



**Spectrum Research & Testing Lab., Inc.**

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

## TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
Page: 1 of 169  
Date: Dec. 28, 2017

Product Name: Almond 3S  
Model No.: A3S  
Applicant: Securifi Ltd.  
11F, No.92, Sec. 5, Nanjing E. Rd.,  
Songshan Dist., Taipei 105, Taiwan  
Date of Receipt: Oct. 30, 2017  
Finished date of Test: Dec. 14, 2017  
Applicable Standards: 47 CFR Part 15, Subpart C, 15.247  
ANSI C63.10: 2013  
FCC publication KDB 558074 D01 DTS Meas Guidance v04  
Measurement on Digital Transmission Systems (DTS)  
Operating under Section 15.247 Apr 5, 2017  
KDB 662911 D01 Multiple Transmitter Output v02r01 Oct 31,  
2013

We, **Spectrum Research & Testing Laboratory Inc.**, hereby certify that one sample of the above was tested in our laboratory with positive results according to the above-mentioned standards. The records in the report are an accurate account of the results. Details of the results are given in the subsequent pages of this report.

Tested By :

Richard Lin

(Richard Lin)

Date:

12/28/2017

Approved By :

Johnson Ho  
( Johnson Ho, Director )

Date:

12/28/2017





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## Revisions History

Report No.	Issue Date	Revisions
FCCA17103001-02	Dec. 28, 2017	Initial issue



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## 1. DOCUMENT POLICY AND TEST STATEMENT

### 1.1 DOCUMENT POLICY

- The report shall not be reproduced except in full, without the written approval of SRT Lab, Inc.
- FCC Registered Test Site Number : TW1016

### 1.2 TEST STATEMENT

- The test results in the report apply only to the unit tested by SRT Lab.
- There was no deviation from the requirements of test standards during the test.
- DC power source from Battery or external adapter.

### 1.3 EUT MODIFICATION

- No modification in SRT Lab.

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**2. DESCRIPTION OF EUT AND TEST MODE****2.1 GENERAL DESCRIPTION OF EUT**

<b>PRODUCT</b>	Almond 3S
<b>MODEL NO.</b>	A3S
<b>POWER SUPPLY</b>	DC power source from Battery or external adapter Brand Name: Shenzhen Gongjin Electronics Co. Ltd Model No.:S36B52-120A250-04 Input: 100~240V 50~60Hz Max 1.0A Output: 12V 2.5A
<b>CABLE</b>	NA
<b>FREQUENCY BAND</b>	2.4 GHz ~ 2.4835 GHz
<b>CARRIER FREQUENCY</b>	2.412 GHz ~ 2.462 GHz
<b>NUMBER OF CHANNEL</b>	2.4 G band_802.11b/g/n - HT20 : 11 ch 2.4 G band_802.11n - HT40 : 7 ch
<b>RATED RF OUTPUT POWER</b>	2.4G band 802.11b : 7.92 dBm (6.19 mW) 802.11g : 5.67 dBm (3.69 mW) 802.11n - HT20 : 7.26 dBm (5.32 mW) 802.11n - HT40 : 7.31 dBm (5.38 mW)
<b>MODULATION TYPE</b>	IEEE802.11b DSSS(BPSK/QPSK/CCK) IEEE802.11g OFDM(BPSK/16-QAM/64-QAM) IEEE802.11n MIMO-OFDM(BPSK/QPSK/16-QAM/64-QAM)
<b>MODE OF OPERATION</b>	Duplex
<b>BIT RATE OF TRANSMISSION</b>	2.4G band 802.11b : 1, 2, 5.5, 11 Mbps 802.11g : 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n - HT20 : MCS0 ~ MCS7 (Max. 144.4 Mbps) 802.11n - HT40 : MCS0 ~ MCS9 (Max. 300 Mbps)
<b>ANTENNA TYPE</b>	Printed Antenna
<b>ANTENNA GAIN</b>	2.0 dBi (ANT#1), 2.0 dBi (ANT#2)

**NOTE:**

For more detailed information, please refer to the EUT's specification or user's manual provided by manufacturer.

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**2.2 DESCRIPTION OF EUT INTERNAL DEVICE**

DEVICE	BRAND / MAKER	MODEL #	FCC ID / DOC	REMARK
NA	NA	NA	NA	NA

**2.3 DESCRIPTION OF TEST MODE**

There are test modes for each test configuration as below:

	Mode	Channel	Frequency (MHz)
01	802.11b	CH01	2412
02		CH06	2437
03		CH11	2462
04	802.11g	CH01	2412
05		CH06	2437
06		CH11	2462
07	802.11n - HT20 (SISO)	CH01	2412
08		CH06	2437
09		CH11	2462
10	802.11n - HT20 (MIMO)	CH01	2412
11		CH06	2437
12		CH11	2462
13	802.11n - HT40 (SISO)	CH03	2422
14		CH06	2437
15		CH09	2452
16	802.11n - HT40 (MIMO)	CH03	2422
17		CH06	2437
18		CH09	2452

**NOTE:**

1. Below 1 GHz were pre-tested in chamber and chosen the worst case for conducted and radiated emission test.
2. Above 1 GHz were tested individually.
3. The axis X,Y and Z we evaluate in chamber, the X axis is worst case.

**2.4 EUT OPERATING CONDITION**

1. For use customer provided continuous transmission EUT.
2. Turn on the power of all equipment and EUT.
3. Open continuous transmission Program "MT76xxE\_AP.exe"



## 2.5 DESCRIPTION OF SUPPORT UNIT

The EUT was configured by the requirement of ANSI C63.10:2013. All interface ports were connected to the appropriate support units via specific cables. The support units and cables are listed below.

NO	DEVICE	BRAND	MODEL #	FCC ID/DOC	CABLE
1	PC	ASUS	M32AA1	R31018	1.5m unshielded power cable.
2	LCD Monitor	DELL	U2412Mb	R43002	1.8m unshielded power cable. 1.5m shielded data cable.
3	Keyboard	ASUS	AW211	D41108	1.8m unshielded data cable.
4	Mouse	ASUS	MOBTUO	R41108	1.5m unshielded data cable.
5	Printer	HP	C8991A	R33001	1.5m unshielded power cable. 1.5m shielded data cable.
6	USB 2.0 HDD	TERASYS	F12-U	4912A002	1.5m unshielded power cable.
7	USB Storage	Kingston	N/A	DoC	8GB
8	USB cable	N/A	N/A	N/A	1.2m shielded data cable.

**NOTE:** For the actual test configuration, please refer to the photos of testing.

## 2.6 CHANNEL AND FREQUENCY TABLE

802.11a/b/n - HT20			
Channel	Frequency	Channel	Frequency
CH01	2412 MHz	CH07	2442 MHz
CH02	2417 MHz	CH08	2447 MHz
CH03	2422 MHz	CH09	2452 MHz
CH04	2427 MHz	CH10	2457 MHz
CH05	2432 MHz	CH11	2462 MHz
CH06	2437 MHz	--	--

802.11n - HT40			
Channel	Frequency	Channel	Frequency
CH03	2422 MHz	CH07	2442 MHz
CH04	2427 MHz	CH08	2447 MHz
CH05	2432 MHz	CH09	2452 MHz
CH06	2437 MHz	--	--





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### 3. DESCRIPTION OF APPLIED STANDARDS

The EUT is a wireless product. According to the specifications provided by the applicant, it must comply with the requirements of the following standards:

47 CFR Part 15, Subpart C, 15.247

ANSI C63.10: 2013

FCC publication KDB 558074 D01 DTS Meas Guidance v04 Measurement on Digital Transmission Systems (DTS) Operating under Section 15.247 Apr 5, 2017

KDB 662911 D01 Multiple Transmitter Output v02r01 Oct 31, 2013

All tests have been performed and recorded as the above standards.

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**3.1 SUMMARY OF TEST RESULTS**

The EUT has been tested according to the following specifications:

<b>STANDARD SECTION</b>	<b>TEST TYPE AND LIMIT RESULTS</b>	<b>RESULTS</b>
15.203 15.247(c)(1)(i)	Antenna requirement	PASS
15.207	AC Power Line Conducted Emission	PASS
15.247(a)(2)	6 dB Bandwidth	PASS
15.247(b)	Maximum Peak Conducted Output Power	PASS
15.247(d)	Band Edge Measurement:	PASS
15.247(d)	Transmitter Radiated Emissions Limit: Table 15.209	PASS
15.247(e)	Power Density: Limit: 8dBm/3kHz	PASS

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Date: Dec. 28, 2017**4. TECHNICAL CHARACTERISTICS TEST****4.1 CONDUCTED EMISSION TEST****4.1.1 LIMIT**

Frequency (MHz)	Class A (dB $\mu$ V)		Class B (dB $\mu$ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

**4.1.2 TEST EQUIPMENT**

The following test equipment was used for the test:

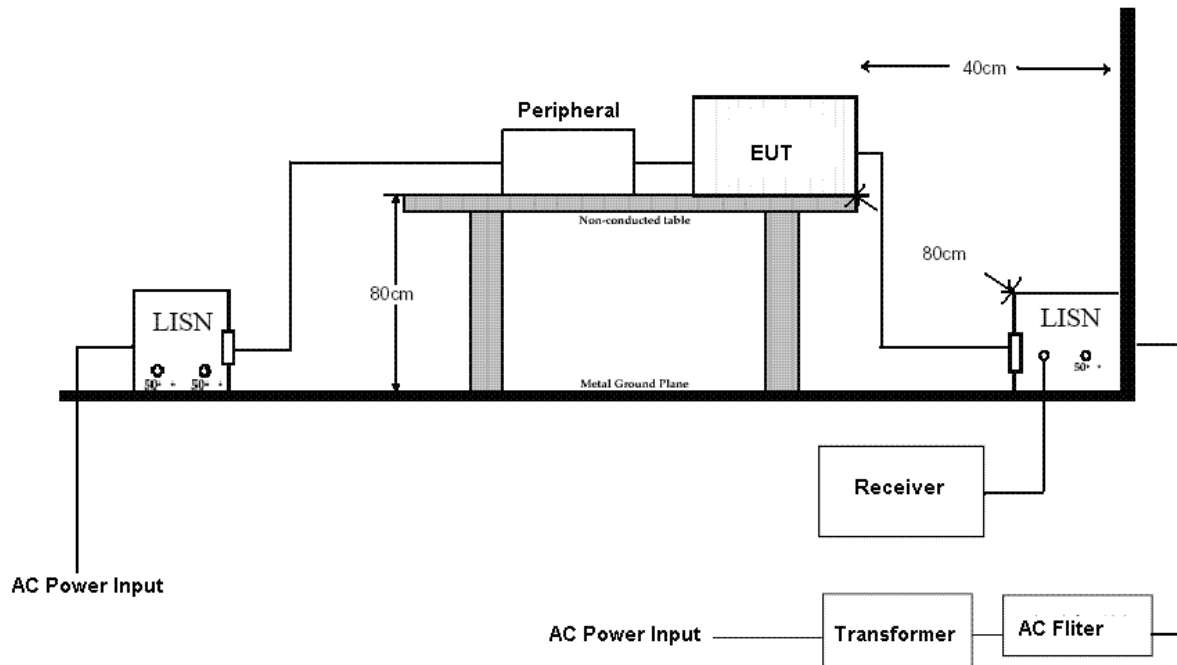
EQUIPMENT/FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER	9 kHz ~ 2.75 GHz	ROHDE & SCHWARZ	ESCS30 / 100376	JAN. 02, 2018 ETC
EMI TEST RECEIVER	9 kHz ~ 30 MHz	ROHDE & SCHWARZ	ESHS30 / 826003/008	JAN. 09, 2018 ETC
LISN	50 $\mu$ H, 50 ohm	SOLAR	9252-50-R-24-BNC/ 951315	OCT. 30, 2018 ETC
LISN	50 $\mu$ H, 50 ohm	SCHWARZBECK	NSLK 8127/ 8127-808	DEC. 11, 2018 ETC
50 $\Omega$ BNC TYPE TERMINATOR	50 ohm	N/A	11593A/ L1TEQU005	NOV. 08, 2018 ETC
50 $\Omega$ BNC TYPE TERMINATOR	50 ohm	N/A	B00-CD-357/ L1TEQU009	MAY 17, 2018 ETC
COAXIAL CABLE	5 m	HUBER+SUHNER	RG214/U / #5M (L1TCAB013)	MAY 08, 2018 ETC
FILTER	2 LINE, 30 A	FIL.COIL	FC-943 / 771	NCR
GROUND PLANE	2 m (H) x 3 m (W)	SRT	N/A	NCR
GROUND PLANE	2.5 m (H) x 3 m (W)	SRT	N/A	NCR
PULSE LIMITER	9 kHz ~ 30 MHz Insertion Loss= 10dB $\pm$ 0.3dB	ROHDE & SCHWARZ	ESH3Z2/ L1TTES009	FEB. 23, 2018 ETC
THERMO-HYGR O	15 - 40 $^{\circ}$ C, 0- 100% RH	TOP	20-A / 6644	SEP. 17, 2018 ETC

**NOTE:**

The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.



## 4.1.3 TEST SETUP



### NOTE :

1. The EUT was put on a wooden table with 0.8m heights above ground plane, and 0.4m away from reference ground plane (> 2mx2m).
2. For the actual test configuration, please refer to the photos of testing.

## 4.1.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.10:2013 and CISPR22:2003. The frequency spectrum from 0.15 MHz to 30 MHz was investigated. The LISN used was 50 ohm/50 $\mu$ H as specified. All readings were quasi-peak and average values with 10 kHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. Both lines of the power mains of EUT were measured and the cables connected to EUT and support units were moved to find the maximum emission levels for each frequency. First, find the margin or higher points at least 6 points by software, then use manual to find the maximum data. The procedure is referred on the test procedure of SRT LAB.

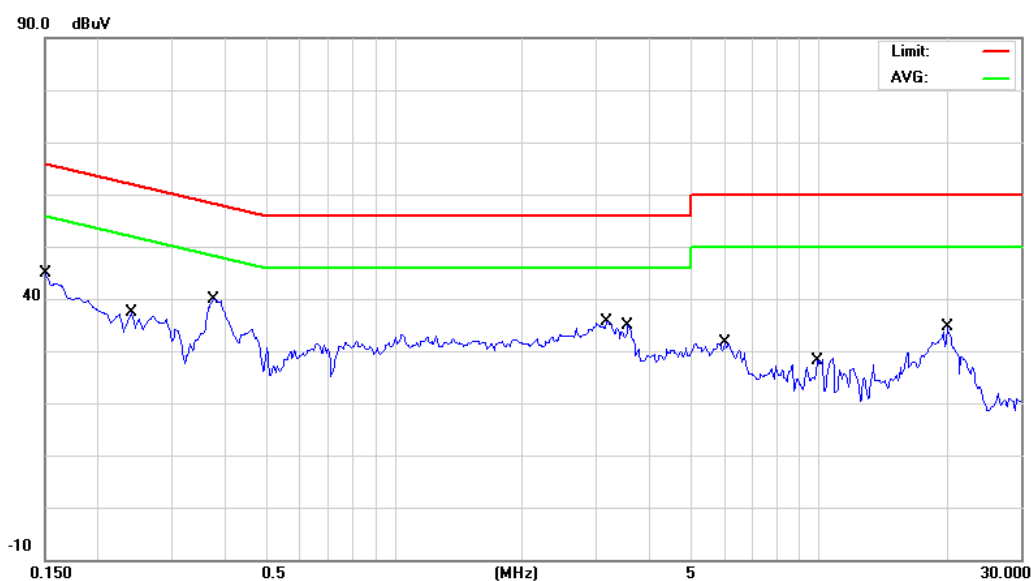
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11b_CH01
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	41.86	-0.12	41.74	66.00	-24.26	QP	
	2	0.1500	29.17	-0.12	29.05	56.00	-26.95	AVG	
	3	0.2400	31.90	-0.12	31.78	62.10	-30.32	QP	
	4	0.2400	20.67	-0.12	20.55	52.10	-31.55	AVG	
	5	0.3750	38.40	-0.14	38.26	58.39	-20.13	QP	
*	6	0.3750	30.03	-0.14	29.89	48.39	-18.50	AVG	
	7	3.1650	31.22	0.05	31.27	56.00	-24.73	QP	
	8	3.1650	23.38	0.05	23.43	46.00	-22.57	AVG	
	9	3.5650	29.58	0.10	29.68	56.00	-26.32	QP	
	10	3.5650	21.03	0.10	21.13	46.00	-24.87	AVG	
	11	6.0000	26.38	0.15	26.53	60.00	-33.47	QP	
	12	6.0000	18.89	0.15	19.04	50.00	-30.96	AVG	
	13	10.0000	22.26	0.14	22.40	60.00	-37.60	QP	
	14	10.0000	15.11	0.14	15.25	50.00	-34.75	AVG	
	15	20.1000	27.34	0.52	27.86	60.00	-32.14	QP	
	16	20.1000	21.80	0.52	22.32	50.00	-27.68	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

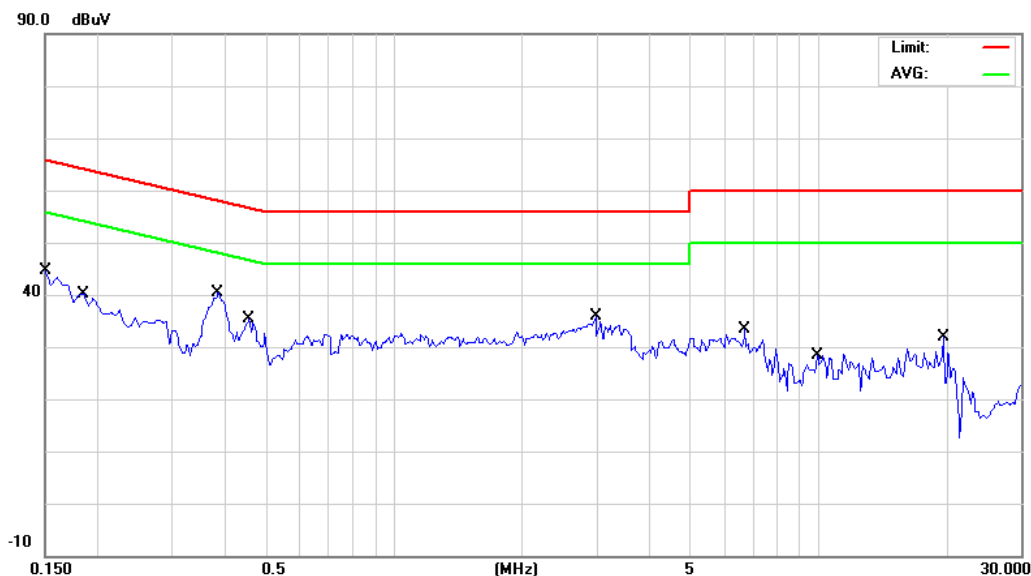
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11b_CH01
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	41.72	0.07	41.79	66.00	-24.21	QP	
	2	0.1500	29.55	0.07	29.62	56.00	-26.38	AVG	
	3	0.1850	35.60	0.01	35.61	64.26	-28.65	QP	
	4	0.1850	22.02	0.01	22.03	54.26	-32.23	AVG	
	5	0.3850	37.64	0.11	37.75	58.17	-20.42	QP	
	*	0.3850	29.01	0.11	29.12	48.17	-19.05	AVG	
	7	0.4550	31.72	0.11	31.83	56.78	-24.95	QP	
	8	0.4550	21.80	0.11	21.91	46.78	-24.87	AVG	
	9	2.9850	30.48	0.13	30.61	56.00	-25.39	QP	
	10	2.9850	22.83	0.13	22.96	46.00	-23.04	AVG	
	11	6.7050	27.08	0.20	27.28	60.00	-32.72	QP	
	12	6.7050	20.57	0.20	20.77	50.00	-29.23	AVG	
	13	10.0000	20.70	0.32	21.02	60.00	-38.98	QP	
	14	10.0000	15.64	0.32	15.96	50.00	-34.04	AVG	
	15	19.7100	28.42	0.55	28.97	60.00	-31.03	QP	
	16	19.7100	25.41	0.55	25.96	50.00	-24.04	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

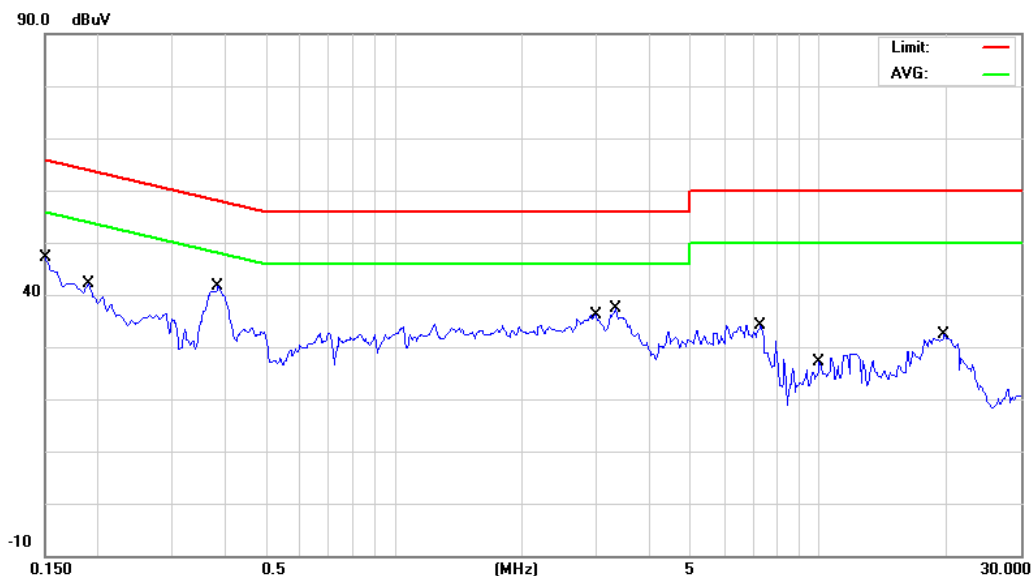
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11b_CH06
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	41.74	-0.12	41.62	66.00	-24.38	QP	
	2	0.1500	29.17	-0.12	29.05	56.00	-26.95	AVG	
	3	0.1900	36.38	-0.11	36.27	64.04	-27.77	QP	
	4	0.1900	24.38	-0.11	24.27	54.04	-29.77	AVG	
	5	0.3850	40.14	-0.15	39.99	58.17	-18.18	QP	
	*	6	31.61	-0.15	31.46	48.17	-16.71	AVG	
	7	2.9950	31.38	0.03	31.41	56.00	-24.59	QP	
	8	2.9950	23.38	0.03	23.41	46.00	-22.59	AVG	
	9	3.3200	32.06	0.07	32.13	56.00	-23.87	QP	
	10	3.3200	24.18	0.07	24.25	46.00	-21.75	AVG	
	11	7.3100	30.10	0.13	30.23	60.00	-29.77	QP	
	12	7.3100	26.64	0.13	26.77	50.00	-23.23	AVG	
	13	10.0000	20.98	0.14	21.12	60.00	-38.88	QP	
	14	10.0000	15.11	0.14	15.25	50.00	-34.75	AVG	
	15	19.8350	27.28	0.52	27.80	60.00	-32.20	QP	
	16	19.8350	21.70	0.52	22.22	50.00	-27.78	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

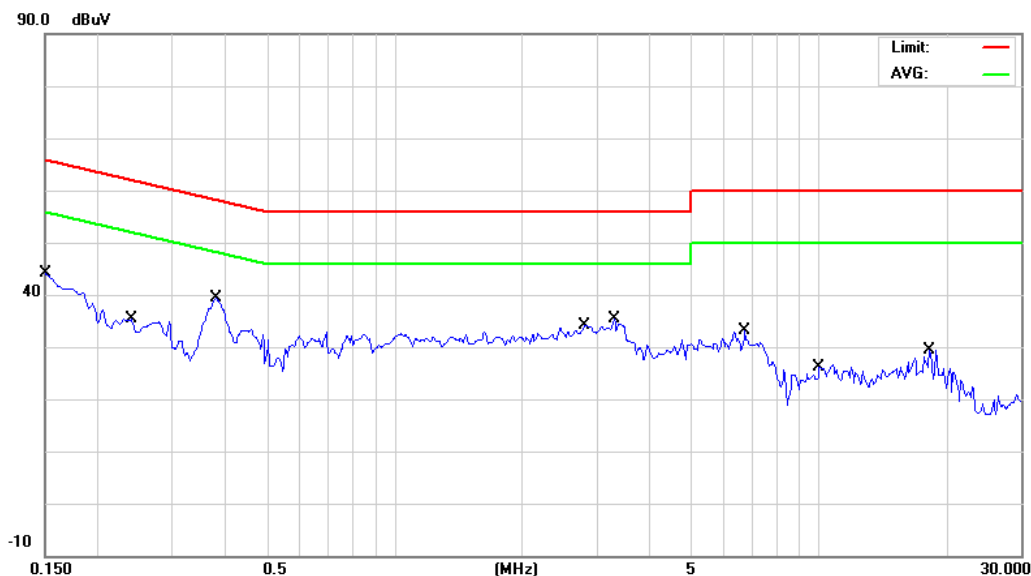
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
Page: 16 of 169  
Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11b_CH06
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	40.54	0.07	40.61	66.00	-25.39	QP	
	2	0.1500	27.82	0.07	27.89	56.00	-28.11	AVG	
	3	0.2400	30.02	0.02	30.04	62.10	-32.06	QP	
	4	0.2400	19.02	0.02	19.04	52.10	-33.06	AVG	
	5	0.3800	37.76	0.11	37.87	58.28	-20.41	QP	
	*	6	29.32	0.11	29.43	48.28	-18.85	AVG	
	7	2.8050	29.66	0.14	29.80	56.00	-26.20	QP	
	8	2.8050	21.42	0.14	21.56	46.00	-24.44	AVG	
	9	3.3050	31.26	0.12	31.38	56.00	-24.62	QP	
	10	3.3050	22.58	0.12	22.70	46.00	-23.30	AVG	
	11	6.7100	27.06	0.20	27.26	60.00	-32.74	QP	
	12	6.7100	19.74	0.20	19.94	50.00	-30.06	AVG	
	13	10.0000	20.70	0.32	21.02	60.00	-38.98	QP	
	14	10.0000	15.21	0.32	15.53	50.00	-34.47	AVG	
	15	18.2450	25.74	0.51	26.25	60.00	-33.75	QP	
	16	18.2450	21.33	0.51	21.84	50.00	-28.16	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.



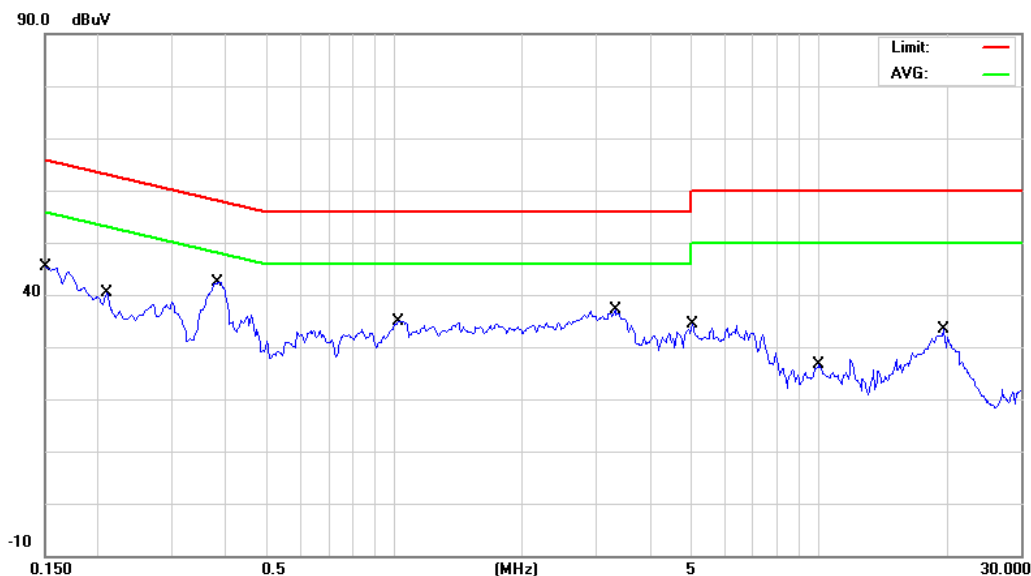
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11b_CH11
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	43.00	-0.12	42.88	66.00	-23.12	QP	
	2	0.1500	30.78	-0.12	30.66	56.00	-25.34	AVG	
	3	0.2100	34.48	-0.11	34.37	63.21	-28.84	QP	
	4	0.2100	22.11	-0.11	22.00	53.21	-31.21	AVG	
	5	0.3850	40.50	-0.15	40.35	58.17	-17.82	QP	
*	6	0.3850	32.07	-0.15	31.92	48.17	-16.25	AVG	
	7	1.0250	31.04	-0.05	30.99	56.00	-25.01	QP	
	8	1.0250	21.98	-0.05	21.93	46.00	-24.07	AVG	
	9	3.3200	33.14	0.07	33.21	56.00	-22.79	QP	
	10	3.3200	24.97	0.07	25.04	46.00	-20.96	AVG	
	11	5.0350	28.24	0.14	28.38	60.00	-31.62	QP	
	12	5.0350	18.76	0.14	18.90	50.00	-31.10	AVG	
	13	10.0000	20.98	0.14	21.12	60.00	-38.88	QP	
	14	10.0000	15.40	0.14	15.54	50.00	-34.46	AVG	
	15	19.7050	28.72	0.51	29.23	60.00	-30.77	QP	
	16	19.7050	23.15	0.51	23.66	50.00	-26.34	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

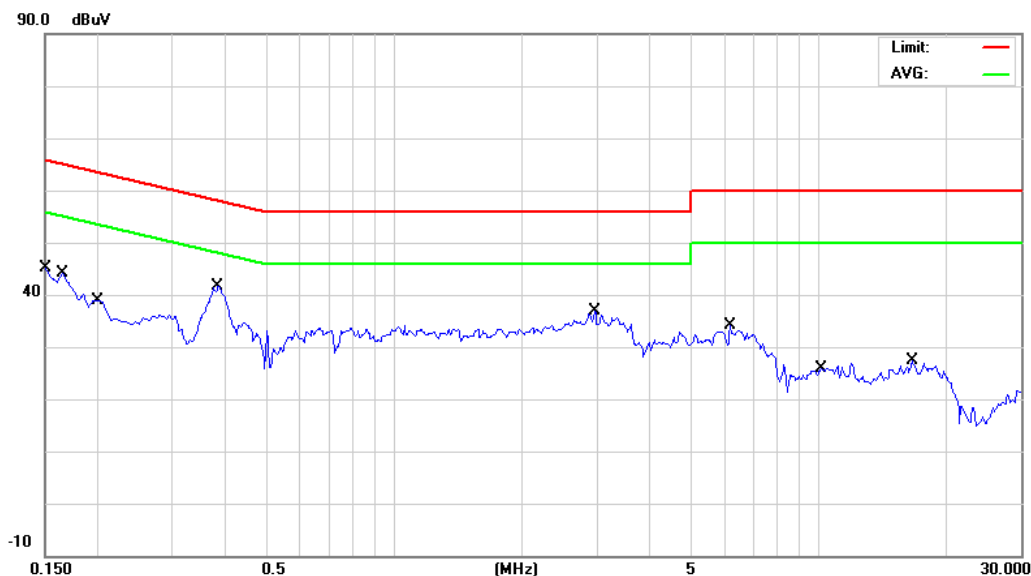
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11b_CH11
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	42.50	0.07	42.57	66.00	-23.43	QP	
	2	0.1500	30.67	0.07	30.74	56.00	-25.26	AVG	
	3	0.1650	40.06	0.05	40.11	65.21	-25.10	QP	
	4	0.1650	26.69	0.05	26.74	55.21	-28.47	AVG	
	5	0.2000	35.90	-0.01	35.89	63.61	-27.72	QP	
	6	0.2000	25.04	-0.01	25.03	53.61	-28.58	AVG	
	7	0.3850	39.16	0.11	39.27	58.17	-18.90	QP	
	* 8	0.3850	30.41	0.11	30.52	48.17	-17.65	AVG	
	9	2.9750	31.58	0.13	31.71	56.00	-24.29	QP	
	10	2.9750	23.82	0.13	23.95	46.00	-22.05	AVG	
	11	6.1950	27.96	0.19	28.15	60.00	-31.85	QP	
	12	6.1950	20.36	0.19	20.55	50.00	-29.45	AVG	
	13	10.0000	21.60	0.32	21.92	60.00	-38.08	QP	
	14	10.0000	15.91	0.32	16.23	50.00	-33.77	AVG	
	15	16.5950	24.40	0.48	24.88	60.00	-35.12	QP	
	16	16.5950	16.39	0.48	16.87	50.00	-33.13	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

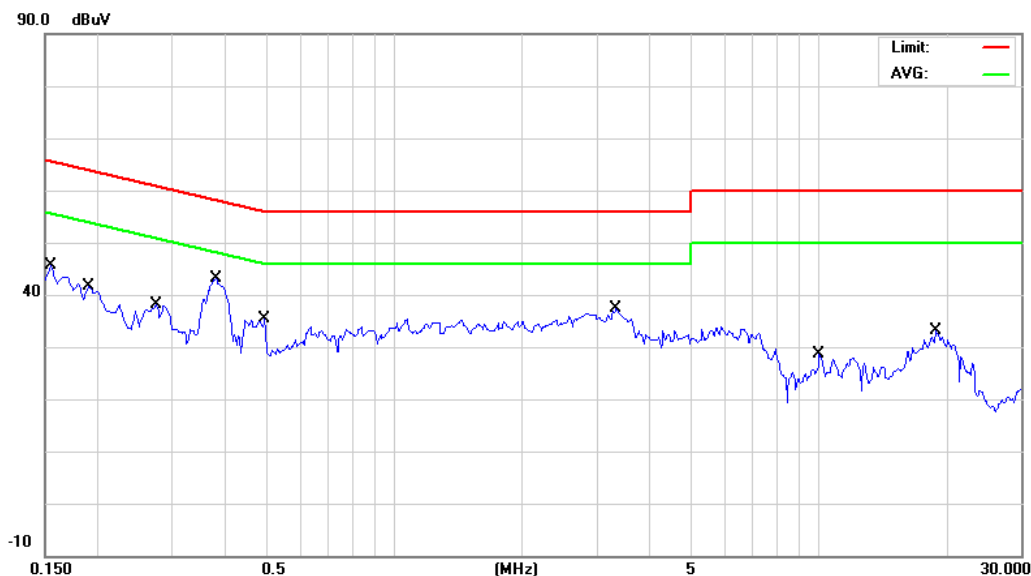
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11g_CH01
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	41.64	-0.12	41.52	65.73	-24.21	QP	
	2	0.1550	27.25	-0.12	27.13	55.73	-28.60	AVG	
	3	0.1900	37.92	-0.11	37.81	64.04	-26.23	QP	
	4	0.1900	26.10	-0.11	25.99	54.04	-28.05	AVG	
	5	0.2750	36.14	-0.13	36.01	60.97	-24.96	QP	
	6	0.2750	25.65	-0.13	25.52	50.97	-25.45	AVG	
	7	0.3800	41.24	-0.15	41.09	58.28	-17.19	QP	
*	8	0.3800	32.91	-0.15	32.76	48.28	-15.52	AVG	
	9	0.4950	32.08	-0.14	31.94	56.08	-24.14	QP	
	10	0.4950	18.36	-0.14	18.22	46.08	-27.86	AVG	
	11	3.3400	33.34	0.07	33.41	56.00	-22.59	QP	
	12	3.3400	24.91	0.07	24.98	46.00	-21.02	AVG	
	13	10.0000	21.38	0.14	21.52	60.00	-38.48	QP	
	14	10.0000	15.54	0.14	15.68	50.00	-34.32	AVG	
	15	18.9100	27.08	0.48	27.56	60.00	-32.44	QP	
	16	18.9100	21.56	0.48	22.04	50.00	-27.96	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.



**Spectrum Research & Testing Lab., Inc.**

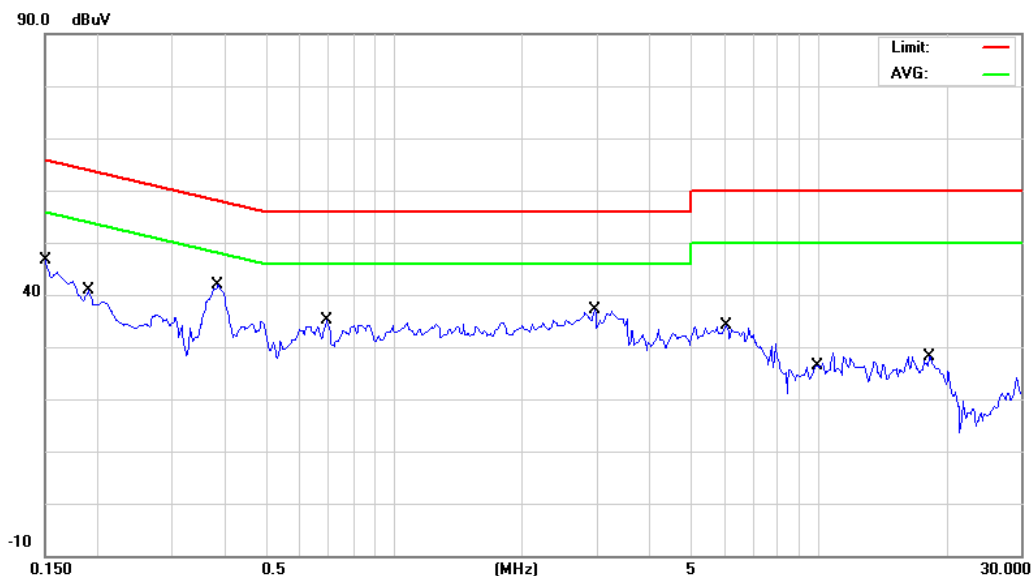
No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	<u>23 °C</u>	Humidity:	<u>65 %RH</u>
Frequency Range:	<u>0.15 – 30 MHz</u>	Tested Mode:	<u>802.11g_CH01</u>
Receiver Detector:	<u>Q.P. and AV.</u>	Tested Date:	<u>Nov. 01, 2017</u>

### Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	42.24	0.07	42.31	66.00	-23.69	QP	
	2	0.1500	29.24	0.07	29.31	56.00	-26.69	AVG	
	3	0.1900	37.44	0.01	37.45	64.04	-26.59	QP	
	4	0.1900	25.16	0.01	25.17	54.04	-28.87	AVG	
	5	0.3850	39.76	0.11	39.87	58.17	-18.30	QP	
*	6	0.3850	30.93	0.11	31.04	48.17	-17.13	AVG	
	7	0.6900	30.90	0.08	30.98	56.00	-25.02	QP	
	8	0.6900	20.14	0.08	20.22	46.00	-25.78	AVG	
	9	2.9750	31.76	0.13	31.89	56.00	-24.11	QP	
	10	2.9750	23.68	0.13	23.81	46.00	-22.19	AVG	
	11	6.0650	28.22	0.19	28.41	60.00	-31.59	QP	
	12	6.0650	20.41	0.19	20.60	50.00	-29.40	AVG	
	13	10.0000	21.92	0.32	22.24	60.00	-37.76	QP	
	14	10.0000	16.13	0.32	16.45	50.00	-33.55	AVG	
	15	18.3050	23.32	0.51	23.83	60.00	-36.17	QP	
	16	18.3050	17.66	0.51	18.17	50.00	-31.83	AVG	

### NOTE :

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

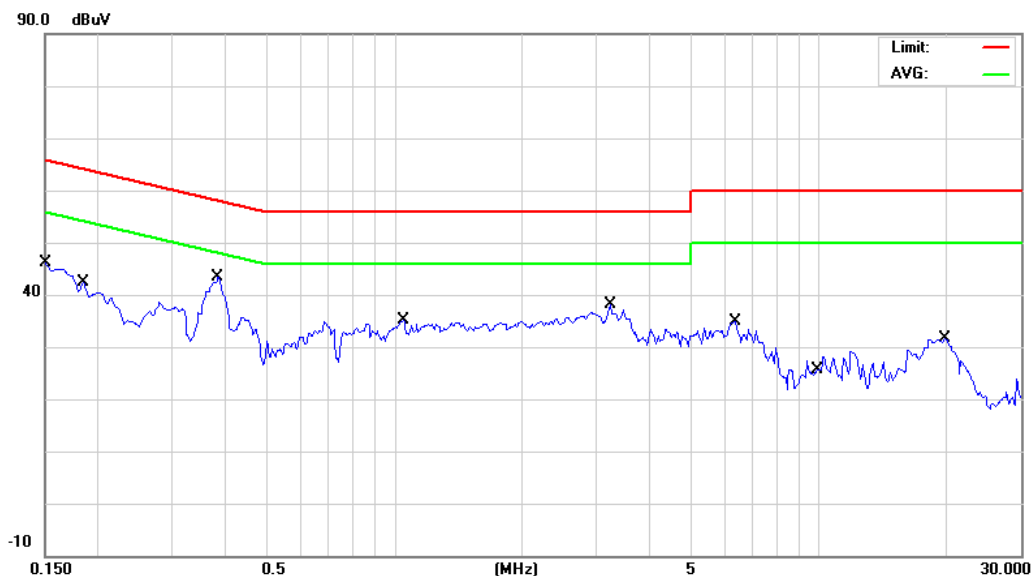
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11g_CH06
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	42.52	-0.12	42.40	66.00	-23.60	QP	
	2	0.1500	29.01	-0.12	28.89	56.00	-27.11	AVG	
	3	0.1850	38.04	-0.11	37.93	64.26	-26.33	QP	
	4	0.1850	24.85	-0.11	24.74	54.26	-29.52	AVG	
	5	0.3850	41.18	-0.15	41.03	58.17	-17.14	QP	
*	6	0.3850	32.50	-0.15	32.35	48.17	-15.82	AVG	
	7	1.0500	32.18	-0.05	32.13	56.00	-23.87	QP	
	8	1.0500	22.41	-0.05	22.36	46.00	-23.64	AVG	
	9	3.2300	33.50	0.06	33.56	56.00	-22.44	QP	
	10	3.2300	24.91	0.06	24.97	46.00	-21.03	AVG	
	11	6.3650	28.28	0.14	28.42	60.00	-31.58	QP	
	12	6.3650	21.08	0.14	21.22	50.00	-28.78	AVG	
	13	10.0000	21.76	0.14	21.90	60.00	-38.10	QP	
	14	10.0000	15.91	0.14	16.05	50.00	-33.95	AVG	
	15	19.9300	26.56	0.52	27.08	60.00	-32.92	QP	
	16	19.9300	21.13	0.52	21.65	50.00	-28.35	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

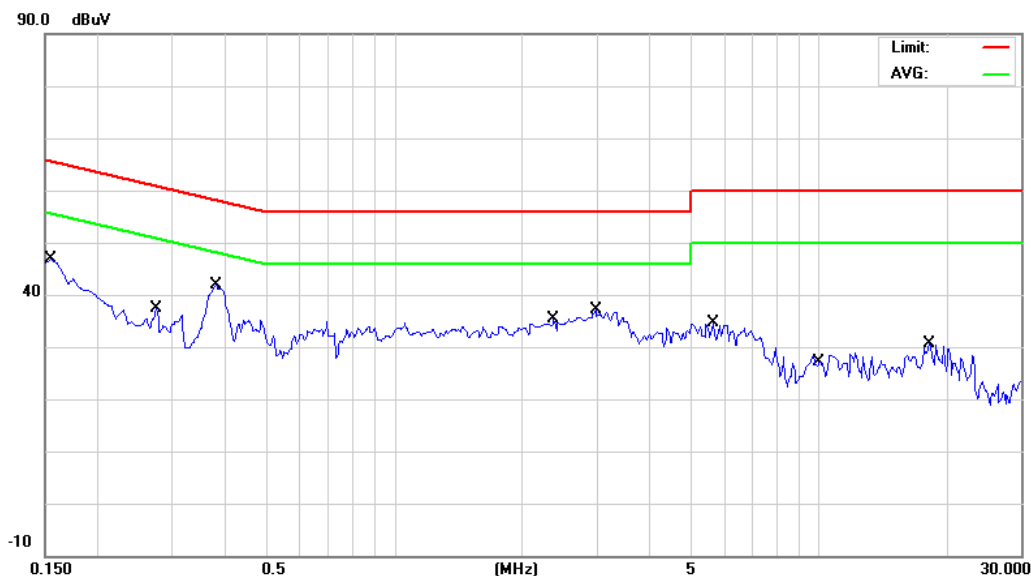
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11g_CH06
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	41.60	0.06	41.66	65.73	-24.07	QP	
	2	0.1550	27.10	0.06	27.16	55.73	-28.57	AVG	
	3	0.2750	34.10	0.04	34.14	60.97	-26.83	QP	
	4	0.2750	23.22	0.04	23.26	50.97	-27.71	AVG	
	5	0.3800	39.68	0.11	39.79	58.28	-18.49	QP	
	*	0.3800	31.42	0.11	31.53	48.28	-16.75	AVG	
	7	2.3750	30.82	0.15	30.97	56.00	-25.03	QP	
	8	2.3750	23.22	0.15	23.37	46.00	-22.63	AVG	
	9	2.9800	32.42	0.13	32.55	56.00	-23.45	QP	
	10	2.9800	23.97	0.13	24.10	46.00	-21.90	AVG	
	11	5.6400	29.10	0.16	29.26	60.00	-30.74	QP	
	12	5.6400	20.73	0.16	20.89	50.00	-29.11	AVG	
	13	10.0000	22.04	0.32	22.36	60.00	-37.64	QP	
	14	10.0000	16.31	0.32	16.63	50.00	-33.37	AVG	
	15	18.3000	26.32	0.51	26.83	60.00	-33.17	QP	
	16	18.3000	23.07	0.51	23.58	50.00	-26.42	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.



**Spectrum Research & Testing Lab., Inc.**

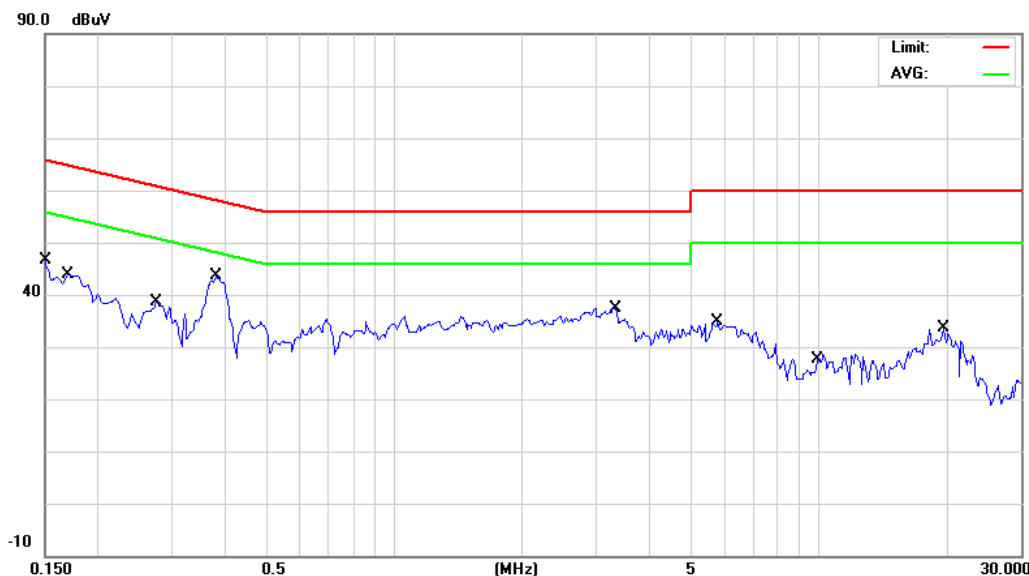
No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

Reference No.: A17103001  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11g_CH11
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

### Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	42.78	-0.12	42.66	66.00	-23.34	QP	
	2	0.1500	29.55	-0.12	29.43	56.00	-26.57	AVG	
	3	0.1700	40.74	-0.12	40.62	64.96	-24.34	QP	
	4	0.1700	29.09	-0.12	28.97	54.96	-25.99	AVG	
	5	0.2750	36.42	-0.13	36.29	60.97	-24.68	QP	
	6	0.2750	26.16	-0.13	26.03	50.97	-24.94	AVG	
	7	0.3800	41.54	-0.15	41.39	58.28	-16.89	QP	
*	8	0.3800	33.30	-0.15	33.15	48.28	-15.13	AVG	
	9	3.3200	33.96	0.07	34.03	56.00	-21.97	QP	
	10	3.3200	25.59	0.07	25.66	46.00	-20.34	AVG	
	11	5.7900	29.40	0.13	29.53	60.00	-30.47	QP	
	12	5.7900	21.66	0.13	21.79	50.00	-28.21	AVG	
	13	10.0000	22.40	0.14	22.54	60.00	-37.46	QP	
	14	10.0000	16.97	0.14	17.11	50.00	-32.89	AVG	
	15	19.7100	31.28	0.51	31.79	60.00	-28.21	QP	
	16	19.7100	27.10	0.51	27.61	50.00	-22.39	AVG	

### NOTE :

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

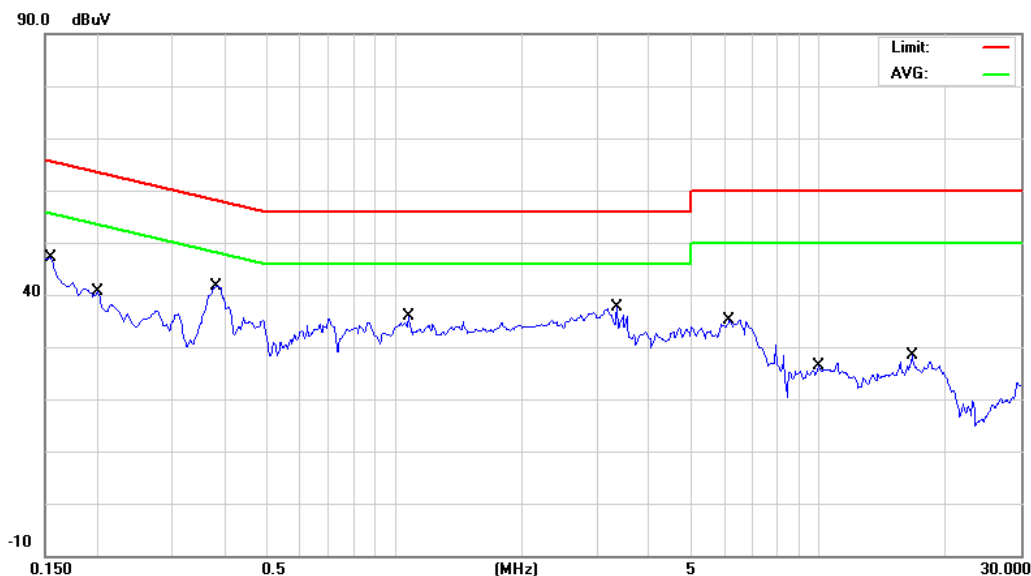
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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FCC ID : AHL-ALMOND3S  
Page: 24 of 169  
Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11g_CH11
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	41.72	0.06	41.78	65.73	-23.95	QP	
	2	0.1550	27.10	0.06	27.16	55.73	-28.57	AVG	
	3	0.2000	36.70	-0.01	36.69	63.61	-26.92	QP	
	4	0.2000	24.38	-0.01	24.37	53.61	-29.24	AVG	
	5	0.3800	40.28	0.11	40.39	58.28	-17.89	QP	
	*	0.3800	31.93	0.11	32.04	48.28	-16.24	AVG	
	7	1.0800	30.92	0.05	30.97	56.00	-25.03	QP	
	8	1.0800	19.74	0.05	19.79	46.00	-26.21	AVG	
	9	3.3550	33.04	0.12	33.16	56.00	-22.84	QP	
	10	3.3550	24.45	0.12	24.57	46.00	-21.43	AVG	
	11	6.1700	28.80	0.19	28.99	60.00	-31.01	QP	
	12	6.1700	20.98	0.19	21.17	50.00	-28.83	AVG	
	13	10.0000	22.06	0.32	22.38	60.00	-37.62	QP	
	14	10.0000	16.39	0.32	16.71	50.00	-33.29	AVG	
	15	16.5900	25.62	0.48	26.10	60.00	-33.90	QP	
	16	16.5900	21.52	0.48	22.00	50.00	-28.00	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.





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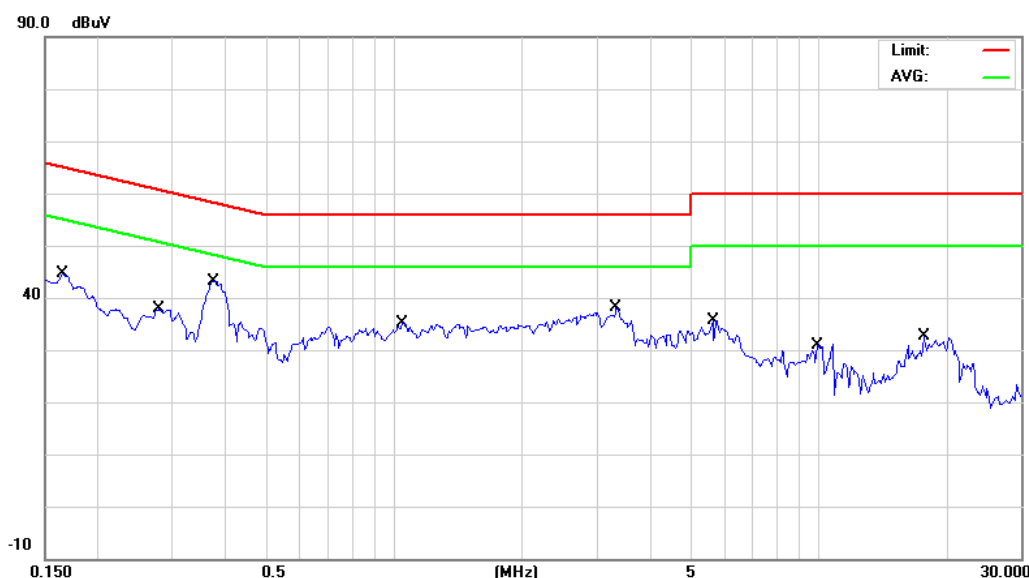
No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
Page: 25 of 169  
Date: Dec. 28, 2017

Temperature:	<u>23 °C</u>	Humidity:	<u>65 %RH</u>
Frequency Range:	<u>0.15 – 30 MHz</u>	Tested Mode:	<u>802.11n - HT20_CH01 (SISO)</u>
Receiver Detector:	<u>Q.P. and AV.</u>	Tested Date:	<u>Nov. 01, 2017</u>

### Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1650	41.06	-0.12	40.94	65.21	-24.27	QP	
	2	0.1650	29.47	-0.12	29.35	55.21	-25.86	AVG	
	3	0.2800	36.06	-0.13	35.93	60.82	-24.89	QP	
	4	0.2800	26.64	-0.13	26.51	50.82	-24.31	AVG	
	5	0.3750	41.42	-0.14	41.28	58.39	-17.11	QP	
*	6	0.3750	32.83	-0.14	32.69	48.39	-15.70	AVG	
	7	1.0450	32.36	-0.05	32.31	56.00	-23.69	QP	
	8	1.0450	22.66	-0.05	22.61	46.00	-23.39	AVG	
	9	3.3300	34.20	0.07	34.27	56.00	-21.73	QP	
	10	3.3300	25.10	0.07	25.17	46.00	-20.83	AVG	
	11	5.6400	29.50	0.13	29.63	60.00	-30.37	QP	
	12	5.6400	20.73	0.13	20.86	50.00	-29.14	AVG	
	13	10.0000	22.18	0.14	22.32	60.00	-37.68	QP	
	14	10.0000	16.56	0.14	16.70	50.00	-33.30	AVG	
	15	17.6950	28.82	0.44	29.26	60.00	-30.74	QP	
	16	17.6950	24.38	0.44	24.82	50.00	-25.18	AVG	

### NOTE :

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.



**Spectrum Research & Testing Lab., Inc.**

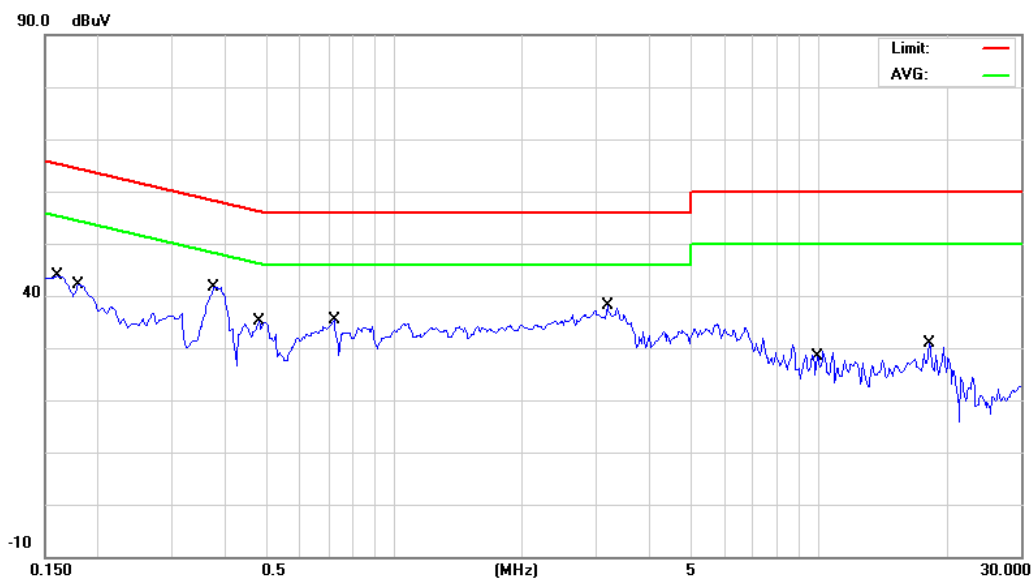
No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
Page: 26 of 169  
Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH01 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1615	41.34	0.05	41.39	65.39	-24.00	QP	
	2	0.1615	29.47	0.05	29.52	55.39	-25.87	AVG	
	3	0.1800	37.94	0.02	37.96	64.49	-26.53	QP	
	4	0.1800	23.75	0.02	23.77	54.49	-30.72	AVG	
	5	0.3750	39.92	0.10	40.02	58.39	-18.37	QP	
*	6	0.3750	31.37	0.10	31.47	48.39	-16.92	AVG	
	7	0.4800	31.94	0.11	32.05	56.34	-24.29	QP	
	8	0.4800	22.50	0.11	22.61	46.34	-23.73	AVG	
	9	0.7200	31.30	0.07	31.37	56.00	-24.63	QP	
	10	0.7200	17.20	0.07	17.27	46.00	-28.73	AVG	
	11	3.1750	33.70	0.13	33.83	56.00	-22.17	QP	
	12	3.1750	24.65	0.13	24.78	46.00	-21.22	AVG	
	13	10.0000	21.98	0.32	22.30	60.00	-37.70	QP	
	14	10.0000	16.31	0.32	16.63	50.00	-33.37	AVG	
	15	18.3050	27.34	0.51	27.85	60.00	-32.15	QP	
	16	18.3050	23.53	0.51	24.04	50.00	-25.96	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

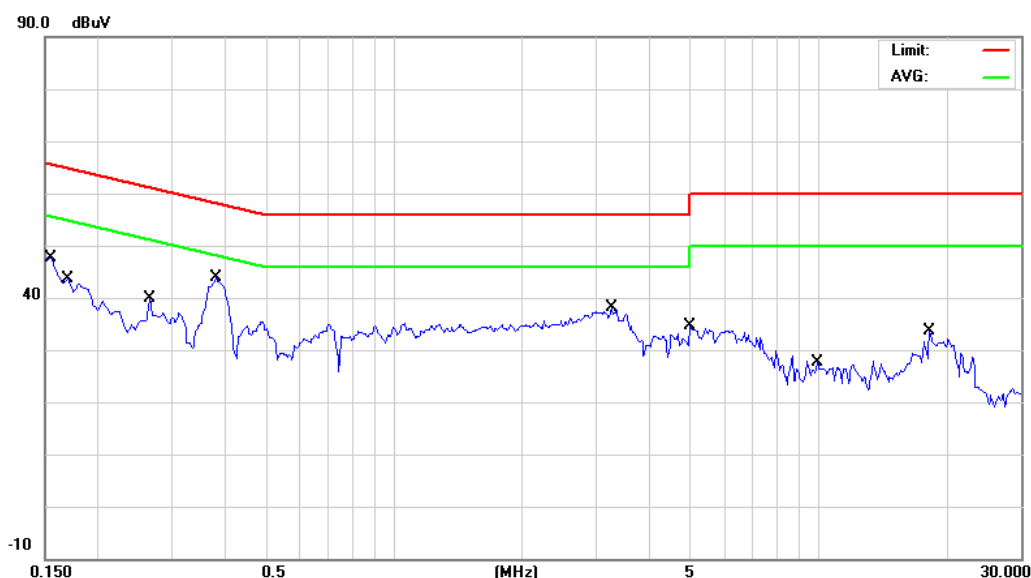
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	<u>23 °C</u>	Humidity:	<u>65 %RH</u>
Frequency Range:	<u>0.15 – 30 MHz</u>	Tested Mode:	<u>802.11n - HT20_CH06 (SISO)</u>
Receiver Detector:	<u>Q.P. and AV.</u>	Tested Date:	<u>Nov. 01, 2017</u>

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	42.08	-0.12	41.96	65.73	-23.77	QP	
	2	0.1550	28.35	-0.12	28.23	55.73	-27.50	AVG	
	3	0.1700	40.46	-0.12	40.34	64.96	-24.62	QP	
	4	0.1700	27.30	-0.12	27.18	54.96	-27.78	AVG	
	5	0.2650	34.72	-0.12	34.60	61.27	-26.67	QP	
	6	0.2650	24.38	-0.12	24.26	51.27	-27.01	AVG	
	7	0.3800	42.00	-0.15	41.85	58.28	-16.43	QP	
*	8	0.3800	33.22	-0.15	33.07	48.28	-15.21	AVG	
	9	3.2500	34.14	0.06	34.20	56.00	-21.80	QP	
	10	3.2500	25.04	0.06	25.10	46.00	-20.90	AVG	
	11	4.9700	28.44	0.14	28.58	56.00	-27.42	QP	
	12	4.9700	19.45	0.14	19.59	46.00	-26.41	AVG	
	13	10.0000	21.84	0.14	21.98	60.00	-38.02	QP	
	14	10.0000	16.05	0.14	16.19	50.00	-33.81	AVG	
	15	18.2450	29.42	0.45	29.87	60.00	-30.13	QP	
	16	18.2450	24.91	0.45	25.36	50.00	-24.64	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

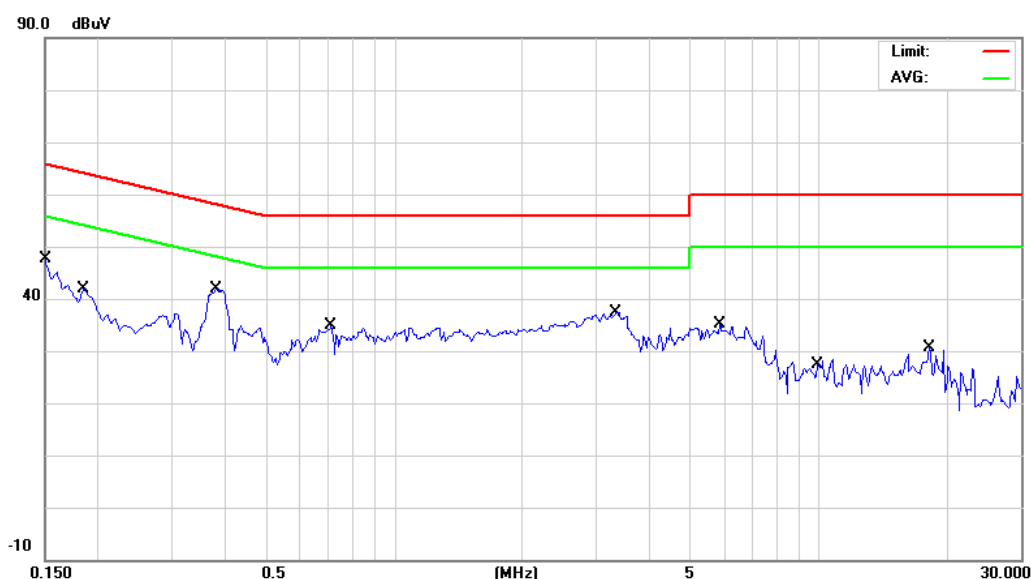
**Spectrum Research & Testing Lab., Inc.**

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH06 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	42.18	0.07	42.25	66.00	-23.75	QP	
	2	0.1500	28.04	0.07	28.11	56.00	-27.89	AVG	
	3	0.1850	38.26	0.01	38.27	64.26	-25.99	QP	
	4	0.1850	25.41	0.01	25.42	54.26	-28.84	AVG	
	5	0.3800	40.54	0.11	40.65	58.28	-17.63	QP	
*	6	0.3800	31.84	0.11	31.95	48.28	-16.33	AVG	
	7	0.7100	30.98	0.07	31.05	56.00	-24.95	QP	
	8	0.7100	18.16	0.07	18.23	46.00	-27.77	AVG	
	9	3.3300	33.56	0.12	33.68	56.00	-22.32	QP	
	10	3.3300	23.97	0.12	24.09	46.00	-21.91	AVG	
	11	5.8500	29.34	0.17	29.51	60.00	-30.49	QP	
	12	5.8500	21.03	0.17	21.20	50.00	-28.80	AVG	
	13	10.0000	22.02	0.32	22.34	60.00	-37.66	QP	
	14	10.0000	16.22	0.32	16.54	50.00	-33.46	AVG	
	15	18.3050	27.28	0.51	27.79	60.00	-32.21	QP	
	16	18.3050	23.45	0.51	23.96	50.00	-26.04	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

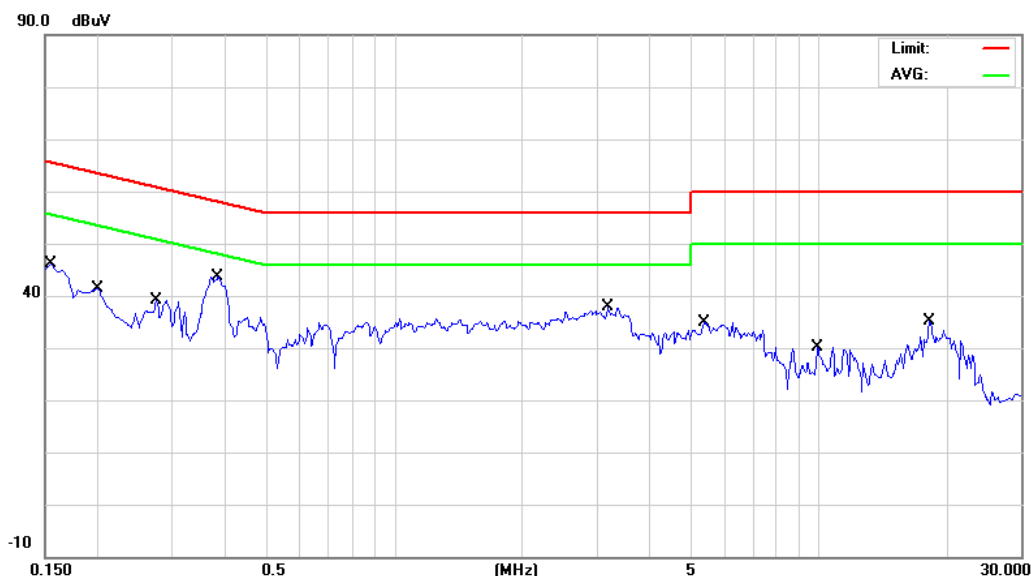
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH11 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	42.32	-0.12	42.20	65.73	-23.53	QP	
	2	0.1550	27.95	-0.12	27.83	55.73	-27.90	AVG	
	3	0.2000	37.56	-0.11	37.45	63.61	-26.16	QP	
	4	0.2000	24.78	-0.11	24.67	53.61	-28.94	AVG	
	5	0.2750	36.52	-0.13	36.39	60.97	-24.58	QP	
	6	0.2750	26.32	-0.13	26.19	50.97	-24.78	AVG	
	7	0.3850	41.52	-0.15	41.37	58.17	-16.80	QP	
*	8	0.3850	32.91	-0.15	32.76	48.17	-15.41	AVG	
	9	3.1800	33.98	0.05	34.03	56.00	-21.97	QP	
	10	3.1800	25.29	0.05	25.34	46.00	-20.66	AVG	
	11	5.3800	29.18	0.13	29.31	60.00	-30.69	QP	
	12	5.3800	20.78	0.13	20.91	50.00	-29.09	AVG	
	13	10.0000	22.56	0.14	22.70	60.00	-37.30	QP	
	14	10.0000	17.20	0.14	17.34	50.00	-32.66	AVG	
	15	18.3050	31.72	0.46	32.18	60.00	-27.82	QP	
	16	18.3050	28.09	0.46	28.55	50.00	-21.45	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

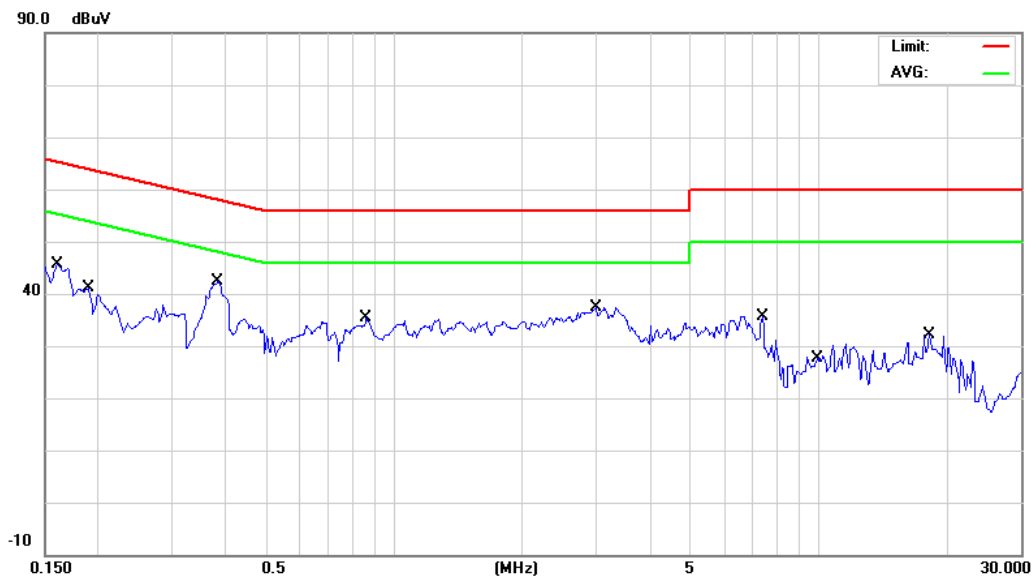
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH11 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1600	41.16	0.05	41.21	65.46	-24.25	QP	
	2	0.1600	28.04	0.05	28.09	55.46	-27.37	AVG	
	3	0.1900	38.22	0.01	38.23	64.04	-25.81	QP	
	4	0.1900	25.93	0.01	25.94	54.04	-28.10	AVG	
	5	0.3850	40.00	0.11	40.11	58.17	-18.06	QP	
*	6	0.3850	31.52	0.11	31.63	48.17	-16.54	AVG	
	7	0.8600	31.16	0.06	31.22	56.00	-24.78	QP	
	8	0.8600	21.56	0.06	21.62	46.00	-24.38	AVG	
	9	2.9950	32.58	0.13	32.71	56.00	-23.29	QP	
	10	2.9950	24.18	0.13	24.31	46.00	-21.69	AVG	
	11	7.3750	30.82	0.23	31.05	60.00	-28.95	QP	
	12	7.3750	27.05	0.23	27.28	50.00	-22.72	AVG	
	13	10.0000	22.64	0.32	22.96	60.00	-37.04	QP	
	14	10.0000	16.89	0.32	17.21	50.00	-32.79	AVG	
	15	18.2450	27.04	0.51	27.55	60.00	-32.45	QP	
	16	18.2450	21.84	0.51	22.35	50.00	-27.65	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

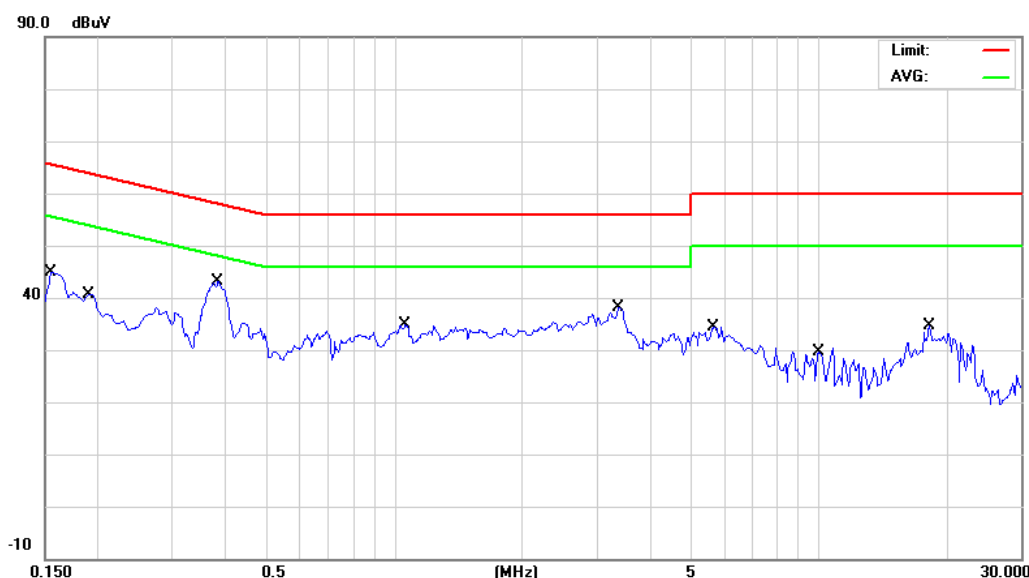
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH01 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	41.56	-0.12	41.44	65.73	-24.29	QP	
	2	0.1550	27.15	-0.12	27.03	55.73	-28.70	AVG	
	3	0.1900	37.72	-0.11	37.61	64.04	-26.43	QP	
	4	0.1900	26.21	-0.11	26.10	54.04	-27.94	AVG	
	5	0.3850	41.14	-0.15	40.99	58.17	-17.18	QP	
*	6	0.3850	32.11	-0.15	31.96	48.17	-16.21	AVG	
	7	1.0650	31.50	-0.05	31.45	56.00	-24.55	QP	
	8	1.0650	20.93	-0.05	20.88	46.00	-25.12	AVG	
	9	3.3800	33.22	0.07	33.29	56.00	-22.71	QP	
	10	3.3800	24.45	0.07	24.52	46.00	-21.48	AVG	
	11	5.6600	28.64	0.13	28.77	60.00	-31.23	QP	
	12	5.6600	20.46	0.13	20.59	50.00	-29.41	AVG	
	13	10.0000	22.20	0.14	22.34	60.00	-37.66	QP	
	14	10.0000	16.64	0.14	16.78	50.00	-33.22	AVG	
	15	18.2400	31.02	0.45	31.47	60.00	-28.53	QP	
	16	18.2400	27.35	0.45	27.80	50.00	-22.20	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

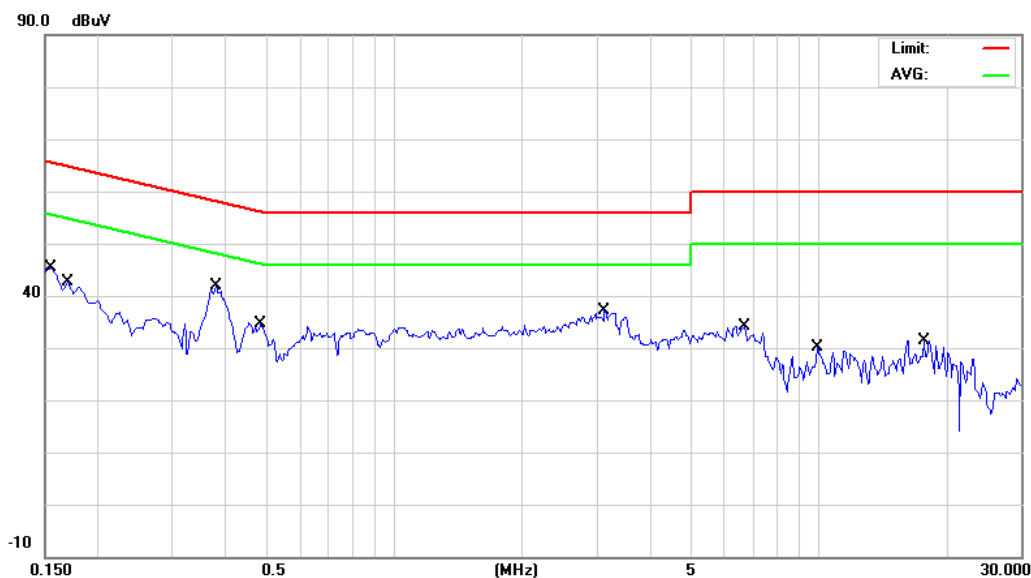
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH01 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	41.30	0.06	41.36	65.73	-24.37	QP	
	2	0.1550	27.20	0.06	27.26	55.73	-28.47	AVG	
	3	0.1700	39.96	0.04	40.00	64.96	-24.96	QP	
	4	0.1700	28.00	0.04	28.04	54.96	-26.92	AVG	
	5	0.3800	39.58	0.11	39.69	58.28	-18.59	QP	
*	6	0.3800	31.18	0.11	31.29	48.28	-16.99	AVG	
	7	0.4850	32.10	0.11	32.21	56.25	-24.04	QP	
	8	0.4850	20.73	0.11	20.84	46.25	-25.41	AVG	
	9	3.1350	32.84	0.13	32.97	56.00	-23.03	QP	
	10	3.1350	24.38	0.13	24.51	46.00	-21.49	AVG	
	11	6.7050	29.62	0.20	29.82	60.00	-30.18	QP	
	12	6.7050	23.75	0.20	23.95	50.00	-26.05	AVG	
	13	10.0000	22.48	0.32	22.80	60.00	-37.20	QP	
	14	10.0000	16.81	0.32	17.13	50.00	-32.87	AVG	
	15	17.6900	28.02	0.50	28.52	60.00	-31.48	QP	
	16	17.6900	24.85	0.50	25.35	50.00	-24.65	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.



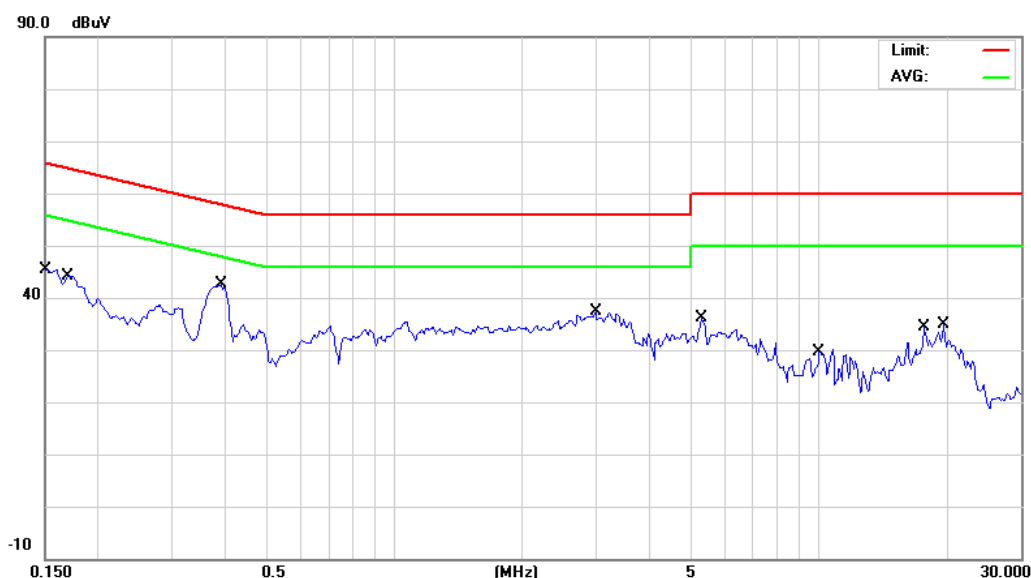
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
Page: 33 of 169  
Date: Dec. 28, 2017

Temperature:	<u>23 °C</u>	Humidity:	<u>65 %RH</u>
Frequency Range:	<u>0.15 – 30 MHz</u>	Tested Mode:	<u>802.11n - HT20_CH06 (MIMO)</u>
Receiver Detector:	<u>Q.P. and AV.</u>	Tested Date:	<u>Nov. 01, 2017</u>

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	42.48	-0.12	42.36	66.00	-23.64	QP	
	2	0.1500	28.60	-0.12	28.48	56.00	-27.52	AVG	
	3	0.1700	40.26	-0.12	40.14	64.96	-24.82	QP	
	4	0.1700	28.09	-0.12	27.97	54.96	-26.99	AVG	
	5	0.3900	41.24	-0.15	41.09	58.06	-16.97	QP	
	*	0.3900	32.41	-0.15	32.26	48.06	-15.80	AVG	
	7	2.9850	32.90	0.03	32.93	56.00	-23.07	QP	
	8	2.9850	24.38	0.03	24.41	46.00	-21.59	AVG	
	9	5.3000	30.16	0.13	30.29	60.00	-29.71	QP	
	10	5.3000	22.24	0.13	22.37	50.00	-27.63	AVG	
	11	10.0000	22.36	0.14	22.50	60.00	-37.50	QP	
	12	10.0000	16.64	0.14	16.78	50.00	-33.22	AVG	
	13	17.6950	30.82	0.44	31.26	60.00	-28.74	QP	
	14	17.6950	27.25	0.44	27.69	50.00	-22.31	AVG	
	15	19.7100	31.48	0.51	31.99	60.00	-28.01	QP	
	16	19.7100	27.39	0.51	27.90	50.00	-22.10	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

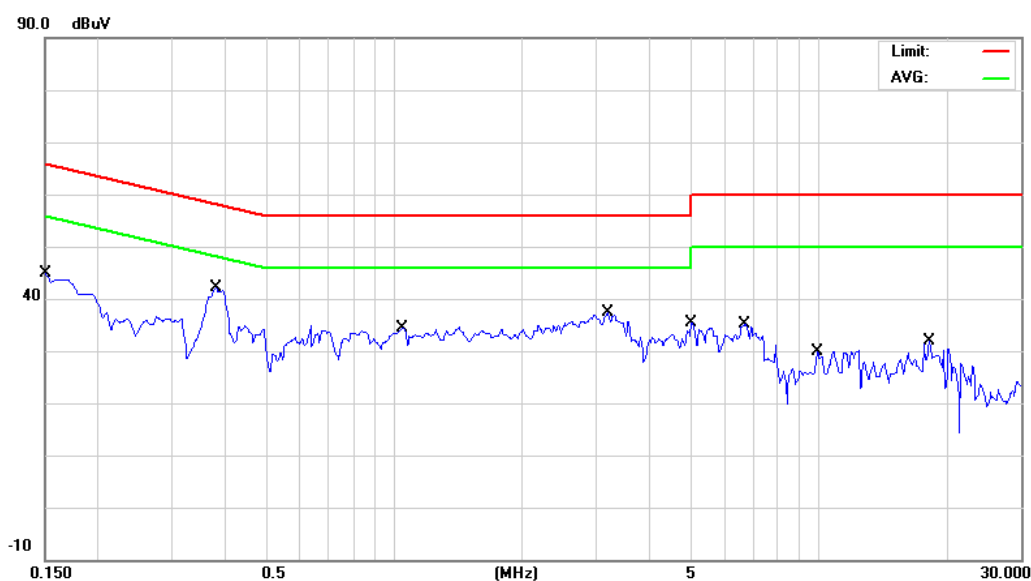
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH06 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	42.26	0.07	42.33	66.00	-23.67	QP	
	2	0.1500	28.43	0.07	28.50	56.00	-27.50	AVG	
	3	0.3800	40.10	0.11	40.21	58.28	-18.07	QP	
*	4	0.3800	31.47	0.11	31.58	48.28	-16.70	AVG	
	5	1.0450	31.78	0.04	31.82	56.00	-24.18	QP	
	6	1.0450	21.42	0.04	21.46	46.00	-24.54	AVG	
	7	3.1850	33.64	0.13	33.77	56.00	-22.23	QP	
	8	3.1850	24.45	0.13	24.58	46.00	-21.42	AVG	
	9	5.0200	29.06	0.14	29.20	60.00	-30.80	QP	
	10	5.0200	20.36	0.14	20.50	50.00	-29.50	AVG	
	11	6.7250	25.56	0.20	25.76	60.00	-34.24	QP	
	12	6.7250	18.76	0.20	18.96	50.00	-31.04	AVG	
	13	10.0000	23.88	0.32	24.20	60.00	-35.80	QP	
	14	10.0000	18.50	0.32	18.82	50.00	-31.18	AVG	
	15	18.2400	29.42	0.51	29.93	60.00	-30.07	QP	
	16	18.2400	26.64	0.51	27.15	50.00	-22.85	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH11 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1516	42.56	-0.12	42.44	65.91	-23.47	QP	
	2	0.1516	28.52	-0.12	28.40	55.91	-27.51	AVG	
	3	0.1850	38.44	-0.11	38.33	64.26	-25.93	QP	
	4	0.1850	25.04	-0.11	24.93	54.26	-29.33	AVG	
	5	0.3800	41.52	-0.15	41.37	58.28	-16.91	QP	
*	6	0.3800	33.30	-0.15	33.15	48.28	-15.13	AVG	
	7	1.0750	31.62	-0.05	31.57	56.00	-24.43	QP	
	8	1.0750	21.18	-0.05	21.13	46.00	-24.87	AVG	
	9	3.3700	33.66	0.07	33.73	56.00	-22.27	QP	
	10	3.3700	25.29	0.07	25.36	46.00	-20.64	AVG	
	11	5.9250	29.28	0.14	29.42	60.00	-30.58	QP	
	12	5.9250	21.08	0.14	21.22	50.00	-28.78	AVG	
	13	10.0000	22.52	0.14	22.66	60.00	-37.34	QP	
	14	10.0000	16.81	0.14	16.95	50.00	-33.05	AVG	
	15	18.9150	30.92	0.48	31.40	60.00	-28.60	QP	
	16	18.9150	26.43	0.48	26.91	50.00	-23.09	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

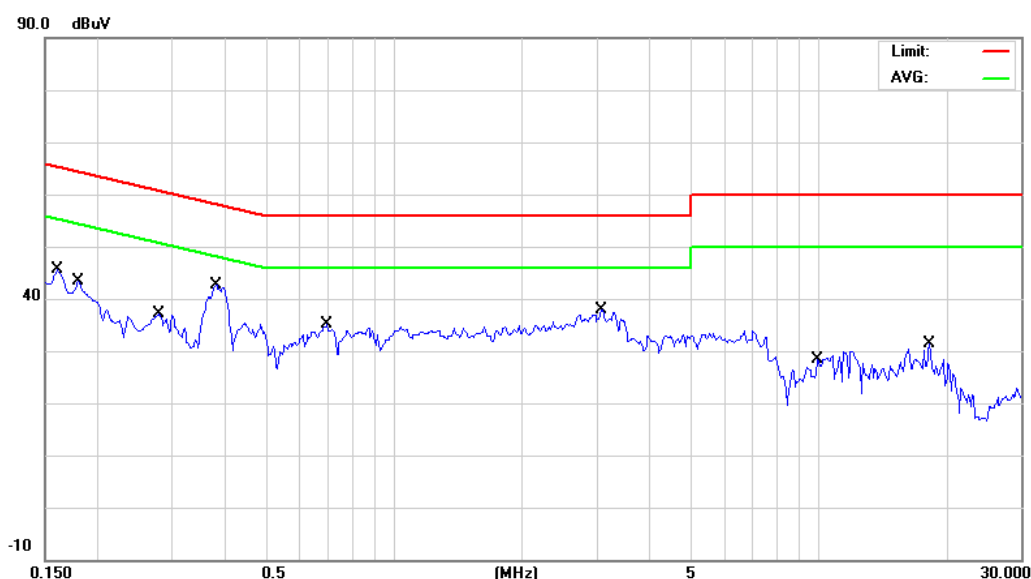
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT20_CH11 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1600	41.26	0.05	41.31	65.46	-24.15	QP	
	2	0.1600	27.82	0.05	27.87	55.46	-27.59	AVG	
	3	0.1800	37.78	0.02	37.80	64.49	-26.69	QP	
	4	0.1800	23.07	0.02	23.09	54.49	-31.40	AVG	
	5	0.2800	34.50	0.04	34.54	60.82	-26.28	QP	
	6	0.2800	24.38	0.04	24.42	50.82	-26.40	AVG	
	7	0.3800	40.12	0.11	40.23	58.28	-18.05	QP	
*	8	0.3800	31.98	0.11	32.09	48.28	-16.19	AVG	
	9	0.6950	31.72	0.08	31.80	56.00	-24.20	QP	
	10	0.6950	19.33	0.08	19.41	46.00	-26.59	AVG	
	11	3.0900	32.32	0.14	32.46	56.00	-23.54	QP	
	12	3.0900	24.18	0.14	24.32	46.00	-21.68	AVG	
	13	10.0000	22.16	0.32	22.48	60.00	-37.52	QP	
	14	10.0000	16.31	0.32	16.63	50.00	-33.37	AVG	
	15	18.2400	24.88	0.51	25.39	60.00	-34.61	QP	
	16	18.2400	27.05	0.51	27.56	50.00	-22.44	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

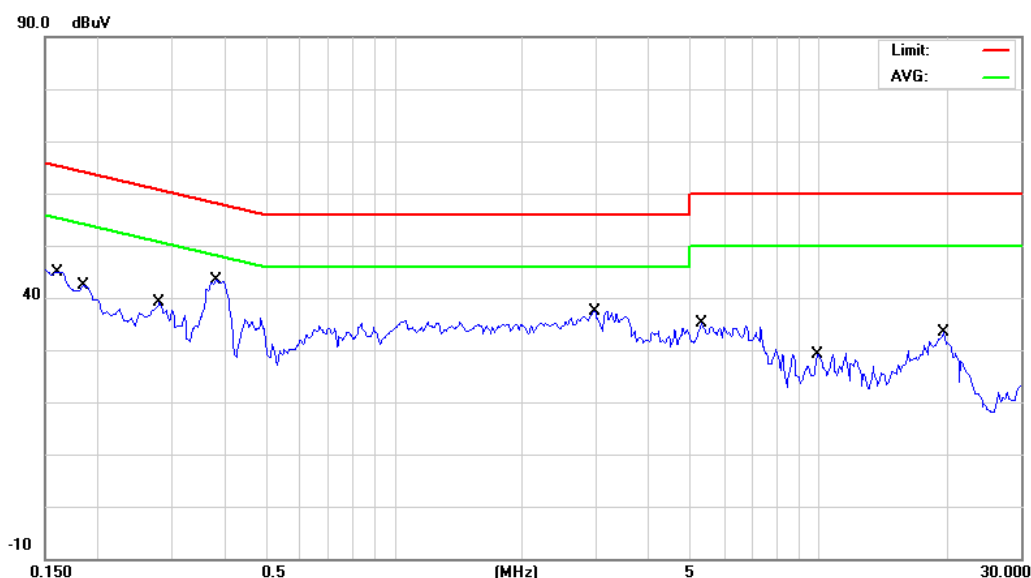
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH03 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1600	41.56	-0.12	41.44	65.46	-24.02	QP	
	2	0.1600	28.52	-0.12	28.40	55.46	-27.06	AVG	
	3	0.1850	38.70	-0.11	38.59	64.26	-25.67	QP	
	4	0.1850	25.29	-0.11	25.18	54.26	-29.08	AVG	
	5	0.2800	36.70	-0.13	36.57	60.82	-24.25	QP	
	6	0.2800	27.10	-0.13	26.97	50.82	-23.85	AVG	
	7	0.3800	41.88	-0.15	41.73	58.28	-16.55	QP	
*	8	0.3800	33.53	-0.15	33.38	48.28	-14.90	AVG	
	9	2.9650	32.84	0.03	32.87	56.00	-23.13	QP	
	10	2.9650	24.52	0.03	24.55	46.00	-21.45	AVG	
	11	5.3000	28.70	0.13	28.83	60.00	-31.17	QP	
	12	5.3000	20.52	0.13	20.65	50.00	-29.35	AVG	
	13	10.0000	21.88	0.14	22.02	60.00	-37.98	QP	
	14	10.0000	16.39	0.14	16.53	50.00	-33.47	AVG	
	15	19.7100	28.38	0.51	28.89	60.00	-31.11	QP	
	16	19.7100	22.91	0.51	23.42	50.00	-26.58	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

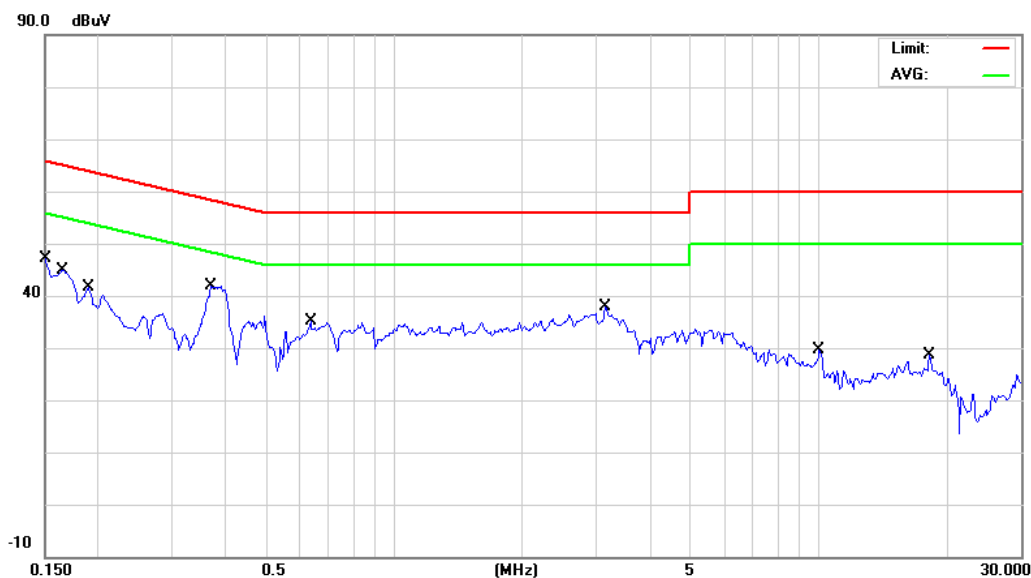
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH03 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	41.98	0.07	42.05	66.00	-23.95	QP	
	2	0.1500	28.43	0.07	28.50	56.00	-27.50	AVG	
	3	0.1650	40.70	0.05	40.75	65.21	-24.46	QP	
	4	0.1650	28.43	0.05	28.48	55.21	-26.73	AVG	
	5	0.1900	37.40	0.01	37.41	64.04	-26.63	QP	
	6	0.1900	25.10	0.01	25.11	54.04	-28.93	AVG	
	7	0.3700	39.44	0.10	39.54	58.50	-18.96	QP	
*	8	0.3700	31.13	0.10	31.23	48.50	-17.27	AVG	
	9	0.6350	30.48	0.08	30.56	56.00	-25.44	QP	
	10	0.6350	21.98	0.08	22.06	46.00	-23.94	AVG	
	11	3.1500	32.78	0.13	32.91	56.00	-23.09	QP	
	12	3.1500	24.45	0.13	24.58	46.00	-21.42	AVG	
	13	10.0000	22.18	0.32	22.50	60.00	-37.50	QP	
	14	10.0000	16.39	0.32	16.71	50.00	-33.29	AVG	
	15	18.2400	24.98	0.51	25.49	60.00	-34.51	QP	
	16	18.2400	19.91	0.51	20.42	50.00	-29.58	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

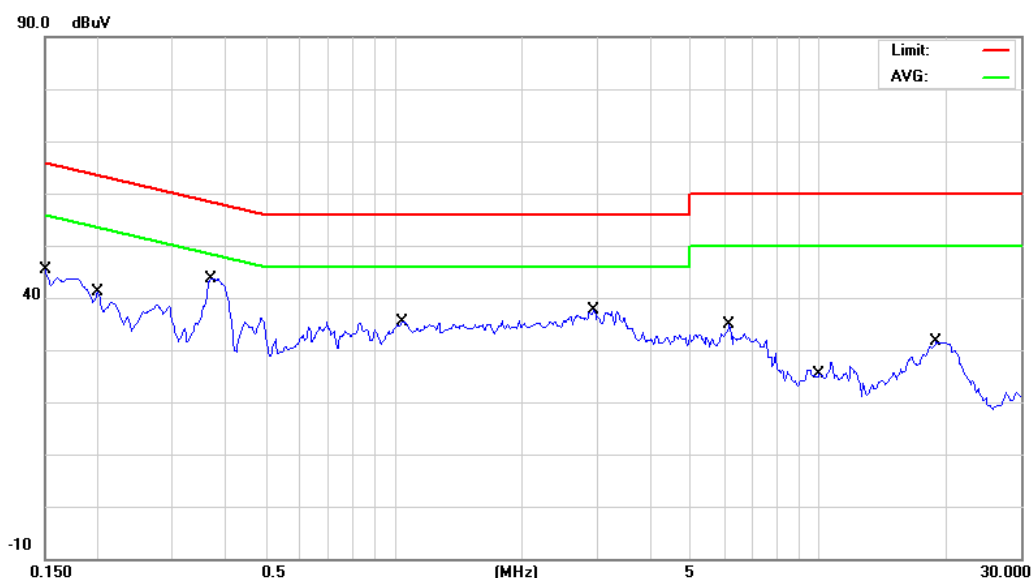
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH06 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	43.04	-0.12	42.92	66.00	-23.08	QP	
	2	0.1500	29.62	-0.12	29.50	56.00	-26.50	AVG	
	3	0.2000	37.74	-0.11	37.63	63.61	-25.98	QP	
	4	0.2000	24.97	-0.11	24.86	53.61	-28.75	AVG	
	5	0.3700	41.44	-0.14	41.30	58.50	-17.20	QP	
*	6	0.3700	33.15	-0.14	33.01	48.50	-15.49	AVG	
	7	1.0450	32.30	-0.05	32.25	56.00	-23.75	QP	
	8	1.0450	22.41	-0.05	22.36	46.00	-23.64	AVG	
	9	2.9600	32.92	0.03	32.95	56.00	-23.05	QP	
	10	2.9600	24.85	0.03	24.88	46.00	-21.12	AVG	
	11	6.1650	28.74	0.14	28.88	60.00	-31.12	QP	
	12	6.1650	21.18	0.14	21.32	50.00	-28.68	AVG	
	13	10.0000	22.02	0.14	22.16	60.00	-37.84	QP	
	14	10.0000	16.39	0.14	16.53	50.00	-33.47	AVG	
	15	18.9450	26.74	0.48	27.22	60.00	-32.78	QP	
	16	18.9450	21.37	0.48	21.85	50.00	-28.15	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.



**Spectrum Research & Testing Lab., Inc.**

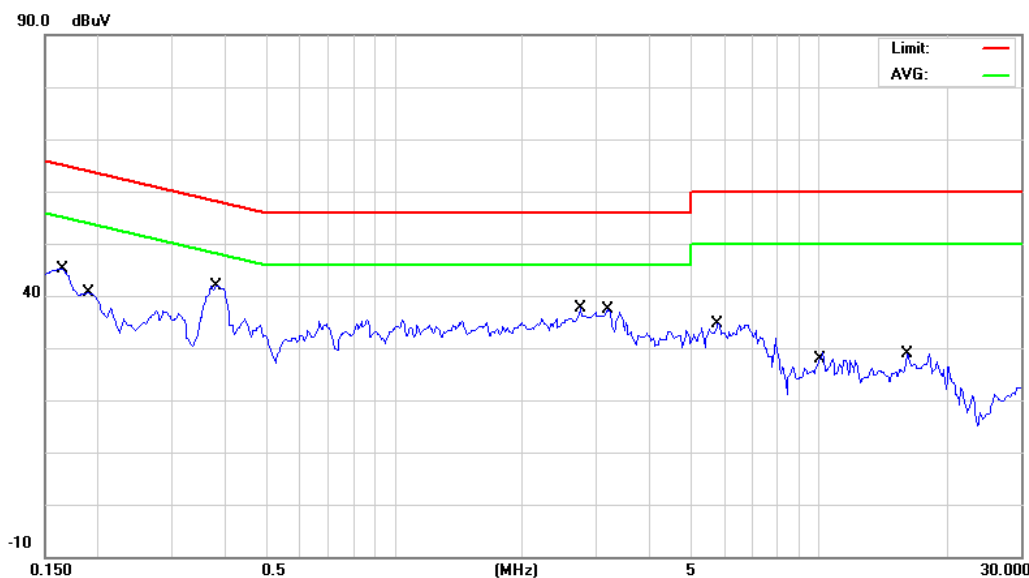
No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	<u>23 °C</u>	Humidity:	<u>65 %RH</u>
Frequency Range:	<u>0.15 – 30 MHz</u>	Tested Mode:	<u>802.11n - HT40_CH06 (SISO)</u>
Receiver Detector:	<u>Q.P. and AV.</u>	Tested Date:	<u>Nov. 01, 2017</u>

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1650	41.66	0.05	41.71	65.21	-23.50	QP	
	2	0.1650	29.70	0.05	29.75	55.21	-25.46	AVG	
	3	0.1900	38.22	0.01	38.23	64.04	-25.81	QP	
	4	0.1900	26.21	0.01	26.22	54.04	-27.82	AVG	
	5	0.3800	40.64	0.11	40.75	58.28	-17.53	QP	
*	6	0.3800	32.11	0.11	32.22	48.28	-16.06	AVG	
	7	2.7500	32.00	0.14	32.14	56.00	-23.86	QP	
	8	2.7500	24.04	0.14	24.18	46.00	-21.82	AVG	
	9	3.1750	33.40	0.13	33.53	56.00	-22.47	QP	
	10	3.1750	25.04	0.13	25.17	46.00	-20.83	AVG	
	11	5.7900	29.58	0.16	29.74	60.00	-30.26	QP	
	12	5.7900	21.80	0.16	21.96	50.00	-28.04	AVG	
	13	10.0000	22.86	0.32	23.18	60.00	-36.82	QP	
	14	10.0000	17.20	0.32	17.52	50.00	-32.48	AVG	
	15	16.1650	27.56	0.47	28.03	60.00	-31.97	QP	
	16	16.1650	23.68	0.47	24.15	50.00	-25.85	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.



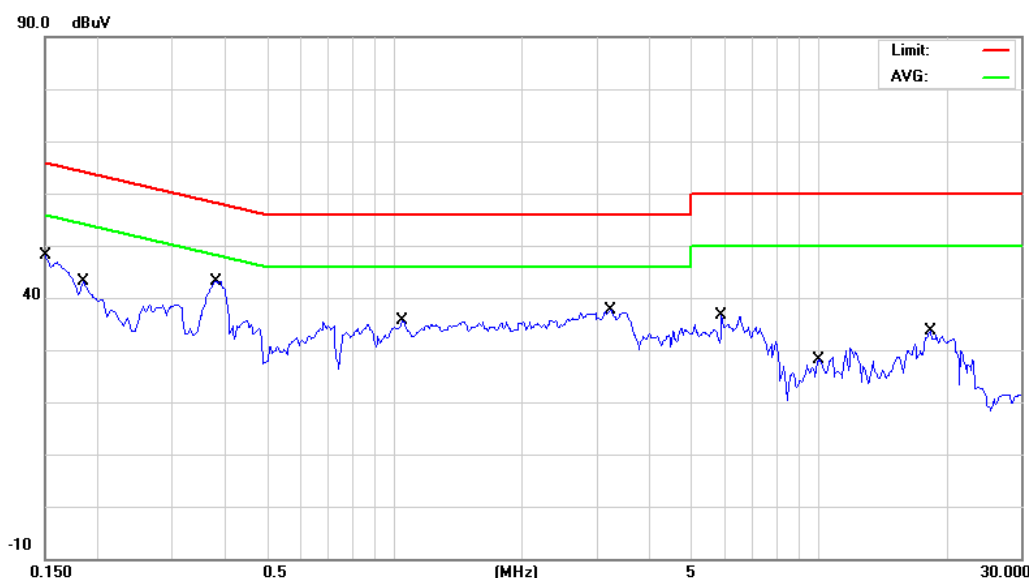
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH09 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	43.26	-0.12	43.14	66.00	-22.86	QP	
	2	0.1500	29.24	-0.12	29.12	56.00	-26.88	AVG	
	3	0.1850	39.24	-0.11	39.13	64.26	-25.13	QP	
	4	0.1850	26.16	-0.11	26.05	54.26	-28.21	AVG	
	5	0.3800	42.14	-0.15	41.99	58.28	-16.29	QP	
*	6	0.3800	33.53	-0.15	33.38	48.28	-14.90	AVG	
	7	1.0450	33.00	-0.05	32.95	56.00	-23.05	QP	
	8	1.0450	23.22	-0.05	23.17	46.00	-22.83	AVG	
	9	3.2300	34.24	0.06	34.30	56.00	-21.70	QP	
	10	3.2300	25.47	0.06	25.53	46.00	-20.47	AVG	
	11	5.9050	31.22	0.14	31.36	60.00	-28.64	QP	
	12	5.9050	24.52	0.14	24.66	50.00	-25.34	AVG	
	13	10.0000	22.54	0.14	22.68	60.00	-37.32	QP	
	14	10.0000	16.81	0.14	16.95	50.00	-33.05	AVG	
	15	18.3650	30.32	0.46	30.78	60.00	-29.22	QP	
	16	18.3650	25.99	0.46	26.45	50.00	-23.55	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

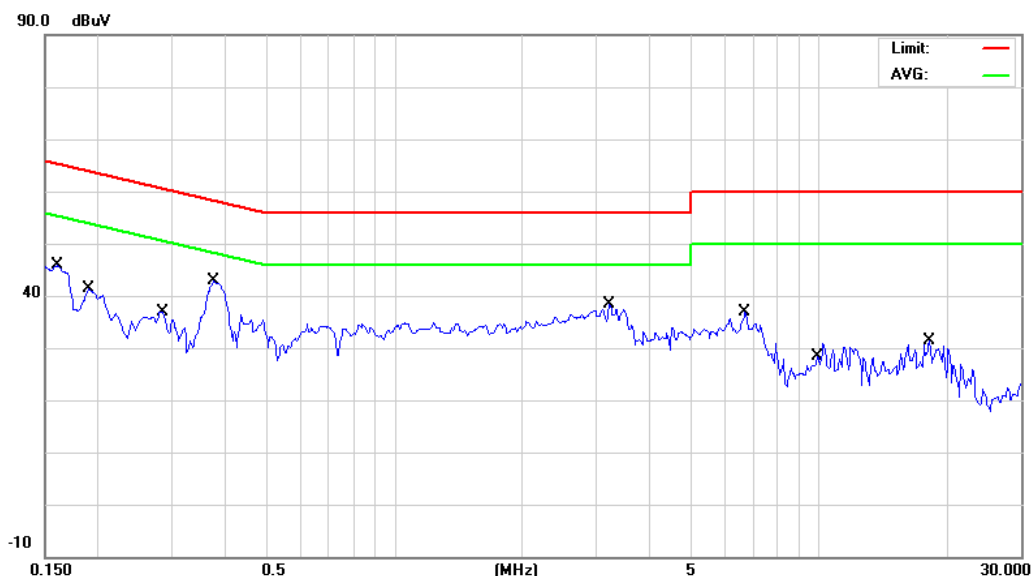
**Spectrum Research & Testing Lab., Inc.**

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
Page: 42 of 169  
Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH09 (SISO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1600	41.66	0.05	41.71	65.46	-23.75	QP	
	2	0.1600	28.93	0.05	28.98	55.46	-26.48	AVG	
	3	0.1900	38.32	0.01	38.33	64.04	-25.71	QP	
	4	0.1900	26.27	0.01	26.28	54.04	-27.76	AVG	
	5	0.2850	34.72	0.05	34.77	60.67	-25.90	QP	
	6	0.2850	24.52	0.05	24.57	50.67	-26.10	AVG	
	7	0.3750	40.56	0.10	40.66	58.39	-17.73	QP	
*	8	0.3750	32.15	0.10	32.25	48.39	-16.14	AVG	
	9	3.2200	33.74	0.13	33.87	56.00	-22.13	QP	
	10	3.2200	24.85	0.13	24.98	46.00	-21.02	AVG	
	11	6.7250	30.00	0.20	30.20	60.00	-29.80	QP	
	12	6.7250	22.66	0.20	22.86	50.00	-27.14	AVG	
	13	10.0000	23.08	0.32	23.40	60.00	-36.60	QP	
	14	10.0000	17.36	0.32	17.68	50.00	-32.32	AVG	
	15	18.2450	29.70	0.51	30.21	60.00	-29.79	QP	
	16	18.2450	26.80	0.51	27.31	50.00	-22.69	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

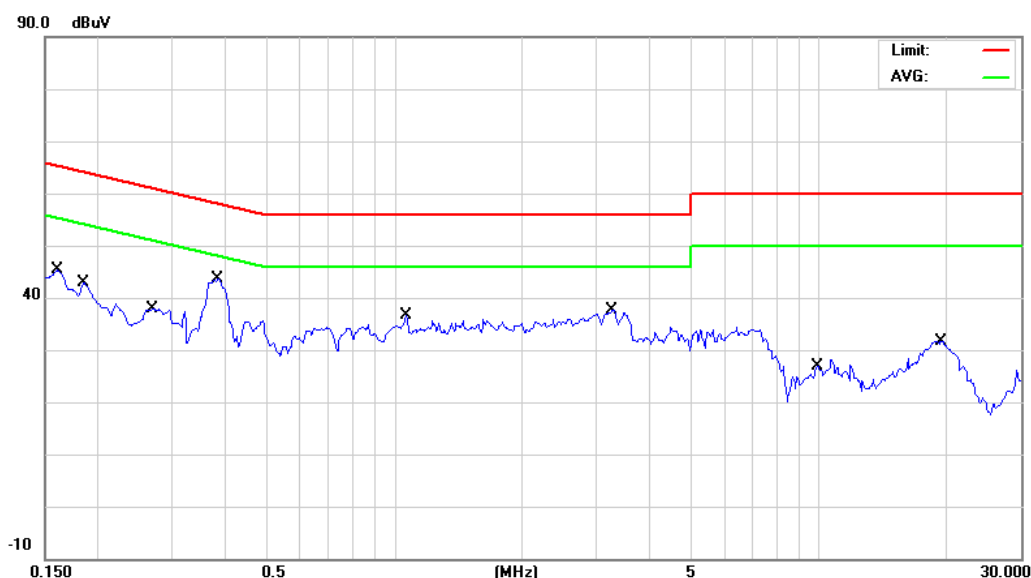
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH03 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1600	41.80	-0.12	41.68	65.46	-23.78	QP	
	2	0.1600	28.68	-0.12	28.56	55.46	-26.90	AVG	
	3	0.1850	39.18	-0.11	39.07	64.26	-25.19	QP	
	4	0.1850	25.65	-0.11	25.54	54.26	-28.72	AVG	
	5	0.2700	36.20	-0.12	36.08	61.12	-25.04	QP	
	6	0.2700	25.99	-0.12	25.87	51.12	-25.25	AVG	
	7	0.3850	41.74	-0.15	41.59	58.17	-16.58	QP	
*	8	0.3850	33.22	-0.15	33.07	48.17	-15.10	AVG	
	9	1.0700	32.78	-0.05	32.73	56.00	-23.27	QP	
	10	1.0700	21.89	-0.05	21.84	46.00	-24.16	AVG	
	11	3.2750	34.16	0.06	34.22	56.00	-21.78	QP	
	12	3.2750	25.59	0.06	25.65	46.00	-20.35	AVG	
	13	10.0000	22.38	0.14	22.52	60.00	-37.48	QP	
	14	10.0000	16.64	0.14	16.78	50.00	-33.22	AVG	
	15	19.4284	27.06	0.51	27.57	60.00	-32.43	QP	
	16	19.4284	21.56	0.51	22.07	50.00	-27.93	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

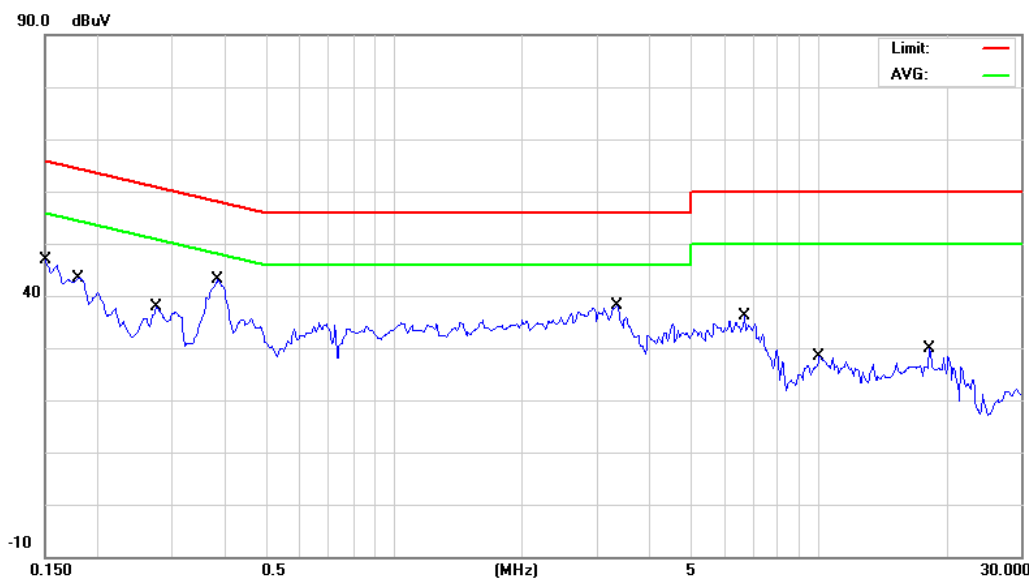
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH03 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1500	43.08	0.07	43.15	66.00	-22.85	QP	
	2	0.1500	29.24	0.07	29.31	56.00	-26.69	AVG	
	3	0.1800	38.96	0.02	38.98	64.49	-25.51	QP	
	4	0.1800	23.30	0.02	23.32	54.49	-31.17	AVG	
	5	0.2750	34.82	0.04	34.86	60.97	-26.11	QP	
	6	0.2750	24.18	0.04	24.22	50.97	-26.75	AVG	
	7	0.3850	40.44	0.11	40.55	58.17	-17.62	QP	
*	8	0.3850	31.80	0.11	31.91	48.17	-16.26	AVG	
	9	3.3600	33.94	0.12	34.06	56.00	-21.94	QP	
	10	3.3600	25.10	0.12	25.22	46.00	-20.78	AVG	
	11	6.7000	32.52	0.20	32.72	60.00	-27.28	QP	
	12	6.7000	26.27	0.20	26.47	50.00	-23.53	AVG	
	13	10.0000	22.82	0.32	23.14	60.00	-36.86	QP	
	14	10.0000	17.13	0.32	17.45	50.00	-32.55	AVG	
	15	18.3050	25.84	0.51	26.35	60.00	-33.65	QP	
	16	18.3050	20.03	0.51	20.54	50.00	-29.46	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

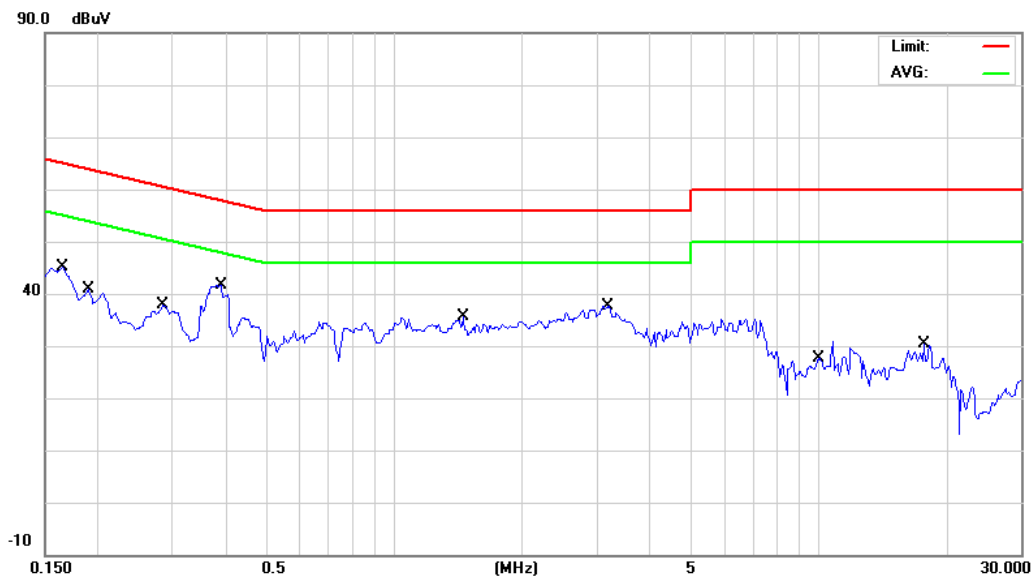
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH06 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1650	41.86	-0.12	41.74	65.21	-23.47	QP	
	2	0.1650	29.84	-0.12	29.72	55.21	-25.49	AVG	
	3	0.1900	38.68	-0.11	38.57	64.04	-25.47	QP	
	4	0.1900	26.38	-0.11	26.27	54.04	-27.77	AVG	
	5	0.2850	34.74	-0.13	34.61	60.67	-26.06	QP	
	6	0.2850	24.72	-0.13	24.59	50.67	-26.08	AVG	
	7	0.3900	39.88	-0.15	39.73	58.06	-18.33	QP	
*	8	0.3900	31.18	-0.15	31.03	48.06	-17.03	AVG	
	9	1.4500	30.98	-0.06	30.92	56.00	-25.08	QP	
	10	1.4500	21.66	-0.06	21.60	46.00	-24.40	AVG	
	11	3.2050	33.20	0.06	33.26	56.00	-22.74	QP	
	12	3.2050	24.45	0.06	24.51	46.00	-21.49	AVG	
	13	10.0000	22.72	0.14	22.86	60.00	-37.14	QP	
	14	10.0000	16.97	0.14	17.11	50.00	-32.89	AVG	
	15	17.6950	25.04	0.44	25.48	60.00	-34.52	QP	
	16	17.6950	19.97	0.44	20.41	50.00	-29.59	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

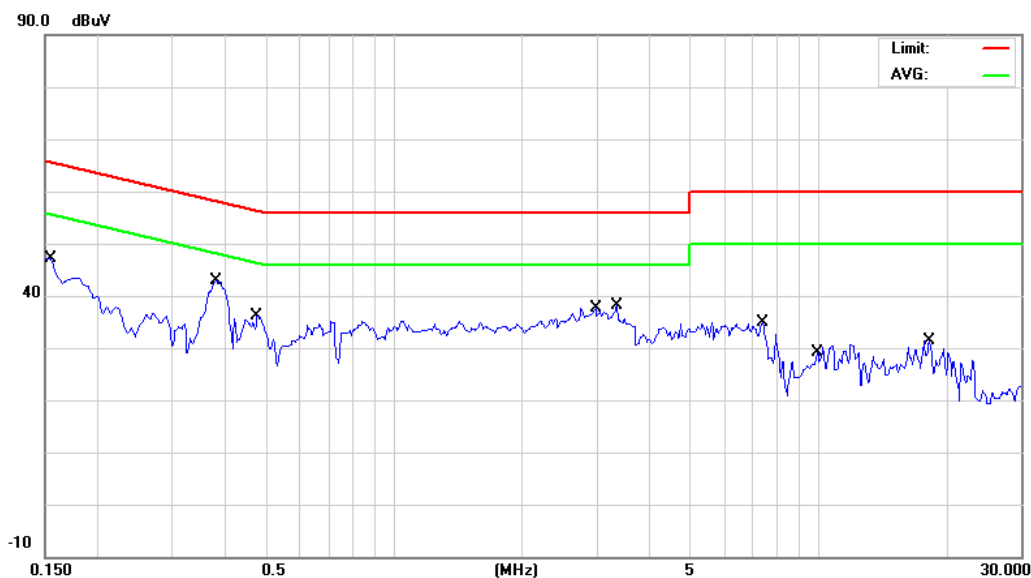
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH06 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	42.40	0.06	42.46	65.73	-23.27	QP	
	2	0.1550	28.09	0.06	28.15	55.73	-27.58	AVG	
	3	0.3800	40.58	0.11	40.69	58.28	-17.59	QP	
*	4	0.3800	32.24	0.11	32.35	48.28	-15.93	AVG	
	5	0.4750	31.74	0.11	31.85	56.43	-24.58	QP	
	6	0.4750	20.98	0.11	21.09	46.43	-25.34	AVG	
	7	2.9800	33.24	0.13	33.37	56.00	-22.63	QP	
	8	2.9800	24.65	0.13	24.78	46.00	-21.22	AVG	
	9	3.3600	33.92	0.12	34.04	56.00	-21.96	QP	
	10	3.3600	25.22	0.12	25.34	46.00	-20.66	AVG	
	11	7.3750	32.30	0.23	32.53	60.00	-27.47	QP	
	12	7.3750	28.68	0.23	28.91	50.00	-21.09	AVG	
	13	10.0000	22.98	0.32	23.30	60.00	-36.70	QP	
	14	10.0000	17.28	0.32	17.60	50.00	-32.40	AVG	
	15	18.2450	29.36	0.51	29.87	60.00	-30.13	QP	
	16	18.2450	26.16	0.51	26.67	50.00	-23.33	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

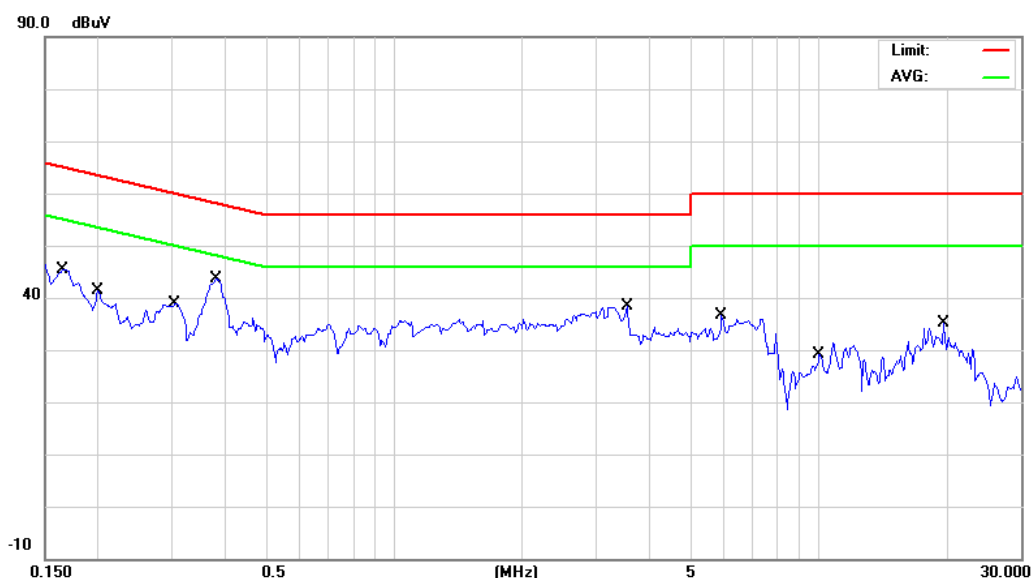
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
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Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH09 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

## Power Line Measured : Line



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1650	41.96	-0.12	41.84	65.21	-23.37	QP	
	2	0.1650	30.30	-0.12	30.18	55.21	-25.03	AVG	
	3	0.2000	37.96	-0.11	37.85	63.61	-25.76	QP	
	4	0.2000	24.45	-0.11	24.34	53.61	-29.27	AVG	
	5	0.3050	35.88	-0.13	35.75	60.11	-24.36	QP	
	6	0.3050	24.32	-0.13	24.19	50.11	-25.92	AVG	
	7	0.3800	42.24	-0.15	42.09	58.28	-16.19	QP	
*	8	0.3800	33.68	-0.15	33.53	48.28	-14.75	AVG	
	9	3.5300	32.22	0.09	32.31	56.00	-23.69	QP	
	10	3.5300	23.60	0.09	23.69	46.00	-22.31	AVG	
	11	5.9100	29.30	0.14	29.44	60.00	-30.56	QP	
	12	5.9100	23.82	0.14	23.96	50.00	-26.04	AVG	
	13	10.0000	22.26	0.14	22.40	60.00	-37.60	QP	
	14	10.0000	16.64	0.14	16.78	50.00	-33.22	AVG	
	15	19.7100	28.48	0.51	28.99	60.00	-31.01	QP	
	16	19.7100	22.91	0.51	23.42	50.00	-26.58	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.

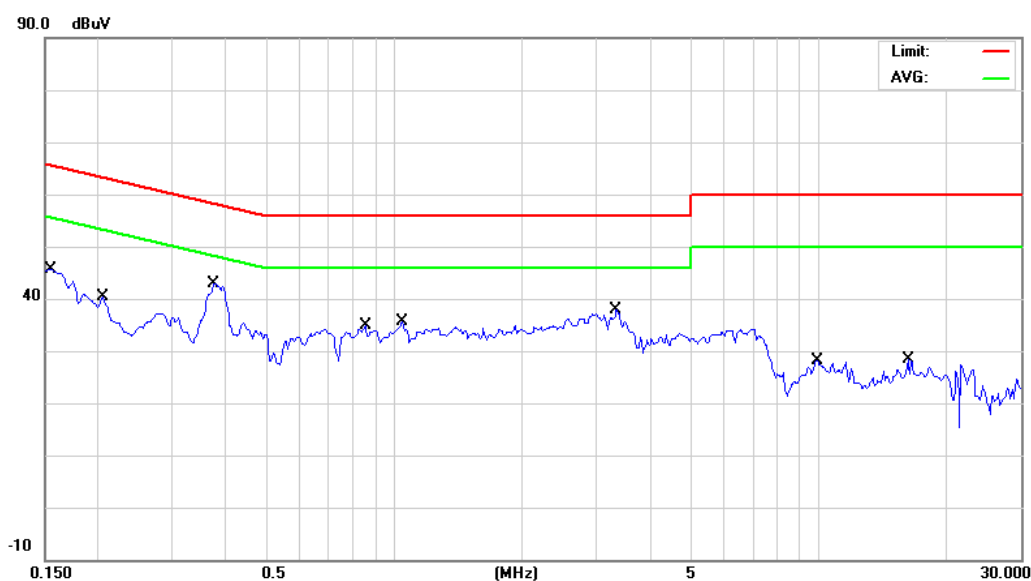
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
Page: 48 of 169  
Date: Dec. 28, 2017

Temperature:	23 °C	Humidity:	65 %RH
Frequency Range:	0.15 – 30 MHz	Tested Mode:	802.11n - HT40_CH09 (MIMO)
Receiver Detector:	Q.P. and AV.	Tested Date:	Nov. 01, 2017

Power Line Measured : Neutral



Mk.	No.	Frequency (MHz)	Reading (dBuV)	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Comment
	1	0.1550	42.54	0.06	42.60	65.73	-23.13	QP	
	2	0.1550	28.00	0.06	28.06	55.73	-27.67	AVG	
	3	0.2050	35.58	-0.01	35.57	63.41	-27.84	QP	
	4	0.2050	22.33	-0.01	22.32	53.41	-31.09	AVG	
	5	0.3750	40.64	0.10	40.74	58.39	-17.65	QP	
*	6	0.3750	32.24	0.10	32.34	48.39	-16.05	AVG	
	7	0.8550	31.62	0.06	31.68	56.00	-24.32	QP	
	8	0.8550	22.07	0.06	22.13	46.00	-23.87	AVG	
	9	1.0450	32.32	0.04	32.36	56.00	-23.64	QP	
	10	1.0450	22.02	0.04	22.06	46.00	-23.94	AVG	
	11	3.3400	33.84	0.12	33.96	56.00	-22.04	QP	
	12	3.3400	24.97	0.12	25.09	46.00	-20.91	AVG	
	13	10.0000	23.32	0.32	23.64	60.00	-36.36	QP	
	14	10.0000	17.43	0.32	17.75	50.00	-32.25	AVG	
	15	16.2300	27.18	0.47	27.65	60.00	-32.35	QP	
	16	16.2300	22.83	0.47	23.30	50.00	-26.70	AVG	

**NOTE :**

1. Measurement uncertainty is 2.92 dB.
2. Result = Reading + Correction factor.
3. Corrected Factor = Cable loss + Insertion loss of LISN  
Difference of Pulse Limiter Factor between EMI Test Receiver corrected 10dB insertion loss.
4. Margin = Result – Limit.



**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017**4.2 RADIATED EMISSION TEST****4.2.1 LIMIT**

FCC Part15, Subpart C Section 15.209 limit of radiated emission for frequency below1000MHz. The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

FREQUENCY (MHz)	FIELD STRENGTH (microvolts/meter)	DISTANCE (m)	FIELD STRENGTH (dB $\mu$ V/m)
0.009 - 0.490	2400/F(kHz)	300	67.6-20log(kHz)
0.490 - 1.705	24000/F(kHz)	30	87.6-20log(kHz)
1.705 - 30	30	30	30
30 - 88	100	3	40.0
88 - 216	150	3	43.5
216 - 960	200	3	46.0
Above 960	500	3	54.0

**NOTE:**

- 30 dBuV (in 30m) = 70 dBuV (in 3m).
- In the emission tables above , the tighter limit applies at the band edges.
- Distance refers to the distance between measuring instrument, antenna, and the closest point of any part of the device or system.

FCC Part 15, Section15.35(b) limit of radiated emission for frequency above 1000 MHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

**Spectrum Research & Testing Lab., Inc.**

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
Page: 50 of 169  
Date: Dec. 28, 2017**4.2.2 TEST EQUIPMENT**

The following test equipment was used during the radiated emission test:

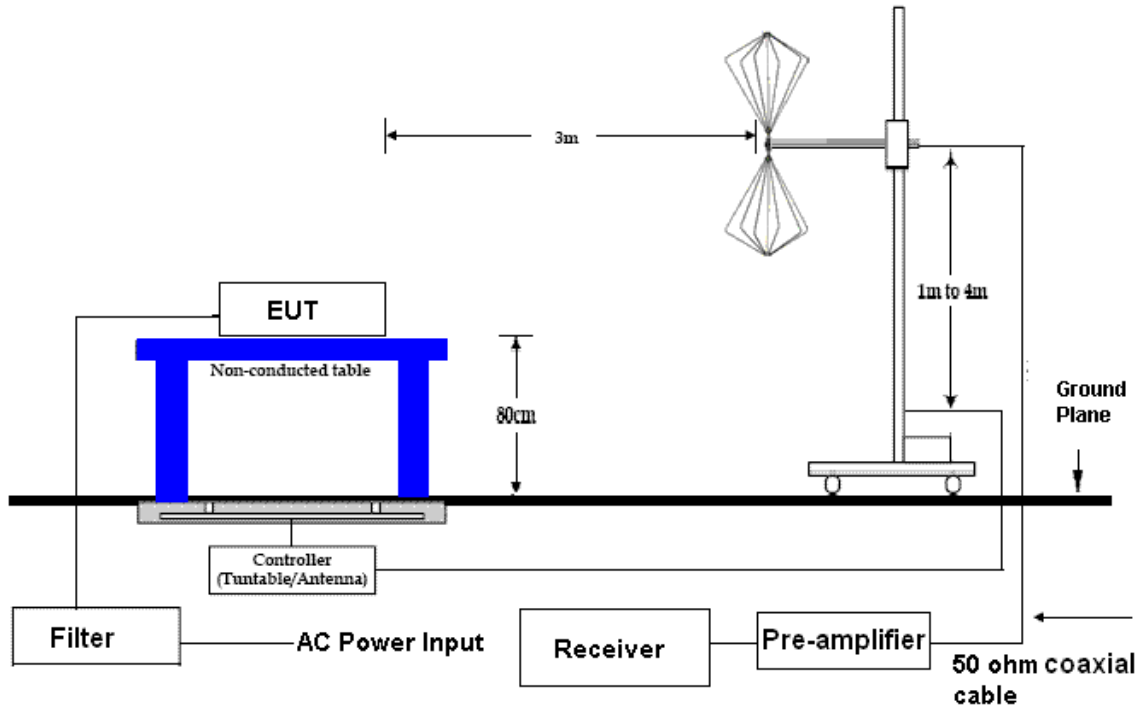
EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER	9 kHz ~ 2.75 GHz	ROHDE & SCHWARZ	ESCS30 / 100376	JAN. 02, 2018 ETC
SPECTRUM ANALYZER	9 kHz ~ 40GHz	ROHDE & SCHWARZ	FSP40 / 100093	JAN. 02, 2018 ETC
BICONICAL ANTENNA	30 MHz ~ 200 MHz	EMCO	3110/ 11966C	MAY 14, 2018 ETC
LOG PERIODIC ANTENNA	200 MHz ~ 1 GHz	EMCO	3146/ 9002-2686	OCT. 27, 2018 ETC
HORN ANTENNA	1 GHz ~ 18 GHz	EMCO	3115/ 9602-4681	NOV. 24, 2018 ETC
HORN ANTENNA	18 ~ 40 GHZ	ETS-LINDGREN	3116 /00032255	DEC. 25, 2018 ETC
PRE-AMPLIFIER	0.1 MHz ~ 1.3 GHz	HP	8447D / 2944A06746	NOV. 14, 2018 ETC
PRE-AMPLIFIER	1 GHz ~ 26.5 GHz	AGILENT	8449B/ 3008A01995	DEC. 29, 2018 ETC
OPEN AREA TEST SITE	3 – 10 M MEASUREMENT	SRT	A02 / SRT002	MAR. 09, 2018 SRT
ANECHOIC CHAMBER	3 M MEASUREMENT	SRT	A01 / SRT001	SEP. 13, 2018 SRT
COAXIAL CABLE	30 M	TIMES	LMR-400 / #30M(L1TCAB014)	MAY 08, 2018 ETC
K-TYPE CABLE	UP TO 40 GHz 3 m	HUBER+SUHNE R	SF102-46/2*11SK 252 /MY2611/2	FEB. 23, 2018 ETC
K-TYPE CABLE	UP TO 40 GHz, 1 m	HUBER+SUHNE R	SF102/2*11SK252 /MY3331/2	SEP. 28, 2018 ETC
FILTER	2 LINE, 30 A	FIL.COIL	FC-943/ 869	NCR
THERMO-HYGR O	15 - 40 °C, 0- 100% RH	TOP	20-A / 7685	SEP. 17, 2018 ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

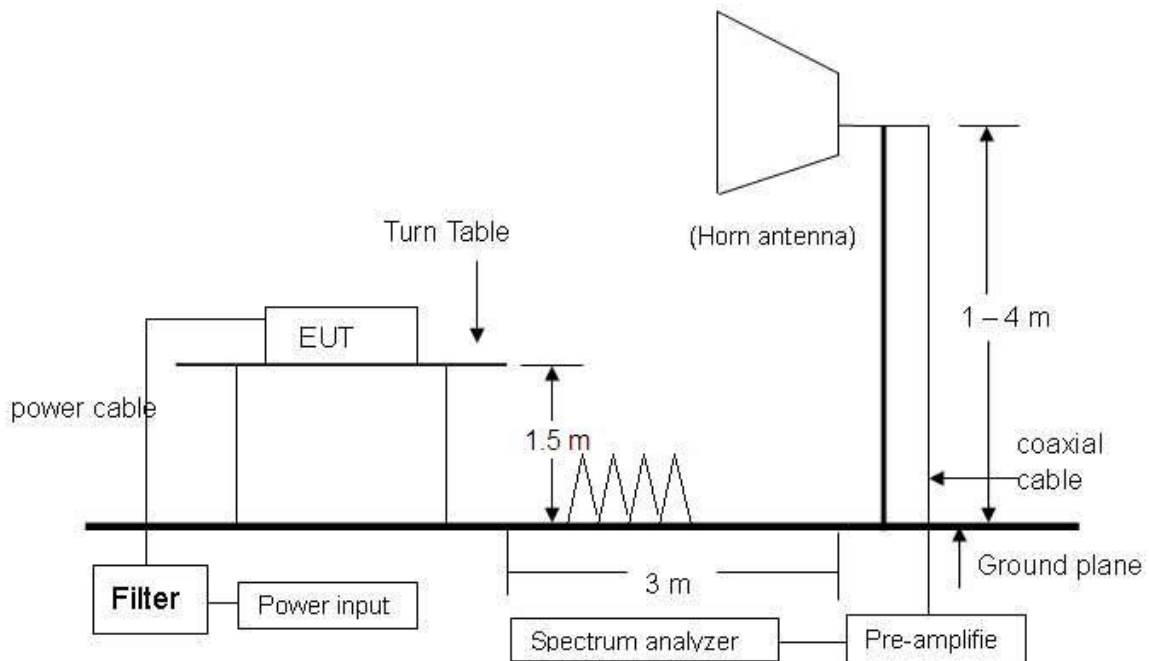


## 4.2.3 TEST SET-UP

### 30 MHz ~ 1 GHz



### Above 1 GHz



**NOTE:** The EUT system was put on a wooden table with 1.5m heights above a ground plane. For the actual test configuration, please refer to the photos of testing.



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# TEST REPORT

Reference No.: A17103001  
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## 4.2.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.10:2013 and CISPR 22:2003. When the frequency spectrum measured started from 30 MHz to 1 GHz, then use antenna is a BICONICAL ANTENNA & LOG PERIODIC ANTENNA. The measurements were made at an open area test site with 3 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 30 MHz to 1 GHz, all readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak or average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency. First, find the margin or higher points at least 6 points by software, then use manual to find the maximum data. The procedure is referred on the test procedure of SRT LAB.

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**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017**4.2.5 TEST RESULT**

Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11b_CH01
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
72.62	2.28	6.60	28.09	43.88	24.67	40	-15.33	93	3.67
154.94	2.80	15.00	27.76	39.51	29.55	44	-13.95	352	3.61
457.36	4.76	17.78	28.16	36.49	30.87	46	-15.13	76	2.68
466.12	4.81	18.02	28.20	36.48	31.11	46	-14.89	284	2.65
499.07	5.00	19.21	28.37	34.11	29.96	46	-16.04	185	2.55
519.84	5.12	18.73	28.38	34.90	30.37	46	-15.63	188	2.49

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
72.52	2.28	6.60	28.09	55.03	35.82	40	-4.18	17	1.13
155.07	2.81	15.05	27.76	39.73	29.83	44	-13.67	25	1.39
471.98	4.84	18.09	28.23	36.37	31.08	46	-14.92	147	2.37
479.36	4.89	18.21	28.27	37.54	32.37	46	-13.63	194	2.39
499.70	5.00	19.21	28.37	35.47	31.32	46	-14.68	149	2.45
516.14	5.11	18.69	28.38	33.77	29.19	46	-16.81	225	2.50

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11b_CH06
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
71.55	2.27	6.65	28.09	44.53	25.36	40	-14.64	352	3.65
155.78	2.81	15.05	27.76	37.40	27.50	44	-16.00	245	3.61
469.34	4.83	18.07	28.22	35.91	30.59	46	-15.41	88	2.64
479.66	4.89	18.21	28.27	35.32	30.15	46	-15.85	237	2.61
499.92	5.00	19.21	28.37	32.98	28.83	46	-17.17	184	2.55
749.51	6.42	21.73	28.15	28.11	28.11	46	-17.89	114	1.75

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
72.28	2.28	6.60	28.09	54.77	35.56	40	-4.44	155	1.14
154.40	2.80	15.00	27.76	40.40	30.44	44	-13.06	25	1.38
461.62	4.78	17.95	28.18	37.22	31.78	46	-14.22	146	2.33
483.93	4.91	18.26	28.29	37.17	32.06	46	-13.94	269	2.40
499.15	5.00	19.21	28.37	35.26	31.11	46	-14.89	149	2.45
514.78	5.09	18.67	28.38	37.15	32.53	46	-13.47	151	2.50

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

**Spectrum Research & Testing Lab., Inc.**

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**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
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Date: Dec. 28, 2017

Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11b_CH11
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
71.18	2.27	6.65	28.09	44.38	25.21	40	-14.79	351	3.62
154.74	2.80	15.00	27.76	39.08	29.12	44	-14.38	114	3.53
472.52	4.85	18.11	28.23	35.68	30.40	46	-15.60	284	2.39
479.01	4.89	18.21	28.27	35.27	30.10	46	-15.90	28	2.74
498.96	5.00	19.11	28.36	34.87	30.62	46	-15.38	177	1.64
514.33	5.09	18.67	28.38	37.54	32.92	46	-13.08	165	1.31

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
73.21	2.28	6.55	28.09	55.40	36.14	40	-3.86	57	1.29
154.98	2.80	15.00	27.76	39.87	29.91	44	-13.59	311	1.54
462.76	4.79	17.97	28.18	36.43	31.00	46	-15.00	145	2.17
475.12	4.87	18.15	28.25	37.65	32.42	46	-13.58	129	2.48
499.07	5.00	19.21	28.37	34.95	30.80	46	-15.20	110	2.35
514.83	5.09	18.67	28.38	39.74	35.12	46	-10.88	151	2.57

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11g_CH01
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
154.21	2.80	15.00	27.76	36.46	26.50	44	-17.00	38	3.62
466.83	4.81	18.02	28.20	37.79	32.42	46	-13.58	313	2.65
478.55	4.88	18.19	28.26	35.87	30.68	46	-15.32	315	2.61
499.07	5.00	19.21	28.37	34.28	30.13	46	-15.87	108	2.55
513.92	5.09	18.66	28.38	35.13	30.50	46	-15.50	219	1.59
748.69	6.42	21.75	28.15	28.96	28.98	46	-17.02	149	1.28

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
71.70	2.27	6.65	28.09	54.81	35.64	40	-4.36	175	1.13
156.16	2.82	15.10	27.75	38.31	28.47	44	-15.03	214	1.39
455.97	4.75	17.67	28.15	39.81	34.08	46	-11.92	145	2.32
469.44	4.83	18.07	28.22	38.30	32.98	46	-13.02	264	2.36
488.37	4.94	18.33	28.31	39.68	34.64	46	-11.36	148	2.42
513.28	5.09	18.66	28.38	34.88	30.25	46	-15.75	151	2.55

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.



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Date: Dec. 28, 2017

Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11g_CH06
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
154.46	2.80	15.00	27.76	36.11	26.15	44	-17.35	332	3.33
474.93	4.86	18.14	28.24	36.46	31.21	46	-14.79	280	2.44
499.01	5.00	19.21	28.37	33.86	29.71	46	-16.29	165	2.24
513.79	5.09	18.66	28.38	40.18	35.55	46	-10.45	62	1.62
519.52	5.12	18.73	28.38	40.83	36.30	46	-9.70	175	1.73
749.35	6.42	21.73	28.15	28.81	28.81	46	-17.19	110	1.58

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
71.62	2.27	6.65	28.09	55.00	35.83	40	-4.17	17	1.07
155.01	2.81	15.05	27.76	38.56	28.66	44	-14.84	195	1.34
208.85	3.14	11.88	27.53	37.72	25.21	44	-18.29	11	1.40
444.94	4.69	17.52	28.10	36.68	30.80	46	-15.20	291	2.31
463.22	4.80	17.98	28.19	37.38	31.97	46	-14.03	129	2.44
499.70	5.00	19.21	28.37	34.02	29.87	46	-16.13	138	2.88

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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**TEST REPORT**Reference No.: A17103001  
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Date: Dec. 28, 2017

Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11g_CH11
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
158.92	2.83	15.20	27.74	36.24	26.53	44	-16.97	322	3.35
454.28	4.74	17.62	28.14	35.13	29.34	46	-16.66	57	2.69
483.45	4.91	18.26	28.29	34.61	29.50	46	-16.50	184	2.60
499.96	5.00	19.21	28.37	33.13	28.98	46	-17.02	301	2.55
513.13	5.09	18.66	28.38	34.88	30.25	46	-15.75	188	2.51
748.40	6.42	21.75	28.15	28.41	28.43	46	-17.57	114	1.25

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
73.42	2.28	6.55	28.09	55.03	35.77	40	-4.23	171	1.13
154.96	2.80	15.00	27.76	39.32	29.36	44	-14.14	254	1.39
209.06	3.14	11.84	27.52	37.96	25.42	44	-18.08	30	1.55
478.18	4.88	18.19	28.26	36.77	31.58	46	-14.42	147	2.09
497.96	4.99	19.02	28.36	34.56	30.22	46	-15.78	277	2.14
513.22	5.09	18.66	28.38	40.58	35.95	46	-10.05	151	2.33

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT20_CH01 (SISO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
155.31	2.81	15.05	27.76	35.70	25.80	44	-17.70	348	3.64
462.65	4.79	17.97	28.18	37.26	31.83	46	-14.17	94	3.12
480.02	4.89	18.22	28.27	35.33	30.17	46	-15.83	219	2.61
499.84	5.00	19.21	28.37	34.37	30.22	46	-15.78	186	2.55
749.11	6.42	21.73	28.15	28.39	28.39	46	-17.61	114	1.78
496.97	4.99	18.92	28.35	32.76	28.32	46	-17.68	233	1.21

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
70.31	2.27	6.70	28.10	53.97	34.84	40	-5.16	141	1.41
154.94	2.80	15.00	27.76	37.47	27.51	44	-15.99	25	1.56
464.25	4.80	18.00	28.19	38.85	33.45	46	-12.55	327	2.34
496.76	4.99	18.92	28.35	37.18	32.74	46	-13.26	55	2.44
498.50	5.00	19.11	28.36	35.38	31.13	46	-14.87	149	3.28
517.87	5.11	18.70	28.38	39.54	34.98	46	-11.02	54	3.61

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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Date: Dec. 28, 2017

Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT20_CH06 (SISO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
154.46	2.80	15.00	27.76	36.19	26.23	44	-17.27	248	3.62
476.29	4.87	18.16	28.25	35.95	30.73	46	-15.27	285	3.13
499.07	5.00	19.21	28.37	33.84	29.69	46	-16.31	185	2.88
513.53	5.09	18.66	28.38	35.54	30.91	46	-15.09	156	2.50
749.88	6.42	21.73	28.15	31.64	31.64	46	-14.36	222	1.77
787.43	6.62	22.30	28.02	28.78	29.68	46	-16.32	118	1.45

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
74.63	2.28	6.50	28.08	54.26	34.96	40	-5.04	175	1.14
154.01	2.80	15.00	27.76	37.69	27.73	44	-15.77	25	1.38
458.78	4.77	17.83	28.16	36.66	31.09	46	-14.91	145	2.33
474.25	4.86	18.14	28.24	36.94	31.69	46	-14.31	331	2.37
499.56	5.00	19.21	28.37	34.13	29.98	46	-16.02	149	2.45
512.44	5.08	18.64	28.38	37.93	33.28	46	-12.72	131	3.07

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT20_CH11 (SISO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
70.17	2.27	6.70	28.10	41.23	22.10	40	-17.90	220	3.68
154.92	2.80	15.00	27.76	36.52	26.56	44	-16.94	29	3.61
481.64	4.90	18.23	28.28	36.03	30.89	46	-15.11	101	2.60
498.36	5.00	19.11	28.36	35.32	31.07	46	-14.93	11	2.55
517.83	5.11	18.70	28.38	40.66	36.10	46	-9.90	332	2.49
749.01	6.42	21.73	28.15	30.30	30.30	46	-15.70	123	1.78

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
74.63	2.28	6.50	28.08	54.06	34.76	40	-5.24	331	1.14
154.07	2.80	15.00	27.76	37.98	28.02	44	-15.48	127	1.38
462.24	4.79	17.97	28.18	38.84	33.41	46	-12.59	324	2.34
467.81	4.82	18.04	28.21	38.33	32.98	46	-13.02	53	2.35
484.99	4.92	18.28	28.29	36.08	30.98	46	-15.02	13	2.41
499.57	5.00	19.21	28.37	33.60	29.45	46	-16.55	41	2.45

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT20_CH01 (MIMO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
154.36	2.80	15.00	27.76	36.04	26.08	44	-17.42	239	3.21
454.89	4.74	17.62	28.14	35.19	29.40	46	-16.60	210	2.69
471.12	4.84	18.09	28.23	36.91	31.62	46	-14.38	39	2.64
499.75	5.00	19.21	28.37	33.81	29.66	46	-16.34	202	2.55
514.08	5.09	18.67	28.38	35.54	30.92	46	-15.08	329	2.50
748.54	6.42	21.75	28.15	28.99	29.01	46	-16.99	298	1.53

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
70.28	2.27	6.70	28.10	54.21	35.08	40	-4.92	162	1.12
415.42	4.57	17.10	27.95	40.28	33.99	46	-12.01	212	2.19
471.66	4.84	18.09	28.23	39.89	34.60	46	-11.40	32	2.37
478.91	4.88	18.19	28.26	37.53	32.34	46	-13.66	268	2.39
499.05	5.00	19.21	28.37	34.16	30.01	46	-15.99	324	2.85
514.34	5.09	18.67	28.38	42.61	37.99	46	-8.01	14	3.14

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT20_CH06 (MIMO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
70.57	2.27	6.70	28.10	40.20	21.07	40	-18.93	348	3.65
158.13	2.83	15.20	27.74	36.65	26.94	44	-16.56	133	3.14
467.04	4.82	18.04	28.21	38.66	33.31	46	-12.69	287	2.65
499.98	5.00	19.21	28.37	35.34	31.19	46	-14.81	252	2.55
517.69	5.11	18.70	28.38	39.49	34.93	46	-11.07	192	2.49
749.22	6.42	21.73	28.15	29.39	29.39	46	-16.61	115	1.78

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
71.61	2.27	6.65	28.09	53.55	34.38	40	-5.62	17	1.13
154.08	2.80	15.00	27.76	38.31	28.35	44	-15.15	55	1.38
210.95	3.15	11.80	27.52	38.34	25.77	44	-17.73	31	1.56
458.23	4.77	17.83	28.16	37.96	32.39	46	-13.61	145	2.32
473.74	4.85	18.12	28.24	37.75	32.49	46	-13.51	277	2.37
499.19	5.00	19.21	28.37	34.49	30.34	46	-15.66	19	2.88

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

**Spectrum Research & Testing Lab., Inc.**

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT20_CH11 (MIMO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
161.22	2.85	15.36	27.73	36.24	26.72	44	-16.78	349	3.66
448.57	4.71	17.44	28.12	34.65	28.69	46	-17.31	280	2.71
479.44	4.89	18.21	28.27	36.94	31.77	46	-14.23	321	2.61
497.96	4.99	19.02	28.36	34.35	30.01	46	-15.99	66	2.55
513.08	5.09	18.66	28.38	42.50	37.87	46	-8.13	195	2.51
749.61	6.42	21.73	28.15	28.26	28.26	46	-17.74	114	1.51

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
71.69	2.27	6.65	28.09	53.96	34.79	40	-5.21	17	1.13
154.25	2.80	15.00	27.76	38.44	28.48	44	-15.02	325	1.38
463.98	4.80	17.98	28.19	37.22	31.81	46	-14.19	58	2.34
478.16	4.88	18.19	28.26	37.95	32.76	46	-13.24	245	2.39
499.03	5.00	19.21	28.37	34.06	29.91	46	-16.09	149	2.45
518.75	5.12	18.72	28.38	37.85	33.30	46	-12.70	144	2.54

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.



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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT40_CH03 (SISO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
57.38	2.24	9.57	28.14	45.18	28.85	40	-11.15	37	3.64
253.09	3.43	12.62	27.34	44.71	33.42	46	-12.58	244	3.31
284.18	3.64	13.82	27.21	40.26	30.51	46	-15.49	121	3.21
321.77	3.91	15.44	27.30	41.72	33.78	46	-12.22	301	3.10
512.56	5.08	18.64	28.38	36.77	32.12	46	-13.88	217	2.51
749.27	6.42	21.73	28.15	35.38	35.38	46	-10.62	143	1.55

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
48.90	2.19	12.57	28.17	46.04	32.63	40	-7.37	14	1.07
68.22	2.27	7.10	28.10	54.81	36.08	40	-3.92	188	1.12
87.85	2.36	7.32	28.04	48.50	30.13	40	-9.87	18	1.18
182.37	2.96	16.40	27.64	36.37	28.09	44	-15.41	28	1.47
472.07	4.85	18.11	28.23	35.09	29.81	46	-16.19	147	2.37
749.43	6.42	21.73	28.15	34.22	34.22	46	-11.78	274	3.21

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT40_CH06 (SISO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
57.65	2.24	9.57	28.14	47.08	30.75	40	-9.25	347	3.64
251.31	3.41	12.54	27.35	43.29	31.89	46	-14.11	299	3.32
321.07	3.91	15.44	27.30	39.44	31.50	46	-14.50	101	3.10
514.53	5.09	18.67	28.38	39.62	35.00	46	-11.00	301	2.50
748.84	6.42	21.75	28.15	32.52	32.54	46	-13.46	145	1.78
918.97	7.45	23.98	27.48	28.04	31.99	46	-14.01	160	1.31

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
49.16	2.19	12.38	28.16	44.36	30.77	40	-9.23	14	1.10
69.72	2.27	6.90	28.10	55.16	36.23	40	-3.77	215	1.12
88.08	2.36	7.48	28.04	51.26	33.07	44	-10.43	18	1.18
173.92	2.90	16.02	27.68	36.62	27.86	44	-15.64	27	1.45
185.53	2.98	16.55	27.63	35.54	27.44	44	-16.06	228	1.48
749.70	6.42	21.73	28.15	35.88	35.88	46	-10.12	274	3.22

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT40_CH09 (SISO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
61.59	2.26	8.50	28.12	47.48	30.12	40	-9.88	354	3.61
253.11	3.43	12.62	27.34	43.55	32.26	46	-13.74	270	3.00
319.83	3.90	15.44	27.28	39.31	31.36	46	-14.64	273	2.74
499.67	5.00	19.21	28.37	36.90	32.75	46	-13.25	188	2.55
514.92	5.09	18.67	28.38	42.45	37.83	46	-8.17	195	2.50
748.43	6.42	21.75	28.15	34.34	34.36	46	-11.64	120	1.58

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
49.95	2.19	12.38	28.16	44.17	30.58	40	-9.42	175	1.13
67.76	2.27	7.30	28.11	54.01	35.47	40	-4.53	16	1.12
91.95	2.38	8.06	28.03	50.92	33.34	44	-10.16	299	1.19
168.02	2.87	15.78	27.70	36.80	27.75	44	-15.75	26	1.43
749.21	6.42	21.73	28.15	35.91	35.91	46	-10.09	274	3.22
868.45	7.12	23.61	27.69	34.66	37.70	46	-8.30	38	3.54

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT40_CH03 (MIMO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
62.87	2.26	8.30	28.12	47.56	30.00	40	-10.00	354	3.60
251.15	3.41	12.54	27.35	42.33	30.93	46	-15.07	59	3.32
326.56	3.95	15.45	27.33	38.90	30.97	46	-15.03	271	3.08
612.98	5.63	20.29	28.42	37.13	34.63	46	-11.37	199	2.20
520.74	5.13	18.74	28.38	40.26	35.75	46	-10.25	133	2.48
749.33	6.42	21.73	28.15	34.01	34.01	46	-11.99	118	1.78

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
48.30	2.19	12.57	28.17	44.49	31.08	40	-8.92	14	1.06
69.88	2.27	6.90	28.10	54.69	35.76	40	-4.24	255	1.12
91.21	2.38	8.06	28.03	50.19	32.61	44	-10.89	19	1.19
164.73	2.86	15.54	27.72	37.16	27.84	44	-15.66	26	1.42
516.16	5.11	18.69	28.38	36.39	31.81	46	-14.19	151	2.50
748.95	6.42	21.75	28.15	35.57	35.59	46	-10.41	274	3.22

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

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Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT40_CH06 (MIMO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
58.12	2.25	9.28	28.13	47.76	31.15	40	-8.85	354	3.57
193.94	3.03	15.42	27.59	43.50	34.36	44	-9.14	36	3.49
321.57	3.91	15.44	27.30	39.15	31.21	46	-14.79	273	3.10
499.87	5.00	19.21	28.37	36.72	32.57	46	-13.43	188	2.55
514.42	5.09	18.67	28.38	38.92	34.30	46	-11.70	192	2.50
748.45	6.42	21.75	28.15	33.80	33.82	46	-12.18	120	1.55

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
47.32	2.18	12.82	28.17	43.86	30.69	40	-9.31	250	1.08
68.64	2.27	7.10	28.10	54.69	35.96	40	-4.04	16	1.12
91.03	2.38	8.06	28.03	50.51	32.93	44	-10.57	19	1.19
172.89	2.89	15.98	27.68	36.82	28.01	44	-15.49	27	1.44
519.13	5.12	18.73	28.38	38.01	33.48	46	-12.52	151	2.51
748.77	6.42	21.75	28.15	35.23	35.25	46	-10.75	274	3.12

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	24 °C	Humidity:	61 %RH
Frequency Range:	30 M – 1 GHz	Tested Mode:	802.11n - HT40_CH09 (MIMO)
Detector Type:	Quasi-peak	IF Bandwidth:	120 kHz
Tested By:	Richard	Tested Date:	Nov. 27, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
61.51	2.26	8.50	28.12	47.02	29.66	40	-10.34	222	3.68
251.04	3.41	12.54	27.35	43.24	31.84	46	-14.16	270	3.32
320.22	3.90	15.44	27.29	39.69	31.75	46	-14.25	274	2.10
386.84	4.39	16.44	27.78	39.54	32.59	46	-13.41	51	1.96
516.19	5.11	18.69	28.38	35.80	31.22	46	-14.78	188	1.58
748.64	6.42	21.75	28.15	35.29	35.31	46	-10.69	121	1.24

Antenna Polarization : Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Pre-Amp (dB)	Reading Data (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	AZ(°)	EL(m)
68.31	2.27	7.10	28.10	54.01	35.28	40	-4.72	16	1.12
88.08	2.36	7.48	28.04	54.41	36.22	44	-7.28	156	1.18
94.96	2.40	8.84	28.02	49.41	32.63	44	-10.87	147	1.20
165.45	2.87	15.60	27.71	37.08	27.83	44	-15.67	302	1.42
517.82	5.11	18.70	28.38	37.06	32.50	46	-13.50	151	2.51
749.25	6.42	21.73	28.15	33.27	33.27	46	-12.73	274	3.44

**NOTE :**

1. Measurement uncertainty is 4.20 dB.
2. "\*\*": Measurement does not apply for this frequency.
3. Emission Level = Reading Value + Ant. Factor + Cable Loss – Pre-Amplifier.
4. The field strength of other emission frequencies were very low against the limit.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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FCC ID : AHL-ALMOND3S  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11b_CH01
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1831.49	-31.93	27.33	45.52	35.22	40.91	30.61	74	54	-33.09	-23.39	324	2.24
2879.14	-31.04	29.94	44.85	34.33	43.75	33.23	74	54	-30.25	-20.77	211	1.94
3216.25	-30.67	30.66	44.52	34.14	44.51	34.13	74	54	-29.49	-19.87	210	1.84
4123.33	-29.74	32.60	43.25	32.17	46.11	35.03	74	54	-27.89	-18.97	198	1.56
4657.76	-29.12	33.01	43.49	33.19	47.38	37.08	74	54	-26.62	-16.92	291	1.40
5589.98	-28.55	34.30	42.51	31.28	48.26	37.03	74	54	-25.74	-16.97	115	1.12

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1058.47	-33.83	24.96	49.73	38.44	40.86	29.57	74	54	-33.14	-24.43	48	1.02
2292.82	-31.41	28.25	46.89	35.68	43.73	32.52	74	54	-30.27	-21.48	31	1.39
2941.05	-31.01	30.18	44.43	34.28	43.60	33.45	74	54	-30.40	-20.55	109	1.58
3817.93	-30.02	32.01	43.13	32.97	45.13	34.97	74	54	-28.87	-19.03	201	1.85
4119.14	-29.74	32.60	43.74	33.25	46.60	36.11	74	54	-27.40	-17.89	144	1.94
5623.68	-28.55	34.30	42.76	32.16	48.51	37.91	74	54	-25.49	-16.09	278	2.19

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11b_CH01 (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2412.00 (F)	-31.31	28.39	98.48	89.14	95.56	86.22	--	--	--	--	327	1.58
4824.00	-28.90	33.44	45.82	34.51	50.37	39.06	74	54	-23.63	-14.94	328	1.51
7236.00	-27.83	35.87	43.15	32.04	51.19	40.08	74	54	-22.81	-13.92	132	1.42
9648.00	-26.98	37.79	41.58	31.23	52.39	42.04	74	54	-21.61	-11.96	245	1.44
12060.00	-25.91	39.29	39.89	29.67	53.26	43.04	74	54	-20.74	-10.96	147	1.56
14472.00	-23.65	42.37	32.15	21.52	50.86	40.23	74	54	-23.14	-13.77	154	1.42

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2412.00 (F)	-31.31	28.39	99.41	88.14	96.49	85.22	--	--	--	--	32	1.47
4824.00	-28.90	33.44	45.89	34.56	50.44	39.11	74	54	-23.56	-14.89	116	1.58
7236.00	-27.83	35.87	42.17	31.97	50.21	40.01	74	54	-23.79	-13.99	126	1.55
9648.00	-26.98	37.79	41.62	31.27	52.43	42.08	74	54	-21.57	-11.92	235	1.49
12060.00	-25.91	39.29	40.33	29.77	53.70	43.14	74	54	-20.30	-10.86	10	1.51
14472.00	-23.65	42.37	32.17	21.07	50.88	39.78	74	54	-23.12	-14.22	163	1.57

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.



**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11b_CH06
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1531.52	-32.43	26.31	46.28	35.65	40.16	29.53	74	54	-33.84	-24.47	329	2.33
2274.70	-31.43	28.23	46.61	35.97	43.41	32.77	74	54	-30.59	-21.23	220	2.12
2873.89	-31.05	29.92	45.40	35.35	44.27	34.22	74	54	-29.73	-19.78	11	1.94
4174.40	-29.68	32.60	44.39	33.77	47.31	36.69	74	54	-26.69	-17.31	128	1.55
4639.22	-29.14	32.96	43.36	33.35	47.18	37.17	74	54	-26.82	-16.83	91	1.41
5076.63	-28.65	33.96	43.79	33.42	49.10	38.73	74	54	-24.90	-15.27	137	1.28

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1914.28	-31.79	27.61	47.44	37.23	43.25	33.04	74	54	-30.75	-20.96	356	1.22
2172.60	-31.51	28.11	46.67	35.79	43.27	32.39	74	54	-30.73	-21.61	32	1.35
2743.44	-31.11	29.42	45.49	34.84	43.80	33.15	74	54	-30.20	-20.85	113	1.52
3779.92	-30.05	31.89	43.18	32.86	45.03	34.71	74	54	-28.97	-19.29	202	1.83
4128.75	-29.73	32.60	43.61	33.25	46.48	36.12	74	54	-27.52	-17.88	198	1.94
5607.02	-28.55	34.30	42.72	31.99	48.47	37.74	74	54	-25.53	-16.26	278	2.36

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11b_CH06 (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	100.03	89.18	97.16	86.31	--	--	--	--	315	1.47
4874.00	-28.83	33.57	43.98	33.43	48.72	38.17	74	54	-25.28	-15.83	195	1.44
7311.00	-27.77	36.05	41.07	30.68	49.35	38.96	74	54	-24.65	-15.04	189	1.47
9748.00	-26.95	37.85	41.27	30.86	52.17	41.76	74	54	-21.83	-12.24	93	1.51
12185.00	-25.61	39.26	40.31	29.38	53.96	43.03	74	54	-20.04	-10.97	68	1.51
14622.00	-23.67	41.86	31.32	20.87	49.52	39.07	74	54	-24.48	-14.93	335	1.44

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	99.90	89.01	97.03	86.14	--	--	--	--	26	1.60
4874.00	-28.83	33.57	45.87	35.45	50.61	40.19	74	54	-23.39	-13.81	276	1.51
7311.00	-27.77	36.05	41.08	30.90	49.36	39.18	74	54	-24.64	-14.82	94	1.48
9748.00	-26.95	37.85	41.20	31.08	52.10	41.98	74	54	-21.90	-12.02	183	1.40
12185.00	-25.61	39.26	39.74	28.92	53.39	42.57	74	54	-20.61	-11.43	177	1.48
14622.00	-23.67	41.86	31.37	20.81	49.57	39.01	74	54	-24.43	-14.99	253	1.52

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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FCC ID : AHL-ALMOND3S  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11b_CH11
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1788.31	-32.00	27.18	47.18	36.94	42.36	32.12	74	54	-31.64	-21.88	299	2.14
2179.96	-31.50	28.11	47.25	37.05	43.86	33.66	74	54	-30.14	-20.34	192	1.84
3136.25	-30.79	30.56	43.94	33.65	43.72	33.43	74	54	-30.28	-20.57	197	1.66
3648.88	-30.15	31.47	44.20	34.13	45.52	35.45	74	54	-28.48	-18.55	188	1.36
4277.79	-29.57	32.60	44.02	33.39	47.05	36.42	74	54	-26.95	-17.58	291	1.25
5111.04	-28.64	33.99	42.60	31.98	47.95	37.33	74	54	-26.05	-16.67	96	1.01

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1952.91	-31.73	27.74	47.04	36.57	43.05	32.58	74	54	-30.95	-21.42	75	1.03
2318.06	-31.39	28.28	46.78	35.83	43.67	32.72	74	54	-30.33	-21.28	26	1.22
3177.48	-30.73	30.61	43.57	33.32	43.45	33.20	74	54	-30.55	-20.80	105	1.59
3689.73	-30.12	31.60	43.93	33.22	45.42	34.71	74	54	-28.58	-19.29	220	1.69
4754.25	-28.99	33.26	43.35	32.50	47.62	36.77	74	54	-26.38	-17.23	139	1.86
5053.84	-28.65	33.94	43.29	33.20	48.58	38.49	74	54	-25.42	-15.51	269	1.96

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
			802.11b_CH11
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	(Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2462.00 (F)	-31.27	28.45	100.03	90.03	97.21	87.21	--	--	--	--	124	1.41
4924.00	-28.76	33.70	45.52	34.90	50.46	39.84	74	54	-23.54	-14.16	226	1.41
7386.00	-27.71	36.23	41.60	31.58	50.12	40.10	74	54	-23.88	-13.90	132	1.49
9848.00	-26.91	37.91	41.93	30.93	52.93	41.93	74	54	-21.07	-12.07	319	1.42
12310.00	-25.31	39.24	40.68	29.87	54.61	43.80	74	54	-19.39	-10.20	147	1.48
14772.00	-23.68	41.20	31.02	20.56	48.55	38.09	74	54	-25.45	-15.91	154	1.50

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2462.00 (F)	-31.27	28.45	99.65	89.25	96.83	86.43	--	--	--	--	14	1.57
4924.00	-28.76	33.70	46.33	36.26	51.27	41.20	74	54	-22.73	-12.80	116	1.51
7386.00	-27.71	36.23	41.69	30.83	50.21	39.35	74	54	-23.79	-14.65	122	1.60
9848.00	-26.91	37.91	41.56	31.16	52.56	42.16	74	54	-21.44	-11.84	211	1.57
12310.00	-25.31	39.24	40.81	30.17	54.74	44.10	74	54	-19.26	-9.90	58	1.43
14772.00	-23.68	41.20	31.07	20.59	48.60	38.12	74	54	-25.40	-15.88	163	1.50

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11g_CH01
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2188.21	-31.50	28.13	46.09	36.04	42.72	32.67	74	54	-31.28	-21.33	221	2.17
2942.66	-31.01	30.18	44.01	33.14	43.18	32.31	74	54	-30.82	-21.69	209	1.92
3649.39	-30.15	31.48	43.07	32.50	44.40	33.83	74	54	-29.60	-20.17	103	1.71
3807.45	-30.02	31.98	42.94	32.73	44.90	34.69	74	54	-29.10	-19.31	252	1.66
5054.03	-28.65	33.94	42.36	31.67	47.65	36.96	74	54	-26.35	-17.04	55	1.24
5757.97	-28.52	34.30	42.03	31.13	47.81	36.91	74	54	-26.19	-17.09	91	1.11

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2274.03	-31.43	28.23	46.43	36.23	43.23	33.03	74	54	-30.77	-20.97	30	1.38
2971.24	-31.00	30.29	43.98	33.42	43.27	32.71	74	54	-30.73	-21.29	109	1.59
3076.47	-30.87	30.49	43.53	33.30	43.15	32.92	74	54	-30.85	-21.08	111	1.62
4239.33	-29.61	32.60	43.57	32.91	46.56	35.90	74	54	-27.44	-18.10	197	1.97
5058.95	-28.65	33.95	43.54	32.94	48.84	38.24	74	54	-25.16	-15.76	287	2.22
5623.18	-28.55	34.30	42.52	31.92	48.27	37.67	74	54	-25.73	-16.33	278	2.33

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	25 °C	Humidity:	68 %RH
			802.11g_CH01
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	(Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2412.00 (F)	-31.31	28.39	98.55	87.62	95.63	84.70	--	--	--	--	306	1.57
4824.00	-28.90	33.44	42.13	31.85	46.68	36.40	74	54	-27.32	-17.60	164	1.48
7236.00	-27.83	35.87	41.34	31.21	49.38	39.25	74	54	-24.62	-14.75	82	1.50
9648.00	-26.98	37.79	40.92	30.79	51.73	41.60	74	54	-22.27	-12.40	163	1.46
12060.00	-25.91	39.29	40.55	29.85	53.92	43.22	74	54	-20.08	-10.78	264	1.46
14472.00	-23.65	42.37	31.92	21.12	50.63	39.83	74	54	-23.37	-14.17	103	1.48

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2412.00 (F)	-31.31	28.39	97.60	87.59	94.68	84.67	--	--	--	--	141	1.52
4824.00	-28.90	33.44	43.70	33.16	48.25	37.71	74	54	-25.75	-16.29	132	1.49
7236.00	-27.83	35.87	41.71	31.36	49.75	39.40	74	54	-24.25	-14.60	46	1.55
9648.00	-26.98	37.79	41.43	30.93	52.24	41.74	74	54	-21.76	-12.26	161	1.50
12060.00	-25.91	39.29	39.87	29.66	53.24	43.03	74	54	-20.76	-10.97	125	1.53
14472.00	-23.65	42.37	31.70	21.06	50.41	39.77	74	54	-23.59	-14.23	243	1.54

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11g_CH06
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1058.03	-33.83	24.96	49.18	38.91	40.31	30.04	74	54	-33.69	-23.96	42	2.31
2304.85	-31.40	28.26	46.65	36.07	43.51	32.93	74	54	-30.49	-21.07	296	2.11
3061.67	-30.89	30.47	44.29	33.68	43.87	33.26	74	54	-30.13	-20.74	286	1.88
3748.19	-30.07	31.79	43.22	32.23	44.94	33.95	74	54	-29.06	-20.05	75	1.68
4642.25	-29.14	32.97	43.33	32.78	47.16	36.61	74	54	-26.84	-17.39	161	1.44
5529.56	-28.56	34.30	43.97	33.39	49.71	39.13	74	54	-24.29	-14.87	59	1.12

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1664.51	-32.21	26.76	45.45	35.42	40.00	29.97	74	54	-34.00	-24.03	116	1.17
2301.92	-31.40	28.26	46.87	35.99	43.73	32.85	74	54	-30.27	-21.15	107	1.39
3659.31	-30.14	31.51	43.95	33.44	45.32	34.81	74	54	-28.68	-19.19	177	1.80
4232.71	-29.62	32.60	43.36	32.91	46.34	35.89	74	54	-27.66	-18.11	64	1.97
4598.08	-29.20	32.85	43.16	32.72	46.82	36.38	74	54	-27.18	-17.62	263	2.08
5273.96	-28.61	34.12	42.55	32.41	48.06	37.92	74	54	-25.94	-16.08	351	2.15

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

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Temperature:	25 °C	Humidity:	68 %RH
			802.11g_CH06
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	(Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	97.93	87.57	95.06	84.70	--	--	--	--	337	1.51
4874.00	-28.83	33.57	44.23	33.90	48.97	38.64	74	54	-25.03	-15.36	168	1.47
7311.00	-27.77	36.05	40.36	29.81	48.64	38.09	74	54	-25.36	-15.91	182	1.40
9748.00	-26.95	37.85	41.56	30.72	52.46	41.62	74	54	-21.54	-12.38	107	1.53
12185.00	-25.61	39.26	39.95	29.08	53.60	42.73	74	54	-20.40	-11.27	171	1.55
14622.00	-23.67	41.86	31.68	20.96	49.88	39.16	74	54	-24.12	-14.84	114	1.51

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	98.94	88.20	96.07	85.33	--	--	--	--	85	1.57
4874.00	-28.83	33.57	44.46	34.08	49.20	38.82	74	54	-24.80	-15.18	49	1.45
7311.00	-27.77	36.05	40.57	30.17	48.85	38.45	74	54	-25.15	-15.55	352	1.60
9748.00	-26.95	37.85	41.32	30.78	52.22	41.68	74	54	-21.78	-12.32	121	1.60
12185.00	-25.61	39.26	39.60	29.24	53.25	42.89	74	54	-20.75	-11.11	138	1.44
14622.00	-23.67	41.86	31.01	20.93	49.21	39.13	74	54	-24.79	-14.87	131	1.60

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.



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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11g_CH11
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2312.60	-31.39	28.27	45.99	35.86	42.87	32.74	74	54	-31.13	-21.26	219	2.11
2938.13	-31.01	30.16	43.85	33.59	43.00	32.74	74	54	-31.00	-21.26	209	1.92
3614.98	-30.18	31.36	43.71	32.90	44.90	34.09	74	54	-29.10	-19.91	104	1.72
4131.27	-29.73	32.60	43.33	32.39	46.20	35.26	74	54	-27.80	-18.74	98	1.56
4717.83	-29.04	33.16	42.73	32.46	46.85	36.58	74	54	-27.15	-17.42	250	1.21
5546.51	-28.56	34.30	41.83	31.53	47.57	37.27	74	54	-26.43	-16.73	12	1.14

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1778.62	-32.02	27.15	46.93	36.36	42.06	31.49	74	54	-31.94	-22.51	255	1.23
2286.05	-31.42	28.24	46.00	35.25	42.83	32.08	74	54	-31.17	-21.92	144	1.39
3031.84	-30.94	30.44	43.88	33.09	43.38	32.59	74	54	-30.62	-21.41	112	1.61
3452.24	-30.34	30.94	44.45	33.86	45.05	34.46	74	54	-28.95	-19.54	7	1.74
3764.77	-30.06	31.84	43.78	33.19	45.57	34.98	74	54	-28.43	-19.02	203	1.83
5633.12	-28.55	34.30	42.52	31.74	48.27	37.49	74	54	-25.73	-16.51	278	2.24

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
			802.11g_CH11
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	(Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2462.00 (F)	-31.27	28.45	97.87	87.40	95.05	84.58	--	--	--	--	322	1.49
4924.00	-28.76	33.70	44.42	34.39	49.36	39.33	74	54	-24.64	-14.67	209	1.55
7386.00	-27.71	36.23	41.39	30.82	49.91	39.34	74	54	-24.09	-14.66	54	1.47
9848.00	-26.91	37.91	41.68	30.70	52.68	41.70	74	54	-21.32	-12.30	45	1.44
12310.00	-25.31	39.24	40.69	29.83	54.62	43.76	74	54	-19.38	-10.24	256	1.43
14772.00	-23.68	41.20	30.93	20.46	48.46	37.99	74	54	-25.54	-16.01	254	1.40

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2462.00 (F)	-31.27	28.45	100.28	89.99	97.46	87.17	--	--	--	--	328	1.49
4924.00	-28.76	33.70	45.47	34.80	50.41	39.74	74	54	-23.59	-14.26	144	1.48
7386.00	-27.71	36.23	40.93	30.88	49.45	39.40	74	54	-24.55	-14.60	112	1.50
9848.00	-26.91	37.91	41.94	31.02	52.94	42.02	74	54	-21.06	-11.98	47	1.43
12310.00	-25.31	39.24	40.60	29.64	54.53	43.57	74	54	-19.47	-10.43	109	1.49
14772.00	-23.68	41.20	30.51	20.43	48.04	37.96	74	54	-25.96	-16.04	217	1.42

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

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No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH01 (SISO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1552.89	-32.39	26.38	45.10	34.61	39.08	28.59	74	54	-34.92	-25.41	108	2.27
2194.15	-31.49	28.13	46.04	35.64	42.68	32.28	74	54	-31.32	-21.72	221	2.14
3211.33	-30.68	30.65	44.39	33.52	44.36	33.49	74	54	-29.64	-20.51	210	1.84
4208.68	-29.65	32.60	43.27	33.03	46.22	35.98	74	54	-27.78	-18.02	96	1.54
4617.94	-29.17	32.90	43.61	33.05	47.34	36.78	74	54	-26.66	-17.22	192	1.41
5272.29	-28.61	34.12	42.87	32.48	48.38	37.99	74	54	-25.62	-16.01	66	1.12

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1796.33	-31.99	27.21	45.29	34.61	40.51	29.83	74	54	-33.49	-24.17	35	1.04
2273.82	-31.43	28.23	46.91	36.23	43.71	33.03	74	54	-30.29	-20.97	31	1.38
3318.09	-30.53	30.78	43.80	33.62	44.05	33.87	74	54	-29.95	-20.13	108	1.70
4019.45	-29.85	32.60	42.92	32.32	45.67	35.07	74	54	-28.33	-18.93	199	1.91
4594.78	-29.20	32.84	42.98	32.69	46.62	36.33	74	54	-27.38	-17.67	147	2.08
5617.40	-28.55	34.30	42.04	31.89	47.79	37.64	74	54	-26.21	-16.36	233	2.19

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH01 (SISO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2412.00 (F)	-31.31	28.39	96.61	86.28	93.69	83.36	--	--	--	--	354	1.44
4824.00	-28.90	33.44	41.66	31.44	46.21	35.99	74	54	-27.79	-18.01	315	1.52
7236.00	-27.83	35.87	41.86	31.20	49.90	39.24	74	54	-24.10	-14.76	247	1.41
9648.00	-26.98	37.79	41.12	31.11	51.93	41.92	74	54	-22.07	-12.08	153	1.47
12060.00	-25.91	39.29	40.05	29.59	53.42	42.96	74	54	-20.58	-11.04	211	1.51
14472.00	-23.65	42.37	31.57	20.98	50.28	39.69	74	54	-23.72	-14.31	176	1.41

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2412.00 (F)	-31.31	28.39	96.88	86.44	93.96	83.52	--	--	--	--	249	1.53
4824.00	-28.90	33.44	42.80	31.81	47.35	36.36	74	54	-26.65	-17.64	134	1.45
7236.00	-27.83	35.87	41.56	31.21	49.60	39.25	74	54	-24.40	-14.75	118	1.51
9648.00	-26.98	37.79	41.49	30.83	52.30	41.64	74	54	-21.70	-12.36	188	1.40
12060.00	-25.91	39.29	39.99	29.69	53.36	43.06	74	54	-20.64	-10.94	251	1.55
14472.00	-23.65	42.37	31.29	21.13	50.00	39.84	74	54	-24.00	-14.16	72	1.43

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH06 (SISO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1519.62	-32.45	26.26	46.30	35.45	40.12	29.27	74	54	-33.88	-24.73	220	2.34
2288.98	-31.41	28.25	46.31	35.65	43.14	32.48	74	54	-30.86	-21.52	25	2.11
3224.35	-30.66	30.67	44.01	33.14	44.02	33.15	74	54	-29.98	-20.85	47	1.83
3801.78	-30.03	31.96	43.56	32.88	45.49	34.81	74	54	-28.51	-19.19	135	1.66
4253.45	-29.60	32.60	43.35	33.09	46.35	36.09	74	54	-27.65	-17.91	74	1.52
5212.51	-28.62	34.07	42.74	31.97	48.19	37.42	74	54	-25.81	-16.58	98	1.14

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBμV)		Emission Level (dBμV/m)		Limit (dBμV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1827.38	-31.94	27.31	45.89	35.56	41.26	30.93	74	54	-32.74	-23.07	336	1.09
2149.92	-31.53	28.08	46.51	36.42	43.06	32.97	74	54	-30.94	-21.03	285	1.34
3231.15	-30.65	30.68	44.29	33.84	44.32	33.87	74	54	-29.68	-20.13	29	1.67
4226.44	-29.63	32.60	43.76	33.52	46.73	36.49	74	54	-27.27	-17.51	66	1.97
4998.67	-28.66	33.89	43.36	32.45	48.59	37.68	74	54	-25.41	-16.32	168	2.20
5792.82	-28.52	34.30	43.02	32.29	48.80	38.07	74	54	-25.20	-15.93	116	2.38

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH06 (SISO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	97.09	86.79	94.22	83.92	--	--	--	--	133	1.58
4874.00	-28.83	33.57	41.73	31.57	46.47	36.31	74	54	-27.53	-17.69	102	1.55
7311.00	-27.77	36.05	40.56	29.58	48.84	37.86	74	54	-25.16	-16.14	33	1.41
9748.00	-26.95	37.85	41.63	30.79	52.53	41.69	74	54	-21.47	-12.31	317	1.42
12185.00	-25.61	39.26	39.46	28.80	53.11	42.45	74	54	-20.89	-11.55	248	1.57
14622.00	-23.67	41.86	30.36	20.30	48.56	38.50	74	54	-25.44	-15.50	114	1.50

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	96.72	86.01	93.85	83.14	--	--	--	--	10	1.56
4874.00	-28.83	33.57	41.49	31.00	46.23	35.74	74	54	-27.77	-18.26	137	1.53
7311.00	-27.77	36.05	40.67	29.86	48.95	38.14	74	54	-25.05	-15.86	253	1.53
9748.00	-26.95	37.85	40.73	30.45	51.63	41.35	74	54	-22.37	-12.65	209	1.49
12185.00	-25.61	39.26	39.85	29.36	53.50	43.01	74	54	-20.50	-10.99	309	1.45
14622.00	-23.67	41.86	31.44	21.03	49.64	39.23	74	54	-24.36	-14.77	160	1.50

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH11 (SISO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1951.40	-31.73	27.73	45.62	35.60	41.62	31.60	74	54	-32.38	-22.40	62	2.31
2288.12	-31.41	28.25	46.88	36.25	43.71	33.08	74	54	-30.29	-20.92	286	2.11
2957.83	-31.00	30.24	45.20	35.11	44.43	34.34	74	54	-29.57	-19.66	265	1.91
3794.07	-30.03	31.94	43.93	33.07	45.84	34.98	74	54	-28.16	-19.02	358	1.66
4686.54	-29.08	33.08	42.82	32.78	46.82	36.78	74	54	-27.18	-17.22	165	1.39
5279.34	-28.61	34.12	42.51	32.31	48.02	37.82	74	54	-25.98	-16.18	100	1.14

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2177.93	-31.50	28.11	46.40	35.93	43.01	32.54	74	54	-30.99	-21.46	260	1.01
2296.08	-31.41	28.26	46.76	35.97	43.61	32.82	74	54	-30.39	-21.18	249	1.39
3071.34	-30.88	30.49	44.21	33.56	43.82	33.17	74	54	-30.18	-20.83	310	1.62
3652.55	-30.15	31.49	44.38	33.50	45.72	34.84	74	54	-28.28	-19.16	189	1.80
4483.80	-29.35	32.60	42.79	32.64	46.04	35.89	74	54	-27.96	-18.11	189	2.05
5264.21	-28.61	34.11	42.93	32.62	48.43	38.12	74	54	-25.57	-15.88	292	2.24

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH11 (SISO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2462.00 (F)	-31.27	28.45	97.72	86.87	94.90	84.05	--	--	--	--	273	1.59
4924.00	-28.76	33.70	44.27	34.26	49.21	39.20	74	54	-24.79	-14.80	131	1.42
7386.00	-27.71	36.23	41.09	30.65	49.61	39.17	74	54	-24.39	-14.83	97	1.50
9848.00	-26.91	37.91	41.39	30.69	52.39	41.69	74	54	-21.61	-12.31	316	1.55
12310.00	-25.31	39.24	39.50	29.39	53.43	43.32	74	54	-20.57	-10.68	315	1.42
14772.00	-23.68	41.20	31.16	20.69	48.69	38.22	74	54	-25.31	-15.78	48	1.46

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2462.00 (F)	-31.27	28.45	96.64	86.58	93.82	83.76	--	--	--	--	98	1.53
4924.00	-28.76	33.70	42.23	31.45	47.17	36.39	74	54	-26.83	-17.61	154	1.51
7386.00	-27.71	36.23	40.84	30.54	49.36	39.06	74	54	-24.64	-14.94	116	1.47
9848.00	-26.91	37.91	41.79	31.01	52.79	42.01	74	54	-21.21	-11.99	327	1.40
12310.00	-25.31	39.24	40.67	29.86	54.60	43.79	74	54	-19.40	-10.21	348	1.52
14772.00	-23.68	41.20	33.59	23.47	51.12	41.00	74	54	-22.88	-13.00	262	1.51

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.



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**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH01 (MIMO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1819.69	-31.95	27.28	45.88	35.54	41.21	30.87	74	54	-32.79	-23.13	39	2.33
2297.33	-31.41	28.26	46.66	35.88	43.51	32.73	74	54	-30.49	-21.27	209	2.11
3117.75	-30.81	30.54	44.48	33.80	44.21	33.53	74	54	-29.79	-20.47	175	1.86
4273.48	-29.58	32.60	43.07	32.58	46.09	35.60	74	54	-27.91	-18.40	215	1.52
4901.14	-28.79	33.64	43.37	32.82	48.22	37.67	74	54	-25.78	-16.33	10	1.33
5482.92	-28.57	34.29	42.72	32.59	48.43	38.30	74	54	-25.57	-15.70	330	1.05

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1817.69	-31.95	27.28	45.61	35.17	40.93	30.49	74	54	-33.07	-23.51	52	1.14
2284.15	-31.42	28.24	47.21	36.69	44.03	33.51	74	54	-29.97	-20.49	113	1.39
3112.38	-30.82	30.53	43.76	33.08	43.47	32.79	74	54	-30.53	-21.21	239	1.63
4048.72	-29.82	32.60	42.96	32.34	45.74	35.12	74	54	-28.26	-18.88	350	1.91
5143.96	-28.63	34.01	42.91	32.59	48.29	37.97	74	54	-25.71	-16.03	83	2.24
5894.44	-28.50	34.30	42.52	32.24	48.32	38.04	74	54	-25.68	-15.96	315	2.35

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH01 (MIMO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2412.00 (F)	-31.31	28.39	96.40	85.58	93.48	82.66	--	--	--	--	284	1.56
4824.00	-28.90	33.44	41.60	31.59	46.15	36.14	74	54	-27.85	-17.86	275	1.41
7236.00	-27.83	35.87	41.85	31.28	49.89	39.32	74	54	-24.11	-14.68	106	1.41
9648.00	-26.98	37.79	41.06	30.96	51.87	41.77	74	54	-22.13	-12.23	91	1.48
12060.00	-25.91	39.29	39.68	29.53	53.05	42.90	74	54	-20.95	-11.10	88	1.47
14472.00	-23.65	42.37	31.51	21.25	50.22	39.96	74	54	-23.78	-14.04	283	1.43

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2412.00 (F)	-31.31	28.39	96.31	85.37	93.39	82.45	--	--	--	--	135	1.53
4824.00	-28.90	33.44	42.26	31.80	46.81	36.35	74	54	-27.19	-17.65	256	1.58
7236.00	-27.83	35.87	41.80	31.16	49.84	39.20	74	54	-24.16	-14.80	237	1.41
9648.00	-26.98	37.79	41.88	30.96	52.69	41.77	74	54	-21.31	-12.23	60	1.53
12060.00	-25.91	39.29	39.89	29.55	53.26	42.92	74	54	-20.74	-11.08	56	1.48
14472.00	-23.65	42.37	31.29	21.20	50.00	39.91	74	54	-24.00	-14.09	139	1.44

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH06 (MIMO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1524.66	-32.44	26.28	47.22	36.72	41.06	30.56	74	54	-32.94	-23.44	140	2.31
2301.21	-31.40	28.26	47.52	36.84	44.38	33.70	74	54	-29.62	-20.30	220	2.11
3062.83	-30.89	30.47	44.55	33.75	44.13	33.33	74	54	-29.87	-20.67	212	1.88
4197.79	-29.66	32.60	43.67	32.84	46.61	35.78	74	54	-27.39	-18.22	98	1.54
5213.52	-28.62	34.07	42.80	32.21	48.25	37.66	74	54	-25.75	-16.34	354	1.24
5598.42	-28.55	34.30	43.41	32.43	49.16	38.18	74	54	-24.84	-15.82	10	1.10

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2272.46	-31.43	28.23	46.55	35.73	43.35	32.53	74	54	-30.65	-21.47	120	1.23
2971.98	-31.00	30.29	45.48	34.61	44.77	33.90	74	54	-29.23	-20.10	110	1.59
3654.33	-30.15	31.49	44.16	34.15	45.51	35.50	74	54	-28.49	-18.50	188	1.80
4203.17	-29.65	32.60	43.49	33.10	46.44	36.05	74	54	-27.56	-17.95	197	1.96
5082.59	-28.65	33.97	43.33	32.95	48.65	38.27	74	54	-25.35	-15.73	286	2.22
5769.62	-28.52	34.30	43.08	32.45	48.86	38.23	74	54	-25.14	-15.77	277	2.37

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH06 (MIMO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	96.33	85.85	93.46	82.98	--	--	--	--	54	1.41
4874.00	-28.83	33.57	42.69	32.44	47.43	37.18	74	54	-26.57	-16.82	27	1.40
7311.00	-27.77	36.05	40.70	30.00	48.98	38.28	74	54	-25.02	-15.72	270	1.42
9748.00	-26.95	37.85	41.47	30.88	52.37	41.78	74	54	-21.63	-12.22	356	1.50
12185.00	-25.61	39.26	39.97	29.52	53.62	43.17	74	54	-20.38	-10.83	88	1.56
14622.00	-23.67	41.86	31.19	20.69	49.39	38.89	74	54	-24.61	-15.11	257	1.47

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dBµV)		Emission Level (dBµV/m)		Limit (dBµV/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	97.49	86.84	94.62	83.97	--	--	--	--	78	1.51
4874.00	-28.83	33.57	42.33	31.72	47.07	36.46	74	54	-26.93	-17.54	223	1.42
7311.00	-27.77	36.05	40.17	29.84	48.45	38.12	74	54	-25.55	-15.88	13	1.60
9748.00	-26.95	37.85	40.79	30.52	51.69	41.42	74	54	-22.31	-12.58	199	1.41
12185.00	-25.61	39.26	40.37	29.81	54.02	43.46	74	54	-19.98	-10.54	245	1.55
14622.00	-23.67	41.86	30.98	20.48	49.18	38.68	74	54	-24.82	-15.32	159	1.60

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

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**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH11 (MIMO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2187.50	-31.50	28.12	46.26	35.30	42.89	31.93	74	54	-31.11	-22.07	221	2.23
2869.96	-31.05	29.90	46.03	35.45	44.88	34.30	74	54	-29.12	-19.70	112	1.94
3526.42	-30.25	31.08	43.34	32.73	44.17	33.56	74	54	-29.83	-20.44	305	1.74
4148.70	-29.71	32.60	43.39	33.10	46.28	35.99	74	54	-27.72	-18.01	98	1.56
4244.28	-29.61	32.60	43.90	33.70	46.89	36.69	74	54	-27.11	-17.31	97	1.53
5338.61	-28.60	34.17	41.30	30.73	46.87	36.30	74	54	-27.13	-17.70	10	1.14

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1997.59	-31.65	27.89	44.15	33.18	40.38	29.41	74	54	-33.62	-24.59	31	1.22
2301.03	-31.40	28.26	46.42	36.38	43.28	33.24	74	54	-30.72	-20.76	229	1.39
3018.25	-30.95	30.42	43.70	33.59	43.17	33.06	74	54	-30.83	-20.94	111	1.61
3946.84	-29.91	32.43	43.62	33.08	46.13	35.59	74	54	-27.87	-18.41	200	1.88
4276.98	-29.57	32.60	43.61	32.97	46.64	36.00	74	54	-27.36	-18.00	197	1.98
5399.12	-28.59	34.22	42.39	31.83	48.02	37.46	74	54	-25.98	-16.54	281	2.33

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

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**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT20_CH11 (MIMO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2462.00 (F)	-31.27	28.45	99.10	88.54	96.28	85.72	--	--	--	--	319	1.60
4924.00	-28.76	33.70	44.08	33.99	49.02	38.93	74	54	-24.98	-15.07	221	1.57
7386.00	-27.71	36.23	40.65	30.57	49.17	39.09	74	54	-24.83	-14.91	338	1.42
9848.00	-26.91	37.91	41.81	30.84	52.81	41.84	74	54	-21.19	-12.16	32	1.60
12310.00	-25.31	39.24	40.86	30.33	54.79	44.26	74	54	-19.21	-9.74	156	1.54
14772.00	-23.68	41.20	30.63	20.59	48.16	38.12	74	54	-25.84	-15.88	59	1.49

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2462.00 (F)	-31.27	28.45	96.85	86.38	94.03	83.56	--	--	--	--	69	1.46
4924.00	-28.76	33.70	42.93	31.95	47.87	36.89	74	54	-26.13	-17.11	198	1.53
7386.00	-27.71	36.23	41.15	30.67	49.67	39.19	74	54	-24.33	-14.81	176	1.45
9848.00	-26.91	37.91	41.16	30.72	52.16	41.72	74	54	-21.84	-12.28	85	1.55
12310.00	-25.31	39.24	40.26	29.84	54.19	43.77	74	54	-19.81	-10.23	108	1.50
14772.00	-23.68	41.20	31.34	20.61	48.87	38.14	74	54	-25.13	-15.86	121	1.55

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH03 (SISO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1341.07	-32.97	25.75	47.83	36.94	40.62	29.73	74	54	-33.38	-24.27	333	2.33
2268.91	-31.43	28.22	47.42	37.00	44.21	33.79	74	54	-29.79	-20.21	221	2.12
3474.34	-30.31	30.97	44.06	33.19	44.72	33.85	74	54	-29.28	-20.15	107	1.76
4192.15	-29.66	32.60	45.34	34.92	48.28	37.86	74	54	-25.72	-16.14	200	1.54
5009.97	-28.66	33.91	44.09	33.32	49.34	38.57	74	54	-24.66	-15.43	15	1.15
5388.62	-28.59	34.21	43.26	32.68	48.88	38.30	74	54	-25.12	-15.70	86	1.04

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1801.02	-31.98	27.22	46.28	35.72	41.52	30.96	74	54	-32.48	-23.04	335	1.24
2293.31	-31.41	28.25	47.50	37.38	44.34	34.22	74	54	-29.66	-19.78	31	1.39
3134.74	-30.79	30.56	44.13	34.04	43.90	33.81	74	54	-30.10	-20.19	111	1.64
3723.11	-30.09	31.71	43.64	32.97	45.26	34.59	74	54	-28.74	-19.41	203	1.82
4239.95	-29.61	32.60	43.26	32.86	46.25	35.85	74	54	-27.75	-18.15	196	1.97
5273.80	-28.61	34.12	42.77	32.70	48.28	38.21	74	54	-25.72	-15.79	283	2.21

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH03 (SISO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2422.00 (F)	-31.30	28.41	94.55	83.67	91.65	80.77	--	--	--	--	116	1.60
4844.00	-28.87	33.49	41.43	30.60	46.06	35.23	74	54	-27.94	-18.77	129	1.43
7266.00	-27.81	35.94	40.77	30.75	48.90	38.88	74	54	-25.10	-15.12	187	1.54
9688.00	-26.97	37.81	41.13	30.17	51.98	41.02	74	54	-22.02	-12.98	275	1.59
12110.00	-25.79	39.28	40.00	29.14	53.48	42.62	74	54	-20.52	-11.38	60	1.41
14532.00	-23.66	42.26	30.71	20.44	49.31	39.04	74	54	-24.69	-14.96	162	1.50

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2422.00 (F)	-31.30	28.41	93.07	82.70	90.17	79.80	--	--	--	--	28	1.49
4844.00	-28.87	33.49	41.66	30.67	46.29	35.30	74	54	-27.71	-18.70	259	1.55
7266.00	-27.81	35.94	41.36	30.65	49.49	38.78	74	54	-24.51	-15.22	276	1.40
9688.00	-26.97	37.81	40.79	30.54	51.64	41.39	74	54	-22.36	-12.61	80	1.44
12110.00	-25.79	39.28	39.47	29.18	52.95	42.66	74	54	-21.05	-11.34	314	1.56
14532.00	-23.66	42.26	31.22	20.88	49.82	39.48	74	54	-24.18	-14.52	164	1.57

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.



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**TEST REPORT**Reference No.: A17103001  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH06 (SISO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1477.26	-32.55	26.14	46.49	35.97	40.08	29.56	74	54	-33.92	-24.44	50	3.21
2302.64	-31.40	28.26	46.29	35.79	43.15	32.65	74	54	-30.85	-21.35	219	2.11
3061.37	-30.89	30.47	43.78	33.28	43.36	32.86	74	54	-30.64	-21.14	311	1.88
4269.15	-29.58	32.60	43.87	32.88	46.89	35.90	74	54	-27.11	-18.10	97	1.52
4733.88	-29.02	33.21	42.68	32.45	46.87	36.64	74	54	-27.13	-17.36	2	1.38
5774.90	-28.52	34.30	42.64	31.82	48.42	37.60	74	54	-25.58	-16.40	14	1.04

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2261.29	-31.44	28.21	46.97	36.38	43.75	33.16	74	54	-30.25	-20.84	327	1.08
3024.43	-30.95	30.43	43.61	33.26	43.09	32.74	74	54	-30.91	-21.26	111	1.61
3698.87	-30.11	31.63	44.05	33.53	45.57	35.05	74	54	-28.43	-18.95	204	1.81
4196.92	-29.66	32.60	42.98	32.73	45.92	35.67	74	54	-28.08	-18.33	188	1.96
4702.16	-29.06	33.13	43.43	32.63	47.50	36.70	74	54	-26.50	-17.30	90	2.11
5529.60	-28.56	34.30	42.43	32.18	48.17	37.92	74	54	-25.83	-16.08	279	3.33

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

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**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH06 (SISO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	93.42	82.52	90.55	79.65	--	--	--	--	349	1.58
4874.00	-28.83	33.57	40.41	29.65	45.15	34.39	74	54	-28.85	-19.61	86	1.40
7311.00	-27.77	36.05	40.21	29.74	48.49	38.02	74	54	-25.51	-15.98	213	1.57
9748.00	-26.95	37.85	41.39	30.66	52.29	41.56	74	54	-21.71	-12.44	337	1.49
12185.00	-25.61	39.26	40.09	29.38	53.74	43.03	74	54	-20.26	-10.97	119	1.53
14622.00	-23.67	41.86	30.78	20.56	48.98	38.76	74	54	-25.02	-15.24	185	1.48

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	95.01	84.24	92.14	81.37	--	--	--	--	126	1.47
4874.00	-28.83	33.57	41.46	30.75	46.20	35.49	74	54	-27.80	-18.51	305	1.43
7311.00	-27.77	36.05	40.60	29.76	48.88	38.04	74	54	-25.12	-15.96	238	1.43
9748.00	-26.95	37.85	41.86	31.28	52.76	42.18	74	54	-21.24	-11.82	204	1.57
12185.00	-25.61	39.26	39.39	29.30	53.04	42.95	74	54	-20.96	-11.05	72	1.47
14622.00	-23.67	41.86	31.77	20.87	49.97	39.07	74	54	-24.03	-14.93	45	1.54

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH09 (SISO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1482.54	-32.54	26.15	46.24	35.77	39.85	29.38	74	54	-34.15	-24.62	330	2.27
2297.82	-31.41	28.26	47.65	37.15	44.50	34.00	74	54	-29.50	-20.00	222	2.11
2931.17	-31.02	30.14	45.39	34.88	44.51	34.00	74	54	-29.49	-20.00	115	1.92
2453.40	-31.28	28.44	47.47	36.92	44.64	34.09	74	54	-29.36	-19.91	220	2.06
4192.29	-29.66	32.60	43.89	33.34	46.83	36.28	74	54	-27.17	-17.72	103	1.54
5860.87	-28.51	34.30	42.98	32.44	48.77	38.23	74	54	-25.23	-15.77	57	1.05

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1063.50	-33.82	24.98	49.49	38.96	40.65	30.12	74	54	-33.35	-23.88	44	1.14
2271.12	-31.43	28.23	47.72	37.28	44.52	34.08	74	54	-29.48	-19.92	32	1.38
3069.99	-30.88	30.48	43.58	33.01	43.18	32.61	74	54	-30.82	-21.39	114	1.62
3648.87	-30.15	31.47	43.80	33.36	45.12	34.68	74	54	-28.88	-19.32	68	1.79
4244.04	-29.61	32.60	43.10	32.68	46.09	35.67	74	54	-27.91	-18.33	202	1.97
5681.39	-28.54	34.30	42.38	31.85	48.14	37.61	74	54	-25.86	-16.39	288	2.35

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

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**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH09 (SISO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2452.00 (F)	-31.28	28.44	92.99	82.55	90.15	79.71	--	--	--	--	194	1.52
4904.00	-28.79	33.65	40.97	30.92	45.83	35.78	74	54	-28.17	-18.22	24	1.58
7356.00	-27.74	36.15	41.00	30.17	49.42	38.59	74	54	-24.58	-15.41	233	1.57
9808.00	-26.93	37.88	41.17	30.74	52.13	41.70	74	54	-21.87	-12.30	11	1.46
12260.00	-25.43	39.25	40.30	29.61	54.12	43.43	74	54	-19.88	-10.57	225	1.44
14712.00	-23.67	41.47	31.35	20.63	49.14	38.42	74	54	-24.86	-15.58	15	1.49

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2452.00 (F)	-31.28	28.44	93.83	83.42	90.99	80.58	--	--	--	--	59	1.54
4904.00	-28.79	33.65	40.80	30.75	45.66	35.61	74	54	-28.34	-18.39	252	1.45
7356.00	-27.74	36.15	40.44	30.30	48.86	38.72	74	54	-25.14	-15.28	310	1.52
9808.00	-26.93	37.88	40.88	30.50	51.84	41.46	74	54	-22.16	-12.54	189	1.53
12260.00	-25.43	39.25	39.89	29.66	53.71	43.48	74	54	-20.29	-10.52	64	1.50
14712.00	-23.67	41.47	31.09	20.42	48.88	38.21	74	54	-25.12	-15.79	147	1.54

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

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**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH03 (MIMO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1829.98	-31.93	27.32	45.98	35.42	41.36	30.80	74	54	-32.64	-23.20	326	2.18
2177.27	-31.50	28.11	45.92	35.48	42.53	32.09	74	54	-31.47	-21.91	223	2.15
3616.55	-30.18	31.37	44.78	34.29	45.97	35.48	74	54	-28.03	-18.52	108	1.72
3948.14	-29.91	32.43	44.20	33.71	46.72	36.23	74	54	-27.28	-17.77	105	1.62
5124.08	-28.64	34.00	42.59	32.01	47.95	37.37	74	54	-26.05	-16.63	305	1.26
5587.64	-28.55	34.30	43.20	32.79	48.95	38.54	74	54	-25.05	-15.46	29	1.12

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1814.21	-31.96	27.27	45.21	34.75	40.52	30.06	74	54	-33.48	-23.94	36	1.24
2291.03	-31.41	28.25	47.28	36.68	44.12	33.52	74	54	-29.88	-20.48	240	1.39
3442.96	-30.35	30.93	44.31	33.87	44.89	34.45	74	54	-29.11	-19.55	110	1.73
4698.52	-29.06	33.11	44.09	33.56	48.14	37.61	74	54	-25.86	-16.39	198	2.11
4917.33	-28.77	33.68	42.54	32.08	47.45	36.99	74	54	-26.55	-17.01	195	2.18
5459.74	-28.58	34.27	43.56	33.04	49.25	38.73	74	54	-24.75	-15.27	290	2.21

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH03 (MIMO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2422.00 (F)	-31.30	28.41	97.17	86.36	94.27	83.46	--	--	--	--	307	1.56
4844.00	-28.87	33.49	42.72	32.26	47.35	36.89	74	54	-26.65	-17.11	92	1.41
7266.00	-27.81	35.94	42.47	31.94	50.60	40.07	74	54	-23.40	-13.93	163	1.51
9688.00	-26.97	37.81	41.76	30.91	52.61	41.76	74	54	-21.39	-12.24	306	1.58
12110.00	-25.79	39.28	39.75	29.43	53.23	42.91	74	54	-20.77	-11.09	13	1.55
14532.00	-23.66	42.26	31.63	20.69	50.23	39.29	74	54	-23.77	-14.71	234	1.54

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2422.00 (F)	-31.30	28.41	97.19	86.81	94.29	83.91	--	--	--	--	351	1.41
4844.00	-28.87	33.49	42.31	31.43	46.94	36.06	74	54	-27.06	-17.94	84	1.51
7266.00	-27.81	35.94	42.02	31.75	50.15	39.88	74	54	-23.85	-14.12	58	1.54
9688.00	-26.97	37.81	41.63	31.18	52.48	42.03	74	54	-21.52	-11.97	315	1.54
12110.00	-25.79	39.28	40.27	29.78	53.75	43.26	74	54	-20.25	-10.74	161	1.42
14532.00	-23.66	42.26	30.66	20.33	49.26	38.93	74	54	-24.74	-15.07	116	1.42

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH06 (MIMO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1839.44	-31.92	27.35	45.57	35.04	41.01	30.48	74	54	-32.99	-23.52	326	2.15
2321.79	-31.39	28.29	46.95	36.48	43.85	33.38	74	54	-30.15	-20.62	221	2.10
2742.15	-31.11	29.42	45.38	34.81	43.69	33.12	74	54	-30.31	-20.88	127	1.98
4276.83	-29.57	32.60	44.37	33.85	47.40	36.88	74	54	-26.60	-17.12	71	1.52
5073.21	-28.65	33.96	42.79	32.27	48.10	37.58	74	54	-25.90	-16.42	156	1.28
5768.65	-28.52	34.30	43.21	32.70	48.99	38.48	74	54	-25.01	-15.52	322	1.07

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2258.09	-31.44	28.21	46.52	36.01	43.29	32.78	74	54	-30.71	-21.22	32	1.28
3014.48	-30.96	30.42	44.88	34.39	44.34	33.85	74	54	-29.66	-20.15	114	1.60
3449.12	-30.34	30.94	44.57	34.03	45.17	34.63	74	54	-28.83	-19.37	354	1.73
3646.69	-30.15	31.47	44.29	33.78	45.60	35.09	74	54	-28.40	-18.91	108	1.79
4377.37	-29.46	32.60	44.43	33.94	47.57	37.08	74	54	-26.43	-16.92	201	2.01
5531.12	-28.56	34.30	42.51	32.05	48.25	37.79	74	54	-25.75	-16.21	289	2.26

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

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**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Date: Dec. 28, 2017

Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH06 (MIMO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	95.27	84.75	92.40	81.88	--	--	--	--	152	1.45
4874.00	-28.83	33.57	41.89	31.51	46.63	36.25	74	54	-27.37	-17.75	53	1.47
7311.00	-27.77	36.05	41.59	30.86	49.87	39.14	74	54	-24.13	-14.86	5	1.52
9748.00	-26.95	37.85	41.58	30.83	52.48	41.73	74	54	-21.52	-12.27	93	1.53
12185.00	-25.61	39.26	39.71	29.02	53.36	42.67	74	54	-20.64	-11.33	261	1.42
14622.00	-23.67	41.86	31.71	21.00	49.91	39.20	74	54	-24.09	-14.80	75	1.47

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2437.00 (F)	-31.29	28.42	95.42	84.69	92.55	81.82	--	--	--	--	306	1.45
4874.00	-28.83	33.57	43.04	32.31	47.78	37.05	74	54	-26.22	-16.95	251	1.57
7311.00	-27.77	36.05	41.47	30.82	49.75	39.10	74	54	-24.25	-14.90	67	1.49
9748.00	-26.95	37.85	41.52	30.91	52.42	41.81	74	54	-21.58	-12.19	330	1.50
12185.00	-25.61	39.26	39.97	29.51	53.62	43.16	74	54	-20.38	-10.84	287	1.42
14622.00	-23.67	41.86	31.58	20.94	49.78	39.14	74	54	-24.22	-14.86	319	1.45

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.



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**TEST REPORT**Reference No.: A17103001  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH09 (MIMO)
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1819.20	-31.95	27.28	45.25	34.76	40.58	30.09	74	54	-33.42	-23.91	326	2.19
2207.96	-31.48	28.15	47.43	36.91	44.10	33.58	74	54	-29.90	-20.42	222	2.14
3038.45	-30.93	30.45	44.10	33.68	43.62	33.20	74	54	-30.38	-20.80	66	1.89
3436.39	-30.36	30.92	46.43	35.97	46.99	36.53	74	54	-27.01	-17.47	110	1.77
4280.17	-29.57	32.60	45.06	34.55	48.09	37.58	74	54	-25.91	-16.42	102	1.52
5487.22	-28.57	34.29	43.25	32.76	48.97	38.48	74	54	-25.03	-15.52	100	1.15

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
1824.68	-31.94	27.30	48.11	37.60	43.47	32.96	74	54	-30.53	-21.04	257	1.21
2208.30	-31.48	28.15	47.54	37.02	44.21	33.69	74	54	-29.79	-20.31	5	1.36
3239.11	-30.64	30.69	45.23	34.78	45.28	34.83	74	54	-28.72	-19.17	336	1.67
3607.93	-30.18	31.34	44.58	34.08	45.74	35.24	74	54	-28.26	-18.76	108	1.78
4271.75	-29.58	32.60	44.85	34.33	47.87	37.35	74	54	-26.13	-16.65	202	1.98
5522.49	-28.57	34.30	42.38	31.89	48.11	37.62	74	54	-25.89	-16.38	289	2.33

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.

**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

**TEST REPORT**Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	25 °C	Humidity:	68 %RH
Frequency Range:	1 GHz – 25 GHz	Tested Mode:	802.11n - HT40_CH09 (MIMO) (Fundamental and Harmonics)
Detector:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Nov. 03, 2017

Antenna Polarization : Horizontal

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2452.00 (F)	-31.28	28.44	96.61	86.17	93.77	83.33	--	--	--	--	302	1.50
4904.00	-28.79	33.65	41.87	31.51	46.73	36.37	74	54	-27.27	-17.63	170	1.56
7356.00	-27.74	36.15	41.28	30.88	49.70	39.30	74	54	-24.30	-14.70	352	1.54
9808.00	-26.93	37.88	41.43	30.73	52.39	41.69	74	54	-21.61	-12.31	178	1.58
12260.00	-25.43	39.25	40.56	29.84	54.38	43.66	74	54	-19.62	-10.34	159	1.55
14712.00	-23.67	41.47	31.97	21.03	49.76	38.82	74	54	-24.24	-15.18	186	1.45

Antenna Polarization : Vertical

Frequency (MHz)	Correct Factor (dB)	Ant. Factor (dB/m)	Reading Data (dB $\mu$ V)		Emission Level (dB $\mu$ V/m)		Limit (dB $\mu$ V/m)		Margin (dB)		AZ (°)	EL (m)
			PK.	AV.	PK.	AV.	PK.	AV.	PK.	AV.		
2452.00 (F)	-31.28	28.44	96.98	86.67	94.14	83.83	--	--	--	--	284	1.40
4904.00	-28.79	33.65	41.88	31.02	46.74	35.88	74	54	-27.26	-18.12	262	1.50
7356.00	-27.74	36.15	41.75	30.77	50.17	39.19	74	54	-23.83	-14.81	3	1.48
9808.00	-26.93	37.88	40.76	30.69	51.72	41.65	74	54	-22.28	-12.35	132	1.47
12260.00	-25.43	39.25	39.83	29.59	53.65	43.41	74	54	-20.35	-10.59	225	1.53
14712.00	-23.67	41.47	31.02	20.56	48.81	38.35	74	54	-25.19	-15.65	176	1.42

**NOTE:**

1. Measurement uncertainty is 4.04 dB.
2. Emission Level = Reading Value + Ant. Factor + Correct Factor (incl.:Cable Loss and Pre-Amplifier Gain)
3. The field strength of other emission frequencies were very low against the limit.
4. (F):The field strength of fundamental frequency.



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### 4.3 BANDWIDTH TEST

#### 4.3.1 LIMIT

FCC Part15, Subpart C Section 15.247 (a)(2). The minimum 6dB bandwidth shall be at least 500 kHz.

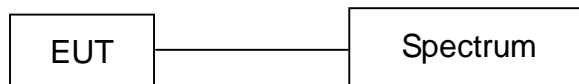
#### 4.3.2 TEST EQUIPMENT

The following test equipment was used during the test :

EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER (INCLUDE SPECTRUM ANALYZER)	9 KHz ~ 6 GHz	ROHDE & SCHWARZ	ESL /100176	MAY 21, 2018 ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

#### 4.3.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

#### 4.3.4 TEST PROCEDURE

The EUT was operated in continuous transmission mode or any specific channel.

Printed out the test result from the spectrum by hard copy function.

#### 4.3.5 EUT OPERATING CONDITION

1. Set the EUT under continuous transmission condition.
2. The EUT was set to the highest available power level.



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# TEST REPORT

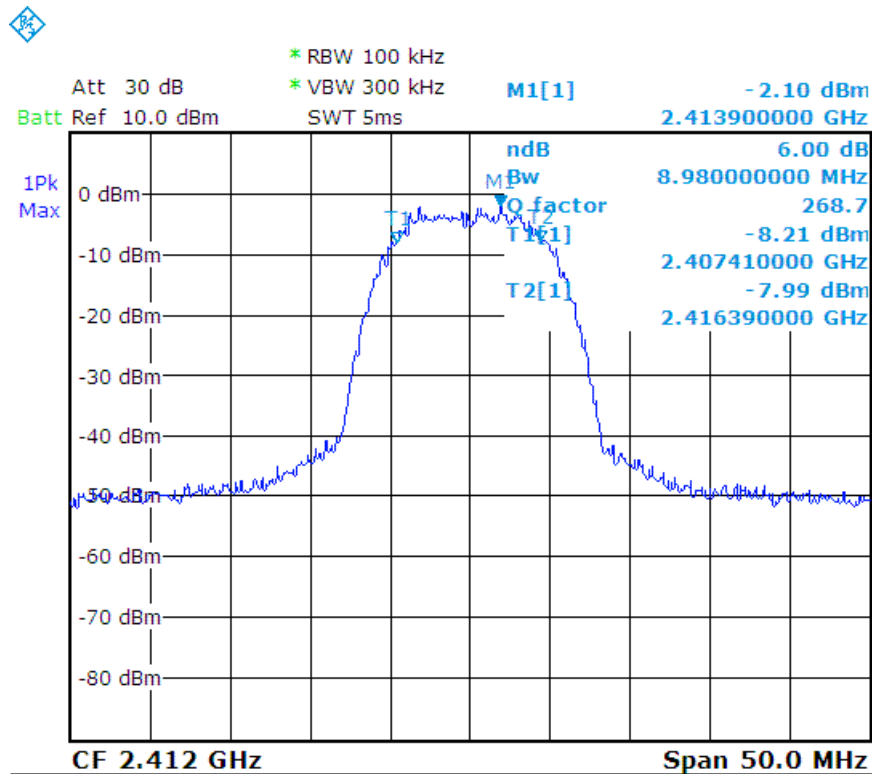
Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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### 4.3.6 TEST RESULT

Temperature:	20 °C	Humidity:	54 %RH
Detector:	Peak	Test Mode:	802.11b
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
CH01	2412	8.98	0.5
CH06	2437	8.98	0.5
CH11	2462	9.08	0.5

b\_CH01 :





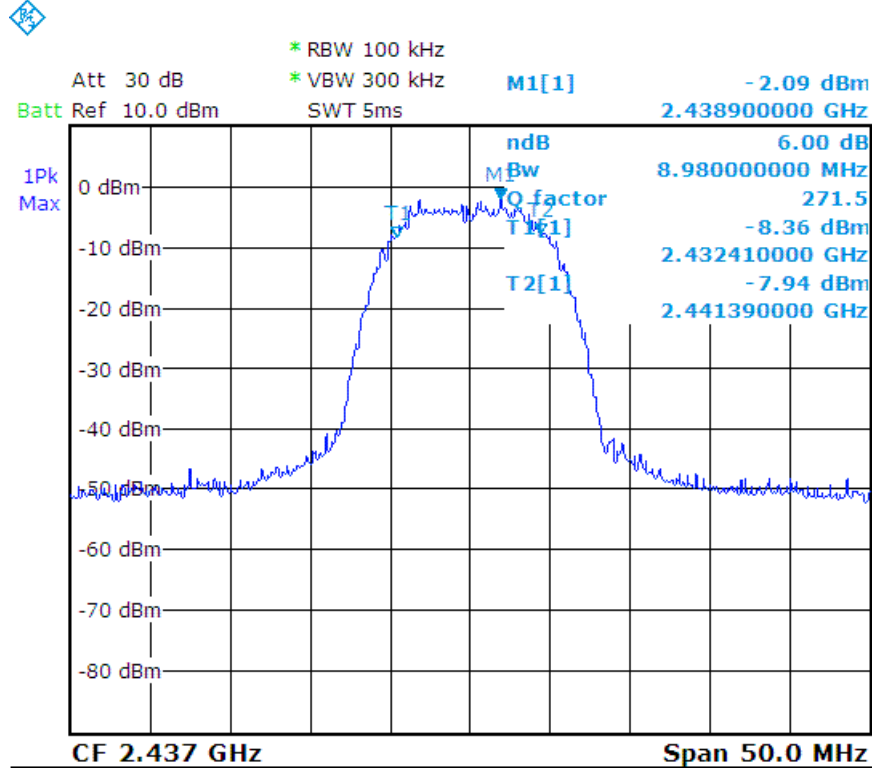
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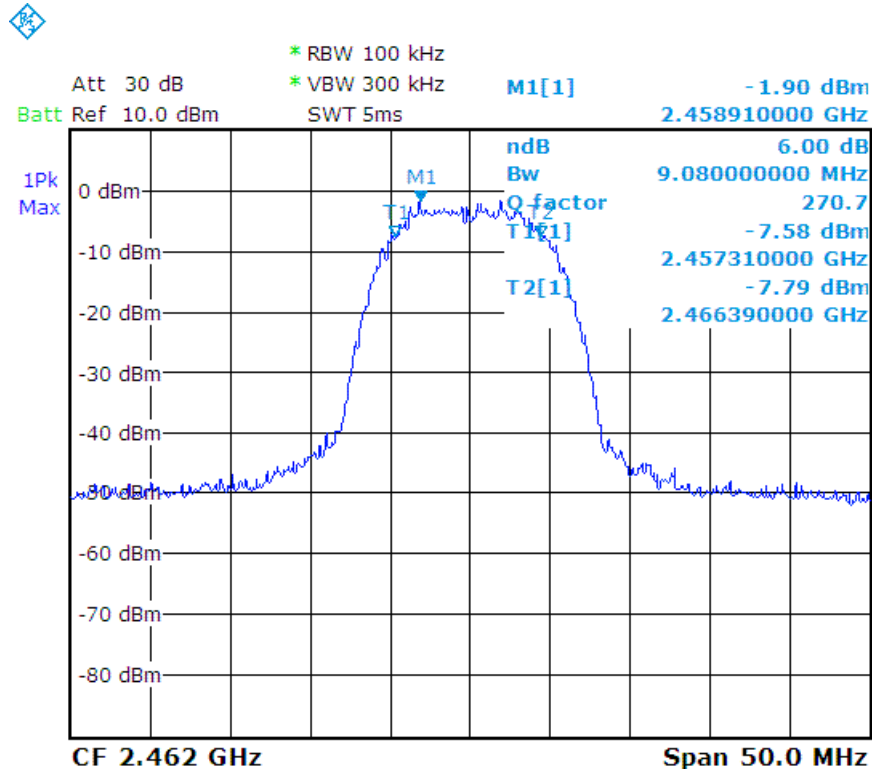
# TEST REPORT

Reference No.: A17103001  
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b\_CH06 :



b\_CH11 :





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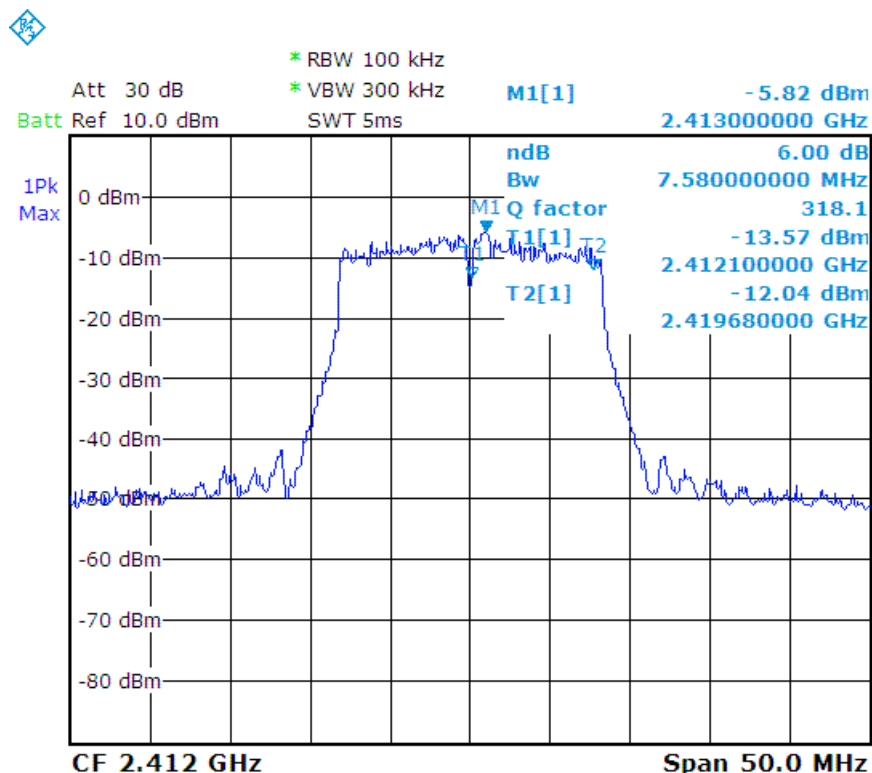
# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	20 °C	Humidity:	54 %RH
Detector:	Peak	Test Mode:	802.11g
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
CH01	2412	7.58	0.5
CH06	2437	6.59	0.5
CH11	2462	7.58	0.5

g\_CH01 :





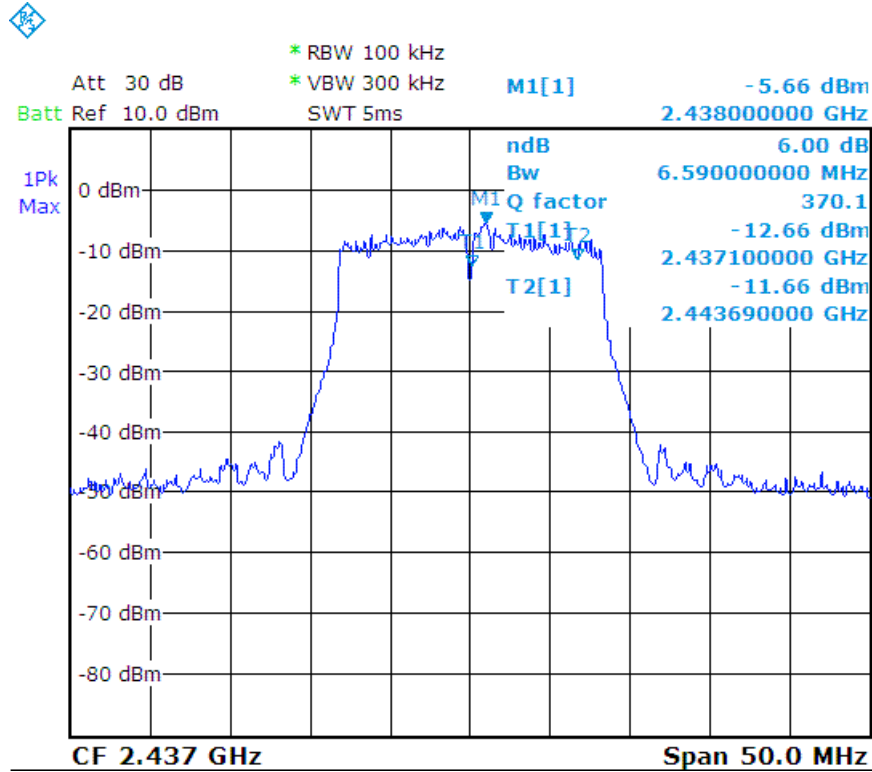
**Spectrum Research & Testing Lab., Inc.**

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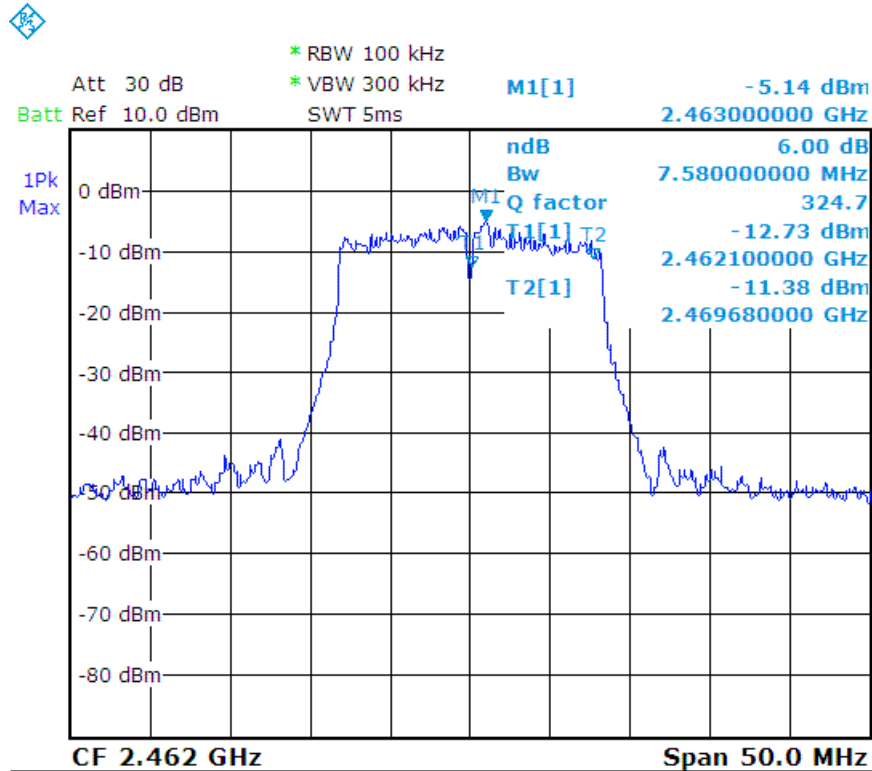
# TEST REPORT

Reference No.: A17103001  
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g\_CH06 :



g\_CH11 :





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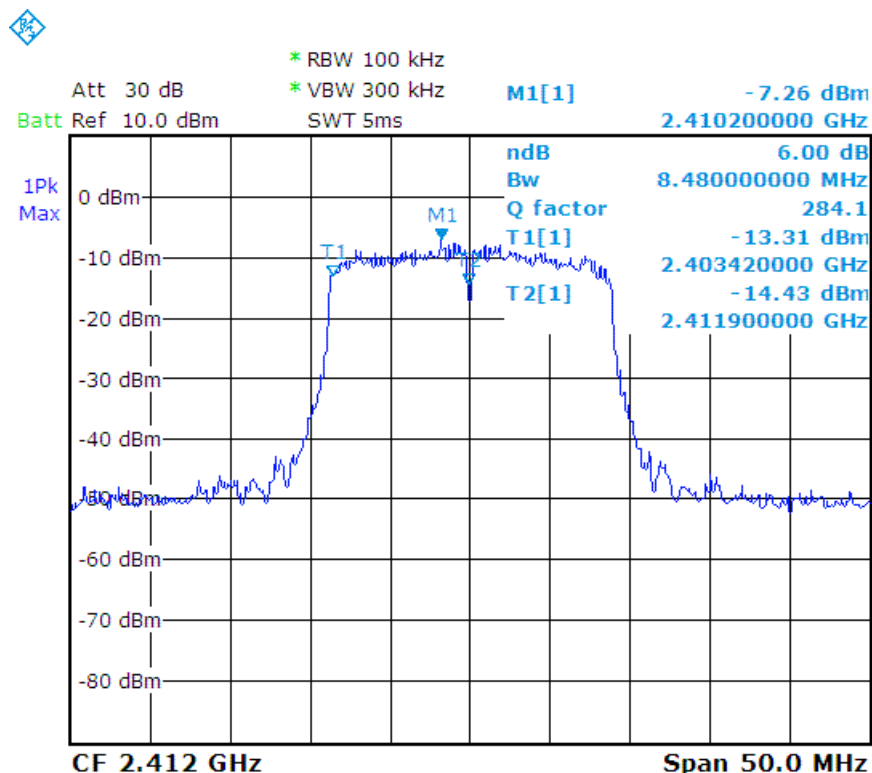
# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	20 °C	Humidity:	54 %RH
Detector:	Peak	Test Mode:	802.11n - HT20
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
CH01	2412	8.48	0.5
CH06	2437	8.48	0.5
CH11	2462	8.68	0.5

n - HT20\_CH01 :







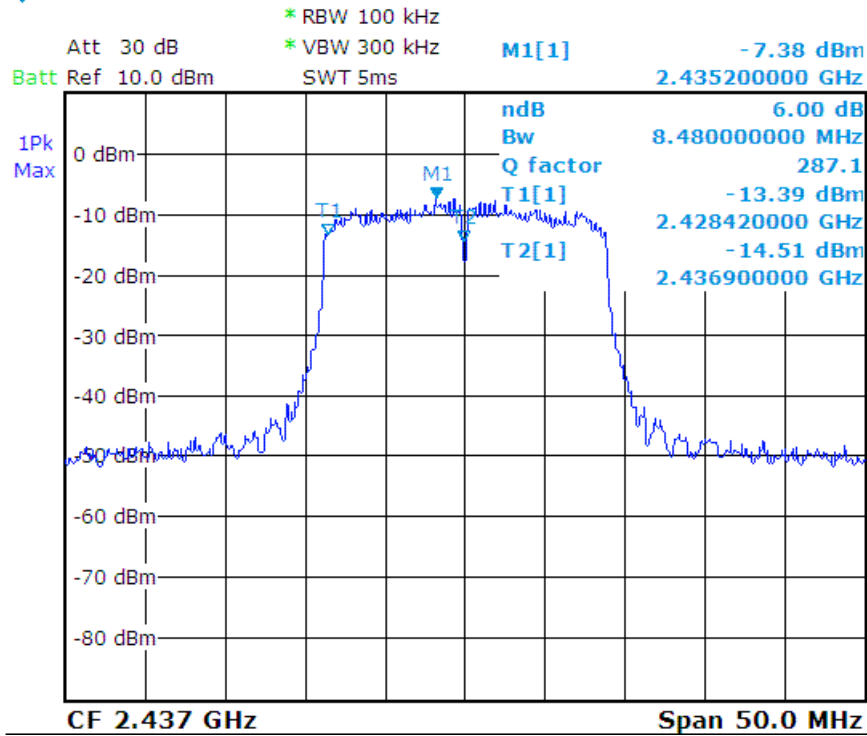
**Spectrum Research & Testing Lab., Inc.**

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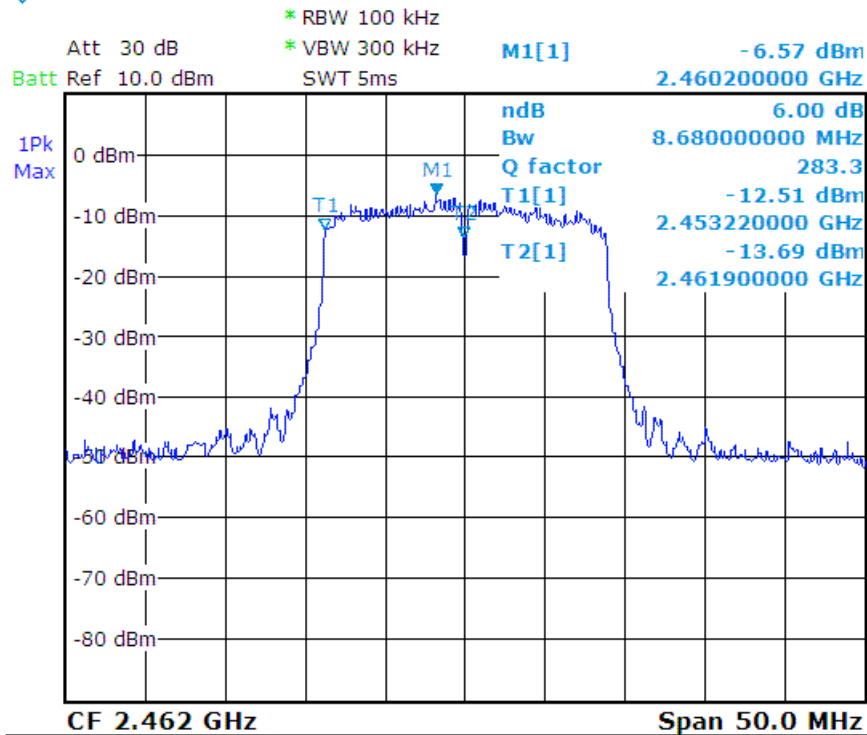
# TEST REPORT

Reference No.: A17103001  
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n - HT20\_CH06 :



n - HT20\_CH11 :





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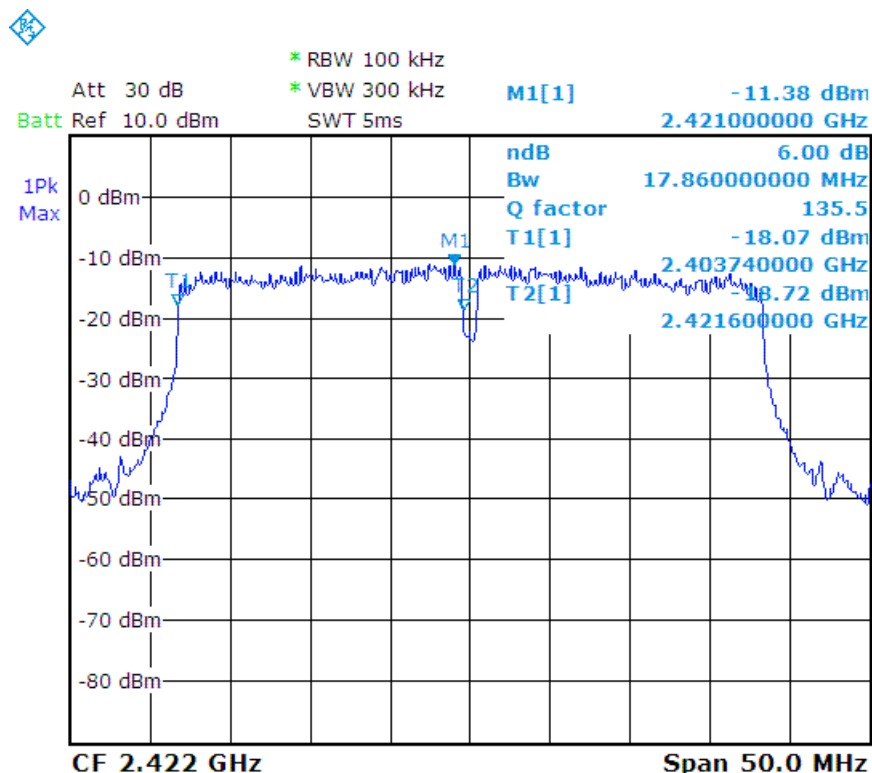
# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	20 °C	Humidity:	54 %RH
Detector:	Peak	Test Mode:	802.11n - HT40
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
CH03	2422	17.86	0.5
CH06	2437	17.86	0.5
CH09	2452	17.86	0.5

n - HT40\_CH03 :





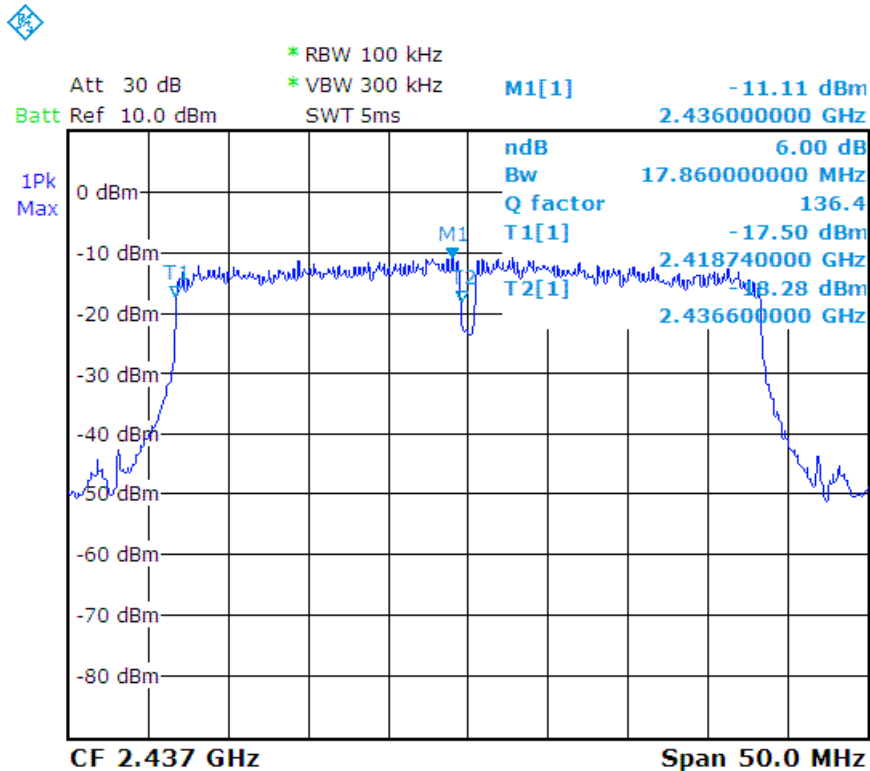
**Spectrum Research & Testing Lab., Inc.**

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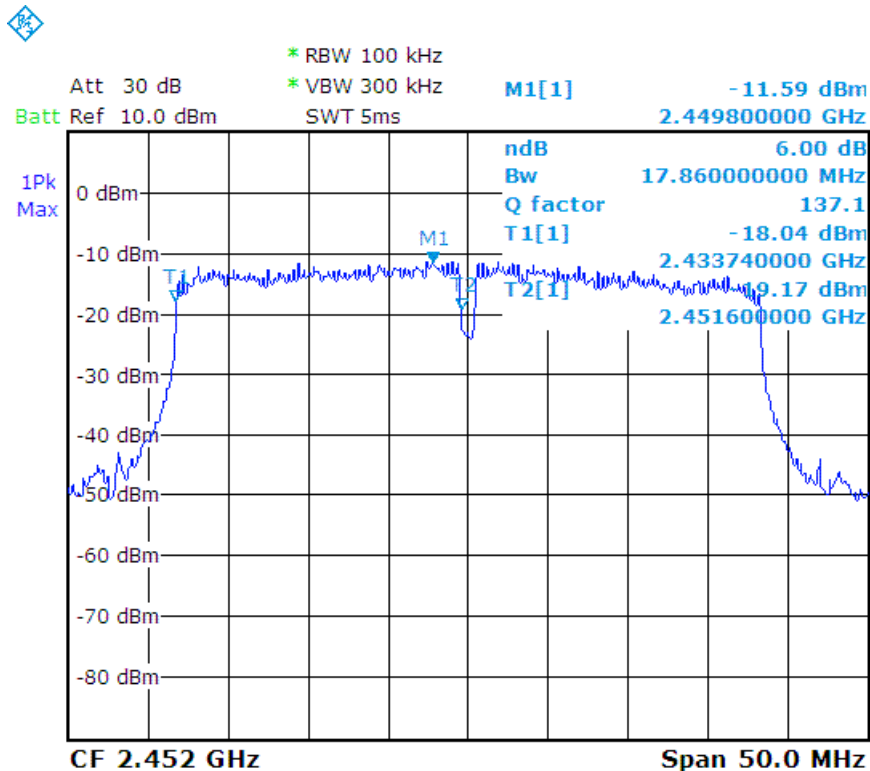
# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
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n - HT40\_CH06 :



n - HT40\_CH09 :





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# TEST REPORT

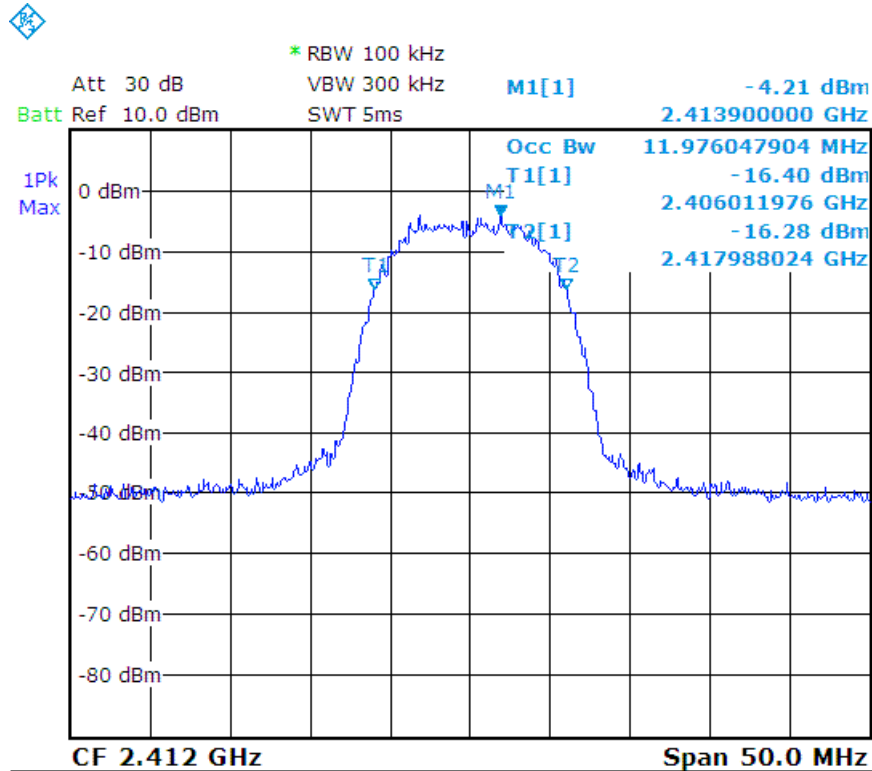
Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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### 99% Bandwidth :

Temperature:	20 °C	Humidity:	54 %RH
Detector:	Peak	Test Mode:	802.11b
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	99% Bandwidth (MHz)
CH01	2412	11.98
CH06	2437	11.98
CH11	2462	11.98

### b\_CH01 :





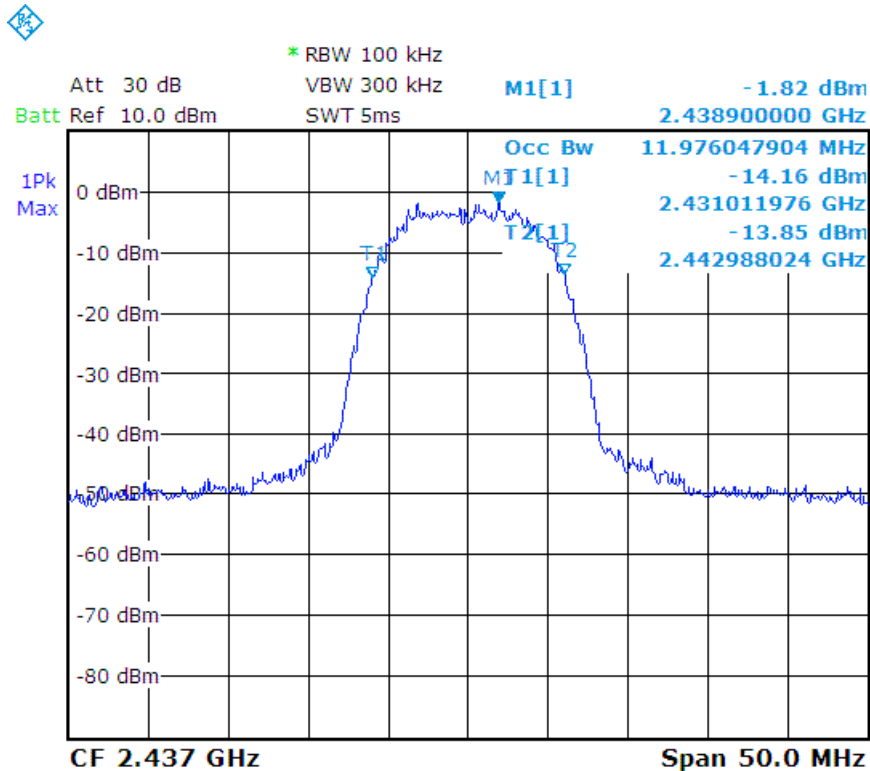
**Spectrum Research & Testing Lab., Inc.**

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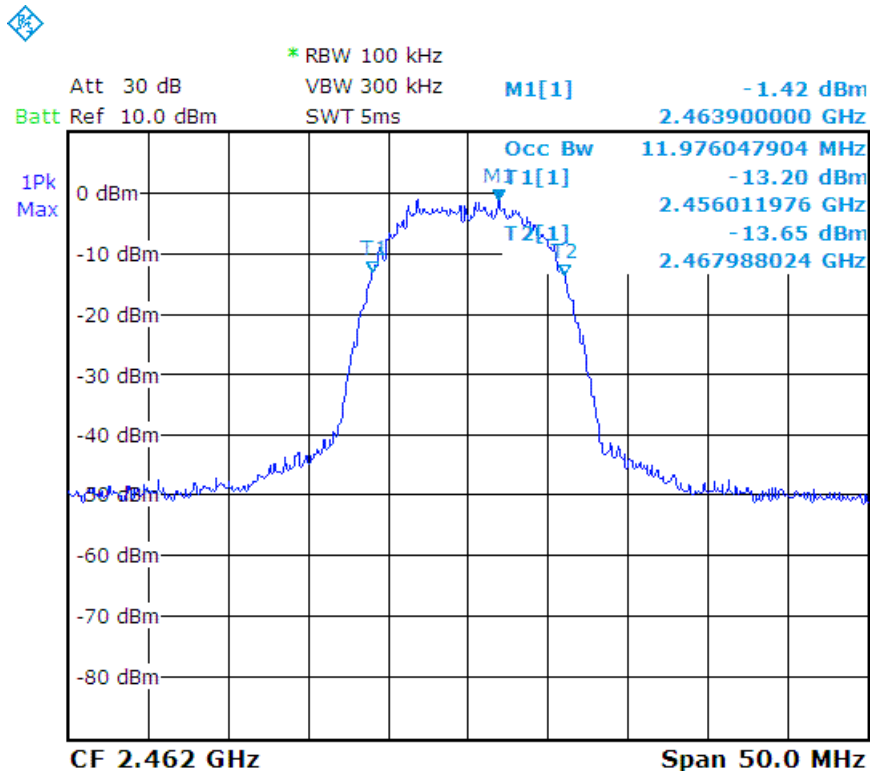
# TEST REPORT

Reference No.: A17103001  
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b\_CH06 :



b\_CH11 :





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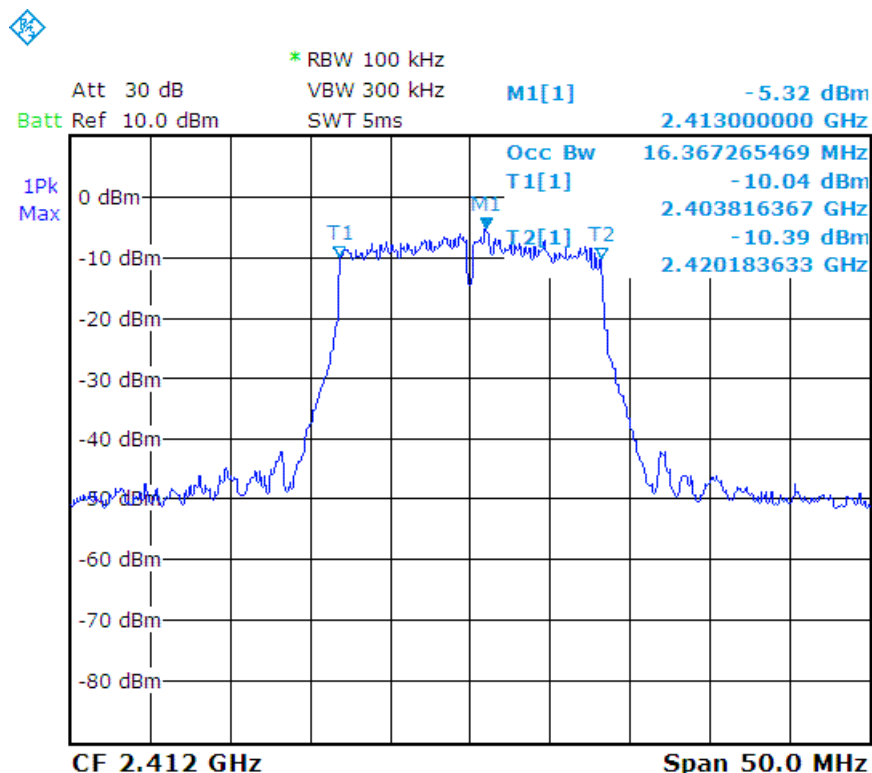
# TEST REPORT

Reference No.: A17103001  
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Temperature:	20 °C	Humidity:	54 %RH
Detector:	Peak	Test Mode:	802.11g
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	99% Bandwidth (MHz)
CH01	2412	16.37
CH06	2437	16.37
CH11	2462	16.37

g\_CH01 :





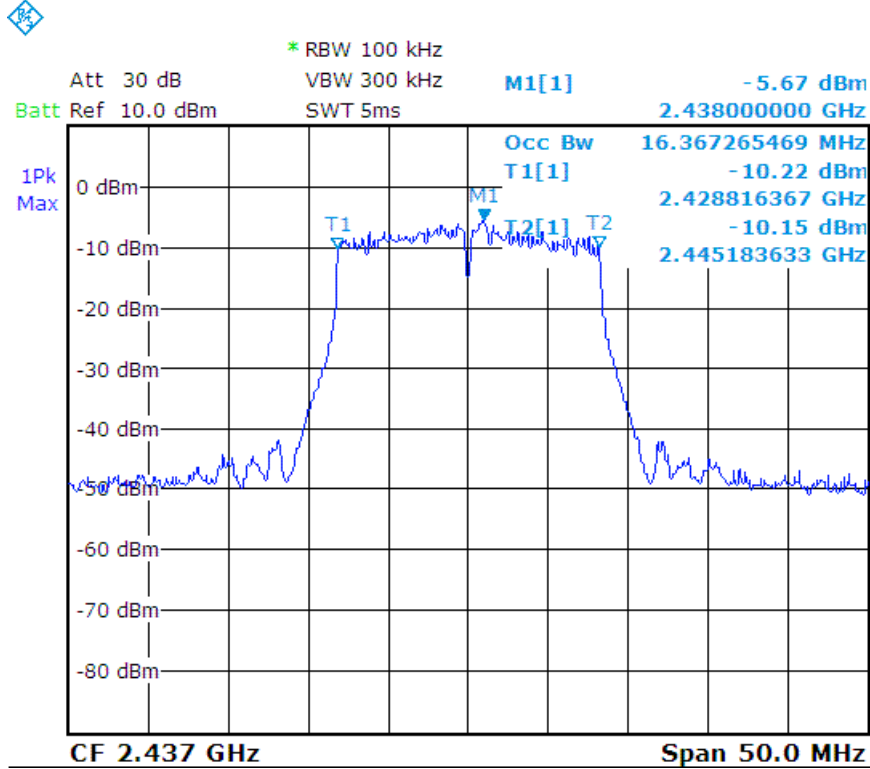
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

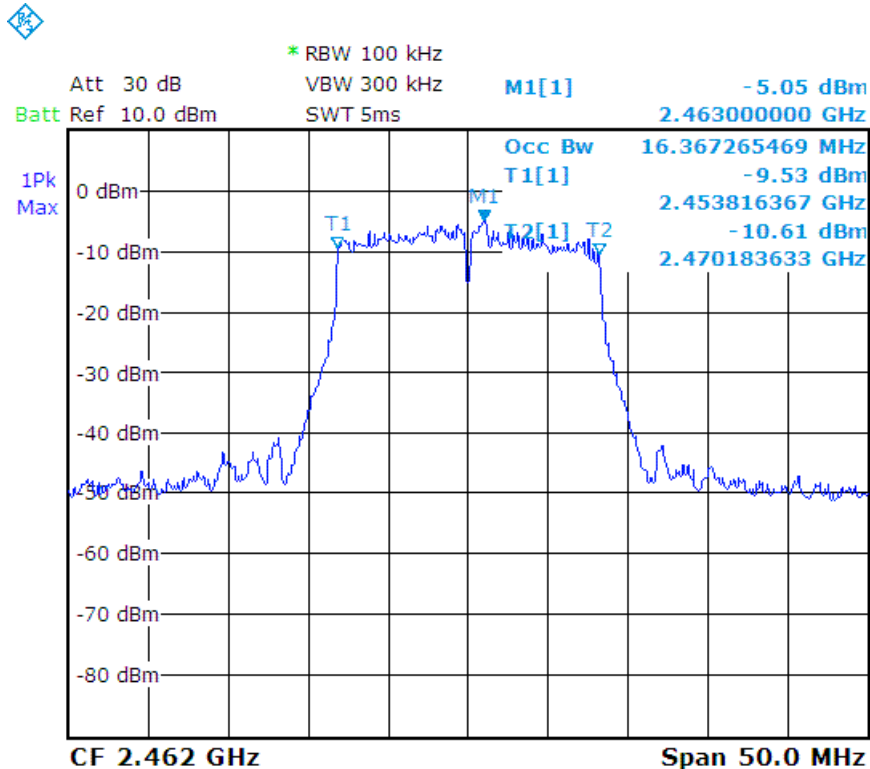
# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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g\_CH06 :



g\_CH11 :





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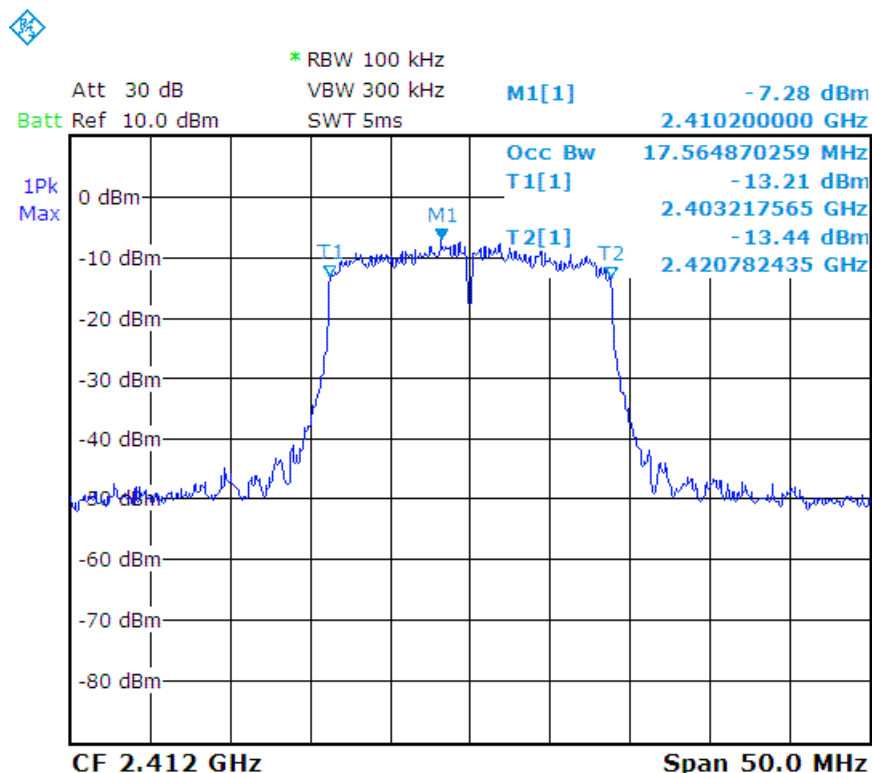
# TEST REPORT

Reference No.: A17103001  
Report No.: FCCA17103001-02  
FCC ID : AHL-ALMOND3S  
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Temperature:	20 °C	Humidity:	54 %RH
Detector:	Peak	Test Mode:	802.11n - HT20
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	99% Bandwidth (MHz)
CH01	2412	17.56
CH06	2437	17.56
CH11	2462	17.56

n - HT20\_CH01 :







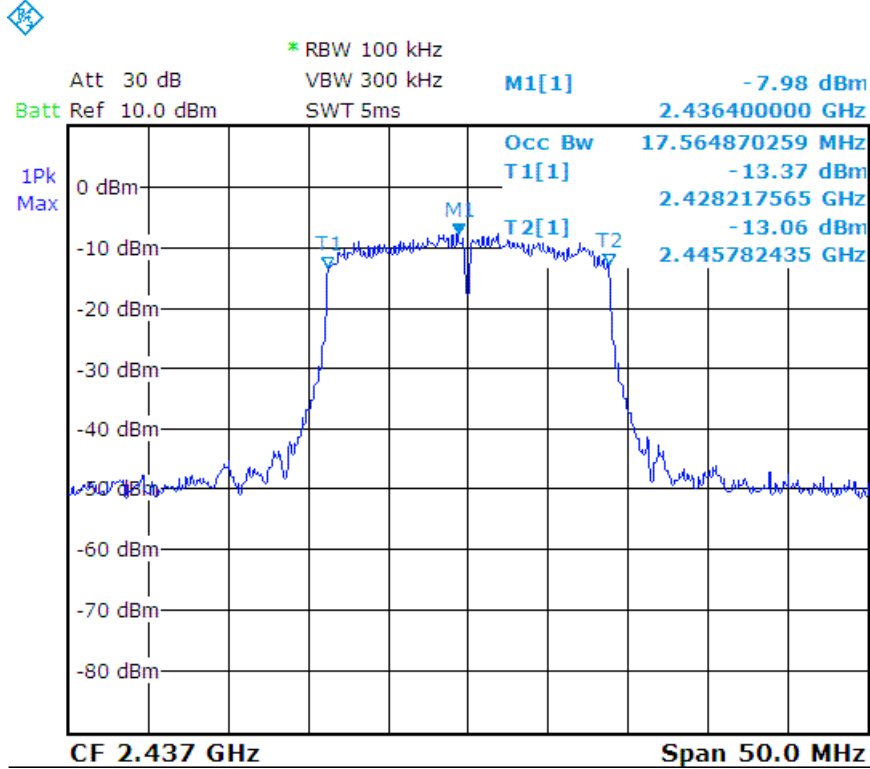
**Spectrum Research & Testing Lab., Inc.**

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

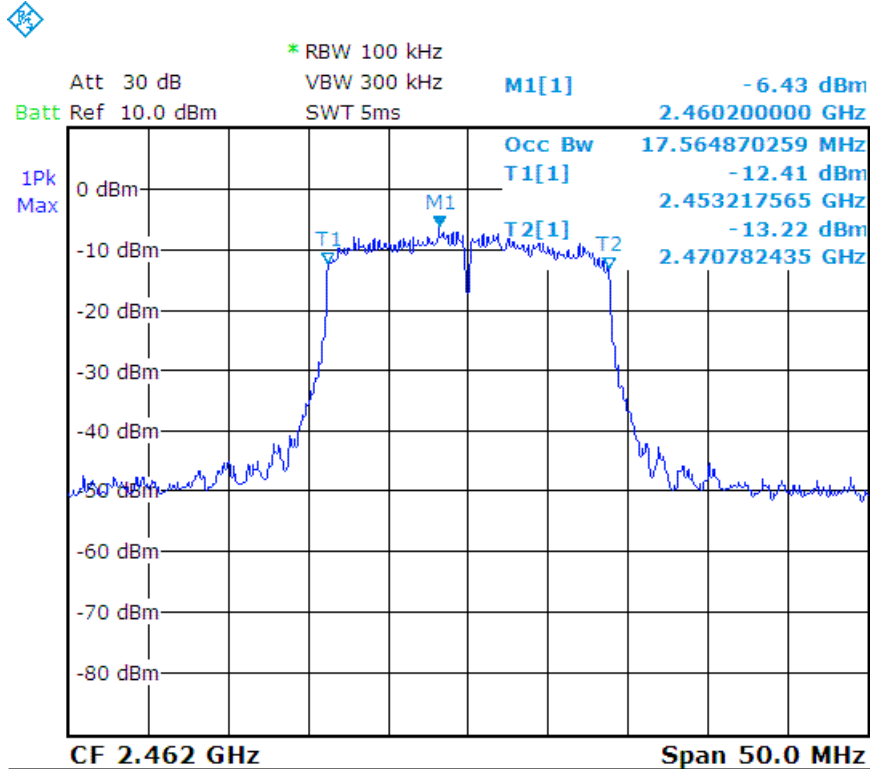
# TEST REPORT

Reference No.: A17103001  
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n - HT20\_CH06 :



n - HT20\_CH11 :





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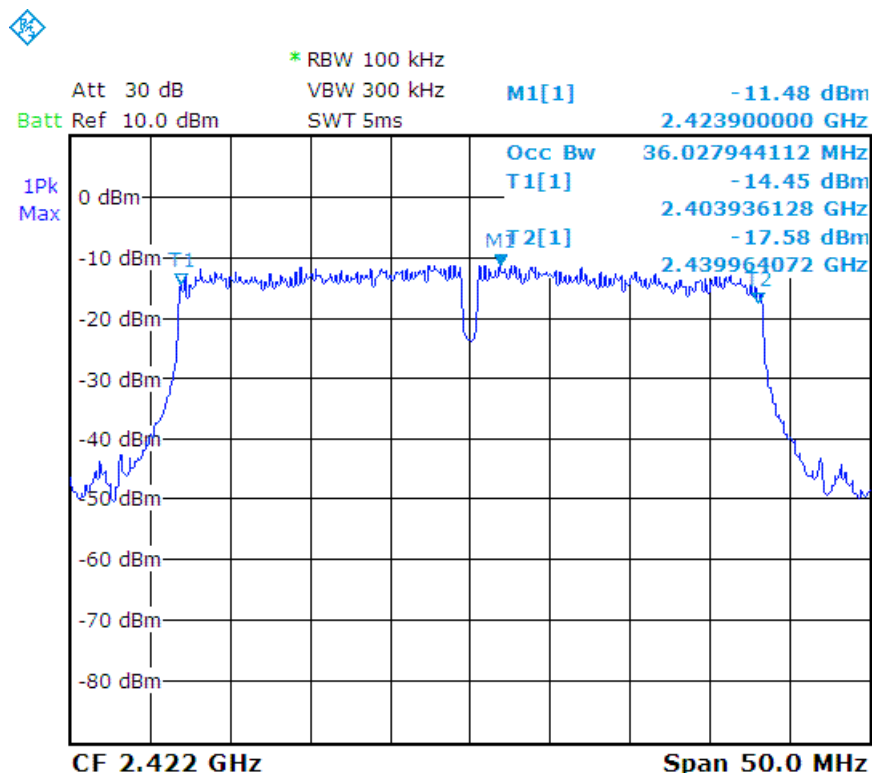
# TEST REPORT

Reference No.: A17103001  
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Temperature:	20 °C	Humidity:	54 %RH
Detector:	Peak	Test Mode:	802.11n - HT20
RBW:	100 kHz	VBW:	300 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	99% Bandwidth (MHz)
CH03	2422	36.03
CH06	2437	36.03
CH09	2452	36.03

n - HT40\_CH03 :





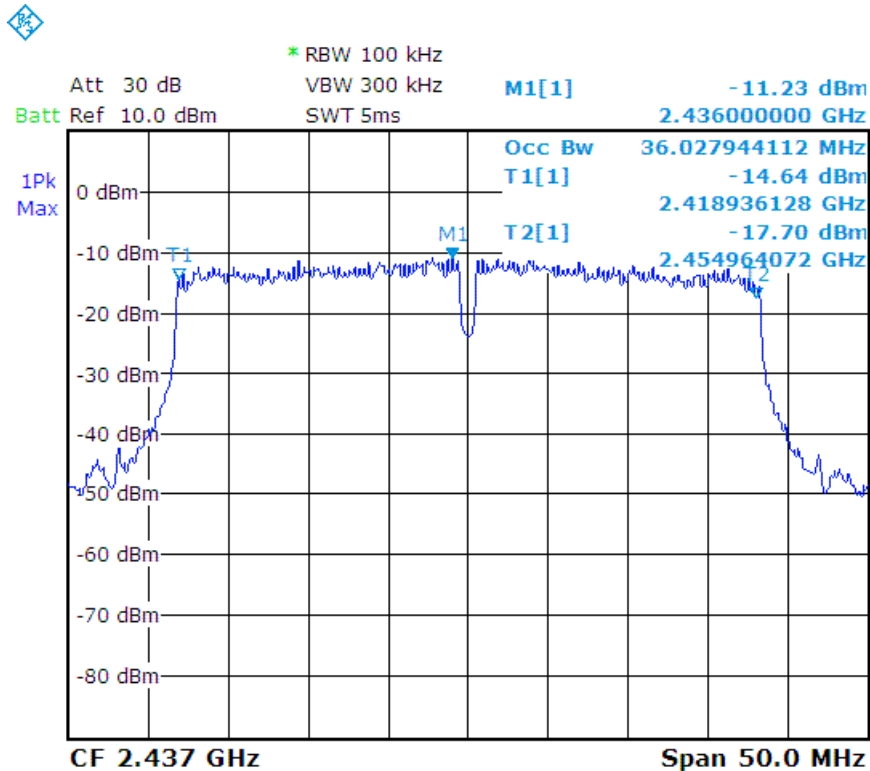
**Spectrum Research & Testing Lab., Inc.**

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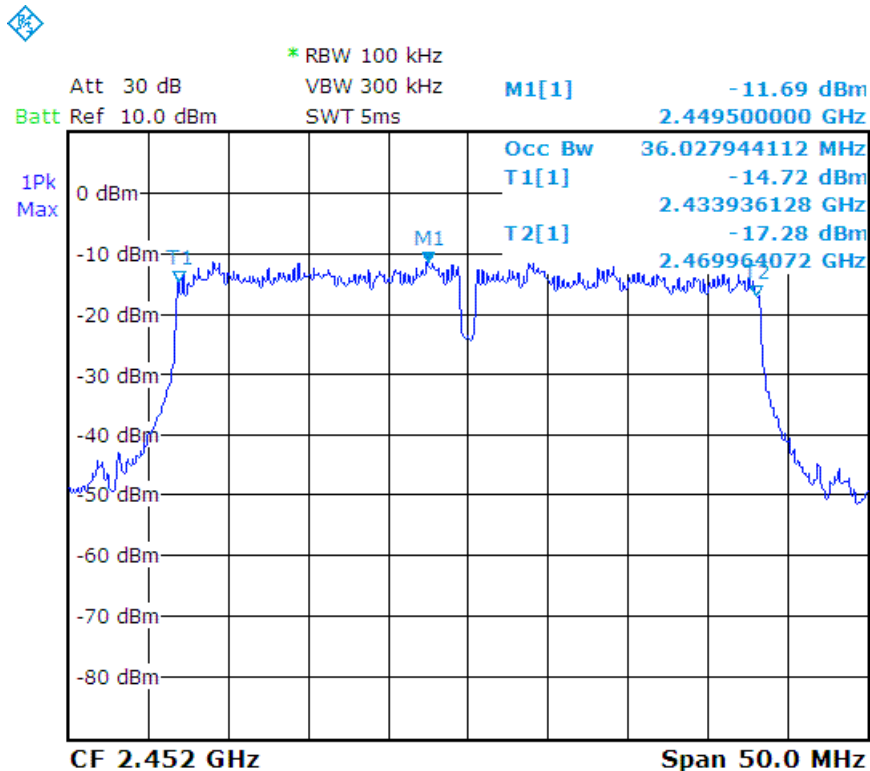
# TEST REPORT

Reference No.: A17103001  
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n - HT40\_CH06 :



n - HT40\_CH09 :



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**TEST REPORT**Reference No.: A17103001  
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Date: Dec. 28, 2017**4.4 PEAK CONDUCTED OUTPUT POWER TEST****4.4.1 LIMIT**

FCC Part15, Subpart C Section 15.247(b).

The maximum peak conducted output power of the intentional radiator shall not exceed the following:

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.

The signals are correlated.

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less for 20-MHz channel widths with  $N_{ANT} \geq 5$ .For power measurements on all other devices: Array Gain =  $10 \log(N_{ANT}/N_{SS})$  dB.**NOTE:**

- Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 5.01\text{dBi} < 6\text{dBi}$ , so the power density limit shall not be reduced.

**4.4.2 TEST EQUIPMENT**

The following test equipment was used during the test :

Equipment/ Facilities	Specifications	Manufacturer	Model#/ Serial#	Due Date of Cal. & Cal. Center
EMI TEST RECEIVER (INCLUDE SPECTRUM ANALYZER)	9 KHz ~ 6 GHz	ROHDE & SCHWARZ	ESL /100176	MAY 21, 2018 ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.



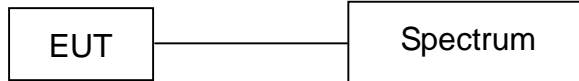
**Spectrum Research & Testing Lab., Inc.**

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# TEST REPORT

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### 4.4.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

### 4.4.4 TEST PROCEDURE

The EUT was operating in continuous transmission mode or could control its channel.

Printed out the test result from the spectrum by hard copy function.



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# TEST REPORT

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### 4.4.5 EUT OPERATING CONDITION

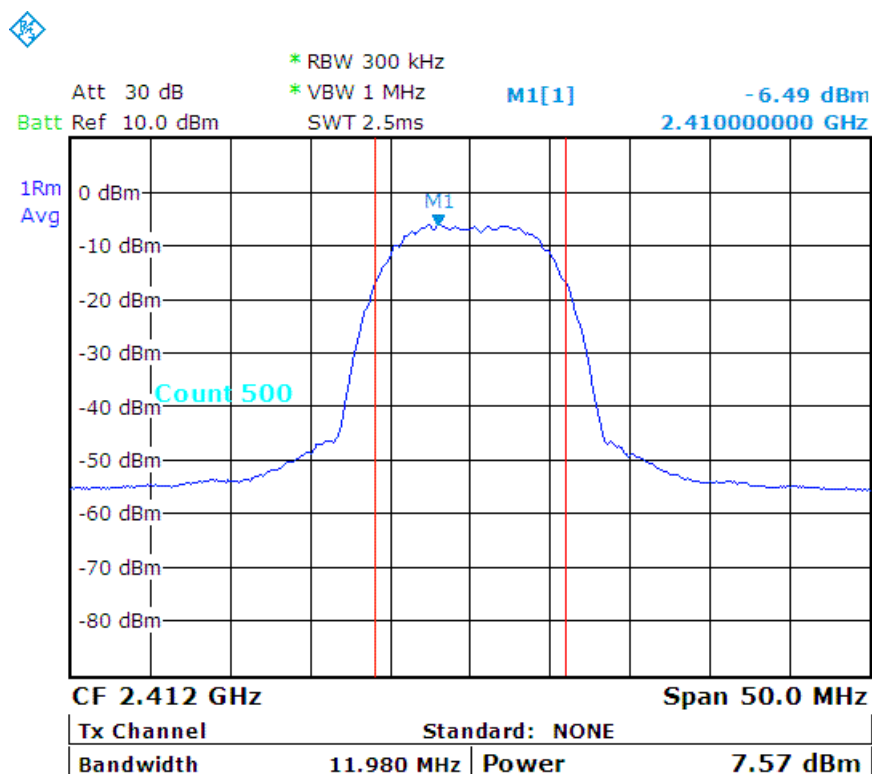
1. Set the EUT under continuous transmission condition.
2. The EUT was set to the highest available power level.

### 4.4.6 TEST RESULT

Temperature:	20 °C	Humidity:	54 %RH
Detector:	RMS	Test Mode:	802.11b
RBW:	300 kHz	VBW:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	99% Bandwidth (MHz)	Peak Conducted Output Power		Limit (dBm)
			(dBm)	(mW)	
CH01	2412	11.98	7.57	5.71	30
CH06	2437	11.98	7.58	5.73	30
CH11	2462	11.98	7.92	6.19	30

b\_CH01 :





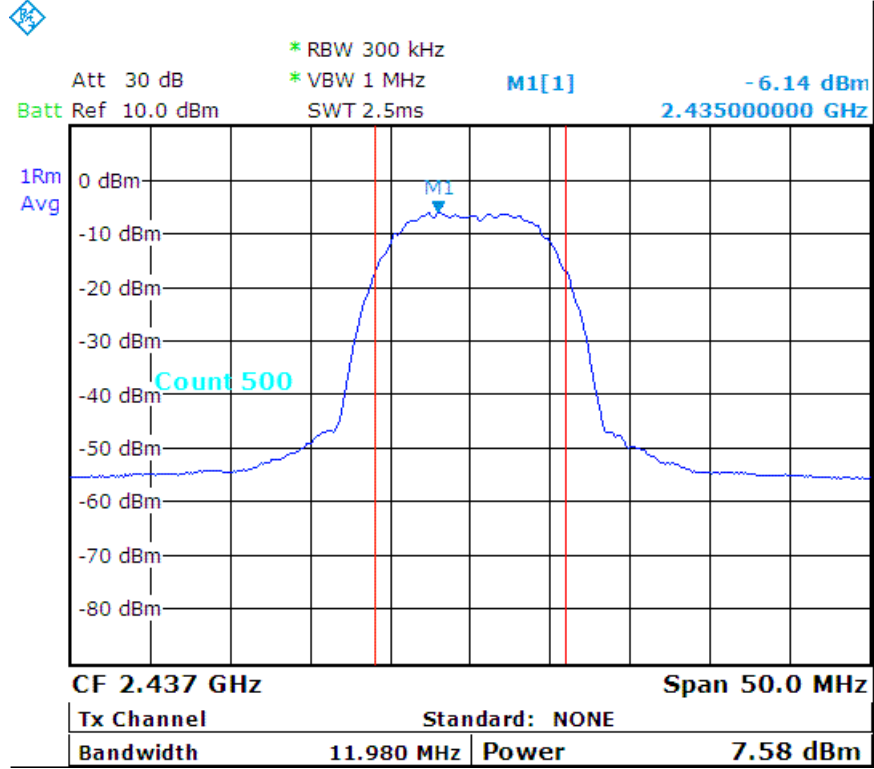
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

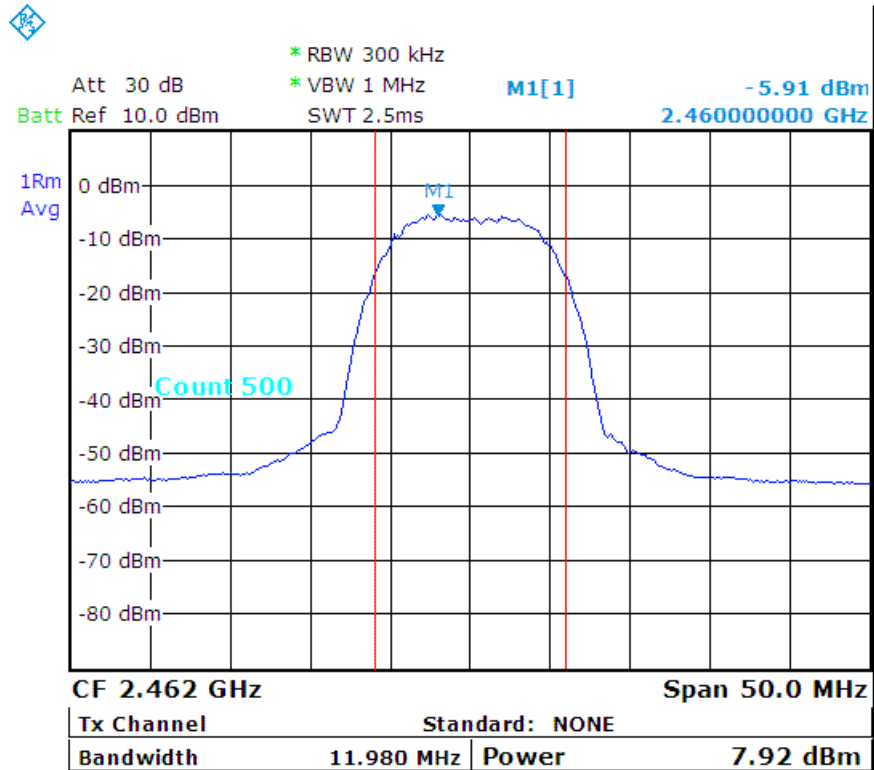
# TEST REPORT

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b\_CH06 :



b\_CH11 :





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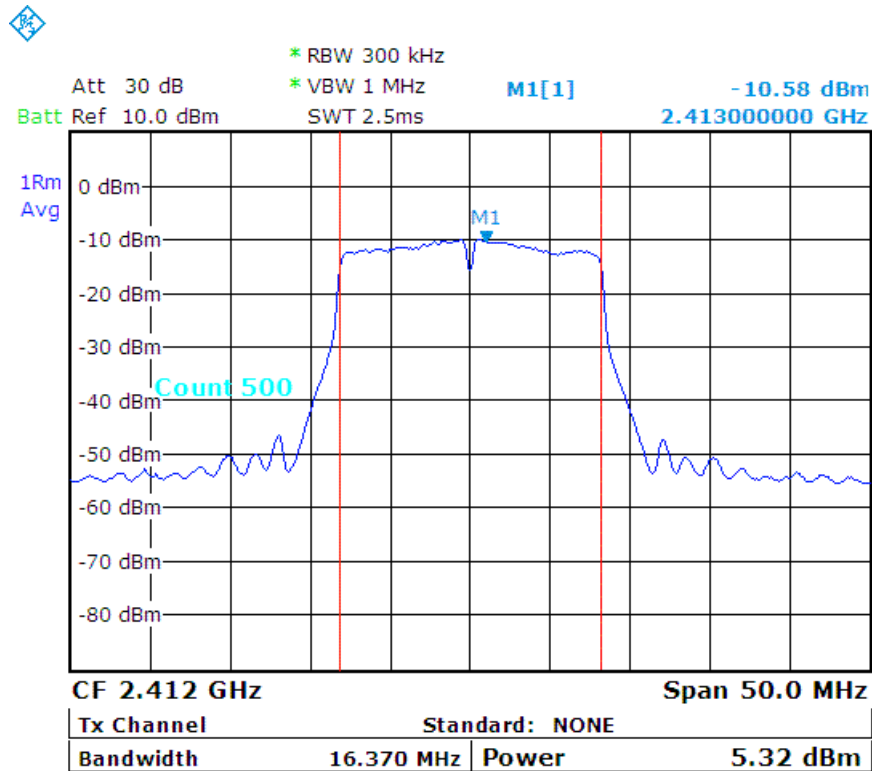
# TEST REPORT

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Temperature:	20 °C	Humidity:	54 %RH
Detector:	RMS	Test Mode:	802.11g
RBW:	300 kHz	VBW:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	99% Bandwidth (MHz)	Peak Conducted Output Power		Limit (dBm)
			(dBm)	(mW)	
CH01	2412	16.37	5.32	3.40	30
CH06	2437	16.37	5.32	3.40	30
CH11	2462	16.37	5.67	3.69	30

g\_CH01 :







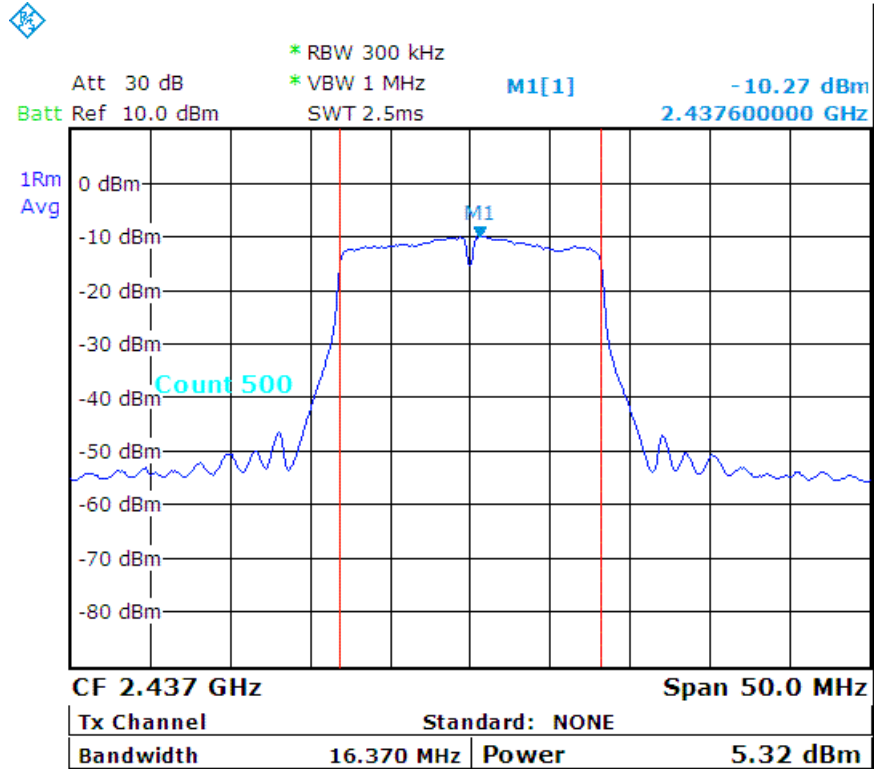
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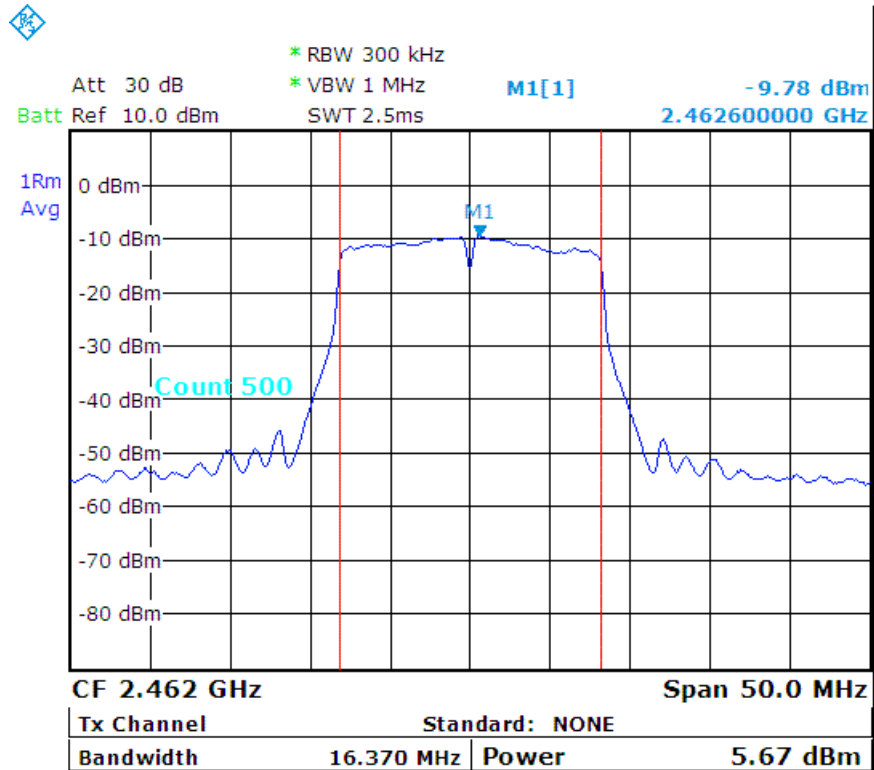
# TEST REPORT

Reference No.: A17103001  
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g\_CH06 :



g\_CH11 :





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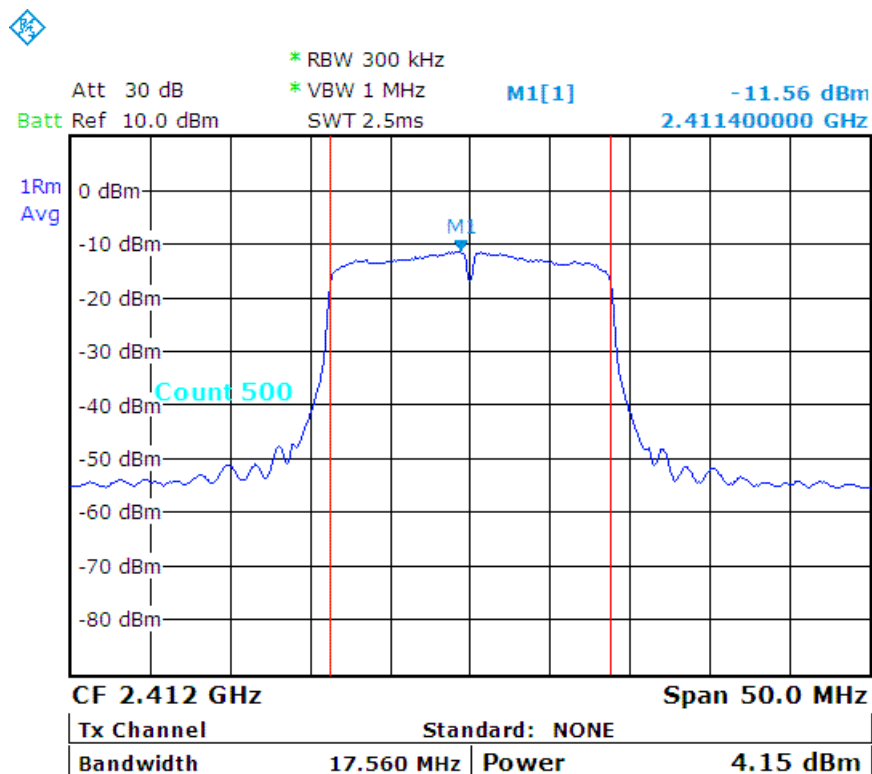
# TEST REPORT

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Temperature:	20 °C	Humidity:	54 %RH
Detector:	RMS	Test Mode:	802.11n - HT20
RBW:	300 kHz	VBW:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	99% Bandwidth (MHz)	Peak Conducted Output Power			Limit (dBm)
			Measure (dBm)	Final (dBm)	Final (mW)	
CH01_ANT1	2412	17.56	4.15	7.08	5.11	30
CH01_ANT2			3.99			30
CH06_ANT1	2437	17.56	4.12	7.05	5.07	30
CH06_ANT2			3.96			30
CH11_ANT1	2462	17.56	4.54	7.26	5.32	30
CH11_ANT2			3.93			30

n - HT20\_CH01\_ANT1 :





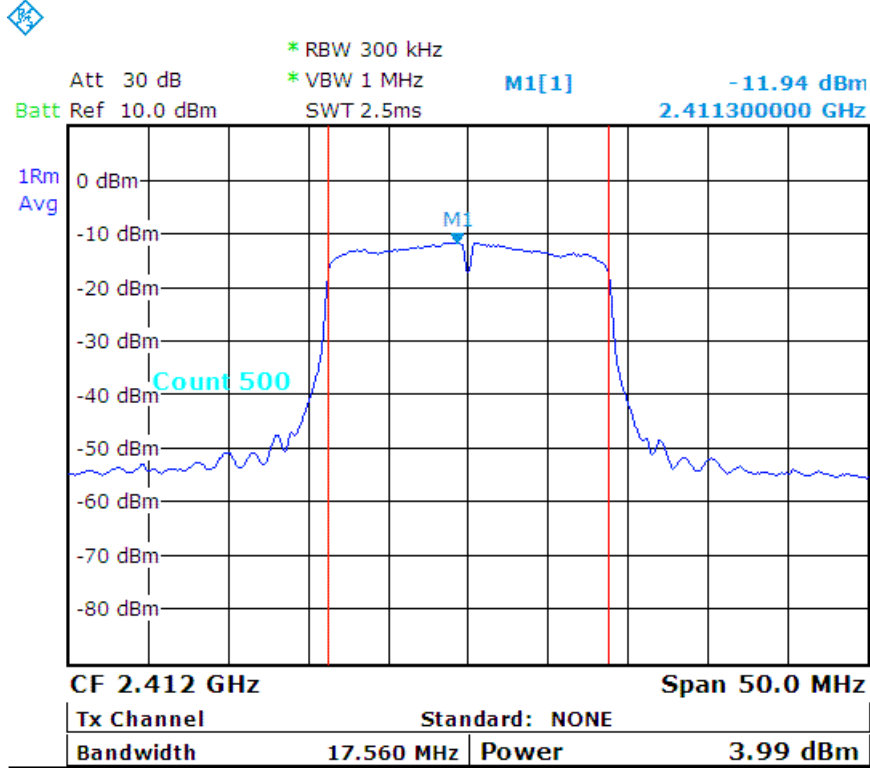
**Spectrum Research & Testing Lab., Inc.**

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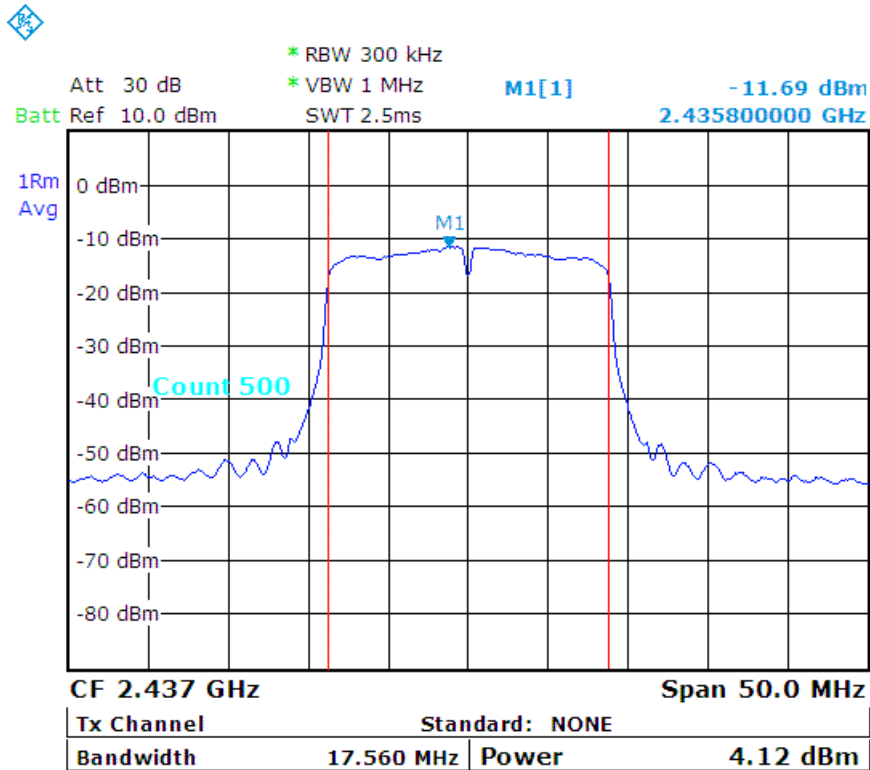
# TEST REPORT

Reference No.: A17103001  
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n - HT20\_CH01\_ANT2 :



n - HT20\_CH06\_ANT1 :





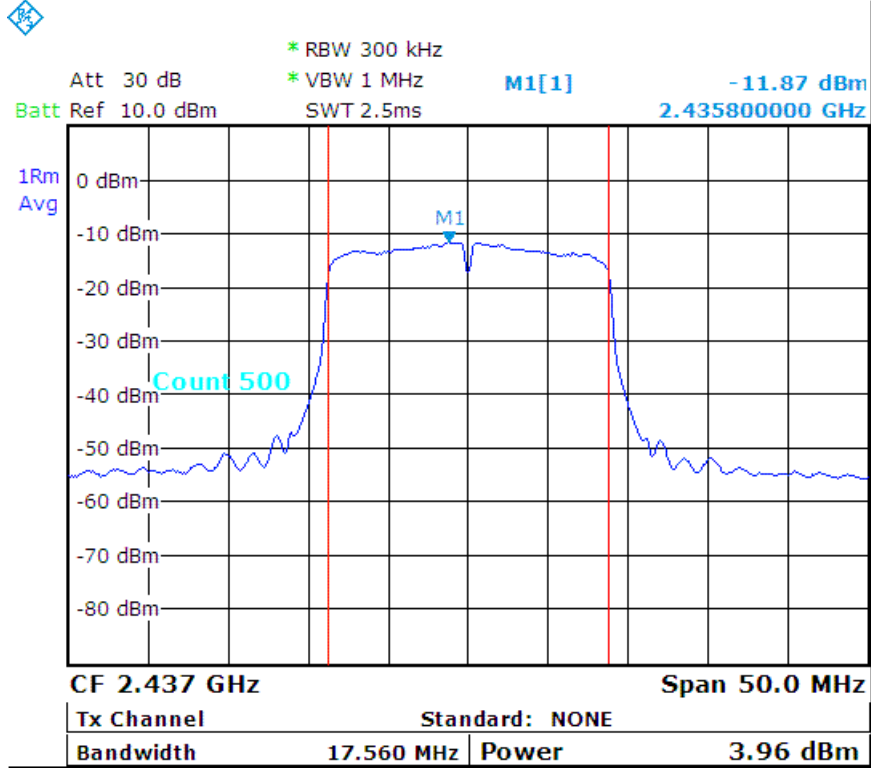
**Spectrum Research & Testing Lab., Inc.**

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

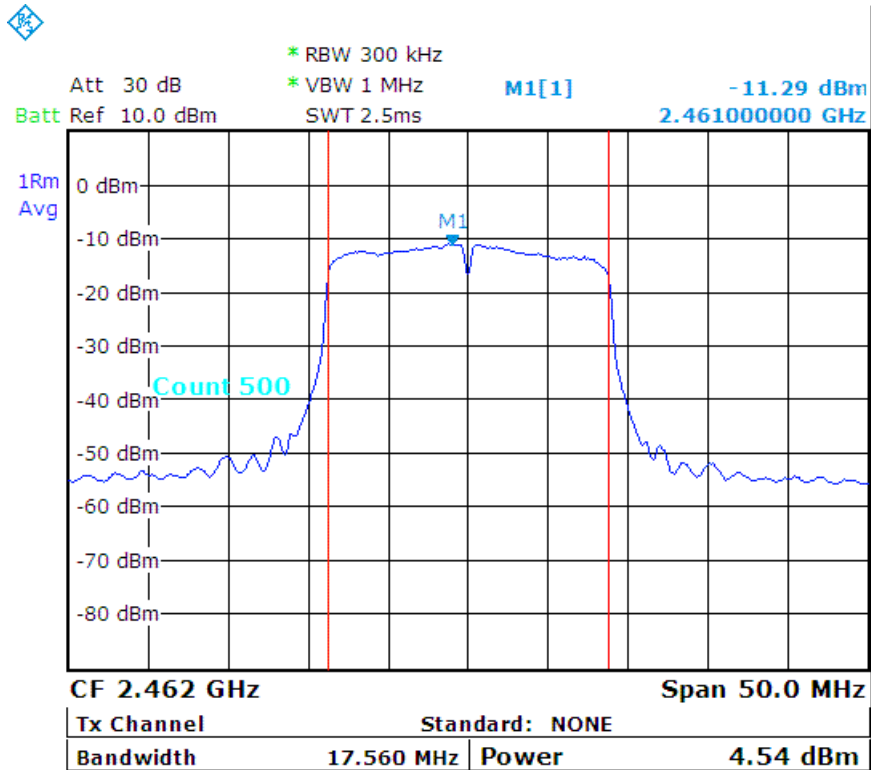
# TEST REPORT

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n - HT20\_CH06\_ANT2 :



n - HT20\_CH11\_ANT1 :





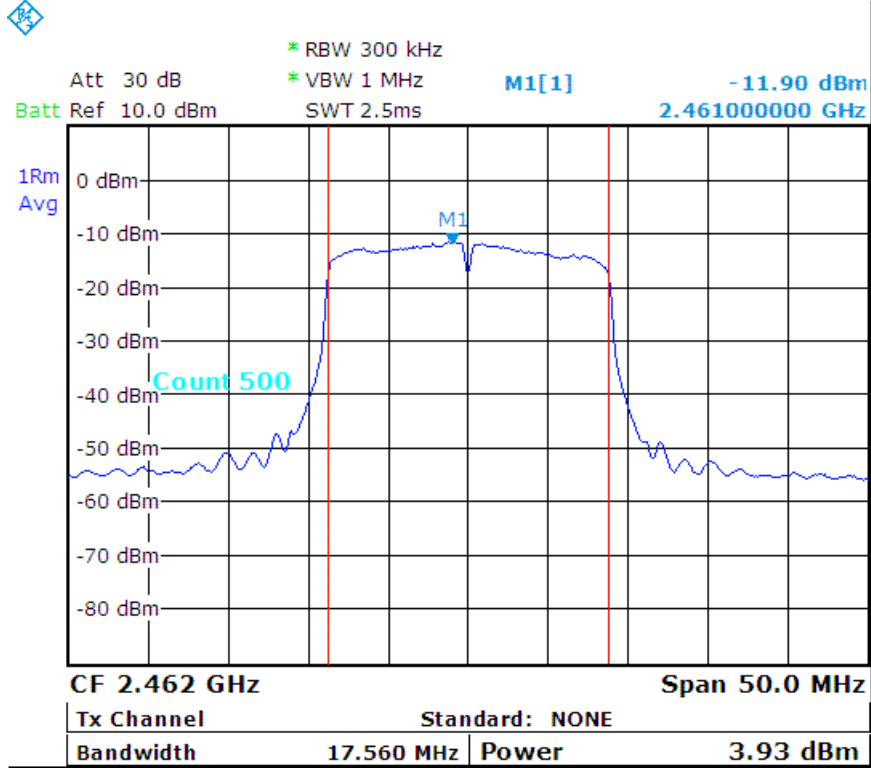
**Spectrum Research & Testing Lab., Inc.**

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# TEST REPORT

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n - HT20\_CH11\_ANT2 :





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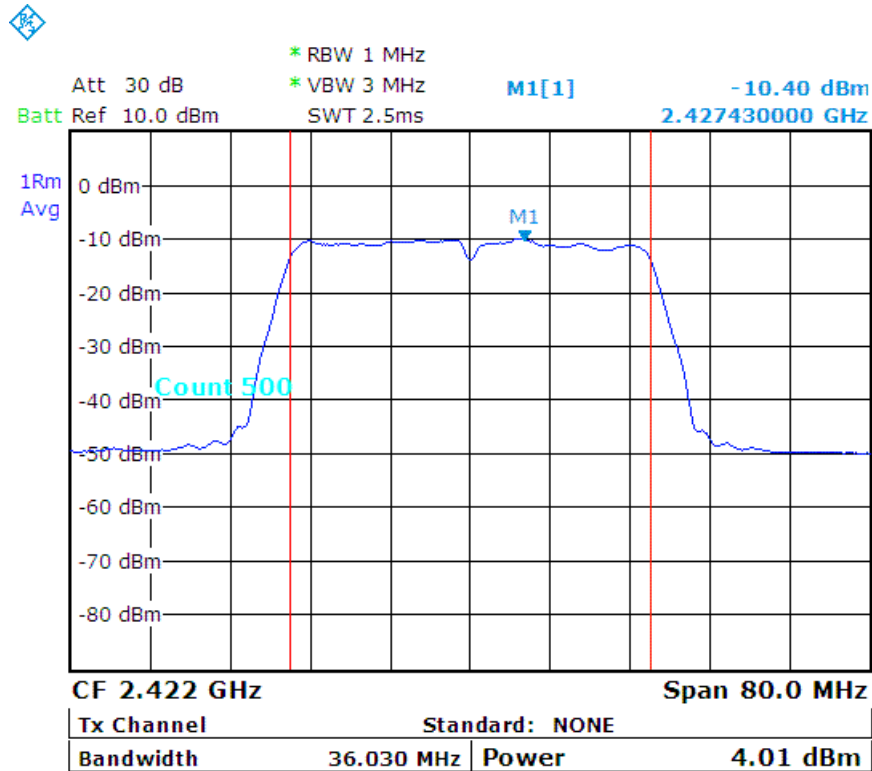
# TEST REPORT

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Temperature:	20 °C	Humidity:	54 %RH
Detector:	RMS	Test Mode:	802.11n - HT40
RBW:	300 kHz	VBW:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	99% Bandwidth (MHz)	Peak Conducted Output Power			Limit (dBm)
			Measure (dBm)	Final (dBm)	Final (mW)	
CH03_ANT1	2412	36.03	4.01	6.94	4.94	30
CH03_ANT2			3.85			
CH06_ANT1	2437	36.03	4.38	7.31	5.38	30
CH06_ANT2			4.22			
CH09_ANT1	2462	36.03	3.85	6.69	4.67	30
CH09_ANT2			3.50			

n - HT40\_CH03\_ANT1 :





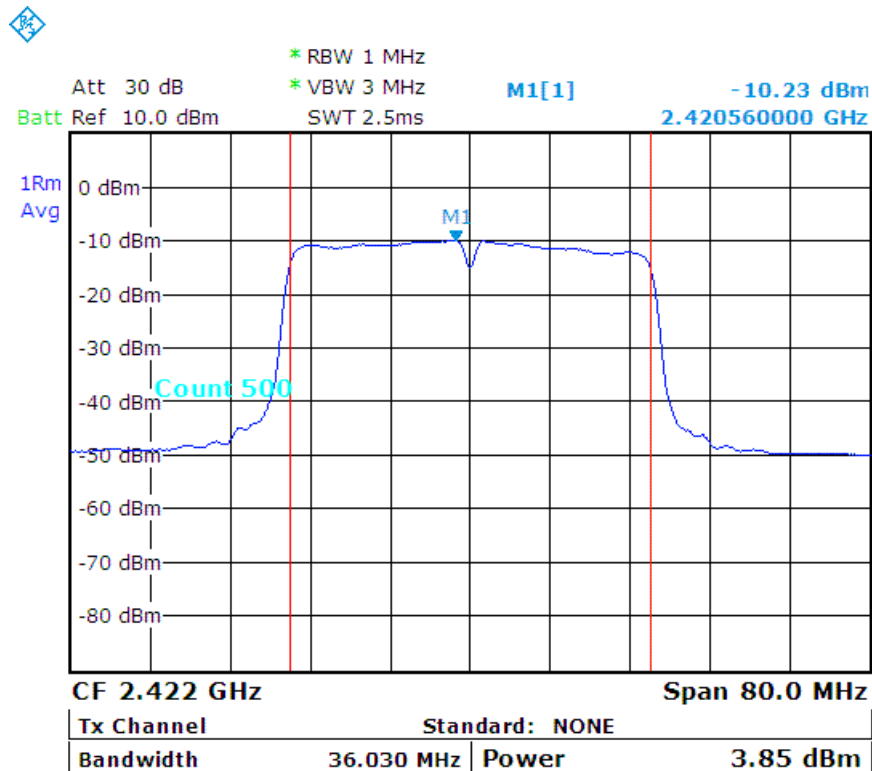
**Spectrum Research & Testing Lab., Inc.**

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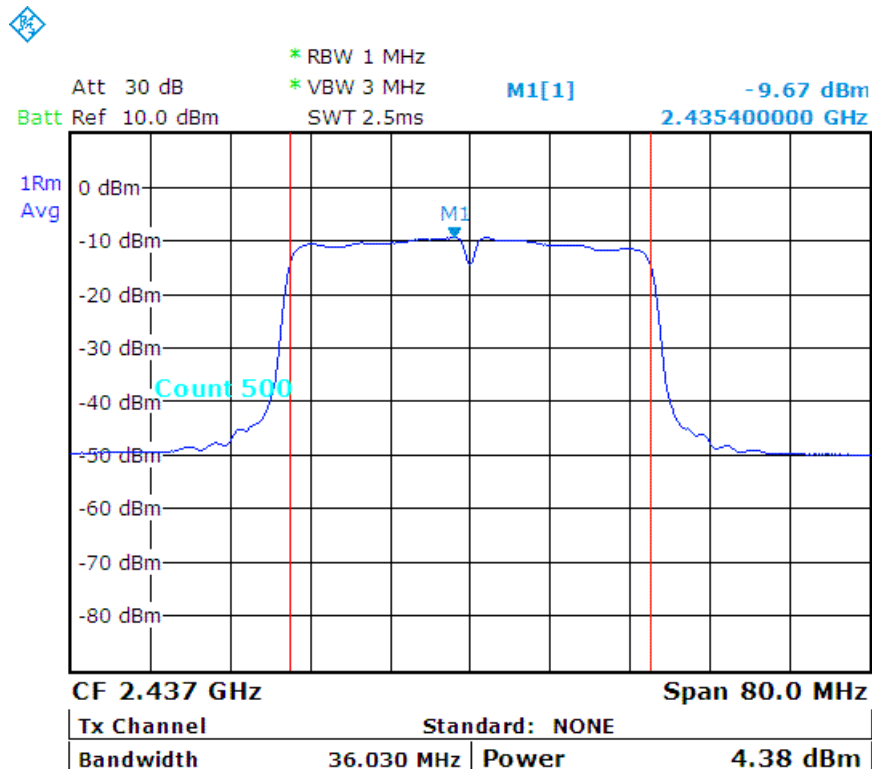
# TEST REPORT

Reference No.: A17103001  
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n - HT40\_CH03\_ANT2 :



n - HT40\_CH06\_ANT1 :





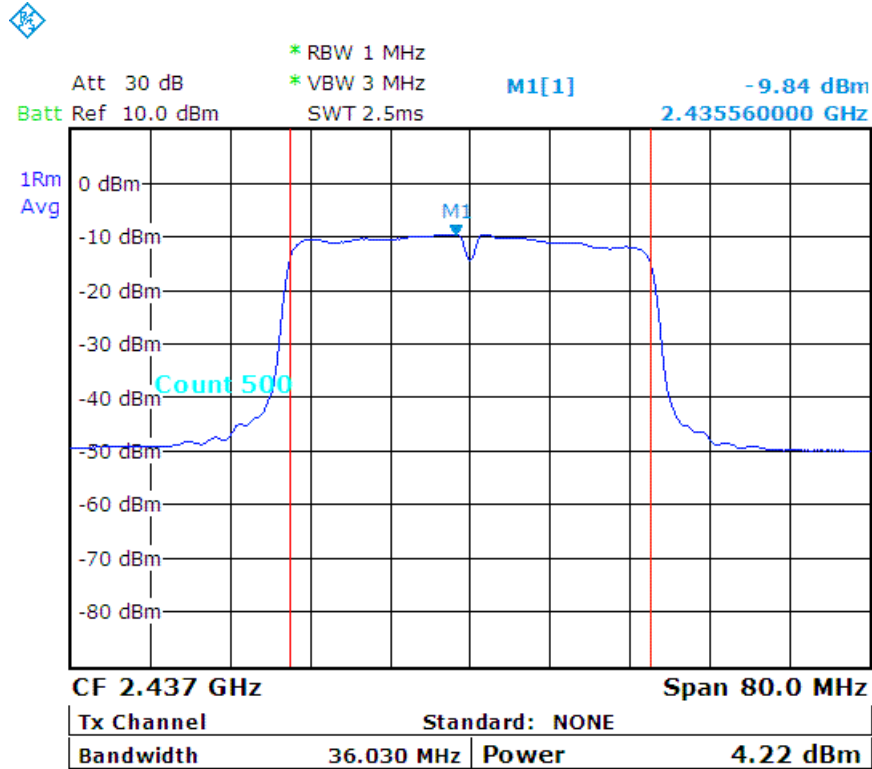
**Spectrum Research & Testing Lab., Inc.**

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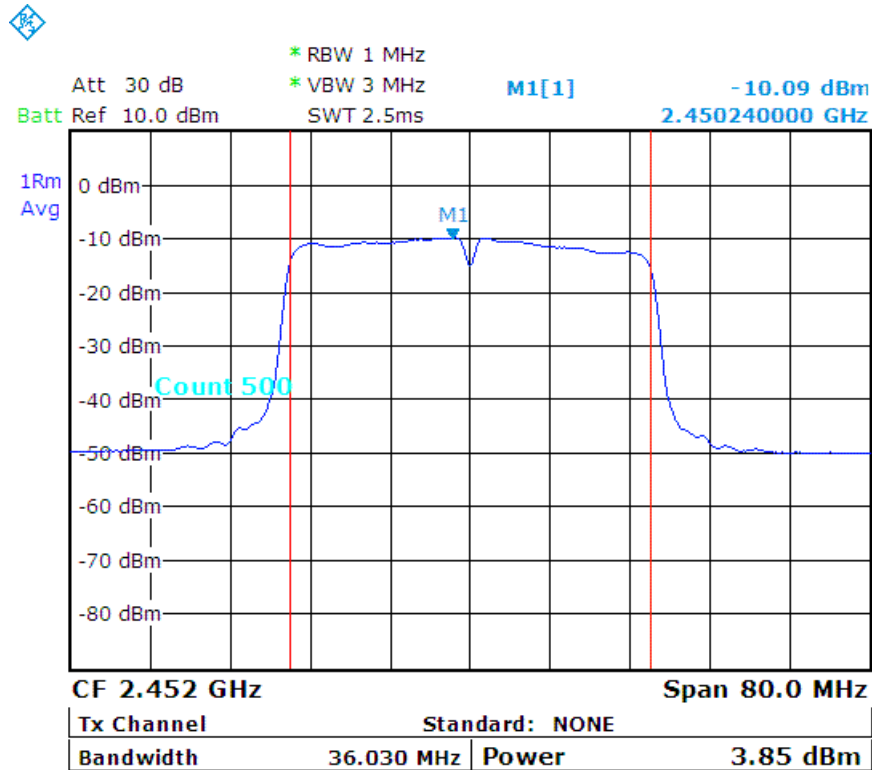
# TEST REPORT

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n - HT40\_CH06\_ANT2 :



n - HT40\_CH09\_ANT1 :







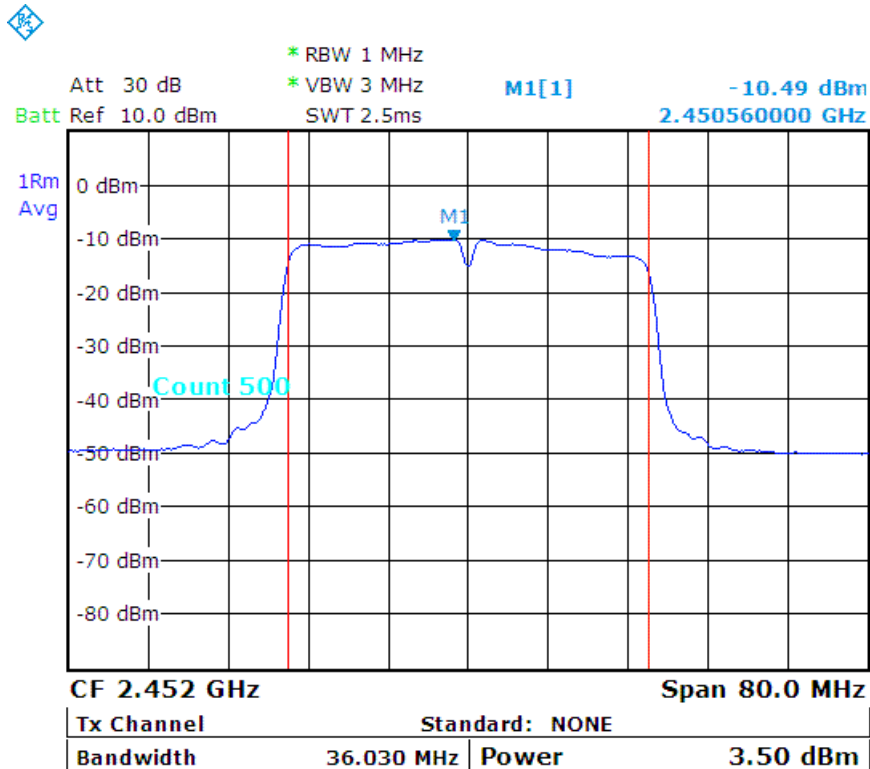
**Spectrum Research & Testing Lab., Inc.**

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n - HT40\_CH09\_ANT2 :



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Date: Dec. 28, 2017**4.5 BAND EDGE TEST****4.5.1 LIMIT**

FCC Part15, Subpart C Section 15.247(d).

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

OPERATING FREQUENCY RANGE (MHz)	SPURIOUS EMISSION FREQUENCY (MHz)	LIMIT	
		Peak power ration to emission(dBc)	Emission level(dBuV/m)
2400 - 2483.5	< 2400	> 20	N/A
	> 2483.5-2500	N/A	54

**NOTE:**

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**4.5.2 TEST EQUIPMENT**

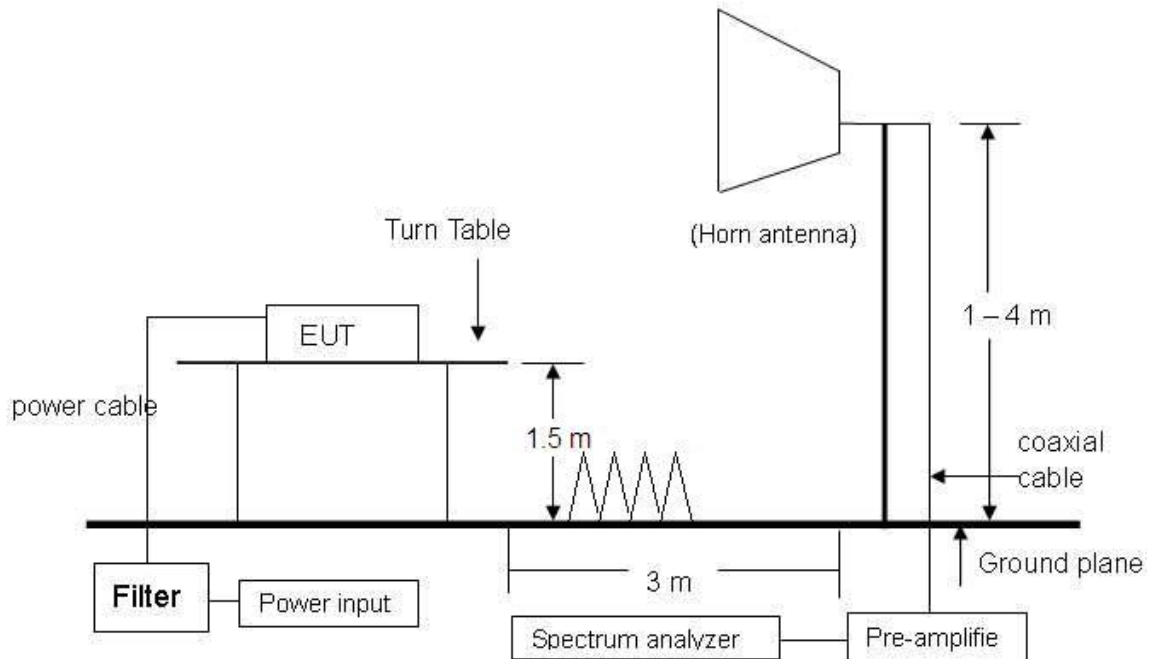
The following test equipment was used during the test:

<b>EQUIPMENT/ FACILITIES</b>	<b>SPECIFICATIONS</b>	<b>MANUFACTURER</b>	<b>MODEL#/ SERIAL#</b>	<b>DUE DATE OF CAL. &amp; CAL. CENTER</b>
SPECTRUM ANALYZER	9 kHz ~ 40 GHz	ROHDE & SCHWARZ	FSP40 / 100093	JAN. 02, 2018 ETC
EMI TEST RECEIVER (INCLUDE SPECTRUM ANALYZER)	9 KHz ~ 6 GHz	ROHDE & SCHWARZ	ESL /100176	MAY 21, 2018 ETC
HORN ANTENNA	1 GHz ~ 18 GHz	EMCO	3115/ 9602-4681	NOV. 24, 2018 ETC
PRE-AMPLIFIER	1 GHz ~ 26.5 GHz	AGILENT	8449B/ 3008A01995	DEC. 29, 2018 ETC
OPEN AREA TEST SITE	3 – 10 M MEASUREMENT	SRT	A02 / SRT002	MAR. 09, 2018 SRT
ANECHOIC CHAMBER	3 M MEASUREMENT	SRT	A01 / SRT001	SEP. 13, 2018 SRT
K-TYPE CABLE	UP TO 40 GHz 3 m	HUBER+SUHNER	SF102-46/2*11SK 252 /MY2611/2	FEB. 23, 2018 ETC
K-TYPE CABLE	UP TO 40 GHz, 1 m	HUBER+SUHNER	SF102/2*11SK252 /MY3331/2	SEP. 28, 2018 ETC
FILTER	2 LINE, 30 A	FIL.COIL	FC-943/ 869	NCR

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.



## 4.5.3 TEST SETUP



**NOTE:** The EUT system was put on a wooden table with 1.5m heights above a ground plane. For the actual test configuration, please refer to the photos of testing.

## 4.5.4 TEST PROCEDURE

The EUT was tested according to the requirement of ANSI C63.10:2013 and CISPR 22:2003. When the frequency spectrum measured started from 30 MHz to 1 GHz, then use antenna is a BICONICAL ANTENNA & LOG PERIODIC ANTENNA. The measurements were made at an open area test site with 3 meter measurement distance under 1 GHz and with 3m distance above 1GHz. The frequency spectrum measured started from 30 MHz to 1 GHz, all readings were quasi-peak values with 120 kHz resolution bandwidth of the test receiver. Above 1 GHz, the measurements were made at an open area test site with 3 meter measurement distance and all readings were peak or average values with 1 MHz resolution bandwidth of the test receiver. The EUT system was operated in all typical methods by users. The cables connected to EUT and support units were moved to find the maximum emission levels for each frequency. First, find the margin or higher points at least 6 points by software, then use manual to find the maximum data. The procedure is referred on the test procedure of SRT LAB.



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## 4.5.5 EUT OPERATING CONDITION

1. Set the EUT under continuous transmission condition.
2. The EUT was set to the highest available power level.

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Date: Dec. 28, 2017**4.5.6 TEST RESULT**

Below 2400MHz (b\_CH01)

Temperature:	19 °C	Humidity:	72 %RH
Frequency Range:	2.30 GHz – 2.43 GHz	Tested Mode:	802.11b
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 14, 2017

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB/m)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dB)	
				PK	AV	PK	AV	PK	AV	PK	AV
2399.36	-31.26	28.38	H	40.66	30.12	37.78	27.24	74.00	54.00	-36.22	-26.76
2398.52	-31.26	28.38	V	39.74	29.25	36.86	26.37	74.00	54.00	-37.14	-27.63
2400.00	-31.26	28.38	H	40.37	29.84	37.49	26.96	74.00	54.00	-36.51	-27.04
2400.00	-31.26	28.38	V	39.70	29.24	36.82	26.36	74.00	54.00	-37.18	-27.64

Above 2483.5MHz (b\_CH11)

Temperature:	19 °C	Humidity:	72 %RH
Frequency Range:	2.44 GHz – 2.60 GHz	Tested Mode:	802.11b
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 14, 2017

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB/m)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dB)	
				PK	AV	PK	AV	PK	AV	PK	AV
2483.50	-31.19	28.48	H	34.88	24.38	32.17	21.67	74.00	54.00	-41.83	-32.33
2483.50	-31.19	28.48	V	34.72	24.27	32.01	21.56	74.00	54.00	-41.99	-32.44
2485.17	-31.19	28.48	H	37.00	26.55	34.29	23.84	74.00	54.00	-39.71	-30.16
2485.74	-31.19	28.48	V	37.31	26.81	34.60	24.10	74.00	54.00	-39.40	-29.90



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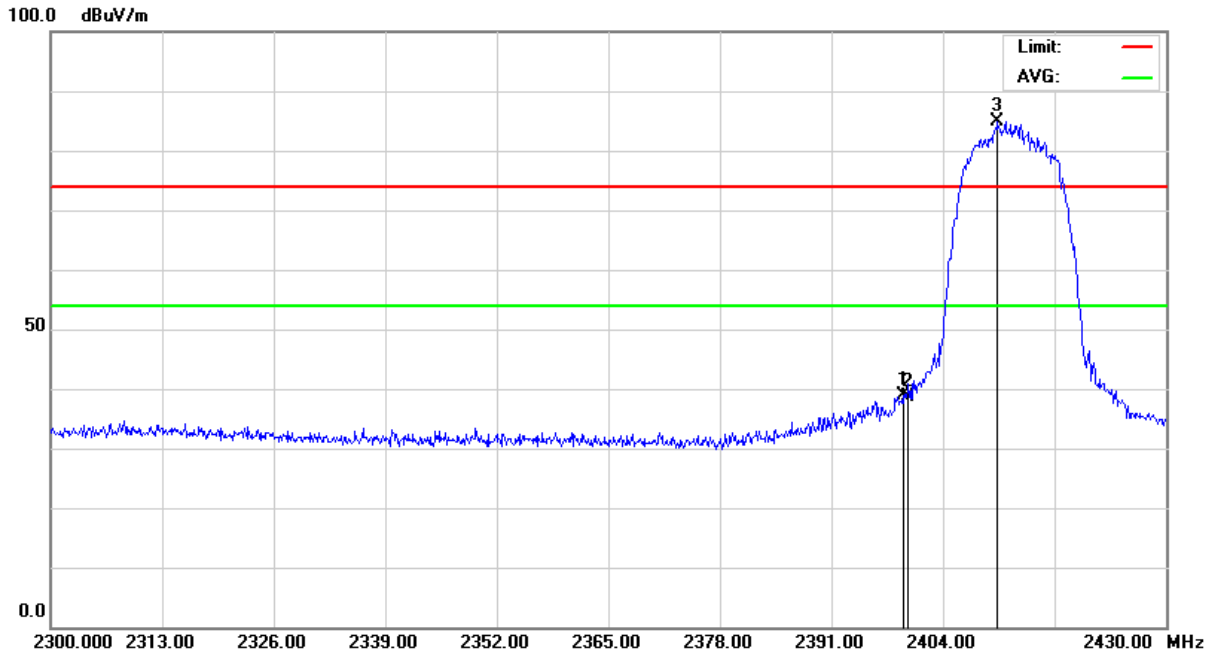
No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

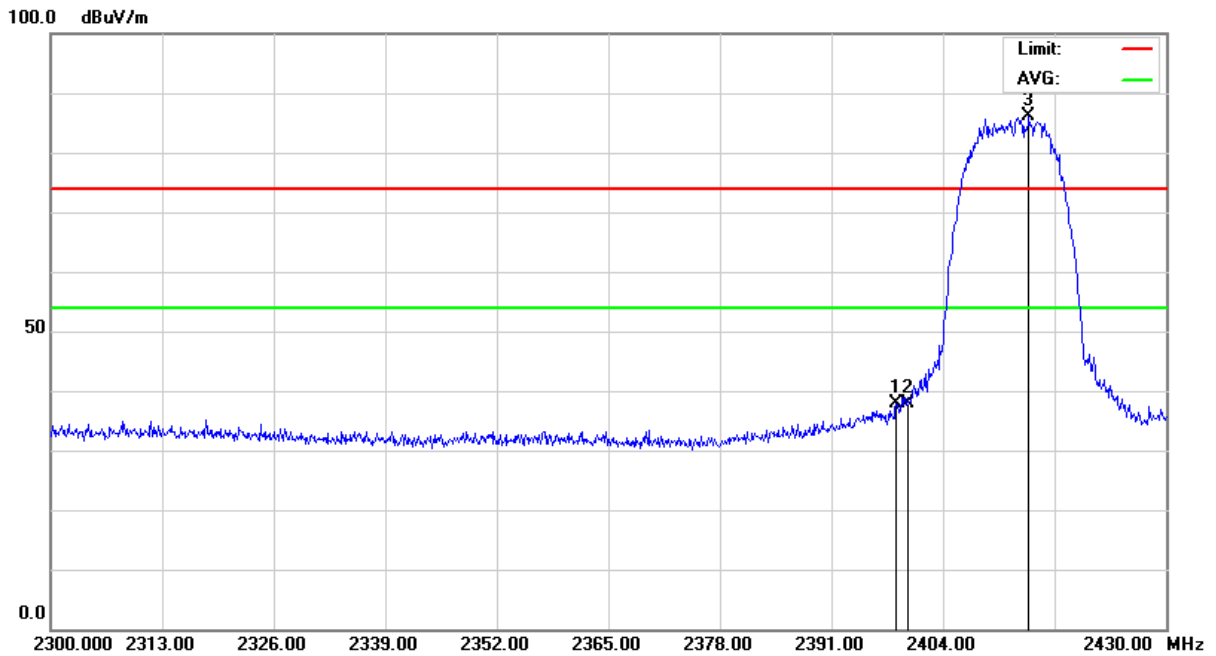
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## Below 2400MHz (b\_CH01)

Antenna Polarization : Horizontal



Antenna Polarization : Vertical





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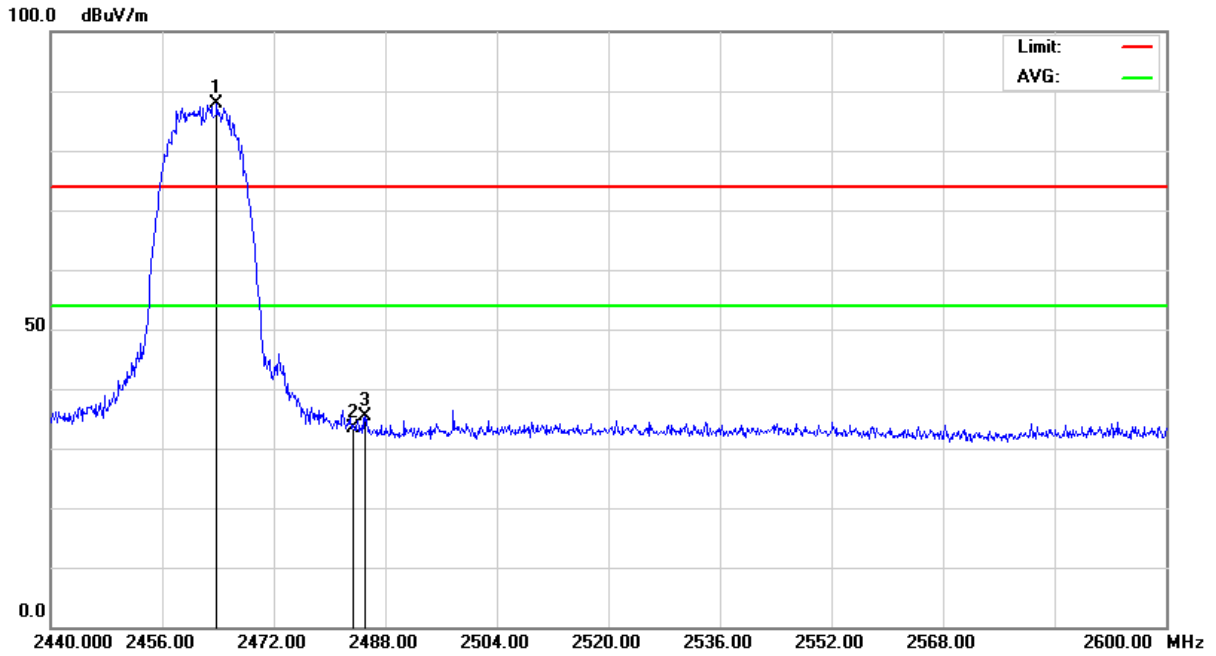
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# TEST REPORT

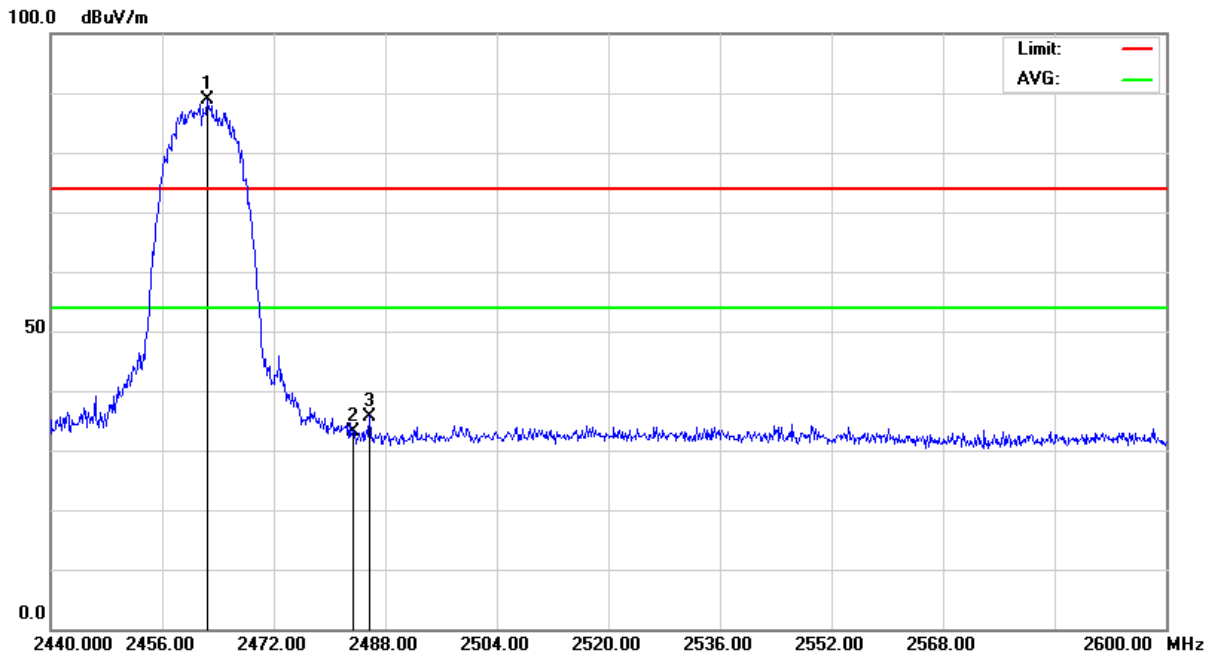
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## Above 2483.5MHz (b\_CH11)

Antenna Polarization : Horizontal



Antenna Polarization : Vertical





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Below 2400MHz (g\_CH01)

Temperature:	19 °C	Humidity:	72 %RH
Frequency Range:	2.30 GHz – 2.43 GHz	Tested Mode:	802.11g
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 14, 2017

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB/m)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dB)	
				PK	AV	PK	AV	PK	AV	PK	AV
2398.68	-31.26	28.38	H	45.21	34.73	42.33	31.85	74.00	54.00	-31.67	-22.15
2398.52	-31.26	28.38	V	44.12	33.62	41.24	30.74	74.00	54.00	-32.76	-23.26
2400.00	-31.26	28.38	H	47.22	36.79	44.34	33.91	74.00	54.00	-29.66	-20.09
2400.00	-31.26	28.38	V	45.85	35.34	42.97	32.46	74.00	54.00	-31.03	-21.54

Above 2483.5MHz (g\_CH11)

Temperature:	19 °C	Humidity:	72 %RH
Frequency Range:	2.44 GHz – 2.60 GHz	Tested Mode:	802.11g
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 14, 2017

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB/m)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dB)	
				PK	AV	PK	AV	PK	AV	PK	AV
2483.50	-31.19	28.48	H	37.10	26.61	34.39	23.90	74.00	54.00	-39.61	-30.10
2483.50	-31.19	28.48	V	37.09	26.55	34.38	23.84	74.00	54.00	-39.62	-30.16
2485.66	-31.19	28.48	H	37.02	26.58	34.31	23.87	74.00	54.00	-39.69	-30.13
2485.78	-31.19	28.48	V	37.80	27.32	35.09	24.61	74.00	54.00	-38.91	-29.39



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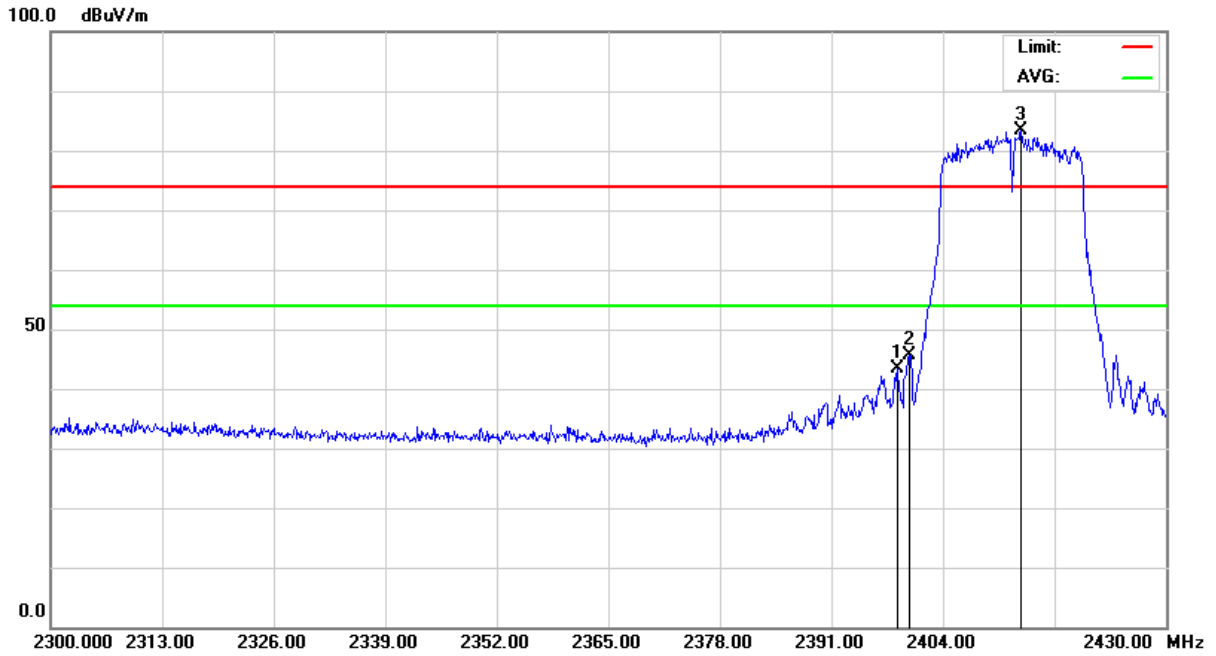
No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

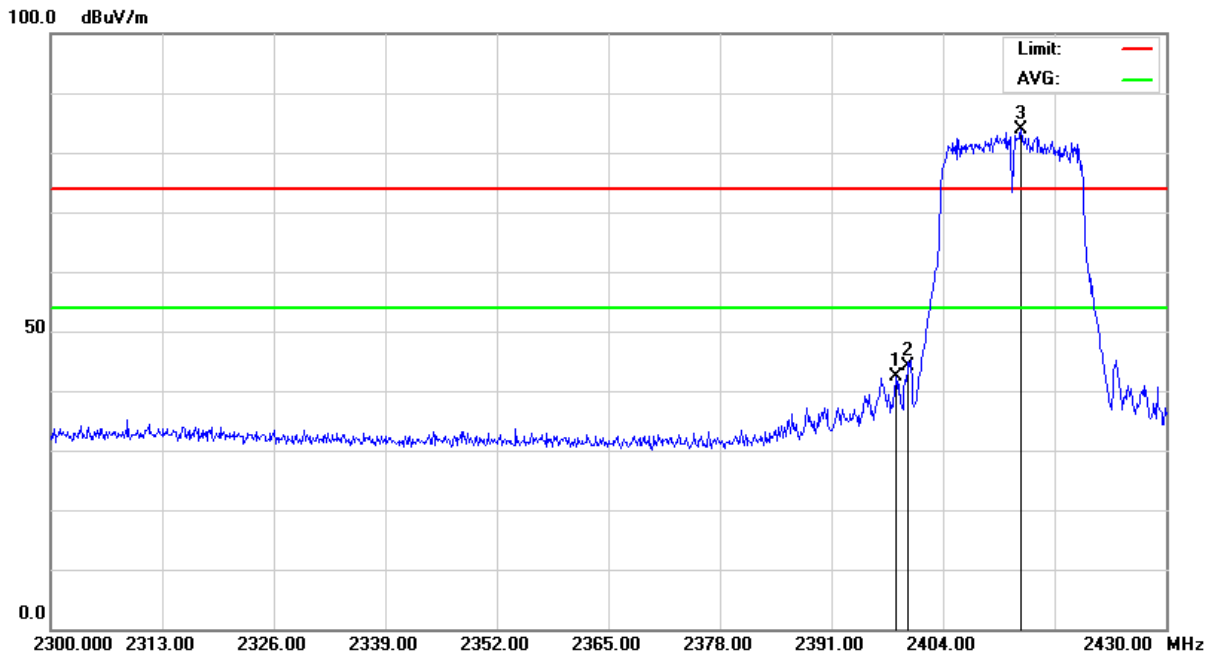
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## Below 2400MHz (g\_CH01)

Antenna Polarization : Horizontal



Antenna Polarization : Vertical





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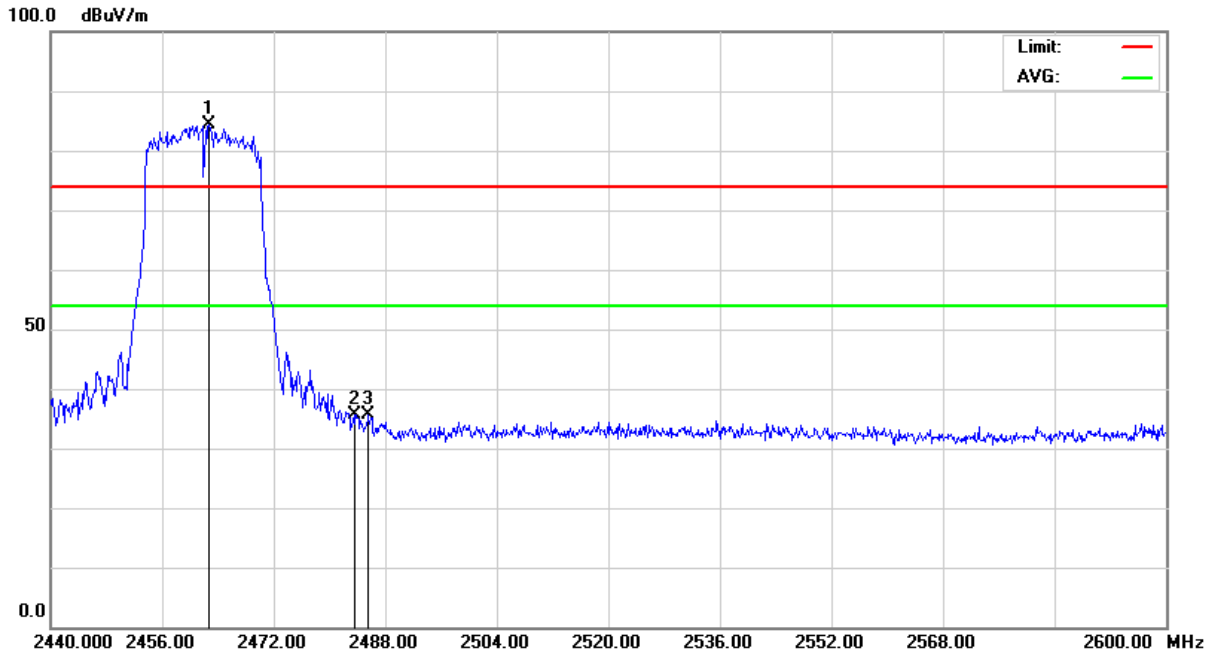
No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

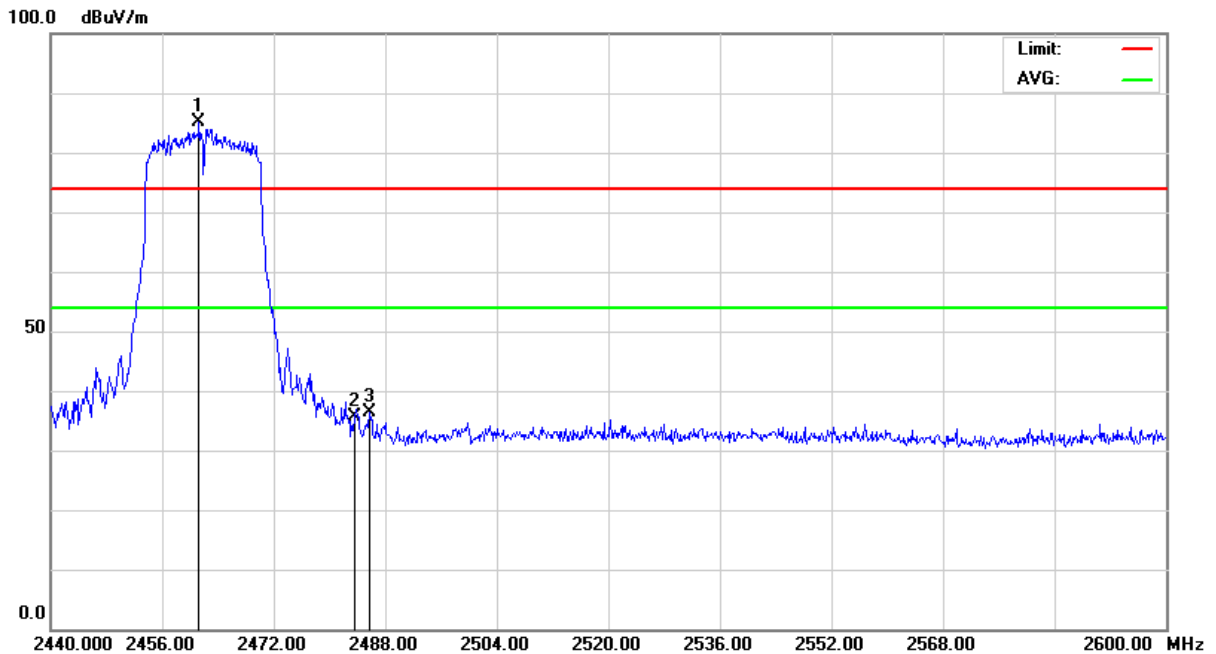
Reference No.: A17103001  
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## Above 2483.5MHz (g\_CH11)

Antenna Polarization : Horizontal



Antenna Polarization : Vertical



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Below 2400MHz (n - HT20\_CH01)

Temperature:	19 °C	Humidity:	72 %RH
Frequency Range:	2.30 GHz – 2.43 GHz	Tested Mode:	802.11n - HT20
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 14, 2017

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB/m)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dB)	
				PK	AV	PK	AV	PK	AV	PK	AV
2397.16	-31.26	28.38	H	43.67	33.19	40.79	30.31	74.00	54.00	-33.21	-23.69
2398.65	-31.26	28.38	V	53.11	42.68	50.23	39.80	74.00	54.00	-23.77	-14.20
2400.00	-31.26	28.38	H	46.06	35.55	43.18	32.67	74.00	54.00	-30.82	-21.33
2400.00	-31.26	28.38	V	53.38	42.81	50.50	39.93	74.00	54.00	-23.50	-14.07

Above 2483.5MHz (n - HT20\_CH11)

Temperature:	19 °C	Humidity:	72 %RH
Frequency Range:	2.44 GHz – 2.60 GHz	Tested Mode:	802.11n - HT20
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 14, 2017

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB/m)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dB)	
				PK	AV	PK	AV	PK	AV	PK	AV
2483.50	-31.19	28.48	H	36.55	26.07	33.84	23.36	74.00	54.00	-40.16	-30.64
2483.50	-31.19	28.48	V	48.60	38.16	45.89	35.45	74.00	54.00	-28.11	-18.55
2488.09	-31.19	28.49	H	37.85	27.39	35.15	24.69	74.00	54.00	-38.85	-29.31
2485.42	-31.19	28.48	V	46.05	35.58	43.34	32.87	74.00	54.00	-30.66	-21.13



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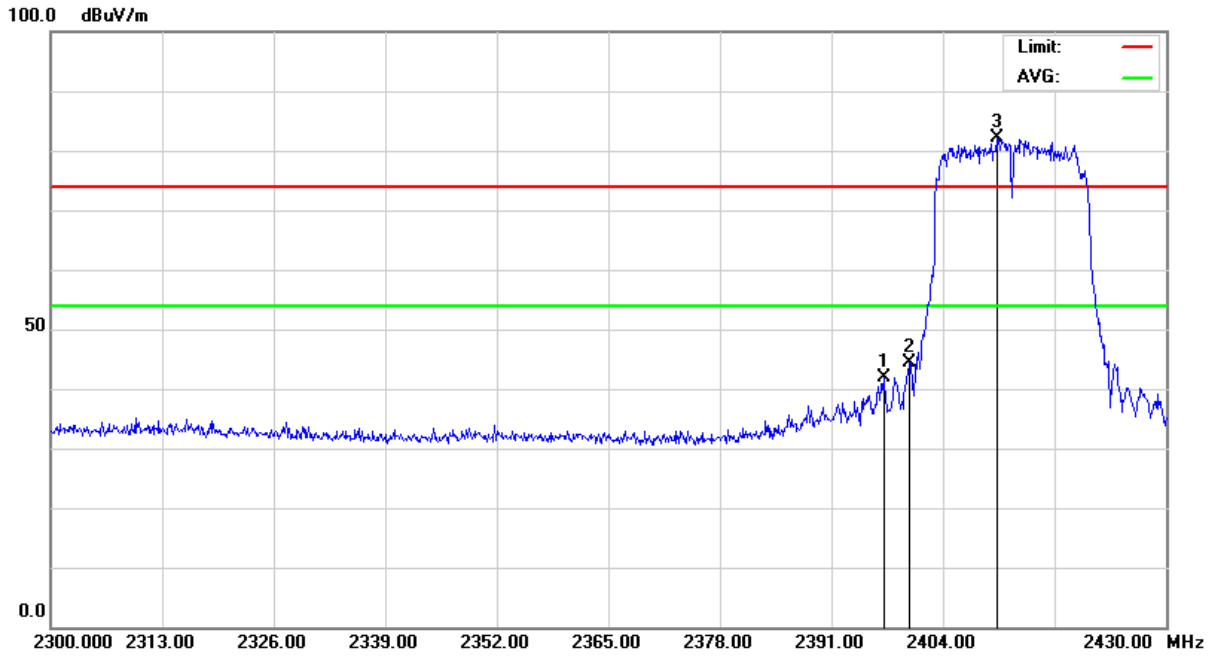
No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

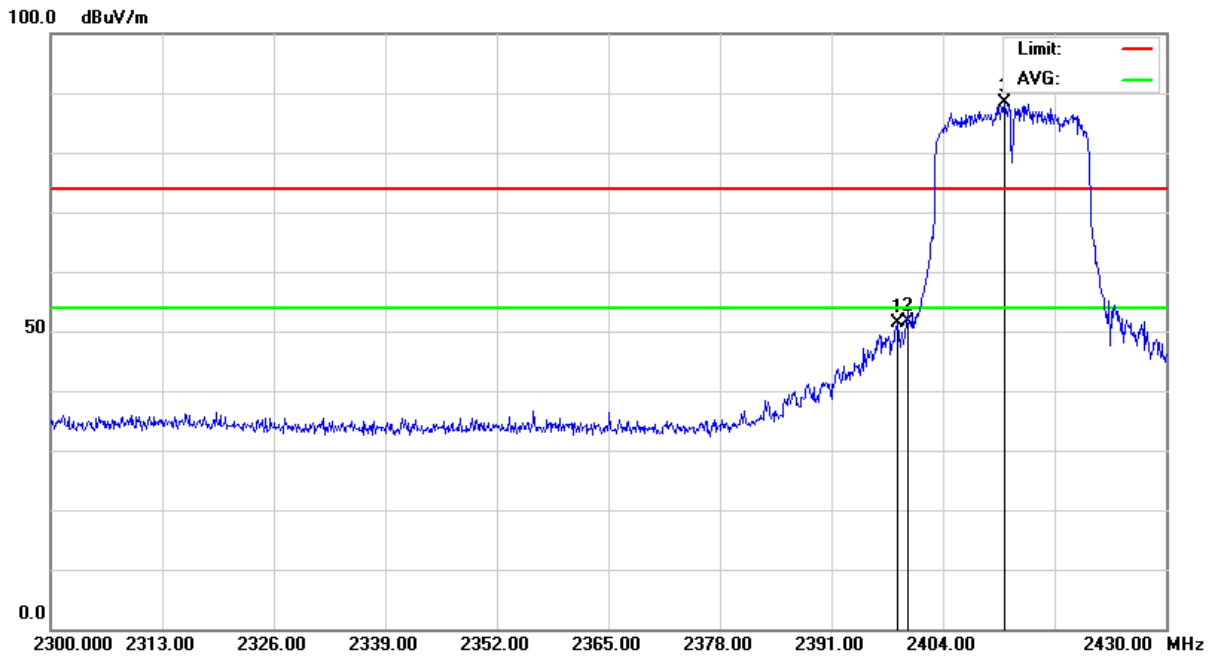
Reference No.: A17103001  
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## Below 2400MHz (n - HT20\_CH01)

Antenna Polarization : Horizontal



Antenna Polarization : Vertical





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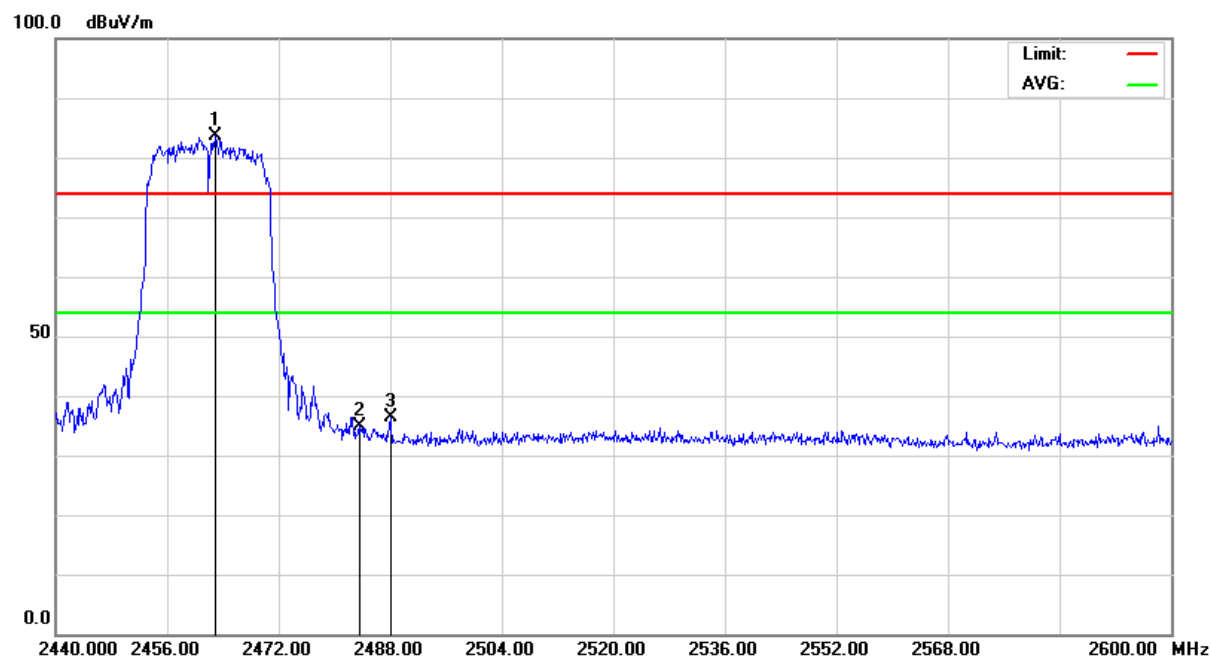
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# TEST REPORT

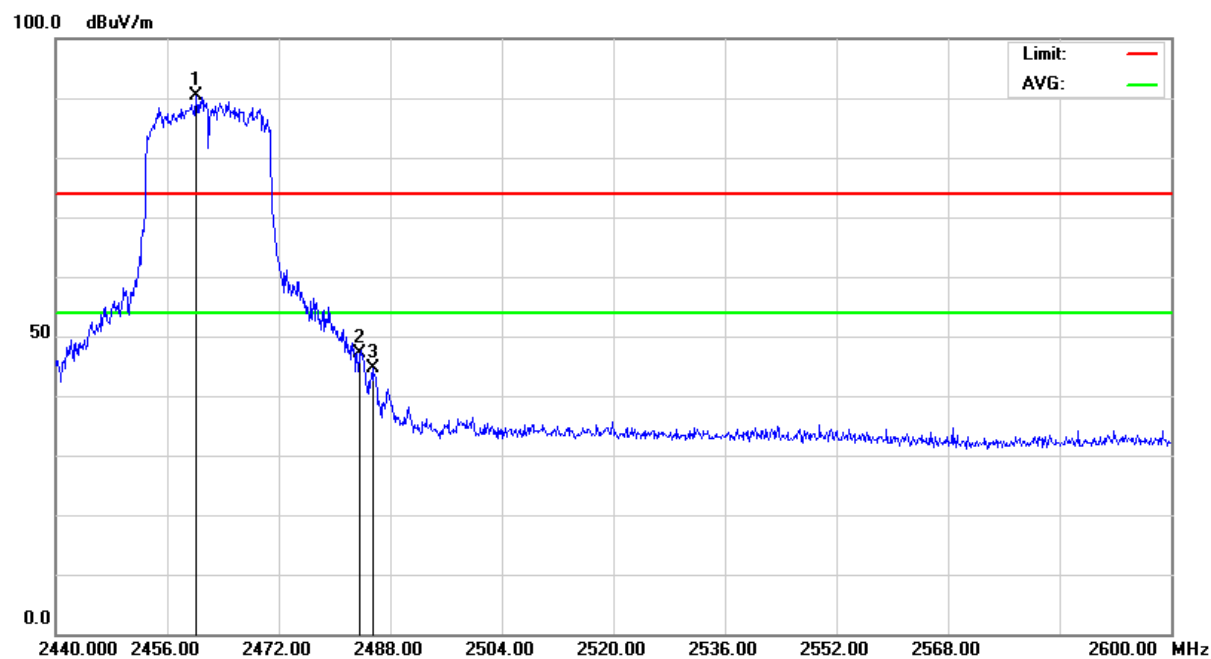
Reference No.: A17103001  
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### Above 2483.5MHz (n - HT20\_CH11)

Antenna Polarization : Horizontal



Antenna Polarization : Vertical



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Below 2400MHz (n - HT40\_CH03)

Temperature:	19 °C	Humidity:	72 %RH
Frequency Range:	2.30 GHz – 2.45 GHz	Tested Mode:	802.11n - HT40
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 14, 2017

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB/m)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dB)	
				PK	AV	PK	AV	PK	AV	PK	AV
2399.06	-31.26	28.38	H	43.21	32.77	40.33	29.89	74.00	54.00	-33.67	-24.11
2399.34	-31.26	28.38	V	51.78	41.29	48.90	38.41	74.00	54.00	-25.10	-15.59
2400.00	-31.26	28.38	H	43.09	32.51	40.21	29.63	74.00	54.00	-33.79	-24.37
2400.00	-31.26	28.38	V	50.75	40.28	47.87	37.40	74.00	54.00	-26.13	-16.60

Above 2483.5MHz (n - HT40\_CH09)

Temperature:	19 °C	Humidity:	72 %RH
Frequency Range:	2.43 GHz – 2.60 GHz	Tested Mode:	802.11n - HT40
Detector Type:	PK. and AV.	IF Bandwidth:	1 MHz
Tested By:	Richard Lin	Tested Date:	Dec. 14, 2017

Frequency (MHz)	Correct Factor (dB)	Ant. Fac. (dB/m)	Ant. Pol. (H/V)	Reading (dBuV)		Emission (dBuV/m)		Limit Line (dBuV/m)		Over Limit (dB)	
				PK	AV	PK	AV	PK	AV	PK	AV
2483.50	-31.19	28.48	H	34.63	24.13	31.92	21.42	74.00	54.00	-42.08	-32.58
2483.50	-31.19	28.48	V	44.59	34.02	41.88	31.31	74.00	54.00	-32.12	-22.69
2494.27	-31.18	28.49	H	37.68	27.19	34.99	24.50	74.00	54.00	-39.01	-29.50
2488.68	-31.19	28.49	V	45.05	34.56	42.35	31.86	74.00	54.00	-31.65	-22.14



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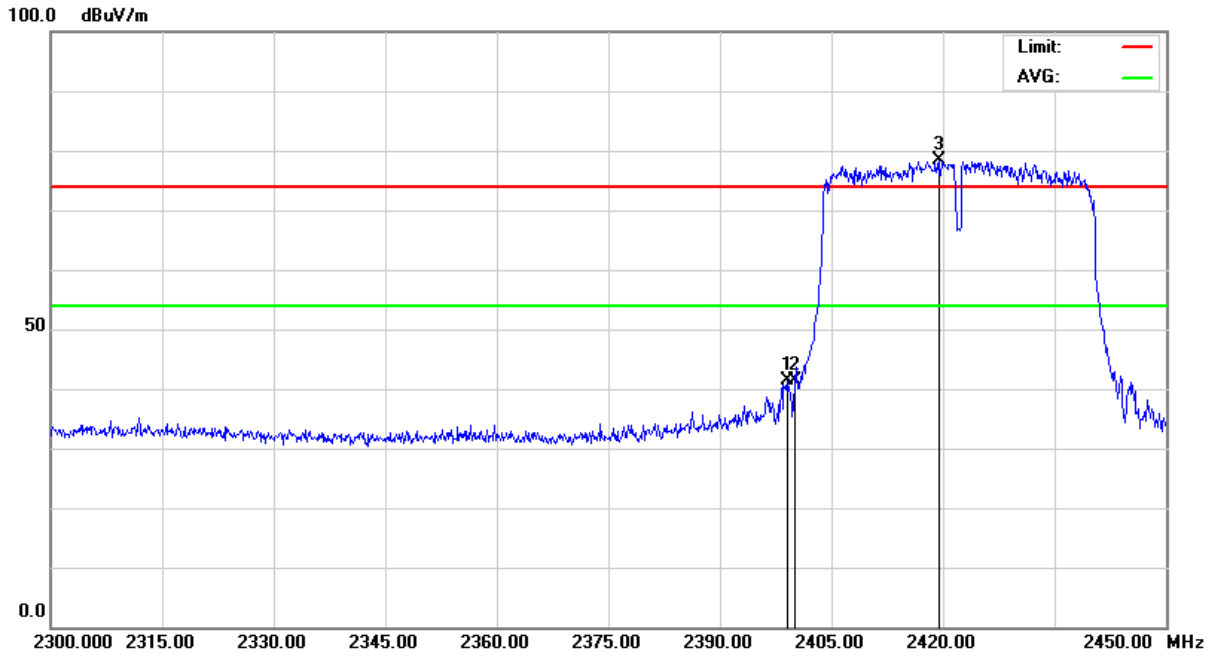
No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

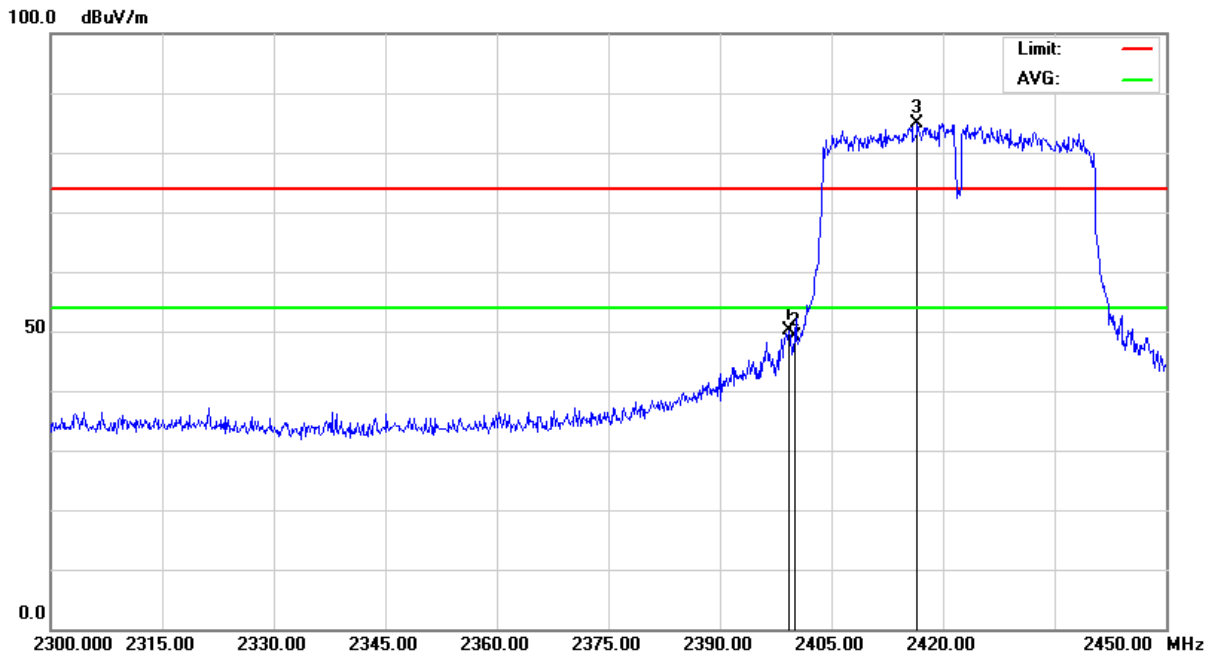
Reference No.: A17103001  
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## Below 2400MHz (n - HT40\_CH03)

Antenna Polarization : Horizontal



Antenna Polarization : Vertical







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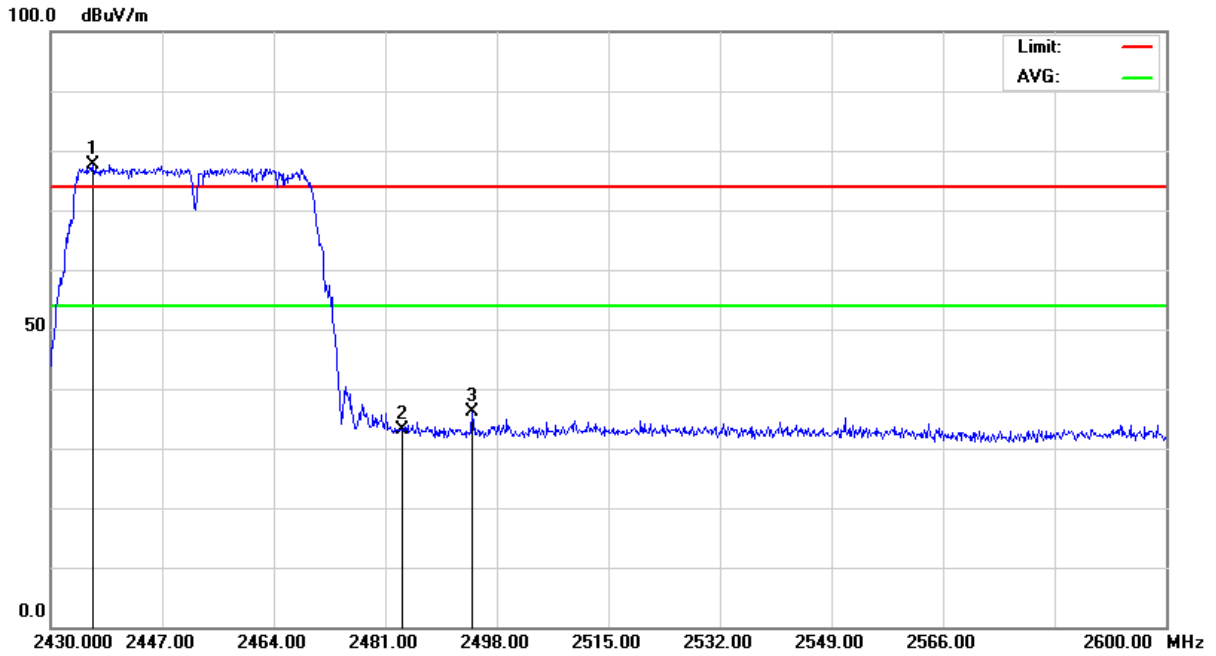
No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

# TEST REPORT

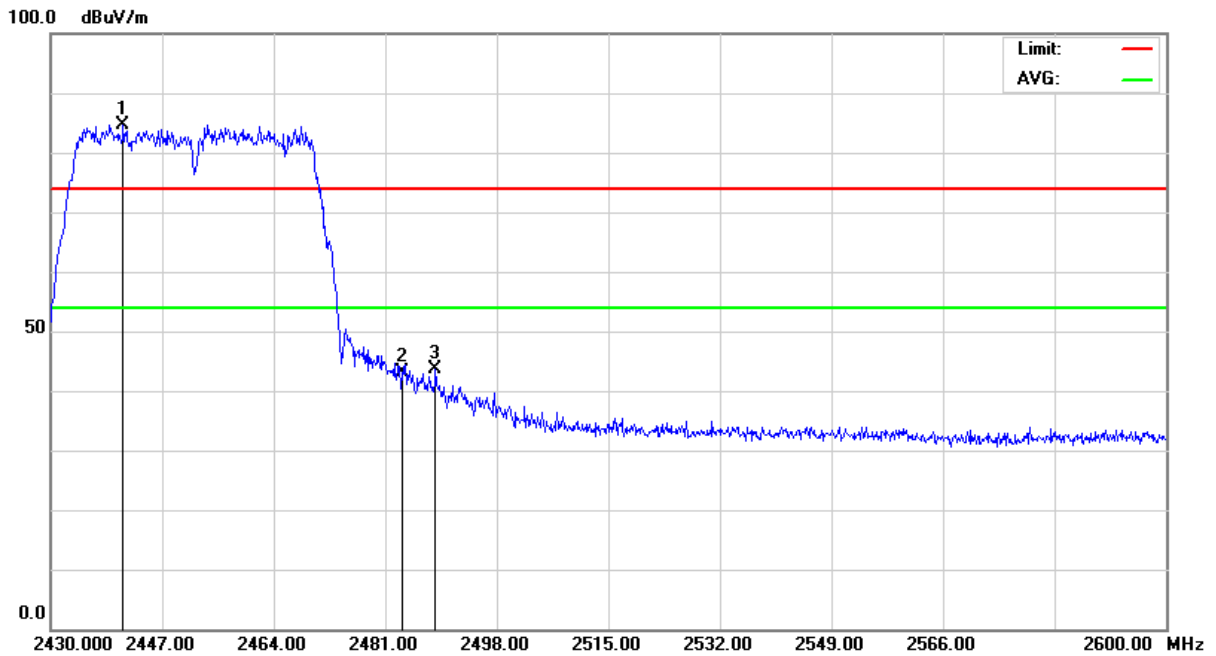
Reference No.: A17103001  
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### Above 2483.5MHz (n - HT40\_CH09)

Antenna Polarization : Horizontal



Antenna Polarization : Vertical





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## 4.6 POWER SPECTRAL DENSITY TEST

### 4.6.1 LIMIT

FCC Part15, Subpart C Section 15.247(e).

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.

FREQUENCY RANGE	Limit
2.40 - 2.4835 GHz	8 dBm / 3 kHz

The signals are correlated.

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;

Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less for 20-MHz channel widths with  $N_{ANT} \geq 5$ .

For power measurements on all other devices: Array Gain =  $10 \log(N_{ANT}/N_{SS})$  dB.

### NOTE:

- Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain =  $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 5.01\text{dBi} < 6\text{dBi}$ , so the power density limit shall not be reduced.



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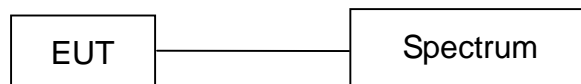
## 4.6.2 TEST EQUIPMENT

The following test equipment was used during the radiated emission test:

EQUIPMENT/FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/SERIAL#	DUE DATE OF CAL. & CAL. CENTER
EMI TEST RECEIVER (INCLUDE SPECTRUM ANALYZER)	9 KHz ~ 6 GHz	ROHDE & SCHWARZ	ESL /100176	MAY 21, 2018 ETC

**NOTE:** The calibration interval of the above test equipment is one year and the calibrations are traceable to NML/ROC and NIST/USA.

## 4.6.3 TEST SET-UP



The EUT was connected to a spectrum through a 50Ω RF cable.

## 4.6.4 TEST PROCEDURE

The EUT was operating in transmitter mode and could be controlled its channel.

Printed out the test result from the spectrum by hard copy function.

## 4.6.5 EUT OPERATING CONDITION

1. Set the EUT under continuous transmission condition.
2. The EUT was set to the highest available power level.



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# TEST REPORT

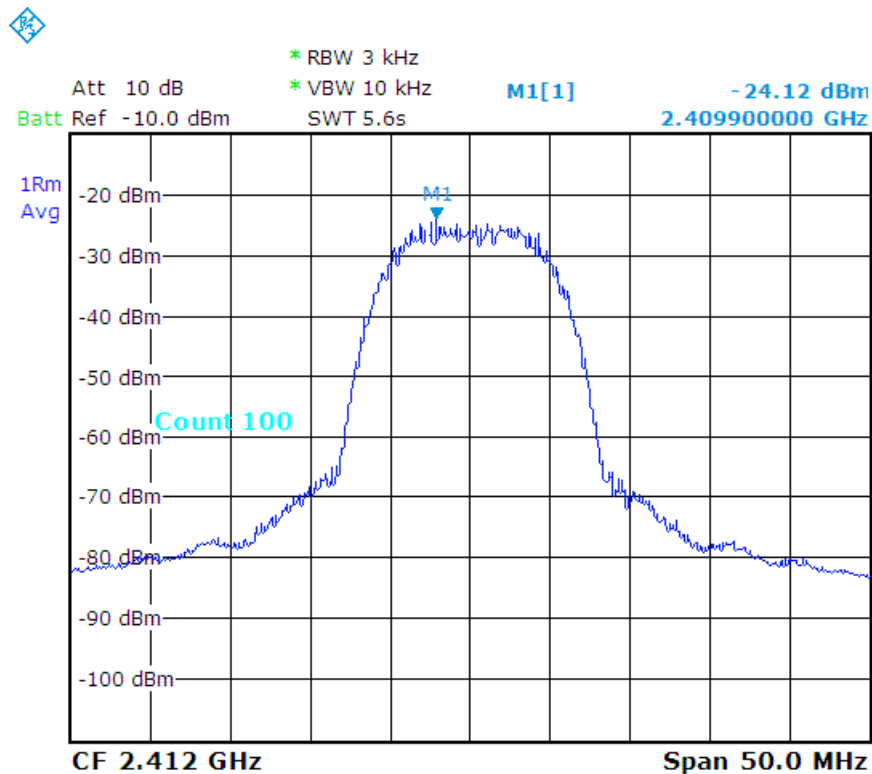
Reference No.: A17103001  
Report No.: FCCA17103001-02  
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### 4.6.6 TEST RESULT

Temperature:	20 °C	Humidity:	54 %RH
Detector:	RMS	Test Mode:	802.11b
RBW:	3 kHz	VBW:	10 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)
CH01	2412	-24.12	8
CH06	2437	-22.52	8
CH11	2462	-25.57	8

b\_CH01 :





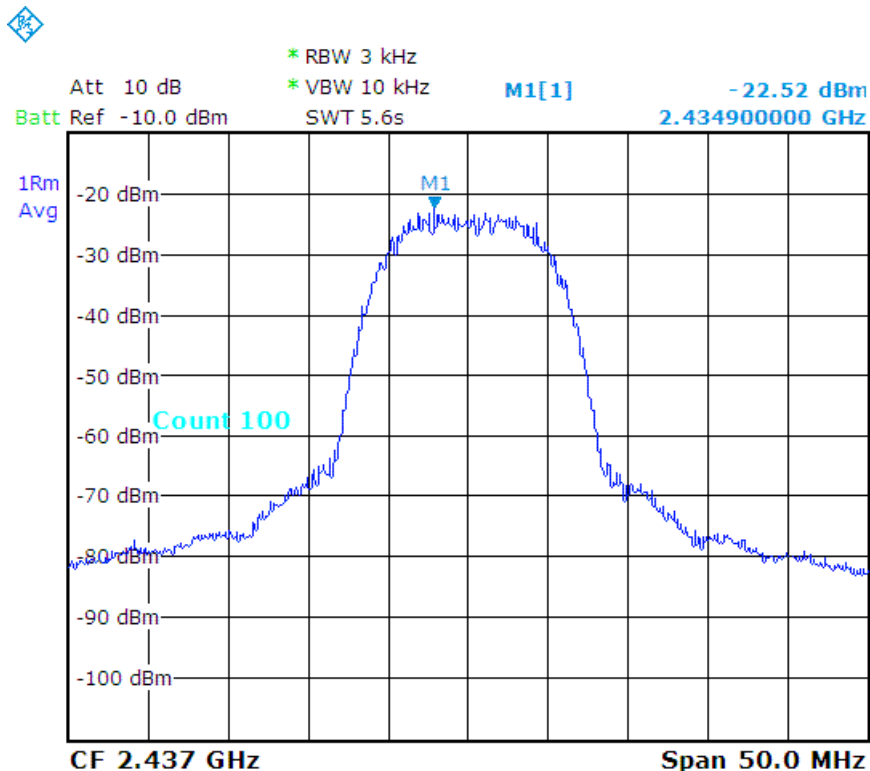
**Spectrum Research & Testing Lab., Inc.**

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

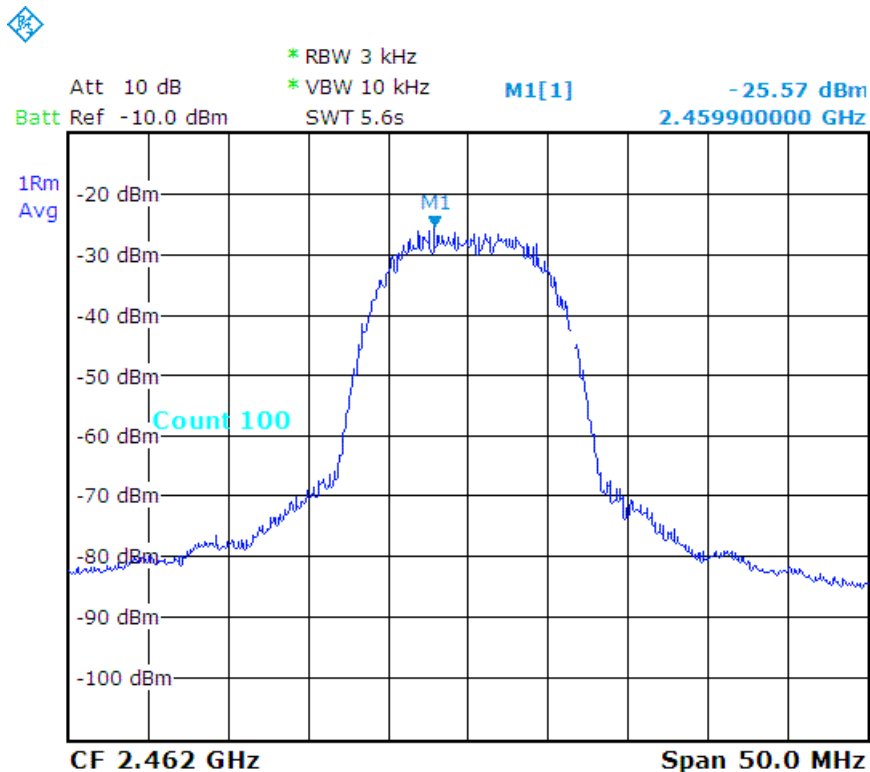
# TEST REPORT

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b\_CH06 :



b\_CH11 :





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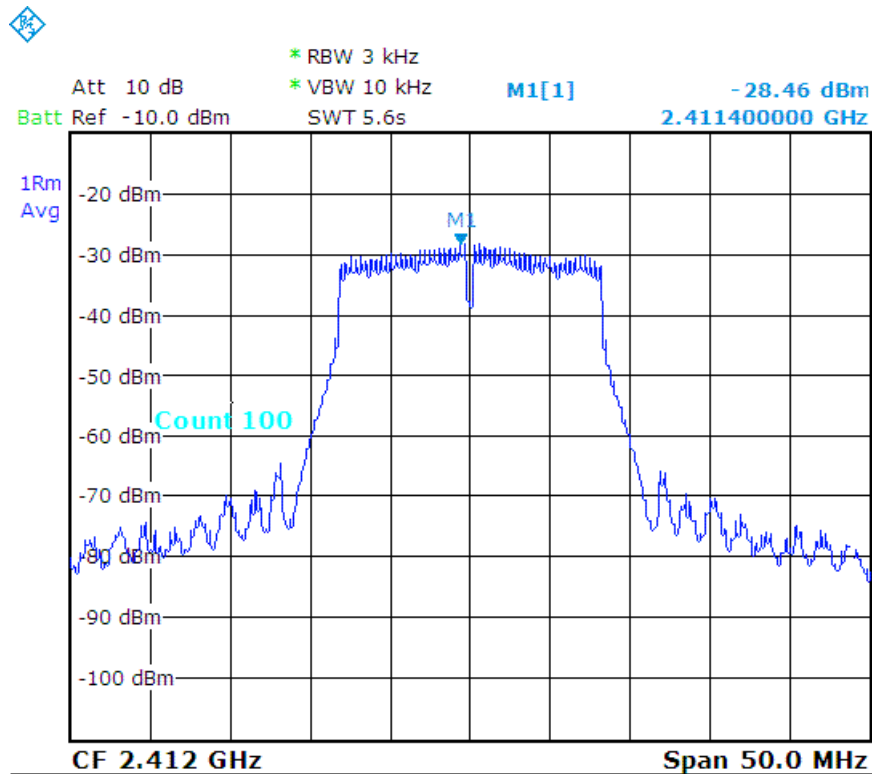
# TEST REPORT

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Temperature:	20 °C	Humidity:	54 %RH
Detector:	RMS	Test Mode:	802.11g
RBW:	3 kHz	VBW:	10 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)
CH01	2412	-28.46	8
CH06	2437	-28.91	8
CH11	2462	-30.06	8

g\_CH01 :





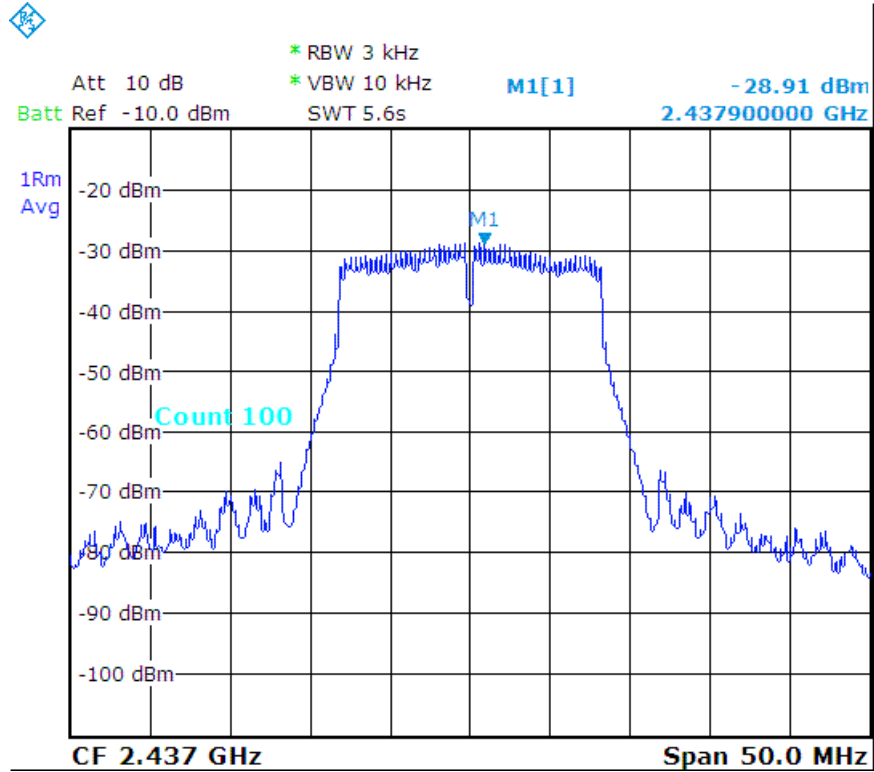
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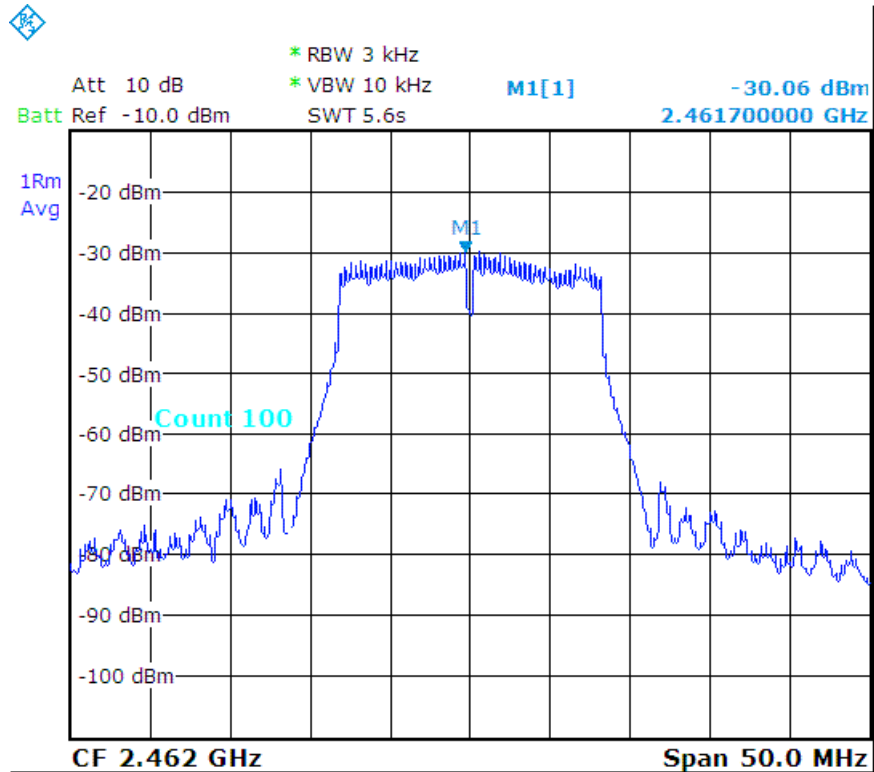
# TEST REPORT

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g\_CH06 :



g\_CH11 :





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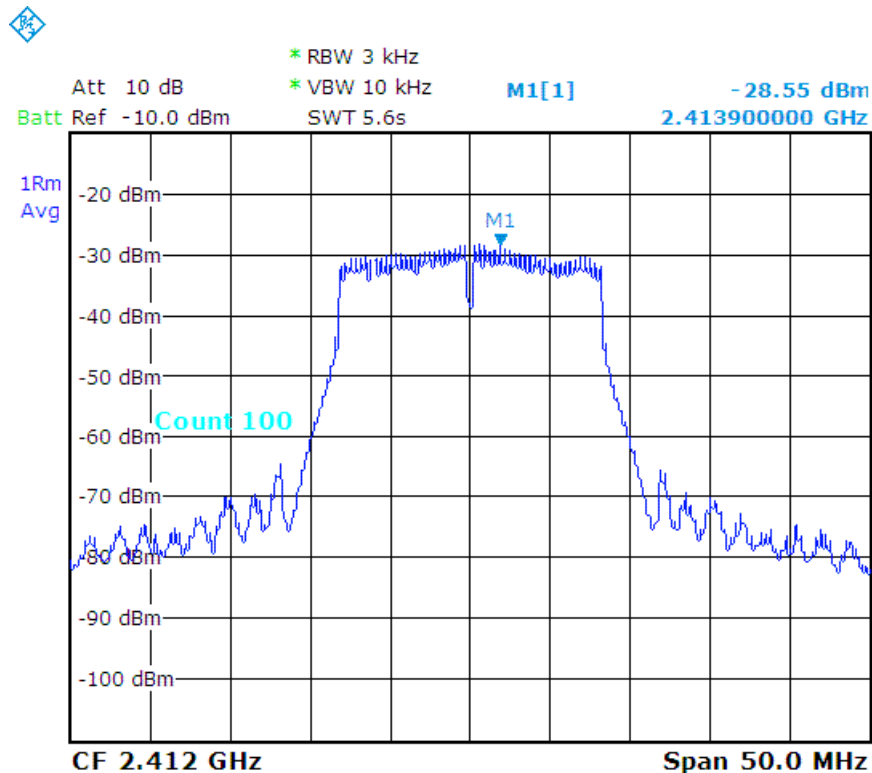
# TEST REPORT

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Temperature:	20 °C	Humidity:	54 %RH
Detector:	RMS	Test Mode:	802.11n - HT20
RBW:	3 kHz	VBW:	10 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	Power Spectral Density (dBm/3kHz)		Maximum Limit (dBm/3kHz)
		Measure	Final	
CH01_ANT1	2412	-28.55	-25.65	8
CH01_ANT2	2412	-28.77		8
CH06_ANT1	2437	-28.67	-25.01	8
CH06_ANT2	2437	-27.46		8
CH11_ANT1	2462	-31.78	-29.37	8
CH11_ANT2	2462	-33.08		8

n - HT20\_CH01\_ANT1 :







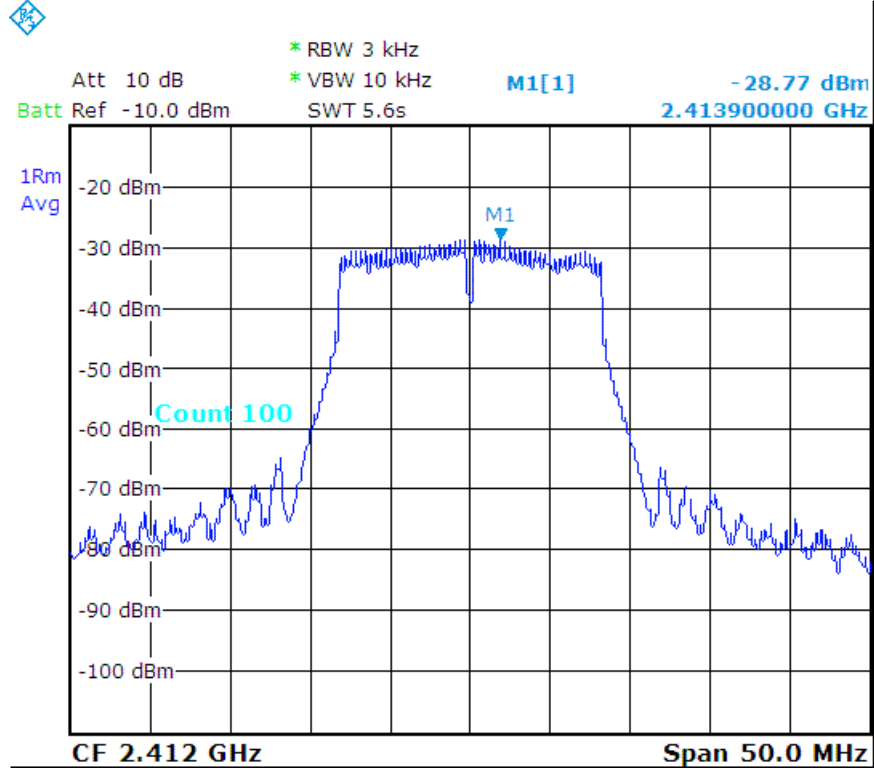
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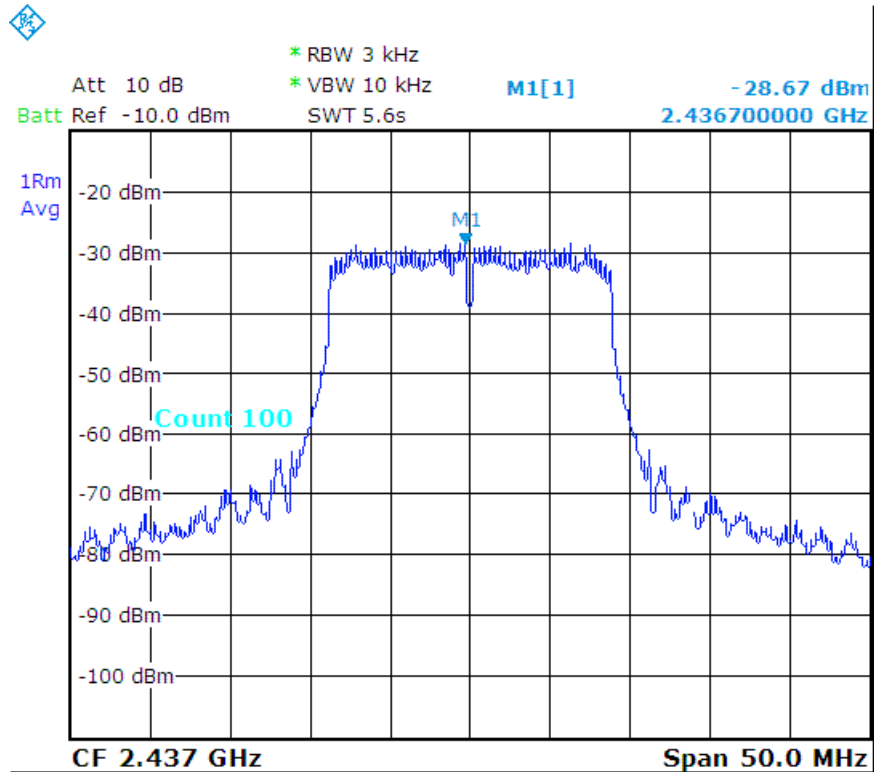
# TEST REPORT

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n - HT20\_CH01\_ANT2 :



n - HT20\_CH06\_ANT1 :





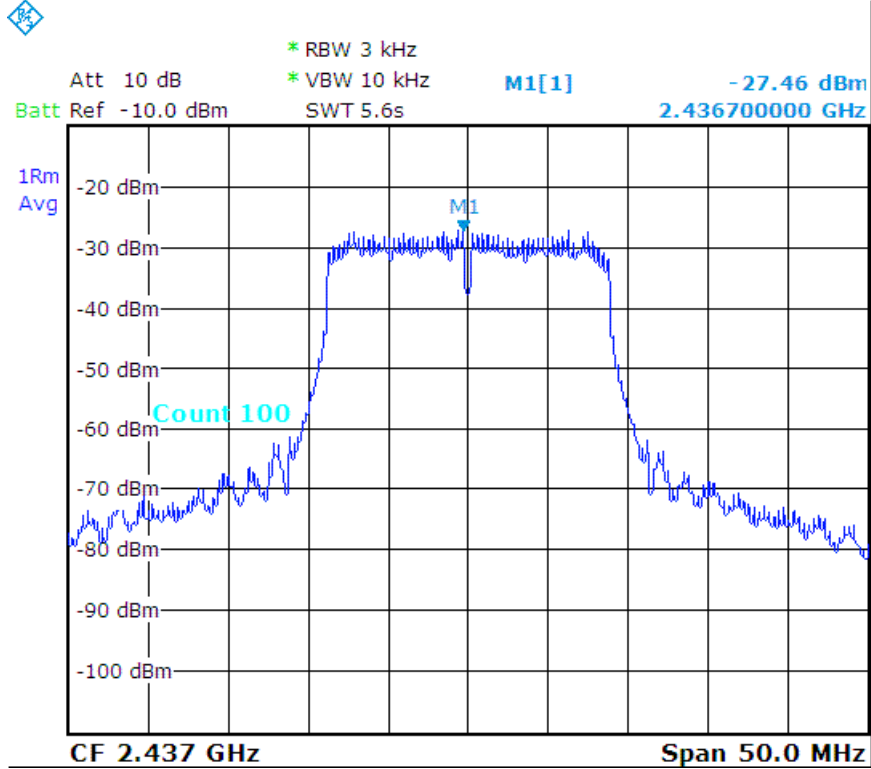
**Spectrum Research & Testing Lab., Inc.**

No.167, Ln. 780, Shan-Tong Rd., Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

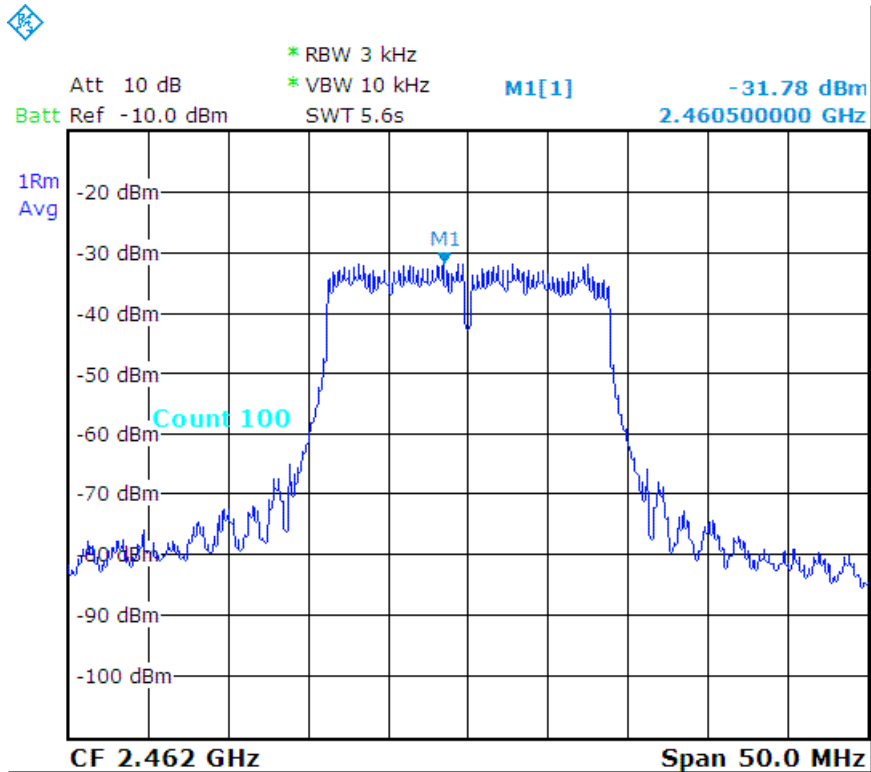
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n - HT20\_CH06\_ANT2 :



n - HT20\_CH11\_ANT1 :





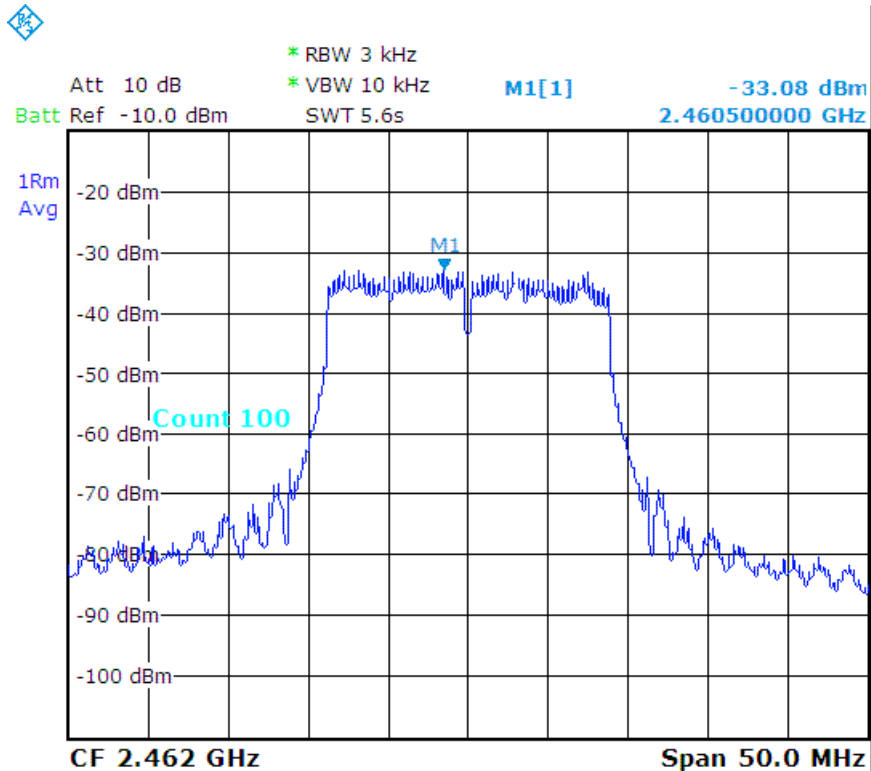
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n - HT20\_CH11\_ANT2 :





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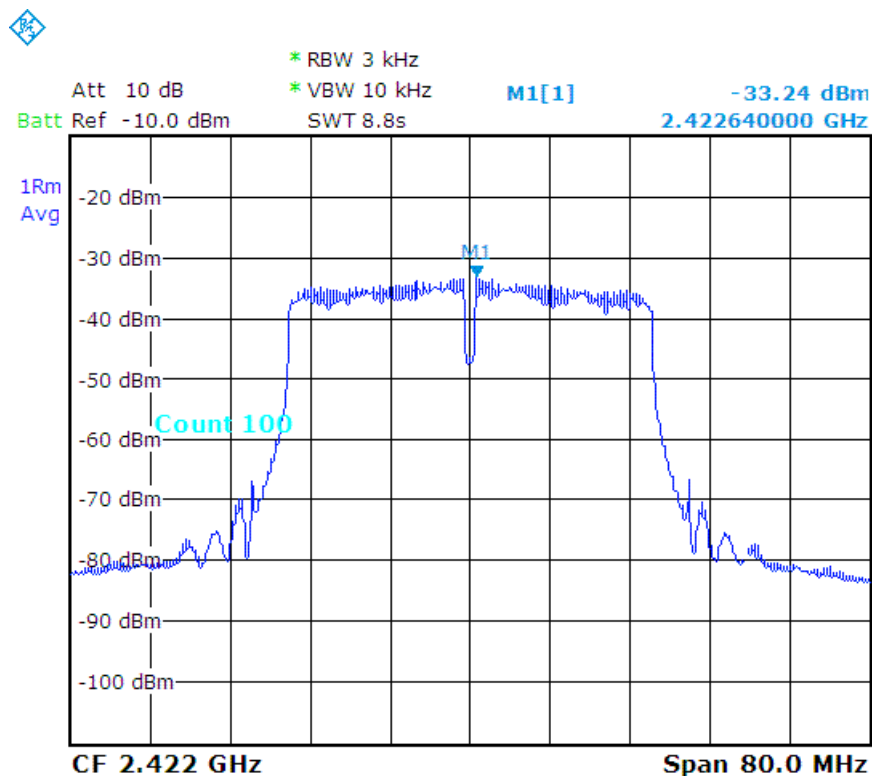
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Temperature:	20 °C	Humidity:	54 %RH
Detector:	RMS	Test Mode:	802.11n - HT40
RBW:	3 kHz	VBW:	10 kHz
Tested By:	Richard Lin	Tested Date:	Dec. 12, 2017

Channel Number	Channel Frequency (MHz)	Power Spectral Density (dBm/3kHz)		Maximum Limit (dBm/3kHz)
		Measure	Final	
CH03_ANT1	2422	-33.24	-30.51	8
CH03_ANT2	2422	-33.81		8
CH06_ANT1	2437	-33.54	-30.89	8
CH06_ANT2	2437	-34.29		8
CH09_ANT1	2452	-34.02	-31.44	8
CH09_ANT2	2452	-34.92		8

n - HT40\_CH03\_ANT1 :





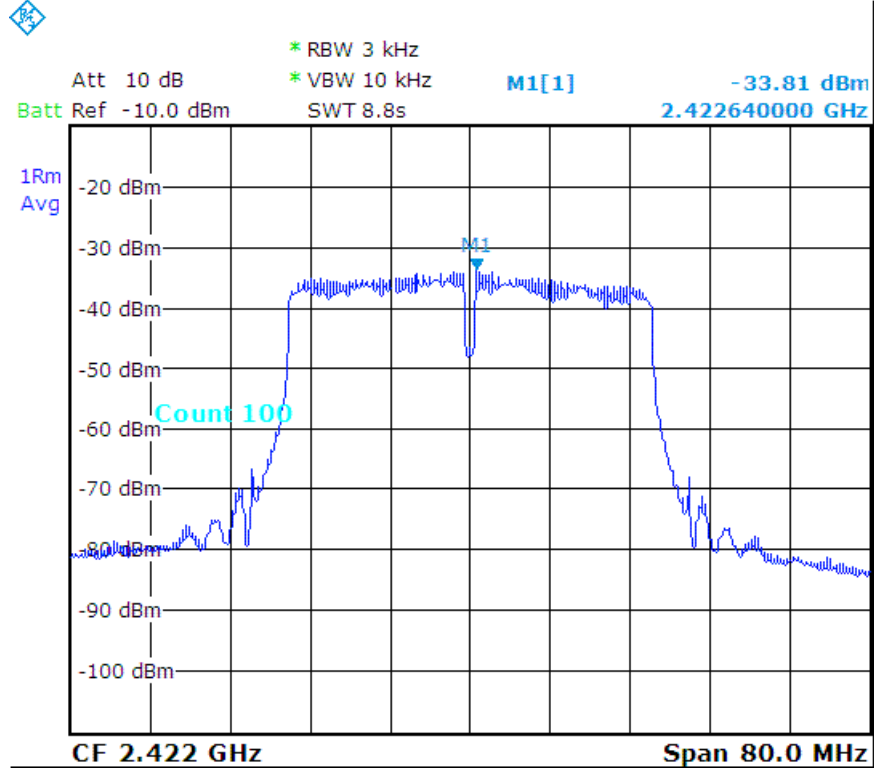
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

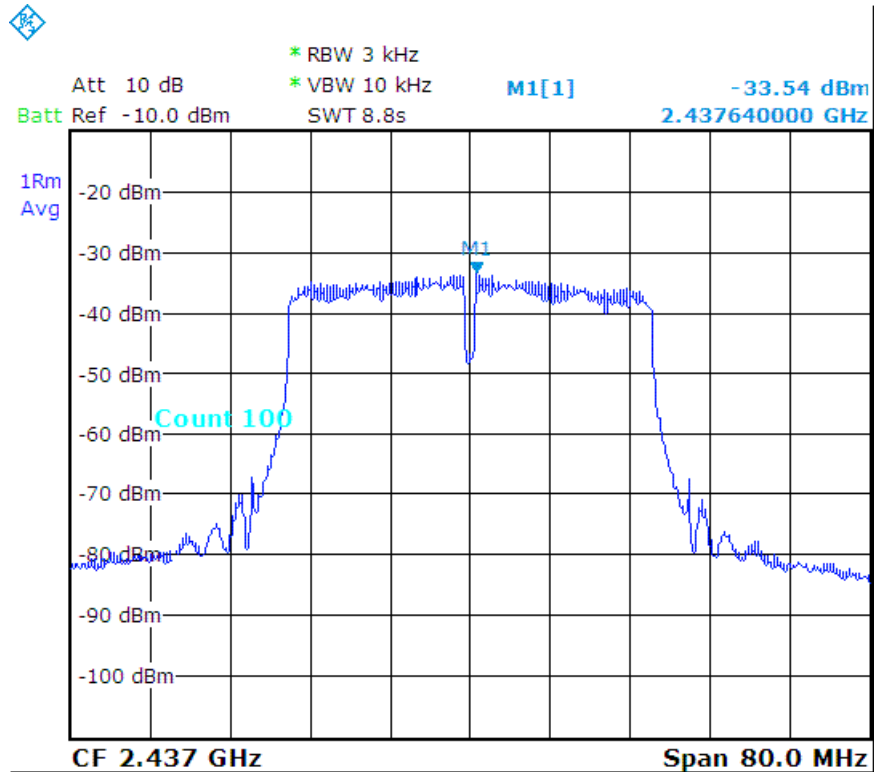
# TEST REPORT

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n - HT40\_CH03\_ANT2 :



n - HT40\_CH06\_ANT1 :





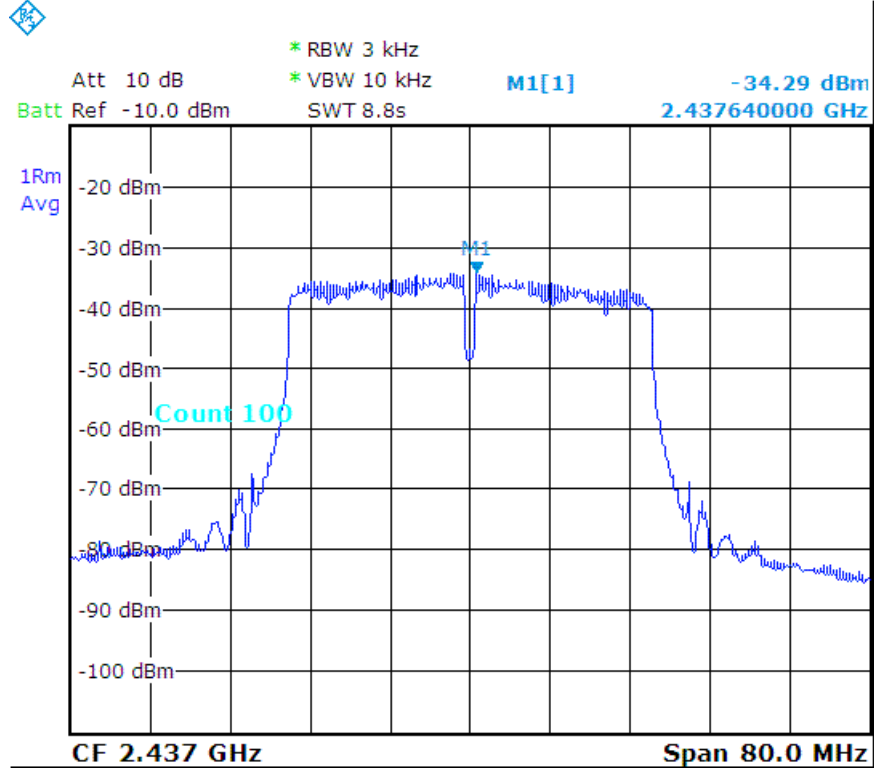
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No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

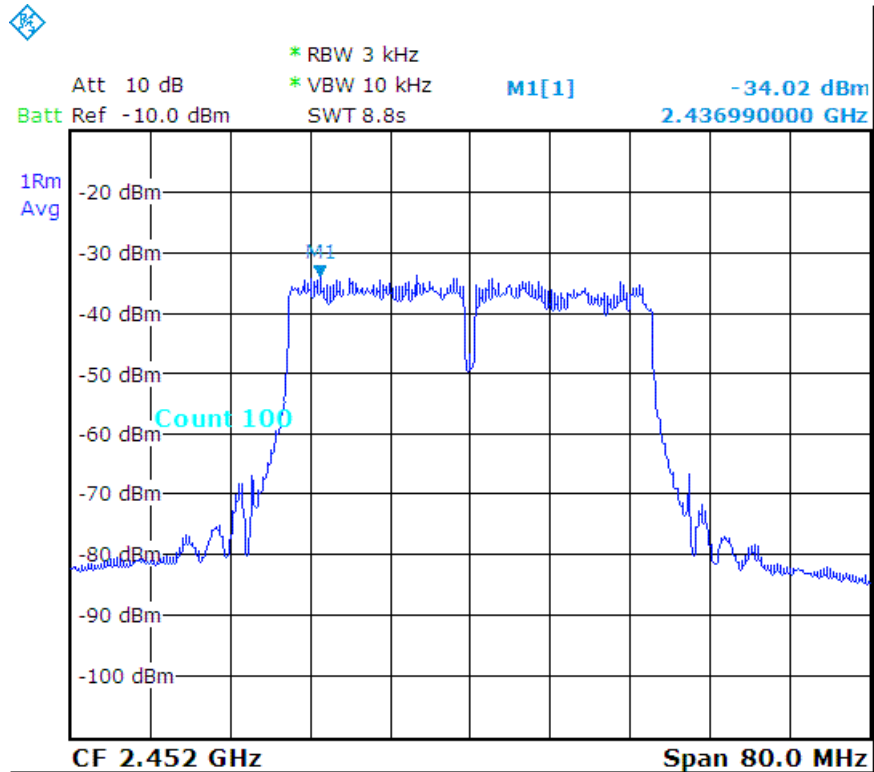
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n - HT40\_CH06\_ANT2 :



n - HT40\_CH09\_ANT1 :





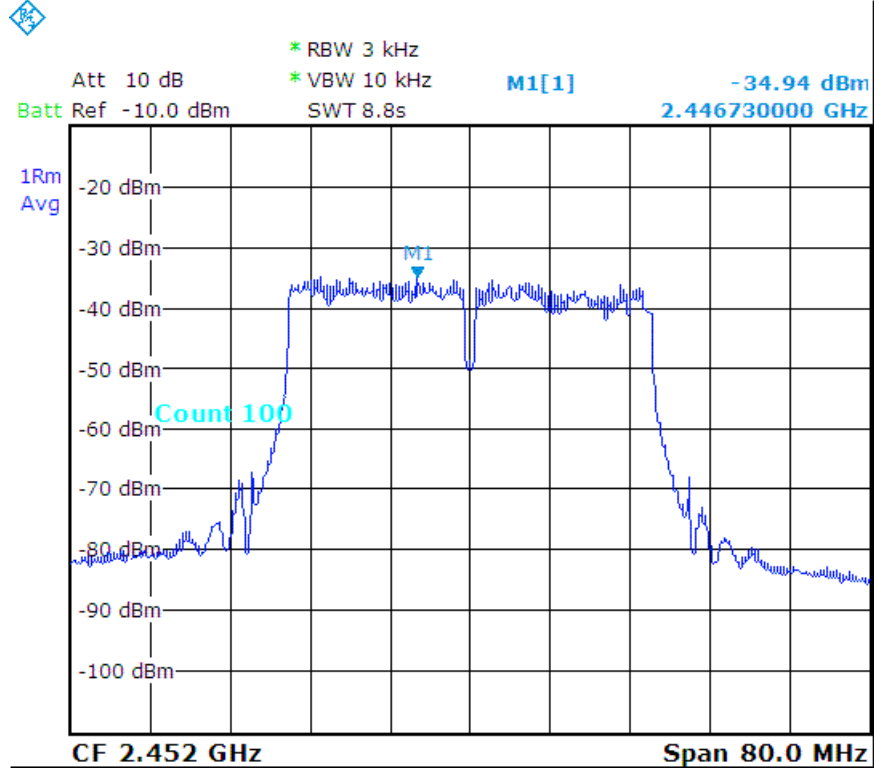
**Spectrum Research & Testing Lab., Inc.**

No.167,Ln. 780, Shan-Tong Rd.,Ling 8, Shan-Tong Li, Chung-Li Dist., Taoyuan City 320, Taiwan (R.O.C.)

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n - HT40\_CH09\_ANT2 :





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## 5. Antenna application

### 5.1 Antenna requirement

The EUT's antenna is met the requirement of FCC Part 15C section 15.203 and 15.204.

FCC Part 15C section 15.247 requirement:

Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

### 5.2 Result

The EUT's antenna used a Printed Antenna. Gain of 2.0 dBi (ANT#1), 2.0 dBi (ANT#2), that meet the requirement.





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## 6. TERMS OF ABBREVIATION

AV.	Average detection
AZ(°)	Turn table azimuth
Correct.	Correction
EL(m)	Antenna height (meter)
EUT	Equipment Under Test
Horiz.	Horizontal direction
LISN	Line Impedance Stabilization Network
NSA	Normalized Site Attenuation
Q.P.	Quasi-peak detection
SRT Lab	Spectrum Research & Testing Laboratory, Inc.
Vert.	Vertical direction