



FCC TEST REPORT (15.407)

REPORT NO.: RF991011C13-1

MODEL NO.: WYPAEBUX4

FCC ID: RYYWYPAEBUX4

RECEIVED: Oct. 11, 2010

TESTED: Oct. 12 ~ Oct. 21, 2010

ISSUED: Oct. 27, 2010

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1. CERTIFICATION

PRODUCT: IEEE 802.11 a/b/g/n Wireless LAN Module

MODEL: WYPAEBUX4

BRAND: TAIYO YUDEN

APPLICANT: TAIYO YUDEN CO., LTD.

TEST SAMPLE: ENGINEERING SAMPLE

TESTED: Oct. 12 ~ Oct. 21, 2010

STANDARDS: FCC Part 15, Subpart E (Section 15.407)

ANSI C63.4-2003

The above equipment (Model: WYPAEBUX4) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Andrea Hsia , **DATE:** Oct. 27, 2010
Andrea Hsia / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE:** Oct. 27, 2010
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE:** Oct. 27, 2010
Gary Chang / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -19.87dB at 11.777MHz.
15.407(b)(1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 17100.00MHz.
15.407(a)(1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

2.1 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:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	IEEE 802.11 a/b/g/n Wireless LAN Module
MODEL NO.	WYPAEBUX4
FCC ID	RYYWYPAEBUX4
POWER SUPPLY	3.3Vdc
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 150.0Mbps
OPERATING FREQUENCY	5180 ~ 5320MHz & 5500 ~ 5700MHz
NUMBER OF CHANNEL	5180 ~ 5320MHz: 8 for 802.11a, 802.11n (20MHz) 4 for 802.11n (40MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz)
OUTPUT POWER	32.4mW for 5180 ~ 5240MHz 39.8mW for 5260 ~ 5320MHz 35.5mW for 5500 ~ 5700MHz
ANTENNA TYPE	Refer to note
ANTENNA CONNECTOR	NA
I/O PORTS	NA
DATA CABLE	NA
ACCESSORY DEVICES	NA

NOTE:

1. The EUT is an IEEE 802.11 a/b/g/n Wireless LAN Module. The test data are separated into following test reports.

	TEST STANDARD	REFERENCE REPORT
WLAN 802.11b/g, 802.11n	FCC Part 15, Subpart C (Section 15.247)	RF991011C13
WLAN 802.11a, 802.11n (5745~5825 MHz)		
WLAN 802.11a, 802.11n (5180~5320MHz & 5500 ~5700MHz)	FCC Part 15, Subpart E (Section 15.407)	RF991011C13-1
WLAN 802.11a, 802.11n (For DFS report) (5250~5350MHz & 5470~5725MHz)		RF991011C13-2

2. The frequency bands used in this EUT are listed as follows:

Frequency Band (MHz)	2412~2462	5180~5320	5500~5700	5745~5825
802.11b	√	-	-	-
802.11g	√	-	-	-
802.11a	-	√	√	√
802.11n (20MHz)	√	√	√	√
802.11n (40MHz)	√	√	√	√

3. The EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX

4. The EUT used the antenna listed as below:

ANTENNA TYPE	ANTENNA CONNECTER	ANTENNA GAIN (dBi)				
		CHAIN	2.4GHz	5.18~5.32GHz	5.50~5.70GHz	5.745~5.825GHz
Printed Monopole	NA	0	1.3	1.7	2.7	2.8
		1	1.2	2.4	2.8	2.8

5. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5320MHz

8 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

4 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	54	5270 MHz
46	5230 MHz	62	5310 MHz

FOR 5500 ~ 5700MHz

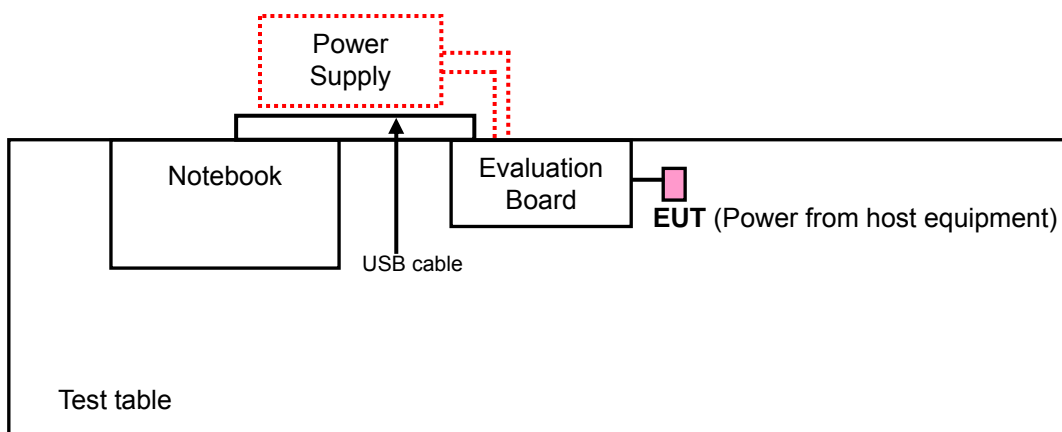
8 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	116	5580 MHz
104	5520 MHz	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

3 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	134	5670 MHz
110	5550 MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST





3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE≥1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

RADIATED EMISSION TEST (ABOVE 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0	Z
802.11n (20MHz)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.5	Z
802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	13.5	Z
802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0	Z
802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5	Z
802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5	Z

RADIATED EMISSION TEST (BELOW 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
802.11a	5180-5320	36 to 64	60	OFDM	BPSK	6.0	Z
802.11a	5500-5700	100 to 140	116	OFDM	BPSK	6.0	Z

POWER LINE CONDUCTED EMISSION TEST:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5320	36 to 64	60	OFDM	BPSK	6.0
802.11a	5500-5700	100 to 140	116	OFDM	BPSK	6.0

BANDEDGE MEASUREMENT:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5320	36 to 64	36, 48, 52, 64	OFDM	BPSK	6.0
802.11n (20MHz)		36 to 64	36, 48, 52, 64	OFDM	BPSK	6.5
802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	13.5
802.11a	5500-5700	100 to 140	100, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 140	OFDM	BPSK	6.5
802.11n (40MHz)		102 to 134	102, 134	OFDM	BPSK	13.5

ANTENNA PORT CONDUCTED MEASUREMENT:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0
802.11n (20MHz)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.5
802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	13.5
802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.0
802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5
802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	27deg. C, 65%RH, 1013 hPa	120Vac, 60Hz	Brad Wu
RE<1G	25deg. C, 65%RH, 1013 hPa	120Vac, 60Hz	Brad Wu
PLC	25deg. C, 65%RH, 1015 hPa	120Vac, 60Hz	Brad Wu
APCM	25deg. C, 65%RH, 1006 hPa	120Vac, 60Hz	Brad Wu

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

ANSI C63.4-2003

All test items have been performed and recorded as per the above standards.

3.4 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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP05L	16484462992	E2K24CLNS
2	POWER SUPPLY	TOP WARD	6306A	713585	NA
3	EVALUATION BOARD	NA	NA	NA	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	2m shielded USB cable without core.
2	NA
3	NA

NOTE: 1. All power cords of the above support units are non shielded (1.8m).
2. Item 3 was supplied from client.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

FREQUENCIES (MHz)	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBµV/m) *NOTE 3
	PK	PK
5150 ~ 5350	-27	68.3
5470 ~ 5725	-27	68.3

NOTE: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).}$$

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Dec. 21, 2009	Dec. 20, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Dec. 31, 2009	Dec. 30, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 27, 2010	Apr. 26, 2011
HORN Antenna SCHWARZBECK	9120D	9120D-405	Feb. 03, 2010	Feb. 02, 2011
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 25, 2009	Dec. 24, 2010
Preamplifier Agilent	8447D	2944A10633	Nov. 10, 2009	Nov. 09, 2010
Preamplifier Agilent	8449B	3008A01964	Nov. 09, 2009	Nov. 08, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	238141/4	May 14, 2010	May 13, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	12738/6	May 14, 2010	May 13, 2011
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100.	TT93021703	NA	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	07026401	Aug. 25, 2010	Aug. 24, 2011

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 988962.
5. The IC Site Registration No. is IC 7450F-3.

4.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. 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 from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

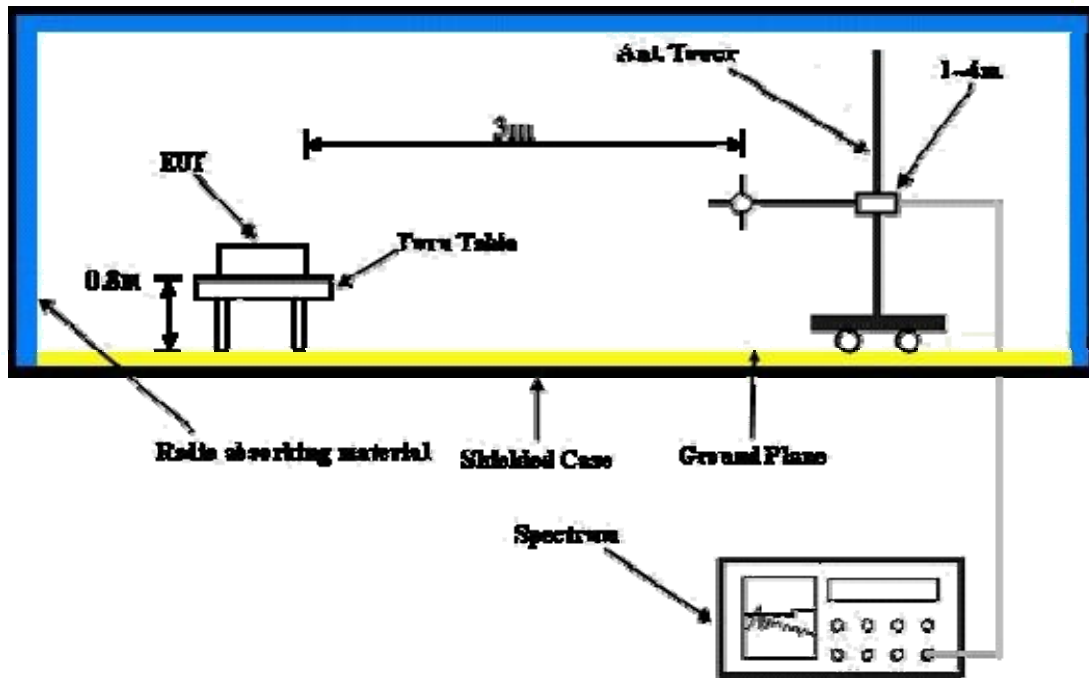
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 DEVIATION FROM TEST STANDARD

No deviation.

4.1.6 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.7 EUT OPERATING CONDITION

- a. Connected EUT into notebook system via a Convertible Board and placed on the testing table.
- b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.

4.1.8 TEST RESULTS

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.8 PK	74.0	-14.2	1.39 H	60	23.10	36.70
2	5150.00	43.3 AV	54.0	-10.7	1.39 H	60	6.60	36.70
3	*5180.00	105.9 PK			1.42 H	71	69.10	36.80
4	*5180.00	92.2 AV			1.42 H	71	55.40	36.80
5	#10360.00	60.8 PK	68.3	-7.5	1.31 H	294	12.90	47.90
6	15540.00	56.9 PK	74.0	-17.1	1.31 H	138	9.50	47.40
7	15540.00	43.9 AV	54.0	-10.1	1.31 H	138	-3.50	47.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.8 PK	74.0	-6.2	1.00 V	348	31.10	36.70
2	5150.00	45.6 AV	54.0	-8.4	1.00 V	348	8.90	36.70
3	*5180.00	107.9 PK			1.00 V	344	71.10	36.80
4	*5180.00	94.9 AV			1.00 V	344	58.10	36.80
5	#10360.00	65.9 PK	68.3	-2.4	1.00 V	155	18.00	47.90
6	15540.00	59.3 PK	74.0	-14.7	1.25 V	47	11.90	47.40
7	15540.00	45.1 AV	54.0	-8.9	1.25 V	47	-2.30	47.40

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	107.5 PK			1.39 H	60	70.70	36.80
2	*5200.00	94.5 AV			1.39 H	60	57.70	36.80
3	#10400.00	60.2 PK	68.3	-8.1	1.30 H	285	12.10	48.10
4	15600.00	57.4 PK	74.0	-16.6	1.28 H	140	9.90	47.50
5	15600.00	44.2 AV	54.0	-9.8	1.28 H	140	-3.30	47.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	109.9 PK			1.00 V	343	73.10	36.80
2	*5200.00	96.9 AV			1.00 V	343	60.10	36.80
3	#10400.00	65.4 PK	68.3	-2.9	1.00 V	171	17.30	48.10
4	15600.00	58.2 PK	74.0	-15.8	1.23 V	338	10.70	47.50
5	15600.00	45.3 AV	54.0	-8.7	1.23 V	338	-2.20	47.50

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.2 PK			1.38 H	61	70.30	36.90
2	*5240.00	94.3 AV			1.38 H	61	57.40	36.90
3	#10480.00	60.5 PK	68.3	-7.8	1.28 H	291	12.20	48.30
4	15720.00	57.6 PK	74.0	-16.4	1.25 H	136	10.50	47.10
5	15720.00	44.5 AV	54.0	-9.5	1.25 H	136	-2.60	47.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	109.6 PK			1.00 V	340	72.70	36.90
2	*5240.00	96.7 AV			1.00 V	340	59.80	36.90
3	#10480.00	65.9 PK	68.3	-2.4	1.00 V	171	17.60	48.30
4	15720.00	57.6 PK	74.0	-16.4	1.06 V	211	10.50	47.10
5	15720.00	45.2 AV	54.0	-8.8	1.06 V	211	-1.90	47.10

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	107.0 PK			1.38 H	61	70.00	37.00
2	*5260.00	94.1 AV			1.38 H	61	57.10	37.00
3	#10520.00	65.8 PK	68.3	-2.5	1.26 H	301	17.40	48.40
4	15780.00	65.4 PK	74.0	-8.6	1.23 H	140	18.40	47.00
5	15780.00	50.6 AV	54.0	-3.4	1.23 H	140	3.60	47.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	109.1 PK			1.00 V	339	72.10	37.00
2	*5260.00	96.2 AV			1.00 V	339	59.20	37.00
3	#10520.00	66.4 PK	68.3	-1.9	1.67 V	1	18.00	48.40
4	15780.00	66.0 PK	74.0	-8.0	1.19 V	236	19.00	47.00
5	15780.00	51.1 AV	54.0	-2.9	1.19 V	236	4.10	47.00

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.5 PK			1.36 H	60	72.40	37.10
2	*5300.00	96.6 AV			1.36 H	60	59.50	37.10
3	10600.00	65.0 PK	74.0	-9.0	1.23 H	306	16.40	48.60
4	10600.00	50.8 AV	54.0	-3.2	1.23 H	306	2.20	48.60
5	15900.00	65.1 PK	74.0	-8.9	1.20 H	139	18.60	46.50
6	15900.00	49.7 AV	54.0	-4.3	1.20 H	139	3.20	46.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	111.5 PK			1.00 V	336	74.40	37.10
2	*5300.00	98.6 AV			1.00 V	336	61.50	37.10
3	10600.00	66.4 PK	74.0	-7.6	1.61 V	23	17.80	48.60
4	10600.00	52.2 AV	54.0	-1.8	1.61 V	23	3.60	48.60
5	15900.00	65.9 PK	74.0	-8.1	1.19 V	272	19.40	46.50
6	15900.00	50.5 AV	54.0	-3.5	1.19 V	272	4.00	46.50

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	106.5 PK			1.35 H	61	69.30	37.20
2	*5320.00	93.6 AV			1.35 H	61	56.40	37.20
3	5350.00	59.3 PK	74.0	-14.7	1.35 H	61	22.10	37.20
4	5350.00	42.1 AV	54.0	-11.9	1.35 H	61	4.90	37.20
5	10640.00	65.0 PK	74.0	-9.0	1.09 H	85	16.40	48.60
6	10640.00	51.3 AV	54.0	-2.7	1.09 H	85	2.70	48.60
7	15960.00	63.5 PK	74.0	-10.5	1.09 H	72	17.10	46.40
8	15960.00	49.0 AV	54.0	-5.0	1.09 H	72	2.60	46.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	108.6 PK			1.00 V	334	71.40	37.20
2	*5320.00	95.7 AV			1.00 V	334	58.50	37.20
3	5350.00	61.4 PK	74.0	-12.6	1.00 V	334	24.20	37.20
4	5350.00	44.3 AV	54.0	-9.7	1.00 V	334	7.10	37.20
5	10640.00	65.3 PK	74.0	-8.7	1.69 V	116	16.70	48.60
6	10640.00	51.4 AV	54.0	-2.6	1.69 V	116	2.80	48.60
7	15960.00	66.0 PK	74.0	-8.0	1.19 V	231	19.60	46.40
8	15960.00	50.0 AV	54.0	-4.0	1.19 V	231	3.60	46.40

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.0 PK	74.0	-14.0	1.31 H	70	22.70	37.30
2	5460.00	40.8 AV	54.0	-13.2	1.31 H	70	3.50	37.30
3	#5470.00	64.1 PK	68.3	-4.2	1.31 H	70	26.70	37.40
4	*5500.00	106.3 PK			1.31 H	70	68.90	37.40
5	*5500.00	93.4 AV			1.31 H	70	56.00	37.40
6	11000.00	65.6 PK	74.0	-8.4	1.21 H	92	16.90	48.70
7	11000.00	49.9 AV	54.0	-4.1	1.21 H	92	1.20	48.70
8	#16500.00	66.2 PK	68.3	-2.1	1.09 H	111	18.30	47.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.4 PK	74.0	-12.6	1.04 V	347	24.10	37.30
2	5460.00	42.1 AV	54.0	-11.9	1.04 V	347	4.80	37.30
3	#5470.00	65.0 PK	68.3	-3.3	1.04 V	347	27.60	37.40
4	*5500.00	108.2 PK			1.04 V	347	70.80	37.40
5	*5500.00	95.4 AV			1.04 V	347	58.00	37.40
6	11000.00	66.2 PK	74.0	-7.8	1.58 V	342	17.50	48.70
7	11000.00	50.4 AV	54.0	-3.6	1.58 V	342	1.70	48.70
8	#16500.00	66.1 PK	68.3	-2.2	1.09 V	291	18.20	47.90

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	108.4 PK			1.30 H	69	70.80	37.60
2	*5580.00	95.5 AV			1.30 H	69	57.90	37.60
3	11160.00	65.3 PK	74.0	-8.7	1.28 H	66	16.90	48.40
4	11160.00	49.7 AV	54.0	-4.3	1.28 H	66	1.30	48.40
5	#16740.00	66.0 PK	68.3	-2.3	1.01 H	29	18.00	48.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	110.2 PK			1.03 V	351	72.60	37.60
2	*5580.00	97.4 AV			1.03 V	351	59.80	37.60
3	11160.00	66.0 PK	74.0	-8.0	1.48 V	319	17.60	48.40
4	11160.00	50.1 AV	54.0	-3.9	1.48 V	319	1.70	48.40
5	#16740.00	65.8 PK	68.3	-2.5	1.10 V	281	17.80	48.00

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 132	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	108.1 PK			1.29 H	66	70.30	37.80
2	*5660.00	95.2 AV			1.29 H	66	57.40	37.80
3	11320.00	65.5 PK	74.0	-8.5	1.24 H	61	17.20	48.30
4	11320.00	50.0 AV	54.0	-4.0	1.24 H	61	1.70	48.30
5	#16980.00	65.5 PK	68.3	-2.8	1.03 H	221	16.70	48.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	109.9 PK			1.03 V	334	72.10	37.80
2	*5660.00	97.1 AV			1.03 V	334	59.30	37.80
3	11320.00	66.2 PK	74.0	-7.8	1.45 V	322	17.90	48.30
4	11320.00	50.3 AV	54.0	-3.7	1.45 V	322	2.00	48.30
5	#16980.00	65.4 PK	68.3	-2.9	1.09 V	232	16.60	48.80

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#“: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.2 PK			1.30 H	61	65.30	37.90
2	*5700.00	90.3 AV			1.30 H	61	52.40	37.90
3	#5725.00	54.8 PK	68.3	-13.5	1.30 H	61	16.80	38.00
4	11400.00	64.2 PK	74.0	-9.8	1.15 H	23	16.20	48.00
5	11400.00	48.5 AV	54.0	-5.5	1.15 H	23	0.50	48.00
6	#17100.00	67.3 PK	68.3	-1.0	1.05 H	218	18.20	49.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.9 PK			1.00 V	348	77.80	27.10
2	*5700.00	92.2 AV			1.00 V	348	65.10	27.10
3	#5725.00	56.3 PK	68.3	-12.0	1.13 V	348	29.20	27.10
4	11400.00	63.8 PK	74.0	-10.2	1.59 V	241	36.70	27.10
5	11400.00	48.0 AV	54.0	-6.0	1.59 V	241	20.90	27.10
6	#17100.00	65.9 PK	68.3	-2.4	1.09 V	231	38.80	27.10

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “*”: Fundamental frequency.
 6. “#”: The radiated frequency is out the restricted band.

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.0 PK	74.0	-12.0	1.35 H	66	25.30	36.70
2	5150.00	43.4 AV	54.0	-10.6	1.35 H	66	6.70	36.70
3	*5180.00	105.6 PK			1.35 H	66	68.80	36.80
4	*5180.00	92.6 AV			1.35 H	66	55.80	36.80
5	#10360.00	64.3 PK	68.3	-4.0	1.02 H	61	16.40	47.90
6	15540.00	63.1 PK	74.0	-10.9	1.41 H	201	15.70	47.40
7	15540.00	50.2 AV	54.0	-3.8	1.41 H	201	2.80	47.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.6 PK	74.0	-8.4	1.00 V	180	28.90	36.70
2	5150.00	44.9 AV	54.0	-9.1	1.00 V	180	8.20	36.70
3	*5180.00	108.1 PK			1.00 V	180	71.30	36.80
4	*5180.00	95.1 AV			1.00 V	180	58.30	36.80
5	#10360.00	67.1 PK	68.3	-1.2	1.02 V	53	19.20	47.90
6	15540.00	66.0 PK	74.0	-8.0	1.03 V	251	18.60	47.40
7	15540.00	50.2 AV	54.0	-3.8	1.03 V	251	2.80	47.40

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#“: The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	107.7 PK			1.01 H	182	70.90	36.80
2	*5200.00	94.6 AV			1.01 H	182	57.80	36.80
3	#10400.00	60.0 PK	68.3	-8.3	1.26 H	54	11.90	48.10
4	15600.00	57.1 PK	74.0	-16.9	1.03 H	261	9.60	47.50
5	15600.00	44.0 AV	54.0	-10.0	1.03 H	261	-3.50	47.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	110.1 PK			1.01 V	156	73.30	36.80
2	*5200.00	97.0 AV			1.01 V	156	60.20	36.80
3	#10400.00	65.2 PK	68.3	-3.1	1.01 V	184	17.10	48.10
4	15600.00	58.0 PK	74.0	-16.0	1.03 V	221	10.50	47.50
5	15600.00	45.1 AV	54.0	-8.9	1.03 V	221	-2.40	47.50

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.4 PK			1.32 H	59	70.50	36.90
2	*5240.00	94.5 AV			1.32 H	59	57.60	36.90
3	#10480.00	60.2 PK	68.3	-8.1	1.22 H	35	11.90	48.30
4	15720.00	57.4 PK	74.0	-16.6	1.18 H	139	10.30	47.10
5	15720.00	44.2 AV	54.0	-9.8	1.18 H	139	-2.90	47.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	109.8 PK			1.01 V	183	72.90	36.90
2	*5240.00	96.9 AV			1.01 V	183	60.00	36.90
3	#10480.00	65.6 PK	68.3	-2.7	1.03 V	224	17.30	48.30
4	15720.00	57.8 PK	74.0	-16.2	1.19 V	26	10.70	47.10
5	15720.00	45.3 AV	54.0	-8.7	1.19 V	26	-1.80	47.10

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	108.0 PK			1.31 H	63	71.00	37.00
2	*5260.00	95.1 AV			1.31 H	63	58.10	37.00
3	#10520.00	65.2 PK	68.3	-3.1	1.21 H	304	16.80	48.40
4	15780.00	64.3 PK	74.0	-9.7	1.05 H	38	17.30	47.00
5	15780.00	51.8 AV	54.0	-2.2	1.05 H	38	4.80	47.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	110.3 PK			1.01 V	175	73.30	37.00
2	*5260.00	97.4 AV			1.01 V	175	60.40	37.00
3	#10520.00	66.5 PK	68.3	-1.8	1.62 V	11	18.10	48.40
4	15780.00	66.4 PK	74.0	-7.6	1.06 V	321	19.40	47.00
5	15780.00	51.6 AV	54.0	-2.4	1.06 V	321	4.60	47.00

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	108.0 PK			1.30 H	52	70.90	37.10
2	*5300.00	95.1 AV			1.30 H	52	58.00	37.10
3	10600.00	64.2 PK	74.0	-9.8	1.19 H	301	15.60	48.60
4	10600.00	50.0 AV	54.0	-4.0	1.19 H	301	1.40	48.60
5	15900.00	64.6 PK	74.0	-9.4	1.18 H	149	18.10	46.50
6	15900.00	49.2 AV	54.0	-4.8	1.18 H	149	2.70	46.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.9 PK			1.02 V	169	72.80	37.10
2	*5300.00	97.0 AV			1.02 V	169	59.90	37.10
3	10600.00	66.0 PK	74.0	-8.0	1.42 V	51	17.40	48.60
4	10600.00	51.9 AV	54.0	-2.1	1.42 V	51	3.30	48.60
5	15900.00	65.3 PK	74.0	-8.7	1.14 V	22	18.80	46.50
6	15900.00	50.0 AV	54.0	-4.0	1.14 V	22	3.50	46.50

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	107.7 PK			1.31 H	92	70.50	37.20
2	*5320.00	94.8 AV			1.31 H	92	57.60	37.20
3	5350.00	59.6 PK	74.0	-14.4	1.31 H	92	22.40	37.20
4	5350.00	42.4 AV	54.0	-11.6	1.31 H	92	5.20	37.20
5	10640.00	64.5 PK	74.0	-9.5	1.12 H	94	15.90	48.60
6	10640.00	50.8 AV	54.0	-3.2	1.12 H	94	2.20	48.60
7	15960.00	63.2 PK	74.0	-10.8	1.18 H	61	16.80	46.40
8	15960.00	48.8 AV	54.0	-5.2	1.18 H	61	2.40	46.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	109.3 PK			1.01 V	186	72.10	37.20
2	*5320.00	96.4 AV			1.01 V	186	59.20	37.20
3	5350.00	61.8 PK	74.0	-12.2	1.01 V	186	24.60	37.20
4	5350.00	44.6 AV	54.0	-9.4	1.01 V	186	7.40	37.20
5	10640.00	65.0 PK	74.0	-9.0	1.56 V	53	16.40	48.60
6	10640.00	51.9 AV	54.0	-2.1	1.56 V	53	3.30	48.60
7	15960.00	64.9 PK	74.0	-9.1	1.14 V	219	18.50	46.40
8	15960.00	50.1 AV	54.0	-3.9	1.14 V	219	3.70	46.40

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.4 PK	74.0	-13.6	1.30 H	58	23.10	37.30
2	5460.00	41.1 AV	54.0	-12.9	1.30 H	58	3.80	37.30
3	#5470.00	64.5 PK	68.3	-3.8	1.30 H	58	27.10	37.40
4	*5500.00	106.1 PK			1.30 H	58	68.70	37.40
5	*5500.00	93.1 AV			1.30 H	58	55.70	37.40
6	11000.00	63.8 PK	74.0	-10.2	1.09 H	62	15.10	48.70
7	11000.00	50.1 AV	54.0	-3.9	1.09 H	62	1.40	48.70
8	#16500.00	64.5 PK	68.3	-3.8	1.10 H	115	16.60	47.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.6 PK	74.0	-12.4	1.02 V	191	24.30	37.30
2	5460.00	42.3 AV	54.0	-11.7	1.02 V	191	5.00	37.30
3	#5470.00	65.3 PK	68.3	-3.0	1.02 V	191	27.90	37.40
4	*5500.00	107.9 PK			1.02 V	191	70.50	37.40
5	*5500.00	95.1 AV			1.02 V	191	57.70	37.40
6	11000.00	66.6 PK	74.0	-7.4	1.49 V	351	17.90	48.70
7	11000.00	50.7 AV	54.0	-3.3	1.49 V	351	2.00	48.70
8	#16500.00	66.4 PK	68.3	-1.9	1.04 V	231	18.50	47.90

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	106.7 PK			1.28 H	61	69.10	37.60
2	*5580.00	93.6 AV			1.28 H	61	56.00	37.60
3	11160.00	65.1 PK	74.0	-8.9	1.05 H	33	16.70	48.40
4	11160.00	49.5 AV	54.0	-4.5	1.05 H	33	1.10	48.40
5	#16740.00	64.5 PK	68.3	-3.8	1.11 H	24	16.50	48.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	108.4 PK			1.03 V	190	70.80	37.60
2	*5580.00	95.6 AV			1.03 V	190	58.00	37.60
3	11160.00	66.4 PK	74.0	-7.6	1.04 V	213	18.00	48.40
4	11160.00	50.4 AV	54.0	-3.6	1.04 V	213	2.00	48.40
5	#16740.00	65.4 PK	68.3	-2.9	1.09 V	211	17.40	48.00

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 132	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	106.4 PK			1.29 H	54	68.60	37.80
2	*5660.00	93.3 AV			1.29 H	54	55.50	37.80
3	11320.00	65.2 PK	74.0	-8.8	1.08 H	118	16.90	48.30
4	11320.00	49.8 AV	54.0	-4.2	1.08 H	118	1.50	48.30
5	#16980.00	64.9 PK	68.3	-3.4	1.03 H	27	16.10	48.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5660.00	108.1 PK			1.05 V	186	70.30	37.80
2	*5660.00	95.3 AV			1.05 V	186	57.50	37.80
3	11320.00	66.1 PK	74.0	-7.9	1.04 V	309	17.80	48.30
4	11320.00	50.0 AV	54.0	-4.0	1.04 V	309	1.70	48.30
5	#16980.00	65.2 PK	68.3	-3.1	1.14 V	232	16.40	48.80

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#“: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	100.4 PK			1.48 H	102	62.50	37.90
2	*5700.00	88.3 AV			1.48 H	102	50.40	37.90
3	#5725.00	66.7 PK	68.3	-1.6	1.48 H	102	28.70	38.00
4	11400.00	56.2 PK	74.0	-17.8	1.60 H	238	8.20	48.00
5	11400.00	41.5 AV	54.0	-12.5	1.60 H	238	-6.50	48.00
6	#17100.00	66.3 PK	68.3	-2.0	1.00 H	125	17.20	49.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.1 PK			1.22 V	160	65.20	37.90
2	*5700.00	90.6 AV			1.22 V	160	52.70	37.90
3	#5725.00	66.3 PK	68.3	-2.0	1.22 V	160	28.30	38.00
4	11400.00	55.1 PK	74.0	-18.9	1.00 V	352	7.10	48.00
5	11400.00	41.2 AV	54.0	-12.8	1.00 V	352	-6.80	48.00
6	#17100.00	62.8 PK	68.3	-5.5	1.12 V	52	13.70	49.10

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”: The radiated frequency is out the restricted band.

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	69.3 PK	74.0	-4.7	1.00 H	120	32.60	36.70
2	5150.00	51.0 AV	54.0	-3.0	1.00 H	120	14.30	36.70
3	*5190.00	100.5 PK			1.00 H	120	63.70	36.80
4	*5190.00	88.0 AV			1.00 H	120	51.20	36.80
5	#10380.00	57.5 PK	68.3	-10.8	1.36 H	123	9.50	48.00
6	15570.00	58.9 PK	74.0	-15.1	1.39 H	319	11.50	47.40
7	15570.00	44.1 AV	54.0	-9.9	1.39 H	319	-3.30	47.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.5 PK	74.0	-5.5	1.48 V	165	31.80	36.70
2	5150.00	52.6 AV	54.0	-1.4	1.48 V	165	15.90	36.70
3	*5190.00	102.6 PK			1.48 V	165	65.80	36.80
4	*5190.00	90.4 AV			1.48 V	165	53.60	36.80
5	#10380.00	60.3 PK	68.3	-8.0	1.00 V	153	12.30	48.00
6	15570.00	58.3 PK	74.0	-15.7	1.61 V	21	10.90	47.40
7	15570.00	44.3 AV	54.0	-9.7	1.61 V	21	-3.10	47.40

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	105.0 PK			1.36 H	62	68.10	36.90
2	*5230.00	92.1 AV			1.36 H	62	55.20	36.90
3	#10460.00	64.1 PK	68.3	-4.2	1.13 H	25	15.80	48.30
4	15690.00	62.1 PK	74.0	-11.9	1.51 H	48	14.90	47.20
5	15690.00	49.3 AV	54.0	-4.7	1.51 H	48	2.10	47.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	107.2 PK			1.11 V	165	70.30	36.90
2	*5230.00	94.3 AV			1.11 V	165	57.40	36.90
3	#10460.00	65.1 PK	68.3	-3.2	1.38 V	62	16.80	48.30
4	15690.00	63.6 PK	74.0	-10.4	1.18 V	91	16.40	47.20
5	15690.00	50.9 AV	54.0	-3.1	1.18 V	91	3.70	47.20

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	104.8 PK			1.35 H	61	67.80	37.00
2	*5270.00	91.9 AV			1.35 H	61	54.90	37.00
3	#10540.00	64.5 PK	68.3	-3.8	1.40 H	93	16.10	48.40
4	15810.00	62.0 PK	74.0	-12.0	1.00 H	211	15.10	46.90
5	15810.00	49.3 AV	54.0	-4.7	1.00 H	211	2.40	46.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	107.0 PK			1.10 V	172	70.00	37.00
2	*5270.00	94.1 AV			1.10 V	172	57.10	37.00
3	#10540.00	65.3 PK	68.3	-3.0	1.41 V	66	16.90	48.40
4	15810.00	63.6 PK	74.0	-10.4	1.18 V	74	16.70	46.90
5	15810.00	50.8 AV	54.0	-3.2	1.18 V	74	3.90	46.90

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	102.5 PK			1.31 H	59	65.40	37.10
2	*5310.00	89.6 AV			1.31 H	59	52.50	37.10
3	5350.00	68.6 PK	74.0	-5.4	1.31 H	59	31.40	37.20
4	5350.00	50.8 AV	54.0	-3.2	1.31 H	59	13.60	37.20
5	10620.00	61.6 PK	74.0	-12.4	1.19 H	235	13.00	48.60
6	10620.00	49.1 AV	54.0	-4.9	1.19 H	235	0.50	48.60
7	15930.00	59.3 PK	74.0	-14.7	1.18 H	223	12.80	46.50
8	15930.00	46.8 AV	54.0	-7.2	1.18 H	223	0.30	46.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	104.1 PK			1.11 V	169	67.00	37.10
2	*5310.00	91.3 AV			1.11 V	169	54.20	37.10
3	5350.00	69.5 PK	74.0	-4.5	1.11 V	169	32.30	37.20
4	5350.00	51.2 AV	54.0	-2.8	1.11 V	169	14.00	37.20
5	10620.00	64.1 PK	74.0	-9.9	1.40 V	59	15.50	48.60
6	10620.00	50.2 AV	54.0	-3.8	1.40 V	59	1.60	48.60
7	15930.00	59.9 PK	74.0	-14.1	1.13 V	82	13.40	46.50
8	15930.00	47.6 AV	54.0	-6.4	1.13 V	82	1.10	46.50

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.3 PK	74.0	-11.7	1.53 H	103	25.00	37.30
2	5460.00	43.9 AV	54.0	-10.1	1.53 H	103	6.60	37.30
3	#5470.00	64.4 PK	68.3	-3.9	1.53 H	103	27.00	37.40
4	*5510.00	98.8 PK			1.53 H	103	61.40	37.40
5	*5510.00	86.3 AV			1.53 H	103	48.90	37.40
6	11020.00	56.7 PK	74.0	-17.3	1.24 H	12	8.00	48.70
7	11020.00	42.1 AV	54.0	-11.9	1.24 H	12	-6.60	48.70
8	#16530.00	58.6 PK	68.3	-9.7	1.02 H	271	10.70	47.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.1 PK	74.0	-12.9	1.24 V	162	23.80	37.30
2	5460.00	45.4 AV	54.0	-8.6	1.24 V	162	8.10	37.30
3	#5470.00	65.5 PK	68.3	-2.8	1.24 V	162	28.10	37.40
4	*5510.00	100.9 PK			1.24 V	162	63.50	37.40
5	*5510.00	88.8 AV			1.24 V	162	51.40	37.40
6	11020.00	57.6 PK	74.0	-16.4	1.25 V	0	8.90	48.70
7	11020.00	42.3 AV	54.0	-11.7	1.25 V	0	-6.40	48.70
8	#16530.00	59.0 PK	68.3	-9.3	1.28 V	348	11.10	47.90

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	103.4 PK			1.54 H	106	65.90	37.50
2	*5550.00	90.8 AV			1.54 H	106	53.30	37.50
3	11100.00	57.0 PK	74.0	-17.0	1.00 H	59	8.50	48.50
4	11100.00	42.6 AV	54.0	-11.4	1.00 H	59	-5.90	48.50
5	#16650.00	60.5 PK	68.3	-7.8	1.00 H	218	12.50	48.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	105.0 PK			1.00 V	167	67.50	37.50
2	*5550.00	92.9 AV			1.00 V	167	55.40	37.50
3	11100.00	58.4 PK	74.0	-15.6	1.79 V	291	9.90	48.50
4	11100.00	43.6 AV	54.0	-10.4	1.79 V	291	-4.90	48.50
5	#16650.00	61.1 PK	68.3	-7.2	1.08 V	290	13.10	48.00

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	27deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	103.4 PK			1.48 H	103	65.60	37.80
2	*5670.00	91.2 AV			1.48 H	103	53.40	37.80
3	#5725.00	64.5 PK	68.3	-3.8	1.48 H	103	26.50	38.00
4	11340.00	56.5 PK	74.0	-17.5	1.17 H	324	8.30	48.20
5	11340.00	42.0 AV	54.0	-12.0	1.17 H	324	-6.20	48.20
6	#17010.00	65.0 PK	68.3	-3.3	1.12 H	223	16.20	48.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	105.5 PK			1.00 V	164	67.70	37.80
2	*5670.00	93.0 AV			1.00 V	164	55.20	37.80
3	#5725.00	63.8 PK	68.3	-4.5	1.00 V	164	25.80	38.00
4	11340.00	56.8 PK	74.0	-17.2	1.12 V	110	8.60	48.20
5	11340.00	42.5 AV	54.0	-11.5	1.12 V	110	-5.70	48.20
6	#17010.00	60.9 PK	68.3	-7.4	1.00 V	182	12.10	48.80

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.
 5. “ * “: Fundamental frequency.
 6. "#":The radiated frequency is out the restricted band.

BELOW 1GHz WORST-CASE DATA : 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	107.67	35.0 QP	43.5	-8.5	2.50 H	67	24.00	11.00
2	162.11	40.0 QP	43.5	-3.5	1.50 H	112	25.70	14.30
3	270.99	30.0 QP	46.0	-16.0	1.75 H	124	16.40	13.60
4	667.63	30.6 QP	46.0	-15.4	2.00 H	283	7.50	23.10
5	724.01	35.2 QP	46.0	-10.8	1.00 H	169	11.40	23.80
6	813.45	30.3 QP	46.0	-15.7	1.50 H	298	5.50	24.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	59.06	36.3 QP	40.0	-3.7	2.00 V	220	23.10	13.20
2	107.67	35.7 QP	43.5	-7.8	1.00 V	295	24.70	11.00
3	164.06	34.4 QP	43.5	-9.1	1.00 V	289	20.30	14.10
4	270.99	34.7 QP	46.0	-11.3	1.00 V	112	21.10	13.60
5	727.90	35.2 QP	46.0	-10.8	1.50 V	304	11.40	23.80
6	813.45	34.2 QP	46.0	-11.8	1.75 V	193	9.40	24.80

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1013 hPa	TESTED BY	Brad Wu

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	107.67	36.9 QP	43.5	-6.6	1.25 H	40	25.90	11.00
2	162.11	39.7 QP	43.5	-3.8	1.25 H	118	25.40	14.30
3	374.04	30.2 QP	46.0	-15.8	1.00 H	148	13.70	16.50
4	665.68	31.3 QP	46.0	-14.7	1.50 H	70	8.20	23.10
5	725.96	32.9 QP	46.0	-13.1	1.00 H	169	9.10	23.80
6	865.94	30.2 QP	46.0	-15.8	1.00 H	226	4.70	25.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	62.95	37.2 QP	40.0	-2.8	1.25 V	205	24.40	12.80
2	107.67	36.8 QP	43.5	-6.7	1.25 V	307	25.80	11.00
3	164.06	34.7 QP	43.5	-8.8	1.00 V	292	20.60	14.10
4	270.99	33.7 QP	46.0	-12.3	1.00 V	181	20.10	13.60
5	724.01	36.5 QP	46.0	-9.5	1.50 V	130	12.70	23.80
6	836.78	35.7 QP	46.0	-10.3	1.75 V	136	10.60	25.10

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
 3. The other emission levels were very low against the limit.
 4. Margin value = Emission level – Limit value.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	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 0.50MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Dec. 16, 2009	Dec. 15, 2010
RF signal cable Woken	5D-FB	Cable-HYC01-01	Nov. 12, 2009	Nov. 11, 2010
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jun. 28, 2010	Jun. 27, 2011
LISN ROHDE & SCHWARZ	ESH3-Z5	835239/001	Feb. 10, 2010	Feb. 09, 2011
Software ADT	ADT_Cond_ V7.3.7	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

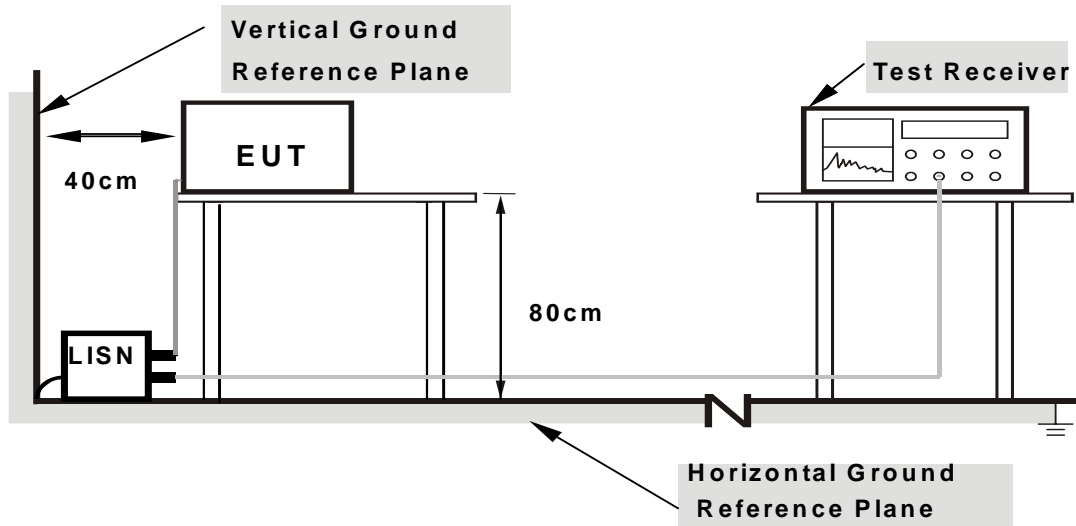
4.2.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.



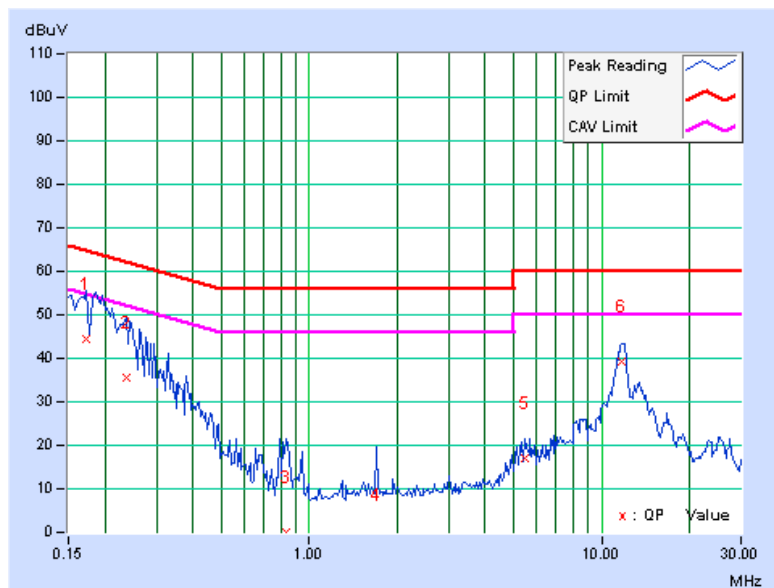
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11a

CHANNEL	Channel 60	PHASE	Line 1
6dB BANDWIDTH	9kHz		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.12	44.30	-	44.42	-	64.79	54.79	-20.38	-
2	0.236	0.11	35.43	-	35.54	-	62.24	52.24	-26.69	-
3	0.838	0.17	-0.27	-	-0.10	-	56.00	46.00	-56.10	-
4	1.691	0.23	-4.15	-	-3.92	-	56.00	46.00	-59.92	-
5	5.484	0.42	16.65	-	17.07	-	60.00	50.00	-42.93	-
6	11.785	0.79	38.49	-	39.28	-	60.00	50.00	-20.72	-

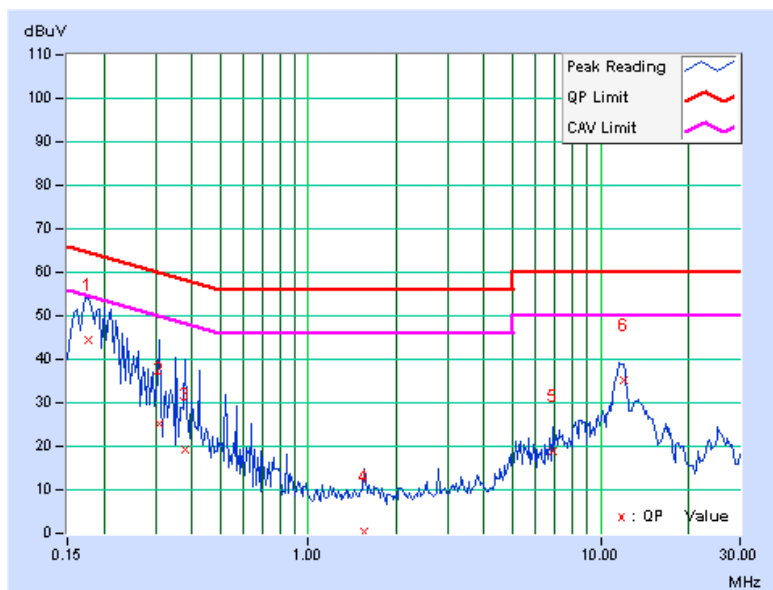
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



CHANNEL	Channel 60	PHASE	Line 2
6dB BANDWIDTH	9kHz		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.177	0.10	44.50	-	44.60	-	64.61	54.61	-20.01	-
2	0.310	0.11	25.16	-	25.27	-	59.97	49.97	-34.70	-
3	0.380	0.12	18.98	-	19.10	-	58.27	48.27	-39.17	-
4	1.547	0.21	0.05	-	0.26	-	56.00	46.00	-55.74	-
5	6.863	0.43	18.31	-	18.74	-	60.00	50.00	-41.26	-
6	11.980	0.70	34.57	-	35.27	-	60.00	50.00	-24.73	-

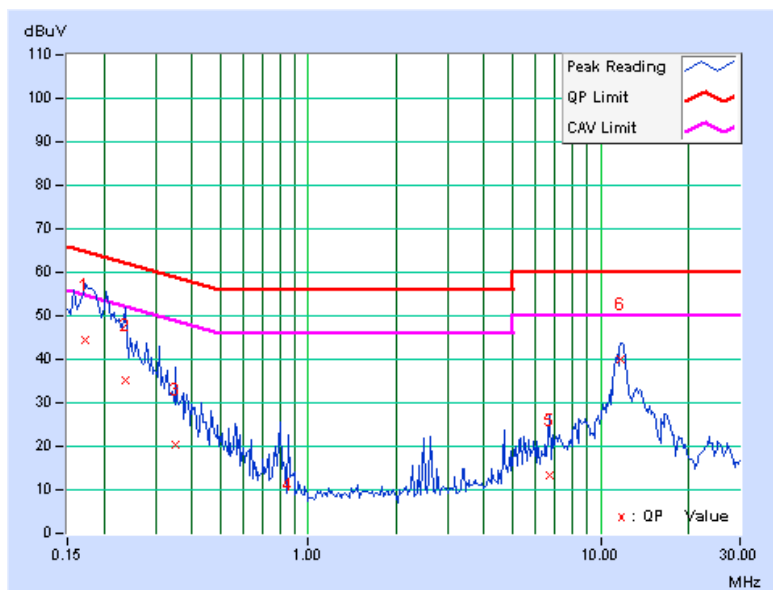
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



CHANNEL	Channel 116	PHASE	Line 1
6dB BANDWIDTH	9kHz		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.173	0.12	44.34	-	44.46	-	64.79	54.79	-20.34	-
2	0.236	0.11	35.11	-	35.22	-	62.24	52.24	-27.01	-
3	0.353	0.13	20.19	-	20.32	-	58.89	48.89	-38.57	-
4	0.853	0.17	-1.65	-	-1.48	-	56.00	46.00	-57.48	-
5	6.707	0.48	12.70	-	13.18	-	60.00	50.00	-46.82	-
6	11.777	0.79	39.34	-	40.13	-	60.00	50.00	-19.87	-

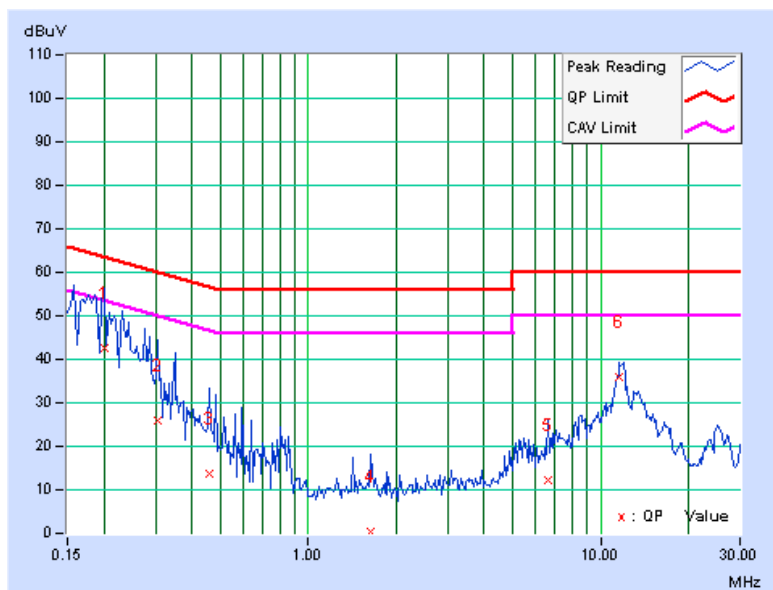
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



CHANNEL	Channel 116	PHASE	Line 2
6dB BANDWIDTH	9kHz		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.10	42.55	-	42.65	-	63.58	53.58	-20.93	-
2	0.306	0.11	25.82	-	25.93	-	60.07	50.07	-34.14	-
3	0.459	0.12	13.72	-	13.84	-	56.72	46.72	-42.87	-
4	1.629	0.21	0.04	-	0.25	-	56.00	46.00	-55.75	-
5	6.637	0.43	11.75	-	12.18	-	60.00	50.00	-47.82	-
6	11.582	0.67	35.08	-	35.75	-	60.00	50.00	-24.25	-

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Emission level - Limit value
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.



4.3 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

4.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.250 ~ 5.350GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.470 ~ 5.725GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB

NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST INSTRUMENTS

FOR POWER OUTPUT MEASUREMENT

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0842014	Apr. 21, 2010	Apr. 20, 2011
Power Sensor	MA2411B	0738404	Apr. 21, 2010	Apr. 20, 2011

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. Measurement Bandwidth of ML2495A is 65MHz greater than 26dB bandwidth of emission.

FOR 26dB OCCUPIED BANDWIDTH

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100039	Jan. 11, 2010	Jan. 10, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST PROCEDURE

FOR POWER OUTPUT MEASUREMENT

A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

FOR 26dB OCCUPIED BANDWIDTH

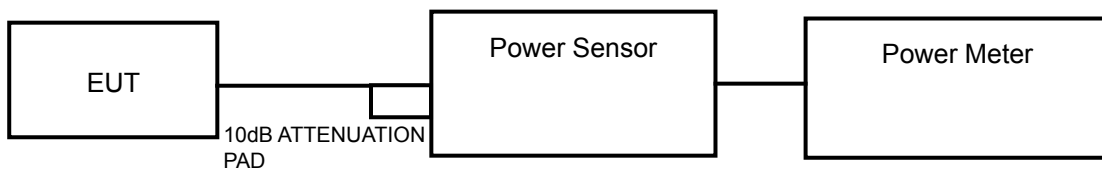
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 300kHz RBW and 1MHz VBW. The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

4.3.4 DEVIATION FROM TEST STANDARD

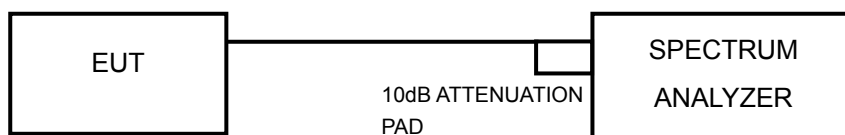
No deviation.

4.3.5 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 26dB OCCUPIED BANDWIDTH



4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.3.7 TEST RESULTS

POWER OUTPUT: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
36	5180	16.6	12.2	17	PASS
40	5200	25.1	14.0	17	PASS
48	5240	25.7	14.1	17	PASS
52	5260	25.7	14.1	24	PASS
60	5300	39.8	16.0	24	PASS
64	5320	26.3	14.2	24	PASS
100	5500	22.4	13.5	24	PASS
116	5580	35.5	15.5	24	PASS
132	5660	35.5	15.5	24	PASS
140	5700	10.0	10.0	24	PASS



802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
36	5180	16.2	12.1	17	PASS
40	5200	25.1	14.0	17	PASS
48	5240	25.7	14.1	17	PASS
52	5260	32.4	15.1	24	PASS
60	5300	28.2	14.5	24	PASS
64	5320	25.1	14.0	24	PASS
100	5500	20.4	13.1	24	PASS
116	5580	28.2	14.5	24	PASS
132	5660	28.2	14.5	24	PASS
140	5700	8.9	9.5	24	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
38	5190	12.6	11.0	17	PASS
46	5230	32.4	15.1	17	PASS
54	5270	33.1	15.2	17	PASS
62	5310	15.8	12.0	24	PASS
102	5510	10.0	10.0	24	PASS
110	5550	25.7	14.1	24	PASS
134	5670	25.1	14.0	24	PASS

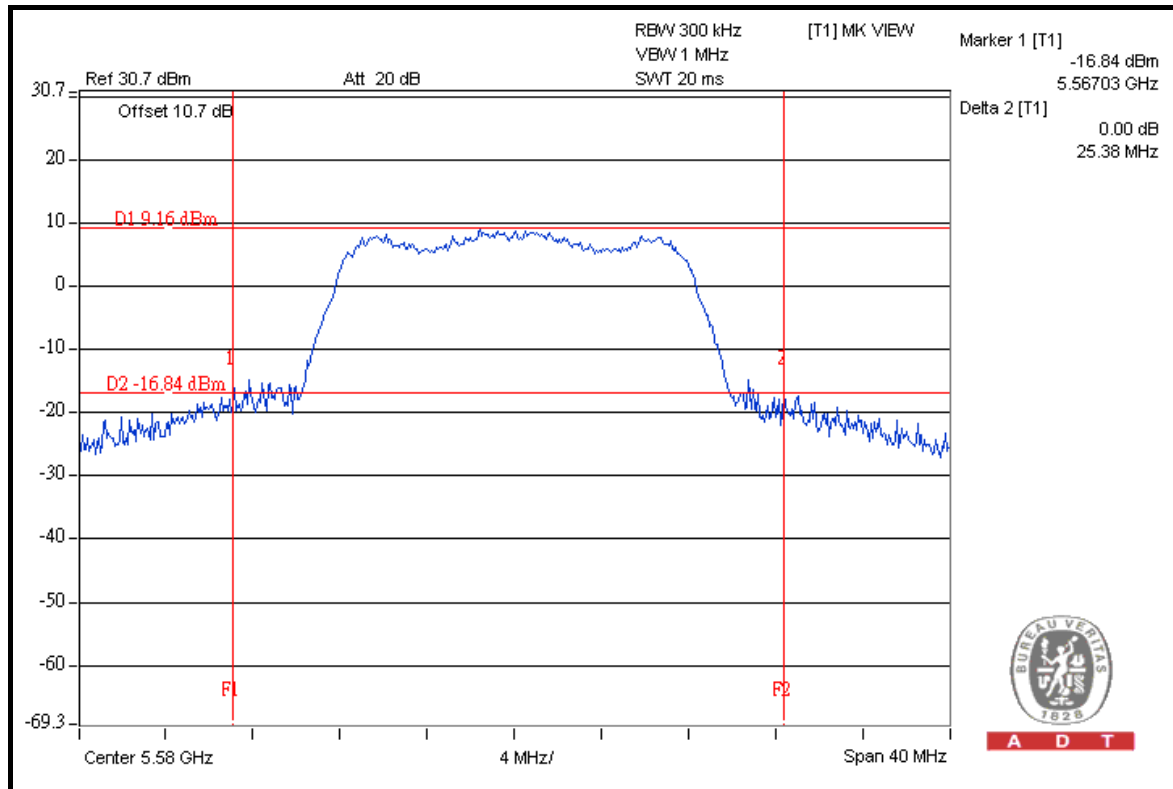


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26dB OCCUPIED BANDWIDTH: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
36	5180	19.65	PASS
40	5200	19.66	PASS
48	5240	21.74	PASS
52	5260	21.81	PASS
60	5300	23.38	PASS
64	5320	19.91	PASS
100	5500	19.68	PASS
116	5580	25.38	PASS
132	5660	21.40	PASS
140	5700	19.69	PASS

CH 116



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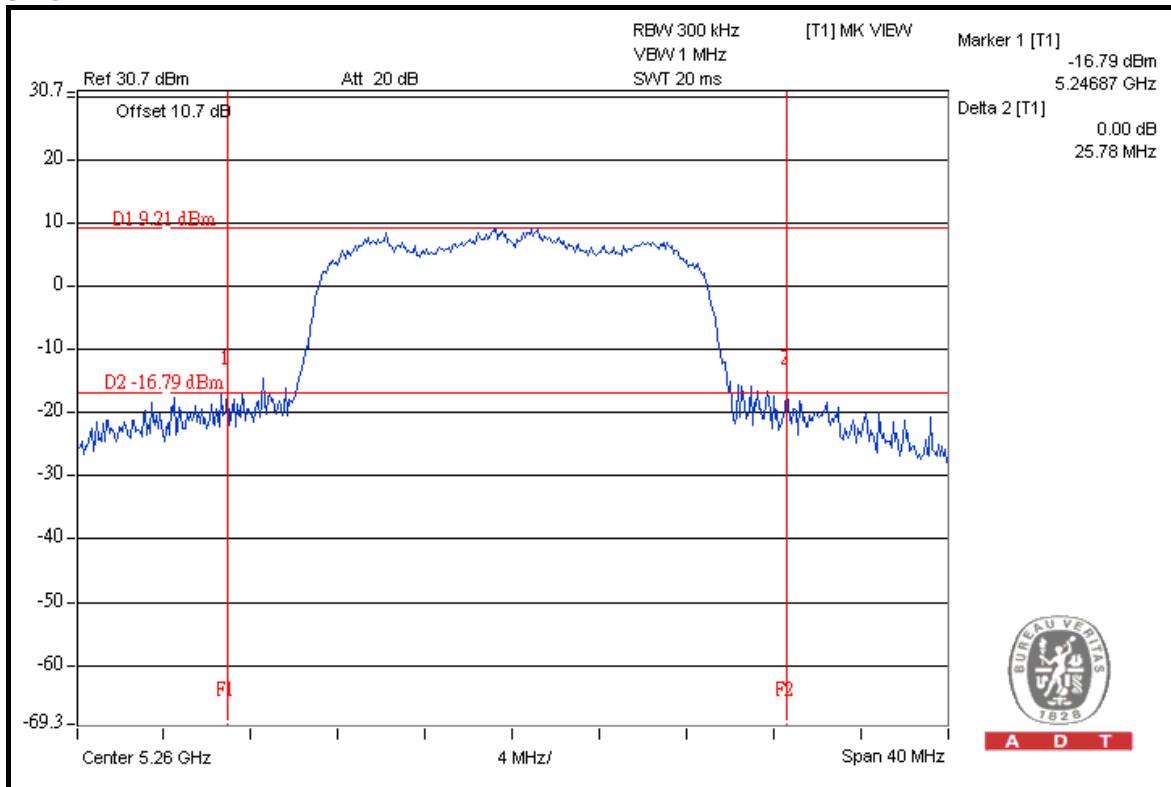


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802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
36	5180	19.93	PASS
40	5200	19.91	PASS
48	5240	20.14	PASS
52	5260	25.78	PASS
60	5300	22.49	PASS
64	5320	20.00	PASS
100	5500	19.88	PASS
116	5580	22.35	PASS
132	5660	21.25	PASS
140	5700	19.90	PASS

CH 52



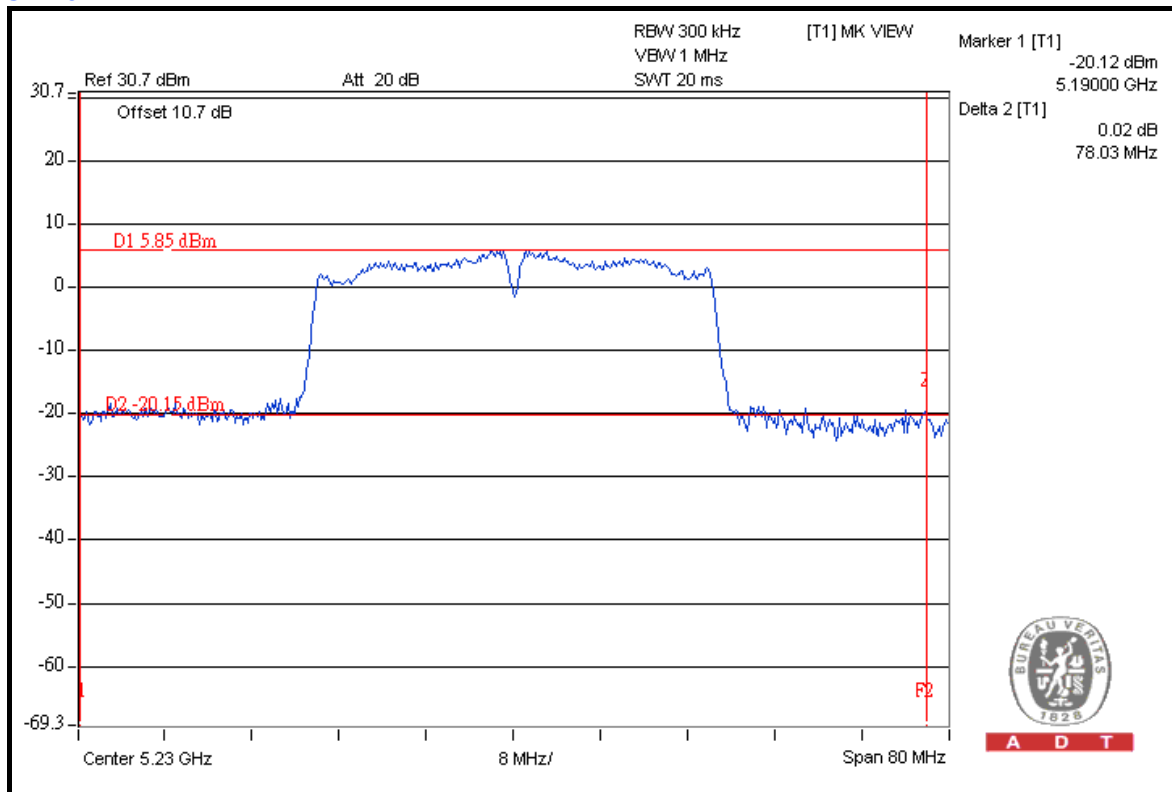


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802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
38	5190	39.52	PASS
46	5230	78.03	PASS
54	5270	62.03	PASS
62	5310	39.58	PASS
102	5510	39.64	PASS
110	5550	39.76	PASS
134	5670	77.07	PASS

CH 46



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4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	13dB
5.250 ~ 5.350GHz	13dB
5.470 ~ 5.725GHz	13dB

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100039	Jan. 11, 2010	Jan. 10, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

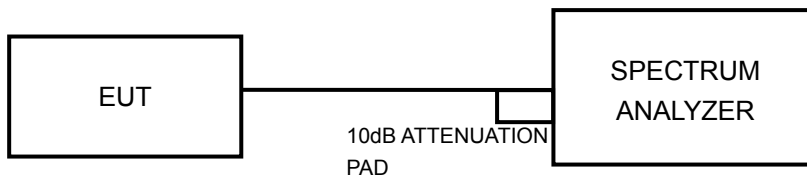
4.4.3 TEST PROCEDURE

- a. The transmitter output was connected to the spectrum analyzer.
- b. Set the spectrum bandwidth span to view the entire spectrum.
- c. Using peak detector and Max-hold function for Trace 1 (RB = 1MHz, VB = 3MHz) and 2 (RB = 1MHz, VB = 300kHz).
- d. The differences between Trace1 and Trace 2 in any 1MHz band at f1 to f2 range were recorded and showed to another trace.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation.

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.4.7 TEST RESULTS

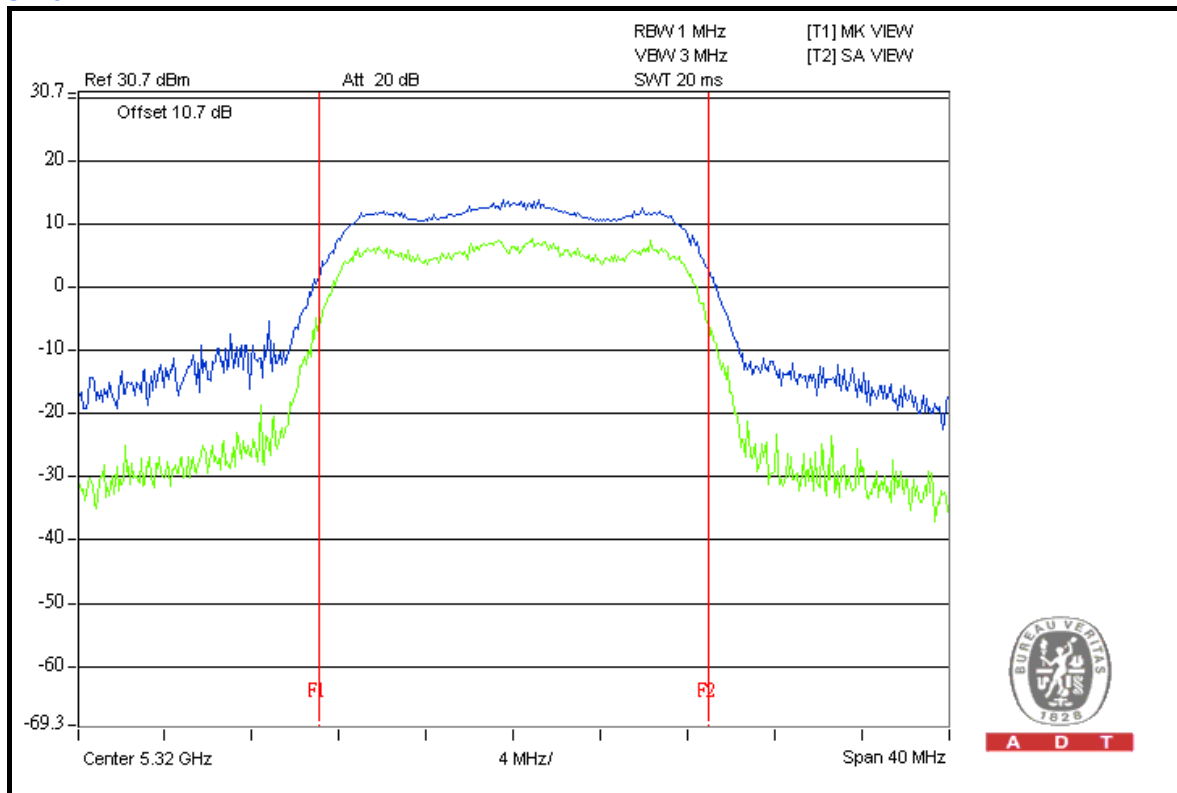
802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	8.55	13	PASS
40	5200	8.47	13	PASS
48	5240	9.07	13	PASS
52	5260	8.69	13	PASS
60	5300	9.19	13	PASS
64	5320	9.69	13	PASS
100	5500	9.22	13	PASS
116	5580	8.65	13	PASS
132	5660	8.59	13	PASS
140	5700	8.47	13	PASS

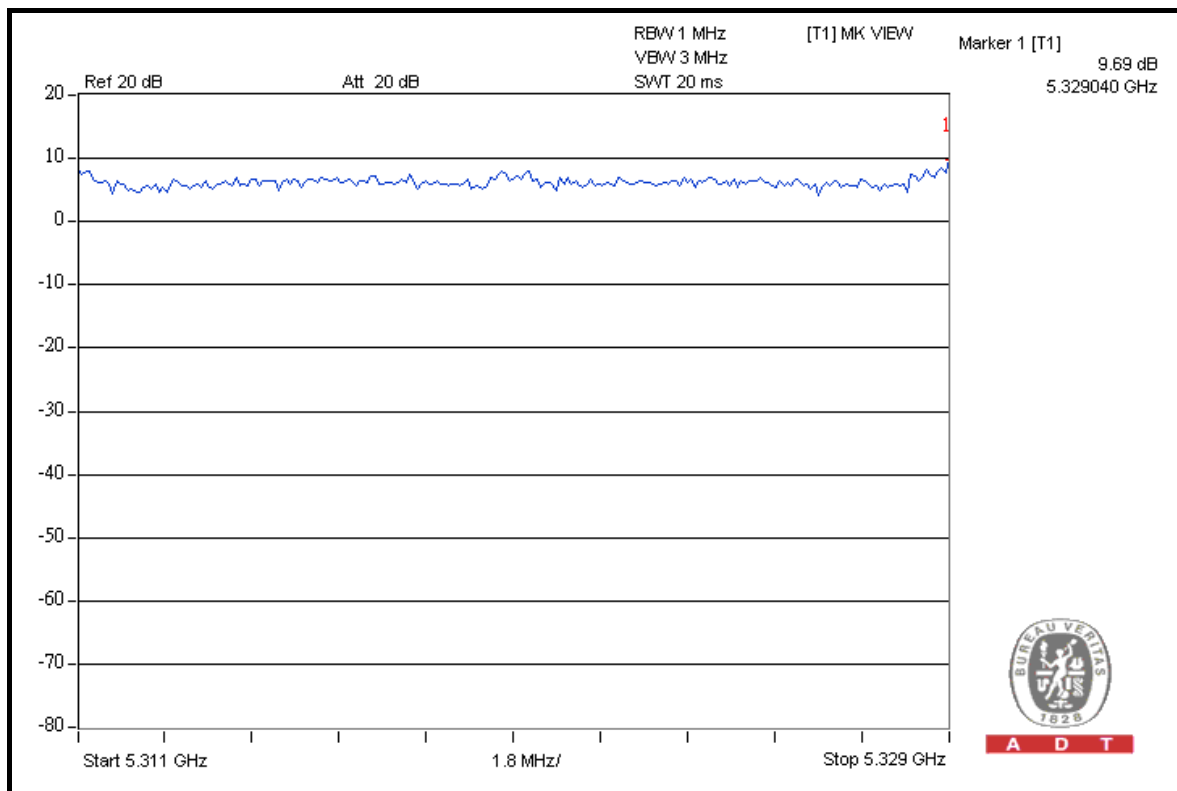


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CH 64



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A D T



A D T

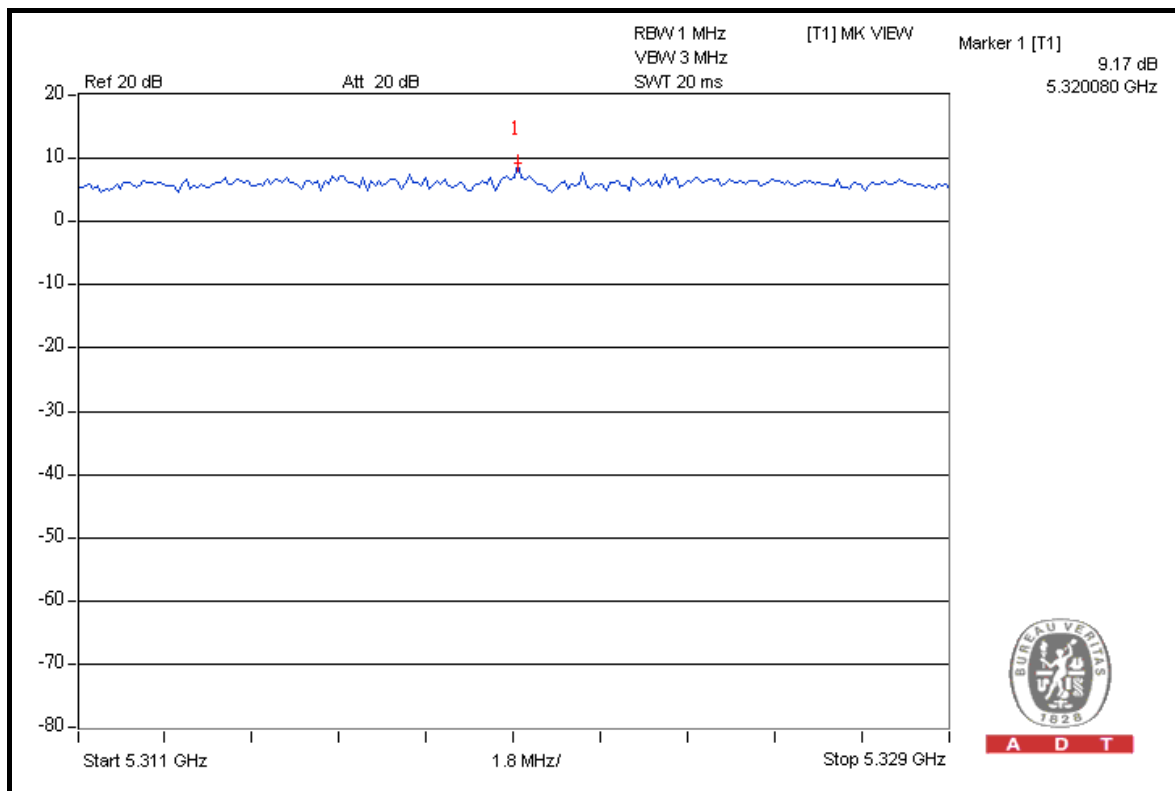
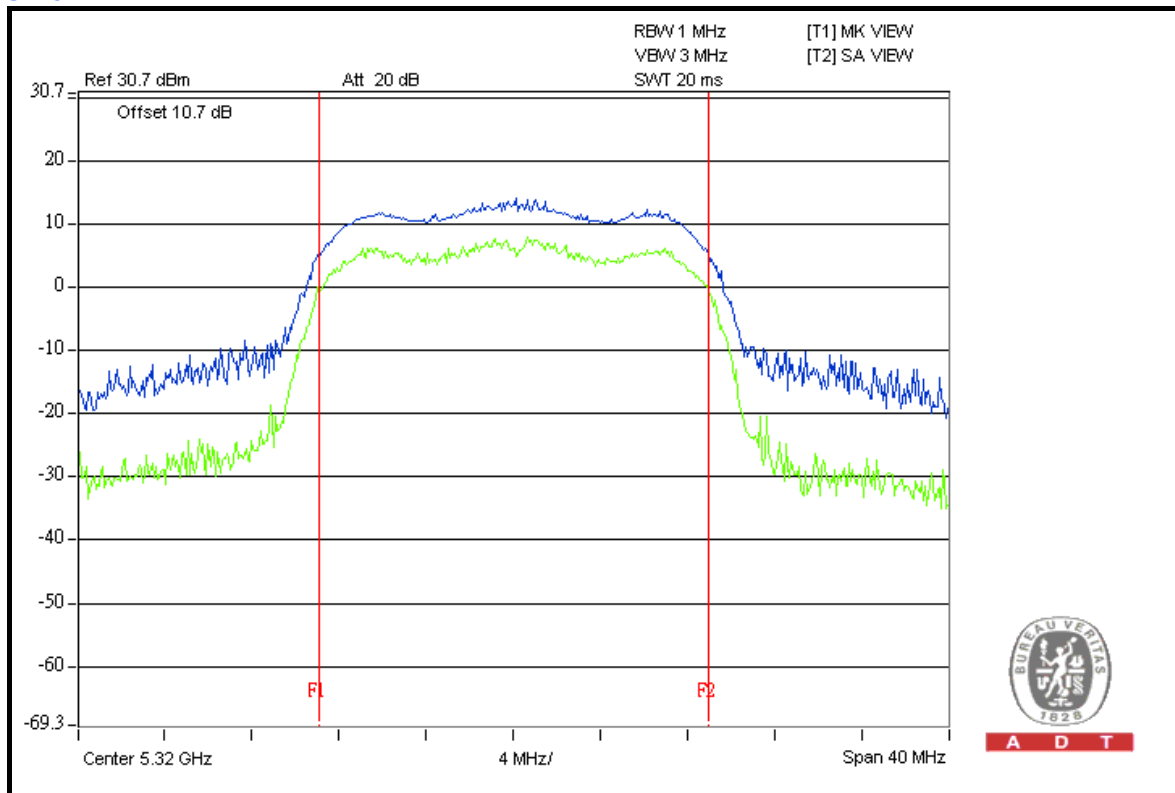
802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	8.23	13	PASS
40	5200	7.76	13	PASS
48	5240	7.91	13	PASS
52	5260	8.04	13	PASS
60	5300	8.15	13	PASS
64	5320	9.17	13	PASS
100	5500	9.07	13	PASS
116	5580	8.17	13	PASS
132	5660	8.56	13	PASS
140	5700	8.60	13	PASS



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CH 64





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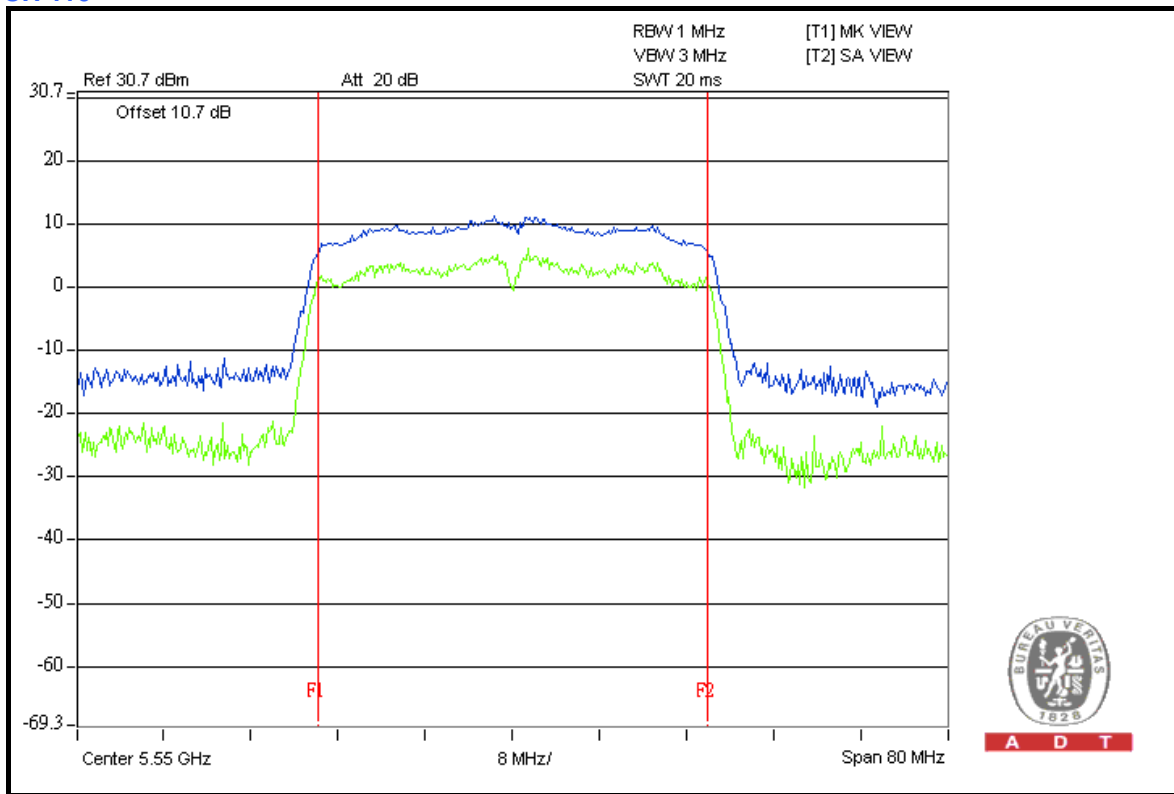
802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
38	5190	9.47	13	PASS
46	5230	8.96	13	PASS
54	5270	9.40	13	PASS
62	5310	9.83	13	PASS
102	5510	8.82	13	PASS
110	5550	10.05	13	PASS
134	5670	8.28	13	PASS

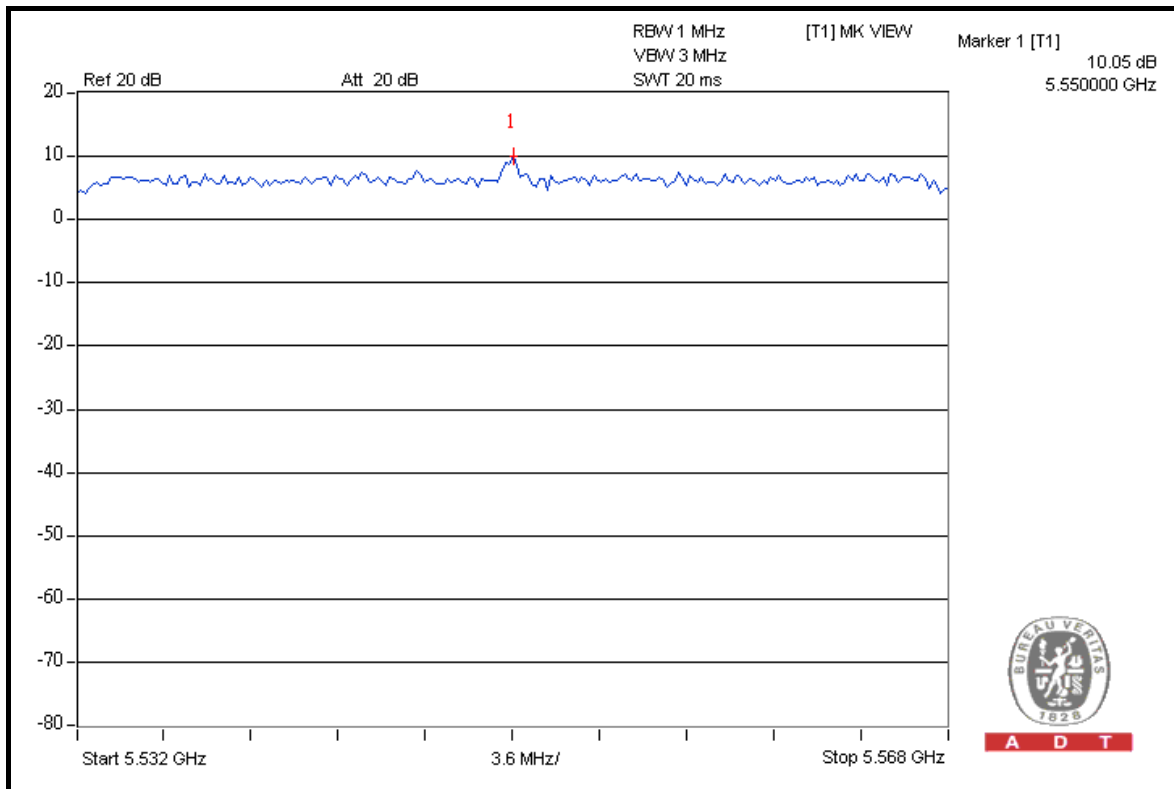


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CH 110



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4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	4dBm
5.250 ~ 5.350GHz	11dBm
5.470 ~ 5.725GHz	11dBm

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100039	Jan. 11, 2010	Jan. 10, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

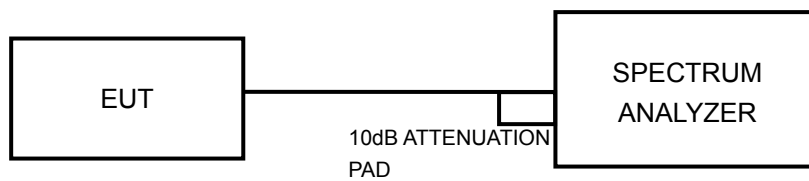
4.5.3 TEST PROCEDURES

- a. The transmitter output was connected to the spectrum analyzer.
- b. Set RBW = 1MHz, VBW = 3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation.

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6.



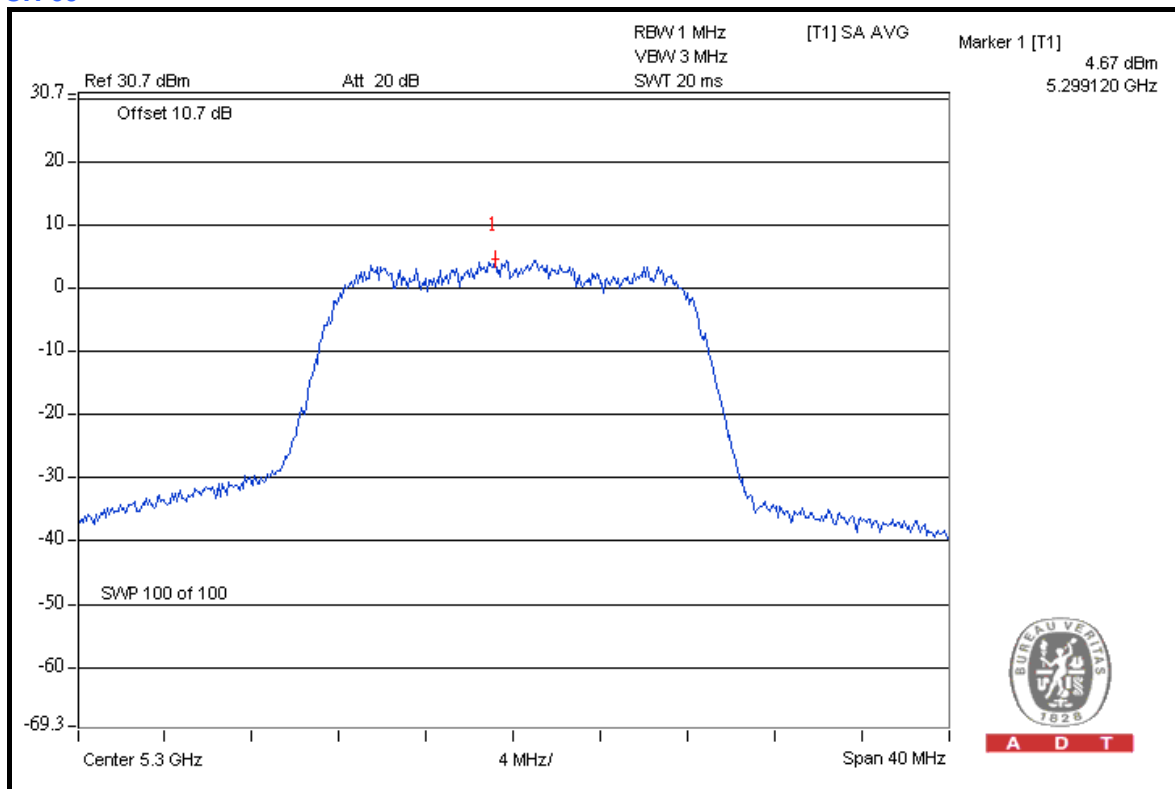
A D T

4.5.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
36	5180	0.9	4	PASS
40	5200	2.5	4	PASS
48	5240	2.7	4	PASS
52	5260	2.9	11	PASS
60	5300	4.7	11	PASS
64	5320	2.8	11	PASS
100	5500	2.3	11	PASS
116	5580	4.1	11	PASS
132	5660	3.8	11	PASS
140	5700	-1.5	11	PASS

CH 60



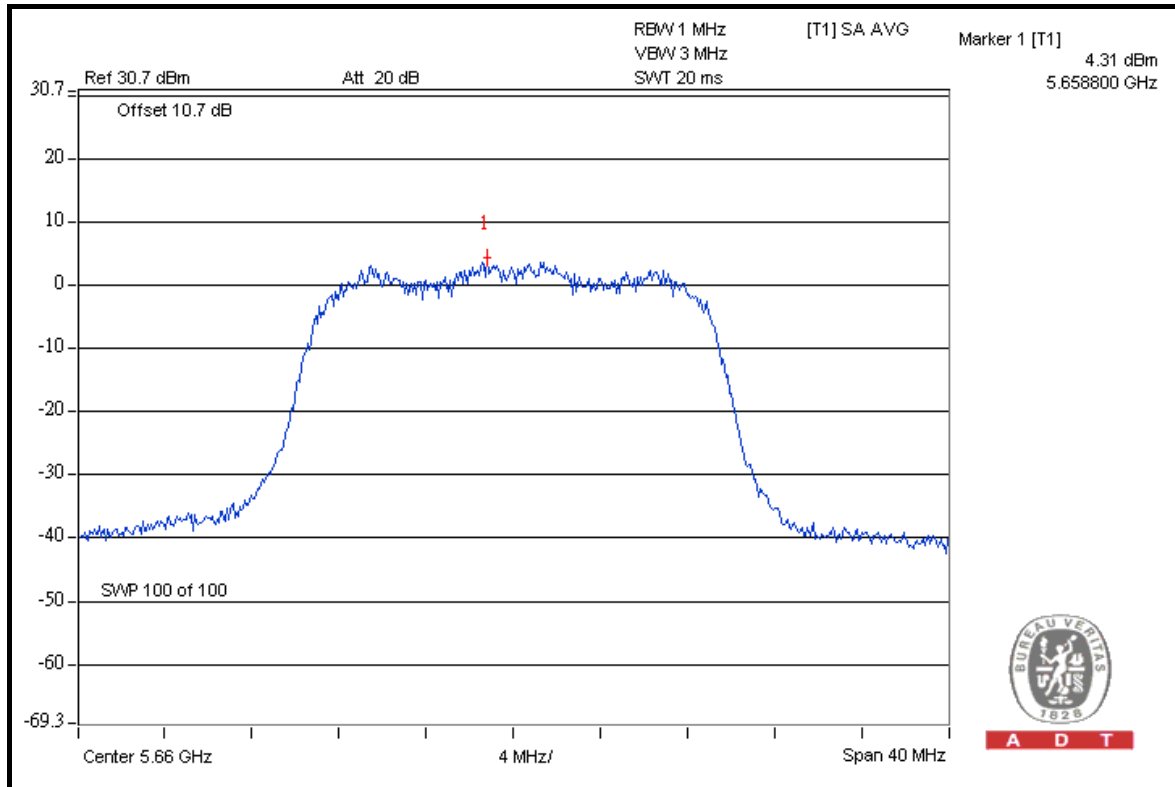


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802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
36	5180	0.9	4	PASS
40	5200	2.6	4	PASS
48	5240	2.9	4	PASS
52	5260	4.1	11	PASS
60	5300	3.0	11	PASS
64	5320	2.7	11	PASS
100	5500	2.0	11	PASS
116	5580	3.1	11	PASS
132	5660	4.3	11	PASS
140	5700	-1.7	11	PASS

CH 132

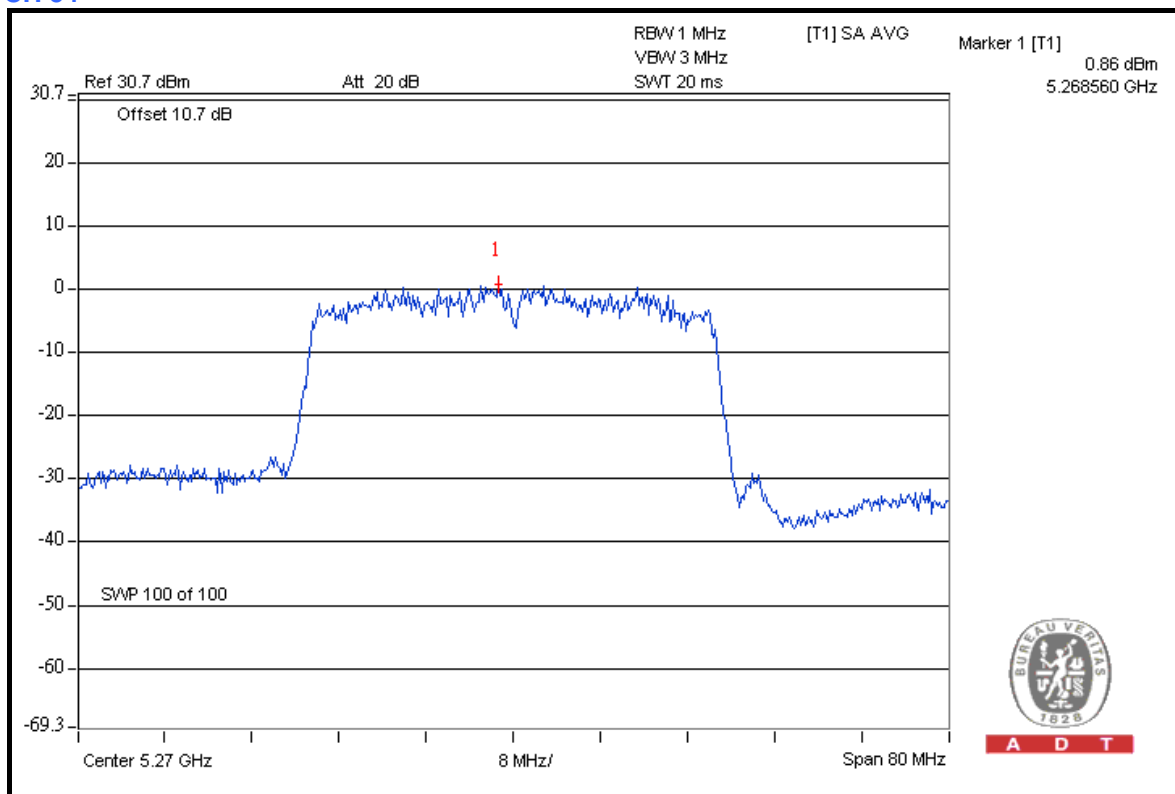


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802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
38	5190	-3.4	4	PASS
46	5230	0.7	4	PASS
54	5270	0.9	4	PASS
62	5310	-2.4	11	PASS
102	5510	-4.4	11	PASS
110	5550	-0.3	11	PASS
134	5670	-0.6	11	PASS

CH 54



4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within the band of operation frequency over a temperature variation of –30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100039	Jan. 11, 2010	Jan. 10, 2011
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W981030	Jun. 28, 2010	Jun. 27, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

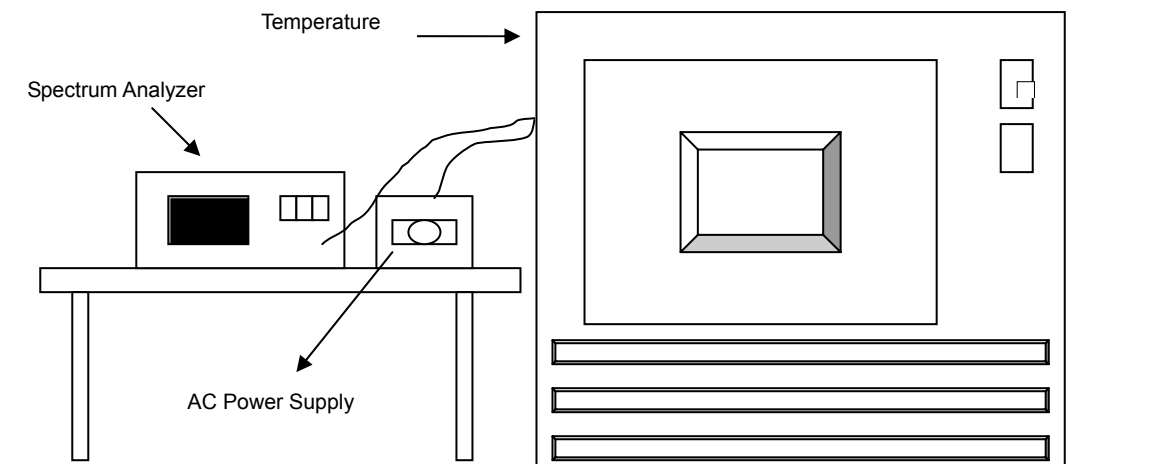
4.6.3 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation.

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6.

4.6.7 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
55	5.0	5319.988663	-2.131	5319.988451	-2.171	5319.988455	-2.170	5319.988623	-2.139
50	5.0	5319.988946	-2.078	5319.989145	-2.040	5319.989144	-2.041	5319.989033	-2.061
40	5.0	5319.990310	-1.821	5319.990697	-1.749	5319.990443	-1.796	5319.990687	-1.751
30	5.0	5319.991753	-1.550	5319.992215	-1.463	5319.991783	-1.545	5319.991846	-1.533
20	5.0	5319.993107	-1.296	5319.992696	-1.373	5319.993378	-1.245	5319.993085	-1.300
10	5.0	5319.993301	-1.259	5319.993053	-1.306	5319.993063	-1.304	5319.992876	-1.339
0	5.0	5319.990807	-1.728	5319.991104	-1.672	5319.991308	-1.634	5319.990741	-1.740
-10	5.0	5319.990645	-1.758	5319.991187	-1.657	5319.991164	-1.661	5319.990980	-1.695
-20	5.0	5319.991366	-1.623	5319.991176	-1.659	5319.990995	-1.693	5319.990501	-1.786
-30	5.0	5319.990701	-1.748	5319.990794	-1.730	5319.990769	-1.735	5319.990776	-1.734

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	4.3	5319.992900	-1.335	5319.993387	-1.243	5319.992991	-1.317	5319.993243	-1.270
	5.0	5319.993107	-1.296	5319.992696	-1.373	5319.993378	-1.245	5319.993085	-1.300
	5.8	5319.993049	-1.307	5319.993238	-1.271	5319.993406	-1.239	5319.993888	-1.149

4.7 BAND EDGES MEASUREMENT

4.7.1 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100039	Jan. 11, 2010	Jan. 10, 2011

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set both RBW and VBW of spectrum analyzer to 1MHz and 3MHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

4.7.3 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.7.4 TEST RESULTS

For signals in the restricted bands above and below the 5.15 to 5.32GHz, 5.50 to 5.70GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

The spectrum plots (Peak RBW = 1MHz, VBW = 3MHz) are attached on the following pages.

FOR 5180-5320MHz BAND: 802.11a

RESTRICT BAND (4500 ~ 5150 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5180.00 (PK)	107.9	40.70	67.2	74.00
5180.00 (AV)	94.9	47.70	47.2	54.00

RESTRICT BAND (5350 ~ 5460 MHz)

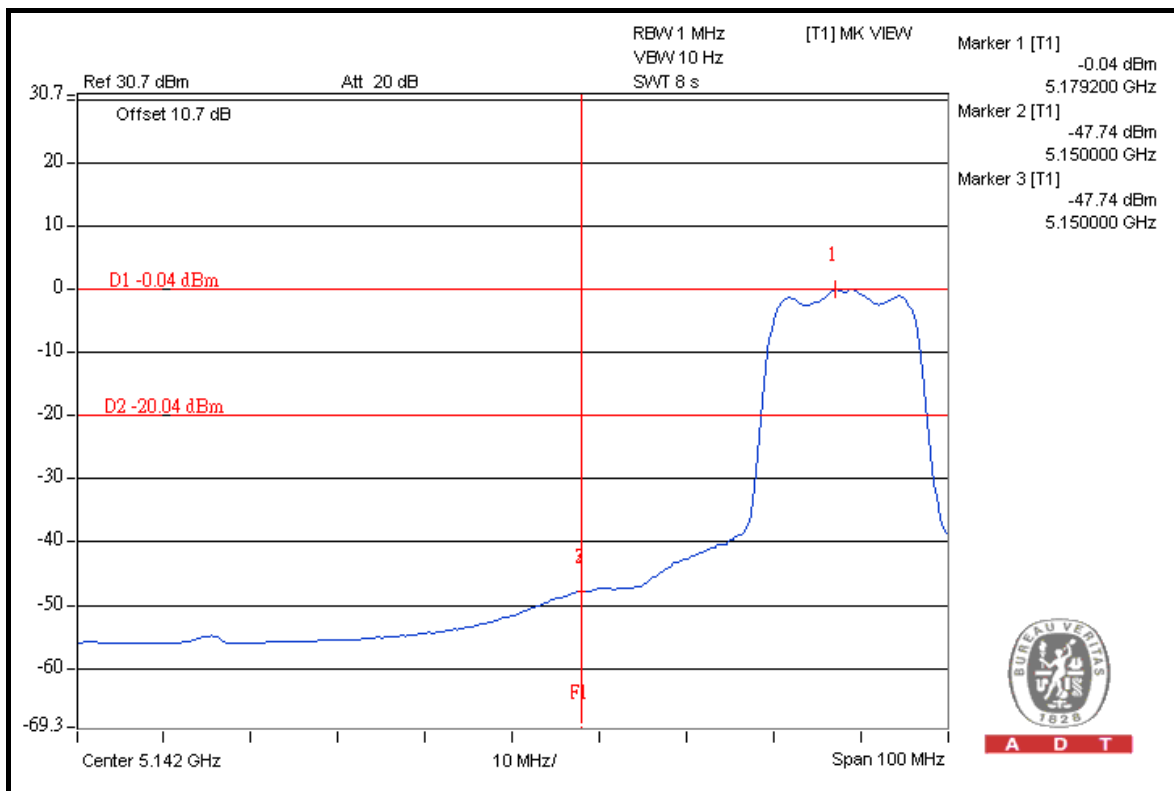
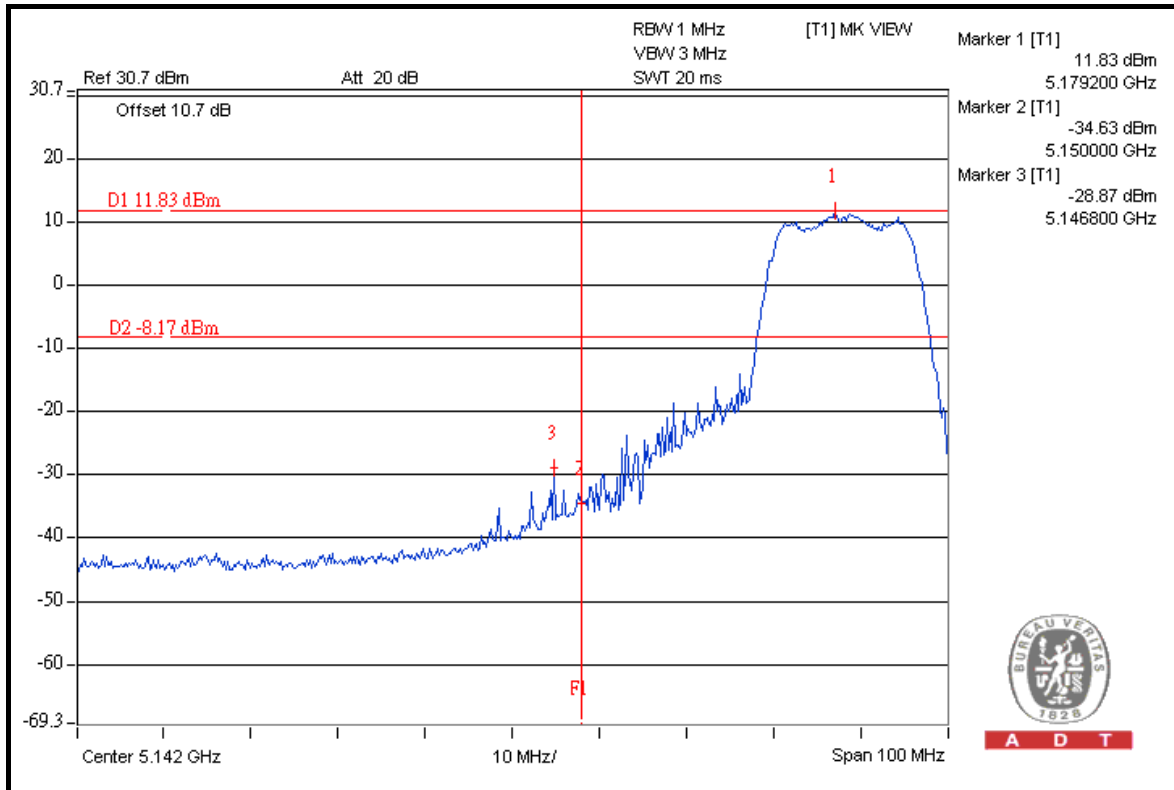
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5320.00 (PK)	108.6	42.17	66.43	74.00
5320.00 (AV)	95.7	47.98	47.72	54.00

NOTE:

- Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
- Maximum field strength in restrict band = Fundamental emission – Delta.

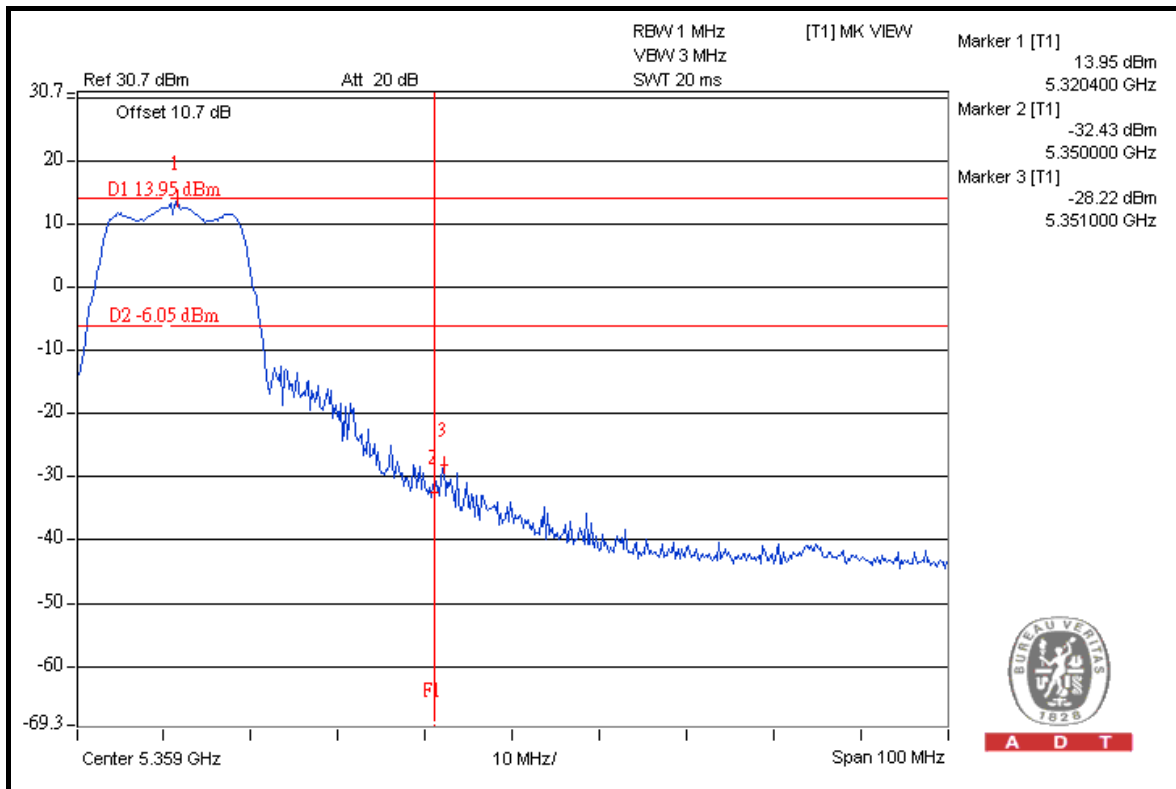
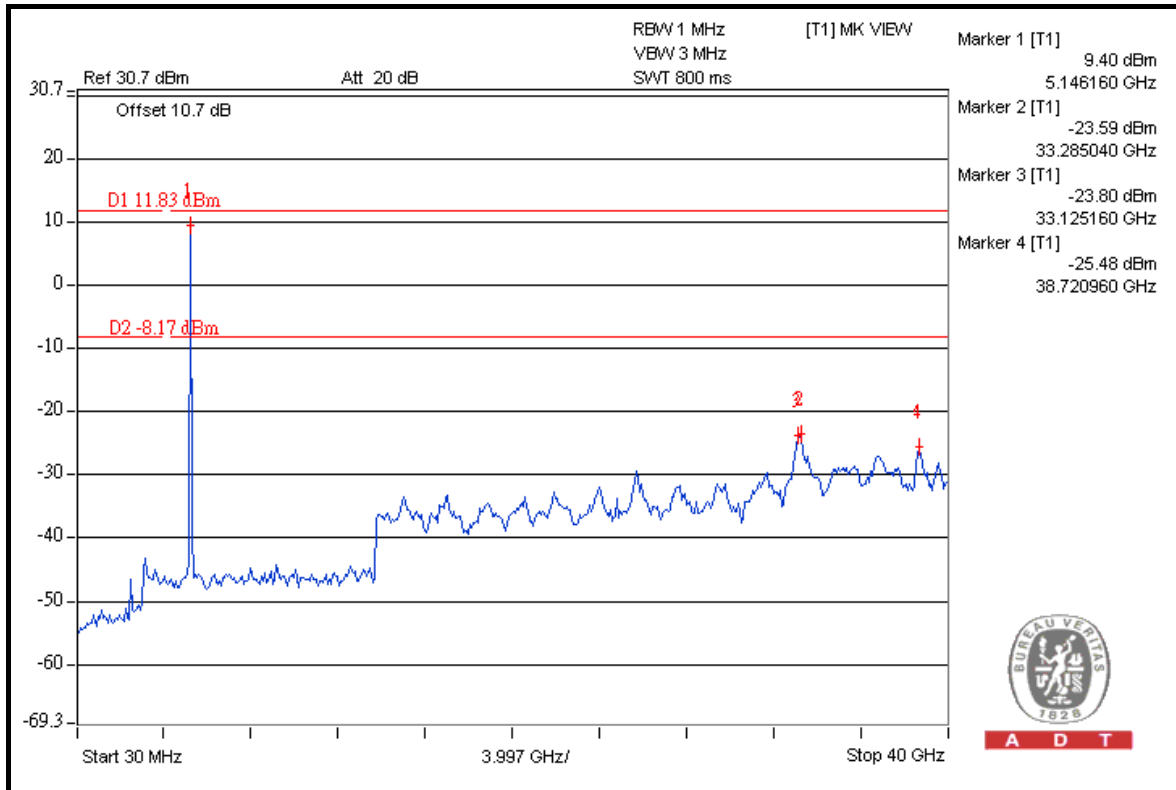


A D T



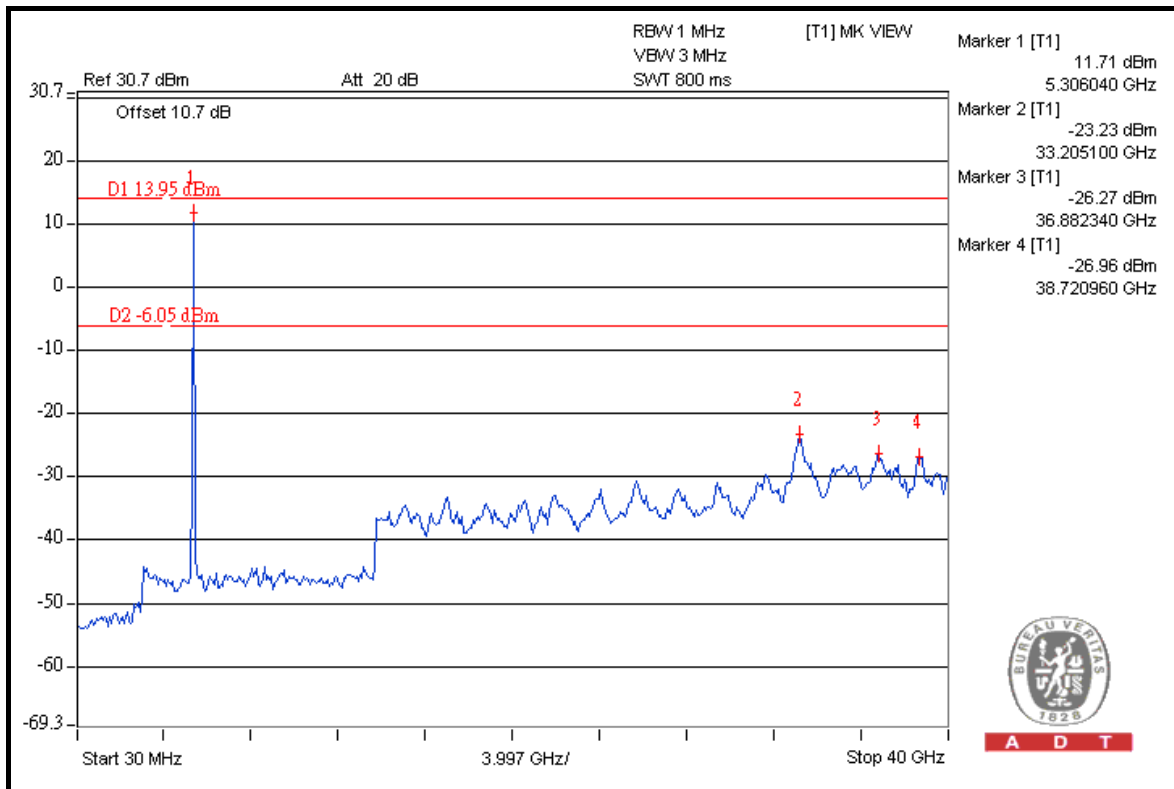
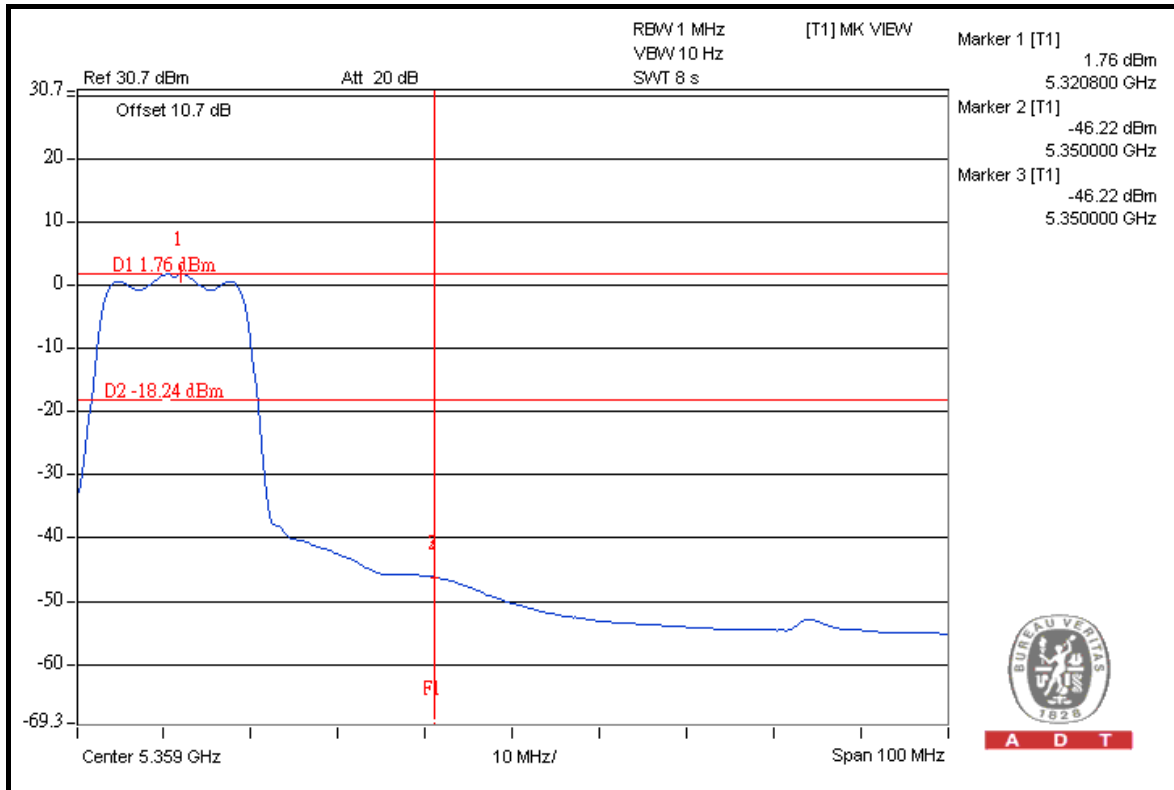


A D T





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FOR 5500-5700MHz BAND:

802.11a

5500MHz

RESTRICT BAND (5350 ~ 5460 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5500.00 (PK)	108.2	50.35	57.85	74.00
5500.00 (AV)	95.4	52.23	43.17	54.00

FREQUENCY BAND (5460 ~ 5470 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH (dBuV/m)	LIMIT (dBuV/m)
5500.00 (PK)	108.2	41.8	66.40	68.30

5700MHz

ABOVE 5725 MHz

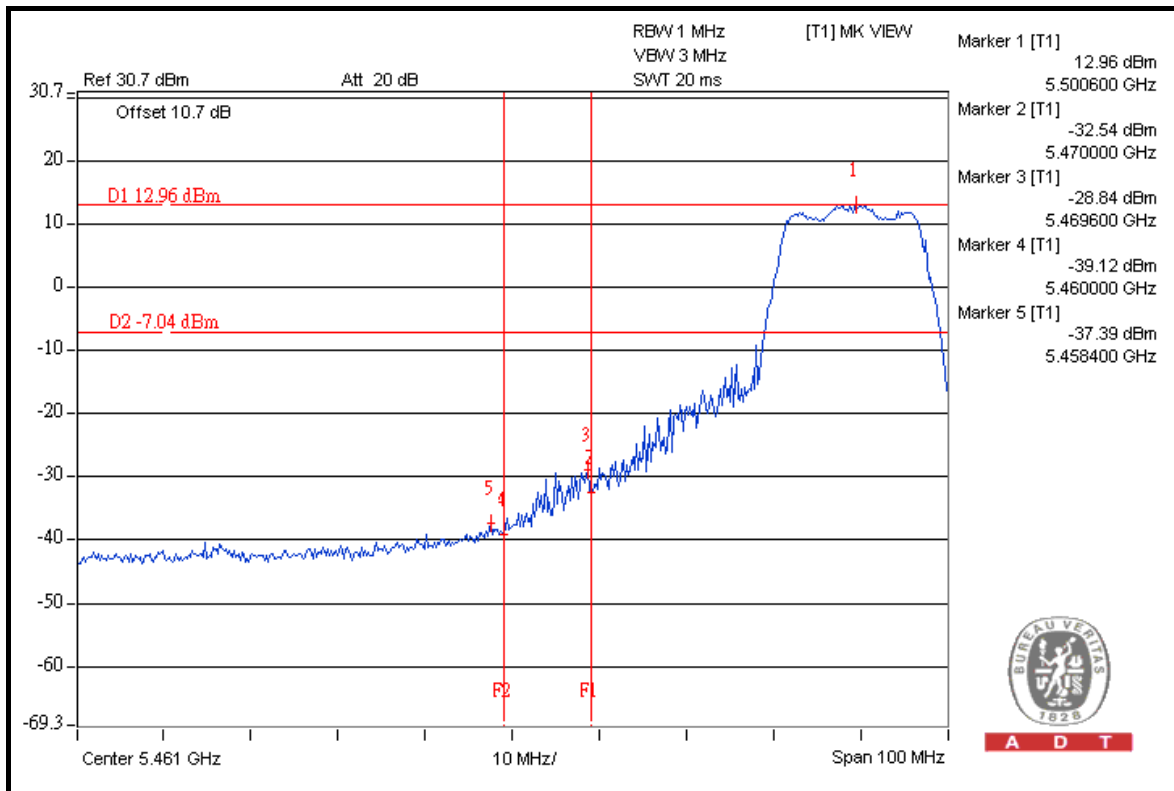
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH (dBuV/m)	LIMIT (dBuV/m)
5700.00 (PK)	104.9	44.53	60.37	68.30

NOTE:

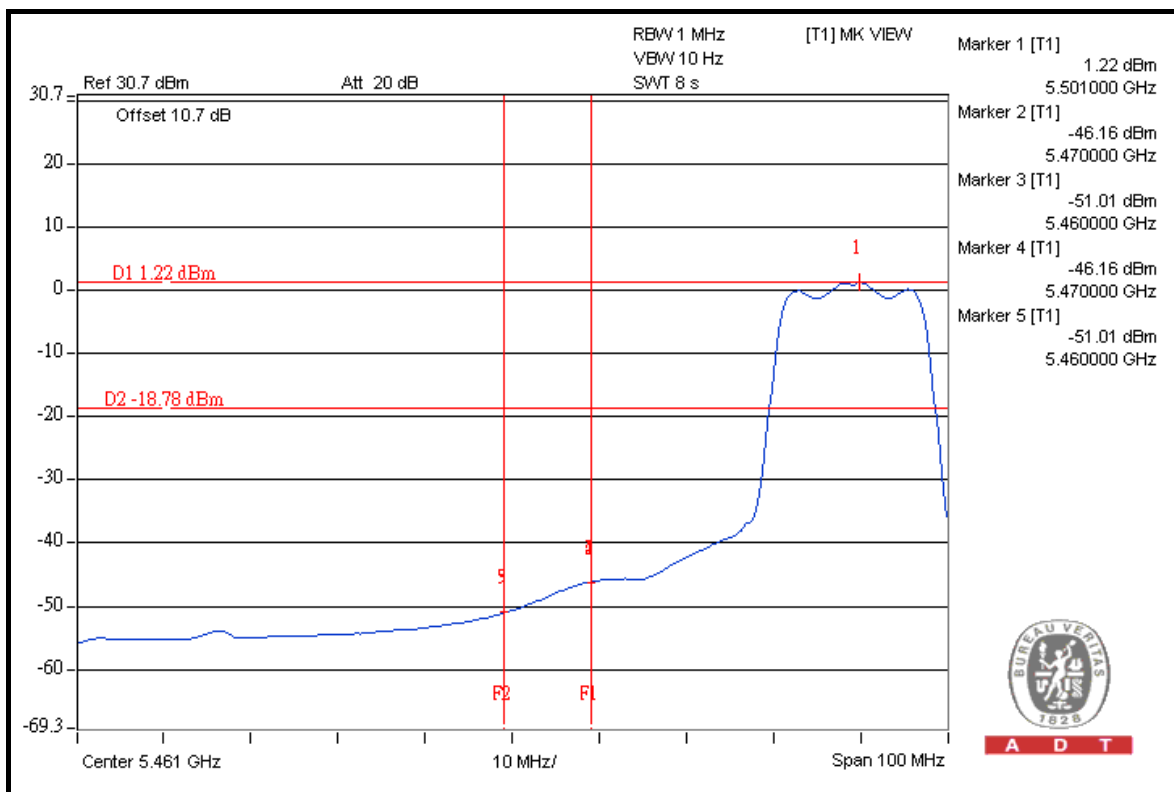
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.



A D T



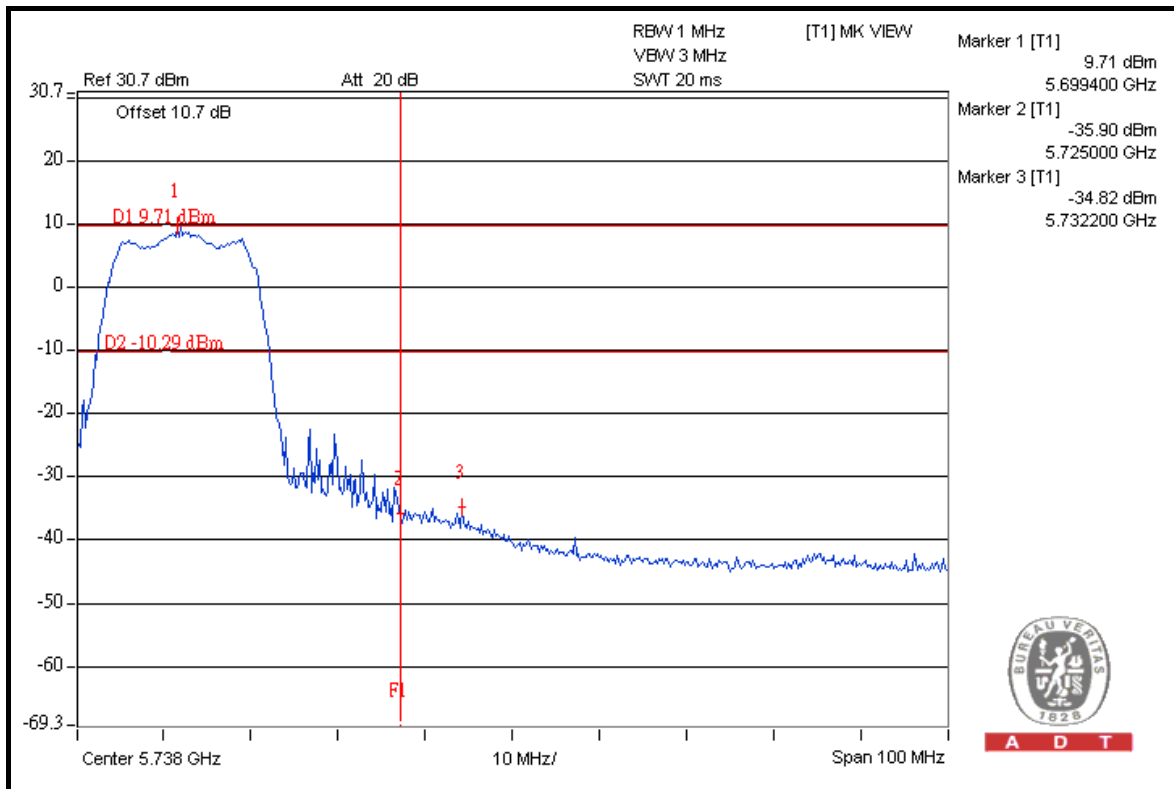
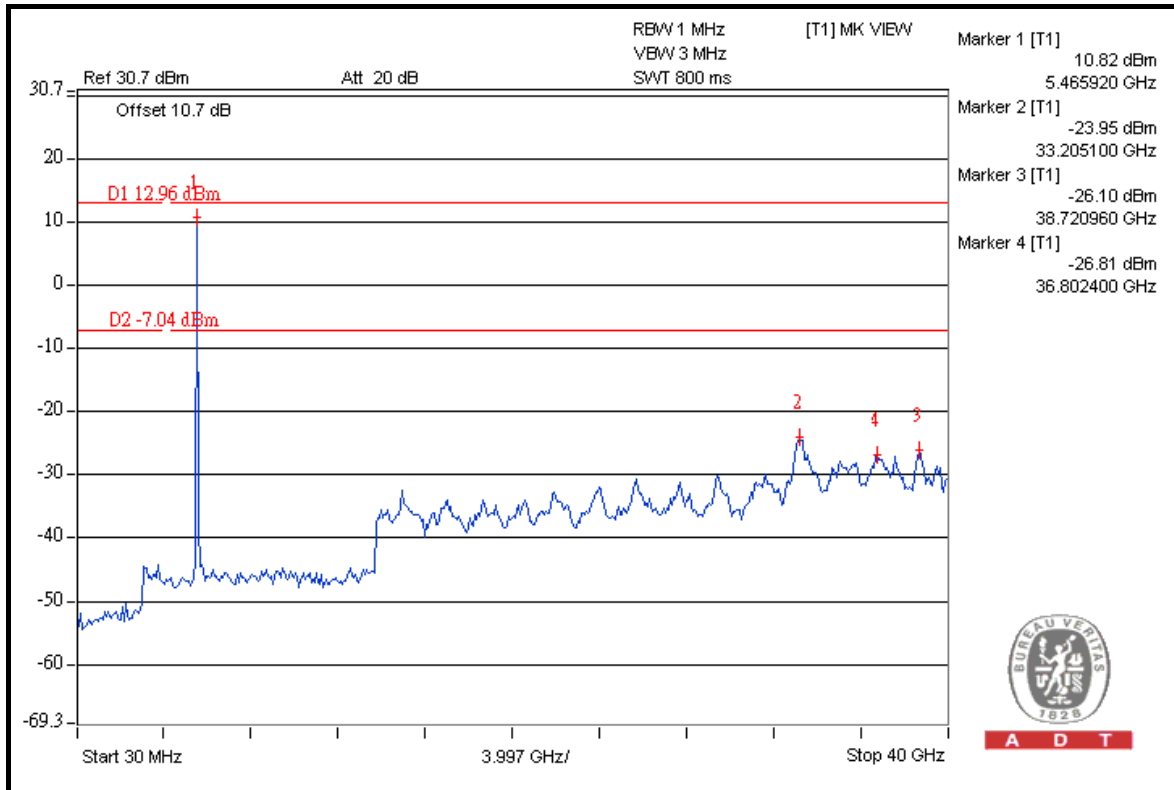
A D T



A D T

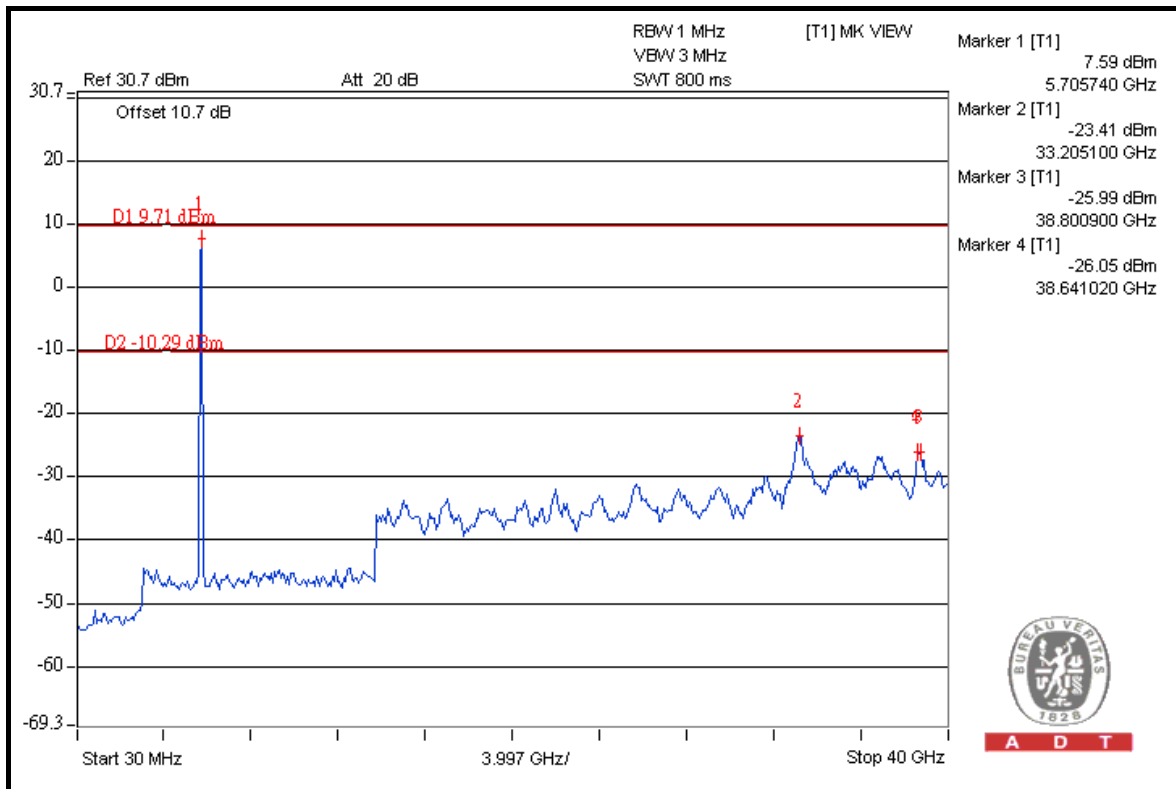
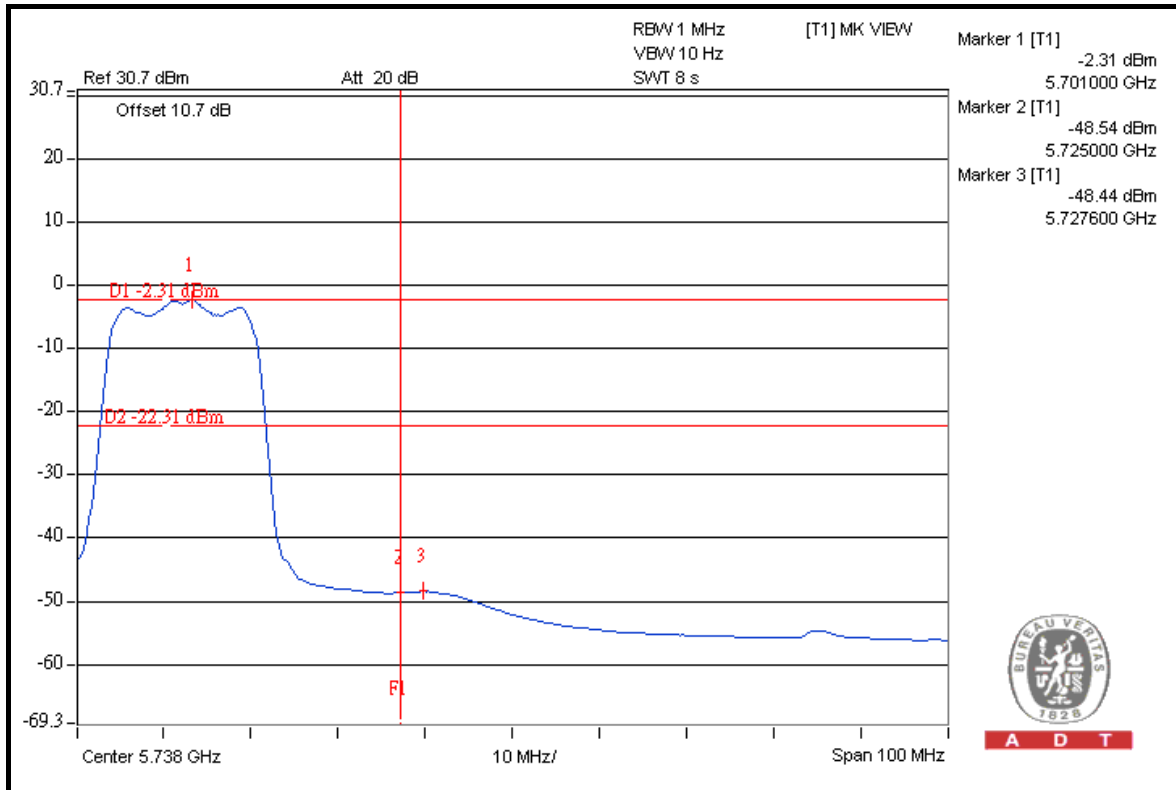


A D T





A D T



FOR 5180-5320MHz BAND:

802.11n (20MHz)

RESTRICT BAND (4500 ~ 5150 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5180.00 (PK)	108.1	39.65	68.45	74.00
5180.00 (AV)	95.1	47.46	47.64	54.00

RESTRICT BAND (5350 ~ 5460 MHz)

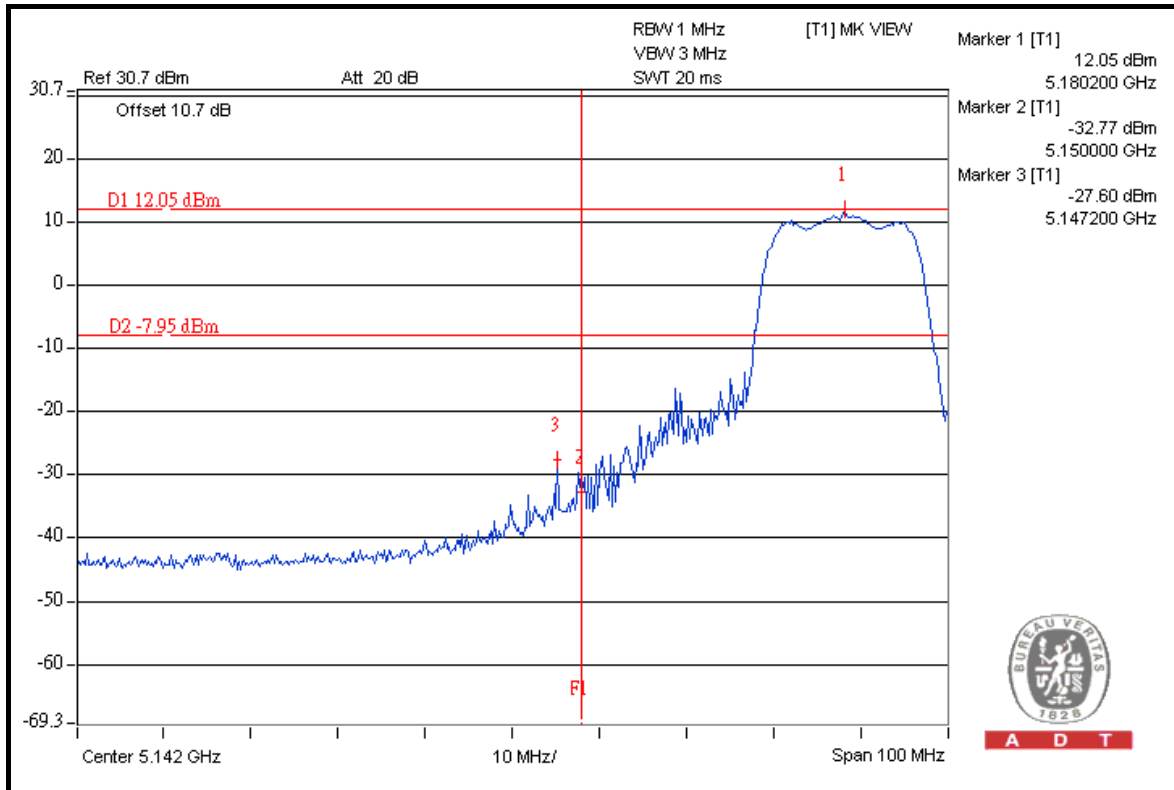
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5320.00 (PK)	109.3	42.63	66.67	74.00
5320.00 (AV)	96.4	47.75	48.65	54.00

NOTE:

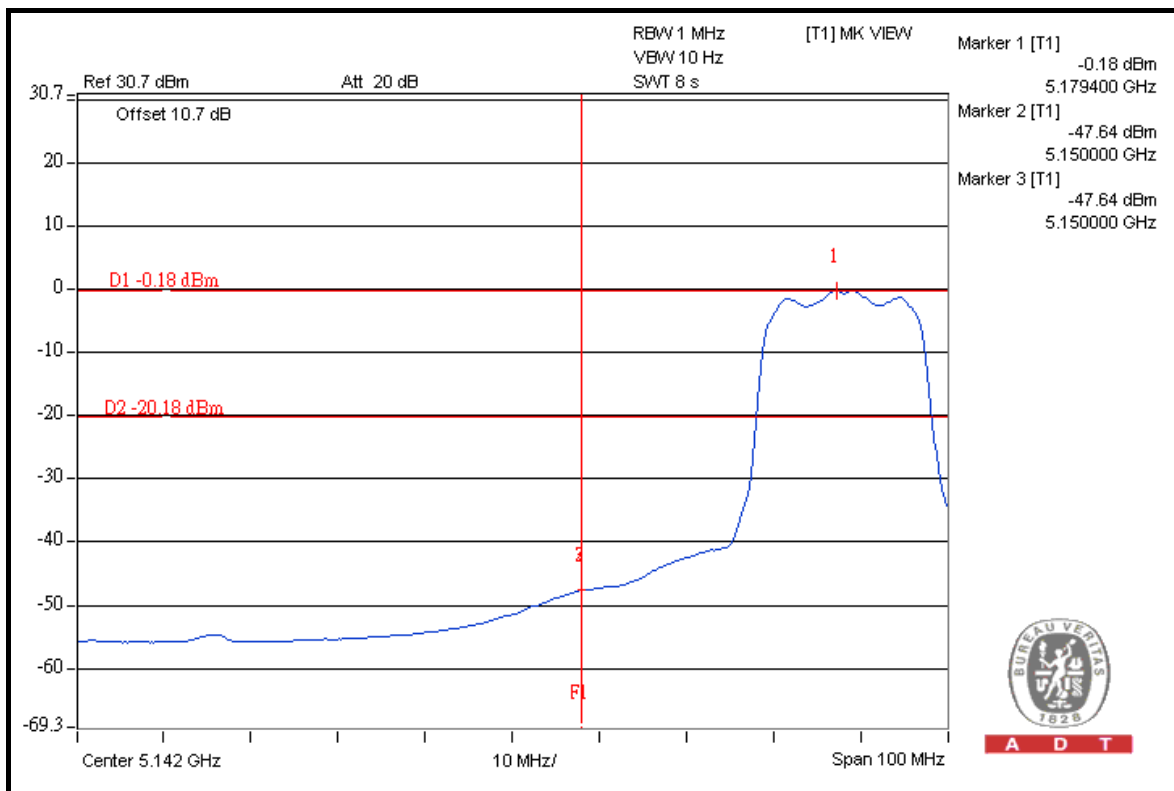
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.



A D T



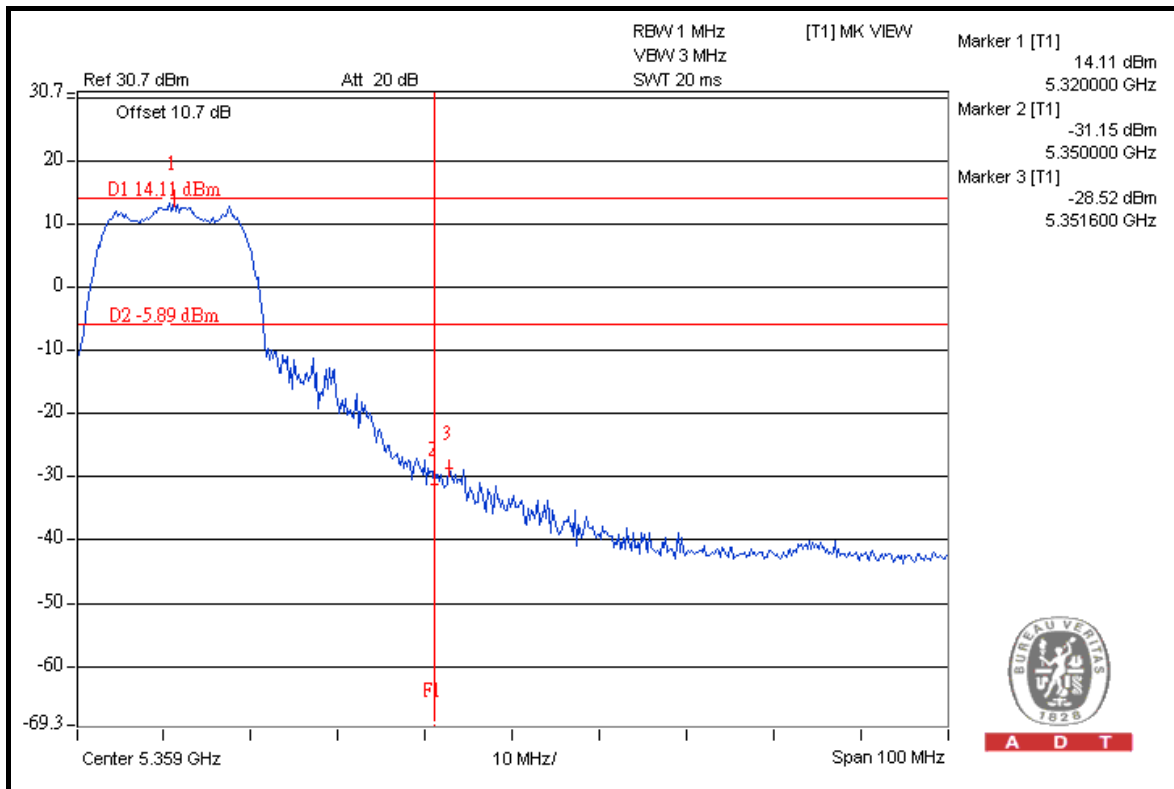
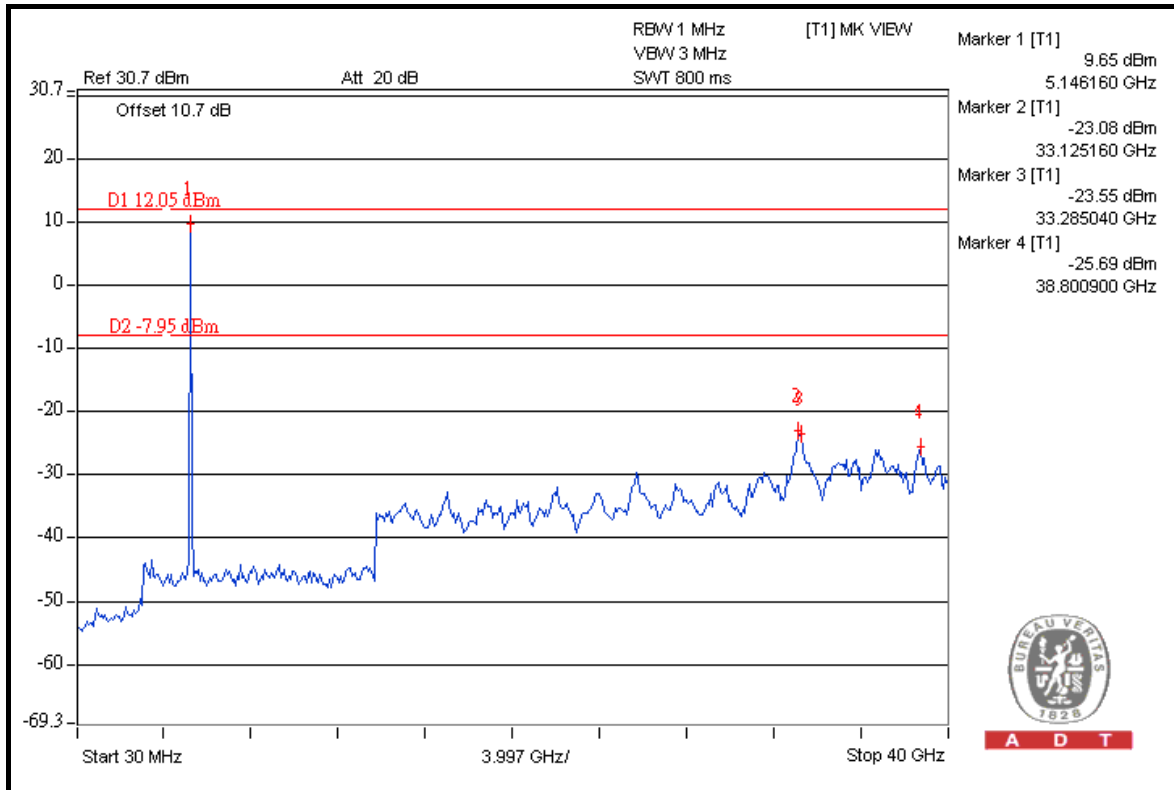
A D T



A D T

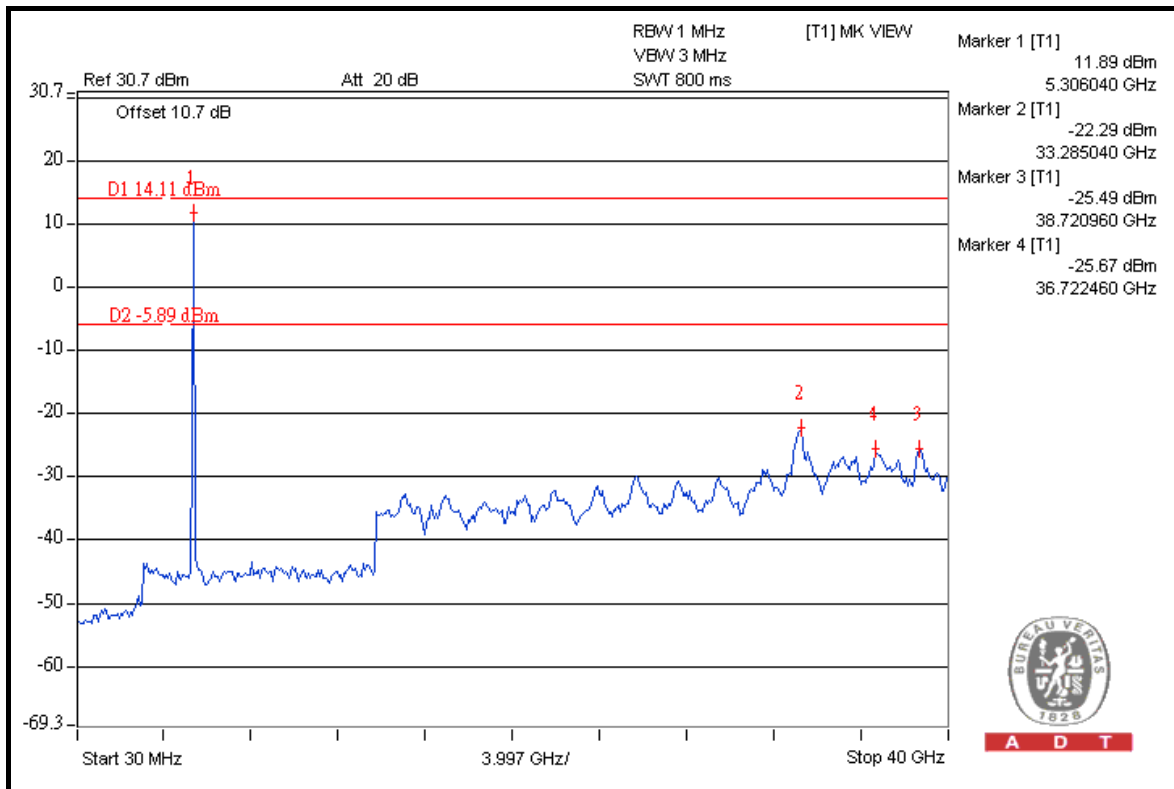
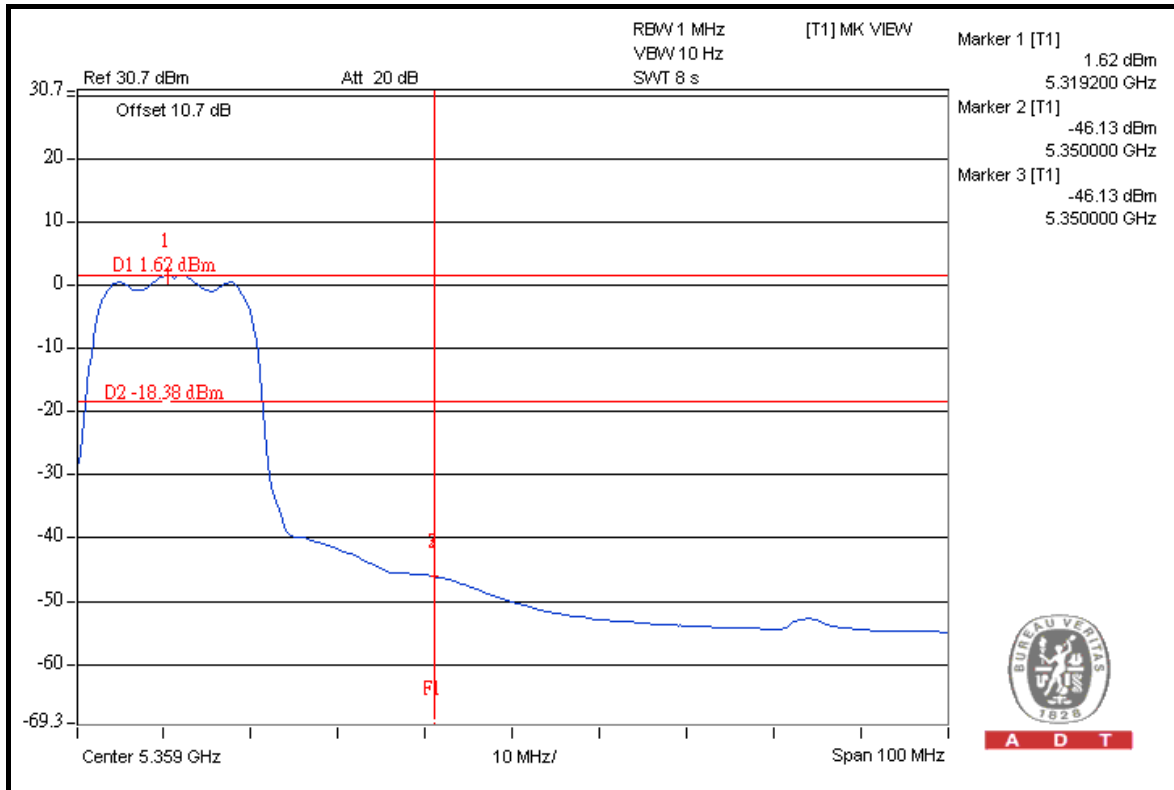


A D T





A D T



FOR 5500-5700MHz BAND:

802.11n (20MHz)

5500MHz

RESTRICT BAND (5350 ~ 5460 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5500.00 (PK)	107.9	49.64	58.26	74.00
5500.00 (AV)	95.1	51.56	43.54	54.00

FREQUENCY BAND (5460 ~ 5470 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH (dBuV/m)	LIMIT (dBuV/m)
5500.00 (PK)	107.9	40.65	67.25	68.30

5700MHz

ABOVE 5725 MHz

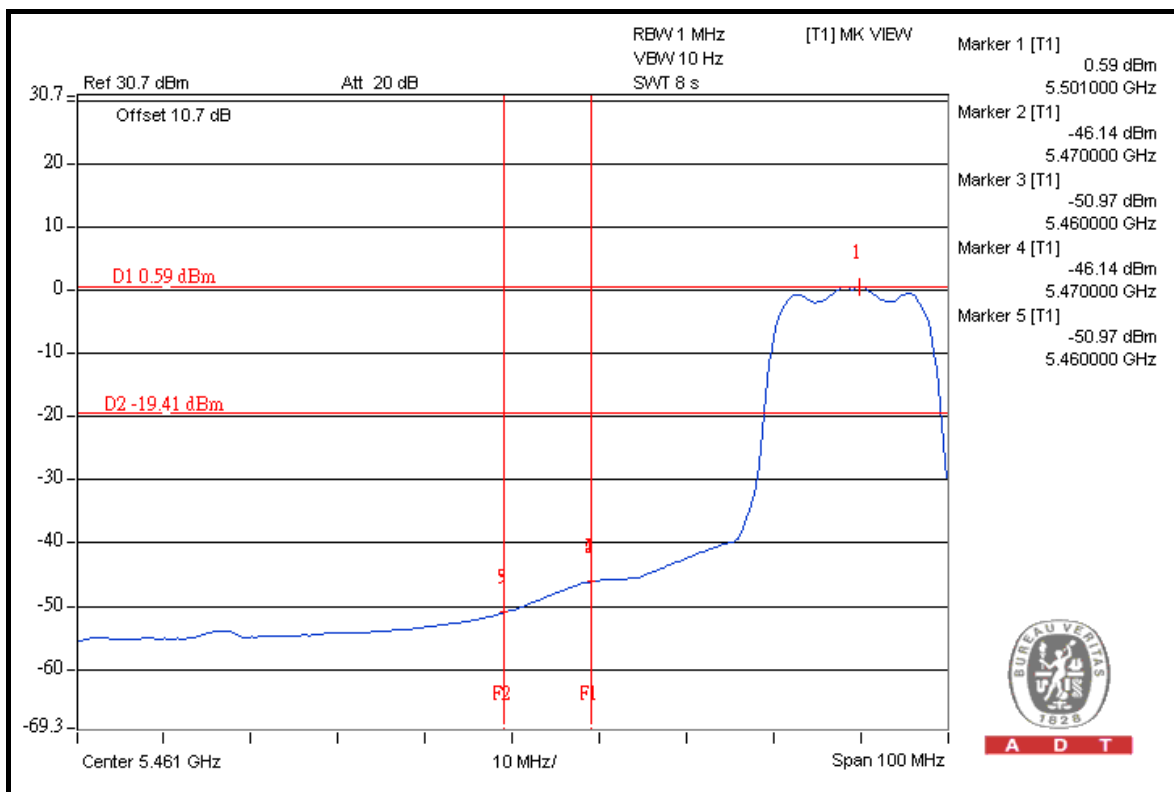
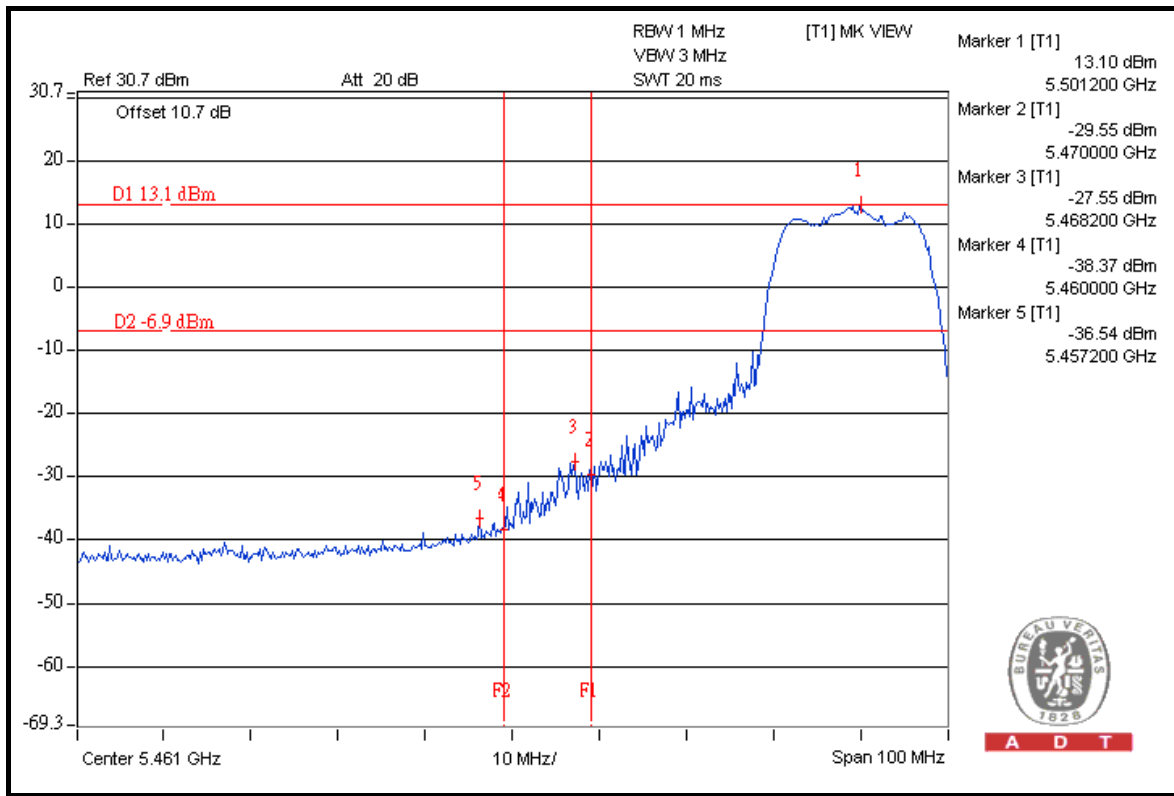
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH (dBuV/m)	LIMIT (dBuV/m)
5700.00 (PK)	103.1	39.12	63.98	68.30

NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

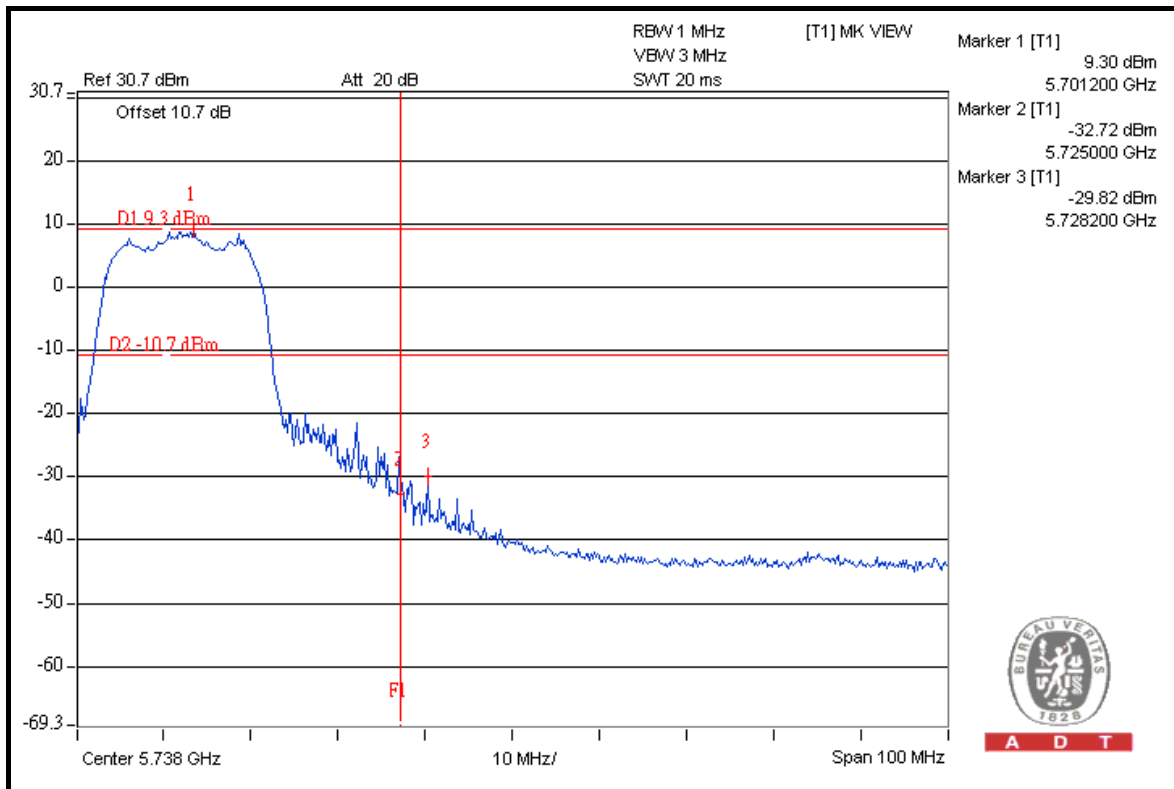
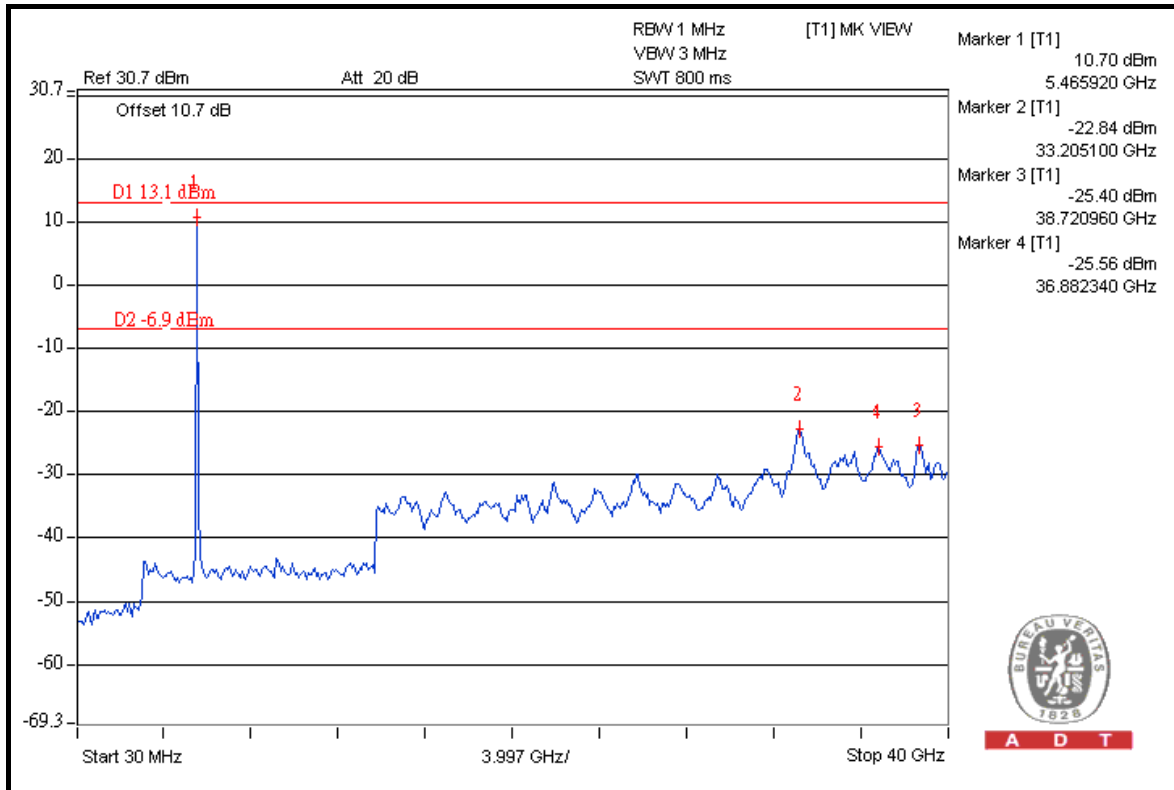


A D T



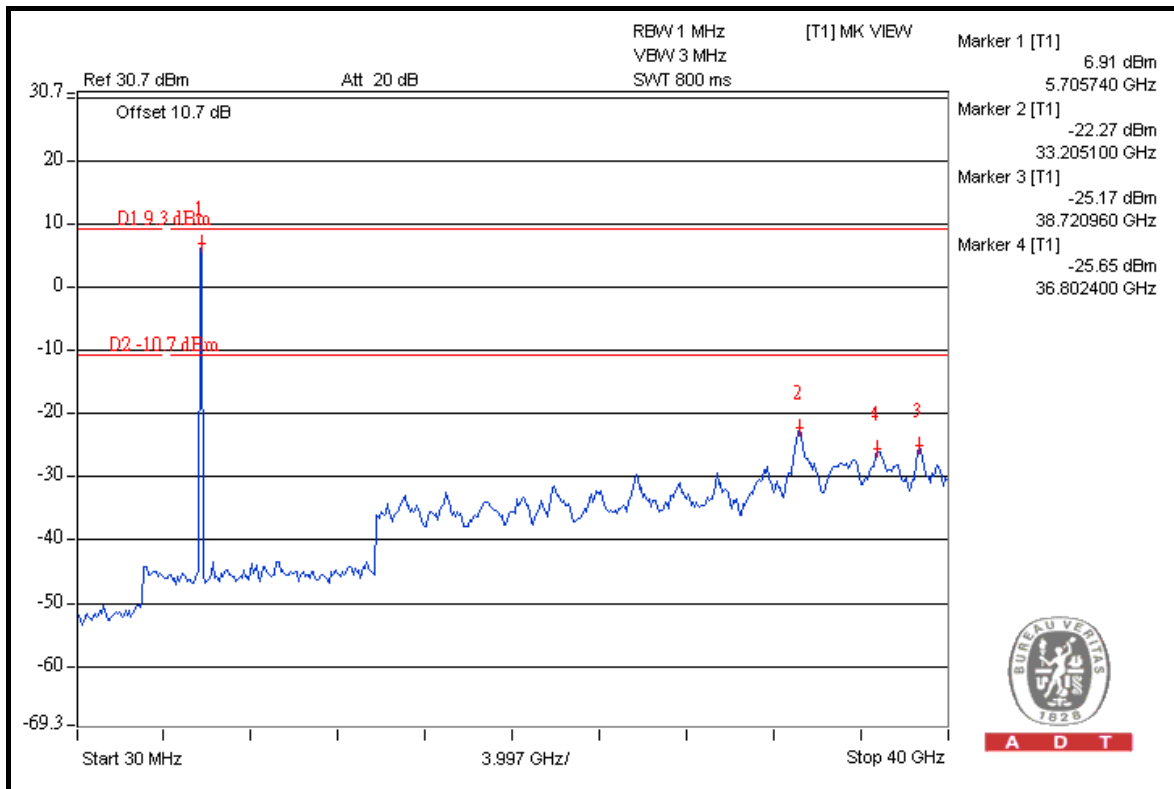
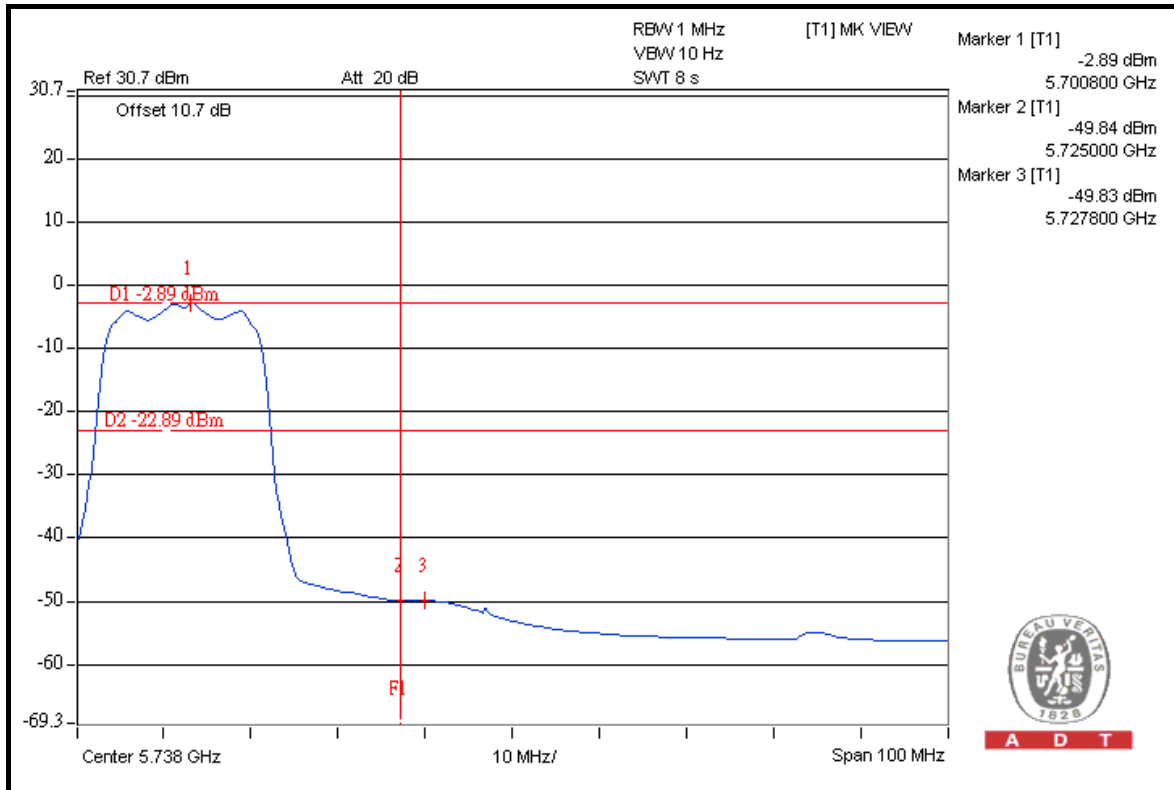


A D T





A D T



FOR 5180-5320MHz BAND:

802.11n (40MHz)

RESTRICT BAND (4500 ~ 5150 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5190.00 (PK)	102.6	29.96	72.64	74.00
5190.00 (AV)	90.4	37.93	52.47	54.00

RESTRICT BAND (5350 ~ 5460 MHz)

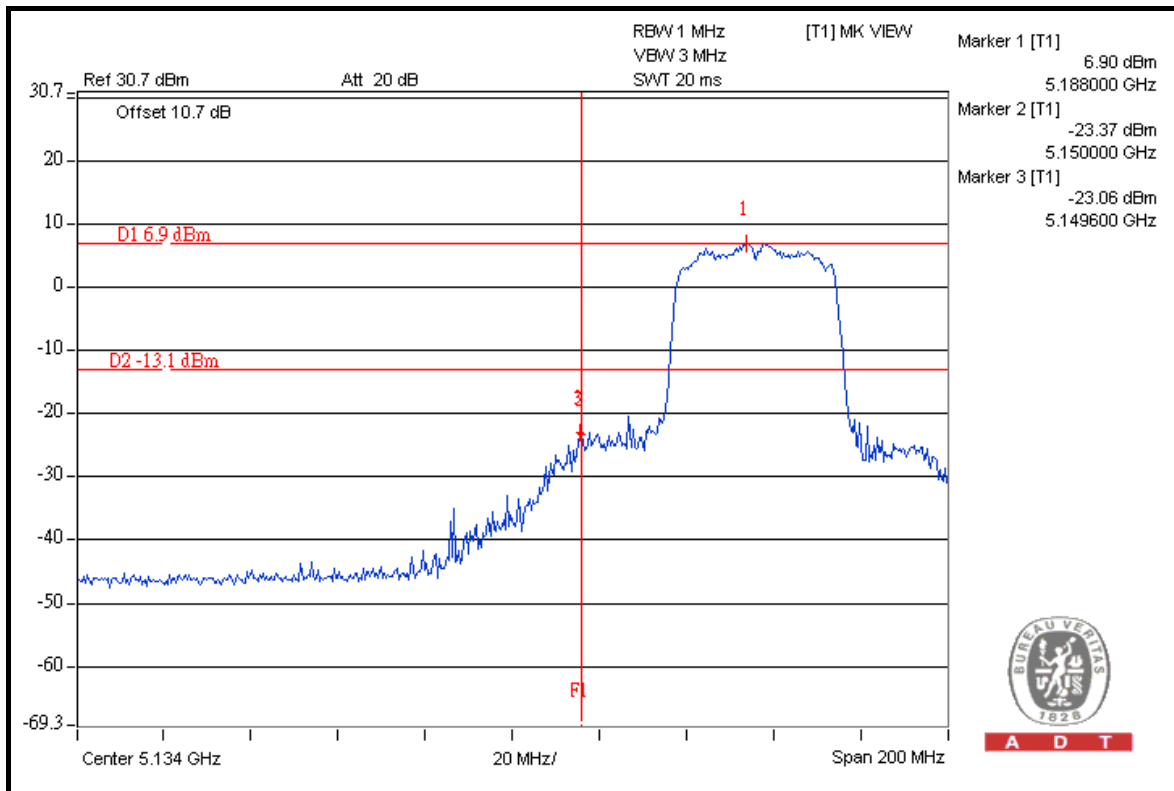
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5310.00 (PK)	104.1	33.21	70.89	74.00
5310.00 (AV)	91.3	38.37	52.93	54.00

NOTE:

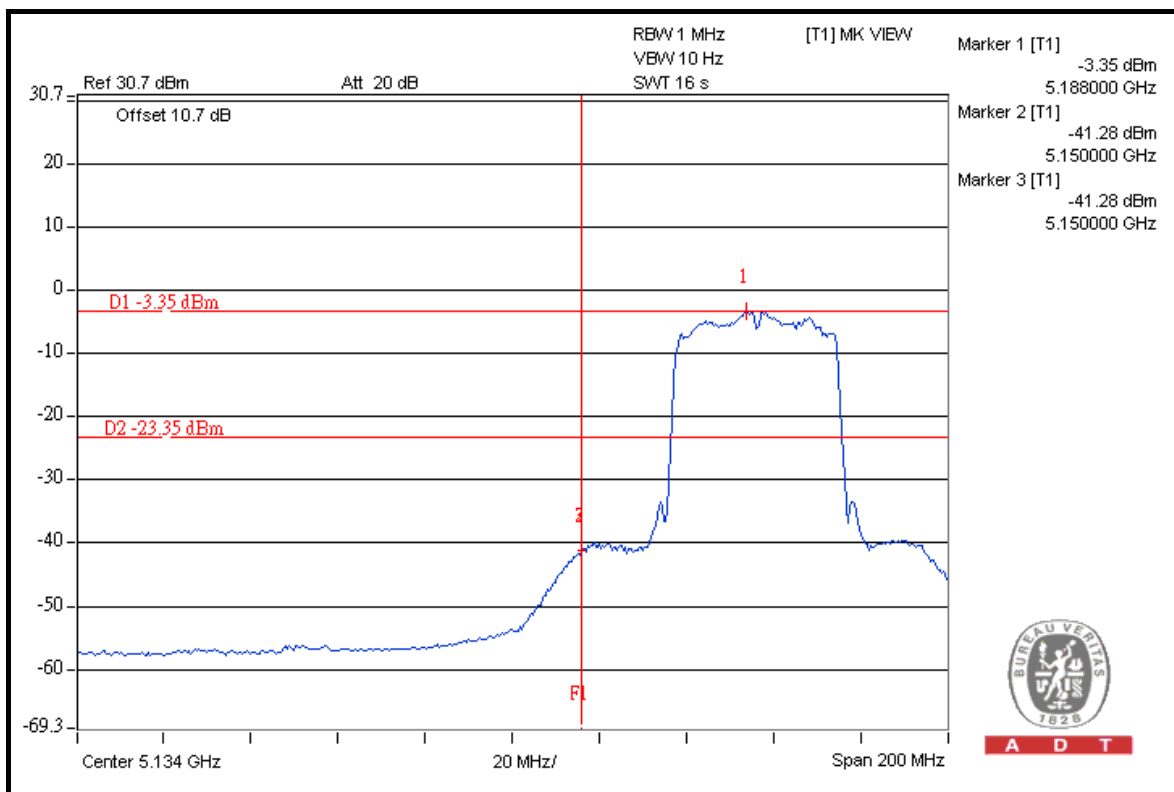
- Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
- Maximum field strength in restrict band = Fundamental emission – Delta.



A D T



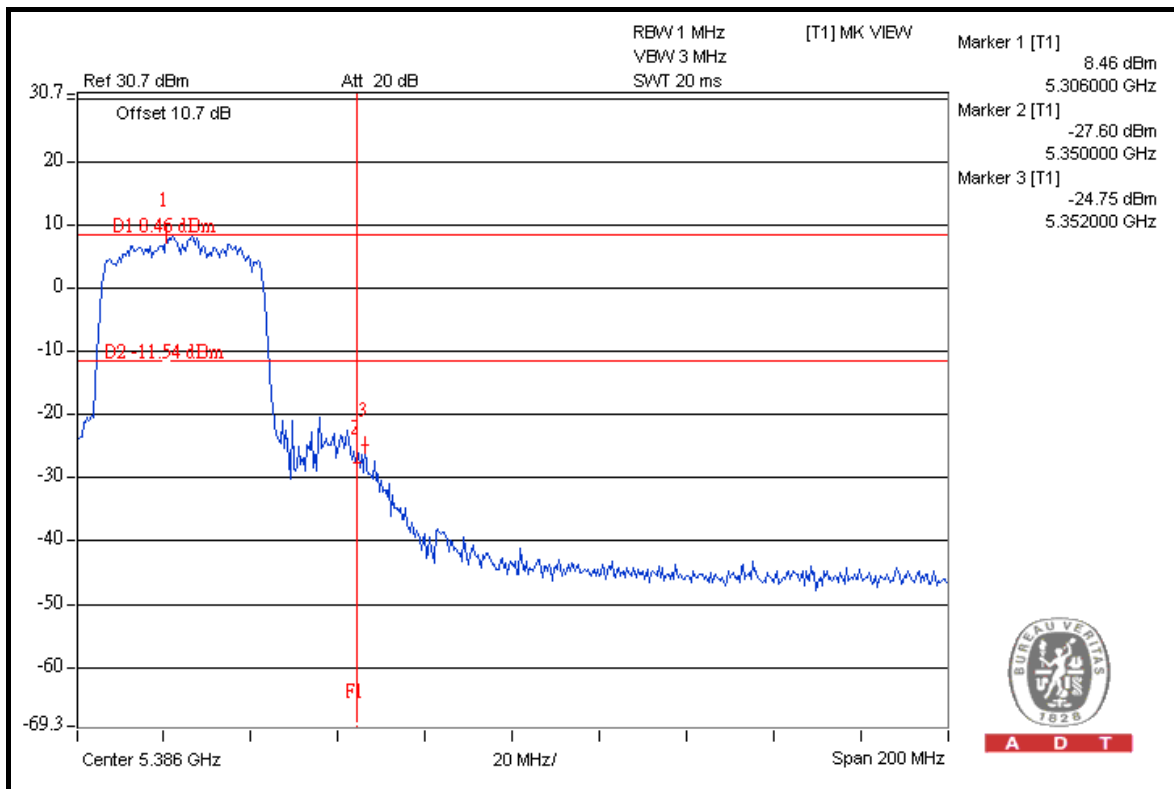
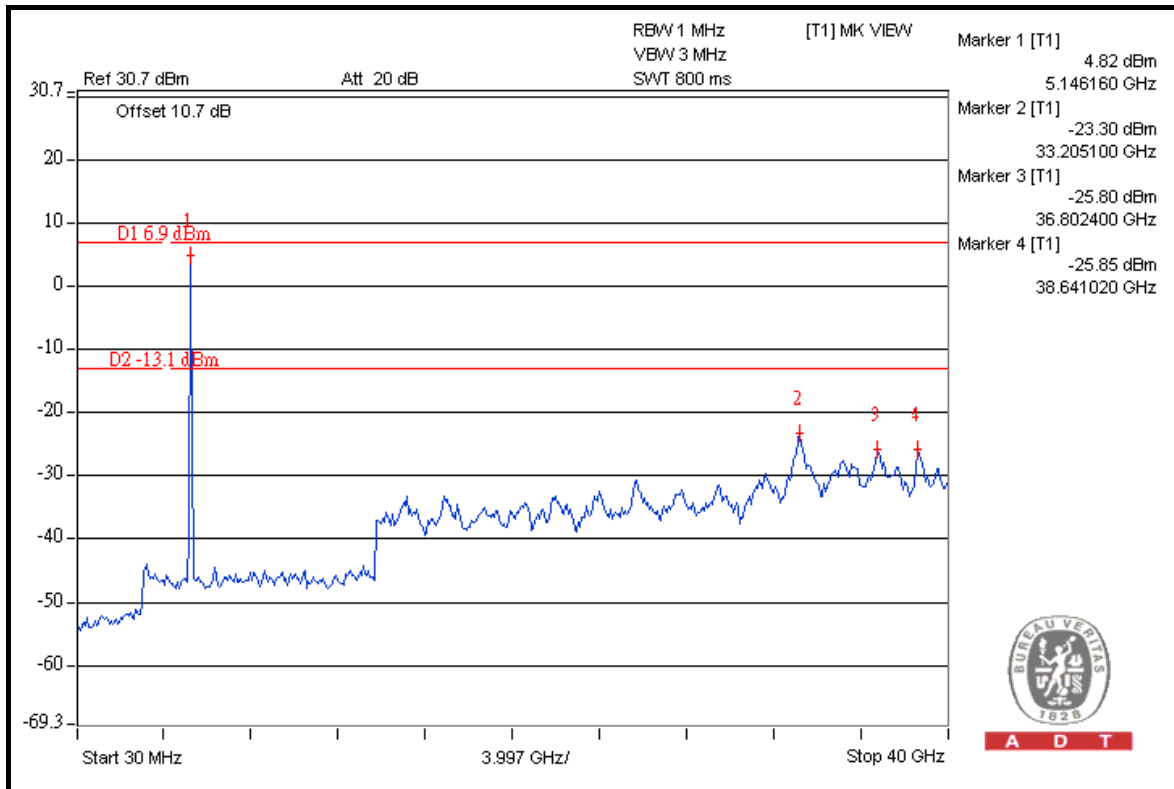
A D T



A D T

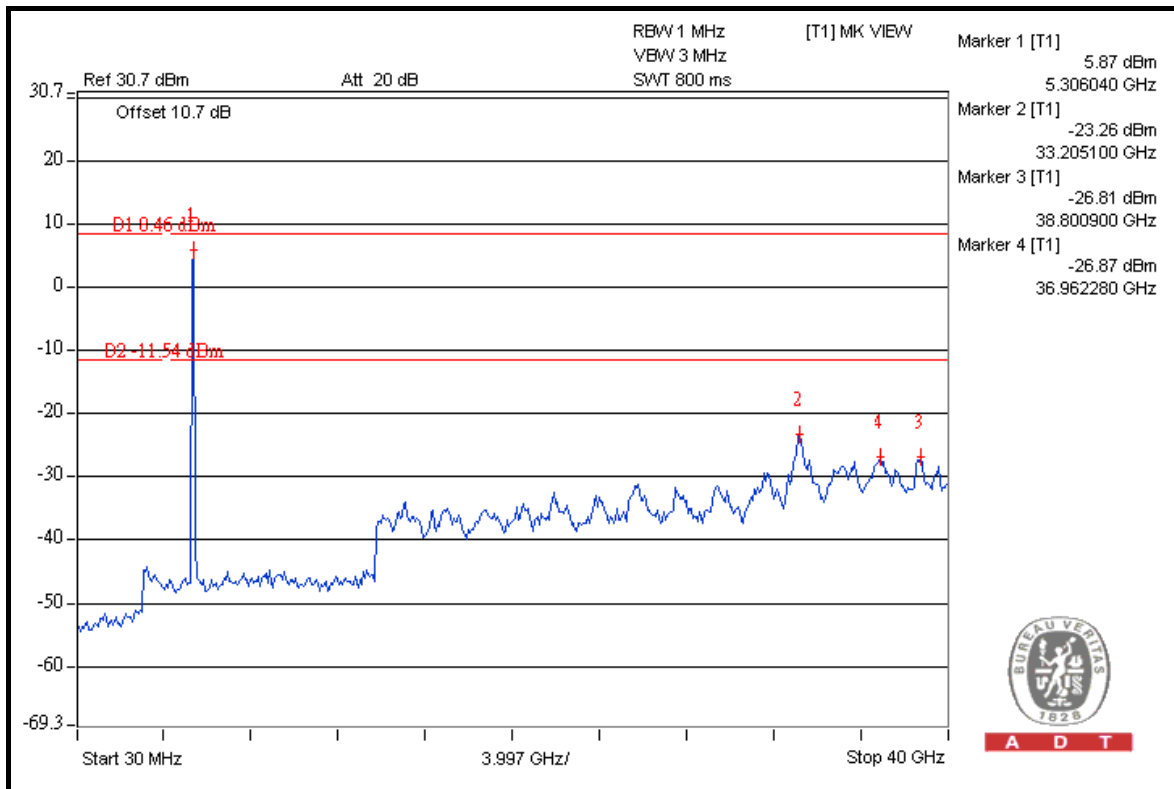
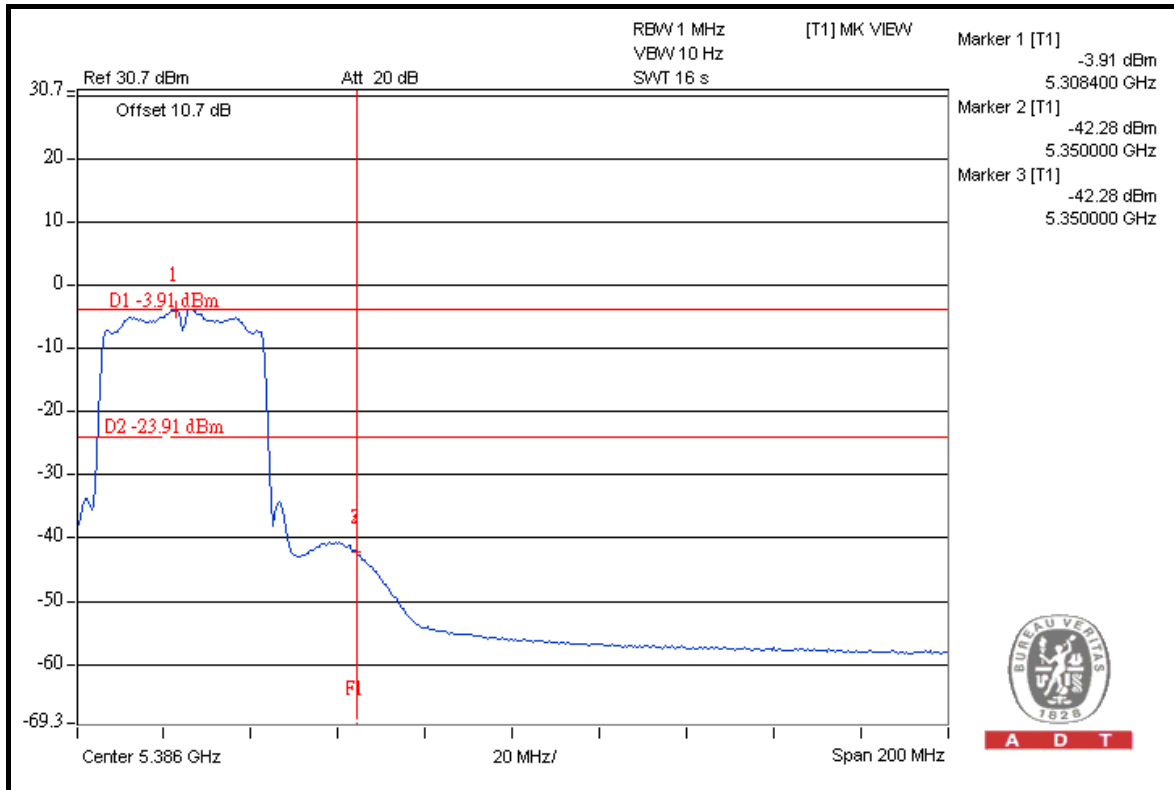


A D T





A D T



FOR 5500-5700MHz BAND:

802.11n (40MHz)

5510MHz

RESTRICT BAND (5350 ~ 5460 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
5510.00 (PK)	100.9	44.36	56.54	74.00
5510.00 (AV)	88.8	46.81	41.99	54.00

FREQUENCY BAND (5460 ~ 5470 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH (dBuV/m)	LIMIT (dBuV/m)
5510.00 (PK)	100.9	34.34	66.56	68.30

5670MHz

ABOVE 5725 MHz

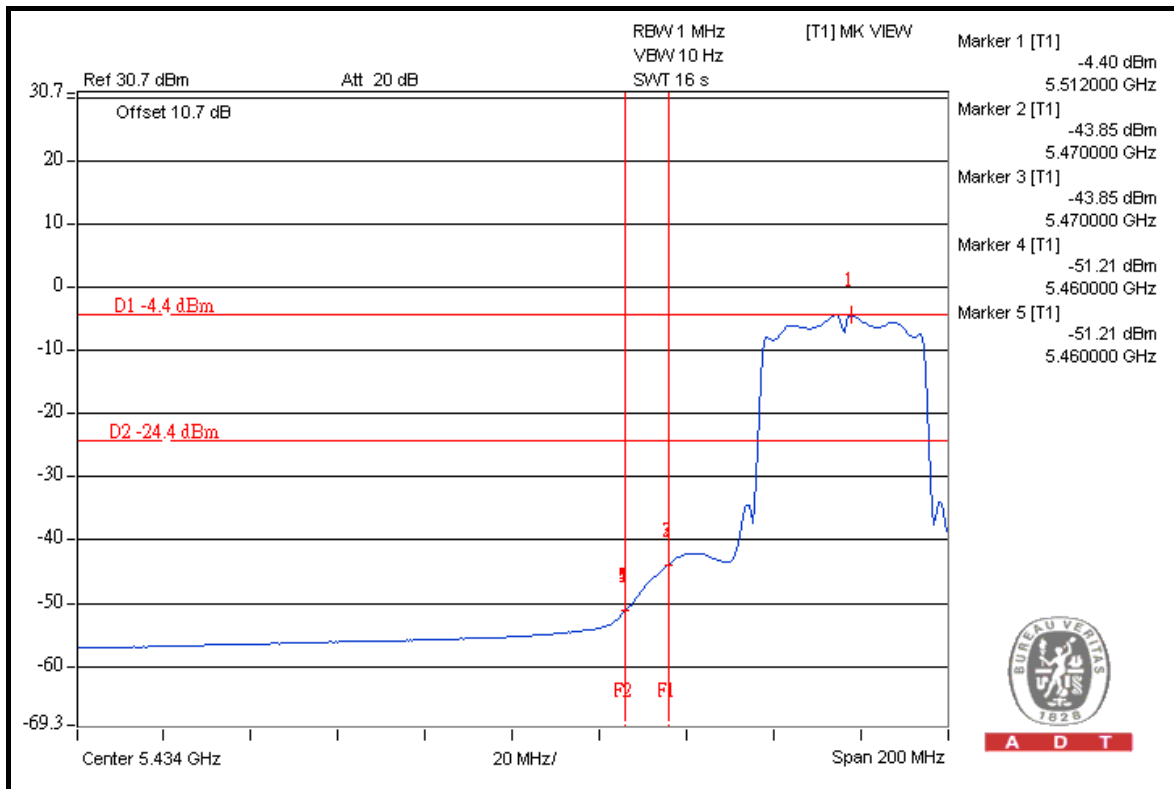
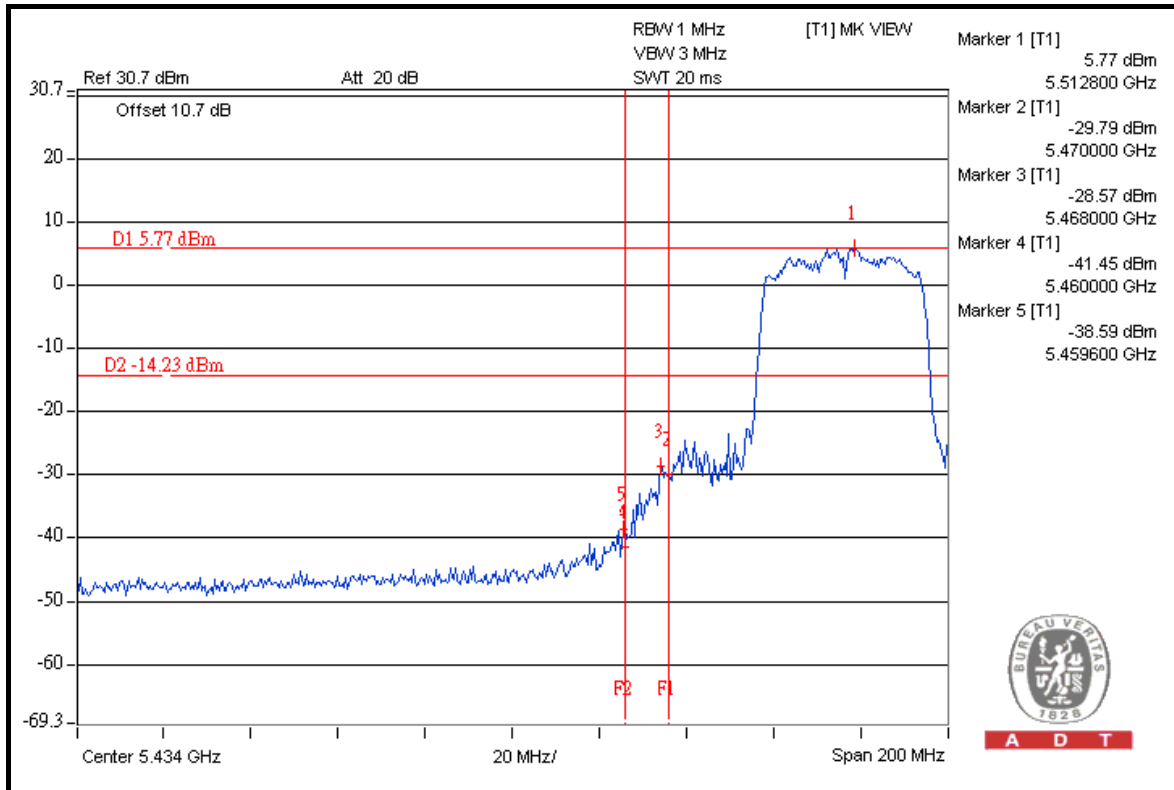
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH (dBuV/m)	LIMIT (dBuV/m)
5670.00 (PK)	105.5	39.27	66.23	68.30

NOTE:

- Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
- Maximum field strength in restrict band = Fundamental emission – Delta.

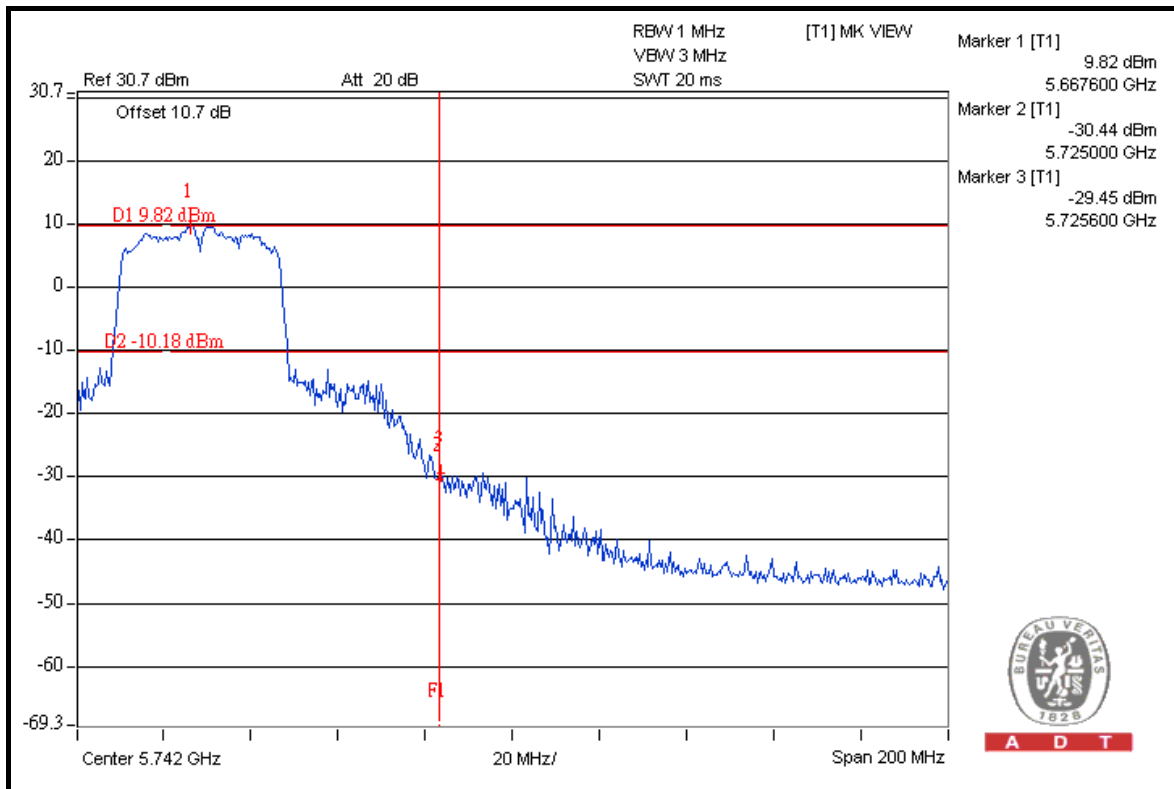
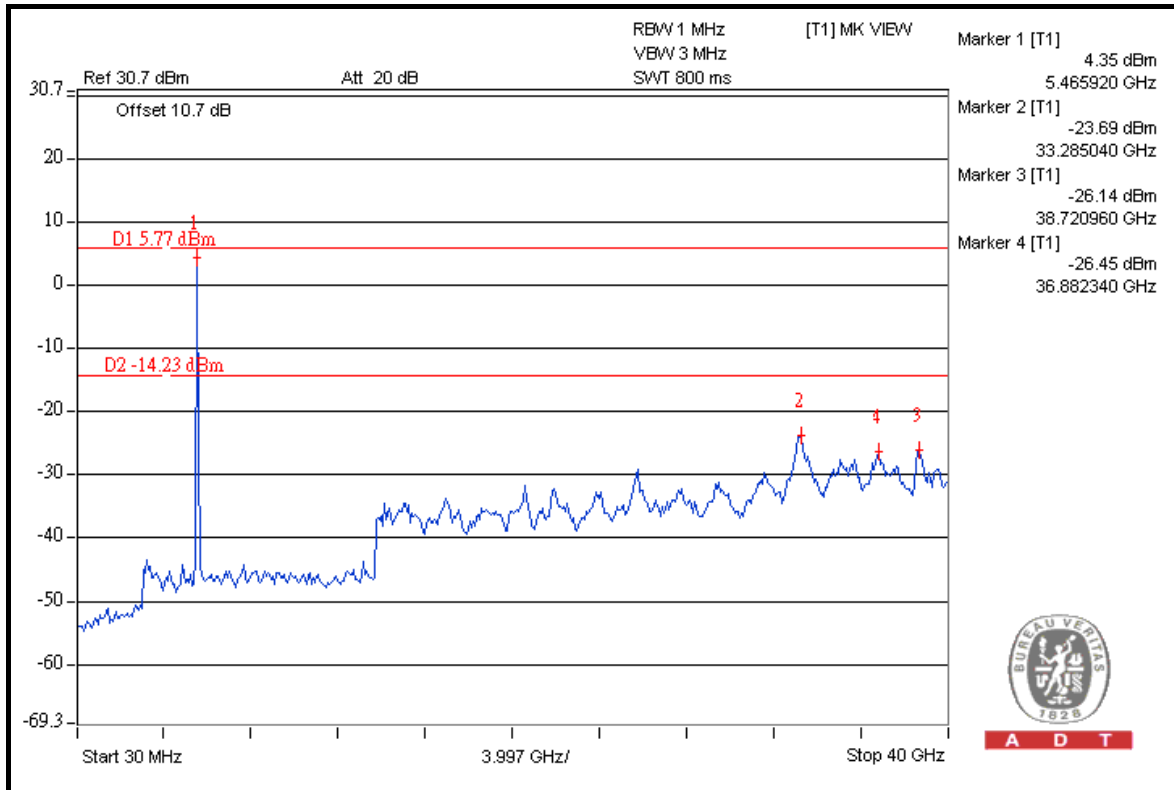


A D T



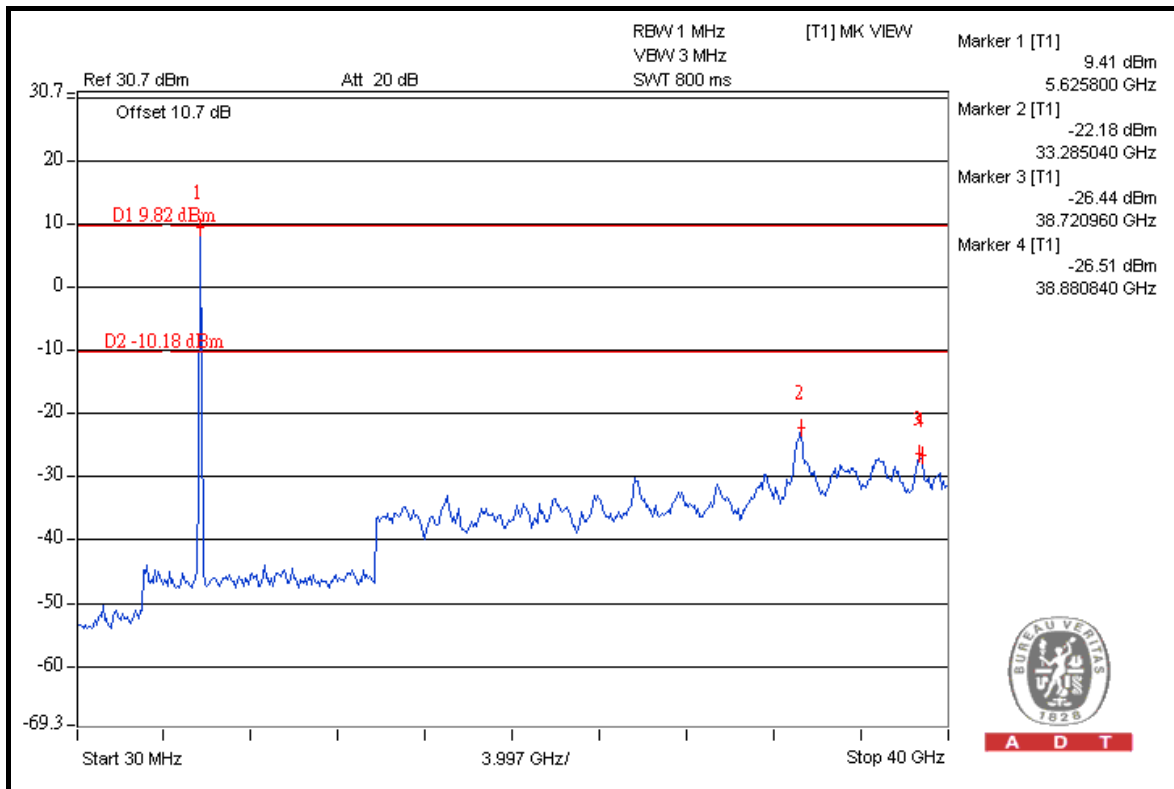
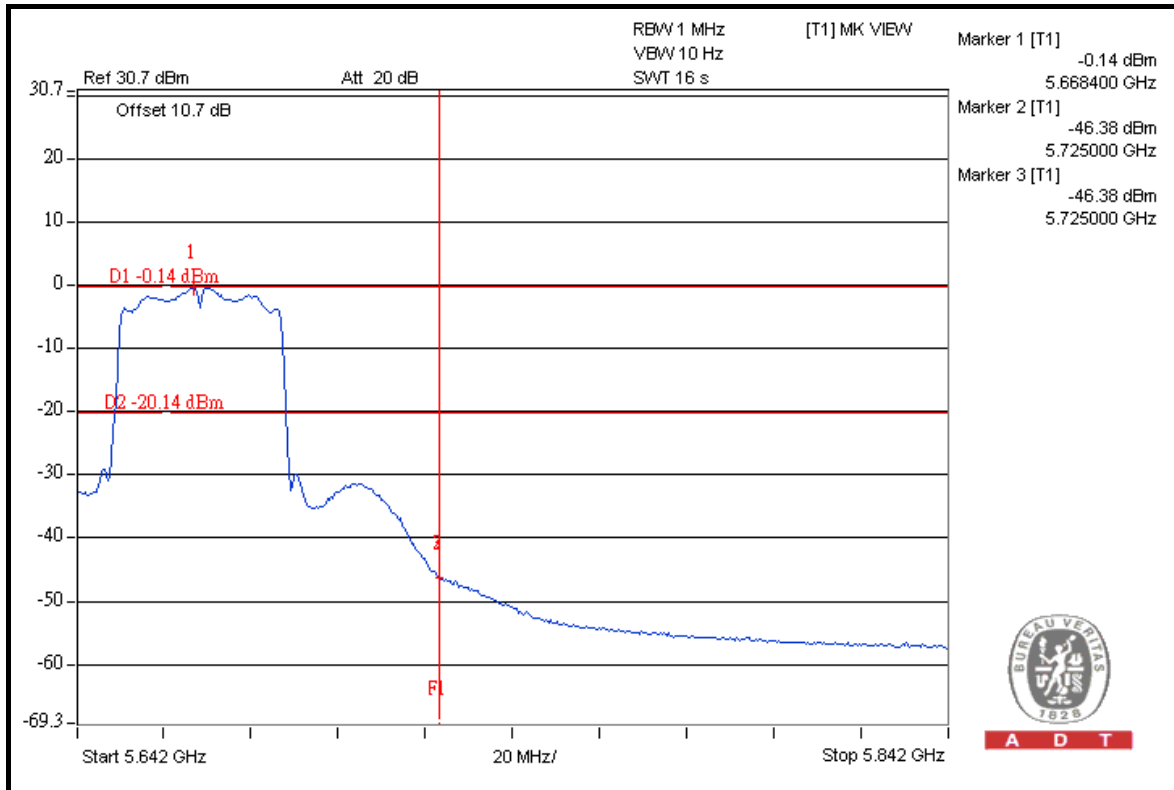


A D T





A D T



5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site:

www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3185050

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---