







ISO/IEC17025Accredited Lab.

Report No: FCC/IC 1312087-01 File reference No: 2013-12-21

Applicant: The Light, Inc.

Product: HDMI TV Stick

Model No: ATV120, ATV100, ATV101, ATV120L, ATV120B, ATV120SD,

ATV120E,ATV120S

Trademark: Ayine

Test Standards: FCC Part 15.247

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4, FCC Part 15 Subpart C, Paragraph 15.247 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: December 21, 2013

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District, Shenzhen,CHINA.

Tel (755) 83448688 Fax (755) 83442996

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Date: 2013-12-21



Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAL. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAL-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

IC- Registration No.: IC5205A-02

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-02.

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Test Report Conclusion

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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

Address: 5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District,

Shenzhen, CHINA.

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-02

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: The Light, Inc.

Address: 345 Clifton Avenue Clifton, NJ 07011

Telephone: N/A Fax: N/A

1.3 Description of EUT

Product: HDMI TV Stick
Manufacturer: The Light, Inc.

Address: 345 Clifton Avenue Clifton, NJ 07011

Brand Name: Ayine
Model Number: ATV120

Additional Model Number: ATV100, ATV101, ATV120L, ATV120B, ATV120SD, ATV120E, ATV120S

Power Adapter Model No.: FJ-SW0501500U

Input: 100-240V, 50/60Hz, 0.35A; Output: 5V, 1500mA

Type of Modulation IEEE 802.11b : DSSS (CCK, QPSK, DBPSK)

IEEE 802.11g/n (HT20) : OFDM(64QAM, 16QAM, QPSK, BPSK)

Frequency range IEEE 802.11b/g/n (HT20) : 2412-2462MHz

Channel Spacing IEEE 802.11b/g/n (HT20) : 5MHz Air Data Rate IEEE 802.11b : 11, 5.5, 2, 1 Mbps

IEEE 802.11g: 54, 48,36, 24, 18, 12, 9, 6 Mbps

IEEE 802.11n HT20: 150, 117, 104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps

Frequency Selection By software

Channel Number IEEE 802.11b/g/n (HT20) : 11 Channels
Antenna: Ceramic Antenna with maximum gain 2.0dBi

The report refers only to the sample tested and does not apply to the bulk.

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Submitted Sample: 2 Samples

1.5 **Test Duration** 2013-12-17 to 2013-12-21

1.6 Test Uncertainty Conducted Emissions Uncertainty =3.6dB Radiated Emissions Uncertainty =4.7dB

Terry Tang Test Engineer The sample tested by

Print Name: Terry Tang

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2.0	Test Equipments					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date	
ESPI Test Receiver	ROHDE&SCHWARZ	ESPI 3	100379	2013-08-23	2014-08-22	
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100294	2013-08-23	2014-08-22	
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100253	2013-08-23	2014-08-22	
Ultra Broadband ANT	ROHDE&SCHWARZ	HL562	100157	2013-08-25	2014-08-24	
ESDV Test Receiver	ROHDE&SCHWARZ	ESDV	100008	2013-08-23	2014-08-22	
Impuls-Begrenzer	ROHDE&SCHWARZ	ESH3-Z2	100281	2013-08-24	2014-08-23	
System Controller	CT	SC100	-			
Printer	EPSON	РНОТО ЕХЗ	CFNH234850			
Computer	IBM	8434	1S8434KCE99BLXL O*	-	-	
Loop Antenna	EMCO	6502	00042960	2013-08-23	2014-08-22	
ESPI Test Receiver	ROHDE&SCHWARZ	ESI26	838786/013	2013-08-23	2014-08-22	
3m OATS			N/A	2013-08-22	2014-08-21	
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170265	2013-08-24	2014-08-23	
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-631	2013-08-24	2014-08-23	
Power meter	Anritsu	ML2487A	6K00003613	2013-08-24	2014-08-23	
Power sensor	Anritsu	MA2491A	32263	2013-08-24	2014-08-23	
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2013-08-21	2014-08-20	
LISN	AFJ	LS16C	10010947251	2013-08-21	2014-08-20	
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2013-08-23	2014-08-22	
9*6*6 Anechoic			N/A	2013-08-22	2014-08-21	
EMI Test Receiver	RS	ESCS30	100139	2013-08-23	2014-08-22	

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2.1 **Auxiliary Equipment**

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Name	Model No.	Serial No.	Manufacturer	Cable	FCC ID/DOC
TF Card			Kingston		
Mouse			Bigcow		DOC
LCD Monitor	PH2450		SAMSUNG		DOC

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3. DESCRIPTION OF TEST MODES

IEEE 802.11b, 802.11g, 802.11n (HT20) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 11Mbps data rate (worst case) was chosen for full testing. IEEE 802.11g mode: 54Mbps data rate (worst case) was chosen for full testing. IEEE 802.11n (HT20) mode: 65Mbps data rate (worst case) were chosen for full testing

The worst-case data rates are determined according to the description above, based on the investigations by measuring the PSD and average power across all the data rates, bandwidths, modulations and spatial stream modes.

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3.0 **Technical Details**

3.1 **Summary of test results**

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107 & 15.207	Conducted Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.247(a)(2) Limit	Spectrum bandwidth of a Orthogonal Frequency Division Multiplex System Limit: 6dB bandwidth>500kHz	PASS	Complies
FCC Part 15, Paragraph 15.247(b)	Maximum peak output power Limit: max. 30dBm	PASS	Complies
FCC Part 15, Paragraph 15.109,15.205 & 15.209	Transmitter Radiated Emission Limit: Table 15.209	PASS	Complies
FCC Part 15, Paragraph 15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Complies
FCC Part 15, Paragraph 15.247(d)	Out of Band Emission and Restricted Band Radiation Limit: 20dB less than peak value of fundamental frequency Restricted band limit: Table 15.209	PASS	Complies

3.2 **Test Standards**

FCC Part 15 Subpart & Subpart C, Paragraph 15.247

EUT Modification 4.0

No modification by Shenzhen Timeway Technology Consulting Co., Ltd

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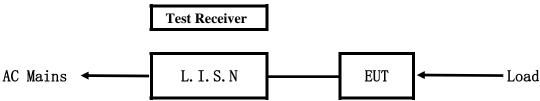
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5. Power Line Conducted Emission Test

5.1 Schematics of the test

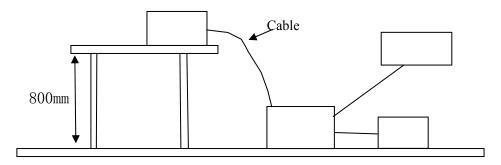


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2003.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2003. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

Device	Manufacturer	Model	IC
		ATV120,ATV100, ATV101,	
HDMI TV Stick	The Light, Inc.	ATV120L, ATV120B,	FCC ID: 2ABKM0013120027
		ATV120SD,	FCC ID. 2ABKW0013120027
		ATV120E,ATV120S	

B. Internal Device

De	vice	Manufacturer	Model	FCC ID/DOC
N	/A			

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C. Peripherals

Device	Manufacturer	Model	FCC ID/DOC	Cable
LCD Monitor	SAMSUNG	PH2450	DOC	

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2003.

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207 and 15.107

Frequency	Class A Lim	its (dB µ V)	Class B Limits (dB µ V)	
(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level
$0.15 \sim 0.50$	79.0	66.0	66.0~56.0*	56.0~46.0*
$0.50 \sim 5.00$	73.0	60.0	56.0	46.0
$5.00 \sim 30.00$	73.0	60.0	60.0	50.0

Notes:

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

5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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A: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

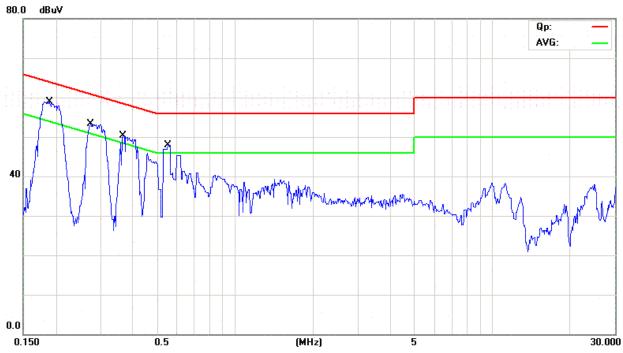
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep Transmitting

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



Frequency	Lina	Line Reading(dBµV)		Limit(dBµV)	
(MHz)	Line	Quasi-peak	Average	Quasi-peak	Average
0.1874	Live	57.44	26.34	64.15	54.15
0.2754	Live	50.83	20.23	60.95	50.95
0.3662	Live	45.53	16.23	58.59	48.59
0.5525	Live	42.93	18.73	56.00	46.00

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B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

EUT Operating Environment

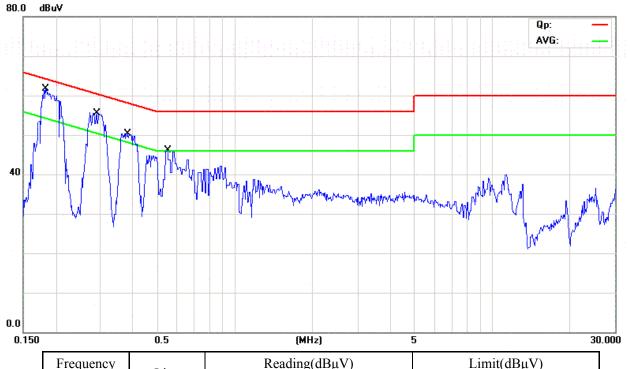
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep Transmitting

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency	Line	Reading(dBµV)		Limit(dBµV)	
(MHz)	Line	Quasi-peak	Average	Quasi-peak	Average
0.1833	Neutral	57.54	27.74	64.33	54.33
0.2891	Neutral	51.25	21.15	60.55	50.55
0.3811	Neutral	46.34	21.14	58.26	48.26
0.5496	Neutral	40.02	18.22	56.00	46.00

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6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.4 –2003. The radiated test was performed at Timeway Laboratory. This site is on file with the FCC laboratory division, Registration No.899988
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-2003.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector. Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization : Vertical polarization and Horizontal polarization.

Block diagram of Test setup Distance = 3m Computer Pre – Amplifier EUT Turn-table Receiver

- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition
 Same as section 5.4 of this report.

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6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

Frequencies in restricted band are complied to limit on Paragraph 15.209 and 15.109

		E 1
Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Transmitting

Results: Pass

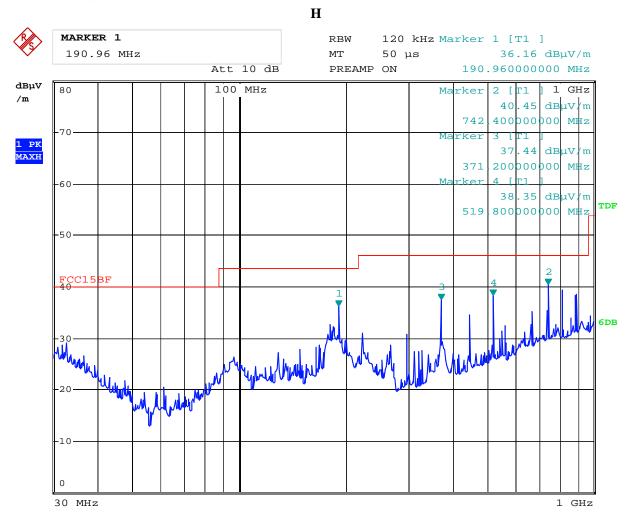
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB µ V/m)	
190.96	36.16	Н	43.50	
371.20	37.44	Н	46.00	
519.80	38.35	Н	46.00	
742.40	40.45	Н	46.00	
89.80	37.44	V	43.50	
456.48	41.83	V	46.00	
519.84	42.03	V	46.00	
816.68	43.73	V	46.00	

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Test Figure:



Date: 17.DEC.2013 10:47:38

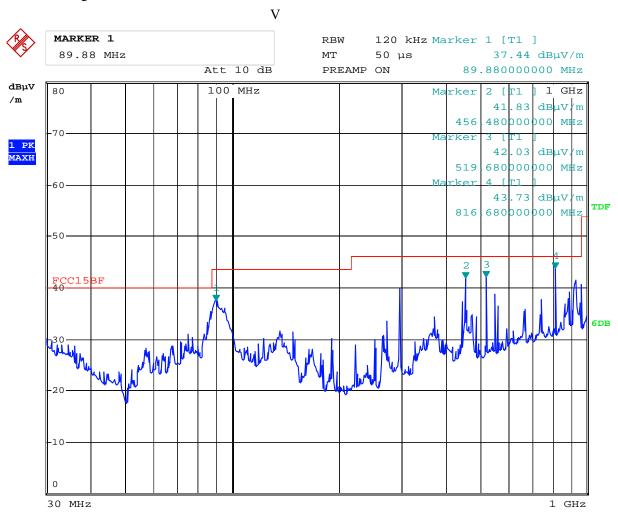
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Test Figure:



Date: 17.DEC.2013 10:49:44

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Operation Mode: Transmitting under CH01 for 11g at 54Mbps

	0			
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)	
2412.00	98.11 (PK)	Н	Fundamental Frequency	
2412.00	98.40 (PK)	V		
4824.00		Н	74(Peak)/ 54(AV)	
4824.00		V	74(Peak)/ 54(AV)	
7236.00		H/V	74(Peak)/ 54(AV)	
9648.00		H/V	74(Peak)/ 54(AV)	
12060		H/V	74(Peak)/ 54(AV)	
14472		H/V	74(Peak)/ 54(AV)	
16884		H/V	74(Peak)/ 54(AV)	
19296		H/V	74(Peak)/ 54(AV)	
21708	21708		74(Peak)/ 54(AV)	
24120		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 54Mbps

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Operation Mode: Transmitting under CH06 for 11g at 54Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)	
2437.00	97.92 (PK)	Н	Eundomontal Eroquanov	
2437.00	97.97 (PK)	V	Fundamental Frequency	
4874.00		Н	74(Peak)/ 54(AV)	
4874.00		V	74(Peak)/ 54(AV)	
7311.00		H/V	74(Peak)/ 54(AV)	
9748.00		H/V	74(Peak)/ 54(AV)	
12185		H/V	74(Peak / 54(AV)	
14622		H/V	74(Peak)/ 54(AV)	
17059		H/V	74(Peak)/ 54(AV)	
19496		H/V	74(Peak)/ 54(AV)	
21933		H/V	74(Peak)/ 54(AV)	
24370	24370		74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 54 Mbps

Operation Mode: Transmitting under CH11 for 11g at 54Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)	
2462.00	98.42 (PK)	Н	Fundamental Frequency	
2462.00	98.27 (PK)	V	Fundamental Frequency	
4924	1	Н	74(Peak)/ 54(AV)	
4924	-	V	74(Peak)/ 54(AV)	
7368		H/V	74(Peak)/ 54(AV)	
9848	1	H/V	74(Peak)/ 54(AV)	
12310	-	H/V	74(Peak)/ 54(AV)	
1 772	-	H/V	74(Peak)/ 54(AV)	
17234	H/V		74(Peak)/ 54(AV)	
19696	1	H/V	74(Peak)/ 54(AV)	
22158		H/V	74(Peak)/ 54(AV)	
24650		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode at 54 Mbps

The report refers only to the sample tested and does not apply to the bulk.

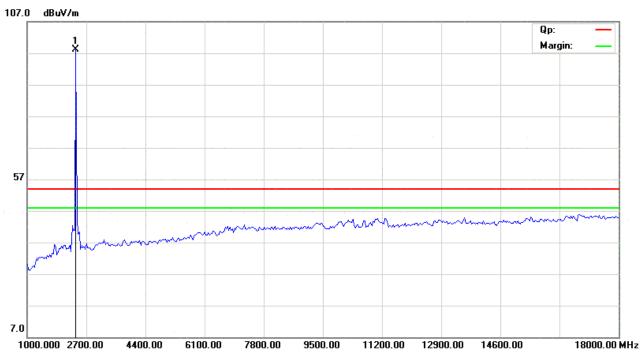
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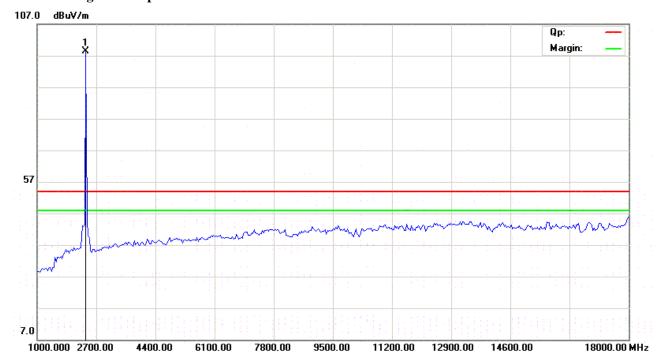


Please refer to the following test plots for details:

CH01 for 11g at 54Mbps: Horizontal



CH01 for 11g at 54Mbps: Vertical



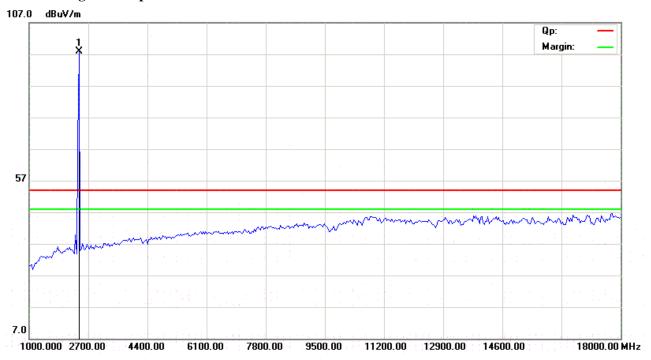
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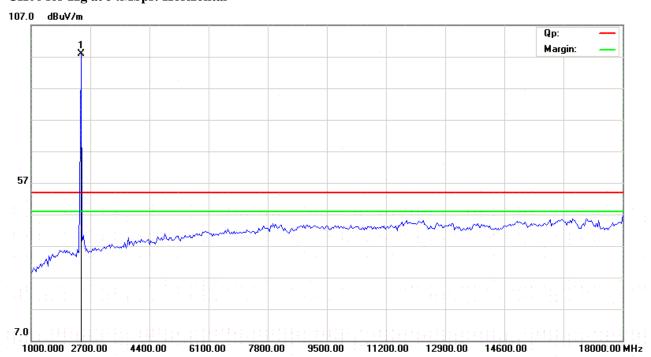
Date: 2013-12-21



CH06 for 11g at 54Mbps: Vertical



CH06 for 11g at 54Mbps: Horizontal



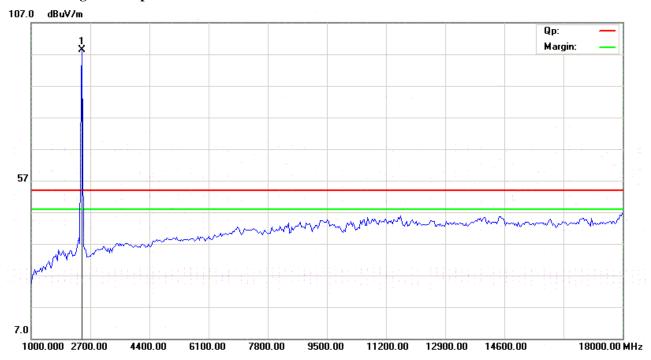
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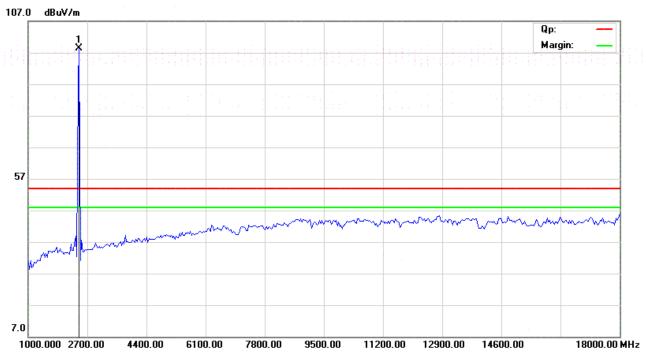
Date: 2013-12-21



CH11 for 11g at 54Mbps: Vertical



CH11 for 11g at 54Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise

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Operation Mode: Transmitting under CH01 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)	
2412.00	98.10 (PK)	V	Eundomontal Eroquanov	
2412.00	98.08 (PK)	Н	Fundamental Frequency	
4824.00		Н	74(Peak)/ 54(AV)	
4824.00		V 74(P		
7236.00		H/V	74(Peak)/ 54(AV)	
9648.00		H/V	74(Peak)/ 54(AV)	
12060		H/V	74(Peak / 54(AV)	
14472		H/V	74(Peak)/ 54(AV)	
16684	H/V		74(Peak)/ 54(AV)	
19296	06 H/V		74(Peak)/ 54(AV)	
21708		H/V	74(Peak)/ 54(AV)	
24120	24120		74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps

Operation Mode: Transmitting under CH06 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB \u03bc V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2437.00	97.42 (PK)	Н	Fundamental Frequency
2437.00	98.22 (PK)	V	Fundamental Frequency
4874.00		Н	74(Peak)/ 54(AV)
4874.00		V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak / 54(AV)
14622		H/V	74(Peak)/ 54(AV)
17059	H/V		74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps

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Operation Mode: Transmitting under CH11 for 11b at 11Mbps

	0			
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)	
2462.00	97.81 (PK)	Н	Fundamental Frequency	
2462.00	97.56 (PK)	V		
4924		Н	74(Peak)/ 54(AV)	
4924		V	74(Peak)/ 54(AV)	
7368	7368		74(Peak)/ 54(AV)	
9848		H/V	74(Peak)/ 54(AV)	
12310		H/V	74(Peak)/ 54(AV)	
1 772		H/V	74(Peak)/ 54(AV)	
17234		H/V	74(Peak)/ 54(AV)	
19696	H/V		74(Peak)/ 54(AV)	
22158		H/V	74(Peak)/ 54(AV)	
24650		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode at 11Mbps

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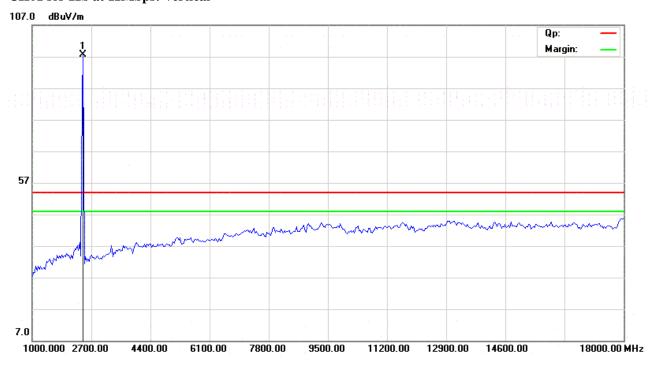


Please refer to the following test plots for details:

CH01 for 11b at 11Mbps: Horizontal



CH01 for 11b at 11Mbps: Vertical



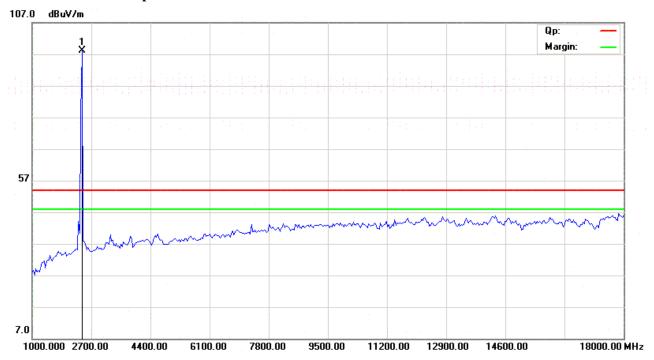
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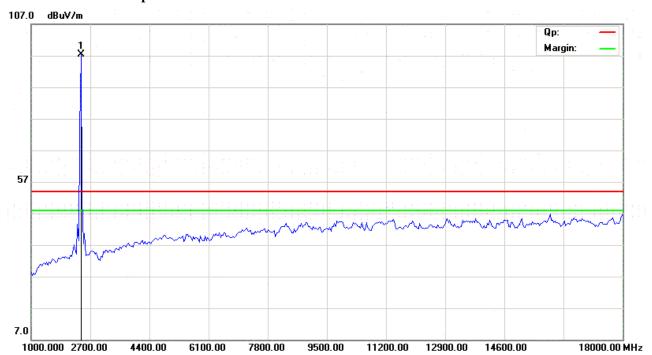
Date: 2013-12-21



CH06 for 11b at 11Mbps: Vertical



CH06 for 11b at 11Mbps: Horizontal



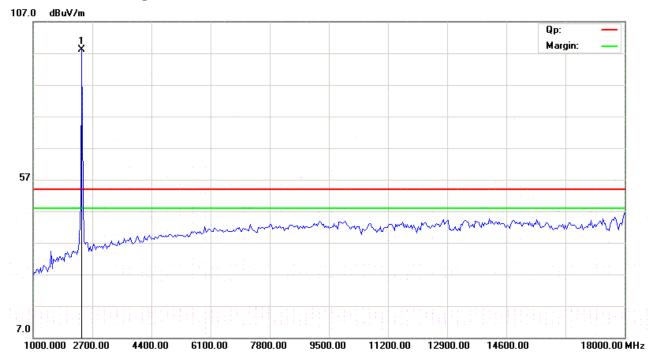
The report refers only to the sample tested and does not apply to the bulk.

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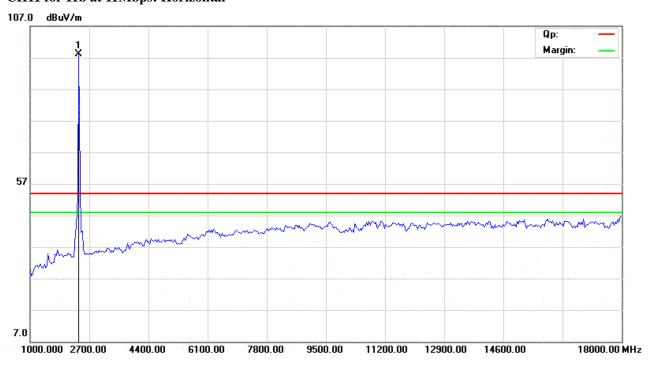
Date: 2013-12-21



CH11 for 11b at 11Mbps: Vertical



CH11 for 11b at 11Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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Operation Mode: Transmitting under CH01 for 11n HT20 at 65Mbps

	0			
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)	
2412.00	98.10 (PK)	Н	Eundomontal Eroquanov	
2412.00	98.08 (PK)	V	Fundamental Frequency	
4824.00		Н	74(Peak)/ 54(AV)	
4824.00		V	74(Peak)/ 54(AV)	
7236.00		H/V	74(Peak)/ 54(AV)	
9648.00		H/V	74(Peak)/ 54(AV)	
12060		H/V	74(Peak / 54(AV)	
14472		H/V	74(Peak)/ 54(AV)	
16684	4 H/V		74(Peak)/ 54(AV)	
19296		H/V		
21708		H/V	74(Peak)/ 54(AV)	
24120	24120		74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

Operation Mode: Transmitting under CH06 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2437.00	97.92 (PK)	Н	Fundamental Frequency
2437.00	98.22 (PK)	V	Fundamental Frequency
4874.00		Н	74(Peak)/ 54(AV)
4874.00		V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00		H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak / 54(AV)
14622		H/V	74(Peak)/ 54(AV)
17059	H/V		74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

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Operation Mode: Transmitting under CH11 for 11n HT20 at 65Mbps

Freque	ncy (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
246	2462.00 98.31 (PK)		Н	Even domental Engavenery
246	52.00	98.06 (PK)	V	Fundamental Frequency
49	924		Н	74(Peak)/ 54(AV)
49	924		V	74(Peak)/ 54(AV)
7.	368		H/V	74(Peak)/ 54(AV)
98	848		H/V	74(Peak)/ 54(AV)
12	310		H/V	74(Peak)/ 54(AV)
1	772		H/V	74(Peak)/ 54(AV)
17	234	H/V		74(Peak)/ 54(AV)
19	19696 H/V		H/V	74(Peak)/ 54(AV)
22	158		H/V	74(Peak)/ 54(AV)
24	24650		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

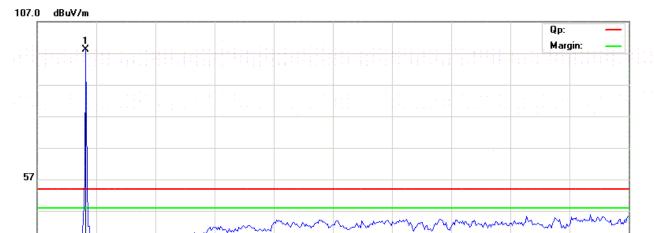
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

Date: 2013-12-21



Please refer to the following test plots for details:

CH01 for 11n HT20 at 65Mbps: Horizontal



CH01 for 11n HT20 at 65Mbps: Vertical

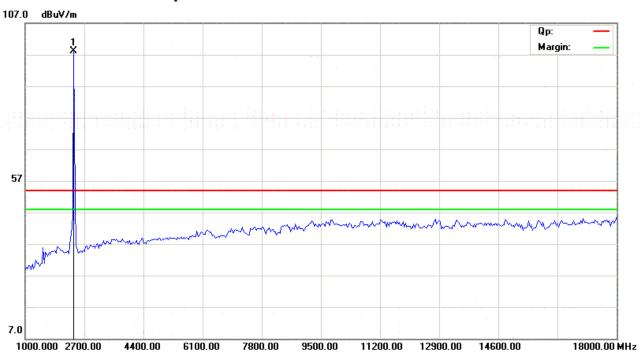
4400.00

6100.00

7800.00

7.0

1000.000 2700.00



9500.00

11200.00

12900.00

14600.00

18000.00 MHz

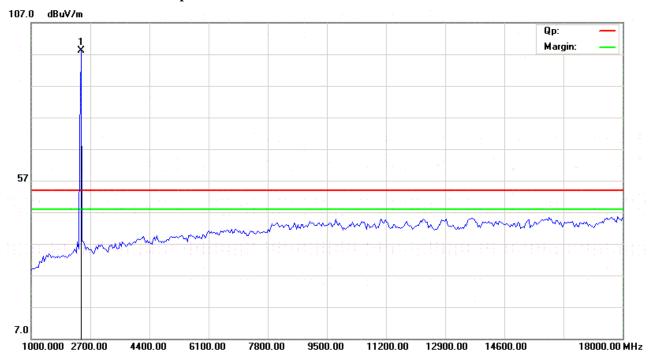
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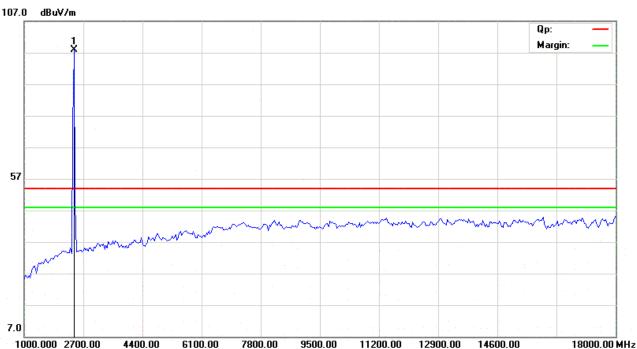
Date: 2013-12-21



CH06 for 11n HT20 at 65Mbps: Vertical



CH06 for 11n HT20 at 65Mbps: Horizontal



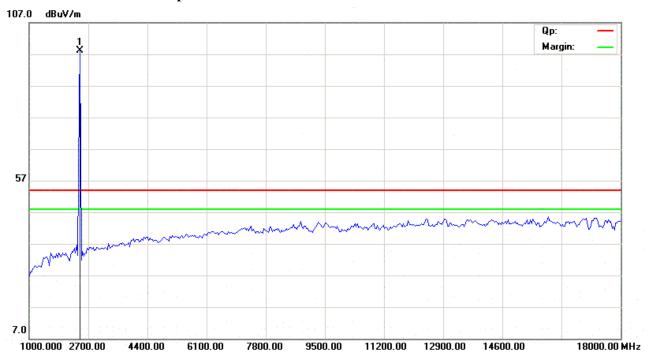
The report refers only to the sample tested and does not apply to the bulk.

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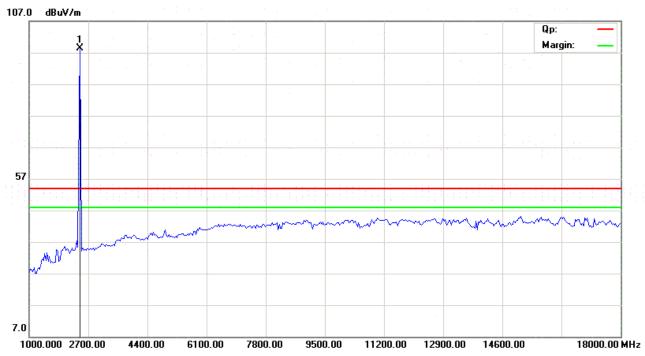
Date: 2013-12-21



CH11 for 11n HT20 at 65Mbps: Vertical



CH11 for 11n HT20 at 65Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

The report refers only to the sample tested and does not apply to the bulk.

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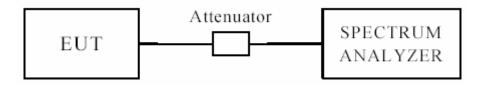
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7.0 6dB Bandwidth Measurement

7.1 Test Setup



7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500 kHz

7.3 Test Procedure

- 1. Set resolution bandwidth (RBW) = 100 kHz
- 2. Set the video bandwidth (VBW) \geq 3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = \max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

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7.4 Test Result 6dB Occupied Bandwidth

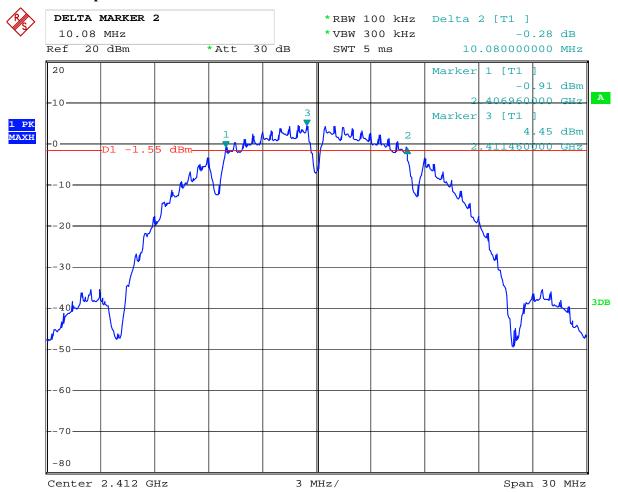
							ATV120	,ATV100,	
EU′	EUT HDM		I TV STICK		Model		ATV101, ATV120L, ATV120B, ATV120SD, ATV120E, ATV120S		
Mode		8	302.11b		Input Voltage			AC 120V	
Temperate	ure	24	4 deg. C,		Humidity		56%	6 RH	
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		indwidth Hz)	Minimum Limit (MHz)		Pass/ Fail	
1		2412	1	10	.08		0.5	Pass	
6		2437	1	10	.08	0.5		Pass	
11		2462	1	10	.08 0.5		0.5	Pass	
1		2412	11	8.	8.70		0.5	Pass	
6		2437	11	8.70			0.5	Pass	
11		2462	11	8.	70		0.5	Pass	

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1. 802.11b at 1Mbps of CH01



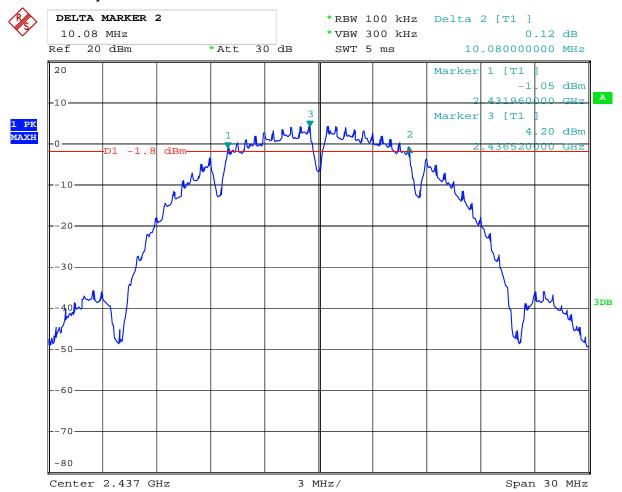
Date: 18.DEC.2013 16:44:56

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2. 802.11b at 1Mbps of CH06



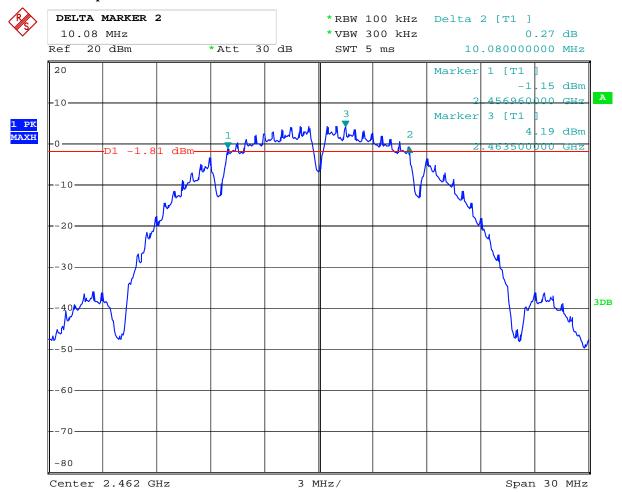
Date: 18.DEC.2013 16:45:42

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3. 802.11b at 1Mbps of CH11



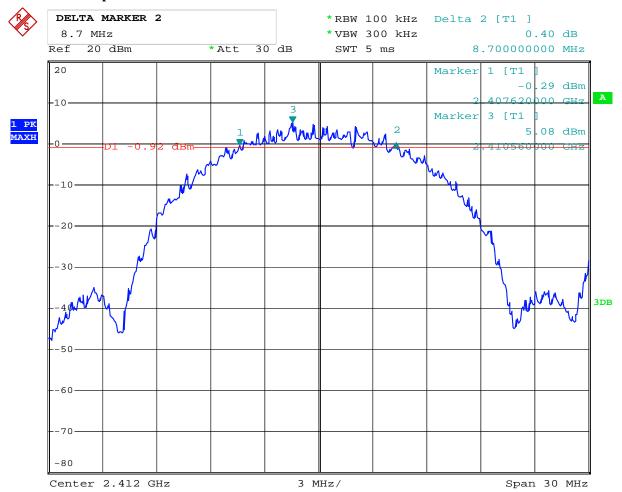
Date: 18.DEC.2013 16:46:21

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4. 802.11b at 11Mbps of CH01



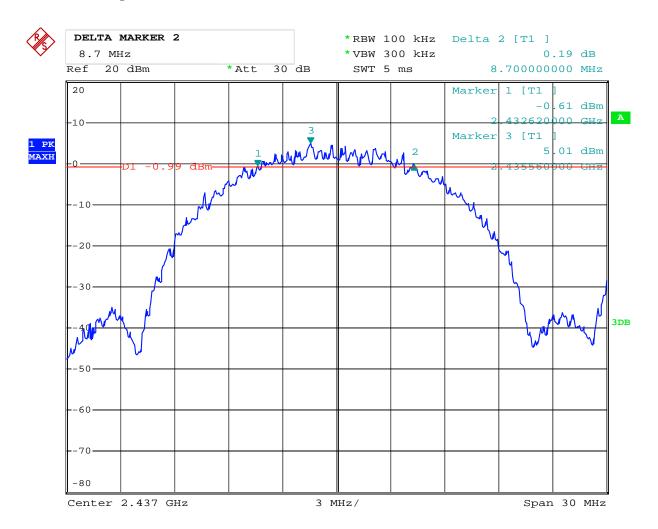
Date: 18.DEC.2013 16:48:02

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Date: 2013-12-21



5. 802.11b at 11Mbps of CH06



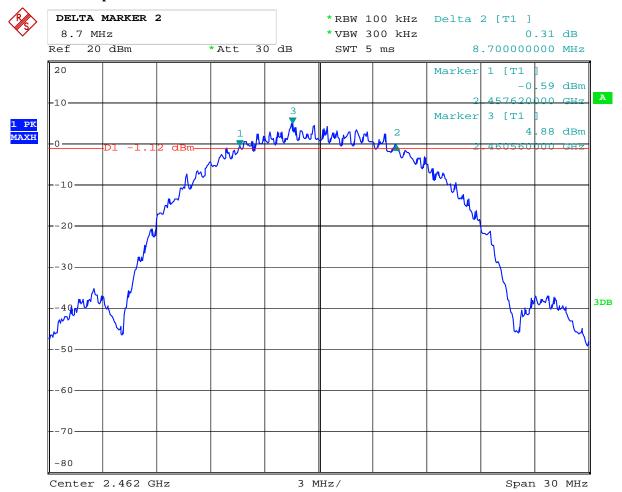
Date: 18.DEC.2013 16:47:29

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6. 802.11b at 11Mbps of CH11



Date: 18.DEC.2013 16:46:55

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6dB Occupied Bandwidth

EU	Γ	HDMI TV		TV STICK		Model		TV100, ATV101, DL, ATV120B, V120SD, 0E,ATV120S
Mode		8	302.11g		Input Vol	tage	A	C 120V
Temperat	ure	24	4 deg. C,		Humidity	,	5	6% RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		andwidth [Hz]		num Limit MHz)	Pass/ Fail
1		2412	54	16	5.56		0.5	Pass
6		2437	54	16	5.56		0.5	Pass
11		2462	54	16	5.56		0.5	Pass

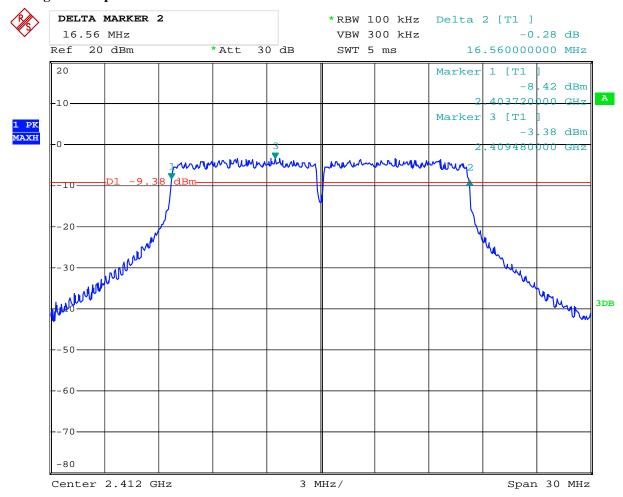
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Test Plots:

1. 802.11g at 54Mbps of CH01



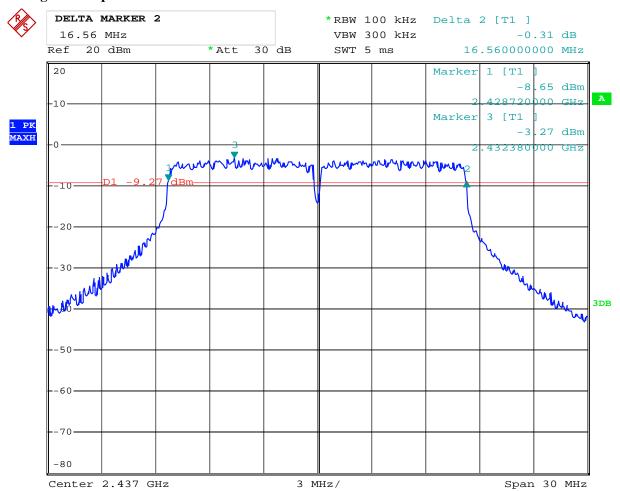
Date: 18.DEC.2013 16:35:23

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2. 802.11g at 54Mbps of CH06



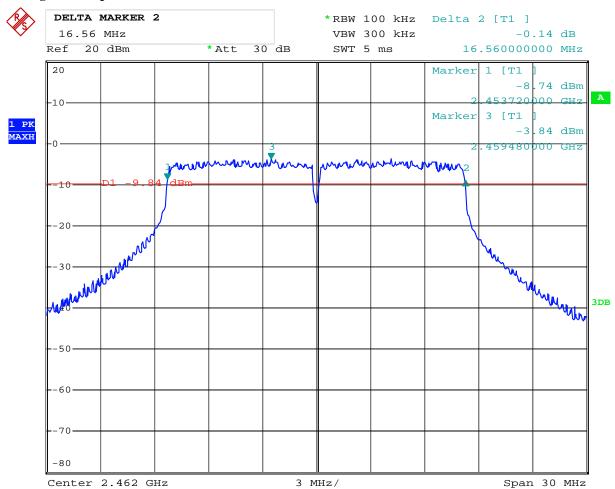
Date: 18.DEC.2013 16:34:44

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3. 802.11g at 54Mbps of CH11



Date: 18.DEC.2013 16:36:33

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6dB Occupied Bandwidth

							ATV120,ATV100,	
EU'	т	нрм	I TV STIC	V	Mod	اما	ATV101, ATV120L,	
EU	1	IIDM	11 (5110)	N.	Wiodei		ATV120B,	ATV120SD,
							ATV120E	E,ATV120S
Mode		8	302.11n		Input Vol	tage	AC	120V
Temperat	ure	24	4 deg. C,		Humidity	r	56%	6 RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ındwidth Hz)		mum Limit MHz)	Pass/ Fail
1		2412	HT20 65M	17	.76		0.5	Pass
6		2437	HT20 65M	17	.80 0.5		0.5	Pass
11		2462	HT20 65M	17	7.80 0.5		0.5	Pass

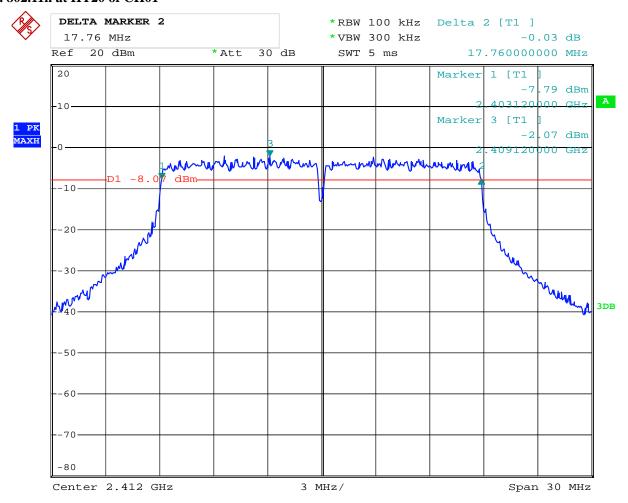
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Test Plots:

1. 802.11n at HT20 of CH01



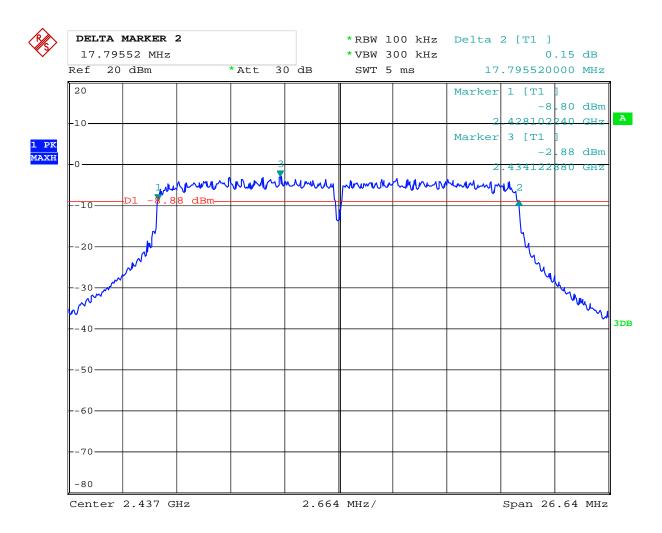
Date: 17.DEC.2013 10:55:35

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2. 802.11n at HT20 of CH06



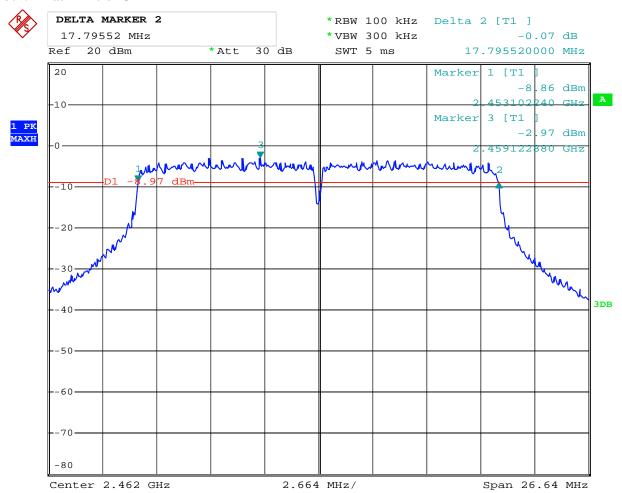
Date: 17.DEC.2013 11:01:48

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3. 802.11n at HT20 of CH11



Date: 17.DEC.2013 11:03:06

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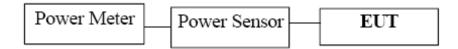
Date: 2013-12-21



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8. Maximum Peak Output Power

8.1 Test Setup



8.2 Limits of Maximum Peak Output Power

The Maximum Peak Output Power Measurement is 30dBm.

8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

Note: the peak power was measured

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8.4Test Results

EUT		HDMI TV	STICK	М	odel	ATV1	120,ATV100, 01, ATV120L, TV120B, FV120SD, 20E,ATV120S
Mode	Mode 802.1		11b Input Vo		Voltage		120V~
Temperat	Temperature 24 deg		g. C,		ımidity		56% RH
Channel	Ch	annel Frequency (MHz)	Peak Power Output (dBm)		Peak P Lin (dB	nit	Pass/ Fail
1		2412	21.24		30		Pass
6		2437	21.01		30		Pass
11		2462	20.08		30)	Pass

Note: 1. At finial test to get the worst-case emission at 11Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EUT		HDMI TV	STICK Mo		odel	ATV12	100,ATV101, 0L, ATV120B, rV120SD, 20E,ATV120S
Mode	Mode 802.1		.1g	Input Voltage		120V~	
Temperat	ure	24 deg	g. C, Hun		nidity	:	56% RH
Channel	Cha	annel Frequency (MHz)	Peak Power Output (dBm)		Peak P Lin (dB:	nit	Pass/ Fail
1		2412	19.07		30		Pass
6		2437	18.97		30)	Pass
11		2462	18.70		30)	Pass

Note: 1. At finial test to get the worst-case emission at 54Mbps for CH01, CH06 and CH11

- 2. The result basic equation calculation as follow:
 - Peak Power Output = Peak Power Reading + Cable loss + Attenuator
- 3. The worse case was recorded

The report refers only to the sample tested and does not apply to the bulk.

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EUT		HDMI TV	STICK	М	odel	ATV1 A AT	120,ATV100, 01, ATV120L, TV120B, TV120SD, 20E,ATV120S
Mode	Mode 802.11n ((HT20) Input V		Voltage		120V~
Temperat	Temperature 24 deg		g. C,		midity :		56% RH
Channel	Cha	hannel Frequency Peak Power (MHz) (dBm)		Output	Peak Power Limit (dBm)		Pass/ Fail
1		2412	19.79		30		Pass
6		2437	18.90		30)	Pass
11		2462	18.87		30)	Pass

Note: 1. At finial test to get the worst-case emission at 65Mbps of 11n HT20 for CH01, CH06 and CH11

2. The result basic equation calculation as follow: Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The worse case was recorded

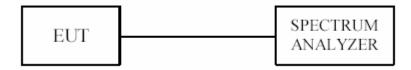
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9. Power Spectral Density Measurement

9.1 Test Setup



9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm.

9.3 Test Procedure

- 1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
- 2. Set the RBW = 10 kHz.
- 3. Set the VBW \geq 30 kHz.
- 4. Set the span to 1.5 times the DTS channel bandwidth.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 11. The resulting peak PSD level must be ≤ 8 dBm.

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9.4Test Result

EUT		HDMI TV	STICK	Model		ATV120,ATV100, ATV101, ATV120L, ATV120B, ATV120SD, ATV120E,ATV120S	
Mode	Mode 802.11b 1		1Mbps	Input	Voltage	AC 120V	
Temperati	Temperature 24 deg		. C,	Humidity		56% RH	
Channel	Cha	annel Frequency (MHz)	Final RF Power Level (dBm)		Maximum Limit (dBm)		Pass/ Fail
			11Mbps				
1		2412	-4.16		8		Pass
6		2437	-4.26		8		Pass
11		2462	-4.57		8		Pass

						ATV	120,ATV100,	
						ATV101, ATV120L,		
EUT		HDMI TV STICK		Model		A	TV120B,	
						A	ΓV120SD,	
					ATV1	20E,ATV120S		
Mode		802.11b	l Mbps	Input	Voltage	A	AC 120V	
Temperat	ure	24 deg. C,		Humidity		;	56% RH	
Channel	Cha	annel Frequency Final RF Po		wer	wer Maximum Limit		Pass/ Fail	
Channel		(MHz) Level in (dI		Bm) (dBm)		m)		
			1Mbps					
1		2412	-5.42		8		Pass	
6		2437	-5.75		8		Pass	
11		2462	-5.76		8		Pass	

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EUT		HDMI TV	STICK	Model		ATV120,ATV100, ATV101, ATV120L, ATV120B, ATV120SD, ATV120E,ATV120S	
Mode	Mode 802.11g 54		54Mbps	Input Voltage		AC 120V	
Temperat	ure	24 deg	g. C,		midity 5		56% RH
Channel	Cha	annel Frequency (MHz)	Final RF Power Level in (dBm)		Maximur (dB		Pass/ Fail
			6Mbps			·	
1		2412	-11.98		8		Pass
6		2437	-12.39		8		Pass
11		2462	-12.39	•	8		Pass

EUT		HDMI TV	STICK Mo		odel	ATV12	100,ATV101, 0L, ATV120B, TV120SD, 20E,ATV120S	
Mode	Mode 802.11n HT2		20 65Mbps	Input	Voltage	A	AC 120V	
Temperat	perature 24 deg		g. C, Humidity		56% RH			
Channel	Cha	annel Frequency (MHz)	Final RF Power Level (dBm)		Maximus (dB		Pass/ Fail	
			HT20					
1		2412	-10.31		8		Pass	
6		2437	-11.06		8		Pass	
11		2462	-11.06		8		Pass	

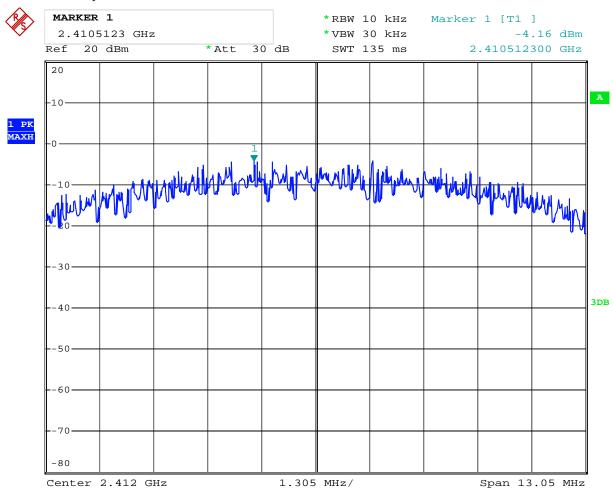
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9.5 Photo of Power Spectral Density Measurement

1.802.11b at 11Mbps of CH01



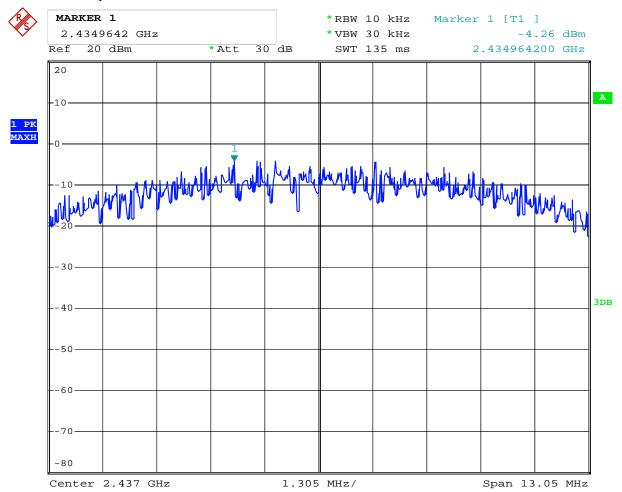
Date: 18.DEC.2013 16:39:31

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2. 802.11b at 11Mbps at CH06



Date: 18.DEC.2013 16:39:01

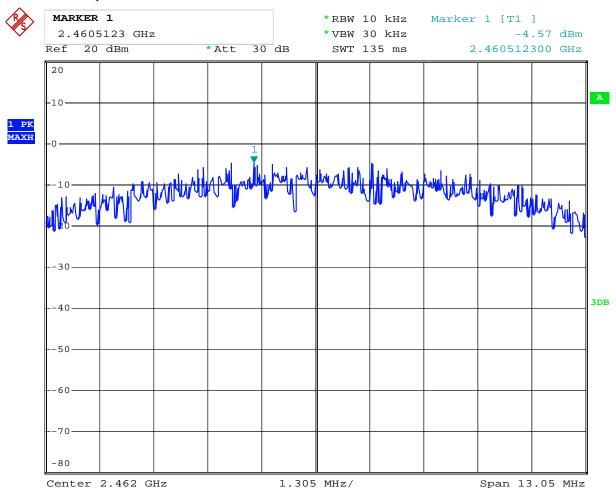
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3. 802.11b at 11Mbps of CH11



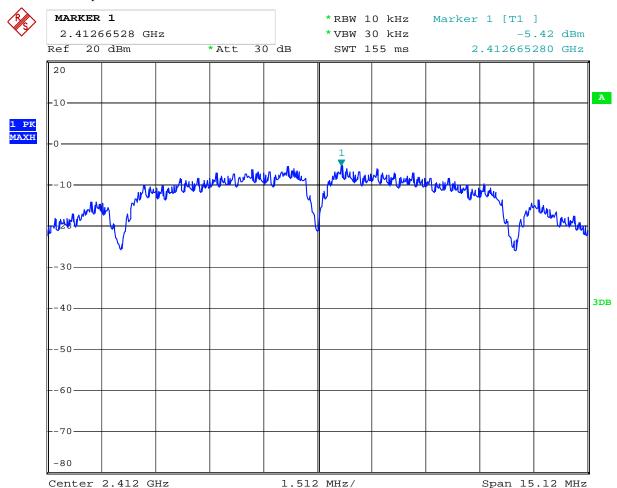
Date: 18.DEC.2013 16:38:39

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4. 802.11b at 1Mbps of CH1



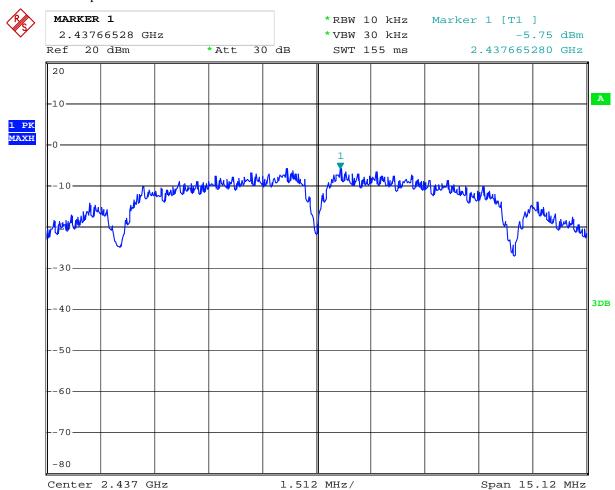
Date: 18.DEC.2013 16:37:11

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5. 802.11b at 1Mbps of CH6



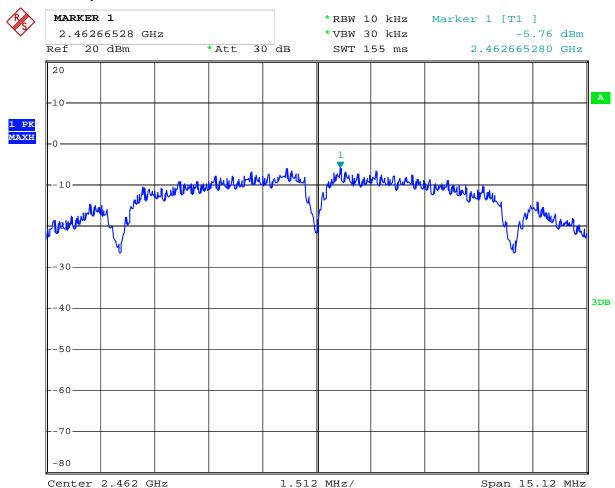
Date: 18.DEC.2013 16:37:39

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6. 802.11b at 1Mbps of CH11



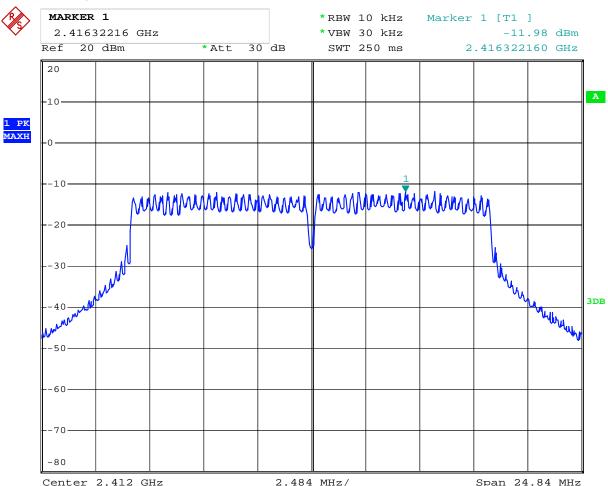
Date: 18.DEC.2013 16:37:57

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7. 802.11g at 6Mbps of CH1



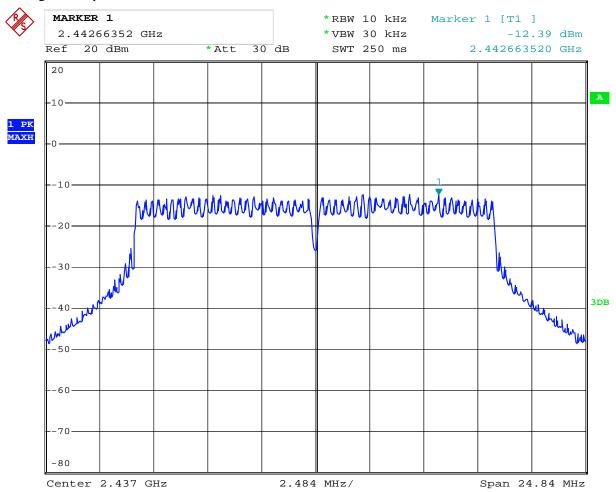
Date: 18.DEC.2013 16:40:19

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8. 802.11g at 6 Mbps of CH6



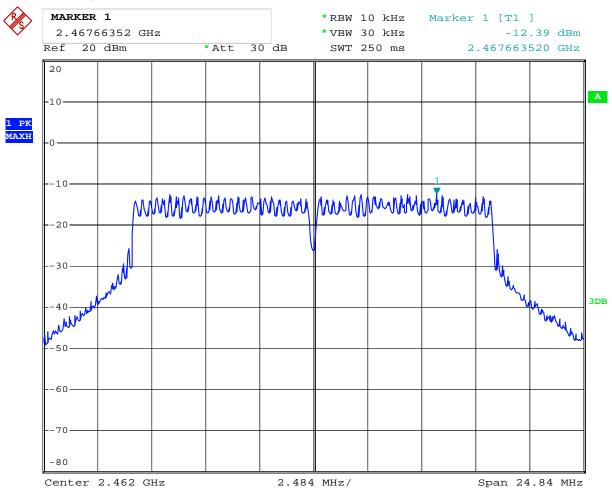
Date: 18.DEC.2013 16:43:18

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9. 802.11g at 6 Mbps of CH11



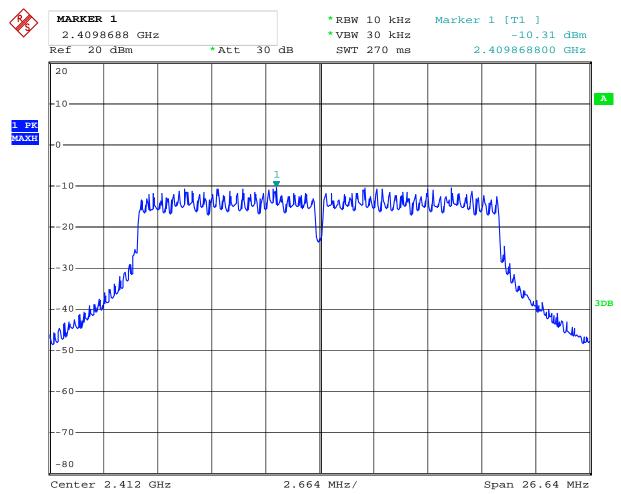
Date: 18.DEC.2013 16:43:42

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10. 802.11n at HT20 of CH01



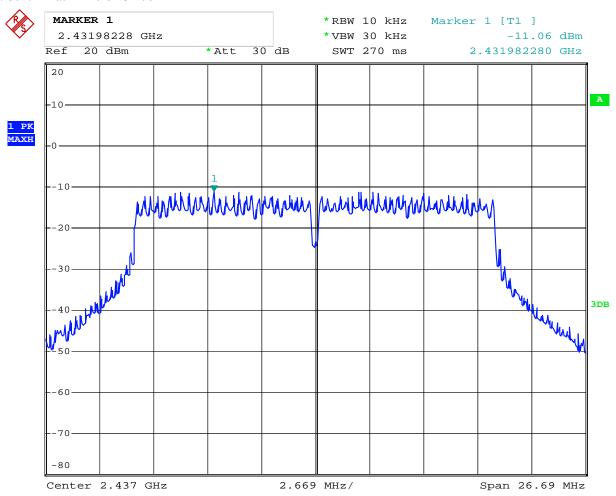
Date: 17.DEC.2013 10:59:24

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11. 802.11n at HT20 of CH06



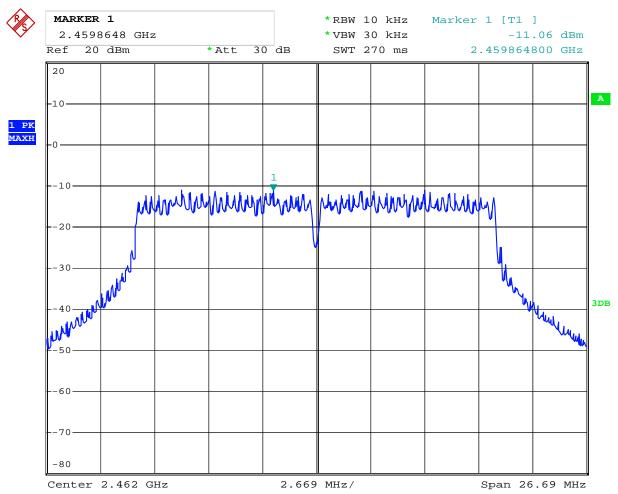
Date: 17.DEC.2013 11:05:47

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12. 802.11n at HT20 of CH11



Date: 17.DEC.2013 11:05:14

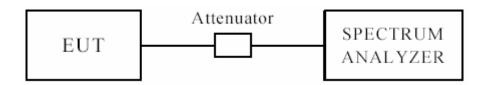
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10 Out of Band Measurement

10.1 Test Setup for band edge



The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

10.2 Limits of Out of Band Emissions Measurement

- 1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of radiated emission test.(Peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector)

For bandage test, the spectrum set as follows: RBW=100,VBW=300 kHz. A conducted measurement used

10.4 Test Result

Please see next pages

Note: For band-edge measurement, the frequency from 30MHz-25GHz was tested. And It met the FCC rule.

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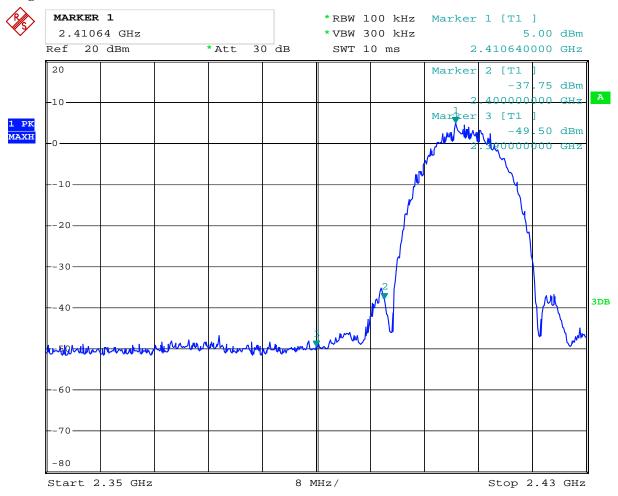
For 802.11b mode

CH01 at 11Mbps

10.4 Band-edge Measurement

EUT	HDMI TV STICK	Model	ATV120,ATV100, ATV101, ATV120L, ATV120B, ATV120SD, ATV120E,ATV120S
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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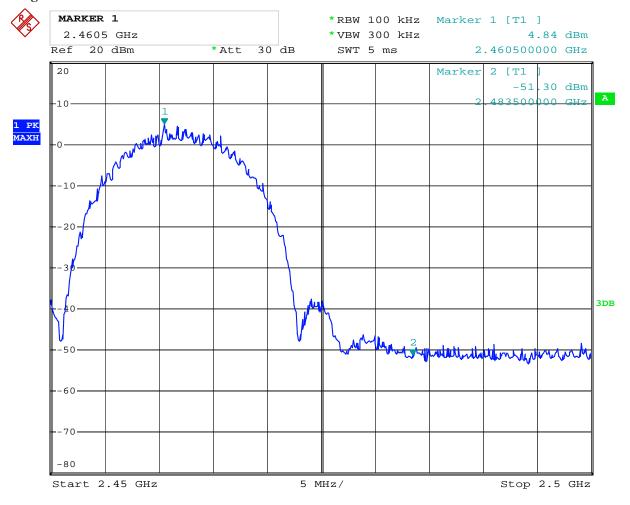


CH11 at 11Mbps

10.4 Band-edge Measurement

EUT	HDMI TV STICK	Model	ATV120,ATV100, ATV101, ATV120L, ATV120B, ATV120SD, ATV120E,ATV120S
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 18.DEC.2013 16:50:44

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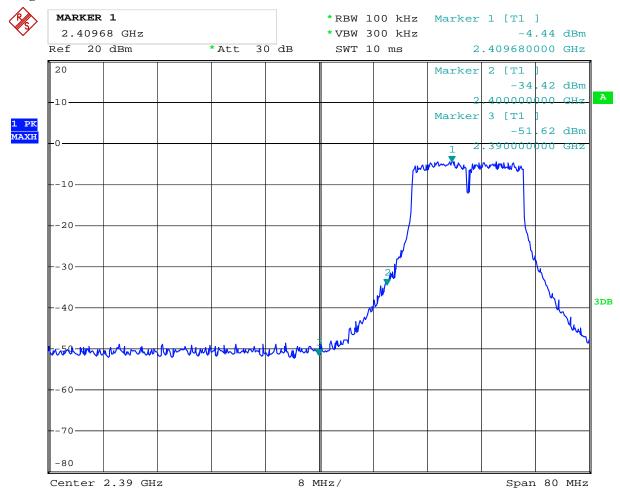
For 802.11g mode

CH01 at 6Mbps

10.4 Band-edge Measurement

EUT	HDMI TV STICK	Model	ATV120,ATV100, ATV101, ATV120L, ATV120B, ATV120SD, ATV120E,ATV120S
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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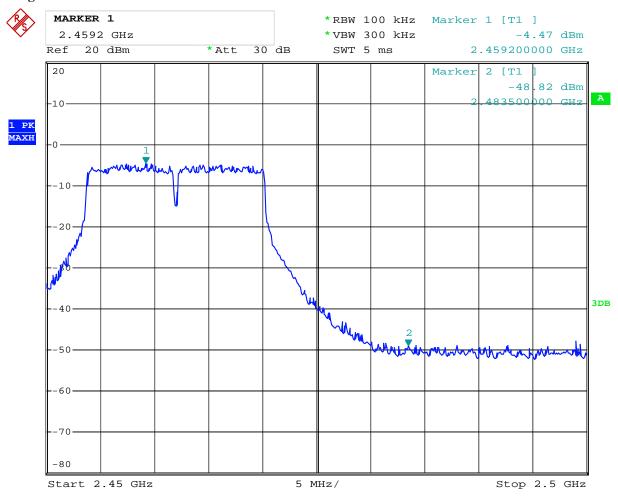


CH11 at 6Mbps

10.4 Band-edge Measurement

EUT	HDMI TV STICK	Model	ATV120,ATV100, ATV101, ATV120L, ATV120B, ATV120SD, ATV120E,ATV120S
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



Date: 18.DEC.2013 16:50:26

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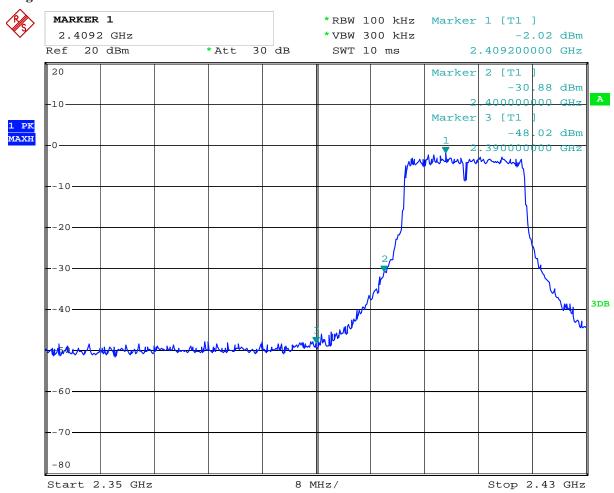
For 802.11n (HT20) mode

CH01 at 65Mbps

10.4 Band-edge Measurement

			ATV120,ATV100, ATV101,
EUT	HDMI TV STICK	Model	ATV120L, ATV120B,
			ATV120SD, ATV120E,ATV120S
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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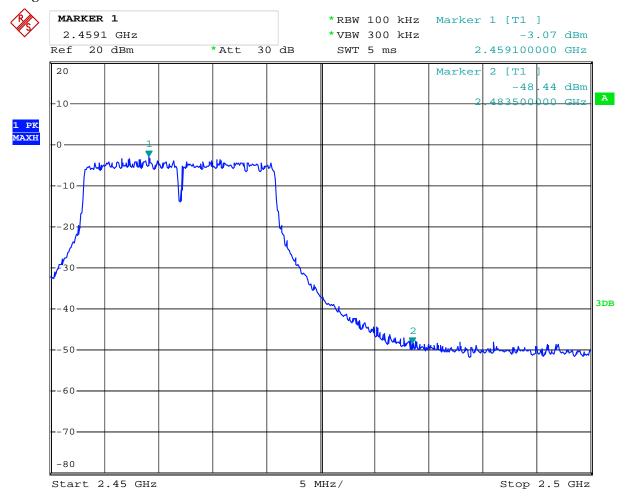


CH11 at 65Mbps

10.4 Band-edge Measurement

EUT	HDMI TV STICK	Model	ATV120,ATV100, ATV101, ATV120L, ATV120B, ATV120SD, ATV120E,ATV120S
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure:



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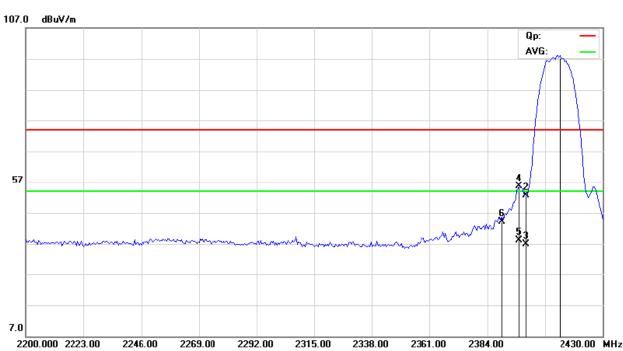
Date: 2013-12-21



802.11b 11Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	Low Channel
Mode	Keeping	g Transmitting	Input Voltage	120V~
Temperature	24	l deg. C,	Humidity	56% RH
Test Result:	Pass		Detector	PK
2400MHz	PK (dBµV/m)	52.66	T imit	$74(dB\mu V/m)$
	AV (dBμV/m)	36.90	Limit	$54(dB\mu V/m)$
2390MHz	PK (dBμV/m)	44.18	I imit	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$
2396.814	PK (dBμV/m)	55.68	Limit	74(dBµV/m)
	AV (dBμV/m)	38.16	Lillit	54(dBµV/m)



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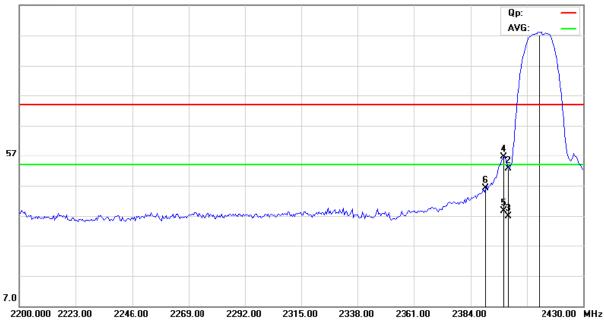


802.11b 11Mbps

12.4 Restricted band Measurement

EUT	HDM	I TV STICK	Test Mode:	Low Channel
Mode	Keeping	g Transmitting	Input Voltage	120V~
Temperature	24	deg. C,	Humidity	56% RH
Test Result:	Pass		Detector	PK
2400MHz	PK (dBµV/m)	52.54	I imit	74(dBµV/m)
	AV (dBμV/m)	36.99	Limit	$54(dB\mu V/m)$
2390MHz	PK (dBμV/m)	46.10	Limit	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)		Limit	$54(dB\mu V/m)$
2397.735	PK (dBμV/m)	56.51	Limit	74(dBµV/m)
	AV (dBμV/m)	38.72		54(dBμV/m)





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802.11b 11Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBμV/m) 46.08		T: '/	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)		Limit	$54(dB\mu V/m)$



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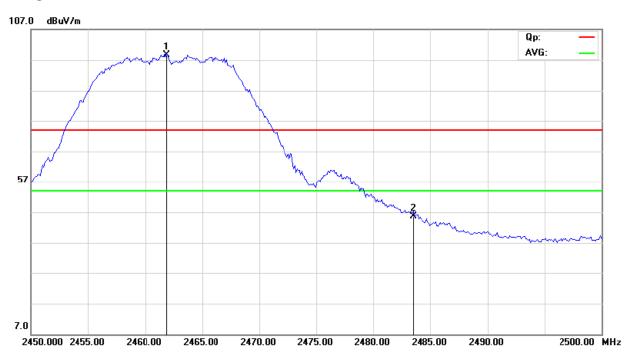
Date: 2013-12-21



802.11b 11Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBμV/m) 45.56		T: '	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$



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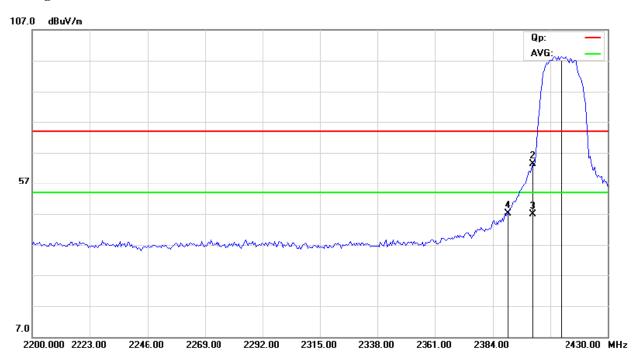
Date: 2013-12-21



802.11g 54Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	Low Channel
Mode	Keeping	g Transmitting	Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400MHz	PK (dBµV/m)	63.33	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	46.94	Limit	$54(dB\mu V/m)$
2390MHz	PK (dBµV/m)	47.18	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$



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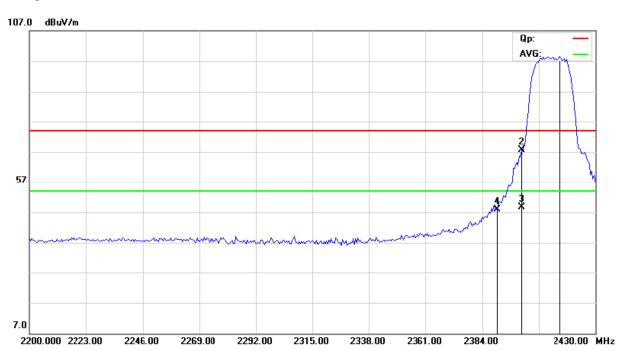
Date: 2013-12-21



802.11g 54Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	Low Channel
Mode	Keeping	g Transmitting	Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400MHz	PK (dBµV/m)	67.70	Limit	74(dBµV/m)
	AV (dBμV/m)	48.74	Limit	54(dBµV/m)
2390MHz	PK (dBμV/m)	47.86	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	54(dBμV/m)



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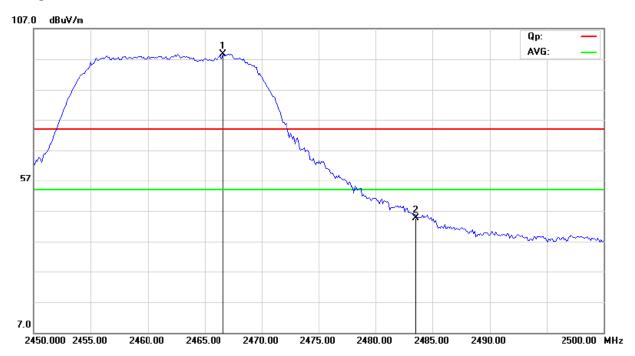
Date: 2013-12-21



802.11g 54Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBµV/m)	44.75	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$



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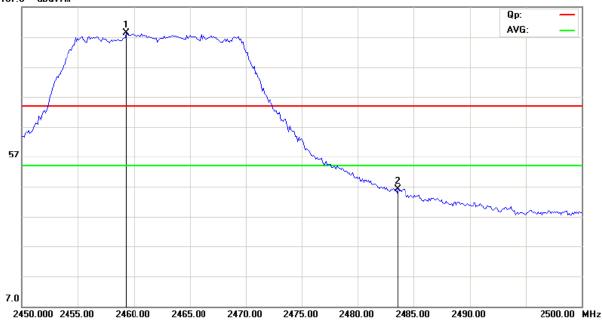


802.11g 54Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBµV/m)	46.06	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$





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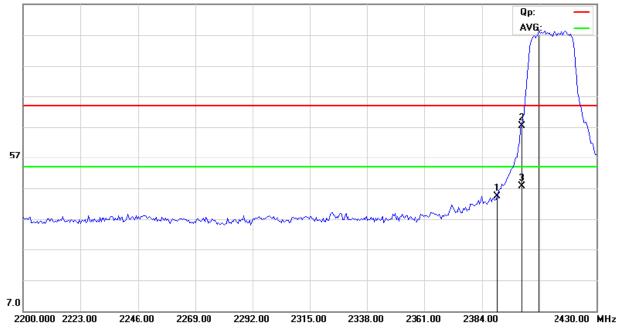


802.11n HT20 65Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	Low Channel
Mode	Keeping	g Transmitting	Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:		Pass		PK
2400MHz	PK (dBμV/m)	67.35	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)	47.54	Limit	54(dBμV/m)
2390MHz	PK (dBμV/m)	44.38	Limit	74(dBμV/m)
	AV (dBμV/m)		Limit	54(dBμV/m)





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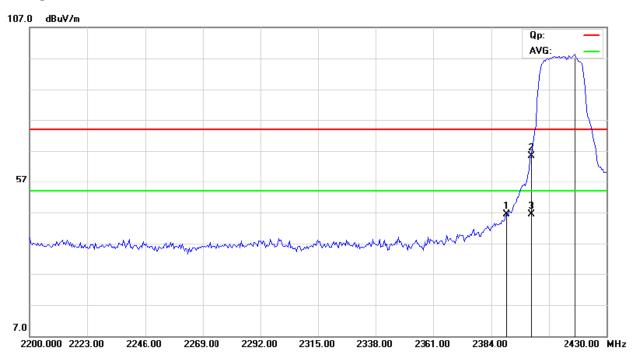
Date: 2013-12-21



802.11n HT20 65Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	Low Channel
Mode	Keeping	g Transmitting	Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400MHz	PK (dBµV/m)	65.39	Limit	74(dBµV/m)
	AV (dBμV/m)	46.26	Limit	54(dBµV/m)
2390MHz	PK (dBµV/m)	46.29	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		Lillit	$54(dB\mu V/m)$



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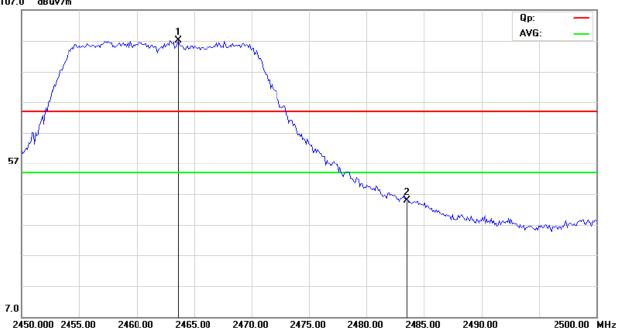


802.11n HT20 65Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBµV/m)	44.78	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)			$54(dB\mu V/m)$





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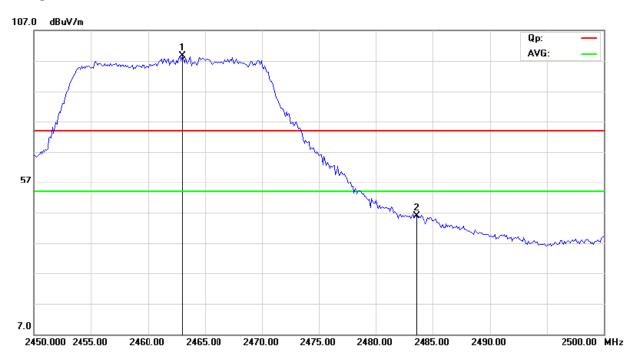
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802.11n HT20 65Mbps

12.4 Restricted band Measurement

EUT	HDMI TV STICK		Test Mode:	High Channel
Mode	Keeping Transmitting		Input Voltage	120V~
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5MHz	PK (dBµV/m)	45.99	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	54(dBµV/m)



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11.0 Antenna Requirement

11.1 Standard Applicable

Date: 2013-12-21

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitter antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the mount in dB that the directional gain of the antenna exceeds 6 dBi.

11.2 Antenna Connected construction

Ceramic antenna used. The maximum Gain of the antennas is 2.0dBi.

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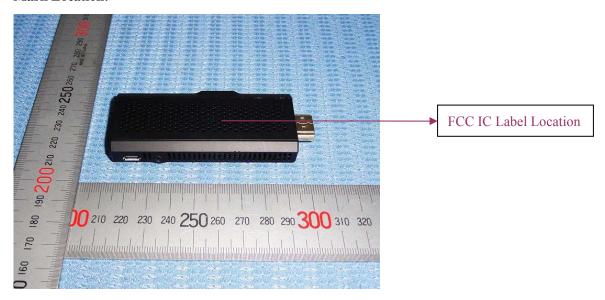


12.0 IC Label

FCC ID: 2ABKM0013120027

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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13.0 Photo of testing

Conducted Emission Test Setup:



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Radiated Emission Test Setup:





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Photographs - EUT

Outside view





The report refers only to the sample tested and does not apply to the bulk.

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Outside view





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Outside view





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Inside view





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Inside view





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Inside view





End of the report

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