







ISO/IEC17025Accredited Lab.

Report No: FCC/IC 1210110-01 File reference No: 2012-09-04

Applicant: Kobian Canada INC.

Product: MID

Model No: HS-7DTB4, HS-7DTB7, HS-7DTB8

Trademark: Hipstreet

Test Standards: FCC Part 15 Subpart C, Paragraph 15.247

RSS-210 Issue 8

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 and RSS-210 Issue 8 for the

evaluation of electromagnetic compatibility

Approved By

Jack Chung

Jack Chung Manager

Dated: Sep 04, 2012

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

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Report No: 1210110-01 Page 2 of 127

Date: 2012-09-04



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.

Page 3 of 127

Report No: 1210110-01

Date: 2012-09-04



Test Report Conclusion

Content

1.0	General Details	4
1.1	Test Lab Details.	4
1.2	Applicant Details	4
1.3	Description of EUT	4
1.4	Submitted Sample	5
1.5	Test Duration.	5
1.6	Test Uncertainty.	5
1.7	Test By	5
2.0	List of Measurement Equipment.	6
3.0	Technical Details	9
3.1	Summary of Test Results	9
3.2	Test Standards.	9
4.0	EUT Modification	9
5.0	Power Line Conducted Emission Test.	10
5.1	Schematics of the Test.	10
5.2	Test Method and Test Procedure.	10
5.3	Configuration of the EUT	10
5.4	EUT Operating Condition.	11
5.5	Conducted Emission Limit.	11
5.6	Test Result.	11
6.0	Radiated Emission test.	14
6.1	Test Method and Test Procedure.	14
6.2	Configuration of the EUT	14
6.3	EUT Operation Condition.	14
6.4	Radiated Emission Limit	15
7.0	6dB Bandwidth Measurement.	42
8.0	Maximum Peak Output Power	79
9.0	Power Spectral Density Measurement.	82
10.0	Out of Band Measurement.	100
11.0	Antenna Requirement.	117
13.0	FCC ID Label.	118
14.0	Photo of Test Setup and EUT View.	119

Report No: 1210110-01 Page 4 of 127



1.0 General Details

Date: 2012-09-04

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-01

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: Kobian Canada INC.

Address: 560 Denison Street, Unit 5, Markham, Ontario, L3R 2M8, Canada

Telephone: (001) 905-948-9967 Fax: (001) 905-948-1601

1.3 Description of EUT

Product: MID

Manufacturer: Kobian Canada INC.

Address: 560 Denison Street, Unit 5, Markham, Ontario, L3R 2M8, Canada

Brand Name: Hipstreet
Model Number: HS-7DTB4

Additional Model Number: HS-7DTB7, HS-7DTB8

Power Adapter Input: DC5V, with Li-ion Battery 3.7V, 2600mAh

(Recharge with AC/DC Adapter Input: AC 100-240V~, 50/60Hz, 0.32A;

Output: DC5V, 2000mA)

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

IEEE 802.11g/n (HT20/HT40) : OFDM(64QAM, 16QAM, QPSK, BPSK)

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

IEEE 802.11n HT40: 2422MHz-2452MHz

Channel Spacing IEEE 802.11b/g/n (HT20/40): 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

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

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Report No: 1210110-01 Page 5 of 127

Report No: 1210110-01 Date: 2012-09-04 中 市 校 和

IEEE 802.11n HT40: 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

IEEE 802.11n HT40: 7 Channels

Antenna: Ceramic Antenna with maximum gain 2.0dBi

1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2012-08-21 to 2012-09-04

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

Terry Tang

The sample tested by

Print Name: Terry Tang

Page 6 of 127

Report No: 1210110-01

Date: 2012-09-04



2.0	0 Test Equipments						
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date		
ESPI Test Receiver	ROHDE&SCHWARZ	ESPI 3	100379	2012-04-21	2013-04-20		
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100294	2012-04-21	2013-04-20		
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100253	2012-04-21	2013-04-20		
Ultra Broadband ANT	ROHDE&SCHWARZ	HL562	100157	2012-04-21	2013-04-20		
ESDV Test Receiver	ROHDE&SCHWARZ	ESDV	100008	2012-04-21	2013-04-20		
Impuls-Begrenzer	ROHDE&SCHWARZ	ESH3-Z2	100281	2012-04-21	2013-04-20		
System Controller	CT	SC100	-				
Printer	EPSON	РНОТО ЕХЗ	CFNH234850				
Computer	IBM	8434	1S8434KCE99BLXL O*	-	-		
Loop Antenna	EMCO	6502	00042960	2012-04-21	2013-04-20		
ESPI Test Receiver	ROHDE&SCHWARZ	ESI26	838786/013	2012-04-21	2013-04-20		
3m OATS			N/A	2012-04-21	2013-04-20		
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170265	2012-04-21	2013-04-20		
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-631	2012-04-21	2013-04-20		
Power meter	Anritsu	ML2487A	6K00003613	2012-04-21	2013-04-20		
Power sensor	Anritsu	MA2491A	32263	2012-04-21	2013-04-20		
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2012-04-21	2013-04-20		
LISN	AFJ	LS16C	10010947251	2012-04-21	2013-04-20		
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2012-04-21	2013-04-20		
9*6*6 Anechoic			N/A	2012-04-21	2013-04-20		
EMI Test Receiver	RS	ESCS30	100139	2012-04-21	2013-04-20		
LISN	AFJ	LS16C	10010947251	2012-04-21	2013-04-20		
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2012-04-21	2013-04-20		

Report No: 1210110-01 Page 7 of 127

2.1 **Auxiliary Equipment**

Date: 2012-09-04

Name	Model No.	Serial No.	Manufacturer	Cable	FCC ID/DOC
	Wiodel Ivo.	Scrium 110.		Cuote	T CC ID/DCC
TF Card			Kingston	-	
Earphone					

Report No: 1210110-01 Page 8 of 127

Date: 2012-09-04



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

IEEE 802.11n HT40

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

Channel	Frequency (MHz)
Low	2422
Mid	2437
High	2452

IEEE 802.11n HT40 mode: 65Mbps data rate (worst case) was 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.

Date: 2012-09-04



3.0 **Technical Details**

3.1 **Summary of test results**

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107	Conducted Emission Test	PASS	Complies
& 15.207 & RSS-210 Issue 8			
	Spectrum bandwidth of a		Complies
FCC Part 15 Subpart C	Orthogonal Frequency		
Paragraph 15.247(a)(2) Limit &	Division Multiplex System	PASS	
RSS-210 Issue 8	Limit: 6dB		
	bandwidth>500kHz		
FCC Part 15, Paragraph	Maximum peak output		
15.247(b) & RSS-210 Issue 8	power	PASS	Complies
13.247(b) & R55-210 Issue 0	Limit: max. 30dBm		
FCC Part 15, Paragraph	Transmitter Radiated	PASS	Complies
15.109,15.205 & 15.209 &	Emission		
RSS-210 Issue 8	Limit: Table 15.209		
FCC Part 15, Paragraph	Power Spectral Density	PASS	Complies
15.247(e) & RSS-210 Issue 8	Limit: max. 8dBm		
FCC Part 15, Paragraph	Out of Band Emission and	PASS	Complies
15.247(d) & RSS-210 Issue 8	Restricted Band		
	Radiation		
	Limit: 20dB less than		
	peak value of fundamental		
	frequency		
	Restricted band limit:		
	Table 15.209		

3.2 **Test Standards**

FCC Part 15 Subpart & Subpart C, Paragraph 15.247 & RSS-210 Issue 8

EUT Modification 4.0

No modification by Shenzhen Timeway Technology Consulting Co., Ltd

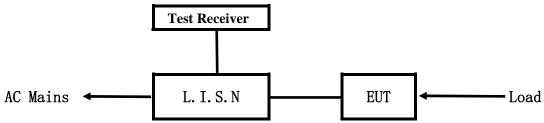
Page 10 of 127

Report No: 1210110-01 Date: 2012-09-04



5. Power Line Conducted Emission Test

5.1 Schematics of the test

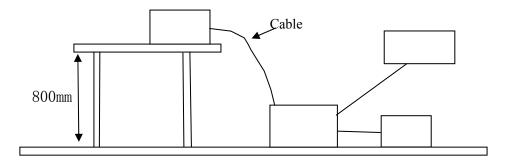


EUT: Equipment Under Test

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	FCC ID/IC
MID	Valian Canada INC	n Canada INC. HS-7DTB4, HS-7DTB7, HS-7DTB8	IC: 8012A-7DTB4
MID	Kobian Canada INC.		INC. HS-7DTB4, HS-7DTB7, HS-7DTB8

B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

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

Report No: 1210110-01 Page 11 of 127

Date: 2012-09-04



C. Peripherals

Device	Manufacturer	Model	FCC ID/DOC	Cable
N/A				

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 and RSS-210

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 ~ 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.

Date: 2012-09-04



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

EUT Operating Environment

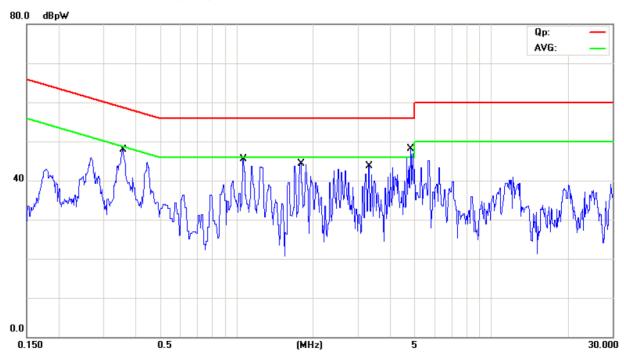
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Charging Mode

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
0.357	Live	43.62	29.22	58.79	48.79
1.067	Live	38.73	28.53	56.00	46.00
1.785	Live	40.61	30.01	56.00	46.00
3.305	Live	38.62	26.02	56.00	46.00
4.823	Live	43.53	28.63	56.00	46.00

Report No: 1210110-01 Page 13 of 127

Date: 2012-09-04



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

EUT Operating Environment

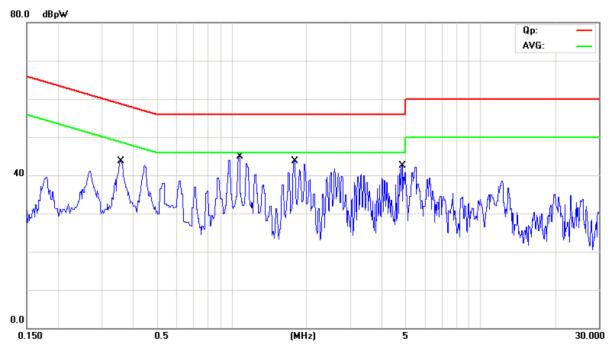
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Charging Mode

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency	Lina	Line Reading(dBµV)		$Limit(dB\mu V)$	
(MHz)	LIIIC	Quasi-peak	Average	Quasi-peak	Average
0.357	Neutral	43.32	34.12	58.79	48.79
1.072	Neutral	42.13	32.43	56.00	46.00
1.787	Neutral	42.02	32.42	56.00	46.00
4.822	Neutral	39.53	30.33	56.00	46.00

Report No: 1210110-01 Page 14 of 127

Date: 2012-09-04



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 Furn-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.

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

Report No: 1210110-01 Page 15 of 127

Date: 2012-09-04



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 and RSS-210

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 $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 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
- 4. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

Report No: 1210110-01 Page 16 of 127

Date: 2012-09-04



Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

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

EUT set Condition: Keep WIFI Transmitting

Results: Pass

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
139.125	27.89	Н	43.50
243.400	31.39	Н	46.00
311.300	33.10	Н	46.00
345.250	34.85	Н	46.00
449.525	34.74	Н	46.00
861.775	37.98	Н	46.00
243.400	33.21	V	46.00
345.250	31.70	V	46.00
483.475	37.82	V	46.00
585.325	37.56	V	46.00
946.650	37.78	V	46.00
655.650	36.86	V	46.00

Page 17 of 127

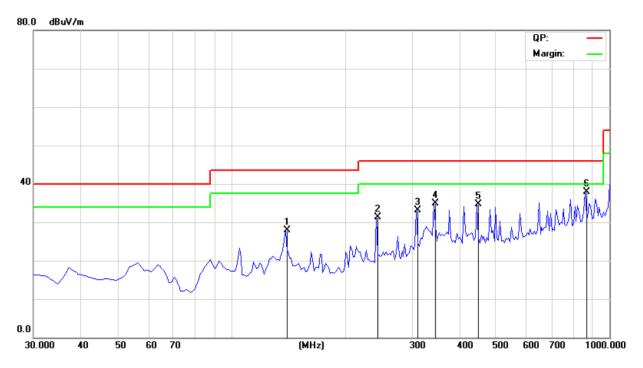
Report No: 1210110-01

Date: 2012-09-04



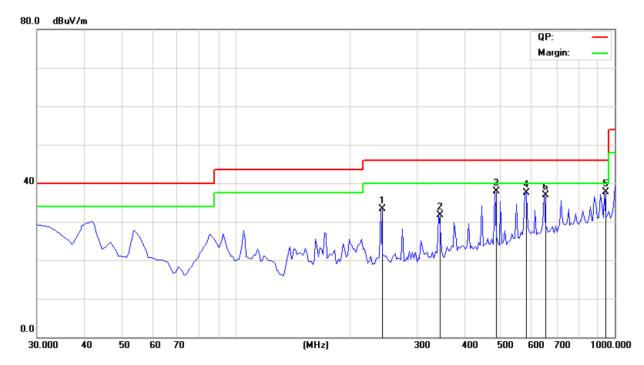
Test Figure:

H



Test Figure:

V



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Report No: 1210110-01 Page 18 of 127

Date: 2012-09-04



Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

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

EUT set Condition: Keep WIFI Receiving and Full Load

Results: Pass

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
825.051	43.06	Н	46.00
990.083	43.67	Н	54.00
660.500	43.25	Н	46.00
495.600	43.20	Н	46.00
333.125	38.25	Н	46.00
240.975	40.24	Н	46.00
660.041	43.08	V	46.00
825.400	43.01	V	46.00
990.300	43.32	V	54.00
495.600	38.94	V	46.00
432.550	38.45	V	46.00
333.125	39.54	V	46.00

Page 19 of 127

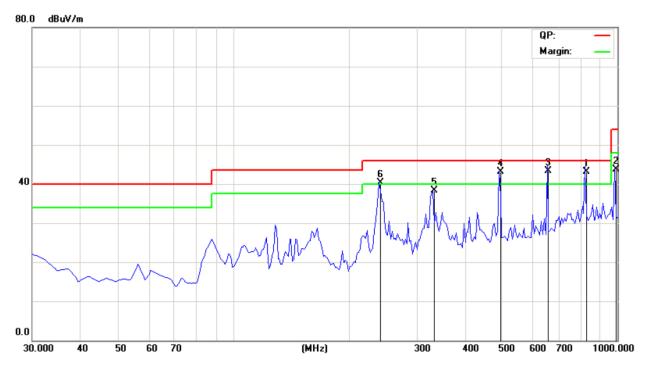
Report No: 1210110-01

Date: 2012-09-04



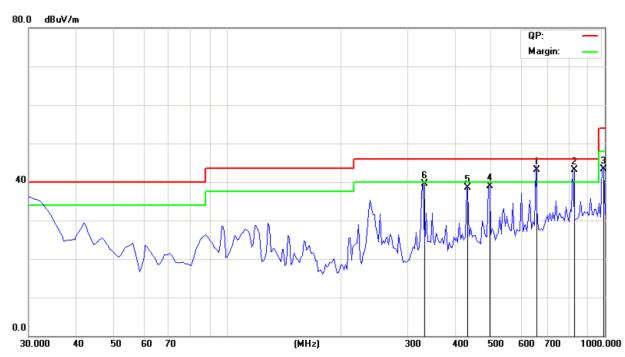
Test Figure:

H



Test Figure:

V



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Report No: 1210110-01 Page 20 of 127

Date: 2012-09-04



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

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2412.00	96.39 (PK)	Н	Even domental Engavenory
2412.00	97.19 (PK)	V	Fundamental Frequency
4824.00	49.78 (PK)	Н	74(Peak)/ 54(AV)
4824.00	46.32 (PK)	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		H/V	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

Date: 2012-09-04



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

	8 8	Ü	
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2437.00	95.47 (PK)	Н	Even do monto l'Eno que move
2437.00	95.94 (PK)	V	Fundamental Frequency
4874.00	46.47 (PK)	Н	74(Peak)/ 54(AV)
4874.00	48.82 (PK)	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 802.11g mode 54 Mbps

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

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2462.00	95.43 (PK)	Н	Fundamental Frequency
2462.00	97.36 (PK)	V	Fundamental Frequency
4924	49.58 (PK)	Н	74(Peak)/ 54(AV)
4924	49.64 (PK)	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)
14772	-	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 802.11g mode at 54 Mbps

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

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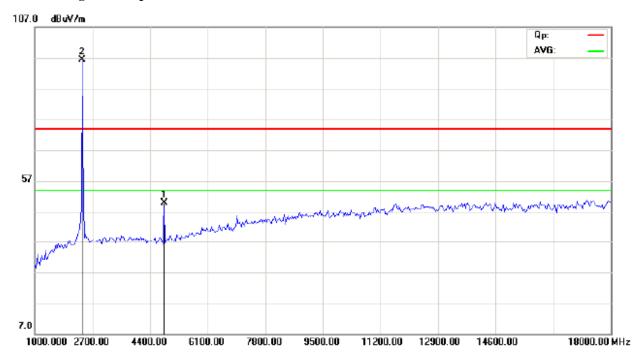
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Date: 2012-09-04

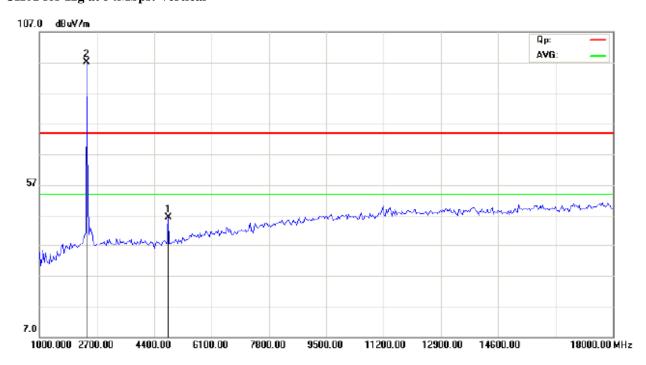


Please refer to the following test plots for details:

CH01 for 11g at 54Mbps: Horizontal



CH01 for 11g at 54Mbps: Vertical



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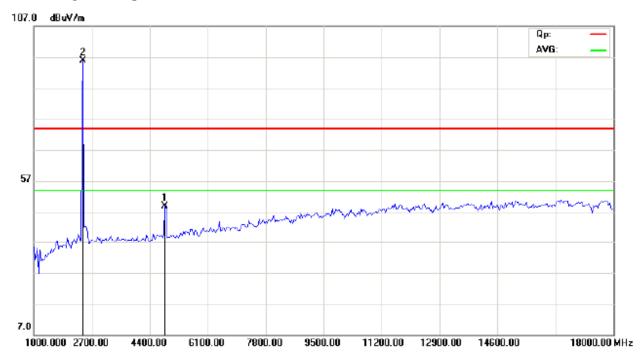
Page 23 of 127

Report No: 1210110-01

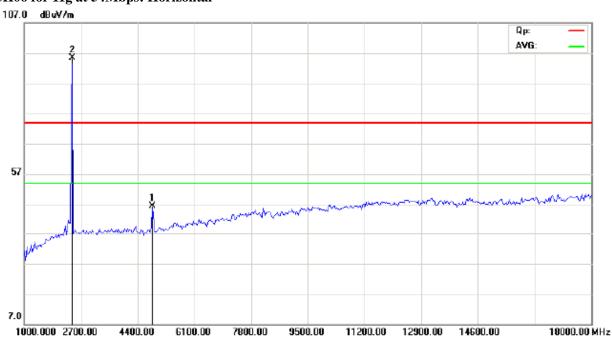
Date: 2012-09-04



CH06 for 11g at 54Mbps: Vertical



CH06 for 11g at 54Mbps: Horizontal

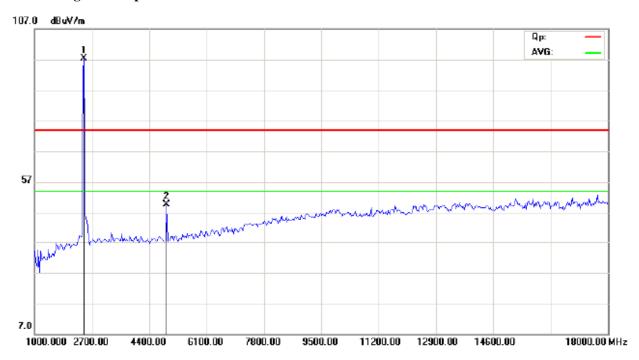


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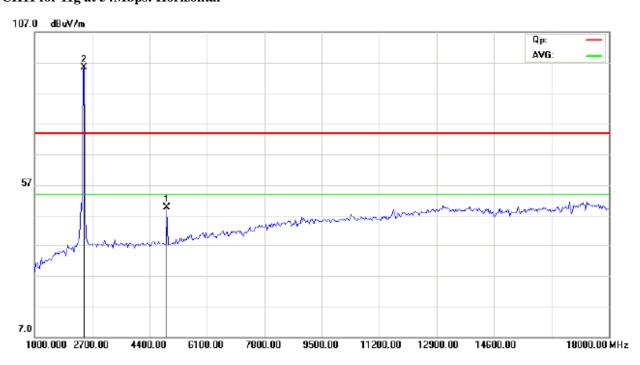
Date: 2012-09-04



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.

Report No: 1210110-01 Date: 2012-09-04



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

	0 0		_
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2412.00	98.76 (PK)	V	Even do monto l. Eno guan av
2412.00	97.26 (PK)	Н	Fundamental Frequency
4824.00	47.82 (PK)	Н	74(Peak)/ 54(AV)
4824.00	49.59 (PK)	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		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	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 802.11b mode 11Mbps

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

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \) V/m)
2437.00	92.13 (PK)	Н	Even domental Engavenor
2437.00	96.15 (PK)	V	Fundamental Frequency
4874.00	48.51 (PK)	Н	74(Peak)/ 54(AV)
4874.00	48.00 (PK)	V	74(Peak)/ 54(AV)
7311.00	-	H/V	74(Peak)/ 54(AV)
9748.00	1	H/V	74(Peak)/ 54(AV)
12185	1	H/V	74(Peak)/ 54(AV)
14622	-	H/V	74(Peak)/ 54(AV)
17059	1	H/V	74(Peak)/ 54(AV)
19496	1	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

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

Report No: 1210110-01 Page 26 of 127

Date: 2012-09-04



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

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2462.00	95.88 (PK)	Н	Even domental Engavenory
2462.00	98.17 (PK)	V	Fundamental Frequency
4924	50.29 (PK)	Н	74(Peak)/ 54(AV)
4924	50.63 (PK)	V	74(Peak)/ 54(AV)
7368		H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		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

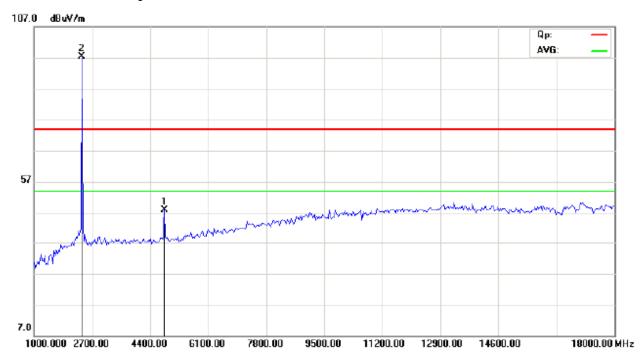
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode at 11Mbps

Date: 2012-09-04

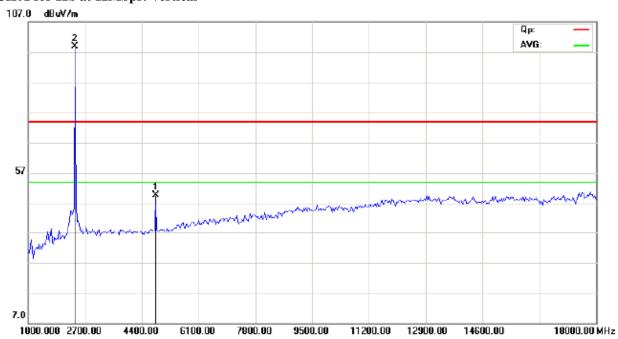


Please refer to the following test plots for details:

CH01 for 11b at 11Mbps: Horizontal



CH01 for 11b at 11Mbps: Vertical



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

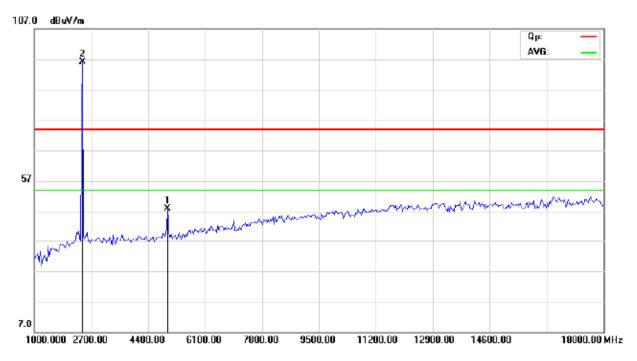
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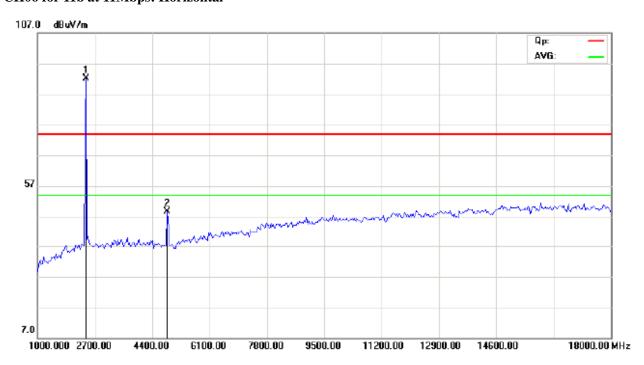
Date: 2012-09-04



CH06 for 11b at 11Mbps: Vertical



CH06 for 11b at 11Mbps: Horizontal

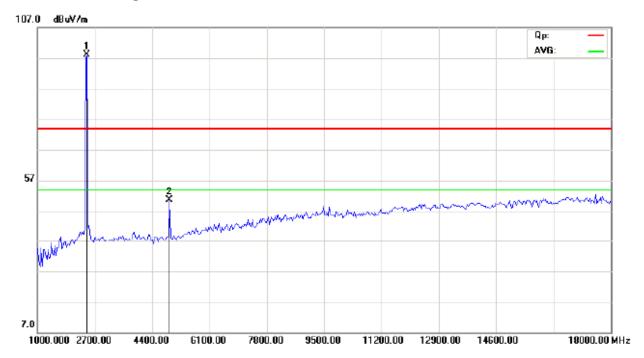


The report refers only to the sample tested and does not apply to the bulk.

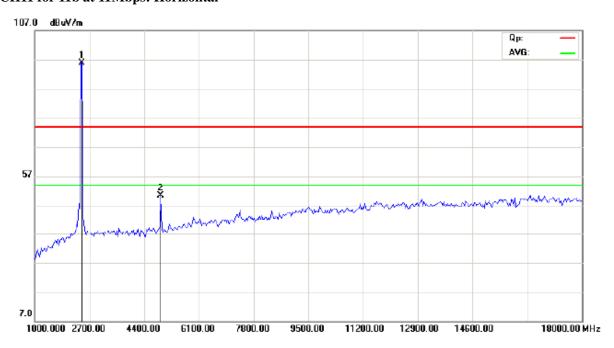
Date: 2012-09-04



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.

Date: 2012-09-04



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

Frequency (MHz)	Level@3m (dB \u03bc V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2412.00	97.33 (PK)	Н	Fundamental Frequency
2412.00	97.42 (PK)	V	Fundamental Frequency
4824.00	49.32 (PK)	Н	74(Peak)/ 54(AV)
4824.00	48.59 (PK)	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		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	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 802.11n (HT20) mode 65Mbps

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

Frequency (MHz)	Level@3m (dB \u03bc V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2437.00	96.55 (PK)	Н	Fundamental Frequency
2437.00	94.01 (PK)	V	Fundamental Frequency
4874.00	46.10 (PK)	Н	74(Peak)/ 54(AV)
4874.00	49.69 (PK)	V	74(Peak)/ 54(AV)
7311.00		H/V	74(Peak)/ 54(AV)
9748.00	1	H/V	74(Peak)/ 54(AV)
12185	1	H/V	74(Peak)/ 54(AV)
14622	1	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

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

Report No: 1210110-01 Page 31 of 127

Date: 2012-09-04



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

	0 0		
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2462.00	96.12 (PK)	Н	Even dominantal Empayanaya
2462.00	95.81 (PK)	V	Fundamental Frequency
4924	48.69 (PK)	Н	74(Peak)/ 54(AV)
4924	49.64 (PK)	V	74(Peak)/ 54(AV)
7368		H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		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

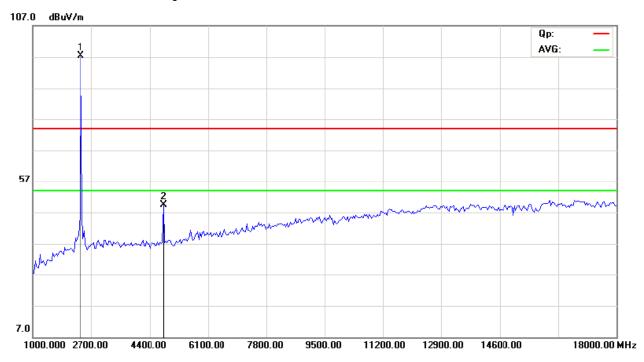
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

Date: 2012-09-04

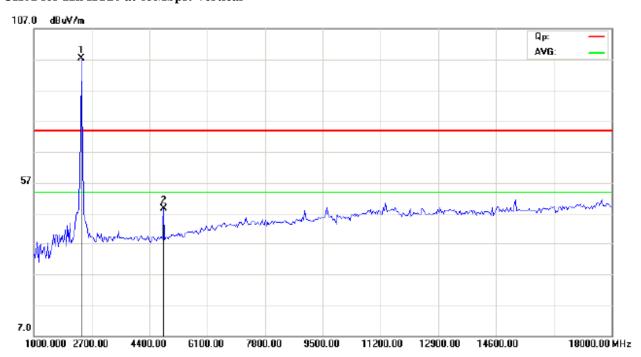


Please refer to the following test plots for details:

CH01 for 11n HT20 at 65Mbps: Horizontal



CH01 for 11n HT20 at 65Mbps: Vertical



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

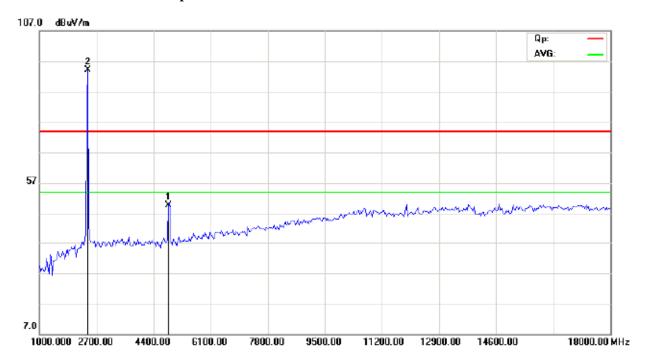
Page 33 of 127

Report No: 1210110-01

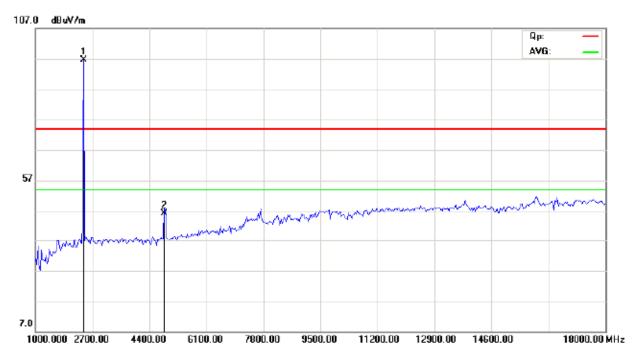
Date: 2012-09-04



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.

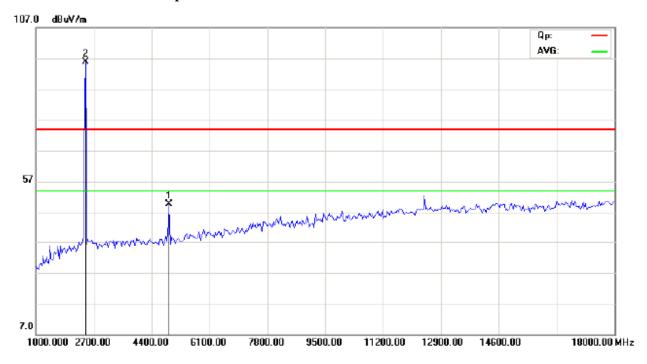
Page 34 of 127

Report No: 1210110-01

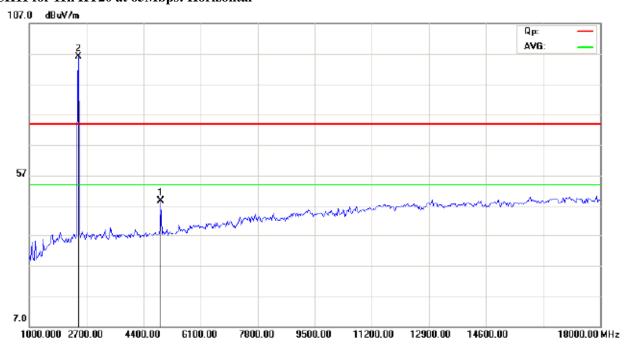
Date: 2012-09-04



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.

Date: 2012-09-04



Operation Mode: Transmitting & Receiving under CH01 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2422.00	95.94 (PK)	V	Fundamental Frequency
2422.00	95.51 (PK)	Н	
4844.00	48.27 (PK)	V	74(Peak)/ 54(AV)
4844.00	44.56 (PK)	Н	74(Peak)/ 54(AV)
7266.00		H/V	74(Peak)/ 54(AV)
9688.00		H/V	74(Peak)/ 54(AV)
12110		H/V	74(Peak)/ 54(AV)
14532		H/V	74(Peak)/ 54(AV)
16954		H/V	74(Peak)/ 54(AV)
19376		H/V	74(Peak)/ 54(AV)
21798		H/V	74(Peak)/ 54(AV)
24220		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 (HT40) mode 65Mbps

Operation Mode: Transmitting & Receiving under CH04 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2437.00	96.72 (PK)	Н	Fundamental Frequency
2437.00	97.15 (PK)	V	
4874.00	50.18 (PK)	Н	74(Peak)/ 54(AV)
4874.00	49.03 (PK)	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	1	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 (HT40) mode 65Mbps

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

Report No: 1210110-01 Page 36 of 127

Date: 2012-09-04



Operation Mode: Transmitting & Receiving under CH7 for 11n HT40 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03bc V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
2452.00	97.10 (PK)	Н	Fundamental Frequency
2452.00	95.69 (PK)	V	
4904	50.23 (PK)	Н	74(Peak)/ 54(AV)
4904	42.92 (PK)	V	74(Peak)/ 54(AV)
7356		H/V	74(Peak)/ 54(AV)
9808		H/V	74(Peak)/ 54(AV)
12260		H/V	74(Peak)/ 54(AV)
14712		H/V	74(Peak)/ 54(AV)
17164		H/V	74(Peak)/ 54(AV)
19616		H/V	74(Peak)/ 54(AV)
22068		H/V	74(Peak)/ 54(AV)
24520		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 (HT40) mode 65Mbps

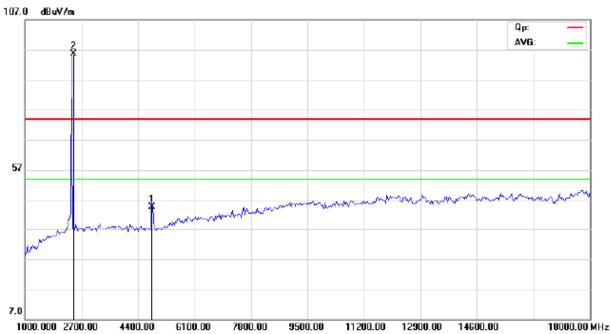
Report No: 1210110-01

Date: 2012-09-04

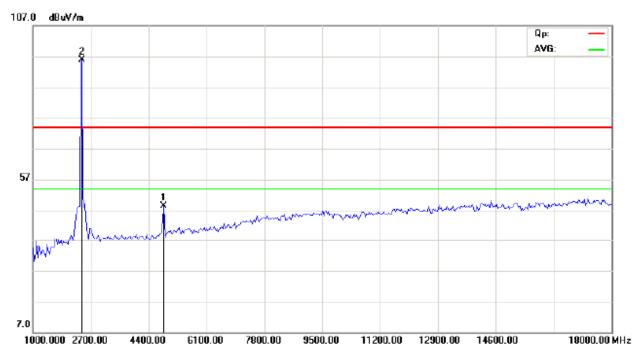


Please refer to the following test plots for details:

CH01 for 11n HT40 at 65Mbps: Vertical



CH01 for 11n HT40 at 65Mbps: Horizontal



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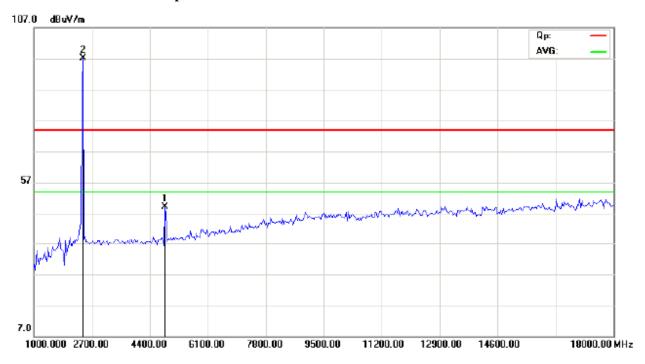
Page 38 of 127

Report No: 1210110-01

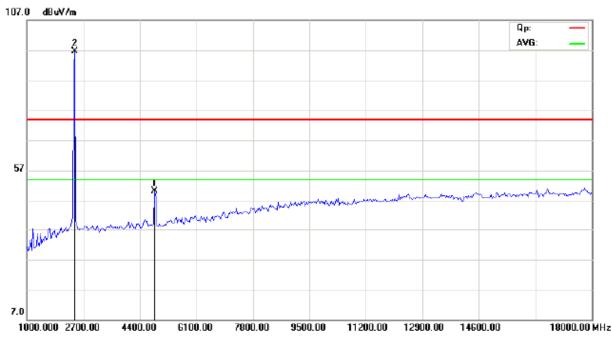
Date: 2012-09-04



CH04 for 11n HT40 at 65Mbps: Vertical



CH04 for 11n HT40 at 65Mbps: Horizontal



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

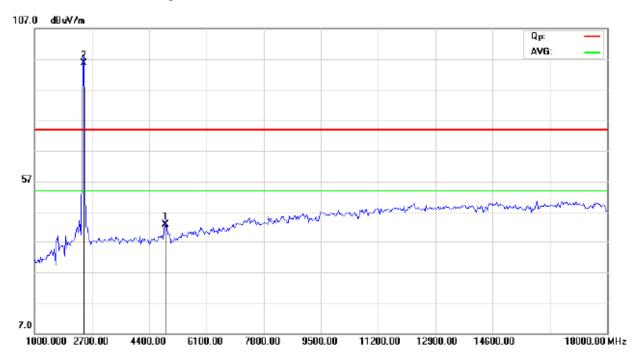
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Report No: 1210110-01

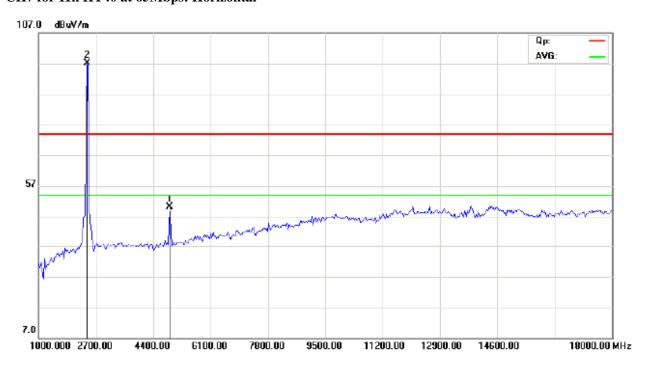
Date: 2012-09-04



CH7 for 11n HT40 at 65Mbps: Vertical



CH7 for 11n HT40 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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Report No: 1210110-01 Page 40 of 127

Date: 2012-09-04



Radiated Disturbance (1000MHz----18000MHz)

EUT Operating Environment

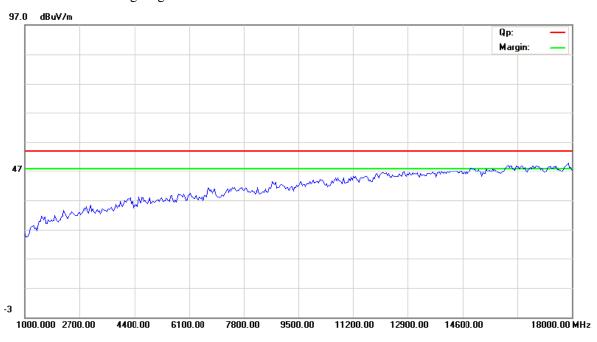
Temperature:25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Receiving and Full Load

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	quency (MHz) Level@3m (dBµV/m)		Limit@3m (dBµV/m)	
		Н	54(AV)	

Note: 1. Due to the final radiated level much less than the limit, so necessary take down final radiated level

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

Report No: 1210110-01 Page 41 of 127

Date: 2012-09-04



Radiated Disturbance (1000MHz----18000MHz)

EUT Operating Environment

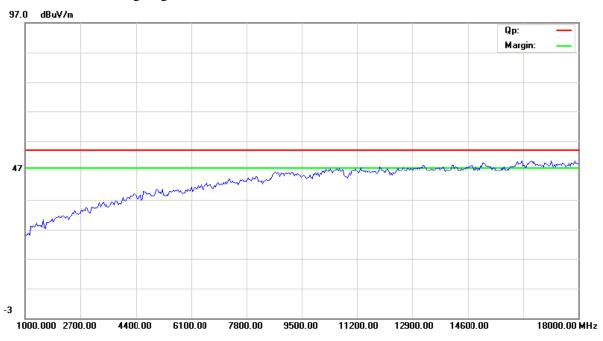
Temperature:25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep WIFI Receiving and Full Load

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency (MHz)	Level@3m (dBµV/m)	Antenna Polarity	Limit@3m (dBµV/m)	
		V	54(AV)	

Note: 1. Due to the final radiated level much less than the limit, so necessary take down final radiated level

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

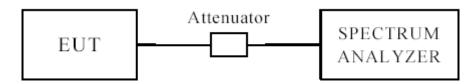
Report No: 1210110-01 Page 42 of 127

Date: 2012-09-04



7.0 6dB and 99% 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.

7.4 Test Result

Report No: 1210110-01 Page 43 of 127

Date: 2012-09-04



6dB Occupied Bandwidth

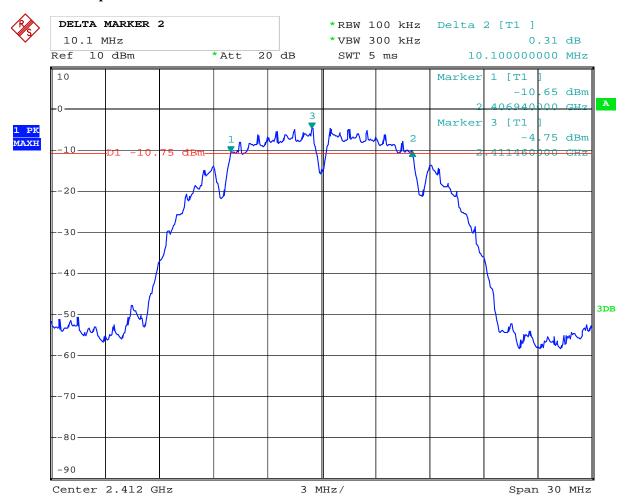
EUT		MID		Model		HS-7DTB4		
Mode 8		302.11b		Input Voltage		AC 120V		
Temperature		24 deg. C,			Humidity	r	56%	6 RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)	Transfer 6 dB Ba Rate (Μ		andwidth Minii Hz) (Pass/ Fail
1		2412	1	10.10		0.5		Pass
6		2437	1	10	.08		0.5	Pass
11		2462	1	10.08		.08 0.5		Pass
1		2412	11	10.04		0.04 0.5		Pass
6		2437	11	10.02		10.02 0.5		Pass
11		2462	11	10	.02	0.5		Pass

Page 44 of 127

Report No: 1210110-01

Date: 2012-09-04



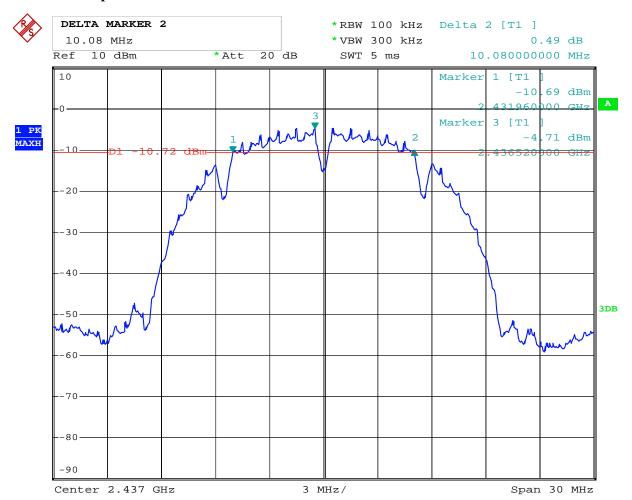


Page 45 of 127

Report No: 1210110-01

Date: 2012-09-04



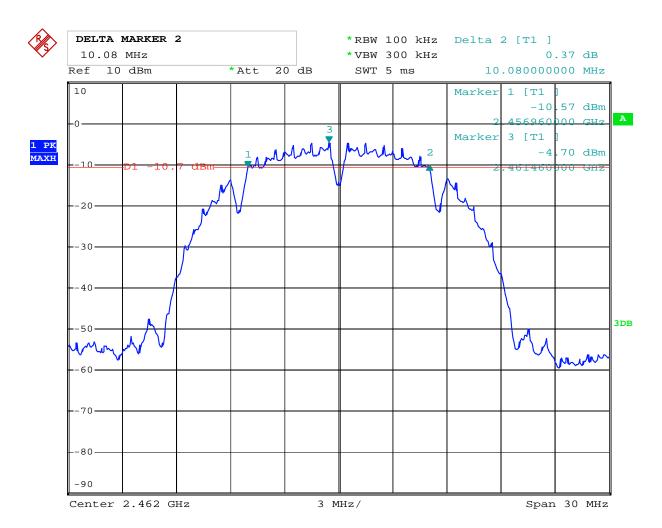


Page 46 of 127

Report No: 1210110-01

Date: 2012-09-04



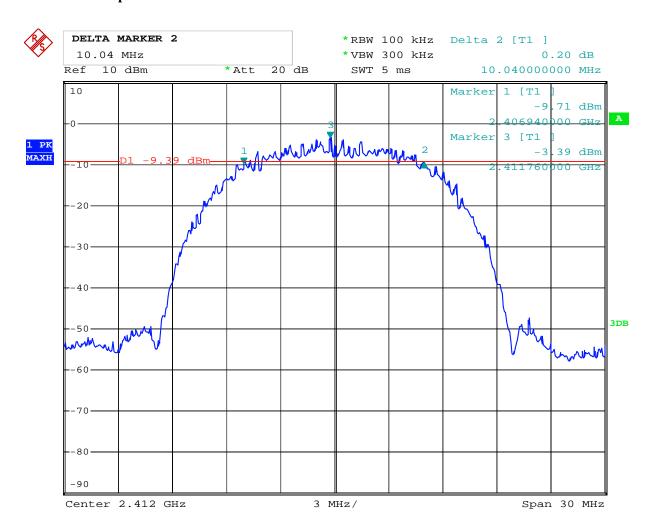


Page 47 of 127

Report No: 1210110-01

Date: 2012-09-04



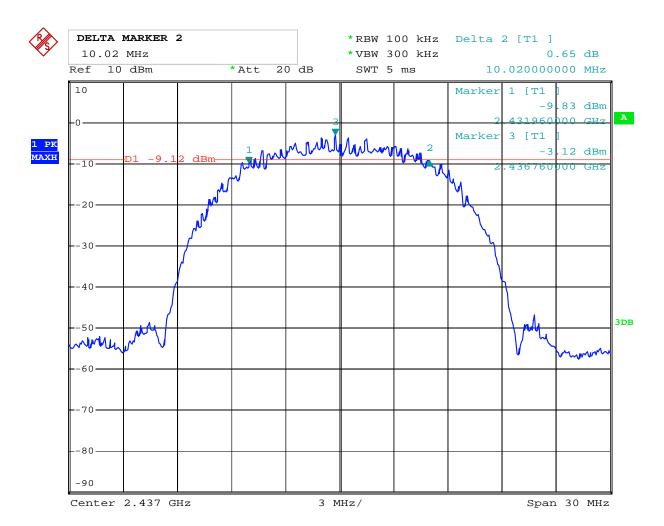


Page 48 of 127

Report No: 1210110-01

Date: 2012-09-04



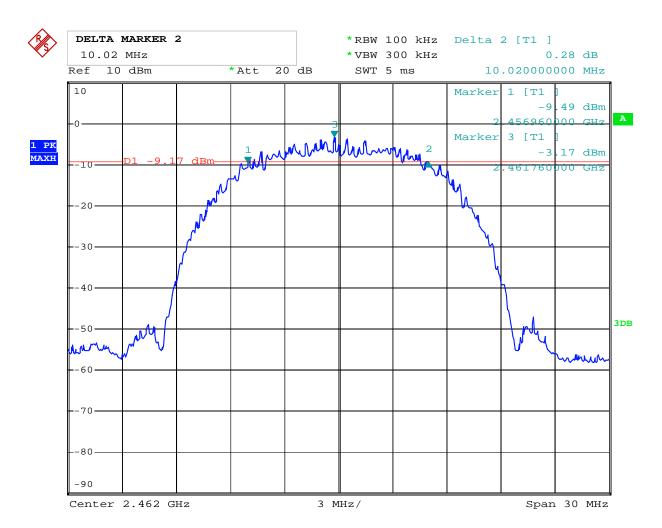


Page 49 of 127

Report No: 1210110-01

Date: 2012-09-04





Report No: 1210110-01 Page 50 of 127

Date: 2012-09-04



6dB Occupied Bandwidth

EUT	1		MID		Model		HS-7DTB4			
Mode	Mode 8		802.11g		Input Voltage		AC 120V			
Temperat	ure	24	24 deg. C,		Humidity		56% RH			
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		andwidth Hz)		Minimum Limit (MHz)			
1		2412	6	16	16.58		58		0.5	Pass
6		2437	6	16.68		.68		Pass		
11		2462	6	16.68		68		Pass		

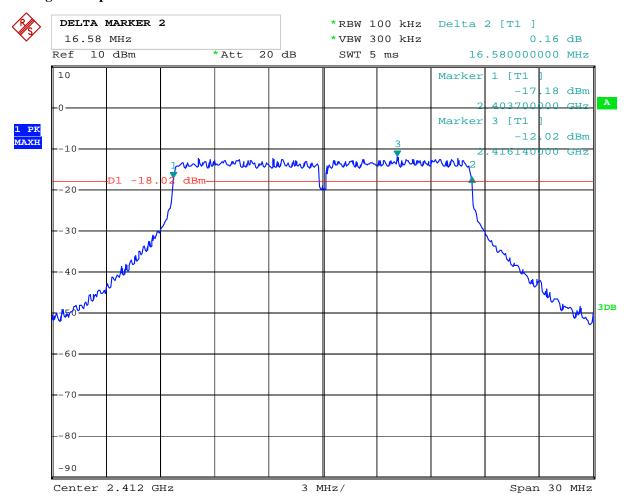
Page 51 of 127

Report No: 1210110-01

Date: 2012-09-04



Test Plots:

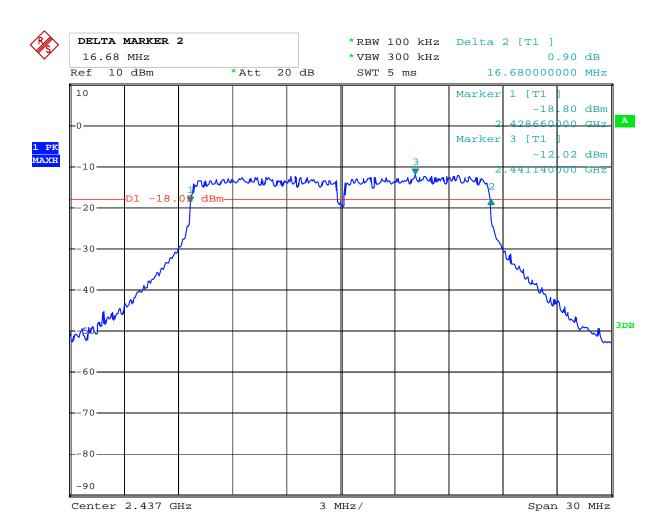


Page 52 of 127

Report No: 1210110-01

Date: 2012-09-04



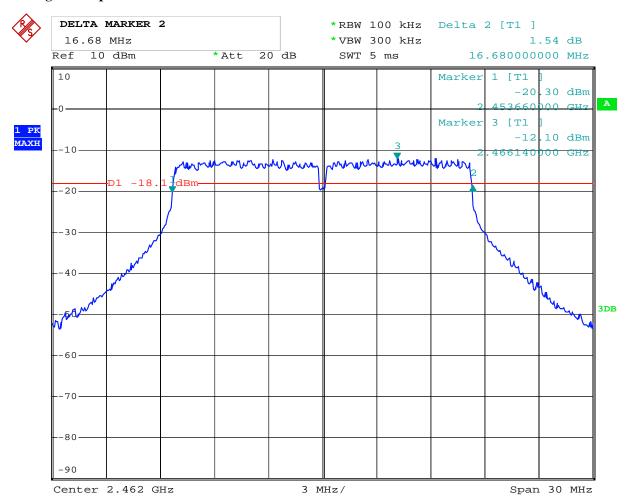


Page 53 of 127

Report No: 1210110-01

Date: 2012-09-04





Report No: 1210110-01 Page 54 of 127

Date: 2012-09-04



6dB Occupied Bandwidth

EUT			MID		Model		HS-7DTB4	
Mode		8	302.11n)2.11n		Input Voltage		120V
Temperat	ure	24	4 deg. C,		Humidity		56% RH	
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail
1		2412	HT20	17.80		0.5		Pass
6		2437 HT20		17	7.82		0.5	Pass
11		2462 HT20 17		.76		0.5	Pass	
1		2422	HT40	36.50		0.5		Pass
4		2437	HT40	36.50		0.5		Pass
7		2452	HT40	36.50		0.5		Pass

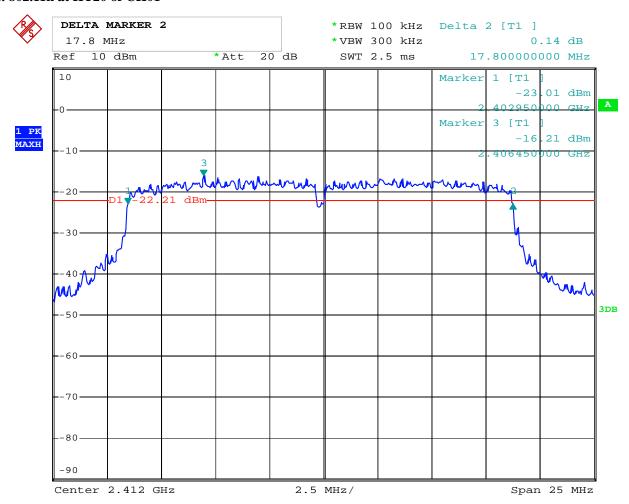
Report No: 1210110-01 Page 55 of 127

Date: 2012-09-04



Test Plots:

1. 802.11n at HT20 of CH01

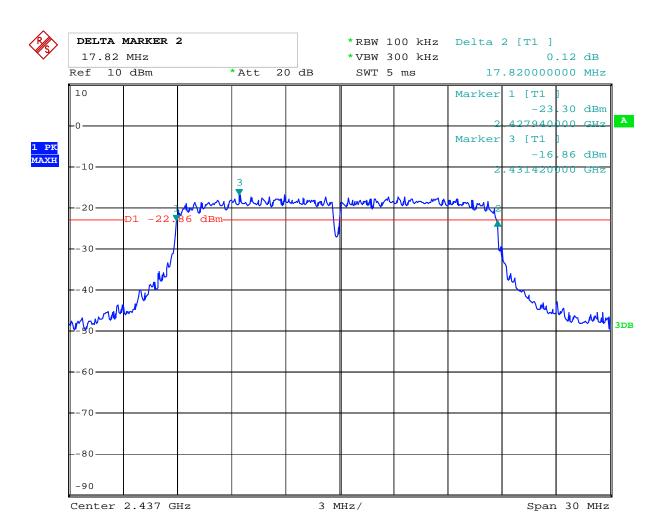


Report No: 1210110-01 Page 56 of 127

Date: 2012-09-04



2. 802.11n at HT20 of CH06



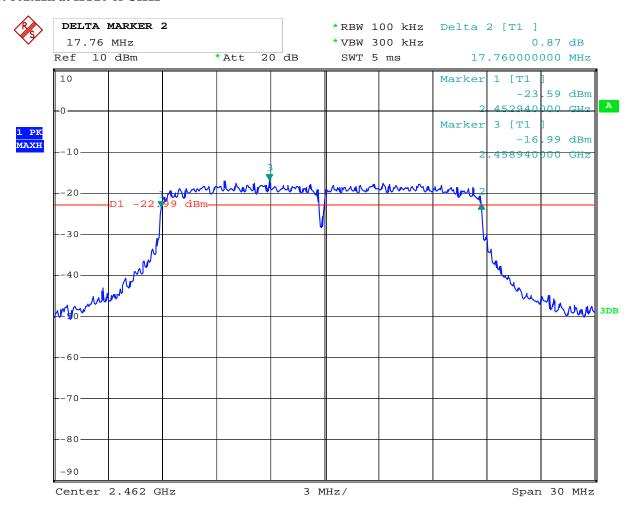
Page 57 of 127

Report No: 1210110-01

Date: 2012-09-04



3. 802.11n at HT20 of CH11



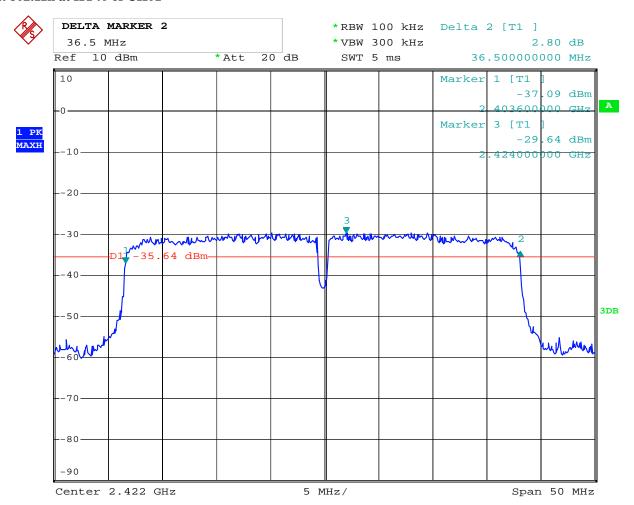
Page 58 of 127

Report No: 1210110-01

Date: 2012-09-04



4. 802.11n at HT40 of CH01



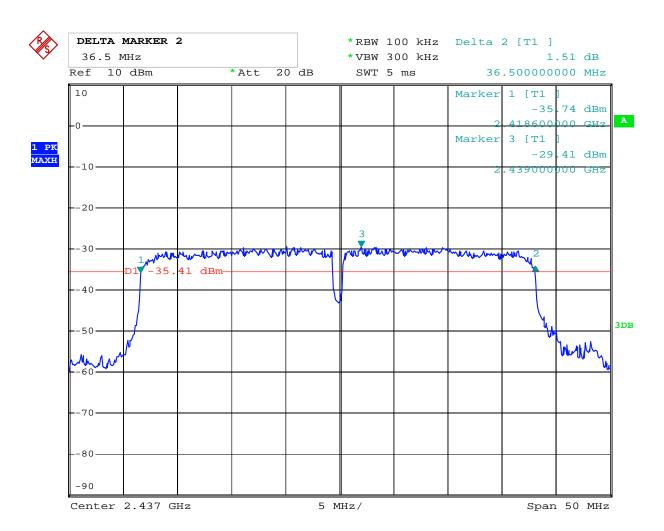
Page 59 of 127

Report No: 1210110-01

Date: 2012-09-04



5. 802.11n at HT40 of CH04



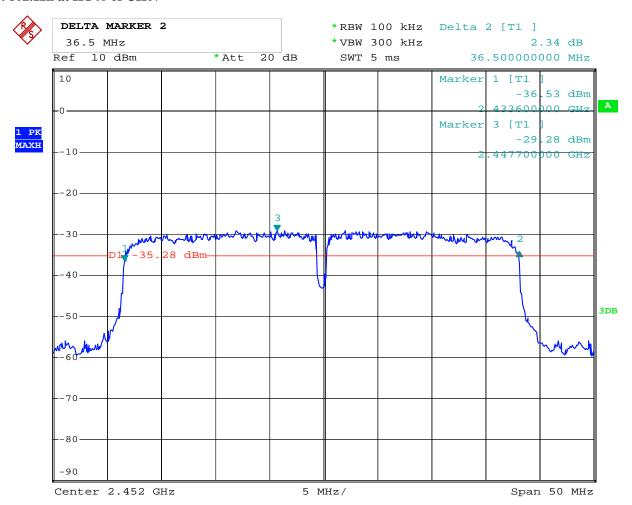
Page 60 of 127

Report No: 1210110-01

Date: 2012-09-04



6. 802.11n at HT40 of CH07



Report No: 1210110-01 Page 61 of 127

Date: 2012-09-04



99% Occupied Bandwidth

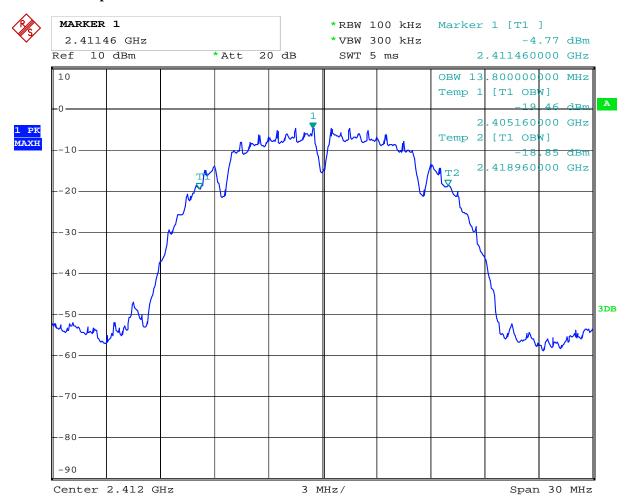
EUT			MID		Model		HS-7DTB4	
Mode	Mode 80.		302.11b	02.11b		Input Voltage		120V
Temperature		24	4 deg. C,		Humidity		56%	6 RH
Channel		Data Inel Frequency Transfer 99% Bar (MHz) Rate (Ml) (Mbps)		ndwidth Minimum Limit Hz) (MHz)		Pass/ Fail		
1		2412	1	13.80				Pass
6		2437	1	13	.80			Pass
11		2462	1	13.80				Pass
1		2412	11	13.56		3.56		Pass
6		2437	11	13	.56			Pass
11		2462	11	13	.56			Pass

Page 62 of 127

Report No: 1210110-01

Date: 2012-09-04



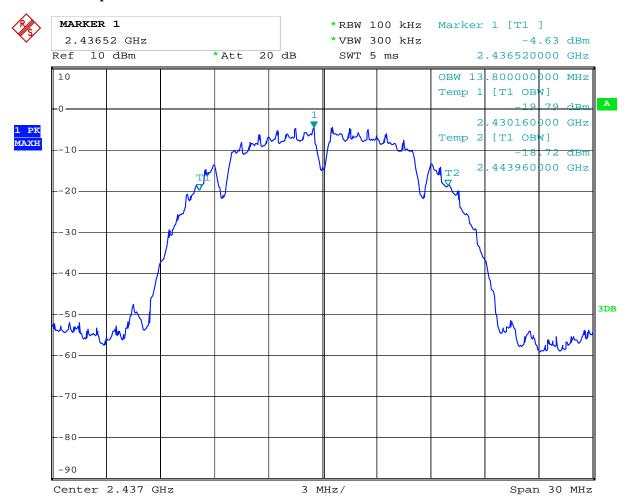


Page 63 of 127

Report No: 1210110-01

Date: 2012-09-04



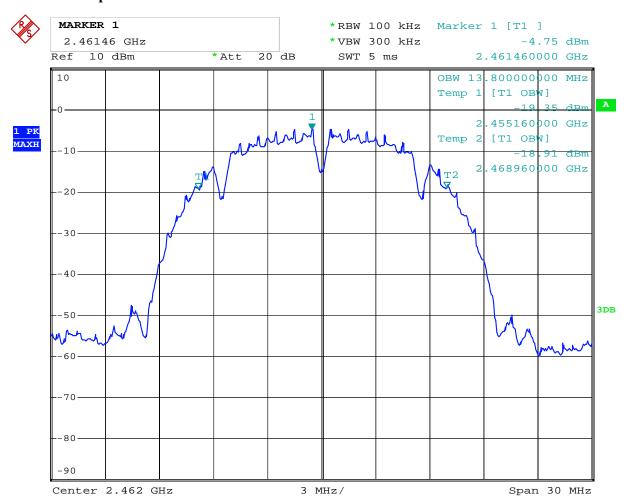


Page 64 of 127

Report No: 1210110-01

Date: 2012-09-04



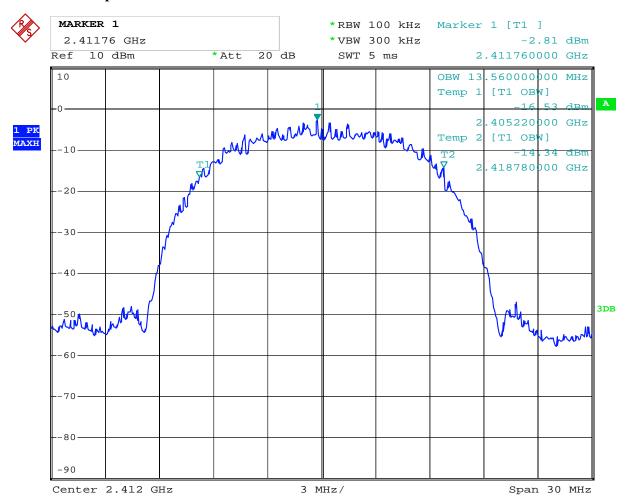


Page 65 of 127

Report No: 1210110-01

Date: 2012-09-04



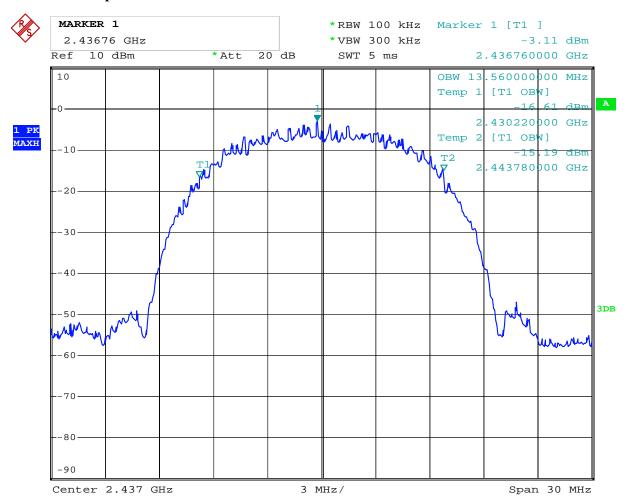


Page 66 of 127

Report No: 1210110-01

Date: 2012-09-04



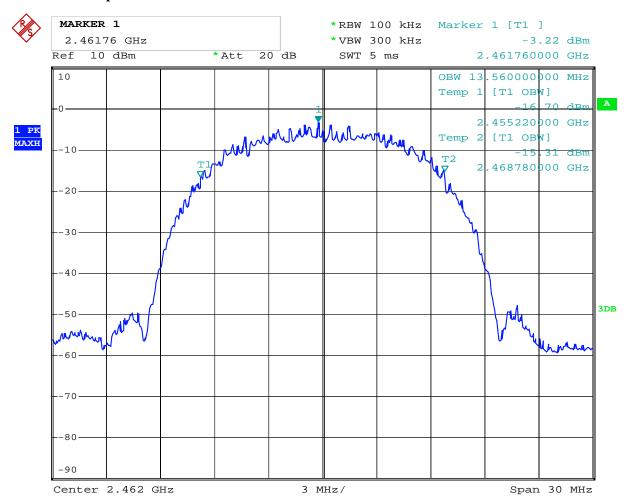


Page 67 of 127

Report No: 1210110-01

Date: 2012-09-04





Report No: 1210110-01 Page 68 of 127

Date: 2012-09-04



99% Occupied Bandwidth

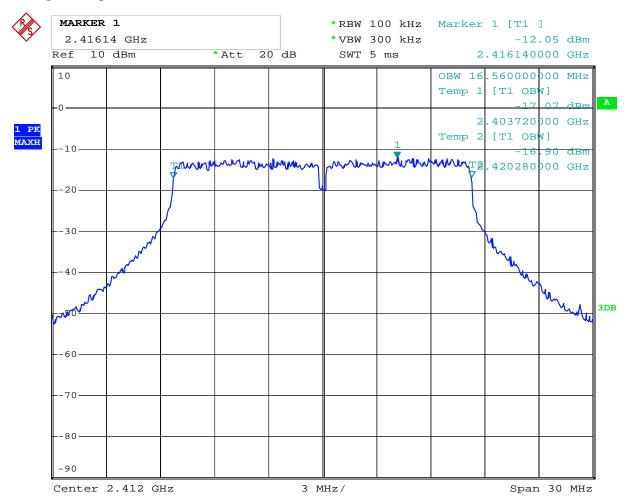
EUT		MID			Model		HS-7DTB4	
Mode		802.11g			Input Voltage		AC 120V	
Temperat	ure	24	4 deg. C,		Humidity		56% RH	
Channel	nel Channel Frequency (MHz)		Data Transfer Rate (Mbps)	99% Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail
1		2412	6	16	.56			Pass
6		2437	6	16.56		56		Pass
11		2462	6	16	.56			Pass

Page 69 of 127

Report No: 1210110-01

Date: 2012-09-04



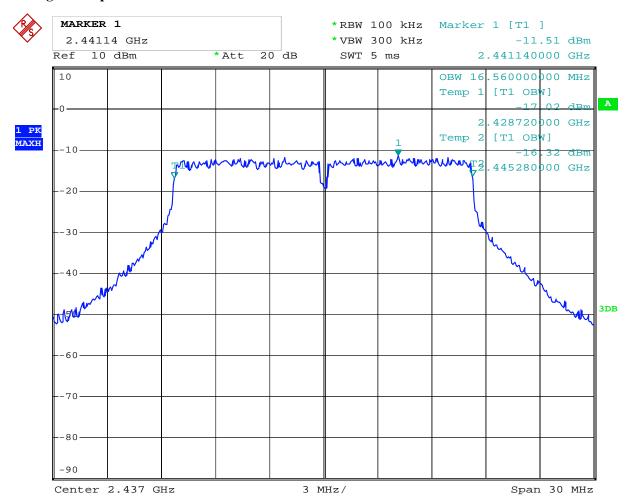


Page 70 of 127

Report No: 1210110-01

Date: 2012-09-04



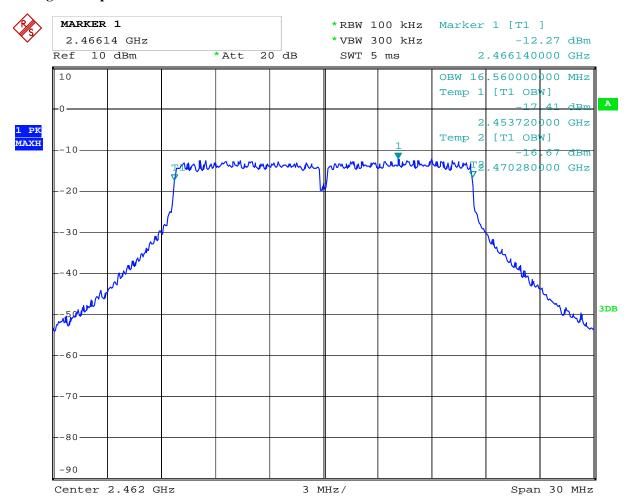


Page 71 of 127

Report No: 1210110-01

Date: 2012-09-04





Report No: 1210110-01 Page 72 of 127

Date: 2012-09-04



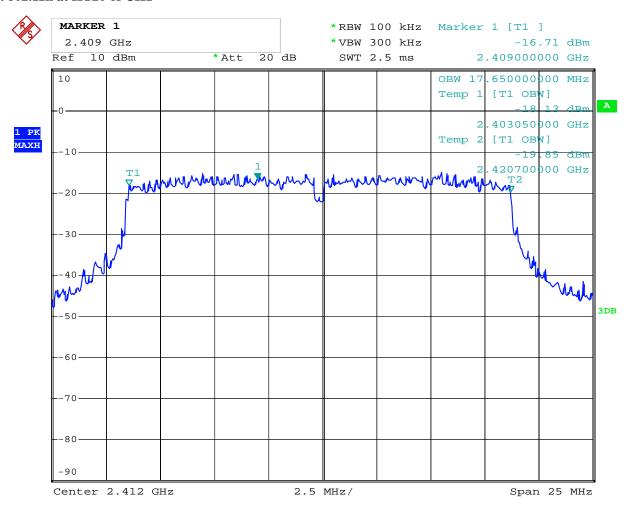
99% Occupied Bandwidth

EUT		MID		Model		HS-7DTB4		
Mode 8		302.11n		Input Voltage		AC 120V		
Temperat	ure	24	4 deg. C,		Humidity	r	56% RH	
Channel		Channel Frequency (MHz)		99% Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail
1		2412	HT20	17.65				Pass
6		2437 HT20		17	7.70			Pass
11		2462	HT20	17	.70			Pass
1		2422	HT40	36.00				Pass
4		2437	HT40	36.00				Pass
7		2452	HT40	36	5.00			Pass

Report No: 1210110-01 Page 73 of 127

Date: 2012-09-04





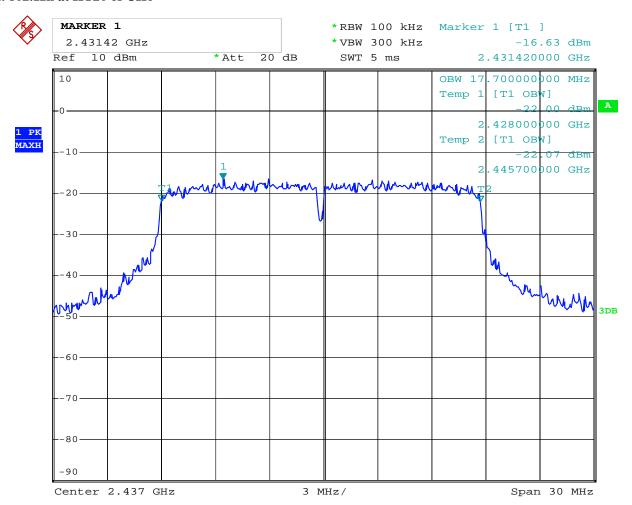
Page 74 of 127

Date: 2012-09-04



2. 802.11n at HT20 of CH6

Report No: 1210110-01

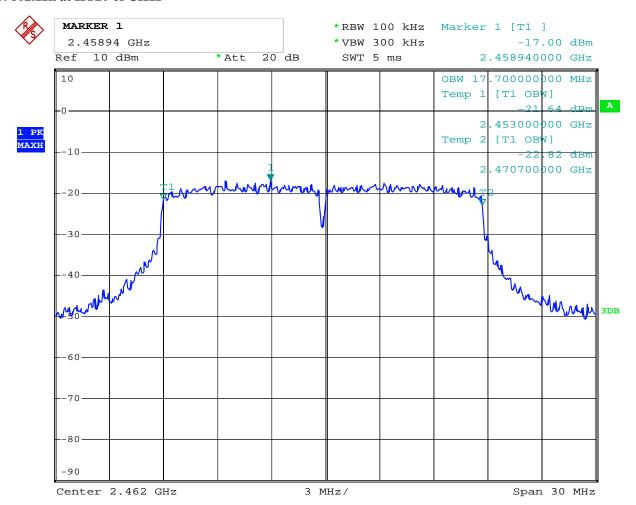


Page 75 of 127

Report No: 1210110-01

Date: 2012-09-04

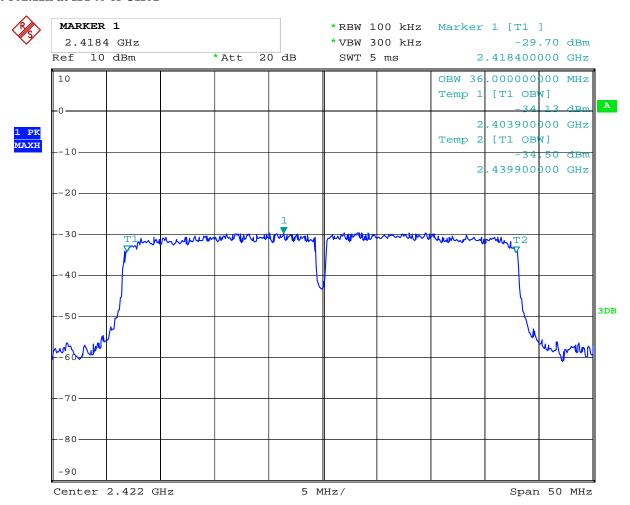




Page 76 of 127

Report No: 1210110-01 Date: 2012-09-04

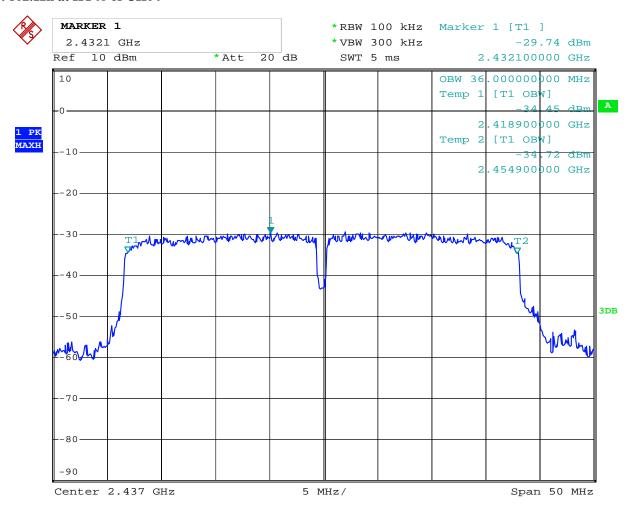




Report No: 1210110-01 Page 77 of 127

Date: 2012-09-04

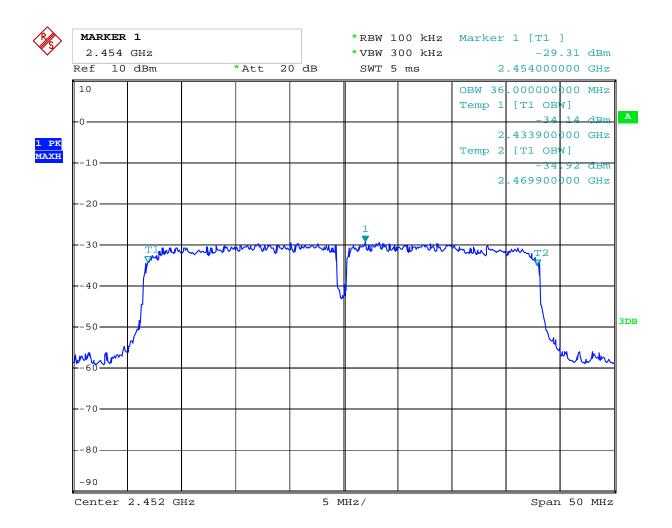




Report No: 1210110-01 Page 78 of 127

Date: 2012-09-04





Report No: 1210110-01

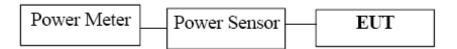
Date: 2012-09-04



Page 79 of 127

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

Page 80 of 127

Report No: 1210110-01

Date: 2012-09-04



8.4Test Results

EUT		MID Model		odel	HS-7DTB4		
Mode		802.1	802.11b Input Volt		Voltage S		ee Below
Temperat	ure	24 deg	g. C,	Hur	nidity		56% RH
Channel	Cha	annel Frequency (MHz)	Peak Power C (dBm)	Output	Peak F Lin (dB	nit	Pass/ Fail
1		2412 10.20			30		Pass
6		2437 10.32			30		Pass
11		2462	10.46		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		MII)	Model		HS-7DTB4	
Mode		802.1	802.11g Input Volt		Voltage S		ee Below
Temperat	ure	24 deg	g. C,	Hur	Humidity		56% RH
Channel	Cha	annel Frequency (MHz)	Peak Power C	Output	Peak F Lin (dB	nit	Pass/ Fail
1		2412	9.72		30		Pass
6		2437	9.69		30)	Pass
11		2462	9.82		30)	Pass

Note: 1. At finial test to get the worst-case emission at 6Mbps 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

Page 81 of 127

Report No: 1210110-01

Date: 2012-09-04



EUT		MID Moo		odel H		S-7DTB4		
Mode		802.11n (802.11n (HT20) Input		Voltage		ee Below	
Temperat	ure	24 deg	g. C,	Hur	Humidity		56% RH	
Channel	Cha	annel Frequency (MHz)	Peak Power C	Output	Peak F Lin (dB	nit	Pass/ Fail	
1		2412	9.32		30		Pass	
6		2437	9.46		30)	Pass	
11		2462	9.56		30)	Pass	

Note: 1. At finial test to get the worst-case emission at 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

EUT		MII	MID Model		odel	HS-7DTB4	
Mode		802.11n (HT40)	Input Voltag		S	ee Below
Temperat	ure	24 deg	g. C,	Hur	Humidity		56% RH
Channel	Cha	annel Frequency (MHz)	Peak Power C (dBm)	Output	Peak F Lin (dB	nit	Pass/ Fail
1		2422	4.35		30		Pass
4		2437	4.30		30)	Pass
7		2452	4.46		30)	Pass

Note: 1. At finial test to get the worst-case emission at 11n HT40 for CH01, CH04 and CH07

2. The result basic equation calculation as follow:

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

3. The worse case was recorded

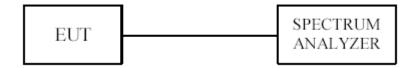
Report No: 1210110-01 Page 82 of 127

Date: 2012-09-04



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.

Report No: 1210110-01 Page 83 of 127

Date: 2012-09-04



9.4Test Result

EUT		MII	D	Model		HS-7DTB4	
Mode		802.11b 11Mbps Input		Voltage	AC 120V		
Temperati	ure	24 deg	g. C,	Humidity		:	56% RH
Channel	Ch	annel Frequency (MHz)	Final RF Po Level in 3kH (dBm)	z BW Maxin		m Limit m)	Pass/ Fail
			11Mbps				
1	_	2412	-13.26		8		Pass
6		2437	-13.54		8		Pass
11		2462	-13.55		8		Pass

EUT		MID		Model		HS-7DTB4	
Mode		802.11b 1Mbps Input V		Voltage	AC 120V		
Temperati	ure	24 deg	g. C,	Humidity		;	56% RH
Channel	Cha	annel Frequency (MHz)	Final RF Po Level in 3kH (dBm)	z BW Maxim		m Limit m)	Pass/ Fail
			1Mbps				
1		2412	-17.67		8		Pass
6		2437	-17.45		8		Pass
11		2462	-17.43		8		Pass

Report No: 1210110-01

Date: 2012-09-04



EUT		MII	D	Model		HS-7DTB4	
Mode		802.11g 6Mbps Input V		Voltage A		AC 120V	
Temperati	ure	24 deg	g. C,	Humidity		:	56% RH
Channel	Cha	annel Frequency (MHz)	Final RF Po Level in 3kH: (dBm)	Maximur		-	Pass/ Fail
			6Mbps				
1		2412	-21.00		8		Pass
6		2437	-20.01		8		Pass
11		2462	-20.05		8		Pass

EUT		MII	D	M	odel	HS-7DTB4	
Mode		802.11n HT20 Input V		Voltage A		AC 120V	
Temperat	ure	24 deg	g. C,	Humidity			56% RH
Channel	Cha	annel Frequency (MHz)	Final RF Po Level in 3kH (dBm)		Maximur		Pass/ Fail
			HT20				
1		2412	-24.67		8		Pass
6		2437 -24.60			8		Pass
11		2462	-23.93		8	•	Pass

EUT		MID Mode		odel	Н	S-7DTB4	
Mode		802.11n HT40		Input	Input Voltage		AC 120V
Temperat	ure	24 deg	24 deg. C, Humidity		nidity	:	56% RH
Channel	Cha	Channel Frequency (MHz) Final RF Power Level in 3kHz BW (dBm)		Maximum Limit (dBm)		Pass/ Fail	
			HT40				
1		2422	-35.86		8		Pass
6		2437	-35.05		8		Pass
11		2452	-35.57		8		Pass

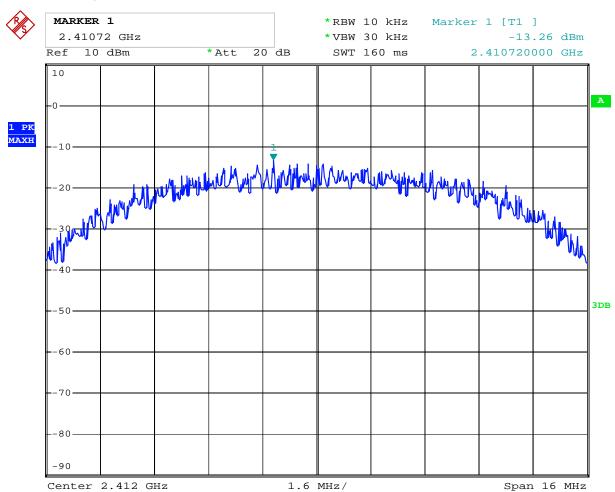
Report No: 1210110-01 Page 85 of 127

Date: 2012-09-04



9.5 Photo of Power Spectral Density Measurement

1.802.11b at 11Mbps of CH01



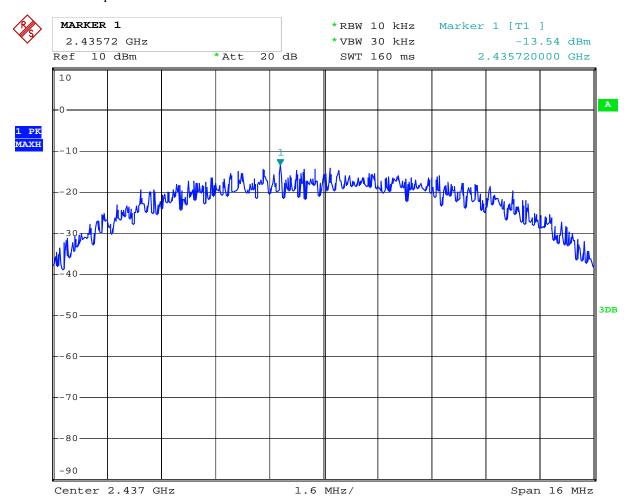
Page 86 of 127

Report No: 1210110-01

Date: 2012-09-04



2. 802.11b at 11Mbps at CH06



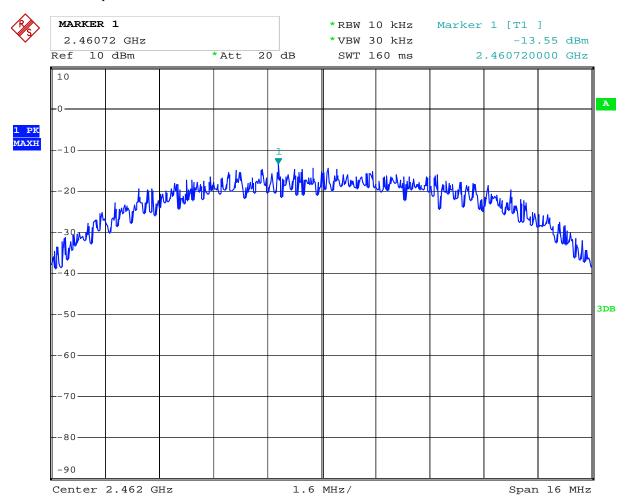
Page 87 of 127

Report No: 1210110-01

Date: 2012-09-04



3. 802.11b at 11Mbps of CH11



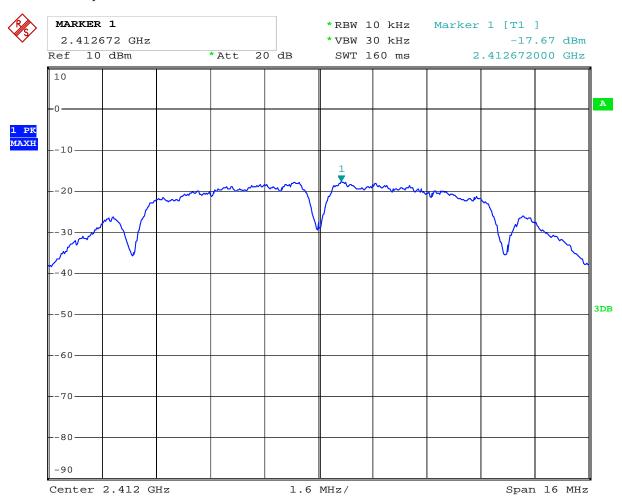
Page 88 of 127

Report No: 1210110-01

Date: 2012-09-04



4. 802.11b at 1Mbps of CH1



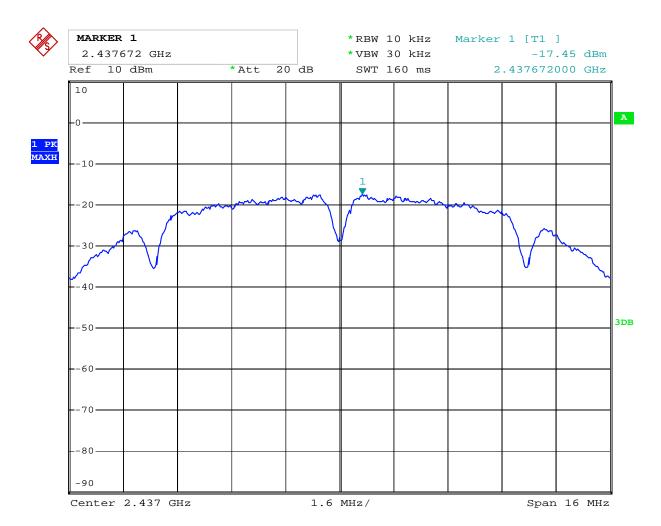
Page 89 of 127

Report No: 1210110-01

Date: 2012-09-04



5. 802.11b at 1Mbps of CH6



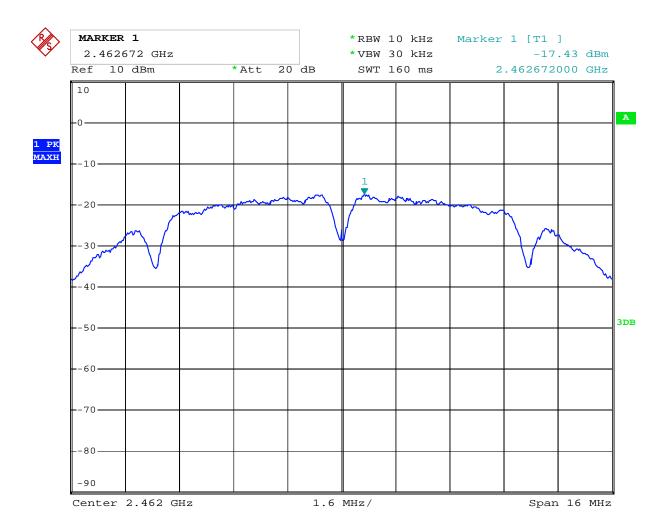
Page 90 of 127

Report No: 1210110-01

Date: 2012-09-04



6. 802.11b at 1Mbps of CH11



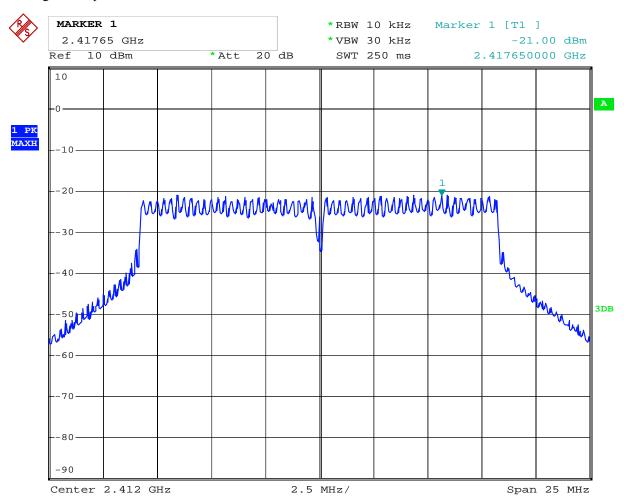
Page 91 of 127

Report No: 1210110-01

Date: 2012-09-04



7. 802.11g at 6Mbps of CH1



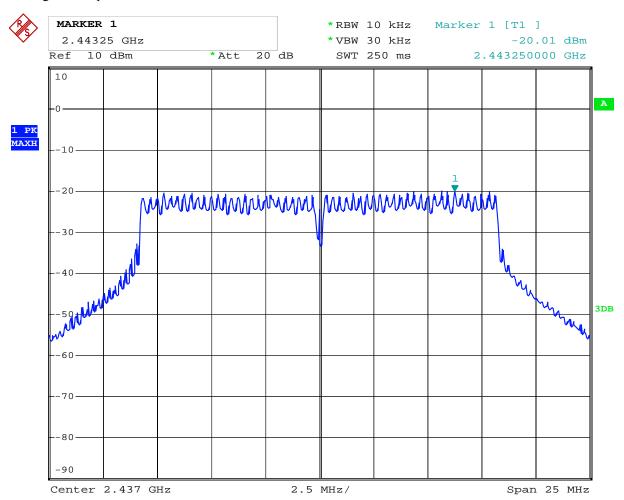
Page 92 of 127

Report No: 1210110-01

Date: 2012-09-04



8. 802.11g at 6 Mbps of CH6



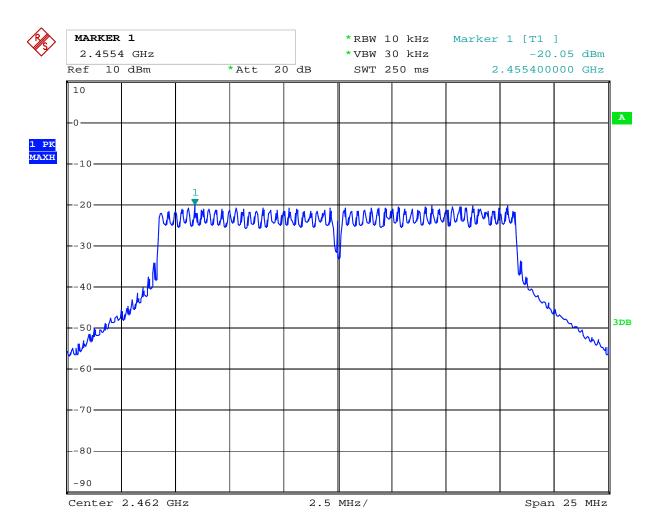
Page 93 of 127

Report No: 1210110-01

Date: 2012-09-04



9. 802.11g at 6 Mbps of CH11

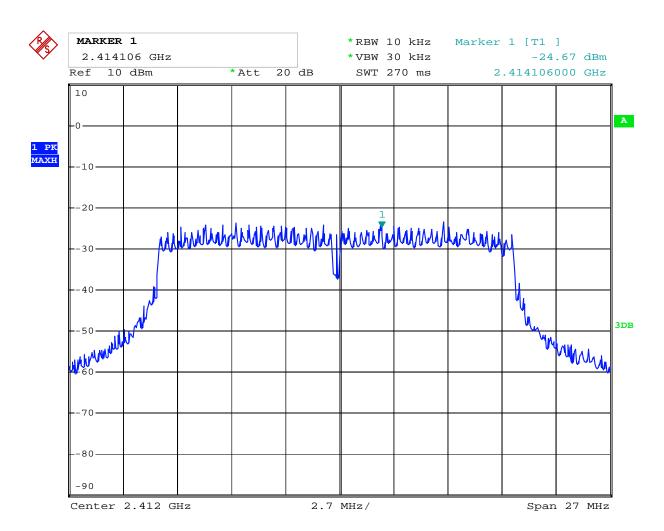


Page 94 of 127

Report No: 1210110-01

Date: 2012-09-04



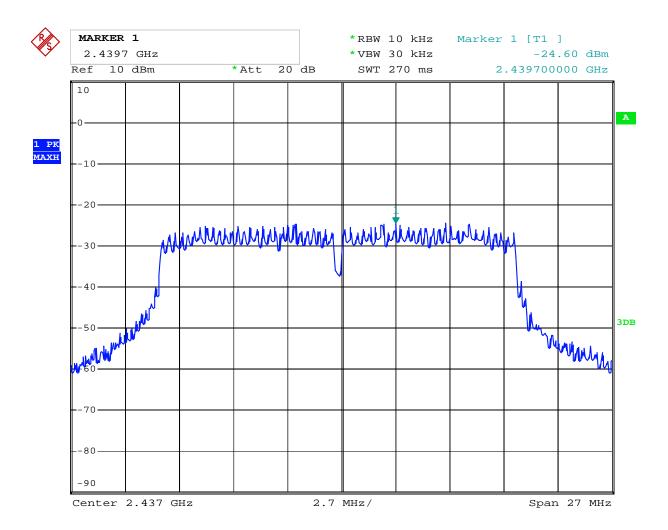


Page 95 of 127

Report No: 1210110-01

Date: 2012-09-04



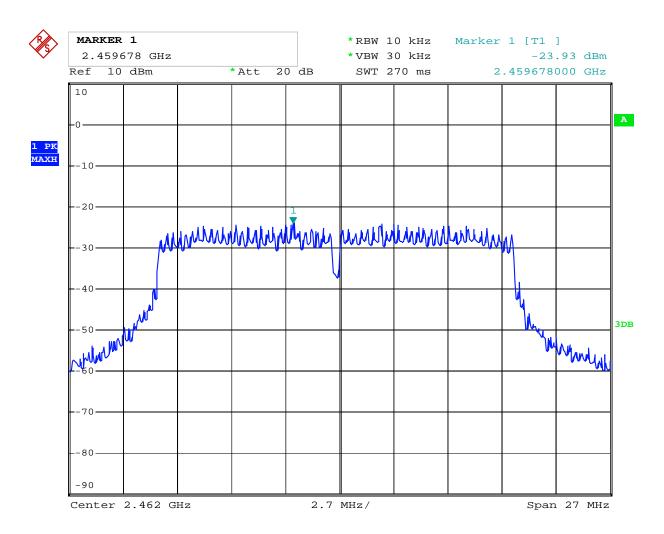


Page 96 of 127

Report No: 1210110-01

Date: 2012-09-04



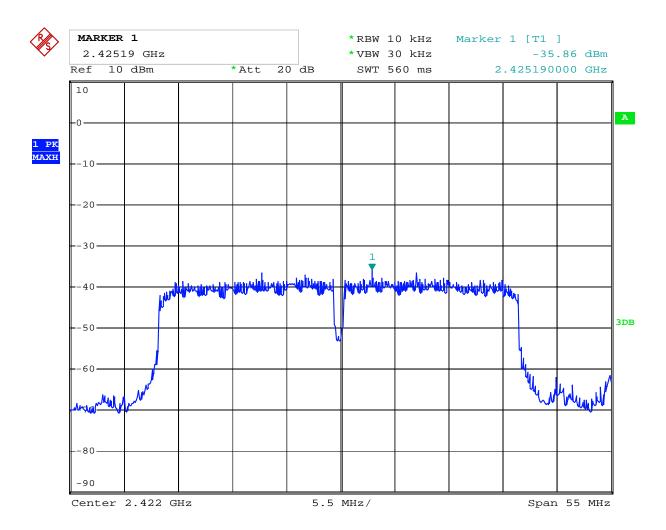


Page 97 of 127

Report No: 1210110-01

Date: 2012-09-04



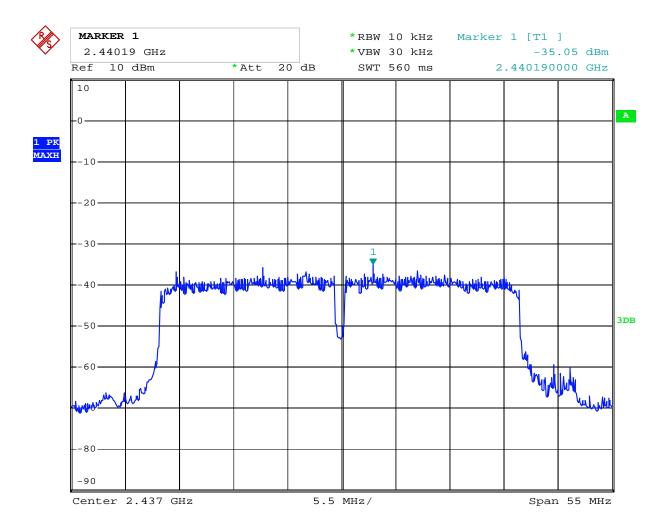


Page 98 of 127

Report No: 1210110-01

Date: 2012-09-04



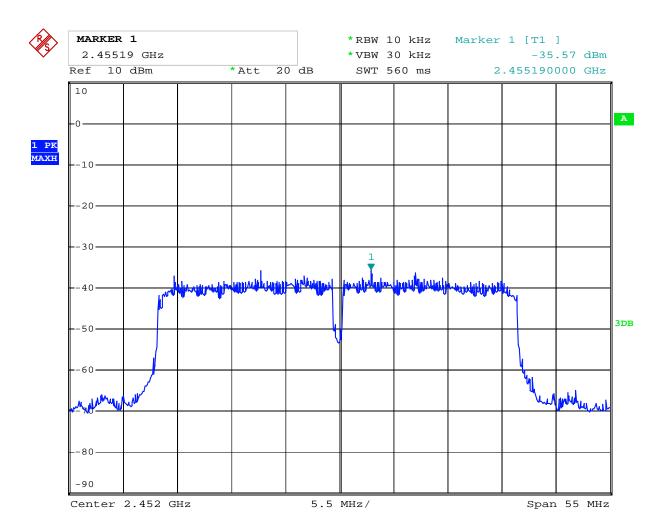


Page 99 of 127

Report No: 1210110-01

Date: 2012-09-04





Report No: 1210110-01

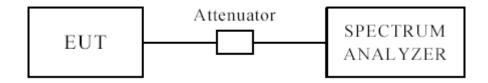
Date: 2012-09-04



Page 100 of 127

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=VBW=100 kHz. A conducted measurement used

10.4 Test Result

Please see next pages

Note: 1. this is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), after pre-test. It was found that the worse radiated emission was get at the lying position.

2. The worse case was recorded

Page 101 of 127

Report No: 1210110-01

Date: 2012-09-04



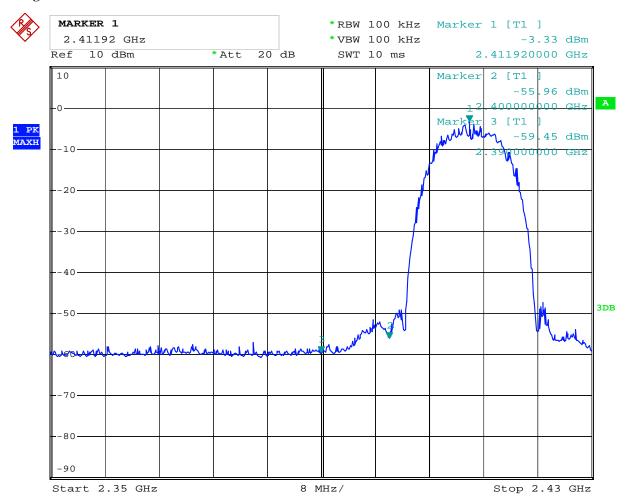
For 802.11b mode

CH01 at 11Mbps

10.4 Band-edge and Restricted band Measurement

Product:	MID		Model:	HS-7DTB4
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	43.08	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	41.96	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

Test Figure:



Page 102 of 127

Report No: 1210110-01

Date: 2012-09-04

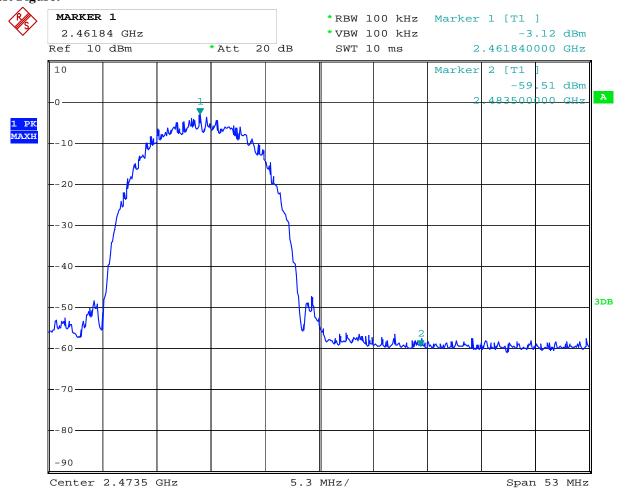


CH11 at 11Mbps

10.4 Band-edge and Restricted band Measurement

Product:	MID		Model:	HS-7DTB4
Mode	Keepin	g Transmitting	Input Voltage	AC 120V
Temperature	24	4 deg. C,	Humidity	56% RH
Test Result:		Pass	Detector	PK
2483.5	PK (dBµV/m)	42.66	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

Test Figure:



Page 103 of 127

Report No: 1210110-01

Date: 2012-09-04



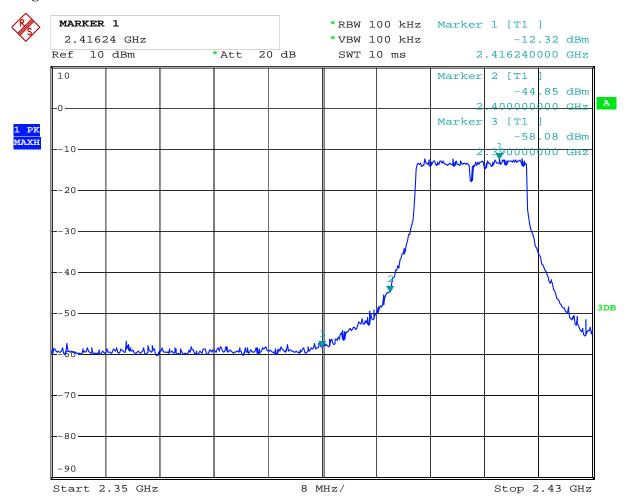
For 802.11g mode

CH01 at 6Mbps

10.4 Band-edge and Restricted band Measurement

Product:	MID		Model:	HS-7DTB4
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	54.16	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	37.27	Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	43.16	Limit	$74(dB\mu V/m)$
	$AV (dB\mu V/m)$		Lillit	$54(dB\mu V/m)$

Test Figure:



Page 104 of 127

Report No: 1210110-01

Date: 2012-09-04

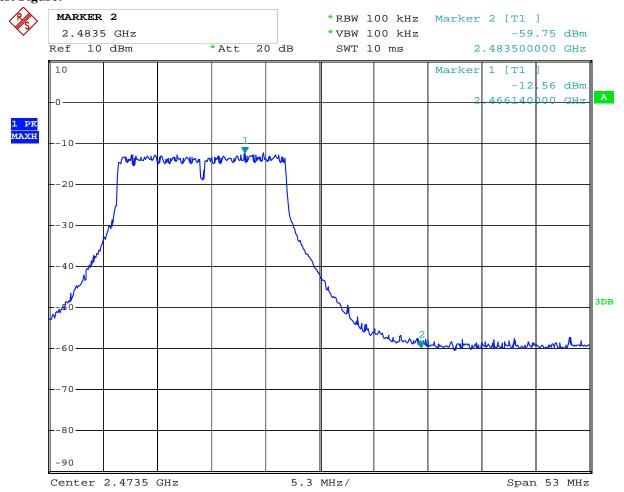


CH11 at 6Mbps

10.4 Band-edge and Restricted band Measurement

Product:	MID		Model:	HS-7DTB4
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBµV/m)	42.87	T ::4	$74(dB\mu V/m)$
	$AV (dB\mu V/m)$		Limit	54(dBμV/m)

Test Figure:



Page 105 of 127

Report No: 1210110-01

Date: 2012-09-04



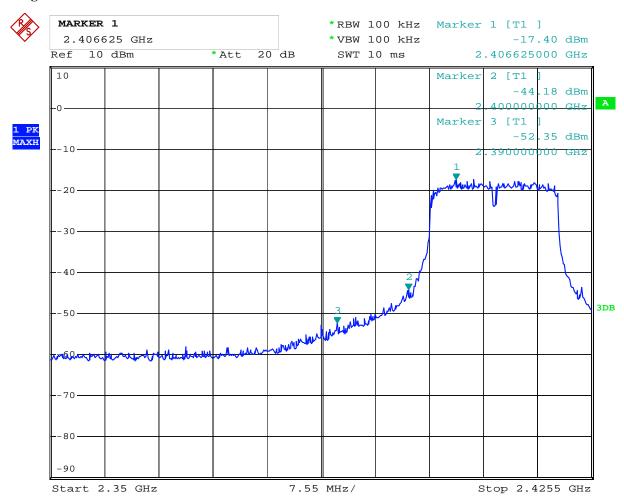
For 802.11n (HT20) mode

CH01 at 65Mbps

10.4 Band-edge and Restricted band Measurement

Product:	MID		Model:	HS-7DTB4
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	53.08	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)	37.76	Limit	$54(dB\mu V/m)$
2390	PK (dBμV/m)	43.69	- Limit	$74(dB\mu V/m)$
	AV (dBμV/m)			$54(dB\mu V/m)$

Test Figure:



Note: The Max. FS in Restrict Band are measured in conventional method.

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Page 106 of 127

Report No: 1210110-01

Date: 2012-09-04

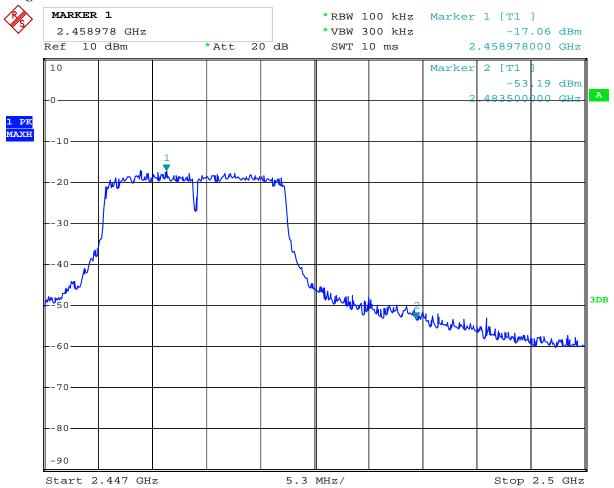


CH11 at 65Mbps

10.4 Band-edge and Restricted band Measurement

Product:	MID		Model:	HS-7DTB4
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBµV/m)	43.89	Limit	74(dBμV/m)
	AV (dBμV/m)			54(dBμV/m)

Test Figure:



Page 107 of 127

Report No: 1210110-01

Date: 2012-09-04



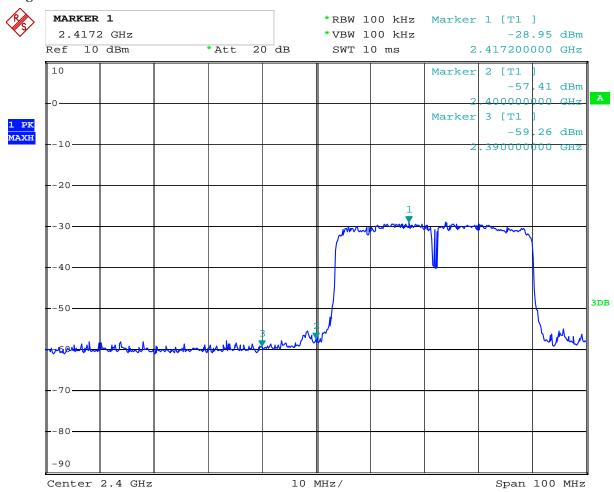
For 802.11n (HT40) mode

CH01 at 65Mbps

10.4 Band-edge and Restricted band Measurement

Product:	MID		Model:	HS-7DTB4
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	44.21	Limit	74(dBμV/m)
	AV (dBμV/m)			54(dBμV/m)
2390	PK (dBμV/m)	41.63	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)			54(dBμV/m)

Test Figure:



Page 108 of 127

Report No: 1210110-01

Date: 2012-09-04

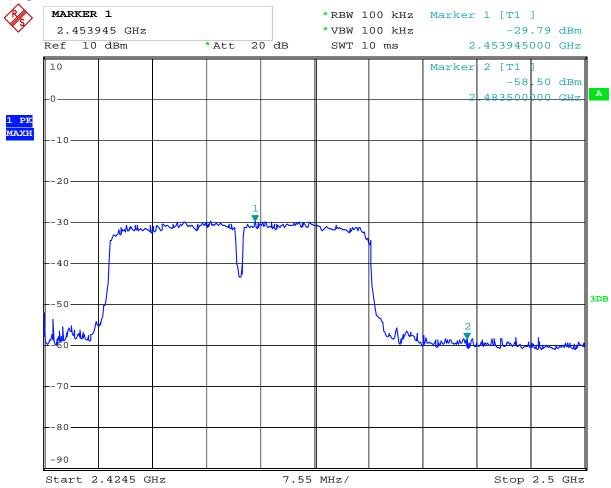


CH7 at 65Mbps

10.4 Band-edge and Restricted band Measurement

Product:	MID		Model:	HS-7DTB4
Mode	Keeping Transmitting		Input Voltage	AC 120V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBµV/m)	42.83	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

Test Figure:



Page 109 of 127

Report No: 1210110-01

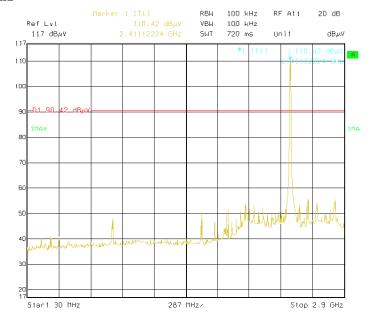
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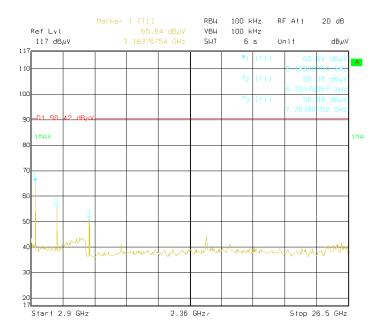


10.4 Conducted Spurious Emissions

Product:	MID	Model:	HS-7DTB4
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure: 802.11b ch1





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Page 110 of 127

Report No: 1210110-01

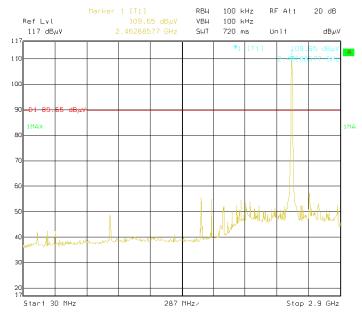
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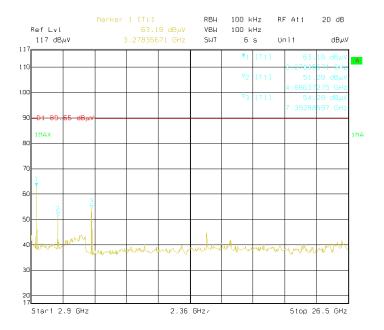


10.4 Conducted Spurious Emissions

Product:	MID	Model:	HS-7DTB4
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure: 802.11b ch11





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Page 111 of 127

Report No: 1210110-01

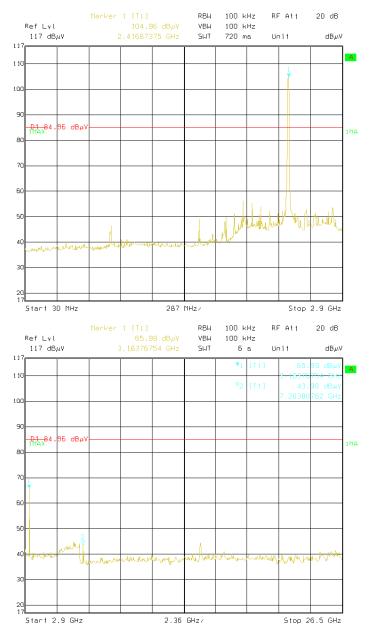
Date: 2012-09-04



10.4 Conducted Spurious Emissions

Product:	MID	Model:	HS-7DTB4
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure: 802.11g ch1



Page 112 of 127

Report No: 1210110-01

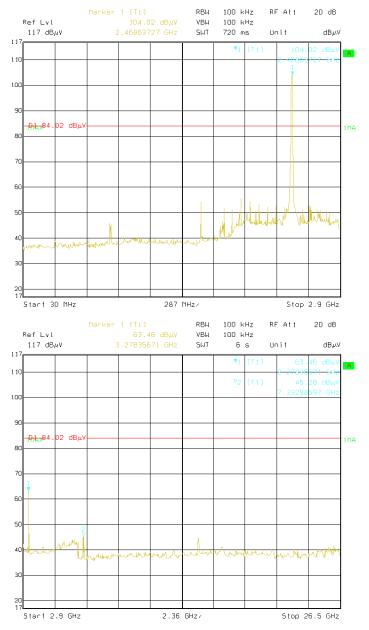
Date: 2012-09-04



10.4 Conducted Spurious Emissions

Product:	MID	Model:	HS-7DTB4
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure: 802.11g ch11



Page 113 of 127

Report No: 1210110-01

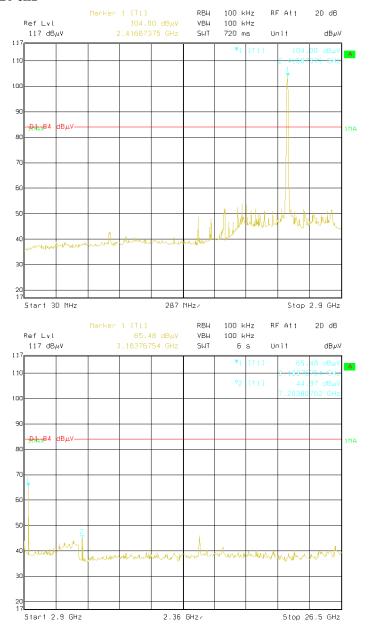
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10.4 Conducted Spurious Emissions

Product:	MID	Model:	HS-7DTB4
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure: 802.11n HT20 ch1



Page 114 of 127

Report No: 1210110-01

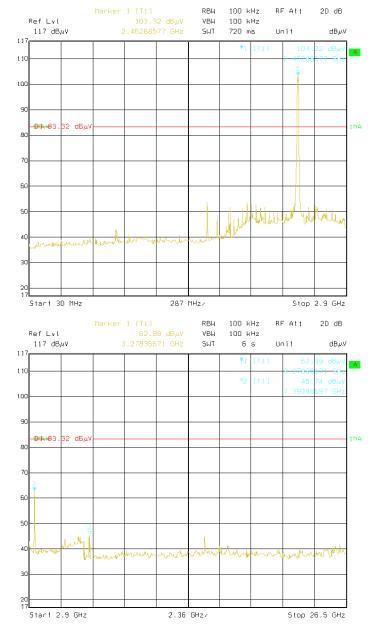
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10.4 Conducted Spurious Emissions

Product:	MID	Model:	HS-7DTB4
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure: 802.11n HT20 ch11



Page 115 of 127

Report No: 1210110-01

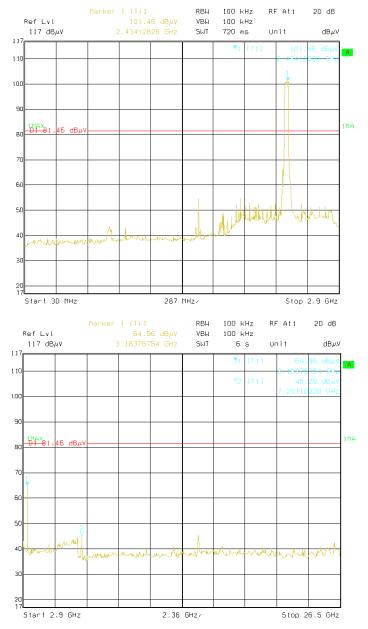
Date: 2012-09-04



10.4 Conducted Spurious Emissions

Product:	MID	Model:	HS-7DTB4
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure: 802.11n HT40 ch1



Page 116 of 127

Report No: 1210110-01

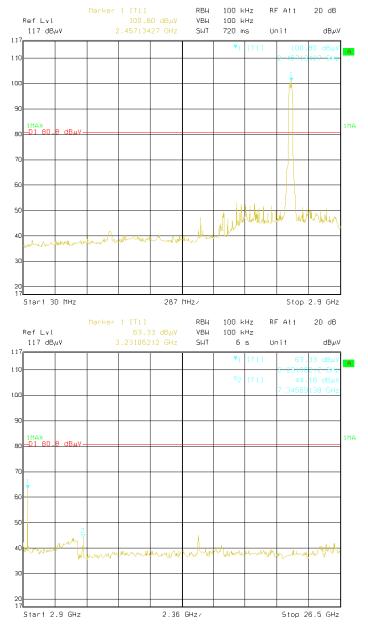
Date: 2012-09-04



10.4 Conducted Spurious Emissions

Product:	MID	Model:	HS-7DTB4
Mode	Keeping Transmitting	Input Voltage	AC 120V
Temperature	24 deg. C	Humidity	56% RH
Test Result:	Pass	Detector	PK

Test Figure: 802.11n HT40 ch7



Report No: 1210110-01 Page 117 of 127

Date: 2012-09-04



11.0 Antenna Requirement

11.1 Standard Applicable

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.

Page 118 of 127

Report No: 1210110-01

Date: 2012-09-04

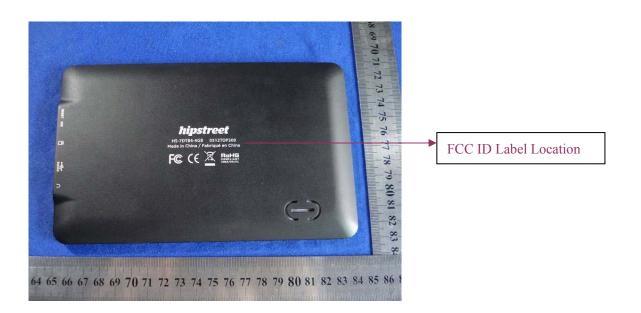
13.0 FCC ID Label

FCC ID: YH5-7DTB4 IC: 8012A-7DTB4

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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:



Page 119 of 127

Report No: 1210110-01

Date: 2012-09-04



14.0 **Photo of testing**

Conducted Emission Test Setup:



Page 120 of 127

Report No: 1210110-01

Date: 2012-09-04



Radiated Emission Test Setup:





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Page 121 of 127

Report No: 1210110-01

Date: 2012-09-04



Photographs - EUT

Outside view





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Page 122 of 127

Report No: 1210110-01

Date: 2012-09-04



Outside view





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Page 123 of 127

Report No: 1210110-01

Date: 2012-09-04



Outside view



Page 124 of 127

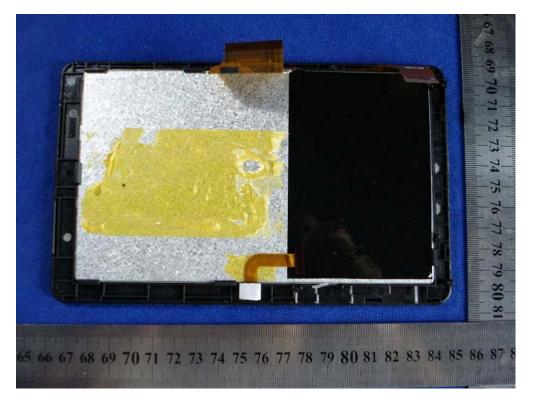
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Date: 2012-09-04



Inside view





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Page 125 of 127

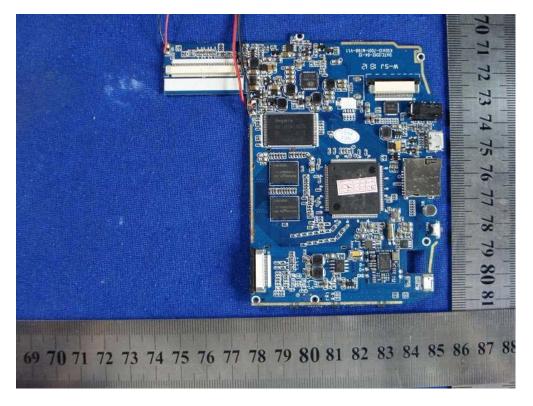
Report No: 1210110-01

Date: 2012-09-04



Inside view





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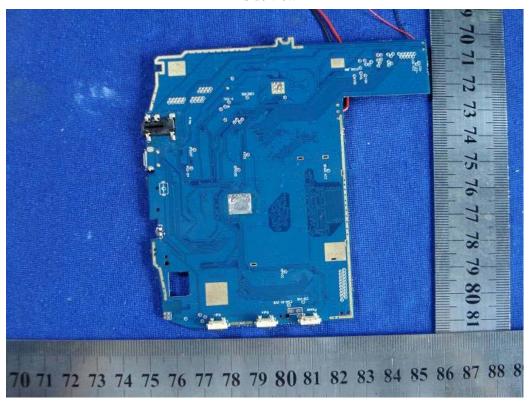
Page 126 of 127

Report No: 1210110-01

Date: 2012-09-04



Inside view



Page 127 of 127

Report No: 1210110-01

Date: 2012-09-04



Power Supply





End of the report

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