



This report conc	erns (check one): ⊠Original Grant ⊡Class II Change
Project No. Equipment Test Model Serial Model Applicant Address	 1609061 In-Wall AP EW-7476IWC IAP1200 EDIMAX TECHNOLOGY CO., LTD. No.3, Wu-Chuan 3rd Road, Wu-Ku Industrial Park, New Taipei City, Taiwan
Date of Receipt Date of Test Issued Date Tested by	 Sep. 20, 2016 Sep. 20, 2016 ~ Nov. 10, 2016 Nov. 14, 2016 BTL Inc.
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Authorized Sign	atory :(Andy Chiu)



Declaration

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Table of Contents	Page
1. CERTIFICATION	6
2 . SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	8
3 . GENERAL INFORMATION	10
3.1 GENERAL DESCRIPTION OF EUT	10
3.2 DESCRIPTION OF TEST MODES	12
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	13
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TE	STED 14
3.5 DESCRIPTION OF SUPPORT UNITS	14
4. EMC EMISSION TEST	15
4.1 CONDUCTED EMISSION MEASUREMENT	15
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	15
4.1.3 DEVIATION FROM TEST STANDARD	15
4.1.4 TEST SETUP	16
4.1.5 EUT OPERATING CONDITIONS	16
4.1.6 EUT TEST CONDITIONS	16
	10
4.2 RADIATED EMISSION MEASUREMENT 4.2.1 BADIATED EMISSION LIMITS	17
4.2.2 TEST PROCEDURE	18
4.2.3 DEVIATION FROM TEST STANDARD	18
4.2.4 TEST SETUP	19
4.2.5 EUT OPERATING CONDITIONS	20
4.2.7 TEST RESULTS (9KHZ TO 30MHZ)	20
4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)	21
4.2.9 TEST RESULTS (ABOVE 1000 MHZ)	21
5 . BANDWIDTH TEST	22
5.1 APPLIED PROCEDURES	22
5.1.1 TEST PROCEDURE	22
5.1.2 DEVIATION FROM STANDARD 5.1.3 TEST SETUP	22
5.1.4 EUT OPERATION CONDITIONS	22
5.1.5 EUT TEST CONDITIONS	22
5.1.6 TEST RESULTS	22
6 . MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST	23





Table of Contents	Page
6.1 APPLIED PROCEDURES / LIMIT	23
6.1.1 TEST PROCEDURE	23
6.1.2 DEVIATION FROM STANDARD 6.1.3 TEST SETUP	23
6.1.4 EUT OPERATION CONDITIONS	23
6.1.5 EUT TEST CONDITIONS	23
6.1.6 TEST RESULTS	23
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	24
7.1 APPLIED PROCEDURES / LIMIT	24
7.1.1 TEST PROCEDURE	24
7.1.2 DEVIATION FROM STANDARD	24
7.1.4 FUT OPERATION CONDITIONS	24 24
7.1.5 EUT TEST CONDITIONS	24
7.1.6 TEST RESULTS	24
8 . POWER SPECTRAL DENSITY TEST	25
8.1 APPLIED PROCEDURES / LIMIT	25
8.1.1 TEST PROCEDURE	25
8.1.2 DEVIATION FROM STANDARD	25
8.1.4 FUT OPERATION CONDITIONS	25 25
8.1.5 EUT TEST CONDITIONS	25
8.1.6 TEST RESULTS	25
9 . MEASUREMENT INSTRUMENTS LIST	26
10 . EUT TEST PHOTO	28
ATTACHMENT A - CONDUCTED EMISSION	32
ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)	35
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)	40
ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)	43
ATTACHMENT E - BANDWIDTH	92
ATTACHMENT F – MAXIMUM PEAK CONDUCTED OUTPUT POWER	109
ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION	114
ATTACHMENT H - POWER SPECTRAL DENSITY	155





REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1609061	Original Issue.	Nov. 14, 2016





1. CERTIFICATION

Equipment	:	In-Wall AP
Brand Name	:	EDIMAX
Test Model	:	EW-7476IWC
Serial Model	:	IAP1200
Applicant	:	EDIMAX TECHNOLOGY CO., LTD.
Manufacturer	:	EDIMAX TECHNOLOGY CO., LTD.
Address	:	No.3, Wu-Chuan 3rd Road, Wu-Ku Industrial Park, New Taipei City, Taiwan
Date of Test	:	Sep. 20, 2016 ~ Nov. 10, 2016
Test Sample	:	Production Sample
Standard(s)	:	FCC Part15, Subpart C:(15.247) / ANSI C63.10-2013

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1609061) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).



2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C					
Standard(s) Section	Test Item	Judgment	Remark		
15.207	Conducted Emission	PASS			
15.247(d)	Antenna conducted Spurious Emission	PASS			
15.247(a)(2)	6dB Bandwidth	PASS			
15.247(b)(3)	Peak Output Power	PASS			
15.247(e)	Power Spectral Density	PASS			
15.203	Antenna Requirement	PASS			
15.209/15.205	Transmitter Radiated Emissions	PASS			

NOTE:

(1)" N/A" denotes test is not applicable in this test report.



2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

Conducted emission Test:

C05: (VCCI RN: C-4742; FCC RN:965108; FCC DN:TW1082) No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Radiated emission Test (Below 1 GHz):

CB15: (FCC RN:674415; FCC DN:TW0659)

No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Radiated emission Test (Above 1 GHz):

CB15: (FCC RN:674415; FCC DN:TW0659) No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

A. Conducted emission test:

Test Site	Method	Measurement Frequency Range	U,(dB)
C05	CISPR	150 kHz ~ 30MHz	3.06

B. Radiated emission test:

Test Site	Method	Measurement Frequency Range	U,(dB)
CB15		9kHz ~ 150kHz	2.96
(3m)	CISER	150kHz ~ 30MHz	2.74

Test Site	Method	Measurement Frequency Range		U,(dB)
CB15 (3m)	CISPR	30MHz ~ 200MHz	V	4.76
		30MHz ~ 200MHz	Н	4.28
		200MHz ~ 1,000MHz	V	5.08
		200MHz ~ 1,000MHz	Н	4.50

Test Site	Method	Measurement Frequency Range		U,(dB)
CB15		1GHz ~ 6GHz	V	4.48
		1GHz ~ 6GHz	Н	4.50
(3m)	CISPR	6GHz ~ 18GHz	V	4.30
		6GHz ~ 18GHz	Н	4.14

Test Site	Method	Measurement Frequency Range	U,(dB)
CB15		18 ~ 26.5 GHz	4.72
(1m)	CISER	26.5 ~ 40 GHz	5.20





Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR} , as follows:

Conducted Disturbance (mains port) – 150 kHz - 30 MHz: 3.6 dBRadiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz - 1000 MHz: 5.2 dB

It can be seen that our U_{lab} values are smaller than U_{CISPR} .

Note: unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	In-Wall AP	
Brand Name	EDIMAX	
Test Model	EW-7476IWC	
Serial Model	IAP1200	
Model Difference	For marketing use only.	
EUT Power Rating	I/P: DC 48V via PoE.	
	Operation Frequency	2412~2462 MHz
Product Description	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM
	Bit Rate of Transmitter	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n: 300 Mbps
	Output Power (Max.)	802.11b: 22.84 dBm 802.11g: 25.85 dBm 802.11n(20MHz): 25.77 dBm 802.11n(40MHz): 24.97 dBm

Note:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 2. Channel List:

	CH01 – CH11 for 802.11b, 802.11g, 802.11n(20MHz) CH03 – CH09 for 802.11n(40MHz)						
Channel	Channel Frequency (MHz) Channel Frequency (MHz) Channel Frequency (MHz) Channel (MHz) Channel (MHz) Channel (MHz)						
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	PIFA	IPEX	2.08
2	N/A	N/A	PIFA	IPEX	1.94

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and two receivers (2T2R).

(2) Directional gain = 10 log(((10⁽Ant 1/20)+10⁽Ant 2/20))²)/2) = 5.02 dBi. Reduced value = 0 dB. (5.02 dBi < 6 dBi)



4.

ΒĨL

Operating Mode	2TX
802.11b	V (ANT 1 + ANT 2)
802.11g	V (ANT 1 + ANT 2)
802.11n(20MHz)	V (ANT 1 + ANT 2)
802.11n(40MHz)	V (ANT 1 + ANT 2)



3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description	
Mode 1	TX B MODE CHANNEL 01/06/11	
Mode 2	TX G MODE CHANNEL 01/06/11	
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11	
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09	
Mode 5	Normal Link	

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test			
Final Test Mode Description			
Mode 5	Normal Link		

For Radiated Test			
Final Test Mode Description			
Mode 1	TX B MODE CHANNEL 01/06/11		
Mode 2	TX G MODE CHANNEL 01/06/11		
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11		
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09		

Note:

(1) The measurements are performed at the high, middle, low available channels.

- (2) 802.11b mode: DBPSK (1Mbps) 802.11g mode: OFDM (6Mbps) 802.11n HT20 mode : BPSK (13Mbps) 802.11n HT40 mode : BPSK (27Mbps) For radiated emission tests, the highest output powers were set for final test.
 (3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.
- (4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.



3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

Test software version	QA ⁻	Tool_v1.0.6.2 (MT762	20A)
Frequency (MHz)	2412	2437	2462
802.11b	15	19	16
802.11g	11	1C	15
802.11n (20MHz)	0F	1C	13
Frequency	2422	2437	2452
802.11n (40MHz)	0C	16	0F





3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.
Α	POE	N/A	N/A	N/A	N/A
В	POE Adapter	DVE	DSA-48PFA-480204801 00	N/A	N/A
С	Notebook PC	acer	MS2392	DOC	X450JN-0023D 4200H
D	AC Adapter	acer	PA-1450-26	DOC	N/A

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	5.0m	RJ45
2	NO	NO	5.0m	RJ45
3	NO	NO	1.5m	Power Cable
4	NO	NO	1.0m	Power Cable



4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Frequency of Emission (MHz)	Conducted Limit (dBµV)		
	Quasi-peak	Average	
0.15 -0.50	66 to 56*	56 to 46*	
0.50 -5.0	56	46	
5.0 -30.0	60	50	

Note:

- (1) The limit of " * " decreases with the logarithm of the frequency
- (2) The test result calculated as following:
 - Measurement Value = Reading Level + Correct Factor
 - Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
 - Margin Level = Measurement Value Limit Value

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

4.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation







4.1.5 EUT OPERATING CONDITIONS

The EUT was placed on the test table and programmed in normal function.

4.1.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

4.1.7 TEST RESULTS

Please refer to the Attachment A.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	(dBuV/m) (at 3 meters)		
	PEAK	AVERAGE	
Above 1000	74	54	

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

 (4) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use) Margin Level = Measurement Value - Limit Value

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW	1MHz / 3MHz for Peak,
(Emission in restricted band)	1MHz / 1/T for Average



Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

4.2.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. For the actual test configuration, please refer to the related Item -EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

No deviation



4.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz









4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.2.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 65% Test Voltage: DC 48V



4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Attachment B

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment D.

Remark:

(1) No limit: This is fundamental signal, the judgment is not applicable. For fundamental signal judgment was referred to Peak output test.



5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES

FCC Part15 (15.247) , Subpart C				
Section Test Item Frequency Range (MHz) Result				
15.247(a)(2) Bandwidth 2400-2483.5 PASS				

5.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

5.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 48V

5.1.6 TEST RESULTS

Please refer to the Attachment E.



6. MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C						
Section	Test Item	Limit	Frequency Range (MHz)	Result		
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm	2400-2483.5	PASS		

6.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- b. The maximum peak conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance v03r04.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 48V

6.1.6 TEST RESULTS

Please refer to the Attachment F.



7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

7.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.
- c. Offset=antenna gain+cable loss

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 48V

7.1.6 TEST RESULTS

Please refer to the Attachment G.



8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C						
Section	Test Item	Limit	Frequency Range (MHz)	Result		
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS		

8.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=10KHz, Sweep time = Auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP

EUT	SPECTRUM	
	ANALYZER	

8.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 48V

8.1.6 TEST RESULTS

Please refer to the Attachment H.



9. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Jan. 26, 2017		
2	Test Cable	TIMES	CFD300-NL	C02	Jun. 15, 2017		
3	EMI Test Receiver	R&S	ESR7	101433	Dec. 10, 2016		
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A		

	Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Trilog-Broadband Antenna	Schwarzbeck	VULB9168-352	9168-352	Feb. 04, 2017	
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-546	Nov. 05, 2017	
3	Pre-Amplifier	HP	8447D	2944A08891	Mar. 09 2017	
4	Pre-Amplifier	Agilent	8449B	3008A02331	Jan. 24, 2017	
5	Test Cable	EMCI	EMC8D-NM-NM -8000	150301	Mar. 09, 2017	
6	Test Cable	EMCI	EMC104-SM-S M-2500	150303	Mar. 09, 2017	
7	Test Cable	EMCI	EMC104-NM-S M-1000	150304	Mar. 09, 2017	
8	Test Cable	EMCI	EMC104-SM-S M-5000	150302	Mar. 29, 2017	
9	Test Cable	EMCI	EMC104-SM-S M-800	150305	Mar. 29, 2017	
10	EXA Spectrum Analyzer	Agilent	N9010A	MY5222099 0	Feb. 24, 2017	
11	EMI Test Receiver	Agilent	N9038A	MY5121021 5	Jan. 08, 2017	
12	Loop Antenna	EMCO	6502	00042960	Nov. 05. 2017	
13	Horn Antenna	Schwarzbeck	BBHA-9170	187	May 12, 2017	





6dB Bandwidth Measurement					
Item Kind of Equipment Manufacturer Type No. Serial No. Calibrated u					
1 Spectrum Analyzer R&S FSP-40 100129 Jan. 18, 2017					

Peak Output Power Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Power Meter	Anritsu	ML2487A	6K00004714	May 18, 2017	
2	Power Meter Sensor	Anritsu	MA2491A	034138	May 17, 2017	

Antenna Conducted Spurious Emission Measurement							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Spectrum Analyzer	R&S	FSP-40	100129	Jan. 18, 2017		

Power Spectral Density Measurement								
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	Spectrum Analyzer	R&S	FSP-40	100129	Jan. 18, 2017			

Remark: "N/A" denotes no model name, serial no. or calibration specified. All calibration period of equipment list is one year.





10. EUT TEST PHOTO

Conducted Measurement Photos

























	ricq.	Level	Factor	ment	Linne	margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1500	37.80	9.66	47.46	66.00	-18.54	QP	
2 *	0.1500	28.70	9.66	38.36	56.00	-17.64	AVG	
3	0.2095	34.70	9.66	44.36	63.23	-18.87	QP	
4	0.2095	24.00	9.66	33.66	53.23	-19.57	AVG	
5	0.2606	32.80	9.66	42.46	61.41	-18.95	QP	
6	0.2606	22.50	9.66	32.16	51.41	-19.25	AVG	
7	0.3880	30.20	9.66	39.86	58.11	-18.25	QP	
8	0.3880	20.80	9.66	30.46	48.11	-17.65	AVG	
9	0.5450	24.50	9.67	34.17	56.00	-21.83	QP	
10	0.5450	16.10	9.67	25.77	46.00	-20.23	AVG	
11	0.9230	20.10	9.67	29.77	56.00	-26.23	QP	
12	0.9230	16.20	9.67	25.87	46.00	-20.13	AVG	







0.7430

12

11.10

9.68

20.78

46.00

-25.22

AVG





ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)

BTL










BTL





BTL









ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)





Test Mode: TX B MODE Vertical 80.0 dBuV/m 70 60 50 40 x ž X 1 5 X **4** X х 30 20 10 0.0 30.000 127.00 224.00 321.00 418.00 515.00 612.00 709.00 806.00 1000.00 MHz Reading Correct Measure-Limit Margin No. Mk. Freq. Level Factor ment dBuV dB dB MHz dBuV/m dBuV/m Detector Comment 42.6100 43.90 -8.58 35.32 40.00 -4.68 QP 1 * 2 571.2600 38.08 -1.37 36.71 -9.29 46.00 peak 3 678.9300 37.15 0.40 37.55 46.00 -8.45 peak 4 807.9400 31.31 2.53 33.84 46.00 -12.16 peak 855.4700 5 30.96 3.23 34.19 46.00 -11.81 peak 6 956.3500 32.66 5.07 37.73 46.00 -8.27 peak





Test Mode: TX B MODE Horizontal 80.0 dBu¥/m 70 60 50 40 Å \$5 X 30 2 X 3 X 20 10 0.0 127.00 1000.00 MHz 30.000 224.00 321.00 515.00 612.00 806.00 418.00 709.00 Reading Correct Measure-No. Mk. Limit Margin Freq. Factor Level ment MHz dBuV dBuV/m dB dB dBuV/m Detector Comment 81.4100 44.35 -12.56 31.79 40.00 -8.21 1 * peak 37.68 2 132.8200 -9.52 28.16 43.50 -15.34 peak 3 200.7200 36.36 -11.06 25.30 43.50 -18.20 peak 579.9900 35.77 -1.14 34.63 46.00 -11.37 4 peak 5 587.7500 35.00 -0.93 34.07 46.00 -11.93 peak 709.9700 35.91 1.07 36.98 -9.02 6 46.00 peak



ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)


































































































































































































































































































ATTACHMENT E - BANDWIDTH



Test Mode : TX B Mode_CH01/06/11_ANT 1

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	10.06	12.29	500	Complies
2437	10.06	12.28	500	Complies
2462	10.09	12.28	500	Complies









Center 2.462 GHz #Res BW 100 kHz Span 20 MHz Sweep 1.933 ms CF Step 2.000000 MHz Man #VBW 300 kHz 21.4 dBm **Occupied Bandwidth** Total Power <u>Auto</u> 12.283 MHz Transmit Freq Error 9.404 kHz % of OBW Power 99.00 % x dB Bandwidth 10.09 MHz x dB -6.00 dB STATUS

Freq Offset

0 Hz



Test Mode : TX B Mode_CH01/06/11_ANT 2

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	10.09	12.28	500	Complies
2437	10.09	12.29	500	Complies
2462	10.08	12.26	500	Complies









% of OBW Power

x dB

99.00 %

-6.00 dB

STATUS

Transmit Freq Error

x dB Bandwidth

-32.003 kHz

10.08 MHz

Freq Offset

0 Hz



Test Mode: TX G Mode_CH01/06/11_ANT 1					
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result	
2412	16.36	16.49	500	Complies	
2437	16.38	16.48	500	Complies	
2462	16.36	16.49	500	Complies	









Test Mode: TX G Mode_CH01/06/11_ANT 2					
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result	
2412	16.38	16.48	500	Complies	
2437	16.38	16.48	500	Complies	
2462	16.35	16.48	500	Complies	









Test Mode : TX N-20MHz Mode_CH01/06/11_ANT 1					
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result	
2412	17.09	17.57	500	Complies	
2437	17.07	17.58	500	Complies	
2462	17.32	17.57	500	Complies	







#VBW 300 kHz

x dB

Total Power

% of OBW Power

19.0 dBm

99.00 %

-6.00 dB

STATUS

Occupied Bandwidth

Transmit Freq Error

x dB Bandwidth

17.570 MHz

12.724 kHz

17.32 MHz

CF Step 2.000000 MHz

Freq Offset

Mar

0 Hz

<u>Auto</u>



Test Mode : TX N-20MHz Mode_CH01/06/11_ANT 2					
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result	
2412	17.31	17.57	500	Complies	
2437	17.08	17.58	500	Complies	
2462	17.08	17.57	500	Complies	











Test Mode : TX N-40MHz Mode_CH03/06/09_ANT 1					
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result	
2422	36.07	36.17	500	Complies	
2437	35.95	36.17	500	Complies	
2452	35.95	36.17	500	Complies	









Test Mode : TX N-40MHz Mode_CH03/06/09_ANT 2					
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result	
2422	36.30	36.19	500	Complies	
2437	36.32	36.18	500	Complies	
2452	35.72	36.12	500	Complies	










ATTACHMENT F – MAXIMUM PEAK CONDUCTED OUTPUT POWER



Test Mode :TX B Mode_CH01/06/11_ANT 1							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Pocult		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	18.43	0.0697	30.00	1.0000	Complies		
2437	20.03	0.1007	30.00	1.0000	Complies		
2462	18.73	0.0746	30.00	1.0000	Complies		

Test Mode :TX B Mode_CH01/06/11_ANT 2								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Booult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2412	18.32	0.0679	30.00	1.0000	Complies			
2437	19.63	0.0918	30.00	1.0000	Complies			
2462	17.85	0.0610	30.00	1.0000	Complies			

Test Mode :TX B Mode_CH01/06/11_Total								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2412	21.39	0.1376	30.00	1.0000	Complies			
2437	22.84	0.1925	30.00	1.0000	Complies			
2462	21.32	0.1356	30.00	1.0000	Complies			



Test Mode :TX G Mode_CH01/06/11_ANT 1							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	21.95	0.1567	30.00	1.0000	Complies		
2437	22.91	0.1954	30.00	1.0000	Complies		
2462	22.43	0.1750	30.00	1.0000	Complies		

Test Mode :TX G Mode_CH01/06/11_ANT 2								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2412	21.70	0.1479	30.00	1.0000	Complies			
2437	22.76	0.1888	30.00	1.0000	Complies			
2462	21.69	0.1476	30.00	1.0000	Complies			

Test Mode :TX G Mode_CH01/06/11_Total								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2412	24.84	0.3046	30.00	1.0000	Complies			
2437	25.85	0.3842	30.00	1.0000	Complies			
2462	25.09	0.3226	30.00	1.0000	Complies			



Test Mode :TX N20 Mode_CH01/06/11_ANT 1							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Pocult		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	21.17	0.1309	30.00	1.0000	Complies		
2437	22.87	0.1936	30.00	1.0000	Complies		
2462	20.92	0.1236	30.00	1.0000	Complies		

Test Mode :TX N20 Mode_CH01/06/11_ANT 2								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2412	20.97	0.1250	30.00	1.0000	Complies			
2437	22.65	0.1841	30.00	1.0000	Complies			
2462	20.92	0.1236	30.00	1.0000	Complies			

Test Mode :TX N20 Mode_CH01/06/11_Total								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2412	24.08	0.2559	30.00	1.0000	Complies			
2437	25.77	0.3777	30.00	1.0000	Complies			
2462	23.93	0.2472	30.00	1.0000	Complies			



Test Mode :TX N40 Mode_CH03/06/09_ANT 1								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2422	19.66	0.0925	30.00	1.0000	Complies			
2437	22.16	0.1644	30.00	1.0000	Complies			
2452	20.76	0.1191	30.00	1.0000	Complies			

Test Mode :TX N40 Mode_CH03/06/09_ANT 2								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2422	19.52	0.0895	30.00	1.0000	Complies			
2437	21.76	0.1500	30.00	1.0000	Complies			
2452	20.21	0.1050	30.00	1.0000	Complies			

Test Mode :TX N40 Mode_CH03/06/09_Total								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2422	22.60	0.1820	30.00	1.0000	Complies			
2437	24.97	0.3144	30.00	1.0000	Complies			
2452	23.50	0.2241	30.00	1.0000	Complies			





ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION





Test Mode :	TX B Mode_ANT 1



BTL







TX B mode CH01 (10 Harmonic of the frequency)





TX B mode CH06 (10 Harmonic of the frequency)





TX B mode CH11 (10 Harmonic of the frequency)





Test Mode :	TX B Mode_ANT 2



BTL







TX B mode CH01 (10 Harmonic of the frequency)





TX B mode CH06 (10 Harmonic of the frequency)





TX B mode CH11 (10 Harmonic of the frequency)





Test Mode :	TX G Mode_ANT 1



BTL









TX G mode CH01 (10 Harmonic of the frequency)





TX G mode CH06 (10 Harmonic of the frequency)