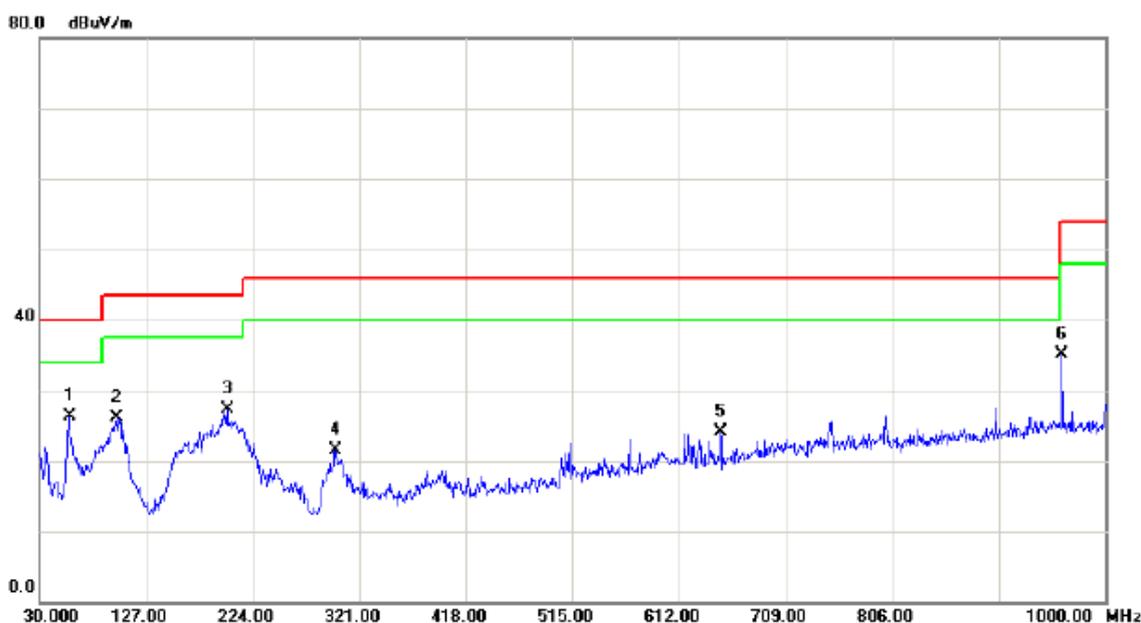
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	56.1900	40.48	-14.34	26.14	40.00	-13.86	QP	
2		99.8400	44.55	-18.84	25.71	43.50	-17.79	QP	
3		199.7500	43.76	-16.72	27.04	43.50	-16.46	QP	
4		298.6900	34.17	-13.52	20.65	46.00	-25.35	QP	
5		616.8500	31.41	-7.28	24.13	46.00	-21.87	QP	
6		960.2300	37.55	-1.67	35.88	54.00	-18.12	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



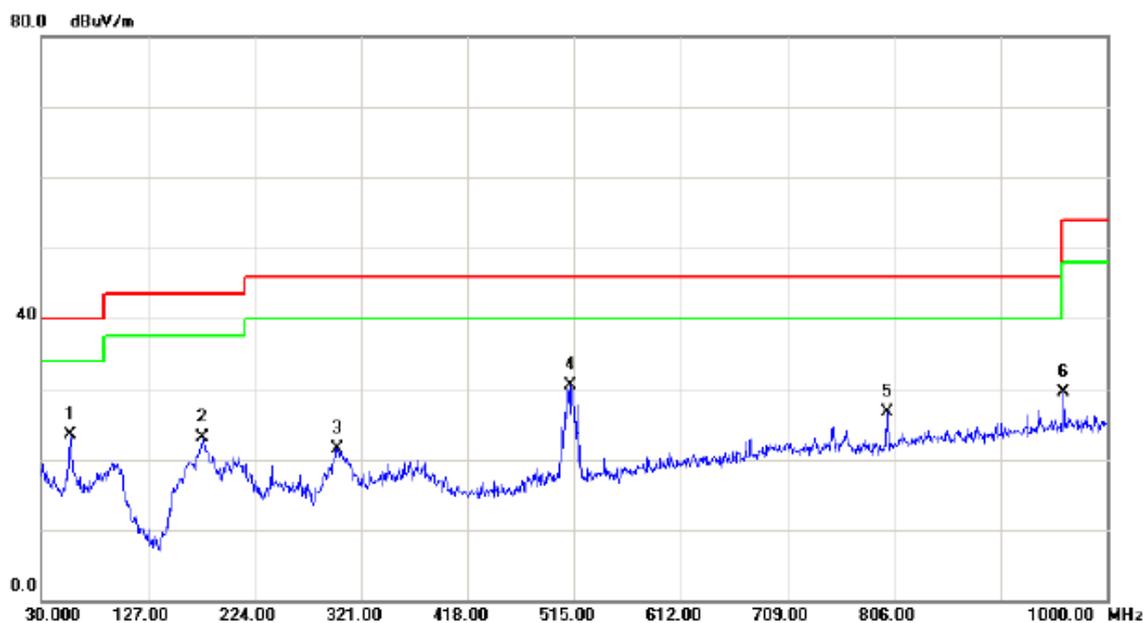
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	57.1600	37.49	-14.44	23.05	40.00	-16.95	QP	
2	94.9900	39.82	-19.58	20.24	43.50	-23.26	QP	
3	178.4100	38.88	-15.26	23.62	43.50	-19.88	QP	
4	299.6600	33.90	-13.50	20.40	46.00	-25.60	QP	
5 *	510.1500	41.52	-9.05	32.47	46.00	-13.53	QP	
6	960.2300	31.40	-1.67	29.73	54.00	-24.27	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



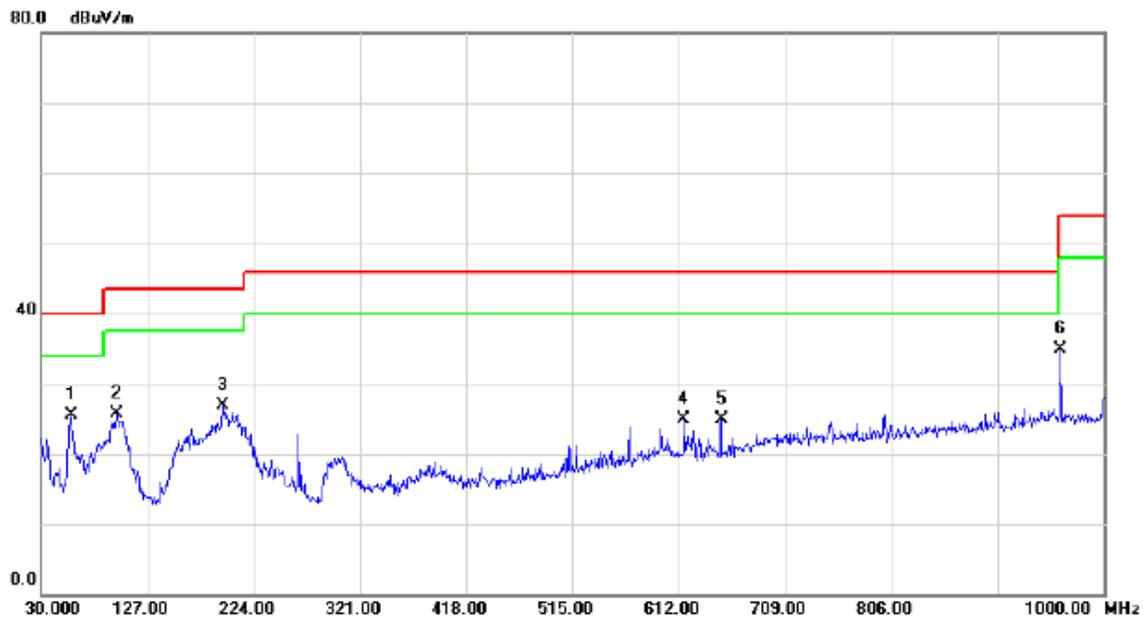
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	57.1600	40.77	-14.44	26.33	40.00	-13.67	QP	
2		99.8400	44.90	-18.84	26.06	43.50	-17.44	QP	
3		200.7200	43.95	-16.71	27.24	43.50	-16.26	QP	
4		299.6600	35.05	-13.50	21.55	46.00	-24.45	QP	
5		649.8300	30.93	-6.91	24.02	46.00	-21.98	QP	
6		960.2300	36.81	-1.67	35.14	54.00	-18.86	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



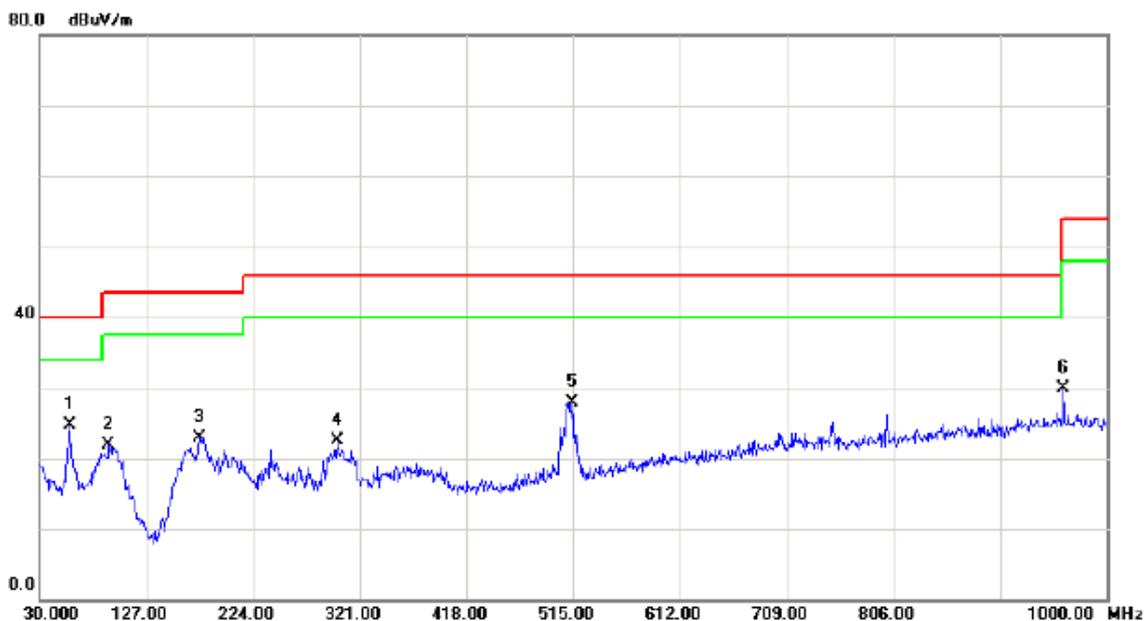
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	56.1900	37.84	-14.34	23.50	40.00	-16.50	QP	
2	176.4700	38.24	-15.07	23.17	43.50	-20.33	QP	
3	299.6600	34.96	-13.50	21.46	46.00	-24.54	QP	
4 *	512.0900	39.54	-8.99	30.55	46.00	-15.45	QP	
5	800.1800	31.47	-4.74	26.73	46.00	-19.27	QP	
6	960.2300	31.26	-1.67	29.59	54.00	-24.41	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	57.1600	39.89	-14.44	25.45	40.00	-14.55	QP	
2		98.8700	44.65	-18.99	25.66	43.50	-17.84	QP	
3		195.8700	43.63	-16.71	26.92	43.50	-16.58	QP	
4		616.8500	32.26	-7.28	24.98	46.00	-21.02	QP	
5		650.8000	31.78	-6.88	24.90	46.00	-21.10	QP	
6		960.2300	36.56	-1.67	34.89	54.00	-19.11	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



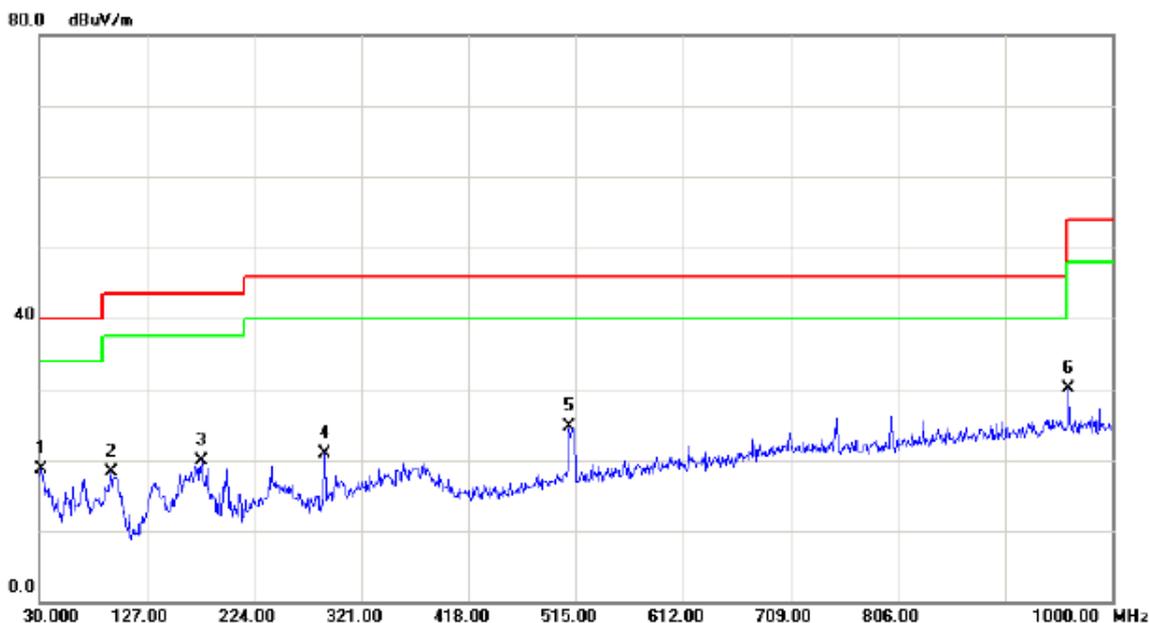
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	57.1600	39.13	-14.44	24.69	40.00	-15.31	QP	
2	93.0500	41.73	-19.86	21.87	43.50	-21.63	QP	
3	175.5000	37.81	-14.97	22.84	43.50	-20.66	QP	
4	300.6300	36.05	-13.48	22.57	46.00	-23.43	QP	
5	514.0300	36.85	-8.94	27.91	46.00	-18.09	QP	
6	960.2300	31.55	-1.67	29.88	54.00	-24.12	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.17m	Polarization:	Vertical



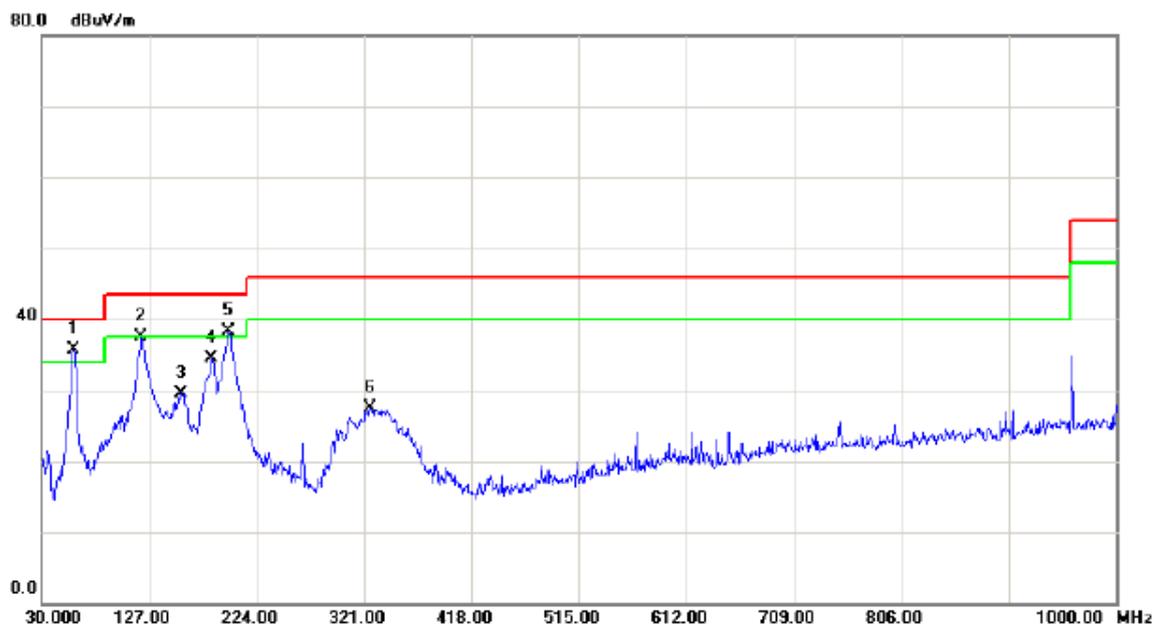
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		34.8500	37.72	-15.15	22.57	40.00	-17.43	QP	
2		100.8100	41.84	-18.70	23.14	43.50	-20.36	QP	
3		172.5900	37.09	-14.68	22.41	43.50	-21.09	QP	
4		199.7500	41.64	-16.72	24.92	43.50	-18.58	QP	
5	*	906.8800	37.08	-2.67	34.41	46.00	-11.59	QP	
6		960.2300	37.07	-1.67	35.40	54.00	-18.60	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.17m	Polarization:	Horizontal



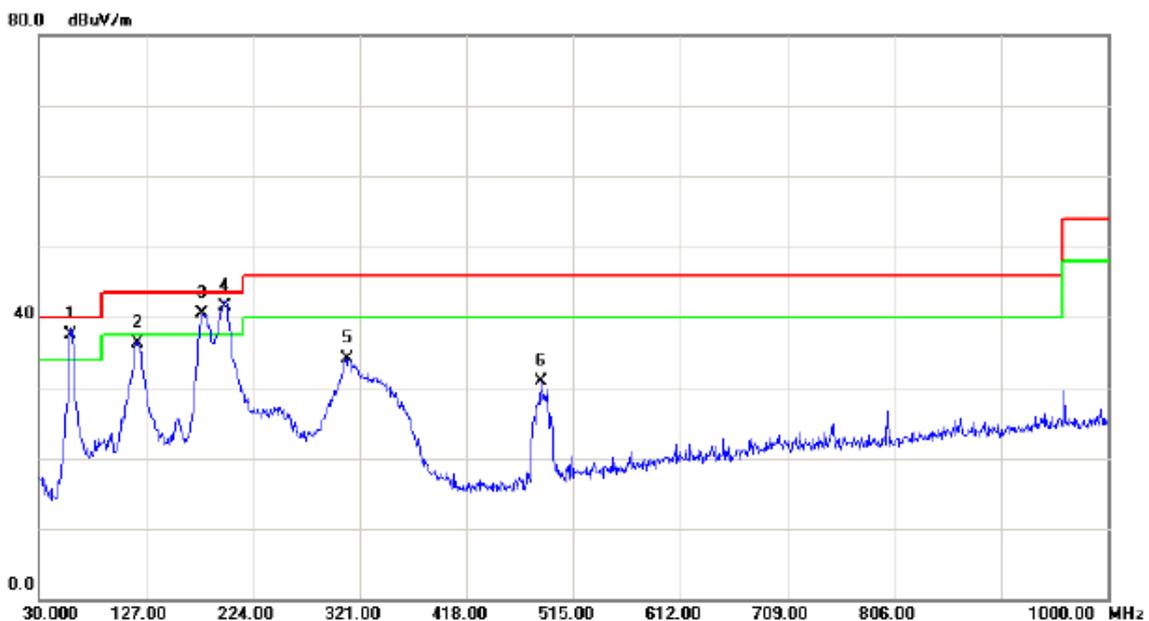
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	31.9400	33.78	-15.10	18.68	40.00	-21.32	QP	
2		94.9900	37.90	-19.58	18.32	43.50	-25.18	QP	
3		176.4700	34.91	-15.07	19.84	43.50	-23.66	QP	
4		288.0200	34.74	-13.75	20.99	46.00	-25.01	QP	
5		509.1800	33.72	-9.06	24.66	46.00	-21.34	QP	
6		960.2300	31.70	-1.67	30.03	54.00	-23.97	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



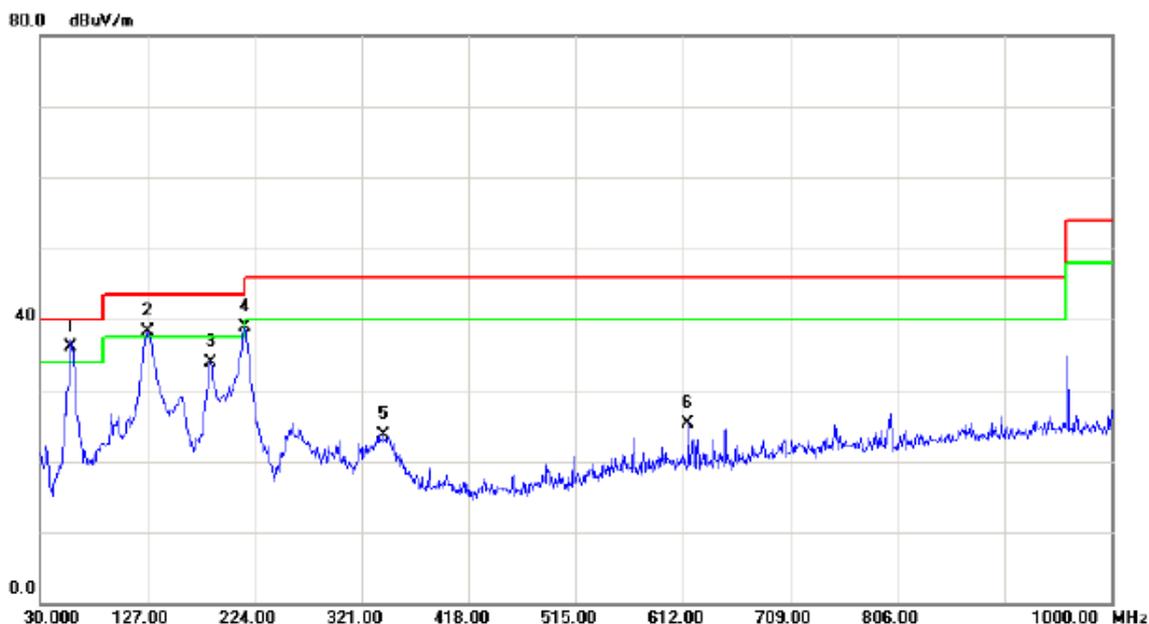
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	59.1000	50.35	-14.64	35.71	40.00	-4.29	QP	
2	!	120.2100	53.76	-16.20	37.56	43.50	-5.94	QP	
3		156.1000	43.54	-13.97	29.57	43.50	-13.93	QP	
4		183.2600	50.42	-15.83	34.59	43.50	-8.91	QP	
5	!	198.7800	54.95	-16.71	38.24	43.50	-5.26	QP	
6		326.8200	40.22	-12.78	27.44	46.00	-18.56	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



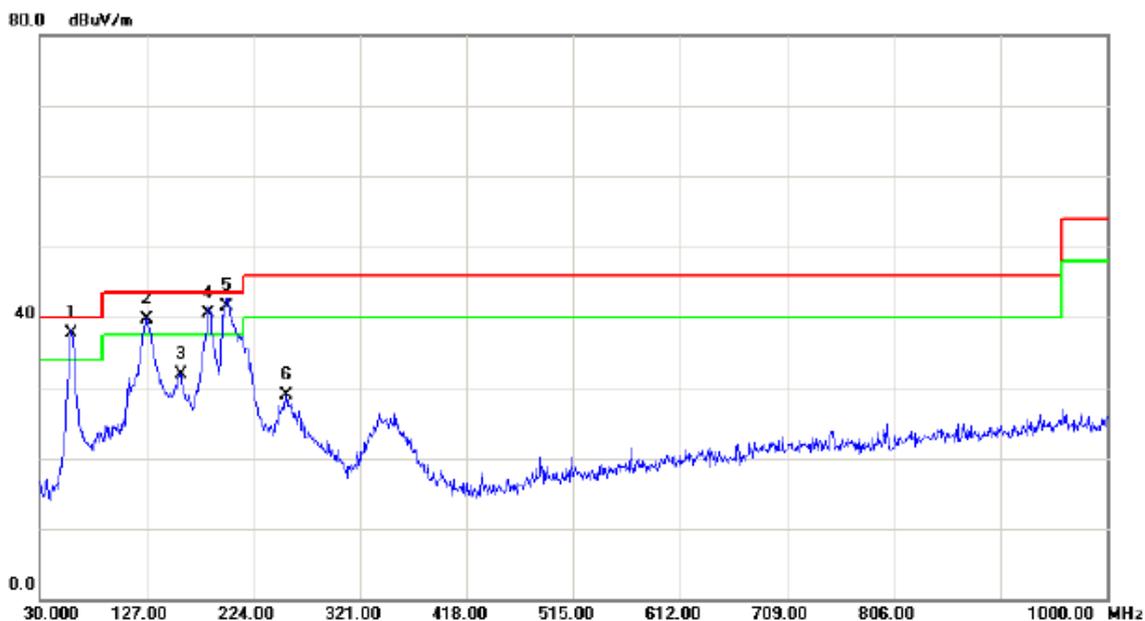
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	!	59.1000	52.18	-14.64	37.54	40.00	-2.46	QP	
2		119.2400	52.71	-16.31	36.40	43.50	-7.10	QP	
3	!	178.4100	55.83	-15.26	40.57	43.50	-2.93	QP	
4	*	198.7800	58.13	-16.71	41.42	43.50	-2.08	QP	
5		310.3300	47.32	-13.20	34.12	46.00	-11.88	QP	
6		485.9000	40.31	-9.41	30.90	46.00	-15.10	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI-Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



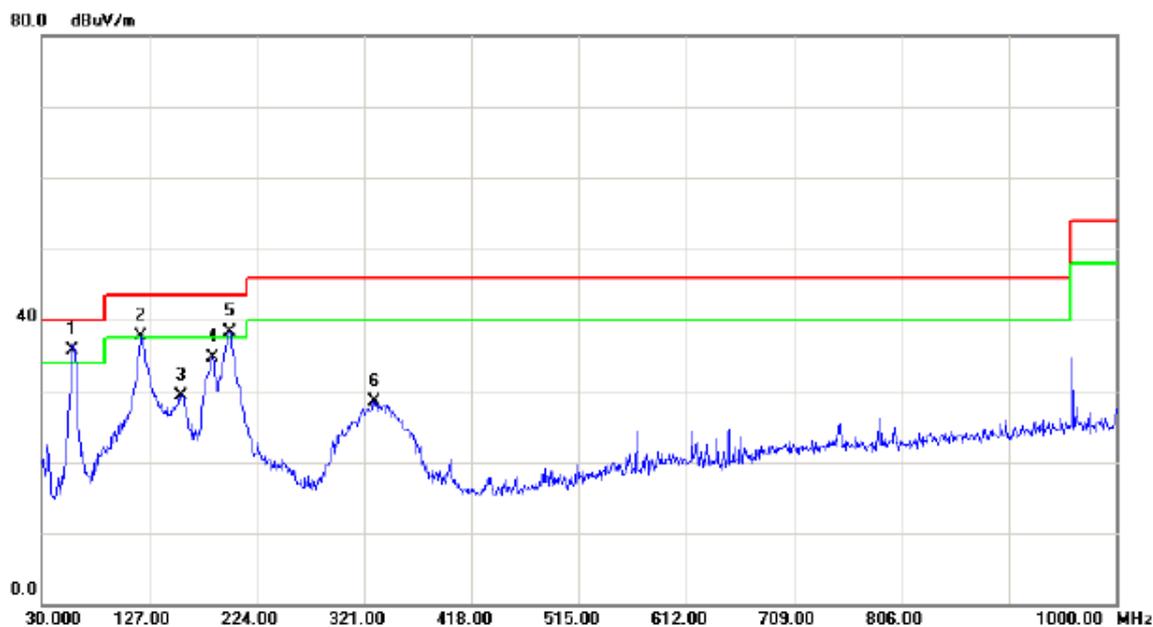
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	58.1300	50.67	-14.55	36.12	40.00	-3.88	QP	
2	!	127.9700	53.88	-15.48	38.40	43.50	-5.10	QP	
3		184.2300	49.94	-15.96	33.98	43.50	-9.52	QP	
4	!	215.2700	55.43	-16.57	38.86	43.50	-4.64	QP	
5		340.4000	36.19	-12.44	23.75	46.00	-22.25	QP	
6		616.8500	32.58	-7.28	25.30	46.00	-20.70	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



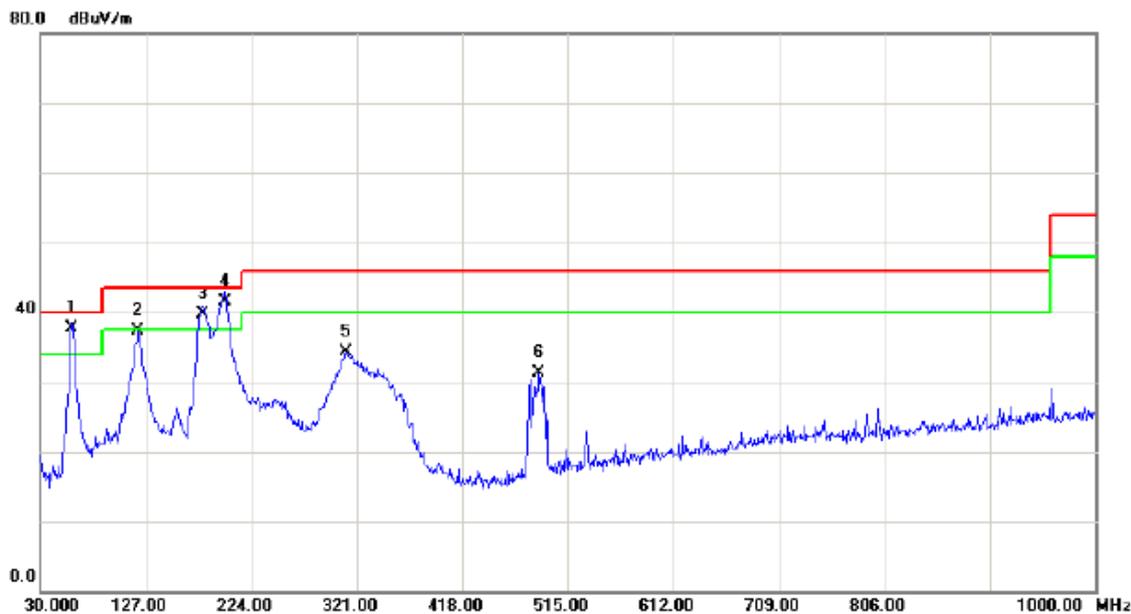
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	!	59.1000	52.28	-14.64	37.64	40.00	-2.36	QP	
2	!	127.0000	55.38	-15.58	39.80	43.50	-3.70	QP	
3		158.0400	45.86	-13.94	31.92	43.50	-11.58	QP	
4	!	183.2600	56.24	-15.83	40.41	43.50	-3.09	QP	
5	*	199.7500	58.14	-16.72	41.42	43.50	-2.08	QP	
6		254.0700	43.74	-14.91	28.83	46.00	-17.17	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



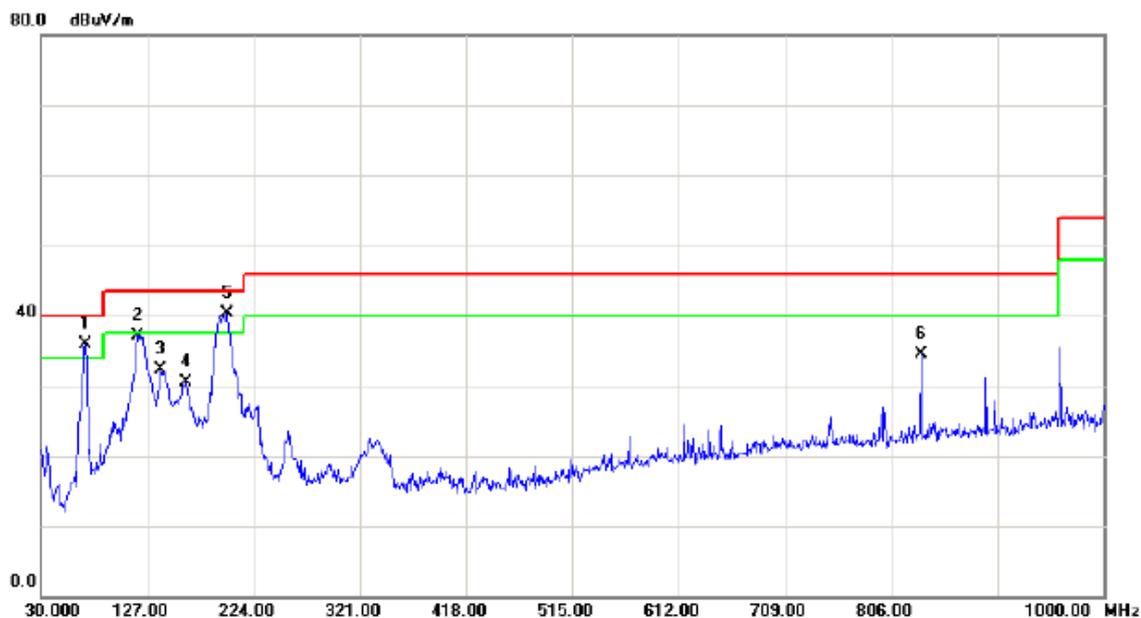
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	58.1300	50.23	-14.55	35.68	40.00	-4.32	QP	
2	!	120.2100	53.83	-16.20	37.63	43.50	-5.87	QP	
3		156.1000	43.28	-13.97	29.31	43.50	-14.19	QP	
4		184.2300	50.60	-15.96	34.64	43.50	-8.86	QP	
5	!	199.7500	55.09	-16.72	38.37	43.50	-5.13	QP	
6		330.7000	41.19	-12.68	28.51	46.00	-17.49	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



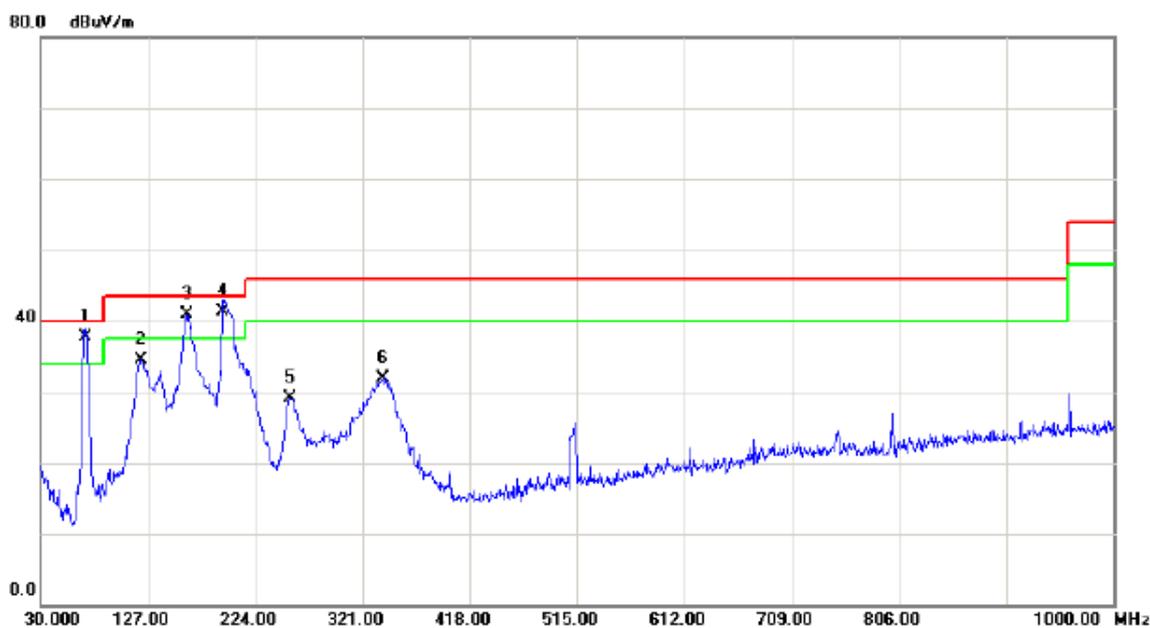
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	!	59.1000	52.28	-14.64	37.64	40.00	-2.36	QP	
2		120.2100	53.45	-16.20	37.25	43.50	-6.25	QP	
3	!	179.3800	55.01	-15.36	39.65	43.50	-3.85	QP	
4	*	199.7500	58.15	-16.72	41.43	43.50	-2.07	QP	
5		311.3000	47.46	-13.18	34.28	46.00	-11.72	QP	
6		488.8100	40.72	-9.38	31.34	46.00	-14.66	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.17m	Polarization:	Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	!	70.7400	52.22	-16.39	35.83	40.00	-4.17	QP	
2		118.2700	53.56	-16.42	37.14	43.50	-6.36	QP	
3		139.6100	46.82	-14.48	32.34	43.50	-11.16	QP	
4		161.9200	44.61	-14.02	30.59	43.50	-12.91	QP	
5	*	199.7500	56.96	-16.72	40.24	43.50	-3.26	QP	
6		833.1600	38.58	-4.14	34.44	46.00	-11.56	QP	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.17m	Polarization:	Horizontal



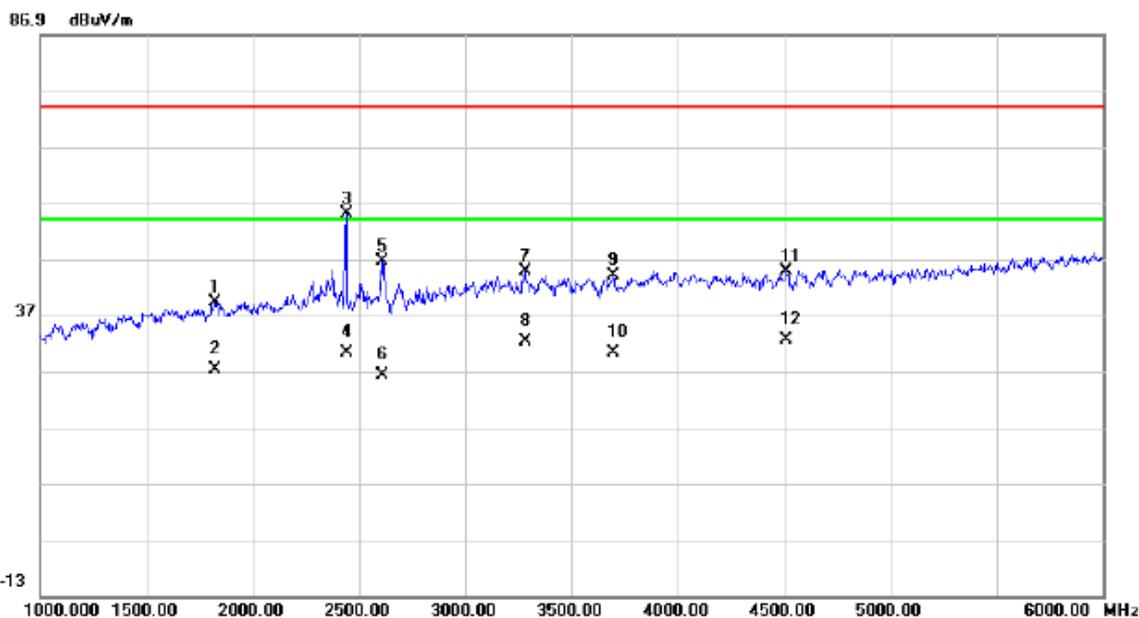
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	!	70.7400	54.15	-16.39	37.76	40.00	-2.24	QP	
2		121.1800	50.63	-16.11	34.52	43.50	-8.98	QP	
3	!	161.9200	54.94	-14.02	40.92	43.50	-2.58	QP	
4	*	194.9000	58.05	-16.70	41.35	43.50	-2.15	QP	
5		255.0400	43.90	-14.85	29.05	46.00	-16.95	QP	
6		339.4300	44.46	-12.47	31.99	46.00	-14.01	QP	

4.2.8 TEST RESULTS- ABOVE 1000MHZ

Remark:

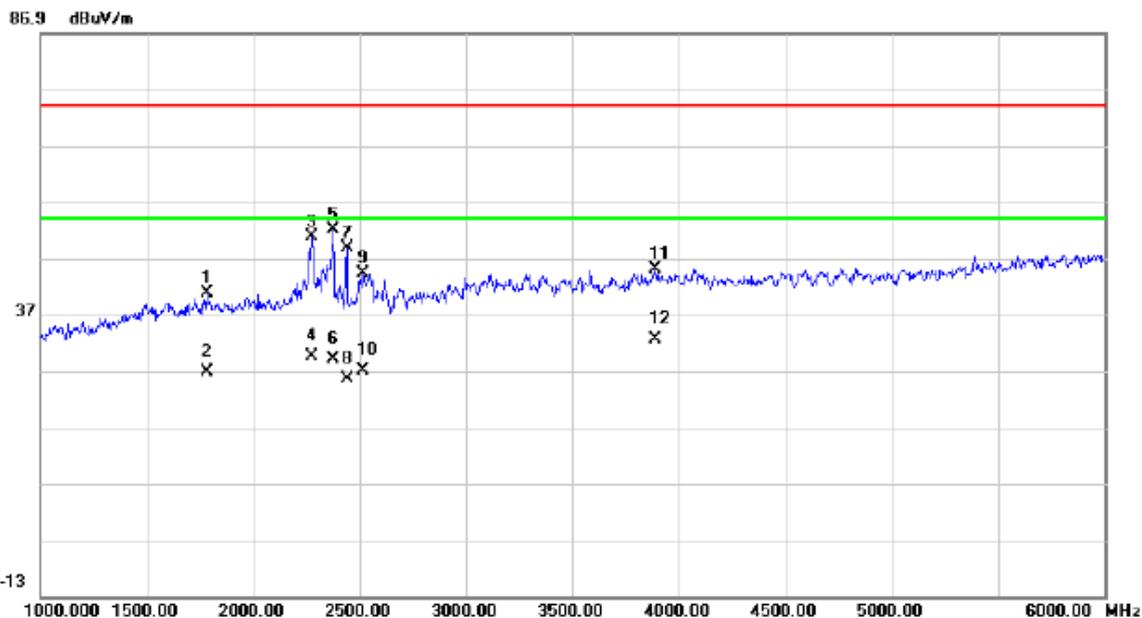
- (1) Reading in which marked as Peak or AVG means measurements by using are Peak Mode or AVG with Detector BW=1MHz; SPA setting in RBW=1MHz, VBW =1MHz, Swp. Time = 0.3 sec./MHz, AVG Mode with detector BW=1MHz; SPA setting in RBW=1MHz, VBW =10Hz, Swp. Time = 0.3 sec./MHz.
- (2) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading Compliance with the QP Limits and then QP Mode measurement didn't perform.
- (3) Measuring frequency range from 1GHz to 40GHz.
- (4) For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also Complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



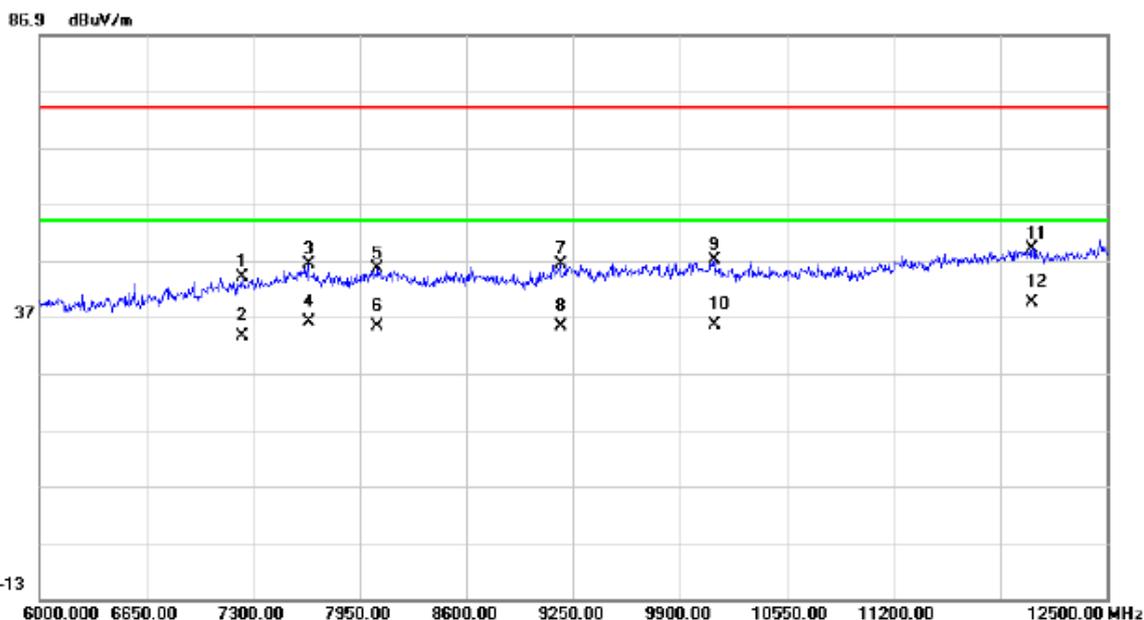
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1825.000	43.08	-3.92	39.16	74.00	-34.84	peak	
2		1825.000	31.25	-3.92	27.33	54.00	-26.67	AVG	
3	*	2440.000	57.31	-2.39	54.92	74.00	-19.08	peak	
4		2440.000	32.63	-2.39	30.24	54.00	-23.76	AVG	
5		2610.000	48.42	-1.85	46.57	74.00	-27.43	peak	
6		2610.000	28.02	-1.85	26.17	54.00	-27.83	AVG	
7		3280.000	44.10	0.72	44.82	74.00	-29.18	peak	
8		3280.000	31.62	0.72	32.34	54.00	-21.66	AVG	
9		3695.000	42.14	1.94	44.08	74.00	-29.92	peak	
10		3695.000	28.32	1.94	30.26	54.00	-23.74	AVG	
11		4510.000	41.70	3.02	44.72	74.00	-29.28	peak	
12		4510.000	29.62	3.02	32.64	54.00	-21.36	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



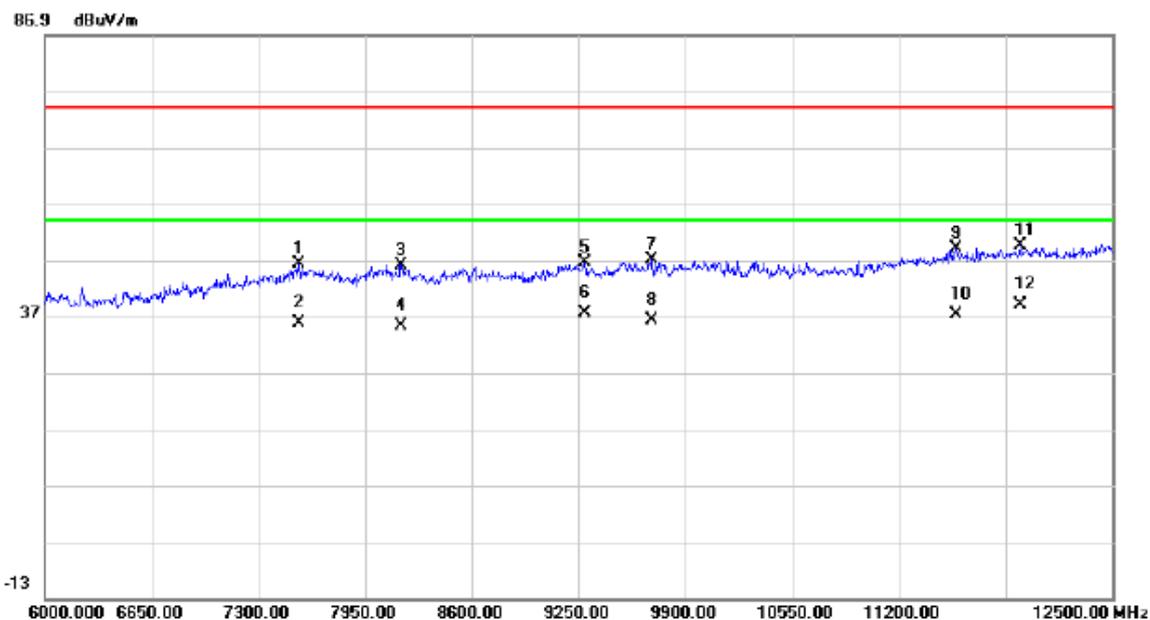
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1780.000	44.91	-4.17	40.74	74.00	-33.26	peak	
2		1780.000	31.02	-4.17	26.85	54.00	-27.15	AVG	
3		2275.000	53.47	-2.61	50.86	74.00	-23.14	peak	
4		2275.000	32.04	-2.61	29.43	54.00	-24.57	AVG	
5		2375.000	54.43	-2.48	51.95	74.00	-22.05	peak	
6		2375.000	31.50	-2.48	29.02	54.00	-24.98	AVG	
7		2440.000	51.22	-2.39	48.83	74.00	-25.17	peak	
8		2440.000	28.02	-2.39	25.63	54.00	-28.37	AVG	
9		2515.000	46.57	-2.25	44.32	74.00	-29.68	peak	
10		2515.000	29.32	-2.25	27.07	54.00	-26.93	AVG	
11		3890.000	42.56	2.47	45.03	74.00	-28.97	peak	
12	*	3890.000	30.14	2.47	32.61	54.00	-21.39	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



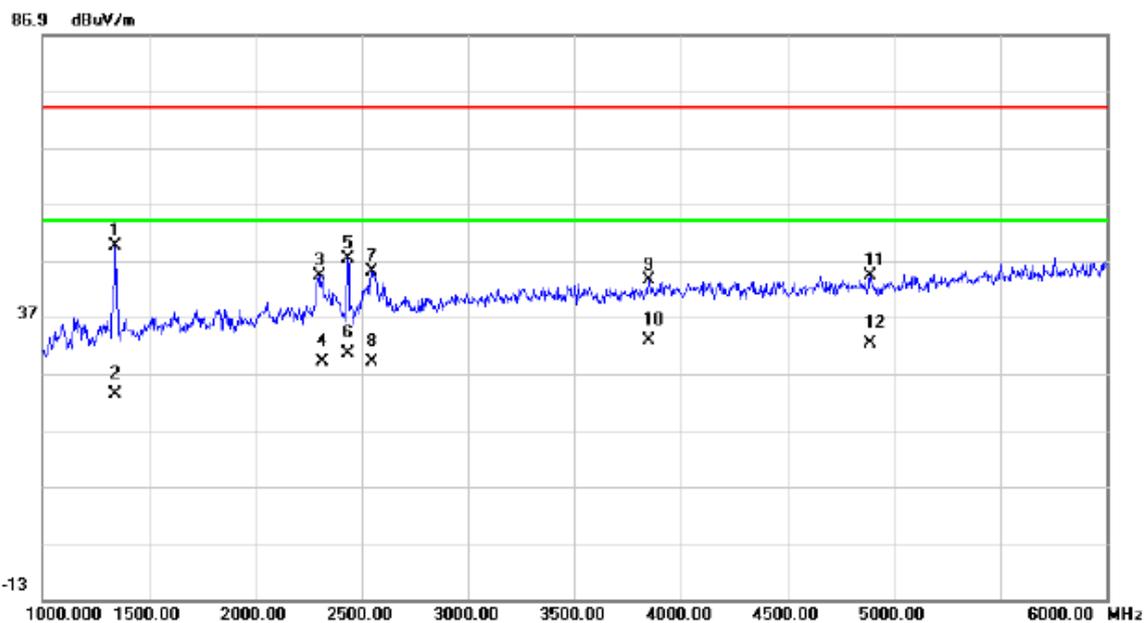
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7235.000	29.21	14.87	44.08	74.00	-29.92	peak	
2		7235.000	18.77	14.87	33.64	54.00	-20.36	AVG	
3		7638.000	30.34	16.01	46.35	74.00	-27.65	peak	
4		7638.000	20.02	16.01	36.03	54.00	-17.97	AVG	
5		8060.500	29.47	16.01	45.48	74.00	-28.52	peak	
6		8060.500	19.31	16.01	35.32	54.00	-18.68	AVG	
7		9172.000	30.58	15.82	46.40	74.00	-27.60	peak	
8		9172.000	19.58	15.82	35.40	54.00	-18.60	AVG	
9		10114.500	31.33	15.59	46.92	74.00	-27.08	peak	
10		10114.500	19.93	15.59	35.52	54.00	-18.48	AVG	
11		12045.000	26.30	22.81	49.11	74.00	-24.89	peak	
12	*	12045.000	16.74	22.81	39.55	54.00	-14.45	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



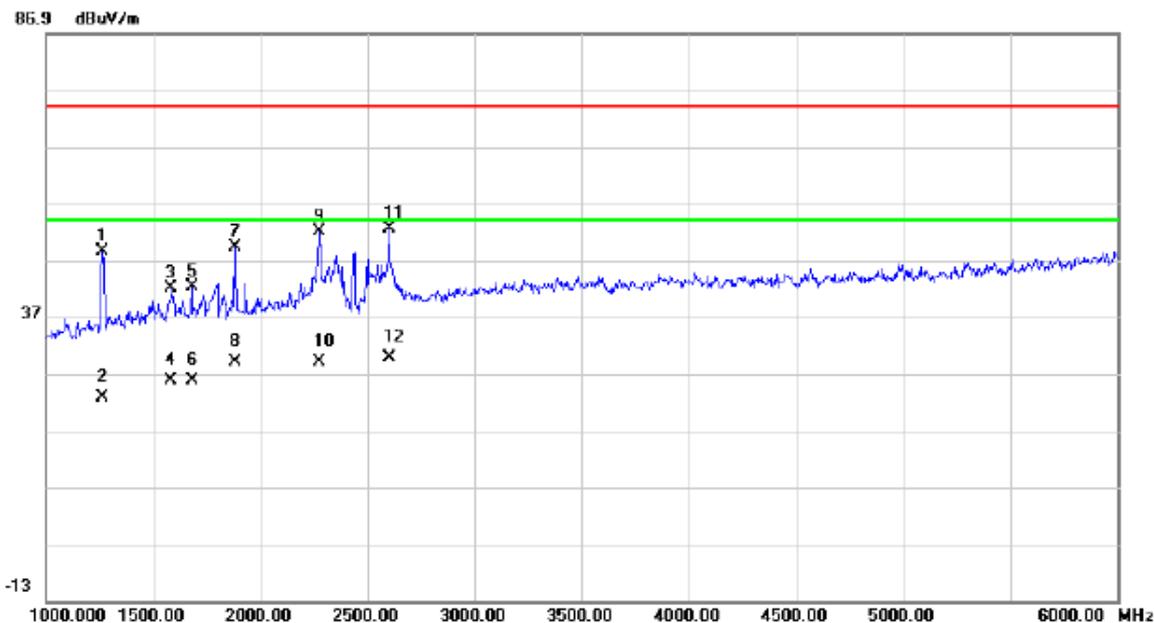
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7547.000	30.24	15.99	46.23	74.00	-27.77	peak	
2		7547.000	19.69	15.99	35.68	54.00	-18.32	AVG	
3		8171.000	30.17	15.85	46.02	74.00	-27.98	peak	
4		8171.000	19.50	15.85	35.35	54.00	-18.65	AVG	
5		9289.000	30.91	15.58	46.49	74.00	-27.51	peak	
6		9289.000	22.00	15.58	37.58	54.00	-16.42	AVG	
7		9692.000	31.46	15.51	46.97	74.00	-27.03	peak	
8		9692.000	20.79	15.51	36.30	54.00	-17.70	AVG	
9		11551.00	28.55	20.47	49.02	74.00	-24.98	peak	
10		11551.00	16.77	20.47	37.24	54.00	-16.76	AVG	
11		11941.00	26.60	22.95	49.55	74.00	-24.45	peak	
12	*	11941.00	16.18	22.95	39.13	54.00	-14.87	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



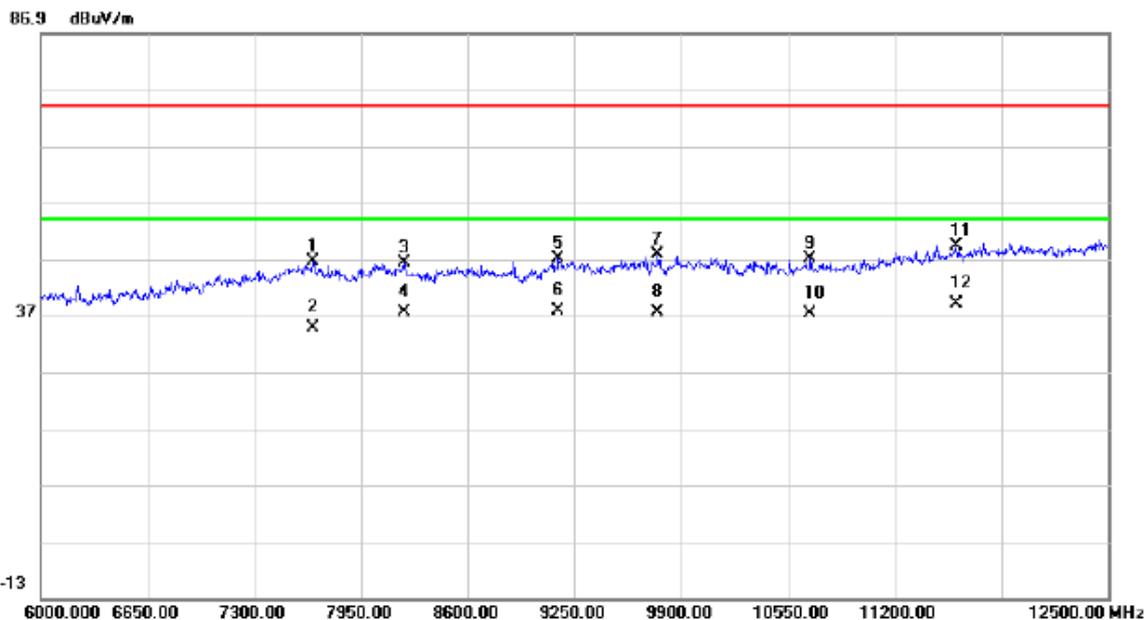
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1345.000	56.36	-6.85	49.51	74.00	-24.49	peak	
2	1345.000	30.25	-6.85	23.40	54.00	-30.60	AVG	
3	2305.000	46.77	-2.57	44.20	74.00	-29.80	peak	
4	2305.000	31.52	-2.57	28.95	54.00	-25.05	AVG	
5	2435.000	49.70	-2.40	47.30	74.00	-26.70	peak	
6	2435.000	33.02	-2.40	30.62	54.00	-23.38	AVG	
7	2550.000	47.02	-2.10	44.92	74.00	-29.08	peak	
8	2550.000	31.20	-2.10	29.10	54.00	-24.90	AVG	
9	3850.000	41.08	2.37	43.45	74.00	-30.55	peak	
10 *	3850.000	30.52	2.37	32.89	54.00	-21.11	AVG	
11	4890.000	40.66	3.74	44.40	74.00	-29.60	peak	
12	4890.000	28.62	3.74	32.36	54.00	-21.64	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



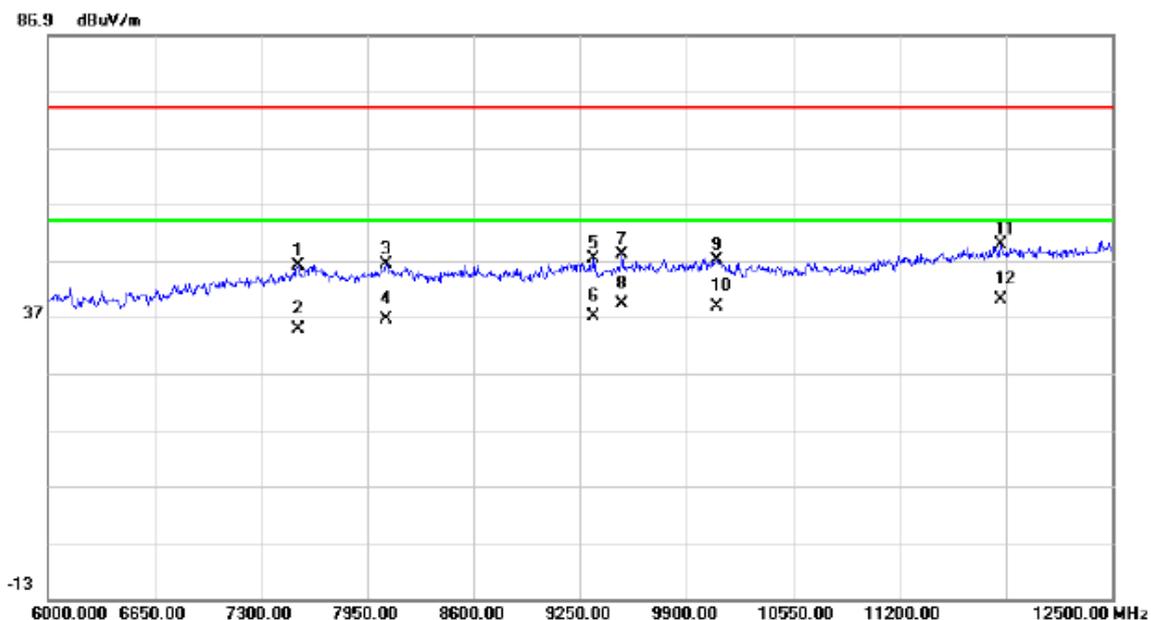
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1265.000	55.94	-7.43	48.51	74.00	-25.49	peak	
2		1265.000	30.25	-7.43	22.82	54.00	-31.18	AVG	
3		1585.000	47.27	-5.26	42.01	74.00	-31.99	peak	
4		1585.000	31.05	-5.26	25.79	54.00	-28.21	AVG	
5		1680.000	46.97	-4.72	42.25	74.00	-31.75	peak	
6		1680.000	30.61	-4.72	25.89	54.00	-28.11	AVG	
7		1880.000	52.96	-3.62	49.34	74.00	-24.66	peak	
8		1880.000	32.60	-3.62	28.98	54.00	-25.02	AVG	
9		2275.000	54.70	-2.61	52.09	74.00	-21.91	peak	
10		2275.000	31.62	-2.61	29.01	54.00	-24.99	AVG	
11	*	2600.000	54.47	-1.89	52.58	74.00	-21.42	peak	
12		2600.000	31.62	-1.89	29.73	54.00	-24.27	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI – Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



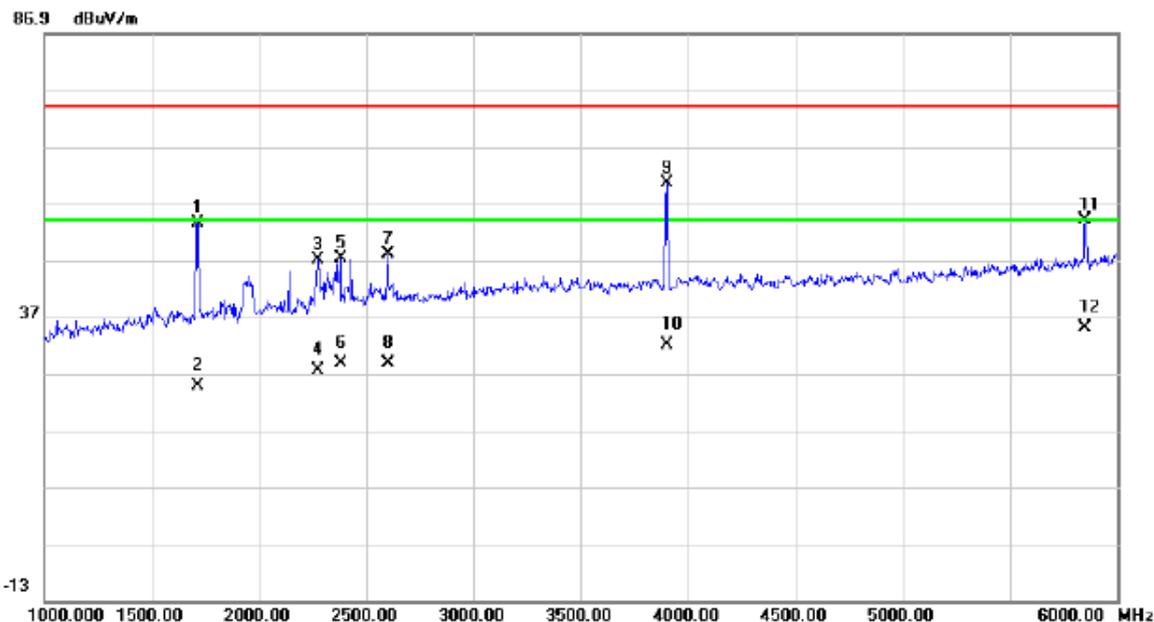
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7657.500	30.43	16.02	46.45	74.00	-27.55	peak	
2		7657.500	18.83	16.02	34.85	54.00	-19.15	AVG	
3		8210.000	30.53	15.79	46.32	74.00	-27.68	peak	
4		8210.000	21.78	15.79	37.57	54.00	-16.43	AVG	
5		9152.500	31.16	15.86	47.02	74.00	-26.98	peak	
6		9152.500	21.84	15.86	37.70	54.00	-16.30	AVG	
7		9757.000	32.15	15.63	47.78	74.00	-26.22	peak	
8		9757.000	21.99	15.63	37.62	54.00	-16.38	AVG	
9		10686.500	30.75	16.38	47.13	74.00	-26.87	peak	
10		10686.500	20.85	16.38	37.23	54.00	-16.77	AVG	
11		11577.000	28.70	20.64	49.34	74.00	-24.66	peak	
12	*	11577.000	18.42	20.64	39.06	54.00	-14.94	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



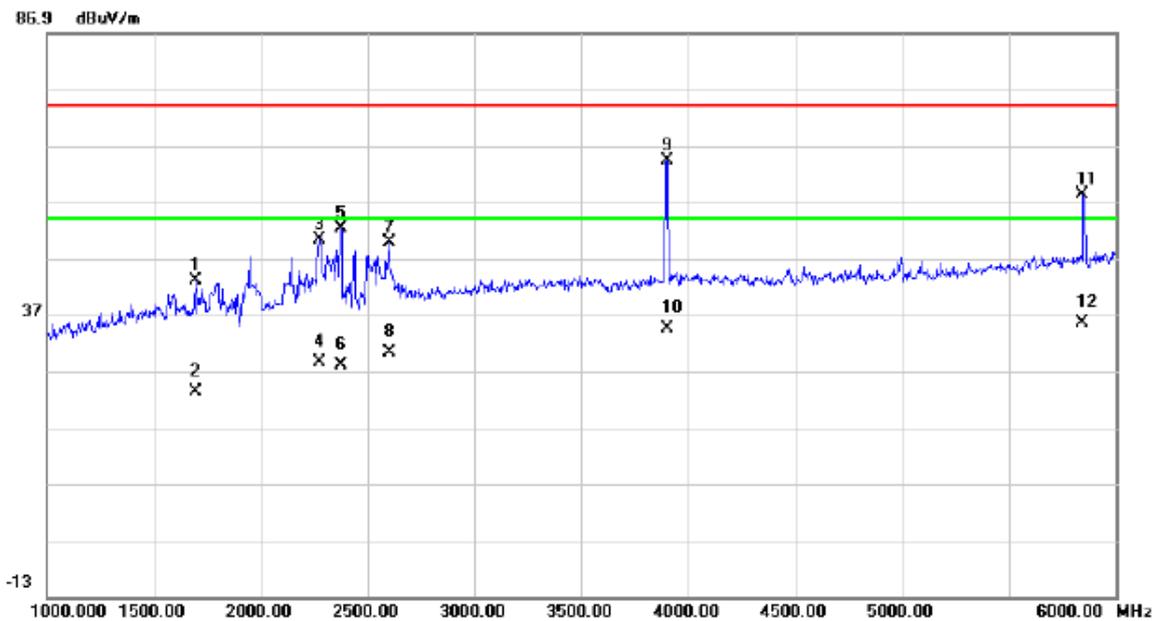
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		7527.500	30.03	15.99	46.02	74.00	-27.98	peak	
2		7527.500	18.75	15.99	34.74	54.00	-19.26	AVG	
3		8067.000	30.18	16.00	46.18	74.00	-27.82	peak	
4		8067.000	20.58	16.00	36.58	54.00	-17.42	AVG	
5		9334.500	31.71	15.50	47.21	74.00	-26.79	peak	
6		9334.500	21.57	15.50	37.07	54.00	-16.93	AVG	
7		9503.500	32.79	15.17	47.96	74.00	-26.04	peak	
8		9503.500	24.04	15.17	39.21	54.00	-14.79	AVG	
9		10088.500	31.44	15.69	47.13	74.00	-26.87	peak	
10		10088.500	23.11	15.69	38.80	54.00	-15.20	AVG	
11		11817.500	27.57	22.17	49.74	74.00	-24.26	peak	
12	*	11817.500	17.75	22.17	39.92	54.00	-14.08	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



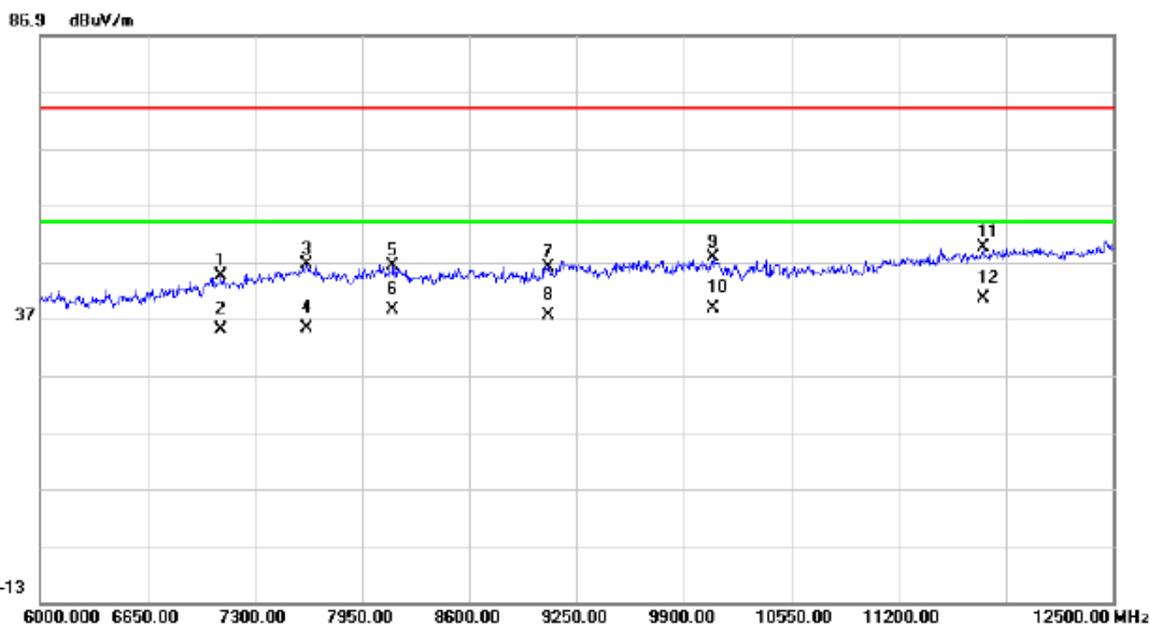
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1715.000	58.02	-4.54	53.48	74.00	-20.52	peak	
2		1715.000	29.32	-4.54	24.78	54.00	-29.22	AVG	
3		2275.000	49.76	-2.61	47.15	74.00	-26.85	peak	
4		2275.000	30.25	-2.61	27.64	54.00	-26.36	AVG	
5		2380.000	49.74	-2.48	47.26	74.00	-26.74	peak	
6		2380.000	31.25	-2.48	28.77	54.00	-25.23	AVG	
7		2600.000	49.85	-1.89	47.96	74.00	-26.04	peak	
8		2600.000	30.62	-1.89	28.73	54.00	-25.27	AVG	
9	*	3900.000	58.10	2.50	60.60	74.00	-13.40	peak	
10		3900.000	29.62	2.50	32.12	54.00	-21.88	AVG	
11		5850.000	46.99	7.03	54.02	74.00	-19.98	peak	
12		5850.000	28.03	7.03	35.06	54.00	-18.94	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



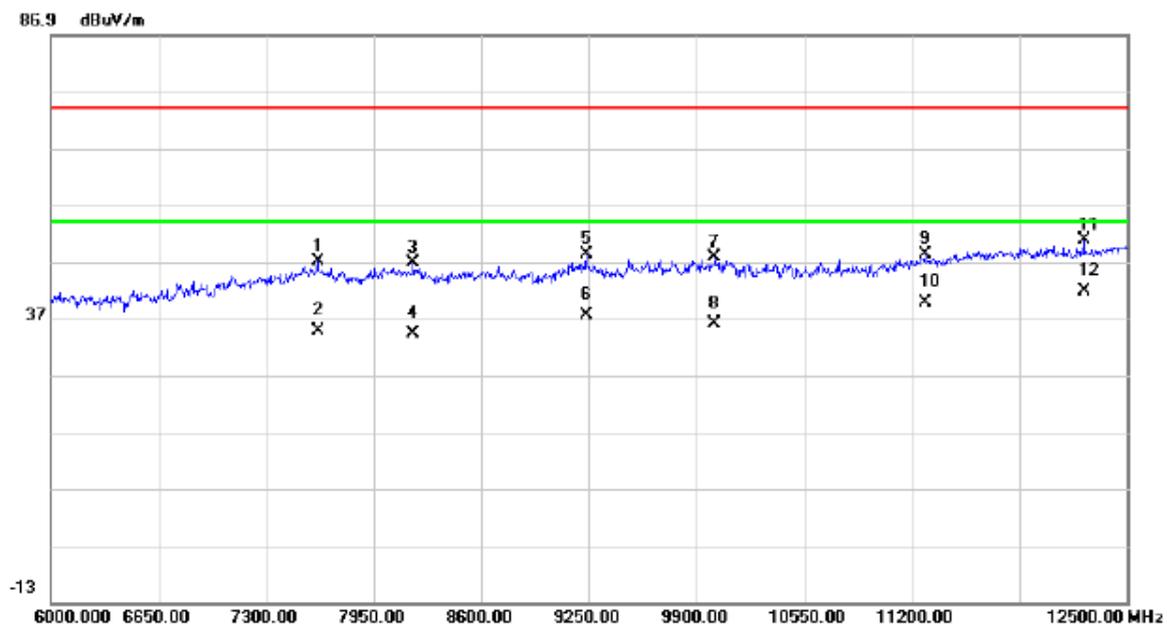
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1695.000	47.71	-4.65	43.06	74.00	-30.94	peak	
2		1695.000	28.03	-4.65	23.38	54.00	-30.62	AVG	
3		2275.000	52.93	-2.61	50.32	74.00	-23.68	peak	
4		2275.000	31.20	-2.61	28.59	54.00	-25.41	AVG	
5		2375.000	54.85	-2.48	52.37	74.00	-21.63	peak	
6		2375.000	30.62	-2.48	28.14	54.00	-25.86	AVG	
7		2600.000	51.62	-1.89	49.73	74.00	-24.27	peak	
8		2600.000	32.05	-1.89	30.16	54.00	-23.84	AVG	
9	*	3900.000	61.88	2.50	64.38	74.00	-9.62	peak	
10		3900.000	31.92	2.50	34.42	54.00	-19.58	AVG	
11		5845.000	51.19	7.01	58.20	74.00	-15.80	peak	
12		5845.000	28.62	7.01	35.63	54.00	-18.37	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



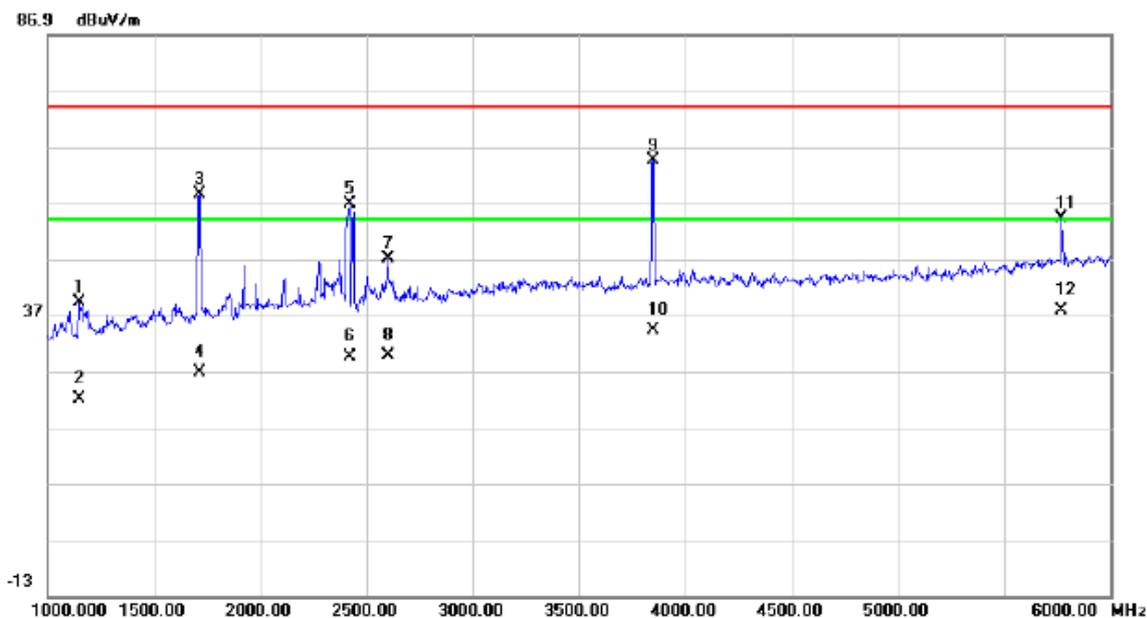
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7098.500	30.21	14.29	44.50	74.00	-29.50	peak	
2		7098.500	20.76	14.29	35.05	54.00	-18.95	AVG	
3		7612.000	30.63	16.01	46.64	74.00	-27.36	peak	
4		7612.000	19.20	16.01	35.21	54.00	-18.79	AVG	
5		8138.500	30.42	15.89	46.31	74.00	-27.69	peak	
6		8138.500	22.74	15.89	38.63	54.00	-15.37	AVG	
7		9081.000	30.13	16.00	46.13	74.00	-27.87	peak	
8		9081.000	21.56	16.00	37.56	54.00	-16.44	AVG	
9		10075.50	32.00	15.74	47.74	74.00	-26.26	peak	
10		10075.50	22.98	15.74	38.72	54.00	-15.28	AVG	
11		11713.50	27.97	21.50	49.47	74.00	-24.53	peak	
12	*	11713.50	19.01	21.50	40.51	54.00	-13.49	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



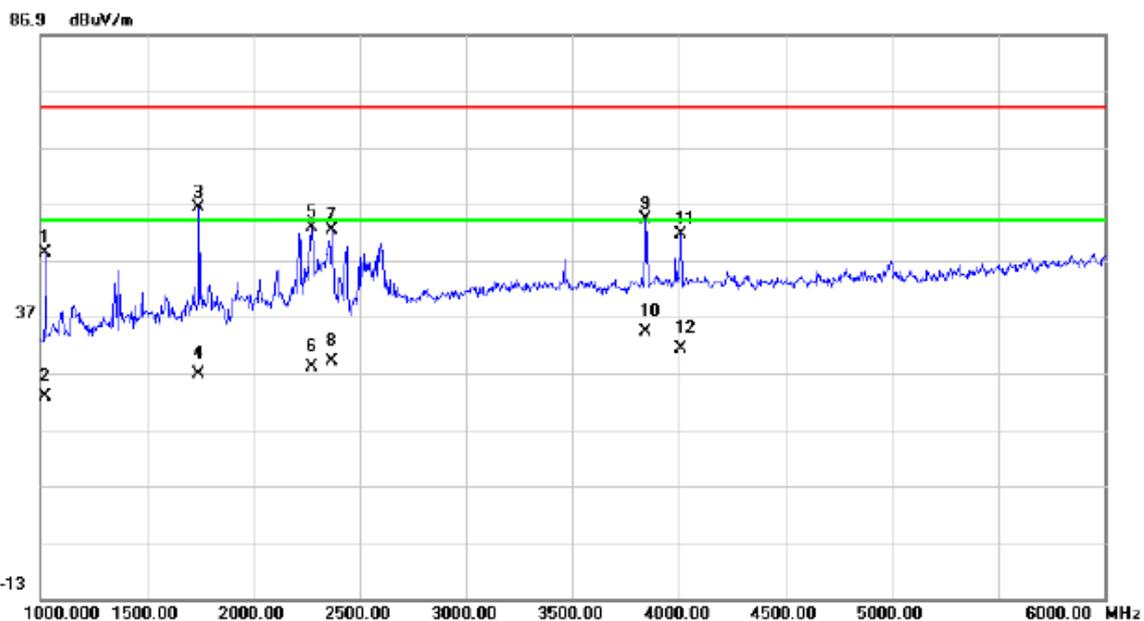
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7612.000	30.90	16.01	46.91	74.00	-27.09	peak	
2	7612.000	18.80	16.01	34.81	54.00	-19.19	AVG	
3	8190.500	30.96	15.82	46.78	74.00	-27.22	peak	
4	8190.500	18.53	15.82	34.35	54.00	-19.65	AVG	
5	9237.000	32.68	15.70	48.38	74.00	-25.62	peak	
6	9237.000	21.78	15.70	37.48	54.00	-16.52	AVG	
7	10010.500	31.64	16.02	47.66	74.00	-26.34	peak	
8	10010.500	19.99	16.02	36.01	54.00	-17.99	AVG	
9	11278.000	28.09	20.25	48.34	74.00	-25.66	peak	
10	11278.000	19.51	20.25	39.76	54.00	-14.24	AVG	
11	12240.000	30.15	20.61	50.76	74.00	-23.24	peak	
12 *	12240.000	21.28	20.61	41.89	54.00	-12.11	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI - Adapter: BYD / USB Cable: 0.8m	Polarization:	Vertical



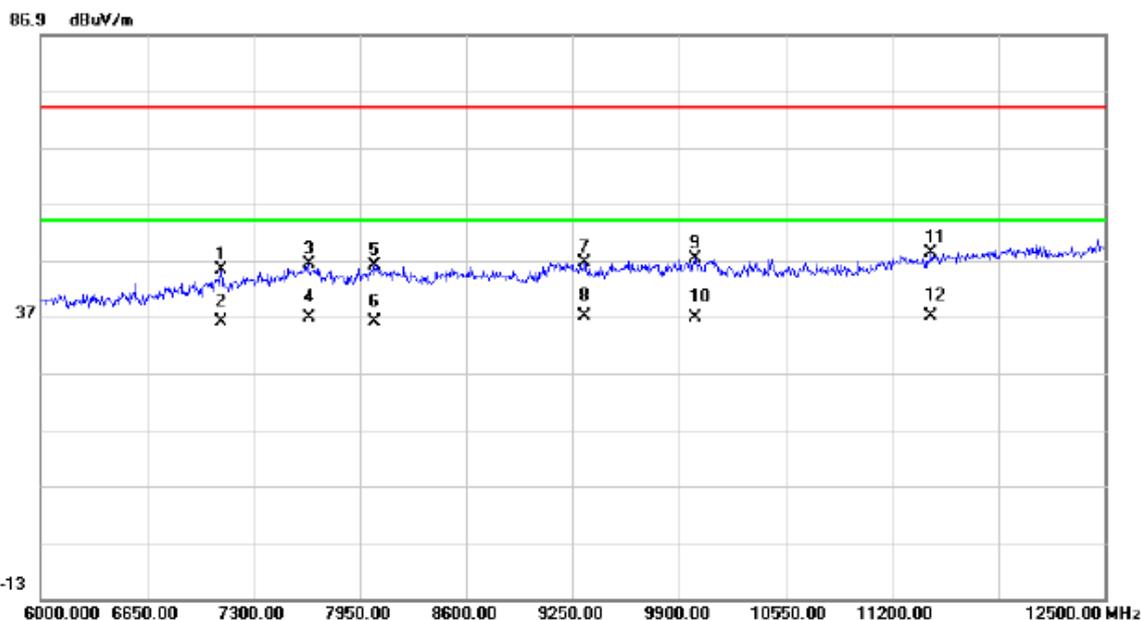
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		1150.000	47.63	-8.26	39.37	74.00	-34.63	peak	
2		1150.000	30.23	-8.26	21.97	54.00	-32.03	AVG	
3		1715.000	63.11	-4.54	58.57	74.00	-15.43	peak	
4		1715.000	31.25	-4.54	26.71	54.00	-27.29	AVG	
5		2420.000	59.16	-2.42	56.74	74.00	-17.26	peak	
6		2420.000	32.02	-2.42	29.60	54.00	-24.40	AVG	
7		2600.000	49.02	-1.89	47.13	74.00	-26.87	peak	
8		2600.000	31.62	-1.89	29.73	54.00	-24.27	AVG	
9	*	3850.000	62.22	2.37	64.59	74.00	-9.41	peak	
10		3850.000	32.01	2.37	34.38	54.00	-19.62	AVG	
11		5770.000	47.67	6.70	54.37	74.00	-19.63	peak	
12		5770.000	31.00	6.70	37.70	54.00	-16.30	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: BYD / USB Cable: 0.8m	Polarization:	Horizontal



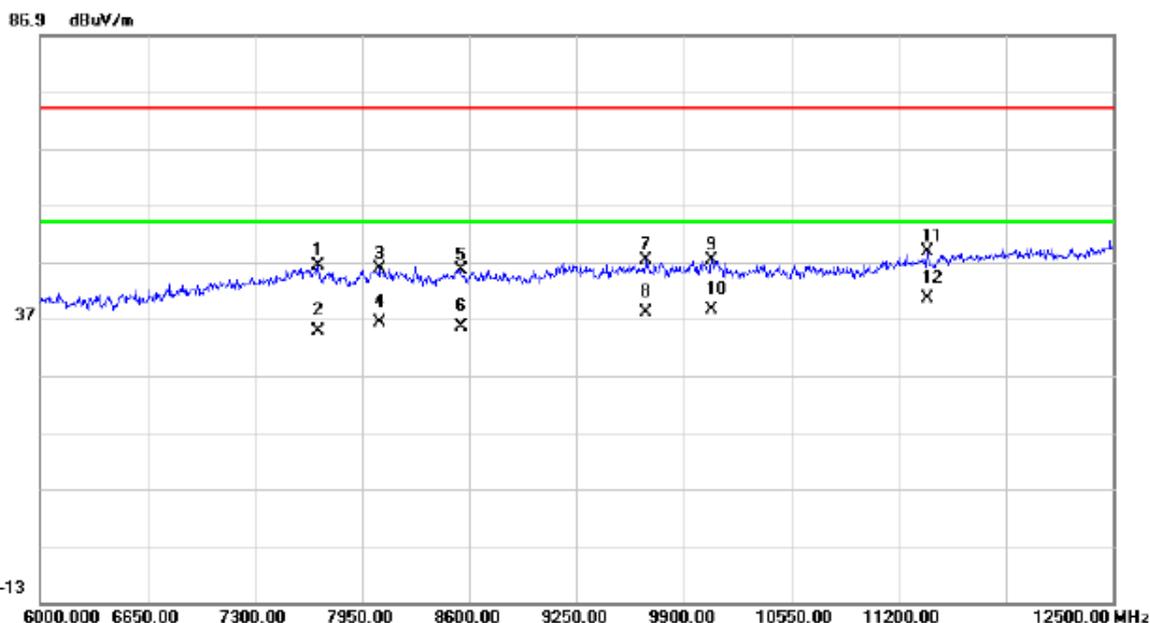
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1025.000	57.42	-9.17	48.25	74.00	-25.75	peak	
2		1025.000	32.02	-9.17	22.85	54.00	-31.15	AVG	
3	*	1745.000	60.53	-4.37	56.16	74.00	-17.84	peak	
4		1745.000	31.20	-4.37	26.83	54.00	-27.17	AVG	
5		2275.000	55.50	-2.61	52.89	74.00	-21.11	peak	
6		2275.000	30.52	-2.61	27.91	54.00	-26.09	AVG	
7		2370.000	54.84	-2.49	52.35	74.00	-21.65	peak	
8		2370.000	31.62	-2.49	29.13	54.00	-24.87	AVG	
9		3845.000	51.95	2.35	54.30	74.00	-19.70	peak	
10		3845.000	32.02	2.35	34.37	54.00	-19.63	AVG	
11		4010.000	48.68	2.78	51.46	74.00	-22.54	peak	
12		4010.000	28.61	2.78	31.39	54.00	-22.61	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: BYD / USB Cable: 0.17m	Polarization:	Vertical



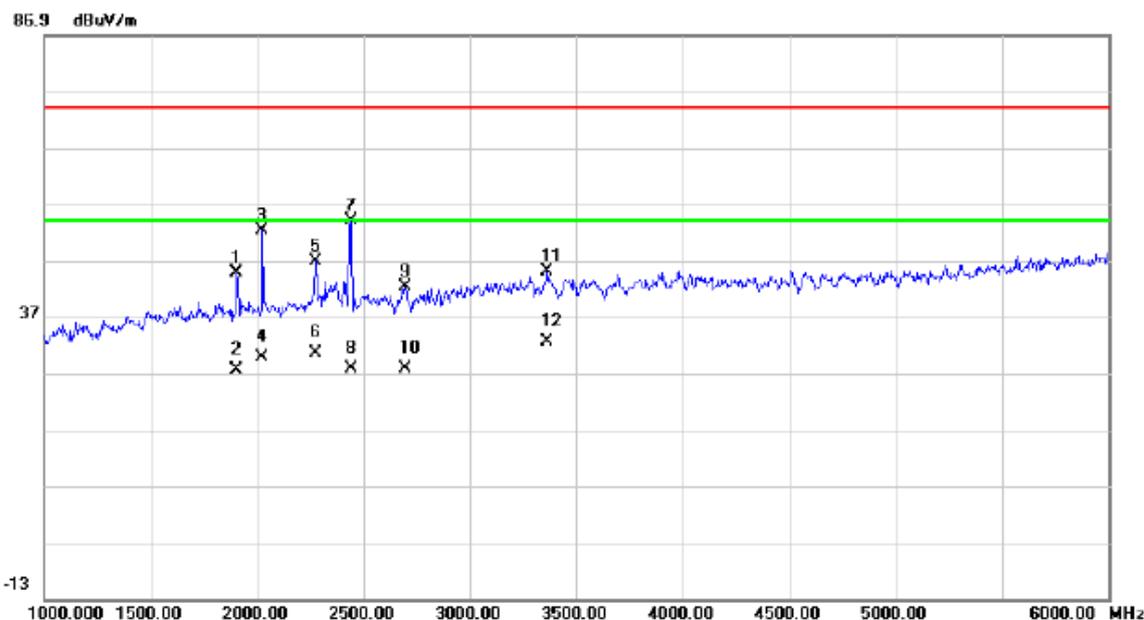
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7105.000	30.95	14.32	45.27	74.00	-28.73	peak	
2		7105.000	21.67	14.32	35.99	54.00	-18.01	AVG	
3		7638.000	30.34	16.01	46.35	74.00	-27.65	peak	
4		7638.000	20.74	16.01	36.75	54.00	-17.25	AVG	
5		8041.000	30.09	16.04	46.13	74.00	-27.87	peak	
6		8041.000	20.05	16.04	36.09	54.00	-17.91	AVG	
7		9321.500	31.08	15.52	46.60	74.00	-27.40	peak	
8		9321.500	21.44	15.52	36.96	54.00	-17.04	AVG	
9		9997.500	31.21	16.06	47.27	74.00	-26.73	peak	
10		9997.500	20.70	16.06	36.76	54.00	-17.24	AVG	
11		11440.50	28.10	20.17	48.27	74.00	-25.73	peak	
12	*	11440.50	16.86	20.17	37.03	54.00	-16.97	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: BYD / USB Cable: 0.17m	Polarization:	Horizontal



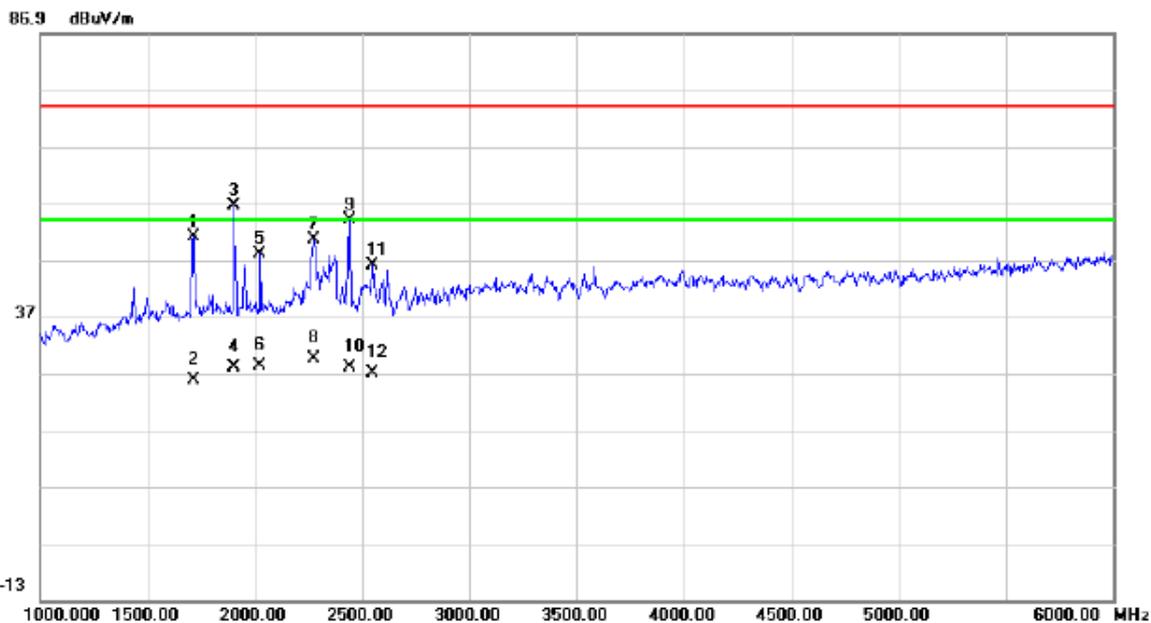
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7683.500	30.22	16.02	46.24	74.00	-27.76	peak	
2	7683.500	18.87	16.02	34.89	54.00	-19.11	AVG	
3	8060.500	29.74	16.01	45.75	74.00	-28.25	peak	
4	8060.500	20.38	16.01	36.39	54.00	-17.61	AVG	
5	8548.000	30.05	15.47	45.52	74.00	-28.48	peak	
6	8548.000	20.11	15.47	35.58	54.00	-18.42	AVG	
7	9672.500	31.73	15.47	47.20	74.00	-26.80	peak	
8	9672.500	22.60	15.47	38.07	54.00	-15.93	AVG	
9	10069.000	31.44	15.78	47.22	74.00	-26.78	peak	
10	10069.000	22.87	15.78	38.65	54.00	-15.35	AVG	
11	11375.500	28.68	20.20	48.88	74.00	-25.12	peak	
12 *	11375.500	20.43	20.20	40.63	54.00	-13.37	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



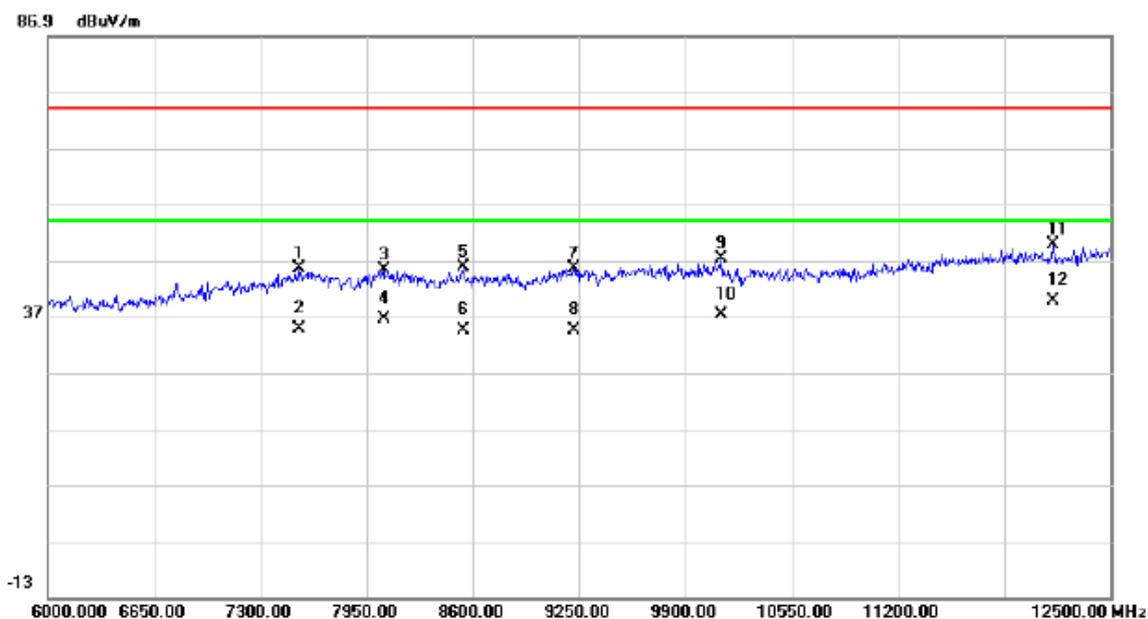
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1905.000	48.26	-3.49	44.77	74.00	-29.23	peak	
2	1905.000	31.02	-3.49	27.53	54.00	-26.47	AVG	
3	2025.000	55.23	-2.93	52.30	74.00	-21.70	peak	
4	2025.000	32.62	-2.93	29.69	54.00	-24.31	AVG	
5	2275.000	49.51	-2.61	46.90	74.00	-27.10	peak	
6	2275.000	33.02	-2.61	30.41	54.00	-23.59	AVG	
7 *	2440.000	56.43	-2.39	54.04	74.00	-19.96	peak	
8	2440.000	30.25	-2.39	27.86	54.00	-26.14	AVG	
9	2695.000	43.69	-1.47	42.22	74.00	-31.78	peak	
10	2695.000	29.25	-1.47	27.78	54.00	-26.22	AVG	
11	3365.000	44.03	0.99	45.02	74.00	-28.98	peak	
12	3365.000	31.52	0.99	32.51	54.00	-21.49	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



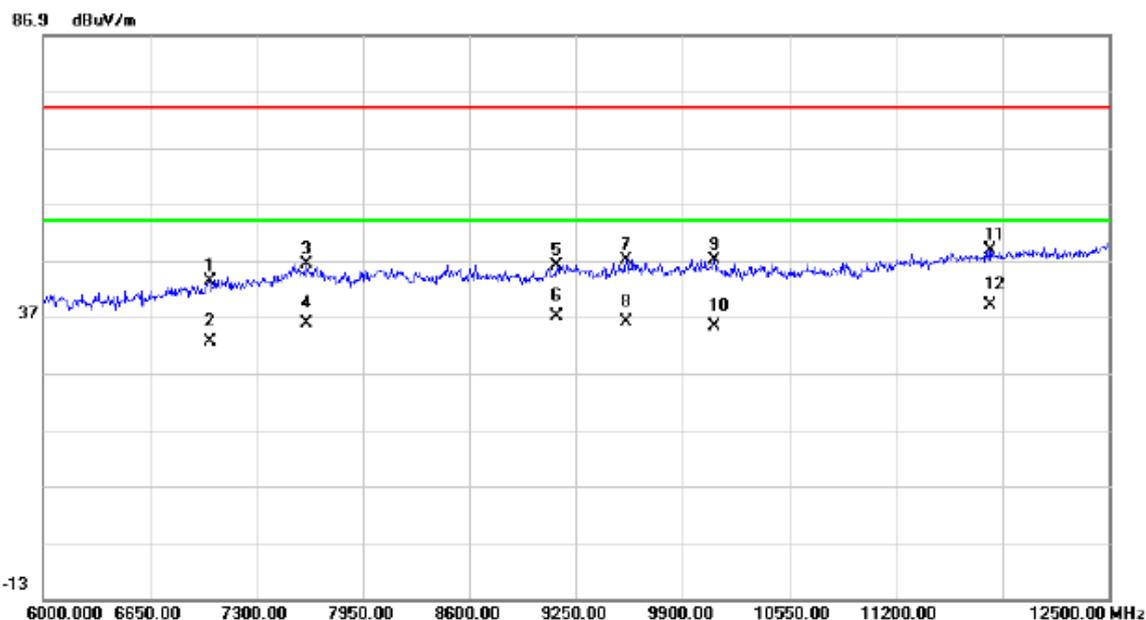
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1715.000	55.63	-4.54	51.09	74.00	-22.91	peak	
2		1715.000	30.25	-4.54	25.71	54.00	-28.29	AVG	
3	*	1900.000	59.92	-3.51	56.41	74.00	-17.59	peak	
4		1900.000	31.62	-3.51	28.11	54.00	-25.89	AVG	
5		2025.000	51.00	-2.93	48.07	74.00	-25.93	peak	
6		2025.000	31.25	-2.93	28.32	54.00	-25.68	AVG	
7		2275.000	53.17	-2.61	50.56	74.00	-23.44	peak	
8		2275.000	32.05	-2.61	29.44	54.00	-24.56	AVG	
9		2440.000	56.49	-2.39	54.10	74.00	-19.90	peak	
10		2440.000	30.52	-2.39	28.13	54.00	-25.87	AVG	
11		2550.000	48.24	-2.10	46.14	74.00	-27.86	peak	
12		2550.000	29.22	-2.10	27.12	54.00	-26.88	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



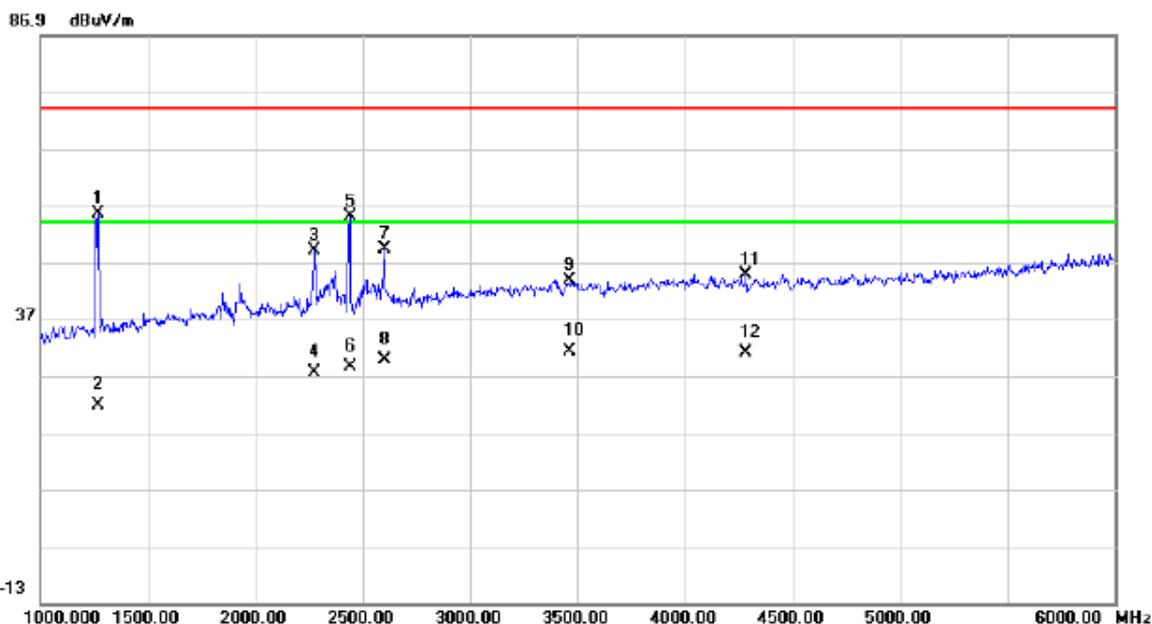
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		7534.000	29.61	15.99	45.60	74.00	-28.40	peak	
2		7534.000	18.78	15.99	34.77	54.00	-19.23	AVG	
3		8054.000	29.27	16.02	45.29	74.00	-28.71	peak	
4		8054.000	20.39	16.02	36.41	54.00	-17.59	AVG	
5		8541.500	30.43	15.45	45.88	74.00	-28.12	peak	
6		8541.500	19.15	15.45	34.60	54.00	-19.40	AVG	
7		9217.500	29.90	15.73	45.63	74.00	-28.37	peak	
8		9217.500	18.73	15.73	34.46	54.00	-19.54	AVG	
9		10121.00	31.72	15.56	47.28	74.00	-26.72	peak	
10		10121.00	21.82	15.56	37.38	54.00	-16.62	AVG	
11		12149.00	28.14	21.64	49.78	74.00	-24.22	peak	
12	*	12149.00	18.03	21.64	39.67	54.00	-14.33	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM850+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



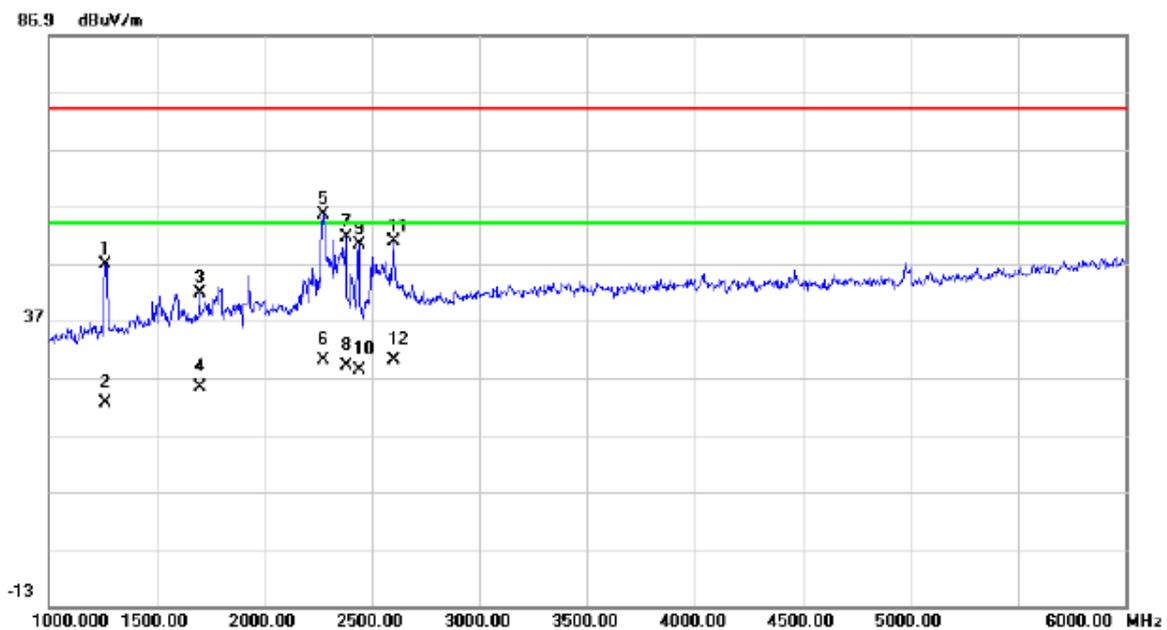
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7014.000	29.34	13.94	43.28	74.00	-30.72	peak	
2		7014.000	18.68	13.94	32.62	54.00	-21.38	AVG	
3		7605.500	30.25	16.01	46.26	74.00	-27.74	peak	
4		7605.500	19.73	16.01	35.74	54.00	-18.26	AVG	
5		9133.000	30.20	15.90	46.10	74.00	-27.90	peak	
6		9133.000	21.18	15.90	37.08	54.00	-16.92	AVG	
7		9555.500	31.78	15.27	47.05	74.00	-26.95	peak	
8		9555.500	20.85	15.27	36.12	54.00	-17.88	AVG	
9		10095.00	31.36	15.67	47.03	74.00	-26.97	peak	
10		10095.00	19.65	15.67	35.32	54.00	-18.68	AVG	
11		11778.50	26.98	21.91	48.89	74.00	-25.11	peak	
12	*	11778.50	17.13	21.91	39.04	54.00	-14.96	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI- Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



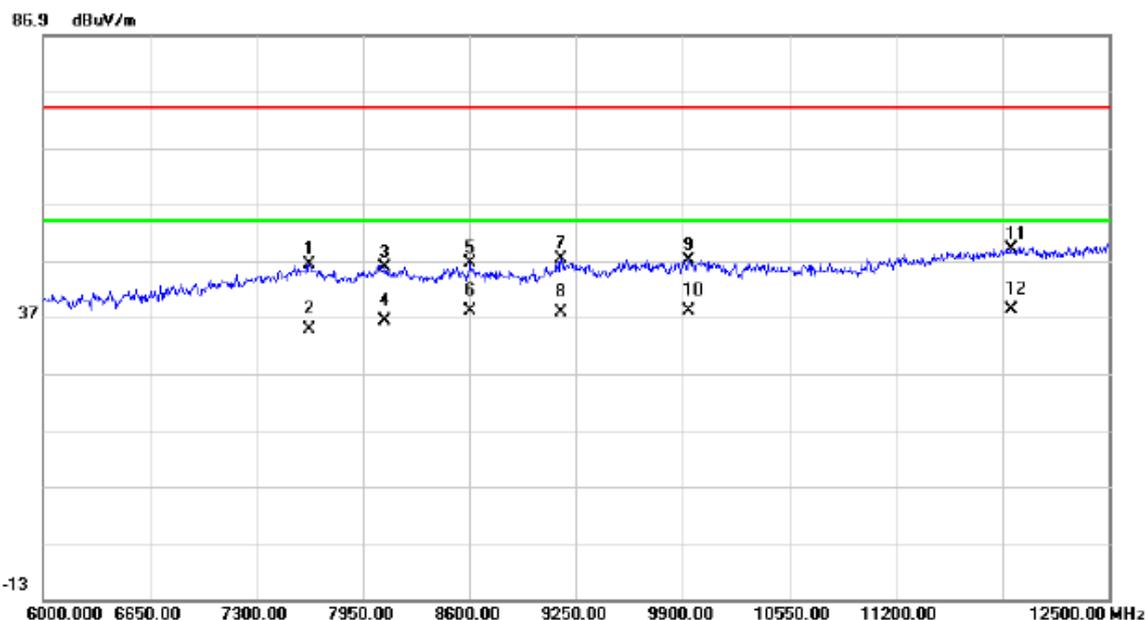
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	1270.000	62.94	-7.39	55.55	74.00	-18.45	peak	
2		1270.000	29.06	-7.39	21.67	54.00	-32.33	AVG	
3		2275.000	51.63	-2.61	49.02	74.00	-24.98	peak	
4		2275.000	30.02	-2.61	27.41	54.00	-26.59	AVG	
5		2440.000	57.33	-2.39	54.94	74.00	-19.06	peak	
6		2440.000	31.02	-2.39	28.63	54.00	-25.37	AVG	
7		2600.000	51.11	-1.89	49.22	74.00	-24.78	peak	
8		2600.000	31.62	-1.89	29.73	54.00	-24.27	AVG	
9		3460.000	42.58	1.29	43.87	74.00	-30.13	peak	
10		3460.000	30.02	1.29	31.31	54.00	-22.69	AVG	
11		4285.000	41.82	2.91	44.73	74.00	-29.27	peak	
12		4285.000	28.07	2.91	30.98	54.00	-23.02	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



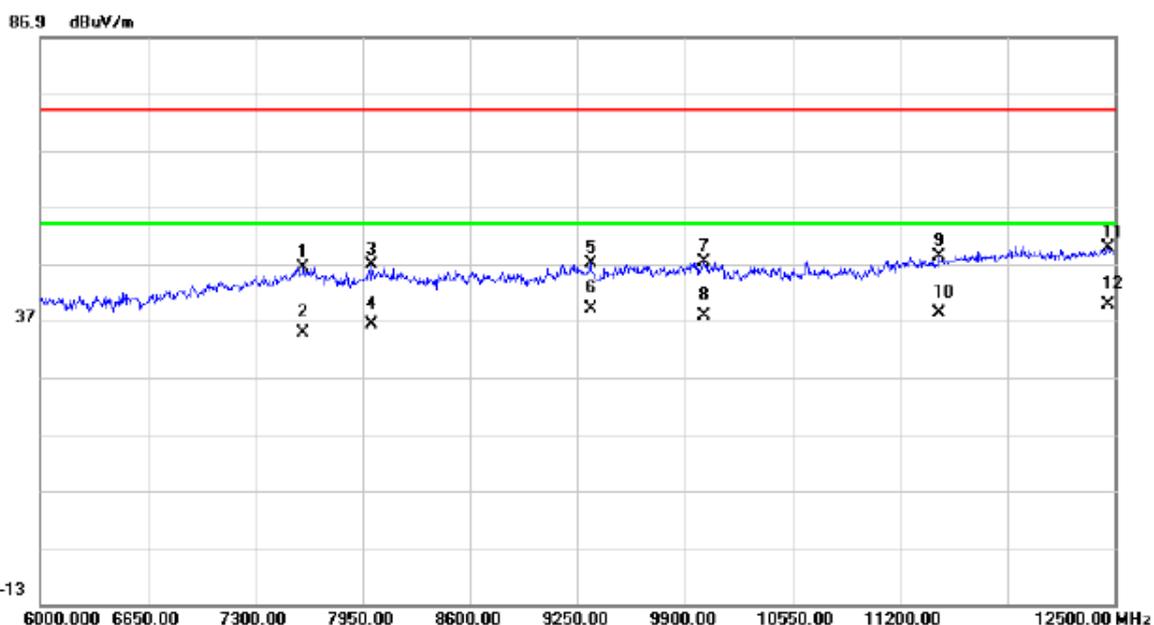
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1265.000	54.20	-7.43	46.77	74.00	-27.23	peak	
2		1265.000	30.02	-7.43	22.59	54.00	-31.41	AVG	
3		1700.000	46.34	-4.62	41.72	74.00	-32.28	peak	
4		1700.000	30.02	-4.62	25.40	54.00	-28.60	AVG	
5	*	2275.000	58.14	-2.61	55.53	74.00	-18.47	peak	
6		2275.000	32.62	-2.61	30.01	54.00	-23.99	AVG	
7		2380.000	54.03	-2.48	51.55	74.00	-22.45	peak	
8		2380.000	31.62	-2.48	29.14	54.00	-24.86	AVG	
9		2440.000	52.66	-2.39	50.27	74.00	-23.73	peak	
10		2440.000	30.61	-2.39	28.22	54.00	-25.78	AVG	
11		2600.000	52.67	-1.89	50.78	74.00	-23.22	peak	
12		2600.000	31.92	-1.89	30.03	54.00	-23.97	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI- Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



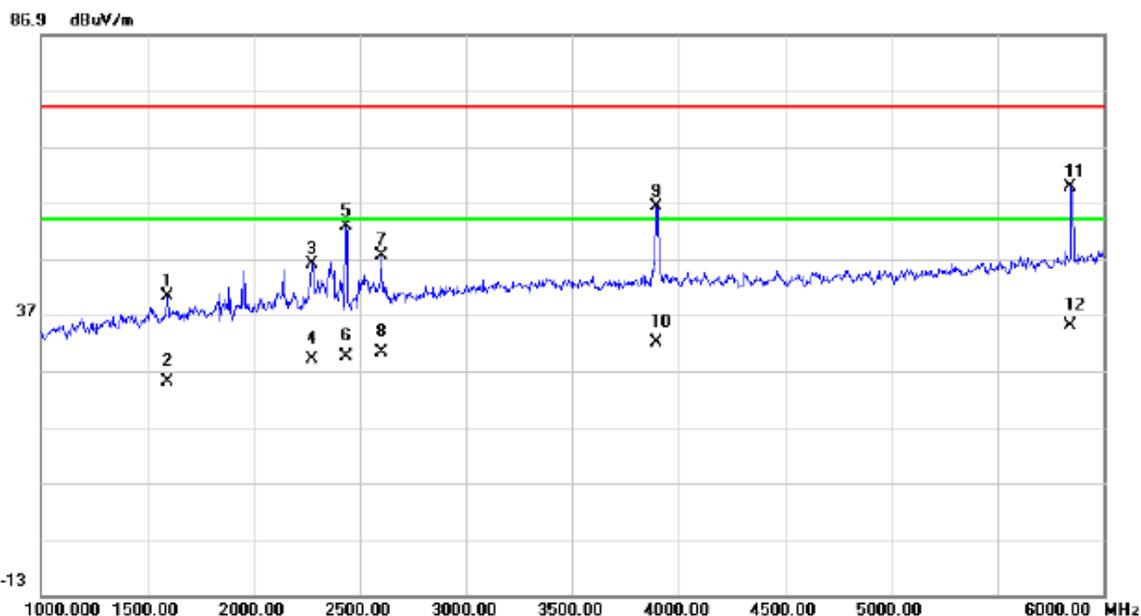
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7625.000	30.21	16.01	46.22	74.00	-27.78	peak	
2		7625.000	18.81	16.01	34.82	54.00	-19.18	AVG	
3		8086.500	29.84	15.97	45.81	74.00	-28.19	peak	
4		8086.500	20.43	15.97	36.40	54.00	-17.60	AVG	
5		8600.000	30.90	15.55	46.45	74.00	-27.55	peak	
6		8600.000	22.37	15.55	37.92	54.00	-16.08	AVG	
7		9159.000	31.50	15.85	47.35	74.00	-26.65	peak	
8		9159.000	21.87	15.85	37.72	54.00	-16.28	AVG	
9		9939.000	31.20	15.95	47.15	74.00	-26.85	peak	
10		9939.000	21.97	15.95	37.92	54.00	-16.08	AVG	
11		11902.00	26.23	22.70	48.93	74.00	-25.07	peak	
12	*	11902.00	15.53	22.70	38.23	54.00	-15.77	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	GSM1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



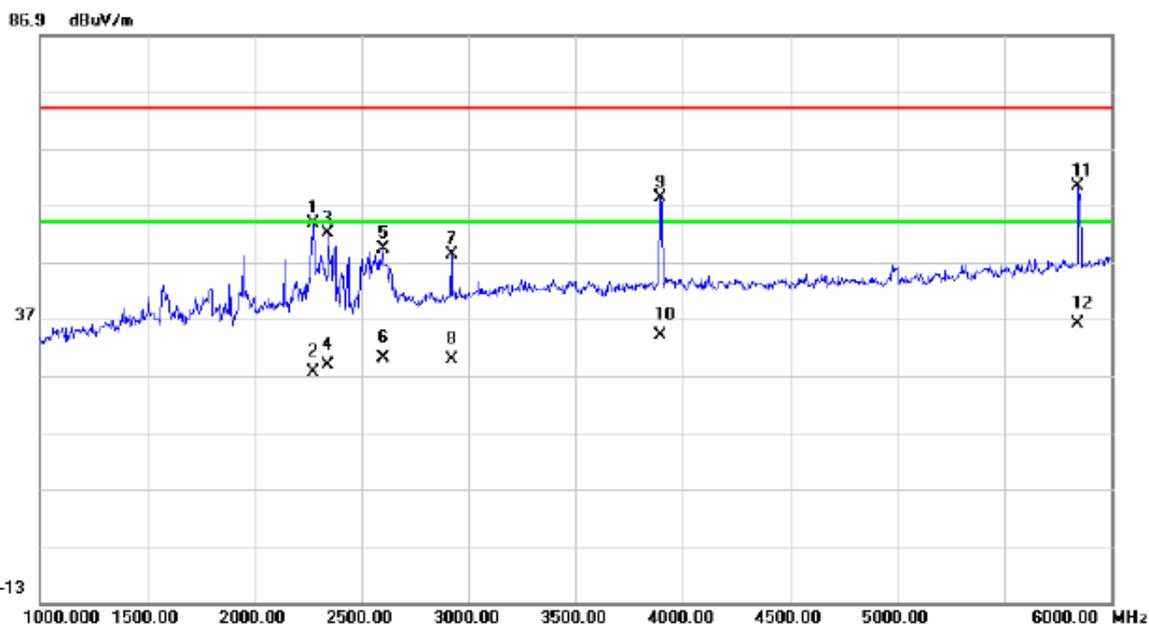
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7592.500	30.38	15.99	46.37	74.00	-27.63	peak	
2	7592.500	18.81	15.99	34.80	54.00	-19.20	AVG	
3	8008.500	30.78	16.08	46.86	74.00	-27.14	peak	
4	8008.500	20.28	16.08	36.36	54.00	-17.64	AVG	
5	9328.000	31.55	15.51	47.06	74.00	-26.94	peak	
6	9328.000	23.45	15.51	38.96	54.00	-15.04	AVG	
7	10017.00	31.41	15.99	47.40	74.00	-26.60	peak	
8	10017.00	21.81	15.99	37.80	54.00	-16.20	AVG	
9	11434.00	28.01	20.18	48.19	74.00	-25.81	peak	
10	11434.00	18.09	20.18	38.27	54.00	-15.73	AVG	
11	12461.00	31.69	18.12	49.81	74.00	-24.19	peak	
12 *	12461.00	21.75	18.12	39.87	54.00	-14.13	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



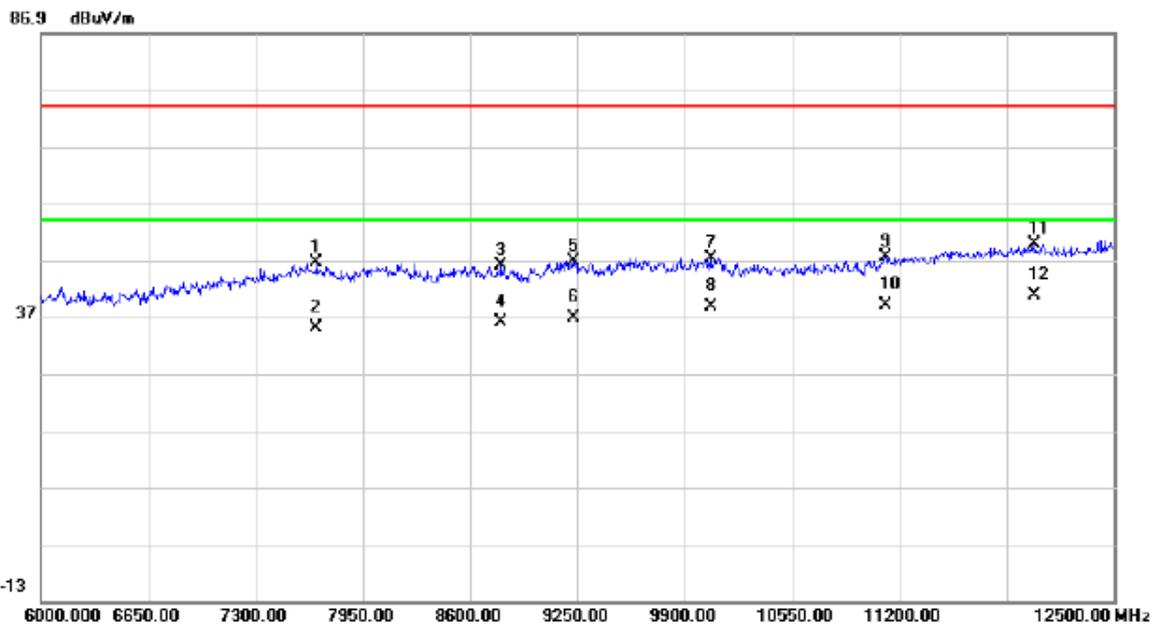
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1595.000	45.41	-5.20	40.21	74.00	-33.79	peak	
2		1595.000	30.25	-5.20	25.05	54.00	-28.95	AVG	
3		2275.000	48.76	-2.61	46.15	74.00	-27.85	peak	
4		2275.000	31.62	-2.61	29.01	54.00	-24.99	AVG	
5		2435.000	55.18	-2.40	52.78	74.00	-21.22	peak	
6		2435.000	32.05	-2.40	29.65	54.00	-24.35	AVG	
7		2600.000	49.31	-1.89	47.42	74.00	-26.58	peak	
8		2600.000	32.06	-1.89	30.17	54.00	-23.83	AVG	
9		3895.000	53.76	2.49	56.25	74.00	-17.75	peak	
10		3895.000	29.62	2.49	32.11	54.00	-21.89	AVG	
11	*	5845.000	52.84	7.01	59.85	74.00	-14.15	peak	
12		5845.000	28.14	7.01	35.15	54.00	-18.85	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



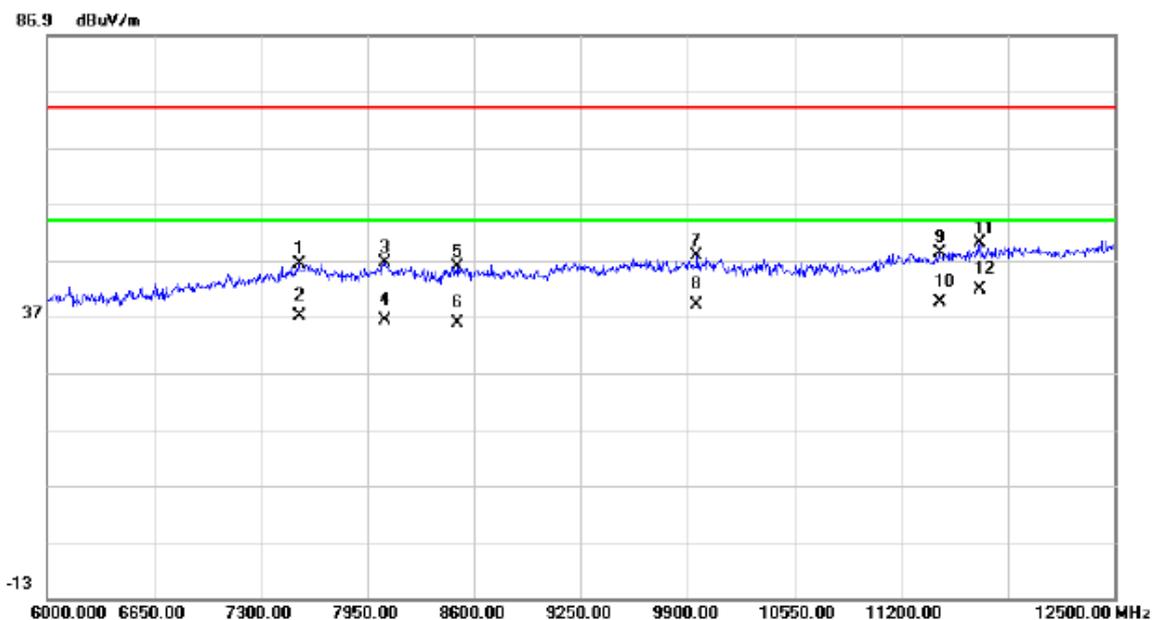
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2275.000	56.33	-2.61	53.72	74.00	-20.28	peak	
2	2275.000	30.26	-2.61	27.65	54.00	-26.35	AVG	
3	2345.000	54.61	-2.51	52.10	74.00	-21.90	peak	
4	2345.000	31.26	-2.51	28.75	54.00	-25.25	AVG	
5	2600.000	51.23	-1.89	49.34	74.00	-24.66	peak	
6	2600.000	32.02	-1.89	30.13	54.00	-23.87	AVG	
7	2920.000	48.68	-0.49	48.19	74.00	-25.81	peak	
8	2920.000	30.26	-0.49	29.77	54.00	-24.23	AVG	
9	3895.000	55.74	2.49	58.23	74.00	-15.77	peak	
10	3895.000	31.60	2.49	34.09	54.00	-19.91	AVG	
11 *	5845.000	53.19	7.01	60.20	74.00	-13.80	peak	
12	5845.000	29.02	7.01	36.03	54.00	-17.97	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



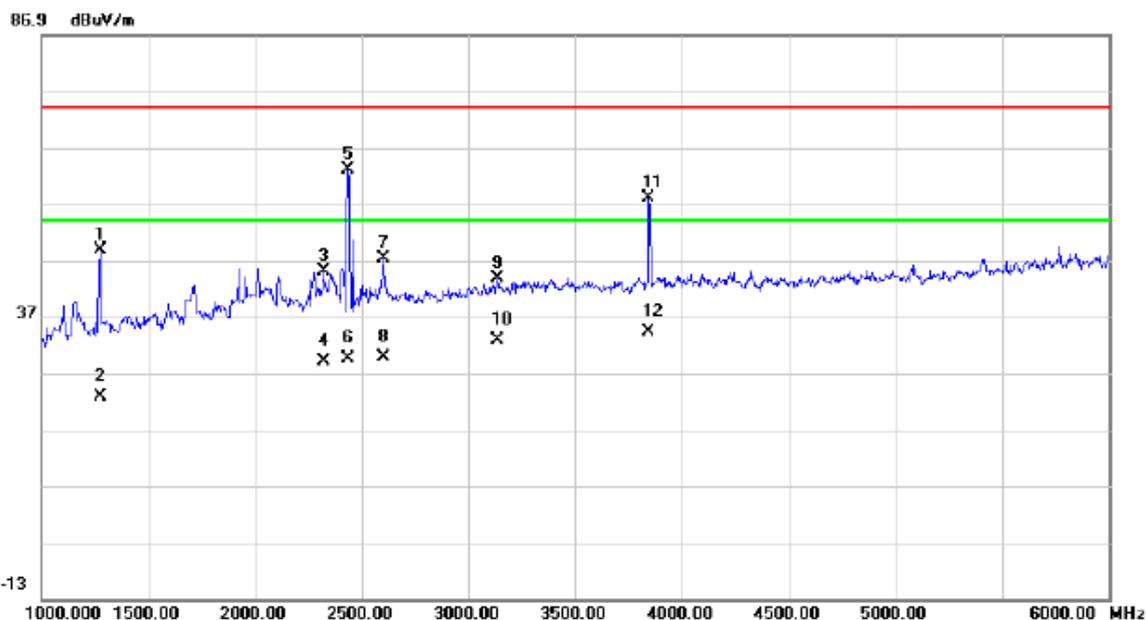
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7670.500	30.48	16.02	46.50	74.00	-27.50	peak	
2	7670.500	18.94	16.02	34.96	54.00	-19.04	AVG	
3	8782.000	30.13	15.82	45.95	74.00	-28.05	peak	
4	8782.000	20.17	15.82	35.99	54.00	-18.01	AVG	
5	9224.000	31.14	15.71	46.85	74.00	-27.15	peak	
6	9224.000	21.13	15.71	36.84	54.00	-17.16	AVG	
7	10056.000	31.53	15.83	47.36	74.00	-26.64	peak	
8	10056.000	23.02	15.83	38.85	54.00	-15.15	AVG	
9	11115.500	27.29	20.33	47.62	74.00	-26.38	peak	
10	11115.500	18.70	20.33	39.03	54.00	-14.97	AVG	
11	12019.000	26.64	23.11	49.75	74.00	-24.25	peak	
12 *	12019.000	17.75	23.11	40.86	54.00	-13.14	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



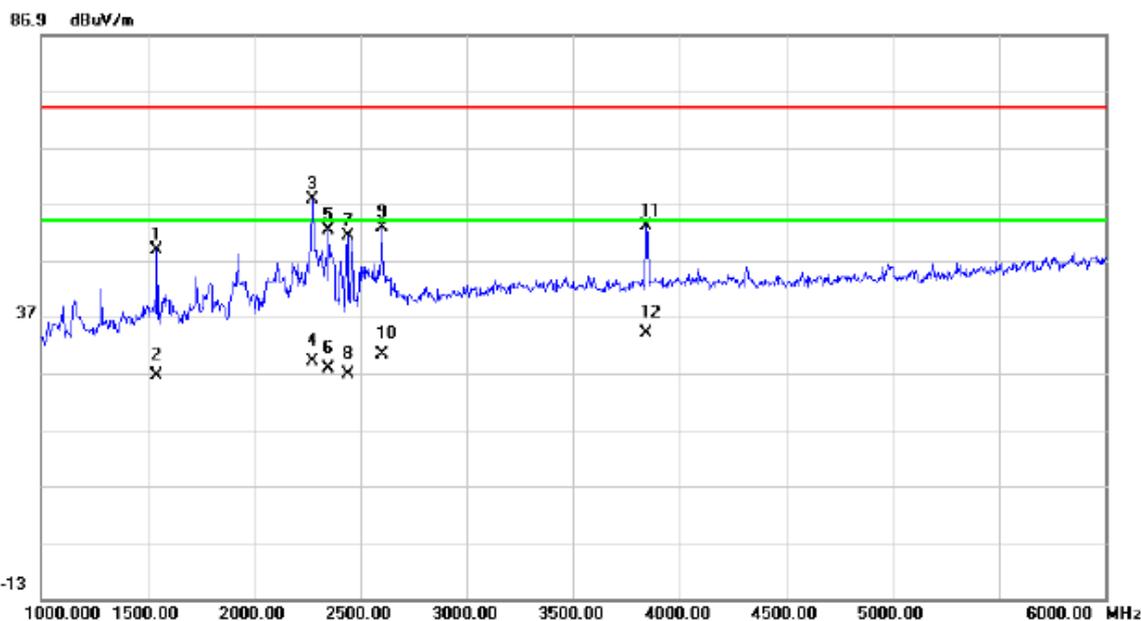
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7534.000	30.35	15.99	46.34	74.00	-27.66	peak	
2		7534.000	20.96	15.99	36.95	54.00	-17.05	AVG	
3		8054.000	30.49	16.02	46.51	74.00	-27.49	peak	
4		8054.000	20.26	16.02	36.28	54.00	-17.72	AVG	
5		8502.500	30.46	15.40	45.86	74.00	-28.14	peak	
6		8502.500	20.43	15.40	35.83	54.00	-18.17	AVG	
7		9958.500	31.86	15.98	47.84	74.00	-26.16	peak	
8		9958.500	23.06	15.98	39.04	54.00	-14.96	AVG	
9		11434.00	28.08	20.18	48.26	74.00	-25.74	peak	
10		11434.00	19.37	20.18	39.55	54.00	-14.45	AVG	
11		11681.00	28.83	21.29	50.12	74.00	-23.88	peak	
12	*	11681.00	20.43	21.29	41.72	54.00	-12.28	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.17m	Polarization:	Vertical



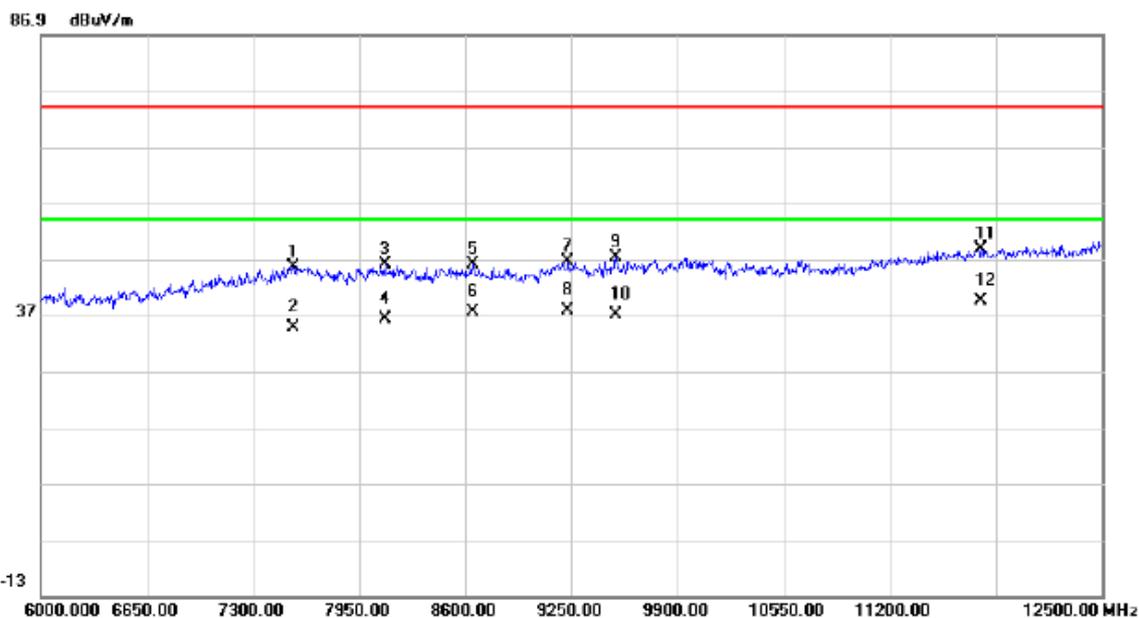
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		1275.000	56.06	-7.37	48.69	74.00	-25.31	peak	
2		1275.000	30.25	-7.37	22.88	54.00	-31.12	AVG	
3		2320.000	47.61	-2.54	45.07	74.00	-28.93	peak	
4		2320.000	31.62	-2.54	29.08	54.00	-24.92	AVG	
5	*	2435.000	65.37	-2.40	62.97	74.00	-11.03	peak	
6		2435.000	32.02	-2.40	29.62	54.00	-24.38	AVG	
7		2600.000	49.29	-1.89	47.40	74.00	-26.60	peak	
8		2600.000	31.62	-1.89	29.73	54.00	-24.27	AVG	
9		3135.000	43.56	0.27	43.83	74.00	-30.17	peak	
10		3135.000	32.51	0.27	32.78	54.00	-21.22	AVG	
11		3845.000	55.58	2.35	57.93	74.00	-16.07	peak	
12		3845.000	31.82	2.35	34.17	54.00	-19.83	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.17m	Polarization:	Horizontal



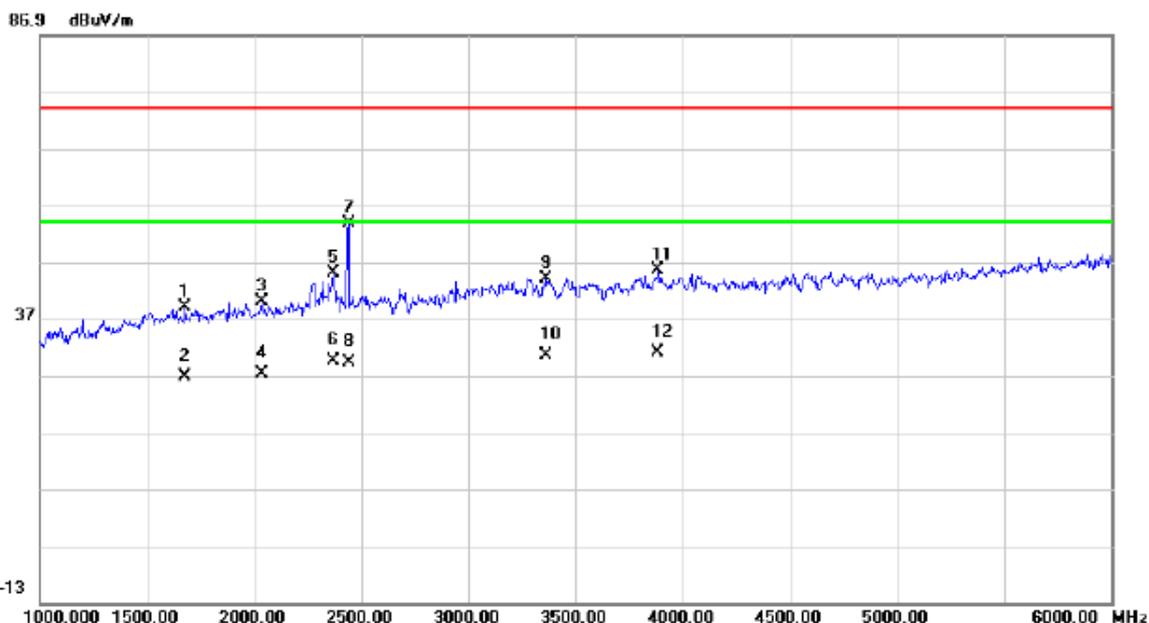
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1545.000	54.27	-5.48	48.79	74.00	-25.21	peak	
2	1545.000	32.02	-5.48	26.54	54.00	-27.46	AVG	
3 *	2275.000	60.30	-2.61	57.69	74.00	-16.31	peak	
4	2275.000	31.62	-2.61	29.01	54.00	-24.99	AVG	
5	2350.000	54.82	-2.52	52.30	74.00	-21.70	peak	
6	2350.000	30.25	-2.52	27.73	54.00	-26.27	AVG	
7	2440.000	53.65	-2.39	51.26	74.00	-22.74	peak	
8	2440.000	29.25	-2.39	26.86	54.00	-27.14	AVG	
9	2600.000	54.67	-1.89	52.78	74.00	-21.22	peak	
10	2600.000	32.05	-1.89	30.16	54.00	-23.84	AVG	
11	3845.000	50.70	2.35	53.05	74.00	-20.95	peak	
12	3845.000	31.62	2.35	33.97	54.00	-20.03	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.17m	Polarization:	Vertical



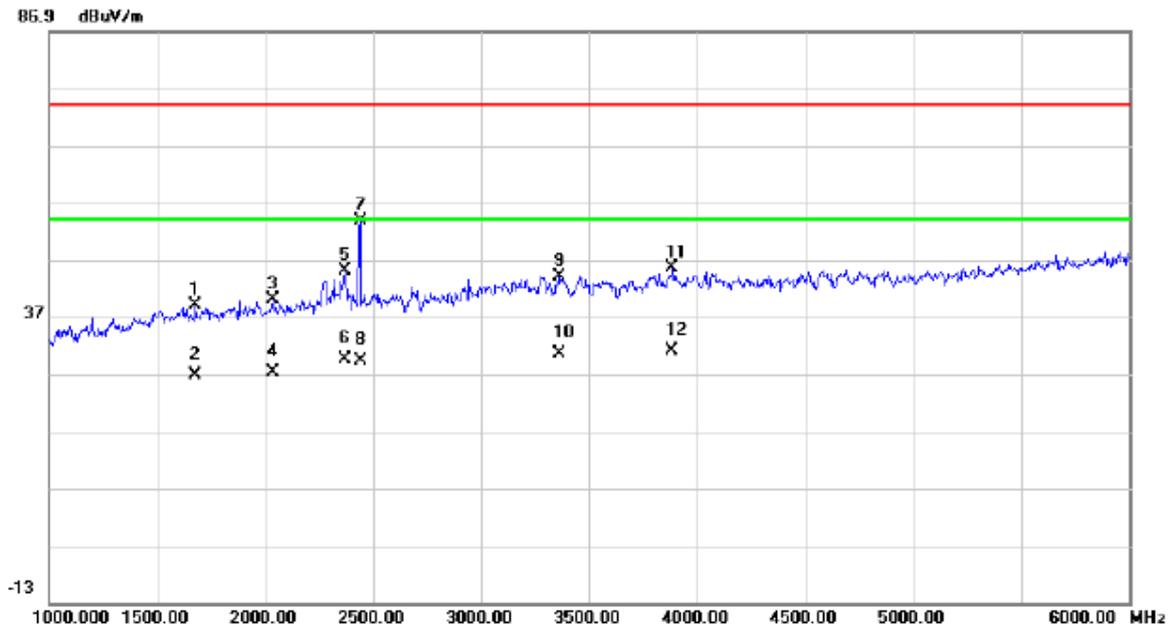
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7547.000	29.58	15.99	45.57	74.00	-28.43	peak	
2		7547.000	18.81	15.99	34.80	54.00	-19.20	AVG	
3		8106.000	30.13	15.94	46.07	74.00	-27.93	peak	
4		8106.000	20.46	15.94	36.40	54.00	-17.60	AVG	
5		8645.500	30.31	15.62	45.93	74.00	-28.07	peak	
6		8645.500	21.87	15.62	37.49	54.00	-16.51	AVG	
7		9230.500	30.80	15.71	46.51	74.00	-27.49	peak	
8		9230.500	21.96	15.71	37.67	54.00	-16.33	AVG	
9		9523.000	32.09	15.21	47.30	74.00	-26.70	peak	
10		9523.000	21.84	15.21	37.05	54.00	-16.95	AVG	
11		11759.00	27.05	21.79	48.84	74.00	-25.16	peak	
12	*	11759.00	17.84	21.79	39.63	54.00	-14.37	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	WCDMA1900+WIFI – Adapter: FUHUA / USB Cable: 0.17m	Polarization:	Horizontal



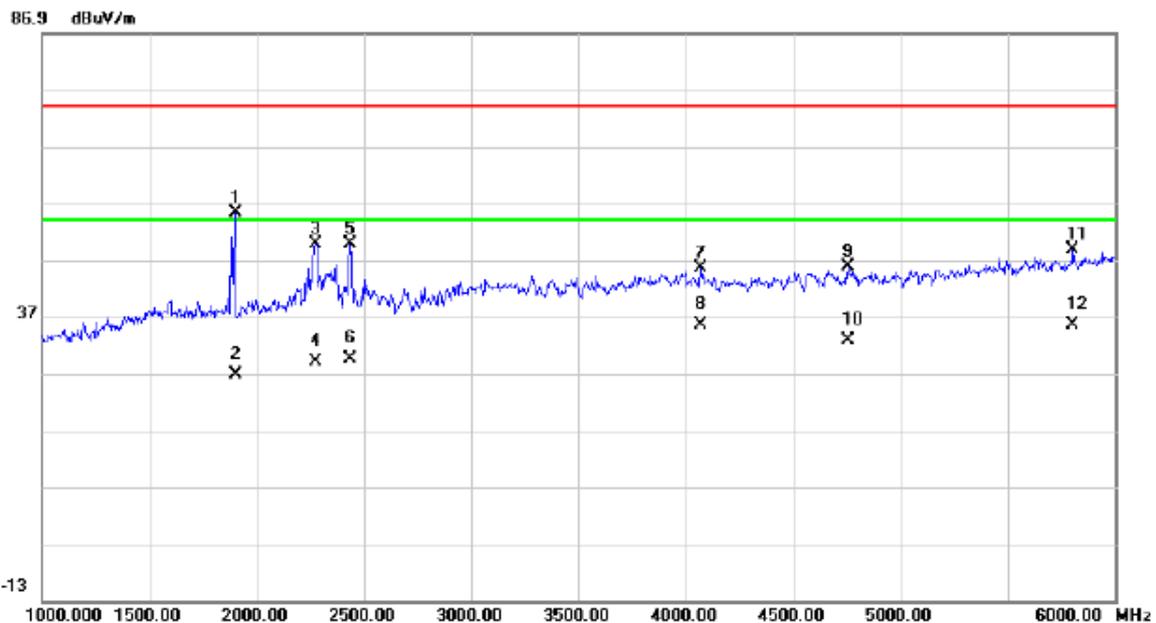
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1675.000	43.88	-4.77	39.11	74.00	-34.89	peak	
2	1675.000	31.62	-4.77	26.85	54.00	-27.15	AVG	
3	2035.000	42.88	-2.91	39.97	74.00	-34.03	peak	
4	2035.000	30.25	-2.91	27.34	54.00	-26.66	AVG	
5	2370.000	47.60	-2.49	45.11	74.00	-28.89	peak	
6	2370.000	32.05	-2.49	29.56	54.00	-24.44	AVG	
7 *	2440.000	56.06	-2.39	53.67	74.00	-20.33	peak	
8	2440.000	31.62	-2.39	29.23	54.00	-24.77	AVG	
9	3365.000	43.04	0.99	44.03	74.00	-29.97	peak	
10	3365.000	29.51	0.99	30.50	54.00	-23.50	AVG	
11	3885.000	42.96	2.45	45.41	74.00	-28.59	peak	
12	3885.000	28.62	2.45	31.07	54.00	-22.93	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI - Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



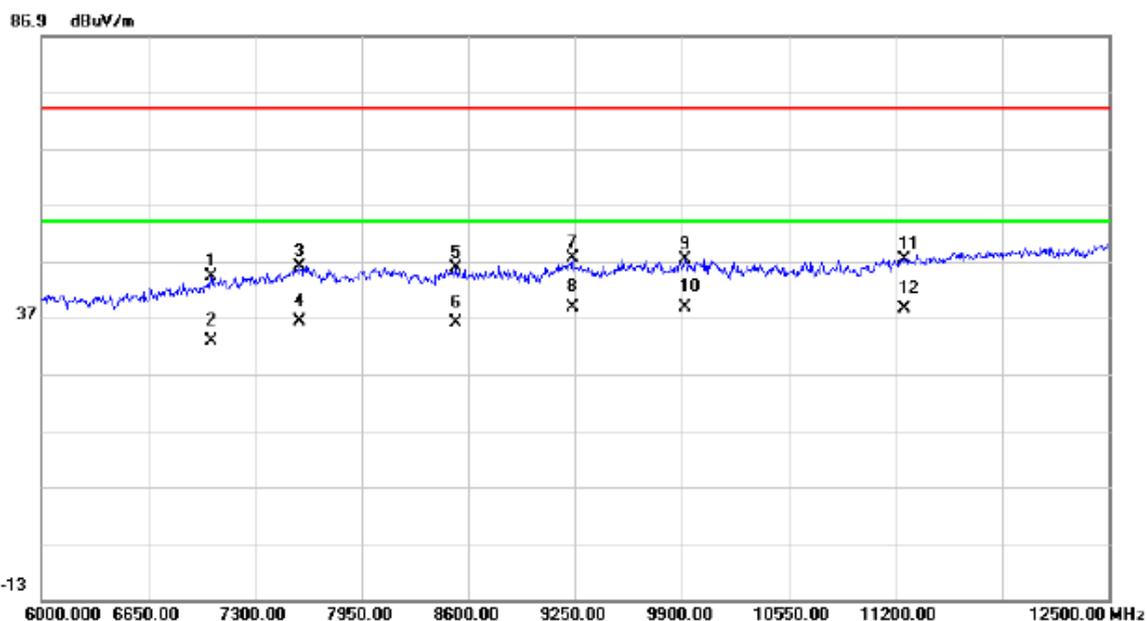
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1675.000	43.88	-4.77	39.11	74.00	-34.89	peak	
2		1675.000	31.62	-4.77	26.85	54.00	-27.15	AVG	
3		2035.000	42.88	-2.91	39.97	74.00	-34.03	peak	
4		2035.000	30.25	-2.91	27.34	54.00	-26.66	AVG	
5		2370.000	47.60	-2.49	45.11	74.00	-28.89	peak	
6		2370.000	32.05	-2.49	29.56	54.00	-24.44	AVG	
7	*	2440.000	56.06	-2.39	53.67	74.00	-20.33	peak	
8		2440.000	31.62	-2.39	29.23	54.00	-24.77	AVG	
9		3365.000	43.04	0.99	44.03	74.00	-29.97	peak	
10		3365.000	29.51	0.99	30.50	54.00	-23.50	AVG	
11		3885.000	42.96	2.45	45.41	74.00	-28.59	peak	
12		3885.000	28.62	2.45	31.07	54.00	-22.93	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



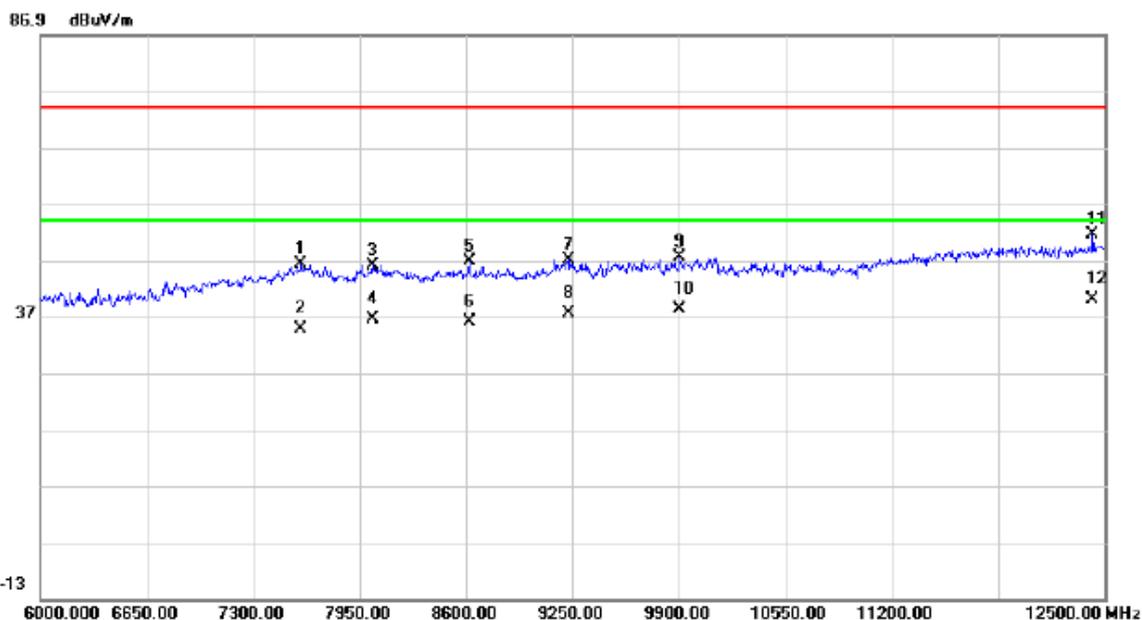
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1900.000	58.81	-3.51	55.30	74.00	-18.70	peak	
2	1900.000	30.25	-3.51	26.74	54.00	-27.26	AVG	
3	2275.000	52.47	-2.61	49.86	74.00	-24.14	peak	
4	2275.000	31.62	-2.61	29.01	54.00	-24.99	AVG	
5	2435.000	52.22	-2.40	49.82	74.00	-24.18	peak	
6	2435.000	32.02	-2.40	29.62	54.00	-24.38	AVG	
7	4070.000	42.73	2.80	45.53	74.00	-28.47	peak	
8	4070.000	32.62	2.80	35.42	54.00	-18.58	AVG	
9	4755.000	42.25	3.49	45.74	74.00	-28.26	peak	
10	4755.000	29.25	3.49	32.74	54.00	-21.26	AVG	
11	5805.000	41.92	6.84	48.76	74.00	-25.24	peak	
12 *	5805.000	28.62	6.84	35.46	54.00	-18.54	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI - Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



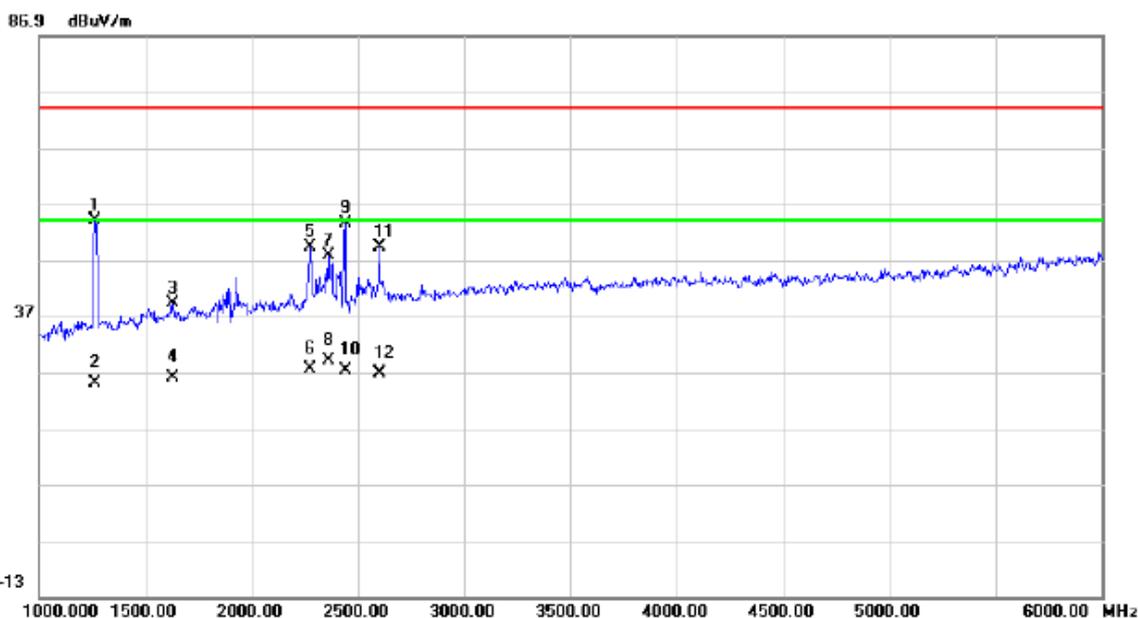
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7033.500	30.28	14.01	44.29	74.00	-29.71	peak	
2	7033.500	18.76	14.01	32.77	54.00	-21.23	AVG	
3	7573.000	30.14	15.99	46.13	74.00	-27.87	peak	
4	7573.000	20.19	15.99	36.18	54.00	-17.82	AVG	
5	8528.500	30.41	15.44	45.85	74.00	-28.15	peak	
6	8528.500	20.51	15.44	35.95	54.00	-18.05	AVG	
7	9237.000	31.83	15.70	47.53	74.00	-26.47	peak	
8	9237.000	22.98	15.70	38.68	54.00	-15.32	AVG	
9	9919.500	31.33	15.92	47.25	74.00	-26.75	peak	
10 *	9919.500	22.97	15.92	38.89	54.00	-15.11	AVG	
11	11252.000	27.04	20.26	47.30	74.00	-26.70	peak	
12	11252.000	18.39	20.26	38.65	54.00	-15.35	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



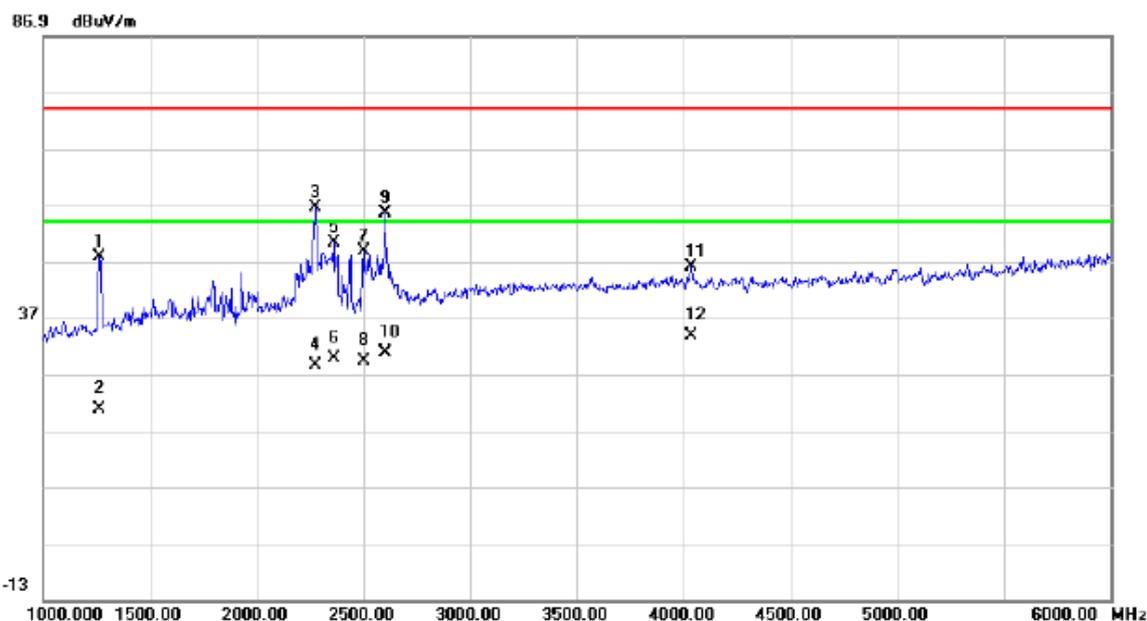
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7592.500	30.36	15.99	46.35	74.00	-27.65	peak	
2		7592.500	18.83	15.99	34.82	54.00	-19.18	AVG	
3		8028.000	30.10	16.05	46.15	74.00	-27.85	peak	
4		8028.000	20.51	16.05	36.56	54.00	-17.44	AVG	
5		8619.500	31.09	15.58	46.67	74.00	-27.33	peak	
6		8619.500	20.47	15.58	36.05	54.00	-17.95	AVG	
7		9224.000	31.33	15.71	47.04	74.00	-26.96	peak	
8		9224.000	21.93	15.71	37.64	54.00	-16.36	AVG	
9		9906.500	31.51	15.90	47.41	74.00	-26.59	peak	
10		9906.500	22.30	15.90	38.20	54.00	-15.80	AVG	
11		12428.50	32.94	18.49	51.43	74.00	-22.57	peak	
12	*	12428.50	21.42	18.49	39.91	54.00	-14.09	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



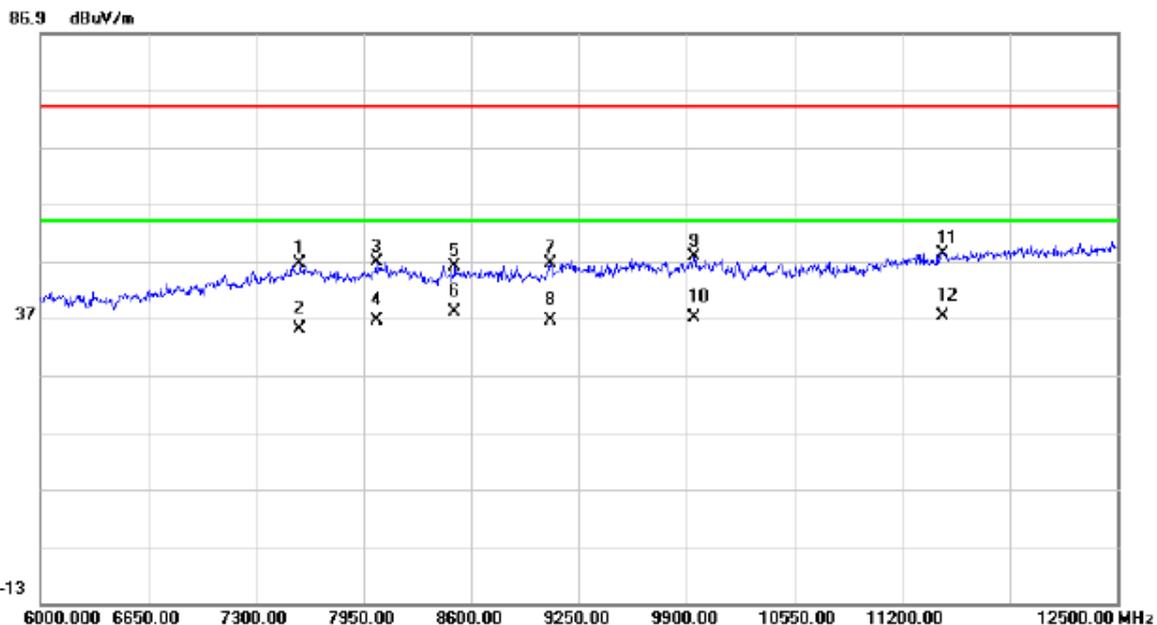
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	1260.000	61.48	-7.47	54.01	74.00	-19.99	peak	
2		1260.000	32.62	-7.47	25.15	54.00	-28.85	AVG	
3		1630.000	44.33	-5.01	39.32	74.00	-34.68	peak	
4		1630.000	31.02	-5.01	26.01	54.00	-27.99	AVG	
5		2275.000	51.87	-2.61	49.26	74.00	-24.74	peak	
6		2275.000	30.25	-2.61	27.64	54.00	-26.36	AVG	
7		2360.000	50.33	-2.50	47.83	74.00	-26.17	peak	
8		2360.000	31.62	-2.50	29.12	54.00	-24.88	AVG	
9		2440.000	55.85	-2.39	53.46	74.00	-20.54	peak	
10		2440.000	29.62	-2.39	27.23	54.00	-26.77	AVG	
11		2600.000	51.06	-1.89	49.17	74.00	-24.83	peak	
12		2600.000	28.62	-1.89	26.73	54.00	-27.27	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



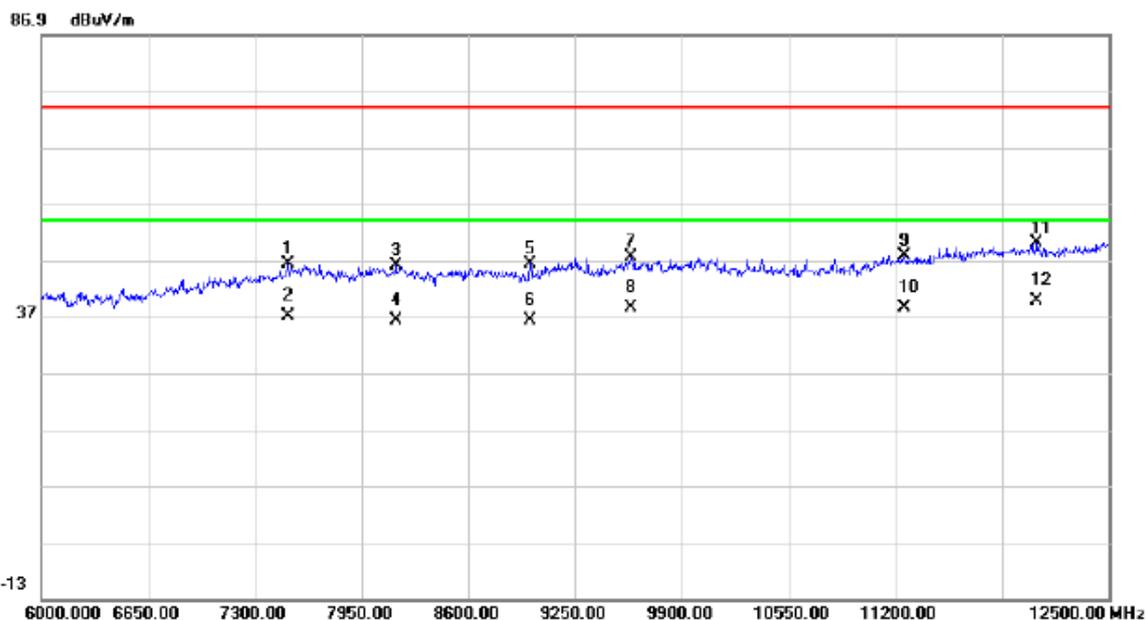
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1265.000	55.12	-7.43	47.69	74.00	-26.31	peak	
2	1265.000	28.21	-7.43	20.78	54.00	-33.22	AVG	
3 *	2275.000	59.05	-2.61	56.44	74.00	-17.56	peak	
4	2275.000	31.02	-2.61	28.41	54.00	-25.59	AVG	
5	2360.000	52.83	-2.50	50.33	74.00	-23.67	peak	
6	2360.000	32.31	-2.50	29.81	54.00	-24.19	AVG	
7	2500.000	51.15	-2.32	48.83	74.00	-25.17	peak	
8	2500.000	31.62	-2.32	29.30	54.00	-24.70	AVG	
9	2600.000	57.51	-1.89	55.62	74.00	-18.38	peak	
10	2600.000	32.62	-1.89	30.73	54.00	-23.27	AVG	
11	4035.000	43.26	2.79	46.05	74.00	-27.95	peak	
12	4035.000	31.05	2.79	33.84	54.00	-20.16	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



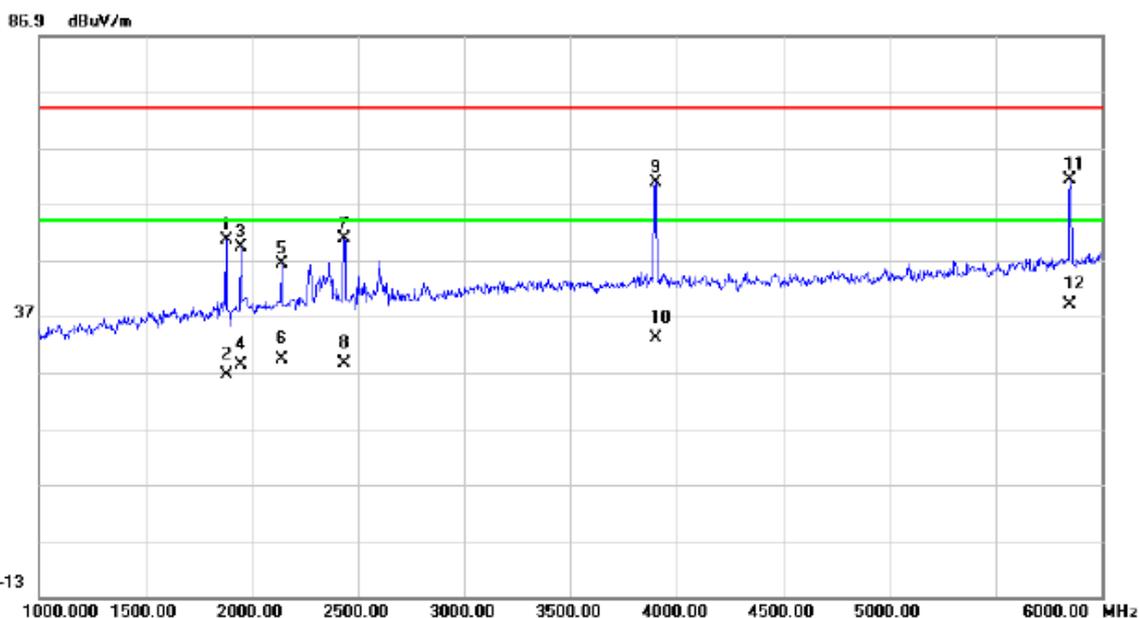
No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	7566.500	30.52	15.99	46.51	74.00	-27.49	peak	
2	7566.500	18.99	15.99	34.98	54.00	-19.02	AVG	
3	8028.000	30.68	16.05	46.73	74.00	-27.27	peak	
4	8028.000	20.51	16.05	36.56	54.00	-17.44	AVG	
5	8502.500	30.66	15.40	46.06	74.00	-27.94	peak	
6 *	8502.500	22.53	15.40	37.93	54.00	-16.07	AVG	
7	9081.000	30.63	16.00	46.63	74.00	-27.37	peak	
8	9081.000	20.46	16.00	36.46	54.00	-17.54	AVG	
9	9945.500	31.81	15.97	47.78	74.00	-26.22	peak	
10	9945.500	20.96	15.97	36.93	54.00	-17.07	AVG	
11	11447.00	28.13	20.17	48.30	74.00	-25.70	peak	
12	11447.00	17.22	20.17	37.39	54.00	-16.61	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



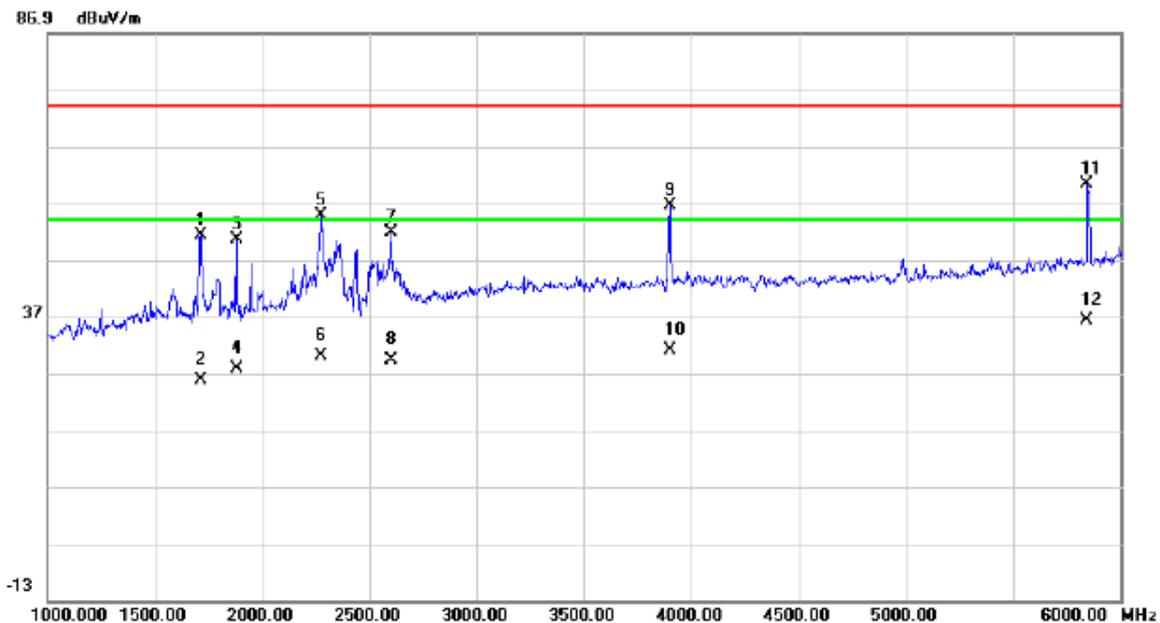
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7501.500	30.24	15.98	46.22	74.00	-27.78	peak	
2	7501.500	20.94	15.98	36.92	54.00	-17.08	AVG	
3	8158.000	30.11	15.87	45.98	74.00	-28.02	peak	
4	8158.000	20.47	15.87	36.34	54.00	-17.66	AVG	
5	8977.000	30.27	16.13	46.40	74.00	-27.60	peak	
6	8977.000	20.14	16.13	36.27	54.00	-17.73	AVG	
7	9594.500	32.27	15.34	47.61	74.00	-26.39	peak	
8	9594.500	23.20	15.34	38.54	54.00	-15.46	AVG	
9	11252.00	27.44	20.26	47.70	74.00	-26.30	peak	
10	11252.00	18.19	20.26	38.45	54.00	-15.55	AVG	
11	12064.50	27.40	22.59	49.99	74.00	-24.01	peak	
12 *	12064.50	17.19	22.59	39.78	54.00	-14.22	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



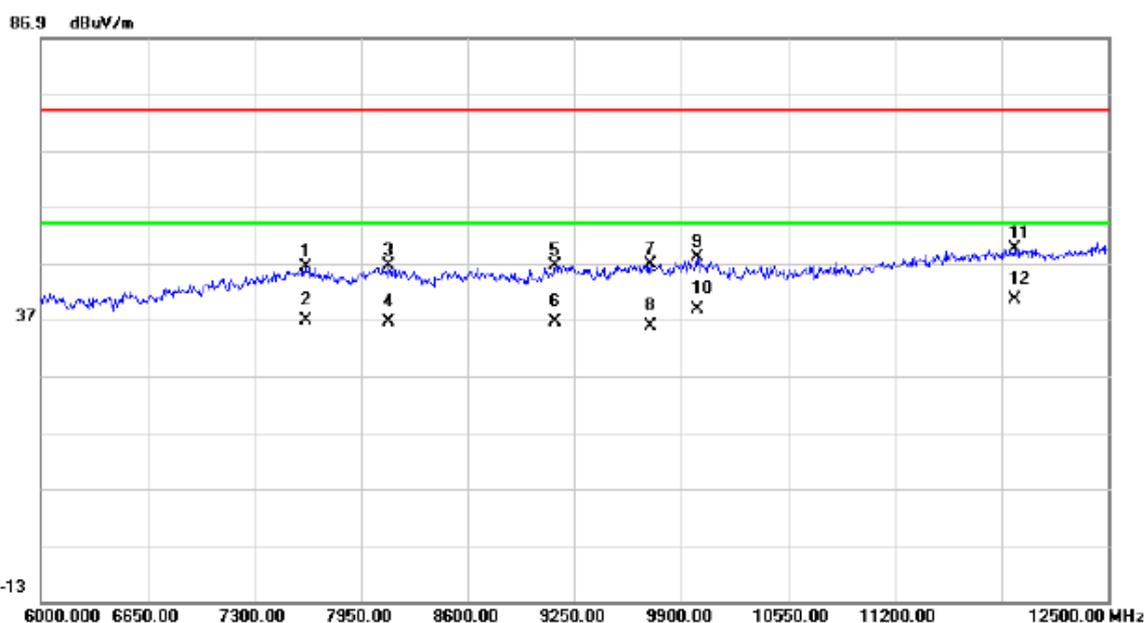
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1880.000	54.23	-3.62	50.61	74.00	-23.39	peak	
2		1880.000	30.25	-3.62	26.63	54.00	-27.37	AVG	
3		1950.000	52.56	-3.23	49.33	74.00	-24.67	peak	
4		1950.000	31.62	-3.23	28.39	54.00	-25.61	AVG	
5		2140.000	49.17	-2.78	46.39	74.00	-27.61	peak	
6		2140.000	32.05	-2.78	29.27	54.00	-24.73	AVG	
7		2435.000	53.17	-2.40	50.77	74.00	-23.23	peak	
8		2435.000	31.05	-2.40	28.65	54.00	-25.35	AVG	
9		3900.000	58.23	2.50	60.73	74.00	-13.27	peak	
10		3900.000	30.62	2.50	33.12	54.00	-20.88	AVG	
11	*	5850.000	54.18	7.03	61.21	74.00	-12.79	peak	
12		5850.000	31.92	7.03	38.95	54.00	-15.05	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



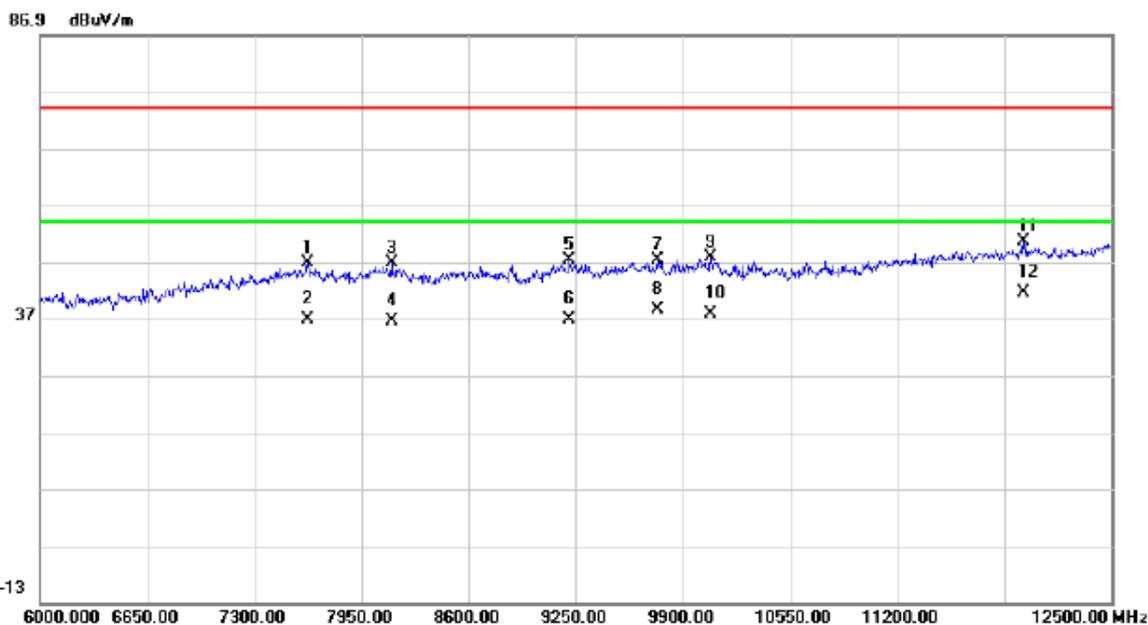
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		1715.000	55.94	-4.54	51.40	74.00	-22.60	peak	
2		1715.000	30.36	-4.54	25.82	54.00	-28.18	AVG	
3		1880.000	54.08	-3.62	50.46	74.00	-23.54	peak	
4		1880.000	31.52	-3.62	27.90	54.00	-26.10	AVG	
5		2275.000	57.38	-2.61	54.77	74.00	-19.23	peak	
6		2275.000	32.60	-2.61	29.99	54.00	-24.01	AVG	
7		2600.000	53.59	-1.89	51.70	74.00	-22.30	peak	
8		2600.000	31.20	-1.89	29.31	54.00	-24.69	AVG	
9		3900.000	54.02	2.50	56.52	74.00	-17.48	peak	
10		3900.000	28.62	2.50	31.12	54.00	-22.88	AVG	
11	*	5845.000	53.21	7.01	60.22	74.00	-13.78	peak	
12		5845.000	29.20	7.01	36.21	54.00	-17.79	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Vertical



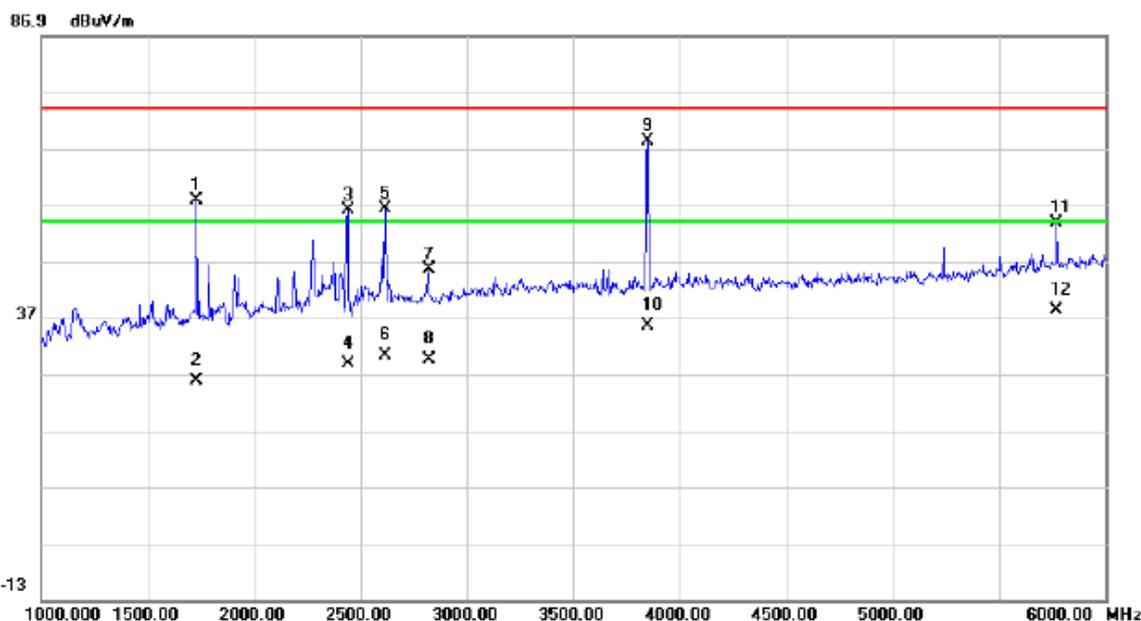
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7612.000	30.33	16.01	46.34	74.00	-27.66	peak	
2		7612.000	20.80	16.01	36.81	54.00	-17.19	AVG	
3		8119.000	30.58	15.92	46.50	74.00	-27.50	peak	
4		8119.000	20.50	15.92	36.42	54.00	-17.58	AVG	
5		9133.000	30.72	15.90	46.62	74.00	-27.38	peak	
6		9133.000	20.66	15.90	36.56	54.00	-17.44	AVG	
7		9711.500	31.31	15.55	46.86	74.00	-27.14	peak	
8		9711.500	20.15	15.55	35.70	54.00	-18.30	AVG	
9		9997.500	32.07	16.06	48.13	74.00	-25.87	peak	
10		9997.500	22.74	16.06	38.80	54.00	-15.20	AVG	
11		11928.00	26.68	22.85	49.53	74.00	-24.47	peak	
12	*	11928.00	17.68	22.85	40.53	54.00	-13.47	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.8m	Polarization:	Horizontal



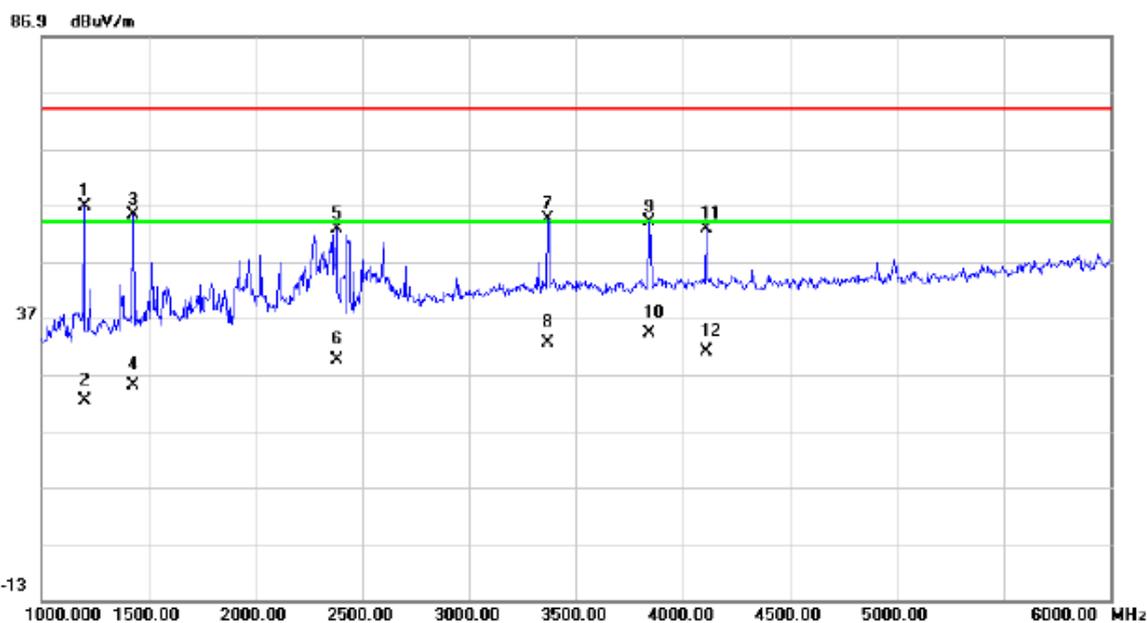
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7625.000	30.65	16.01	46.66	74.00	-27.34	peak	
2		7625.000	20.81	16.01	36.82	54.00	-17.18	AVG	
3		8132.000	30.88	15.90	46.78	74.00	-27.22	peak	
4		8132.000	20.73	15.90	36.63	54.00	-17.37	AVG	
5		9211.000	31.43	15.75	47.18	74.00	-26.82	peak	
6		9211.000	21.07	15.75	36.82	54.00	-17.18	AVG	
7		9744.000	31.71	15.60	47.31	74.00	-26.69	peak	
8		9744.000	22.94	15.60	38.54	54.00	-15.46	AVG	
9		10069.000	31.96	15.78	47.74	74.00	-26.26	peak	
10		10069.000	22.05	15.78	37.83	54.00	-16.17	AVG	
11		11967.000	27.42	23.11	50.53	74.00	-23.47	peak	
12	*	11967.000	18.52	23.11	41.63	54.00	-12.37	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.17m	Polarization:	Vertical



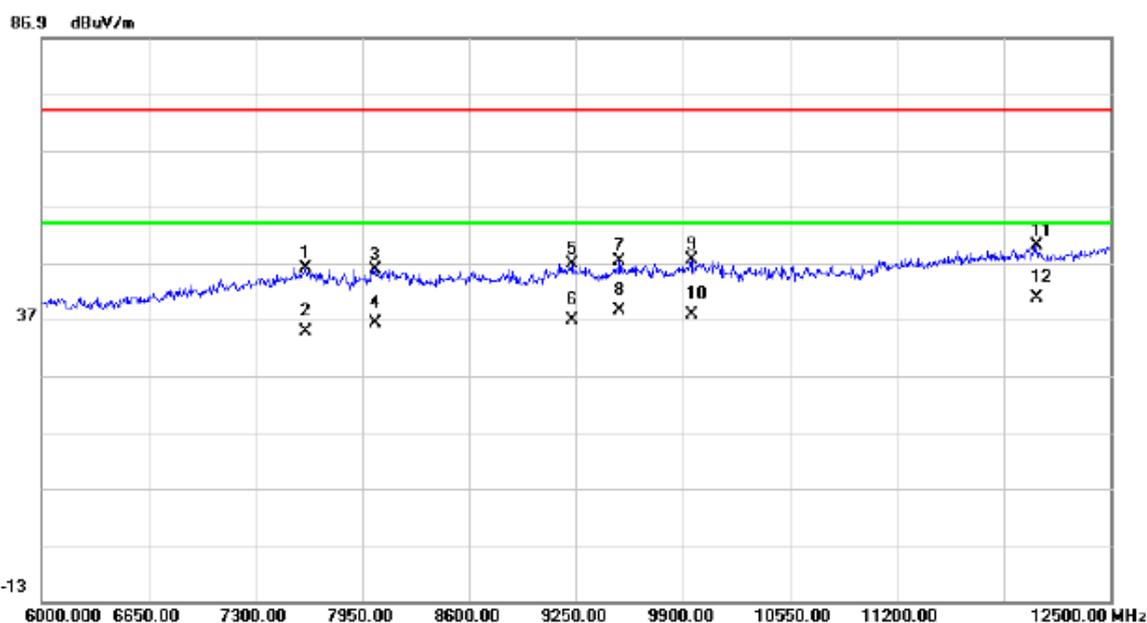
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1730.000	62.35	-4.45	57.90	74.00	-16.10	peak	
2	1730.000	30.25	-4.45	25.80	54.00	-28.20	AVG	
3	2440.000	58.44	-2.39	56.05	74.00	-17.95	peak	
4	2440.000	31.25	-2.39	28.86	54.00	-25.14	AVG	
5	2615.000	57.98	-1.82	56.16	74.00	-17.84	peak	
6	2615.000	32.02	-1.82	30.20	54.00	-23.80	AVG	
7	2820.000	46.36	-0.93	45.43	74.00	-28.57	peak	
8	2820.000	30.36	-0.93	29.43	54.00	-24.57	AVG	
9 *	3850.000	65.89	2.37	68.26	74.00	-5.74	peak	
10	3850.000	33.25	2.37	35.62	54.00	-18.38	AVG	
11	5770.000	47.12	6.70	53.82	74.00	-20.18	peak	
12	5770.000	31.63	6.70	38.33	54.00	-15.67	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.17m	Polarization:	Horizontal



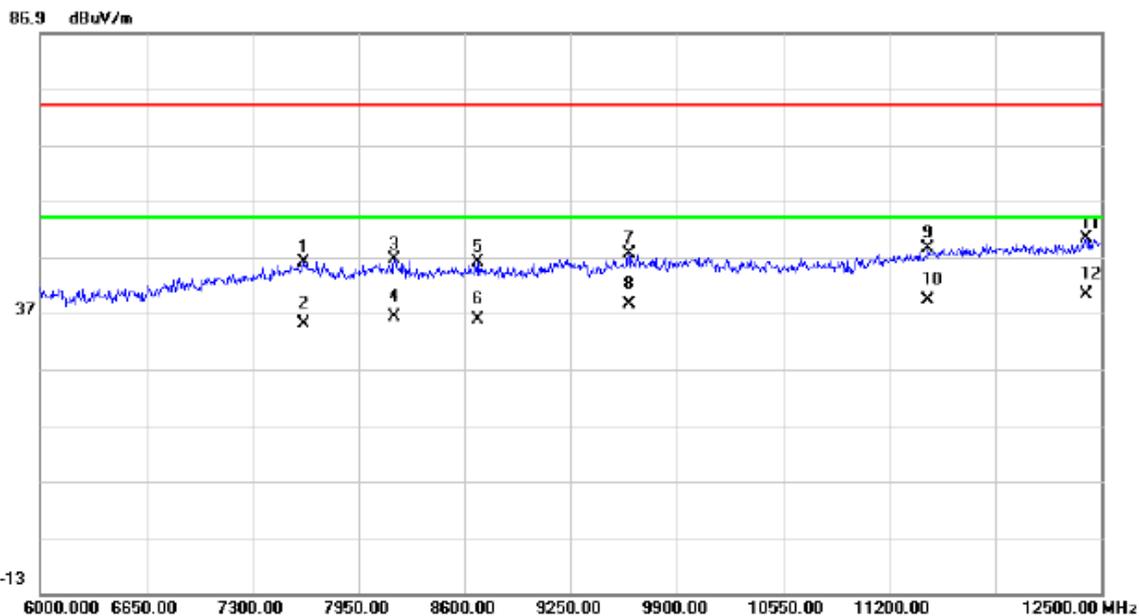
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	1200.000	64.76	-7.90	56.86	74.00	-17.14	peak	
2		1200.000	30.25	-7.90	22.35	54.00	-31.65	AVG	
3		1430.000	61.42	-6.24	55.18	74.00	-18.82	peak	
4		1430.000	31.25	-6.24	25.01	54.00	-28.99	AVG	
5		2380.000	55.34	-2.48	52.86	74.00	-21.14	peak	
6		2380.000	32.02	-2.48	29.54	54.00	-24.46	AVG	
7		3370.000	53.52	1.00	54.52	74.00	-19.48	peak	
8		3370.000	31.62	1.00	32.62	54.00	-21.38	AVG	
9		3845.000	51.59	2.35	53.94	74.00	-20.06	peak	
10		3845.000	32.02	2.35	34.37	54.00	-19.63	AVG	
11		4110.000	49.97	2.82	52.79	74.00	-21.21	peak	
12		4110.000	28.21	2.82	31.03	54.00	-22.97	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.17m	Polarization:	Vertical



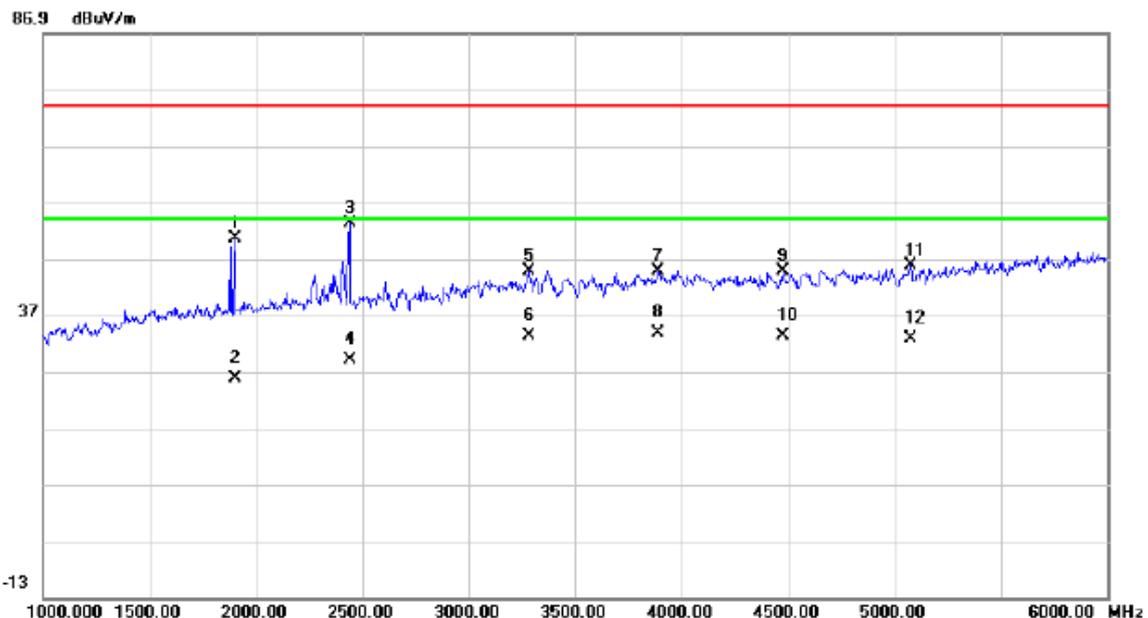
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7605.500	30.07	16.01	46.08	74.00	-27.92	peak	
2	7605.500	18.84	16.01	34.85	54.00	-19.15	AVG	
3	8028.000	29.85	16.05	45.90	74.00	-28.10	peak	
4	8028.000	20.31	16.05	36.36	54.00	-17.64	AVG	
5	9230.500	31.07	15.71	46.78	74.00	-27.22	peak	
6	9230.500	21.07	15.71	36.78	54.00	-17.22	AVG	
7	9516.500	32.07	15.20	47.27	74.00	-26.73	peak	
8	9516.500	23.26	15.20	38.46	54.00	-15.54	AVG	
9	9952.000	31.49	15.98	47.47	74.00	-26.53	peak	
10	9952.000	21.87	15.98	37.85	54.00	-16.15	AVG	
11	12051.500	27.25	22.74	49.99	74.00	-24.01	peak	
12 *	12051.500	17.99	22.74	40.73	54.00	-13.27	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI -Car Charger: BYD / USB Cable: 0.17m	Polarization:	Horizontal



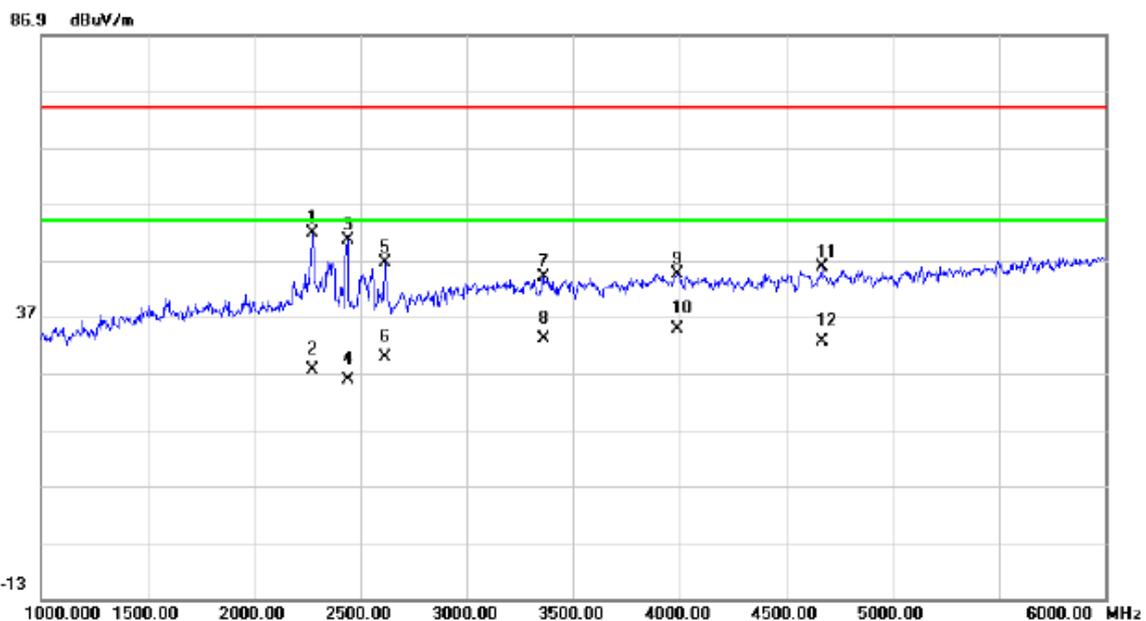
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7612.000	30.07	16.01	46.08	74.00	-27.92	peak	
2		7612.000	19.00	16.01	35.01	54.00	-18.99	AVG	
3		8171.000	30.76	15.85	46.61	74.00	-27.39	peak	
4		8171.000	20.32	15.85	36.17	54.00	-17.83	AVG	
5		8684.500	30.34	15.67	46.01	74.00	-27.99	peak	
6		8684.500	20.07	15.67	35.74	54.00	-18.26	AVG	
7		9607.500	32.11	15.36	47.47	74.00	-26.53	peak	
8		9607.500	23.12	15.36	38.48	54.00	-15.52	AVG	
9		11440.500	28.25	20.17	48.42	74.00	-25.58	peak	
10		11440.500	19.02	20.17	39.19	54.00	-14.81	AVG	
11		12409.000	31.47	18.71	50.18	74.00	-23.82	peak	
12	*	12409.000	21.56	18.71	40.27	54.00	-13.73	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



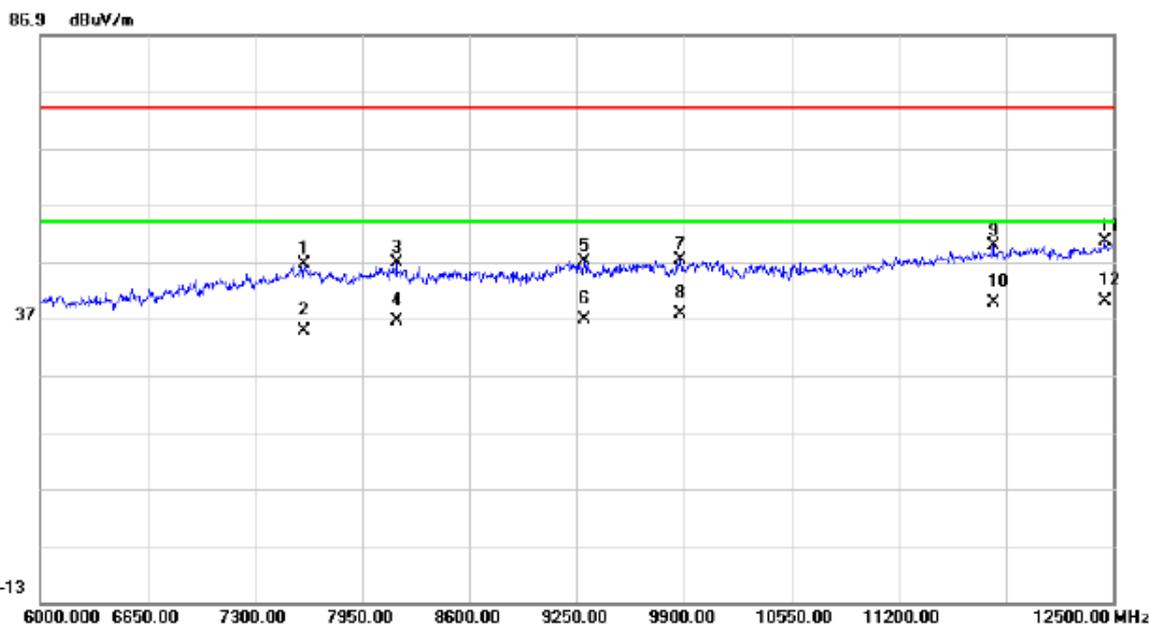
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1900.000	54.07	-3.51	50.56	74.00	-23.44	peak	
2		1900.000	29.32	-3.51	25.81	54.00	-28.19	AVG	
3		2440.000	55.62	-2.39	53.23	74.00	-20.77	peak	
4		2440.000	31.52	-2.39	29.13	54.00	-24.87	AVG	
5		3285.000	43.94	0.74	44.68	74.00	-29.32	peak	
6		3285.000	32.60	0.74	33.34	54.00	-20.66	AVG	
7		3890.000	42.25	2.47	44.72	74.00	-29.28	peak	
8	*	3890.000	31.25	2.47	33.72	54.00	-20.28	AVG	
9		4475.000	41.72	3.00	44.72	74.00	-29.28	peak	
10		4475.000	30.25	3.00	33.25	54.00	-20.75	AVG	
11		5075.000	41.57	4.20	45.77	74.00	-28.23	peak	
12		5075.000	28.62	4.20	32.82	54.00	-21.18	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



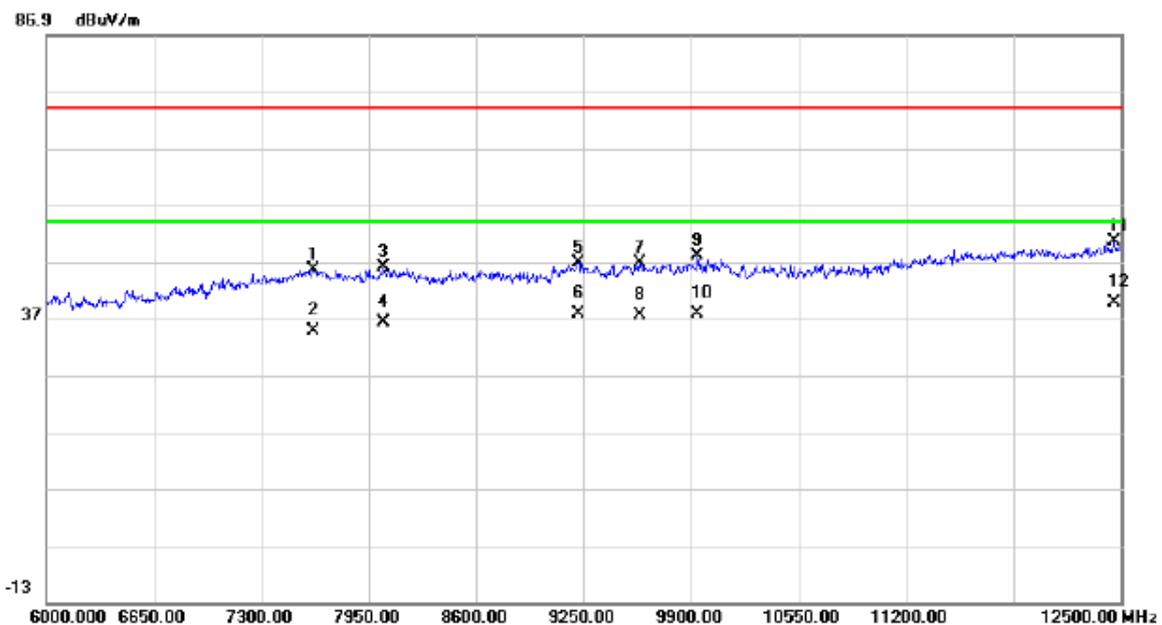
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2275.000	54.36	-2.61	51.75	74.00	-22.25	peak	
2		2275.000	30.02	-2.61	27.41	54.00	-26.59	AVG	
3		2440.000	52.82	-2.39	50.43	74.00	-23.57	peak	
4		2440.000	28.06	-2.39	25.67	54.00	-28.33	AVG	
5		2615.000	48.26	-1.82	46.44	74.00	-27.56	peak	
6		2615.000	31.62	-1.82	29.80	54.00	-24.20	AVG	
7		3365.000	43.15	0.99	44.14	74.00	-29.86	peak	
8		3365.000	32.05	0.99	33.04	54.00	-20.96	AVG	
9		3990.000	41.77	2.75	44.52	74.00	-29.48	peak	
10	*	3990.000	32.05	2.75	34.80	54.00	-19.20	AVG	
11		4670.000	42.45	3.33	45.78	74.00	-28.22	peak	
12		4670.000	29.22	3.33	32.55	54.00	-21.45	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



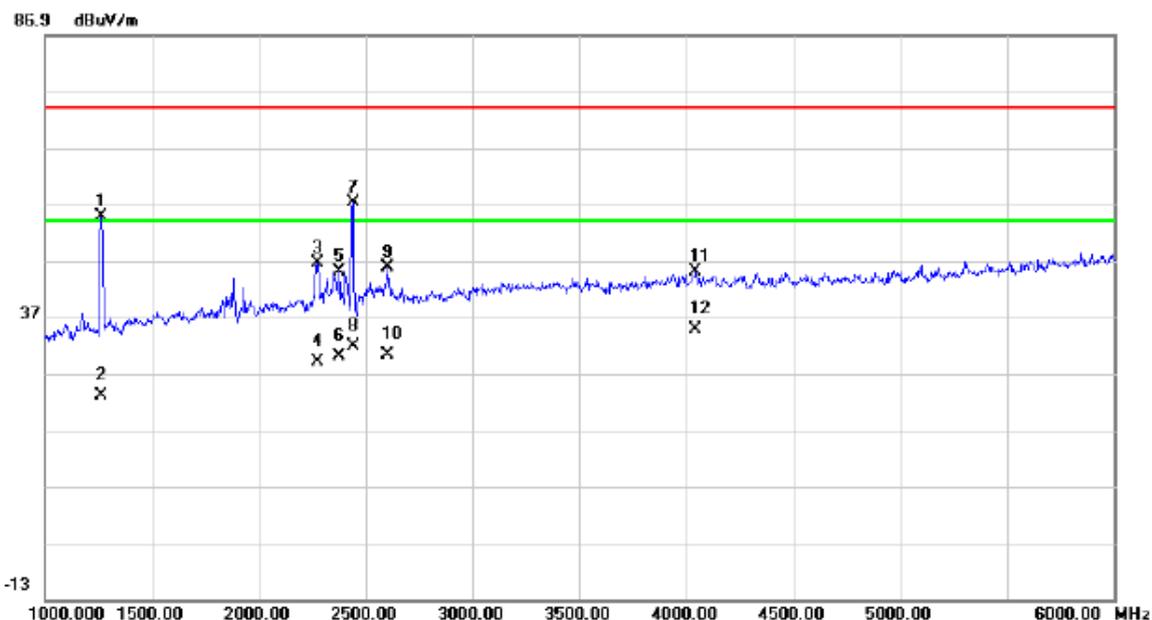
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7599.000	30.50	16.00	46.50	74.00	-27.50	peak	
2		7599.000	18.80	16.00	34.80	54.00	-19.20	AVG	
3		8158.000	30.79	15.87	46.66	74.00	-27.34	peak	
4		8158.000	20.57	15.87	36.44	54.00	-17.56	AVG	
5		9295.500	31.45	15.58	47.03	74.00	-26.97	peak	
6		9295.500	21.21	15.58	36.79	54.00	-17.21	AVG	
7		9874.000	31.43	15.83	47.26	74.00	-26.74	peak	
8		9874.000	21.99	15.83	37.82	54.00	-16.18	AVG	
9		11772.00	27.83	21.88	49.71	74.00	-24.29	peak	
10		11772.00	17.79	21.88	39.67	54.00	-14.33	AVG	
11		12448.00	32.20	18.27	50.47	74.00	-23.53	peak	
12	*	12448.00	21.65	18.27	39.92	54.00	-14.08	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM850+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



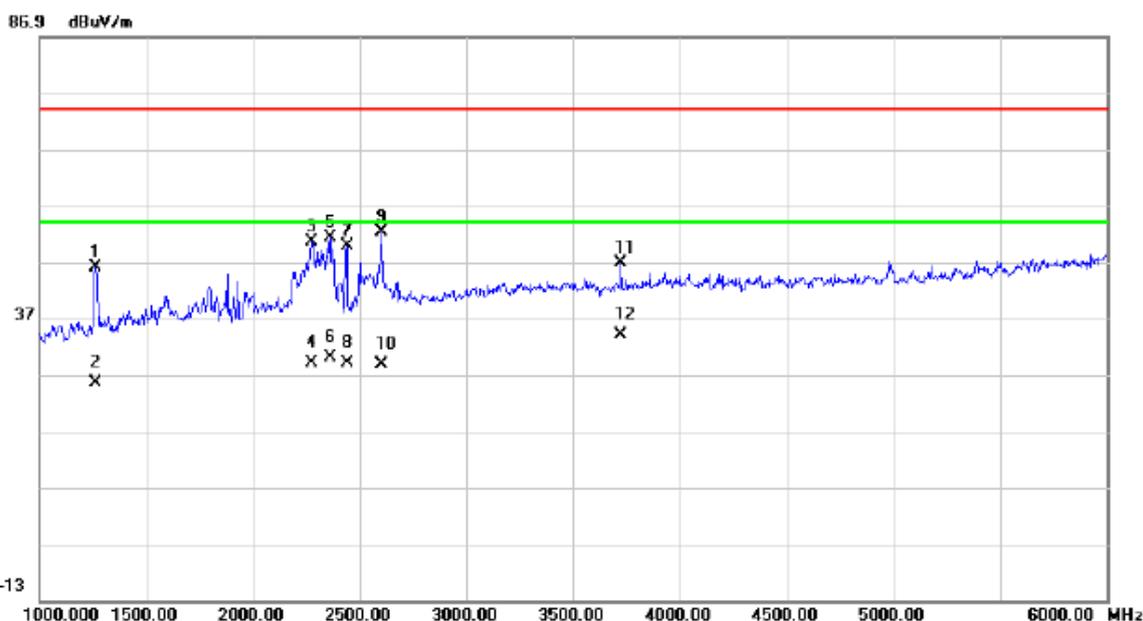
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7612.000	29.61	16.01	45.62	74.00	-28.38	peak	
2	7612.000	18.80	16.01	34.81	54.00	-19.19	AVG	
3	8041.000	29.87	16.04	45.91	74.00	-28.09	peak	
4	8041.000	20.33	16.04	36.37	54.00	-17.63	AVG	
5	9217.500	31.17	15.73	46.90	74.00	-27.10	peak	
6	9217.500	22.00	15.73	37.73	54.00	-16.27	AVG	
7	9588.000	31.34	15.33	46.67	74.00	-27.33	peak	
8	9588.000	22.20	15.33	37.53	54.00	-16.47	AVG	
9	9939.000	31.96	15.95	47.91	74.00	-26.09	peak	
10	9939.000	21.87	15.95	37.82	54.00	-16.18	AVG	
11	12461.00	32.49	18.12	50.61	74.00	-23.39	peak	
12 *	12461.00	21.76	18.12	39.88	54.00	-14.12	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI-Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



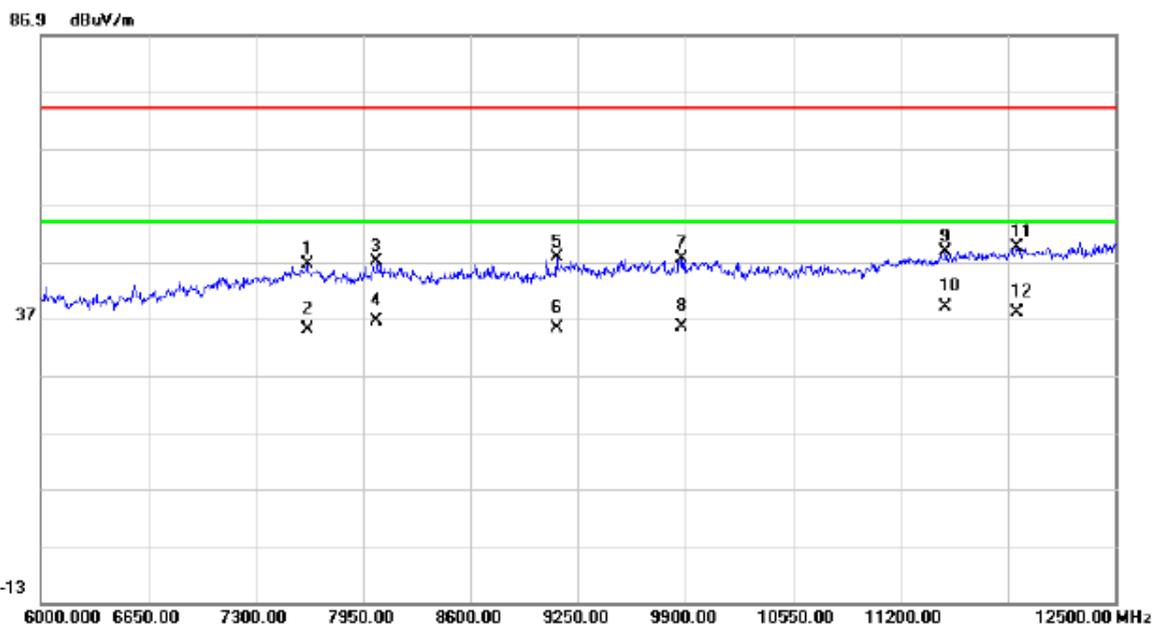
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1265.000	62.18	-7.43	54.75	74.00	-19.25	peak	
2		1265.000	30.36	-7.43	22.93	54.00	-31.07	AVG	
3		2275.000	49.16	-2.61	46.55	74.00	-27.45	peak	
4		2275.000	31.52	-2.61	28.91	54.00	-25.09	AVG	
5		2375.000	47.60	-2.48	45.12	74.00	-28.88	peak	
6		2375.000	32.60	-2.48	30.12	54.00	-23.88	AVG	
7	*	2440.000	59.76	-2.39	57.37	74.00	-16.63	peak	
8		2440.000	34.05	-2.39	31.66	54.00	-22.34	AVG	
9		2600.000	47.64	-1.89	45.75	74.00	-28.25	peak	
10		2600.000	32.05	-1.89	30.16	54.00	-23.84	AVG	
11		4045.000	42.28	2.79	45.07	74.00	-28.93	peak	
12		4045.000	31.92	2.79	34.71	54.00	-19.29	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



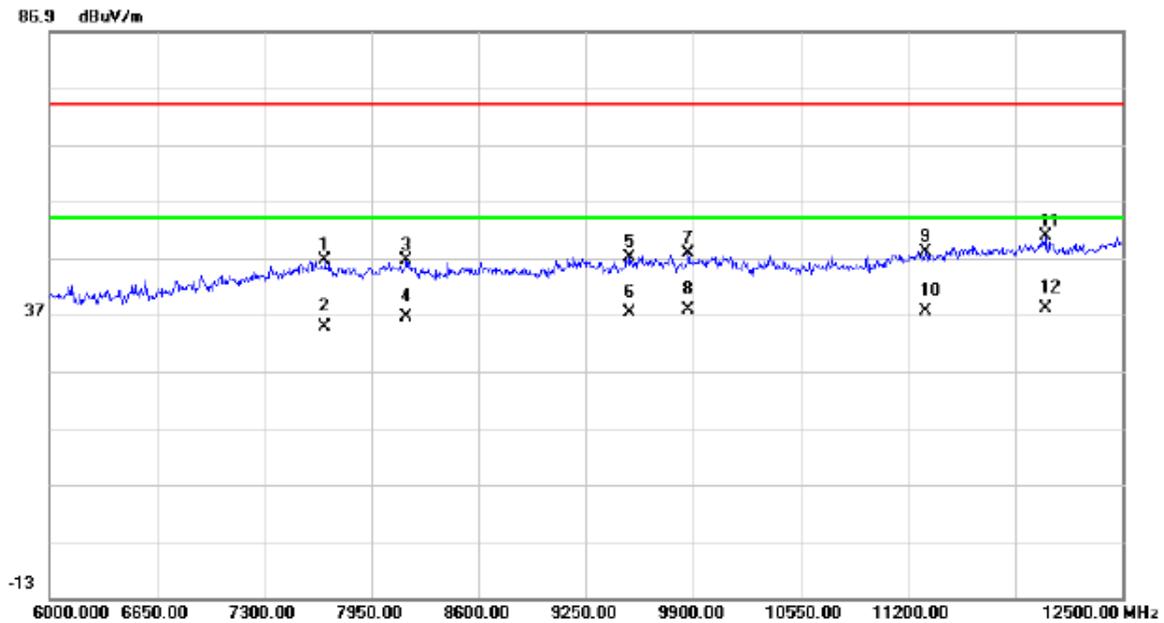
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1265.000	53.53	-7.43	46.10	74.00	-27.90	peak	
2	1265.000	33.02	-7.43	25.59	54.00	-28.41	AVG	
3	2275.000	53.21	-2.61	50.60	74.00	-23.40	peak	
4	2275.000	31.62	-2.61	29.01	54.00	-24.99	AVG	
5	2365.000	53.78	-2.50	51.28	74.00	-22.72	peak	
6	2365.000	32.60	-2.50	30.10	54.00	-23.90	AVG	
7	2440.000	52.19	-2.39	49.80	74.00	-24.20	peak	
8	2440.000	31.52	-2.39	29.13	54.00	-24.87	AVG	
9	2600.000	54.27	-1.89	52.38	74.00	-21.62	peak	
10	2600.000	30.62	-1.89	28.73	54.00	-25.27	AVG	
11	3725.000	44.81	2.02	46.83	74.00	-27.17	peak	
12 *	3725.000	31.92	2.02	33.94	54.00	-20.06	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI-Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



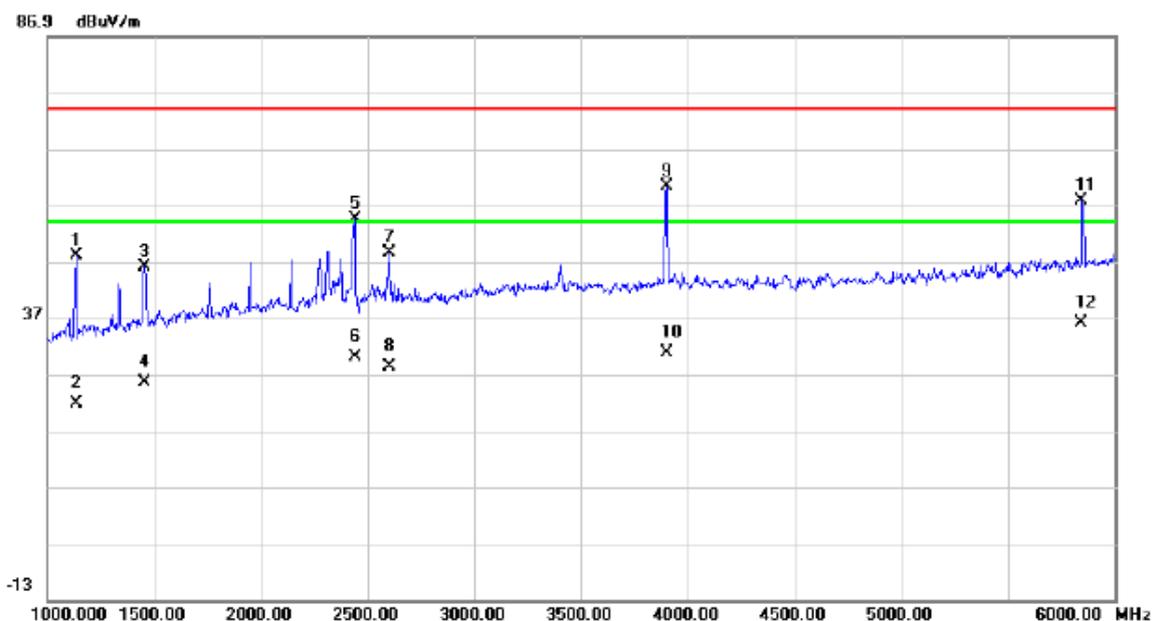
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		7612.000	30.58	16.01	46.59	74.00	-27.41	peak	
2		7612.000	18.90	16.01	34.91	54.00	-19.09	AVG	
3		8034.500	30.87	16.05	46.92	74.00	-27.08	peak	
4		8034.500	20.52	16.05	36.57	54.00	-17.43	AVG	
5		9120.000	31.97	15.92	47.89	74.00	-26.11	peak	
6		9120.000	19.32	15.92	35.24	54.00	-18.76	AVG	
7		9880.500	31.79	15.85	47.64	74.00	-26.36	peak	
8		9880.500	19.78	15.85	35.63	54.00	-18.37	AVG	
9		11473.00	28.65	20.15	48.80	74.00	-25.20	peak	
10	*	11473.00	18.85	20.15	39.00	54.00	-15.00	AVG	
11		11902.00	26.87	22.70	49.57	74.00	-24.43	peak	
12		11902.00	15.23	22.70	37.93	54.00	-16.07	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	GSM1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



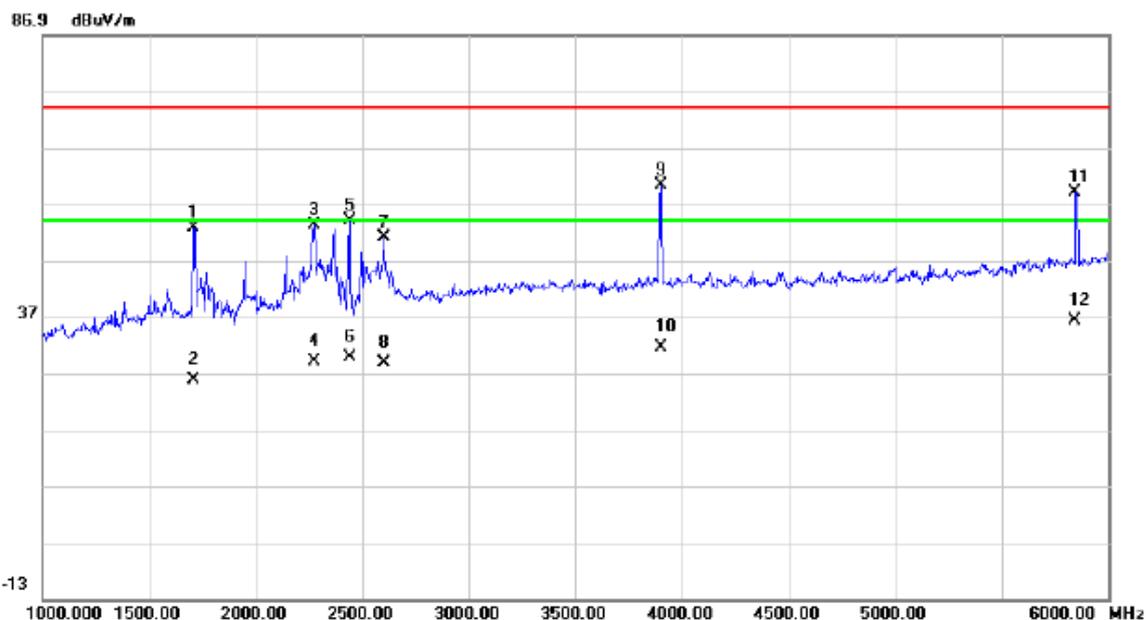
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		7670.500	30.50	16.02	46.52	74.00	-27.48	peak	
2		7670.500	18.84	16.02	34.86	54.00	-19.14	AVG	
3		8164.500	30.55	15.86	46.41	74.00	-27.59	peak	
4		8164.500	20.58	15.86	36.44	54.00	-17.56	AVG	
5		9516.500	31.82	15.20	47.02	74.00	-26.98	peak	
6		9516.500	22.14	15.20	37.34	54.00	-16.66	AVG	
7		9867.500	31.94	15.83	47.77	74.00	-26.23	peak	
8		9867.500	21.99	15.83	37.82	54.00	-16.18	AVG	
9		11310.50	27.86	20.24	48.10	74.00	-25.90	peak	
10		11310.50	17.23	20.24	37.47	54.00	-16.53	AVG	
11		12038.50	27.82	22.89	50.71	74.00	-23.29	peak	
12	*	12038.50	15.10	22.89	37.99	54.00	-16.01	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



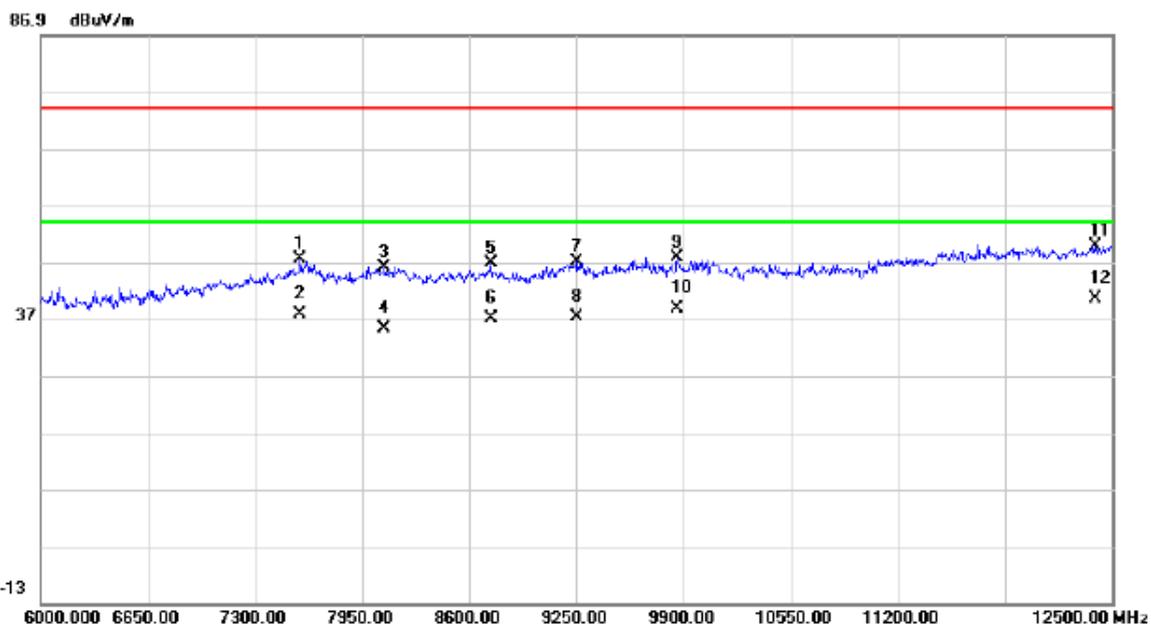
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1135.000	56.38	-8.37	48.01	74.00	-25.99	peak	
2		1135.000	30.25	-8.37	21.88	54.00	-32.12	AVG	
3		1455.000	52.00	-6.06	45.94	74.00	-28.06	peak	
4		1455.000	31.62	-6.06	25.56	54.00	-28.44	AVG	
5		2440.000	56.87	-2.39	54.48	74.00	-19.52	peak	
6		2440.000	32.51	-2.39	30.12	54.00	-23.88	AVG	
7		2600.000	50.30	-1.89	48.41	74.00	-25.59	peak	
8		2600.000	30.25	-1.89	28.36	54.00	-25.64	AVG	
9	*	3900.000	57.69	2.50	60.19	74.00	-13.81	peak	
10		3900.000	28.20	2.50	30.70	54.00	-23.30	AVG	
11		5845.000	50.67	7.01	57.68	74.00	-16.32	peak	
12		5845.000	29.04	7.01	36.05	54.00	-17.95	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



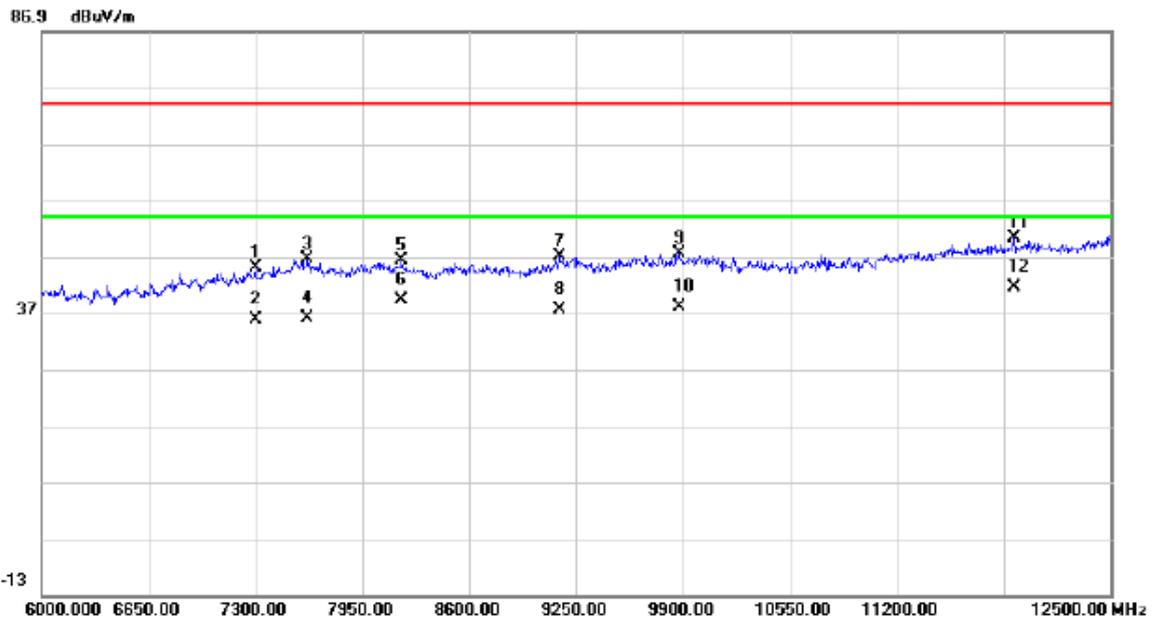
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	1710.000	57.29	-4.57	52.72	74.00	-21.28	peak	
2	1710.000	30.25	-4.57	25.68	54.00	-28.32	AVG	
3	2275.000	55.85	-2.61	53.24	74.00	-20.76	peak	
4	2275.000	31.62	-2.61	29.01	54.00	-24.99	AVG	
5	2440.000	56.50	-2.39	54.11	74.00	-19.89	peak	
6	2440.000	32.05	-2.39	29.66	54.00	-24.34	AVG	
7	2600.000	53.03	-1.89	51.14	74.00	-22.86	peak	
8	2600.000	30.62	-1.89	28.73	54.00	-25.27	AVG	
9 *	3900.000	57.66	2.50	60.16	74.00	-13.84	peak	
10	3900.000	28.92	2.50	31.42	54.00	-22.58	AVG	
11	5845.000	52.06	7.01	59.07	74.00	-14.93	peak	
12	5845.000	29.30	7.01	36.31	54.00	-17.69	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Vertical



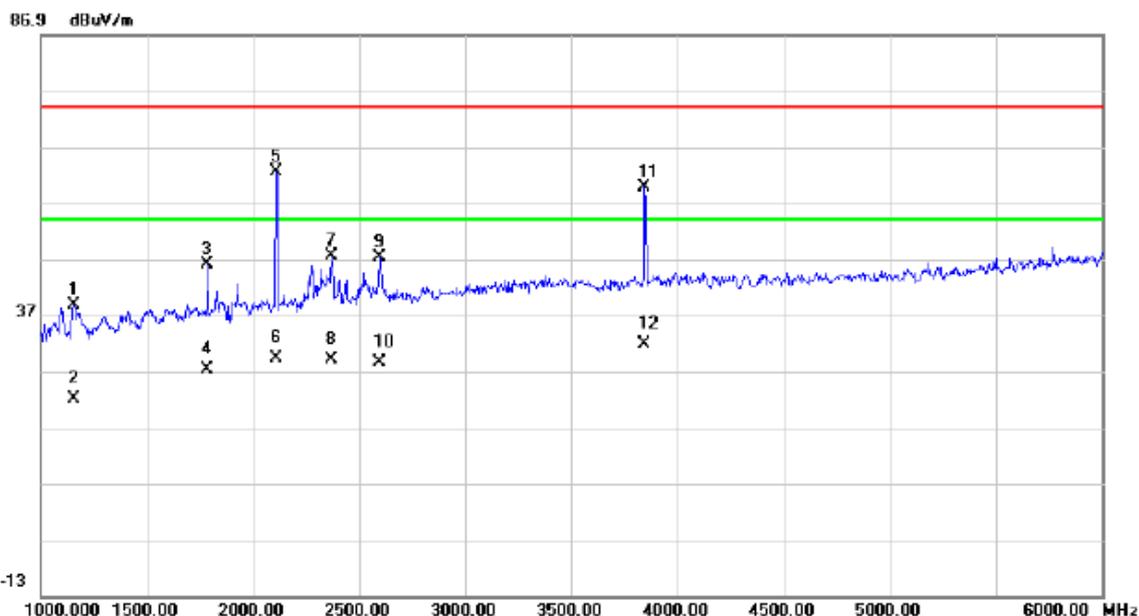
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7573.000	31.43	15.99	47.42	74.00	-26.58	peak	
2	7573.000	21.89	15.99	37.88	54.00	-16.12	AVG	
3	8086.500	30.18	15.97	46.15	74.00	-27.85	peak	
4	8086.500	19.23	15.97	35.20	54.00	-18.80	AVG	
5	8730.000	31.05	15.74	46.79	74.00	-27.21	peak	
6	8730.000	21.30	15.74	37.04	54.00	-16.96	AVG	
7	9250.000	31.30	15.67	46.97	74.00	-27.03	peak	
8	9250.000	21.63	15.67	37.30	54.00	-16.70	AVG	
9	9861.000	31.98	15.81	47.79	74.00	-26.21	peak	
10	9861.000	22.90	15.81	38.71	54.00	-15.29	AVG	
11	12396.00	30.99	18.85	49.84	74.00	-24.16	peak	
12 *	12396.00	21.58	18.85	40.43	54.00	-13.57	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.8m	Polarization:	Horizontal



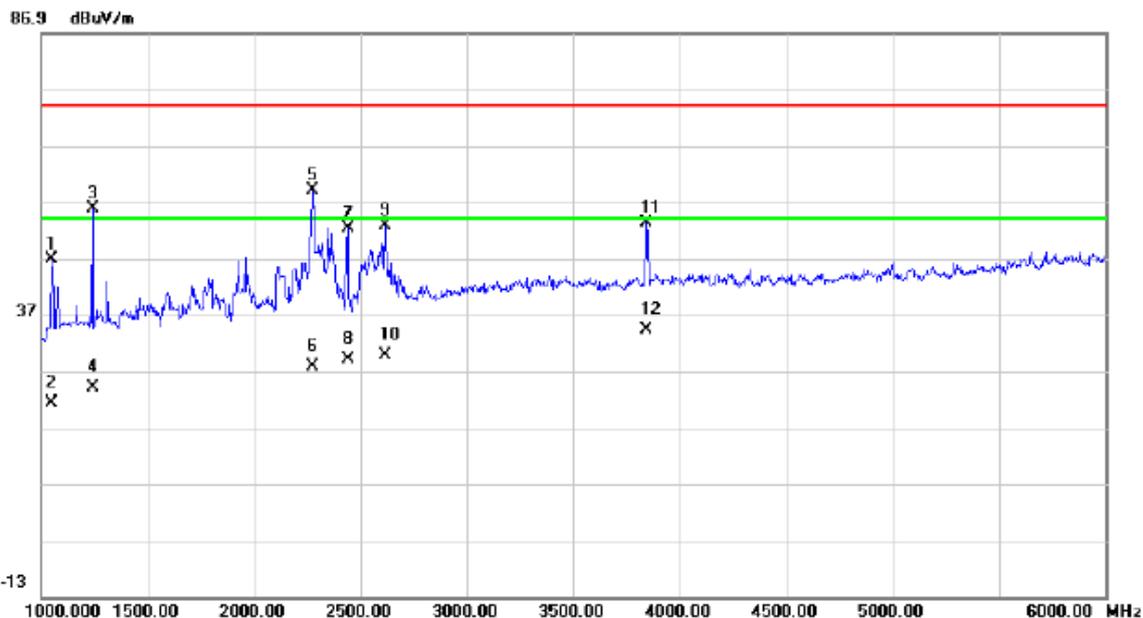
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7300.000	29.94	15.14	45.08	74.00	-28.92	peak	
2		7300.000	20.74	15.14	35.88	54.00	-18.12	AVG	
3		7618.500	30.55	16.00	46.55	74.00	-27.45	peak	
4		7618.500	20.02	16.00	36.02	54.00	-17.98	AVG	
5		8190.500	30.39	15.82	46.21	74.00	-27.79	peak	
6		8190.500	23.53	15.82	39.35	54.00	-14.65	AVG	
7		9146.000	31.23	15.87	47.10	74.00	-26.90	peak	
8		9146.000	21.72	15.87	37.59	54.00	-16.41	AVG	
9		9874.000	31.82	15.83	47.65	74.00	-26.35	peak	
10		9874.000	22.09	15.83	37.92	54.00	-16.08	AVG	
11		11915.00	27.38	22.78	50.16	74.00	-23.84	peak	
12	*	11915.00	18.65	22.78	41.43	54.00	-12.57	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.17m	Polarization:	Vertical



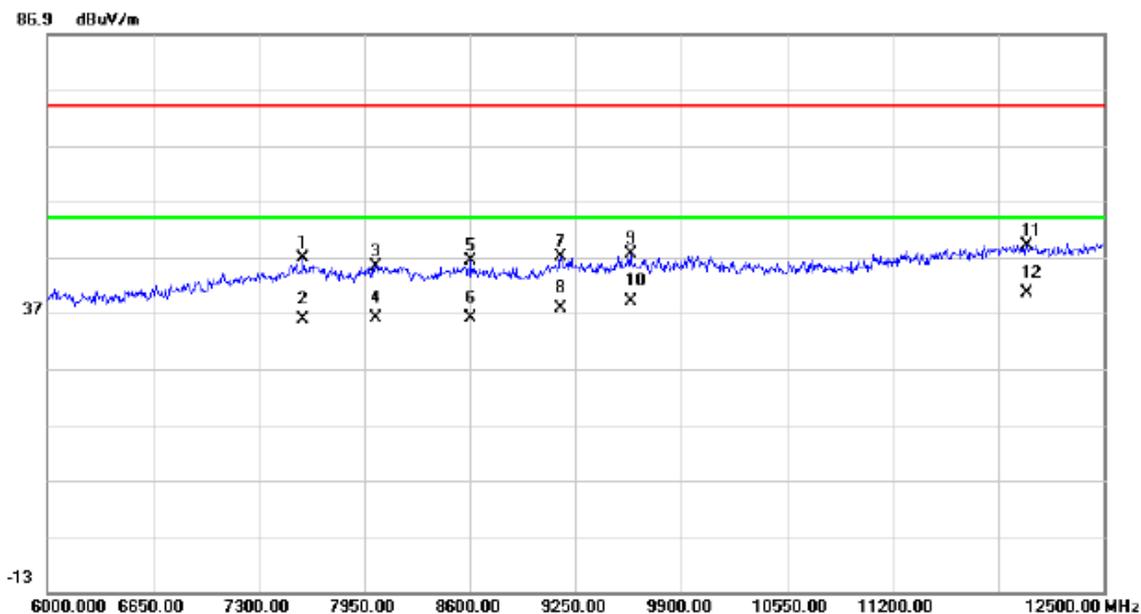
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1155.000	47.01	-8.23	38.78	74.00	-35.22	peak	
2		1155.000	30.25	-8.23	22.02	54.00	-31.98	AVG	
3		1785.000	50.10	-4.15	45.95	74.00	-28.05	peak	
4		1785.000	31.52	-4.15	27.37	54.00	-26.63	AVG	
5	*	2110.000	65.45	-2.82	62.63	74.00	-11.37	peak	
6		2110.000	32.02	-2.82	29.20	54.00	-24.80	AVG	
7		2370.000	49.91	-2.49	47.42	74.00	-26.58	peak	
8		2370.000	31.62	-2.49	29.13	54.00	-24.87	AVG	
9		2595.000	49.17	-1.91	47.26	74.00	-26.74	peak	
10		2595.000	30.52	-1.91	28.61	54.00	-25.39	AVG	
11		3845.000	57.45	2.35	59.80	74.00	-14.20	peak	
12		3845.000	29.36	2.35	31.71	54.00	-22.29	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.17m	Polarization:	Horizontal



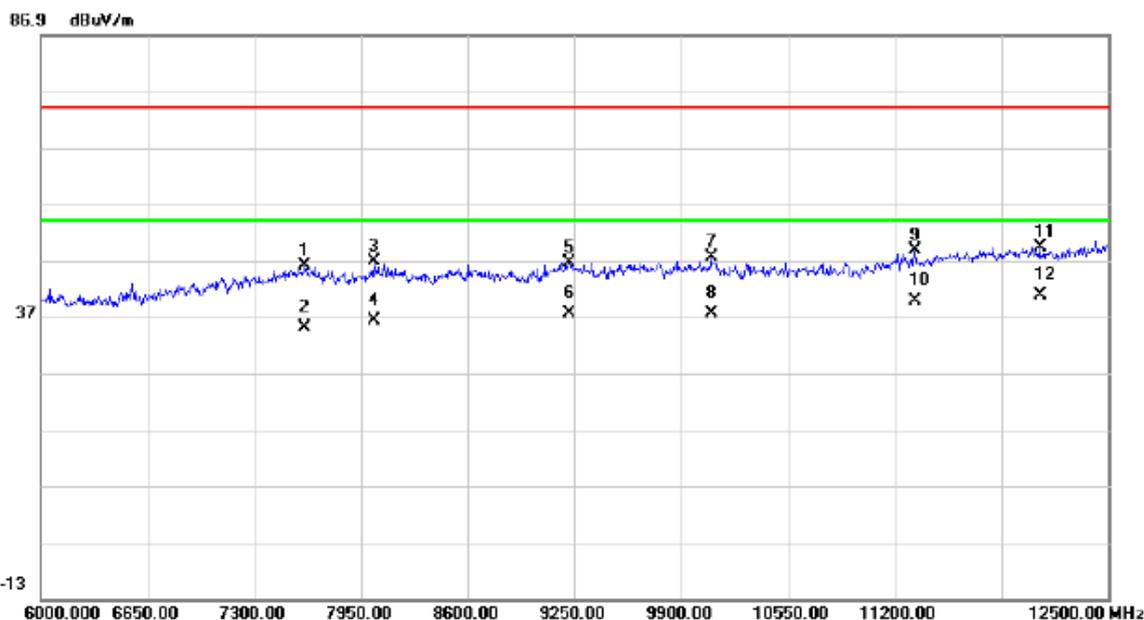
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		1050.000	55.79	-8.99	46.80	74.00	-27.20	peak	
2		1050.000	30.25	-8.99	21.26	54.00	-32.74	AVG	
3		1240.000	63.51	-7.61	55.90	74.00	-18.10	peak	
4		1240.000	31.52	-7.61	23.91	54.00	-30.09	AVG	
5	*	2275.000	61.60	-2.61	58.99	74.00	-15.01	peak	
6		2275.000	30.36	-2.61	27.75	54.00	-26.25	AVG	
7		2440.000	54.60	-2.39	52.21	74.00	-21.79	peak	
8		2440.000	31.52	-2.39	29.13	54.00	-24.87	AVG	
9		2615.000	54.69	-1.82	52.87	74.00	-21.13	peak	
10		2615.000	31.62	-1.82	29.80	54.00	-24.20	AVG	
11		3845.000	50.98	2.35	53.33	74.00	-20.67	peak	
12		3845.000	32.02	2.35	34.37	54.00	-19.63	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.17m	Polarization:	Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7573.000	30.86	15.99	46.85	74.00	-27.15	peak	
2		7573.000	19.71	15.99	35.70	54.00	-18.30	AVG	
3		8021.500	29.34	16.06	45.40	74.00	-28.60	peak	
4		8021.500	20.03	16.06	36.09	54.00	-17.91	AVG	
5		8600.000	30.65	15.55	46.20	74.00	-27.80	peak	
6		8600.000	20.39	15.55	35.94	54.00	-18.06	AVG	
7		9159.000	31.12	15.85	46.97	74.00	-27.03	peak	
8		9159.000	21.89	15.85	37.74	54.00	-16.26	AVG	
9		9588.000	32.16	15.33	47.49	74.00	-26.51	peak	
10		9588.000	23.62	15.33	38.95	54.00	-15.05	AVG	
11		12025.50	26.09	23.04	49.13	74.00	-24.87	peak	
12	*	12025.50	17.54	23.04	40.58	54.00	-13.42	AVG	

E.U.T :	HUAWEI Wingle E8231	Model Name :	E8231s-81
Temperature :	22° C	Relative Humidity :	55 %
Pressure :	1012 hPa	Test Voltage :	DC 12V
Test Mode :	WCDMA1900+WIFI –Car Charger: FUHUA / USB Cable: 0.17m	Polarization:	Horizontal



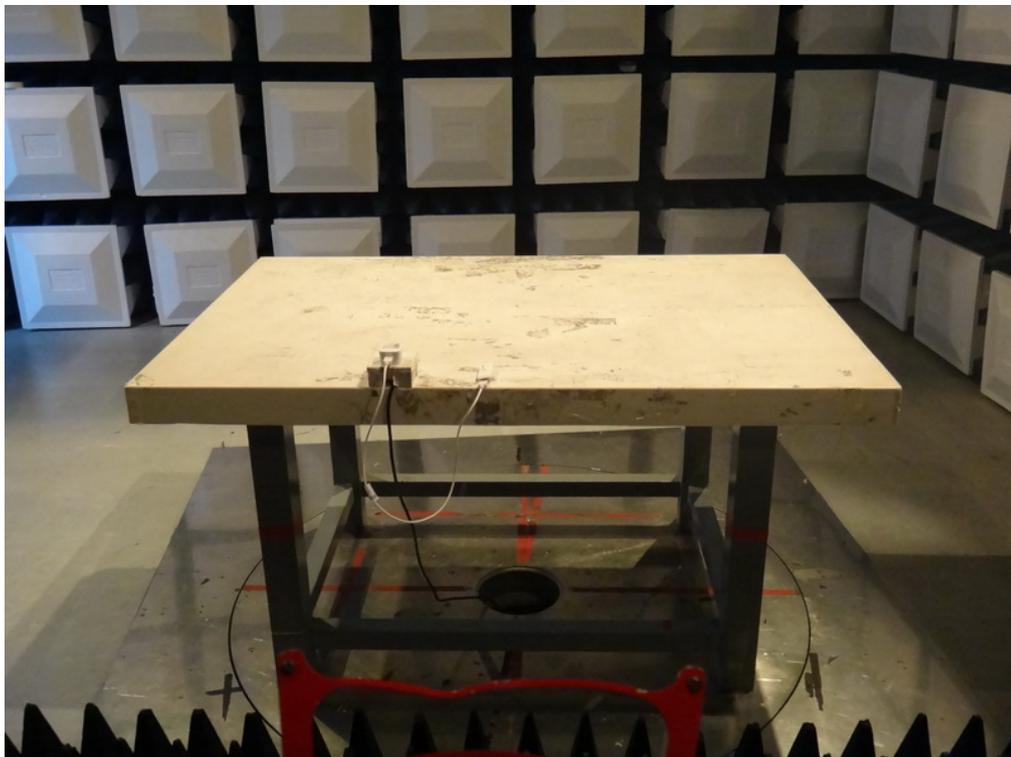
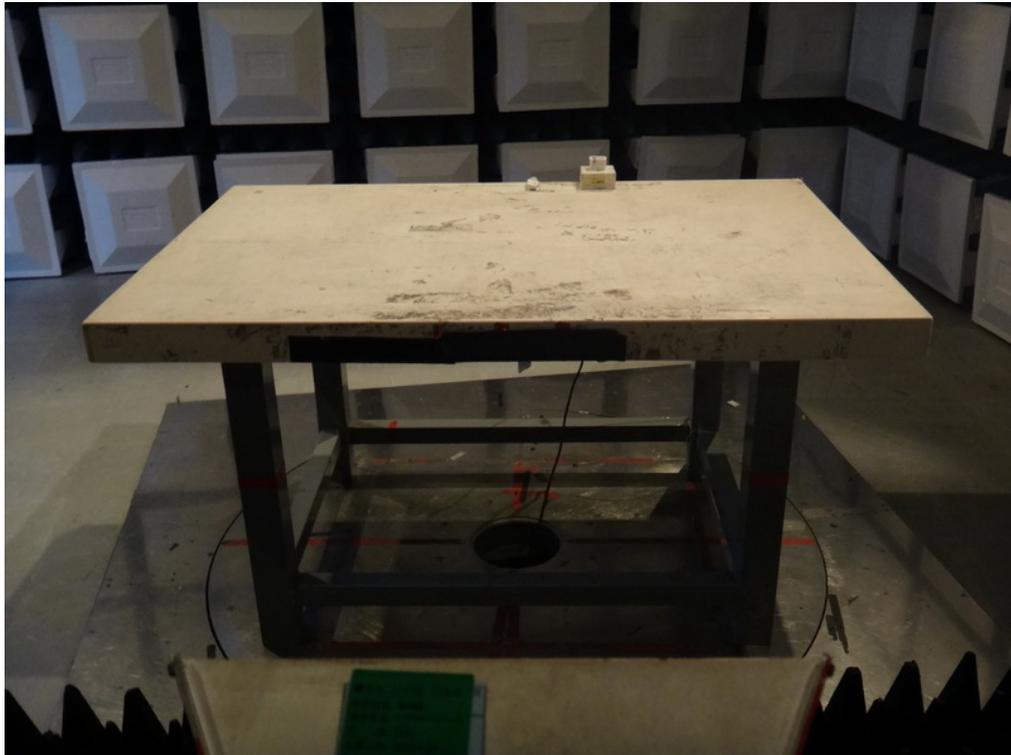
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		7605.500	29.93	16.01	45.94	74.00	-28.06	peak	
2		7605.500	18.93	16.01	34.94	54.00	-19.06	AVG	
3		8028.000	30.77	16.05	46.82	74.00	-27.18	peak	
4		8028.000	20.21	16.05	36.26	54.00	-17.74	AVG	
5		9217.500	30.81	15.73	46.54	74.00	-27.46	peak	
6		9217.500	21.75	15.73	37.48	54.00	-16.52	AVG	
7		10082.000	31.74	15.71	47.45	74.00	-26.55	peak	
8		10082.000	21.93	15.71	37.64	54.00	-16.36	AVG	
9		11323.500	28.43	20.23	48.66	74.00	-25.34	peak	
10		11323.500	19.52	20.23	39.75	54.00	-14.25	AVG	
11		12084.000	26.99	22.37	49.36	74.00	-24.64	peak	
12	*	12084.000	18.40	22.37	40.77	54.00	-13.23	AVG	

6.EUT TEST PHOTO**Conducted Measurement Photos**

**Radiated Measurement Photos
Below 1G -Adapter**



**Radiated Measurement Photos
Above 1GHz -Adapter**



**Radiated Measurement Photos
Below 1G - Car Charger**



**Radiated Measurement Photos
Above 1GHz - Car Charger**

