Valued Quality. Delivered.

Issuing Laboratory:
Intertek Testing Services Hong Kong Limited

HKAS has accredited this laboratory (HOKLAS 005 – TEST) under HOKLAS for specific laboratory activities as listed in the HOKLAS directory of accredited laboratories.

HOKLAS 005 TEST

TEST REPORT

Report No.: 14080215HKG-002

Alco Electronics Ltd.

Application
For
Certification
(Original Grant)
(FCC ID: A2HRCT6293W23)
(IC: 9903A-RCT6293W23)

Transceiver

Prepared and Checked by:

Wong Chouk Ho, Herbert
Lead Engineer

Approved by:

Chan Chi Hung, Terry
Supervisor
Date: September 19, 2014

- Intertek's standard Terms and Conditions can be obtained at our website http://www.intertek.com/terms/.
- This report shall not be reproduced, except in full.
- This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

GENERAL INFORMATION

Grantee:	Alco Electronics Ltd.
Grantee Address:	11/F., Zung Fu Industrial Building, 1067 King's Road, Quarry Bay, Hong Kong.
Contact Person:	Peggy Suen
Tel:	(852) 2562 6121
Fax:	(852) 2597 5201
e-mail:	peggy.suen@alco.com.hk
Manufacturer:	Alco Electronics (Dongguan) Limited
Manufacturer Address:	Gong Ye Xi Road, Houjie Technology Industrial Park, Houjie, Dongguan, Guangdong P.R.C. 523960 China
Brand Name:	VENTURER / RCA
Tested Model:	CT9293W23 (VENTURER)
Additional Model:	RCT6293W23 (RCA)
Type of EUT:	Transceiver
Description of EUT:	9" Tablet
Serial Number:	N/A
FCC ID / IC:	A2HRCT6293W23 / 9903A-RCT6293W23
Date of Sample Submitted:	July 08, 2014
Date of Test:	July 08, 2014 to September 10, 2014
Report No.:	14080215HKG-002
Report Date:	September 19, 2014
Environmental Conditions:	Temperature: +10 to 40°C Humidity: 10 to 90%

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

SUMMARY OF TEST RESULT

TEST SPECIFICATION	REFERENCE	RESULTS
Transmitter Power Line Conducted Emissions	15.207 / RSS-Gen 7.2.4	Pass
Radiated Emission Radiated Emission on the Bandedge	15.249 / RSS-210 A2.9	Pass
Digital Device Radiated Emissions	15.109 / RSS-210 2.5	Pass
Radiated Emission in Restricted Bands	15.205 / RSS-210 2.2	Pass

The equipment under test is found to be complying with the following standards:
FCC Part 15, October 1, 2012 Edition
RSS-210 Issue 8, December 2010
RSS-Gen Issue 3, December 2010

Note: 1. The EUT uses a permanently attached antenna which, in accordance to section 15.203, is considered sufficient to comply with the pervisions of this section.
2. Pursuant to FCC part 15 Section 15.215(c), the 20 dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Table of Contents

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

1.0 General Description

1.1 Product Description

The Equipment Under Test (EUT) is a Tablet, equipped with WiFi, SD and USB Interface. The EUT operates in frequency range from 2412MHz to 2462MHz at 802.11b,g,n HT20 (11 channels with 5MHz spacing) while from 2422MHz to 2452MHz at 802.11n HT40 (7 channels with 5MHz channel spacing). The EUT is powered by an external AC/DC adaptor (5VDC output) or/and internal 3.7VDC (1x 3.7V rechargeable battery). The adaptor accepts 100-120VAC only. The applicant declared that only WiFi function is used in this product. GPS, FM and Bluetooth functions will not be used in the product.

The Model: RCT6293W23 is the same as the Model: CT9293W23 in hardware aspect. The difference in model number and brand name serves as marketing strategy.

Antenna Type: Internal, Integral

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

1.2 Related Submittal(s) Grants

This is a single application for certification of a transceiver.

The Declaration of the Conformity procedure of PC Connectivity for this transceiver (with FCC ID: A2HRCT6293W23) is being processed as the same time of this application.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2009). Preliminary scans were performed to determine worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the **"Justification Section"** of this Application. Average measurements were performed according to ANSI C63.10 (2009).

1.4 Test Facility

The radiated and conducted measurement facility used to collect the data is located at Workshop No. 3, G/F., World-Wide Industrial Centre, 43-47 Shan Mei Street, Fo Tan, Sha Tin, N.T., Hong Kong. This test facility and site measurement data have been placed on file with the FCC and IC.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

2.0 System Test Configuration

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (2009).

The device was powered by 120VAC.

For AC line conducted emission test, the EUT along with its peripherals were placed on a 1.0m(W)X1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT power cord connected to one LISN (Line impedance stabilization network), which provided 50ohm coupling impedance for measuring instrument. Meanwhile, the peripheral or supporting equipment power cords connected to a separate LISN. The ac power for all LISNs were obtained from the same power source. The LISN housing, measuring instrument case, reference ground plane, and vertical ground plane were bounded together. The excess power cable between the EUT and the LISN was bundled. Power cords of non-equipments draped over the rear of the table, and routed them down onto the floor of the ac power line conducted emission test site to the second LISN.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was mounted to a plastic stand if necessary and placed on the wooden turntable, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

All configuration (with and without PC connectivity during transceiver test) and setting of data rate for each 802.11b/g/n(HT20)/n(HT40) of WiFi mode had been considered, and worst case test data are shown on this test report.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

2.2 EUT Exercising Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use.

2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

2.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Uncertainty and Compliance - Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

2.5 Support Equipment List and Description

1. Headphone of 1.2m long cable
2. 4GB Micro SD Card
   (Provided by Intertek)
3. Test Mode Software: Android Engineering Mode
4. Notebook Computer (PC6231)
5. USB cable of 1m long
6. AC/DC Adaptor (Input: 100-120VAC 50-60Hz; Output: 5VDC 1.5A)
   Model: STC-A515V-Z, Date Code: 1427
   (Provided by Applicant)

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

3.0 Emission Results

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any), Average Factor (optional) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CF - AG - AV

where FS = Field Strength in dBµV/m
RA = Receiver Amplitude (including preamplifier) in dBµV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
AV = Average Factor in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

FS = RR + LF

where FS = Field Strength in dBµV/m
RR = RA - AG - AV in dBµV
LF = CF + AF in dB

Assume a receiver reading of 52.0 dBµV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB are added. The amplifier gain of 29 dB and average factor of 5 dB are subtracted, giving a field strength of 32 dBµV/m. This value in dBµV/m was converted to its corresponding level in µV/m.

RA = 52.0 dBµV/m
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
AV = 5.0 dB
RR = 18.0 dBµV
LF = 9.0 dB
FS = RR + LF
FS = 18 + 9 = 27 dBµV/m

Level in µV/m = Common Antilogarithm [(27 dBµV/m)/20] = 22.4 µV/m

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

3.2 Radiated Emission Configuration Photograph

The worst case in radiated emission was found at 14472.000 MHz

For electronic filing, the worst case radiated emission configuration photographs are saved with filename: radiated photos.pdf.

3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgment: Passed by 2.2 dB

3.4 Conducted Emission Configuration Photograph

The worst case in line-conducted emission was found at 0.348 MHz

For electronic filing, the worst case line-conducted configuration photographs are saved with filename: conducted photo.pdf.

3.5 Conducted Emission Data

For electronic filing, the graph and data table of conducted emission is saved with filename: conducted.pdf.

Judgment: Pass by 6.0 dB

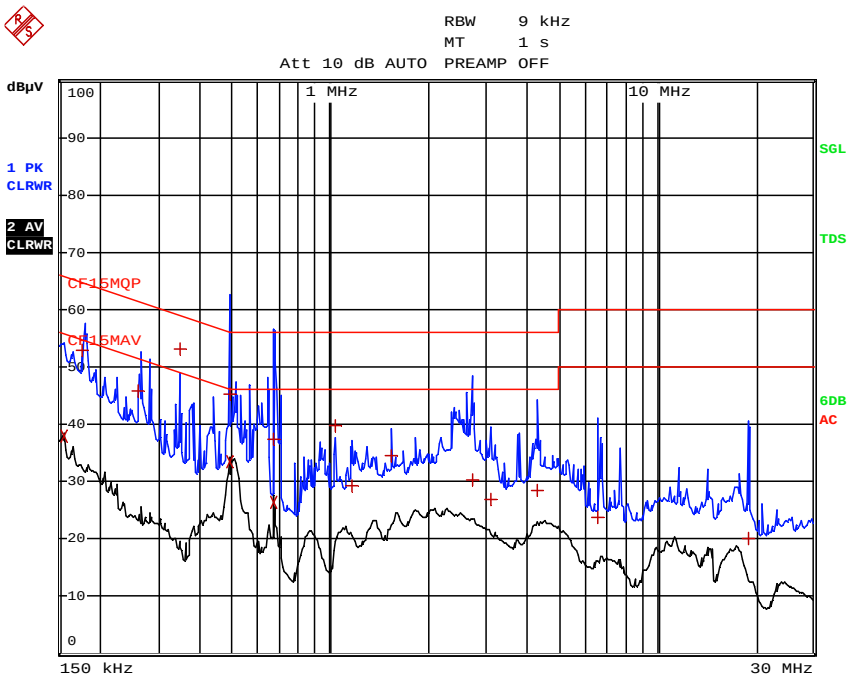
Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Worst-Case Operating Mode: WiFi Transmitting

EDIT PEAK LIST (Final Measurement Results)

Trace1: CF15MQP
Trace2: CF15MAV
Trace3: ---

TRACE		FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
2	CISPR Average	154.5 kHz	38.02	L1	-17.73
1	Quasi Peak	177 kHz	52.76	L1	-11.86
1	Quasi Peak	262.5 kHz	45.80	L1	-15.55
1	Quasi Peak	348 kHz	53.05	L1	-5.95
1	Quasi Peak	492 kHz	45.29	N	-10.84
2	CISPR Average	492 kHz	33.38	L1	-12.74
1	Quasi Peak	667.5 kHz	37.52	N	-18.47
2	CISPR Average	667.5 kHz	26.50	N	-19.49
1	Quasi Peak	1.041 MHz	39.64	L1	-16.35
1	Quasi Peak	1.167 MHz	29.38	L1	-26.61
1	Quasi Peak	1.536 MHz	34.50	N	-21.49
1	Quasi Peak	2.7285 MHz	30.39	L1	-25.60
1	Quasi Peak	3.111 MHz	26.88	N	-29.11
1	Quasi Peak	4.2945 MHz	28.57	N	-27.42
1	Quasi Peak	6.567 MHz	23.79	L1	-36.20
1	Quasi Peak	19.0905 MHz	20.10	N	-39.89



Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: Transmitting (802.11b DSSS 11Mbps)

Table 1
Radiated Emissions
Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m -Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2412.000	91.5	33	29.4	87.9	94.0	-6.1
H	***4824.000***	***37.8***	***33***	***34.9***	***39.7***	***54.0***	***-14.3***
H	7236.000	36.7	33	37.9	41.6	54.0	-12.4
H	9648.000	34.3	33	40.4	41.7	54.0	-12.3
H	***12060.000***	***35.4***	***33***	***40.5***	***42.9***	***54.0***	***-11.1***
H	***14472.000***	***44.8***	***33***	***40.0***	***51.8***	***54.0***	***-2.2***

Channel 06

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2437.000	91.4	33	29.4	87.8	94.0	-6.2
H	***4874.000***	***37.6***	***33***	***34.9***	***39.5***	***54.0***	***-14.5***
H	***7311.000***	***36.7***	***33***	***37.9***	***41.6***	***54.0***	***-12.4***
H	9748.000	34.2	33	40.4	41.6	54.0	-12.4
H	***12185.000***	***36.1***	***33***	***40.5***	***43.6***	***54.0***	***-10.4***
H	14622.000	46.3	33	38.4	51.7	54.0	-2.3

Channel 11

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2462.000	91.4	33	29.4	87.8	94.0	-6.2
H	***4924.000***	***38.0***	***33***	***34.9***	***39.9***	***54.0***	***-14.1***
H	***7386.000***	***35.9***	***33***	***37.9***	***40.8***	***54.0***	***-13.2***
H	9848.000	34.4	33	40.4	41.8	54.0	-12.2
H	***12310.000***	***36.3***	***33***	***40.5***	***43.8***	***54.0***	***-10.2***
H	14772.000	46.2	33	38.4	51.6	54.0	-2.4

NOTES:
1. Average measurement method is used for emission measurement.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative sign in the column shows value below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.
7. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: Transmitting (802.11b DSSS 11Mbps)

Table 2
Radiated Emissions
Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2412.000	105.0	33	29.4	101.4	114.0	-12.6
H	***4824.000***	***43.5***	***33***	***34.9***	***45.4***	***74.0***	***-28.6***
H	7236.000	41.5	33	37.9	46.4	74.0	-27.6
H	9648.000	41.2	33	40.4	48.6	74.0	-25.4
H	***12060.000***	***42.1***	***33***	***40.5***	***49.6***	***74.0***	***-24.4***
H	***14472.000***	***49.6***	***33***	***40.0***	***56.6***	***74.0***	***-17.4***

Channel 06

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2437.000	104.8	33	29.4	101.2	114.0	-12.8
H	***4874.000***	***44.6***	***33***	***34.9***	***46.5***	***74.0***	***-27.5***
H	***7311.000***	***41.6***	***33***	***37.9***	***46.5***	***74.0***	***-27.5***
H	9748.000	41.2	33	40.4	48.6	74.0	-25.4
H	***12185.000***	***43.1***	***33***	***40.5***	***50.6***	***74.0***	***-23.4***
H	14622.000	50.2	33	38.4	55.6	74.0	-18.4

Channel 11

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2462.000	104.6	33	29.4	101.0	114.0	-13.0
H	***4924.000***	***44.7***	***33***	***34.9***	***46.6***	***74.0***	***-27.4***
H	***7386.000***	***41.7***	***33***	***37.9***	***46.6***	***74.0***	***-27.4***
H	9848.000	41.2	33	40.4	48.6	74.0	-25.4
H	***12310.000***	***43.2***	***33***	***40.5***	***50.7***	***74.0***	***-23.3***
H	14772.000	50.5	33	38.4	55.9	74.0	-18.1

NOTES:
1. Peak Detector is used for emission measurement.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative sign in the column shows value below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.
7. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: Transmitting (802.11g OFDM 54Mbps)

Table 3
Radiated Emissions
Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m -Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2412.000	88.4	33	29.4	84.8	94.0	-9.2
H	***4824.000***	***38.8***	***33***	***34.9***	***40.7***	***54.0***	***-13.3***
H	7236.000	37.8	33	37.9	42.7	54.0	-11.3
H	9648.000	35.4	33	40.4	42.8	54.0	-11.2
H	***12060.000***	***36.3***	***33***	***40.5***	***43.8***	***54.0***	***-10.2***
H	***14472.000***	***42.9***	***33***	***40.0***	***49.9***	***54.0***	***-4.1***

Channel 06

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2437.000	88.2	33	29.4	84.6	94.0	-9.4
H	***4874.000***	***38.7***	***33***	***34.9***	***40.6***	***54.0***	***-13.4***
H	***7311.000***	***37.7***	***33***	***37.9***	***42.6***	***54.0***	***-11.4***
H	9748.000	36.1	33	40.4	43.5	54.0	-10.5
H	***12185.000***	***36.4***	***33***	***40.5***	***43.9***	***54.0***	***-10.1***
H	14622.000	44.2	33	38.4	49.6	54.0	-4.4

Channel 11

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2462.000	88.1	33	29.4	84.5	94.0	-9.5
H	***4924.000***	***38.6***	***33***	***34.9***	***40.5***	***54.0***	***-13.5***
H	***7386.000***	***37.6***	***33***	***37.9***	***42.5***	***54.0***	***-11.5***
H	9848.000	36.5	33	40.4	43.9	54.0	-10.1
H	***12310.000***	***36.3***	***33***	***40.5***	***43.8***	***54.0***	***-10.2***
H	14772.000	44.1	33	38.4	49.5	54.0	-4.5

NOTES:
1. Average measurement method is used for emission measurement.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative sign in the column shows value below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.
7. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: Transmitting (802.11g OFDM 54Mbps)

Table 4
Radiated Emissions
Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2412.000	104.2	33	29.4	100.6	114.0	-13.4
H	***4824.000***	***44.7***	***33***	***34.9***	***46.6***	***74.0***	***-27.4***
H	7236.000	41.9	33	37.9	46.8	74.0	-27.2
H	9648.000	39.5	33	40.4	46.9	74.0	-27.1
H	***12060.000***	***42.4***	***33***	***40.5***	***49.9***	***74.0***	***-24.1***
H	***14472.000***	***49.2***	***33***	***40.0***	***56.2***	***74.0***	***-17.8***

Channel 06

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2437.000	103.9	33	29.4	100.3	114.0	-13.7
H	***4874.000***	***43.7***	***33***	***34.9***	***45.6***	***74.0***	***-28.4***
H	***7311.000***	***41.8***	***33***	***37.9***	***46.7***	***74.0***	***-27.3***
H	9748.000	39.4	33	40.4	46.8	74.0	-27.2
H	***12185.000***	***43.3***	***33***	***40.5***	***50.8***	***74.0***	***-23.2***
H	14622.000	48.4	33	38.4	53.8	74.0	-20.2

Channel 11

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2462.000	103.7	33	29.4	100.1	114.0	-13.9
H	***4924.000***	***43.9***	***33***	***34.9***	***45.8***	***74.0***	***-28.2***
H	***7386.000***	***41.9***	***33***	***37.9***	***46.8***	***74.0***	***-27.2***
H	9848.000	38.4	33	40.4	45.8	74.0	-28.2
H	***12310.000***	***43.3***	***33***	***40.5***	***50.8***	***74.0***	***-23.2***
H	14772.000	48.3	33	38.4	53.7	74.0	-20.3

NOTES:
1. Peak Detector is used for emission measurement.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative sign in the column shows value below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.
7. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: Transmitting (802.11n HT20 mcs7 65Mbps)

Table 5
Radiated Emissions
Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m -Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2412.000	87.0	33	29.4	83.4	94.0	-10.6
H	***4824.000***	***39.0***	***33***	***34.9***	***40.9***	***54.0***	***-13.1***
H	7236.000	36.9	33	37.9	41.8	54.0	-12.2
H	9648.000	35.4	33	40.4	42.8	54.0	-11.2
H	***12060.000***	***37.4***	***33***	***40.5***	***44.9***	***54.0***	***-9.1***
H	***14472.000***	***41.7***	***33***	***40.0***	***48.7***	***54.0***	***-5.3***

Channel 06

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2437.000	86.2	33	29.4	82.6	94.0	-11.4
H	***4874.000***	***38.7***	***33***	***34.9***	***40.6***	***54.0***	***-13.4***
H	***7311.000***	***36.7***	***33***	***37.9***	***41.6***	***54.0***	***-12.4***
H	9748.000	35.4	33	40.4	42.8	54.0	-11.2
H	***12185.000***	***37.3***	***33***	***40.5***	***44.8***	***54.0***	***-9.2***
H	14622.000	42.8	33	38.4	48.2	54.0	-5.8

Channel 11

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2462.000	84.8	33	29.4	81.2	94.0	-12.8
H	***4924.000***	***38.8***	***33***	***34.9***	***40.7***	***54.0***	***-13.3***
H	***7386.000***	***36.7***	***33***	***37.9***	***41.6***	***54.0***	***-12.4***
H	9848.000	36.2	33	40.4	43.6	54.0	-10.4
H	***12310.000***	***37.3***	***33***	***40.5***	***44.8***	***54.0***	***-9.2***
H	14772.000	43.5	33	38.4	48.9	54.0	-5.1

NOTES:
1. Average measurement method is used for emission measurement.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative sign in the column shows value below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.
7. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: Transmitting ((802.11n HT20 mcs7 65Mbps)

Table 6
Radiated Emissions
Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 01

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2412.000	103.9	33	29.4	100.3	114.0	-13.7
H	***4824.000***	***43.0***	***33***	***34.9***	***44.9***	***74.0***	***-29.1***
H	7236.000	40.0	33	37.9	44.9	74.0	-29.1
H	9648.000	39.5	33	40.4	46.9	74.0	-27.1
H	***12060.000***	***41.3***	***33***	***40.5***	***48.8***	***74.0***	***-25.2***
H	***14472.000***	***43.5***	***33***	***40.0***	***50.5***	***74.0***	***-23.5***

Channel 06

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2437.000	103.7	33	29.4	100.1	114.0	-13.9
H	***4874.000***	***42.9***	***33***	***34.9***	***44.8***	***74.0***	***-29.2***
H	***7311.000***	***40.0***	***33***	***37.9***	***44.9***	***74.0***	***-29.1***
H	9748.000	39.3	33	40.4	46.7	74.0	-27.3
H	***12185.000***	***41.4***	***33***	***40.5***	***48.9***	***74.0***	***-25.1***
H	14622.000	44.5	33	38.4	49.9	74.0	-24.1

Channel 11

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2462.000	103.0	33	29.4	99.4	114.0	-14.6
H	***4924.000***	***42.8***	***33***	***34.9***	***44.7***	***74.0***	***-29.3***
H	***7386.000***	***39.9***	***33***	***37.9***	***44.8***	***74.0***	***-29.2***
H	9848.000	39.3	33	40.4	46.7	74.0	-27.3
H	***12310.000***	***41.3***	***33***	***40.5***	***48.8***	***74.0***	***-25.2***
H	14772.000	44.5	33	38.4	49.9	74.0	-24.1

NOTES:
1. Peak Detector is used for emission measurement.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative sign in the column shows value below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.
7. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: Transmitting (802.11n HT40 mcs7 130Mbps)

Table 7
Radiated Emissions
Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 03

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2422.000	81.8	33	29.4	78.2	94.0	-15.8
H	***4844.000***	***40.0***	***33***	***34.9***	***41.9***	***54.0***	***-12.1***
H	7266.000	40.0	33	37.9	44.9	54.0	-9.1
H	9688.000	36.4	33	40.4	43.8	54.0	-10.2
H	***12110.000***	***37.3***	***33***	***40.5***	***44.8***	***54.0***	***-9.2***
H	***14532.000***	***43.0***	***33***	***38.4***	***48.4***	***54.0***	***-5.6***

Channel 06

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2437.000	80.9	33	29.4	77.3	94.0	-16.7
H	***4874.000***	***39.9***	***33***	***34.9***	***41.8***	***54.0***	***-12.2***
H	***7311.000***	***39.9***	***33***	***37.9***	***44.8***	***54.0***	***-9.2***
H	9748.000	36.4	33	40.4	43.8	54.0	-10.2
H	***12185.000***	***37.2***	***33***	***40.5***	***44.7***	***54.0***	***-9.3***
H	14622.000	43.2	33	38.4	48.6	54.0	-5.4

Channel 09

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
H	2452.000	80.0	33	29.4	76.4	94.0	-17.6
H	***4904.000***	***38.7***	***33***	***34.9***	***40.6***	***54.0***	***-13.4***
H	***7356.000***	***39.9***	***33***	***37.9***	***44.8***	***54.0***	***-9.2***
H	9808.000	36.5	33	40.4	43.9	54.0	-10.1
H	***12260.000***	***37.3***	***33***	***40.5***	***44.8***	***54.0***	***-9.2***
H	14712.000	43.3	33	38.4	48.7	54.0	-5.3

NOTES:
1. Average measurement method is used for emission measurement.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative sign in the column shows value below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.
7. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: Transmitting (802.11n HT40 mcs7 130Mbps)

Table 8
Radiated Emissions
Pursuant to FCC Part 15 Section 15.249 Requirement

Channel 03

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2422.000	103.7	33	29.4	100.1	114.0	-13.9
H	***4844.000***	***44.0***	***33***	***34.9***	***45.9***	***74.0***	***-28.1***
H	7266.000	40.0	33	37.9	44.9	74.0	-29.1
H	9688.000	39.4	33	40.4	46.8	74.0	-27.2
H	***12110.000***	***41.3***	***33***	***40.5***	***48.8***	***74.0***	***-25.2***
H	***14532.000***	***44.0***	***33***	***38.4***	***49.4***	***74.0***	***-24.6***

Channel 06

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2437.000	103.4	33	29.4	99.8	114.0	-14.2
H	***4874.000***	***43.8***	***33***	***34.9***	***45.7***	***74.0***	***-28.3***
H	***7311.000***	***40.9***	***33***	***37.9***	***45.8***	***74.0***	***-28.2***
H	9748.000	39.4	33	40.4	46.8	74.0	-27.2
H	***12185.000***	***41.4***	***33***	***40.5***	***48.9***	***74.0***	***-25.1***
H	14622.000	44.5	33	38.4	49.9	74.0	-24.1

Channel 09

Polari-zation	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
H	2452.000	103.0	33	29.4	99.4	114.0	-14.6
H	***4904.000***	***43.7***	***33***	***34.9***	***45.6***	***74.0***	***-28.4***
H	***7356.000***	***40.7***	***33***	***37.9***	***45.6***	***74.0***	***-28.4***
H	9808.000	39.3	33	40.4	46.7	74.0	-27.3
H	***12260.000***	***41.3***	***33***	***40.5***	***48.8***	***74.0***	***-25.2***
H	14712.000	44.4	33	38.4	49.8	74.0	-24.2

NOTES:
1. Peak Detector is used for emission measurement.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative sign in the column shows value below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. For the measurement of radiated emission, summation method was used which numerical integrating (in terms of linear power) over the transmitter occupied bandwidth.
6. For the linear power measurement, data in 1MHz spacing was collected by spectrum analyzer with 1MHz resolution bandwidth.
7. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Applicant: Alco Electronics Ltd. Date of Test: September 10, 2014
Model: CT9293W23
Worst-Case Operating Mode: WiFi with STC Adaptor

Table 9

Radiated Emissions
Pursuant to FCC Part 15 Section 15.209 Requirement

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
H	59.125	41.8	16	10.0	35.8	40.0	-4.2
H	76.685	47.4	16	6.0	37.4	40.0	-2.6
H	96.458	39.8	16	12.0	35.8	43.5	-7.7
H	148.256	38.8	16	14.0	36.8	43.5	-6.7
H	174.968	32.8	16	19.0	35.8	43.5	-7.7
H	198.354	34.9	16	16.0	34.9	43.5	-8.6
H	230.875	33.8	16	18.0	35.8	46.0	-10.2
H	297.691	29.9	16	22.0	35.9	46.0	-10.1
H	338.005	26.8	16	24.0	34.8	46.0	-11.2
H	462.546	24.6	16	26.0	34.6	46.0	-11.4

NOTES: 1. Quasi-Peak Detector Data unless otherwise stated.

2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative sign in the column shows value below limit.

4. Emission (the row indicated by ***bold italic***) within the restricted band meets the requirement of FCC Part 15 Section 15.205 / RSS-210 Section 2.2.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

4.0 Equipment Photographs

For electronic filing, the photographs are saved with filename: external photos.pdf and internal photos.pdf.

5.0 Product Labelling

For electronics filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

6.0 Technical Specifications

For electronic filing, the block diagram and schematic of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

7.0 Instruction Manual

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States and Canada.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

8.0 Miscellaneous Information

The miscellaneous information includes details of the test procedure and measured bandwidth / calculation of factor such as pulse desensitization and averaging factor.

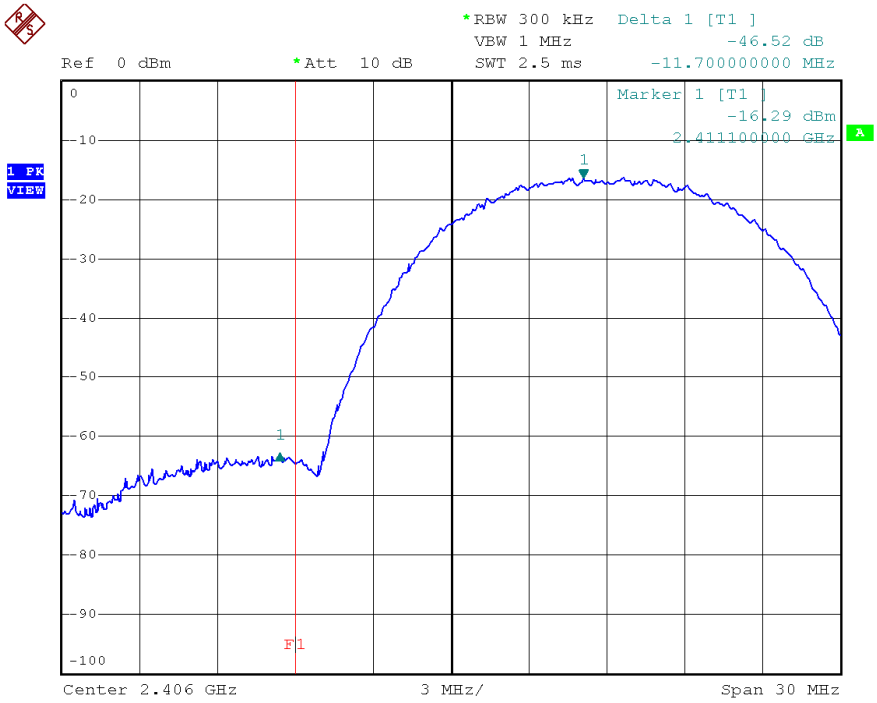
8.1 Radiated Emission on the Bandedge

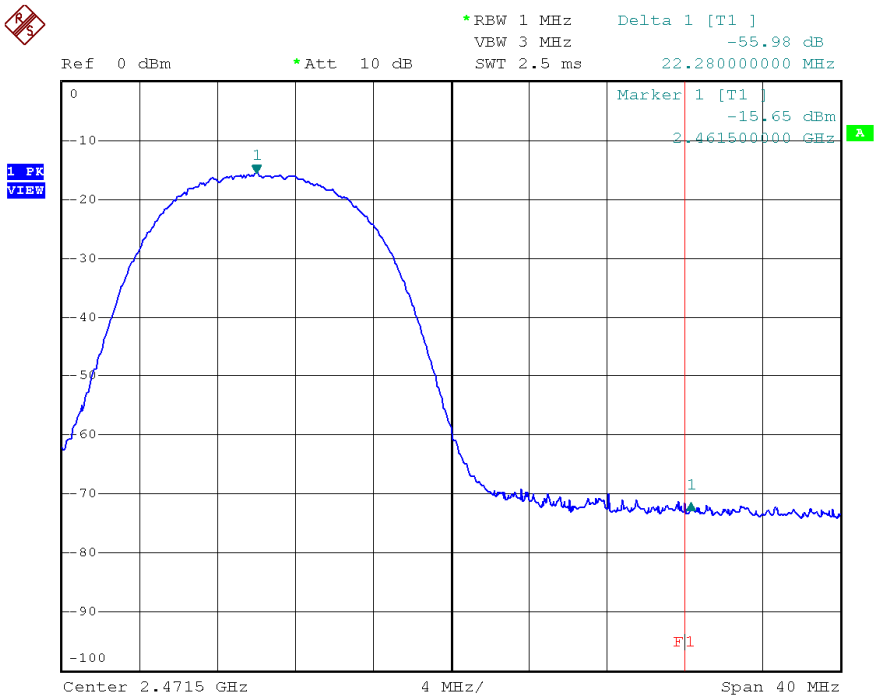
From the following plots, they show that the fundamental emissions are confined in the specified band (2400MHz to 2483.5MHz). In case of the fundamental emissions are within two standard bandwidths from the bandedge, the delta measurement technique as according to C63.10 (2009) is used for determining bandedge compliance. Standard bandwidth is the bandwidth specified by ANSI C63.4 (2009) for frequency being measured.

Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50dB below the level of the fundamental or to the general radiated emissions limits in Section 15.209 / RSS-210 2.5, whichever is the lesser attenuation, which meet the requirement of part 15.249(d) / RSS-210 A2.9.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Peak Measurement (802.11b DSSS 11Mbps)





Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Peak Measurement (802.11b DSSS 11Mbps)

Bandedge compliance is determined by applying marker-delta method, i.e. (Bandedge Plot).

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=101.4 dBµV/m - 46.5 dB
=54.9 dBµV/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=87.9 dBµV/m - 46.5 dB
=41.4 dBµV/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=101.0 dBµV/m - 56.0 dB
=45.0 dBµV/m

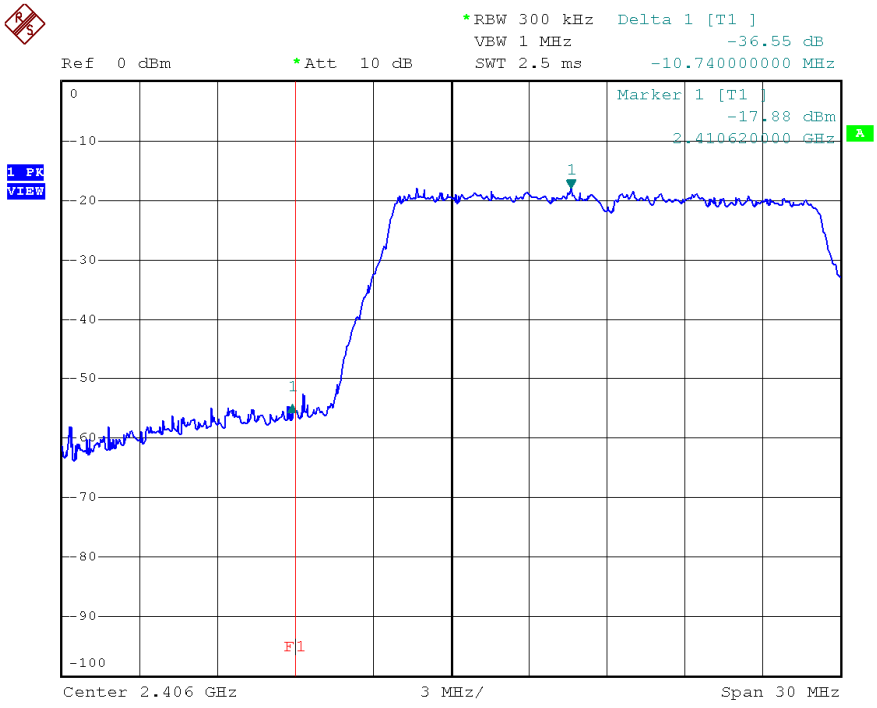
Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

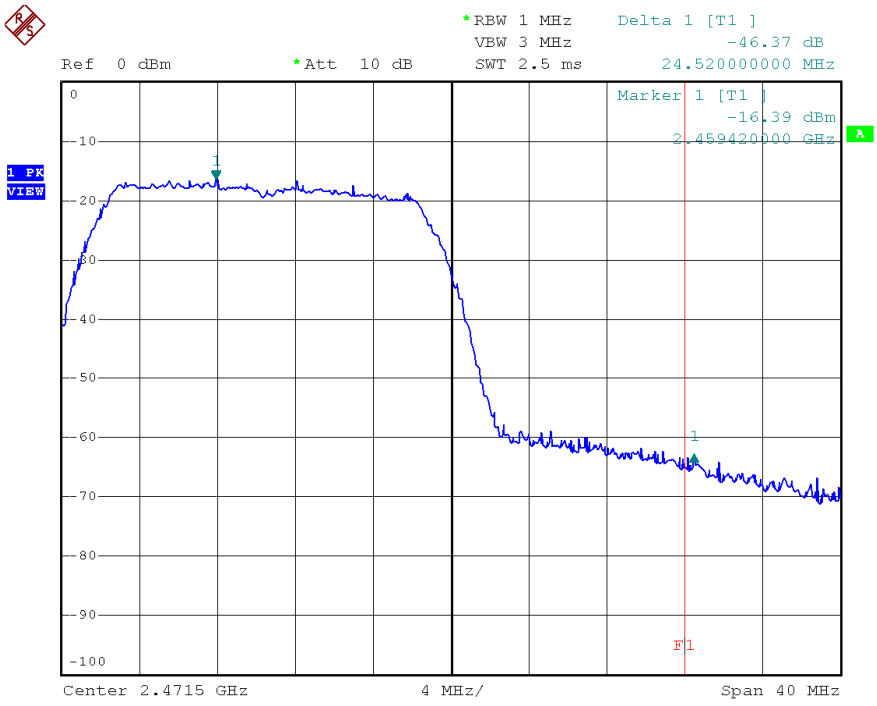
=87.8 dBµV/m - 56.0 dB
=31.8 dBµV/m

The resultant field strength meets the general radiated emission limit in Section 15.209, which does not exceed 74 dBµV/m (Peak Limit) and 54 dBµV/m (Average Limit).

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Peak Measurement (802.11g OFDM 54Mbps)





Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Peak Measurement (802.11g OFDM 54Mbps)

Bandedge compliance is determined by applying marker-delta method, i.e. (Bandedge Plot).

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=100.6 dBµV/m - 36.6 dB
=64.0 BµV/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=84.8 dBµV/m - 36.6 dB
=48.2 dBµV/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=100.1 dBµV/m - 46.4 dB
=53.7 dBµV/m

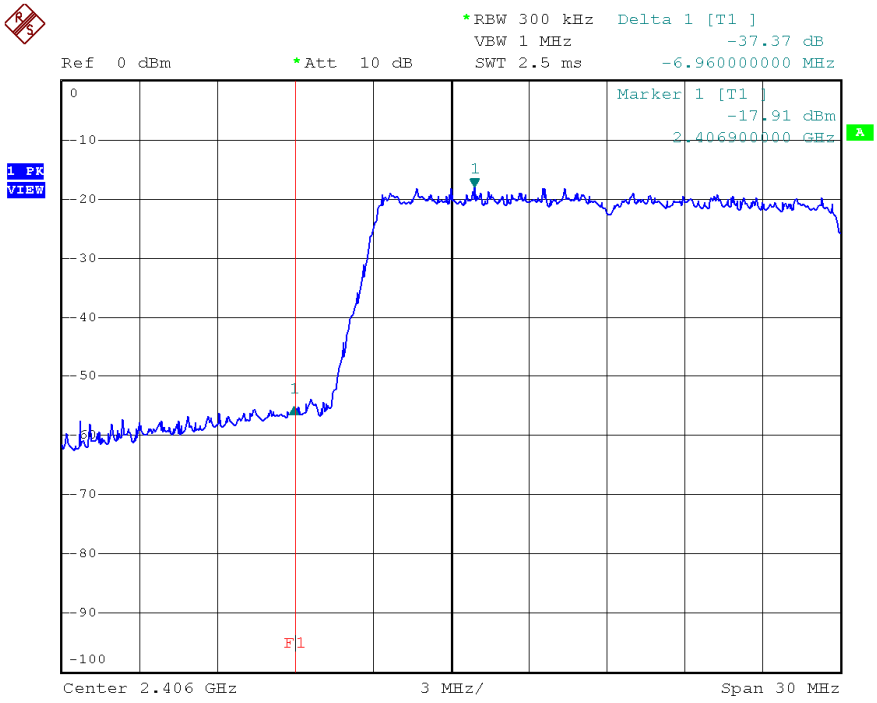
Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

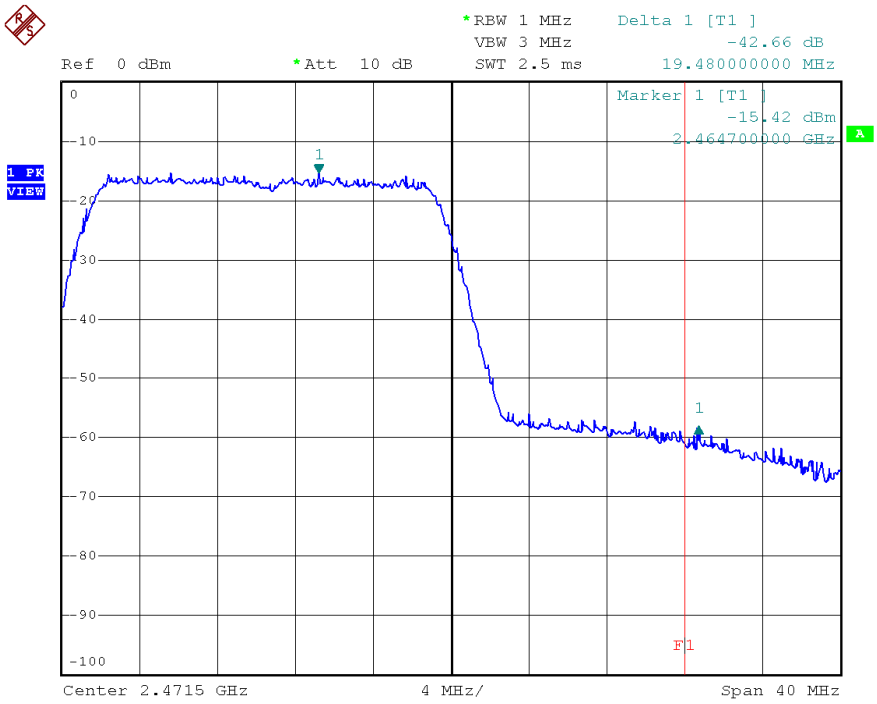
=84.5 dBµV/m - 46.4 dB
=38.1 dBµV/m

The resultant field strength meets the general radiated emission limit in Section 15.209, which does not exceed 74 dBµV/m (Peak Limit) and 54 dBµV/m (Average Limit).

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Peak Measurement (802.11n HT20 mcs7 65Mbps)





Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Peak Measurement (802.11n HT20 mcs7 65Mbps)

Bandedge compliance is determined by applying marker-delta method, i.e. (Bandedge Plot).

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=100.3 dBµV/m - 37.4 dB
=62.9 dBµV/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=83.4 dBµV/m - 37.4 dB
=46.0 dBµV/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=99.4 dBµV/m - 42.7 dB
=56.7 dBµV/m

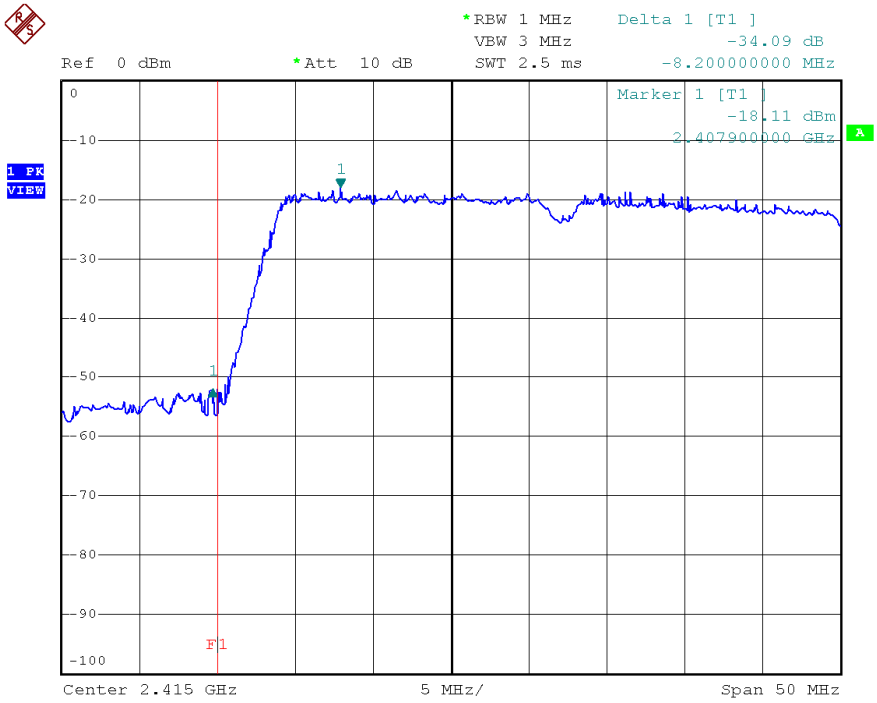
Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

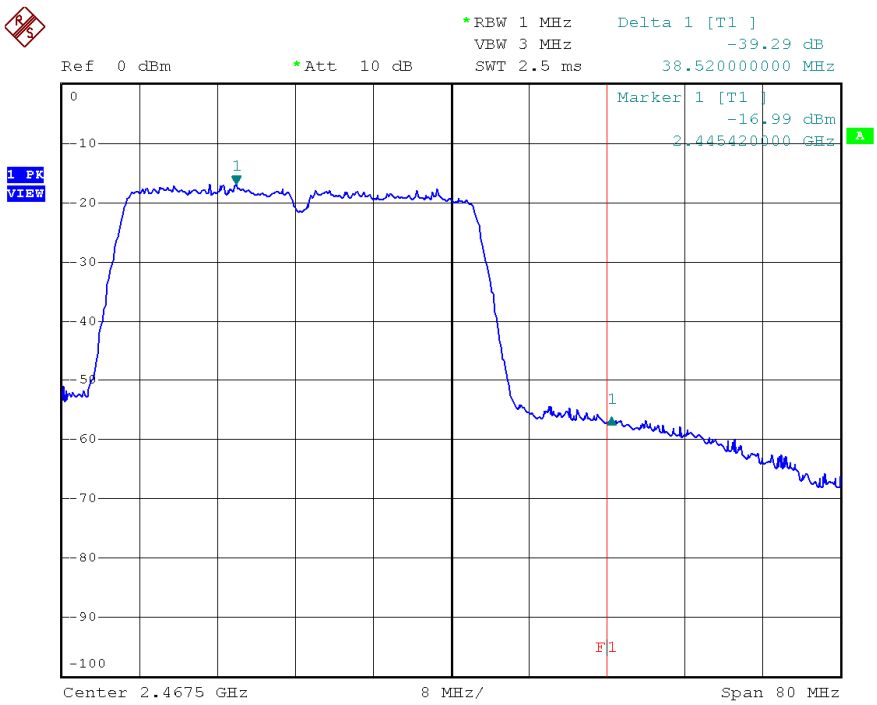
=81.2 dBµV/m - 42.7 dB
=38.5 dBµV/m

The resultant field strength meets the general radiated emission limit in Section 15.209, which does not exceed 74 dBµV/m (Peak Limit) and 54 dBµV/m (Average Limit).

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Peak Measurement (802.11n HT40 mcs7 130Mbps)





Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Peak Measurement (802.11n HT40 mcs7 130Mbps)

Bandedge compliance is determined by applying marker-delta method, i.e. (Bandedge Plot).

Lower bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=100.1 dBµV/m - 34.1 dB
=66.0 dBµV/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=78.2 dBµV/m - 34.1 dB
=44.1 dBµV/m

Upper bandedge

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the plot

=99.4 dBµV/m - 39.3 dB
=60.1 dBµV/m

Average Resultant field strength = Fundamental emissions (average value) – delta from the plot

=76.4 dBµV/m - 39.3 dB
=37.1 dBµV/m

The resultant field strength meets the general radiated emission limit in Section 15.209, which does not exceed 74 dBµV/m (Peak Limit) and 54 dBµV/m (Average Limit).

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

8.2 Discussion of Pulse Desensitization

Pulse desensitivity is not applicable for this device. Since the transmitter transmits the RF signal continuously.

8.3 Calculation of Average Factor

The average factor is not applicable for this device as the transmitted signal is a continuously signal.

8.4 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services Hong Kong Ltd. in the measurements of transmitter operating under the Part 15, Subpart C rules.

The transmitting equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjusted through all three orthogonal axis to obtain maximum emission levels. The antenna height and polarization are also varied during the testing to search for maximum signal levels. The height of the antenna is varied from one to four meters.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in Exhibit 8.3.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower. For line conducted emissions, the range scanned is 150 kHz to 30 MHz.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

8.4 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements were made as described in ANSI C63.4 (2009).

The IF bandwidth used for measurement of radiated signal strength was 100 kHz or greater when frequency is below 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Exhibit 8.1). Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the forbidden bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, unless otherwise reported. Measurements taken at a closer distance are so marked.

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

8.5 Occupied Bandwidth

Occupied Bandwidth Results: 802.11b DSSS 11Mbps

Bluetooth	Occupied Bandwidth (kHz)
Low Channel: 2412	12600
Middle Channel: 2437	12800
High Channel: 2462	12800

Occupied Bandwidth Results: 802.11g OFDM 54Mbps

Bluetooth	Occupied Bandwidth (kHz)
Low Channel: 2412	17600
Middle Channel: 2437	17400
High Channel: 2462	17200

Occupied Bandwidth Results: 802.11n(HT20) mcs7 65Mbps

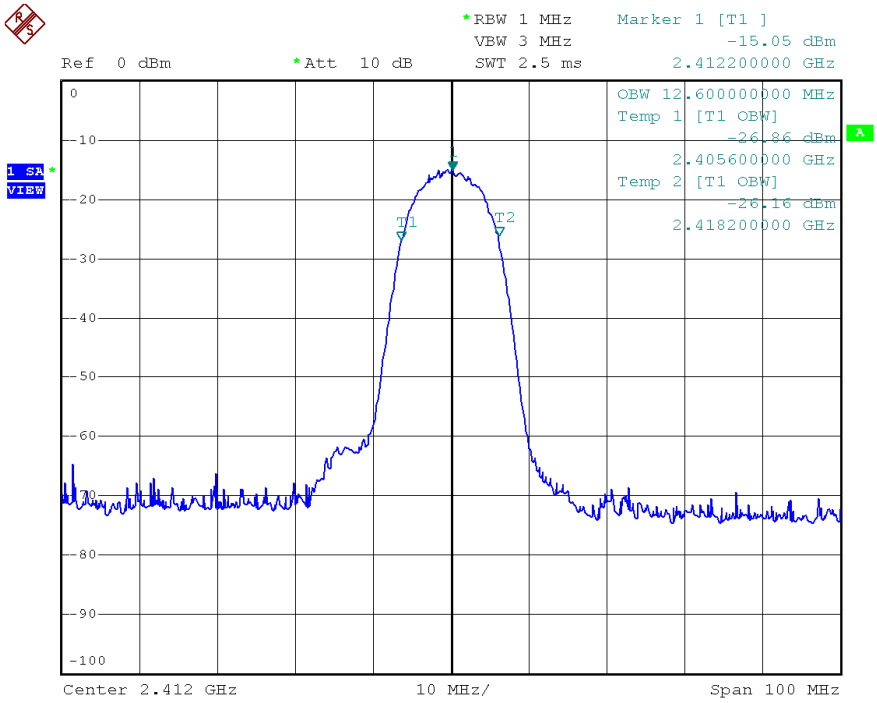
Bluetooth	Occupied Bandwidth (kHz)
Low Channel: 2412	18600
Middle Channel: 2437	18400
High Channel: 2462	18200

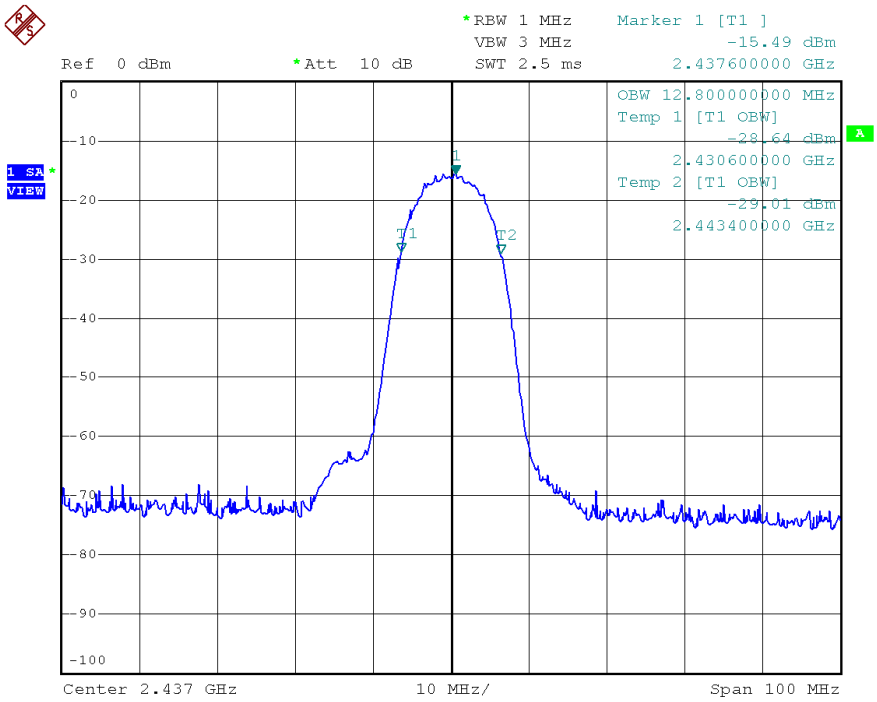
Occupied Bandwidth Results: 802.11n(HT40) mcs7 130Mbps

Bluetooth	Occupied Bandwidth (kHz)
Low Channel: 2422	36400
Middle Channel: 2437	36400
High Channel: 2452	36200

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

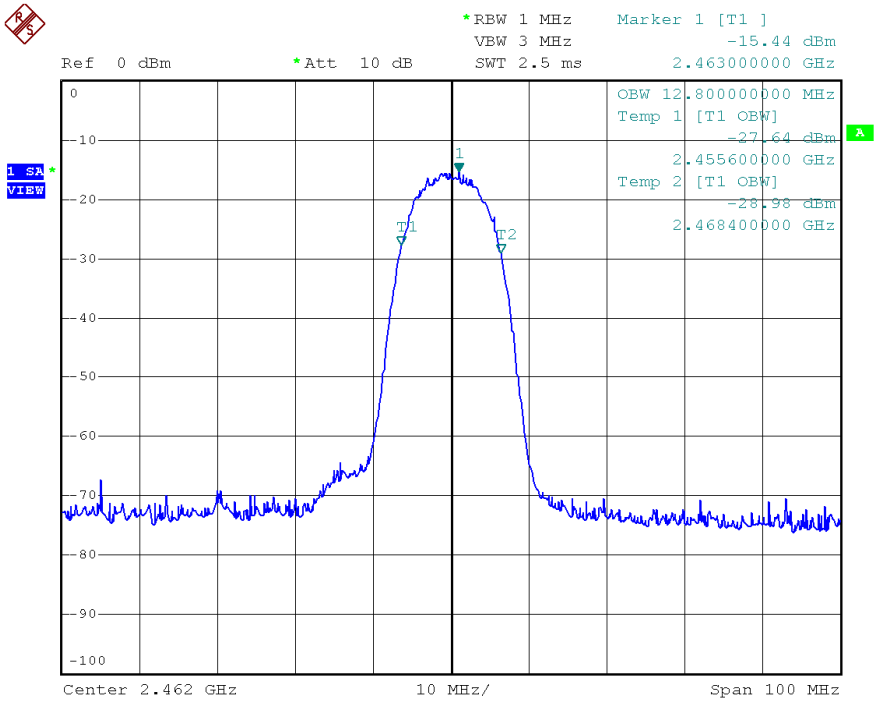
Bandwidth Measurement (802.11b DSSS 11Mbps)





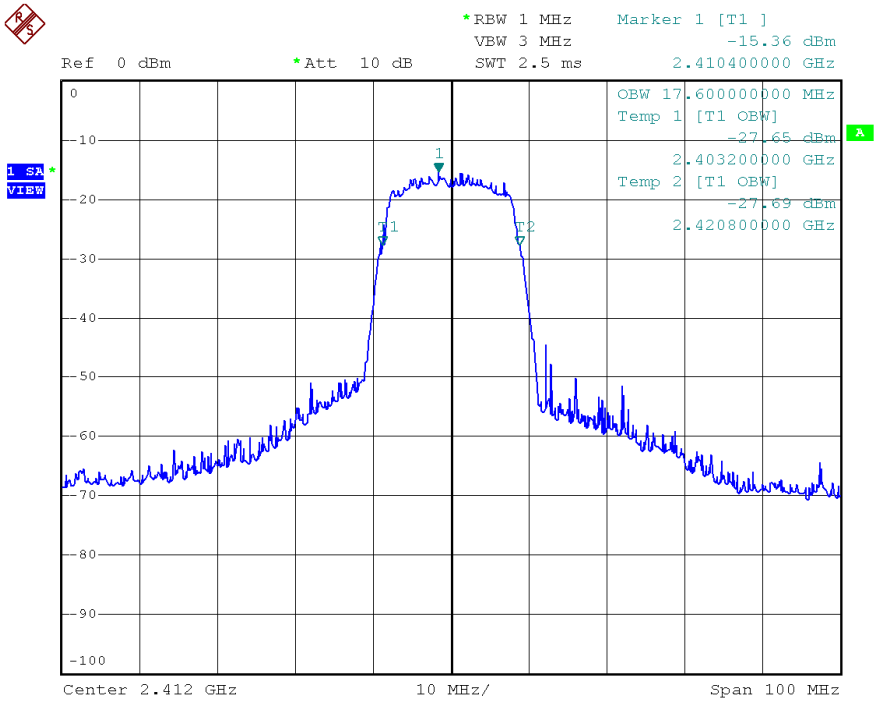
Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

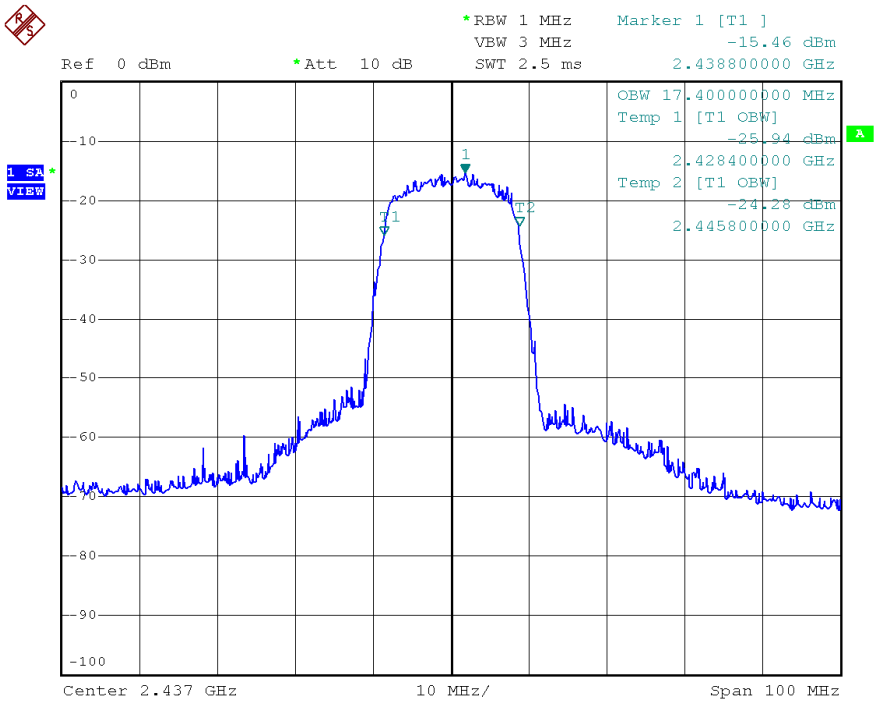
Bandwidth Measurement (802.11b DSSS 11Mbps)



Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

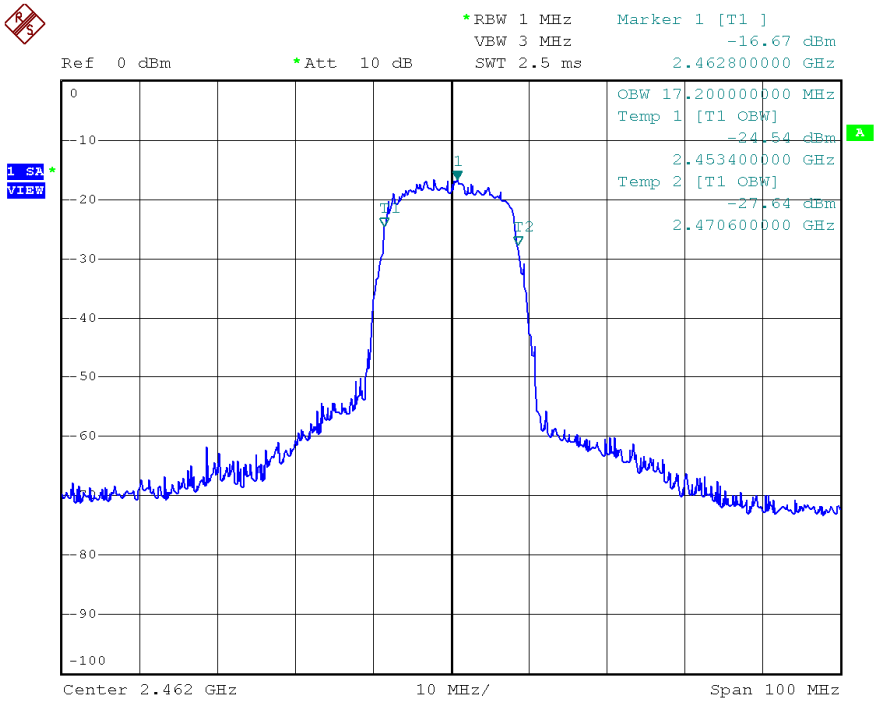
Bandwidth Measurement (802.11g OFDM 54Mbps)





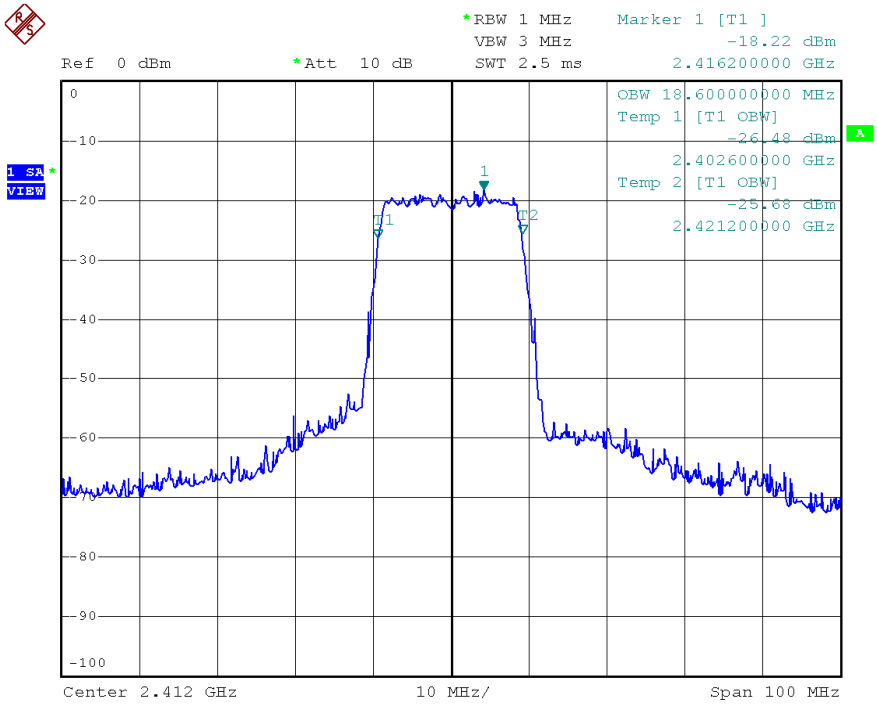
Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

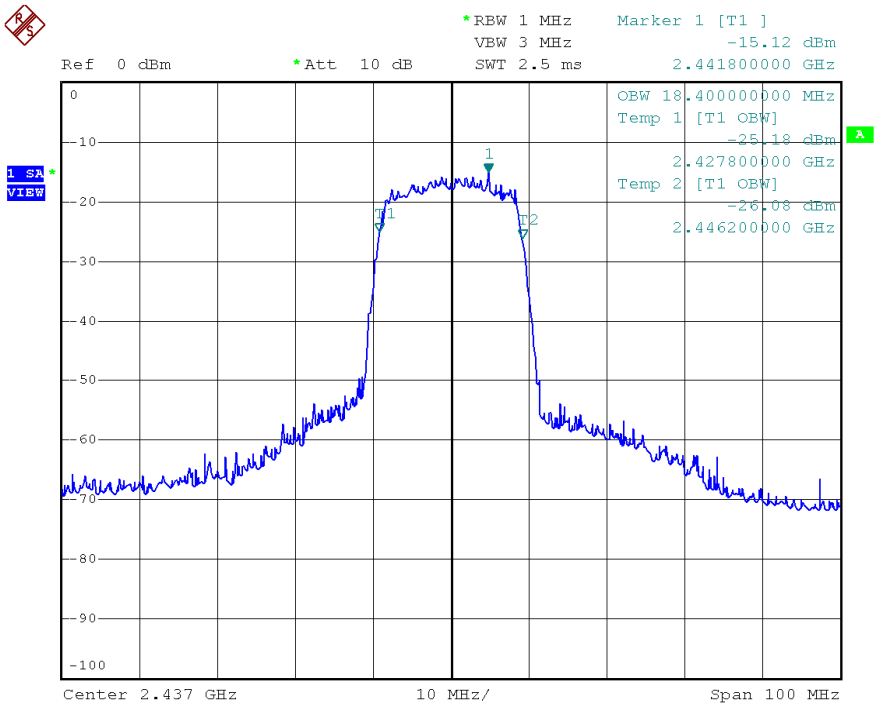
Bandwidth Measurement (802.11g OFDM 54Mbps)



Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

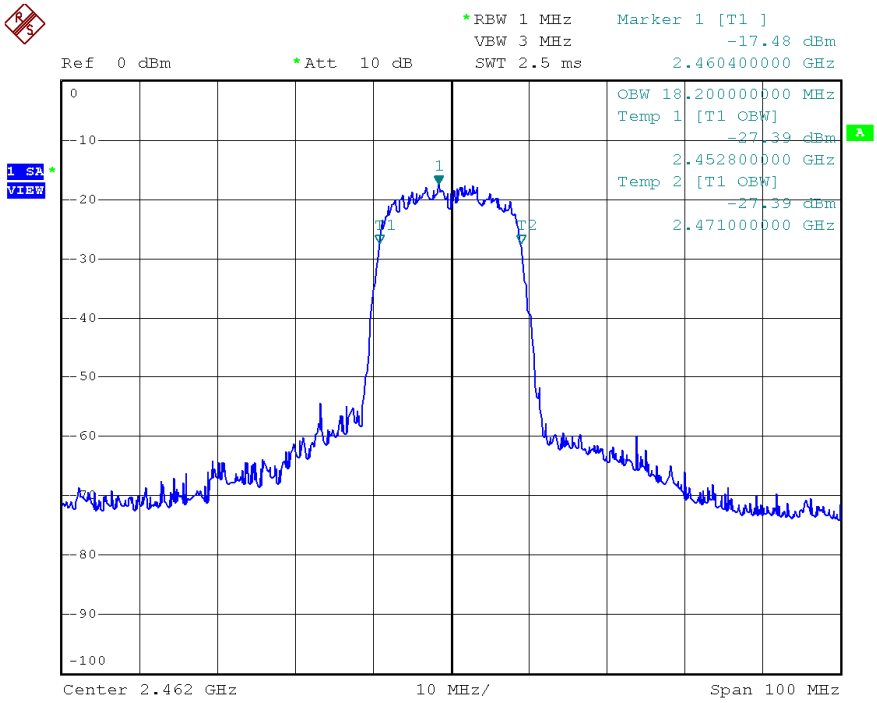
Bandwidth Measurement (802.11n HT20 mcs7 65Mbps)





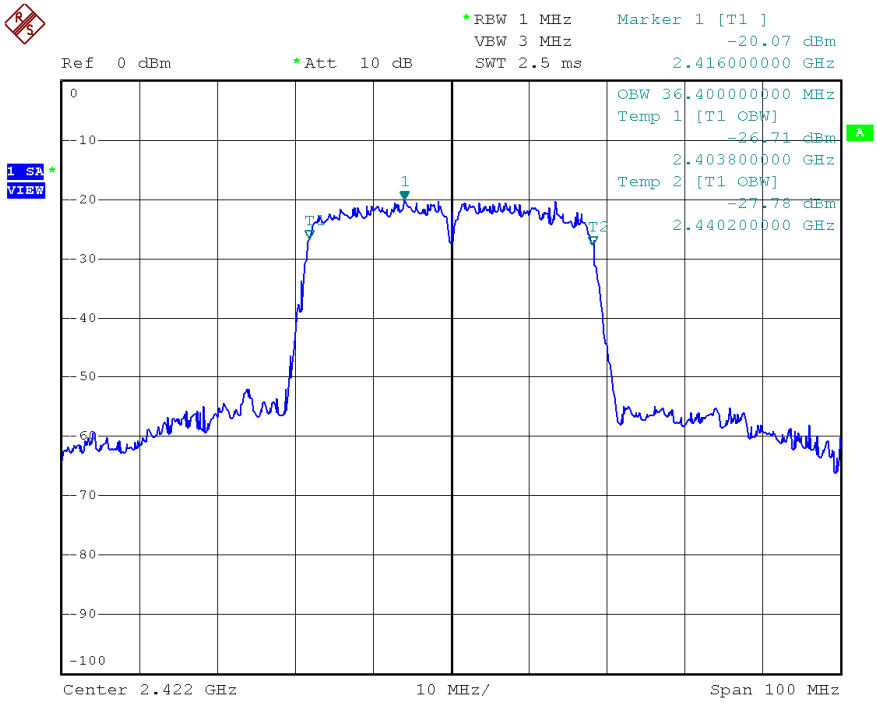
Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

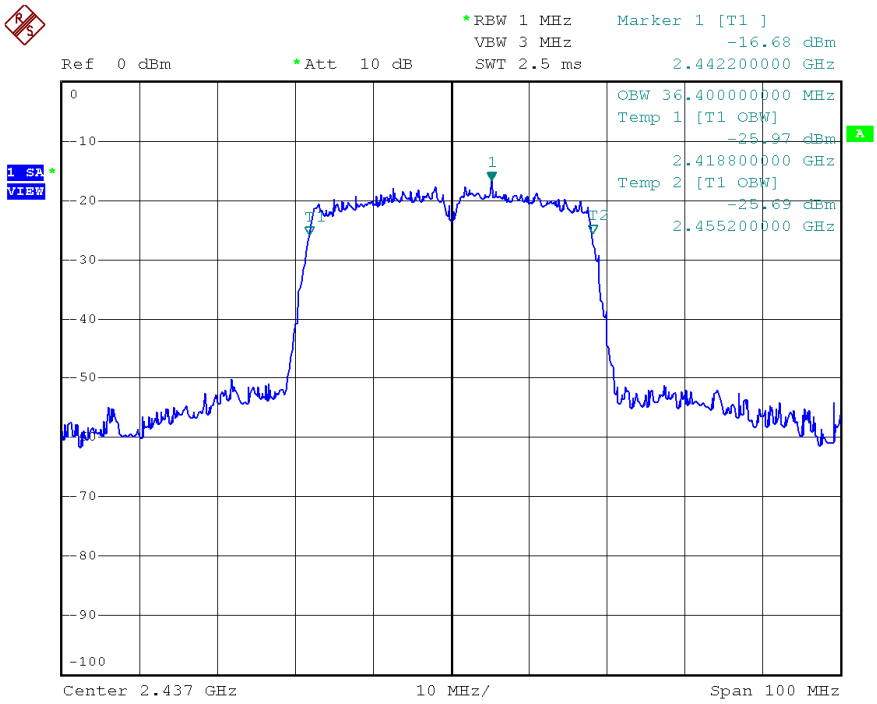
Bandwidth Measurement (802.11n HT20 mcs7 65Mbps)



Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

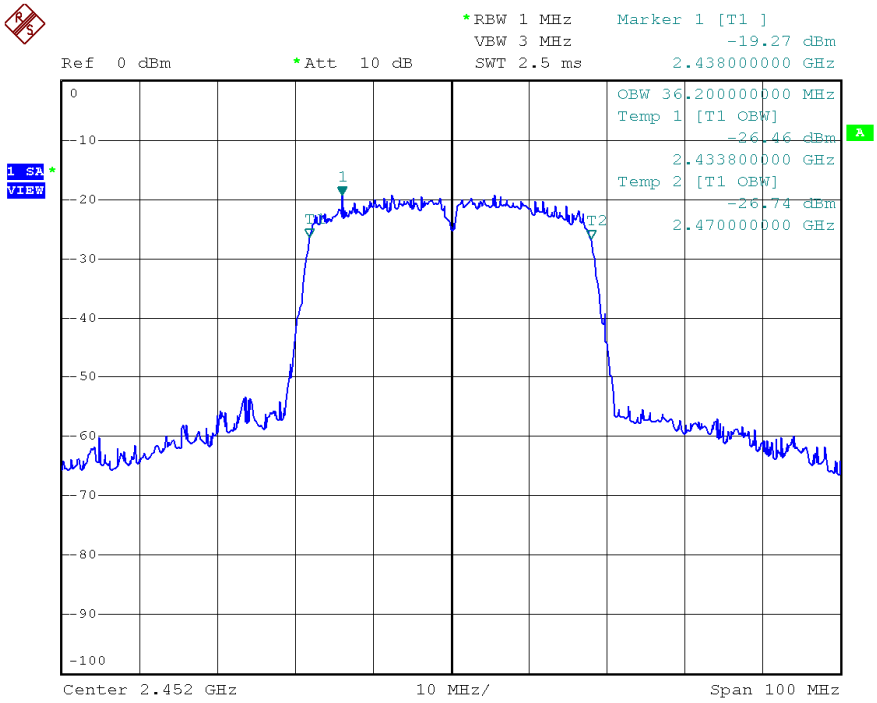
Bandwidth Measurement (802.11n HT40 mcs7 130Mbps)





Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

Bandwidth Measurement (802.11n HT40 mcs7 130Mbps)



Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com

9.0 **Equipment List**

1) Radiated Emissions Test

Equipment	EMI Test Receiver	Biconical Antenna	Log Periodic Antenna
Registration No.	EW-2666	EW-0571	EW-0572
Manufacturer	R&S	EMCO	EMCO
Model No.	ESCI7	3104C	3146
Calibration Date	Jun. 20, 2013	Nov. 01, 2013	Jun. 26, 2013
Calibration Due Date	Sep. 20, 2014	May 01, 2015	Dec. 26, 2014

Equipment	Spectrum Analyzer	Pyramidal Horn Antenna	Double Ridged Guide Antenna
Registration No.	EW-2188	EW-0905	EW-1133
Manufacturer	AGILENTTECH	EMCO	EMCO
Model No.	E4407B	3160-09	3115
Calibration Date	Apr. 16, 2014	Jan. 28, 2014	Apr. 30, 2014
Calibration Due Date	Apr. 16, 2015	Jul. 28, 2015	Oct. 30, 2015

2) Conducted Emissions Test

Equipment	EMI Test Receiver	LISN	LISN
Registration No.	EW-2666	EW-0192	EW-2501
Manufacturer	R&S	R&S	R&S
Model No.	ESCI7	ESH3-Z5	ENV-216
Calibration Date	Jun. 20, 2013	Jul. 24, 2014	Dec. 25, 2013
Calibration Due Date	Sep. 20, 2014	Apr. 15, 2015	Nov. 30, 2014

3) Bandedge and Bandwidth Measurement

Equipment	Spectrum Analyzer
Registration No.	EW-2249
Manufacturer	R&S
Model No.	FSP30
Calibration Date	Oct. 28, 2013
Calibration Due Date	Oct. 28, 2014

END OF TEST REPORT

Intertek Testing Services Hong Kong Ltd.
2/F., Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong.
Tel: (852) 2173 8888 Fax: (852) 2785 5487 Website: www.hk.intertek-etlsemko.com