

## FCC 47 CFR PART 15 SUBPART C

Product Type : Rugged Tablet PC  
Applicant : Handheld Group AB  
Address : Kinnegatan 17, 53133 , Lidköping , Sweden  
Trade Name : handheld  
Model Number : ALGIZ 10XB, ALGIZ 10XBxxx (x=0~9, A~Z, a~z or blank or slash;  
for marketing purpose only and no impact safety related  
constructions and critical components)  
Test Specification : FCC 47 CFR PART 15 SUBPART C: Oct., 2013  
Canada RSS-210 ISSUE 8: Dec., 2010  
Canada RSS-Gen ISSUE 4: Nov., 2014  
ANSI C63.4:2014  
CISPR 16-1-4:2010  
Receive Date : Dec. 25, 2014  
Test Period : Dec. 26, 2014 ~ Jan. 06, 2015  
Issue Date : Jan. 27, 2015

### Issue by

A Test Lab Techno Corp.  
No. 140-1, Changan Street, Bade City,  
Taoyuan County 334, Taiwan R.O.C.  
Tel : +886-3-2710188 / Fax : +886-3-2710190



Taiwan Accreditation Foundation accreditation number: 1330

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**Revision History**

Rev.	Issue Date	Revisions	Revised By
00	Jan. 27, 2015	Initial Issue	

## Verification of Compliance

Issued Date: 01/27/2015

Product Type : Rugged Tablet PC  
Applicant : Handheld Group AB  
Address : Kinnegatan 17, 53133 , Lidköping , Sweden  
Trade Name : handheld  
Model Number : ALGIZ 10XB, ALGIZ 10XBxxx (x=0~9, A~Z, a~z or blank or slash; for marketing purpose only and no impact safety related constructions and critical components)  
FCC ID : YY3-ALGIZ10XB  
EUT Rated Voltage : DC 19V, 3.42A  
Test Voltage : 120 Vac / 60 Hz  
Applicable Standard : FCC 47 CFR PART 15 SUBPART C: Oct., 2013  
Canada RSS-210 ISSUE 8: Dec., 2010  
Canada RSS-Gen ISSUE 4: Nov., 2014  
ANSI C63.4:2014  
CISPR 16-1-4:2010  
Test Result : Complied  
Performing Lab. : A Test Lab Techno Corp.  
No. 140-1, Changan Street, Bade City,  
Taoyuan County 334, Taiwan R.O.C.  
Tel : +886-3-2710188 / Fax : +886-3-2710190  
Taiwan Accreditation Foundation accreditation number: 1330  
<http://www.atl-lab.com.tw/e-index.htm>



The above equipment was tested by A Test Lab Techno Corp. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4:2014 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247 .

The test results of this report relate only to the tested sample identified in this report.

Approved By : Fly Lu Reviewed By : Eric Ou Yang  
(Manager) (Fly Lu) (Testing Engineer) (Eric Ou Yang)

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## 1 General Information

### 1.1 Summary of Test Result

Standard		Item	Result	Remark
15.247	RSS-GEN			
15.207	8.8	AC Power Conducted Emission	PASS	-----
-----	7.1	Receiver Radiated Emissions	PASS	-----
-----	6.6	99 % Occupied Bandwidth	PASS	-----
Standard		Item	Result	Remark
15.247	RSS-210			
15.247(d)	A8.5	Transmitter Radiated Emissions	PASS	-----
15.247(b)(3)	A8.4	Max. Output Power	PASS	-----
15.247(a)(2)	A8.2 (a)	6dB RF Bandwidth	PASS	-----
15.247(e)	A8.2 (b)	Power Spectral Density	PASS	-----
15.247(d)	A8.5	Out of Band Conducted Spurious Emission	PASS	-----
15.247(d)	A8.5	Band Edge Measurement	PASS	-----
15.203	-	Antenna Requirement	PASS	-----

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

### 1.2 Measurement Uncertainty

Test Item	Frequency Range		Uncertainty (dB)
Conducted Emission	9kHz ~ 30MHz		± 2.02
Radiated Emission	30MHz ~ 1000MHz	Horizontal	± 3.98
		Vertical	± 3.62
	1000MHz ~ 18000MHz	Horizontal	± 3.11
		Vertical	± 3.07
	18000MHz ~ 40000MHz	Horizontal	± 3.66
		Vertical	± 3.54

## 2 EUT Description

Product Type	Rugged Tablet PC		
Trade Name	handheld		
Model No.	ALGIZ 10XB, ALGIZ 10XBxxx (x=0~9, A~Z, a~z or blank or slash; for marketing purpose only and no impact safety related constructions and critical components)		
Applicant	Handheld Group AB Kinnegatan 17, 53133, Lidköping, Sweden		
Manufacturer	Handheld Group AB Kinnegatan 17, 53133, Lidköping, Sweden		
FCC ID	YY3-ALGIZ10XB		
Frequency Range	IEEE 802.11b / 802.11g / 802.11n 2.4GHz 20MHz: 2412 ~ 2462 MHz		
Modulation Type	IEEE 802.11b:DSSS IEEE 802.11g:DSSS + OFDM IEEE 802.11n 2.4GHz 20MHz: OFDM		
Antenna Used	Antenna	Type	Max. Gain
	Main	Internal Antenna	1.57 dBi
	Aux	Internal Antenna	1.17 dBi
Antenna Delivery	1TX + 1RX		
RF Output Power	IEEE 802.11b: 0.071 W / 18.53 dBm IEEE 802.11g: 0.135 W / 21.29 dBm IEEE 802.11n 2.4GHz 20MHz: 0.131 W / 21.17 dBm		
99 % Occupied Bandwidth	IEEE 802.11b: 14.53 MHz IEEE 802.11g: 17.10 MHz IEEE 802.11n 2.4GHz 20MHz: 18.17 MHz		
Emission Designator	IEEE 802.11b: 14M5G1D IEEE 802.11g: 17M1D1D IEEE 802.11n 2.4GHz 20MHz: 18M1D1D		

### 3 Test Methodology

#### 3.1. Mode of Operation

Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Normal Operation Mode
Mode 2: IEEE 802.11b Link Mode
Mode 3: IEEE 802.11g Link Mode
Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode
Mode 5: Receiver Mode

Software used to control the EUT for staying in continuous transmitting mode was programmed.

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz and power line conducted emissions below 30MHz, which worst case was in normal link mode only.

IEEE 802.11b mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 1Mbps data rate were chosen for full testing.

IEEE 802.11g mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with 6Mbps data rate were chosen for full testing.

IEEE 802.11n 2.4GHz 20MHz mode:

Channel Low (2412MHz), Channel Mid (2437MHz) and Channel High (2462MHz) with MCS0 data rate were chosen for full testing.

By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that "X axis" position was the worst, then the final test was executed the worst condition and test data were recorded in this report.

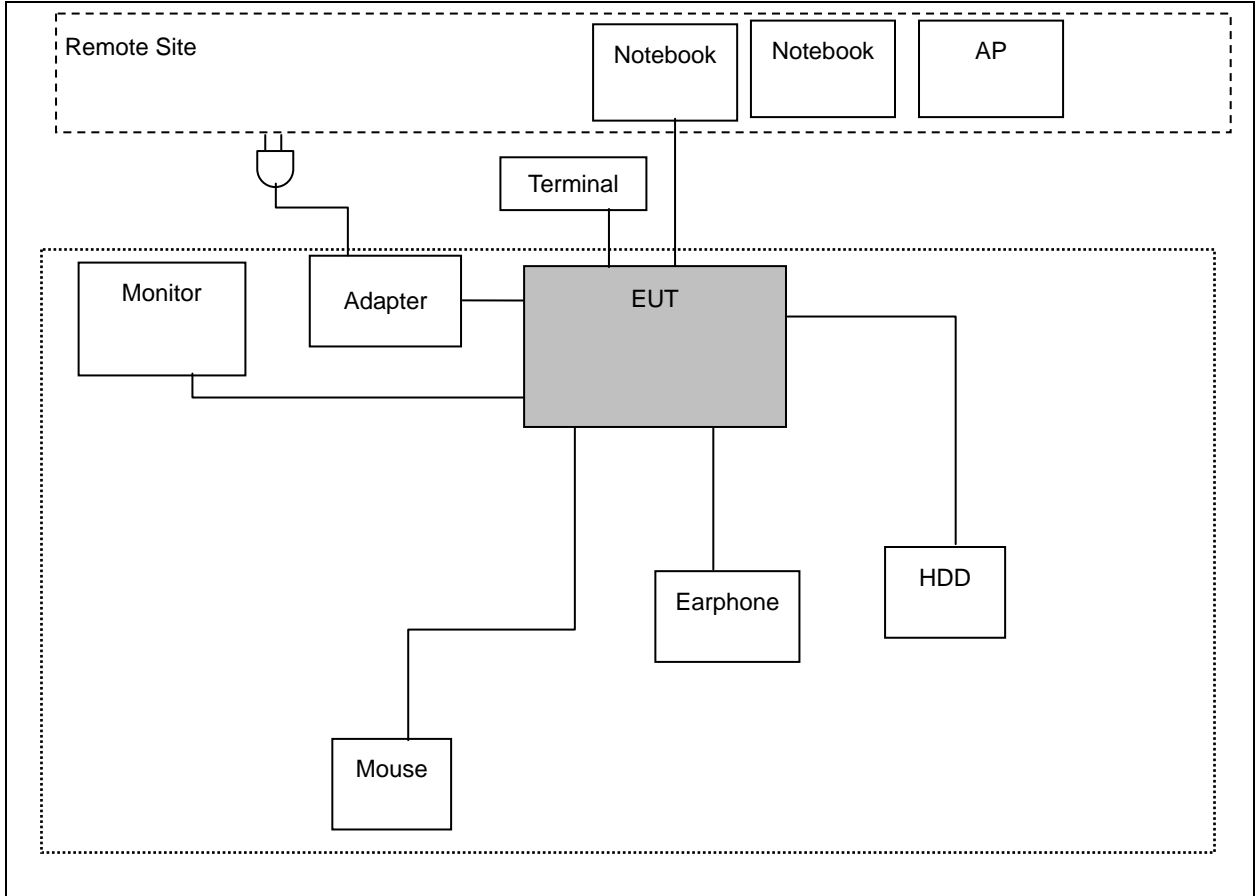
#### 3.2. EUT Exercise Software

1. Setup the EUT shown on 3.3.
2. Turn on the power of all equipment.
3. Turn on Wi-Fi function link to AP.
4. EUT run test program.

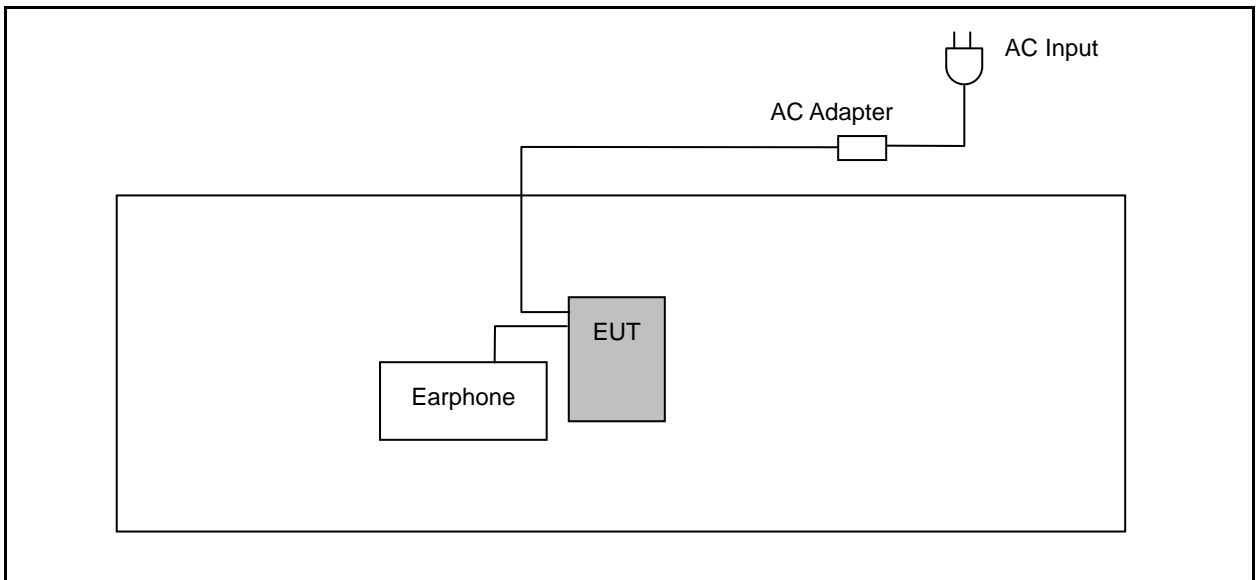


### 3.3. Configuration of Test System Details

#### Conducted Emissions



#### Radiated Emissions



### 3.4. Test Site Environment

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

## 4 Conducted Emission Measurement

### 4.1. Limit

Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

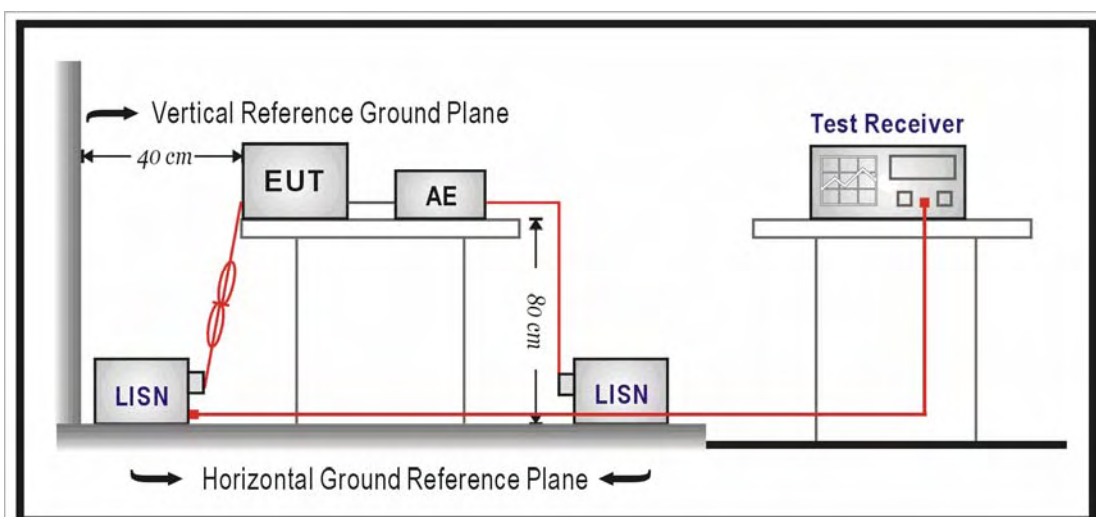
### 4.2. Test Instruments

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	06/12/2014	(1)
LISN	R&S	ENV216	101040	03/07/2014	(1)
LISN	R&S	ENV216	101041	03/07/2014	(1)
Test Site	ATL	TE02	TE02	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 4.3. Test Setup



#### 4.4. Test Procedure

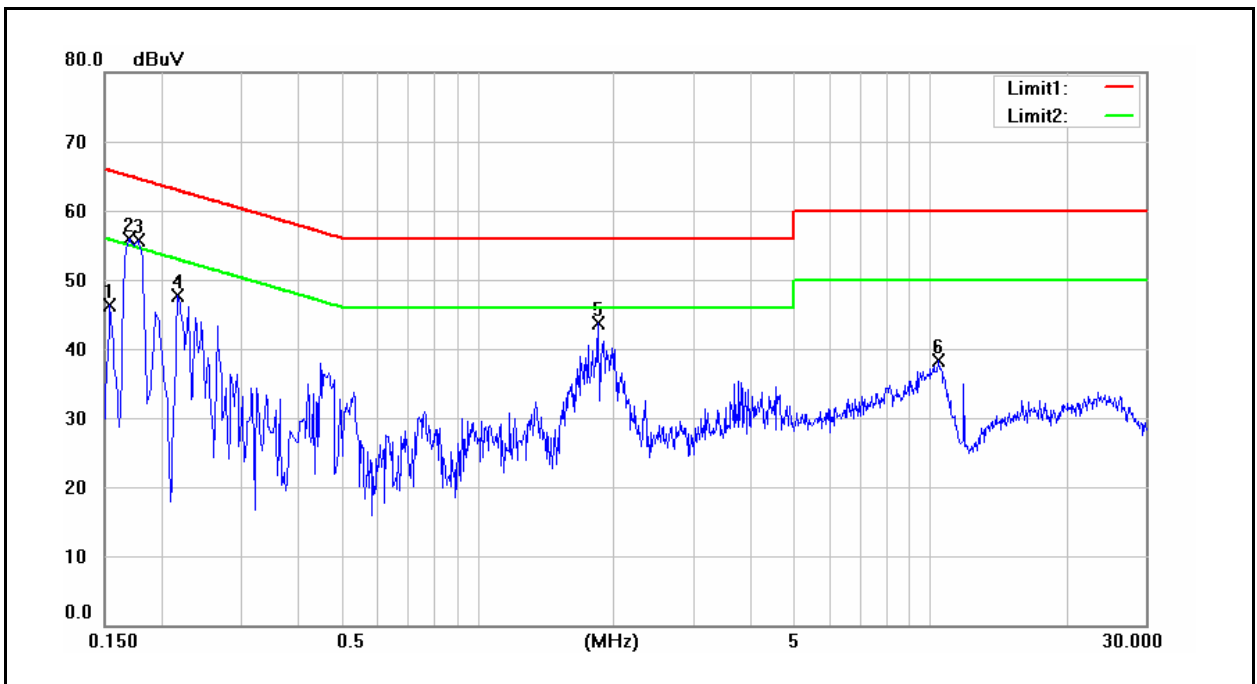
The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3162/2 SH Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPR quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 4.1.

#### 4.5. Test Result

Standard:	FCC Part 15C	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	ALGIZ 10XB	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	12/26/2014
		Test By:	Eric Ou Yang
Description:			

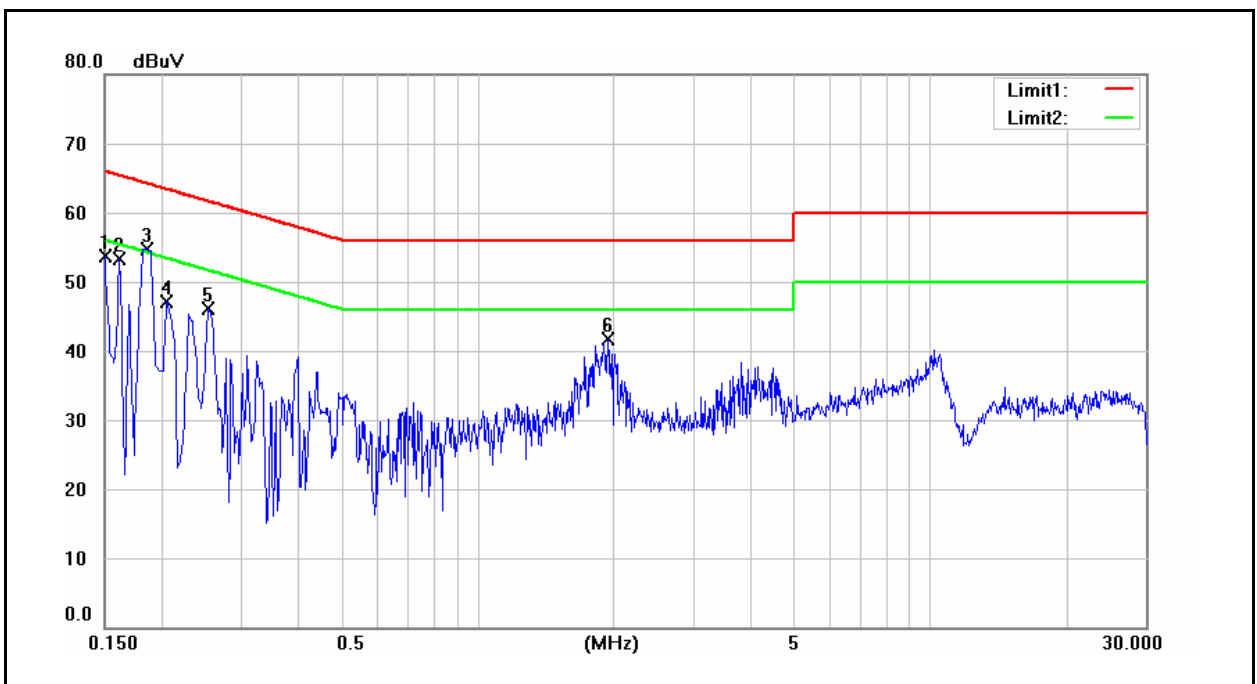


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	34.39	11.65	9.60	43.99	21.25	65.78	55.78	-21.79	-34.53	Pass
2	0.1700	36.10	11.85	9.60	45.70	21.45	64.96	54.96	-19.26	-33.51	Pass
3	0.1780	38.28	17.40	9.60	47.88	27.00	64.58	54.58	-16.70	-27.58	Pass
4	0.2180	30.34	9.18	9.60	39.94	18.78	62.89	52.89	-22.95	-34.11	Pass
5	1.8500	28.89	19.72	9.68	38.57	29.40	56.00	46.00	-17.43	-16.60	Pass
6	10.4660	22.77	17.23	9.97	32.74	27.20	60.00	50.00	-27.26	-22.80	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15C	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	ALGIZ 10XB	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	12/26/2014
		Test By:	Eric Ou Yang
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1500	38.54	13.61	9.59	48.13	23.20	66.00	56.00	-17.87	-32.80	Pass
2	0.1620	35.91	10.20	9.60	45.51	19.80	65.36	55.36	-19.85	-35.56	Pass
3	0.1860	43.60	26.49	9.60	53.20	36.09	64.21	54.21	-11.01	-18.12	Pass
4	0.2060	38.21	16.71	9.60	47.81	26.31	63.37	53.37	-15.56	-27.06	Pass
5	0.2540	33.39	17.54	9.61	43.00	27.15	61.63	51.63	-18.63	-24.48	Pass
6	1.9460	25.80	18.00	9.70	35.50	27.70	56.00	46.00	-20.50	-18.30	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

## 5 Radiated Emission Measurement

### 5.1. Limit

According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ( $\mu\text{V}/\text{m}$ at meter)	Measurement Distance (meters)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 - 88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

\*\* Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

### 5.2. Test Instruments

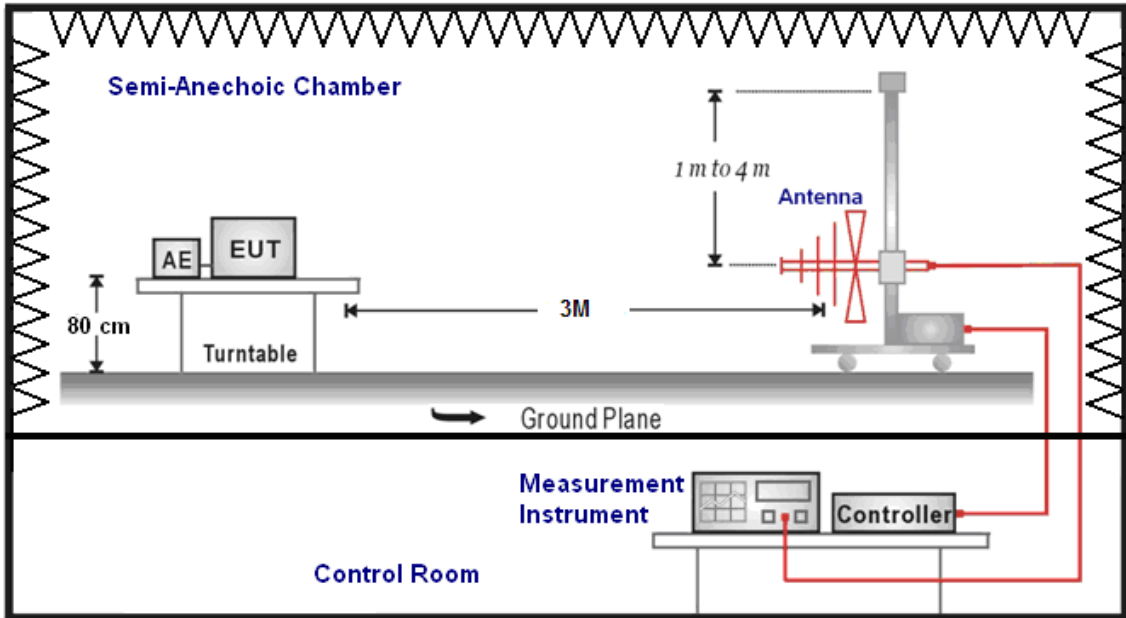
3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/10/2014	(1)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/10/2014	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/21/2014	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/21/2014	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	07/22/2014	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/11/2014	(1)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	07/02/2014	(1)
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	01/28/2014	(1)
Test Site	ATL	TE01	888001	08/28/2014	(1)

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

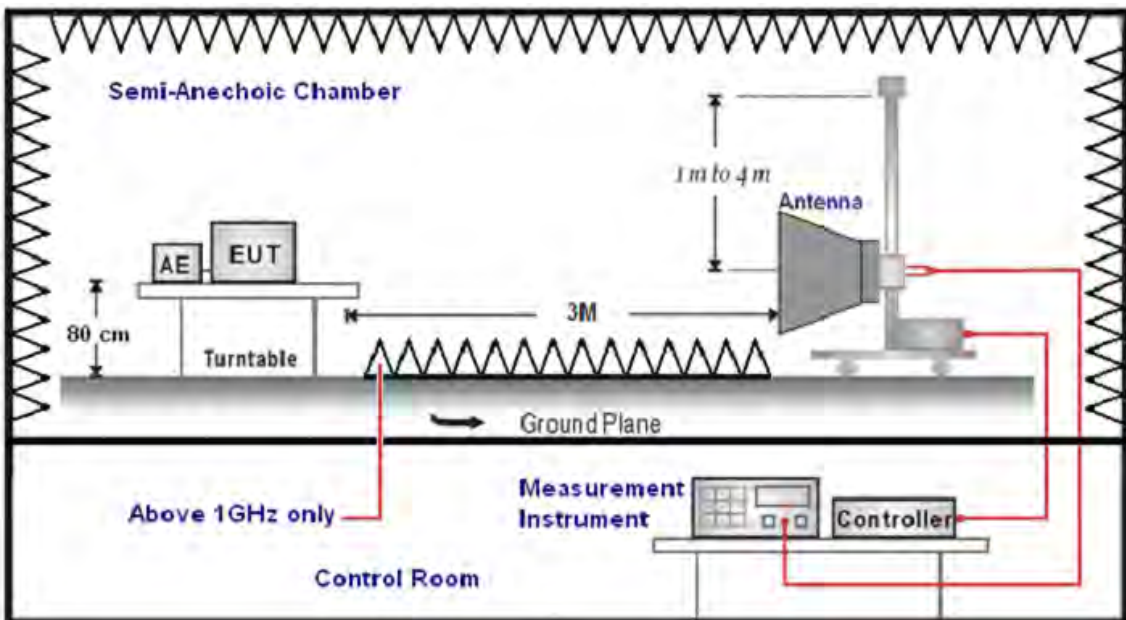
Note: N.C.R. = No Calibration Request.

### 5.3. Setup

Below 1GHz



Above 1GHz



## 5.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 9 kHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).



The actual field intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1)  $\text{Amplitude (dBuV/m)} = \text{FI (dBuV)} + \text{AF (dBuV)} + \text{CL (dBuV)} - \text{Gain (dB)}$

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

(2)  $\text{Actual Amplitude (dBuV/m)} = \text{Amplitude (dBuV)} - \text{Dis(dB)}$

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency : Transmitter Output < +30dBm

(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

Data of measurement within this frequency range without mark in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

## 5.5. Test Result

### Below 1GHz

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	ALGIZ 10XB	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	12/31/2014
		Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
192.0000	36.08	-14.24	21.84	43.50	-21.66	QP	H
289.0000	31.74	-10.84	20.90	46.00	-25.10	QP	H
399.0000	31.07	-8.51	22.56	46.00	-23.44	QP	H
567.0000	27.55	-5.17	22.38	46.00	-23.62	QP	H
672.0000	30.95	-3.12	27.83	46.00	-18.17	QP	H
852.0000	26.71	0.43	27.14	46.00	-18.86	QP	H
114.5000	34.78	-15.07	19.71	43.50	-23.79	QP	V
200.0000	33.01	-14.58	18.43	43.50	-25.07	QP	V
403.5000	29.51	-8.42	21.09	46.00	-24.91	QP	V
552.5000	27.40	-5.58	21.82	46.00	-24.18	QP	V
672.0000	30.65	-3.12	27.53	46.00	-18.47	QP	V
878.5000	27.18	0.93	28.11	46.00	-17.89	QP	V

Note: No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz).

**Above 1GHz**

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	2			Date:	12/30/2014		
Frequency:	2412MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2995.000	38.01	-0.55	37.46	74.00	-36.54	peak	H
4563.000	33.83	3.95	37.78	74.00	-36.22	peak	H
6677.000	34.63	9.46	44.09	74.00	-29.91	peak	H
3058.000	38.39	-0.38	38.01	74.00	-35.99	peak	V
4570.000	33.27	3.97	37.24	74.00	-36.76	peak	V
6677.000	34.85	9.46	44.31	74.00	-29.69	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	2			Date:	12/30/2014		
Frequency:	2437MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3030.000	38.86	-0.45	38.41	74.00	-35.59	peak	H
4570.000	34.38	3.97	38.35	74.00	-35.65	peak	H
6642.000	33.20	9.37	42.57	74.00	-31.43	peak	H
3051.000	39.03	-0.40	38.63	74.00	-35.37	peak	V
4647.000	34.01	4.16	38.17	74.00	-35.83	peak	V
6691.000	33.80	9.50	43.30	74.00	-30.70	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	2			Date:	12/30/2014		
Frequency:	2462MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3051.000	39.02	-0.40	38.62	74.00	-35.38	peak	H
4570.000	34.22	3.97	38.19	74.00	-35.81	peak	H
6705.000	33.58	9.54	43.12	74.00	-30.88	peak	H
3030.000	38.42	-0.45	37.97	74.00	-36.03	peak	V
4577.000	34.33	3.98	38.31	74.00	-35.69	peak	V
6691.000	33.47	9.50	42.97	74.00	-31.03	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	3			Date:	12/30/2014		
Frequency:	2412MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3058.000	37.43	-0.38	37.05	74.00	-36.95	peak	H
4563.000	33.92	3.95	37.87	74.00	-36.13	peak	H
6677.000	33.27	9.46	42.73	74.00	-31.27	peak	H
3065.000	37.95	-0.36	37.59	74.00	-36.41	peak	V
4570.000	33.26	3.97	37.23	74.00	-36.77	peak	V
6670.000	34.58	9.45	44.03	74.00	-29.97	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	3			Date:	12/30/2014		
Frequency:	2437MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3051.000	38.29	-0.40	37.89	74.00	-36.11	peak	H
4570.000	33.49	3.97	37.46	74.00	-36.54	peak	H
6691.000	33.38	9.50	42.88	74.00	-31.12	peak	H
3030.000	38.80	-0.45	38.35	74.00	-35.65	peak	V
4577.000	34.39	3.98	38.37	74.00	-35.63	peak	V
6635.000	34.07	9.35	43.42	74.00	-30.58	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	3			Date:	12/30/2014		
Frequency:	2462MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3037.000	37.58	-0.44	37.14	74.00	-36.86	peak	H
4577.000	33.76	3.98	37.74	74.00	-36.26	peak	H
6705.000	33.14	9.54	42.68	74.00	-31.32	peak	H
3051.000	37.64	-0.40	37.24	74.00	-36.76	peak	V
4563.000	32.98	3.95	36.93	74.00	-37.07	peak	V
6705.000	33.36	9.54	42.90	74.00	-31.10	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	4			Date:	12/30/2014		
Frequency:	2412MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3037.000	37.96	-0.44	37.52	74.00	-36.48	peak	H
4591.000	34.65	4.01	38.66	74.00	-35.34	peak	H
6691.000	32.72	9.50	42.22	74.00	-31.78	peak	H
3023.000	38.01	-0.48	37.53	74.00	-36.47	peak	V
4591.000	34.41	4.01	38.42	74.00	-35.58	peak	V
6705.000	32.73	9.54	42.27	74.00	-31.73	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	4			Date:	12/30/2014		
Frequency:	2437MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3009.000	38.15	-0.51	37.64	74.00	-36.36	peak	H
4570.000	33.08	3.97	37.05	74.00	-36.95	peak	H
6677.000	33.88	9.46	43.34	74.00	-30.66	peak	H
3037.000	37.22	-0.44	36.78	74.00	-37.22	peak	V
4577.000	34.14	3.98	38.12	74.00	-35.88	peak	V
6670.000	33.73	9.45	43.18	74.00	-30.82	peak	V

Standard:	FCC Part 15C	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	ALGIZ 10XB	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	4	Date:	12/30/2014
Frequency:	2462MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3051.000	38.00	-0.40	37.60	74.00	-36.40	peak	H
4598.000	34.74	4.04	38.78	74.00	-35.22	peak	H
6670.000	33.54	9.45	42.99	74.00	-31.01	peak	H
3051.000	38.68	-0.40	38.28	74.00	-35.72	peak	V
4549.000	34.10	3.92	38.02	74.00	-35.98	peak	V
6607.000	33.27	9.27	42.54	74.00	-31.46	peak	V

Standard:	RSS-Gen	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	ALGIZ 10XB	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5	Date:	12/30/2014
Modulation:	IEEE 802.11b	Test By:	Eric Ou Yang
Frequency:	2437MHz		

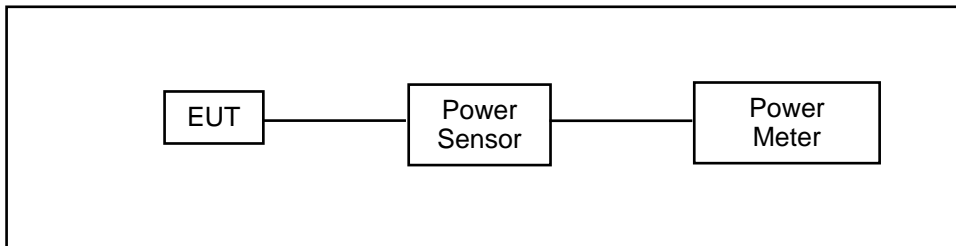
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Peak Limit (dBuV/m)	AVG. Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3030.000	37.33	-0.45	36.88	74.00	54.00	-37.12	peak	H
4605.000	33.58	4.05	37.63	74.00	54.00	-36.37	peak	H
6719.000	33.98	9.58	43.56	74.00	54.00	-30.44	peak	H
2995.000	37.03	-0.55	36.48	74.00	54.00	-37.52	peak	V
4633.000	35.06	4.13	39.19	74.00	54.00	-34.81	peak	V
6670.000	34.42	9.45	43.87	74.00	54.00	-30.13	peak	V

## 6 Maximum Conducted Output Power Measurement

### 6.1. Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm.

### 6.2. Test Setup



### 6.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	Anritsu	MA2411B	1126022	08/21/2014	(1)
Power Meter	Anritsu	ML2495A	1135009	08/21/2014	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 6.4. Test Procedure

The tests below are run with the EUT's transmitter set at high power in TX mode. The EUT is needed to force selection of output power level and channel number. While testing, EUT was set to transmit continuously. Remove the Subjective device's antenna and connect the RF output port to power sensor. The maximum peak output power shall not exceed 1 watt.

Use a direct connection between the antenna port of transmitter and the power sensor, for prevent the power sensor input attenuation 40-50 dB. Set the RBW Bandwidth of the emission or use a channel power meter mode.

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt (+30 dBm). For antennas with gains greater than 6 dBi, transmitter output level must be decreased by an amount equal to  $(\text{GAIN} - 6)/3$  dBm.

The antenna port of the EUT was connected to the input of a power sensor. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.



**6.5. Test Result**

Model Number	ALGIZ 10XB			
Test Item	Maximum Conducted Output Power			
Test Mode	Mode 2: IEEE 802.11b Link Mode			
Date of Test	01/05/2015		Test Site	TE05
Frequency (MHz)	Data Rate	Peak Power		Limit (dBm)
		(dBm)	(W)	
2412	1M	<b>18.53</b>	<b>0.071</b>	< 30
2437		18.25	0.067	< 30
2462		18.33	0.068	< 30
2437	2M	18.18	0.066	< 30
2437	5.5M	18.05	0.064	< 30
2437	11M	17.97	0.063	< 30

Model Number	ALGIZ 10XB			
Test Item	Maximum Conducted Output Power			
Test Mode	Mode 3: IEEE 802.11g Link Mode			
Date of Test	01/05/2015		Test Site	TE05
Frequency (MHz)	Data Rate	Peak Power		Limit (dBm)
		(dBm)	(W)	
2412	6M	<b>21.29</b>	<b>0.135</b>	< 30
2437		21.11	0.129	< 30
2462		20.94	0.124	< 30
2437	9M	21.07	0.128	< 30
2437	12M	20.98	0.125	< 30
2437	18M	20.91	0.123	< 30
2437	24M	20.85	0.122	< 30
2437	36M	20.77	0.119	< 30
2437	48M	20.74	0.119	< 30
2437	54M	20.69	0.117	< 30

Model Number	ALGIZ 10XB			
Test Item	Maximum Conducted Output Power			
Test Mode	Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode			
Date of Test	01/05/2015	Test Site	TE05	
Frequency (MHz)	Data Rate	Peak Power		Limit (dBm)
		(dBm)	(W)	
2412	6.5M	20.90	0.123	< 30
2437		21.09	0.129	< 30
2462		<b>21.17</b>	<b>0.131</b>	< 30
2437	13M	21.05	0.127	< 30
2437	19.5M	21.02	0.126	< 30
2437	26M	21.01	0.126	< 30
2437	39M	20.97	0.125	< 30
2437	52M	20.99	0.126	< 30
2437	58.5M	20.94	0.124	< 30
2437	65M	20.92	0.124	< 30

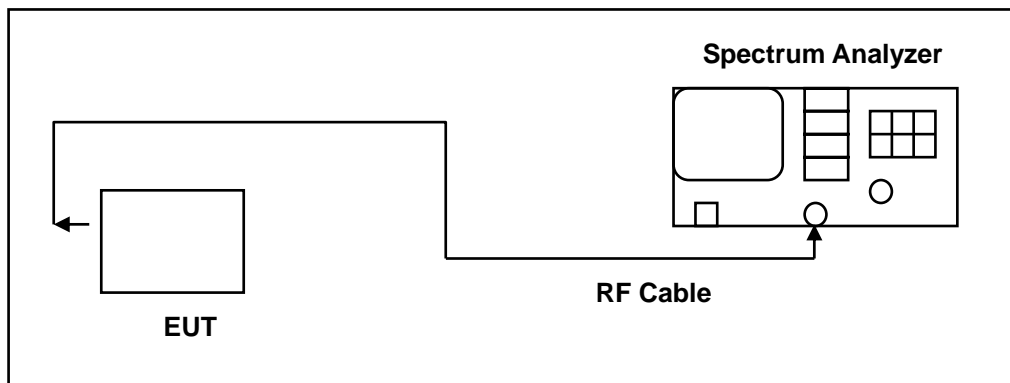
## 7 6dB RF Bandwidth and 99 % Occupied Bandwidth Measurement

### 7.1. Limit

6dB RF Bandwidth: Systems using digital modulation techniques may operate in the 2400–2483.5 MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

99 % Occupied Bandwidth: N/A

### 7.2. Test Setup



### 7.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/16/2014	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

dRemark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 7.4. Test Procedure

The EUT was setup to ANSI C63.4:2014; tested to DTS test procedure of KDB558074D01 for compliance to FCC 47CFR 15.247 requirements.

6dB RF Bandwidth: The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels (Channel low, middle, high)

99 % Occupied Bandwidth: The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual.

The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded.

**7.5. Test Result**

Model Number	ALGIZ 10XB		
Test Item	6dB RF Bandwidth and 99 % Occupied Bandwidth		
Test Mode	Mode 2: IEEE 802.11b Link Mode		
Date of Test	01/05/2015	Test Site	TE05
Frequency (MHz)	6dB RF Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6dB RF Bandwidth Limit (MHz)
2412	11.063	14.3857	> 0.500
2437	11.112	14.5317	> 0.500
2462	10.181	14.4938	> 0.500

Model Number	ALGIZ 10XB		
Test Item	6dB RF Bandwidth and 99 % Occupied Bandwidth		
Test Mode	Mode 3: IEEE 802.11g Link Mode		
Date of Test	01/05/2015	Test Site	TE05
Frequency (MHz)	6dB RF Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6dB RF Bandwidth Limit (MHz)
2412	16.372	17.0383	> 0.500
2437	16.393	17.0668	> 0.500
2462	16.398	17.0978	> 0.500

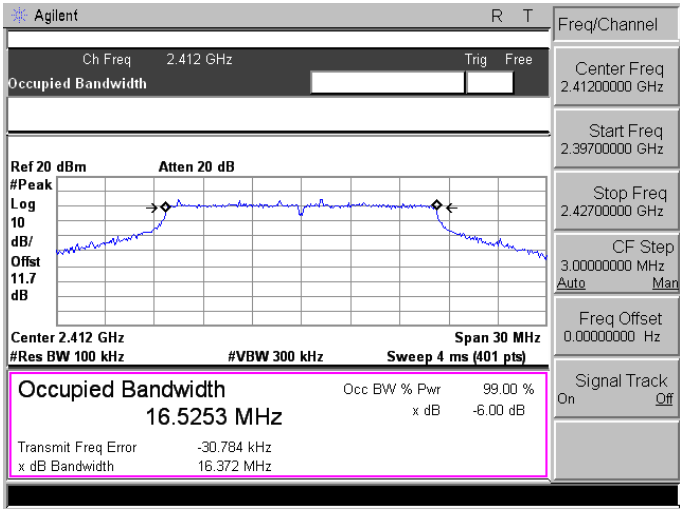
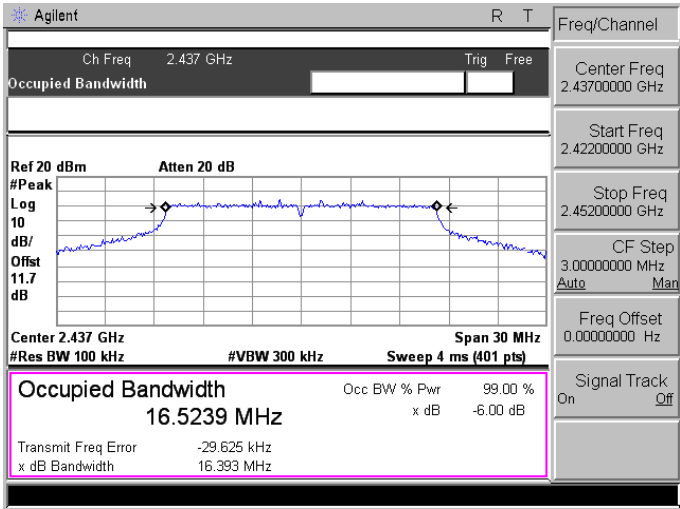
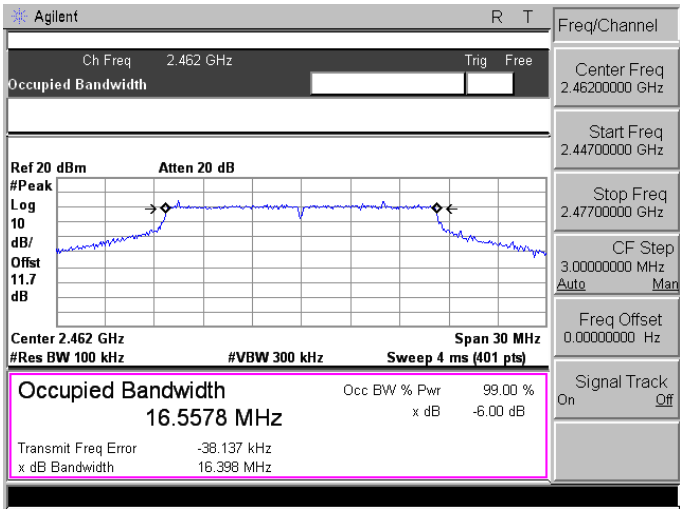
Model Number	ALGIZ 10XB		
Test Item	6dB RF Bandwidth and 99 % Occupied Bandwidth		
Test Mode	Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode		
Date of Test	01/05/2015	Test Site	TE05
Frequency (MHz)	6dB RF Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6dB RF Bandwidth Limit (MHz)
2412	17.625	18.1661	> 0.500
2437	17.668	18.1200	> 0.500
2462	17.642	18.1583	> 0.500

### 7.6. Test Graphs

6dB RF Bandwidth

Mode 2: IEEE 802.11b Link Mode	
2412	<p>Agilent R T</p> <p>Ch Freq 2.412 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.412 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 14.2635 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -6.00 dB</p> <p>Transmit Freq Error -41.007 kHz</p> <p>x dB Bandwidth 11.063 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.39700000 GHz</p> <p>Stop Freq 2.42700000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
2437	<p>Agilent R T</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.437 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 14.4863 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -6.00 dB</p> <p>Transmit Freq Error -12.414 kHz</p> <p>x dB Bandwidth 11.112 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.42200000 GHz</p> <p>Stop Freq 2.45200000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
2462	<p>Agilent R T</p> <p>Ch Freq 2.462 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.462 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 14.4892 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -6.00 dB</p> <p>Transmit Freq Error -25.892 kHz</p> <p>x dB Bandwidth 10.181 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.44700000 GHz</p> <p>Stop Freq 2.47700000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

Mode 3: IEEE 802.11g Link Mode

<p>2412</p>	 <p>Agilent R T</p> <p>Ch Freq 2.412 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.412 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 % <b>16.5253 MHz</b> x dB -6.00 dB</p> <p>Transmit Freq Error -30.784 kHz x dB Bandwidth 16.372 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.39700000 GHz</p> <p>Stop Freq 2.42700000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>2437</p>	 <p>Agilent R T</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.437 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 % <b>16.5239 MHz</b> x dB -6.00 dB</p> <p>Transmit Freq Error -29.625 kHz x dB Bandwidth 16.393 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.42200000 GHz</p> <p>Stop Freq 2.45200000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>2462</p>	 <p>Agilent R T</p> <p>Ch Freq 2.462 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.462 GHz Span 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 % <b>16.5578 MHz</b> x dB -6.00 dB</p> <p>Transmit Freq Error -38.137 kHz x dB Bandwidth 16.398 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.44700000 GHz</p> <p>Stop Freq 2.47700000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode

<p>2412</p>	<p>Agilent R T</p> <p>Ch Freq 2.412 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.412 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 17.7163 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -6.00 dB</p> <p>Transmit Freq Error -20.307 kHz x dB Bandwidth 17.625 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.39700000 GHz</p> <p>Stop Freq 2.42700000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>2437</p>	<p>Agilent R T</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.437 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 17.7295 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -6.00 dB</p> <p>Transmit Freq Error -23.670 kHz x dB Bandwidth 17.668 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.42200000 GHz</p> <p>Stop Freq 2.45200000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>2462</p>	<p>Agilent R T</p> <p>Ch Freq 2.462 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 11.7 dB</p> <p>Center 2.462 GHz Span 30 MHz</p> <p>#Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth 17.7502 MHz</b></p> <p>Occ BW % Pwr 99.00 % x dB -6.00 dB</p> <p>Transmit Freq Error -18.933 kHz x dB Bandwidth 17.642 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.44700000 GHz</p> <p>Stop Freq 2.47700000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

99 % Occupied Bandwidth

Mode 2: IEEE 802.11b Link Mode

<p>2412</p>	<p>Agilent R T</p> <p>Ch Freq 2.412 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 11.7 dB</p> <p>Center 2.412 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 %</p> <p><b>14.3857 MHz</b> x dB -6.00 dB</p> <p>Transmit Freq Error -25.685 kHz</p> <p>x dB Bandwidth 10.406 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.39700000 GHz</p> <p>Stop Freq 2.42700000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>2437</p>	<p>Agilent R T</p> <p>Ch Freq 2.437 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 11.7 dB</p> <p>Center 2.437 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 %</p> <p><b>14.5317 MHz</b> x dB -6.00 dB</p> <p>Transmit Freq Error -13.678 kHz</p> <p>x dB Bandwidth 10.410 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.42200000 GHz</p> <p>Stop Freq 2.45200000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
<p>2462</p>	<p>Agilent R T</p> <p>Ch Freq 2.462 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Ref 20 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offst 11.7 dB</p> <p>Center 2.462 GHz Span 30 MHz</p> <p>#Res BW 300 kHz #VBW 1 MHz Sweep 4 ms (401 pts)</p> <p><b>Occupied Bandwidth</b> Occ BW % Pwr 99.00 %</p> <p><b>14.4938 MHz</b> x dB -6.00 dB</p> <p>Transmit Freq Error 1.572 kHz</p> <p>x dB Bandwidth 10.409 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.44700000 GHz</p> <p>Stop Freq 2.47700000 GHz</p> <p>CF Step 3.00000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>



Mode 3: IEEE 802.11g Link Mode

<p>2412</p>	
<p>2437</p>	
<p>2462</p>	

Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode

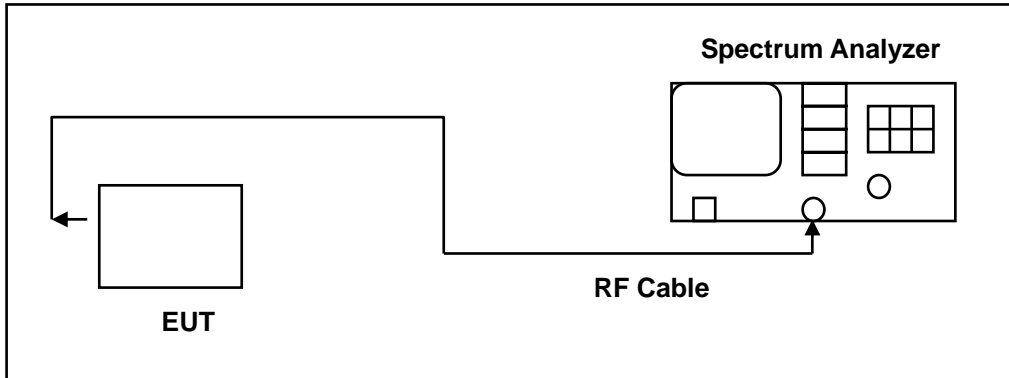
<p>2412</p>	
<p>2437</p>	
<p>2462</p>	

## 8 Maximum Power Density Measurement

### 8.1. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### 8.2. Test Setup



### 8.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/16/2014	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 8.4. Test Procedure

The EUT was setup to ANSI C63.4:2014; tested to DTS test procedure of KDB558074D01 for compliance to FCC 47CFR 15.247 requirements.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
4. Set the VBW  $\geq 3 \times \text{RBW}$ .
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 within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

**8.5. Test Result**

Model Number	ALGIZ 10XB		
Test Item	Maximum Power Density		
Test Mode	Mode 2: IEEE 802.11b Link Mode		
Date of Test	01/06/2015	Test Site	TE05
Frequency (MHz)	Reading (dBm/3KHz)		Limit (dBm)
2412	-7.89		< 8
2437	-7.19		< 8
2462	-7.16		< 8

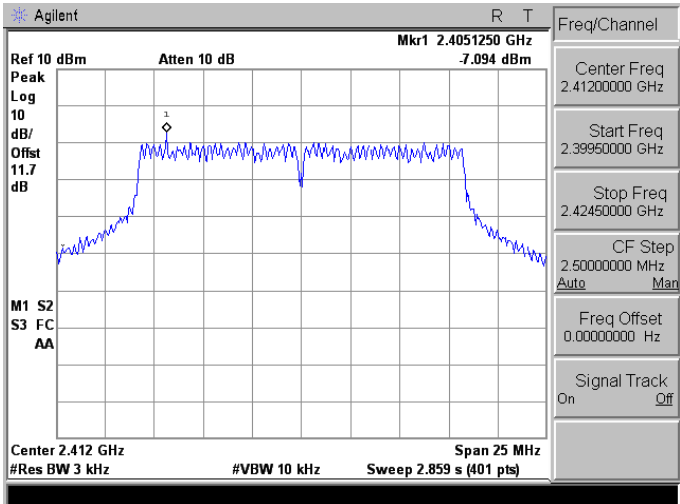
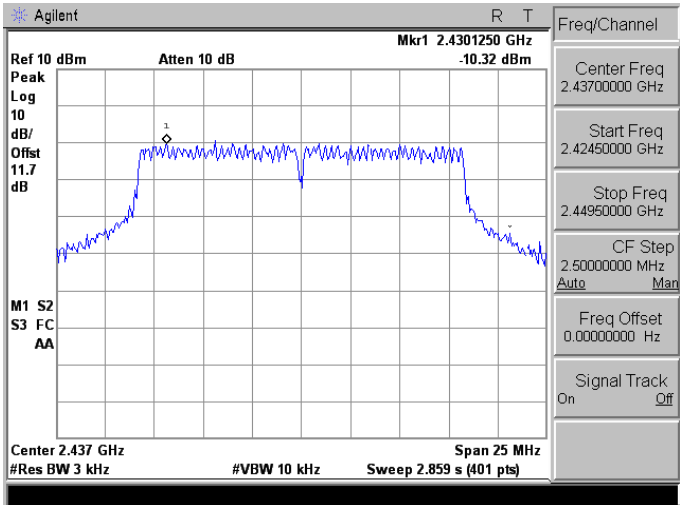
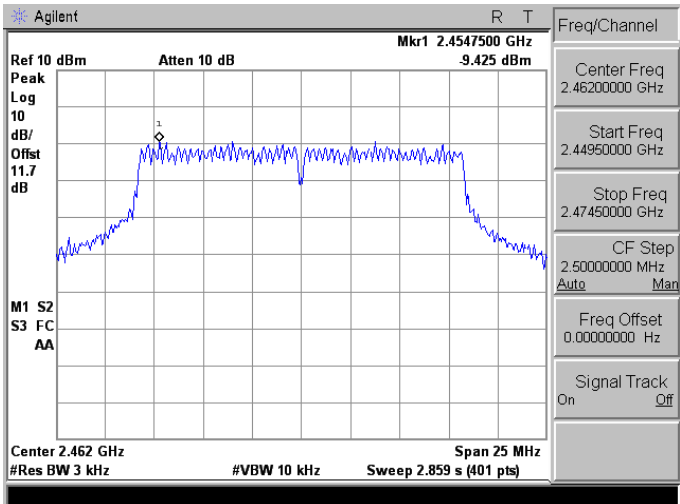
Model Number	ALGIZ 10XB		
Test Item	Maximum Power Density		
Test Mode	Mode 3: IEEE 802.11g Link Mode		
Date of Test	01/06/2015	Test Site	TE05
Frequency (MHz)	Reading (dBm/3KHz)		Limit (dBm)
2412	-7.09		< 8
2437	-10.32		< 8
2462	-9.43		< 8

Model Number	ALGIZ 10XB		
Test Item	Maximum Power Density		
Test Mode	Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode		
Date of Test	01/06/2015	Test Site	TE05
Frequency (MHz)	Reading (dBm/3KHz)		Limit (dBm)
2412	-9.48		< 8
2437	-8.68		< 8
2462	-9.69		< 8

**8.6. Test Graphs**

Mode 2: IEEE 802.11b Link Mode																	
2412	<p>Agilent R T            Ref 10 dBm Atten 10 dB Mkr1 2.4099600 GHz            Peak Log 10 dB/Offset 11.7 dB            Center 2.412 GHz Span 17 MHz            #Res BW 3 kHz #VBW 10 kHz Sweep 1.944 s (401 pts)</p> <table border="1"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.41200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.40350000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.42050000 GHz</td></tr> <tr><td>CF Step</td><td>1.70000000 MHz</td></tr> <tr><td></td><td>Auto Man</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>On Off</td></tr> </table>	Freq/Channel		Center Freq	2.41200000 GHz	Start Freq	2.40350000 GHz	Stop Freq	2.42050000 GHz	CF Step	1.70000000 MHz		Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel																	
Center Freq	2.41200000 GHz																
Start Freq	2.40350000 GHz																
Stop Freq	2.42050000 GHz																
CF Step	1.70000000 MHz																
	Auto Man																
Freq Offset	0.00000000 Hz																
Signal Track	On Off																
2437	<p>Agilent R T            Ref 10 dBm Atten 10 dB Mkr1 2.4389975 GHz            Peak Log 10 dB/Offset 11.7 dB            Center 2.437 GHz Span 17 MHz            #Res BW 3 kHz #VBW 10 kHz Sweep 1.944 s (401 pts)</p> <table border="1"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.43700000 GHz</td></tr> <tr><td>Start Freq</td><td>2.42850000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.44550000 GHz</td></tr> <tr><td>CF Step</td><td>1.70000000 MHz</td></tr> <tr><td></td><td>Auto Man</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>On Off</td></tr> </table>	Freq/Channel		Center Freq	2.43700000 GHz	Start Freq	2.42850000 GHz	Stop Freq	2.44550000 GHz	CF Step	1.70000000 MHz		Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel																	
Center Freq	2.43700000 GHz																
Start Freq	2.42850000 GHz																
Stop Freq	2.44550000 GHz																
CF Step	1.70000000 MHz																
	Auto Man																
Freq Offset	0.00000000 Hz																
Signal Track	On Off																
2462	<p>Agilent R T            Ref 10 dBm Atten 10 dB Mkr1 2.4639975 GHz            Peak Log 10 dB/Offset 11.7 dB            Center 2.462 GHz Span 17 MHz            #Res BW 3 kHz #VBW 10 kHz Sweep 1.944 s (401 pts)</p> <table border="1"> <tr><th colspan="2">Freq/Channel</th></tr> <tr><td>Center Freq</td><td>2.46200000 GHz</td></tr> <tr><td>Start Freq</td><td>2.45350000 GHz</td></tr> <tr><td>Stop Freq</td><td>2.47050000 GHz</td></tr> <tr><td>CF Step</td><td>1.70000000 MHz</td></tr> <tr><td></td><td>Auto Man</td></tr> <tr><td>Freq Offset</td><td>0.00000000 Hz</td></tr> <tr><td>Signal Track</td><td>On Off</td></tr> </table>	Freq/Channel		Center Freq	2.46200000 GHz	Start Freq	2.45350000 GHz	Stop Freq	2.47050000 GHz	CF Step	1.70000000 MHz		Auto Man	Freq Offset	0.00000000 Hz	Signal Track	On Off
Freq/Channel																	
Center Freq	2.46200000 GHz																
Start Freq	2.45350000 GHz																
Stop Freq	2.47050000 GHz																
CF Step	1.70000000 MHz																
	Auto Man																
Freq Offset	0.00000000 Hz																
Signal Track	On Off																

Mode 3: IEEE 802.11g Link Mode

2412	
2437	
2462	

Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode

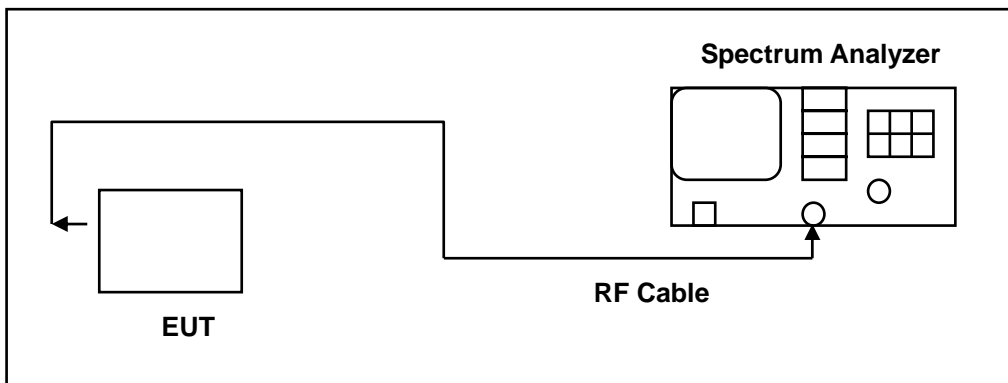
2412	<p>Agilent R T Mkr1 2.4176025 GHz -9.484 dBm Ref 10 dBm Atten 10 dB Peak Log 10 dB/Offset 11.7 dB M1 S2 S3 FC AA Center 2.412 GHz Span 27 MHz #Res BW 3 kHz #VBW 10 kHz Sweep 3.088 s (401 pts)</p> <p>Freq/Channel Center Freq 2.41200000 GHz Start Freq 2.39850000 GHz Stop Freq 2.42550000 GHz CF Step 2.70000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off</p>
2437	<p>Agilent R T Mkr1 2.4313300 GHz -8.677 dBm Ref 10 dBm Atten 10 dB Peak Log 10 dB/Offset 11.7 dB M1 S2 S3 FC AA Center 2.437 GHz Span 27 MHz #Res BW 3 kHz #VBW 10 kHz Sweep 3.088 s (401 pts)</p> <p>Freq/Channel Center Freq 2.43700000 GHz Start Freq 2.42350000 GHz Stop Freq 2.45050000 GHz CF Step 2.70000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off</p>
2462	<p>Agilent R T Mkr1 2.4538325 GHz -9.69 dBm Ref 10 dBm Atten 10 dB Peak Log 10 dB/Offset 11.7 dB M1 S2 S3 FC AA Center 2.462 GHz Span 27 MHz #Res BW 3 kHz #VBW 10 kHz Sweep 3.088 s (401 pts)</p> <p>Freq/Channel Center Freq 2.46200000 GHz Start Freq 2.44850000 GHz Stop Freq 2.47550000 GHz CF Step 2.70000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off</p>

## 9 Out of Band Conducted Emissions Measurement

### 9.1. Limit

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

### 9.2. Test Setup



### 9.3. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/16/2014	(1)
Spectrum Analyzer	Agilent	E4408B	MY45107753	07/24/2014	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

### 9.4. Test Procedure

In any 100 kHz bandwidth outside the EUT pass band, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20 dB below that of the maximum in-band 100 kHz emission, antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the pass band.

The test was performed at 3 channels.



### 9.5. Test Graphs

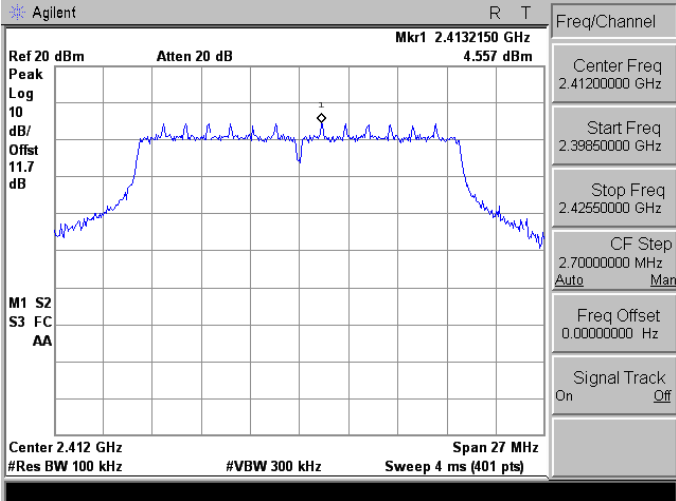
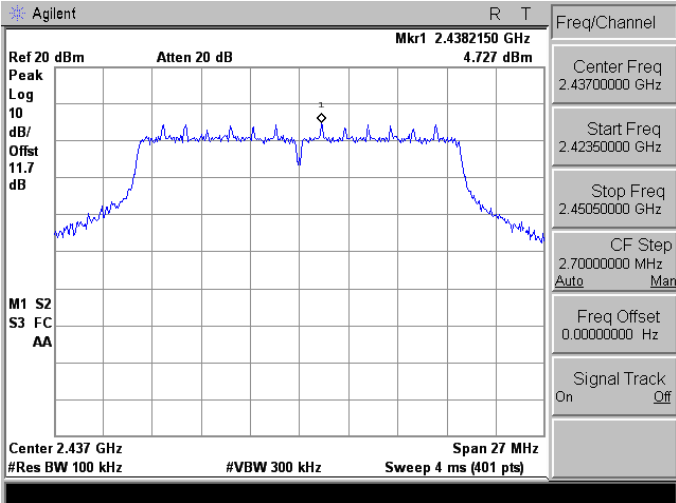
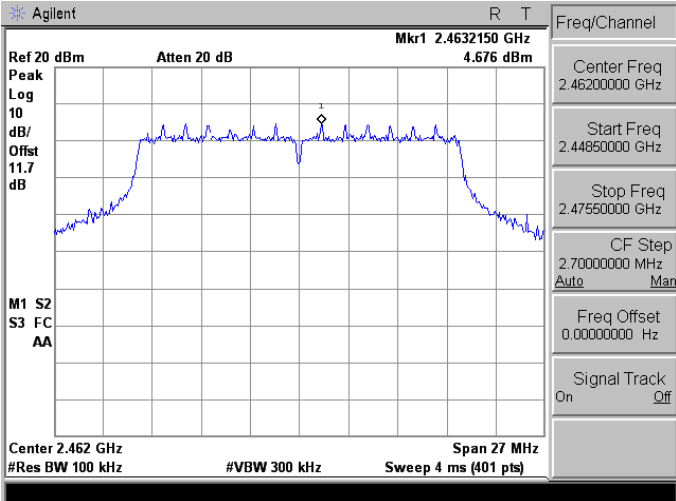
#### Reference level

Mode 2: IEEE 802.11b Link Mode	
2412	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 2.4109800 GHz            Peak 5.88 dBm            Log            10            dB/ Offst            11.7            dB            M1 S2            S3 FC            AA            Center 2.412 GHz Span 17 MHz            #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p>Freq/Channel            Center Freq 2.41200000 GHz            Start Freq 2.40350000 GHz            Stop Freq 2.42050000 GHz            CF Step 1.70000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>
2437	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 2.4359800 GHz            Peak 6.743 dBm            Log            10            dB/ Offst            11.7            dB            M1 S2            S3 FC            AA            Center 2.437 GHz Span 17 MHz            #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p>Freq/Channel            Center Freq 2.43700000 GHz            Start Freq 2.42850000 GHz            Stop Freq 2.44550000 GHz            CF Step 1.70000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>
2462	<p>Agilent R T            Ref 20 dBm Atten 20 dB Mkr1 2.4639975 GHz            Peak 6.354 dBm            Log            10            dB/ Offst            11.7            dB            M1 S2            S3 FC            AA            Center 2.462 GHz Span 17 MHz            #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p>Freq/Channel            Center Freq 2.46200000 GHz            Start Freq 2.45350000 GHz            Stop Freq 2.47050000 GHz            CF Step 1.70000000 MHz            Auto Man            Freq Offset 0.00000000 Hz            Signal Track On Off</p>

Mode 3: IEEE 802.11g Link Mode

2412	
2437	
2462	

Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode

2412	 <p>Agilent R T</p> <p>Ref 20 dBm Atten 20 dB Mkr1 2.4132150 GHz 4.557 dBm</p> <p>Peak Log 10 dB/Offset 11.7 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.412 GHz Span 27 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.41200000 GHz</p> <p>Start Freq 2.39850000 GHz</p> <p>Stop Freq 2.42550000 GHz</p> <p>CF Step 2.70000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
2437	 <p>Agilent R T</p> <p>Ref 20 dBm Atten 20 dB Mkr1 2.4382150 GHz 4.727 dBm</p> <p>Peak Log 10 dB/Offset 11.7 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.437 GHz Span 27 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.43700000 GHz</p> <p>Start Freq 2.42350000 GHz</p> <p>Stop Freq 2.45050000 GHz</p> <p>CF Step 2.70000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>
2462	 <p>Agilent R T</p> <p>Ref 20 dBm Atten 20 dB Mkr1 2.4632150 GHz 4.676 dBm</p> <p>Peak Log 10 dB/Offset 11.7 dB</p> <p>M1 S2 S3 FC AA</p> <p>Center 2.462 GHz Span 27 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4 ms (401 pts)</p> <p>Freq/Channel</p> <p>Center Freq 2.46200000 GHz</p> <p>Start Freq 2.44850000 GHz</p> <p>Stop Freq 2.47550000 GHz</p> <p>CF Step 2.70000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p>

**Out of Band Conducted Emissions**

Mode 2: IEEE 802.11b Link Mode

<p>2412</p>	
<p>2437</p>	
<p>2462</p>	

Mode 3: IEEE 802.11g Link Mode

<p>2412</p>	
<p>2437</p>	
<p>2462</p>	

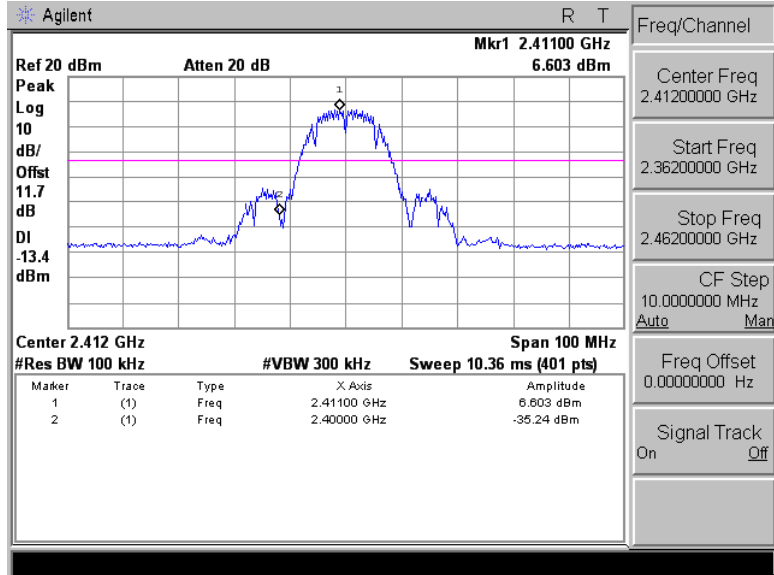
Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode

<p>2412</p>	
<p>2437</p>	
<p>2462</p>	

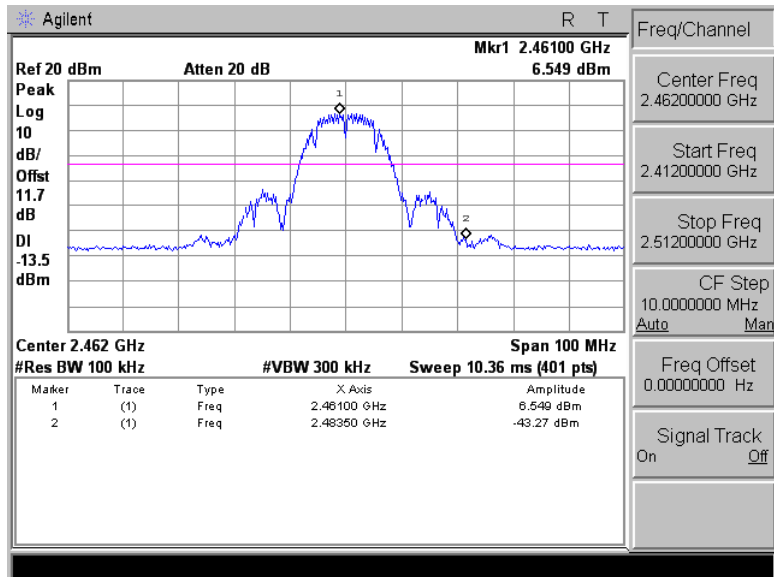
**Conducted Band Edge**

Mode 2: IEEE 802.11b Link Mode

2412

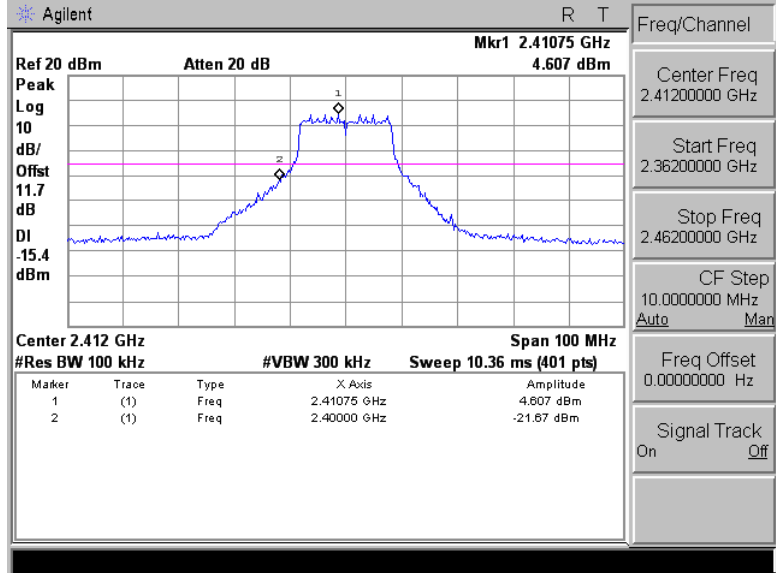


2462

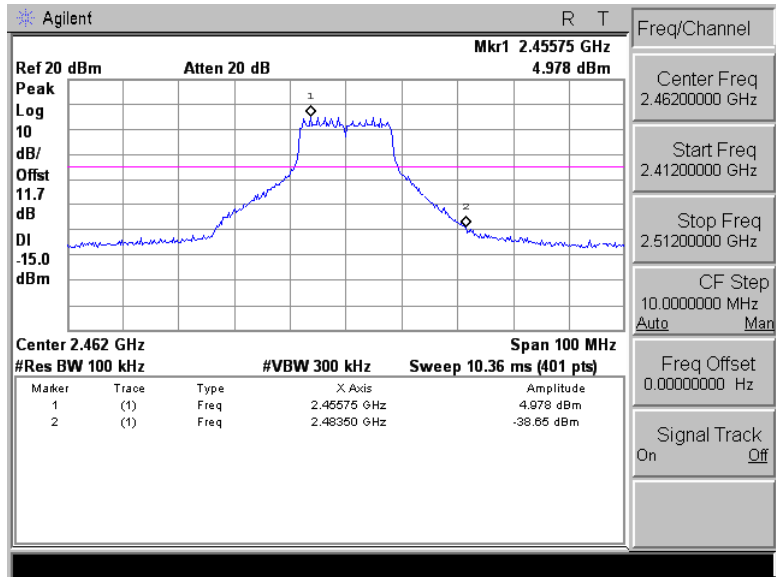


Mode 3: IEEE 802.11g Link Mode

2412



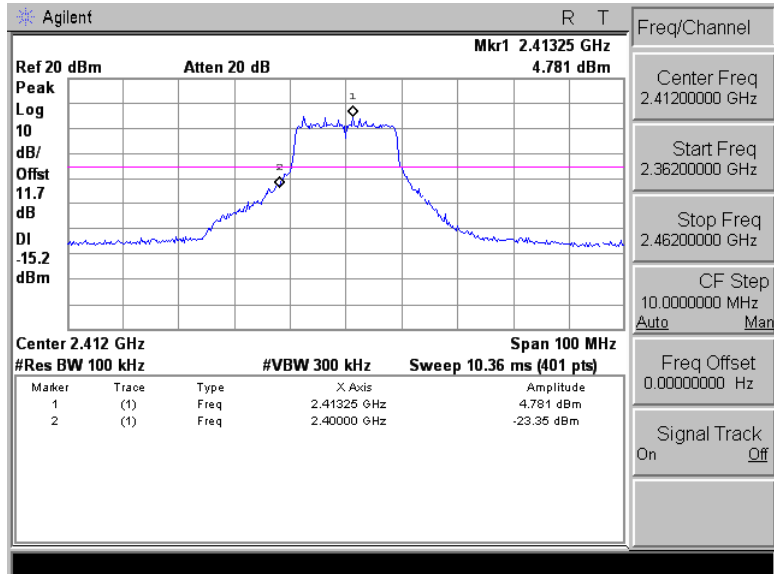
2462



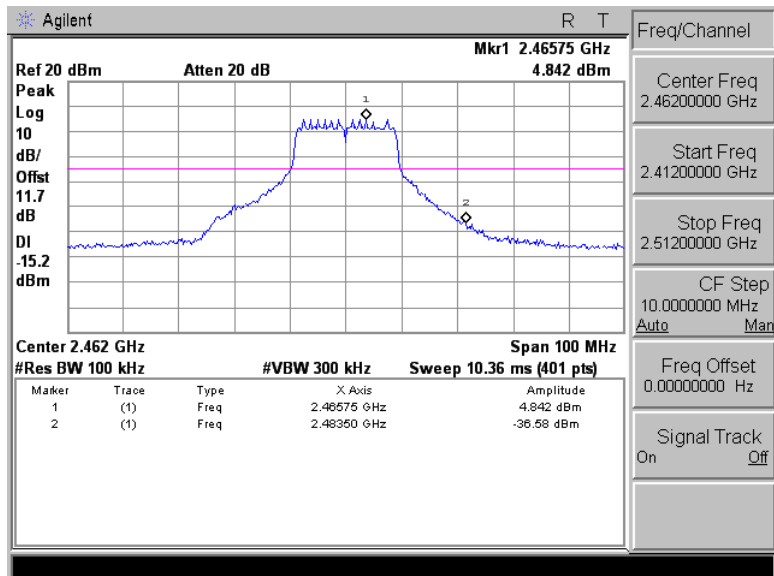


Mode 4: IEEE 802.11n 2.4GHz 20MHz Link Mode

2412



2462

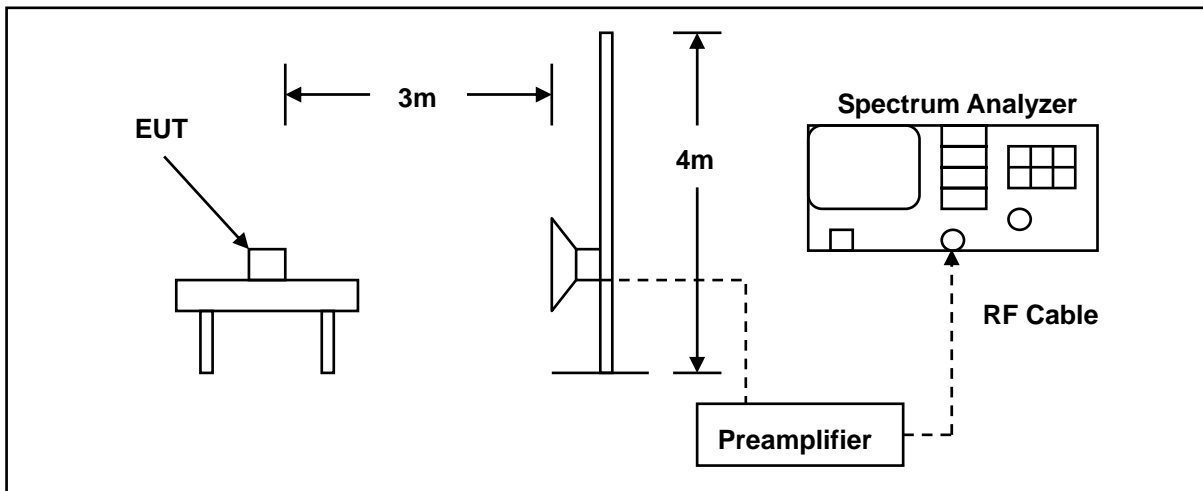


## 10 Band Edges Measurement

### 10.1.Limit

In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.

### 10.2.Test Setup



### 10.3.Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/10/2014	(1)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/10/2014	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/21/2014	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/21/2014	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/11/2014	(1)
Test Site	ATL	TE01	888001	08/28/2014	(1)

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years. (3) Calibration period 3 years.

Note: N.C.R. = No Calibration Request.

#### **10.4. Test Procedure**

The EUT was setup to ANSI C63.4:2014; tested to DTS test procedure of KDB558074D01 for compliance to FCC 47CFR 15.247 requirements.

The emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter was in full radiated power. The additional test was performed to show compliance with the requirement at the band-edge frequency 2483.5 MHz and up to 2500 MHz and at 2390.0 MHz.

The transmitter was configured with the worst case antenna and setup to transmit at the highest channel. Then the field strength was measured at 2483.5 MHz.

The transmitter was then configured with the worst case antenna and setup to transmit at the lowest channel. Then the field strength was measured at 2390.0 MHz. These tests were performed at 4 different bit rates.

For measurements the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

**10.5. Test Result**

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	2			Date:	12/30/2014		
Frequency:	2412 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2385.680	51.74	-2.27	49.47	74.00	-24.53	peak	H
2390.000	49.03	-2.24	46.79	74.00	-27.21	peak	H
2385.460	52.93	-2.27	50.66	74.00	-23.34	peak	V
2390.000	50.17	-2.24	47.93	74.00	-26.07	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	2			Date:	12/30/2014		
Frequency:	2462 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	50.59	-1.83	48.76	74.00	-25.24	peak	H
2487.840	53.50	-1.80	51.70	74.00	-22.30	peak	H
2483.500	52.05	-1.83	50.22	74.00	-23.78	peak	V
2485.640	53.04	-1.82	51.22	74.00	-22.78	peak	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	3			Date:	12/30/2014		
Frequency:	2412 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2389.530	64.26	-2.25	62.01	74.00	-11.99	peak	H
2389.530	48.81	-2.25	46.56	54.00	-7.44	AVG	H
2390.000	64.43	-2.24	62.19	74.00	-11.81	peak	H
2390.000	49.48	-2.24	47.24	54.00	-6.76	AVG	H
2389.530	66.57	-2.25	64.32	74.00	-9.68	peak	V
2389.530	51.57	-2.25	49.32	54.00	-4.68	AVG	V
2390.000	65.35	-2.24	63.11	74.00	-10.89	peak	V
2390.000	52.54	-2.24	50.30	54.00	-3.70	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	3			Date:	12/30/2014		
Frequency:	2462 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	58.06	-1.83	56.23	74.00	-17.77	peak	H
2483.500	47.45	-1.83	45.62	54.00	-8.38	AVG	H
2484.520	60.82	-1.82	59.00	74.00	-15.00	peak	H
2484.520	46.57	-1.82	44.75	54.00	-9.25	AVG	H
2483.500	61.43	-1.83	59.60	74.00	-14.40	peak	V
2483.500	48.05	-1.83	46.22	54.00	-7.78	AVG	V
2483.920	63.36	-1.82	61.54	74.00	-12.46	peak	V
2483.920	47.59	-1.82	45.77	54.00	-8.23	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	4			Date:	12/30/2014		
Frequency:	2412 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2389.530	67.98	-2.25	65.73	74.00	-8.27	peak	H
2389.530	51.38	-2.25	49.13	54.00	-4.87	AVG	H
2390.000	64.11	-2.24	61.87	74.00	-12.13	peak	H
2390.000	52.10	-2.24	49.86	54.00	-4.14	AVG	H
2389.310	69.90	-2.25	67.65	74.00	-6.35	peak	V
2389.310	52.64	-2.25	50.39	54.00	-3.61	AVG	V
2390.000	68.47	-2.24	66.23	74.00	-7.77	peak	V
2390.000	53.81	-2.24	51.57	54.00	-2.43	AVG	V

Standard:	FCC Part 15C			Test Distance:	3m		
Test item:	Radiated Emission			Power:	AC 120V/60Hz		
Model Number:	ALGIZ 10XB			Temp.(°C)/Hum.(%RH):	26(°C)/60%RH		
Mode:	4			Date:	12/30/2014		
Frequency:	2462 MHz			Test By:	Eric Ou Yang		
Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
2483.500	56.52	-1.83	54.69	74.00	-19.31	peak	H
2483.500	47.05	-1.83	45.22	54.00	-8.78	AVG	H
2483.680	62.00	-1.83	60.17	74.00	-13.83	peak	H
2483.680	47.02	-1.83	45.19	54.00	-8.81	AVG	H
2483.500	64.80	-1.83	62.97	74.00	-11.03	peak	V
2483.500	47.48	-1.83	45.65	54.00	-8.35	AVG	V
2483.800	65.47	-1.83	63.64	74.00	-10.36	peak	V
2483.800	47.41	-1.83	45.58	54.00	-8.42	AVG	V

## 11 Antenna Measurement

### 11.1.Limit

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

And According to 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 11.2.Antenna Connector Construction

The antenna used in this product list as below:

Antenna	Type	Max. Gain
Main	Internal Antenna	1.57 dBi
Aux	Internal Antenna	1.17 dBi