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#### Test Report issued under the responsibility of:



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#### **TEST REPORT**

#### FCC Part 15

Radio Frequency Devices
Subpart C – Intentional Radiators
FCC ID.: ZC9001AYBA2

RSS 210, Issue 8

Licence-exempt Radio Apparatus: Category I Equipment

IC: 9580A-1AYBA2

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Report Reference No.....: 10225634RUS1\_FCC\_IC-TRF

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Date of issue .....: 26-Oct-12

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Testing Laboratory .....: Nemko USA, Inc. (Dallas)

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USA

Applicant's name .....: Seagate Technology LLC

Address.....: 10200 S. De Anza Blvd., Cupertino, CA 95014

Model(s) Tested.....: 1AYBA2

**Test specification:** 

Standard .....: FCC Part 15, Subpart C & RSS 210, Issue 8
Test procedure ......: ANSI C63.10:2009 and 558074 D01 v02

Non-standard test method .....: N/A

TRF Revision..... 14-Oct-12



Revision History			
#	Description	Date	
0	Original Report Release	26-Oct-12	

#### **Notices:**

- 1. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
- 2. The test results presented in this report relate only to the object tested.
- 3. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.
- 4. "(see Enclosure #)" refers to additional information appended to the report.
- 5. Throughout this report a point is used as the decimal separator.
- 6. Dimensions in English units for convenience only, metric units prevail.



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#### **Normative References**

The following document(s) have been appropriately considered in the performance of the test results detailed in this report.

CFR Title 47, Part 15 Radio Frequency Devices

ANSI C63.10:2009

American National Standard for Testing Unlicensed Wireless Devices

558074 D01 DTS Measurement Guidance v02

Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247

RSS 210, Issue 8

License-exempt Radio Apparatus (All Frequency Bands): Category I Equipment

RSS-Gen, Issue 3:2010

General Requirements and Information for the Certification of Radio Apparatus



#### Channels for USA and Canada:

Channel	Frequency (MHz)
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

#### Channels for Israel:

Channel	Frequency (MHz)
1	Not used
2	Not used
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	Not used
11	Not used

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# **Equipment Under Test (EUT)**

Details:
Test item description:
Model: 1AYBA2
Serial Number NA30100Y
Production Status ∶ ⊠ Production □ Pre-Production □ Prototype
Other Status Info Click here to enter text.
EUT Received Date 9-Oct-12
Ratings 5.0VDC ☐ 1¢ ☐ 3¢ ☒ Battery
General product description:
The device is an external storage drive with Wireless LAN connection.  Power is provided by an internal Li battery or from a 5 Vdc USB power connection. An external AC to USB DC adapter can be used to charge the internal battery.
Modifications to the EUT required for compliance:
There have been no modifications to the EUT as a result of this evaluation.  Deviations from Test Methodology:
There have been no deviations, additions to, or exclusions from the specified test standard.
Engineering Judgements:
No engineering judgments based on the results in this test report have been made.
Approved by (+ signature): Click here to enter text.



#### Table 1 – EUT Internal Operating Frequencies

Frequency (MHz)	Description	Frequency (MHz)	Description
2400 – 2483.5	WLAN		
12	Clock		

#### Table 2 – EUT Operating Modes

Mode #	Description
1	802.11 b mode
2	802.11g mode
3	802.11n mode (20 MHz) 1 TX stream

#### **EUT Configuration**

A minimum representative configuration, as defined by the manufacturer, has been used for the testing performed herein. The selection of hardware (including interface ports), software, and cables were chosen by the manufacturer as being representative of the product's intended use. The interconnection of various articles of equipment and the types of cables used has also been defined by the manufacturer.

The placement of the equipment under test has been, to the extent practical, arranged to maximize emissions.

Cables, of the type and length specified by the manufacturer, were connected to at least one of each type of interface port provided by the EUT and if practical, were terminated by a device typical of actual usage. For multiple ports of the same type, the addition of cables did not significantly affect the emission level (i.e. < 2B variation).

The arrangement of external power supply units was as follows:

- a) If the mains input cable of the external power supply unit is greater than 0,8 m, the external power supply unit shall be placed on the tabletop, with a nominal 0,1 m separation from the host unit.
- b) If the external power supply unit has a mains input cable that is less than 0,8 m, the external power supply unit shall be placed at a height above the ground plane such that its power cable is fully extended in the vertical direction.
- c) If the external power supply unit is incorporated into the mains power plug, it shall be placed on the tabletop. An extension cable shall be used between the external power supply unit and the source of power. The extension cable should be connected in a manner such that it takes the most direct path between the external power supply unit and the source of power.



Figure 1 - EUT Configuration Diagram

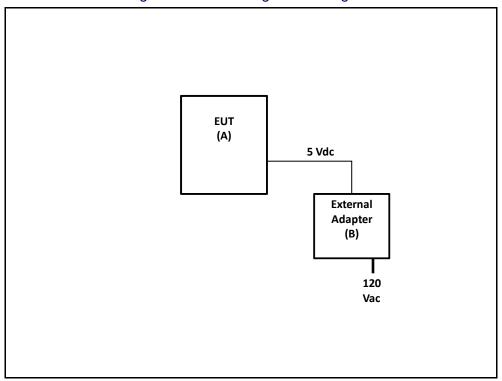


Table 3 – EUT & Auxilliary Equipment List

Item	Use*	Product Type	Manufacturer	Model	Serial No.
Α	EUT	External Storage Drive	Seagate Technology LLC	1AYBA2	NA30100Y
В	AE	External Adapter	Asian Power Devices, Inc.	WA-10L05RU	299003687

Note:

Table 4 - Interconnecting Cables List

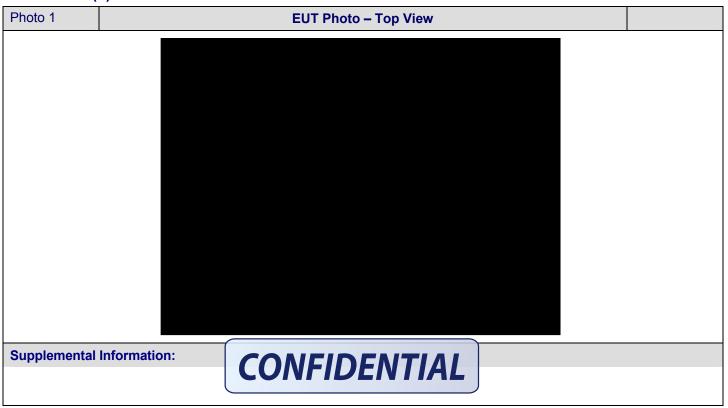
Item	Use*	Cable Type
1	EUT	DC power to USB

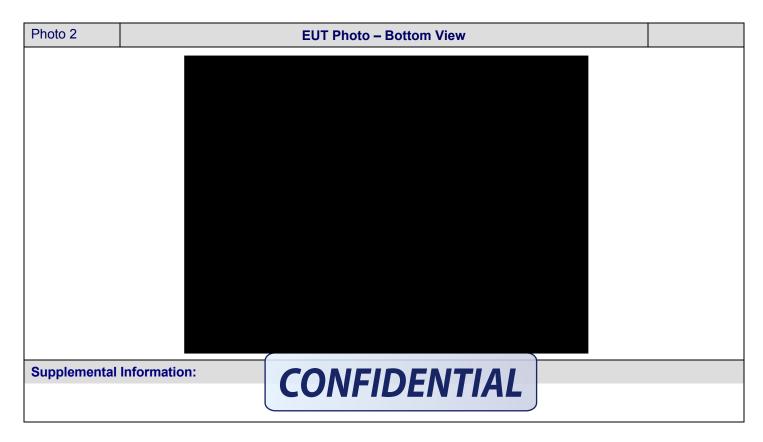
<sup>\*</sup> Use = EUT - Equipment Under Test, AE - Auxiliary/Associated Equipment, or SIM - Simulator (Not Subjected to Test)

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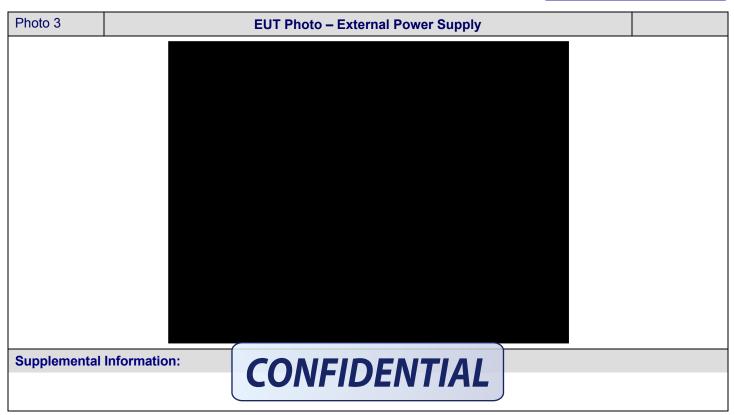
## **EUT Photo(s)**





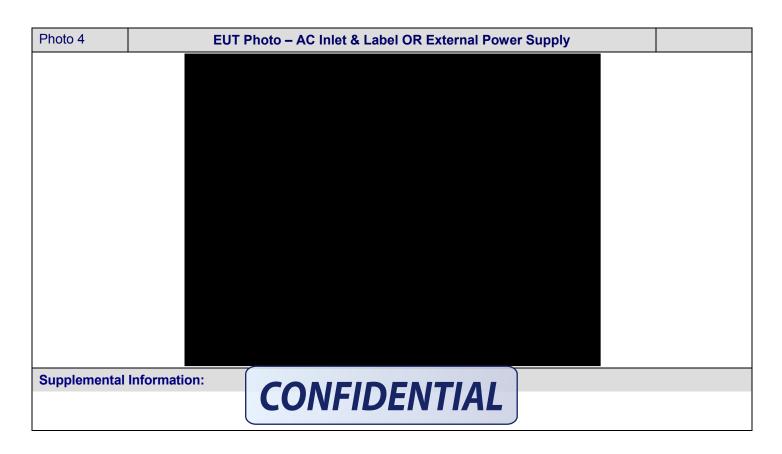
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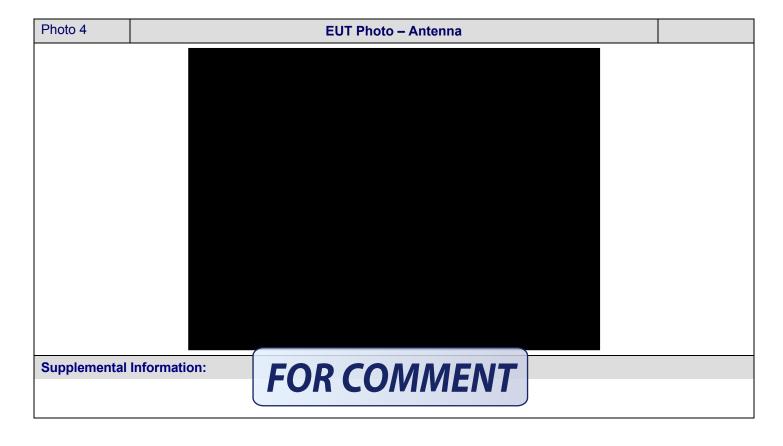




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# **Summary of Testing**

#### Possible test case verdicts:

test case does not apply to the test object: N/A
test object does meet the requirement .....: P (Pass)
test object does not meet the requirement: F (Fail)
not tested (not part of this evaluation) ......: NT

Clause	Test Description	Verdict	Comment
47 CFR			
15.203	Antenna Requirement	Р	
15.207	Conducted Emissions - Mains	Р	
15.209	Radiated Emissions – Restricted Bands	Р	
15.247(a)(2)	6 dB Occupied Bandwidth	Р	
15.247(b)(3)	RF Output Power	Р	
15.247(d)	Spurious Emissions	Р	
15.247(e)	Power Spectral Density	Р	
15.247(i)	RF Exposure	Р	See separate SAR test report
RSS 210			
RSS GEN 7.2.4	Conducted Emissions - Mains	Р	
RSS GEN 7.2.2	Radiated Emissions – Restricted Bands	Р	
A8.2(a)	6 dB Occupied Bandwidth	Р	
A8.2(b)	Power Spectral Density	Р	
A8.4(4)	RF Output Power	Р	
A8.5	Out of Band Spurious Emissions	Р	
RSS GEN 5.6	RF Exposure	Р	See separate SAR test report

#### Notes:

#### **General remarks:**

#### Summary of compliance with national requirements:

Compliance with this standard provides a means of demonstrating conformity with the United States Federal Communication Commission (FCC) certification authorization procedures and Industry Canada (IC) rules.

In addition compliance with this standard provides a means of demonstrating conformity with the requirements of the Israeli Ministry of Communications. Units in Israel will only operate on channel 3 – 9 (2422 MHz to 2452 MHz)

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**Testing Location** 

**Testing Laboratory:** Nemko USA, Inc. (Dallas)

Testing location/ address ...... 802 N. Kealy Ave.

Lewisville, TX 75057

**USA** 

Testing procedure: TMP

Tested by (name + signature)

Approved by (+ signature)

Testing location/ address .....:

#### **Supplemental Information:**

Testing results contained herein were performed at the location(s) listed above.

## **Procedural Requirements**

The following requirements are taken from the appropriate rules, other rules may apply and the manufacturer should consult the full text of the appropriate laws prior to marketing any device.

#### **United States**

Mandated procedures for digital devices are defined in 47 CFR 15.201, *Equipment authorization requirement*. Details of the authorization procedures (verification, declaration of conformity, and certification) can be found in 47 CFR, Part 2, Subpart J, *Equipment Authorization Procedures*.

#### Canada

Standard RSS-GEN contains the procedural requirements.

#### Information to the User and Labeling Requirements

The following requirements are taken from the appropriate rules, other rules may apply and the manufacturer should consult the full text of the appropriate laws prior to marketing any device.

#### **United States**

#### Labeling

47 CFR 2.925

(a) Each equipment covered in an application for equipment authorization shall bear a nameplate or label listing the following:

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(1) FCC Identifier consisting of the two elements in the exact order specified in §2.926. The FCC Identifier shall be preceded by the term *FCC ID* in capital letters on a single line, and shall be of a type size large enough to be legible without the aid of magnification.

Example: FCC ID XXX123. XXX—Grantee Code 123—Equipment Product Code

#### 47 CFR 15.19

- (a) In addition to the requirements in part 2 of this chapter, a device subject to certification, or verification shall be labeled as follows:
- (3) All other devices shall bear the following statement in a conspicuous location on the device:

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.

47 CFR 15.19(b)(2) Label text and information should be in a size of type large enough to be readily legible, consistent with the dimensions of the equipment and the label. However, the type size for the text is not required to be larger than eight point.

47 CFR 15.19(b)(3): When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (b)(1) of this section on it, such as for a CPU board or a plug-in circuit board peripheral device, the text associated with the logo may be placed in a prominent location in the instruction manual or pamphlet supplied to the user. However, the unique identification (trade name and model number) and the logo must be displayed on the device.

47 CFR 15.19(b)(4): The label shall not be a stick-on, paper label. The label on these products shall be permanently affixed to the product and shall be readily visible to the purchaser at the time of purchase, as described in §2.925(d) of this chapter. "Permanently affixed" means that the label is etched, engraved, stamped, silkscreened, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment or on a nameplate of metal, plastic, or other material fastened to the equipment by welding, riveting, or a permanent adhesive. The label must be designed to last the expected lifetime of the equipment in the environment in which the equipment may be operated and must not be readily detachable.

#### Information to User

47 CFR 15.21: The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

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#### Canada



#### Labeling

RSS –GEN 5.2: Every unit of Category I radio apparatus certified for marketing and use in Canada shall bear a permanent label on which is indelibly displayed the model number and Industry Canada certification number of the equipment model (transmitter, receiver, or inseparable combination thereof). Each model shall be identified by a unique combination of a model number and a certification number, which are assigned as described below in this section. The label shall be securely affixed to a permanently attached part of the device, in a location where it is visible or easily accessible to the user, and shall not be readily detachable. The label shall be sufficiently durable to remain fully legible and intact on the device in all normal conditions of use throughout the device's expected lifetime. These requirements may be met either by a separate label or nameplate permanently attached to the device or by permanently imprinting or impressing the label directly onto the device.

The label text shall be legible without the aid of magnification, but is not required to be larger than 8-point font size. If the device is too small to meet this condition, the label information may be included in the user manual upon agreement with Industry Canada.

The model number is assigned by the applicant and shall be unique to each model of radio apparatus under that applicant's responsibility. The model number shall be displayed on the label preceded by the text: "Model:", so it appears as follows:

Model: model number assigned by applicant

The certification number is made up of a Company Number (CN) assigned by Industry Canada's Certification and Engineering Bureau followed by the Unique Product Number (UPN), assigned by the applicant.

The certification number shall appear as follows:

IC: XXXXXX-YYYYYYYYYYY

#### where:

- XXXXXX-YYYYYYYYYYY is the certification number;
- XXXXXX is the Company Number (CN) assigned by Industry Canada, made of at most 6 alphanumeric characters (A-Z, 0-9), including a letter at the end of the CN to distinguish between different company addresses:
- YYYYYYYYY is the Unique Product Number (UPN) assigned by the applicant, made of at most 11 alphanumeric characters (A-Z, 0-9); and the letters "IC" (Industry Canada) are to indicate the Industry Canada certification number, but are not part of the certification number.

Permitted alphanumerical characters used in the CN and UPN are limited to capital letters (A-Z) and numerals (0-9). Example: A company has been assigned a CN of "21A" and wishes to use a UPN of "WILAN3" for one of its products. The full Industry Canada certification number of this product would thus be: IC: 21A-WILAN3.

Category I equipment that is not labeled with the model number and the certification number as described above is not considered certified.

#### Notices to the User

RSS-GEN 5.3: Radio apparatus shall comply with the requirements to include required notices or statements to the user of equipment with each unit of equipment model offered for sale.

The required notices are specified in the RSS documents (including RSS-Gen) applicable to the equipment model. These notices are required to be shown in a conspicuous location in the user manual for the equipment, or to be displayed on the equipment model. If more than one notice is required, the equipment model(s) to which each notice pertains should be identified. Suppliers of radio apparatus shall provide notices and user information in both English and French.

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RSS-GEN 7.1.3: User manuals for licence-exempt radio apparatus shall contain the following or equivalent notice in a conspicuous location in the user manual or alternatively on the device or both.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

User manuals for transmitters shall display the following notice in a conspicuous location:

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

User manuals for transmitters equipped with detachable antennas shall also contain the following notice in a conspicuous location:

This radio transmitter (identify the device by certification number, or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types approved for use with the transmitter, indicating the maximum permissible antenna gain (in dBi) and required impedance for each.

# **Technical Requirements**

The testing requirements, as appropriate, were derived from ANSI C63.4; 47 CFR, Subpart A; RSS 210; and RSS GEN.

#### **Conducted Emissions**

The mains cable of the EUT or EUT host unit was connected to the LISN defined in this standard and is bonded to the reference plane. Where applicable, remaining auxiliary equipment was powered through an additional LISN (also bonded to the reference plane), using a multi-socket outlet strip if necessary. The LISNs were at least 0.8m away from the EUT. A vertical ground plane was used while the table-top EUTs were placed on a wooden table 0.8m high. Floor-standing EUTs were insulated from the ground plane and grounded according to the manufacturer's instructions.

Signal cables were positioned for their entire lengths, as far as possible, at a nominal distance of 0.4 m from the ground reference plane. Where the mains cable supplied by the manufacturer was longer than 1 m, the excess was folded at the centre into a bundle no longer than 0.4 m, so that its length is shortened to 1 m. If the 1 m cable length cannot be achieved owing to physical limitations of the EUT arrangement, the cable length shall be as near to 1 m as possible.

All telecommunication and signal ports were correctly terminated using either appropriate associated equipment or a representative termination during the measurement of the conducted disturbances at the mains. If an ISN is connected to a telecommunications port during the measurement of conducted disturbances at the mains port, then the ISN receiver port was terminated in  $50\Omega$ . The ISNs were at least 0.8m away from the EUT.

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#### Mains

Any power cable(s) from the equipment under test that were directly connected to the AC Mains have been tested. In the event that the equipment under test had no direct connection to the Mains, that is, it was connected to a Host unit (example: USB powered); then conducted emissions was performed on the Mains of the Host unit. Battery powered equipment was not tested for conducted emissions; however, if the equipment makes provisions for connections to a battery charger that is connected to the Mains, then conducted emissions were performed on the battery charger.

Table 5 - Class B Conducted Emissions Limits - Mains

	Limits (dBμV)	
Frequency	Quasi-peak	Average
150 kHz – 500 kHz	66 - 56	5-46
500 kHz – 5 MHz	56	46
5 MHz – 30 MHz	60	50

NOTE 1: The lower limit shall apply at the transition frequency. NOTE 2: The limit decreases linearly with the logarithm of the frequency in the range 150 kHz to 500 kHz.

#### Radiated Emissions - Restricted Bands

The arrangement of the equipment is typical of a normal installation practice and as was practical, the arrangement was varied and emissions investigated for maximum amplitude. Final measurements were performed in a semi-anechoic chamber or on an open area test site (OATS). The equipment was rotated 360° and the antenna height has been varied between 1m and 4m. Measurements were taken at both horizontal and vertical antenna polarities. The receiver bandwidth was set to 120 kHz for measurements below 1 GHz, and 1 MHz for measurements above 1 GHz. A peak detector is used to detect an emission; a quasi-peak detector may be used to record a final measurement below 1 GHz and an average detector may be used above 1 GHz. An inverse proportionality factor of 20 dB/decade (10 dB) was used, as noted in 15.31(f)(1), to normalize the measured data to the specified test distance for determining compliance.

Frequency range of radiated measurements (15.33(a)):

Operating frequency of intentional radiator	Lowest frequency searched	Highest frequency searched
Below 10 GHz	9 kHz or lowest operating frequency generated in the device, whichever is highest	10 <sup>th</sup> harmonic of highest fundamental frequency or 40 GHz, whichever is lower
10 – 30 GHz	9 kHz or lowest operating frequency generated in the device, whichever is highest	5 <sup>th</sup> harmonic of highest fundamental frequency or 100 GHz, whichever is lower
At or above 30 GHz	9 kHz or lowest operating frequency generated in the device, whichever is highest	5 <sup>th</sup> harmonic of highest fundamental frequency or 200 GHz, whichever is lower

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## Restricted Bands 47 CFR 15.205

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495–0.505	16.69475-16.69525	608–614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5–25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5–38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73–74.6	1645.5-1646.5	9.3–9.5
6.215-6.218	74.8–75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9–150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7–156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322–335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

## Restricted Bands RSS-GEN

MHz	MHz	MHz	GHz
0.090-0.110	12.57675-12.57725	960-1427	9.0-9.2
2.1735-2.1905	13.36-13.41	1435-1626.5	9.3-9.5
3.020-3.026	16.42-16.423	1645.5-1646.5	10.6-12.7
4.125-4.128	16.69475-16.69525	1660-1710	13.25-13.4
4.17725-4.17775	16.80425-16.80475	1718.8-1722.2	14.47-14.5
4.20725-4.20775	25.5-25.67	2200-2300	15.35-16.2
5.677-5.683	37.5-38.25	2310-2390	17.7-21.4
6.125-6.218	73-74.6	2655-2900	22.01-23.12
6.6775-6.26825	74.8-75.2	3260-3267	23.6-24.0
6.31175-6.31225	108-138	3332-3339	31.2-31.8
8.291-8.294	156.52475-156.52525	3345.8-3358	36.43-36.5
8.362-8.366	156.7-156.9	3500-4400	Above 38.6
8.37625-8.38675	240-285	4500-5150	
8.41425-8.41475	322-335.4	5350-5460	
12.29-12.293	399.9-410	7250-7750	
12.51975-12.52025	608-614	8025-8500	



#### Radiated Emission Limit – Restricted Bands

Reading on the measuring receiver showing fluctuations close to the limit, were observed for at least 15 s at each measurement frequency; the highest reading was recorded.

Table 6 – Radiated Emissions Limits per 47 CFR 15.209(a) & RSS-GEN 7.2.5

Frequency Range	Field Strength (μV/m)	Field Strength (dB <sub>µ</sub> V/m)	Measurement Distance (m)
9 kHz – 490 kHz	2400/F(kHz)	48.5 – 13.8	300
490 kHz – 1.705 MHz	24000/F(kHz)	33.6 – 23.0	30
1.705 MHz – 30 MHz	30	29.5	30
30 MHz – 88 MHz	100	40.0	3
88 MHz – 216 MHz	150	43.5	3
216 MHz – 960 MHz	200	46.0	3
Above 960 MHz	500	54.0	3

# **Receiver Bandwidth and Hopping**

15.247(a)(1) and RSS 210 A8.1(a): The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

Receiver bandwidth and hopping is verified through a technical description provided by the manufacturer.

# 6 dB Occupied Bandwidth

15.247(a)(2) and RSS 210 A8.2(a): Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

The 6 dB Occupied Bandwidth is measured at low, mid, and high channels and with each modulation mode.

#### Option #1:

- 1. Set resolution bandwidth (RBW) = 1-5% or DTS BW, not to exceed 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.

#### Option #2

The automatic bandwidth measurement capability of a spectrum analyzer may be employed using the X dB bandwidth mode with X set to 6 dB, if it implements the functionality described above. When using this capability, care should be taken to ensure that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that may be  $\geq$  6 dB.



# **Peak RF Output Power**

#### Option #1

This procedure should be used when a spectrum/signal analyzer with a resolution bandwidth that is greater than or equal to the DTS bandwidth can be used to perform the measurement.

- 1. Set the RBW ≥ DTS bandwidth.
- 2. Set VBW  $\geq$  3 x RBW.
- 3. Set span ≥ RBW.
- 4. Sweep time = auto couple.
- 5. Detector = peak.
- 6. Trace mode = max hold.
- 7. Allow trace to fully stabilize.
- 8. Use peak marker function to determine the peak amplitude level.

#### Option #2

This procedure should only be used when the maximum available RBW of the spectrum/signal analyzer is less than the DTS bandwidth.

- 1. Set the RBW = maximum available (at least 1 MHz).
- 2. Set the VBW =  $3 \times RBW$  or maximum available setting (must be  $\geq RBW$ ).
- 3. Set the span to fully encompass the DTS bandwidth.
- 4. Detector = peak.
- 5. Sweep time = auto couple.
- 6. Trace mode = max hold.
- 7. Allow trace to fully stabilize.
- 8. Use the spectrum analyzer's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some analyzers, this may require a manual override to ensure use of peak detector). If the spectrum analyzer does not have a band power function, sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

#### Option #3

The maximum peak conducted output power can be measured using a broadband peak RF power meter. The power meter must have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast, average-responding diode type sensor.

# Maximum RMS RF Output Power

**15.247(b)(3)** permits the maximum (average) conducted output power to be measured as an alternative to the maximum peak conducted output power for demonstrating compliance to the limit. When these procedures are utilized, the power is referenced to the emission bandwidth (EBW) rather than the DTS bandwidth (see Section 2.0 for definitions).

When using a spectrum/signal analyzer to perform these measurements, it must be capable of utilizing a number of measurement points in each sweep that is greater than or equal to twice the span/RBW in order to ensure bin-to-bin spacing of ≤ RBW/2 so that narrowband signals are not lost between frequency bins.

The ideal method for measuring the maximum (average) conducted output power is with the EUT is configured to transmit continuously (duty cycle ≥ 98%) at its maximum power control level. However, when this condition cannot be realized, video triggering or signal gating can be used to ensure that the measurements are performed

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only during periods when the EUT is transmitting at its maximum power control level. An option is also provided that can be used when none of the above requirements can be met with the available measurement instrumentation.

#### Option #1

This procedure should be used with an RMS power averaging detector; however, a sample detector can be used when an RMS detector is not available. This is the baseline method for measuring the maximum (average) conducted output power.

- 1. Set the analyzer span to a minimum of 1.5 times the EBW.
- 2. Set the RBW = 1 MHz.
- 3. Set the VBW  $\geq$  3 MHz.
- Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
- 5. Sweep time = auto couple.
- 6. Detector = power averaging (RMS) or sample detector when RMS not available.
- 7. Employ trace averaging in power averaging (RMS) mode over a minimum of 100 traces.
- 8. Use the spectrum analyzer's band power measurement function with band limits set equal to the EBW band edges.

Note: If the analyzer does not have a band power function, sum the spectral levels (in linear power units) at 1 MHz intervals extending across the entire EBW.

#### Option #2

This procedure can be used when an RMS power averaging detector is available in the spectrum/signal analyzer. This method utilizes a single slow sweep for determining the maximum (average) conducted output power and may be advantageous for use in automated test set-ups.

- 1. Set the analyzer span to a minimum of 1.5 times the EBW.
- 2. Set the RBW = 1 MHz.
- 3. Set the VBW  $\geq$  3 MHz.
- 4. Detector = power average (RMS) detector.
- 5. Ensure that the number of measurement points in the sweep  $\geq 2 \times \text{span/RBW}$ .
- 6. Manually set the sweep time to: ≥10 x (number of measurement points in sweep) x (maximum data rate per stream).
- 7. Perform the measurement over a single sweep.
- 8. Use the spectrum analyzer's band power measurement function with band limits set equal to the EBW band edges.

Note: If the analyzer does not have a band power function, sum the spectral levels (in linear power units) at 1 MHz intervals extending across the entire EBW.

#### Option #3

This procedure provides an alternative for determining the RMS output power using a broadband RF average power meter with a thermocouple detector if the EUT can be configured to transmit continuously or if the power meter can be triggered/signal-gated such that the power is measured only when the EUT is transmitting at its maximum power control level.

#### **Alternative**

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When the EUT cannot be configured to transmit continuously (*i.e.*, duty cycle < 98%), and video triggering/signal gating cannot be used to perform the measurement only during a time interval when the EUT is transmitting at its maximum power control level, then one of the procedures above can be used in free run mode to determine the average power inclusive of the on/off periods of the transmitter and then corrected by the duty cycle as follows:

- 1. Measure the duty cycle per the guidance provided in Section 5.0.
- 2. Add 10log (1/duty cycle) to the logarithmic representation of the maximum measured power level.
- 3. Note that when a power meter is used to perform this measurement then the integration period must exceed the repetition period of the transmitted signal by at least a factor of five.

## **Power Spectral Density**

A conducted power spectral density (PSD) limit of 8 dBm in any 3 kHz band segment within the DTS bandwidth is specified during any time interval of continuous transmission.4 By rule, the same method as used to determine the conducted output power shall be used to determine the power spectral density (*i.e.*, if maximum peak conducted output power was measured then the peak PSD procedure shall be used and if maximum conducted output power was measured then the average PSD procedure shall be used). If the average PSD is measured with a power averaging (RMS) detector or a sample detector, then the spectrum analyzer must be capable of utilizing a number of measurement points in each sweep that is greater than or equal to twice the span/RBW in order to ensure bin-to-bin spacing of ≤ RBW/2 so that narrowband signals are not lost between frequency bins.

One of the following procedures can be used to determine the DTS PSD as applicable.

#### Option #1

This procedure <u>must</u> be used if maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit, and is optional if the maximum (average) conducted output power was used to demonstrate compliance.

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS channel bandwidth.
- 3. Set the RBW  $\geq$  3 kHz.
- 4. Set the VBW  $\geq$  3 x RBW.
- 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.

#### Option #2

This procedure can be used when the maximum (average) conducted output power was used to demonstrate compliance to the fundamental output power limit. This is the baseline method for determining the maximum (average) conducted PSD level. If the analyzer has an RMS power averaging detector, it must be used; otherwise, use the sample detector. The EUT must be configured to transmit continuously (duty cycle ≥ 98%), or else video triggering/signal gating must be implemented to ensure that measurements are made when the EUT is transmitting at its maximum power control level.

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set span to at least 1.5 times the DTS channel bandwidth.
- 3. Set RBW ≥ 3 kHz.
- 4. Set VBW ≥3 x RBW.
- 5. Detector = power averaging (RMS) or sample detector (when RMS not available).
- 6. Ensure that the number of measurement points in the sweep  $\geq 2 \times \text{span/RBW}$ .

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- 7. Sweep time = auto couple.
- 8. Employ trace averaging (RMS) mode over a minimum of 100 traces.
- 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.

#### Option #3

This procedure can be used when the maximum (average) conducted output power was used to demonstrate compliance to the fundamental output power limit and the EUT can be configured to transmit continuously (duty cycle  $\geq$  98%), or video triggering/signal gating can be implemented to ensure that measurements are made when the EUT is transmitting at its maximum power control level. This procedure utilizes a single slow sweep to perform the measurement and may be advantageous for use in an automated test set-up.

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the analyzer span to at least 1.5 times the DTS channel bandwidth.
- 3. Set the RBW ≥ 3 kHz.
- 4. Set the VBW ≥ 3 x RBW.
- 5. Detector = power average (RMS).
- Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
- 7. Manually set the sweep time to:  $\geq$  10 x (number of measurement points in sweep) x (maximum data rate per stream).
- 8. Perform the measurement over a single sweep.
- 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.

#### Alternative 1

When the EUT cannot be configured to transmit continuously (*i.e.*, duty cycle < 98%), and video triggering/signal gating cannot be used to measure only when the EUT is transmitting at its maximum power control level, then one of the procedures described above can be used in free run mode to determine the average power inclusive of the on/off periods of the transmitter and the result corrected by the duty cycle as follows:

- 1. Measure the duty cycle per the guidance provided in Section 5.0.
- 2. Add 10log (1/duty cycle) to the logarithmic representation of the maximum measured power level.

# **Spurious Emissions**

15.247(d) and RSS 210 A8.5: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits is not required. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits specified.

#### **Reference Level Measurement**

Establish the reference level by using the peak PSD procedure to measure the PSD level in any 100 kHz bandwidth (*i.e.*, set RBW = 100 kHz and VBW ≥ 300 kHz) within the DTS channel bandwidth (the channel found to contain the maximum PSD level can be used to establish the reference level).

#### **Unwanted Emissions Level Measurement**



Measure the peak power in any 100 kHz bandwidth for all emissions outside of the authorized DTS frequency band as follows. This measurement must be performed over a frequency range that that spans from the lowest frequency generated in the device up to and including the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

- 1. Set start frequency to DTS channel edge frequency.
- 2. Set stop frequency so as to encompass the spectrum to be examined.
- 3. Set RBW = 100 kHz.
- 4. Set VBW ≥ 300 kHz.
- 5. Detector = peak.
- 6. Trace Mode = max hold.
- 7. Sweep = auto couple.
- 8. Allow the trace to stabilize (this may take some time, depending on the extent of the span).
- 9. Use peak marker function to determine maximum amplitude of all unwanted emissions within any 100 kHz bandwidth.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 10.1. Report the three highest emissions relative to the limit.

#### **Unwanted Emissions in Restricted Bands**

§15.247(d) specifies that emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a).

#### **Radiated Emissions Measurements**

Since the emission limits provided in **§15.209(a)** are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are defined in C63.10 shall be used.

#### **Antenna-Port Conducted Emission Measurements**

Antenna-port conducted measurements are acceptable as an alternative to radiated measurements for demonstrating compliance to the limits in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test (with antenna port(s) terminated) for cabinet/case emissions will also be required.

#### Relationship between Equivalent Isotropic Radiated Power (EIRP) and Electric Field Strength (E)

**15.209(a)** specifies radiated emissions limits for unwanted emissions in the restricted bands in terms of the maximum permissible electric field strength at a specified measurement distance. A correspondent EIRP level can be determined from the following relationship:

eirp = 
$$(e \times d)^2/30$$

where:

eirp = the equivalent isotropic radiated power in watts,

e = electric field strength in V/m,



d = measurement distance in meters.

Converting the above equation to the logarithmic equivalent yields:

EIRP = E + 20log(d) - 104.8

and rearranging terms yields:

E = EIRP - 20log(d) + 104.8

where:

EIRP = the equivalent isotropic radiated power in dBm,

 $E = electric field strength in dB\mu V/m$ ,

d = measurement distance in meters.

This relationship can be used to determine correspondent field strength levels from EIRP levels measured at the distances specified in §15.209(a).

Additionally, when a conducted test is performed in lieu of a radiated test, an additional factor must be added to the measured amplitude level to account for possible ground reflections. For emissions at frequencies less than or equal to 30 MHz, a maximum ground reflection factor of 6 dB shall be used and for emissions at frequencies greater than 30 MHz but less than or equal to 1000 MHz, a maximum ground reflection factor of 4.7 dB shall be used. For emissions on frequencies greater than 1000 MHz, no ground reflection factor is applied.

#### **Transmitter Antenna Gain Assumptions**

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna must be added to the measured output power (when working in logarithmic terms).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater.5 However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

For guidance on calculating the additional array gain term when determining the effective antenna gain for an EUT with multiple outputs occupying the same or overlapping frequency ranges (e.g., MIMO or beamforming antennas), see KDB Publication 662911.

#### **Radiated Spurious Emissions Measurement**

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Established procedures for performing radiated measurements shall be used (see C63.10). All detected emissions must comply with the applicable limits.

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#### **Band-Edge Measurements**

The measurement of unwanted emissions at the edge of the authorized frequency bands can be complicated by the capture of RF energy from the fundamental emission within the RBW passband. The following techniques are permitted for use in performing a measurement of the unwanted emission level at the band edges.

#### Marker-Delta Method

The marker-delta method, as described in KDB 913591 and in C63.10, can be used to perform measurements of the unwanted emissions level at the band-edges.

#### **Integrated Power Measurement**

A narrower resolution bandwidth can be used at the band edge to improve the measurement accuracy provided that the measurement is subsequently integrated to the relevant bandwidth specification (e.g., 100 kHz within non-restricted bands and 1 MHz within restricted frequency bands).

## **Measurement Uncertainty**

Determining compliance with the limits in these standards was based on the results of the measurement, and does not take into account the measurement instrumentation uncertainty.

Referencing the measurement instrumentation uncertainty considerations contained in CISPR 16-4-2, the expanded measurement uncertainty is ±4.90 dB for radiated emissions, ±3.46 dB for mains conducted emissions, and ±4.31 dB for telecommunication ports conducted emissions.

## **List of Test Equipment**

The following test equipment was used in the performance of the testing herein.

Table 7 – Test Equipment Used

Asset	Description	Manufacturer	Model	Serial	Cal. Date	Cal. Due
Tag	Description	Mariaraotaror	Model	Number	oui. Dute	Gui. Buc
992	Antenna, Horn	EMCO	3160-09	9705-1079	N/R	
1016	Preamplifier	Hewlett Packard	8449A	2749A00159	23-Jul-2012	23-Jul-2013
1025	Preamplifier, 25dB	Nemko USA	LNA25	399	27-Feb-2012	27-Feb-2013
1036	Spectrum Analyzer	Rohde & Schwartz	FSEK30	830844/006	23-Dec-2011	23-Dec-2013
1304	Antenna, Horn	Electro Metrics	RGA-60	6151	24-Nov-2010	24-Nov-2012
1468	Attenuator, 10 dB	MCL Inc.	BW-S10W2 10db-2WDC		N/R	
1469	Attenuator, 10 dB	MCL Inc.	BW-S10W2 10db-2WDC		N/R	
1470	Attenuator, 10 dB	MCL Inc.	BW-S10W2 10db-2WDC		N/R	
1659	Spectrum Analyzer	Rohde & Schwartz	FSP	973353	17-Oct-2012	17-Oct-2014

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Asset Tag	Description	Description Manufacturer Model		Serial Number	Cal. Date	Cal. Due
1763	Antenna, Bilog	Schaffner	CBL 6111D	22926	21-Feb-2012	21-Feb-2013
1767	Receiver, EMI Test	Rohde & Schwartz	ESIB26	837491/0002	09-Dec-2011	09-Dec-2012
1783	Cable Assembly	Nemko	3m Chamber		26-Sep-2012	26-Sep-2013
1482	High Pass Filter	K&L Microwave	11SH10-4000/ T12000-0	2	N/R	

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**Test Results – Antenna Requirement** 

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T 11 N 4				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Table No. 1		Antenna requirement		Verdict
				P
	a connection:			connector
Type of unique	connector:	A U.FL test connector is on the PWB and disconnected when a test probe is inserte		antenna is
Method of pern	nanent connection:	The antenna is soldered to the PWB.		
Antenna gain		4.75 dBi		
Supplemental	Information:	CONFIDENTIAL		
		CONFIDENTIAL		
	'			
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			Wand Cll	
Tested by (+ signal	gnature)	: David Light	700	

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**Test Results - Conducted Emissions - Mains** 

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Table No. 2			Cond	ucted Emiss	sions - Main	ıs			Verdict P
Frequency Rai	ngo	· 150 k	.Hz to 20 MH:	7	Test Location	on: 1	ah 3		Г
	•			<u> </u>	Test Localit	JII	Lau 3		
Test Method: ANSI C63.10									
EUT Configuration Transmit full power, channel 6									
Power Input								e A	
Test Date: 8-Oct-12									
Temperature		: 24.5°	C		Relative Hu	ımidity:	33.3 %		
Test Equipmer	nt Asset Ta	ag List: 674,1	1663,1924,70	4,1922,1258					
100.0 —							-,		٦
90.0 +	<ul><li>Scan</li><li>Measure</li><li>EN55022</li></ul>	d Pks	!	LINE1			! -!		
80.0	EN55022	Z B QP Z B AVG					   		
Ī									
70.0							-    		1
<u>e</u> 60.0 €					<del></del>		<u>'</u> 		<del>-</del>
월 50.0 +	-,- - -		ع تعدان - براه - در			la	1		-
Amplitude (dBuv)	-   40-4,44,44,44	╙┧╁╽╇╁┸		والأرباء المترافية والمار					
<b>⋖</b> 30.0	ולווי, יוד "עליפּר	ulla i i i i i i a <b>ndikat</b> i i i i i i i i i i	, Tarin Tarini and Tarini T.	 հինվու ահեկերում ակ		The state of the s	All the state of t		ì
20.0 +							-	<sup>————</sup>	7
10.0 +							! !		1
0				,			 		
150.0K	AM, Monday,	October 08,2012	1.0M	Frequency (M	Hz)	10	).oM	3	M0.0
	(1)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
				Quasi	-Peak	Aver	age		
		QP	AVE						
	quency	evel	Level	Limit	Margin	Limit	Margin	Pass	
•	/Hz)	(dBuV)	(dBµV)	(dBµV)	(dB)	(dBµV)	(dB)	Fail	
	1597 1680	51.8 50.6	41.0	65.7 65.5	14.0	55.7 55.5	14.8 15.4	Pass	
	1794	50.6 49.1	40.1 39.3	65.5 65.2	14.9 16.0	55.2	15.4	Pass Pass	
	2020	47.4	35.0	64.5	17.1	54.5	19.5	Pass	
	3516	31.0	15.8	56.0	25.1	46.0	30.2	Pass	
Cumplemental	Informati	loni	(5) = (3) + (4)	(7) = (6) - (5)	(9) = (8) ·	<del>– (5)</del>			
Supplemental	informati	ion:							
							700		
						//	111		
						( lau	I Ele		
Tested by (+ si	ignature)	······································		David Ligh	nt	NV WA			

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Table No. 3 Conducted Emissions – Mains									Verdict
			Condi	ucteu Elliis	SIONS – IVIAN	1115			Р
Frequency Range       150 kHz to 30 MHz       Test Location       :Lab 5         Test Method       ANSI C63.10         EUT Configuration       Transmit full power, channel 6         Power Input       120VAC, 60 Hz       1φ       3φ       Line Tested .: Neutral         Test Date       8-Oct-12         Temperature       24.5°C       Relative Humidity :33.3 %         Test Equipment Asset Tag List : 674,1663,1924,704,1922,1258									
Test Equipment Asset Tag List: 674,1663,1924,704,1922,1258  100.0									
0 <sup>1</sup> 150 09:1	t ∪.0K 1:21 AM, Monday, Oc	tober 08,2012	1.0 M	Frequency (M	MHz)		10.0M	+	30.0M
				Quasi	-Peak	Ave	rage		
	Frequency (MHz)	QP Level (dBuV)	AVE Level (dBµV)	Limit (dBµV)	Margin (dB)	Limit (dBµV)	Margin (dB)	Pass/ Fail	
	0.1516	52.3	35.3	66.0	13.6	56.0	20.6	Pass	
	0.1607	51.3	38.6	65.7	14.4	55.7 55.4	17.1	Pass	4
	0.1716 0.2043	50.0 46.3	34.3 31.7	65.4 64.4	15.4 18.1	55.4 54.4	21.1 22.7	Pass Pass	4
	4.2835	51.1	44.4	56.0	4.9	46.0	1.6	Pass	+
	4.3048	51.6	44.8	56.0	4.4	46.0	1.2	Pass	1
	4.3248	51.6	44.8	56.0	4.4	46.0	1.2	Pass	_
	4.3578	51.4	44.9	56.0	4.6	46.0	1.1	Pass	]
	4.4267	50.7	43.9	56.0	5.3	46.0	2.1	Pass	4
	4.4322	50.6	43.7	56.0	5.4	46.0	2.3	Pass	_
			(5) = (3) + (4)	(7) = (6) - (6)	5) (9) = (8)	) – (5)			
Supplem	ental Information	on:							

**David Light** 

Nemko USA, Inc. 802 N. Kealy Ave. Lewisville, TX USA Tel: +1 972-436-9600 Fax: +1 972-436-9600

Tested by (+ signature) .....

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**Test Results – Radiated Emissions – Restricted Bands** 



Table No. 4

Radiated Emissions – Restricted Bands – Lowest Channel

P

Frequency Range .....: 30 MHz to 1 GHz Test Location .....: 3m Chamber

Test Method.....: 558074 D01 DTS Measurement Guidance v02

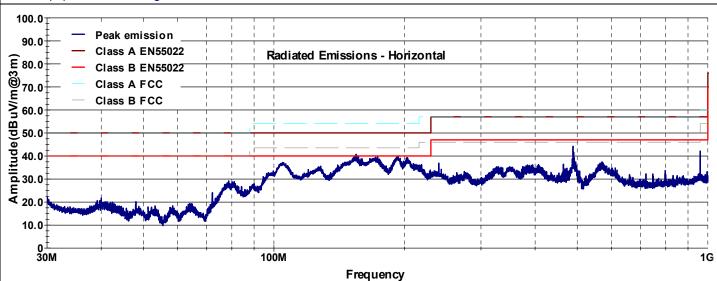
Test Distance .....: 3m

EUT Configuration .....: Transmit full power at 2412 MHz

Test Date .....: 15-Oct-12

Temperature .....: 24.2°C Relative Humidity ....: 42.6 %

Test Equipment Asset Tag List : 1767, 1783, 1016, 1766, 1304



(4)	(0)	(0)	( a )	(=)	(0)	(=\	(0)	(0)	(4.0)	(4.4)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
						Site				
Antenna			Turntable	Antenna	Receiver	Correction	Emission			
Polarity		Frequency	Azimuth	Height	Reading	Factor	Level	Limit	Margin	Pass/
(H/V)	Detector	(MHz)	(deg)	(m)	(dBµV/m)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)	Fail
Н	QPK	155.0830	244	243	50.0	-14.7	35.3	40.0	4.7	Pass
Н	QPK	488.7170	280	283	37.5	-7.1	30.5	47.0	16.5	Pass
Н	QPK	569.4600	143	119	33.3	-5.3	28.1	47.0	18.9	Pass
Н	QPK	959.9580	107	83	24.3	1.2	25.4	47.0	21.6	Pass

 $(6) = (4) + (5) \qquad (8) = (7) - (6)$ 

**Supplemental Information:** 

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Table No. 5

Radiated Emissions – Restricted Bands – Lowest Channel

P

Frequency Range .....: 30 MHz to 1 GHz Test Location .....: 3m Chamber

Test Method.....: 558074 D01 DTS Measurement Guidance v02

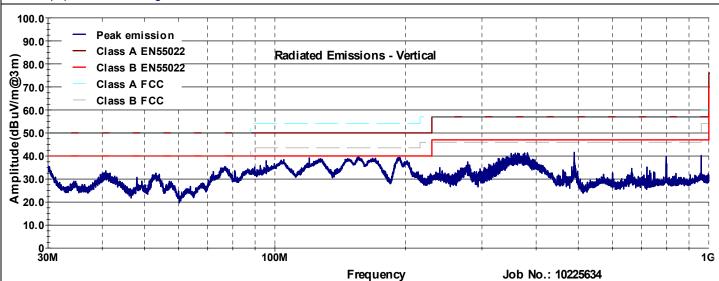
Test Distance .....: 3m

EUT Configuration .....: Transmit full power at 2412 MHz

Test Date .....: 15-Oct-12

Temperature .....: 24.2°C Relative Humidity ....: 42.6 %

Test Equipment Asset Tag List : 1767, 1783, 1016, 1766, 1304



(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Antenna Polarity		Frequency	Turntable Azimuth	Antenna Height	Receiver Reading	Site Correction Factor	Emission Level	Limit	Margin	Pass/
(H/V)	Detector	(MHz)	(deg)	(m)	(dBµV/m)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)	Fail
V	QPK	53.1519	95	106	51.0	-19.8	31.2	40.0	8.8	Pass
V	QPK	155.6170	57	109	50.9	-14.8	36.2	40.0	3.8	Pass
V	QPK	193.0320	-1	111	52.1	-16.0	36.1	40.0	3.9	Pass
V	QPK	277.8540	143	123	43.0	-12.4	30.6	47.0	16.4	Pass
V	QPK	381.9090	139	129	48.3	-9.3	39.0	47.0	8.0	Pass
V	QPK	490.2370	278	107	41.7	-7.0	34.7	47.0	12.3	Pass
V	QPK	797.6400	110	108	37.9	-1.8	36.1	47.0	10.9	Pass

(6) = (4) + (5) (8) = (7) - (6)

**Supplemental Information:** 

Tested by (+ signature) ...... David Light

Danel Ell

Revision: 0 Issue Date: 26-Oct-12



Table No. 6

Radiated Emissions – Restricted Bands – Lowest Channel

P

Frequency Range .....: 1 GHz to 18 GHz Test Location .....: 3m Chamber

Test Method.....: 558074 D01 DTS Measurement Guidance v02

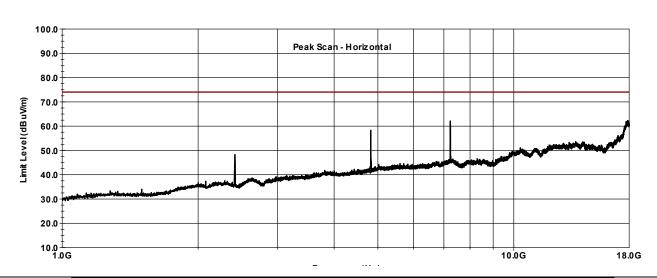
Test Distance .....: 3m

EUT Configuration .....: Transmit full power at 2412 MHz

Test Date .....: 15-Oct-12

Temperature .....: 24.2°C Relative Humidity ....: 42.6 %

Test Equipment Asset Tag List : 1767, 1783, 1016, 1766, 1304



(1)	(2)	(3)	(4)	(5) Site	(6)	(7)	(8)	(9)
Antenna Polarity (H/V)	Detector	Frequency (MHz)	Receiver Reading (dBµV/m)	Correction Factor (dB/m)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pass/ Fail
Н	Average	4,824.0200	42.0	11	52.9	54.0	1.1	Pass
Н	Average	7,235.9900	36.9	16	53.4	54.0	0.6	Pass
Н	Average	9,648.0200	28.0	17	45.1	54.0	8.9	Pass
Н	Average	12,060.0000	28.0	21	49.2	54.0	4.8	Pass
Н	Average	14,472.0000	26.0	24	50.0	54.0	4.0	Pass
Н	Average	16,884.0000	20.0	27	46.9	54.0	7.1	Pass
Н	Average	4,824.0300	40.4	10.9	51.3	54.0	2.7	Pass
V	Average	7,235.3900	38.9	16.5	52.4	54.0	1.6	Pass
V	Average	9,648.2200	34.2	17.1	51.3	54.0	2.7	Pass
V	Average	12,059.5000	34.6	21.1	45.7	54.0	8.3	Pass
V	Average	14,471.7000	32.6	24.0	46.5	54.0	7.5	Pass
V	Average	16,884.0000	31.4	26.9	48.3	54.0	5.7	Pass

(6) = (4) + (5) (8) = (7) - (6)

## **Supplemental Information:**

Tested by (+ signature) ....... David Light

Danel Ele

Revision: 0 Issue Date: 26-Oct-12



Table No. 7 Verdict Radiated Emissions - Restricted Bands - Mid Channel Р

Frequency Range .....: 1 GHz to 18 GHz Test Location .....: 3m Chamber

Test Method.....: 558074 D01 DTS Measurement Guidance v02

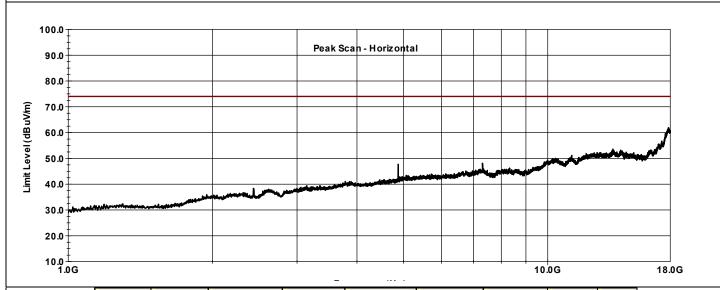
Test Distance .....: 3m

EUT Configuration .....: Transmit full power at 2437 MHz

Test Date .....: 15-Oct-12

Temperature .....: 24.2°C Relative Humidity ....: 42.6 %

Test Equipment Asset Tag List : 1767, 1783, 1016, 1766, 1304



(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				Site				
Antenna			Receiver	Correction	Emission			
Polarity		Frequency	Reading	Factor	Level	Limit	Margin	Pass/
(H/V)	Detector	(MHz)	(dBµV/m)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)	Fail
Н	Average	4,874.0000	36.6	11	47.8	54.0	6.2	Pass
Н	Average	7,310.0900	34.8	16	51.3	54.0	2.7	Pass
Н	Average	9,748.0800	34.3	18	51.9	54.0	2.1	Pass
Н	Average	12,184.3000	23.9	22	45.5	54.0	8.5	Pass
Н	Average	14,622.6000	22.6	24	46.3	54.0	7.7	Pass
Н	Average	17,058.3000	21.7	28	49.5	54.0	4.5	Pass
V	Average	4,874.0000	36.6	11.2	52.4	54.0	1.6	Pass
V	Average	7,311.0000	34.1	16.5	50.6	54.0	3.4	Pass
V	Average	9,748.0000	34.4	17.6	45.7	54.0	8.3	Pass
V	Average	12,185.0000	33.9	21.6	46.5	54.0	7.5	Pass
V	Average	14,622.0000	32.4	23.7	48.3	54.0	5.7	Pass
V	Average	17,059.0000	31.8	27.8	48.3	54.0	5.7	Pass

(6) = (4) + (5)(8) = (7) - (6)

## **Supplemental Information:**

Revision: 0 Issue Date: 26-Oct-12



Table No. 8

Radiated Emissions – Restricted Bands – Highest Channel

P

Frequency Range .....: 1 GHz to 18 GHz Test Location .....: 3m Chamber

Test Method.....: 558074 D01 DTS Measurement Guidance v02

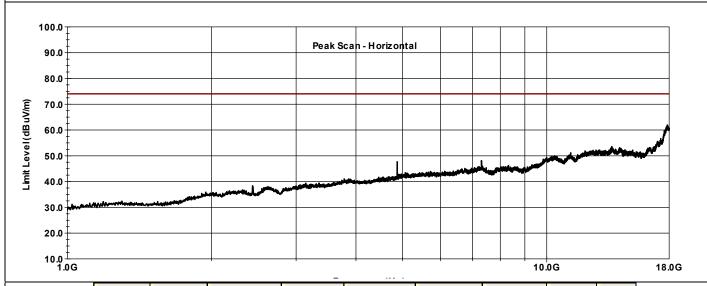
Test Distance .....: 3m

EUT Configuration .....: Transmit full power at 2462 MHz

Test Date .....: 15-Oct-12

Temperature .....: 24.2°C Relative Humidity ....: 42.6 %

Test Equipment Asset Tag List : 1767, 1783, 1016, 1766, 1304



(	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
					Site				
Ante	enna			Receiver	Correction	Emission			
Pol	arity		Frequency	Reading	Factor	Level	Limit	Margin	Pass/
(H	I/V)	Detector	(MHz)	(dBµV/m)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)	Fail
	Τ	Average	2,483.4800	36.3	3	39.7	54.0	14.3	Pass
	Τ	Average	4,924.0300	36.6	11	48.1	54.0	5.9	Pass
	Τ	Average	7,385.9100	33.8	16	50.0	54.0	4.0	Pass
	Τ	Average	9,848.0400	34.2	18	52.1	54.0	1.9	Pass
	Τ	Average	12,310.3000	24.0	22	45.8	54.0	8.2	Pass
	Τ	Average	14,771.4000	21.3	24	44.9	54.0	9.1	Pass
	Н	Average	17,233.4000	32.1	27.8	52.4	54.0	1.6	Pass
	V	Average	4,924.0100	38.4	11.5	49.8	54.0	4.2	Pass
	V	Average	7,386.0000	37.9	16.2	45.7	54.0	8.3	Pass
	V	Average	9,848.0000	35.5	17.9	46.5	54.0	7.5	Pass
	V	Average	12,310.0000	24.0	21.8	48.3	54.0	5.7	Pass
	V	Average	14,772.0000	21.5	23.6	48.3	54.0	5.7	Pass

(6) = (4) + (5) (8) = (7) - (6)

#### **Supplemental Information:**

Tested by (+ signature) ...... David Light

Danel Ele

Revision: 0 Issue Date: 26-Oct-12



Table No. 9

Radiated Emissions – Restricted Bands

Verdict
P

Frequency Range .....: 18 GHz to 25 GHz Test Location .....: 3m Chamber

Test Method.....: 558074 D01 DTS Measurement Guidance v02

Test Distance .....: 3m

EUT Configuration .....: Transmit full power channel 6

Test Date .....: 26-Oct-12

Temperature .....: 22.9°C Relative Humidity ....: 50.2 %

Test Equipment Asset Tag List : 1036, 983, 992



#### **Supplemental Information:**

There were not emissions detected within 20 dB of the specification limit.

Tested by (+ signature) ...... David Light

Nemko USA, Inc. 802 N. Kealy Ave. Lewisville, TX USA Tel: +1 972-436-9600 Fax: +1 972-436-9600

Danel Ell

Revision: 0 Issue Date: 26-Oct-12



# 6 dB Occupied Bandwidth



Table No. 10				6 (	dB Occup	ied Band	dwidth				Verdict		
To at Mathe and			. 550074					<u> </u>			Р		
Test Method 6 dB BW					Measure	ment Gui	dance vu	2					
EUT Configura					han 1								
Power Input						□ 3φ							
Test Date					Δ ΙΨ	οφ							
Temperature				-		Rela	tive Humi	dity:	12.2 %				
•		Asset Tag List: 1654, 1468. 1469, 1470, 1471											
(R)	Marker 1 [T1] RBW 100 kHz RF Att 10 dB												
Re	f Lvl												
	0.7 d	.7 dBm 2.41660165 GHz SWT 10 ms Unit dBm											
20.7	30.7	30.7 dB Offset											
			 						2.41660	165 GI			
10					.14	. 14.	Δ1	<del>[T1]</del>	2	.01 di	B		
				1	MMM	Mily	, 1		-8.58459	319 MI	Hz		
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-10							<del>  \/\</del>				IN1		
	VIEW			/ V			\ \				1MA		
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-40	/\/		V					***	W W	My 14 111 .			
W	V	V								Juny	un		
-50													
			<u> </u>										
-60													
-70													
-79.3 Ce	enter	2.412 G	Hz		3.8592	2 MHz/			Span 38.	592 MI	Hz		
Date:	9	0.OCT.20	12 10:	47:13									
Supplemental	Inform	ation:											
									11	7			
								(/h.	1/1/	1			
Tested by (+ sig	anature	e)	:		David	Light		x w	00	Port			



Table No. 11	6 dB Occupied Bandwidth											
								Р				
		558074 D01 DTS	Measurem	ent Gui	dance v02							
	:	8.55 MHZ 802.11b mode, Ch	on 2									
				٦ 3 ٨								
Power Input: 120VAC, 60 Hz												
				Rela	tive Humidi	ity:50.2 %	1					
•	erature: 22.9°C Relative Humidity:50.2 % quipment Asset Tag List : 1036, 1468. 1469, 1470, 1471											
<u> </u>	Test Equipment Asset Tay List . 1000, 1700. 1700, 1770, 1771											
( )	Marker 1 [T1] RBW 100 kHz RF Att 10 dB											
***	Ref Lvl         -2.59 dBm         VBW         300 kHz         Mixer         -20 dBm           20.7 dBm         2.42654108 GHz         SWT         500 ms         Unit         dBm											
20.	.7 30.7 dB Offset											
	38.1 45 3116				*1 [[1		108 GHz LN					
1					<u> </u>		.12 dB					
			1. JUM N	الملالا		-8.55310	621 MHZ					
			1	The same	,							
-1		M	Y	Y	1							
•	1MAX 1MA											
-2	0	<b> </b>			<u> </u>							
		/			1							
-3	0	<del>                                     </del>			<del>- \</del>							
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-4	and when the state of the state					March	amend					
-5						•						
-E	0											
- 7	·'O											
-79.	3											
13.	Center 2.422	GHz	4.4 MH	lz/		Spar	44 MHz					
Dati	e: 26.OCT.	2012 11:09:35										
Supplemental Information:												
$\cap$ $\cap$ $\cap$												
Wand Ele												
Tested by (+ sig	anature)	Tested by (+ signature)										



Table No. 12				6 (	dB Occup	ied Band	dwidth				Verdict	
											Р	
Test Method					Measure	ment Gui	idance v0	2				
6 dB BW					han 6							
EUT Configura Power Input						□ 2+						
					Δ Ιψ	∃						
	t Date: 9-Oct-12 sperature: 23.4°C Relative Humidity:42.2 %											
•	est Equipment Asset Tag List: 1654, 1468. 1469, 1470, 1471											
Ŕ	Marker 1 [T1] RBW 100 kHz RF Att 10 dB											
Re	Ref Lvl 0.95 dBm VBW 300 kHz Mixer -20 dBm											
	20.7 d	0.7 dBm										
20.7	30.7	dB Offs	et				<b>v</b> <sub>1</sub>	[T1]	(	0.95 dBm	2	
									2.44106		A In	
10—							Δ1	<del>[T1]</del>		3.86 dB		
				1	Mh	Milly.	<u>1</u>		8.03653	3451 MHz		
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					l		٦					
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1	VIEW	EW										
-20				<b></b>			$\overline{}$					
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		Mark	/\/\/\					LA				
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-50	•									• •		
6.0												
-60												
-70												
-79.3												
	enter	2.437 G	Hz		3.859	2 MHz/		:	Span 38.	.592 MHz		
Date:	ç	9.OCT.20	12 10:	50:40								
Supplemental	Inform	ation:										
								1	11	7		
								(1 h.	ul a			
Tested by (+ sig	anature	·)			David	Light		x w				



Table No. 13		6 dB Occupied Bandwidth									
		558074 D01 DTS Measurement 8.11MHz	Guidance v02	Р							
		802.11b mode, Chan. 9									
•		120VAC, 60 Hz ⊠ 1¢ □ 3	ф								
Test Date	:	26-Oct-12									
Temperature	:	22.9°C F	Relative Humidity: 50.2 %								
Test Equipment	Asset Tag List:	1036, 1468. 1469, 1470, 1471									
20.	7	-2.52 dBm VE 2.45610020 GHz Sk	8m VBW 300 kHz Mixer –20 dBm Hz SWT 500 ms Unit dBm								
	30.7 dB Off	set	▼1 [T1] -2.52 dBm A 2.45610020 GHz IN								
:	.0		2.45610020 GHZ LN								
			-8.11222445 MHz								
	0	The state of the s	<del>u/.                                      </del>								
		M** V	<b>W</b>								
<b>-</b> :	1MAX		1MA								
,											
-2	20		<u> </u>								
-3	30		<u> </u>								
- 4	10	11.4 AM	MA MA								
	10 mynumpuh		an half and wounder								
-5	50		+ + + + + + + + + + + + + + + + + + + +								
-6	60										
-	, U										
-79.	3										
Center 2.452 GHz 4.4 MHz/ Span 44 MHz  Date: 26.0CT.2012 11:12:01											
Supplemental Information:											
			Would Ell								
Tested by (+ sid	nature)	: David Light	Willet Col								



Table No. 14		6 dB Occupied Bandwidth										
			- 00	D Occup	ned Band	wiatii				Р		
				Measure	ment Gui	dance v0	)2					
	ation				_							
		: 120VAC, 60 Hz										
			2									
						itive Hum	idity	: 42.2 %				
Test Equipmen	nt Asset Tag List			9, 1470, 1 <sub>0</sub>	471							
<u> </u>	6 - 7	Marker		0.0 7-	RBW	100 }		RF Att	10 dB			
•	ef Lvl 20.7 dBm	2	-0. .466137	90 dBm	VBW SWT	300 k		Mixer Unit	-20 dBm dBm			
20.7			.400137	OZ GIIZ	SWI	10 1	115	JIII C	CIBIII			
	30.7 dB Off	set				$\blacktriangledown_1$	[T1]	- 0		A		
1.0						7	[ m 1 ]	2.46613	3762 GHz I	LN .		
10				. 4	1.	$\Delta_{\perp}$	[11]	_7 73386	774 MHz			
				1 muly	Muly.	1		7.73360	)//4 MHZ			
0			.N		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Va.						
			ľ	l		1						
-10	VIEW		7/			<u> </u>				IN1 LMA		
	VIEW		<i>,</i> / \			VY				LMA		
-20			<u> </u>			\						
			/				4					
-30		111 100 1					1					
	Muly						514	44.1				
-40	W 909	Au I					0					
l	~ <sup>/</sup>						(		$M_{\rm M}$			
-50	V	V						·	a Ma			
_30												
-60												
-70												
-79.3L	enter 2.462	CH <sub>7</sub>		3 859	2 MHz/			Span 38.	592 MHz			
			-0 1 -	3.032	Z M11Z/			Span 30.	JJZ MIIZ			
Date:	9.OCT.2	2012 10:	52:17									
Supplemental	Information:											
							/	1 11/	7			
							(//	nel Cl				
Tested by (+ signal	gnature)	·····		David	Light		NO W					



Table No. 15			6 45	2 Occup	ied Pand	hwidth				Verdict
					ied Band					Р
				Measure	ment Gui	dance v0	2			
	ition			an 1						
					∃					
				Δ 'Ψ	<b>0</b> φ					
					Rela	tive Humi	dity:	42.2 %		
Test Equipmen	nt Asset Tag List	: 1654, 14	68. 1469,	1470, 14	171					
		Marker	1 [T1]		RBW	200 k	Hz R	F Att	10 dB	
<b>₩</b> R∈	ef Lvl		-4.9	6 dBm	VBW	300 k	Hz M	ixer	-20 dBm	
20.7	20.7 dBm	2	.4202365	7 GHz	SWT	5 m	s U	nit	dBm	
20.7	30.7 dB Offs	et				<b>v</b> <sub>1</sub>	[T1]	- 4	.96 dBm	A
10						. 4		2.42023	657 GHz	LN
10						$\Delta_{\perp}$	-1 -1	-0 16.16378	357 MHz	
0—				la L	-All 5: 4.	.				
		1	Morrian -		when	Maryan	1 <b>Y</b>			
-10		/					1			IN1
1	VIEW								:	1MA
-20							<del>- \</del>			
							W.			
-30	halls replansifican	And the second					*1	WALLAND IN A	Whally	
u	Lulla Marketin							Mr. M	What	
-40	1000 000									
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00										
-70										
-79.3										
	enter 2.412 G			3.8592	2 MHz/		S	Span 38.	592 MHz	
Date:	9.OCT.20	10:5	54:44							
Supplemental	Information:									
							1	11/	7	
l							Wan	Il le	1	
Tested by (+ si	gnature)	:		David	Light		7.4.15	1		



Table No. 16									
'			6 dB Occup	oled Ban	awiatn				Р
	:		TS Measure	ement Gu	iidance	v02			
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•	tion:	_							
	······································		z 🗵 1¢	□ 3φ					
				Pal	ativa Hu	ımidity	: 50.2	0/	
•	t Asset Tag List:		.69 1 <u>47</u> 0 1		alive i ic	innuity	50.2	%	
rest Equipmen	t Asset lag List .	1000, 1400. 14	1470, 1						
<u> (§</u>	Ref Lvl	Marker 1 [T	1] -6.12 dBm	RBW VBW	200 k 300 k		KF Att 1ixer	10 dB -20 dBm	
	20.7 dBm		06814 GHz	SWT	500 m		Jn i t	dBm	
20	0.7 30.7 dB Of	fset			<b>▼</b> 1	[T1]	-6	.12 dBm	
							2.43006	814 GHz LN	
	10				Δ1	<del>[T1]</del> _	<del>-8</del> 15.87174	. <del>23 dB</del> 349 MHz	
							10.01111	013 1112	
		1,00	wholester	mymy	muhn1				
	-10								
	1MAX					4		1 MA	ı
	-20	+ /-				٧.			
						W <sub>V</sub>			
	-30	www				M	IN NAVADAL	۸.	
	-40 www.M. M. William	~					4010	Mila	
	MCMAN							WY	
	-50								
	-60								
	-70								
-79	9.3								
	Center 2.422		4.4	MHz/			Span	44 MHz	
Da	te: 26.0C	Г.2012 11:14:	52						
Supplemental	Information:								
							1	1 1	
							land	411	
Tested by (+ sig	gnature)	:	David	Light		X	/www	LY.	



Table No. 17			C 4D	000000	ad Dand	ما 4 ام				Verdict
			6 aB	Occupi	ed Band	IWIGTN				Р
				easuren	nent Gui	dance v0	2			
	#			. 0						
	ition									
				<u>d</u> 10	_ 3 <sub>ϕ</sub>					
					Rela	tive Humi	dity :	12 2 %		
•	nt Asset Tag List		68. 1469. 1	470. 14		avo mann	arty	72.2 /0		
.oot _qa.po				-,						
S P.	ef Lvl	Marker 1	1 [T1] -4.62	dDm	RBW VBW	200 k 300 k		F Att ixer	10 dB -20 dBm	
•	20.7 dBm	2.	-4.62 44521696.		SWT	500 K		nit	-20 dBill	
20.7	30.7 dB Offs	et				<b>v</b> <sub>1</sub>	[T1]		(0 dp.	
						, Т	[11]	2.44521		A M
10						Δ1	<del>[11]</del>	-(	.82 dB	
								6.29885	371 MHz	
0		1	when w	the bound	Maky	where !	1			
		f I	Mariana	V			Y			
-10	VIEW						1			IN1 1MA
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-40	has challenger and the								Mulm	
1000									\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
-50										
-60										
-70										
-79.3										
	enter 2.437 G			3.8592	MHz/		٤	Span 38.	592 MHz	
Date:	9.OCT.20	10:5	66:35							
Supplemental	Information:									
							1	11	7	
İ							(1/n.	16		
Tested by (+ si	gnature)	:		David I	_ight		KV WA	-,		



Table No. 18			Verdict									
Table No. 10		6 dB Occupied Bandwidth	P									
Test Method		558074 D01 DTS Measurement Guidance v02	II.									
6 dB BW		16.0 MHz										
EUT Configuration	ion:	802.11g mode, Chan. 9										
Power Input	:	120VAC, 60 Hz										
Test Date	: 26-Oct-12											
	:											
Test Equipmen	: Asset Tag List :	1036, 1468. 1469, 1470, 1471										
	Marker 1 [T1]  RBW 200 kHz RF Att 10 dB  Ref Lvl											
		1 Monto Market Mary agrand 1										
<b>-</b> :	1MAX	1MA										
-2	on											
<b>-</b> 3	30											
	O MARINE MARINE	me comment of the contract of										
- 2	-0 www.	The state of the s										
<b>-</b> 5	50											
-6	60											
-7	'O											
<b>-</b> 79.	3											
-13.	Center 2.452	GHz 4.4 MHz/ Span 44 MHz										
Dat	e: 26.OCT	.2012 11:16:59										
Supplemental	Information:											
Supplemental	imormadon.											
		$\cap$ $\cap$										
		( ) and Ell										
Tested by (+ sig	gnature)	: David Light										



Table No. 19		6 dB Occupied Bandwidth									
									Р		
		: 558074 D01 DT	S Measurem	ent Gui	dance v02	2					
		: 802.11g mode,									
Power Input		: 120VAC, 60 Hz		] 3φ							
					tive Humi	dity:	42.2 %				
Test Equipmen	t Asset Tag List	: 1654, 1468. 146	89, 1470, 147	1							
(i)		Marker 1 [T1]		RBW	200 kI	Hz RI	7 Att	10 dB			
•	ef Lvl		.56 dBm	VBW	300 kI		ixer	-20 dBm			
	20.7 dBm	2.47023	8657 GHz	SWT	5 ms	s Ui	nit	dBm			
20.7	30.7 dB Offs	et			$\mathbf{v}_1$	[T1]	- 4	.56 dBm			
							2.47023		A IN		
10—					Δ1	<del>[T1]</del>	-(	<del>.55 dB</del>			
						-1	6.31846	092 MHz			
0—				NWL III .		1					
		1 Www.	MANAGERIA MA	100	une has when	<b>▼</b>					
-10		Γ	V					,	IN1		
	VIEW							1	LMA		
		<b>!</b>									
-20		LA CAR				4					
						Whi					
-30	1	And a second					<del>U</del> mal	L.			
	white white the						while .	Mount			
-40 <mark>4</mark>	Mica and						-	MANNA			
-50											
5.0											
-60											
-70											
-79.3	2 462 0		2.0500	N/II - /			1 20	500 MH-			
Ce	enter 2.462 G	iHZ	3.8592	MHZ/		5	span 38.	592 MHz			
Date:	9.OCT.20	012 10:57:38									
Supplemental	Information:										
						1	11	7			
						1/2	11/11	1			
Tested by (+ sig	anature)		David Li	iaht		Wall	4 CG				



Table No. 20			dB Occup	ied Rand	lwidth				Verdict				
		6 dB Occupied Bandwidth : 558074 D01 DTS Measurement Guidance v02											
			TS Measure	ment Gui	dance v02	2							
	:												
•	tion:												
	:		i	□ 3φ									
	:												
•	:				tive Humi	dity:	42.2 %						
Test Equipmen	t Asset Tag List:	: 1654, 1468. 14	69, 1470, 14	171									
Ê		Marker 1 [T1	]	RBW	100 ki	Hz Rl	F Att	10 dB					
•	ef Lvl		9.87 dBm	VBW	300 ki		ixer	-20 dBm					
20.7 <u>—</u>	20.7 dBm	2.4209	3262 GHz	SWT	10 ms	s Ui	nit	dBm					
20.7	30.7 dB Offse	et			<b>v</b> <sub>1</sub>	[T1]	_9	.87 dBm	A				
							2.42093		LN				
10					Δ1	[T1]	(	1.81 dB					
						-1	7.71055	711 MHz					
0													
		1	wholephy	murh	اميدامام الما	da							
-10		MINIMA	W		- The Almon	WI			IN1				
1	VIEW							1	LMA				
2.0		]				4							
-20		.)				4							
		<i>,</i>				Ц							
-30		M				<del>\</del>	<b>.</b> .						
	المالمريها	<b>Y</b>					Mulmh	h.d					
-40	myrullum hyrullum						1 00	huhanday					
	T .												
-50													
6.0													
-60													
-70													
-79.3L	enter 2.412 GF		3.8592	) MII - /			30	.592 MHz					
	encer 2.412 Gr		3.0392	Z MHZ/			span so.	.592 MHZ					
Date:	9.OCT.20	11:05:38											
Supplemental	Information:												
						1	11	7					
						(1 h	14						
Tested by (+ sig	anature)		David	Light		Wille	a u						



Table No. 21	6 dB Occupied Bandwidth													
				0 u	ь Оссир	ieu Daiii	uwiuii			Р				
Test Method		: 5	58074 D	01 DTS	Measure	ment Gu	idance v02							
6 dB BW		: 1	7.2 MHz											
EUT Configura	tion	: 8	02.11n n	node, Cł	nan. 3									
Power Input		: 1	20VAC,	60 Hz		□ 3φ								
Test Date		: 2	6-Oct-12	2										
Temperature .	: 22.9°C Relative Humidity: 50.2 %													
Test Equipmen	Asset Tag List: 1036, 1468. 1469, 1470, 1471													
	$\lambda$		Marker	1 [T1]		RBW	200 kHz	RF Att	10 dB					
V	Ref Lvl -7.73 dBm VBW 300 kHz Mixer -20 dBm													
21	20.7 dBm 2.43068537 GHz SWT 500 ms Unit dBm													
	30.7	dB Offs	<b>e</b> t				<b>▼</b> 1 [⊤1		7.73 dBm					
	10						. 4 - 5 - 7 - 4	2.4306	0 00 40	l				
							VI LII	-17.1943	I I					
	0													
				1 4 4 6 4	many	while	Mark of 1							
	-10			Kmyng										
	1MAX													
	-20		/											
			/ /					\						
	-30		<u> </u>					MI 11 11 11						
	-40 <b>-40</b>	II. II Alam	M						May May Marin					
	-40 4 MAN	MMM.n.						•	White I was					
									-					
	-50													
	-60													
	-70													
_														
- 75	9.3 <b>L</b> Center	2.422 G	Hz		4.4	1Hz/	l	Spa	n 44 MHz					
Da	Date: 26.0CT.2012 11:19:03													
	tal Information:													
Cappiomontai														
Tooled by (1 signature) David Light														
								( Jouel	Ell					
Tested by (+ sig	gnature)		:		David	Light		No was						



Table No. 22				6 (	dB Occup	ied Band	dwidth				Verdict P
Test Method			558074	DO1 DT9	Measure	ment Gui	dance v0	2			P
6 dB BW					Measure	ment Oui	dance vo.	2			
EUT Configura					than 6						
Power Input						∃					
Test Date					Δ 'Ψ	οψ					
Temperature .				_		Rela	tive Humi	ditv:	42 2 %		
Test Equipmen				468. 1469	9, 1470, 14			,	12.2 70		
6 A				1 [T1]	, ,	RBW	100 k	Hz R	F Att	10 dB	
Re	ef Lvl			-9.	.97 dBm	VBW	300 k	Hz M	lixer	-20 dBm	
2	20.7 dBm		2	2.445932	262 GHz	SWT	10 m	s U	nit	dBm	
20.7	30.7 dB	Offset	t				▼1	[T1]		3.97 dBm	
							_	[11]	2.44593		A M
10—							Δ1	<del>[T1]</del>		1.09 dB	
									17.71059	711 MHz	
0—							1				
					mylladay	MMMM	ا بال اس				
-10			, Auth	MMINIM	(Odfor .		, advillada,	IM <sub>L</sub>			IN1
	.VIEW										1MA
			A								
-20			1					4			
			الم م					W.			
-30		. U	Who was					- 4			
		AINMAN							May Was	1. 4. 1	
-40	Juli Labalahan	V (V ·							0 10	Mary John	
	•										
-50											
-60											
-70											
-79.3 <b>∟</b> C€	enter 2.	437 GH	z		3.8592	2 MHz/			Span 38.	.592 MHz	
				06.50		,			_		
Date:		OCT.201	_∠ 11:	06:50							
Supplemental	intormatio	on:									
									)	The second secon	
								(,)	11/1	7	
Tested by (+ si	ignature)				David	Light		Wa	net the		



Table No. 23				6 4	B Occup	aiod Rane	dwidth			Verdict				
				o u	B Occup	neu Ban	uwiutii			Р				
Test Method		:	558074 D	01 DTS	Measure	ment Gu	idance v02							
6 dB BW		:	17.3 MHz											
EUT Configuration	tion	: 8	802.11n r	node, Cl	nan. 9									
Power Input		:	120VAC,	60 Hz		□ 3φ								
Test Date		: 2	26-Oct-12	2										
Temperature		: 2	22.9°C			Rela	ative Humidi	ty: 50.2	%					
Test Equipment	t Asset Tag	g List :	1036, 146	88. 1469	, 1470, 14	471								
S)S	Reflyl		Marker		N/ dBm	RBW VBU	200 kHz		10 dB _20 dBm					
<u> </u>		Ref Lvl         -8.04 dBm         VBW         300 kHz         Mixer         -20 dBm           20.7 dBm         2.46068537 GHz         SWT         500 ms         Unit         dBm												
20.	7 30.7	dB Offs	e t				<b>▼</b> 1 [⊤1	1	3.04 dBm					
							, 1   [   1	l l	B537 GHz LN					
;	10						1   [ ⊤1	1	<del>17 dB</del>					
								-17.2825	6613 MHz					
	0					A. A								
				I Meyershirth	Molyky	mary	AND I							
-1				<u> </u>					1MA					
	1MAX		/				\		ITTH					
-2	20		<del>                                     </del>				$\overline{}$							
-3	30							WIII.						
	la de		<i>\\</i> ₩''.					And Million	4.L.					
- 4	10 Harrison	AIV						will william	Millerin					
-5	50													
-6	60													
-1	70													
- 79 .	3													
13.	Center	2.452 G	Hz		4.4	MHz/		Spar	n 44 MHz					
Dat	e: 2	26.OCT.2	2012 11	:21:25										
Supplemental	Informatio	on:												
								1	1 1					
								Wanel .	411					
Tested by (+ sig	gnature)		:		David	Light		X WULL	4					



Table No. 24			6 dB Occup	ied Band	dwidth				Verdict
									Р
			DTS Measure	ment Gui	dance v0:	2			
			la Olasa 44						
	tion								
			HZ ⊠ 1¢	□ 3φ					
				Pola	tive Humi	dity :	40.0.0/		
	t Accet Tog Liet		1460 1470 1		ilive Hullii	uity	42.2 %		
rest Equipmen	t Asset Tag List	Marker 1 [		RBW	100 k	II.a. Di	· Att	10 dB	
Ŷ\$ <sub>R∈</sub>	ef Lvl	marker I [	-9.69 dBm	VBW	300 k		ixer	-20 dBm	
•	20.7 dBm	2.47	093262 GHz	SWT	10 m		nit	dBm	
20.7	30.7 dB Offs	<b>b</b> +			▼ .	5-0.3			
	Jo., QB OIIS				1	[T1]	-9		A
10—					Δ1	<del>-{T1}</del>	2.47000	1.96 dB	LN
					_	-1	7.71055	711 MHz	
0									
		1 1.	Mohambalay	Munu	44				
-10		inulithi	MM	·	MAMMI	VV.			IN1
	VIEW		4						LMA
						\			
-20		./				Ч			
		M				V.,			
-30		M				<b>*</b>	h.		
	Mary John Mary						Myanh	Mhaulp	
-40	May by April 1911							1 MANAGE PARTIES	
-50									
-60									
-70									
-79.3									
Ce	enter 2.462 G	Hz	3.8592	2 MHz/		S	Span 38.	592 MHz	
Date:	9.OCT.20	11:08:	16						
Supplemental	Information:								
						1	ſi.	7	
						Dan	11/1	1	
Tested by (+ sig	gnature)	· · · · · · ·	David	Liaht		X au	a la		

Revision: 0 Issue Date: 26-Oct-12



**RF Output Power** 



Table No. 25					DE 0							Verdict
					RF Out	put Powe	er				Ī	Р
Test Method				: 5	58074 D0	1 DTS Me	asureme	ent Gui	dance v0	)2		
EUT Configuration	ion			: 8	02.11b mo	de, Chan	. 1					
Power Input				: 1	20VAC, 60	) Hz 🛚	1φ 🗌	] 3φ				
Test Date												
Temperature .							ative Hun		:50.2 °	%		
Test Equipmen	Asset Tag	List		: 1	036, 1468	. 1469, 14	70, 1471					
					.10 dBm 000 GHz	RBW VBW SWT	1 MH 3 MH 5 ms	z M	F Att ixer nit	10 dB -20 dBm dBm		
30	.7	dB Offs	e t				<b>▼</b> 1 [	T 1 ]	1	2.10 dBm	Α	
	20						<del>CH P</del>	WR -	2.42300	000 GHz <del>1.77 dBm</del>		
								5W (	1.00000	000 MHz		
	10					<b>\</b>						
	0						$\rightarrow$					
	1MAX										1MA	
-	10											
_	20											
	20											
-	30	<b>/</b>								The way		
-	40											
	-0											
_	50											
-	50		CO					CO				
-69		0.440.5				MII				00 MII		
Center 2.412 GHz 2.2 MHz/ Span 22 MHz  Date: 26.0CT.2012 09:26:45												
18.1181818Sup	plementa	l Informa	ation:									
Tested by (+ sig	ınature)		:			David Ligh	t	4	Tand	lle		

Revision: 0 Issue Date: 26-Oct-12



Table No. 26			DE Output David	••		Verdict								
			RF Output Powe	er		Р								
Test Method		5	58074 D01 DTS Me	asurement Guidan	ce v02									
_			02.11b mode, Chan											
				1φ 🗌 3φ										
		: 26-Oct-12: 22.9°C Relative Humidity:50.2 % sset Tag List: 1036, 1468. 1469, 1470, 1471												
-					50.2 %									
Test Equipmen	t Asset Tag List	i 1	030, 1408. 1409, 14	70, 1471										
•	Ref Lvl 30.7 dBm		RBW 3.08 dBm VBW 0000 GHz SWT	1 MHz RF A 3 MHz Mixe 5 ms Unit										
30	30.7 dB Offs	se t		<b>▼</b> 1 [⊤1]	-33.08 dBm									
	20			eu eus	43300000 GHz									
				CH BW 11.0	1 <del>4.00 UBM</del> 30000 <mark>000 MHz</mark>									
	10													
	1MAX				1MA									
_	10													
		1												
-	20	+ + -	+ + +											
	_													
-	30				The same of the sa									
-	40													
-	50													
-	60	CO		CO										
-69														
_	Center 2.422 (		2.2 MHz/		Span 22 MHz									
Da 	Date: 26.0CT.2012 09:32:16													
40 44040400	44040400													
18.11818Supplemental Information:														
Tested by (+ signature) : David Light														
Tested by (+ signature)	gnature)	:	David Ligh	t Wan	ict CC									

Nemko USA, Inc. 802 N. Kealy Ave. Lewisville, TX USA Tel: +1 972-436-9600 Fax: +1 972-436-9600

Revision: 0 Issue Date: 26-Oct-12



Table No. 27										Verdict				
		RF Output Power  : 558074 D01 DTS Measurement Guidance v02												
								Guidance v0	)2					
EUT Configura														
Power Input						Hz 🖂	1φ 🗌 3	ф						
	: 26-Oct-12: 22.9°C Relative Humidity:50.2 %  nt Asset Tag List : 1036, 1468, 1469, 1470, 1471													
Test Equipmen	t Asset Tag	J List		: 10	136, 1468	1469, 14	70, 1471							
( )			Marker	1 [T1]		RBW	1 MHz	RF Att						
	Ref Lvl -32.30 dBm VBW 3 MHz Mixer -20 dBm 30.7 dBm 2.42600000 GHz SWT 5 ms Unit dBm													
30	7			Z.420001	000 0112	INC								
	30.7	dB Offs	e t				▼1 [⊤1		2.30 dBm <mark>A</mark>					
	20						CH PWR	2.42000	1.28 dBm					
							СН ВЫ	11.00000	000 MHz					
	10	1							-					
					~~~	<b>/</b>								
	0 1MAX	+							1MA					
	THAX								Ina					
-	10													
		/												
-	-20	<del>  /                                   </del>												
								\						
-	30	<b>Y</b>							Marine Marine					
-	40													
=	-50													
_	-60													
			CO				С							
-69														
	Center	2.437 G	Hz		2.2	1Hz/		Spar	n 22 MHz					
Da	te:	26.OCT.2	2012 0	9:28:41										
Supplemental Information:														
•														
									li a					
								Wanel	Dia					
Tested by (+ signal	gnature)		:			avid Light	t	Wand	U					

Nemko USA, Inc. 802 N. Kealy Ave. Lewisville, TX USA Tel: +1 972-436-9600 Fax: +1 972-436-9600



Table No. 28				RF Out	out Powe	•			Verdict					
									Р					
Test Method							Guidance v0	)2						
EUT Configura														
Power Input					HZ 🔀	16 <u> </u>	)							
		Asset Tag List: 1036, 1468. 1469, 1470, 1471												
223 424				•	· · · · · · · · · · · · · · · · · · ·	•								
_		Mar	ker 1 [T1]	1	RB₩	1 MHz	RF Att	10 dB						
	Ref Lvl	Hari		3.76 dBm	VBW	3 MHz	Mixer	-20 dBm						
20	30.7 dBm		2.44228	3000 GHz	SWT	5 ms	Unit	dBm						
31.	30.7 dB	Offset				<b>▼</b> 1 [⊤1		I A						
	20						2.44228	3000 GHz						
						CH BW	11.00000	000 MHz						
	10			+ +										
				1										
	1MAX							1MA						
-	10													
_	20													
		/												
-	30 WM							Marine.						
-	40													
	_													
=	50													
_	60													
		С				Ci								
-69		450 611			41.1									
D-	Center 2.4		09:30:45	2.2	IHZ/		Spar	n 22 MHz						
Da	:e: ∠b.	UL1.2U12	U9:3U:45											
Supplemental	emental Information:													
							Danel	Ell						
Tested by (+ sig	gnature)	:		D	avid Light		/.U W							



Table No. 29						RE Out	put Pow	or						Verdict
						Ki Out	putiow	GI						Р
Test Method					: 5	58074 DC	1 DTS M	easurer	ment	Gui	dance vo	)2		
EUT Configura														
Power Input							0 Hz	₫ 1φ	☐ 3	ф				
Test Date														
Temperature .										у	:50.2 %	Ď		
Test Equipmen	t Asset Tag	g List			: 10	036, 1468	3. 1469, 1	470, 14	71					
	Ref Lvl 30.7 d		Mark			.04 dBm ]00 GHz	RBW VBW SWT		IHz IHz ıs	Μi	Att xer iit		m	
30	.7	dB Offs	e t	T				<b>▼</b> 1	[T1		<u> </u>	.04 dB	n	
								•		- 1	2.45100	ı	H	
2	20							<del>CH</del>	PWR		14			
								CH	BW	1	1.00000	UUU MH	<u>Z</u>	
	10												1	
					سممسم		~							
	1MAX			7									1MA	
	1.0													
<u>-</u> 1	10	/												
,	20													
	20												1	
	30											Na.		
	Z <sub>m</sub>													
-4	10													
F	50													
`														
_£	60												_	
			CO							J				
-69		0 460 6										00. 1411	J	
_	Center					2.2	ľIHZ/				Spar	22 MH	Z	
Da t	e: 2	26.OCT.2	2012	09:	33:08									
Supplemental	Informatio	on:												
Tested by (+ sig	gnature)		:			David	Light			6	and c	U		



Table No. 30				RF Out	put Powe	er					Verdict				
											Р				
							t Gui	dance v(	)2						
	tion			_											
					0 Hz ⊠	] 1¢ 🔲 ;	3ф								
		:: 26-Oct-12 :: 22.9°C Relative Humidity:50.2 %													
iest Equipmen	: Asset Tag List: 1036, 1468. 1469, 1470, 1471														
<b></b>	Ref Lvl 30.7 dBm		1 [T1] -14 2.42300	.32 dBm 000 GHz	RBW VBW SWT	1 MHz 3 MHz 5 ms	M	Att ixer nit	10 dB -20 dBm dBm						
30.	.7 30.7 dB Offs	se t				<b>▼</b> 1 [⊤1	h	- 14	.32 dBm						
							Ĭ		000 GHz	A					
2	20					CH PWR	`		.24 dBm						
						CH BW	2	2.00000	000 MHz						
•	10														
			manua.	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m	mln									
	1MAX									1MA					
<b>-</b> ;	10														
,		July Pr					4.								
-2	80 Mahahaman 1900 Mah	N N N N N N N N N N N N N N N N N N N					V	<b>(</b>							
-3								MAN	hallahan Andrew						
								ľ	MANUAL LI						
-4	10								W						
_E	50														
-6	50														
		co					:0 								
-69									44.80						
	Center 2.412			4.4	1Hz/			Span	44 MHz						
Dat	Date: 26.0CT.2012 09:57:01														
Orangia are a ref. 1															
Supplemental	ental Information:														
							(	and c	11						
Tested by (+ sig	gnature)	:		David	Light		1								



Table No. 31				DE 04					Verdict					
		RF Output Power  : 558074 D01 DTS Measurement Guidance v02												
Test Method			: 5	58074 D0	1 DTS Me	asurement	Guidance v	02						
EUT Configuration	ion		: 80	02.11g mo	ode, Chan.	. 3								
Power Input			: 12	20VAC, 60	) Hz 🖂	1φ 🔲 3	Бф							
Test Date		:: 26-Oct-12 :: 22.9°C Relative Humidity:50.2 %												
							y :50.2 %	6						
Test Equipment	Asset Tag List		: 10	036, 1468	. 1469, 14	70, 1471								
	Ref Lvl	Marker	1 [T1] -14	.68 dBm	RBW VBW	1 MHz 3 MHz	RF Att Mixer	10 dB -20 dBm						
~	30.7 dBm		2.432600		SWT	5 ms	Unit	dBm						
30.	30.7 dB Of	fset				<b>▼</b> 1 [⊤1	] – 1	4.68 dBm	ı					
2	20					<del>CH PWR</del>		0000 GHz <del>4.84 dBm</del>	'					
						СН ВЫ	22.00000	0000 MHz						
•	0			- s. Harrelon de	manh									
	0		mount	mahmana	madeple	my								
	1MAX					٧,		1 M e	4					
-:	.0		<u>/</u>			V <sub>A1</sub>								
							w.							
-2	20	. I A A A A A A A A A A A A A A A A A A					We Way							
-3	30	prop					- MMM	U A I.						
								Mhykull						
-2														
-5	50													
<b>-</b> 6	60													
·		CO				Ci								
-69	Center 2.422	CH-7		4.4	1U = 7		Spar	n 44 MHz						
Da t		.2012 1	n·n3·3a	4.4 1	11127		Jþai	1 44 11112						
Dat	e. 20.061	.2012 1	0.03.33											
Supplemental	Information:													
							11	11						
<b>-</b>							Danel !	Ell						
rested by (+ sig	gnature)	:		David	Light		Vac: 4)	6741						



Table No. 32					<b>DE 0</b> 4	4.5						Verdict
					RF Out	put Powe	r					Р
Test Method				: 5	58074 D0	1 DTS Me	easureme	nt Gu	idance v	02	•	
EUT Configura	tion			: 8	02.11g mo	ode, Chan	. 6					
Power Input				: 1:	20VAC, 6	) Hz 🛛	1φ 🔲	3φ				
Test Date												
Temperature .									:50.2 %	6		
Test Equipmen	t Asset Tag	List		: 1	036, 1468	. 1469, 14	170, 1471					
(A)			Marker	1 [T1]		RBW	1 MHz	RI	F Att	10 dB		
	Ref Lvl				.17 dBm	VBW	3 MHz			-20 dBm		
30	30.7 df			2.423000	000 GHz	SWT	5 ms	Uı	nit	dBm		
30	30.7	dB Offse	e t				<b>▼</b> 1 [T	1]	1	6.17 dBm	Α	
,	20								1 4-	0000 GHz		
•							CH BL	1 2	1: 22.00000	0.22 dBm 0000 MHz		
	10											
						hmhan						
	0			man			~~~\ 					
	1 V I E W			/			<b>\</b> \_				1MA	
-	10		1					\u .				
			l W					V				
-2	20		<u> </u>					M	(1)			
	30	1.40	W					· ·	Www.	Mylling		
-3	30	LIM WAY							17000	Mu		
	WWW.									Why		
	40									1		
-!	50											
<b>-</b> 6	60							CO				
-69	Q		CÓ 									
-03	Center:	2.437 GI	Hz		4.4	1Hz/			Spar	n 44 MHz		
Da t	e: 2	6.OCT.2	2012 05	1:58:30								
Oumple-sect-1	lufa was =4' =											
Supplemental	imormatio	111.										
								6	and (	11.		
Tested by (+ sig	nnature)				David	Liaht		K	auch (	U		
reacted by ( r Si	<i>g</i> . iu.ui.u. <i>u</i>				David	-igit						

Revision: 0 Issue Date: 26-Oct-12



Table No. 33										Verdict
145.6 146. 66					RF Out	put Powe	er			P
Test Method				: 5	58074 D0	1 DTS Me	easurement	t Guidance	v02	
EUT Configura	tion			: 80	02.11g m	ode, Chan	ı. 9			
Power Input				: 12	20VAC, 6	) Hz 🛛	] 1φ 🔲 3	<b>3</b> φ		
Test Date				: 20	6-Oct-12					
Temperature .				: 2	2.9°C	Relat	tive Humidi	ty :50.2	2 %	
Test Equipmen	t Asset Tag	JList		: 10	036, 1468	. 1469, 14	470, 1471			
^			Marker	1 [T1]		RB₩	1 MHz	RF Att	10 dB	
	Ref Lvl		riai ikei		.21 dBm	VBW	3 MHz	Mixer		
	30.7 d	Bm		2.432600	000 GHz	SWT	5 ms	Unit	dBm	
30	30.7	dB Offs	e t				<b>▼</b> 1 [⊤1	] -	-34.21 dBm	4
								2.432	260000 GHz	
2	20						<del>CH PWR</del> CH BW	22 000	<del>15<mark>.01 UBm</mark> 1</del> 00000 MHz	
	10						CH IDM	42.000	JUUUUU TIMZ	
	10									
				mm		muly	~~~			
	1MAX			N/					11	1A
	10		ا ا	1			\			
_	10		N/				4			
_3	20		M					W.		
	30	l w	M					"What,		
-3	30	Market Commencer						"\4	Wall	
		V VT							The state of the s	
- 4	10								~~~	
-5	50									
-6	60									
			cb					Ĭ		
-69	.3 <b>L</b> Center	2 452 G	<b>I</b>		4.4	1Hz /		<u> </u>	pan 44 MHz	
Da t		26.OCT.2		a.59.⊿n				٥,		
Dat	C. 2	.0.001.2	.012 0							
Supplemental	Informatio	on:								
								1	11 11	
								( Souch	1/11	
Tested by (+ sig	gnature)		:		David	Light		Much	U	

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Table No. 34													Verdict
						RF Out	put Pow	er					Р
Test Method					.: 55	8074 DO	1 DTS M	leasuren	nent G	Guidance v	02		
EUT Configura	tion				.: 80	2.11g m	ode, Cha	n. 11					
Power Input					.: 12	0VAC, 6	0 Hz	<b>∃</b> 1φ [	3 <sub>\phi</sub>				
Test Date					: 26	-Oct-12							
Temperature .										:50.2 %	6		
Test Equipmen	t Asset Tag	List			: 10	36, 1468	3. 1469, 1	470, 147	71				
$\wedge$			Marke	er 1 [	T1]		RBW	1 MF	Ηz	RF Att	10 dB		
	Ref Lvl					75 dBm	VBW	3 MH	Ηz	Mixer	-20 dBm		
20	30.7 df	3m		2.44	-0000	00 GHz	SWT	500 ms	5	Unit	dBm		
30	30.7	dB Offs	e t					<b>▼</b> 1	[ T 1 ]	-3	7.75 dBm	Α	
										2.4400	0000 GHz		
	20							CH CH	<del>PWR</del> Bul	22 0000	5 <mark>.12 dBm</mark> 3000 MHz		
	10							CIT	DW	22.0000	3000 11112		
	10												
	0				my	~~~~~~	Munder from	month					
	U			1				V				1MA	
_	10							1	4				
			\ \	ا ا					٧.				
	20								14	سلم			
	30	لياسا	Juliu							Aug			
<b>-</b> 3	30	A Number								mhuha	<b>   </b>		
	Mymaly	u · •									July Lille		
	10										, andW		
-!	50												
-6	60								CO				
			co						Ï				
-69	.3 Center	2 462 6	H 7			4.4	MHə /			Snai	n 44 MHz		
Do t		2.402 U 6.OCT.2		10.00		4.4	111127			3941	1 44 11112		
Dat	e: ∠	.D.ULI.2	2012	10:00	,00								
Supplemental	Informatio	n:											
									141	1	i a		
									1	Soul	1/1		
Tested by (+ sig	gnature)		:			David	Light		×	Junes	u		

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Table No. 35								Verdict
			RF Outp	out Powe	er			Р
Test Method			: 558074 D0°	DTS Me	easurement	Guidance v	02	
_								
				Hz 🗵	] 1	ф		
						y :50.2 %	6	
Test Equipmen	t Asset Tag List		: 1036, 1468	. 1469, 14	470, 1471			
(A)		Marker 1 [	T1]	RBW	1 MHz	RF Att	10 dB	
	Ref Lvl		-32.50 dBm	VBW	3 MHz	Mixer	-20 dBm	
30	7		400000 GHz	SWT	500 ms	Unit	dBm ———	
	30.7 dB Of	fset			<b>▼</b> 1 [⊤1	I	2.50 dBm	
	20				CH PWR	2.43400	000 GHz <del>5.88 dBm</del>	
					CH BW	22.00000		
	10							
			باستحسن					
	1MAX				\		1MA	
-	10	<del>                                      </del>			<u> </u>			
		المحاس				44		
-2	20	W				What I		
	30 hillight film and hilling	William				What have	AN U	
	30					-	The last of the la	
	Middle						AND ONL	
	40							
_{	50							
-{	50				C			
-69	3							
	Center 2.412	2 GHz	4.4 ٢	Hz/		Spar	1 44 MHz	
Dat	e: 26.0C	T.2012 10:49	: 14					
Cumplemental	Information.							
Supplemental	inionnation:							
						(1) 11	1	
						Wanel (		
Tested by (+ signal	gnature)	:	David I	Light		,		



Table No. 36					DE 04								Verdict
					RF Out	put Pow	er						Р
Test Method				: 5	58074 D0	1 DTS M	1easurer	nent	Gui	dance v	02	'	
EUT Configura	tion			: 80	02.11n m	ode, Cha	ın. 3						
Power Input				: 12	20VAC, 6	0 Hz	<b>⊠</b> 1φ	□ 3	Вф				
Test Date				: 20									
Temperature .						Rela			у	:50.2 %	, D		
Test Equipmen	t Asset Tag Lis	st		: 10	036, 1468	s. 1469, <i>1</i>	1470, 14	.71					
	Ref Lvl 30.7 dBm	Mar			.84 dBm JOO GHz	RBW VBW SWT		lHz	M :	Att xer nit	10 dB -20 dBm dBm		
30	.7 <u>30.7</u> dB	Offset					▼1	[T1	1	- 17	'.84 dBm	ľ	
							, 1	LII	J		.04 UDIII 1000 GHz	Α	
4	20						СН	PWR		14	1		
							CH	ВИ	2	2.00000	000 MHz		
	10												
					,	Manage	M						
	1MAX		<i>\</i>									1MA	
	10		/"					1					
_	10							٦	\1			1	
_,	20	الماري المار							₩,				
•		AN THINK I							Ì	What Hard	Alida.		
-3	30	W .								· · ·	All I		
	MMM III										WILL		
	40												
_5	50												
-6	50							С	0			1	
-69	3												
-03	Center 2.4	22 GHz			4.4	MHz/				Spar	1 44 MHz	•	
Da t	e: 26.0	DCT.2012	10:	:51:46									
Supplemental	Information												
oupplemental	iniormation.												
Tested by (+ sig	gnature)	:			David	Light			6	and c	lu		



Table No. 37													Verdict
					RF Out	put Pow	ver						Р
Test Method				: 5	58074 DC	1 DTS N	/leasurer	ment	Gui	dance v(	)2		
EUT Configura	tion			: 80	02.11n m	ode, Cha	an. 6						
Power Input				: 12	20VAC, 6	0 Hz [	<b>⊠</b> 1φ	□ 3	ф				
Test Date				: 20									
Temperature .							ative Hu		у	. :50.2 %	b		
Test Equipmen	t Asset Tag L	.ist		: 10	036, 1468	3. 1469,	1470, 14	71					
20	Ref Lvl 30.7 dBm			1 [T1] 3. 2.434000	.21 dBm )00 GHz	RBW VBW SWT	1 M 3 M 500 m	lHz	Μi	Att xer nit	10 dB -20 dBr dBr		
30	30.7 dB	Offse	t				<b>▼</b> 1	[T1			.21 dBm	H	
:	20						<del>- CH</del>	PWR		2.434UU 14	000 GHz <del>.94 dB</del> m		
								ВЫ	2	2.00000	000 MHz		
	10				1							1	
	0			Munual Market	with the same of t	humandh	umm					1	
	1MAX		کار ا	1				N				1MA	
-	10											1	
			المر						كر				
-2	20		<u> </u>						7	hard who		1	
	30 million 10 million	MMM									My u.		
-,	N.M.Mod.										J. W.		
	10											1	
-:	50											1	
- 8	60							Ci	1			4	
			cb										
-69	.3L Center 2.	437 GH	<b>_</b> Z		4.4	MHz/		<u>                                       </u>		Spar	1 1 44 MHz	J :	
Da t		.OCT.20	_	:55:53						0   0			
Supplemental	Information												
Cappioniona													
Toptod by / Lai	anoture)				Dovid	Light			6	and c	U		
Tested by (+ signal	gnature)		:		David	∟ignt							

Revision: 0 Issue Date: 26-Oct-12



Table No. 38												Verdict
10.010 110.00					RF Out	put Pow	er				-	P
Test Method				: 5	58074 D0	1 DTS M	leasuren	nent G	Guidance v	02		
EUT Configura	tion			: 80	02.11n m	ode, Cha	ın. 9					
Power Input				: 12	20VAC, 6	0 Hz	<b>⊠</b> 1φ [	3φ				
Test Date				: 20	6-Oct-12							
Temperature .									:50.2 %	6		
Test Equipmen	t Asset Tag I	_ist		: 10	036, 1468	3. 1469, <i>1</i>	1470, 147	71				
(F)		1	1arker	1 [T1]		RBW	1 MF	Ηz	RF Att	10 dB		
	Ref Lvl				.55 dBm	VBW	3 M		Mixer			
30	30.7 dBm			.434000	000 GHz	SWT	500 ms	3	Unit	dBm		
	30.7 dE	3 Offse	t				<b>▼</b> 1	[ T 1 ]	1	3.55 dBm	Α	
,	20								2.43400	000 GHz		
							CH	BW	22.00000	4.86 dbm 000 MHz		
	10											
					A hards							
	0			www.	,		many					
	1MAX		\ \ \ \	/				Y			1MA	
-	10		Jr					_\(				
			,,					W.				
-2	20	V	N .						What I I			
		WAMME							annoth !	Milia		
-3	30 July William	7								THE STATE OF THE S		
										W		
	10											
,	-											
=:	50											
_ [	60											
_(			CO					cb				
-69												
	Center 2.	.452 GH:	Z		4.4	MHz/			Spar	n 44 MHz		
Da t	e: 26	.OCT.20	112 10	:57:12								
Supplemental	Information	1:										
								*	1	9 0		
								/	Soul	110		
Tested by (+ sig	gnature)		:		David	Light		×	Much	U		

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Table No. 39								Verdict
'			RF Outpu	it Power				Р
Test Method		:: ;	558074 D01	DTS Mea	surement	Guidance vo	02	
EUT Configura	tion	:: :	302.11n mod	e, Chan.	11			
		:		Hz ⊠	1φ 🗌 3	φ		
		: : :						
-		:				y :50.2 %	6	
Test Equipmen	t Asset Tag List	:	1036, 1468. 1	1469, 147	70, 1471			
Į į	<b>\</b>	Marker 1 [T1	]	RBW	1 MHz	RF Att	10 dB	
	Ref Lvl		5.55 dBm	VBW	3 MHz	Mixer	-20 dBm	
30	30.7 dBm		0000 GHz	SWT !	500 ms	Unit	dBm	
	30.7 dB Of	fset			<b>▼</b> 1 [⊤1	I	5.55 dBm A	
	20				CH PWR	2.44000	1000 GHz <del>1.08 UBm</del>	
					СН ВЫ	22.00000		
	10							
			Munney					
	0							
	1MAX	$\mathcal{M}$			\		1MA	
-	10							
		ا الم				Y		
-:	20	. 100				Mali III	<del>                                     </del>	
							Mila.	
-:	30 MANAMANA					<u> </u>	Well	
							1 100	
	40							
_!	50							
	20							
-1	50	CO			C	)		
-69	.3							
	Center 2.462	GHz	4.4 MH	Z/		Spar	n 44 MHz	
Dat	e: 26.0CT	.2012 10:58:03	3					
Supplemental	Information:							
Cappionional	mormation							
						. / ,	7	
						( Janel 1	0,0	
Tested by (+ signature)	gnature)	:	David Li	ght		Want (	U	

Revision: 0 Issue Date: 26-Oct-12



Table No. 40	Dook DE Output - EIDD Coloulation Method	Verdict
	Peak RF Output – EIRP Calculation Method	NT

Measured Peak Antenna Power .....: Test Location .....: 3m Chamber

Test Method...... ANSI C63.10 and 558074 D01 DTS Measurement Guidance v02

Test Distance ...... 3m

EUT Configuration .....: Transmit 15 dBm

Test Date ...... 9-Oct-12

Temperature .....: 23.3°C Relative Humidity ....: 42.4 %

Test Equipment Asset Tag List .....:

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	<b>(I)</b>	(J)
	, ,	P <sub>meas</sub>	G <sub>R</sub>	L <sub>C</sub>	G <sub>amp</sub>	$P_R$	L <sub>P</sub>		G <sub>T</sub>	P <sub>T</sub>
			RX			Adjusted	Free-space		TX	Transmit
		Meter	antenna	Cable	Pre-amp	RX	propogation		antenna	power at
F	req.	reading	gain	loss	Gain	Power	loss	EIRP	gain	antenna port
(1	MHz)	(dBm)	(dBi)	(dB)	(dB)	(dBm)	(dB)	(dBm)	(dBi)	(dBm)
	2412		9.13	3.0	0.0		49.7		4.75	
	2412		9.13	3.0	0.0		49.7		4.75	
:	2412		9.13	3.0	0.0		49.7		4.75	
	2437		9.13	3.0	0.0		49.8		4.75	
	2437		9.13	3.0	0.0		49.8		4.75	
	2437		9.13	3.0	0.0		49.8		4.75	
	2462		9.13	3.0	0.0		49.9		4.75	
:	2462		9.13	3.0	0.0		49.9		4.75	
	2462		9.13	3.0	0.0		49.9		4.75	

(F) = (B)-(C)+(D)-(E)	$(G) = 20 \log(A) + 20 \log(3) - 27.5$	(H) = (F) + (G)	(J) = (H) - (I)
-----------------------	----------------------------------------	-----------------	-----------------

**Supplemental Information:** 

Tested by (+ signature) ...... David Light

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## **Spurious Emissions**



Table No. 41	Spurious Emissions – Lower Band Edge											
To at NA attacks		Р										
	: ANSI C63.10 and 558074 D01 DTS Measurement Guidance tion: 802.11b mode Chan. 1	V02										
_	: 120VAC, 60 Hz 🔀 1¢ 🔲 3¢											
	:: 9-Oct-12											
	: 23.4°C Relative Humidity:42.2 %											
	t Asset Tag List: 1654, 1468, 1469, 1470, 1471											
6												
<b>%</b> \$>	*RBW 100 kHz Marker 1 [T1 ] *VBW 300 kHz -58.73 dBm											
	Ref 6.3 dBm *Att 10 dB *SWT 300 ms 2.385875000 GHz											
	0 Offset 30 7 dB Marker 2 [T1 ] -47.37 dBm											
	-47.37 dBm -10 2.546000000 GHz A											
1 PK												
MAXH	20 D1 20.07 dB											
		VL										
	-30											
	40											
	50											
	who will be a series of the se											
	70											
	-80											
	90											
	100											
	Start 1.9 GHz 100 MHz/ Stop 2.9 GHz											
Date:	9.OCT.2012 18:35:19											
Supplemental	information:											
	Consture) David Light											
Table districts	Wand Ell											
rested by (+ sig	gnature): David Light											



Table No. 42	Spurious Emissions	Verdict NT									
Test Method											
	ation: 802.11b mode Chan. 1	.02									
	: 120VAC, 60 Hz										
	: 9-Oct-12										
Temperature .	: 23.3°C Relative Humidity:42.4 %										
Test Equipmen	nt Asset Tag List: 1654, 1468, 1469, 1470, 1471										
	*RBW 100 kHz Marker 1 [T1 ]  *VBW 300 kHz -49.68 dBm										
	Ref 6.3 dBm *Att 10 dB *SWT 300 ms 2.330636250 GHz										
	0 Offset 30 7 dB Marker 2 [T1]										
	-43.91 dBm 10 2.491387500 GHz	A									
1 PK	Marker 3 [T1]										
MAXH	-46.82 dBm 20 D1 20.17 dB -2.570463750 GHz										
	2.370403/30 GHZ	TAT									
	30										
	40										
	50										
	-70										
	80-										
	-90										
	_100										
	Start 30 MHz 297 MHz/ Stop 3 GHz										
Date:	9.OCT.2012 18:21:47										
Supplemental	i information.										
	ignature) Click here to enter text										
Tested by (+ signal	ignature): Click here to enter text.										



Table No. 43					Spur	ious	Emis	sion	S			Verdict
Test Method				· ^	NELC	62 10	) and	550C	74 D01 DTS	Mossuromo	nt Cuidonoo	NT W02
EUT Configura									174 001 013	Measureme	int Guidance	VU2
Power Input									φ 🔲 3φ			
Test Date								ا لك	Ψ 🗀 ΟΨ			
Temperature .							F	Relati	ve Humidity	:42.4 %		
Test Equipmen						468,	1469	, 147	0, 1471			
Ŕ		Maı	cker 1	[T1]			RE	3W	100 kHz	RF Att	10 dB	
<b>~</b>	ef Lvl											
0	20 dBm		4.8	807869	961 G	Hz	SV	VT	5.6 ສ	Unit	dB	
	30.7 dB	Offset					10	GHz				A
-10											I	.N
-20	D1 0.1 di	3m										
-30												:N1
	1MAX											.MA
-40												
10												
-50												
30												
-60		1										
-00		<b>T</b>	4 .4	M						Mary Mary Mary Mary Mary Mary Mary Mary	mmahra	
-70	mymm	munde	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		ww	Meny	Mult	D***	Musham	•		
7.0												
-80												
-80												
-90												
30												
-100												
	Start 3 GF	Iz								Sto	p 25 GHz	
Date:	10.	OCT.2012	14:0	5:11								
Supplemental	Informatio	n:										
									(K.	1 1	Л	
									6	Vanel El		
Tested by (+ si	gnature)		. :		Clic	ck he	re to	enter	text.	Vuid C	1	



Table No. 44	Spurious Emissions	Verdict									
To at Martin and		P									
	: ANSI C63.10 and 558074 D01 DTS Measurement Guidance valion	/02									
_	: 120VAC, 60 Hz 🖂 1¢ 🔲 3¢										
	9-Oct-12										
	23.4°C Relative Humidity :42.2 %										
	nt Asset Tag List 1654, 1468, 1469, 1470, 1471										
<b>8</b>	*RBW 100 kHz Marker 3 [T1 ]										
P	*VBW 300 kHz -49.68 dBm  Ref 6.3 dBm										
_	0 Offset 30 7 dB   Marker 1 [T1]										
	-48.58 dBm										
	-10	A									
1 PK	Marker 2 [T1 ] -46.59 dBm										
MAXH	-20 D1 -20.17 dB 2 515147500 GHZ										
		LVL									
<u>-</u>	-30										
-	-40										
<u> </u>	-50 <u>1 2 3</u>										
	The state of the s										
L	-70										
_	-80										
<u></u>	-90										
L	-100										
5	Start 30 MHz 297 MHz/ Stop 3 GHz										
Date:	9.OCT.2012 18:24:19										
Supplemental	Information:										
	Consture) David Light										
Tested by (+ sig	gnature): David Light										



Table No. 45					Spur	ious	Emis	sions	5			Verdict
To at Matte and										2 Manageman	nt O. dalamaa	P02
Test Method EUT Configura									74 001 013	s weasureme	nt Guidance	VU2
Power Input									φ 🔲 3φ			
Test Date							12		φ 🗀 Οφ			
Temperature :: 23.0°C Relative Humidity :::::42.4 %												
Test Equipment Asset Tag List: 1767, 1468, 1469, 1470, 1471												
		Maı	rker 1	[T1]			RE	ВW	100 kHz	RF Att	10 dB	
•	ef Lvl			-42.	39 d	Bm	VE	3W	1 MHz	Mixer	-20 dBm	
0	20 dBm		6.	725639	982 G	Hz	SV	ΙΤ	5.6 s	Unit	dB	
Ŭ,	30.7 dB	Offset					10	GHz				A
-10												ıN
10												
-20	D1 0 1 d1	2m										
20	D1 0.1 a1	JIII										
-30												
	1MAX	MAX INI										
-40												
10												
-50												
30												
-60				1								
		1		الألمي				1	Muhamild	lahanna a. A. N.		
-70	\mukunyhmy	Mullaly	mm	white "		۸۸,	ww	WOOK		· • • • • • • • • • • • • • • • • • • •		
,												
-80												
-90												
-100												
S	Start 3 GF	Iz								Stor	25 GHz	
Date:	10.	OCT.2012	14:0	7:52								
Supplemental	Informatio	n:										
									i i	0 1	Л	
									(	Danel Cl	11	
Tested by (+ si	gnature)		.:			Da	ıvid L	ight	У	Vuan V	1	



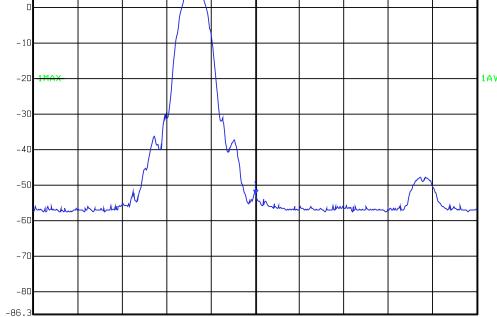
Table No. 46	Spurious Emissions	Verdict									
Toot Mathad	· ANCLOSS 10 and 559074 D01 DTS Magaurament Cuidanes	P P									
	: ANSI C63.10 and 558074 D01 DTS Measurement Guidance value in the control of the control o	702									
	:: 120VAC, 60 Hz										
	: 9-Oct-12										
	: 23.4°C Relative Humidity:42.2 %										
•	nt Asset Tag List : 1654, 1468, 1469, 1470, 1471										
8	*RBW 100 kHz Marker 3 [T1 ]										
<b>W</b> 3/	*VBW 300 kHz -50.86 dBm										
Re											
0	0 Offset 30 7 dB Marker [T1] -46.98 dBm										
		A									
1 PK	Marker : [T1]										
MAXH	-46.19 dBm -20.17 dB 21.142991250 GHz										
		LVL									
	-30										
	-40										
	-50 1 2										
TO STATE OF THE ST											
· · ·	Farence of the second s										
	-70										
	-80										
	-90										
<u>_</u>	-100										
S	Start 30 MHz 297 MHz/ Stop 3 GHz										
Date:	9.OCT.2012 18:27:24										
Supplemental	Il Information:										
	Signature) David Light										
Tested by (+ si	signature) David Light										



Table No. 47					Spur	ious	Emis	sion	s			Verdict
					-							Р
Test Method										S Measureme	ent Guidanc	e v02
	EUT Configuration: 802.11b mode Chan. 11  Power Input: 120VAC, 60 Hz ⊠ 1∮ □ 3∮											
-	est Date 120VAC, 60 HZ											
Temperature: 23.0°C Relative Humidity:42.4 %												
Test Equipment Asset Tag List : 1767, 1468, 1469, 1470, 1471												
^			ker 1			<u> </u>	RE		100 kHz	RF Att	10 dB	
Re	ef Lvl	11012	1101		95 d	Bm	VE		1 MHz	Mixer	-20 dBm	
2	20 dBm	0 dBm 6.72563982 GHz SWT 5.6 s Unit dB										
0	30.7 dB	Offset					10	GHz				
												A LN
-10												
-20	<del>D1 0.1 dI</del>	<del>3m</del>										
-30	VIEW											IN1 LMA
-40												
-50												
-60				1						1	A	
	Huraharany	wan ha		my	unu	WW	hum	NYW	Marin an Mi	the hollowing	Mahalland	
-70 <del>s</del> 3	- Franchisco											
-80												
-90												
-100												
	tart 3 GH	Iz								Sto	p 25 GHz	
Date:	10.0	OCT.2012	14:1	2:07								
Supplemental	Informatio	m.										
Cappiemental	mormano	·111										
									la:	$\bigcap$ $n$	n	
									(/	Panel Ca		
Tested by (+ si	ignature)		:		Da	avid L	ight		X	runa Ca	<i>r</i>	



Revision: 0 Iss	sue Date: 26-Oct-12							
Table No. 48		Spurious Emis	sions – Un	nor Band E	dae			Verdict
		Spurious Eillis	sions – op	per Band E	uge			Р
Test Method		: ANSI C	63.10 and	558074 D0	1 DTS Me	asuremer	nt Guidanc	e v02
EUT Configura	tion	: 802.11	b mode Cha	an. 11				
Power Input		: 120VA	C, 60 Hz	□ 1    □	3φ			
Test Date		: 9-Oct-1	12					
Temperature .		: 23.4°C	Re	lative Humi	dity :4	2.2 %		
Test Equipmen	t Asset Tag List	: 1654, 1	1468, 1469,	1470, 1471	I			
	^	Marker 1 [T1]	RBW	1 MH7	RF Att	0 dB		
	Ref Lvl	-52.62 d	dBm VBW		Mixer			
	13.7 dBm	2.48350000 0	SHZ SWT	5 ms	Un i t	dBm		
	10 30.7 dB Of	fset					Α	
	0							
	-10							
	- 10							



29.0CT.2012 09:14:14 Date:

Center 2.4835 GHz

#### **Supplemental Information:**

	Measured		Power at	Field	Field
Frequency	Power at ant.	Ant. gain	ant.	strength	strength
(MHz)	(dBm)	(dBi)	(W)	(V/m)	(dBuV/m)
2483.5	-52.62	4.75	1.633E-08	0.000233	47.4

15.521875 MHz/

Span 155.21875 MHz

Danel Ele

Tested by (+ signature) .....: Tom Tidwell

Nemko USA, Inc. 802 N. Kealy Ave. Lewisville, TX USA Tel: +1 972-436-9600 Fax: +1 972-436-9600



Table No. 49	Spurious Emissions – Lower Band Edge										
	Spurious Emissions – Lower Band Edge	Р									
Test Method	: ANSI C63.10 and 558074 D01 DTS Measurement Gu	uidance v02									
_	on 802.11g mode Chan. 1										
_	: 120VAC, 60 Hz 🛛 1φ 🔲 3φ										
	: 9-Oct-12										
•	rature										
Test Equipmen	est Equipment Asset Tag List : 1654, 1468, 1469, 1470, 1471										
<b>8</b> 5	*RBW 100 kHz Marker 2 [T1]										
	*VBW 300 kHz -41.13 dBm  1.7 dBm *Att 10 dB *SWT 300 ms 2.400000000 GHz										
_		U GHZ									
	0 Offset 30 7 dB Marker 1 [T1]	4 dBm									
_											
1 PK											
MAXH	20 D1 19.999 dB										
		LVL									
_	-30										
-	-40										
-	-50										
0		Daniel Dalas									
<u> </u>	-60										
_	-70										
	-80										
	90-										
	_100										
<u> </u>	Start 2.15 GHz 50 MHz/ Stop 2.6	55 GHz									
	500F 2.15 6112 51112/	33 0112									
Date:	9.OCT.2012 18:56:26										
Supplemental	al Information:										
	$\sim \sim $										
	David Light										
Tested by (+ si	signature): David Light										



Table No. 50 Spurious Emissions											
			Spurious	EIIIISSIOII	is			Р			
						DTS Meas	urement Guidano	e v02			
_	ation		_								
				Hz 🖂	1¢ ∐ ;	3φ					
				5.1.0							
						ty:42.	2 %				
Test Equipmer	nt Asset Tag List .		1654, 1468,	1469, 147	70, 1471						
<b>8</b>					00 kHz 00 kHz	Marker	1 [T1 ] -48.50 dE	m			
Re	ef 1.7 dBm	* Att	10 dB	*SWT 3		2	.493243750 GH				
0	Offset 30	.7 dB									
								A			
	-10										
1 PK											
MAXH	<del>20 D1 19.</del>	999 dB									
								LVL			
-	-30										
	-40										
	-50						1				
		والماماة ومشاهدته والمساهدين	ar is the law in	la dakada	ana la sara	ألفاقه والمرازات	لل المعالمة المالية	tan b			
	-16:0-1 - 41-15:4-16:4-16:4-16:4-16:4-16:4-16:4-16:4-16					أساسيان واس	II had been proportional	-de			
	·										
	-70										
	, 0										
	-80										
	-80										
	-90										
-	-100										
S	tart 30 MHz	l l	297	MHz/			Stop 3 G				
Date:	9.OCT.201	18:48:58									
Supplementa	I Information:										
							1 1				
						Dance	1/10				
Tested by (+ s	ignature)	:	David	₋ight		Wuuch	u				



Table No. 51					Spur	ious	Fmis	sion	•			Verdict
												Р
Test Method										S Measureme	ent Guidance	e v02
EUT Configura												
Power Input Test Date							ΗZ		1φ			
Temperature .							R	elativ	e Humidity	:42 4 %		
Test Equipmen										12.1 70		
			rker 1				RE		100 kHz	RF Att	10 dB	
R	ef Lvl			-43.	69 d	Bm	VE	ВW	1 MHz	Mixer	-20 dBm	
0	20 dBm		6.6	597123	304 G	Hz	SV	ΙΤ	5.6 s	Unit	dB	
	30.7 dB	Offset					10	GHz				A
-10											I -	.N
-10												
-20	D1 0 1 d1	2m										
	21 011 01											
-30												N1
	1MAX											.MA
-40												
-50												
-60				1								
			اما	_ w/\uniterline	4 4 A		/	اللممكاء	لمان بدالمسينات	Lowerhal	10 My Nowaldon	
-70 <del>**</del>	ulyah	mulululu	Jan Marie		Mounty	~~~\ <sub>\</sub>	MV					
-80												
-90												
-100											05.55	
	Start 3 GH									Sto	p 25 GHz	
Date:	10.0	OCT.2012	2 14:2	22:20								
Supplemental	Informatio	n:										
									e e	01	1	
T4-11 ( )					_		11.4		Q	Vanel Co	1	
Tested by (+ si	anature)		•		1);	l bive	iant					



Table No. 52	Spurious Emissions	Verdict
		Р
	ANSI C63.10 and 558074 D01 DTS Measurement Guida	nce v02
_	ation	
	: 120VAC, 60 Hz	
	nt Asset Tag List : 1654, 1468, 1469, 1470, 1471	
R	*RBW 100 kHz Marker 1 [T1 ]	
<b>V</b> \$/	*VBW 300 kHz -49.96 d	Bm
R	Ref 1.7 dBm  *Att 10 dB  *SWT 300 ms  2.518117500 G	Hz
	0 Offset 30 7 dB	
L.	10	A
1 PK		
MAXH	20 D1 -19.999 dB	
		LVL
	-30	
<u> </u> -	40	
	-50 1 1 V	_
4	La para de la companya de la constitución de la con	րգուհո
<mark>⊬</mark> 1	42.0 O market and the first sear of temporal properties of the first search of the fir	
-	70	_
-	-80	
<b>-</b> -	90	$\dashv$
	-100	
S	Start 30 MHz 297 MHz/ Stop 3 G	Hz
Date:	9.OCT.2012 18:50:55	
Supplemental	information:	
<u> </u>		
	ignature) David Light	
Tested by (+ sig	ignature): David Light	



Table No. 53					Spur	ious	Emis	sion	s			Verdict
												Р
Test Method										S Measurem	ent Guidance	÷ ∨02
EUT Configura Power Input						_						
Test Date							ПΖ		ιφ 🔝 3φ			
Temperature .							R	elativ	e Humidity	:42.4 %		
Test Equipmen												
<b>^</b>		Ma	rker 1	[T1]			RE	3W	100 kHz	RF Att	10 dB	
R	ef Lvl			-43.	.91 d	Bm	VE	3W	1 MHz	Mixer	-20 dBm	
0	20 dBm		6.0	697123	304 G	Hz	SV	ЛТ	5.6 s	Unit	dB	
Ĭ	30.7 dB	Offset					10	GHz				A
-10												N
-20	<del>D1 0.1 d</del> 1	<del>3m</del>										
-30												N1
:	1MAX											MA
-40												
-50												
-60				1								
	. da		. Al^.	WANT NO.	A A	wan. M	1. I.M	ullia	munder	Marchallahard	any who	
-70	hay	muhamma	My W		Married .	V	but Min				•	
-80												
-90												
-100	Start 3 GH	I 7								Sto	p 25 GHz	
Date:		OCT.2012	) 1/1.5	3:29						500	,p 23 G112	
			2 14.5									
Supplemental	Informatio	n:										
										n 11	7	
									6	Sand E		
Tested by (+ si	ignature)				Da	avid I	iaht		*	June V	1	



Table No. 54								Verdict
			Spurious	Emissio	ns			Р
Test Method		:	ANSI C63.1	0 and 558	3074 D01	DTS Meas	surement Guidanc	e v02
_	tion		_					
				Hz 🛚	1φ 🗌	3ф		
				5.1.0				
	4 A 4 T 1 !- 4					lity:42	.2 %	
rest Equipmen	t Asset Tag List	i	1004, 1400,	1409, 14	70, 147 1			
<b>%</b>					00 kHz	Marker	1 [T1 ]	
F	Ref 1.7 dBm	* Att	10 dB		00 kHz 00 ms	2.	-50.67 dBm 540021250 GHz	
Γ	0 Offset 30	7 dB					Li	
							,	A
	10							
1 PK MAXH	00 01 10	000 45						
	<del>-20 D1 19.</del>	yyy ab						LVL
	30							
	-30-							
	40							
	50-						1.	
	والمنافعة والمنافعة والمنافعة	Antalandrilla politica de la constitució	ينمان يماني	عدالله مرتفا	مرابي والسروان	lu da bas ka	Theretill, telefor and refer	
ľ		and the property of the party o					A mapala month of the	
	70							
-	80							
-	90							
	-100							
L	Start 30 MHz		297	MHz/			Stop 3 GHz	
	Start 50 Miz		201	141127			500p 5 dii2	
Date:	9.OCT.201	12 18:53:38						
Supplemental	Information:							
İ							11 11	
1						( Jane	I lu	
Tested by (+ sig	gnature)	:	David I	_ight		VO W		



Table No. 55					Cnur	iouo	Emis	olon				Verdict
					Spur	ious	EIIIIS	Sion	15			Р
Test Method										S Measureme	ent Guidance	e v02
EUT Configura												
Power Input							Hz		1φ 🗌 3φ			
Test Date							D	alativ	ve Humidity	:40 4 0/		
Temperature . Test Equipmen									-	42.4 %		
rest Equipmen	It Asset Tag		rker 1			100,	RE		100 kHz	RF Att	10 dB	
RO RO	ef Lvl	Ма.	rker i		.63 d	Bm	VE		100 KHZ 1 MHz	Mixer	-20 dBm	
:	20 dBm		6.	697123	304 G	Hz	SV	Т	5.6 s	Unit	dB	
0	30.7 dB	Offset					10	GHz				_
												A <sub>A</sub> N
-10												
	51 0 1 1											
-20	<del>D1 0.1 at</del>	<del>3m</del>										
-30												
	1MAX											:N1 .MA
-40												
10												
-50-												
-60				1								
				Muha		6. AÅ	A.	<u>~</u>	amandela alle	mm. Lu	WAN Jorda	
-70	mmmmle	~~~~~	WW		www		Alay M					
-80												
-90												
-100												
S	tart 3 GH	Iz								Stop	o 25 GHz	
Date:	10.0	OCT.2012	2 14:5	55:18								
Supplemental	Information	n:										
										11	1	
									(	Sand El		
Tested by (+ signal	gnature)		.:		Da	avid L	ight				15	



Table No. 56		Courious	Emissions	Inner Be	nd Edge		Verdict
		Spurious	Emissions –	Jpper Ba	na Eage		Р
Test Method		: A	NSI C63.10 ar	nd 558074	D01 DTS N	leasurement Gu	idance v02
_		8	_				
		: 1		□ 1 φ	□ 3φ		
		: 9					
-		2			lumidity	:42.2 %	
Test Equipment	t Asset Tag List	1				Att 0 dB	
	Ref Lvl	Marker 1 [T1] -48			MHz RF		
·	13.7 dBm	2.48350			ms Uni		
13	.7 10 30.7 dB Off	set					
							A
	0						
		man	$\uparrow$				
-	10						
_	20 1MAX				+ +		1AV
-	30	<del>                                     </del>			+ +		
		1					
-	40	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	<del>  \</del>		+ +		
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	mywanth	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1	monmo	mmmm	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
_	60						
_	70						
_							
_	80						
-86							
-00	Center 2.4835	6 GHz	15.521875 M	- - - - - -	Span	155.21875 MHz	
Da t	te: 29.0CT	.2012 09:22:40					
Supplemental	Information:						
		Measured	F	ower at	Field	Field	
	Frequency	Power at ant.	Ant. gain	ant.	strength	strength	
	(MHz)	(dBm)	(dBi)	(W)	(V/m)	(dBuV/m)	
	2483.5	-48.61	4.75 4	.111E-08	0.00037	51.4	
						_	
					/.	1111	
_ ,					Wa	med Ell	
lested by (+ sig	gnature)	:	David Ligh	t	,	F.M.	



Table No. 57			Verdict
		Spurious Emissions – Lower Band Edge	P
Test Method		: ANSI C63.10 and 558074 D01 DTS Measurement	Guidance v02
EUT Configura	ition	: 802.11n mode Chan. 1	
Power Input		: 120VAC, 60 Hz ⊠ 1φ □ 3φ	
Test Date		: 9-Oct-12	
-			
Test Equipmen	t Asset Tag List	: 1654, 1468, 1469, 1470, 1471	
<b>\$</b>		*RBW 100 kHz Marker 2 [T1	
· · · · · · · · · · · · · · · · · · ·	Ref 1.8 dBm	*VBW 300 kHz -59  *Att 10 dB *SWT 300 ms 2.336350	.77 dBm
- Γ	0 Offset 30.7 dB	Marker 1 [T1	1
			.11 dBm
-	10-	2,400000	000 GHz A
1 PK			
MAXH	<del>D1077 d</del>		
			LVL
-	30		
-	40		
-	50		
	فالمراوية والمراوية والمراوية والمراوية والمراوية والمراوية		Market markets by
-	60	2"	'
-	70		
-	80		
-	90		
	100		
L	-100   Start 1.9 GHz	120 MHz/ Stop	3.1 GHz
	Start 1.5 diiz	120 PM2/ 500p	J.1 GIIZ
Date:	9.OCT.2012 19	:10:58	
Supplemental			
Field strength	at 2483.5 MHz = 48.3 dB	uV/m @3m	
		$\cap$ $\cap$ $\cap$	
		David Light	1
Tested by (+ si	gnature):	David Light	



Table No. 58	Spurious Emissions	Verdict
	Spurious Emissions	Р
	: ANSI C63.10 and 558074 D01 DTS Measurement Guidance	e v02
_	ration: 802.11n mode Chan. 1	
-	:: 120VAC, 60 Hz	
	: 9-Oct-12 :: 23.4°C Relative Humidity:42.2 %	
	ent Asset Tag List : 1654, 1468, 1469, 1470, 1471	
RANGE ENGINEER	*RBW 100 kHz Marker 1 [T1 ]	
<b>4</b> 5/	*VBW 300 kHz -50.61 dBr	n
F	Ref 1.8 dBm	z
	0 Offset 30 7 dB Marker 2 [T1]	
	-50 31 dBr -10 2 571948750 GHs	
1 PK		
MAXH	20 D1 20.077 dB	
		LVL
	30	
-	40	
_	50	
	والمراجع والأنسية المتحول المراجع والمراجع والم والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع والمراجع	
-	600 and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco	- Tr
-	70	
-	80	
	90	
	100	
L	Start 30 MHz 297 MHz/ Stop 3 GH	z
Date:	9.OCT.2012 19:03:36	
Supplemental	al Information:	
	David Light	
Tested by (+ s	signature): David Light	



Table No. 59					Spur	ious	Fmis	sion	s			Verdict
												Р
Test Method										S Measureme	ent Guidanc	e v02
EUT Configura												
Power Input Test Date							ΗZ		1¢ <u> </u>			
Temperature							R	elativ	e Humidity	:42 4 %		
Test Equipmen									=	12.1.70		
			rker 1				RE		100 kHz	RF Att	10 dB	
R	ef Lvl			-42.	63 d	Bm	VE	ВW	1 MHz	Mixer	-20 dBm	
0	20 dBm		6.0	697123	304 G	Hz	SV	ΙΤ	5.6 s	Unit	dв	
	30.7 dB	Offset					10	GHz				A
-10												N
-10												
-20	D1 0 1 dm	m										
20	D1 0.1 ab											
-30												IN1
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-40												
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-70 <u>-</u>	hambala	mullum	WILL.		V-4 -41 ·	VV 44	/ <b>V</b> ()	•				
-80												
-90												
-100	_											
S	Start 3 GH									Sto	p 25 GHz	
Date:	10.0	OCT.2012	14:5	57:24								
Supplemental	Information	1:										
										11	1	
					_				6	Sand El	1	
Tested by (+ si	gnature)				Da	avid L	ıaht				10.0	



Table No. 60				Considera					Verdict
			•	Spurious	Emissioi	ns			Р
Test Method			: A1	NSI C63.1	0 and 558	3074 D01	DTS Meas	surement Guidand	e v02
EUT Configura	tion		: 80	2.11n mo	de Chan	. 6			
Power Input			: 12	0VAC, 60	Hz 🖂	1φ 🗌	3ф		
•							lity:42	.2 %	
Test Equipmen	t Asset Tag List		: 16	554, 1468,	1469, 14	70, 1471			
<b>B</b>						00 kHz	Marker	2 [T1 ]	
V R	ef 1.8 dBm	*	Att 1	0 dB	* VBW 3 * SWT 3	00 kHz	2	-51.24 dBm .936887500 GHz	
_		.7 dB		l ab	511 3		Marker		7
	0 011500 30	. , ab					Marker	-50.90 dBn	n
	-10						2	517746250 GHs	A
1 PK									
MAXH	20 D1 -20.	077 dB							
									LVL
	-30								
	-40								
	-50-							1 2	
				والمراف أحرور	al como un	and order	the annich distrib	Unandonia L	
	and former of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the	and large age and the					A desirate and the same of	Control of the State of Secondary	.,
L	-70								
	70								
	-80								
	-80-								
	0.0								
	-90-								
	-100								
S	tart 30 MHz	<u>l</u>		297	MHz/			Stop 3 GH	z
Date:	9.OCT.201	2 19:04	4:46						
Supplemental	Information:								
								11	
							6 Jane	I le	
Tested by (+ signature)	gnature)	:		David I	₋ight		NO WILL		



Table No. 61					Spur	ious	Emis	sion	s			Verdict
				_								Р
Test Method										TS Measurem	ent Guidance	÷ v02
EUT Configura												
Power Input Test Date							ПΖ		1φ 📙 3φ	)		
Temperature .							R	elativ	e Humiditv	:42.4 %		
Test Equipmen									=	, ,		
<b>√</b>			rker 1				RE		100 kHz	RF Att	10 dB	
RO RO	ef Lvl			-42.	29 d	Bm	VE	3W	1 MHz	Mixer	-20 dBm	
	20 dBm		6.	697123	304 G	Hz	SV	ΙΤ	5.6 s	Unit	dB	
	30.7 dB	Offset					10	GHz				A
-10											_	·N
10												
-20	D1 0 1 di	3m										
	21 011 a.											
-30-											ļ.,	:N1
1	1MAX											.MA
-40												
-50												
-60				1								
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-70	Man Maria		~									
-80												
-90												
-100		-									05 677	
	tart 3 GH									Sto	p 25 GHz	
Date:		OCT.2012	2 15:1	3:49								
Supplemental	Information	n:										
										82		
										011	1	
Tested by (+ sig	anaturo)				D	avid I	iaht		!	Wand E	1	



Table No. 62			Spurious	s Emiss	ions				Verdict
									P
						001 DTS	Measur	ement Guid	ance v02
_	tion					_			
-				0 Hz [	<b>⊠</b> 1φ				
				_					
•						midity	:42.2 9	%	
Test Equipment	t Asset Tag List	:	1654, 1468	3, 1469,	1470, 14	171			
1	Ref Lvl 13.7 dBm 3.7		] 5.57 dBm 5198 GHz	RBW VBW SWT	100 k 300 k 240 m	Hz M	- Att ixer nit	0 dB -20 dBm dBm	
1	10 30.7 dB Offse	e t						A	
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	0								
				L.					
	-10			<del>-/1</del>					
	-20 1VIEH							1 M	A
	-30								
	-40								
	-50								
				, \	M				
	-60 manunummummummummummummummummummummummummu	May May May March	Ly Henry Will	<i>y</i> "()	of thereby	white	Mhymylin	where	
	-70								
	-80								
-8	6.3								
	Start 1.9 GHz		95.77681	451 MHz	/	Stop 2	.857768	145 GHz	
Da	ate: 29.0CT.2	2012 09:39:5	7						
Supplemental	Information:								
						- /	7 /	1 1	
						(/	land	410	
Tested by (+ sig	gnature)	:	David	Light		X	Wat		



Spurious Emissions         P           Test Method
EUT Configuration : 802.11n mode Chan. 11  Power Input : 120VAC, 60 Hz ☑ 1∮ ☐ 3∮  Test Date : 10-Oct-12  Temperature : 23.0°C Relative Humidity:42.4 %  Test Equipment Asset Tag List : 1767, 1468, 1469, 1470, 1471    Marker 1 [T1] RBW 100 kHz RF Att 10 dB
Power Input : 120VAC, 60 Hz ☑ 1∮ ☐ 3∮  Test Date : 10-Oct-12  Temperature : 23.0°C Relative Humidity:42.4 %  Test Equipment Asset Tag List : 1767, 1468, 1469, 1470, 1471   Marker 1 [T1] RBW 100 kHz RF Att 10 dB
Test Date : 10-Oct-12  Temperature : 23.0°C Relative Humidity ::::42.4 %  Test Equipment Asset Tag List :: 1767, 1468, 1469, 1470, 1471  Marker 1 [T1] RBW 100 kHz RF Att 10 dB
Temperature: 23.0°C Relative Humidity:42.4 %  Test Equipment Asset Tag List: 1767, 1468, 1469, 1470, 1471  Marker 1 [T1] RBW 100 kHz RF Att 10 dB
Test Equipment Asset Tag List: 1767, 1468, 1469, 1470, 1471    Marker 1 [T1]   RBW 100 kHz RF Att 10 dB
Ref Lvl $-42.29~\mathrm{dBm}$ VBW 1 MHz Mixer $-20~\mathrm{dBm}$
20 dBm 6.69712304 GHz SWT 5.6 s Unit dB
30.7 dB Offset 10 GHz
-10 LN
-20 D1 0.1 dBm
-30 IN1
1MAX 1MA
-40
-50
-60
and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of th
-70
-80
-90
-100 Start 3 GHz Stop 25 GHz
Date: 10.OCT.2012 15:15:35
Supplemental Information:
Tosted by (+ signature) : David Light
Tested by (+ signature): David Light

Revision: 0 Issue Date: 26-Oct-12



Table No. 64		Snur	rious Emissis	no Unnor Por	nd Edga		Verdict				
		Spui	rious Emissio	ns – Upper Baı	na Eage		Р				
					D01 DTS M	leasurement Gui	dance v02				
EUT Configurat											
Power Input				60 Hz ⊠ 1φ	□ 3φ						
Test Date				5							
Temperature					lumidity	42.2 %					
Test Equipment	Asset Tag List		: 1654, 146	8, 1469, 1470, 1	14/1						
<b>Q</b>	Ref Lvl	Marker 1	-47.38 dBm	VBW 1	MHz Mix						
13	13.7 dBm 2.48350000 GHz SWT 5 ms Unit dBm										
	10 30.7 dB 0	ttset				<del>-  </del>	A				
	0		. 4. 0								
		<u> </u>	my								
-	10										
			11				4.4.4				
_	20 1VIEW						1AV				
	20										
_	30										
_	40	w^									
		JANKA	"\	1							
_	50		1								
	when	/		M							
-	60			wyther around	Mullingum	/ Ville					
-	70										
	80										
-86	.3										
	Center 2.48	35 GHz	15.5218	375 MHz/	Span	155.21875 MHz					
Dat	e: 29.00	CT.2012 09:3	31:46								
Supplemental	Supplemental Information:										
		Measure	ed	Power at	Field	Field					
	Frequenc				strength	strength					
	(MHz)										

Tested by (+ signature) ...... David Light

4.75

5.458E-08

0.000427

52.6

-47.38

2483.5

Revision: 0 Issue Date: 26-Oct-12



**Test Results – Power Spectral Density** 

Revision: 0 Issue Date: 26-Oct-12



Table No. 65	Power Spectral Density	Verdict										
	1 Ower Spectral Delisity	Р										
	: 558074 D01 DTS Measurement Guidance v02											
_	ation 802.11b mode, Chan. 1											
	120VAC, 60 Hz											
	9-Oct-12											
	: 23.4°C Relative Humidity:42.2 %											
Test Equipmen	nt Asset Tag List : 1654, 1468, 1469, 1470, 1471											
*RBW 100 kHz Marker 1 [T1 ]												
	*VBW 300 kHz -8.62 dBm  Ref 14.8 dBm *Att 10 dB SWT 2.5 ms 2.411050000 GHz											
	Offset 15.5 dB											
	-10 D1 8 dBm											
-	.											
	PK O O											
	LVL											
LVL												
-20												
-30												
	-40											
	-50 MMM											
	Simulation of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of th											
	-60											
	70											
	80-											
	Center 2.412 GHz 2.5 MHz/ Span 25 MHz											
Da	ate: 9.OCT.2012 17:36:15											
Supplemental	Information:											
Supplemental Information:												
	$\bigcap A \cap A$											
Tested by (+ signature) David Light												
Tested by (+ signal	Tested by (+ signature) David Light											

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Table No. 66				P	ower Sp	ectral De	ensity					Verdict
												Р
Test Method						ement Gu	uidance v	/02				
EUT Configurat												
Power Input						□ 3φ             □						
Test Date				2								
Temperature							ative Hu	midity	:42.2 %	)		
Test Equipment	t Asset Tag	List : '			), 1470, 1	471						
	<b>)</b>		Marker		0.5 1.5	RBW	200 k		- Att	20 dB		
***	Ref Lvl 15.5 dB	m	-11.95 dBm VBW 300 kHz Mixer -20 dBm 2.42301403 GHz SWT 500 ms Unit dBm									
15.	5										1	
1	15.5 dl		e t				<b>V</b> 1	[T1]	-11 2 42301	.95 dBm 403 GHz	Α	
	"—D18dB	m <del></del>							2.42301	4U3 6HZ	LN	
-1	10					1						
					muny	MM.						
-2	20				W \	'VY	۸				1MA	
				ſ	ή '		1					
3	30						1/4					
_				J <sup>*</sup> V			ľЧ					
-2	10			J								
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F	50 <del>m / 1 ko k</del>	الم مقار	Mu	M			7	Mill	4			
	D WILLIAM DE	MINIOUN	- June						MANNAMA	Mermony		
-E	20											
- t	30											
_	70											
-7	70											
-84 - 84												
-04.	Center 2	.422 G	Hz		4.4	MHz/			Span	44 MHz		
Dat	e: 2E	.OCT.2	2012 11	:24:16								
Supplemental	Information	ո։										
									7 1	1		
								(/	and c	411		
Tested by (+ sig	anature)		:		David	Liaht		X	was c	A.		



Table No. 67		Power Spectral Density										Verdict P
Test Method		. 55	8074 D0	01 DTS I	Measurer	ment Gu	idance vi	<u> </u>				<u> </u>
EUT Configura						nent Ou	idance vi	<i>52</i>				
Power Input						□ 3₼						
Test Date				,011Z [	Δ Ψ	Οψ						
Temperature .						Rela	ative Hun	niditv	:42.2 %			
Test Equipmen				8, 1469,	1470, 14			,	/.			
	<u> </u>						.00 kHz	Marker	1 [T1	1		
~	S/ D-5 14	0 45		* 7 1	Q. 4D		00 kHz	0		.60 dBm		
Ref 14.8 dBm *Att 10 dB SWT 2.5 ms 2.438000000 GHz  Offset 15.5 dB												
-10												
	A STATE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE											
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	~~~~									WW TANK		
	60									. •		
	70											
	80											
	Center	2.437 G	Hz	1	2.5	MHz/			Spar	ı 25 MHz	ļ	
Da	te: 9	.OCT.201	L2 17:3	37:10								
Supplemental	Information	:										
								. ,	7 ,			
								6	and c	Din		
Tested by (+ sig	anature)		:		David	Liaht		W	tuck (	4		



Table No. 68				P	ower Sp	ectral De	ensitv					Verdict
												Р
Test Method						ement Gu	uidance v	/02				
EUT Configuration												
Power Input					<b>⊠</b> 1φ	∃						
Test Date				2								
Temperature							ative Hu	midity	:42.2 %	)		
Test Equipmen	t Asset Tag	List :			, 1470, 1							
<u> </u>	Ref Lvl		Marker		15 dBm	RBW VBW	200 k		F Att	20 dB -20 dBm		
<u> </u>	15.5 dBr	m	-12.15 dBm VBW 300 kHz Mixer -20 dBm 2.45301403 GHz SWT 500 ms Unit dBm									
15					1			[T1]				
;	10 D1 8 dB		, , ,				*1	[   1 ]	-12 2 45301	.15 dBm 403 GHz	A LN	
	D1 8 0D									100 0112	LIN	
-:	10					1 NY						
					www	muy.					4344	
-2	20			N	1	١٩	4				1MA	
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-3	30			$-\mathcal{A}$			<del>- VY</del>					
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-6	60											
	70											
3-	30											
-84	.5 Center 2	/52 F	Hz		1 1	MHz/			Snan	44 MHz		
Dat		.432 C		:25:22	4.4	111127			эрап	44 11112		
			2012 11	:20:22								
Supplemental	information	1:										
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								(1	and c	1/1		
Tested by (+ sig	anature)		:		David	Light		X	auct (	4		

Revision: 0 Issue Date: 26-Oct-12



Table No. 69  Power Spectral Density	Verdict										
Fower Spectral Delisity	Р										
Test Method: 558074 D01 DTS Measurement Guidance v02											
EUT Configuration: 802.11b mode, Chan. 11											
Power Input 120VAC, 60 Hz ⊠ 1φ □ 3φ											
Test Date 9-Oct-12											
Temperature: 23.4°C Relative Humidity:42.2 %											
Test Equipment Asset Tag List: 1654, 1468, 1469, 1470, 1471											
*RBW 100 kHz Marker 1 [T1 ]											
*VBW 300 kHz $-7.86$ dBm Ref 14.8 dBm *Att 10 dB SWT 2.5 ms $2.462500000$ GHz											
Offset 15 5 dB											
D1 8 dBm											
1 PK MAXH											
-10 LVL											
LVL											
-20											
-30											
-40											
minut   I   I   I   I   I   I   I   I   I											
60-											
-70											
-80											
Center 2.462 GHz 2.5 MHz/ Span 25 MHz											
Date: 9.OCT.2012 17:38:58											
Supplemental Information:											
(1 11)											
Tested by (+ signature) David Light											

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Table No. 70		Power Spectral Density									
				PU	wer Spe	Cirai De	пыц				Р
Test Method		: 55	8074 D	D1 DTS I	Measurer	ment Gu	idance v	02			
EUT Configuration	ion	: 80	2.11g m	ode, Ch	an. 1						
Power Input		: 12	OVAC, 6	60 Hz	<b>⊠</b> 1φ	□ 3φ					
Test Date											
Temperature							itive Hun	nidity	:42.2 %		
Test Equipmen	Asset Tag L	_ist : 16	54, 146	8, 1469,	1470, 14	71					
<b>§</b>							00 kHz	Marker			
~	Ref 14	.8 dBm		*Att 1	0 dB		00 kHz	2	-14 .415750	.63 dBm 000 GHz	
	Offset 15 5 dB										
	-10	D1 8 dB	m-							A	
	-0										•
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	10									LV	L
							<b>†</b>				
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	40	N							- W	<u>۷</u>	
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	<b></b> 50										
	60										
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	, ,										
	80										
										05	
	Center	2.412 G	HZ		2.5	MHz/			Span	25 MHz	
Dat		OCT.201	.2 17:4	40:57							
Supplemental Information:											
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Tested by (+ signature) David Light											



Table No. 71		Power Spectral Density										Verdict
												Р
Test Method						ement Gu	idance \	/02				
EUT Configura			_			_						
Power Input					<b>⊠</b> 1φ	<b>∐</b> 3φ						
Test Date				2		5.						
Temperature .				00 4400	4.470 4		ative Hu	midity	:42.2 %	)		
Test Equipmen	t Asset Tag	List :			, 1470, 1		400 1		- Att	00 10		
	Ref Lvl		Marker		26 dBm	RBW VBW	100 k 300 k		- Att ixer	20 dB -20 dBm		
~	15.5 dl	3m	2.42327856 GHz SWT 500 ms Unit dBm									
15	.5	dB Offs	se t				<b>▼</b> 1	[T1]	-17	.26 dBm		
	10 D1 8 d	Bm							2.42327	856 GHz	LN	
	4.0											
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-6	50											
	70											
-8	30											
-84	.5 Center	2 122 [	<u>l</u> SHz		4.4	MHz/			Snan	44 MHz		
Da t		2.422 C		:27:48	4.4	111127			Span	44 11112		
Supplemental			2012 11	.21.40								
Oupplemental	mormatic	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										
								/	7 1	1		
Tested by (+ signature) David Light												
Tested by (+ sig	gnature)		:		David	Light		X	war, L	4		



Table No. 72	Power Spectral Density	Verdict P										
Test Method	: 558074 D01 DTS Measurement Guidance v02	<u> </u>										
	ion: 802.11g mode, Chan. 6											
=	: 120VAC, 60 Hz											
	: 16-Nov-11											
	: 23.4°C Relative Humidity:42.2 %											
	Asset Tag List : 1654, 1468, 1469, 1470, 1471											
	*RBW 100 kHz Marker 1 [T1 ]											
× ×	*VBW 300 kHz -14.00 dBm											
	Ref 14.8 dBm * Att 10 dB SWT 2.5 ms 2.439500000 GHz  Offset 15.5 dB											
	-10 D1 8 dBm											
DI O UBILI												
	PK											
MAXH												
-20 marker broken from home from home from the first of t												
	-30											
	-40											
	Wind war war war war war war war war war war											
	60											
	70											
	-80											
	Center 2.437 GHz 2.5 MHz/ Span 25 MHz											
Da	te: 9.OCT.2012 17:41:38											
Supplemental	Information:											
	mature) David Light											
Tested by (+ signature) David Light												



Table No. 73				P	ower Sp	ectral De	ensitv					Verdict
												Р
Test Method						ement Gu	ıidance v	/02				
EUT Configuration			_									
Power Input					<b>⊠</b> 1φ	□ 3φ						
Test Date				2								
Temperature					4.70.4		ative Hu	midity	:42.2 %	)		
Test Equipmen	t Asset Tag	j List:			, 1470, 1							
S. Contraction of the contractio	Ref Lvl		Marker		13 dBm	RBW VBW	100 k 300 k		- Att ixer	20 dB -20 dBm		
~	15.5 d	Bm	2.45451303 GHz SWT 500 ms Unit dBm									
15.	15.5	dB Offs	se t		1		▼1	[T1]	-17	.13 dBm		
:	10 <u></u>						. 1	FIIJ	2.45451		LN	
	0											
-:	10											
	1MAX				١	$\begin{bmatrix} 1 \\ 1 \end{bmatrix}$					1MA	
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r	10											
-84 -84												
	Center	2.452 (	SHz		4.4	MHz/			Span	44 MHz		
Dat	e: 2	26.OCT.	2012 11	:28:47								
Supplemental	Informatio	on:										
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<b>-</b>					<b>.</b>			6	and C	4		
Tested by (+ sig	ınature)				David	Light						



Table No. 74	Power Spectral Density	Verdict										
Toot Mothod		Р										
	: 558074 D01 DTS Measurement Guidance v02 ation 802.11g mode, Chan. 11											
_												
	: 23.4°C Relative Humidity :42.2 %											
	at Asset Tag List: 1654, 1468, 1469, 1470, 1471											
	*RBW 100 kHz Marker 1 [T1 ]											
~	*VBW 300 kHz -12.37 dBm											
	Ref 14.8 dBm *Att 10 dB SWT 2.5 ms 2.463250000 GHz  Offset 15 5 dB											
	-10											
	DI 8 GBIII											
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-20 mboolean nombroulant perhantement and and handy												
-30												
	Ludward Warner											
	U-Jan V											
	60											
	70											
	-80											
	Center 2.462 GHz 2.5 MHz/ Span 25 MHz											
Da	ate: 9.OCT.2012 17:42:45											
Supplemental	Information:											
•												
	(1 11.1)											
Tested by (+ signature) . David Light												



Table No. 75			Verdict								
			POV	wer Spe	ctral De	nsity				Р	
Test Method		.: 558074 D0	1 DTS M	leasurer	ment Gu	idance v	02				
EUT Configuratio											
Power Input			0 Hz	☑ 1φ	□ 3φ						
Test Date											
Temperature						ative Hur	midity	. :42.2 %			
Test Equipment A	sset Tag List	: 1654, 1468	3, 1469, 1	1470, 14	71						
*RBW 100 kHz Marker 1 [T1 ]											
~	Ref 14.8	dBm	*Att 10	) dB	*VBW 3	00 kHz ms	2	-13 .413320	.88 dBm 000 GHz		
	Offset 15.5 dB										
	-10	8 dBm							A		
1 71											
1 PE											
	10				1				LVL		
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	WW										
	60										
	-70										
	80										
	Center 2.4	112 GHz		3 M	IHz/			Span	30 MHz		
Date	e: 9.00	T.2012 17:	53:03								
Supplemental Information:											
Cappionicità inicitiation											
							1.	11	1.		
Tootod by (1 size	atura)			Dovid	l iah <del>t</del>		W	and c	4		
Tested by (+ sign	aiure)			David I	∟ıg⊓t						



Table No. 76	Power Spectral Density									Verdict		
											Р	
	: 558074 D01 DTS Measurement Guidance v02											
EUT Configuration: 802.11n mode, Chan. 3												
	wer Input 120VAC, 60 Hz ⊠ 1φ □ 3φ											
	st Date 26-Oct-12											
Temperature: 23.4°C Relative Humidity:42.2 %												
Test Equipment Asset Tag List: 1654, 1468, 1469, 1470, 1471												
<b>S</b>	Ref Lvl		Marker		.82 dBm	RBW VBW	100 k 300 k		Att ixer	20 dB -20 dBm		
<u> </u>	15.5 dB	m	2	. 42327E		SWT	500 K		nit	dBm		
15	.5 15.5 d	R Offe	3 <b>a</b> t		Ι							
	10 D1 8 dE		50 1				<b>▼</b> 1	[T1]	-17 2.42327	.82 dBm 856 GHz	LN	
	0											
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-2	20 1MAX			ment	A July In	what i					THH	
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-5	50 wwwwwwww	March Company	~ AAPV					· VIII.	Madday March	MANAMA		
-6	50											
_	70											
	30											
-84	Center 2	.422 (	- <b>I</b> GHz		4.4	MHz/			Span	44 MHz		
Date: 26.0CT.2012 11:30:18												
Supplemental Information:												
								1	7 1	1		
Tested by (+ signature) . David Light												
Tested by (+ signature) David Light												

Revision: 0 Issue Date: 26-Oct-12



Test Method	Table No. 77	Power Spectral Density										
EUT Configuration												
Power Input												
Test Date												
Temperature				∐ 3¢								
Test Equipment Asset Tag List: 1654, 1468, 1469, 1470, 1471  **Rew 100 kHz   Marker 1 [T1]   14.60 dBm   2.434480000 GHz  Ref 14.8 dBm   *Att 10 dB   SNT 5 ms   2.434480000 GHz  **The state of the sta												
*RBW 100 kHz *VSW 300 kHz *14.8 dBm *Att 10 dB *SWT 5 ms 2.434480000 GHz *15   5 dB *10 dB *SWT 5 ms 2.434480000 GHz *10 dB *10												
Ref 14.8 dBm *Att 10 dB SWT 5 ms 2.434480000 GHz  Offset 15 5 dB	rest Equipment Asset Tag List : 1004, 1409, 1470, 1471											
Ref. 14.8 dBm *Att 10 dB SWT 5 ms 2.434480000 GHz  Off set 15 5 dB  -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -												
10 D1 8 dBm												
0			dB									
-10 -20 -30 -40 -40 -40 -40 -40 -40 -40 -40 -40 -4		D1 8 dBm-			A							
-10 -20 -40 -40 -40 -40 -40 -40 -40 -40 -40 -4	-	-0-										
Center 2.437 GHz 3 MHz/ Span 30 MHz  Date: 9.0CT.2012 17:55:19  Supplemental Information:		10			LVL							
Center 2.437 GHz 3 MHz/ Span 30 MHz  Date: 9.0CT.2012 17:55:19  Supplemental Information:			, , , ,   † , ,									
Center 2.437 GHz 3 MHz/ Span 30 MHz  Supplemental Information:		20	10 hardwall	1 hapman manger	Alexandra de la companya della companya de la companya de la companya della companya della companya de la companya de la companya della compa							
Date: 9.0CT.2012 17:55:19  Supplemental Information:				Y								
		30										
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Center 2.437 GHz 3 MHz/ Span 30 MHz  Date: 9.0CT.2012 17:55:19  Supplemental Information:		-40			N <sub>a</sub>							
Center 2.437 GHz 3 MHz/ Span 30 MHz  Date: 9.0CT.2012 17:55:19  Supplemental Information:		1- Mr. March			The state of the s							
Date: 9.0CT.2012 17:55:19  Supplemental Information:		Ang Market			- Wt							
Date: 9.0CT.2012 17:55:19  Supplemental Information:		60										
Center 2.437 GHz 3 MHz/ Span 30 MHz  Date: 9.0CT.2012 17:55:19  Supplemental Information:												
Center 2.437 GHz 3 MHz/ Span 30 MHz  Date: 9.OCT.2012 17:55:19  Supplemental Information:		70										
Center 2.437 GHz 3 MHz/ Span 30 MHz  Date: 9.OCT.2012 17:55:19  Supplemental Information:												
Date: 9.OCT.2012 17:55:19  Supplemental Information:		80										
Date: 9.OCT.2012 17:55:19  Supplemental Information:		Contor 2 427 CUS	2	MILT /	Cnon 20 MUG							
Supplemental Information:		Center 2.43/ Gnz	3	MHZ/	Spail 30 MHz							
Supplemental Information:												
(1) 1 Lea	Supplemental Information:											
Q. 1 Lea												
Q. 120												
(1) 11 Dec												
17 1. 17 90 1/					(1) 11 Den							
Tested by (+ signature) David Light	Tested by (+ sid	Tested by (+ signature) David Light										

Nemko USA, Inc. 802 N. Kealy Ave. Lewisville, TX USA Tel: +1 972-436-9600 Fax: +1 972-436-9600



Table No. 78	Power Spectral Density										Verdict	
										Р		
	558074 D01 DTS Measurement Guidance v02											
EUT Configuration												
	/er Input 120VAC, 60 Hz ⊠ 1φ □ 3φ											
	: 26-Oct-12											
Temperature: 23.4°C Relative Humidity:42.2 %												
Test Equipment Asset Tag List: 1654, 1468, 1469, 1470, 1471												
S.	Ref Lvl		Marker		16 dBm	RBW VBW	100 k 300 k		- Att ixer	20 dB -20 dBm		
~	15.5 dBm		2	.450721		SWT	500 M		nit	dBm		
15.	.5 15.5 dB	Offs	e t				▼1	[T1]	1.0	.16 dBm	l	
:	10 -D1 8 dBm						. 1	[11]	-10 2.45072	.10 UBIII 144 GHz	LN	
	T											
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54.	Center 2.	452 E	iHz		4.4	MHz/			Span	44 MHz	•	
Date: 26.0CT.2012 11:31:06												
Supplemental	Supplemental Information:											
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								/.	11	11		
Tested by (+ signature) : David Light												
Tested by (+ sig	anature)		:		David	Light		,	No.			



Table No. 79	Power Spectral Density									Verdict	
Test Method: 558074 D01 DTS Measurement Guidance v02											
EUT Configuration 802.11n mode, Chan. 11											
Power Input											
Test Date											
Temperature: 23.3°C Relative Humidity:42.2 %											
Test Equipment Asset Tag List: 1654, 1468, 1469, 1470, 1471											
*RBW 100 kHz Marker 1 [T1 ]  *VBW 300 kHz -14.90 dBm											
·	Ref :	14.8 dBm		*Att 1	0 dB	SWT 5		2		000 GHz	
		fset 15	.5 dB								
	-10	—D1 8 dB	m							A	l
	-0										
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	70										
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	80										
		0.460.6								20.157	
Center 2.462 GHz 3 MHz/ Span 30 MHz											
Date: 9.OCT.2012 17:57:02											
Supplemental Information:											
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Total by (1 signature)											
Tested by (+ signature) Click here to enter text.											

Revision: 0 Issue Date: 26-Oct-12



## **RF Exposure**



Table No. 80	able No. 80  RF Exposure						
	: ANSI C.95 and Safety Code 6						
	ion Body SAR configuration						
Power Input	120VAC, 60 Hz ⊠ 1φ □ 3φ						
	Refer to separate SAR test report						
	recicl to separate OAR test report						
Supplemental	Information:						

Revision: 0 Issue Date: 26-Oct-12



## **Setup Photos**





