



APPLICATION OF CERTIFICATION

For

HUAWEI TECHNOLOGIES CO.,LTD

HD Cable STB

Model Number : DC351

FCC ID: QISDC351

Prepared for : HUAWEI TECHNOLOGIES CO.,LTD
Administration Building, Huawei Base, Bantian, Longgang
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Report Number : ACS- F13097
Date of Test : Jul.04~24, 2013
Date of Report : Jul.10, 2013

TABLE OF CONTENTS

Description	Page
Test Report Certification	
1. SUMMARY OF STANDARDS AND RESULTS	1-1
1.1. Description of Standards and Results	1-1
2. GENERAL INFORMATION.....	2-1
2.1. Description of Device (EUT).....	2-1
2.2. Tested Supporting System Details.....	2-2
2.3. Block diagram of connection between the EUT and simulators.....	2-3
2.4. Test Facility	2-4
2.5. Measurement Uncertainty (95% confidence levels, k=2).....	2-4
3. POWER LINE CONDUCTED EMISSION TEST	3-1
3.1. Test Equipment.....	3-1
3.2. Block Diagram of Test Setup.....	3-1
3.3. Power Line Conducted Emission Test Limits	3-1
3.4. Configuration of EUT on Test.....	3-1
3.5. Operating Condition of EUT	3-2
3.6. Test Procedure	3-2
3.7. Conducted Disturbance at Mains Terminals Test Results	3-2
4. RADIATED EMISSION TEST.....	4-1
4.1. Test Equipment.....	4-1
4.2. Block Diagram of Test Setup.....	4-2
4.3. Radiated Emission Limit	4-3
4.4. EUT Configuration on Test	4-3
4.5. Operating Condition of EUT	4-3
4.6. Test Procedure	4-3
4.7. Radiated Disturbance Test Results	4-3
5. RF INPUT TERMINAL-CONDUCTED LEVEL MEASUREMENT	5-1
5.1. Test Equipments	5-1
5.2. Block Diagram of Test Setup.....	5-1
5.3. Limits of Antenna Terminals Disturbance Voltage Test	5-1
5.4. EUT Configuration on Test	5-1
5.5. Operating Condition of EUT	5-1
5.6. Test Procedure	5-2
5.7. Test Results.....	5-3
6. DEMONSTRATION ON INTERNAL PREVENTING CIRCUITRY	6-6
6.1. Test Requirement:.....	6-6
6.2. Test Equipments	6-6
6.3. Block Diagram of Test Setup.....	6-6
6.4. Test Method.....	6-6
6.5. Test Voltage: 120Vac/60Hz.....	6-6
6.6. Test Date: Jul.31.2013	6-6
6.7. E.U.T. Operation.....	6-6
6.8. Test Setup and Procedure	6-7
6.9. Test Result	6-7
7. RF OUTPUT TERMINAL-CONDUCTED LEVEL MEASUREMENT.....	7-8
7.1. Test Equipment.....	7-8

7.2.	Block Diagram of Test Setup.....	7-8
7.3.	Output Signal Limits (§ 15.115(b)(1)(ii)).....	7-8
7.4.	Output Signal Limits (§ 15.115(b)(2)(ii)).....	7-8
7.5.	Operating Condition of EUT	7-8
7.6.	Test Procedure	7-9
7.7.	RF Output Terminal-Conducted Level Measurement Results.....	7-10
8.	DEVIATION TO TEST SPECIFICATIONS	8-11
9.	PHOTOGRAPH	9-1
9.1.	Photos of Power Line Conducted Emission Measurement.....	9-1
9.2.	Photos of Radiated Emission Measurement (In 3m Anechoic Chamber).....	9-2
9.3.	Photo of Antenna Terminals Disturbance Voltage Test	9-4
9.4.	Photo of RF Output Terminals Disturbance Voltage Test.....	9-5
10.	PHOTOS OF THE EUT	10-6



TEST REPORT CERTIFICATION

Applicant : HUAWEI TECHNOLOGIES CO.,LTD
 Manufacturer : HUAWEI TECHNOLOGIES CO.,LTD
 EUT Description : HD Cable STB
 FCC ID : QISDC351
 (A) Model No. : DC351
 (B) Power Supply : DC 12V
 (C) Test Voltage : DC 12V Adapter Input AC 120V/60Hz

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart B Class B 2012, ANSI C63.4: 2009

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both conducted and radiated emissions. The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed of full responsibility for the accuracy and completeness of these tests. This report contains data that are not covered by the NVLAP accreditation.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Jul.04~24, 2013 Report of date: Jul.10, 2013

Prepared by : Lisa Liang / Assistant Reviewed by : Mario Wu / Assistant Manager

Approved & Authorized Signer : David Jin / Deputy Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Results	Remarks
Power Line Conducted Emission Test	FCC Part 15: 2012 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 7.31dB at 0.16500MHz
Radiated Emission Test (30-1000MHz)	FCC Part 15: 2012 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 3.10dB at 742.550MHz
Radiated Emission Test (1-5GHz)	FCC Part 15: 2012 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 3.19dB at 2386.400MHz
RF Input Terminal Conducted Level Measurement	FCC Part 15: 2012 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 23.65B at 562.520MHz
RF Output Terminal Conducted Level Measurement	FCC Part 15: 2012 ANSI C63.4: 2009	PASS	Meets Class B Limit Minimum passing margin is 3.76B at 61.25MHz

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description : HD Cable STB

Model Number : DC351

FCC ID : QISDC351

Max. Work Freq : 604MHz

Applicant : HUAWEI TECHNOLOGIES CO.,LTD
Administration Building, Huawei Base, Bantian, Longgang District,
Shenzhen 518129 P.R. China

Manufacturer : HUAWEI TECHNOLOGIES CO.,LTD
Administration Building, Huawei Base, Bantian, Longgang District,
Shenzhen 518129 P.R. China

Power Adapter#1 : Manufacturer :HUAWEI S/N: HWHKABD42100135
Input : AC 100-240~, 50-60Hz, 0.8A
Output : DC 12V, 2A
DC Cable: Unshielded, Undetachable, 1.5m

Power Adapter#2 : Manufacturer :HUAWEI S/N: HWXQAAD42003571
Input : AC 100-240~, 50-60Hz, 0.8A
Output : DC 12V, 2A
DC Cable: Unshielded, Undetachable, 1.5m

Remote Controller : Manufacturer : HUAWEI

HDMI Cable : Shielded, Detachable, 1.5m

Date of Test : Jul.04~24, 2013

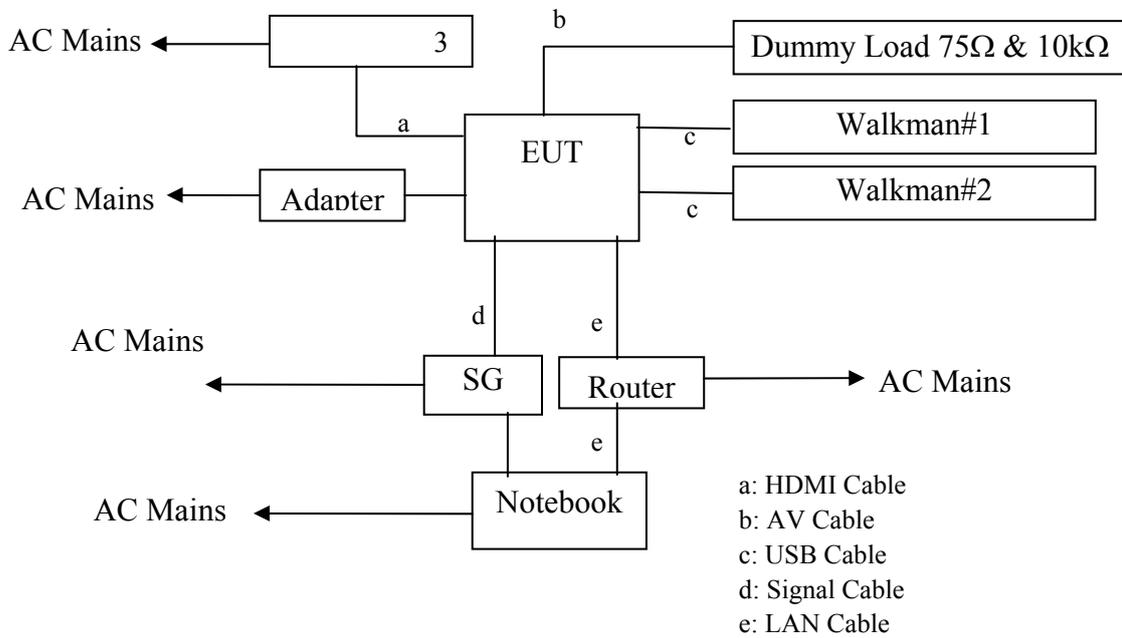
Date of Receipt : Jul.02, 2013

Sample Type : Prototype production

2.2. Tested Supporting System Details

	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	Notebook	--	Lenovo	V470	N/A	<input checked="" type="checkbox"/> CCC
2.	3D Monitor	--	SamSung	SA950	--	<input checked="" type="checkbox"/> CCC
		Power Adapter: M/N: AD-6314 DC Cable: Unshielded, Detachable, 1.5m AC Cable: Unshielded, Undetachable, 1.5m				
3.	Walkman#1	--	Sony	NWZ-S540	--	<input checked="" type="checkbox"/> CE/EMC
		USB Cable: Shielded Detachable 1.0m				
4.	Walkman#2	--	Sony	NW-S644	--	<input checked="" type="checkbox"/> CE/EMC
		USB Cable: Shielded Detachable 1.0m				
5.	Router	--	BUFFALO	WZR-HP-G3 02H	N/A	<input checked="" type="checkbox"/> FCC DoC <input checked="" type="checkbox"/> BSMI ID: R33001
6.	S.G	--	SFC-U	ROHDE&SC HWARZ	N/A	<input checked="" type="checkbox"/> CE/EMC
7.	LAN Cable	Unshielded Detachable 1.0m & 10.0m				
8.	Signal Cable	Shielded Detachable 10.0m				
9.	AV Cable	Shielded, Detachable, 1.2m				

2.3. Block diagram of connection between the EUT and simulators



(EUT: HD Cable STB)

2.4. Test Facility

Site Description

- Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China
- 3m Anechoic Chamber : Certificated by FCC, USA
Registration Number: 90454
Valid Date: Feb.22, 2015
- 3m & 10m Anechoic Chamber : Certificated by FCC, USA
Registration Number: 794232
Valid Date: Oct.31, 2015
- EMC Lab. : Certificated by DAkkS, Germany
Registration No: D-PL-12151-01-01
Valid Date: Feb.01, 2014
- Accredited by NVLAP, USA
NVLAP Code: 200372-0
Valid Date: Mar.31, 2014

2.5. Measurement Uncertainty (95% confidence levels, k=2)

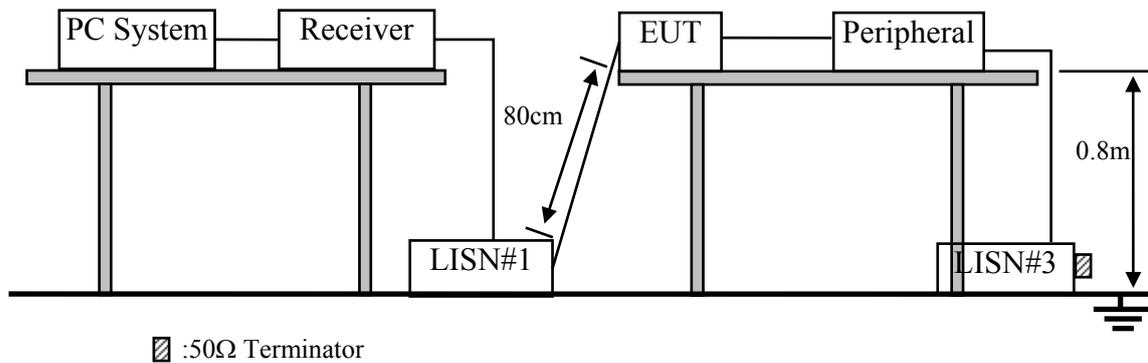
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	3.08 dB(9kHz to 150kHz)
	3.10 dB(150kHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	3.22 dB(30~200MHz, Polarize: H)
	3.23dB(30~200MHz, Polarize: V)
	3.49dB(200M~1GHz, Polarize: H)
	3.39dB(200M~1GHz, Polarize: V)
Uncertainty for Radiated Emission test in 3m chamber (1GHz-18GHz)	5.04dB (1~6GHz Distance: 3m)
	5.06 dB (6~18GHz Distance: 3m)
Uncertainty for disturbance voltage at the antenna terminals	2.0 dB (30MHz~1000MHz)
	0.24 dB (1000MHz~2150MHz)
Uncertainty for test site temperature and humidity	3%
	0.6°C

3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Oct.31, 12	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Oct.31, 12	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 13	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 13	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 2	May.08, 13	1 Year
6.	RF Cable	Fujikura	3D-2W	No.1	May.08, 13	1Year
7.	Coaxial Switch	Anritsu	MP59B	M50564	May.08, 13	1 Year
8.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 13	1 Year

3.2. Block Diagram of Test Setup



3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

- Notes: 1. * Decreasing linearly with logarithm of frequency.
 2. The lower limit shall apply at the transition frequencies.

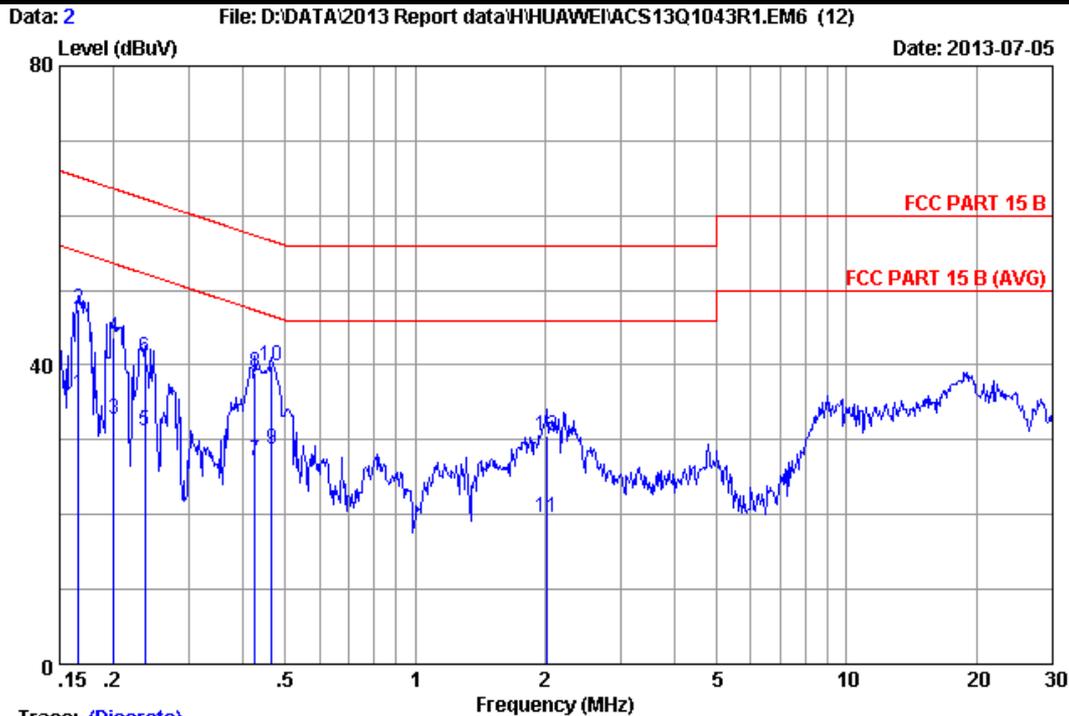
3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1. HD Cable STB (EUT)

Model Number : DC351
 Serial Number : N/A

3.4.2. Support Equipment : As Tested Supporting System Detail, in Section 2.2.

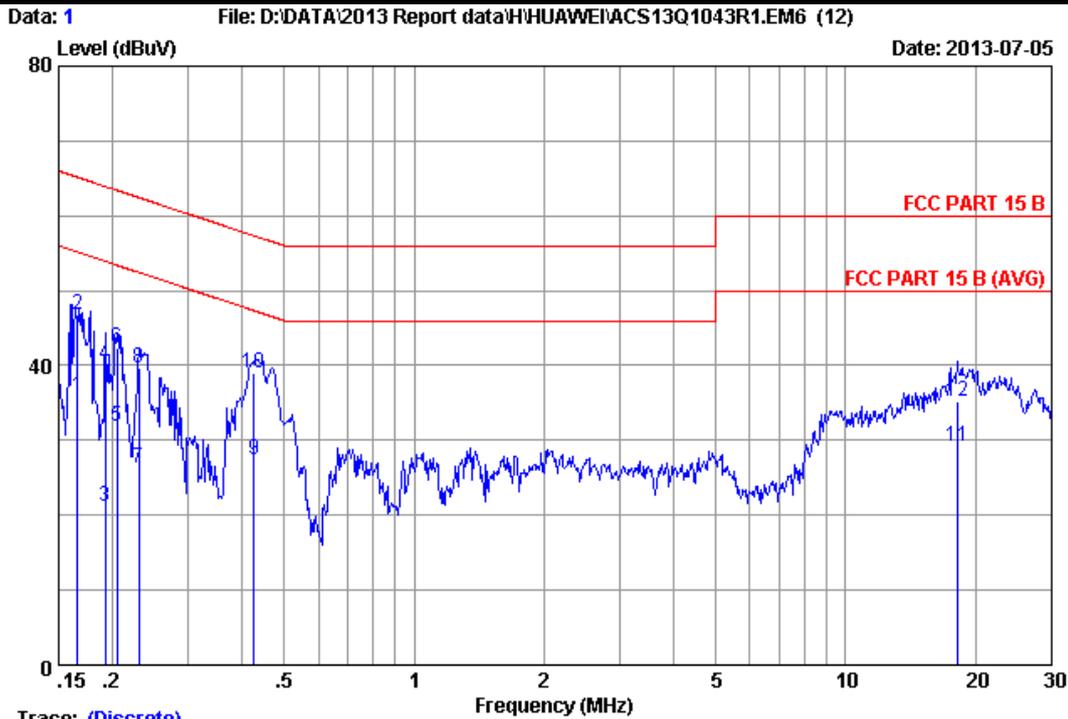


Trace: (Discrete)

Site no :1#conduction Data No :2
 Dis./Lisn. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24.2°C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH2 (F=114MHz)
 Adapter:HWHK&BD42100135

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16600	0.19	0.01	36.00	36.20	55.16	18.96	Average
2	0.16600	0.19	0.01	47.30	47.50	65.16	17.66	QP
3	0.20000	0.19	0.01	32.60	32.80	53.61	20.81	Average
4	0.20000	0.19	0.01	43.50	43.70	63.61	19.91	QP
5	0.23600	0.19	0.01	31.00	31.20	52.24	21.04	Average
6	0.23600	0.19	0.01	40.70	40.90	62.24	21.34	QP
7	0.42500	0.19	0.02	26.90	27.11	47.35	20.24	Average
8	0.42500	0.19	0.02	38.80	39.01	57.35	18.34	QP
9	0.46600	0.19	0.02	28.60	28.81	46.58	17.77	Average
10	0.46600	0.19	0.02	39.60	39.81	56.58	16.77	QP
11	2.011	0.24	0.04	19.40	19.68	46.00	26.32	Average
12	2.011	0.24	0.04	30.20	30.48	56.00	25.52	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

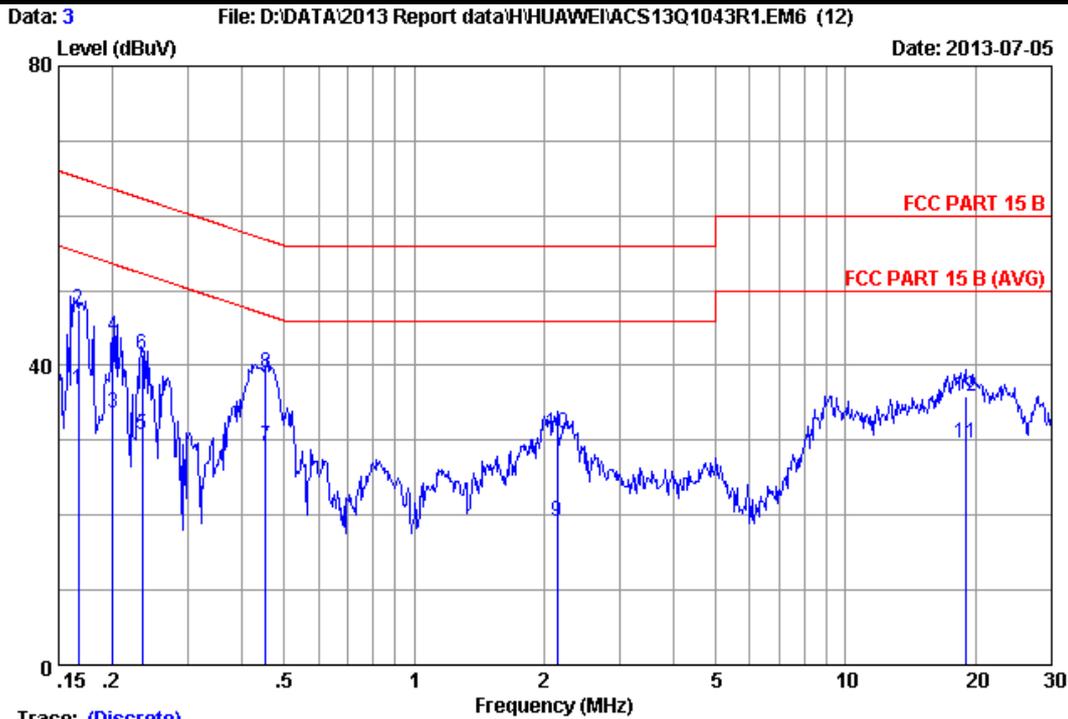


Trace: (Discrete)

Site no :1#conduction Data No :1
 Dis./Lisn. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH2 (F=114MHz)
 Adapter:HWHK&BD42100135

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16600	0.21	0.01	35.60	35.82	55.16	19.34	Average
2	0.16600	0.21	0.01	46.50	46.72	65.16	18.44	QP
3	0.19200	0.21	0.01	20.90	21.12	53.95	32.83	Average
4	0.19200	0.21	0.01	39.90	40.12	63.95	23.83	QP
5	0.20500	0.21	0.01	31.70	31.92	53.41	21.49	Average
6	0.20500	0.21	0.01	42.10	42.32	63.41	21.09	QP
7	0.23000	0.21	0.01	26.10	26.32	52.45	26.13	Average
8	0.23000	0.21	0.01	39.50	39.72	62.45	22.73	QP
9	0.42500	0.23	0.02	27.09	27.34	47.35	20.01	Average
10	0.42500	0.23	0.02	38.69	38.94	57.35	18.41	QP
11	18.135	0.87	0.13	28.20	29.20	50.00	20.80	Average
12	18.135	0.87	0.13	34.30	35.30	60.00	24.70	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

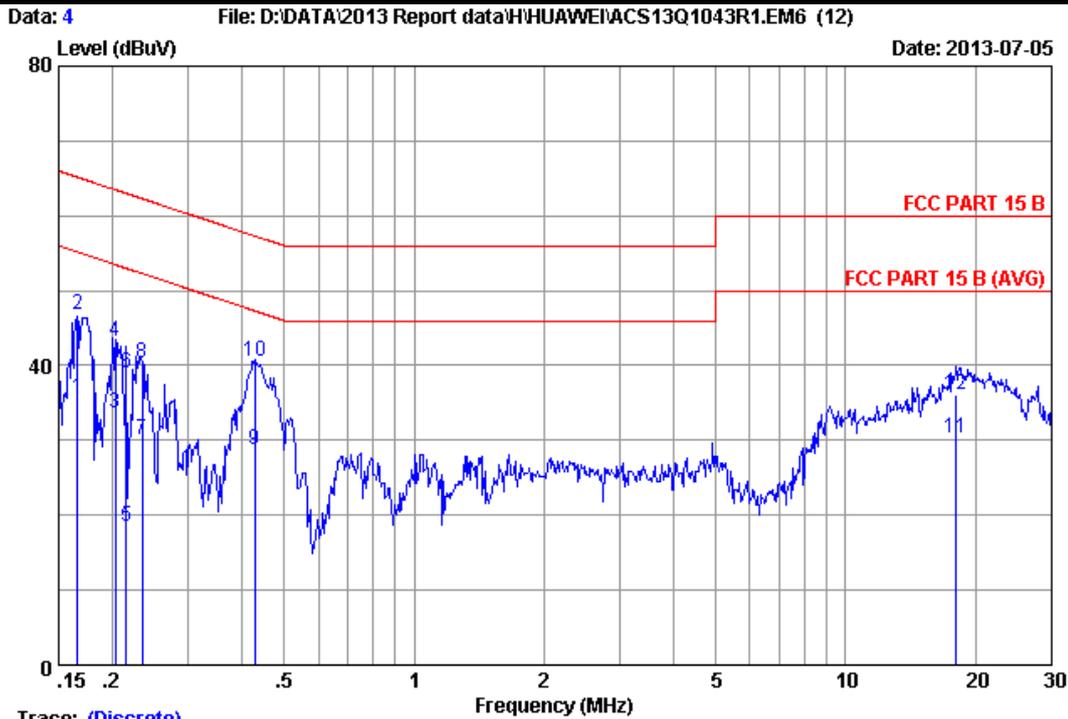


Trace: (Discrete)

Site no :1#conduction Data No :3
 Dis./Lisn. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH33 (F=338MHz)
 Adapter:HWHK&BD42100135

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16700	0.19	0.01	36.50	36.70	55.11	18.41	Average
2	0.16700	0.19	0.01	47.20	47.40	65.11	17.71	QP
3	0.20000	0.19	0.01	33.50	33.70	53.61	19.91	Average
4	0.20000	0.19	0.01	43.60	43.80	63.61	19.81	QP
5	0.23400	0.19	0.01	30.60	30.80	52.31	21.51	Average
6	0.23400	0.19	0.01	41.30	41.50	62.31	20.81	QP
7	0.45300	0.19	0.02	28.90	29.11	46.82	17.71	Average
8	0.45300	0.19	0.02	38.70	38.91	56.82	17.91	QP
9	2.143	0.24	0.04	18.90	19.18	46.00	26.82	Average
10	2.143	0.24	0.04	30.70	30.98	56.00	25.02	QP
11	18.930	1.07	0.14	28.49	29.70	50.00	20.30	Average
12	18.930	1.07	0.14	34.69	35.90	60.00	24.10	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

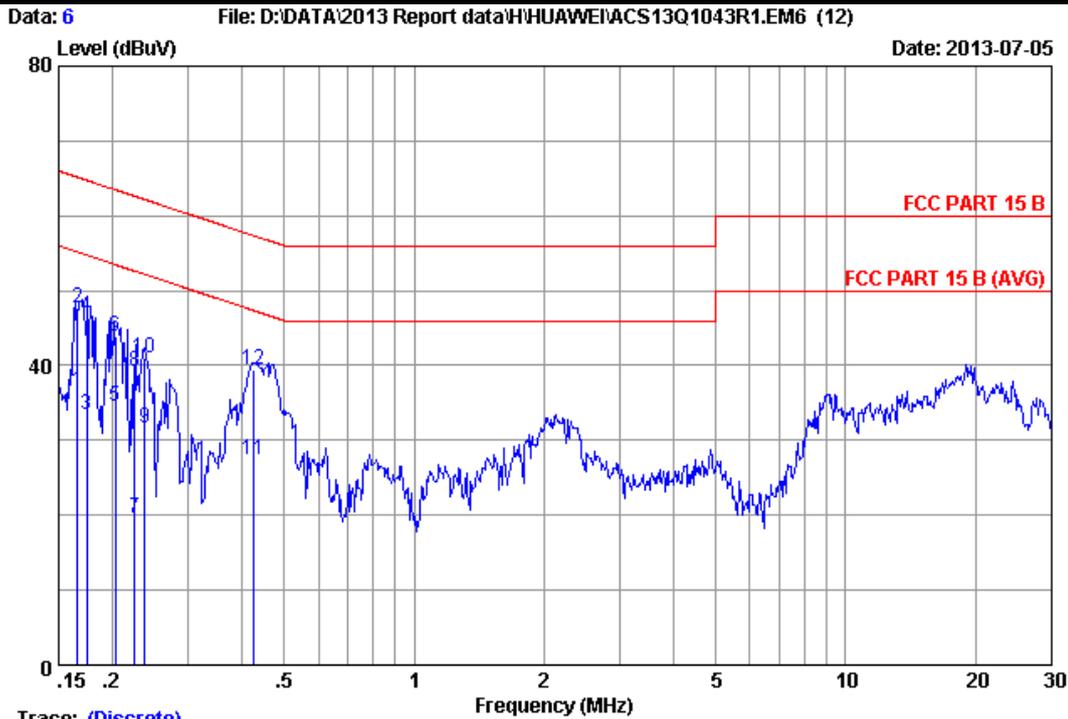


Trace: (Discrete)

Site no :1#conduction Data No :4
 Dis./Lisn. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH33 (F=338MHz)
 Adapter:HWHK&BD42100135

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16600	0.21	0.01	35.40	35.62	55.16	19.54	Average
2	0.16600	0.21	0.01	46.50	46.72	65.16	18.44	QP
3	0.20300	0.21	0.01	33.50	33.72	53.49	19.77	Average
4	0.20300	0.21	0.01	43.00	43.22	63.49	20.27	QP
5	0.21500	0.21	0.01	18.30	18.52	53.01	34.49	Average
6	0.21500	0.21	0.01	38.80	39.02	63.01	23.99	QP
7	0.23400	0.21	0.01	29.90	30.12	52.31	22.19	Average
8	0.23400	0.21	0.01	40.00	40.22	62.31	22.09	QP
9	0.42800	0.23	0.02	28.59	28.84	47.29	18.45	Average
10	0.42800	0.23	0.02	40.39	40.64	57.29	16.65	QP
11	18.039	0.86	0.13	29.30	30.29	50.00	19.71	Average
12	18.039	0.86	0.13	35.10	36.09	60.00	23.91	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

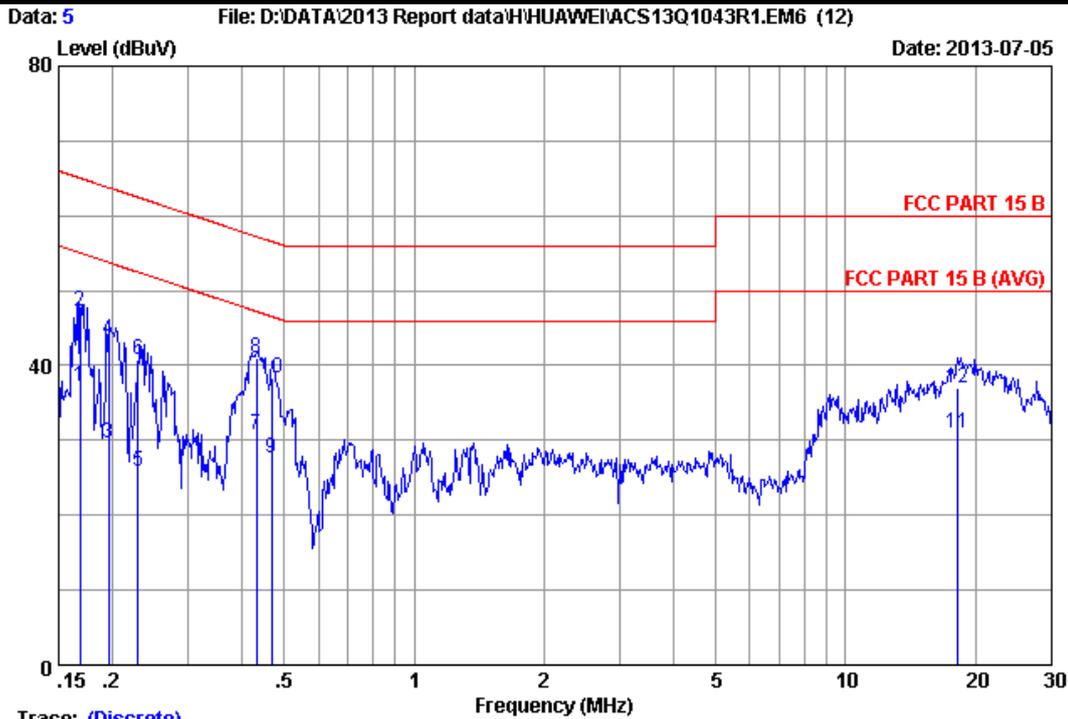


Trace: (Discrete)

Site no :1#conduction Data No :6
 Dis./Lisn. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH98 (F=858MHz)
 Adapter:HWHK&BD42100135

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16600	0.19	0.01	36.30	36.50	55.16	18.66	Average
2	0.16600	0.19	0.01	47.40	47.60	65.16	17.56	QP
3	0.17400	0.19	0.01	33.30	33.50	54.77	21.27	Average
4	0.17400	0.19	0.01	46.30	46.50	64.77	18.27	QP
5	0.20300	0.19	0.01	34.40	34.60	53.49	18.89	Average
6	0.20300	0.19	0.01	43.60	43.80	63.49	19.69	QP
7	0.22500	0.19	0.01	19.50	19.70	52.63	32.93	Average
8	0.22500	0.19	0.01	39.00	39.20	62.63	23.43	QP
9	0.23700	0.19	0.01	31.50	31.70	52.20	20.50	Average
10	0.23700	0.19	0.01	40.90	41.10	62.20	21.10	QP
11	0.42500	0.19	0.02	27.30	27.51	47.35	19.84	Average
12	0.42500	0.19	0.02	39.20	39.41	57.35	17.94	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

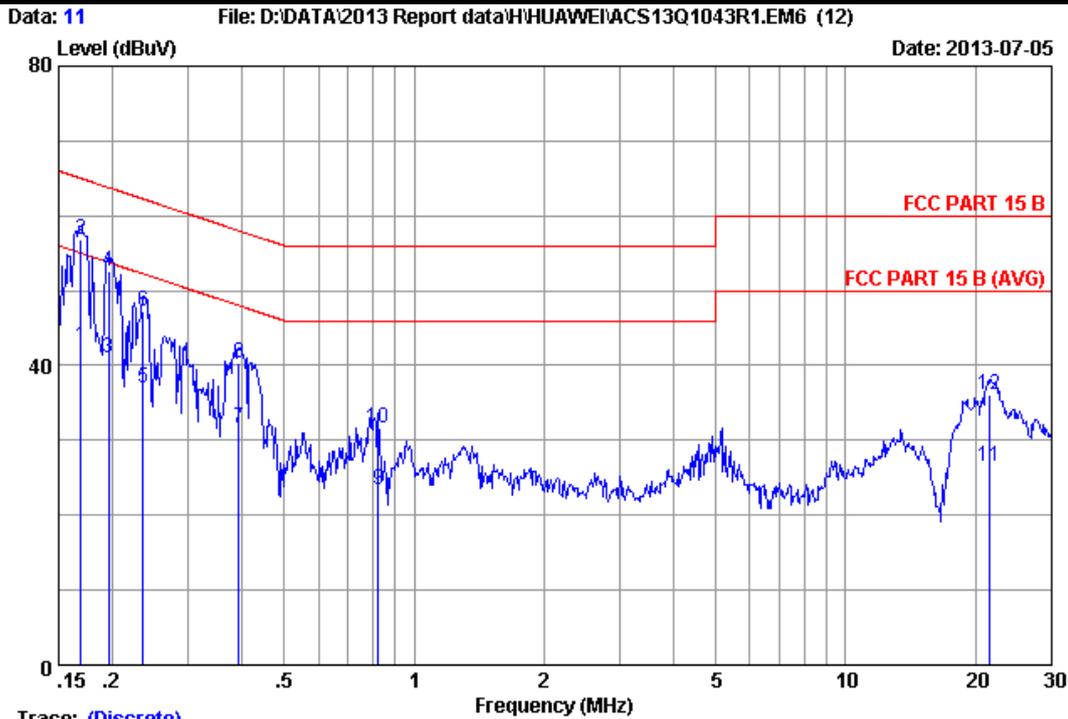


Trace: (Discrete)

Site no :1#conduction Data No :5
 Dis./Lisn. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH98 (F=858MHz)
 Adapter:HWHK&BD42100135

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16800	0.21	0.01	36.90	37.12	55.06	17.94	Average
2	0.16800	0.21	0.01	47.10	47.32	65.06	17.74	QP
3	0.19600	0.21	0.01	29.50	29.72	53.78	24.06	Average
4	0.19600	0.21	0.01	43.20	43.42	63.78	20.36	QP
5	0.22900	0.21	0.01	25.70	25.92	52.49	26.57	Average
6	0.22900	0.21	0.01	40.50	40.72	62.49	21.77	QP
7	0.43200	0.23	0.02	30.49	30.74	47.21	16.47	Average
8	0.43200	0.23	0.02	40.69	40.94	57.21	16.27	QP
9	0.46800	0.23	0.02	27.40	27.65	46.55	18.90	Average
10	0.46800	0.23	0.02	38.00	38.25	56.55	18.30	QP
11	18.135	0.87	0.13	30.00	31.00	50.00	19.00	Average
12	18.135	0.87	0.13	35.90	36.90	60.00	23.10	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

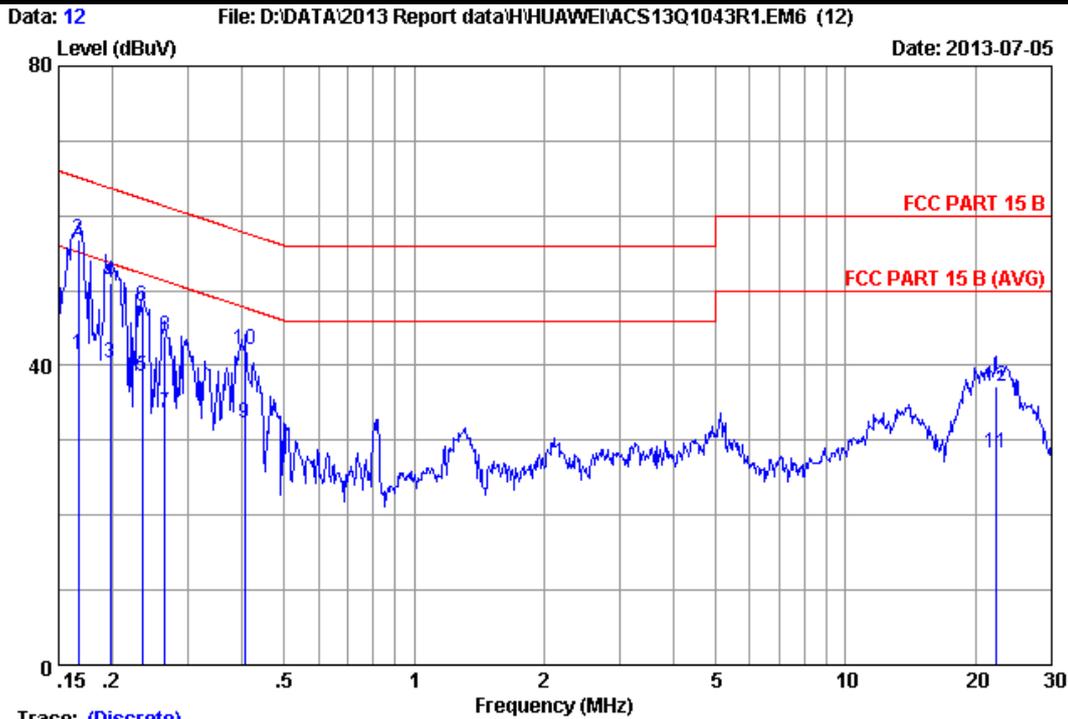


Trace: (Discrete)

Site no :1#conduction Data No :11
 Dis./Lisn. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH2 (F=114MHz)
 Adapter:HWXQ&AD42003571

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16900	0.19	0.01	42.30	42.50	55.01	12.51	Average
2	0.16900	0.19	0.01	56.60	56.80	65.01	8.21	QP
3	0.19600	0.19	0.01	40.90	41.10	53.78	12.68	Average
4	0.19600	0.19	0.01	52.40	52.60	63.78	11.18	QP
5	0.23500	0.19	0.01	36.90	37.10	52.27	15.17	Average
6	0.23500	0.19	0.01	47.10	47.30	62.27	14.97	QP
7	0.39300	0.19	0.02	31.50	31.71	48.00	16.29	Average
8	0.39300	0.19	0.02	40.20	40.41	58.00	17.59	QP
9	0.82600	0.20	0.03	23.20	23.43	46.00	22.57	Average
10	0.82600	0.20	0.03	31.50	31.73	56.00	24.27	QP
11	21.485	1.22	0.15	25.20	26.57	50.00	23.43	Average
12	21.485	1.22	0.15	34.80	36.17	60.00	23.83	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

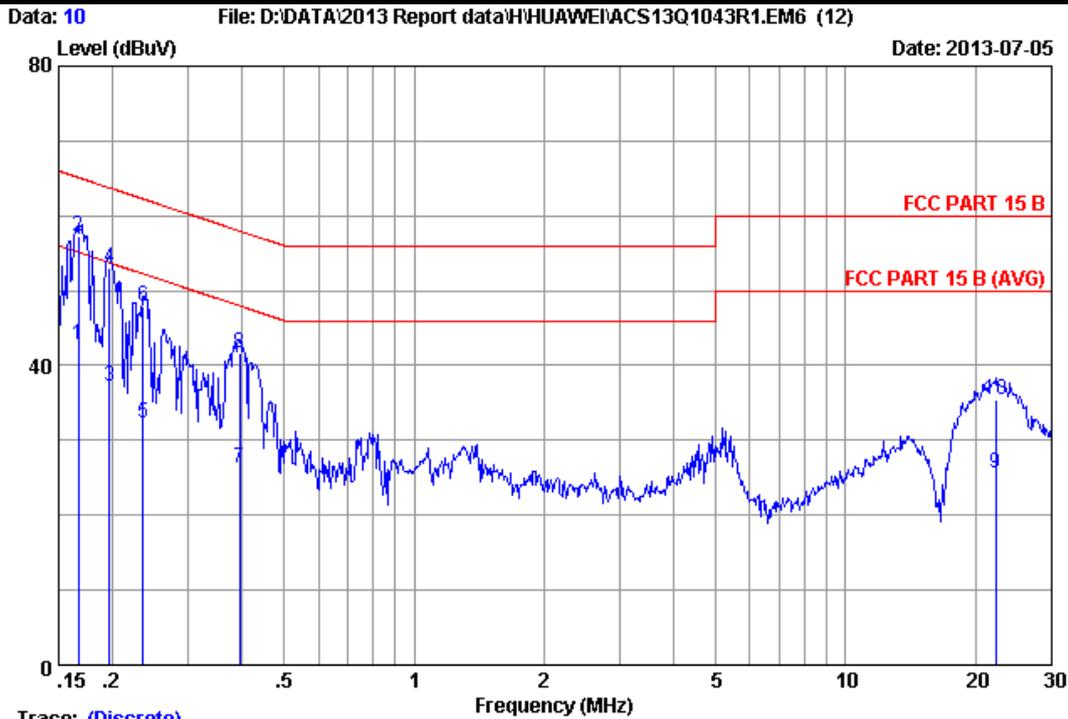


Trace: (Discrete)

Site no :1#conduction Data No :12
 Dis./Lisn. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH2 (F=114MHz)
 Adapter:HWXQ&AD42003571

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16700	0.21	0.01	41.20	41.42	55.11	13.69	Average
2	0.16700	0.21	0.01	56.70	56.92	65.11	8.19	QP
3	0.19800	0.21	0.01	40.20	40.42	53.69	13.27	Average
4	0.19800	0.21	0.01	50.80	51.02	63.69	12.67	QP
5	0.23400	0.21	0.01	38.30	38.52	52.31	13.79	Average
6	0.23400	0.21	0.01	47.60	47.82	62.31	14.49	QP
7	0.26400	0.22	0.01	33.50	33.73	51.30	17.57	Average
8	0.26400	0.22	0.01	43.70	43.93	61.30	17.37	QP
9	0.40400	0.23	0.02	31.99	32.24	47.77	15.53	Average
10	0.40400	0.23	0.02	41.79	42.04	57.77	15.73	QP
11	22.296	0.99	0.15	27.09	28.23	50.00	21.77	Average
12	22.296	0.99	0.15	35.99	37.13	60.00	22.87	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

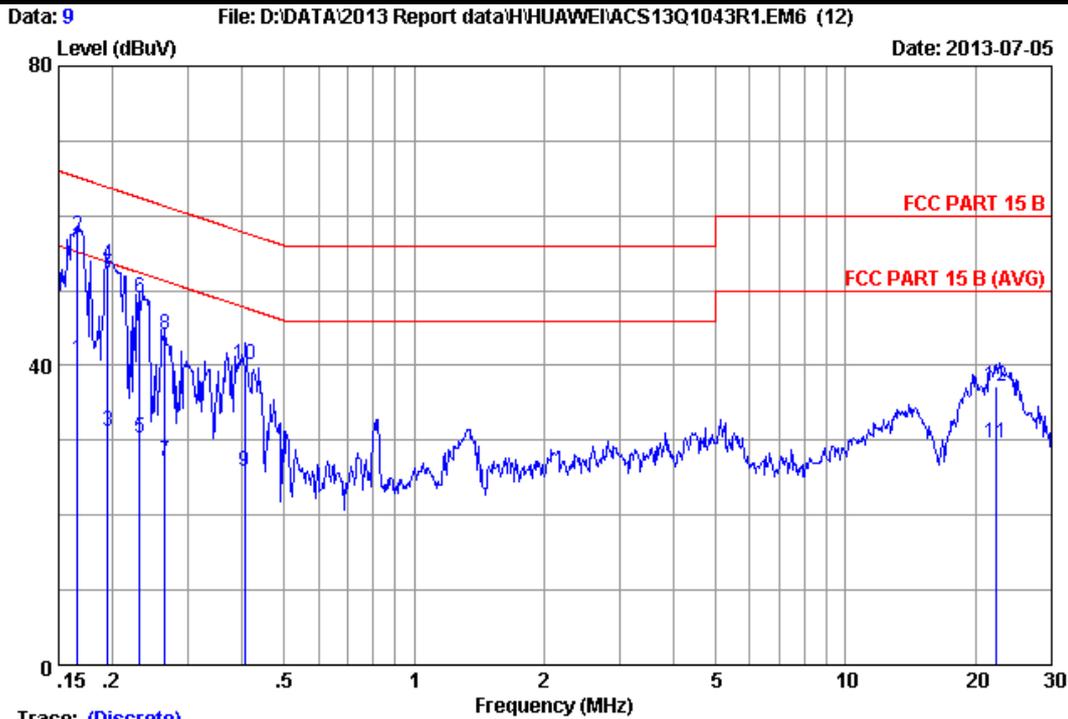


Trace: (Discrete)

Site no :1#conduction Data No :10
 Dis./Lisn. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH33 (F=338MHz)
 Adapter:HWXQ&AD42003571

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16700	0.19	0.01	42.60	42.80	55.11	12.31	Average
2	0.16700	0.19	0.01	57.00	57.20	65.11	7.91	QP
3	0.19700	0.19	0.01	37.00	37.20	53.74	16.54	Average
4	0.19700	0.19	0.01	52.80	53.00	63.74	10.74	QP
5	0.23500	0.19	0.01	32.20	32.40	52.27	19.87	Average
6	0.23500	0.19	0.01	47.60	47.80	62.27	14.47	QP
7	0.39400	0.19	0.02	26.20	26.41	47.98	21.57	Average
8	0.39400	0.19	0.02	41.40	41.61	57.98	16.37	QP
9	22.295	1.25	0.15	24.30	25.70	50.00	24.30	Average
10	22.295	1.25	0.15	34.00	35.40	60.00	24.60	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

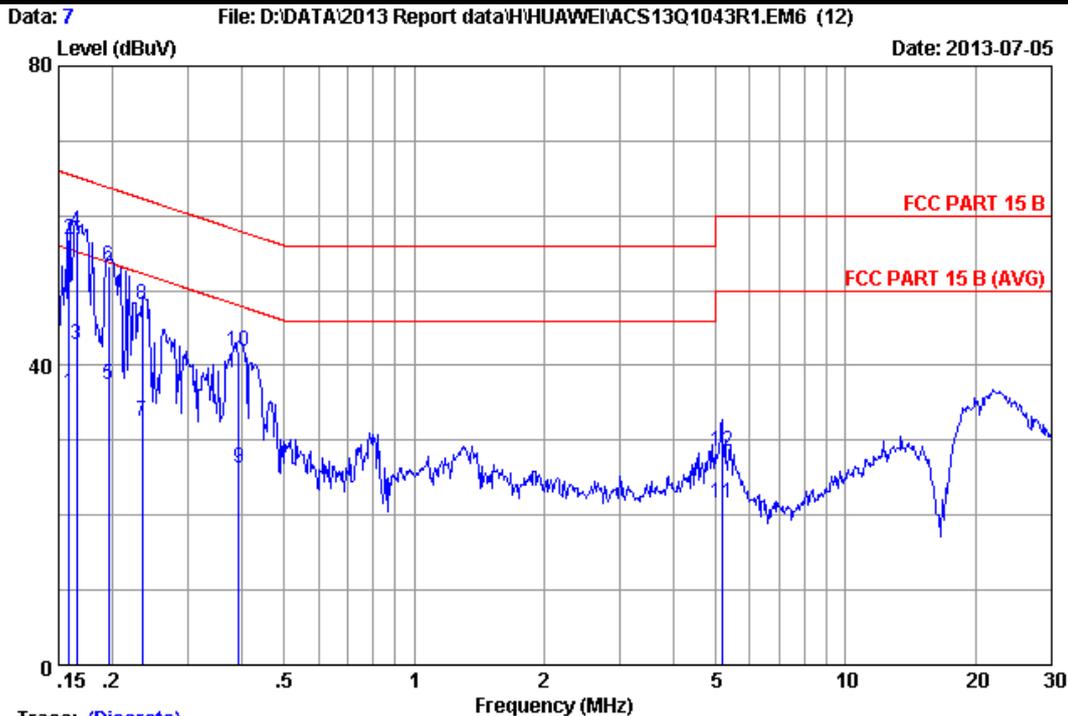


Trace: (Discrete)

Site no :1#conduction Data No :9
 Dis./Lisn. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH33 (F=338MHz)
 Adapter:HWXQ&AD42003571

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16600	0.21	0.01	40.60	40.82	55.16	14.34	Average
2	0.16600	0.21	0.01	57.00	57.22	65.16	7.94	QP
3	0.19500	0.21	0.01	31.00	31.22	53.82	22.60	Average
4	0.19500	0.21	0.01	53.20	53.42	63.82	10.40	QP
5	0.23100	0.21	0.01	30.00	30.22	52.41	22.19	Average
6	0.23100	0.21	0.01	48.70	48.92	62.41	13.49	QP
7	0.26500	0.22	0.01	27.00	27.23	51.27	24.04	Average
8	0.26500	0.22	0.01	43.80	44.03	61.27	17.24	QP
9	0.40500	0.23	0.02	25.49	25.74	47.75	22.01	Average
10	0.40500	0.23	0.02	39.79	40.04	57.75	17.71	QP
11	22.290	0.99	0.15	28.39	29.53	50.00	20.47	Average
12	22.290	0.99	0.15	35.99	37.13	60.00	22.87	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

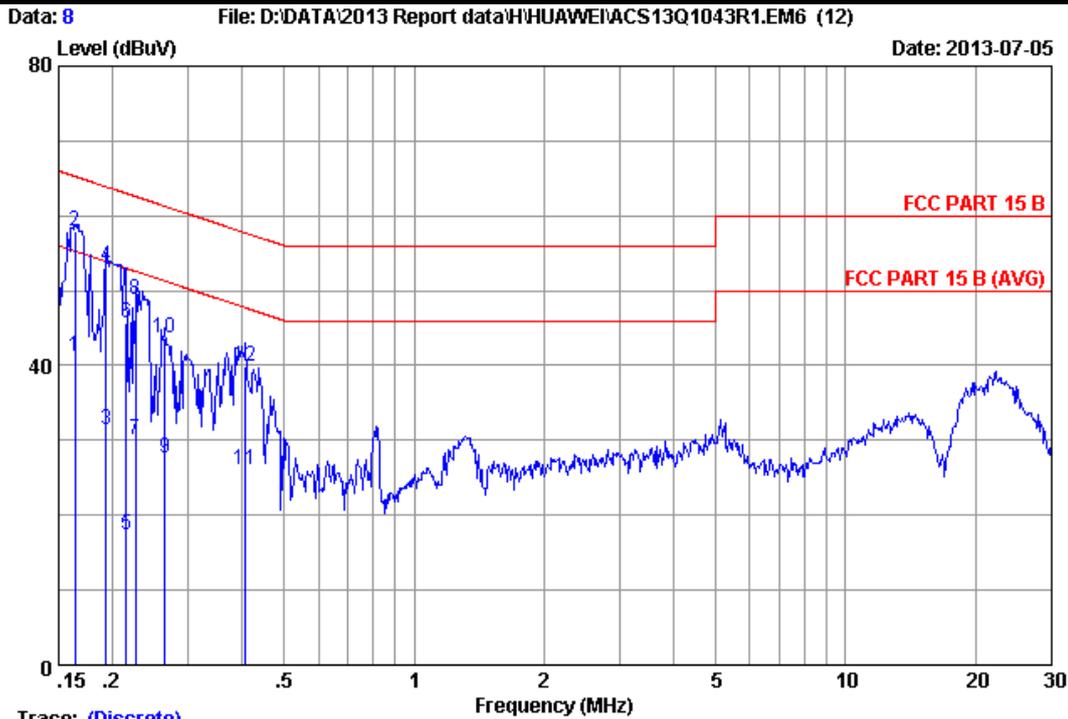


Trace: (Discrete)

Site no :1#conduction Data No :7
 Dis./Lisn. :** 2012 ESH2-25 LINE
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH98 (F=858MHz)
 Adapter:HWXQ&AD42003571

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15900	0.19	0.01	36.10	36.30	55.52	19.22	Average
2	0.15900	0.19	0.01	56.70	56.90	65.52	8.62	QP
3	0.16500	0.19	0.01	42.50	42.70	55.21	12.51	Average
4	0.16500	0.19	0.01	57.70	57.90	65.21	7.31	QP
5	0.19600	0.19	0.01	37.20	37.40	53.78	16.38	Average
6	0.19600	0.19	0.01	53.10	53.30	63.78	10.48	QP
7	0.23400	0.19	0.01	32.40	32.60	52.31	19.71	Average
8	0.23400	0.19	0.01	48.00	48.20	62.31	14.11	QP
9	0.39300	0.19	0.02	26.00	26.21	48.00	21.79	Average
10	0.39300	0.19	0.02	41.60	41.81	58.00	16.19	QP
11	5.166	0.32	0.07	21.20	21.59	50.00	28.41	Average
12	5.166	0.32	0.07	28.20	28.59	60.00	31.41	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



Trace: (Discrete)

Site no :1#conduction Data No :8
 Dis./Lisn. :** 2012 ESH2-25 NEUTRAL
 Limit :FCC PART 15 B
 Env./Ins. :24.2*C/45% Engineer :Jolly_Xu
 EUT :HD Cable STB M/N:DC351
 Power Rating :DC 12V Adapter Input AC 120V/60Hz
 Test Mode :DTV Mode
 CH98 (F=858MHz)
 Adapter:HWXQ&AD42003571

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.16400	0.21	0.01	41.00	41.22	55.26	14.04	Average
2	0.16400	0.21	0.01	57.70	57.92	65.26	7.34	QP
3	0.19300	0.21	0.01	31.10	31.32	53.91	22.59	Average
4	0.19300	0.21	0.01	53.10	53.32	63.91	10.59	QP
5	0.21500	0.21	0.01	17.20	17.42	53.01	35.59	Average
6	0.21500	0.21	0.01	45.40	45.62	63.01	17.39	QP
7	0.22600	0.21	0.01	29.80	30.02	52.60	22.58	Average
8	0.22600	0.21	0.01	48.60	48.82	62.60	13.78	QP
9	0.26400	0.22	0.01	27.40	27.63	51.30	23.67	Average
10	0.26400	0.22	0.01	43.50	43.73	61.30	17.57	QP
11	0.40600	0.23	0.02	25.79	26.04	47.73	21.69	Average
12	0.40600	0.23	0.02	39.59	39.84	57.73	17.89	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1. Test Equipment

4.1.1. For frequency range 30MHz~1000MHz

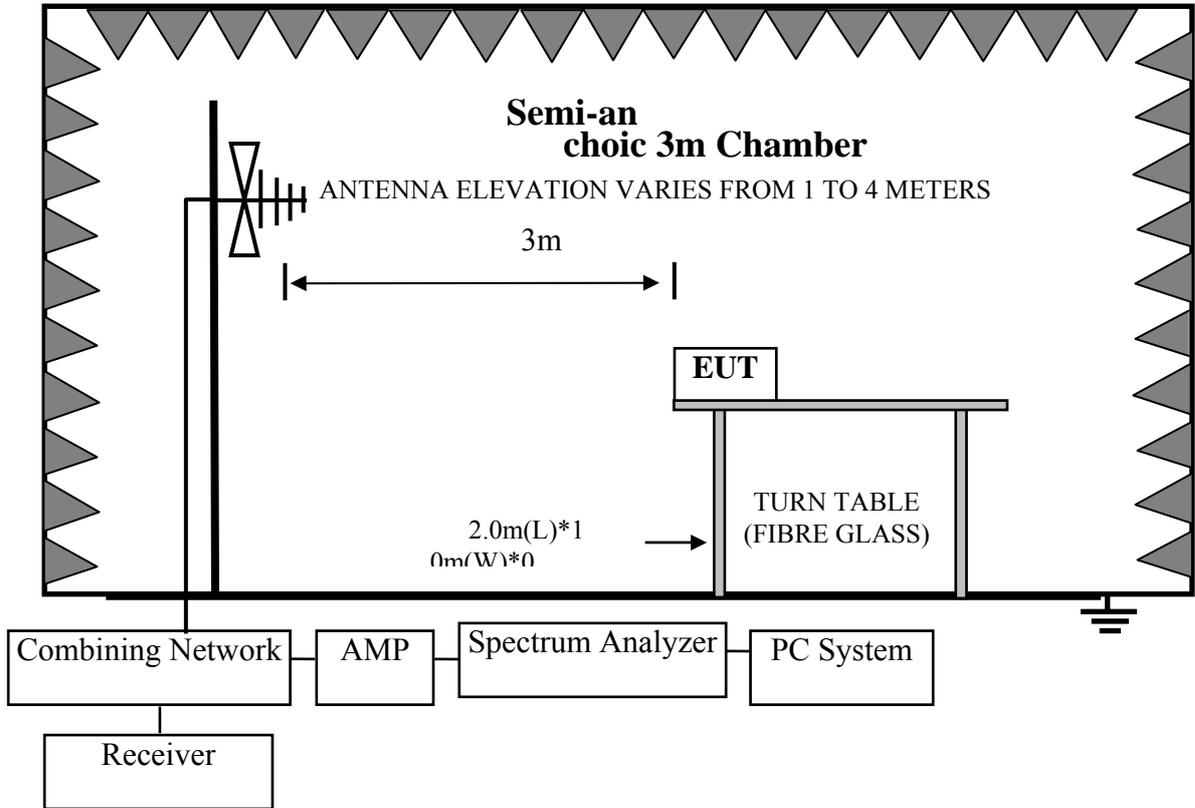
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.24,12	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 13	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 13	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 13	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Mar.14,13	1 Year
6	RF Cable	MIYAZAKI	CFD400-NL	3# Chamber No.1	May.08, 13	1 Year
7	Coaxial Switch	Anritsu	MP59B	M74389	May.08, 13	1 Year

4.1.2. For frequency range 1GHz~5GHz

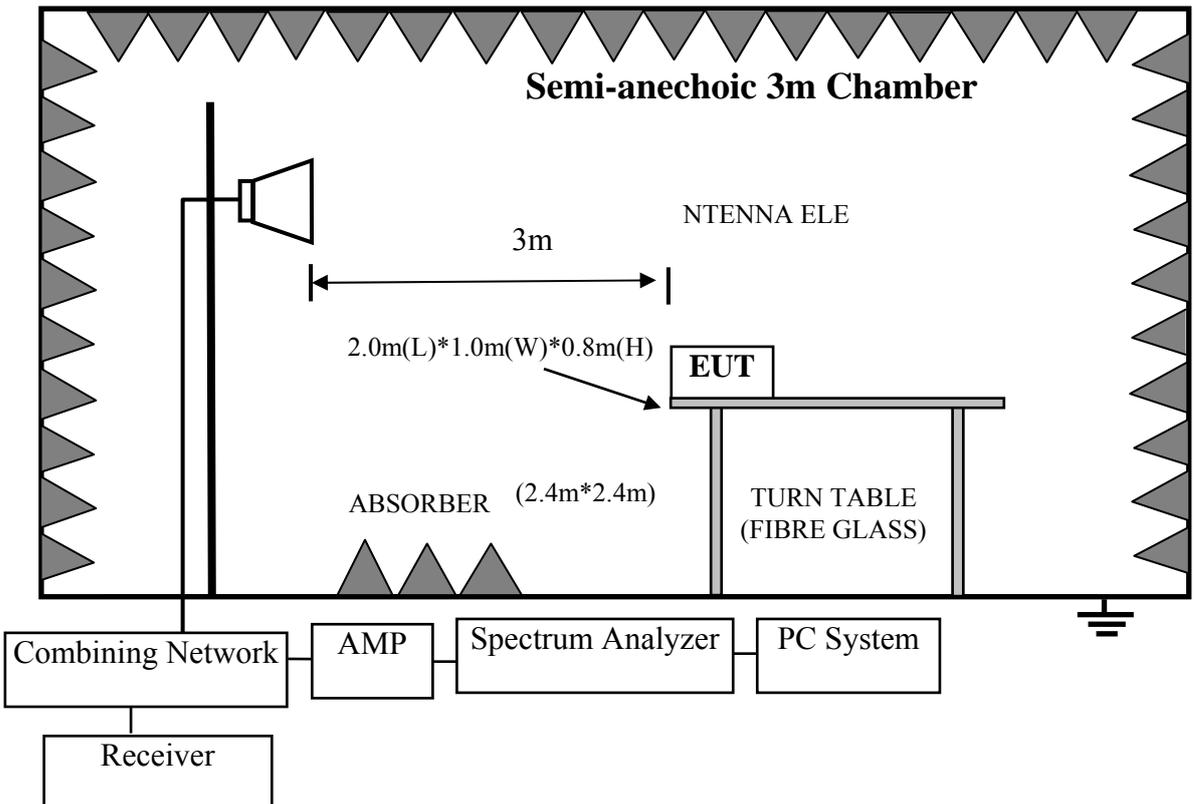
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.24,12	1 Year
2	Spectrum Analyzer	Agilent	E4407B	MY41440292	May.08, 13	1 Year
3	Horn Antenna	EMCO	3115	9607-4877	Aug.28, 13	1 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 13	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX106	77980/6	May.08, 13	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	May.08, 13	1 Year

4.2. Block Diagram of Test Setup

4.2.1. In Anechoic Chamber Test Setup Diagram for 30MHz~1000MHz



4.2.2. Frequency range above 1GHz



4.3. Radiated Emission Limit

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μV)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0
Above 1000	3	74(Peak)54(Average)

- Remark: (1) Emission level = Antenna Factor + Cable Loss + Reading
Emission level = Antenna Factor - Amp Factor + Cable Loss + Reading
(above 1000MHz)
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. EUT Configuration on Test

The configurations of EUT are listed in Section 3.4

4.5. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.5. except the test set up replaced by Section 4.2.

4.6. Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4: 2009 on Radiated Emission test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz.

4.7. Radiated Disturbance Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

EUT: HD Cable STB Model No. : DC351

For frequency range 30MHz~1000MHz

The EUT with the following test modes were tested and selected to read Q.P values, all the test results are listed in next pages.

Test Date: Jul.04, 2013 Temperature: 24°C Humidity: 56%

The details of test modes are as follows :

No.	Adapter	Test Mode	Reference Test Data No.	
			Horizontal	Vertical
1.	HWHKABD42 100135	DVB Mode CH2(F=114MHz)	# 7	# 8
2. ※		DVB Mode CH33(F=338MHz)	# 10	# 9
3.		DVB Mode CH98(F=858MHz)	# 11	# 12
4.	HWXQAAD42 003571	DVB Mode CH2(F=114MHz)	# 6	# 5
5.		DVB Mode CH33(F=338MHz)	# 3	# 4
6.		DVB Mode CH98(F=858MHz)	# 2	# 1

(※ Worst test mode)

For frequency range 1GHz~5GHz

The EUT with below test mode were measured within Anechoic Chamber and the test results listed in next pages

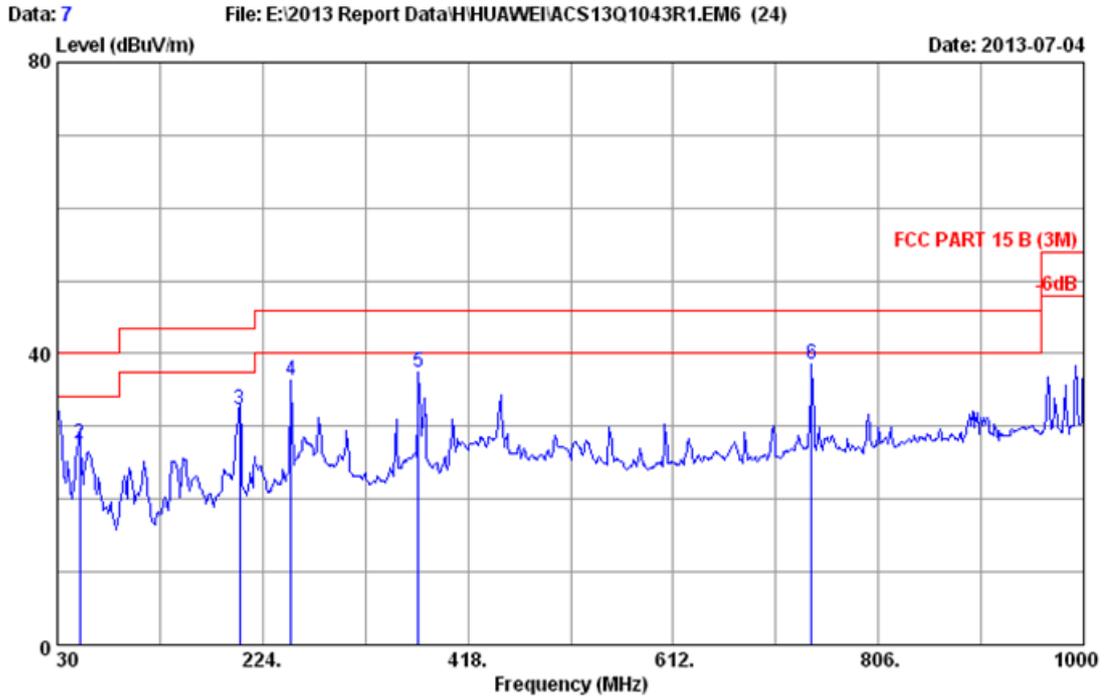
Note: For all the emissions above 1GHz, the peak measured level comply with peak limit, so the average level were deemed to comply with average limit.

Test Date: Jul.04, 2013 Temperature: 24°C Humidity: 56%

No.	Adapter	Test Mode	Reference Test Data No.	
			Horizontal	Vertical
1.	HWHKABD42 100135	DVB Mode CH2(F=114MHz)	# 17	# 18
2.		DVB Mode CH33(F=338MHz)	# 15	# 16
3. ※		DVB Mode CH98(F=858MHz)	# 13	# 14
4.	HWXQAAD42 003571	DVB Mode CH2(F=114MHz)	# 20	# 19
5.		DVB Mode CH33(F=338MHz)	# 22	# 21
6.		DVB Mode CH98(F=858MHz)	# 23	# 24

(※ Worst test mode)

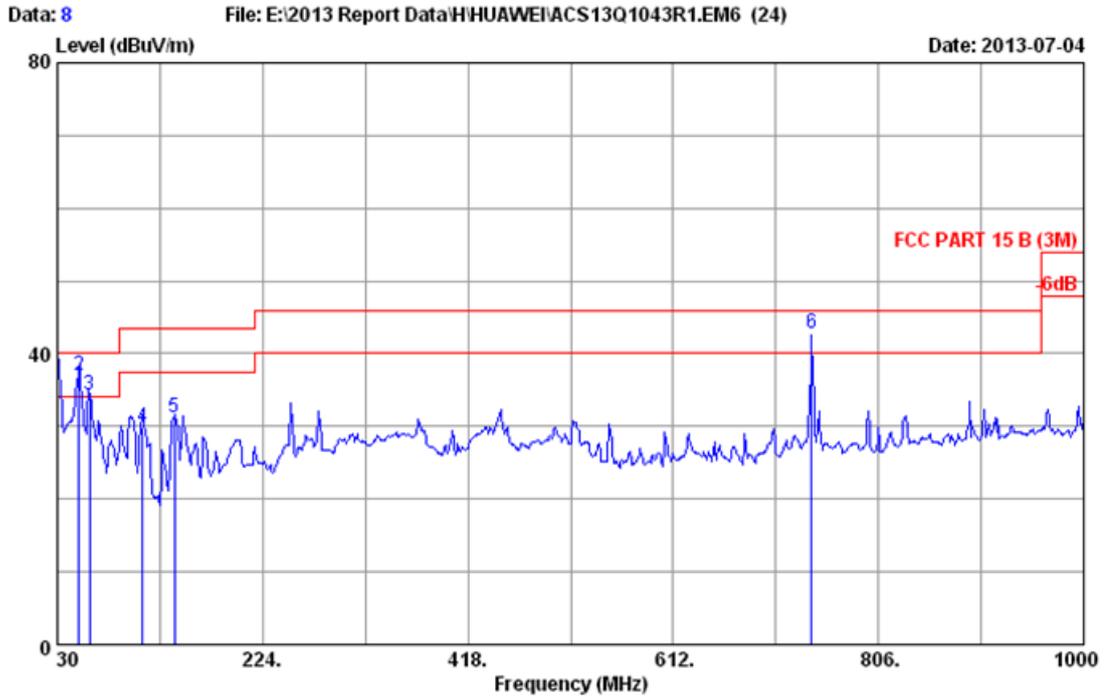
30MHz~1000MHz



Site no. : 3m Chamber Data no. : 7
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH2 (F=114MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.630	19.58	0.84	10.41	30.83	40.00	9.17	QP
2	51.330	8.30	1.20	18.20	27.70	40.00	12.30	QP
3	202.660	10.05	1.80	20.50	32.35	43.50	11.15	QP
4	251.160	12.82	1.98	21.41	36.21	46.00	9.79	QP
5	371.440	15.53	2.38	19.44	37.35	46.00	8.65	QP
6	742.760	21.96	3.45	13.19	38.60	46.00	7.40	QP

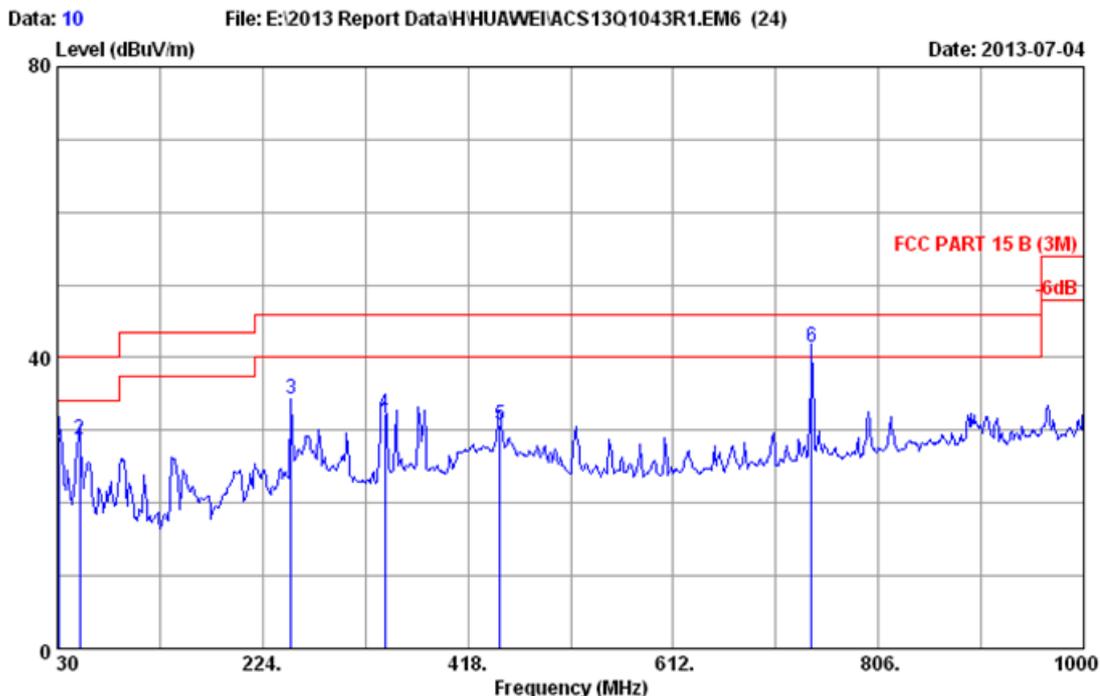
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 8
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH2 (F=114MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.630	19.58	0.84	16.11	36.53	40.00	3.47	QP
2	50.450	8.70	1.19	27.00	36.89	40.00	3.11	QP
3	60.560	6.10	1.24	26.90	34.24	40.00	5.76	QP
4	110.220	11.62	1.45	16.90	29.97	43.50	13.53	QP
5	140.950	12.20	1.57	17.50	31.27	43.50	12.23	QP
6	742.550	21.95	3.45	17.40	42.80	46.00	3.20	QP

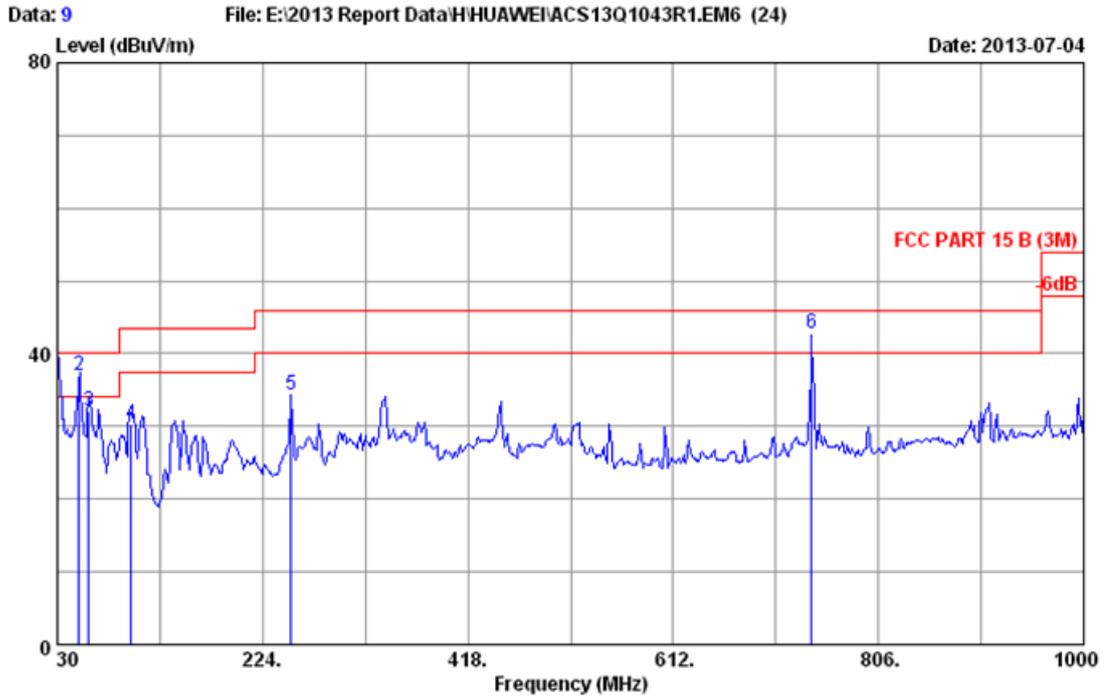
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 10
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH33 (F=338MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.940	18.93	0.86	9.39	29.18	40.00	10.82	QP
2	51.340	8.30	1.20	19.24	28.74	40.00	11.26	QP
3	251.160	12.82	1.98	19.52	34.32	46.00	11.68	QP
4	339.940	14.80	2.29	15.19	32.28	46.00	13.72	QP
5	448.510	17.07	2.60	11.00	30.67	46.00	15.33	QP
6	742.550	21.95	3.45	16.10	41.50	46.00	4.50	QP

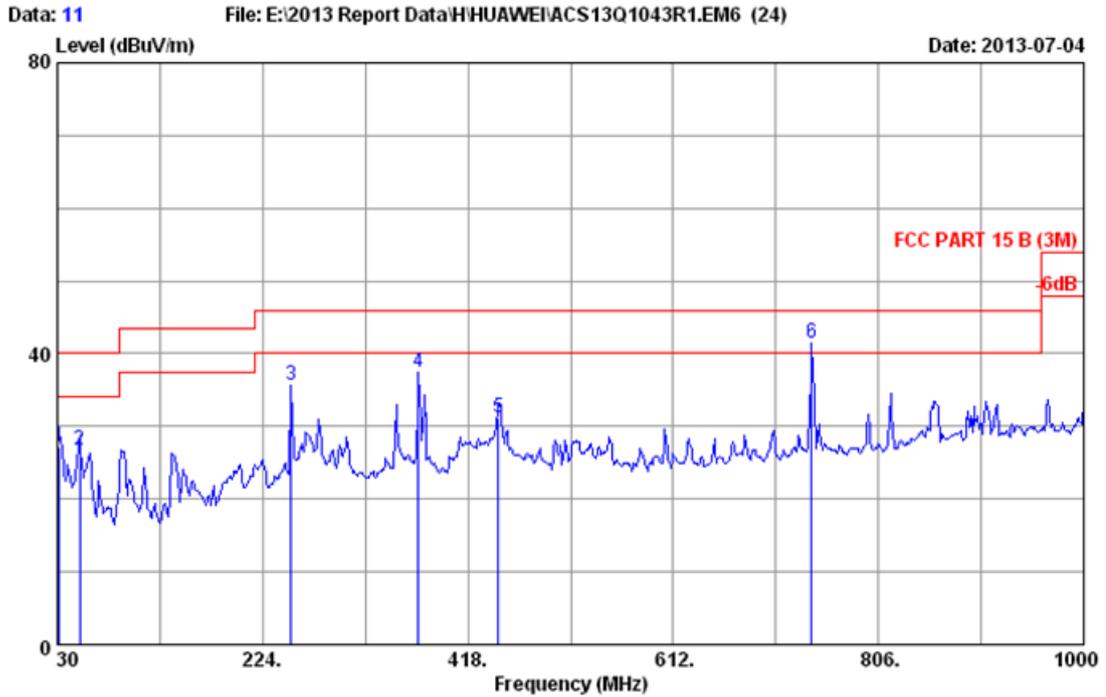
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 9
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH33 (F=338MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.630	19.58	0.84	16.41	36.83	40.00	3.17	QP
2	50.450	8.70	1.19	27.00	36.89	40.00	3.11	QP
3	59.530	6.15	1.23	24.60	31.98	40.00	8.02	QP
4	99.450	10.22	1.41	18.60	30.23	43.50	13.27	QP
5	251.160	12.82	1.98	19.58	34.38	46.00	11.62	QP
6	742.550	21.95	3.45	17.50	42.90	46.00	3.10	QP

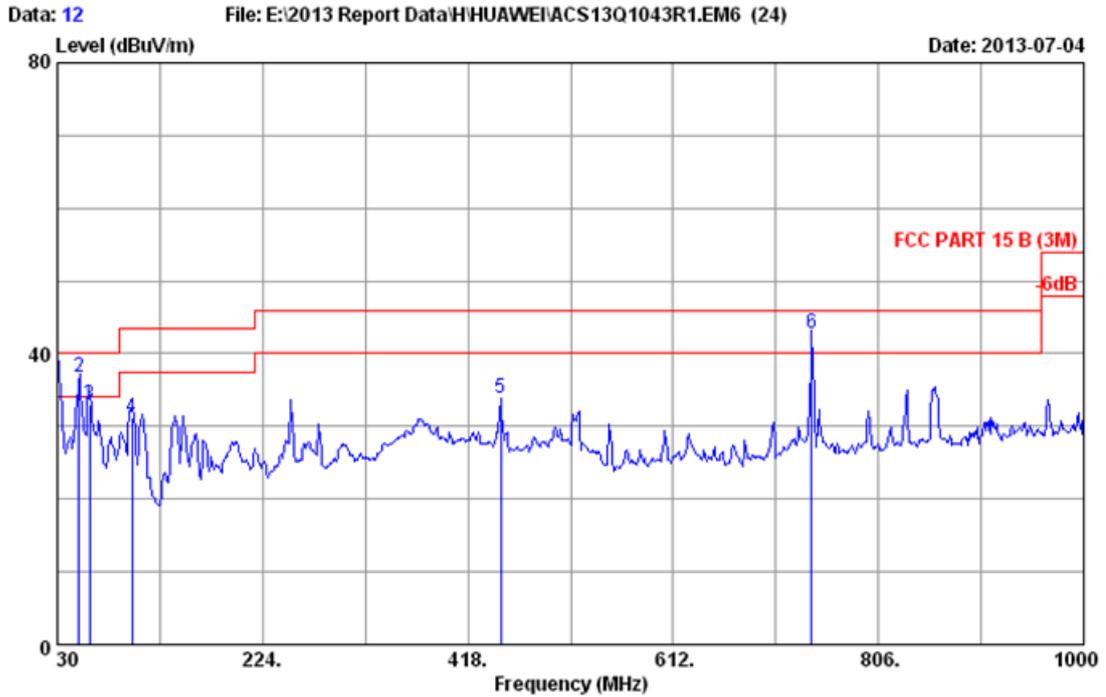
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 11
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH98 (F=858MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.940	18.93	0.86	7.40	27.19	40.00	12.81	QP
2	51.340	8.30	1.20	17.25	26.75	40.00	13.25	QP
3	251.160	12.82	1.98	20.83	35.63	46.00	10.37	QP
4	371.440	15.53	2.38	19.53	37.44	46.00	8.56	QP
5	447.100	17.04	2.60	11.67	31.31	46.00	14.69	QP
6	742.950	21.96	3.45	15.95	41.36	46.00	4.64	QP

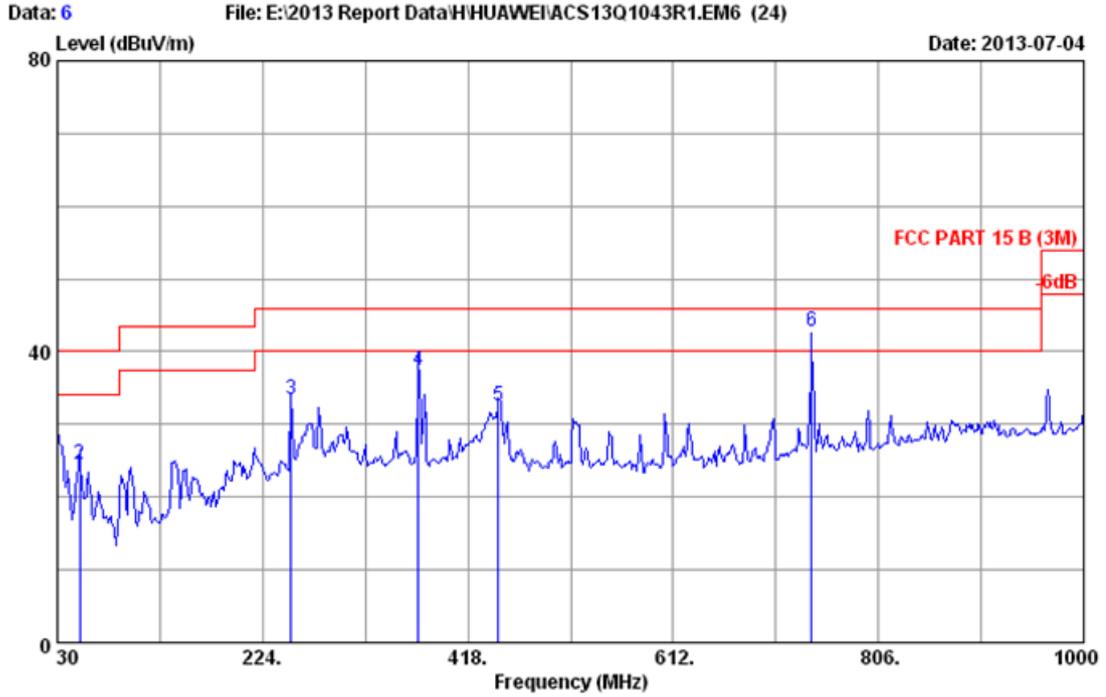
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 12
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH98 (F=858MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.630	19.58	0.84	16.31	36.73	40.00	3.27	QP
2	50.450	8.70	1.19	26.90	36.79	40.00	3.21	QP
3	60.700	6.10	1.24	25.60	32.94	40.00	7.06	QP
4	100.830	10.42	1.41	19.31	31.14	43.50	12.36	QP
5	449.040	17.08	2.60	14.23	33.91	46.00	12.09	QP
6	742.550	21.95	3.45	17.40	42.80	46.00	3.20	QP

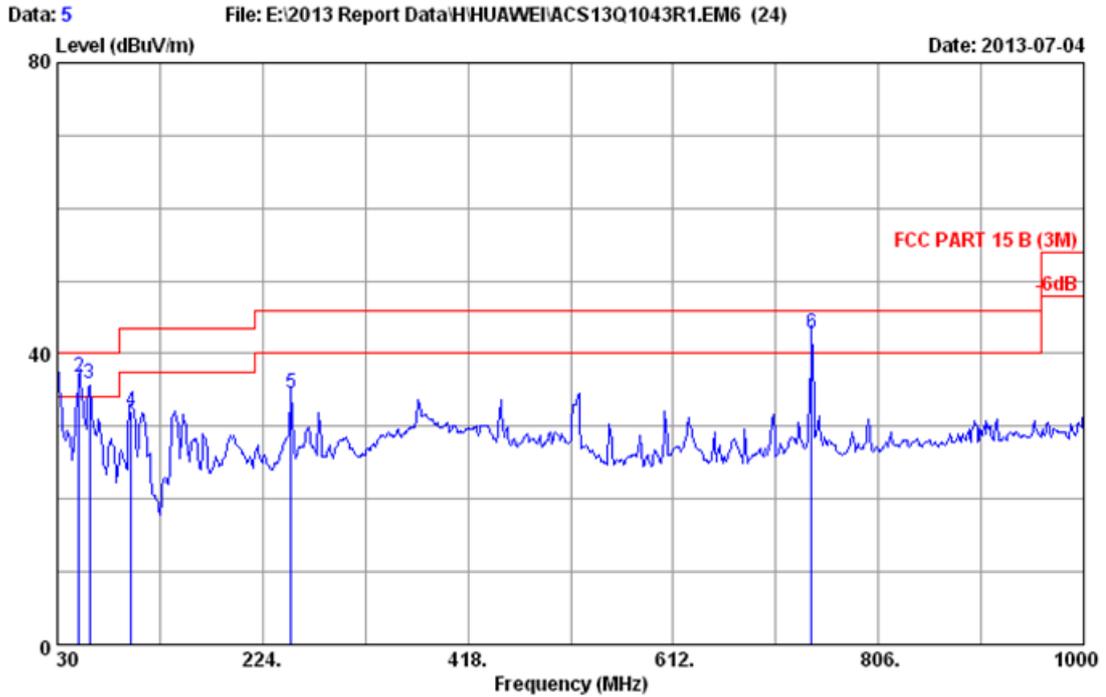
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 6
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH2 (F=114MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	19.90	0.83	6.42	27.15	40.00	12.85	QP
2	51.340	8.30	1.20	15.12	24.62	40.00	15.38	QP
3	251.160	12.82	1.98	18.60	33.40	46.00	12.60	QP
4	371.280	15.53	2.38	19.49	37.40	46.00	8.60	QP
5	447.100	17.04	2.60	12.91	32.55	46.00	13.45	QP
6	742.530	21.95	3.45	17.40	42.80	46.00	3.20	QP

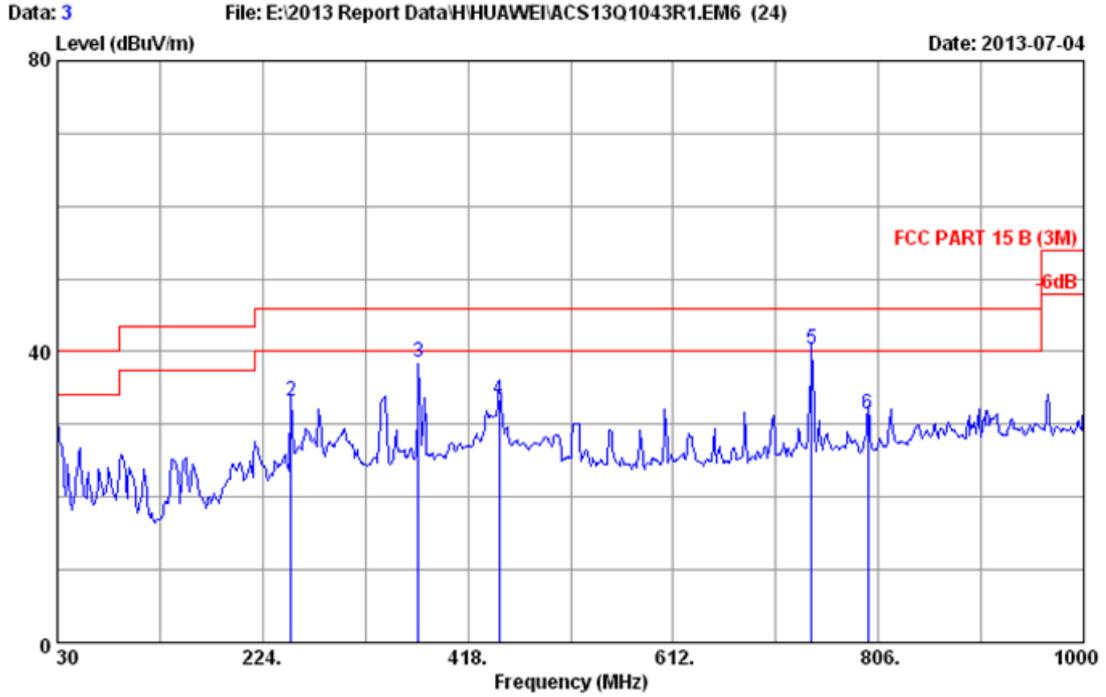
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 5
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH2 (F=114MHz)
 Adapter:HWXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.630	19.58	0.84	13.61	34.03	40.00	5.97	QP
2	50.450	8.70	1.19	26.80	36.69	40.00	3.31	QP
3	60.330	6.10	1.24	28.50	35.84	40.00	4.16	QP
4	99.870	10.28	1.41	20.40	32.09	43.50	11.41	QP
5	250.620	12.76	1.98	19.70	34.44	46.00	11.56	QP
6	742.550	21.95	3.45	17.30	42.70	46.00	3.30	QP

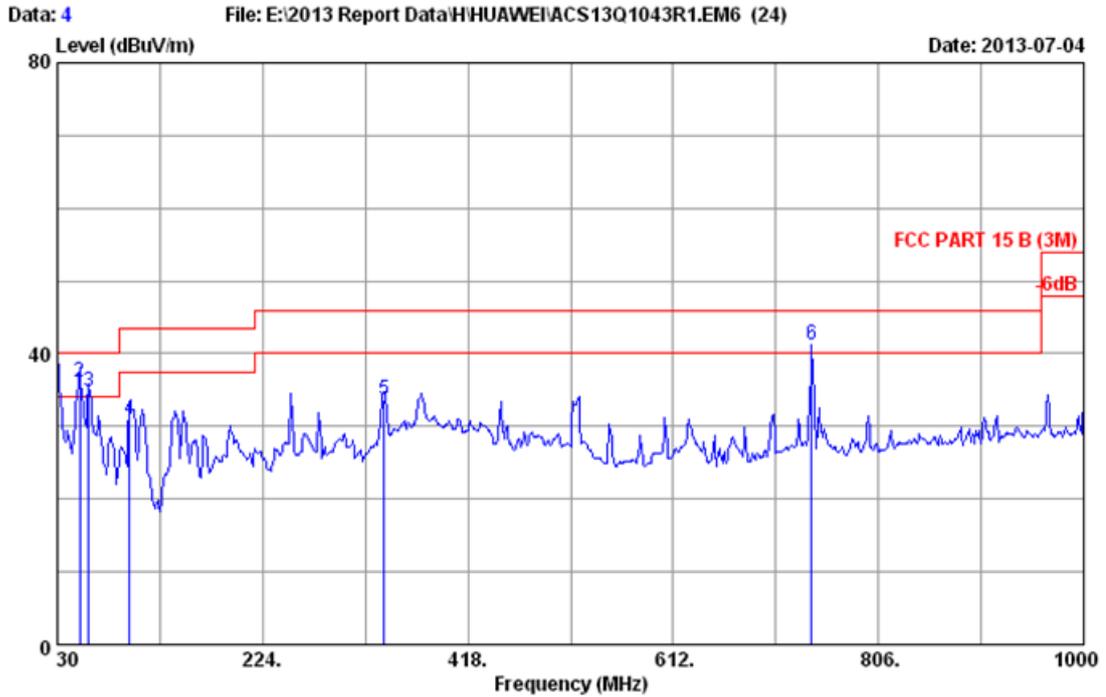
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 3
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH33 (F=338MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.540	19.63	0.84	9.00	29.47	40.00	10.53	QP
2	251.150	12.81	1.98	18.31	33.10	46.00	12.90	QP
3	371.423	15.53	2.38	20.60	38.51	46.00	7.49	QP
4	447.220	17.04	2.60	13.70	33.34	46.00	12.66	QP
5	742.933	21.96	3.45	14.90	40.31	46.00	5.69	QP
6	796.300	22.10	3.60	5.79	31.49	46.00	14.51	QP

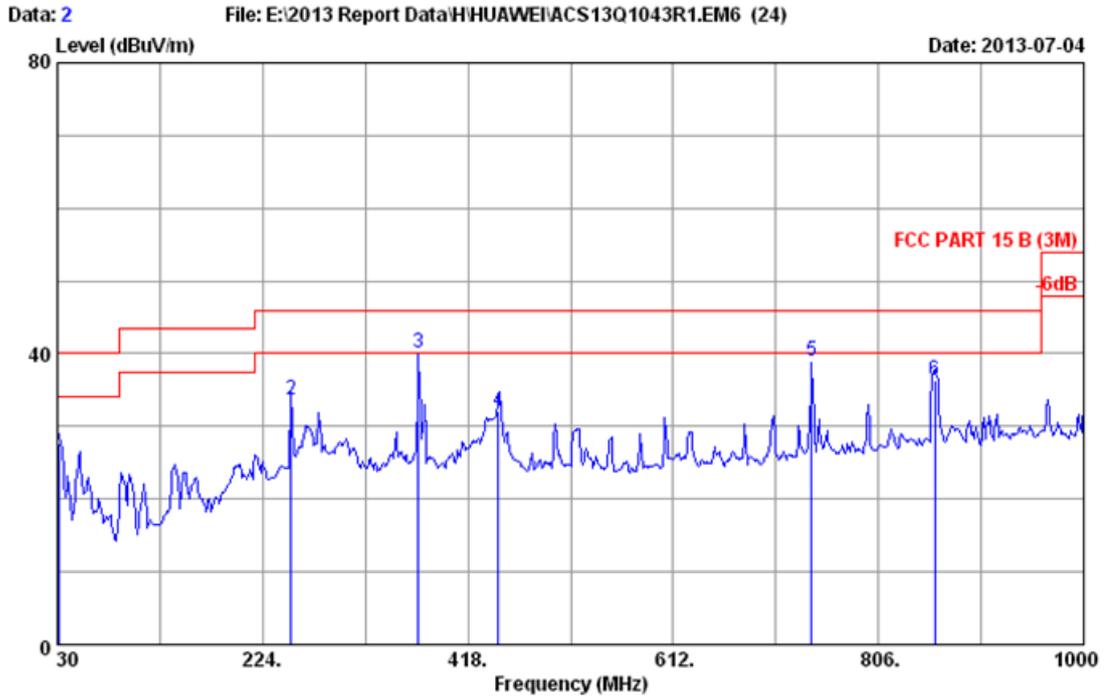
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 4
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH33 (F=338MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.550	19.62	0.84	15.90	36.36	40.00	3.64	QP
2	51.334	8.30	1.20	26.60	36.10	40.00	3.90	QP
3	59.320	6.17	1.23	27.40	34.80	40.00	5.20	QP
4	98.520	10.08	1.40	19.50	30.98	43.50	12.52	QP
5	338.620	14.74	2.28	16.71	33.73	46.00	12.27	QP
6	742.750	21.95	3.45	15.90	41.30	46.00	4.70	QP

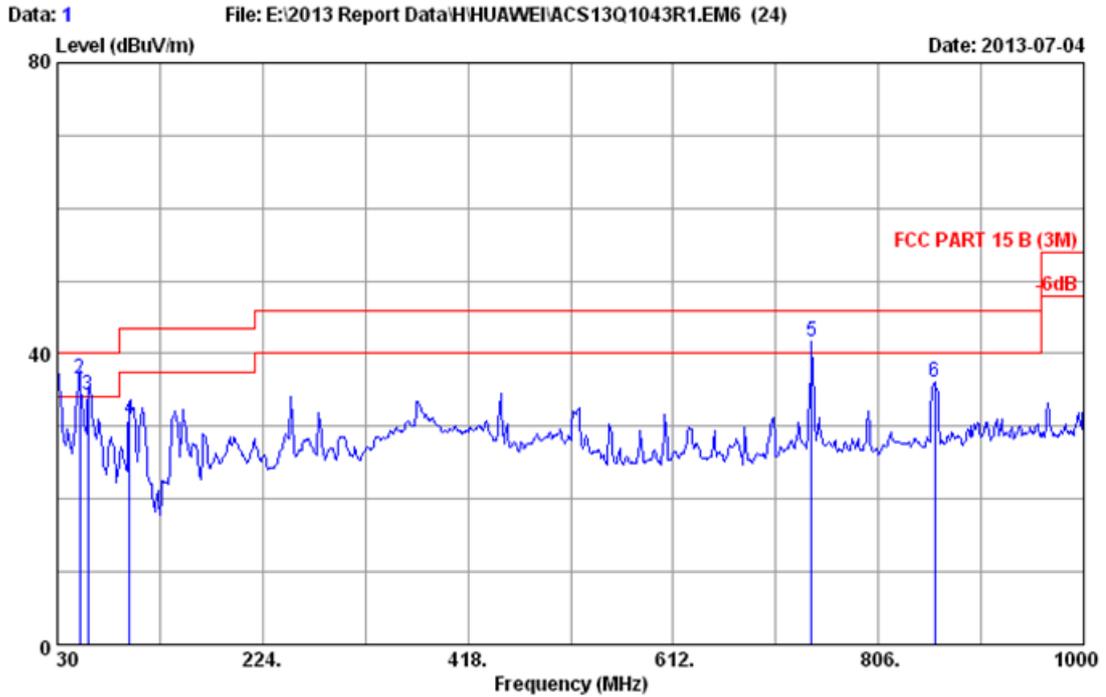
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 2
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH98 (F=858MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.960	19.42	0.85	7.30	27.57	40.00	12.43	QP
2	251.160	12.82	1.98	18.96	33.76	46.00	12.24	QP
3	371.420	15.53	2.38	22.20	40.11	46.00	5.89	QP
4	447.100	17.04	2.60	12.53	32.17	46.00	13.83	QP
5	742.933	21.96	3.45	13.70	39.11	46.00	6.89	QP
6	859.330	22.81	3.80	9.80	36.41	46.00	9.59	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

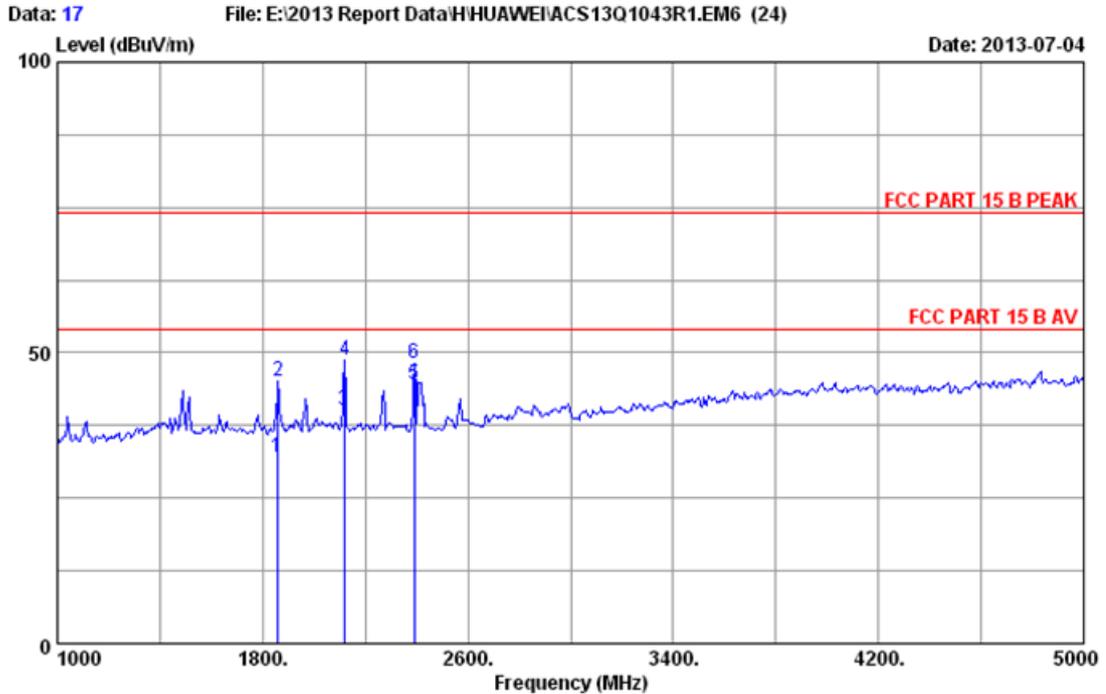


Site no. : 3m Chamber Data no. : 1
 Dis. / Ant. : 3m 2013 CBL6111C 2598 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/65% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH98 (F=858MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.330	19.73	0.84	14.10	34.67	40.00	5.33	QP
2	51.324	8.30	1.20	27.00	36.50	40.00	3.50	QP
3	59.080	6.19	1.23	27.00	34.42	40.00	5.58	QP
4	97.879	9.98	1.40	19.50	30.88	43.50	12.62	QP
5	742.750	21.95	3.45	16.20	41.60	46.00	4.40	QP
6	859.335	22.81	3.80	9.50	36.11	46.00	9.89	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

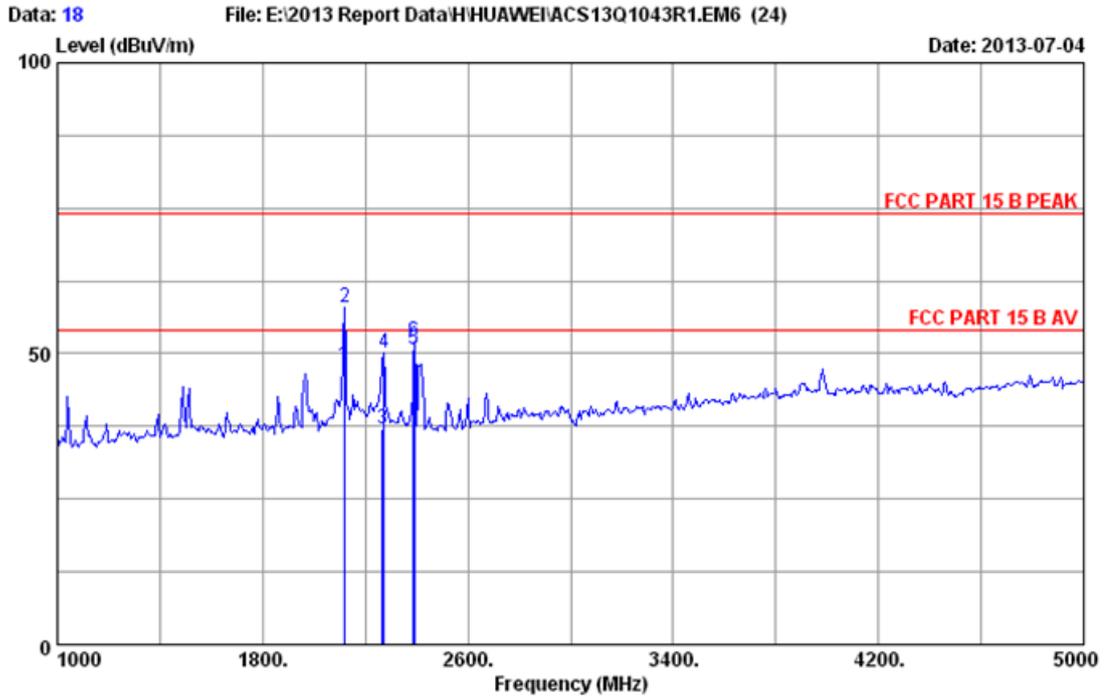
1GHz~5GHz



Site no. : 3m Chamber Data no. : 17
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH2 (F=114MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1856.400	24.17	2.27	33.40	39.05	32.09	54.00	21.91	Average
2	1860.000	24.17	2.27	33.39	52.02	45.07	74.00	28.93	Peak
3	2117.300	24.08	2.53	33.35	46.95	40.21	54.00	13.79	Average
4	2120.000	24.08	2.53	33.35	55.60	48.86	74.00	25.14	Peak
5	2392.000	23.81	2.77	33.40	51.44	44.62	54.00	9.38	Average
6	2392.000	23.81	2.77	33.40	55.09	48.27	74.00	25.73	Peak

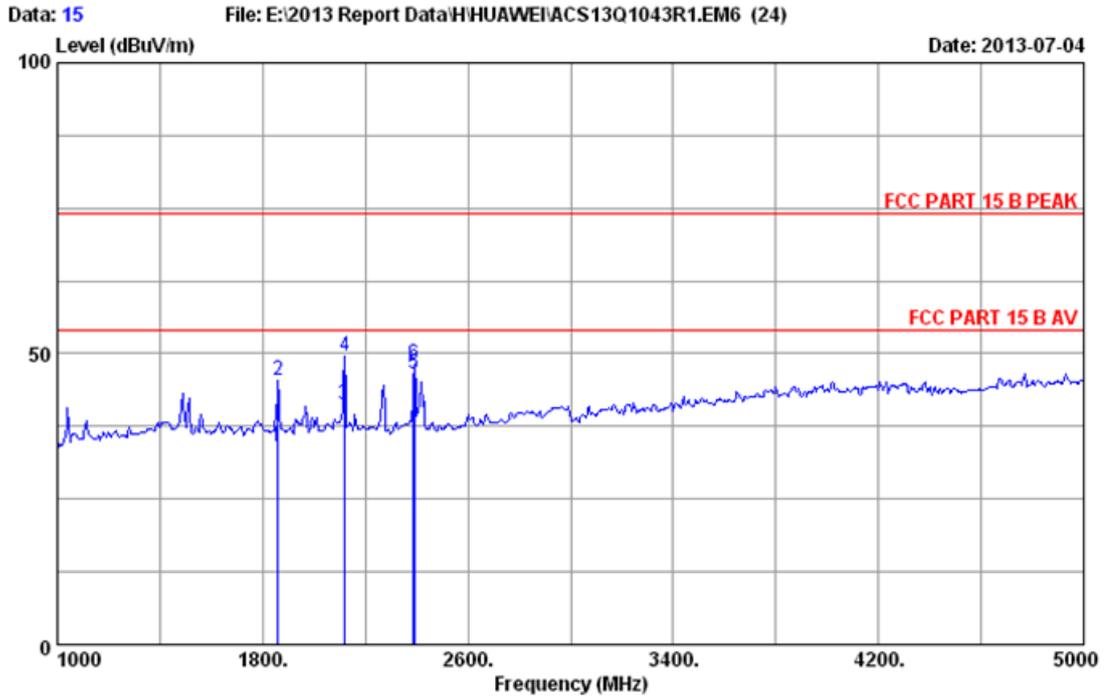
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 18
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH2 (F=114MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2116.600	24.08	2.53	33.35	54.59	47.85	54.00	6.15	Average
2	2120.000	24.08	2.53	33.35	64.77	58.03	74.00	15.97	Peak
3	2266.000	23.93	2.66	33.38	43.96	37.17	54.00	16.83	Average
4	2272.000	23.93	2.66	33.38	56.84	50.05	74.00	23.95	Peak
5	2386.400	23.81	2.76	33.40	57.57	50.74	54.00	3.26	Average
6	2392.000	23.81	2.77	33.40	59.02	52.20	74.00	21.80	Peak

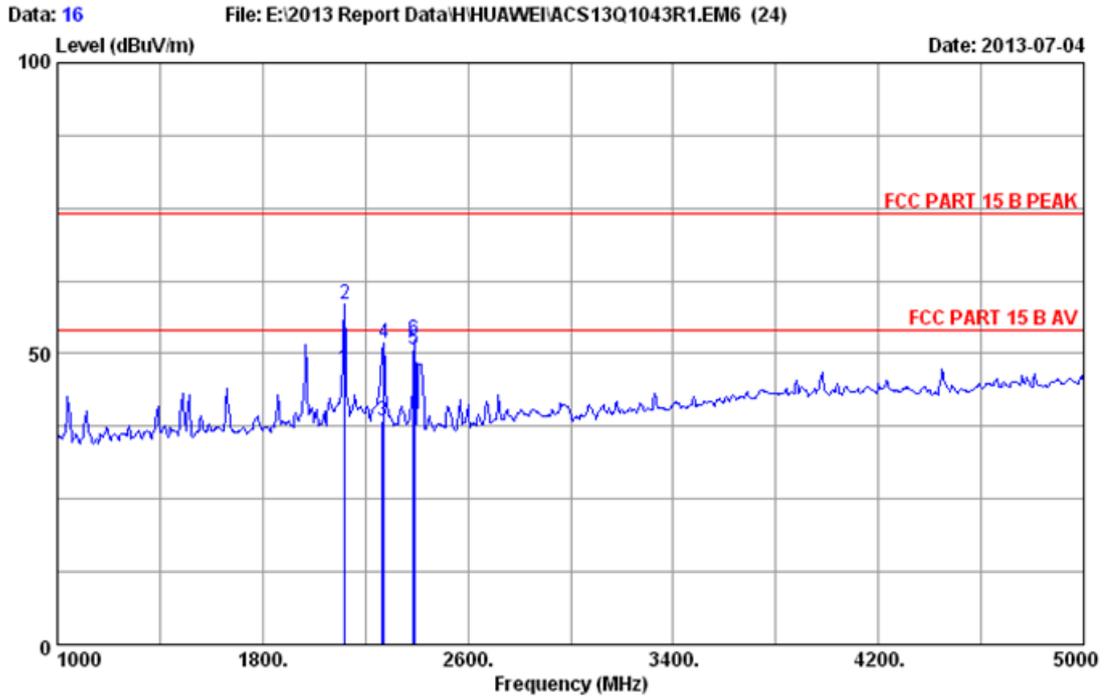
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 15
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH33 (F=338MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			Remark
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	1856.300	24.17	2.27	33.40	41.03	34.07	54.00	19.93	Average
2	1860.000	24.17	2.27	33.39	52.36	45.41	74.00	28.59	Peak
3	2117.000	24.08	2.53	33.35	47.98	41.24	54.00	12.76	Average
4	2120.000	24.08	2.53	33.35	56.39	49.65	74.00	24.35	Peak
5	2386.400	23.81	2.76	33.40	53.33	46.50	54.00	7.50	Average
6	2392.000	23.81	2.77	33.40	54.99	48.17	74.00	25.83	Peak

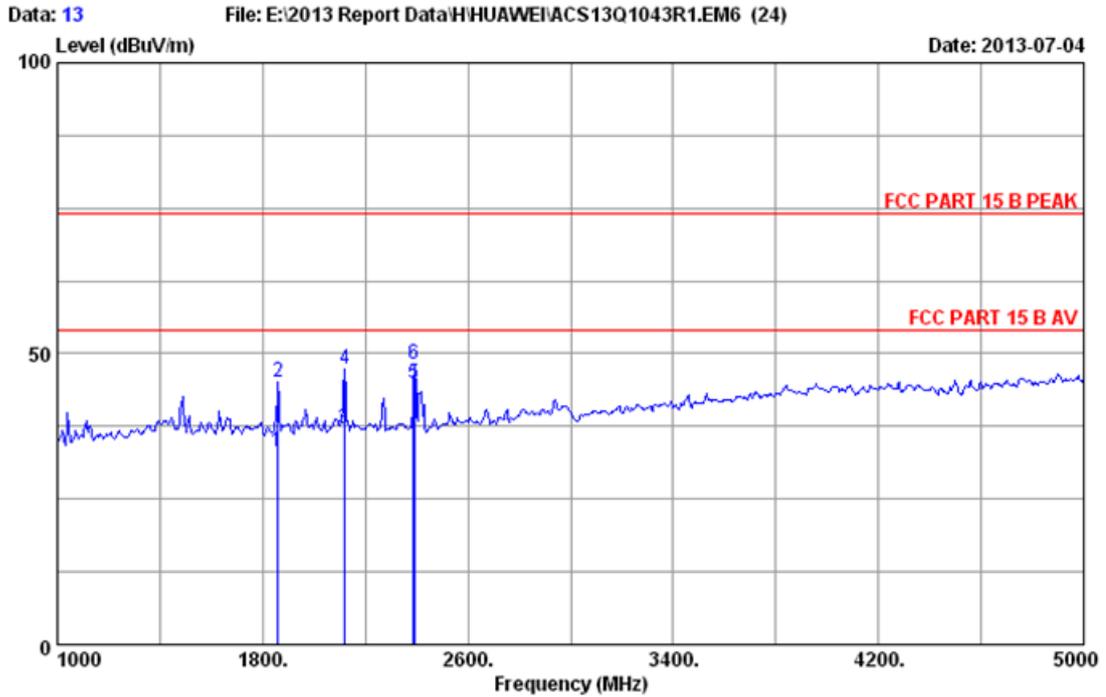
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 16
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH33 (F=338MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2117.100	24.08	2.53	33.35	53.99	47.25	54.00	6.75	Average
2	2120.000	24.08	2.53	33.35	65.17	58.43	74.00	15.57	Peak
3	2267.800	23.93	2.66	33.38	45.16	38.37	54.00	15.63	Average
4	2272.000	23.93	2.66	33.38	58.51	51.72	74.00	22.28	Peak
5	2386.400	23.81	2.76	33.40	57.52	50.69	54.00	3.31	Average
6	2392.000	23.81	2.77	33.40	59.13	52.31	74.00	21.69	Peak

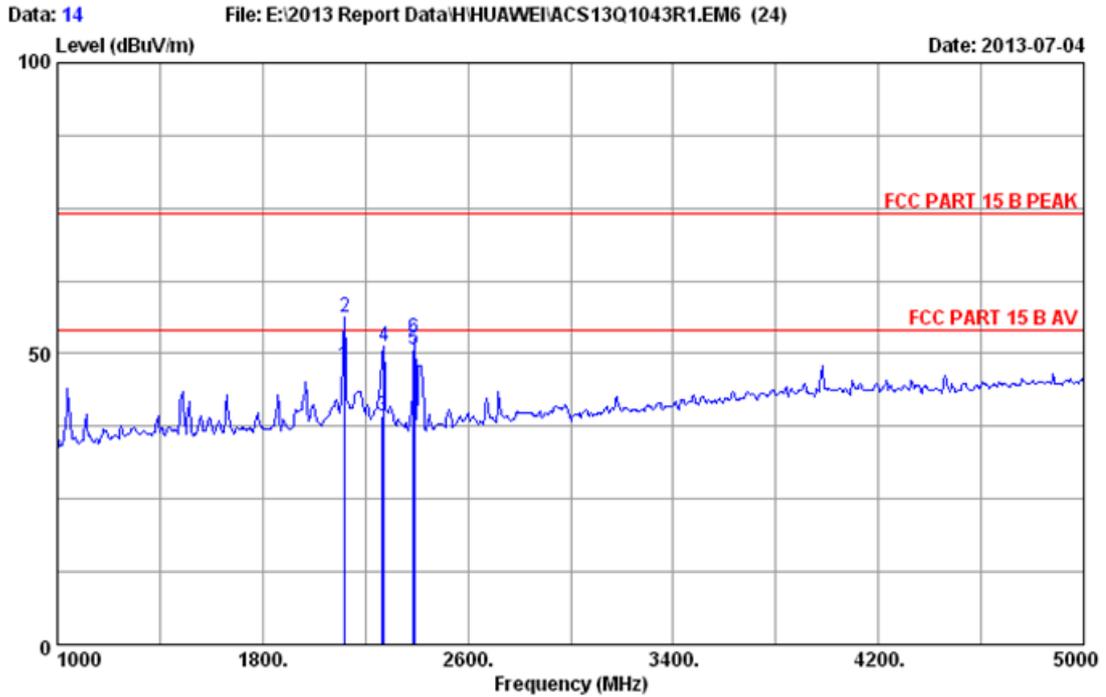
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 13
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH98 (F=858MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1856.100	24.17	2.27	33.40	40.24	33.28	54.00	20.72	Average
2	1860.000	24.17	2.27	33.39	52.04	45.09	74.00	28.91	Peak
3	2117.100	24.08	2.53	33.35	43.86	37.12	54.00	16.88	Average
4	2120.000	24.08	2.53	33.35	54.00	47.26	74.00	26.74	Peak
5	2386.400	23.81	2.76	33.40	51.60	44.77	54.00	9.23	Average
6	2392.000	23.81	2.77	33.40	54.99	48.17	74.00	25.83	Peak

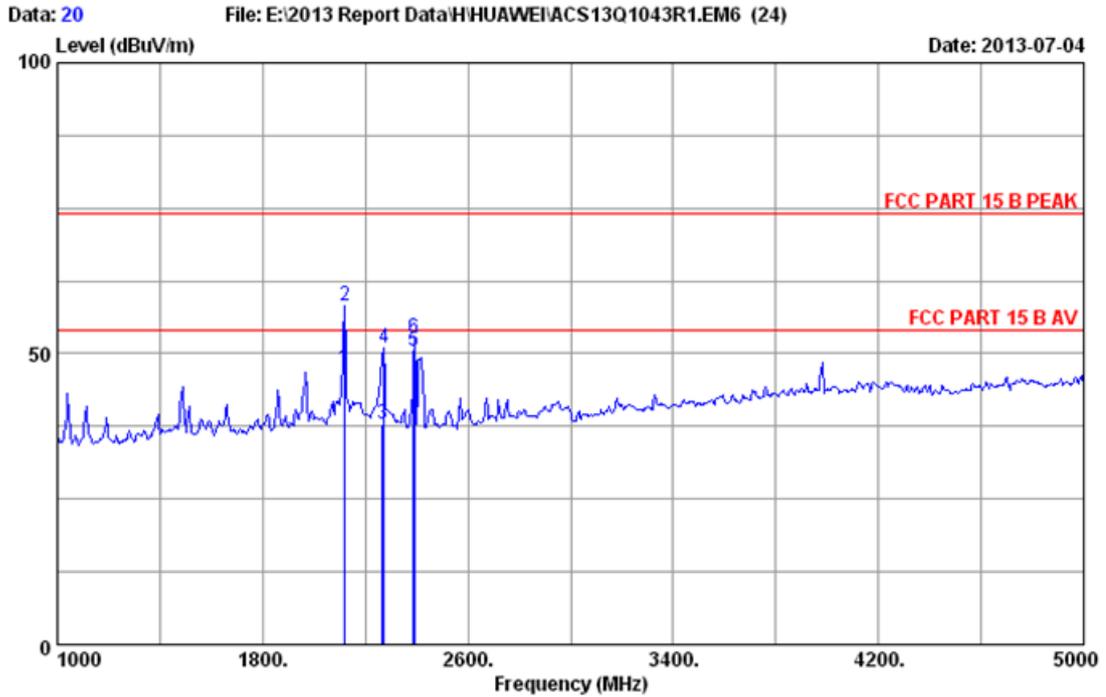
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 14
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH98 (F=858MHz)
 Adapter:HWHKABD42100135

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			Remark
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	2116.900	24.08	2.53	33.35	54.58	47.84	54.00	6.16	Average
2	2120.000	24.08	2.53	33.35	62.98	56.24	74.00	17.76	Peak
3	2268.500	23.93	2.66	33.38	45.93	39.14	54.00	14.86	Average
4	2272.000	23.93	2.66	33.38	57.93	51.14	74.00	22.86	Peak
5	2386.400	23.81	2.76	33.40	57.64	50.81	54.00	3.19	Average
6	2392.000	23.81	2.77	33.40	59.43	52.61	74.00	21.39	Peak

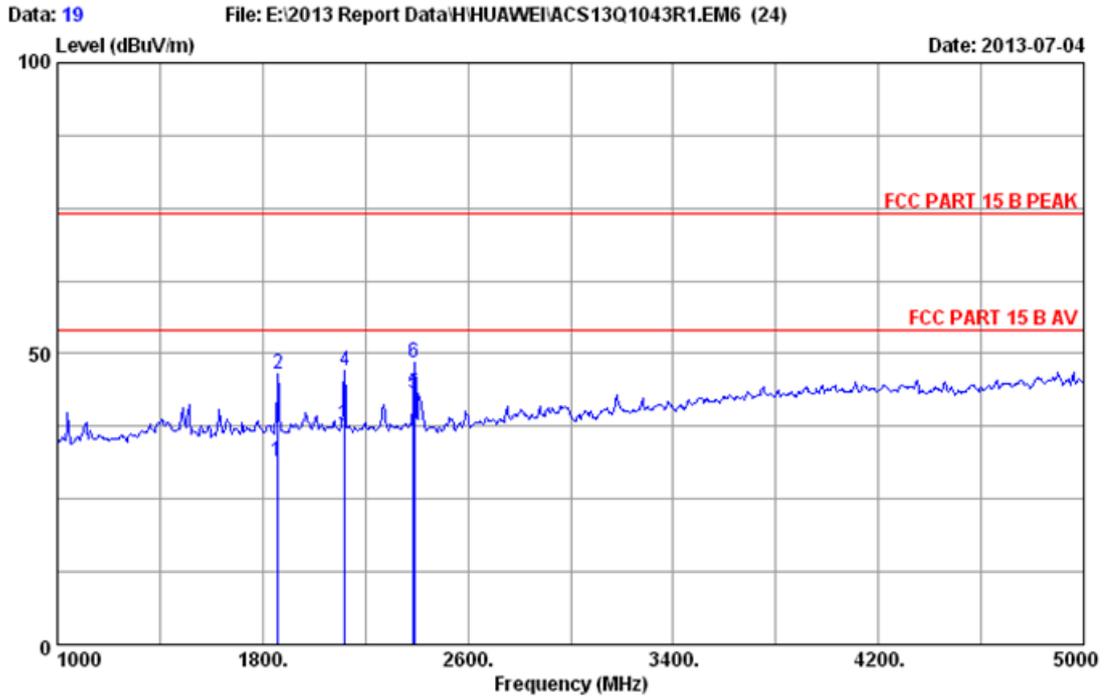
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 20
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH2 (F=114MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2116.800	24.08	2.53	33.35	54.07	47.33	54.00	6.67	Average
2	2120.000	24.08	2.53	33.35	64.89	58.15	74.00	15.85	Peak
3	2267.600	23.93	2.66	33.38	44.61	37.82	54.00	16.18	Average
4	2272.000	23.93	2.66	33.38	57.65	50.86	74.00	23.14	Peak
5	2386.400	23.81	2.76	33.40	57.19	50.36	54.00	3.64	Average
6	2392.000	23.81	2.77	33.40	59.39	52.57	74.00	21.43	Peak

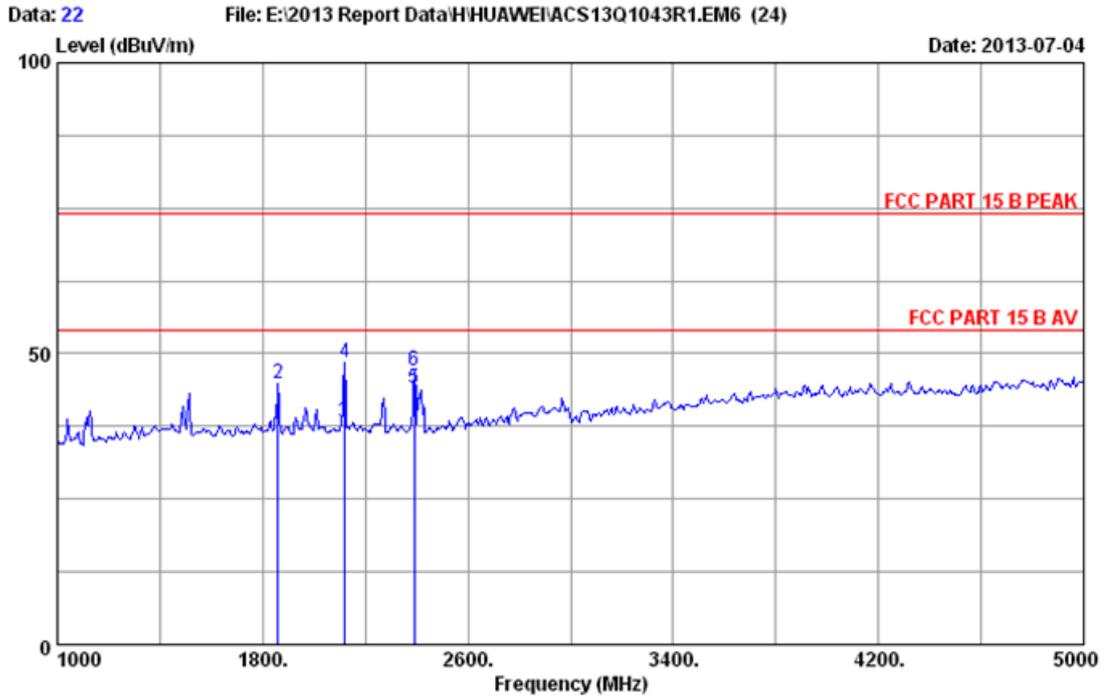
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 19
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH2 (F=114MHz)
 Adapter:HWXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			Remark
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	1856.500	24.17	2.27	33.40	38.52	31.56	54.00	22.44	Average
2	1860.000	24.17	2.27	33.39	53.60	46.65	74.00	27.35	Peak
3	2116.900	24.08	2.53	33.35	44.26	37.52	54.00	16.48	Average
4	2120.000	24.08	2.53	33.35	53.86	47.12	74.00	26.88	Peak
5	2386.400	23.81	2.76	33.40	50.11	43.28	54.00	10.72	Average
6	2392.000	23.81	2.77	33.40	55.18	48.36	74.00	25.64	Peak

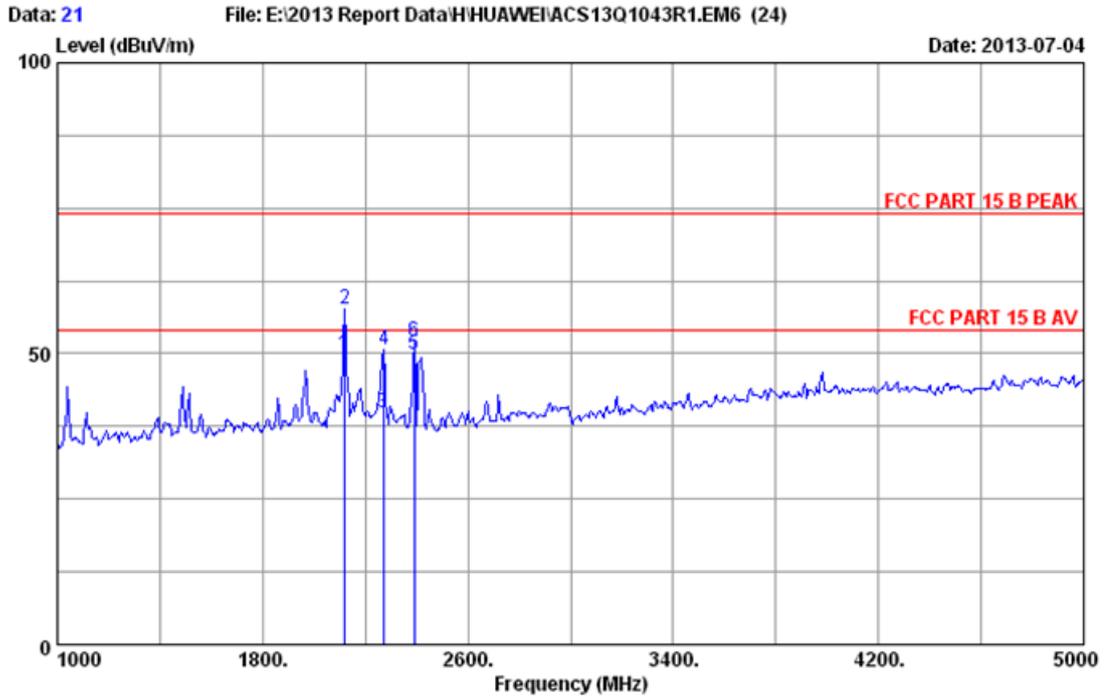
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 3m Chamber Data no. : 22
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH33 (F=338MHz)
 Adapter:HWXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1859.880	24.17	2.27	33.39	43.22	36.27	54.00	17.73	Average
2	1860.000	24.17	2.27	33.39	51.75	44.80	74.00	29.20	Peak
3	2116.800	24.08	2.53	33.35	44.76	38.02	54.00	15.98	Average
4	2120.000	24.08	2.53	33.35	55.07	48.33	74.00	25.67	Peak
5	2390.980	23.81	2.77	33.40	50.84	44.02	54.00	9.98	Average
6	2392.000	23.81	2.77	33.40	53.87	47.05	74.00	26.95	Peak

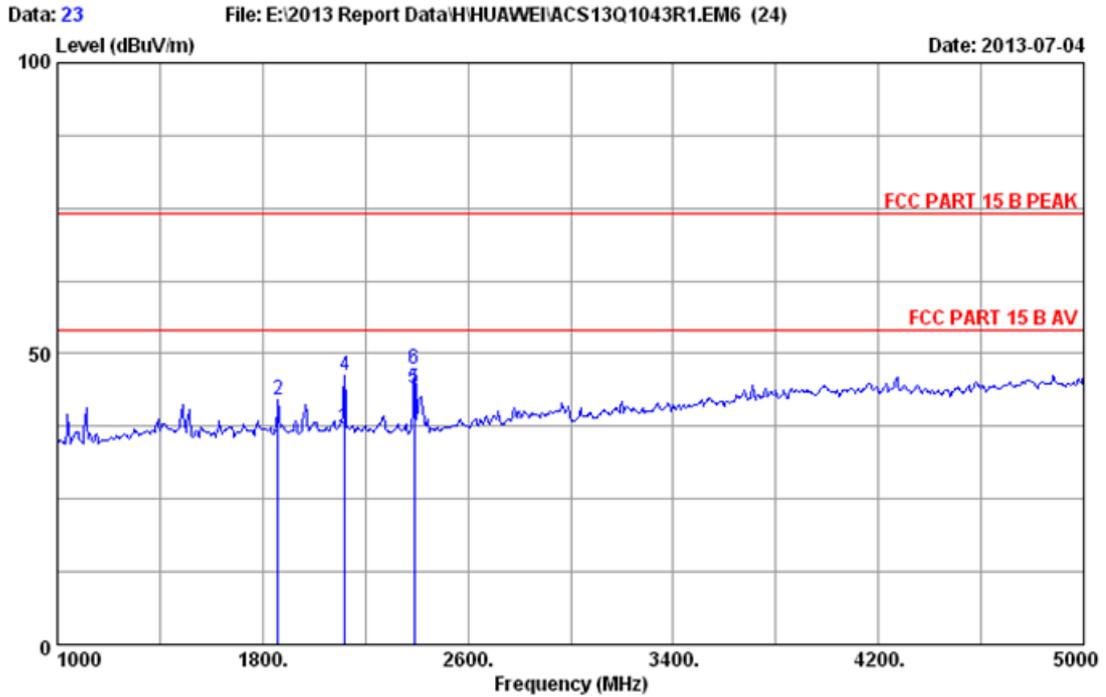
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 21
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH33 (F=338MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2117.000	24.08	2.53	33.35	56.57	49.83	54.00	4.17	Average
2	2120.000	24.08	2.53	33.35	64.46	57.72	74.00	16.28	Peak
3	2270.650	23.93	2.66	33.38	46.66	39.87	54.00	14.13	Average
4	2272.000	23.93	2.66	33.38	57.56	50.77	74.00	23.23	Peak
5	2391.860	23.81	2.77	33.40	56.61	49.79	54.00	4.21	Average
6	2392.000	23.81	2.77	33.40	58.88	52.06	74.00	21.94	Peak

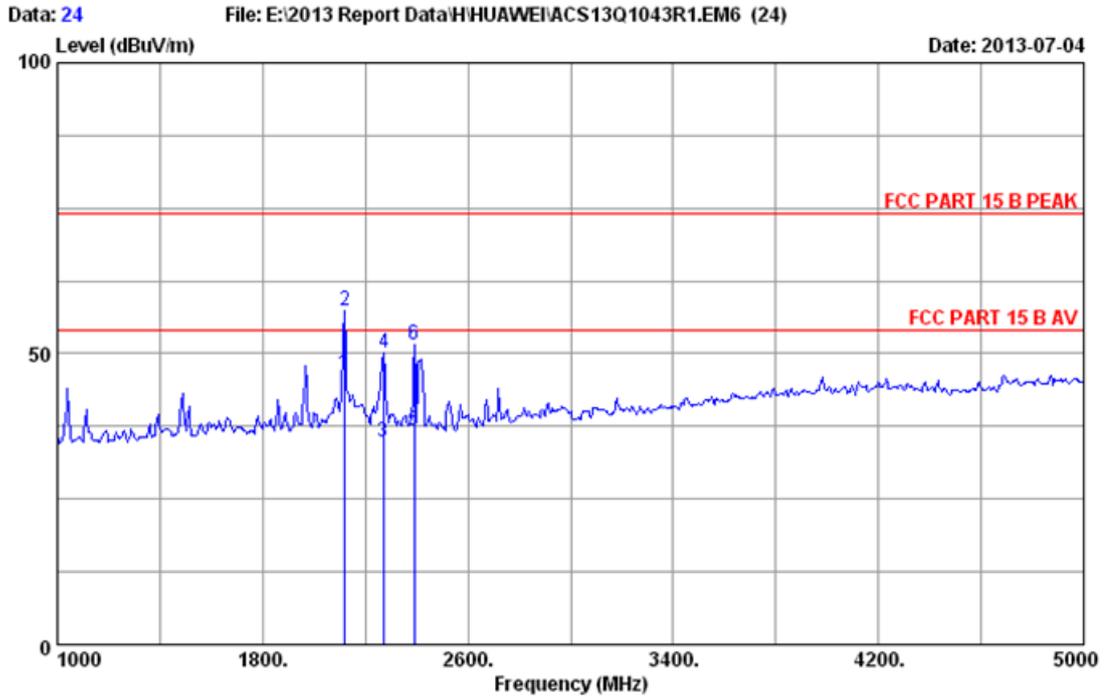
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 23
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH98 (F=858MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			Remark
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	1859.680	24.17	2.27	33.39	40.75	33.80	54.00	20.20	Average
2	1860.000	24.17	2.27	33.39	49.01	42.06	74.00	31.94	Peak
3	2116.800	24.08	2.53	33.35	43.80	37.06	54.00	16.94	Average
4	2120.000	24.08	2.53	33.35	52.91	46.17	74.00	27.83	Peak
5	2390.890	23.81	2.77	33.40	50.75	43.93	54.00	10.07	Average
6	2392.000	23.81	2.77	33.40	54.16	47.34	74.00	26.66	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 24
 Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56% Engineer : Crede
 EUT : HD Cable STB M/N:DC351
 Power Rating : DC 12V Adapter Input AC 120V/60Hz
 Test Mode : DTV Mode
 CH98 (F=858MHz)
 Adapter:HUXQAAD42003571

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2117.100	24.08	2.53	33.35	53.12	46.38	54.00	7.62	Average
2	2120.000	24.08	2.53	33.35	63.99	57.25	74.00	16.75	Peak
3	2270.860	23.93	2.66	33.38	41.63	34.84	54.00	19.16	Average
4	2272.000	23.93	2.66	33.38	56.85	50.06	74.00	23.94	Peak
5	2390.980	23.81	2.77	33.40	43.57	36.75	54.00	17.25	Average
6	2392.000	23.81	2.77	33.40	58.37	51.55	74.00	22.45	Peak

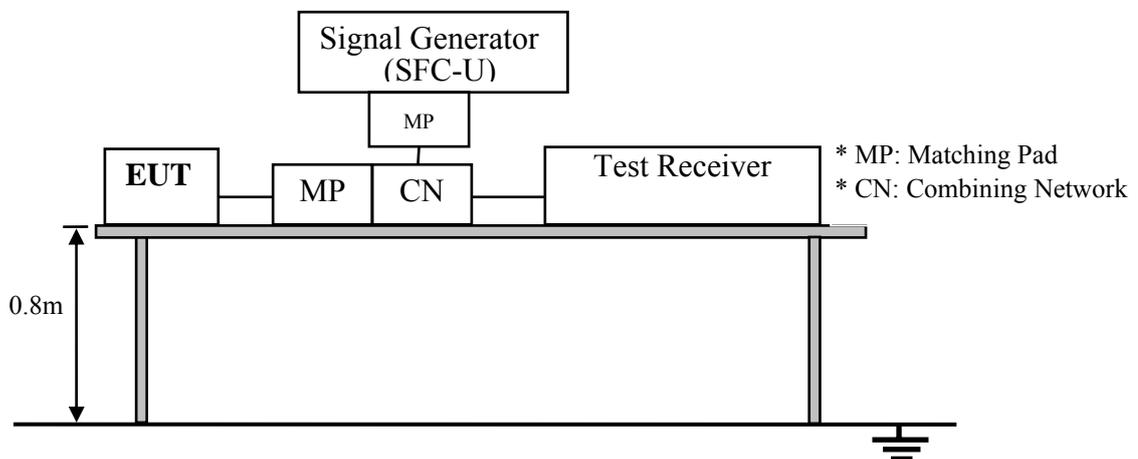
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp Factor
 2. The emission levels that are 20dB below the official limit are not reported.

5. RF INPUT TERMINAL-CONDUCTED LEVEL MEASUREMENT

5.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	100842	May.08, 13	1 Year
2.	Signal Generator	Marconi	2031B	11606/058	May.08, 13	1 Year
3	75-50 Matching Pad	Anritsu	12N50-75B	0511027	Oct.31, 12	1 Year
4.	T-Pad	Anritsu	Z-164A	M90549	Oct.31, 12	1 Year

5.2. Block Diagram of Test Setup



5.3. Limits of Antenna Terminals Disturbance Voltage Test

Frequency (MHz)	Limits Value dB(μ V)
30~960	51.80
Above 960	51.80

Remark: $0\text{dBm} = 1\text{mW} = 10\log 1\text{mW}/1\text{mW}$, $\text{dBuV} = 107 + \text{dBm}$

5.4. EUT Configuration on Test

The configurations of EUT are listed in Section 3.4.

5.5. Operating Condition of EUT

5.5.1. Setup the EUT and simulators as shown in Section 5.2.

5.5.2. Turn on the power of all equipments.

5.5.3. Let the EUT work in test modes (DVB Mode(J.83/B Modulate)) and test it.

5.6. Test Procedure

5.6.1. Configuration the EUT System in Accordance with FCC part 15.

5.6.2. See also the block diagram and photographs of EUT System configuration in this report.

5.6.3. Unused RF input/output terminals in the proper impedance.

5.6.4. Activate the EUT system.

5.6.5. Set the spectrum analyzer as follows.

Frequency Span	:	1MHz
Resolution Bandwidth	:	100kHz
Video Bandwidth	:	3MHz
Detector Function	:	Peak Mode

5.6.6. The RF output terminal is connected to the spectrum analyzer through the matching transformer with a calibrated coaxial cable.

5.6.7. Then, the RF output terminal conducted spurious emission level is measure under the EUT condition produced the maximum signal level.

5.6.8. The frequency range from 30MHz to 1000MHz is investigated.

5.6.9. The test data are listed in Section 5.7.

5.7. Test Results

PASS.

Date of Test:	<u>Jul.04, 2013</u>	Temperature:	<u>23.2 °C</u>
EUT:	<u>HD Cable STB</u>	Humidity:	<u>58 %</u>
M/N:	<u>DC351</u>	Power Supply:	<u>DC 12V Adapter Input AC 120V/60Hz</u>
Test Mode:	<u>CH2 (F=114MHz)</u>	Test Engineer:	<u>Jolly</u>

Frequency(MHz)	Loss(dB)	Level(dB μ V)	Limit(dB μ V)	Margin(dB)
562.520	13.25	28.15	51.80	23.65
888.970	13.31	27.61	51.80	24.19

Remark: . The spectrum was checked in operation mode, and the maximum measured data was report.

Date of Test:	Jul.04, 2013	Temperature:	23.2 °C
EUT:	HD Cable STB	Humidity:	58 %
M/N:	DC351	Power Supply:	DC 12V Adapter Input AC 120V/60Hz
Test Mode:	CH33 (F=338MHz)	Test Engineer:	Jolly

Frequency(MHz)	Loss(dB)	Level(dB μ V)	Limit(dB μ V)	Margin(dB)
541.660	13.26	27.36	51.80	24.44
677.630	13.34	27.64	51.80	24.16

Remark: . The spectrum was checked in operation mode, and the maximum measured data was report.

Date of Test:	Jul.04, 2013	Temperature:	23.2 °C
EUT:	HD Cable STB	Humidity:	58 %
M/N:	DC351	Power Supply:	DC 12V Adapter Input AC 120V/60Hz
Test Mode:	CH98 (F=858MHz)	Test Engineer:	Jolly

Frequency(MHz)	Loss(dB)	Level(dBμV)	Limit(dBμV)	Margin(dB)
374.530	13.13	27.13	51.80	24.67
591.620	13.33	27.13	51.80	24.67

Remark: . The spectrum was checked in operation mode, and the maximum measured data was report.

6. DEMONSTRATION ON INTERNAL PREVENTING CIRCUITRY

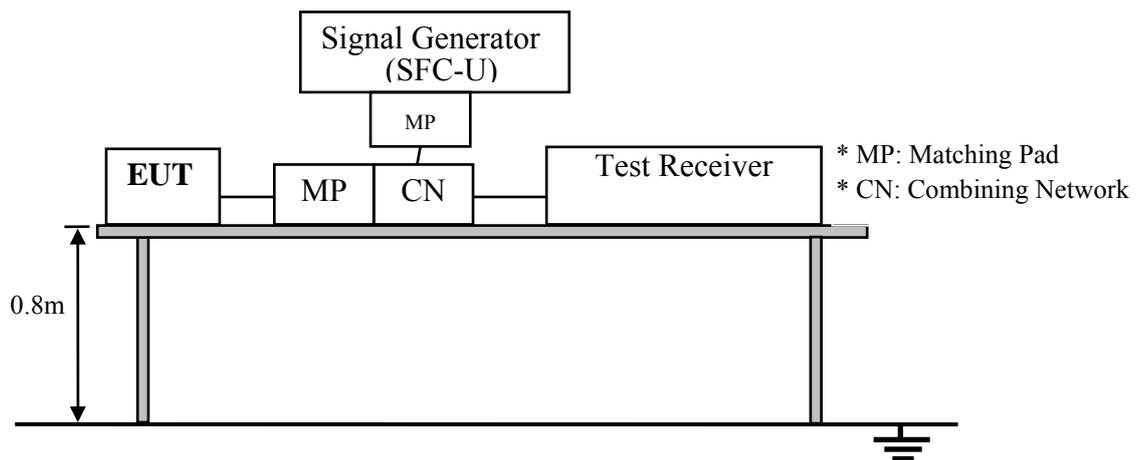
6.1. Test Requirement:

The antenna port input with video signal levels in the range of one to five volts.

6.2. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	100842	May.08, 13	1 Year
2.	Signal Generator	Marconi	2031B	11606/058	May.08, 13	1 Year
3	75-50 Matching Pad	Anritsu	12N50-75B	0511027	Oct.31, 12	1 Year
4.	T-Pad	Anritsu	Z-164A	M90549	Oct.31, 12	1 Year

6.3. Block Diagram of Test Setup



6.4. Test Method

6.4.1. Activate the EUT system.

6.4.2. The RF input terminal is connected to the spectrum analyzer through the matching transformer with a calibrated coaxial cable.

6.4.3. Then, the RF input terminal conducted spurious emission level is measure under the EUT condition produced the maximum signal level.

6.5. Test Voltage: 120Vac/60Hz

6.6. Test Date: Jul.31.2013

6.7. E.U.T. Operation

6.7.1. Turned on the power of all equipments.

6.7.2. Set the S.G. on a frequency to send the “Color Bar” image and 1kHz audio signal to the TV via HD Cable STB (EUT).

6.8. Test Setup and Procedure

A TV interface device, including a cable system terminal device, shall incorporate circuitry to automatically prevent emanations from the device from exceeding the technical specifications in this part. These circuits shall be adequate to accomplish their functions when the TV interface device is presented, if applicable, with video input signal levels in the range of one to five volts; this requirement is not applicable to a TV interface device that uses a built-in signal source and has no provisions for the connection of an external signal source. For devices that contain provisions for an external signal source but do not contain provisions for the input of an external baseband signal, e.g., some cable system terminal devices, compliance with the provisions of this paragraph shall be demonstrated with a radio frequency input signal of 0 to 25 dBmV.

6.9. Test Result

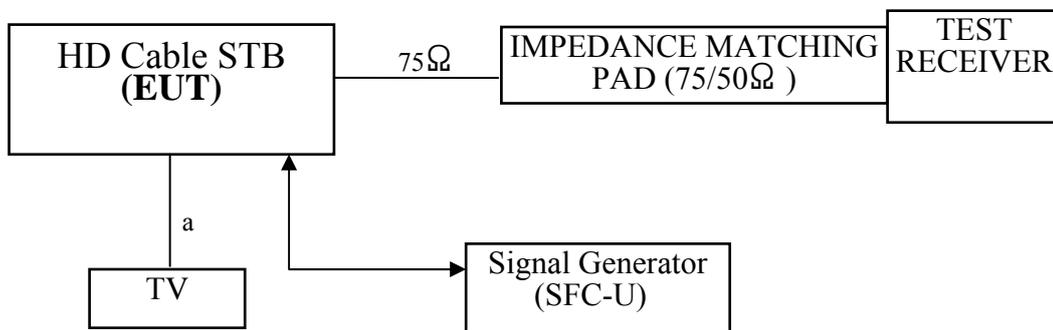
While the antenna port with video signal levels in the range of one to five volts, There without anything noise appeared on the monitor, And the EUT was operated normally.

7. RF OUTPUT TERMINAL-CONDUCTED LEVEL MEASUREMENT

7.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	100842	May.08, 13	1 Year
2.	T-Pad	Anritsu	Z-164A	M90549	Oct.31, 12	1 Year
3.	75-50 Matching Pad	Anritsu	12N50-75B	0511027	Oct.31, 12	1 Year

7.2. Block Diagram of Test Setup



a : HDMI Cable

7.3. Output Signal Limits (§ 15.115(b)(1)(ii))

Signal Level	Limit at 75Ω	
	(μV)	(dBμV)
Fundamental	3000	69.5
Spurious	671	56.5

Notes: 1. (dBμV) = 20 log signal level (μV)

7.4. Output Signal Limits (§ 15.115(b)(2)(ii))

Signal Level	Limit at 75Ω	
	(μV)	(dBμV)
Spurious	94.83	39.5

Notes: 1. (dBμV) = 20 log signal level (μV)

7.5. Operating Condition of EUT

7.5.1. Set up the EUT and simulators as shown on 6.2.

7.5.2. Turned on the power of all equipments.

7.5.3. Set the S.G. on a frequency to send the “Color Bar” image and 1kHz audio signal to the TV via HD Cable STB (EUT).

7.6. Test Procedure

- 7.6.1. The ANSI C63.4 section 12.2.5 test method was used to find the maximum voltage level during the RF output terminal-conducted level measurement. The test receiver was set the resolution bandwidth at 120kHz; scanning at 100msec; video bandwidth at 1MHz; span at 1MHz.
- 7.6.2. The output voltage of video carrier or audio carrier frequency at the RF-output terminal of the EUT was measured at 3 and 4 channel connecting directly to a test receiver with 50ohm input impedance via 75-to-50ohm matching pad. Indicated voltage of 75ohm system.
- 7.6.3. Measurement=Factor (Matching Pad Loss + Cable Loss) + Reading.
The EUT (HD Cable STB) with the following operational channels were tested during RF output signal-conducted voltage testing and all the test results are listed in next pages.

No.	Output Channel	Frequency
1.	CH3	61.25MHz
2.	CH4	67.25 MHz

7.7.RF Output Terminal-Conducted Level Measurement Results

PASSED. Please refer to the below and following pages.

Applicant: HUAWEI TECHNOLOGIES CO.,LTD

EUT: HD Cable STB M/N: DC351

Test Engineer: Jolly Test date: Jul.24, 2013

Power Supply : DC12V Adapter Input AC 230V/50Hz

Operation Mode : DTV Mode

Channel	Frequency (MHz)	Level (dBμV)	Limit dBμV 75Ω (QP)	Memo
CH3	61.25	65.74	69.5	Video Carrier
	65.75	51.65	56.5	Audio Carrier
CH4	67.25	65.66	69.5	Video Carrier
	71.25	29.47	56.5	Audio Carrier

Channel	Frequency (MHz)	Level (dBμV)	Limit dBμV 75Ω (QP)
CH3	56.50	36.4	39.5
	183.56	20.7	39.5
CH4	54.10	21.2	39.5
	133.87	20.9	39.5

8. DEVIATION TO TEST SPECIFICATIONS

[NONE]