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FCC TEST REPORT (15.247)

REPORT NO.: RF980105L18

MODEL NO.: A5200 (refer to item 3.1 for more detail)

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TABLE OF CONTENTS

1.	CERTIFICATION.....	5
2.	SUMMARY OF TEST RESULTS	6
2.1	MEASUREMENT UNCERTAINTY.....	6
3.	GENERAL INFORMATION.....	7
3.1	GENERAL DESCRIPTION OF EUT	7
3.2	DESCRIPTION OF TEST MODES.....	9
3.2.1	CONFIGURATION OF SYSTEM UNDER TEST	10
3.2.2	TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	14
3.3	GENERAL DESCRIPTION OF APPLIED STANDARDS	18
3.4	DESCRIPTION OF SUPPORT UNITS	19
4.	TEST TYPES AND RESULTS (FOR 2.4GHz BAND).....	20
4.1	RADIATED EMISSION MEASUREMENT	20
4.1.1	LIMITS OF RADIATED EMISSION MEASUREMENT.....	20
4.1.2	TEST INSTRUMENTS.....	21
4.1.3	TEST PROCEDURES	23
4.1.4	DEVIATION FROM TEST STANDARD.....	23
4.1.5	TEST SETUP.....	24
4.1.6	EUT OPERATING CONDITIONS	25
4.1.7	TEST RESULTS	26
4.2	CONDUCTED EMISSION MEASUREMENT	56
4.2.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	56
4.2.2	TEST INSTRUMENTS.....	56
4.2.3	TEST PROCEDURES	57
4.2.4	DEVIATION FROM TEST STANDARD.....	57
4.2.5	TEST SETUP.....	58
4.2.6	EUT OPERATING CONDITIONS	58
4.2.7	TEST RESULTS	59
4.3	6dB BANDWIDTH MEASUREMENT.....	67
4.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT	67
4.3.2	TEST INSTRUMENTS.....	67
4.3.3	TEST PROCEDURE.....	67
4.3.4	DEVIATION FROM TEST STANDARD.....	67
4.3.5	TEST SETUP.....	68
4.3.6	EUT OPERATING CONDITIONS	68
4.3.7	TEST RESULTS	69
4.4	MAXIMUM PEAK OUTPUT POWER.....	89
4.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT	89
4.4.2	INSTRUMENTS.....	89
4.4.3	TEST PROCEDURES	89
4.4.4	DEVIATION FROM TEST STANDARD.....	90
4.4.5	TEST SETUP.....	90
4.4.6	EUT OPERATING CONDITIONS	90
4.4.7	TEST RESULTS	91
4.5	POWER SPECTRAL DENSITY MEASUREMENT	93
4.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	93
4.5.2	TEST INSTRUMENTS.....	93
4.5.3	TEST PROCEDURE.....	93
4.5.4	DEVIATION FROM TEST STANDARD.....	94



A D T

4.5.5	TEST SETUP	94
4.5.6	EUT OPERATING CONDITION.....	94
4.5.7	TEST RESULTS	95
4.6	BAND EDGES MEASUREMENT	110
4.6.1	LIMITS OF BAND EDGES MEASUREMENT	115
4.6.2	TEST INSTRUMENTS.....	115
4.6.3	DEVIATION FROM TEST STANDARD.....	116
4.6.4	EUT OPERATING CONDITION.....	116
4.6.5	TEST RESULTS	117
4.7	ANTENNA REQUIREMENT	149
4.7.1	STANDARD APPLICABLE	149
4.7.2	ANTENNA CONNECTED CONSTRUCTION	149
5.	TEST TYPES AND RESULTS (FOR 5.0GHz BAND).....	150
5.1	RADIATED EMISSION MEASUREMENT	150
5.1.1	LIMITS OF RADIATED EMISSION MEASUREMENT.....	150
5.1.2	TEST INSTRUMENTS.....	151
5.1.3	TEST PROCEDURES	153
5.1.4	DEVIATION FROM TEST STANDARD.....	153
5.1.5	TEST SETUP	154
5.1.6	EUT OPERATING CONDITIONS	154
5.1.7	TEST RESULTS	155
5.2	CONDUCTED EMISSION MEASUREMENT	175
5.2.1	LIMITS OF CONDUCTED EMISSION MEASUREMENT	175
5.2.2	TEST INSTRUMENTS.....	175
5.2.3	TEST PROCEDURES	176
5.2.4	DEVIATION FROM TEST STANDARD.....	176
5.2.5	TEST SETUP	177
5.2.6	EUT OPERATING CONDITIONS	177
5.2.7	TEST RESULTS	178
5.3	6dB BANDWIDTH MEASUREMENT.....	186
5.3.1	LIMITS OF 6dB BANDWIDTH MEASUREMENT	186
5.3.2	TEST INSTRUMENTS.....	186
5.3.3	TEST PROCEDURE.....	186
5.3.4	DEVIATION FROM TEST STANDARD.....	187
5.3.5	TEST SETUP.....	187
5.3.6	EUT OPERATING CONDITIONS	187
5.3.7	TEST RESULTS	188
5.4	MAXIMUM PEAK OUTPUT POWER.....	202
5.4.1	LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT	202
5.4.2	INSTRUMENTS.....	202
5.4.3	TEST PROCEDURES	202
5.4.4	DEVIATION FROM TEST STANDARD.....	203
5.4.5	TEST SETUP.....	203
5.4.6	EUT OPERATING CONDITIONS	203
5.4.7	TEST RESULTS	204
5.5	POWER SPECTRAL DENSITY MEASUREMENT	206
5.5.1	LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT	206
5.5.2	TEST INSTRUMENTS.....	206
5.5.3	TEST PROCEDURE.....	206
5.5.4	DEVIATION FROM TEST STANDARD.....	207
5.5.5	TEST SETUP	207



A D T

5.5.6	EUT OPERATING CONDITION.....	207
5.5.7	TEST RESULTS	208
5.6	BAND EDGES MEASUREMENT	222
5.6.1	LIMITS OF BAND EDGES MEASUREMENT	222
5.6.2	TEST INSTRUMENTS.....	222
5.6.3	TEST PROCEDURE.....	223
5.6.4	DEVIATION FROM TEST STANDARD.....	224
5.6.5	EUT OPERATING CONDITION.....	224
5.6.6	TEST RESULTS	224
5.7	ANTENNA REQUIREMENT	243
5.7.1	STANDARD APPLICABLE	243
5.7.2	ANTENNA CONNECTED CONSTRUCTION	243
6.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	244
7.	INFORMATION ON THE TESTING LABORATORIES	245
8.	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB.....	246



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1. CERTIFICATION

PRODUCT: AirMagnet SmartEdge Sensor

MODEL NO.: A5200 (refer to item 3.1 for more detail)

BRAND: AirMagnet

APPLICANT: AirMagent, Inc.

TEST SAMPLE: ENGINEERING SAMPLE

TESTED: Feb. 04 ~ May 27, 2009

STANDARDS: FCC Part 15, Subpart C (Section 15.247)

ANSI C63.4-2003

The above equipment (Model: A5200, A5205) 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** : Jun. 04, 2009
Andrea Hsia / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE** : Jun. 04, 2009
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE** : Jun. 04, 2009
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 C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -12.54dB at 0.846MHz.
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.01dB at 933.28MHz.
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.

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 ~ 1000MHz	4.03 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

PRODUCT	AirMagnet SmartEdge Sensor
MODEL NO.	A5200 (refer to note as below)
FCC ID	RD7-A520X
POWER SUPPLY	12Vdc from AC adapter 48Vdc from POE
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps Draft 802.11n: up to 300.0Mbps
OPERATING FREQUENCY	2.4GHz: 2412~ 2462MHz 5.0GHz: 5745 ~ 5825MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, draft 802.11n (20MHz) 7 for draft 802.11n (40MHz) 5.0GHz: 5 for 802.11a & draft 802.11n (20MHz) 2 for draft 802.11n (40MHz)
OUTPUT POWER	2.4GHz: 369.960mW 5.0GHz: 773.355mW
ANTENNA TYPE	Refer to note as below
I/O PORTS	RJ45, RS232
DATA CABLE	NA
ACCESSORY DEVICES	Adapter, POE

NOTE:

- The following models are provided to this EUT.

BRAND	MODEL NAME	PRODUCT NAME	REMARK
AirMagnet	A5200	AirMagnet SmartEdge Sensor	External antenna
AirMagnet	A5205	AirMagnet SmartEdge Sensor	Internal antenna

- The EUT is an AirMagnet SmartEdge Sensor. The functions of EUT listed as below:

	TEST STANDARD	REFERENCE REPORT
WLAN 802.11b/g, draft 802.11n	FCC Part 15, Subpart C (Section 15.247)	RF980105L18
WLAN 802.11a, draft 802.11n (5745~5825 MHz)		
WLAN 802.11a, draft 802.11n (5180~ 5320MHz)	FCC Part 15, Subpart E (Section 15.407)	RF980105L18-1
WLAN 802.11a, draft 802.11n (For DFS report) (5260~ 5320MHz)	FCC Part 15, Subpart E (Section 15.407)	RF980105L18-2

3. The EUT was powered by the following adapter:

BRAND	FAIRWAY
MODEL	VE20-120
INPUT POWER	100-240Vac, 50-60Hz, 1.0A max.
OUTPUT POWER	12Vdc, 1.66A
POWER LINE	1.8m non-shielded cable without core

4. The EUT was powered by the following POE:

BRAND	PowerDsine™ 3001
MODEL	PD-3001/AC
INPUT POWER	100-250Vac, 50-60Hz, 0.5A
OUTPUT POWER	48Vdc, 0.35A

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

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

6. The EUT incorporates a MIMO function. Physically, the EUT provides three completed transmitters and three receivers.

MODULATION MODE	TX FUNCTION
802.11b	3TX
802.11g	3TX
802.11a	3TX
Draft 802.11n (20MHz)	3TX
Draft 802.11n (40MHz)	3TX

7. The following antennas are used in this EUT.

TYPE	CONNECTOR	GAIN (dBi)	
		2.4GHz	5.0GHz
Embedded (Internal ant.)	UFL	2.8	5.1
Dipole (External ant.)	RSMA	2.0	2.0

8. 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 2.4GHz:

11 channels are provided for 802.11b, 802.11g and draft 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

7 channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

FOR 5.0GHz (5745 ~ 5825MHz):

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

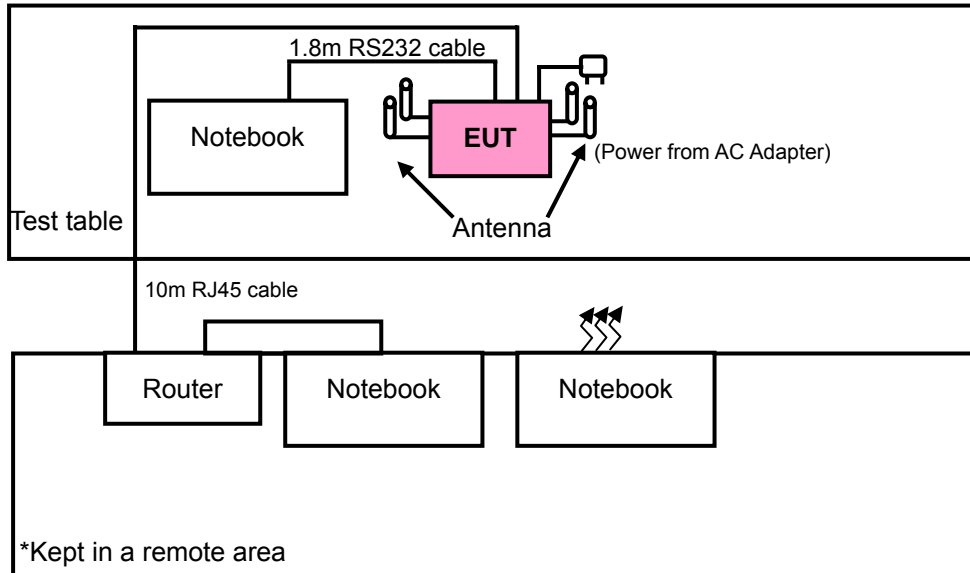
2 channels are provided for draft 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

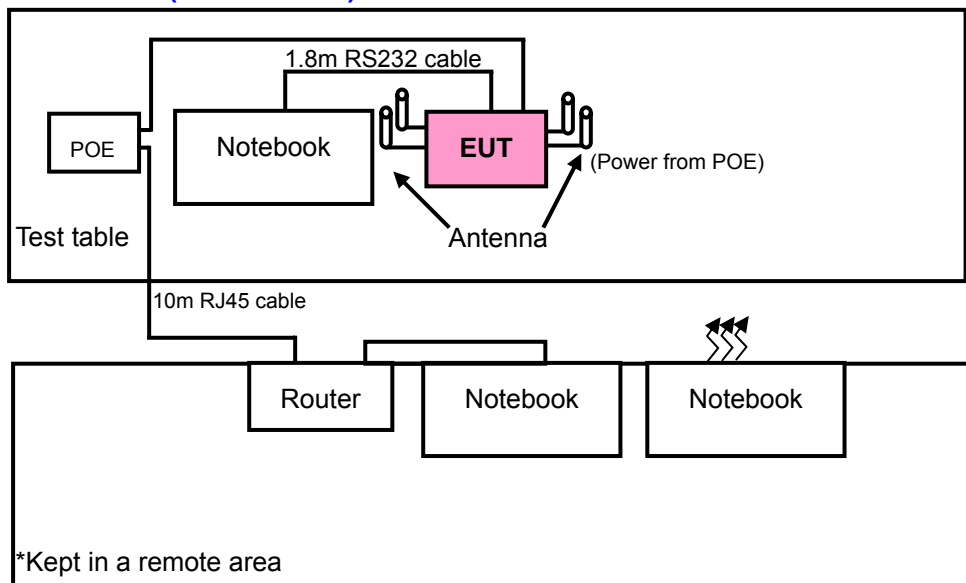
3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

RADIATED EMISSION TEST BELOW 1GHz

TEST MODE A (Model: A5200)



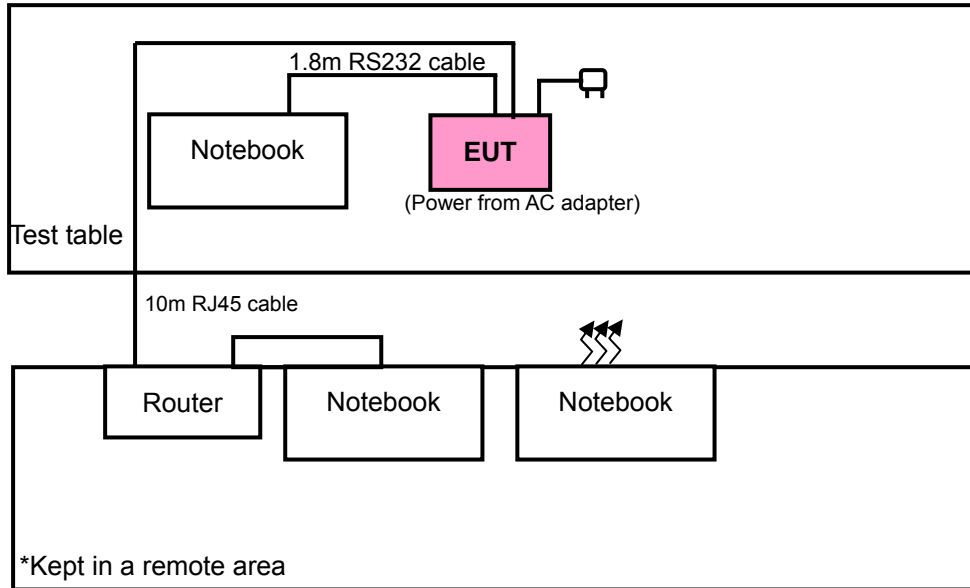
TEST MODE B (Model: A5200)



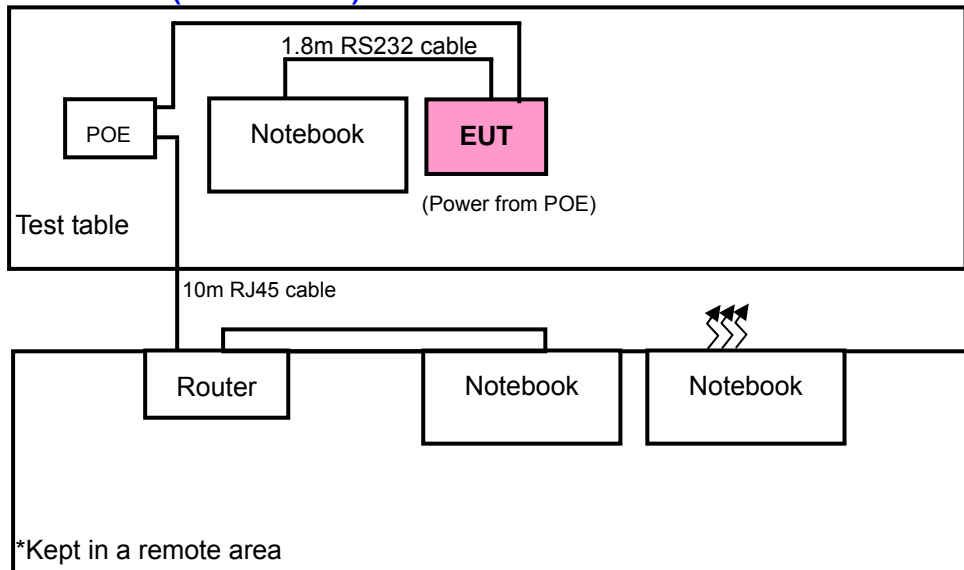


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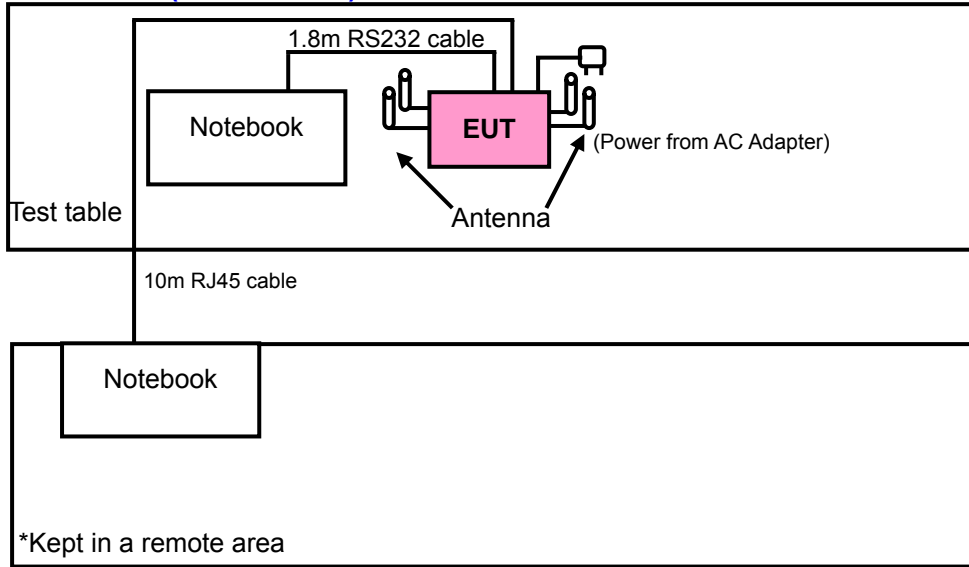
TEST MODE C (Model: A5205)



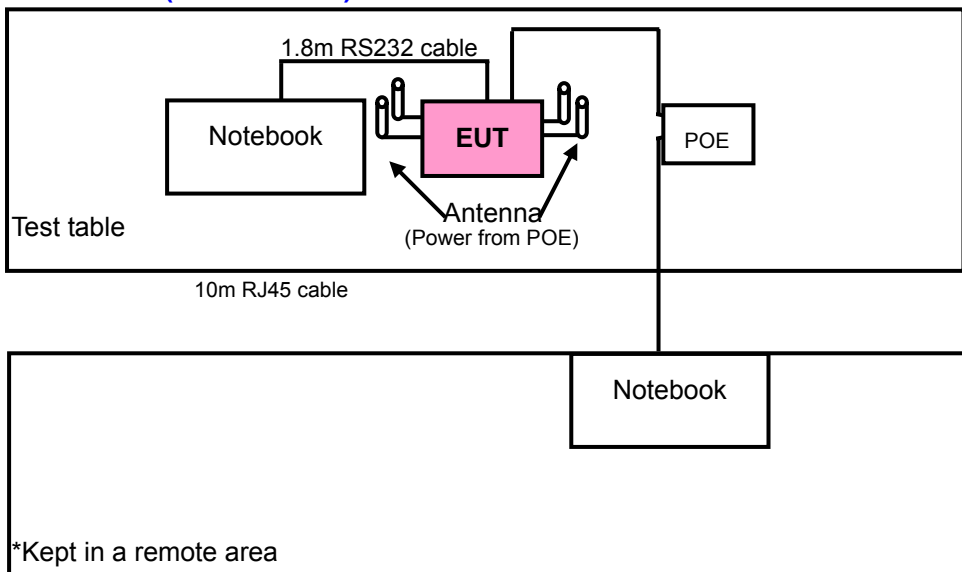
TEST MODE D (Model: A5205)



BESIDE RADIATED EMISSION TEST BELOW 1GHz
TEST MODE A (Model: A5200)



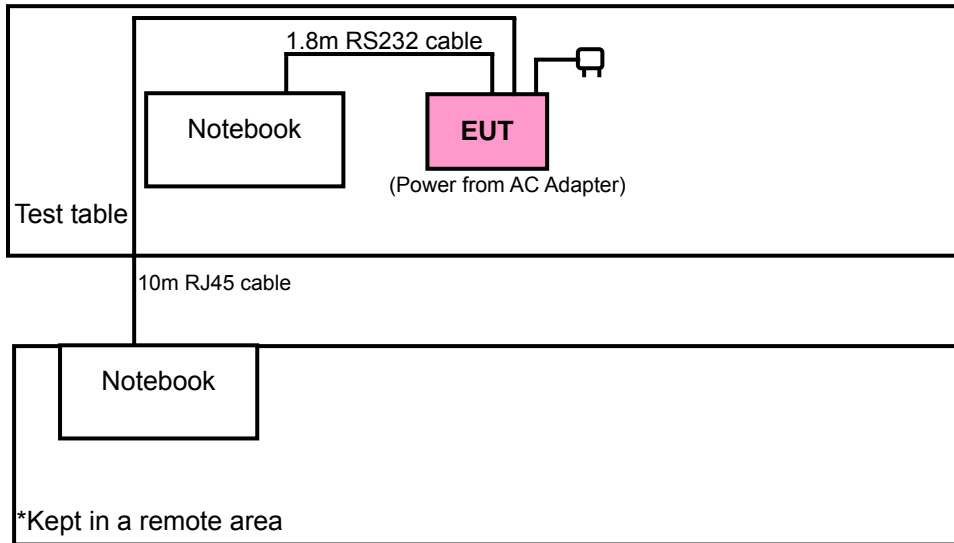
TEST MODE B (Model: A5200)



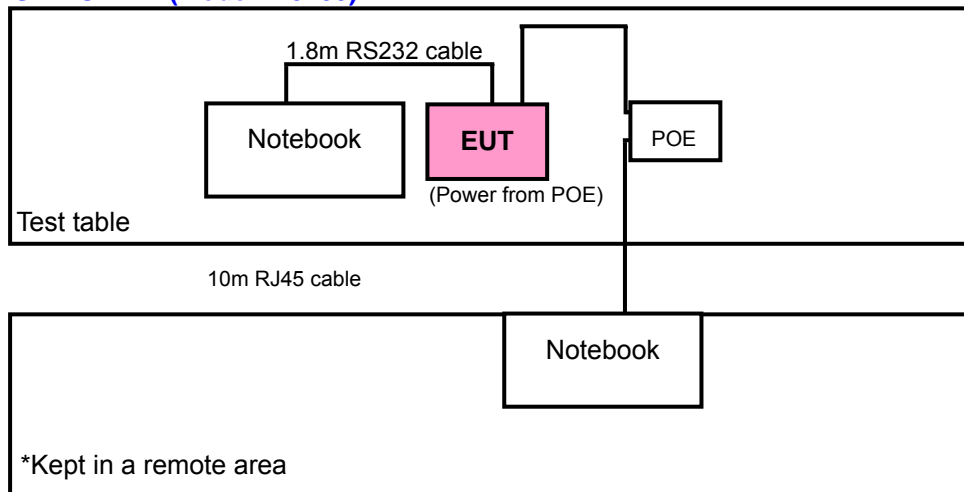


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TEST MODE C (Model: A5205)



TEST MODE D (Model: A5205)





3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.412 ~ 2.462GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	For model: A5200 & power from AC adapter
B	-	√	√	-	For model: A5200 & power from POE
C	√	√	√	-	For model: A5205 & power from AC adapter
D	-	√	√	-	For model: A5205 & power from POE

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

NOTE: "-" means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	X
C	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Z
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	X
C	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Z
A	Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	X
C	Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	Z
A	Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0	X
C	Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0	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, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11g	1 to 11	11	OFDM	BPSK	6.0	X
B	802.11g	1 to 11	11	OFDM	BPSK	6.0	X
C	802.11g	1 to 11	11	OFDM	BPSK	6.0	Z
D	802.11g	1 to 11	11	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C & D	802.11g	1 to 11	11	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & C	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
A & C	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
A & C	Draft 802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2
A & C	Draft 802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	15.0

ANTENNA PORT CONDUCTED 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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
A	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
A	Draft 802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
A	Draft 802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0



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FOR 5.745 ~ 5.825GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	For model: A5200 & power from AC adapter
B	-	√	√	-	For model: A5200 & power from POE
C	√	√	√	-	For model: A5205 & power from AC adapter
D	-	√	√	-	For model: A5205 & power from POE

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

NOTE: "-" means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0	X
C	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0	Z
A	Draft 802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2	X
C	Draft 802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2	Z
A	Draft 802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0	X
C	Draft 802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0	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, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11a	149 to 165	157	OFDM	BPSK	6.0	X
B	802.11a	149 to 165	157	OFDM	BPSK	6.0	X
C	802.11a	149 to 165	157	OFDM	BPSK	6.0	Z
D	802.11a	149 to 165	157	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C & D	802.11a	149 to 165	165	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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & C	802.11a	149 to 165	149, 165	OFDM	BPSK	6.0
A & C	Draft 802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	7.2
A & C	Draft 802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0

ANTENNA PORT CONDUCTED 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.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
A	Draft 802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2
A	Draft 802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0



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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 C (15.247)

ANSI C63.4-2003

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

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



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.

BESIDES RADIATED EMISSION TEST BELOW 1GHz

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP05L	12130898320	E2K24CLNS
2	NOTEBOOK	DELL	PP05L	25191592336	E2K24CLNS

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.8m RS232 cable
2	10m RJ45 cable
3	10m RJ45 cable

NOTE 1: All power cords of the above support units are non shielded (1.8m).

NOTE 2: Item 2 acted as a communication partner to transfer data.

RADIATED EMISSION TEST BELOW 1GHz

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP05L	20375526736	FCC DoC Approved
2	NOTEBOOK	DELL	PP04X	CN-0HN341-48643-845-5341	FCC DoC Approved
3	NOTEBOOK	CLEVO	M54N	NKM540N06H01430	FCC DoC Approved
4	802.11a/b/g/n AP ROUTER	Ralink	RT2880AP	NA	AP2800D

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.8m RS232 cable
2	10m RJ45 cable
3	NA
4	10m RJ45 cable
5	10m RJ45 cable

NOTE 1: All power cords of the above support units are non shielded (1.8m).

NOTE 2: Item 2 ~ 4 acted as a communication partner to transfer data.

NOTE 3: Item 4 was supplied from client



4. TEST TYPES AND RESULTS (FOR 2.4GHz BAND)

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.



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4.1.2 TEST INSTRUMENTS

Above 1GHz Test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 29, 2008	Dec. 28, 2009
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 08, 2008	Dec. 07, 2009
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 29, 2009	Apr. 28, 2010
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Dec. 29, 2008	Dec. 28, 2009
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009	Jan. 05, 2010
Preamplifier Agilent	8449B	3008A01960	Nov. 03, 2008	Nov. 02, 2009
Preamplifier Agilent	8447D	2944A10631	Nov. 03, 2008	Nov. 02, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274041/4	Aug. 21, 2008	Aug. 20, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 21, 2008	Aug. 20, 2009
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	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 Chamber 4.
 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 IC7450F-4.



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Below 1GHz Test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ TEST RECEIVER	ESCI	100412	Jul. 22, 2008	Jul. 21, 2009
SCHAFFENR BILOG Antenna	CBL6111D	21872	Apr. 28, 2009	Apr. 27, 2010
CT Turn Table	TT100	NA	NA	NA
CT Tower	AT100	NA	NA	NA
Software	ADT_Radiated_V7.6.15.9.2	NA	NA	NA
ADT RF Switches BOX	EM-H-01-1	1002	Aug. 19, 2008	Aug. 18, 2009
WOKEN RF cable	8D	CABLE-ST5-01	Mar. 05, 2009	Mar. 04, 2010

- 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 Open Site No. 5.
 3. The VCCI Site Registration No. R-1039.
 4. The Industry Canada Reference No. IC 7450E-5
 5. The FCC Site Registration No. 90422.



4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber & 3 meters open side area. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

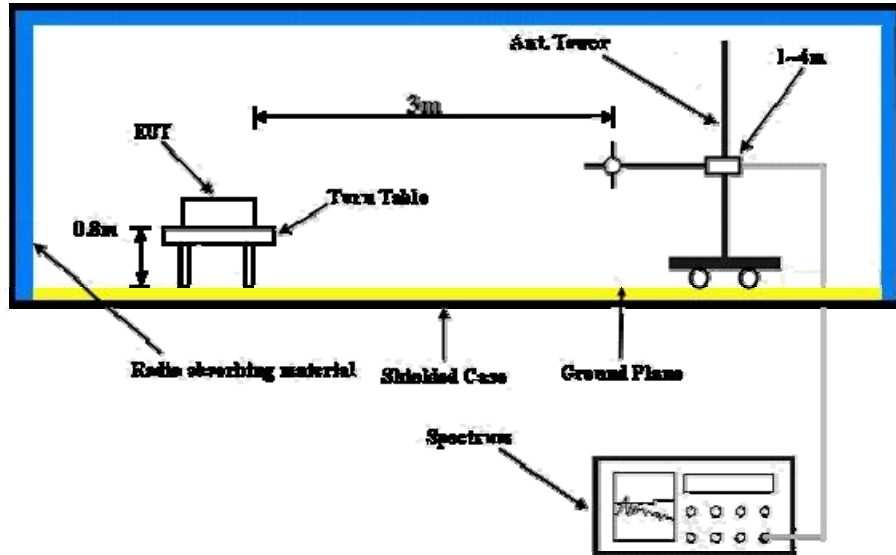
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution 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.

4.1.4 DEVIATION FROM TEST STANDARD

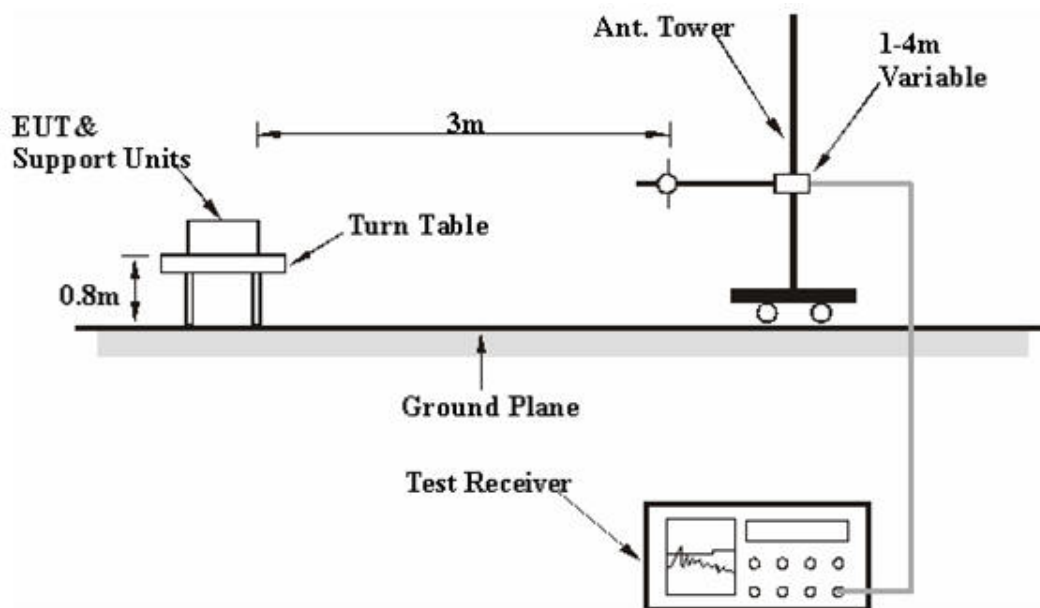
No deviation.

4.1.5 TEST SETUP

Above 1GHz Test:



Below 1GHz Test:



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



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4.1.6 EUT OPERATING CONDITIONS

Above 1GHz Test:

- a. Connected the EUT to Notebook and placed on a testing table.
- b. Prepared notebook systems to act as a communication partner and placed them outside of testing area.
- c. The communication partners connected with EUT via a UTP cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- d. The communication partners sent data to EUT by command "PING".

Below 1GHz Test:

- a. Connected the EUT to Notebook and placed on a testing table.
- b. Prepared a Wireless N Router and placed it outside of testing area to act as communication partner for EUT.
- c. The Notebook ran a test program to enable EUT under transmission condition continuously at specific channel frequency.
- d. The necessary accessories enable the EUT in full functions.



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4.1.7 TEST RESULTS

802.11b DSSS MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	49.85 PK	74.00	-24.15	1.22 H	141	21.30	28.55
2	1200.00	41.38 AV	54.00	-12.62	1.22 H	141	12.83	28.55
3	2390.00	59.05 PK	74.00	-14.95	1.00 H	3	26.76	32.29
4	2390.00	46.34 AV	54.00	-7.66	1.00 H	3	14.05	32.29
5	*2412.00	102.94 PK			1.06 H	209	70.56	32.38
6	*2412.00	98.39 AV			1.06 H	209	66.01	32.38
7	#3216.00	46.53 PK	82.94	-36.41	1.00 H	10	11.95	34.58
8	#3216.00	34.08 AV	78.39	-44.31	1.00 H	10	-0.50	34.58
9	4824.00	50.24 PK	74.00	-23.76	1.00 H	156	11.67	38.56
10	4824.00	39.43 AV	54.00	-14.57	1.00 H	156	0.86	38.56
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	1200.00	48.85 PK	74.00	-25.15	1.02 V	332	20.30	28.55
2	1200.00	45.62 AV	54.00	-8.38	1.02 V	332	17.07	28.55
3	2390.00	58.87 PK	74.00	-15.13	1.06 V	0	26.58	32.29
4	2390.00	46.89 AV	54.00	-7.11	1.06 V	0	14.60	32.29
5	*2412.00	113.51 PK			1.05 V	273	81.13	32.38
6	*2412.00	109.22 AV			1.05 V	273	76.84	32.38
7	#3216.00	47.99 PK	93.51	-45.52	1.18 V	214	13.41	34.58
8	#3216.00	38.44 AV	89.22	-50.78	1.18 V	214	3.86	34.58
9	4824.00	51.35 PK	74.00	-22.65	1.09 V	177	12.78	38.56
10	4824.00	42.26 AV	54.00	-11.74	1.09 V	177	3.69	38.56

- 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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	49.87 PK	74.00	-24.13	1.24 H	145	21.32	28.55
2	1200.00	41.41 AV	54.00	-12.59	1.24 H	145	12.86	28.55
3	*2437.00	102.49 PK			1.11 H	9	70.01	32.48
4	*2437.00	98.46 AV			1.11 H	9	65.98	32.48
5	4874.00	48.70 PK	74.00	-25.30	1.00 H	232	10.02	38.67
6	4874.00	38.14 AV	54.00	-15.86	1.00 H	232	-0.54	38.67
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	1200.00	49.70 PK	74.00	-24.30	1.00 V	318	21.15	28.55
2	1200.00	45.42 AV	54.00	-8.58	1.00 V	318	16.87	28.55
3	*2437.00	113.57 PK			1.14 V	1	81.09	32.48
4	*2437.00	109.26 AV			1.14 V	1	76.78	32.48
5	4874.00	51.08 PK	74.00	-22.92	1.17 V	165	12.40	38.67
6	4874.00	45.55 AV	54.00	-8.45	1.17 V	165	6.87	38.67

- 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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	49.75 PK	74.00	-24.25	1.16 H	125	21.20	28.55
2	1200.00	41.23 AV	54.00	-12.77	1.16 H	125	12.68	28.55
3	*2462.00	102.94 PK			1.26 H	213	70.36	32.58
4	*2462.00	99.02 AV			1.26 H	213	66.44	32.58
5	2483.50	59.12 PK	74.00	-14.88	1.00 H	268	26.46	32.66
6	2483.50	46.72 AV	54.00	-7.28	1.00 H	268	14.06	32.66
7	4924.00	49.33 PK	74.00	-24.67	1.00 H	125	10.54	38.79
8	4924.00	36.18 AV	54.00	-17.82	1.00 H	125	-2.61	38.79
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	1200.00	48.85 PK	74.00	-25.15	1.03 V	321	20.30	28.55
2	1200.00	45.62 AV	54.00	-8.38	1.03 V	321	17.07	28.55
3	*2462.00	113.63 PK			1.09 V	276	81.05	32.58
4	*2462.00	110.16 AV			1.09 V	276	77.58	32.58
5	2483.50	59.60 PK	74.00	-14.40	1.01 V	265	26.94	32.66
6	2483.50	48.02 AV	54.00	-5.98	1.01 V	265	15.36	32.66
7	4924.00	51.47 PK	74.00	-22.53	1.15 V	23	12.68	38.79
8	4924.00	41.01 AV	54.00	-12.99	1.15 V	23	2.22	38.79

- 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 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.85 PK	74.00	-25.15	1.16 H	200	19.09	29.76
2	1600.00	45.73 AV	54.00	-8.27	1.16 H	200	15.97	29.76
3	2390.00	58.32 PK	74.00	-15.68	1.22 H	231	26.03	32.29
4	2390.00	46.59 AV	54.00	-7.41	1.22 H	231	14.30	32.29
5	*2412.00	103.82 PK			1.22 H	230	71.44	32.38
6	*2412.00	99.15 AV			1.22 H	230	66.77	32.38
7	4824.00	51.34 PK	74.00	-22.66	1.47 H	159	12.77	38.56
8	4824.00	34.60 AV	54.00	-19.40	1.47 H	159	-3.97	38.56
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	1600.00	50.53 PK	74.00	-23.47	1.03 V	37	20.77	29.76
2	1600.00	46.81 AV	54.00	-7.19	1.03 V	37	17.05	29.76
3	2390.00	60.70 PK	74.00	-13.30	1.09 V	162	28.41	32.29
4	2390.00	48.78 AV	54.00	-5.22	1.09 V	162	16.49	32.29
5	*2412.00	115.50 PK			1.09 V	160	83.12	32.38
6	*2412.00	111.75 AV			1.09 V	160	79.37	32.38
7	4824.00	56.25 PK	74.00	-17.75	1.13 V	196	17.68	38.56
8	4824.00	52.24 AV	54.00	-1.76	1.13 V	196	13.67	38.56

- 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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.96 PK	74.00	-25.04	1.18 H	193	19.20	29.76
2	1600.00	45.82 AV	54.00	-8.18	1.18 H	193	16.06	29.76
3	*2437.00	103.98 PK			1.05 H	198	71.50	32.48
4	*2437.00	100.09 AV			1.05 H	198	67.61	32.48
5	4874.00	50.99 PK	74.00	-23.01	1.39 H	205	12.31	38.67
6	4874.00	43.32 AV	54.00	-10.68	1.39 H	205	4.64	38.67
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	1600.00	50.61 PK	74.00	-23.39	1.06 V	45	20.85	29.76
2	1600.00	46.92 AV	54.00	-7.08	1.06 V	45	17.16	29.76
3	*2437.00	115.69 PK			1.37 V	168	83.21	32.48
4	*2437.00	111.86 AV			1.37 V	168	79.38	32.48
5	4874.00	53.67 PK	74.00	-20.33	1.33 V	121	14.99	38.67
6	4874.00	48.83 AV	54.00	-5.17	1.33 V	121	10.15	38.67

- 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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.76 PK	74.00	-25.24	1.14 H	198	19.00	29.76
2	1600.00	45.62 AV	54.00	-8.38	1.14 H	198	15.86	29.76
3	*2462.00	103.81 PK			1.17 H	234	71.23	32.58
4	*2462.00	99.03 AV			1.17 H	234	66.45	32.58
5	2483.50	58.42 PK	74.00	-15.58	1.18 H	235	25.76	32.66
6	2483.50	46.66 AV	54.00	-7.34	1.18 H	235	14.00	32.66
7	4924.00	49.80 PK	74.00	-24.20	1.17 H	226	11.01	38.79
8	4924.00	38.96 AV	54.00	-15.04	1.17 H	226	0.17	38.79
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	1600.00	50.45 PK	74.00	-23.55	1.05 V	44	20.69	29.76
2	1600.00	46.78 AV	54.00	-7.22	1.05 V	44	17.02	29.76
3	*2462.00	115.18 PK			1.07 V	156	82.60	32.58
4	*2462.00	111.04 AV			1.07 V	156	78.46	32.58
5	2483.50	53.41 PK	74.00	-20.59	1.06 V	155	20.75	32.66
6	2483.50	49.33 AV	54.00	-4.67	1.06 V	155	16.67	32.66
7	4924.00	54.75 PK	74.00	-19.25	1.24 V	196	15.96	38.79
8	4924.00	48.04 AV	54.00	-5.96	1.24 V	196	9.25	38.79

- 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

802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1066.00	48.34 PK	74.00	-25.66	1.44 H	343	20.23	28.11
2	1066.00	44.44 AV	54.00	-9.56	1.44 H	343	16.33	28.11
3	1200.00	47.73 PK	74.00	-26.27	1.23 H	10	19.18	28.55
4	1200.00	43.80 AV	54.00	-10.20	1.23 H	10	15.25	28.55
5	2390.00	58.37 PK	74.00	-15.63	1.08 H	157	26.08	32.29
6	2390.00	46.01 AV	54.00	-7.99	1.08 H	157	13.72	32.29
7	*2412.00	99.78 PK			1.08 H	157	67.40	32.38
8	*2412.00	90.51 AV			1.08 H	157	58.13	32.38
9	4824.00	47.35 PK	74.00	-26.65	1.18 H	67	8.78	38.56
10	4824.00	35.34 AV	54.00	-18.66	1.18 H	67	-3.23	38.56

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	1066.00	50.50 PK	74.00	-23.50	1.04 V	56	22.39	28.11
2	1066.00	46.59 AV	54.00	-7.41	1.04 V	56	18.48	28.11
3	1200.00	45.68 PK	74.00	-28.32	1.16 V	342	17.13	28.55
4	1200.00	42.52 AV	54.00	-11.48	1.16 V	342	13.97	28.55
5	2390.00	58.61 PK	74.00	-15.39	1.18 V	2	26.32	32.29
6	2390.00	48.00 AV	54.00	-6.00	1.18 V	2	15.71	32.29
7	*2412.00	111.86 PK			1.16 V	18	79.48	32.38
8	*2412.00	102.00 AV			1.16 V	18	69.62	32.38
9	4824.00	48.73 PK	74.00	-25.27	1.26 V	20	10.16	38.56
10	4824.00	36.10 AV	54.00	-17.90	1.26 V	20	-2.47	38.56

- 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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1066.00	48.39 PK	74.00	-25.61	1.42 H	331	20.28	28.11
2	1066.00	44.42 AV	54.00	-9.58	1.42 H	331	16.31	28.11
3	*2437.00	99.86 PK			1.13 H	12	67.38	32.48
4	*2437.00	90.56 AV			1.13 H	12	58.08	32.48
5	4874.00	48.29 PK	74.00	-25.71	1.06 H	93	9.61	38.67
6	4874.00	34.45 AV	54.00	-19.55	1.06 H	93	-4.23	38.67
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	1066.00	50.63 PK	74.00	-23.37	1.07 V	61	22.52	28.11
2	1066.00	46.64 AV	54.00	-7.36	1.07 V	61	18.53	28.11
3	*2437.00	112.15 PK			1.10 V	267	79.67	32.48
4	*2437.00	102.26 AV			1.10 V	267	69.78	32.48
5	4874.00	48.18 PK	74.00	-25.82	1.18 V	164	9.50	38.67
6	4874.00	35.70 AV	54.00	-18.30	1.18 V	164	-2.98	38.67

- 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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1066.00	48.42 PK	74.00	-25.58	1.46 H	348	20.31	28.11
2	1066.00	44.51 AV	54.00	-9.49	1.46 H	348	16.40	28.11
3	*2462.00	99.88 PK			1.04 H	157	67.30	32.58
4	*2462.00	90.67 AV			1.04 H	157	58.09	32.58
5	2483.50	58.15 PK	74.00	-15.85	1.05 H	155	25.49	32.66
6	2483.50	46.36 AV	54.00	-7.64	1.05 H	155	13.70	32.66
7	4924.00	47.40 PK	74.00	-26.60	1.20 H	73	8.61	38.79
8	4924.00	35.43 AV	54.00	-18.57	1.20 H	73	-3.36	38.79
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	1066.00	50.57 PK	74.00	-23.43	1.05 V	58	22.46	28.11
2	1066.00	46.65 AV	54.00	-7.35	1.05 V	58	18.54	28.11
3	*2462.00	111.85 PK			1.06 V	268	79.27	32.58
4	*2462.00	102.26 AV			1.06 V	268	69.68	32.58
5	2483.50	62.20 PK	74.00	-11.80	1.07 V	270	29.54	32.66
6	2483.50	50.25 AV	54.00	-3.75	1.07 V	270	17.59	32.66
7	4924.00	48.82 PK	74.00	-25.18	1.30 V	23	10.03	38.79
8	4924.00	36.18 AV	54.00	-17.82	1.30 V	23	-2.61	38.79

- 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 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1066.00	57.70 PK	74.00	-16.30	1.24 H	0	29.59	28.11
2	1066.00	52.23 AV	54.00	-1.77	1.24 H	0	24.12	28.11
3	2390.00	61.26 PK	74.00	-12.74	1.03 H	229	28.97	32.29
4	2390.00	48.35 AV	54.00	-5.65	1.03 H	229	16.06	32.29
5	*2412.00	101.37 PK			1.01 H	229	68.99	32.38
6	*2412.00	91.46 AV			1.01 H	229	59.08	32.38
7	4824.00	52.13 PK	74.00	-21.87	1.06 H	163	13.56	38.56
8	4824.00	39.40 AV	54.00	-14.60	1.06 H	163	0.83	38.56
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	1066.00	56.33 PK	74.00	-17.67	1.03 V	345	28.22	28.11
2	1066.00	50.37 AV	54.00	-3.63	1.03 V	345	22.26	28.11
3	2390.00	68.83 PK	74.00	-5.17	1.36 V	248	36.54	32.29
4	2390.00	51.67 AV	54.00	-2.33	1.36 V	248	19.38	32.29
5	*2412.00	114.08 PK			1.18 V	193	81.70	32.38
6	*2412.00	104.07 AV			1.18 V	193	71.69	32.38
7	4824.00	52.19 PK	74.00	-21.81	1.06 V	256	13.62	38.56
8	4824.00	41.12 AV	54.00	-12.88	1.06 V	256	2.55	38.56

- 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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1066.00	57.82 PK	74.00	-16.18	1.18 H	3	29.71	28.11
2	1066.00	52.33 AV	54.00	-1.67	1.18 H	3	24.22	28.11
3	*2437.00	101.30 PK			1.00 H	232	68.82	32.48
4	*2437.00	91.40 AV			1.00 H	232	58.92	32.48
5	4874.00	47.21 PK	74.00	-26.79	1.00 H	312	8.53	38.67
6	4874.00	34.50 AV	54.00	-19.50	1.00 H	312	-4.18	38.67
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	1066.00	56.42 PK	74.00	-17.58	1.09 V	336	28.31	28.11
2	1066.00	50.48 AV	54.00	-3.52	1.09 V	336	22.37	28.11
3	*2437.00	113.97 PK			1.42 V	209	81.49	32.48
4	*2437.00	104.24 AV			1.42 V	209	71.76	32.48
5	4874.00	49.54 PK	74.00	-24.46	1.40 V	109	10.86	38.67
6	4874.00	37.13 AV	54.00	-16.87	1.40 V	109	-1.55	38.67

- 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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1066.00	57.80 PK	74.00	-16.20	1.03 H	183	29.69	28.11
2	1066.00	52.97 AV	54.00	-1.03	1.03 H	183	24.86	28.11
3	*2462.00	102.70 PK			1.09 H	239	70.12	32.58
4	*2462.00	92.62 AV			1.09 H	239	60.04	32.58
5	2483.50	68.09 PK	74.00	-5.91	1.05 H	148	35.43	32.66
6	2483.50	52.01 AV	54.00	-1.99	1.05 H	148	19.35	32.66
7	4924.00	52.30 PK	74.00	-21.70	1.03 H	195	13.51	38.79
8	4924.00	39.62 AV	54.00	-14.38	1.03 H	195	0.83	38.79
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	1066.00	56.86 PK	74.00	-17.14	1.05 V	171	28.75	28.11
2	1066.00	51.01 AV	54.00	-2.99	1.05 V	171	22.90	28.11
3	*2462.00	114.06 PK			1.06 V	131	81.48	32.58
4	*2462.00	103.63 AV			1.06 V	131	71.05	32.58
5	2483.50	68.09 PK	74.00	-5.91	1.05 V	148	35.43	32.66
6	2483.50	52.01 AV	54.00	-1.99	1.05 V	148	19.35	32.66
7	4924.00	53.40 PK	74.00	-20.60	1.07 V	58	14.61	38.79
8	4924.00	41.36 AV	54.00	-12.64	1.07 V	58	2.57	38.79

- 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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DRAFT 802.11n (20MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	47.83 PK	74.00	-26.17	1.13 H	27	19.28	28.55
2	1200.00	42.31 AV	54.00	-11.69	1.13 H	27	13.76	28.55
3	2390.00	58.59 PK	74.00	-15.41	1.00 H	13	26.30	32.29
4	2390.00	46.45 AV	54.00	-7.55	1.00 H	13	14.16	32.29
5	*2412.00	98.58 PK			2.04 H	122	66.20	32.38
6	*2412.00	87.18 AV			2.04 H	122	54.80	32.38
7	4824.00	49.56 PK	74.00	-24.44	1.00 H	76	10.99	38.56
8	4824.00	36.86 AV	54.00	-17.14	1.00 H	76	-1.71	38.56
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	1200.00	52.59 PK	74.00	-21.41	1.48 V	309	24.04	28.55
2	1200.00	44.59 AV	54.00	-9.41	1.48 V	309	16.04	28.55
3	2390.00	60.27 PK	74.00	-13.73	1.35 V	298	27.98	32.29
4	2390.00	47.85 AV	54.00	-6.15	1.35 V	298	15.56	32.29
5	*2412.00	110.11 PK			1.32 V	301	77.73	32.38
6	*2412.00	99.83 AV			1.32 V	301	67.45	32.38
7	4824.00	50.65 PK	74.00	-23.35	1.12 V	102	12.08	38.56
8	4824.00	37.98 AV	54.00	-16.02	1.12 V	102	-0.59	38.56

- 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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	47.63 PK	74.00	-26.37	1.12 H	16	19.08	28.55
2	1200.00	42.19 AV	54.00	-11.81	1.12 H	16	13.64	28.55
3	*2437.00	97.97 PK			1.19 H	33	65.49	32.48
4	*2437.00	88.88 AV			1.19 H	33	56.40	32.48
5	4874.00	48.89 PK	74.00	-25.11	1.16 H	92	10.22	38.67
6	4874.00	36.17 AV	54.00	-17.83	1.16 H	92	-2.50	38.67
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	1200.00	52.48 PK	74.00	-21.52	1.41 V	284	23.93	28.55
2	1200.00	44.51 AV	54.00	-9.49	1.41 V	284	15.96	28.55
3	*2437.00	110.44 PK			1.15 V	358	77.96	32.48
4	*2437.00	100.33 AV			1.15 V	358	67.85	32.48
5	4874.00	50.42 PK	74.00	-23.58	1.19 V	186	11.75	38.67
6	4874.00	37.66 AV	54.00	-16.34	1.19 V	186	-1.01	38.67

- 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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	47.72 PK	74.00	-26.28	1.15 H	33	19.17	28.55
2	1200.00	42.21 AV	54.00	-11.79	1.15 H	33	13.66	28.55
3	*2462.00	97.84 PK			1.30 H	112	65.26	32.58
4	*2462.00	88.76 AV			1.30 H	112	56.18	32.58
5	2483.50	59.56 PK	74.00	-14.44	1.22 H	100	26.90	32.66
6	2483.50	46.97 AV	54.00	-7.03	1.22 H	100	14.31	32.66
7	4924.00	49.03 PK	74.00	-24.97	1.21 H	293	10.24	38.79
8	4924.00	36.20 AV	54.00	-17.80	1.21 H	293	-2.59	38.79
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	1200.00	52.51 PK	74.00	-21.49	1.45 V	302	23.96	28.55
2	1200.00	44.46 AV	54.00	-9.54	1.45 V	302	15.91	28.55
3	*2462.00	109.95 PK			1.27 V	259	77.37	32.58
4	*2462.00	99.90 AV			1.27 V	259	67.32	32.58
5	2483.50	60.33 PK	74.00	-13.67	1.27 V	261	27.67	32.66
6	2483.50	48.47 AV	54.00	-5.53	1.27 V	261	15.81	32.66
7	4924.00	50.58 PK	74.00	-23.42	1.09 V	91	11.79	38.79
8	4924.00	37.81 AV	54.00	-16.19	1.09 V	91	-0.97	38.79

- 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 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.76 PK	74.00	-25.24	1.15 H	195	19.00	29.76
2	1600.00	45.67 AV	54.00	-8.33	1.15 H	195	15.91	29.76
3	2390.00	58.60 PK	74.00	-15.40	1.28 H	124	26.31	32.29
4	2390.00	46.95 AV	54.00	-7.05	1.28 H	124	14.66	32.29
5	*2412.00	101.52 PK			1.26 H	123	69.14	32.38
6	*2412.00	91.59 AV			1.26 H	123	59.21	32.38
7	4824.00	49.79 PK	74.00	-24.21	1.29 H	103	11.22	38.56
8	4824.00	36.83 AV	54.00	-17.17	1.29 H	103	-1.74	38.56
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	1600.00	50.36 PK	74.00	-23.64	1.04 V	39	20.60	29.76
2	1600.00	46.67 AV	54.00	-7.33	1.04 V	39	16.91	29.76
3	2390.00	68.16 PK	74.00	-5.84	1.13 V	191	35.87	32.29
4	2390.00	50.14 AV	54.00	-3.86	1.13 V	191	17.85	32.29
5	*2412.00	112.50 PK			1.12 V	187	80.12	32.38
6	*2412.00	101.99 AV			1.12 V	187	69.61	32.38
7	4824.00	49.64 PK	74.00	-24.36	1.22 V	19	11.07	38.56
8	4824.00	37.37 AV	54.00	-16.63	1.22 V	19	-1.20	38.56

- 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 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.86 PK	74.00	-25.14	1.16 H	180	19.10	29.76
2	1600.00	45.75 AV	54.00	-8.25	1.16 H	180	15.99	29.76
3	*2437.00	101.69 PK			1.23 H	248	69.21	32.48
4	*2437.00	91.85 AV			1.23 H	248	59.37	32.48
5	4874.00	47.32 PK	74.00	-26.68	1.05 H	331	8.65	38.67
6	4874.00	34.68 AV	54.00	-19.32	1.05 H	331	-3.99	38.67
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	1600.00	50.45 PK	74.00	-23.55	1.06 V	45	20.69	29.76
2	1600.00	46.78 AV	54.00	-7.22	1.06 V	45	17.02	29.76
3	*2437.00	112.70 PK			1.40 V	211	80.22	32.48
4	*2437.00	102.07 AV			1.40 V	211	69.59	32.48
5	4874.00	49.62 PK	74.00	-24.38	1.36 V	122	10.95	38.67
6	4874.00	37.24 AV	54.00	-16.76	1.36 V	122	-1.43	38.67

- 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 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.69 PK	74.00	-25.31	1.18 H	193	18.93	29.76
2	1600.00	45.59 AV	54.00	-8.41	1.18 H	193	15.83	29.76
3	*2462.00	101.55 PK			1.40 H	159	68.97	32.58
4	*2462.00	91.95 AV			1.40 H	159	59.37	32.58
5	2483.50	58.74 PK	74.00	-15.26	1.40 H	156	26.08	32.66
6	2483.50	47.39 AV	54.00	-6.61	1.40 H	156	14.73	32.66
7	4924.00	47.36 PK	74.00	-26.64	1.27 H	99	8.57	38.79
8	4924.00	35.49 AV	54.00	-18.51	1.27 H	99	-3.30	38.79
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	1600.00	50.36 PK	74.00	-23.64	1.04 V	39	20.60	29.76
2	1600.00	46.71 AV	54.00	-7.29	1.04 V	39	16.95	29.76
3	*2462.00	112.06 PK			1.39 V	158	79.48	32.58
4	*2462.00	102.14 AV			1.39 V	158	69.56	32.58
5	2483.50	62.80 PK	74.00	-11.20	1.38 V	157	30.14	32.66
6	2483.50	50.55 AV	54.00	-3.45	1.38 V	157	17.89	32.66
7	4924.00	48.01 PK	74.00	-25.99	1.15 V	188	9.22	38.79
8	4924.00	36.89 AV	54.00	-17.11	1.15 V	188	-1.90	38.79

- 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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DRAFT 802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	47.72 PK	74.00	-26.28	1.10 H	39	19.17	28.55
2	1200.00	42.18 AV	54.00	-11.82	1.10 H	39	13.63	28.55
3	2390.00	58.83 PK	74.00	-15.17	1.08 H	28	26.54	32.29
4	2390.00	47.25 AV	54.00	-6.75	1.08 H	28	14.96	32.29
5	*2422.00	95.81 PK			1.11 H	12	63.39	32.42
6	*2422.00	85.25 AV			1.11 H	12	52.83	32.42
7	4844.00	49.01 PK	74.00	-24.99	1.03 H	45	10.40	38.61
8	4844.00	36.60 AV	54.00	-17.40	1.03 H	45	-2.01	38.61
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	1200.00	52.52 PK	74.00	-21.48	1.45 V	305	23.97	28.55
2	1200.00	44.49 AV	54.00	-9.51	1.45 V	305	15.94	28.55
3	2390.00	66.38 PK	74.00	-7.62	1.28 V	271	34.09	32.29
4	2390.00	49.98 AV	54.00	-4.02	1.28 V	271	17.69	32.29
5	*2422.00	107.82 PK			1.31 V	278	75.40	32.42
6	*2422.00	97.28 AV			1.31 V	278	64.86	32.42
7	4844.00	50.04 PK	74.00	-23.96	1.20 V	68	11.43	38.61
8	4844.00	36.63 AV	54.00	-17.37	1.20 V	68	-1.98	38.61

- 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 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	47.78 PK	74.00	-26.22	1.18 H	48	19.23	28.55
2	1200.00	42.26 AV	54.00	-11.74	1.18 H	48	13.71	28.55
3	*2437.00	95.76 PK			1.13 H	86	63.28	32.48
4	*2437.00	85.13 AV			1.13 H	86	52.65	32.48
5	4874.00	47.25 PK	74.00	-26.75	1.04 H	147	8.57	38.67
6	4874.00	35.27 AV	54.00	-18.73	1.04 H	147	-3.41	38.67
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	1200.00	52.49 PK	74.00	-21.51	1.18 V	46	23.94	28.55
2	1200.00	44.32 AV	54.00	-9.68	1.18 V	46	15.77	28.55
3	*2437.00	107.80 PK			1.10 V	282	75.32	32.48
4	*2437.00	97.24 AV			1.10 V	282	64.76	32.48
5	4874.00	47.61 PK	74.00	-26.39	1.35 V	3	8.93	38.67
6	4874.00	35.39 AV	54.00	-18.61	1.35 V	3	-3.29	38.67

- 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 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	47.62 PK	74.00	-26.38	1.16 H	45	19.07	28.55
2	1200.00	42.14 AV	54.00	-11.86	1.16 H	45	13.59	28.55
3	*2452.00	95.75 PK			1.05 H	190	63.21	32.54
4	*2452.00	84.73 AV			1.05 H	190	52.19	32.54
5	2483.50	58.50 PK	74.00	-15.50	1.01 H	188	25.84	32.66
6	2483.50	46.99 AV	54.00	-7.01	1.01 H	188	14.33	32.66
7	4904.00	48.70 PK	74.00	-25.30	1.06 H	212	9.96	38.74
8	4904.00	36.80 AV	54.00	-17.20	1.06 H	212	-1.94	38.74
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	1200.00	52.42 PK	74.00	-21.58	1.33 V	309	23.87	28.55
2	1200.00	44.62 AV	54.00	-9.38	1.33 V	309	16.07	28.55
3	*2452.00	107.39 PK			1.11 V	136	74.85	32.54
4	*2452.00	97.28 AV			1.11 V	136	64.74	32.54
5	2483.50	64.44 PK	74.00	-9.56	1.09 V	318	31.78	32.66
6	2483.50	49.30 AV	54.00	-4.70	1.09 V	318	16.64	32.66
7	4904.00	49.76 PK	74.00	-24.24	1.18 V	162	11.02	38.74
8	4904.00	37.68 AV	54.00	-16.32	1.18 V	162	-1.06	38.74

- 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 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.75 PK	74.00	-25.25	1.13 H	197	18.99	29.76
2	1600.00	45.67 AV	54.00	-8.33	1.13 H	197	15.91	29.76
3	*2422.00	98.40 PK			1.20 H	240	65.98	32.42
4	*2422.00	88.35 AV			1.20 H	240	55.93	32.42
5	2483.50	60.11 PK	74.00	-13.89	1.20 H	240	27.45	32.66
6	2483.50	47.79 AV	54.00	-6.21	1.20 H	240	15.13	32.66
7	4844.00	49.66 PK	74.00	-24.34	1.22 H	142	11.05	38.61
8	4844.00	37.03 AV	54.00	-16.97	1.22 H	142	-1.58	38.61
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	1600.00	50.47 PK	74.00	-23.53	1.01 V	41	20.71	29.76
2	1600.00	46.68 AV	54.00	-7.32	1.01 V	41	16.92	29.76
3	2390.00	65.74 PK	74.00	-8.26	1.35 V	144	33.45	32.29
4	2390.00	52.94 AV	54.00	-1.06	1.35 V	144	20.65	32.29
5	*2422.00	109.72 PK			1.38 V	157	77.30	32.42
6	*2422.00	98.54 AV			1.38 V	157	66.12	32.42
7	4844.00	50.60 PK	74.00	-23.40	1.08 V	214	11.99	38.61
8	4844.00	37.03 AV	54.00	-16.97	1.08 V	214	-1.58	38.61

- 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 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.82 PK	74.00	-25.18	1.16 H	181	19.06	29.76
2	1600.00	45.77 AV	54.00	-8.23	1.16 H	181	16.01	29.76
3	*2437.00	98.96 PK			1.78 H	124	66.48	32.48
4	*2437.00	88.94 AV			1.78 H	124	56.46	32.48
5	4874.00	49.75 PK	74.00	-24.25	1.16 H	139	11.08	38.67
6	4874.00	37.21 AV	54.00	-16.79	1.16 H	139	-1.46	38.67
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	1600.00	50.56 PK	74.00	-23.44	1.05 V	52	20.80	29.76
2	1600.00	46.73 AV	54.00	-7.27	1.05 V	52	16.97	29.76
3	*2437.00	109.98 PK			1.11 V	219	77.50	32.48
4	*2437.00	99.01 AV			1.11 V	219	66.53	32.48
5	4874.00	50.73 PK	74.00	-23.27	1.06 V	211	12.06	38.67
6	4874.00	37.22 AV	54.00	-16.78	1.06 V	211	-1.45	38.67

- 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 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	48.64 PK	74.00	-25.36	1.15 H	187	18.88	29.76
2	1600.00	45.80 AV	54.00	-8.20	1.15 H	187	16.04	29.76
3	*2452.00	98.36 PK			1.18 H	236	65.82	32.54
4	*2452.00	88.18 AV			1.18 H	236	55.64	32.54
5	2483.50	61.11 PK	74.00	-12.89	1.17 H	230	28.45	32.66
6	2483.50	48.97 AV	54.00	-5.03	1.17 H	230	16.31	32.66
7	4904.00	50.24 PK	74.00	-23.76	1.28 H	133	11.50	38.74
8	4904.00	36.71 AV	54.00	-17.29	1.28 H	133	-2.03	38.74
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	1600.00	50.41 PK	74.00	-23.59	1.03 V	46	20.65	29.76
2	1600.00	46.55 AV	54.00	-7.45	1.03 V	46	16.79	29.76
3	*2452.00	109.61 PK			1.10 V	154	77.07	32.54
4	*2452.00	98.41 AV			1.10 V	154	65.87	32.54
5	2483.50	67.02 PK	74.00	-6.98	1.10 V	192	34.36	32.66
6	2483.50	52.91 AV	54.00	-1.09	1.10 V	192	20.25	32.66
7	4904.00	50.36 PK	74.00	-23.64	1.07 V	210	11.62	38.74
8	4904.00	36.89 AV	54.00	-17.11	1.07 V	210	-1.85	38.74

- 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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BELOW 1GHz WORST-CASE DATA : 802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	A
TESTED BY	Tim Mie		

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	133.48	34.73 QP	43.50	-8.77	1.25 H	249	22.02	12.71
2	166.78	30.96 QP	43.50	-12.54	1.78 H	287	18.96	12.00
3	250.30	34.16 QP	46.00	-11.84	1.13 H	179	19.19	14.97
4	300.20	35.73 QP	46.00	-10.27	1.13 H	285	20.69	15.04
5	366.66	35.60 QP	46.00	-10.40	2.57 H	101	18.45	17.15
6	399.99	44.49 QP	46.00	-1.51	2.95 H	149	26.29	18.20
7	500.80	37.16 QP	46.00	-8.84	1.54 H	180	16.47	20.69
8	533.31	43.24 QP	46.00	-2.76	1.20 H	224	21.37	21.87
9	633.30	40.95 QP	46.00	-5.05	1.80 H	43	16.27	24.68
10	666.63	44.82 QP	46.00	-1.18	2.18 H	176	19.78	25.05
11	766.63	42.58 QP	46.00	-3.42	1.15 H	184	16.00	26.59
12	799.97	44.97 QP	46.00	-1.03	1.00 H	159	17.75	27.22
13	834.20	37.60 QP	46.00	-8.40	1.00 H	6	10.23	27.37
14	899.95	37.03 QP	46.00	-8.97	1.00 H	5	9.56	27.47
15	933.28	44.19 QP	46.00	-1.81	1.00 H	221	16.08	28.11

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	A
TESTED BY	Tim Mie		

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	75.18	32.64 QP	40.00	-7.36	1.53 V	92	24.53	8.11
2	125.00	34.82 QP	43.50	-8.68	1.23 V	348	22.15	12.67
3	166.67	30.63 QP	43.50	-12.87	1.00 V	224	18.61	12.02
4	225.20	30.29 QP	46.00	-15.71	1.00 V	70	17.77	12.52
5	295.30	33.55 QP	46.00	-12.45	1.50 V	116	18.52	15.03
6	399.99	39.84 QP	46.00	-6.16	2.09 V	65	21.64	18.20
7	500.00	31.56 QP	46.00	-14.44	1.00 V	261	10.90	20.66
8	533.30	36.65 QP	46.00	-9.35	1.60 V	146	14.78	21.87
9	633.30	36.00 QP	46.00	-10.00	1.00 V	155	11.32	24.68
10	666.64	44.37 QP	46.00	-1.63	1.30 V	191	19.32	25.05
11	699.97	44.57 QP	46.00	-1.43	1.17 V	69	19.23	25.34
12	766.63	40.32 QP	46.00	-5.68	1.32 V	204	13.73	26.59
13	799.96	41.95 QP	46.00	-4.05	1.35 V	261	14.73	27.22
14	833.50	36.26 QP	46.00	-9.74	2.04 V	189	8.90	27.36
15	900.20	34.59 QP	46.00	-11.41	1.69 V	101	7.12	27.47
16	933.29	44.26 QP	46.00	-1.74	1.89 V	182	16.15	28.11

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	B
TESTED BY	Tim Mie		

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	166.70	37.79 QP	43.50	-5.71	2.11 H	208	25.77	12.02
2	233.32	42.85 QP	46.00	-3.15	1.21 H	111	29.53	13.32
3	250.00	41.30 QP	46.00	-4.70	1.68 H	227	26.33	14.97
4	375.00	39.32 QP	46.00	-6.68	1.00 H	292	21.91	17.41
5	399.97	43.53 QP	46.00	-2.47	1.68 H	156	25.33	18.20
6	500.00	36.65 QP	46.00	-9.35	2.30 H	302	15.99	20.66
7	533.29	36.15 QP	46.00	-9.85	2.21 H	8	14.28	21.87
8	566.62	43.36 QP	46.00	-2.64	2.08 H	9	20.30	23.06
9	666.61	43.27 QP	46.00	-2.73	1.00 H	80	18.22	25.05
10	733.29	35.02 QP	46.00	-10.98	2.66 H	352	9.06	25.96
11	799.98	36.25 QP	46.00	-9.75	1.57 H	90	9.03	27.22
12	899.92	34.15 QP	46.00	-11.85	1.26 H	57	6.68	27.47
13	933.28	42.02 QP	46.00	-3.98	2.10 H	226	13.91	28.11

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	83.22	37.52 QP	40.00	-2.48	1.04 V	319	28.48	9.04
2	110.97	38.32 QP	43.50	-5.18	1.01 V	308	26.66	11.66
3	125.00	34.33 QP	43.50	-9.17	1.00 V	195	21.66	12.67
4	233.39	34.23 QP	46.00	-11.77	1.02 V	188	20.90	13.33
5	249.99	41.11 QP	46.00	-4.89	1.00 V	213	26.14	14.97
6	399.98	43.76 QP	46.00	-2.24	2.13 V	322	25.56	18.20
7	500.00	41.62 QP	46.00	-4.38	1.00 V	339	20.96	20.66
8	533.99	36.89 QP	46.00	-9.11	1.40 V	157	14.99	21.90
9	567.40	38.70 QP	46.00	-7.30	1.18 V	0	15.61	23.09
10	666.61	42.87 QP	46.00	-3.13	1.00 V	289	17.82	25.05
11	699.97	42.00 QP	46.00	-4.00	1.53 V	339	16.66	25.34
12	799.92	40.20 QP	46.00	-5.80	1.23 V	90	12.98	27.22
13	933.28	43.63 QP	46.00	-2.37	1.60 V	302	15.52	28.11

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	C
TESTED BY	Tim Mie		

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	133.50	30.61 QP	43.50	-12.89	1.11 H	189	17.90	12.71
2	166.67	29.01 QP	43.50	-14.49	1.55 H	284	16.99	12.02
3	225.11	32.72 QP	46.00	-13.28	1.66 H	259	20.21	12.51
4	233.33	42.42 QP	46.00	-3.58	1.27 H	205	29.10	13.32
5	266.90	36.97 QP	46.00	-9.03	1.00 H	160	21.94	15.03
6	366.66	33.89 QP	46.00	-12.11	2.79 H	81	16.74	17.15
7	399.99	38.38 QP	46.00	-7.62	1.85 H	237	20.18	18.20
8	499.99	39.67 QP	46.00	-6.33	1.38 H	43	19.01	20.66
9	533.29	39.30 QP	46.00	-6.70	1.45 H	179	17.43	21.87
10	633.30	36.69 QP	46.00	-9.31	1.75 H	94	12.01	24.68
11	666.64	39.34 QP	46.00	-6.66	1.48 H	114	14.30	25.05
12	699.97	43.72 QP	46.00	-2.28	1.75 H	87	18.38	25.34
13	799.95	41.07 QP	46.00	-4.93	2.08 H	347	13.85	27.22
14	899.95	37.39 QP	46.00	-8.61	3.17 H	285	9.92	27.47
15	933.28	40.14 QP	46.00	-5.86	2.32 H	143	12.04	28.11

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	C
TESTED BY	Tim Mie		

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	124.85	34.14 QP	43.50	-9.36	1.25 V	154	21.47	12.67
2	146.30	30.72 QP	43.50	-12.78	1.48 V	274	18.05	12.67
3	366.80	34.38 QP	46.00	-11.62	2.11 V	25	17.23	17.15
4	399.98	36.79 QP	46.00	-9.21	1.80 V	323	18.59	18.20
5	500.00	32.21 QP	46.00	-13.79	1.45 V	117	11.55	20.66
6	533.31	37.99 QP	46.00	-8.01	1.14 V	135	16.12	21.87
7	633.30	35.71 QP	46.00	-10.29	1.00 V	314	11.03	24.68
8	666.63	42.92 QP	46.00	-3.08	1.37 V	5	17.87	25.05
9	699.97	42.59 QP	46.00	-3.41	1.43 V	354	17.25	25.34
10	733.30	34.77 QP	46.00	-11.23	1.00 V	308	8.81	25.96
11	800.50	35.61 QP	46.00	-10.39	1.43 V	221	8.39	27.22
12	899.96	34.15 QP	46.00	-11.85	1.15 V	96	6.68	27.47
13	933.28	44.99 QP	46.00	-1.01	1.00 V	262	16.88	28.11

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	D
TESTED BY	Tim Mie		

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	233.41	43.18 QP	46.00	-2.82	1.54 H	113	29.85	13.33
2	250.00	41.54 QP	46.00	-4.46	1.18 H	52	26.57	14.97
3	399.99	43.84 QP	46.00	-2.16	1.00 H	304	25.64	18.20
4	533.32	41.63 QP	46.00	-4.37	2.17 H	30	19.76	21.87
5	566.71	41.36 QP	46.00	-4.64	2.00 H	32	18.29	23.07
6	633.30	40.85 QP	46.00	-5.15	1.00 H	199	16.17	24.68
7	666.64	41.87 QP	46.00	-4.13	1.08 H	220	16.82	25.05
8	766.59	40.25 QP	46.00	-5.75	2.61 H	219	13.66	26.59
9	799.96	41.89 QP	46.00	-4.11	1.15 H	20	14.67	27.22
10	933.28	42.80 QP	46.00	-3.20	1.10 H	158	14.69	28.11
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	84.03	37.62 QP	40.00	-2.38	1.00 V	211	28.49	9.13
2	123.05	32.01 QP	43.50	-11.49	1.00 V	201	19.35	12.66
3	250.27	34.23 QP	46.00	-11.77	1.02 V	96	19.26	14.97
4	400.01	43.15 QP	46.00	-2.85	1.05 V	1	24.95	18.20
5	633.30	37.63 QP	46.00	-8.37	1.38 V	98	12.95	24.68
6	666.63	42.02 QP	46.00	-3.98	1.28 V	190	16.97	25.05
7	699.97	44.52 QP	46.00	-1.48	1.46 V	180	19.18	25.34
8	799.96	40.63 QP	46.00	-5.37	2.25 V	247	13.41	27.22
9	833.30	40.25 QP	46.00	-5.75	1.08 V	226	12.89	27.36
10	933.28	44.50 QP	46.00	-1.50	1.00 V	33	16.39	28.11

- 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.



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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	100288	Sep. 22, 2008	Sep. 21, 2009
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 31, 2008	Dec. 30, 2009
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Dec. 29, 2008	Dec. 28, 2009
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jul. 30, 2008	Jul. 29, 2009
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 2.
3. The VCCI Site Registration No. is C-2047.



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4.2.3 TEST PROCEDURES

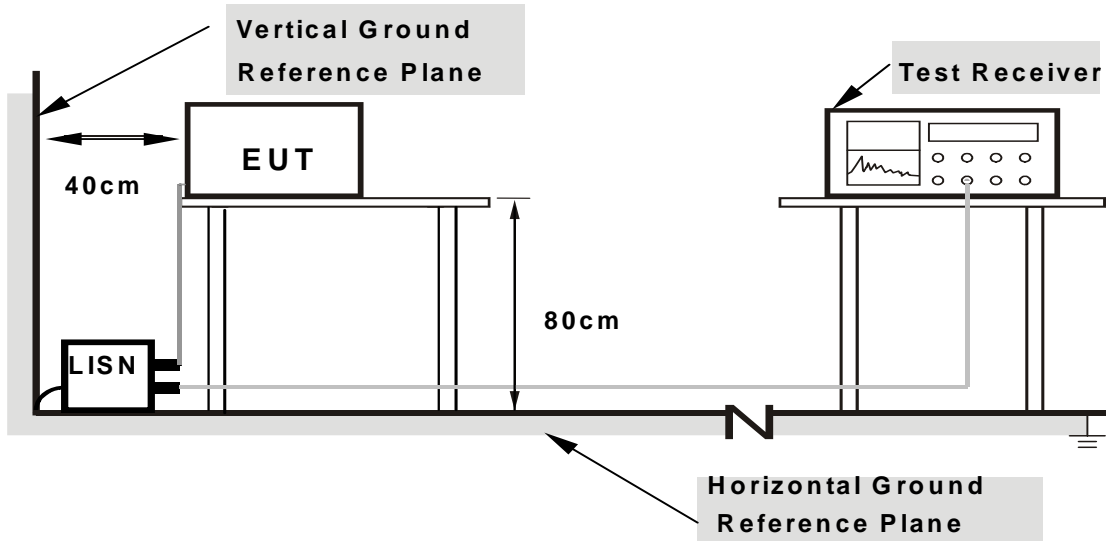
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

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.

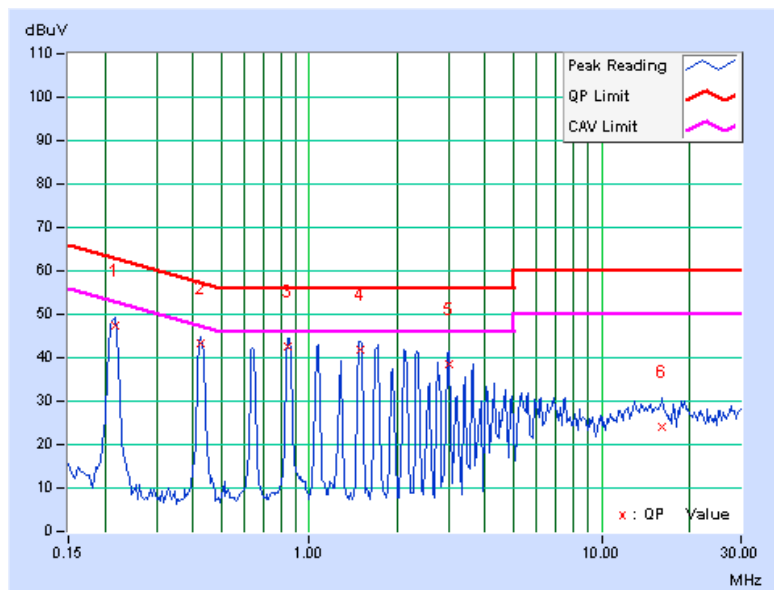
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11g OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	A
TESTED BY	Lori Chiu		

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	0.216	0.13	47.37	-	47.50	-	62.96	52.96	-15.45	-
2	0.427	0.14	43.34	-	43.48	-	57.30	47.30	-13.82	-
3	0.845	0.16	42.52	-	42.68	-	56.00	46.00	-13.32	-
4	1.492	0.18	41.67	-	41.85	-	56.00	46.00	-14.15	-
5	3.000	0.23	38.14	-	38.37	-	56.00	46.00	-17.63	-
6	16.152	0.58	23.61	-	24.19	-	60.00	50.00	-35.81	-

- 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.



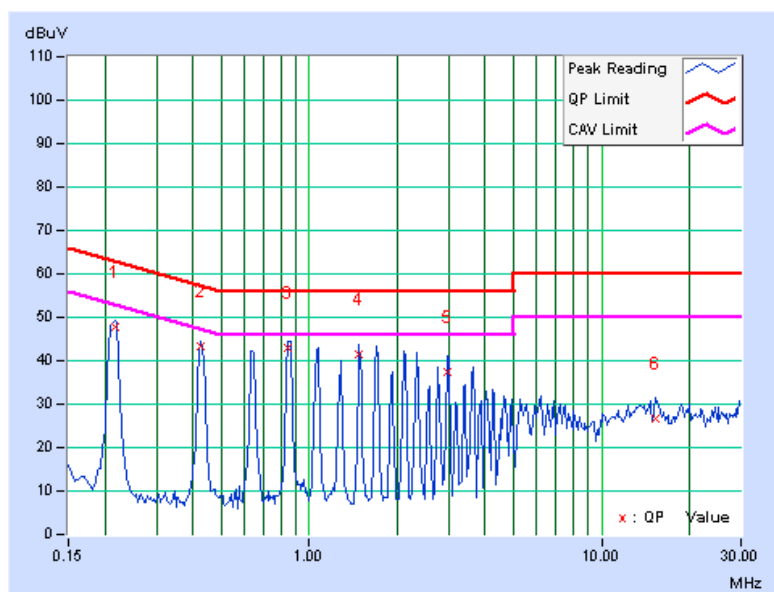


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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	A
TESTED BY	Lori Chiu		

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	0.216	0.13	47.69	-	47.82	-	62.96	52.96	-15.13	-
2	0.427	0.15	43.16	-	43.31	-	57.30	47.30	-13.99	-
3	0.849	0.16	42.78	-	42.94	-	56.00	46.00	-13.06	-
4	1.484	0.18	41.19	-	41.37	-	56.00	46.00	-14.63	-
5	2.984	0.25	37.23	-	37.48	-	56.00	46.00	-18.52	-
6	15.320	0.67	25.88	-	26.55	-	60.00	50.00	-33.45	-

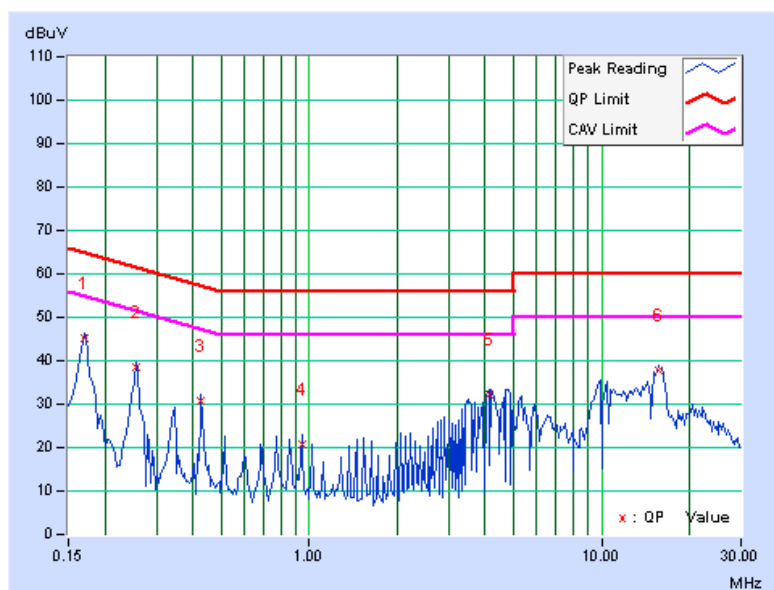
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	B
TESTED BY	Lori Chiu		

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	0.170	0.13	44.95	-	45.08	-	64.98	54.98	-19.90	-
2	0.255	0.13	38.21	-	38.34	-	61.58	51.58	-23.23	-
3	0.427	0.14	30.62	-	30.76	-	57.30	47.30	-26.54	-
4	0.943	0.17	20.56	-	20.73	-	56.00	46.00	-35.27	-
5	4.109	0.28	32.07	-	32.35	-	56.00	46.00	-23.65	-
6	15.664	0.57	37.31	-	37.88	-	60.00	50.00	-22.12	-

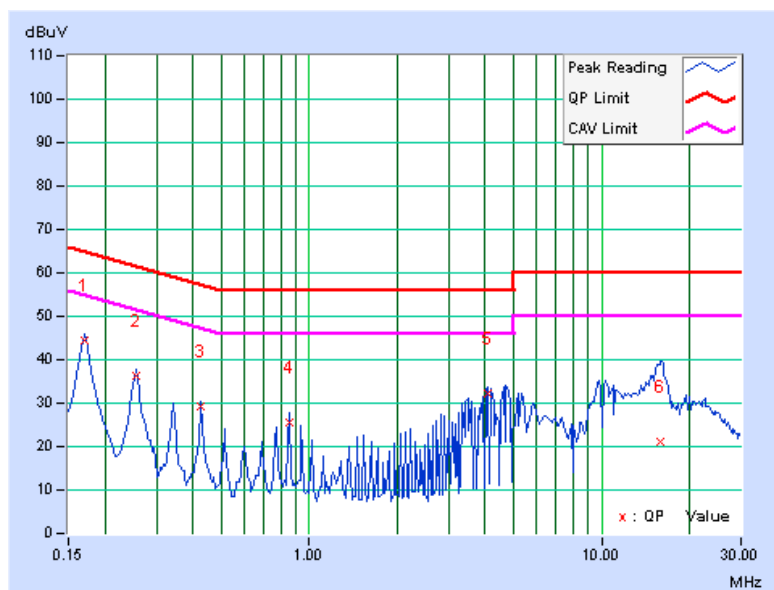
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	B
TESTED BY	Lori Chiu		

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	0.170	0.13	44.33	-	44.46	-	64.98	54.98	-20.52	-
2	0.255	0.14	36.30	-	36.44	-	61.58	51.58	-25.14	-
3	0.427	0.15	29.00	-	29.15	-	57.30	47.30	-28.15	-
4	0.853	0.17	25.34	-	25.51	-	56.00	46.00	-30.49	-
5	4.105	0.30	31.84	-	32.14	-	56.00	46.00	-23.86	-
6	15.902	0.69	20.38	-	21.07	-	60.00	50.00	-38.93	-

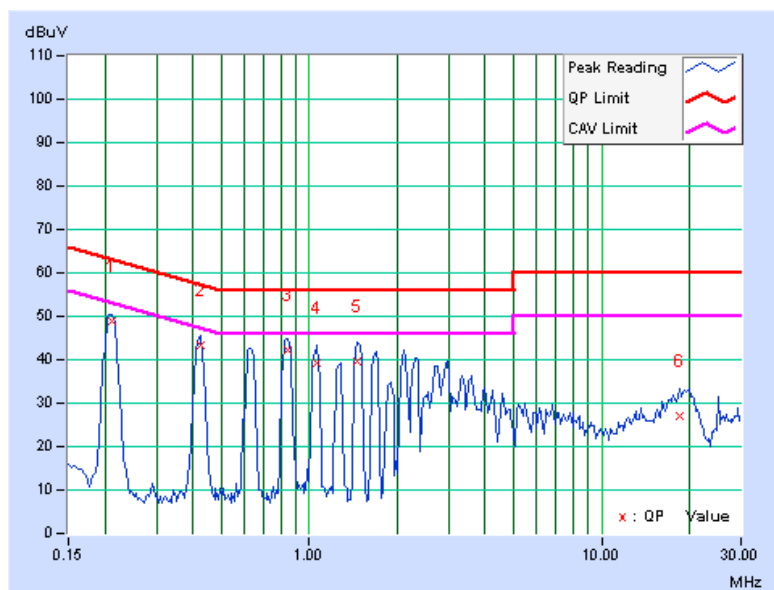
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	C
TESTED BY	Lori Chiu		

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	0.212	0.13	48.66	-	48.79	-	63.11	53.11	-14.32	-
2	0.423	0.14	43.16	-	43.30	-	57.38	47.38	-14.08	-
3	0.849	0.16	42.08	-	42.24	-	56.00	46.00	-13.76	-
4	1.066	0.17	39.06	-	39.23	-	56.00	46.00	-16.77	-
5	1.466	0.18	39.48	-	39.66	-	56.00	46.00	-16.34	-
6	18.434	0.63	26.56	-	27.19	-	60.00	50.00	-32.81	-

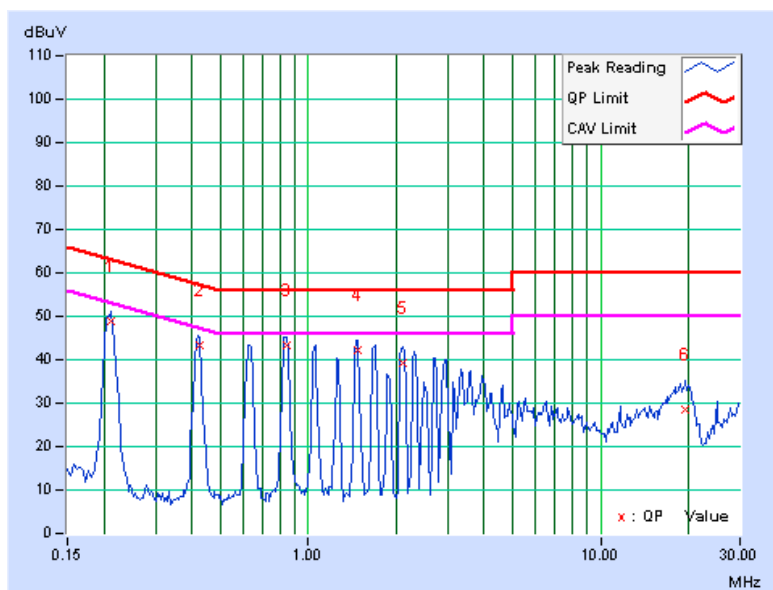
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	C
TESTED BY	Lori Chiu		

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	0.211	0.13	48.80	-	48.93	-	63.16	53.16	-14.23	-
2	0.426	0.15	43.34	-	43.49	-	57.33	47.33	-13.84	-
3	0.846	0.16	43.30	-	43.46	-	56.00	46.00	-12.54	-
4	1.477	0.18	42.07	-	42.25	-	56.00	46.00	-13.75	-
5	2.098	0.20	39.19	-	39.39	-	56.00	46.00	-16.61	-
6	19.469	0.80	27.79	-	28.59	-	60.00	50.00	-31.41	-

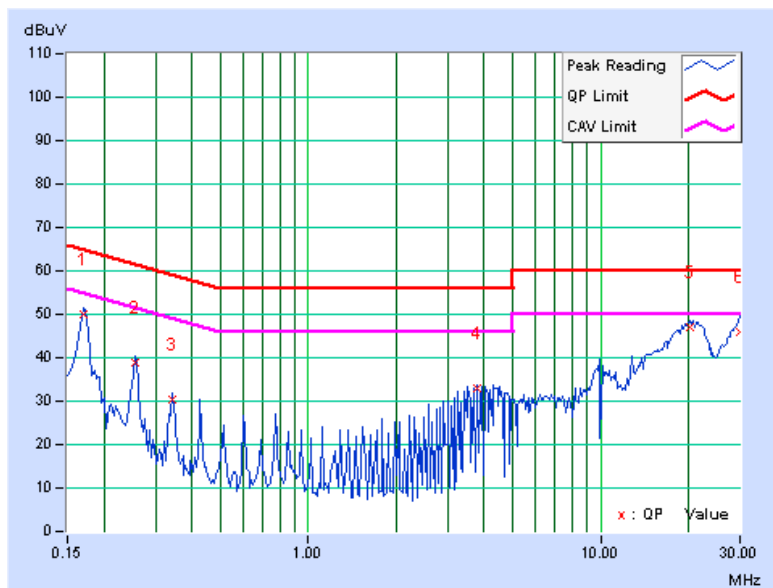
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	D
TESTED BY	Lori Chiu		

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	0.170	0.13	49.96	-	50.09	-	64.98	54.98	-14.89	-
2	0.256	0.13	38.88	-	39.01	-	61.58	51.58	-22.56	-
3	0.341	0.14	30.27	-	30.41	-	59.17	49.17	-28.76	-
4	3.770	0.27	32.77	-	33.04	-	56.00	46.00	-22.96	-
5	20.258	0.67	46.38	-	47.05	-	60.00	50.00	-12.95	-
6	30.000	0.62	45.22	-	45.84	-	60.00	50.00	-14.16	-

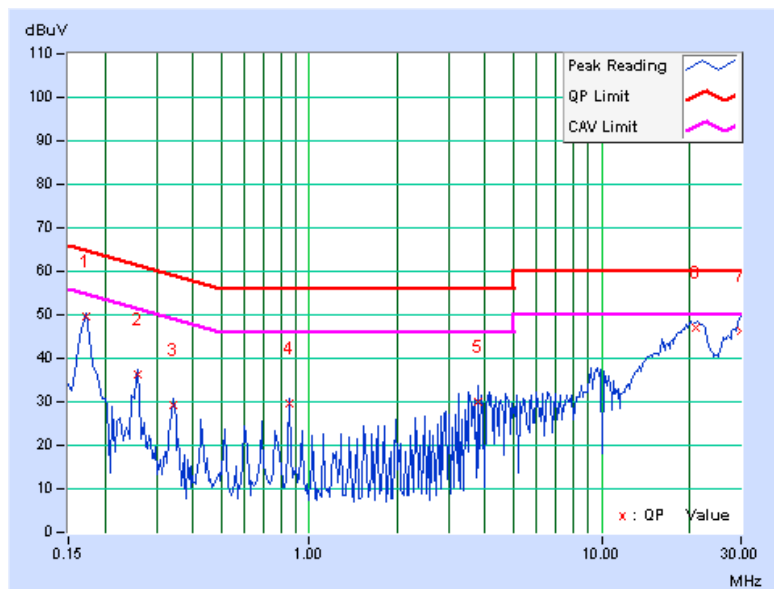
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	D
TESTED BY	Lori Chiu		

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	0.172	0.13	49.65	-	49.78	-	64.86	54.86	-15.08	-
2	0.259	0.14	36.14	-	36.28	-	61.45	51.45	-25.18	-
3	0.341	0.14	29.25	-	29.39	-	59.17	49.17	-29.77	-
4	0.857	0.17	29.32	-	29.49	-	56.00	46.00	-26.51	-
5	3.770	0.29	29.62	-	29.91	-	56.00	46.00	-26.09	-
6	20.926	0.81	46.22	-	47.03	-	60.00	50.00	-12.97	-
7	29.992	0.76	45.67	-	46.43	-	60.00	50.00	-13.57	-

- 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.





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4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100041	May 13, 2009	May 12, 2010

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

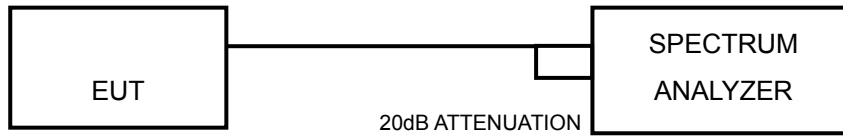
4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



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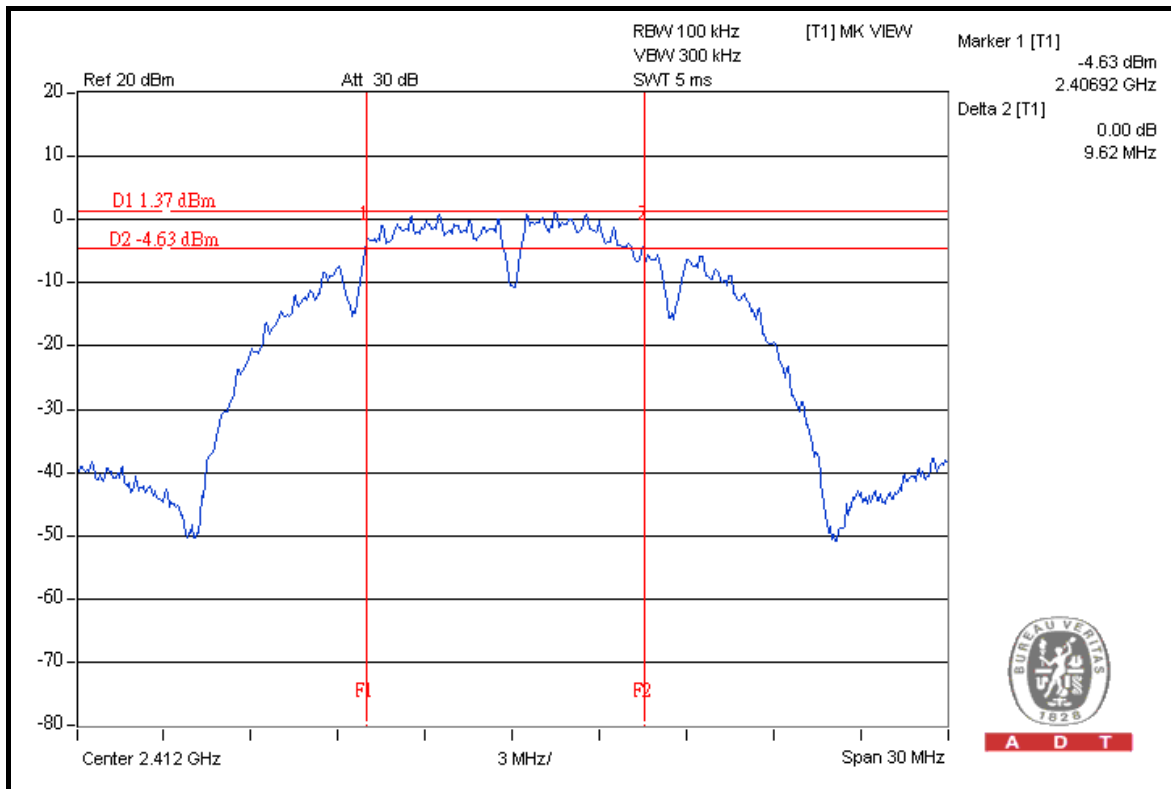
4.3.7 TEST RESULTS

802.11b DSSS MODULATION

MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	9.62	11.70	12.16	0.5	PASS
6	2437	10.15	10.19	10.11	0.5	PASS
11	2462	12.70	10.15	10.21	0.5	PASS

FOR CHAIN 0: CH 1

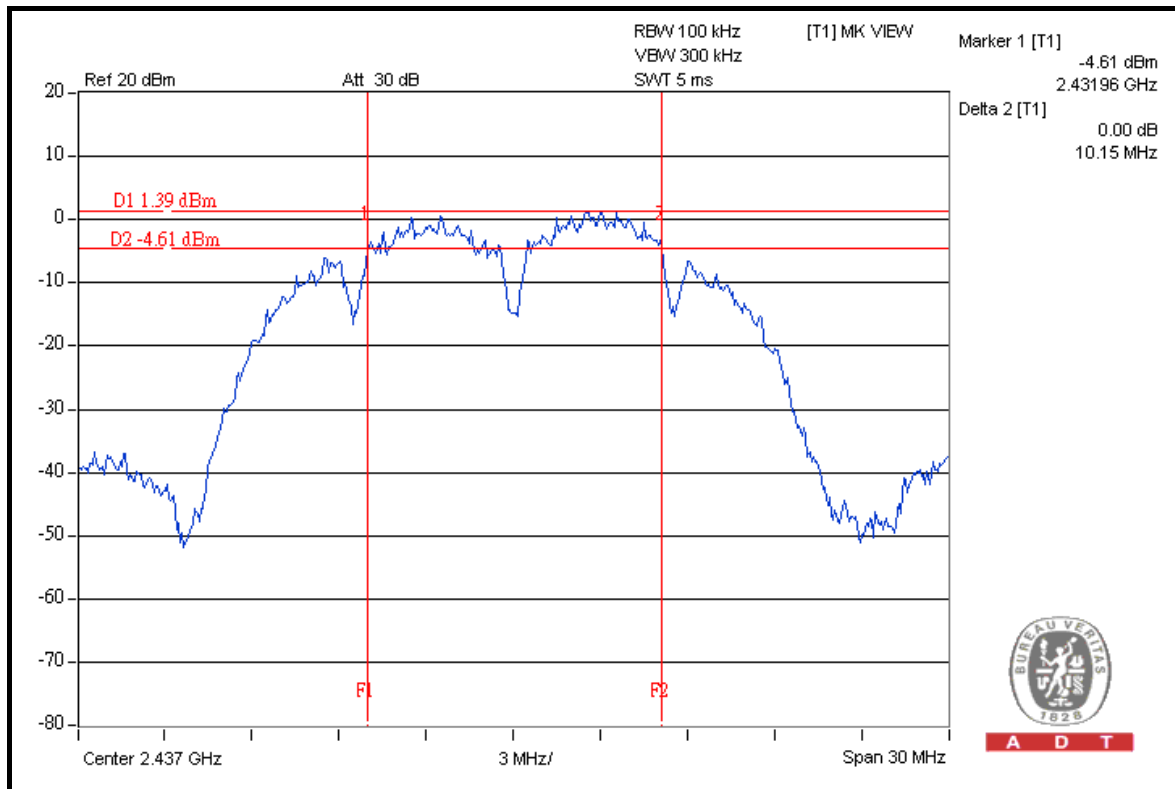


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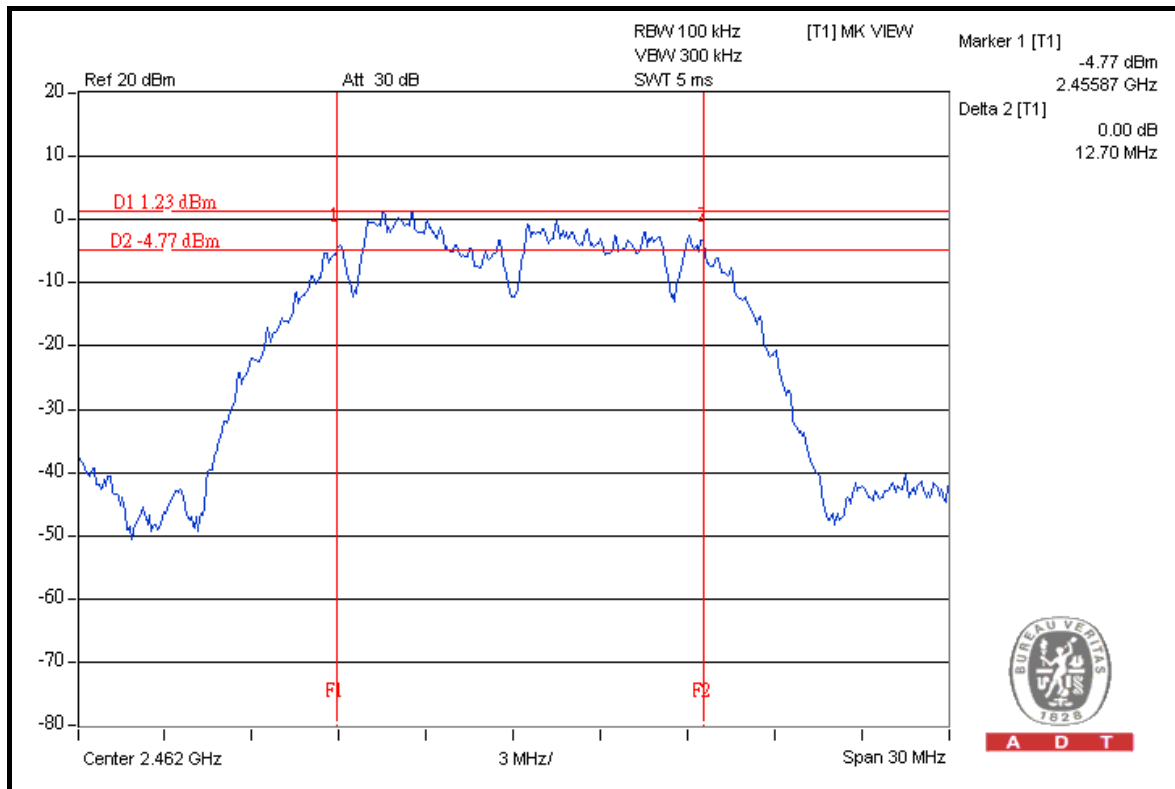


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CH 6



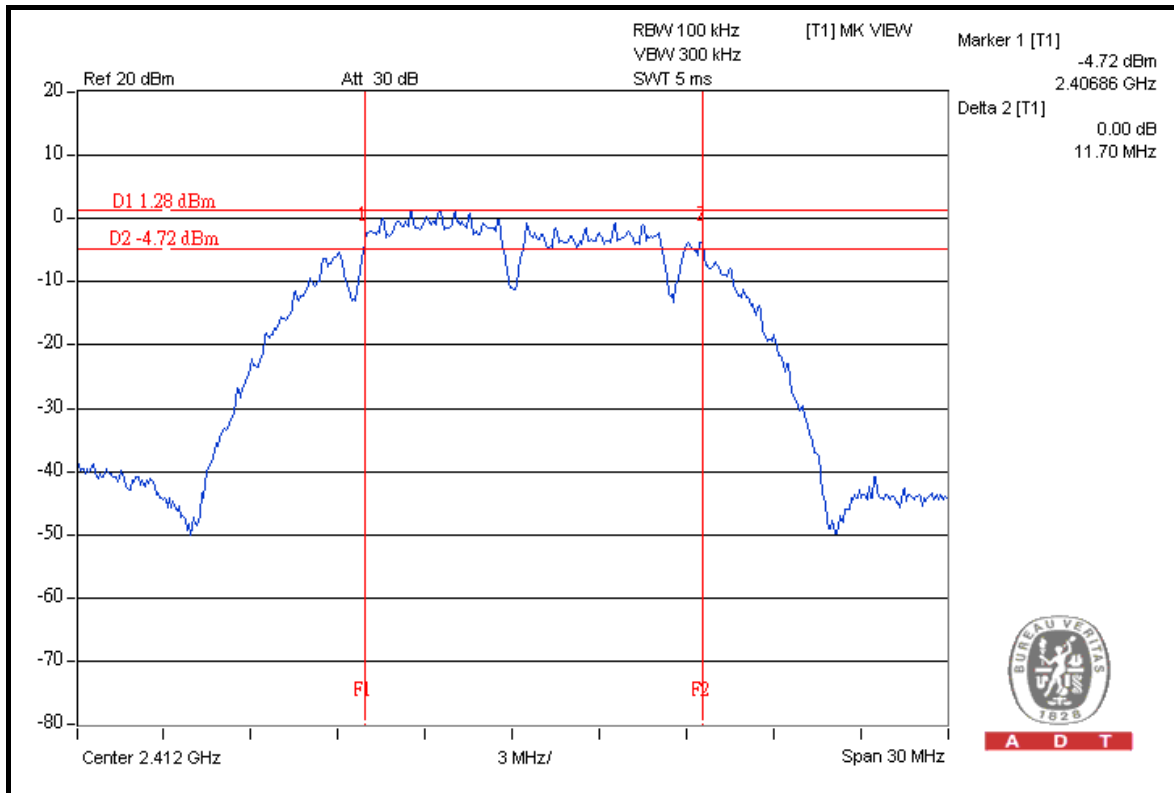
CH 11



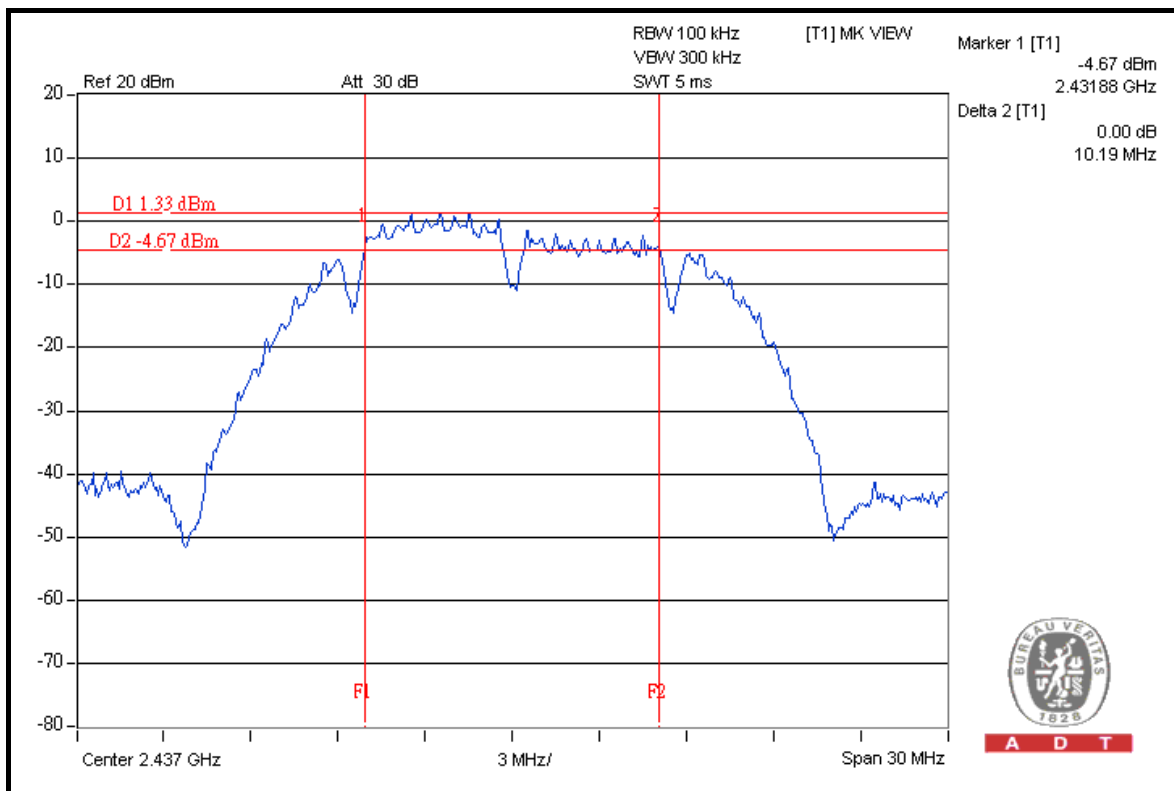


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FOR CHAIN 1: CH 1



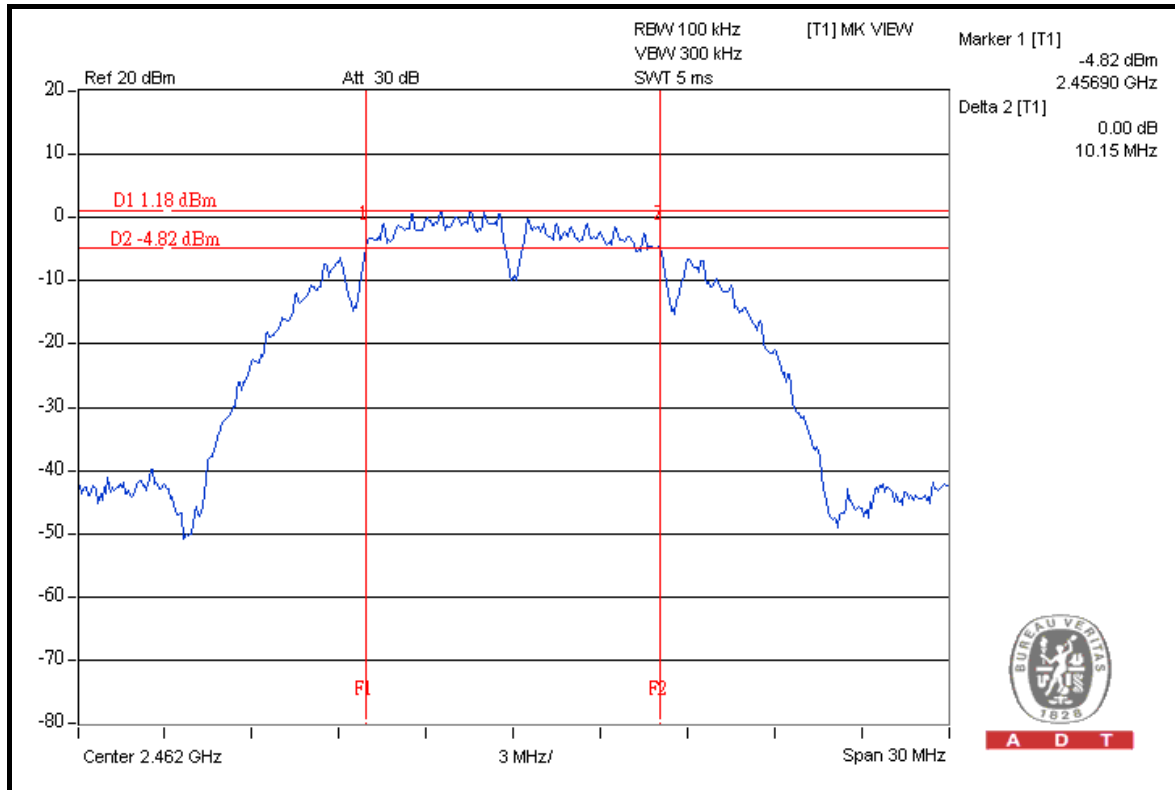
CH 6



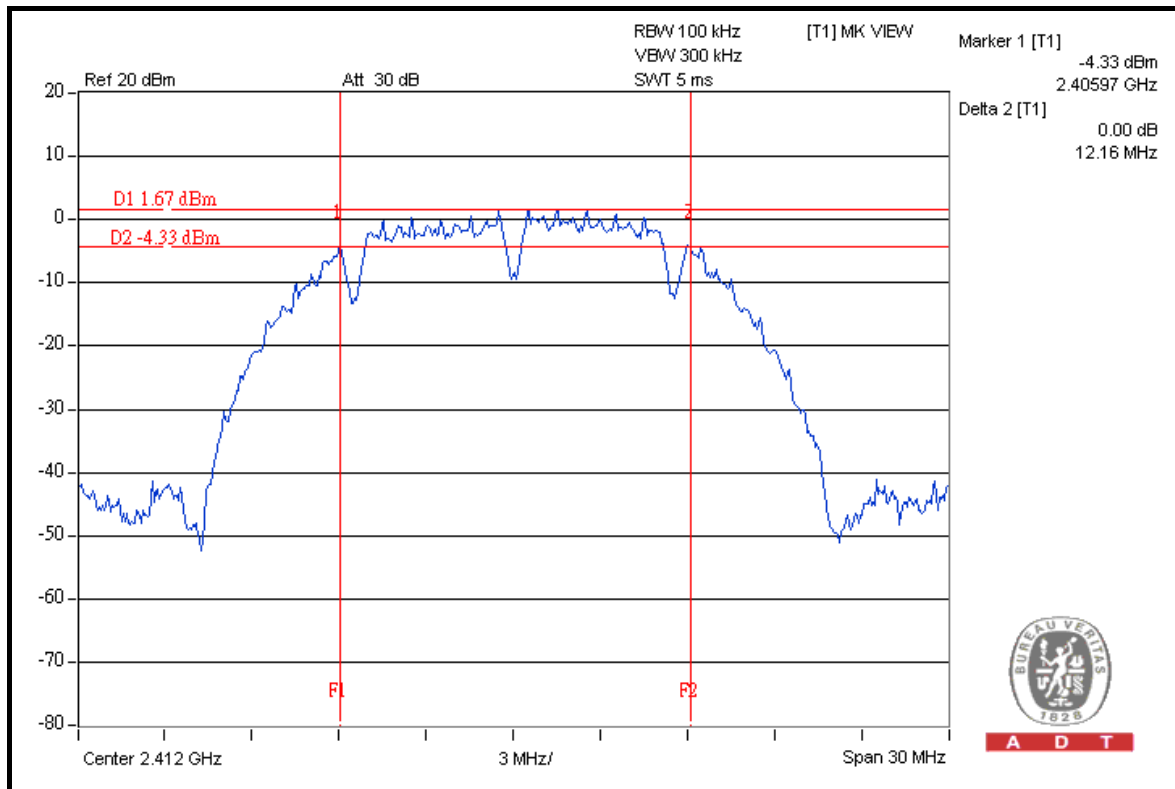


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CH 11



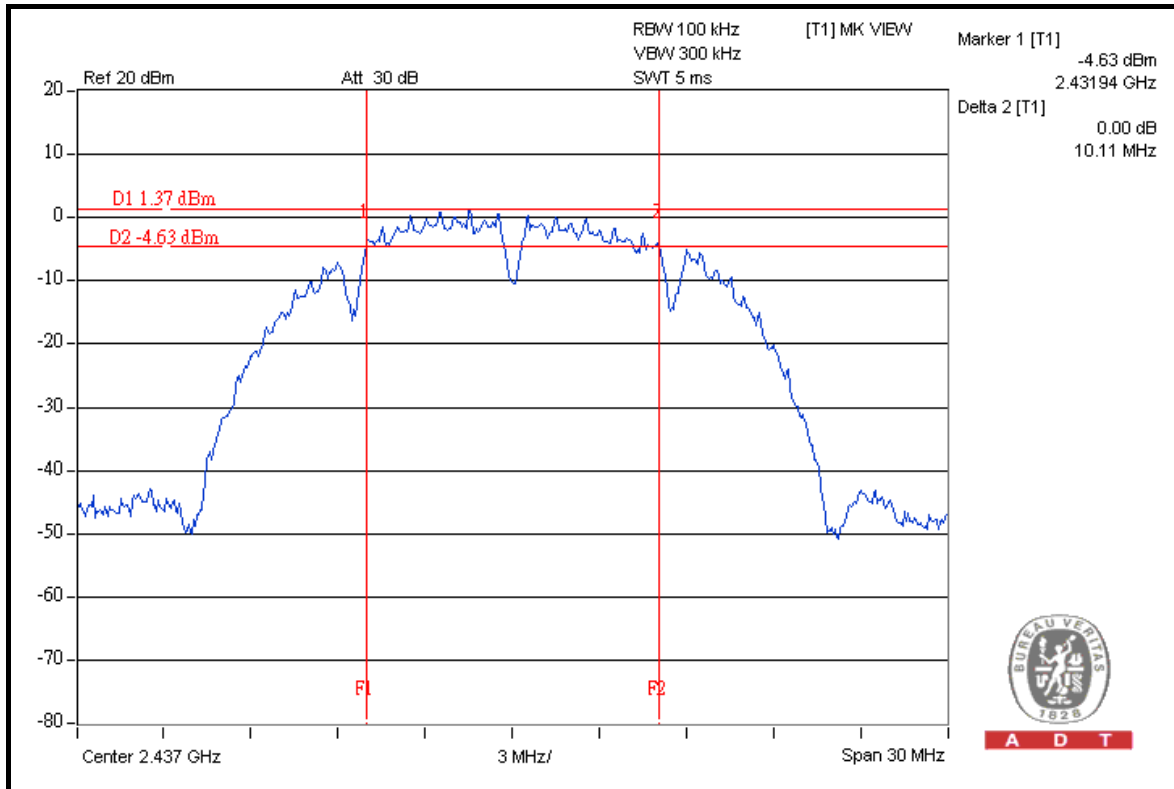
FOR CHAIN 2: CH 1



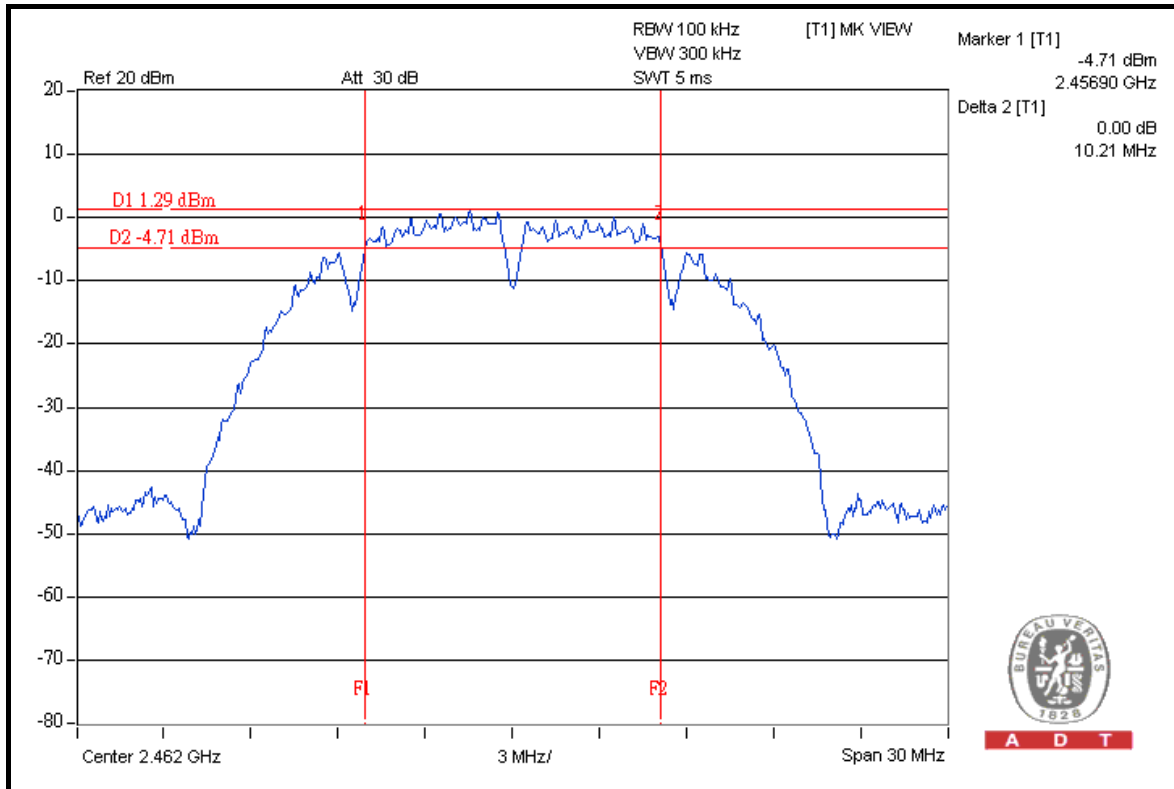


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CH 6



CH 11





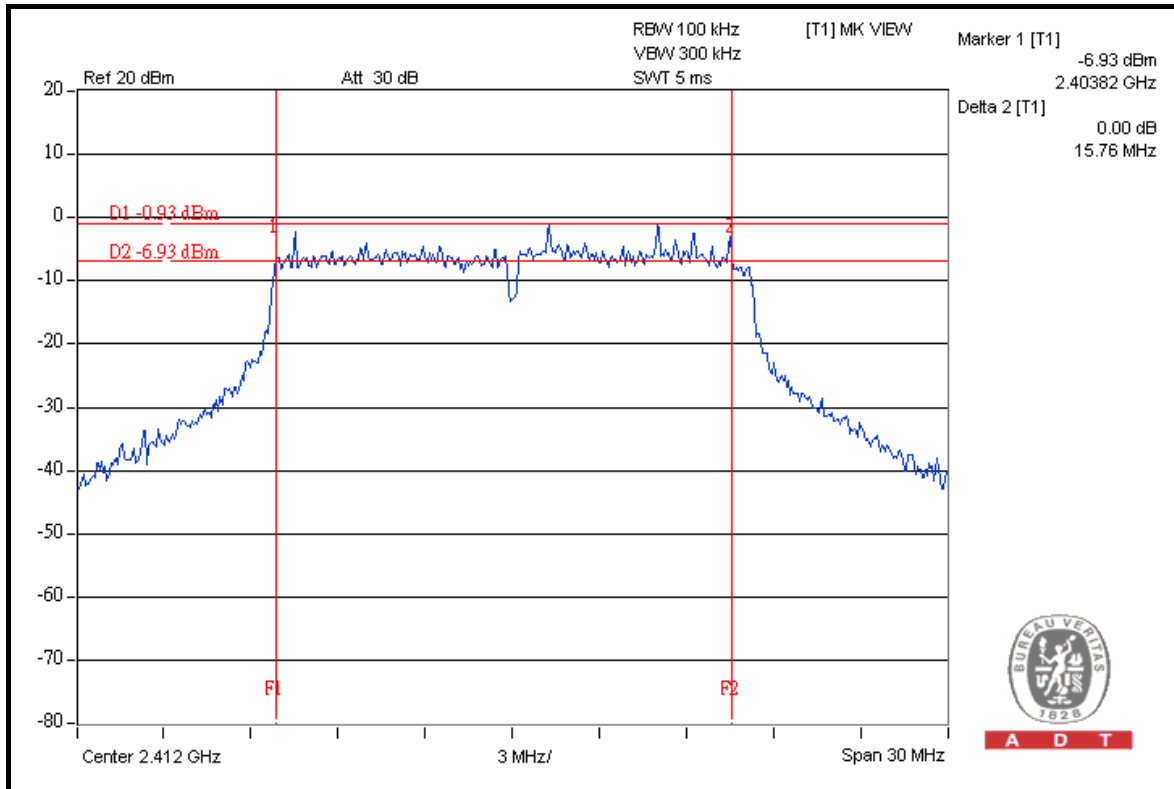
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802.11g OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	15.76	15.80	16.13	0.5	PASS
6	2437	15.77	16.34	16.14	0.5	PASS
11	2462	15.77	16.35	15.77	0.5	PASS

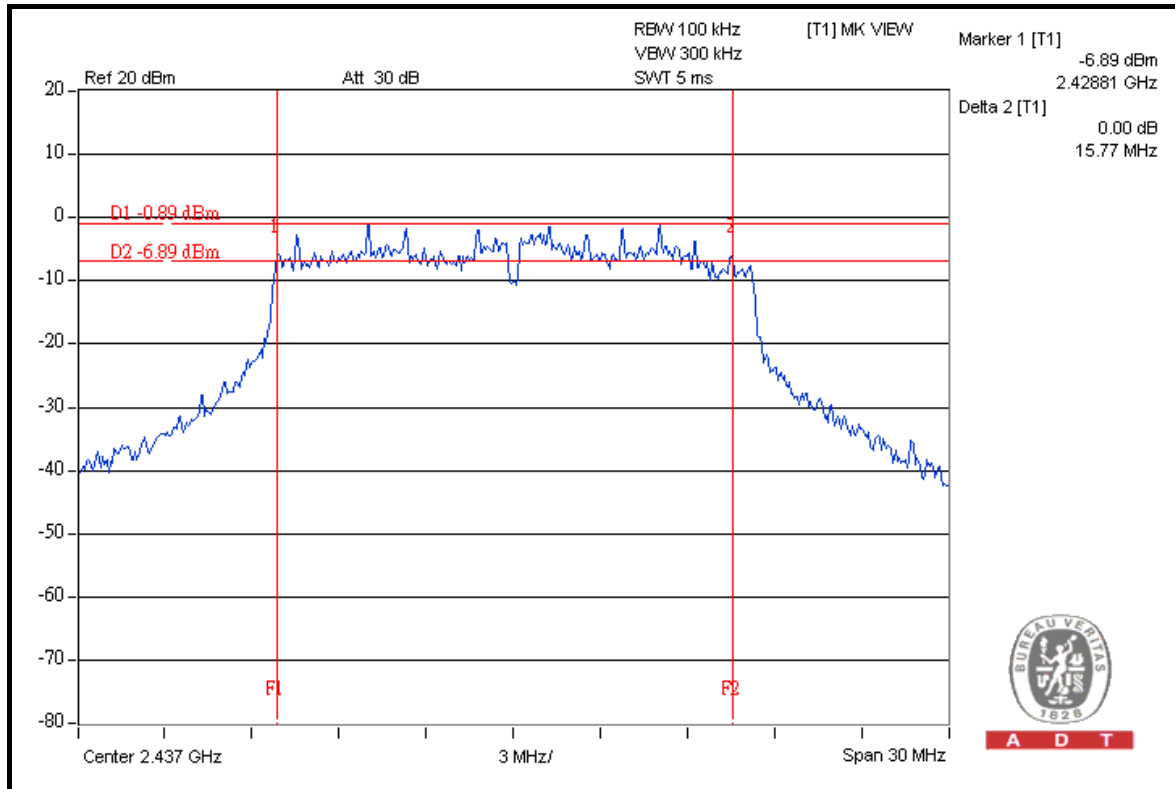
FOR CHAIN 0: CH 1



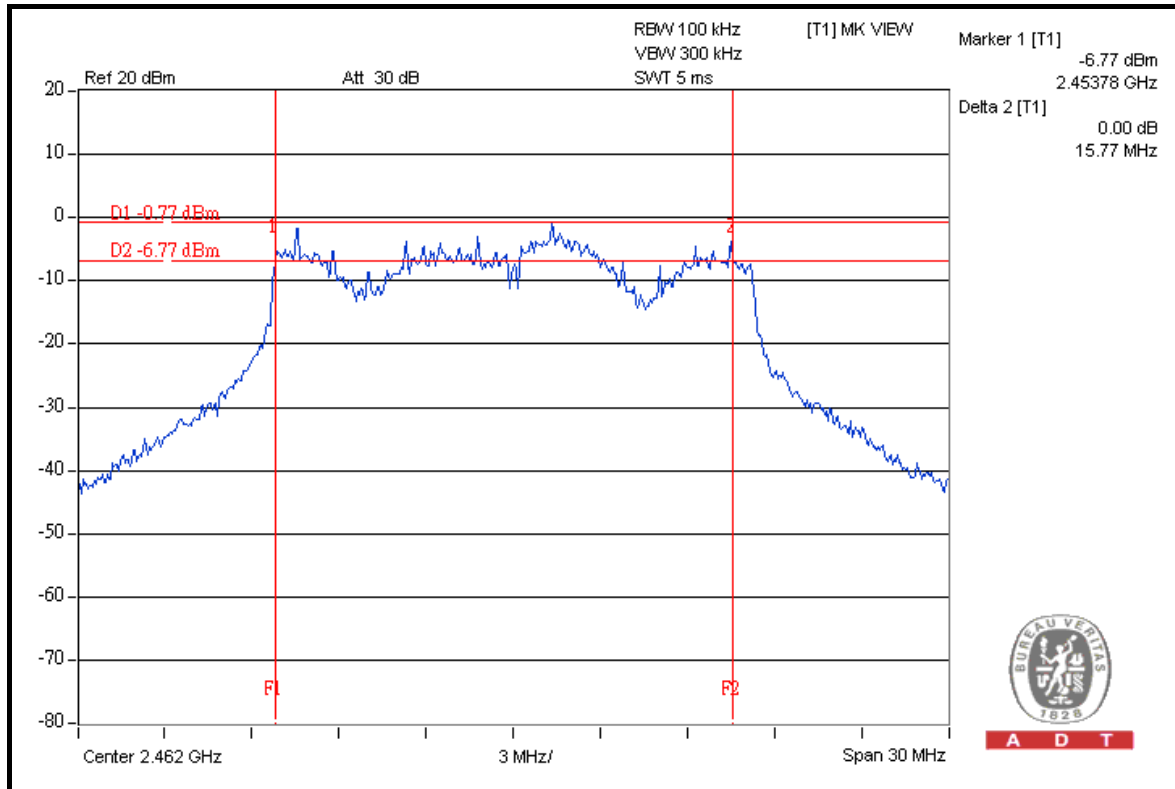


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CH 6



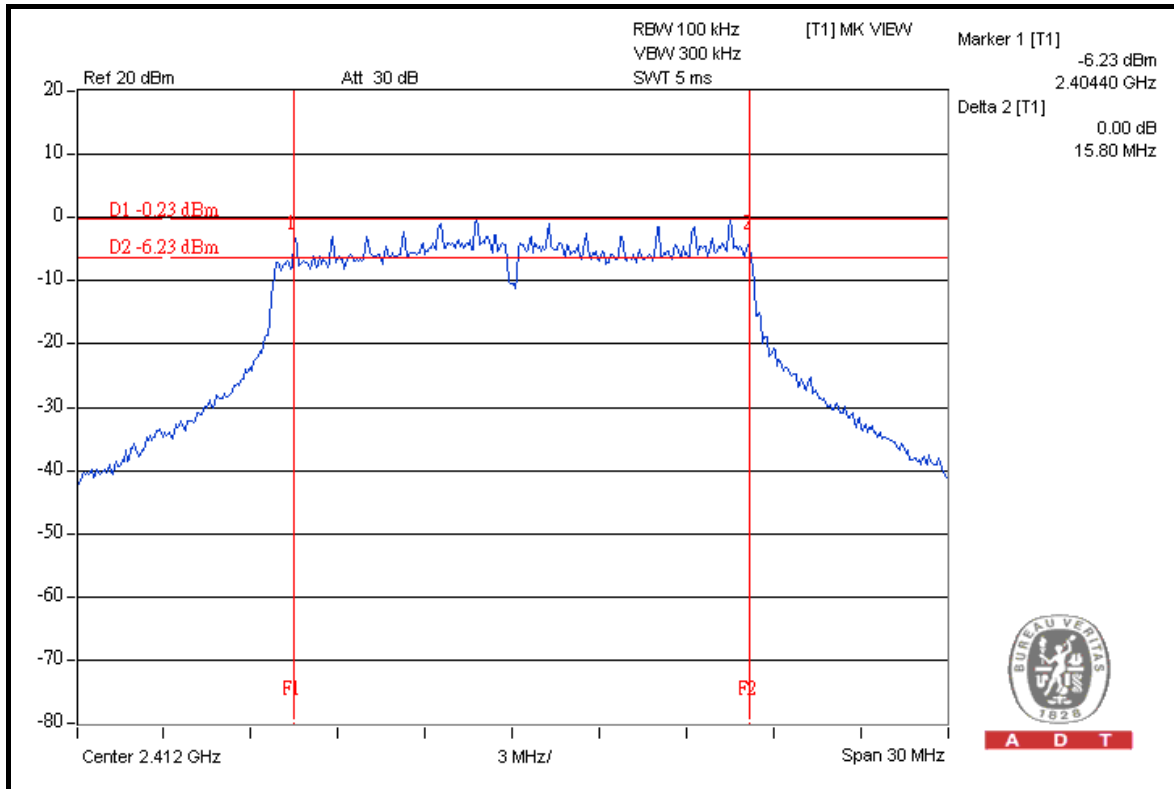
CH 11



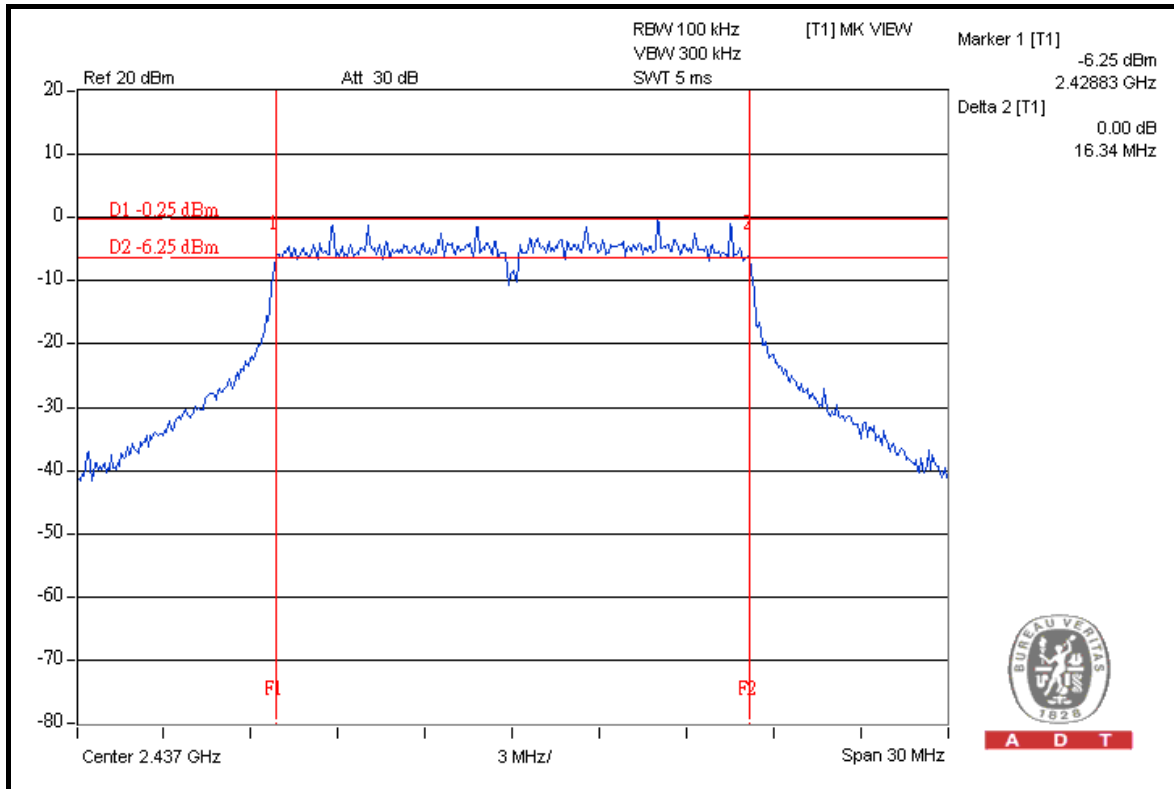


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FOR CHAIN 1: CH 1



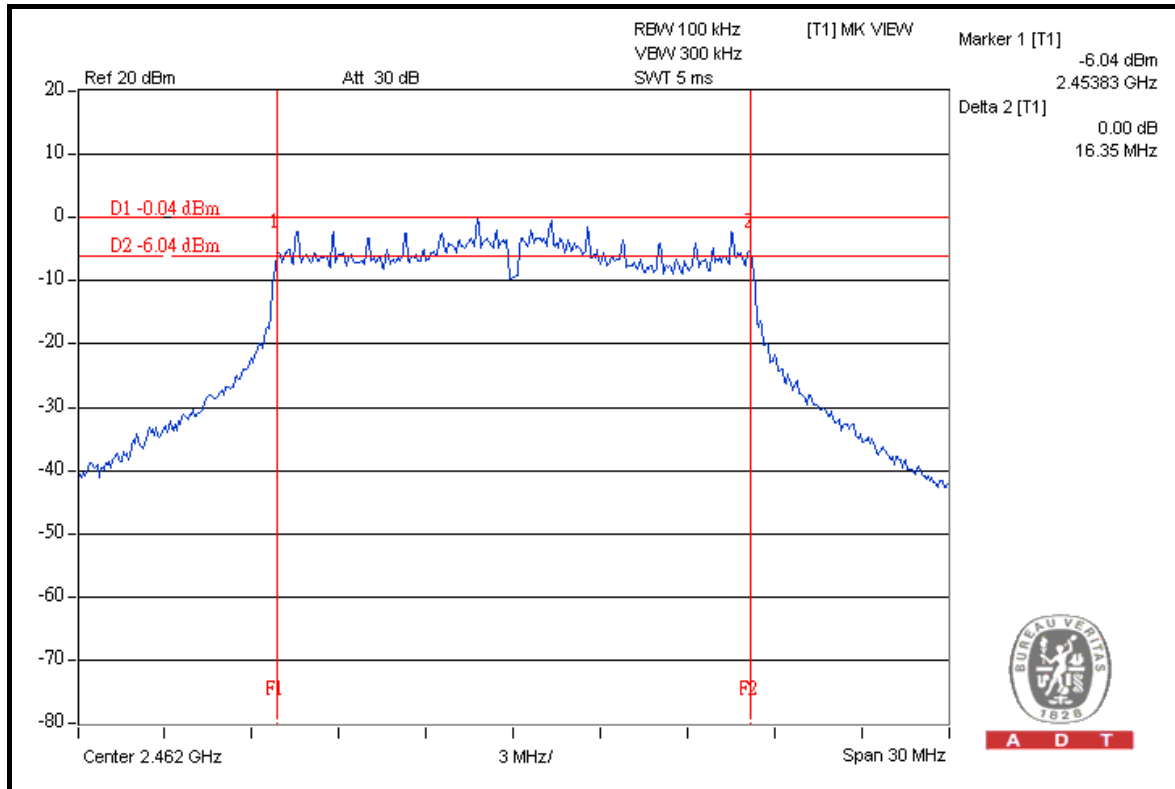
CH 6



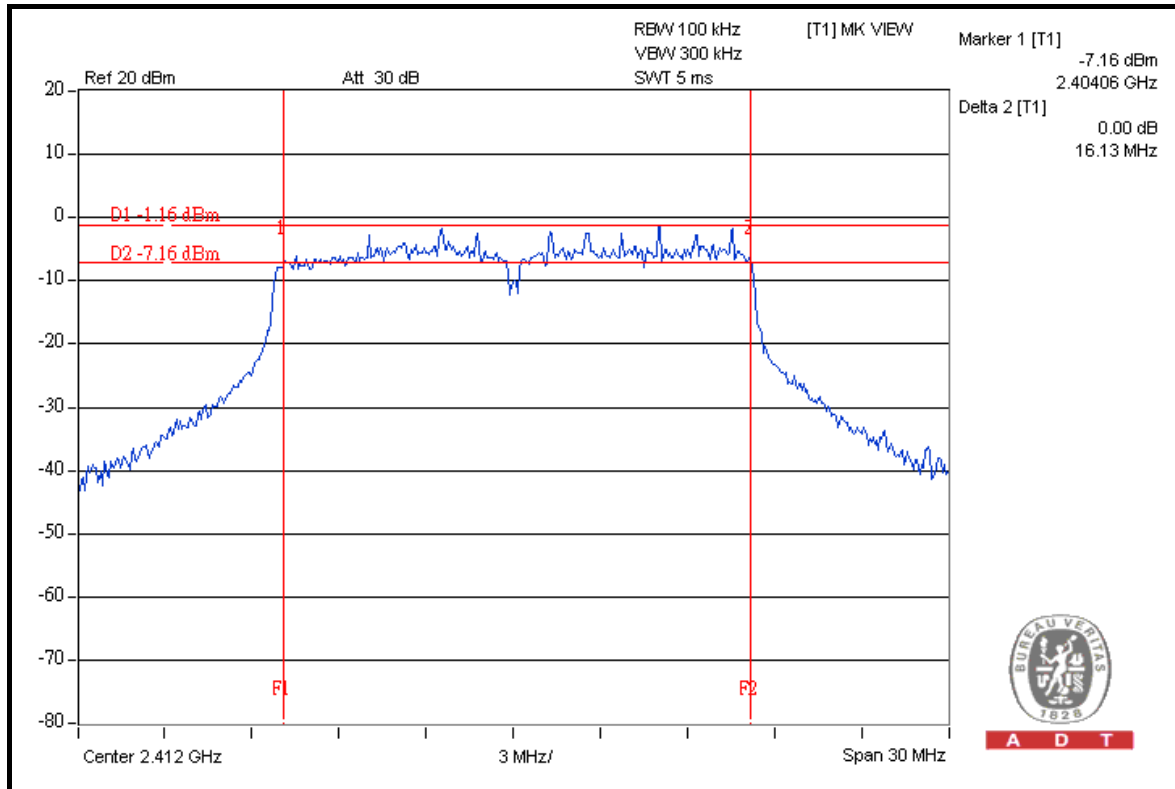


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CH 11



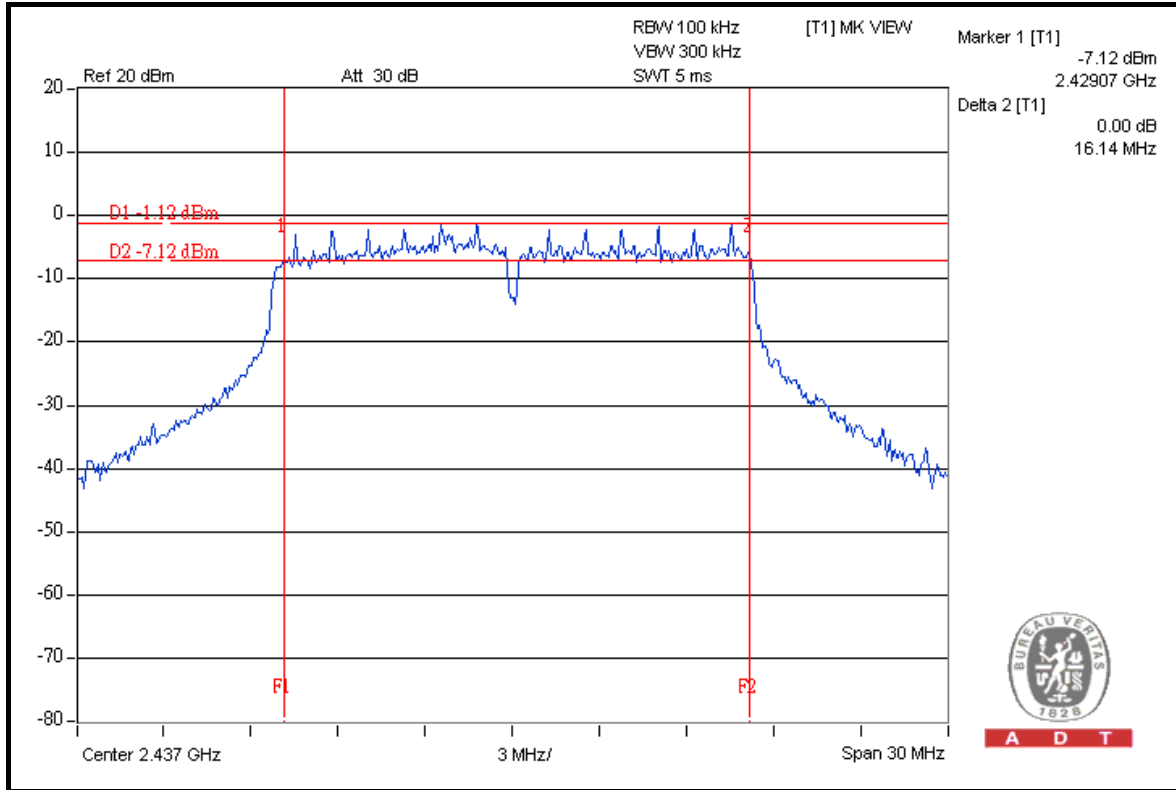
FOR CHAIN 2: CH 1



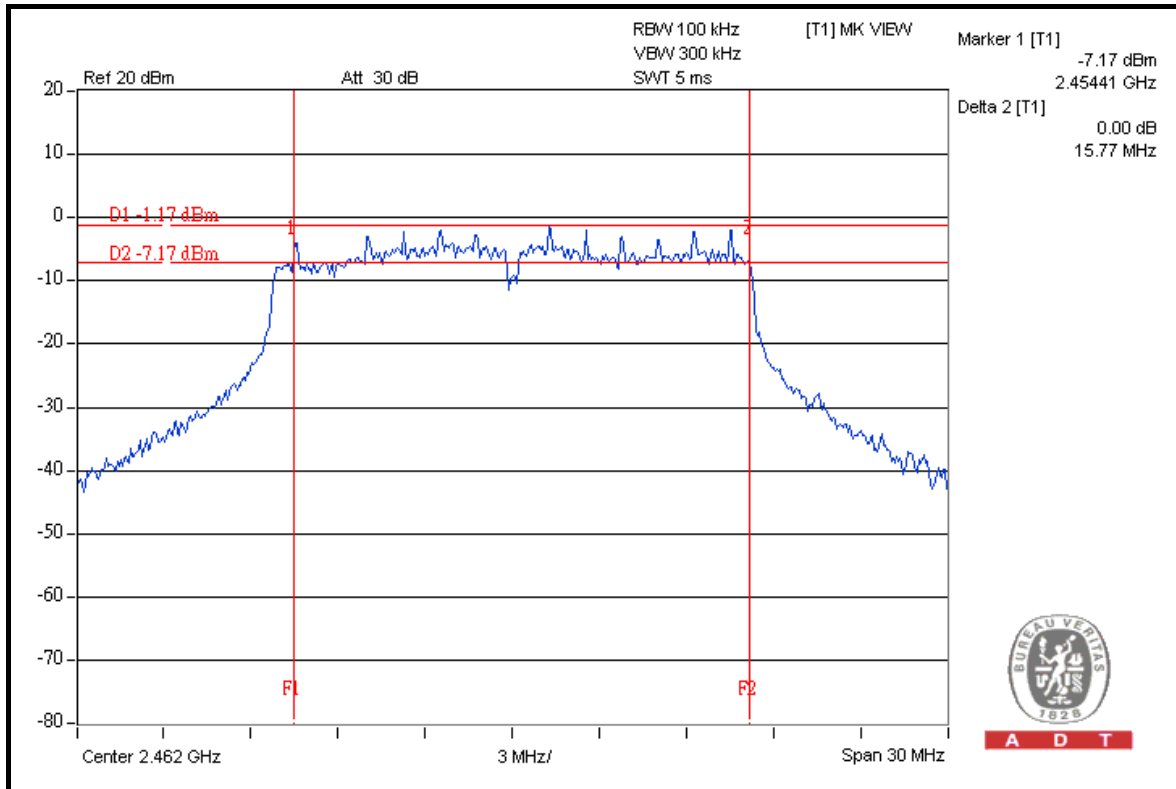


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CH 6



CH 11





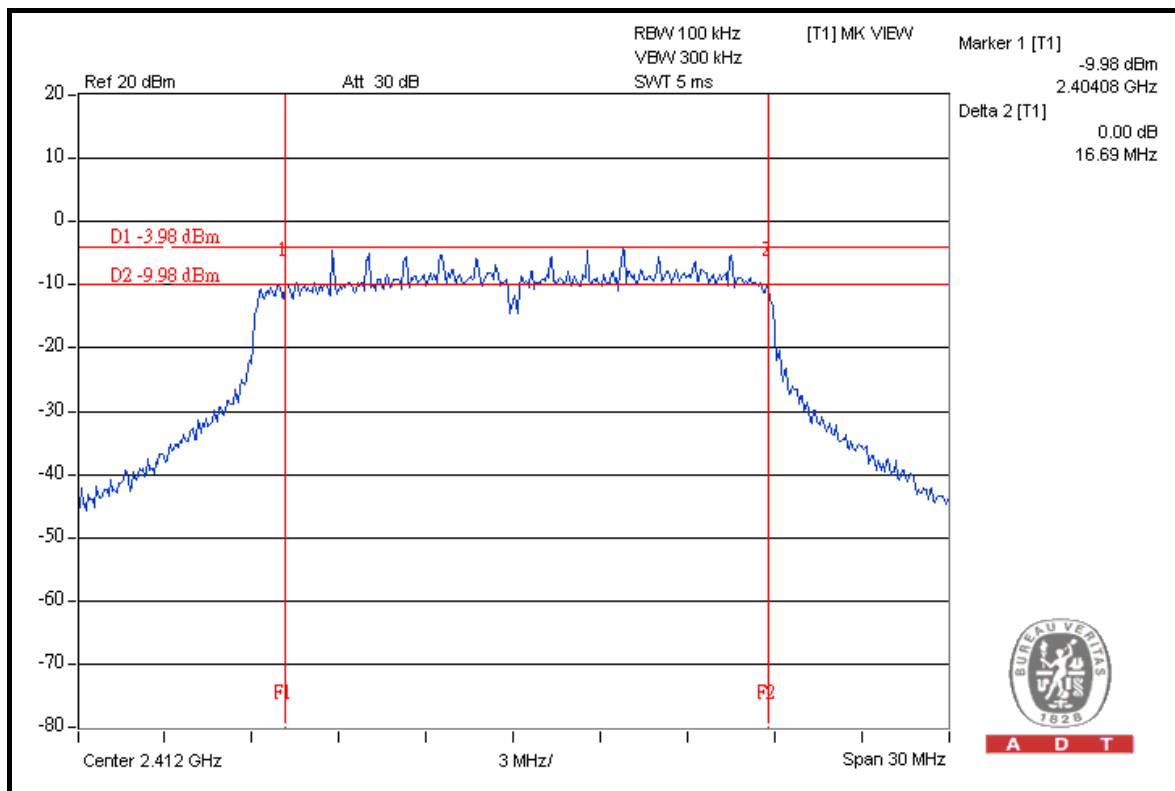
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DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	16.69	15.44	15.50	0.5	PASS
6	2437	15.73	15.75	15.75	0.5	PASS
11	2462	15.20	15.77	15.76	0.5	PASS

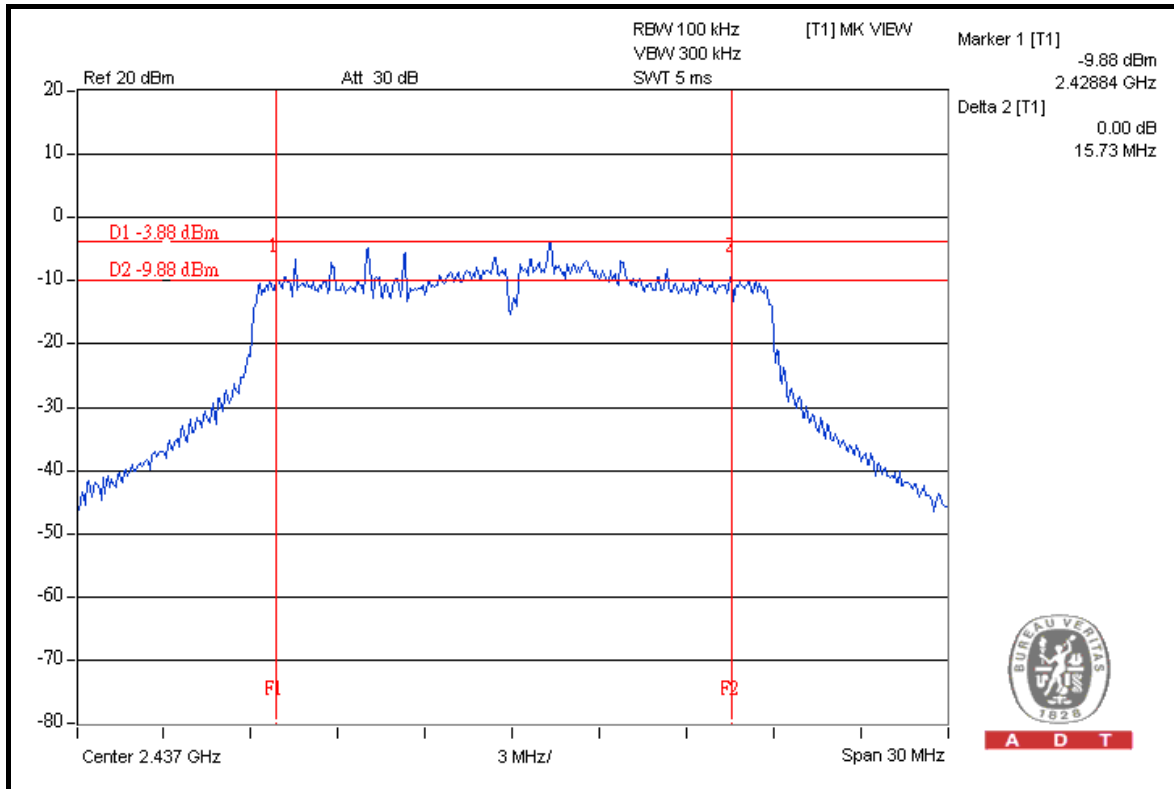
FOR CHAIN 0: CH 1



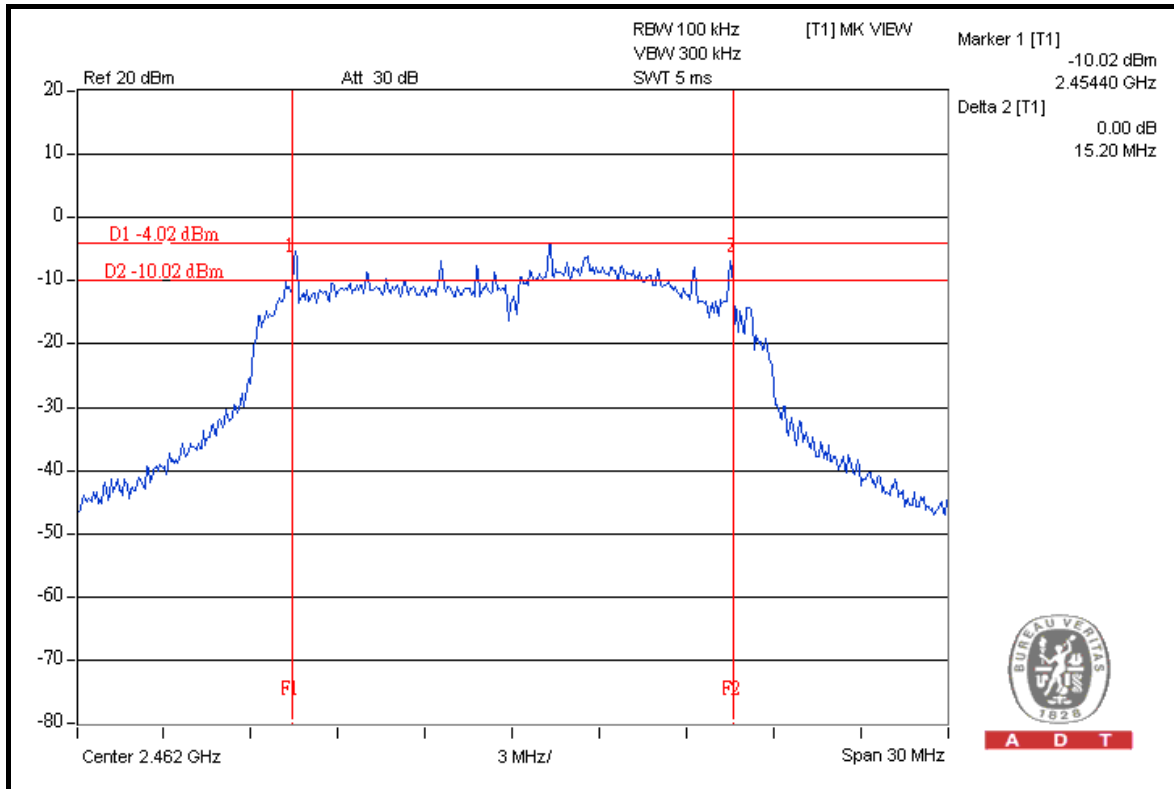


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CH 6



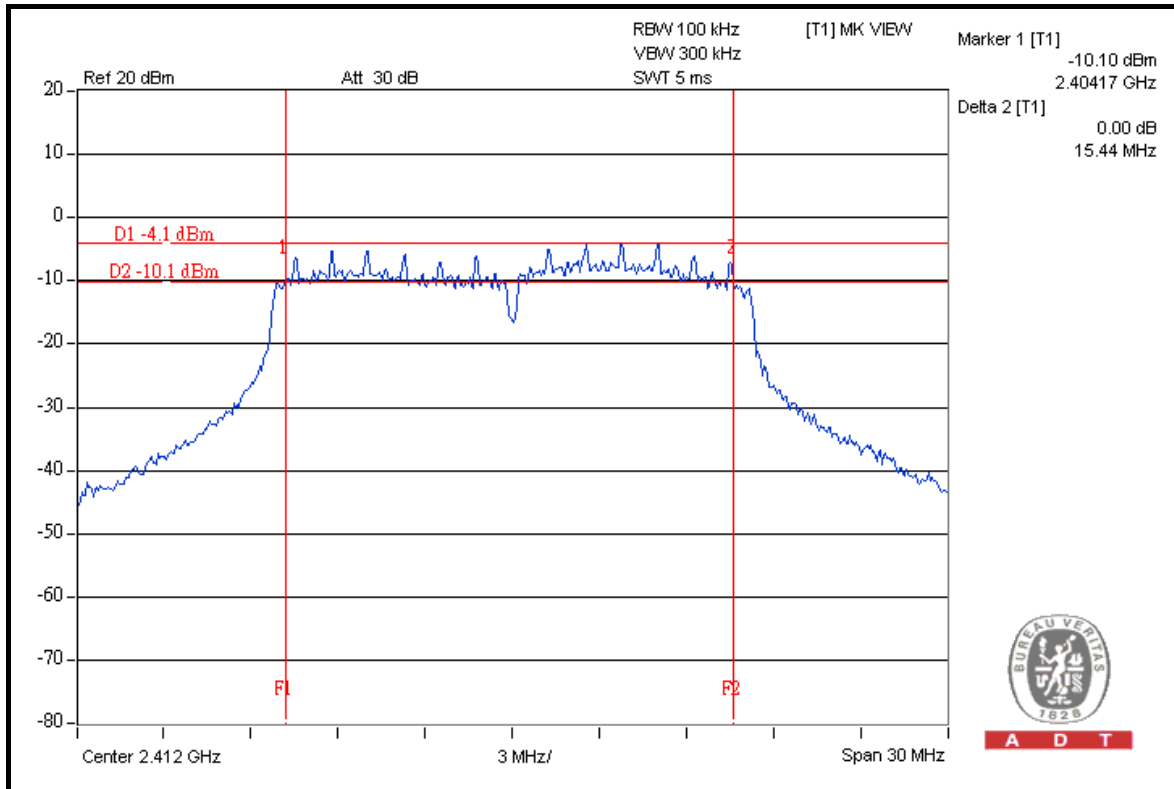
CH 11



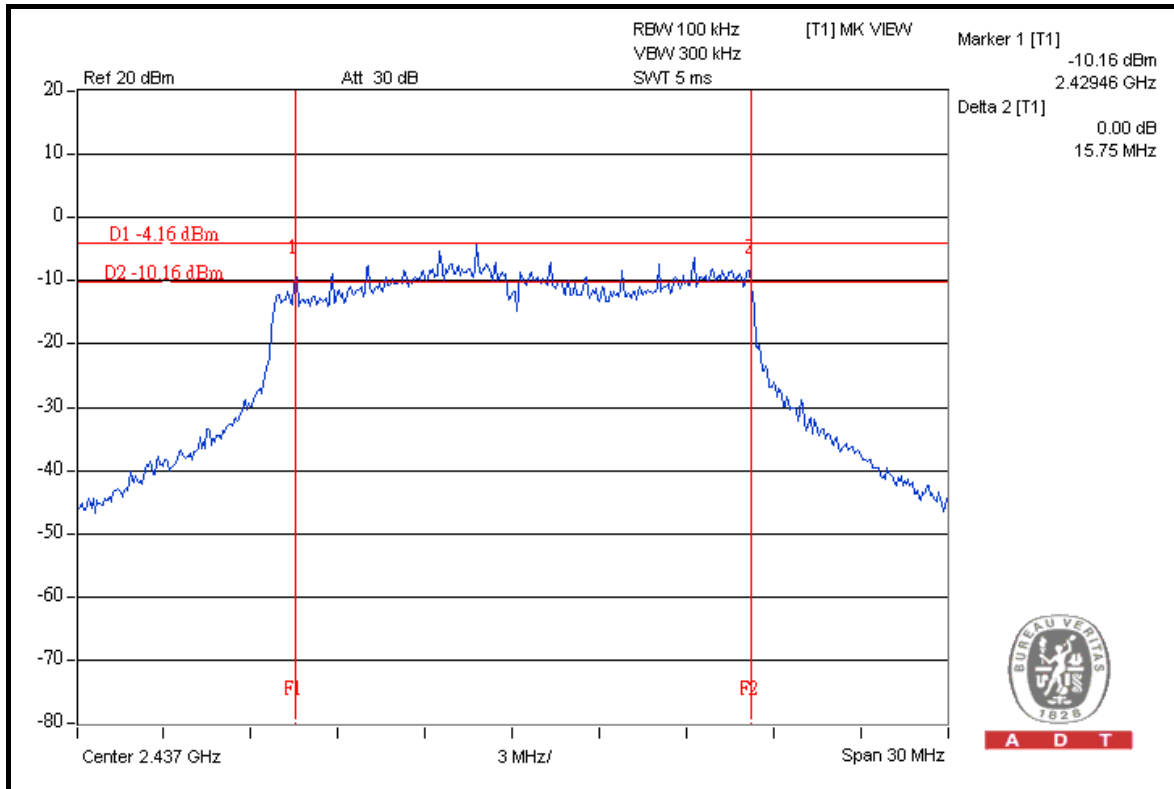


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FOR CHAIN 1: CH 1



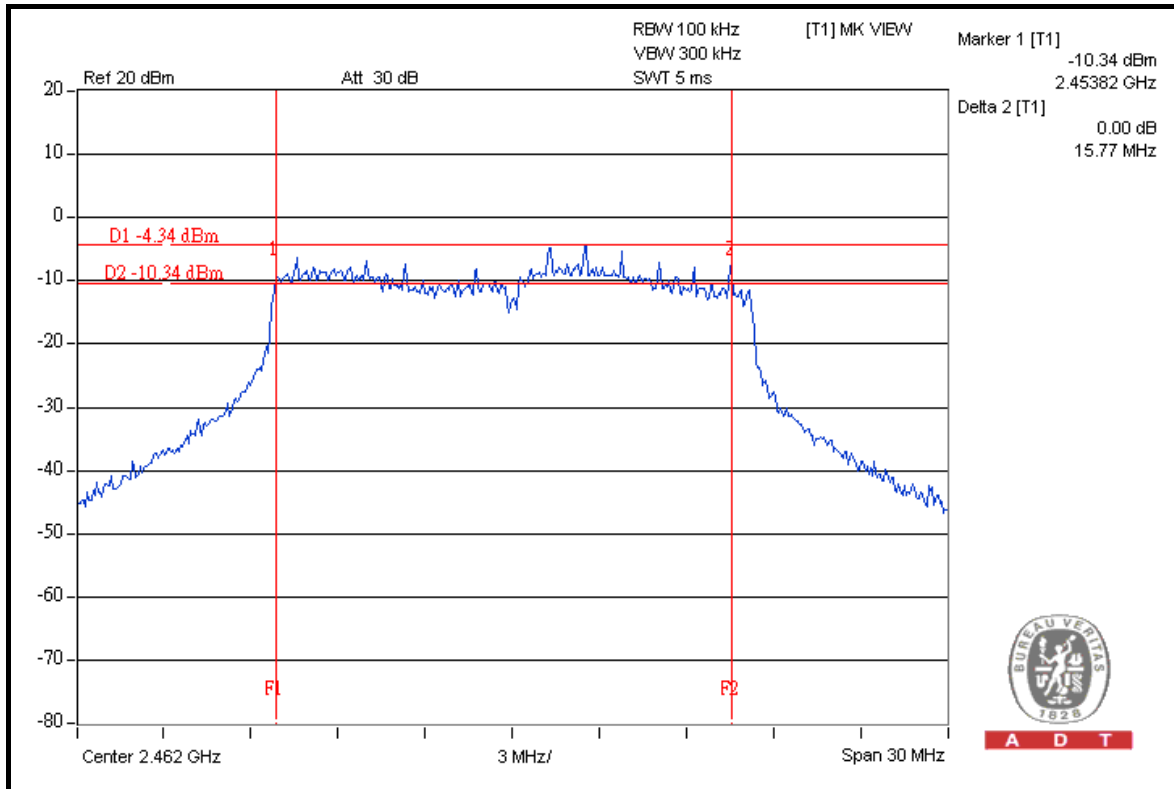
CH 6



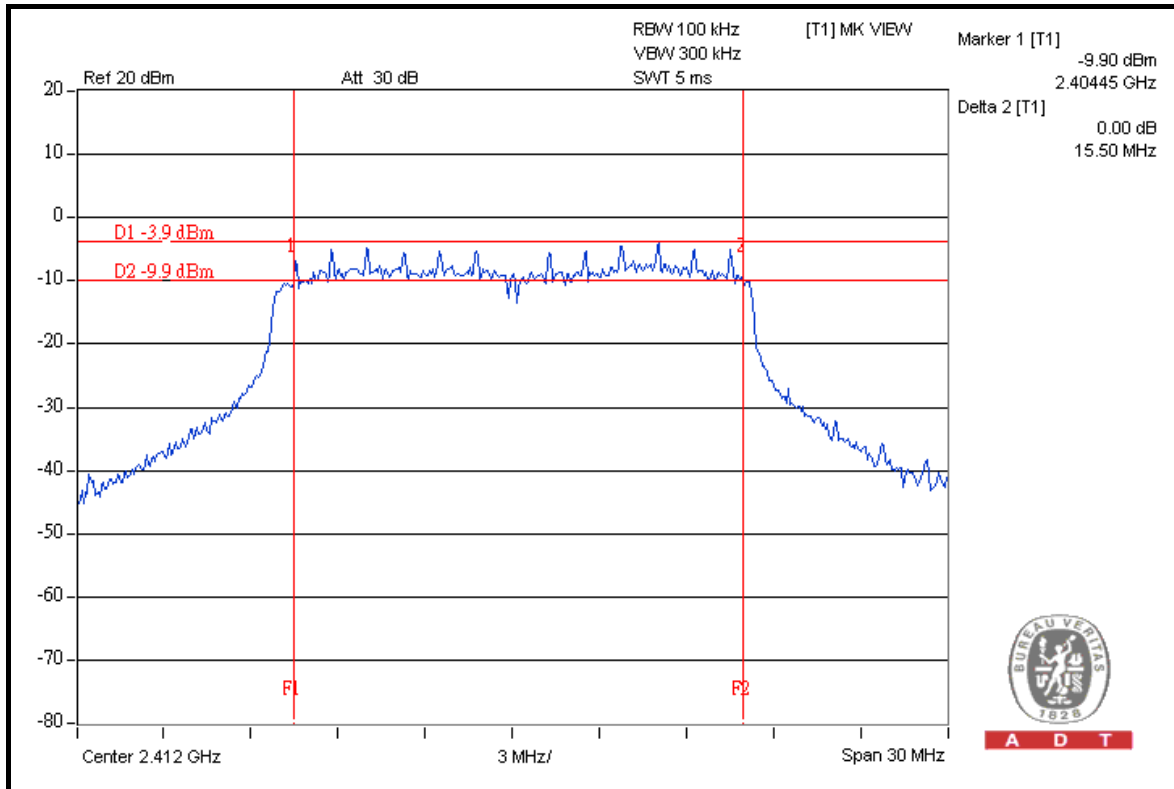


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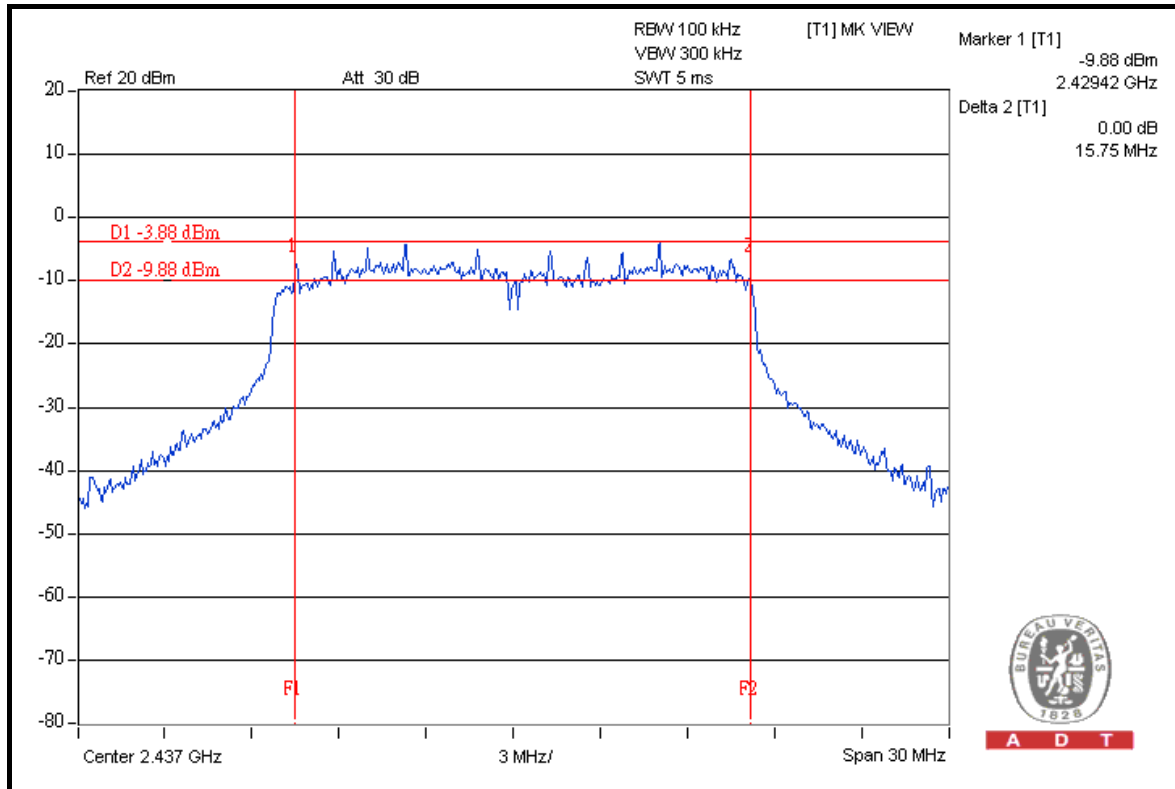
FOR CHAIN 2: CH 1



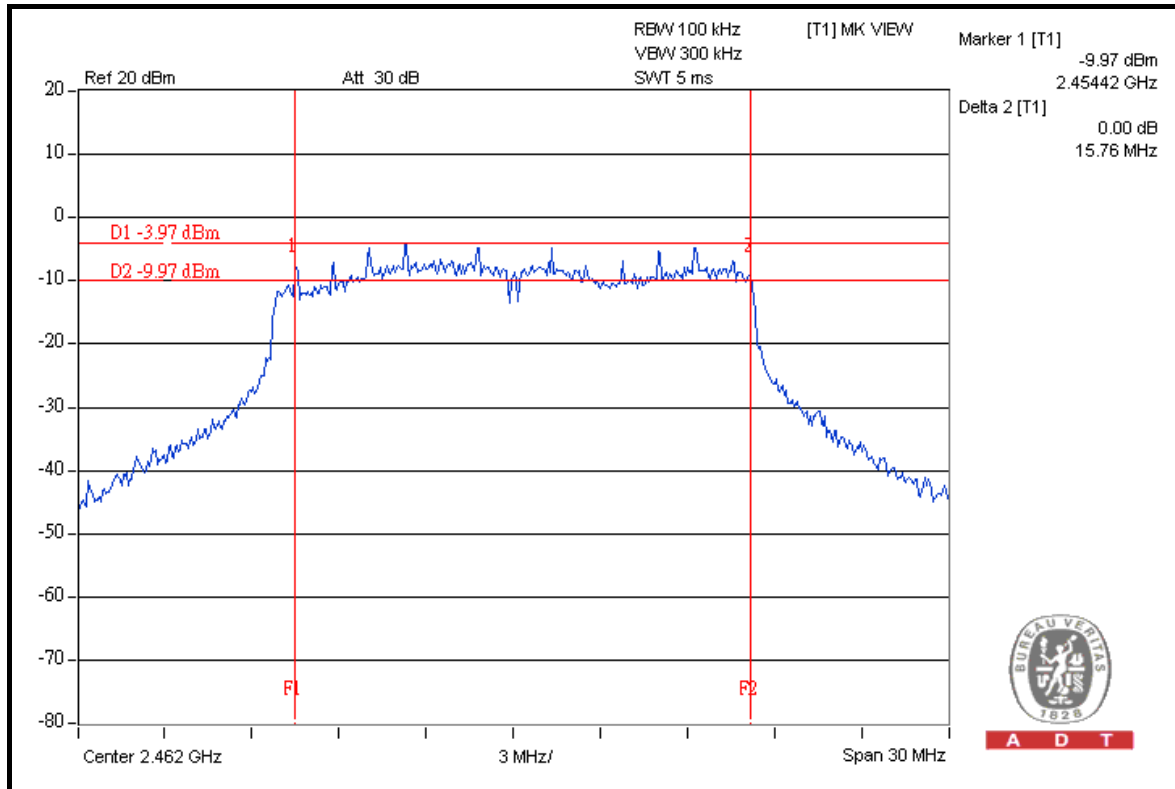


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CH 11





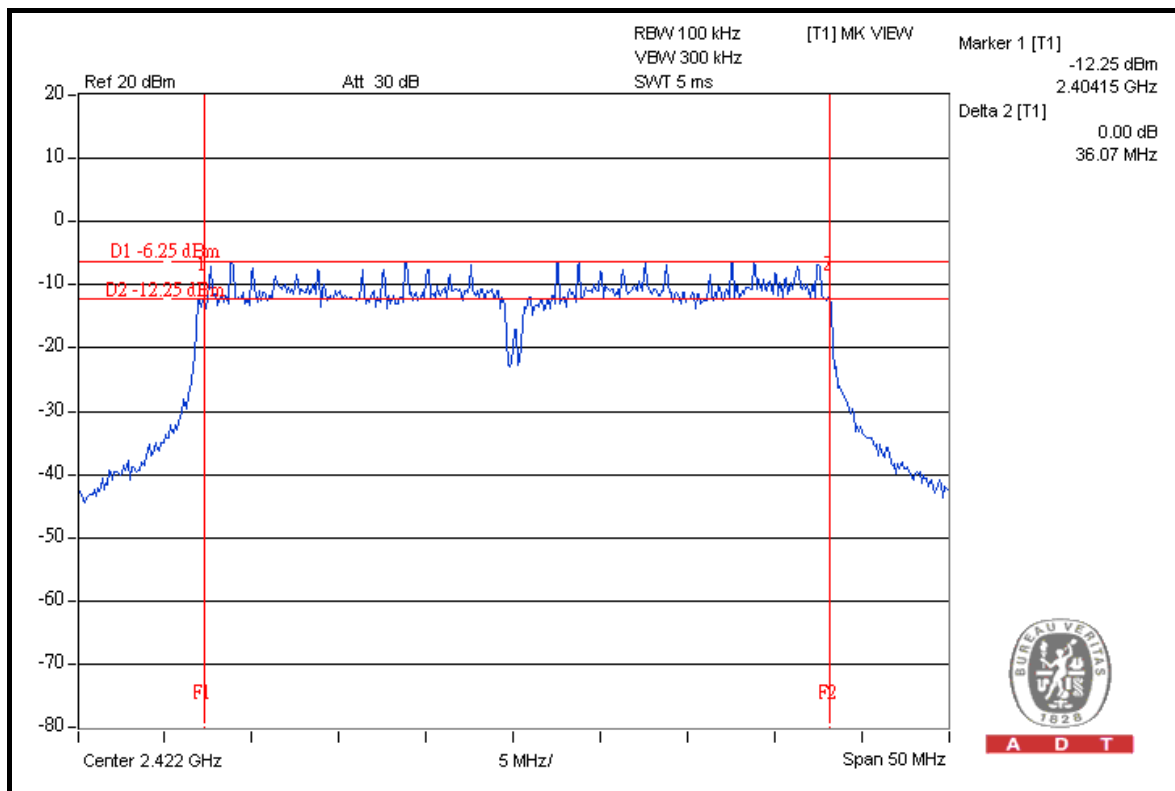
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DRAFT 802.11n (40MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2422	36.07	36.14	35.80	0.5	PASS
4	2437	35.19	36.12	36.37	0.5	PASS
7	2452	35.61	36.15	35.85	0.5	PASS

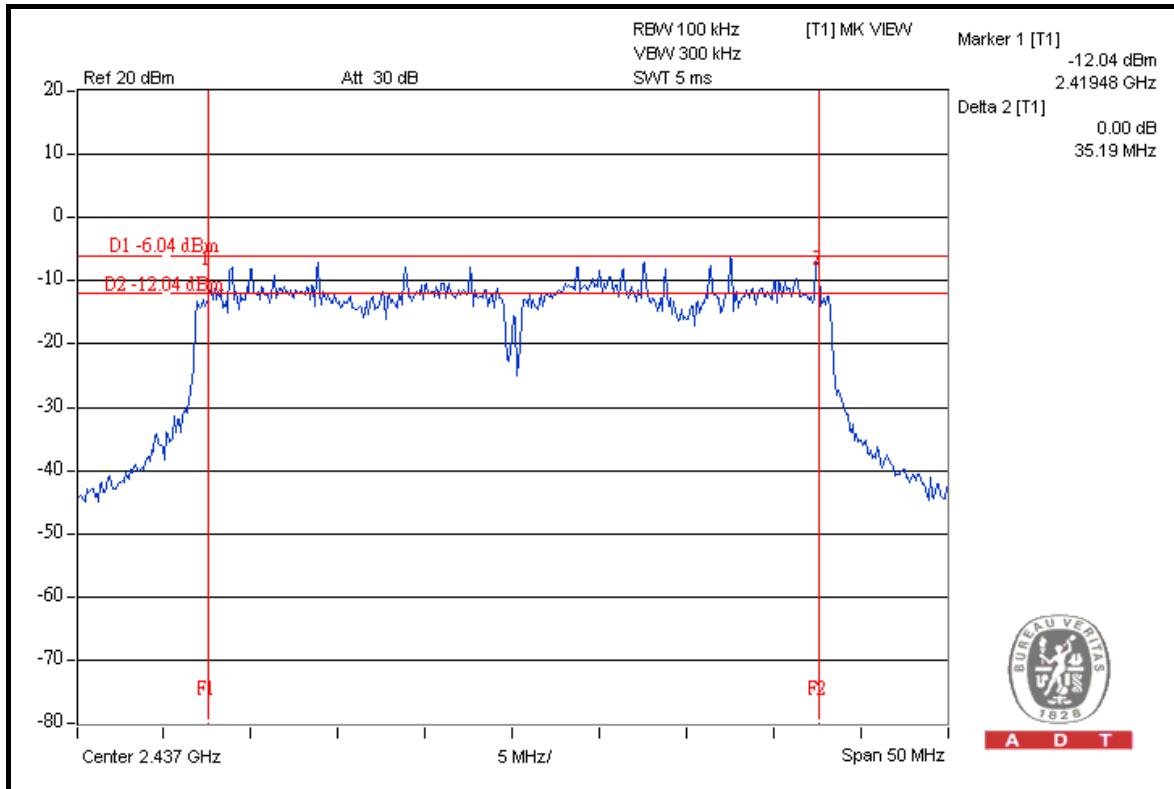
FOR CHAIN 0: CH 1



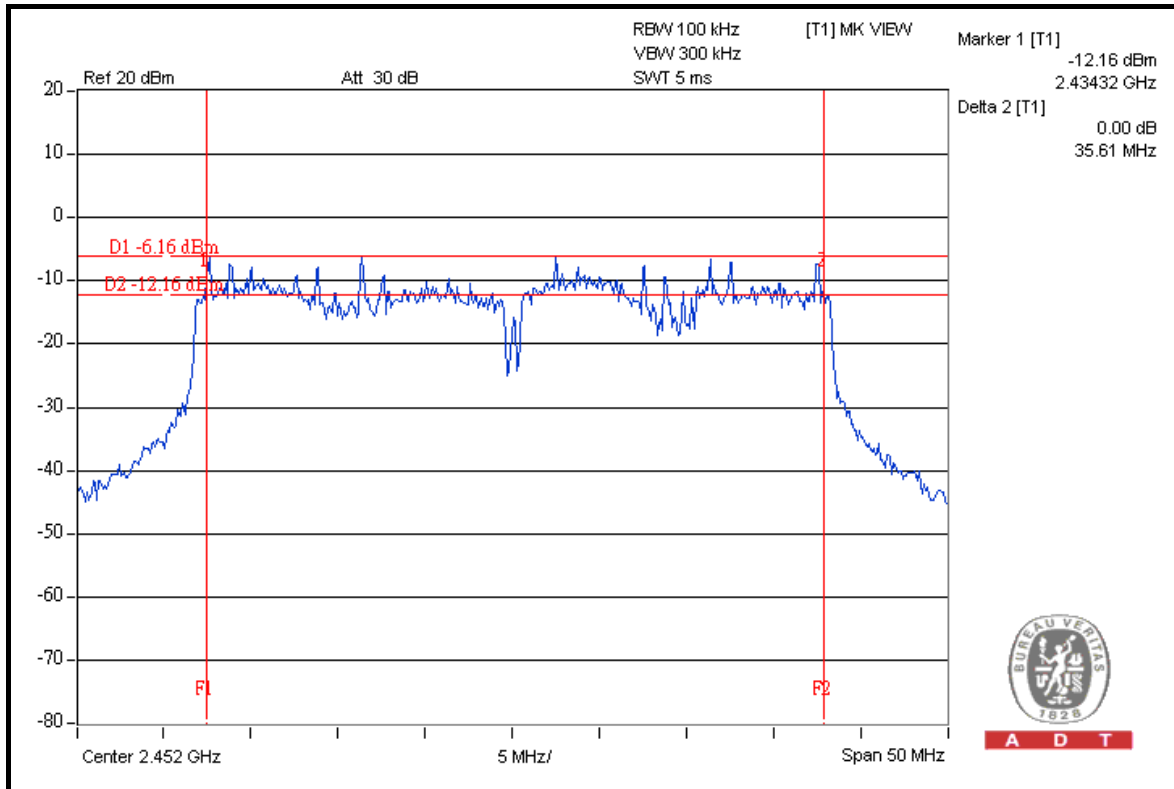


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CH 6



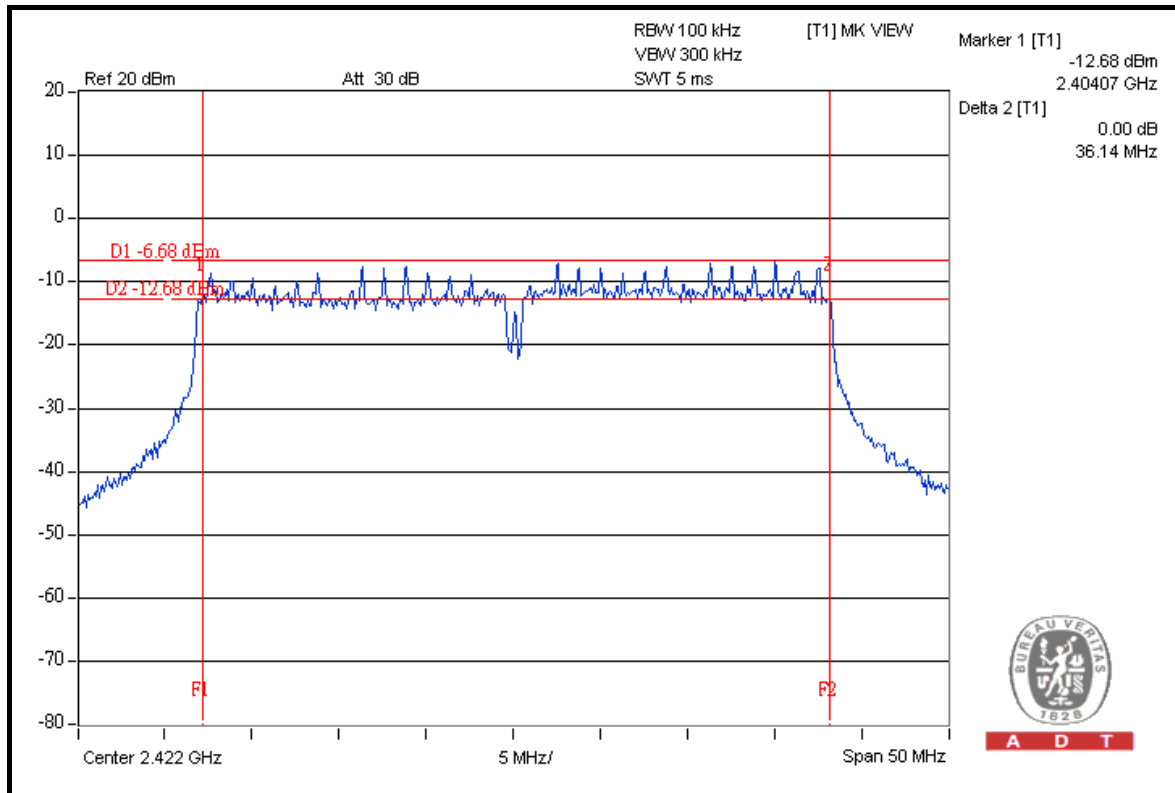
CH 11



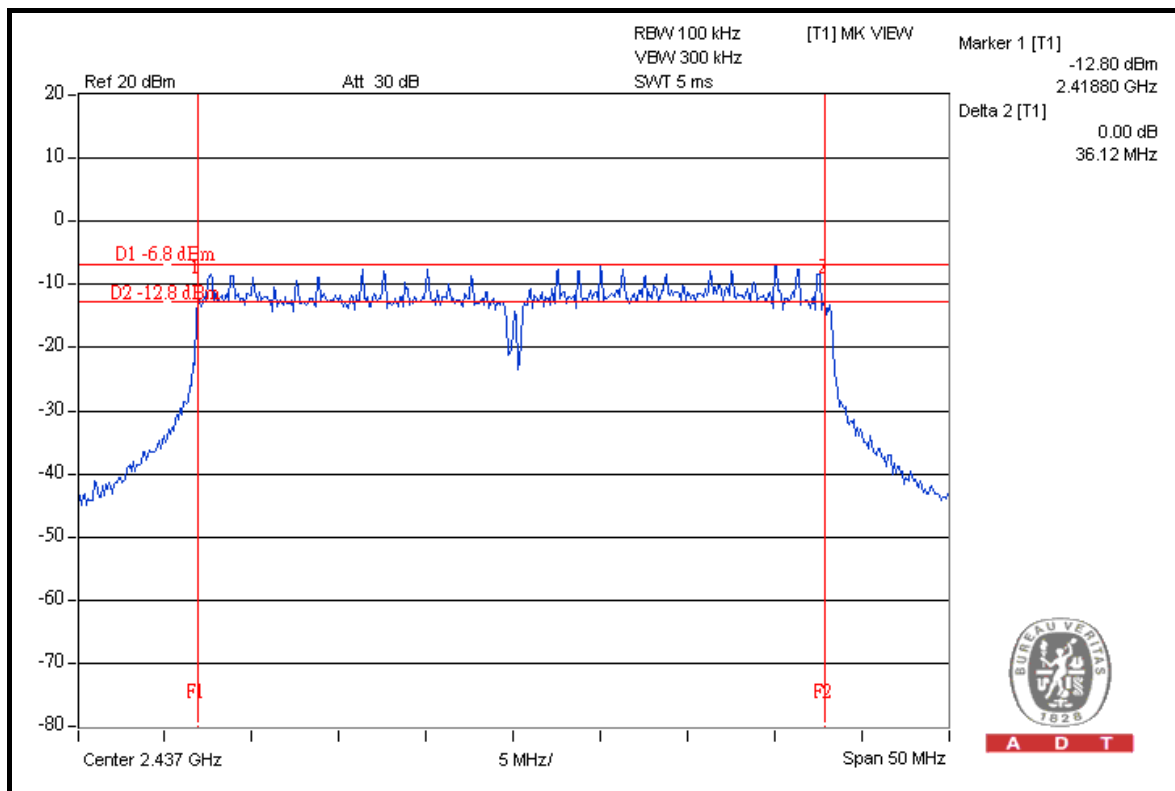


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FOR CHAIN 1: CH 1



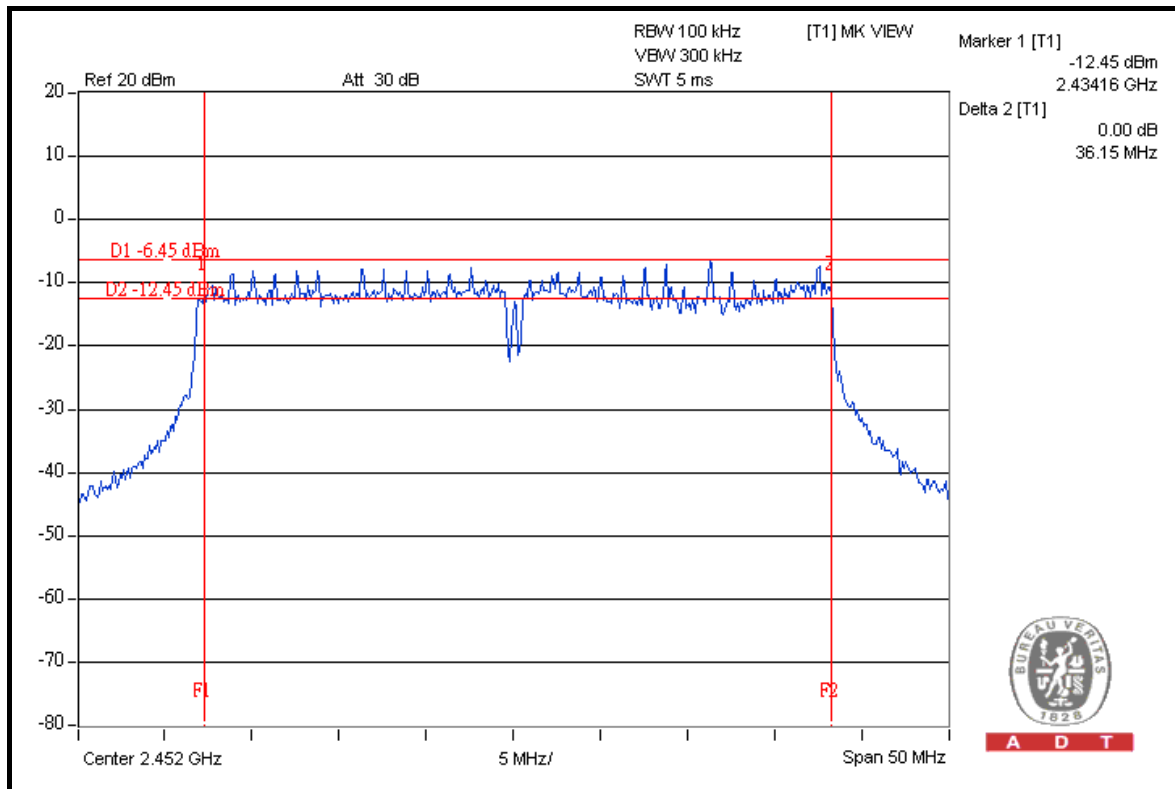
CH 6



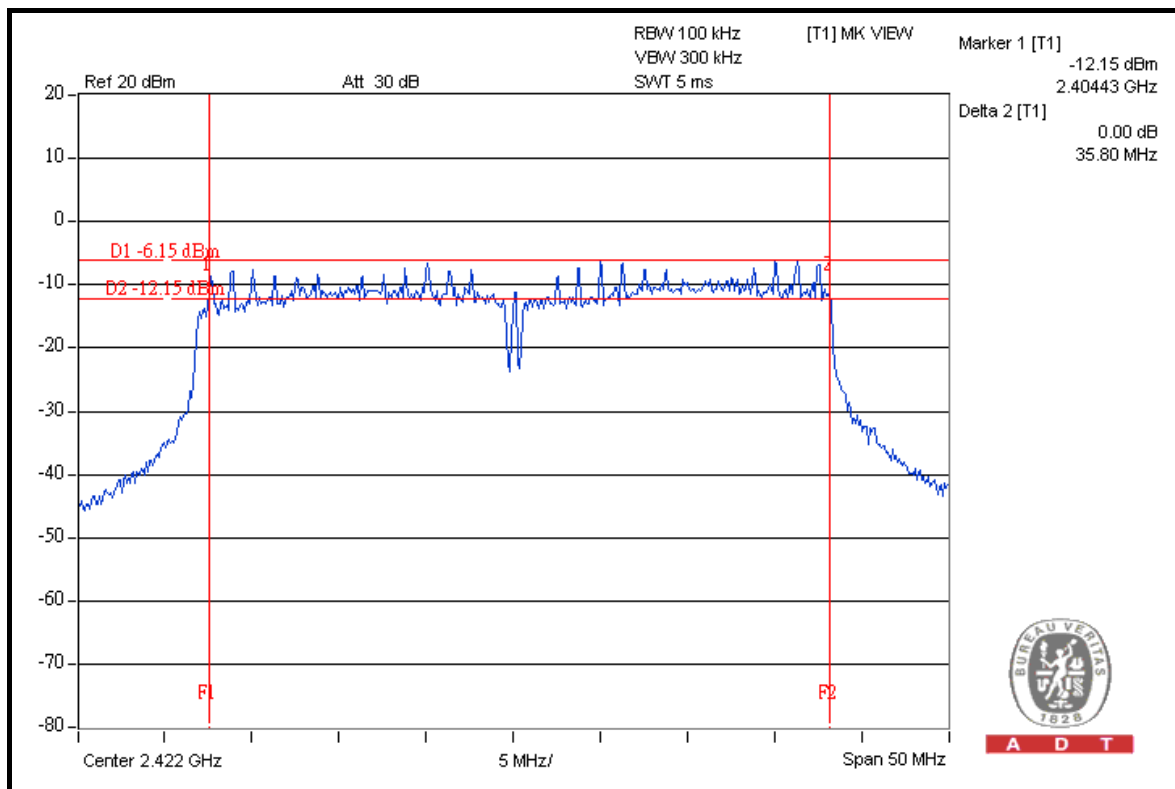


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CH 11



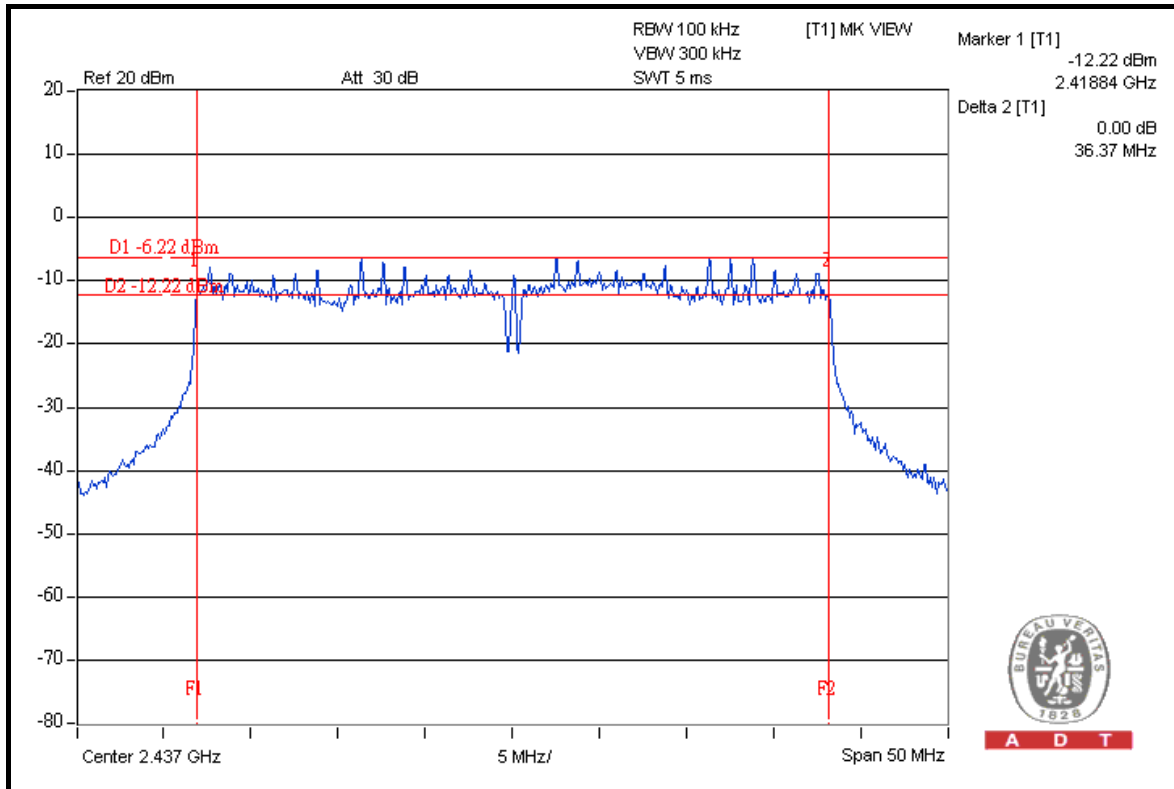
FOR CHAIN 2: CH 1



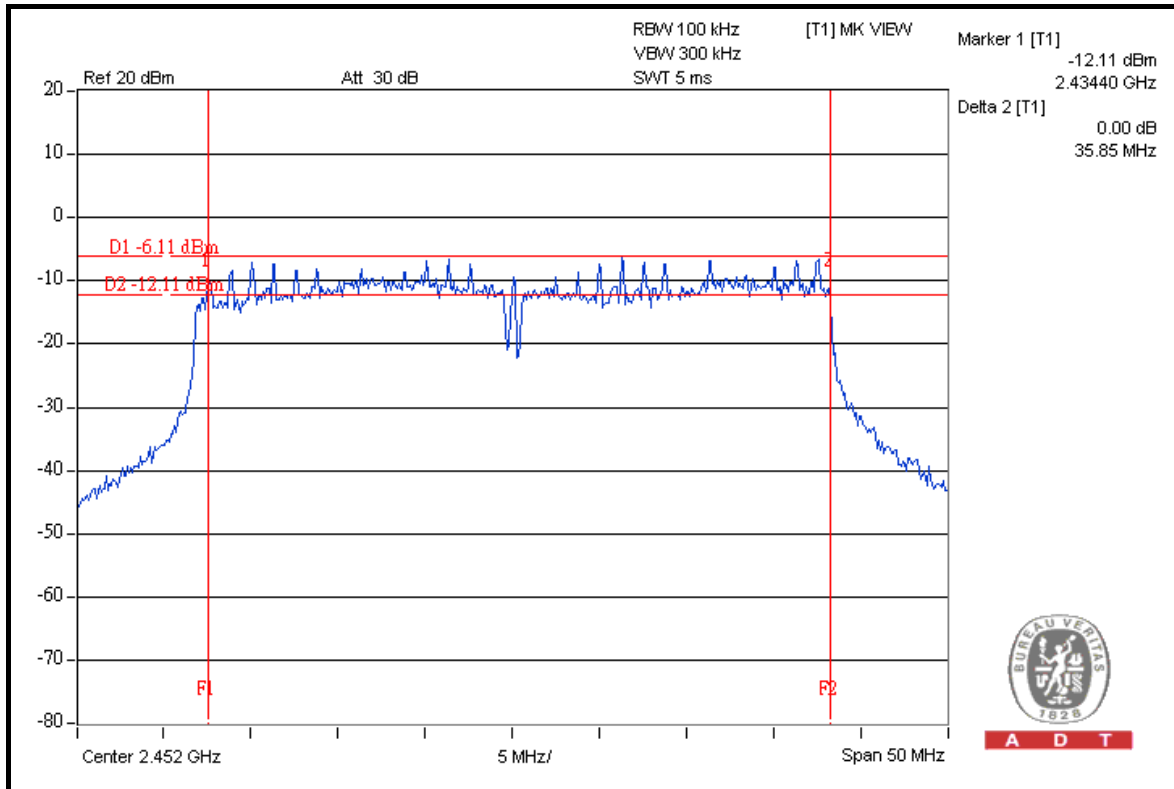


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4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
High Speed Peak Power Meter	ML2495A	0824012	Aug. 04, 2008	Aug. 03, 2009
Power Sensor	MA2411B	0738138	Aug. 04, 2008	Aug. 03, 2009

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 6dB bandwidth of emission.

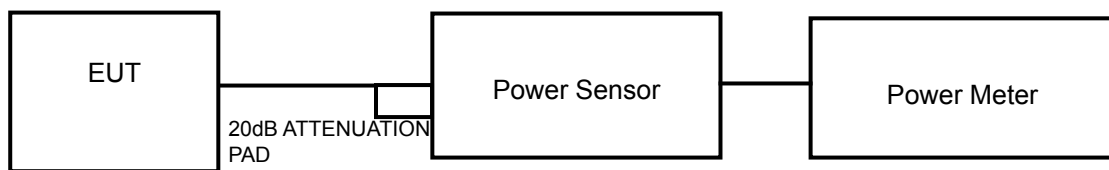
4.4.3 TEST PROCEDURES

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.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation.

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.



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4.4.7 TEST RESULTS

802.11b DSSS MODULATION

MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	16.52	16.54	17.04	140.539	21.48	30	PASS
6	2437	16.51	16.55	16.52	134.831	21.30	30	PASS
11	2462	16.54	16.56	16.53	135.349	21.31	30	PASS

802.11g OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	20.53	21.53	20.52	367.932	25.66	30	PASS
6	2437	20.54	21.55	20.53	369.109	25.67	30	PASS
11	2462	20.55	21.56	20.54	369.960	25.68	30	PASS



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DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	17.56	17.52	17.55	170.395	22.31	30	PASS
6	2437	17.53	17.54	17.51	169.742	22.30	30	PASS
11	2462	17.54	17.56	17.53	170.395	22.31	30	PASS

DRAFT 802.11n (40MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2422	19.02	18.55	19.04	231.582	23.65	30	PASS
4	2437	19.04	18.54	19.03	231.601	23.65	30	PASS
7	2452	19.05	18.52	19.06	232.012	23.66	30	PASS



4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100041	May 13, 2009	May 12, 2010

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 PROCEDURE

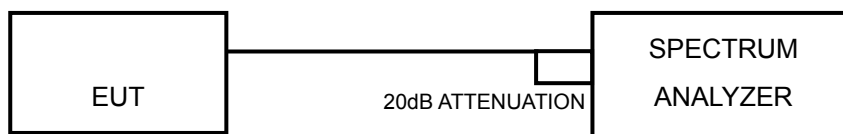
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6



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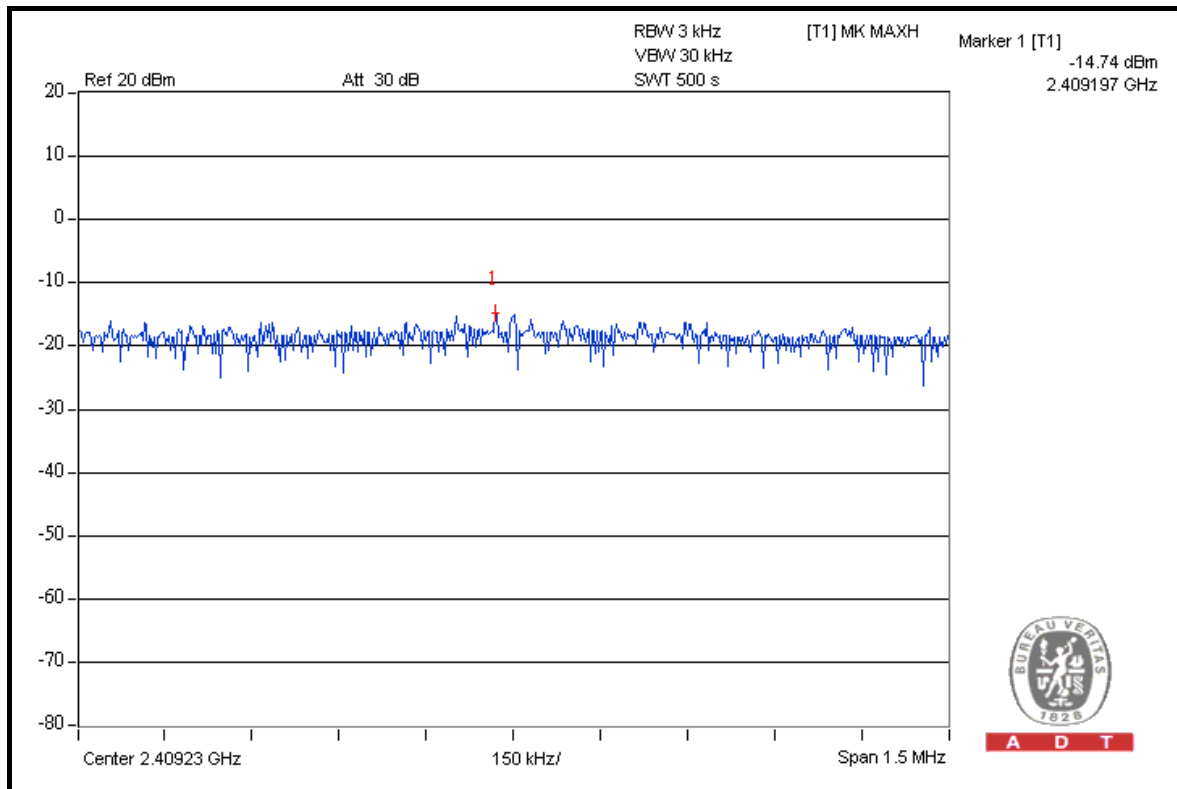
4.5.7 TEST RESULTS

802.11b DSSS MODULATION

MODULATION TYPE	DBPSK	TRANSFER RATE	1.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	-14.74	-14.01	-13.16	0.122	-9.15	8	PASS
6	2437	-14.52	-13.83	-13.83	0.118	-9.28	8	PASS
11	2462	-14.56	-13.80	-13.50	0.121	-9.16	8	PASS

FOR CHAIN 0: CH 1

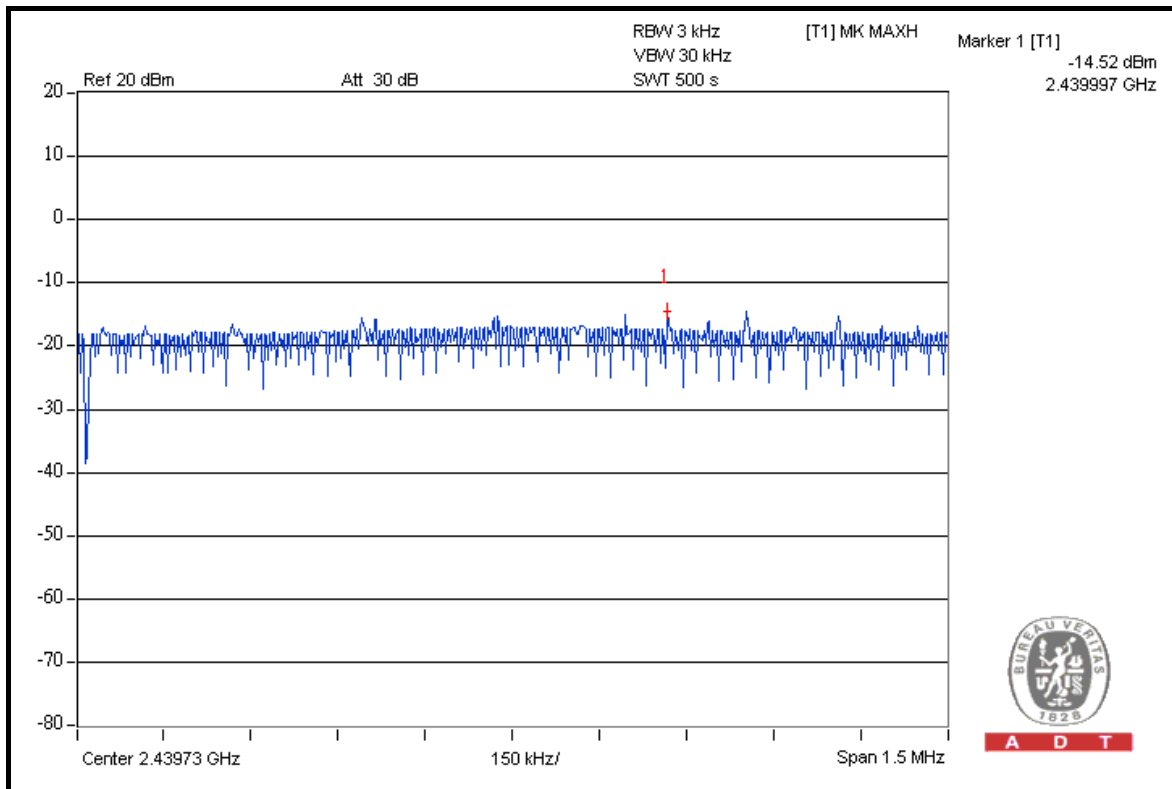


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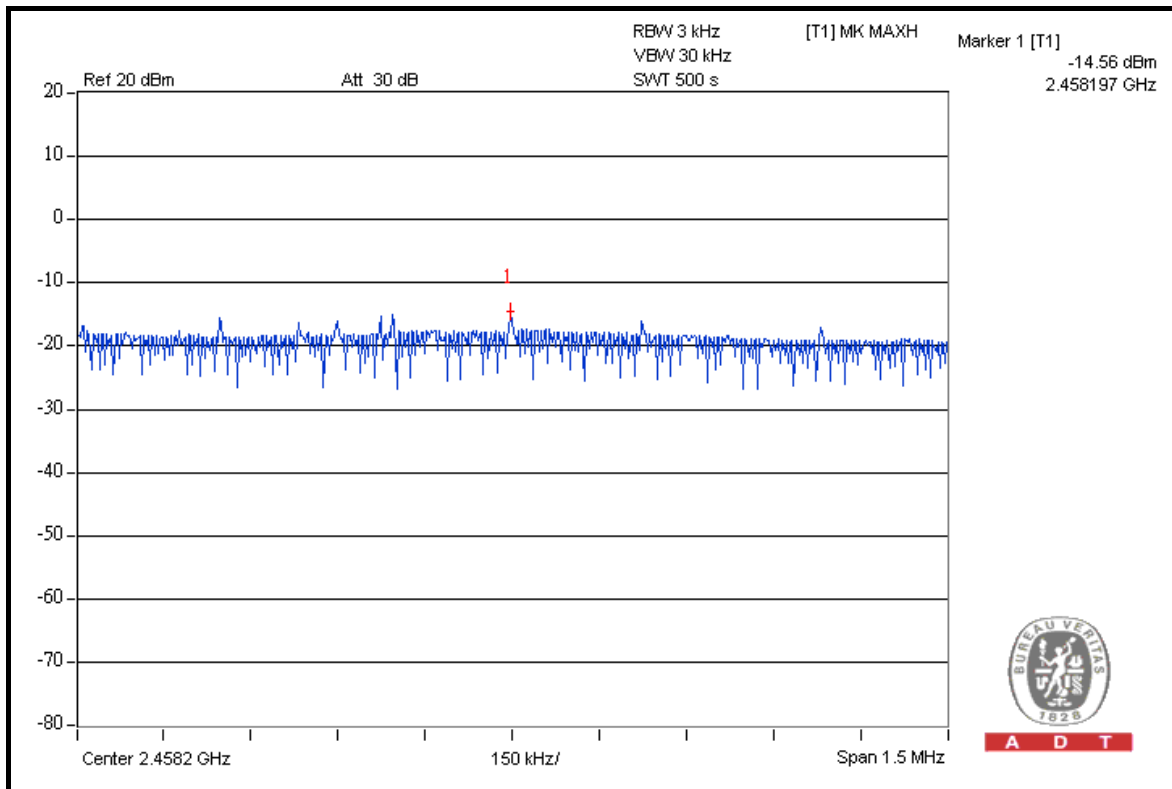


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CH 6



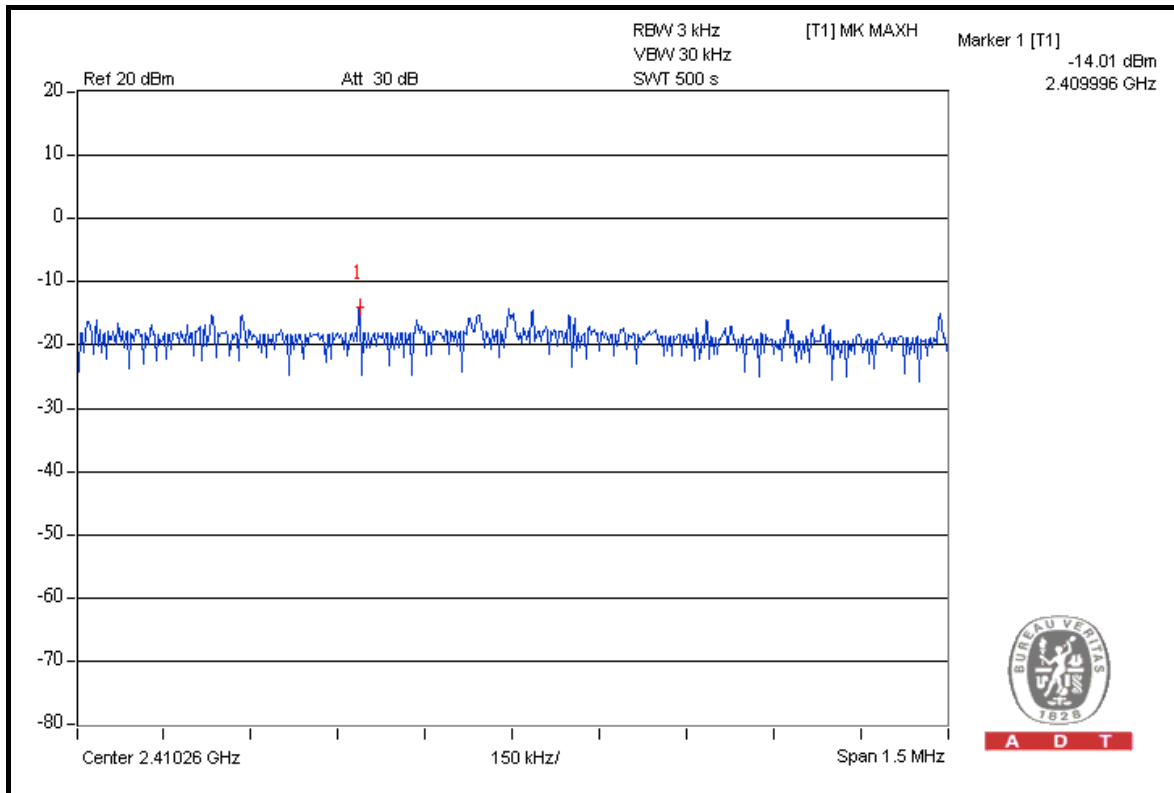
CH 11



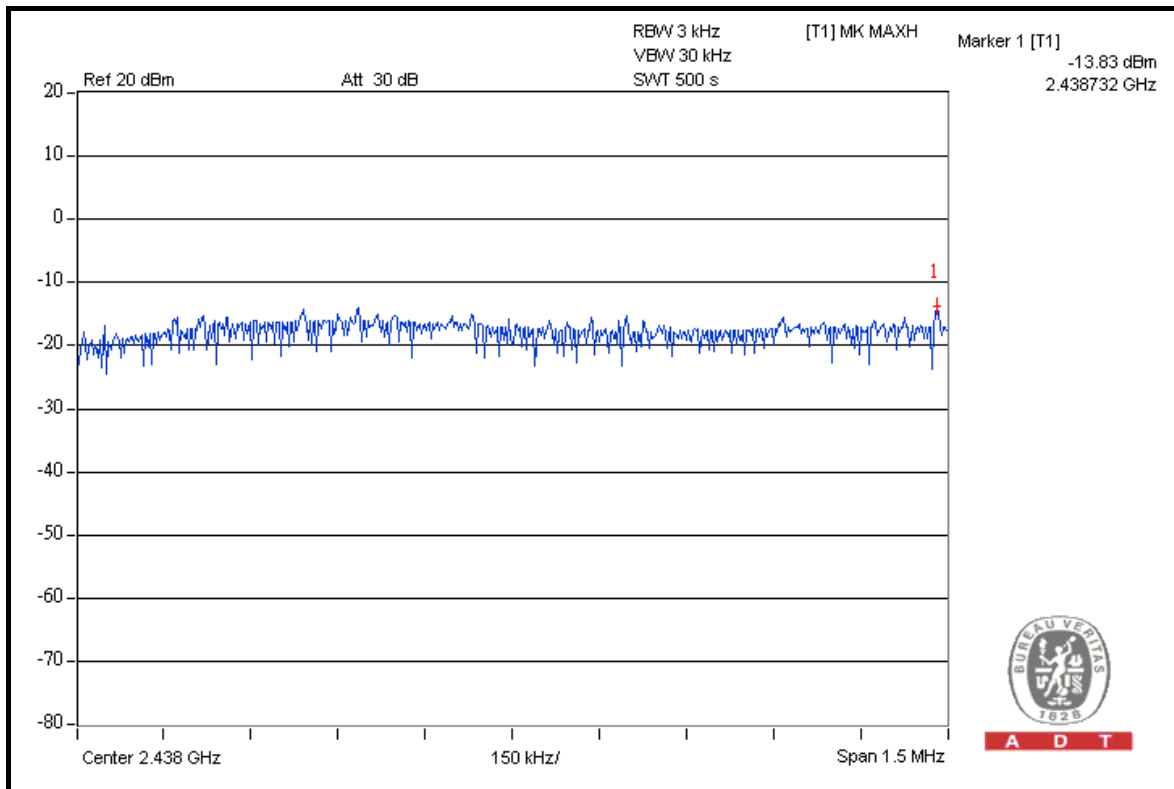


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FOR CHAIN 1: CH 1



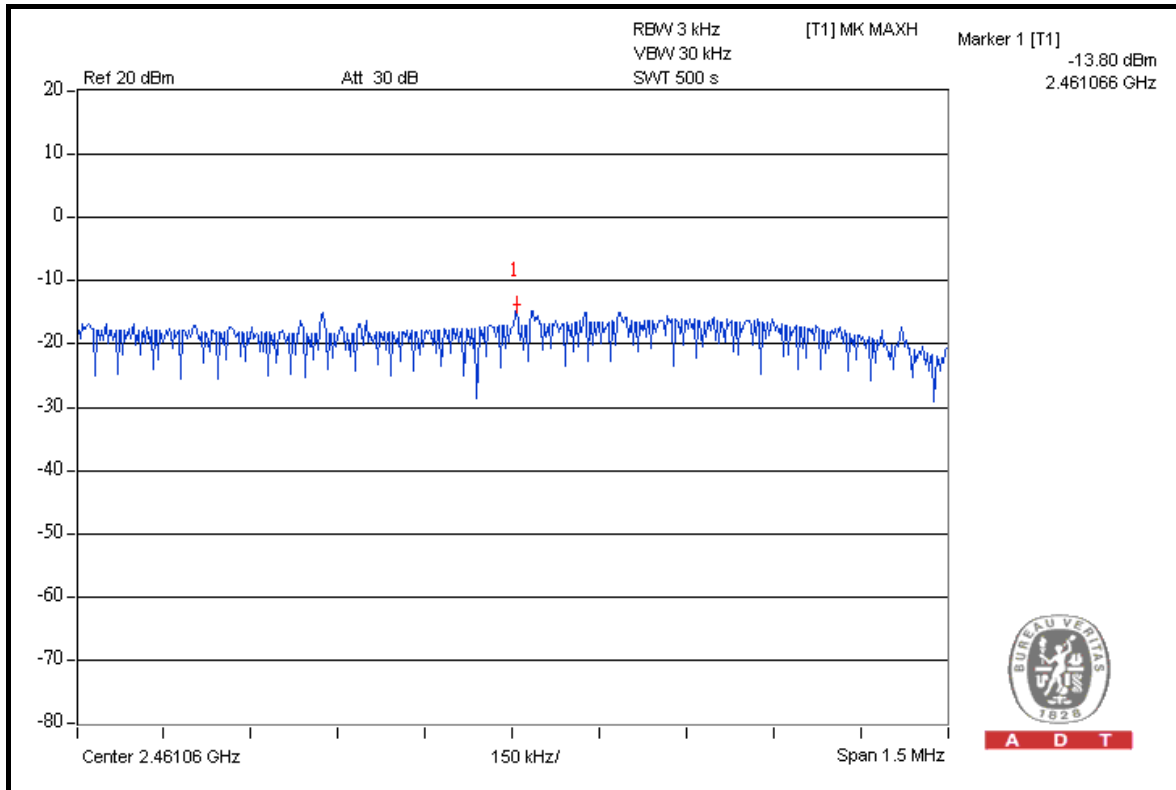
CH 6



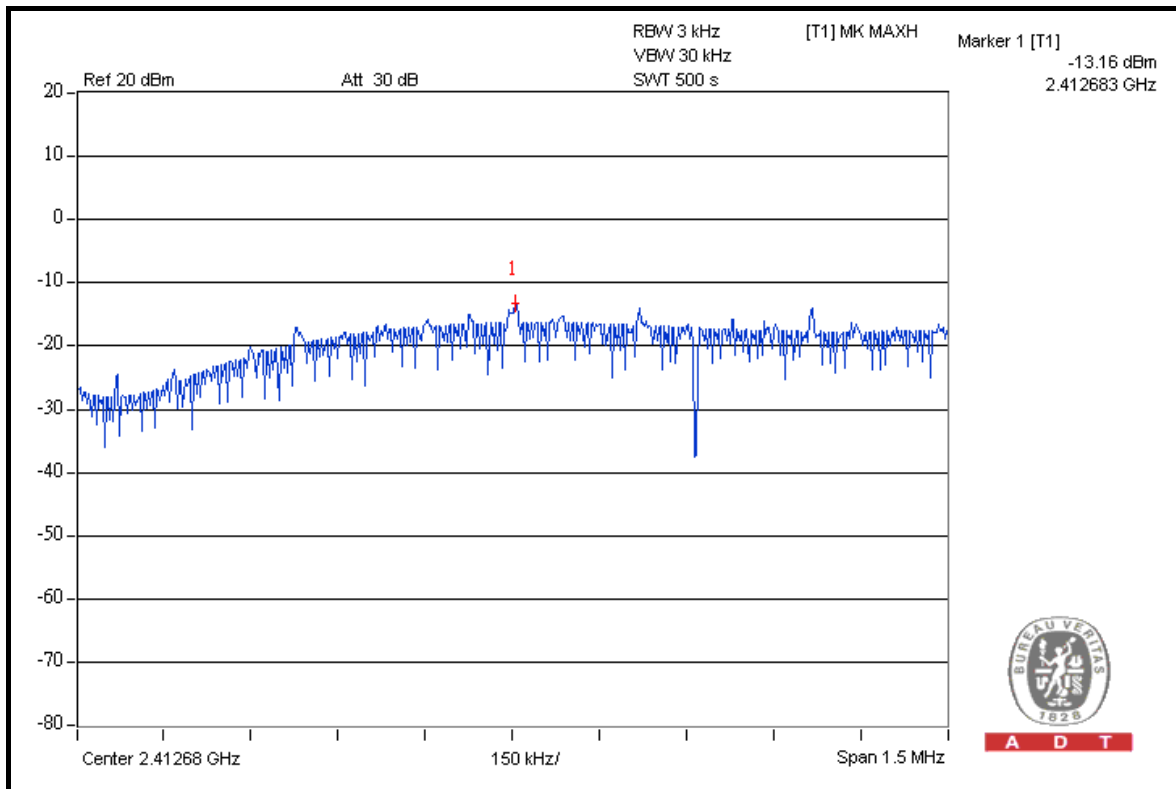


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CH 11



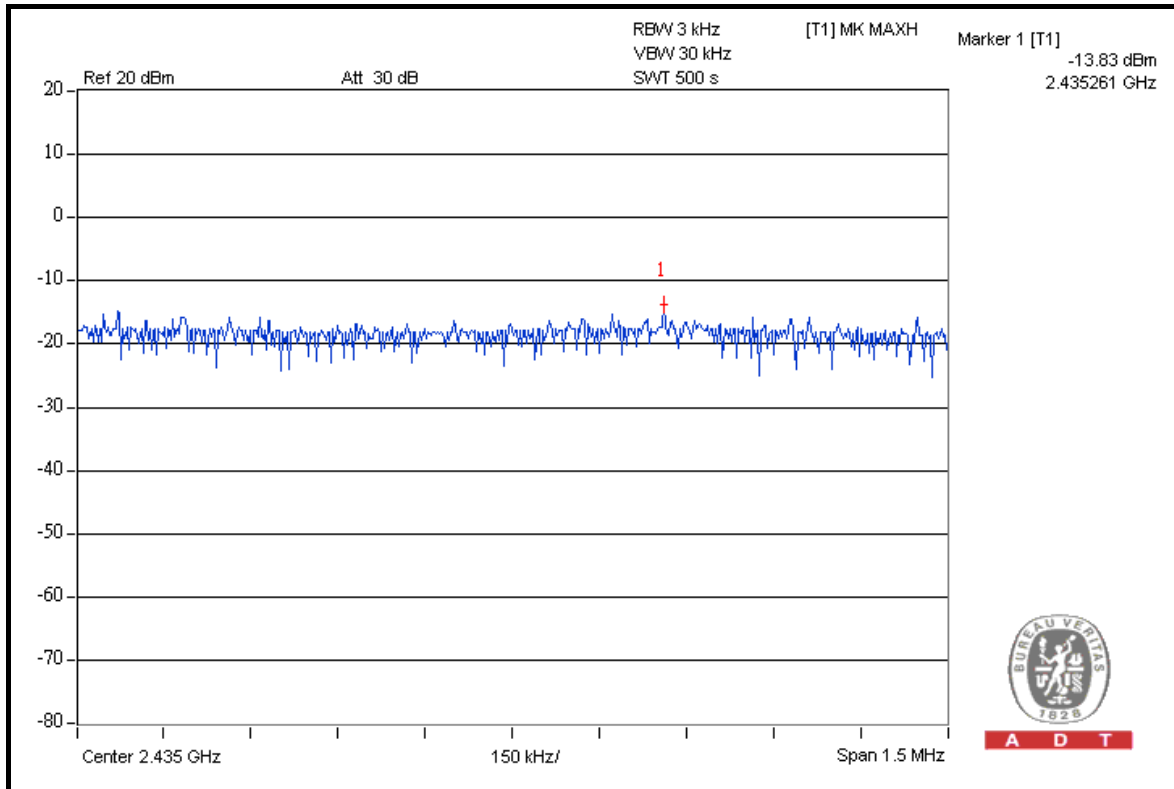
FOR CHAIN 2: CH 1



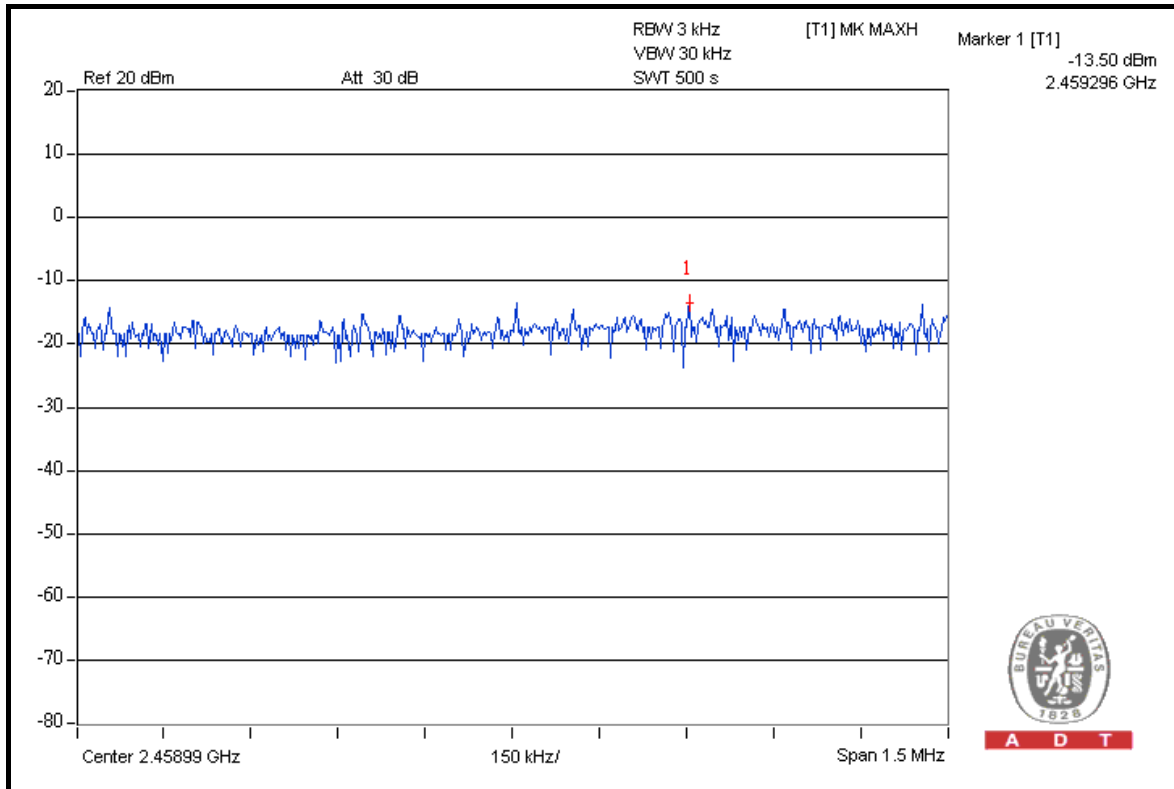


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CH 6



CH 11





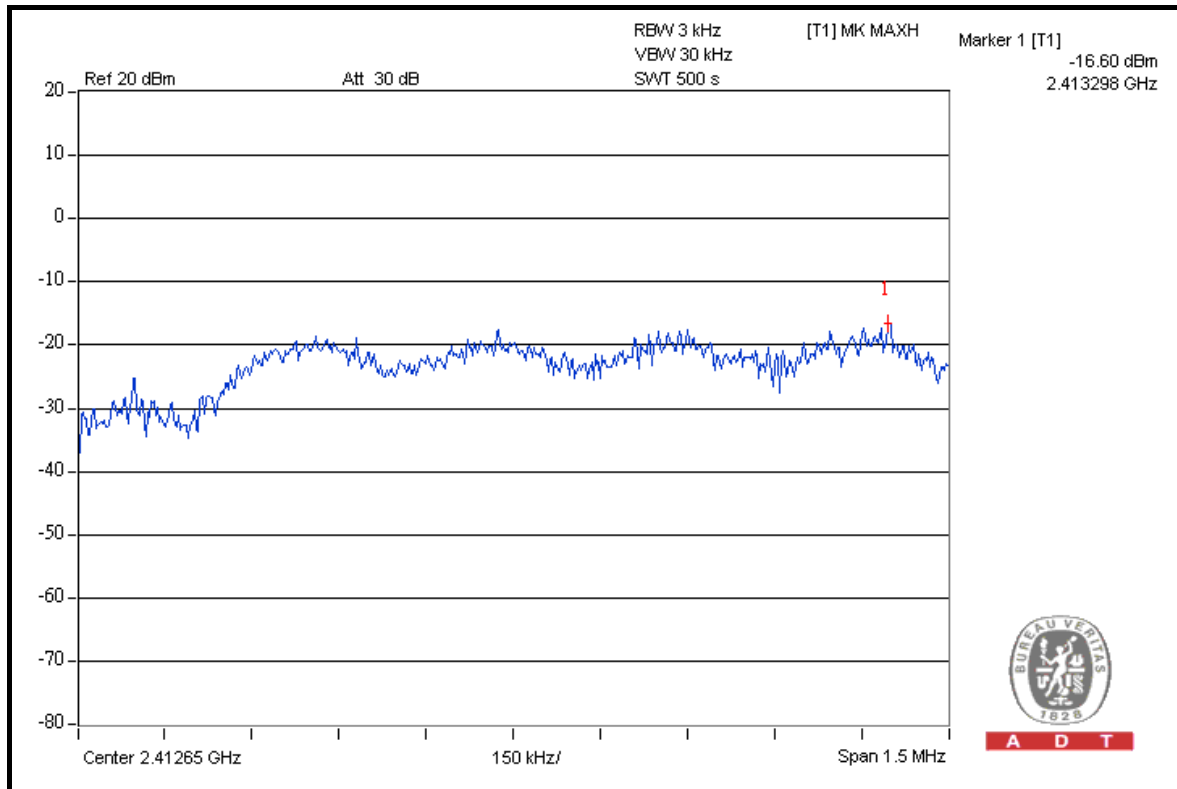
A D T

802.11g OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg.C, 64%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	-16.60	-16.33	-14.02	0.085	-10.72	8	PASS
6	2437	-16.60	-16.31	-13.97	0.085	-10.69	8	PASS
11	2462	-16.47	-16.22	-13.81	0.088	-10.55	8	PASS

FOR CHAIN 0: CH 1

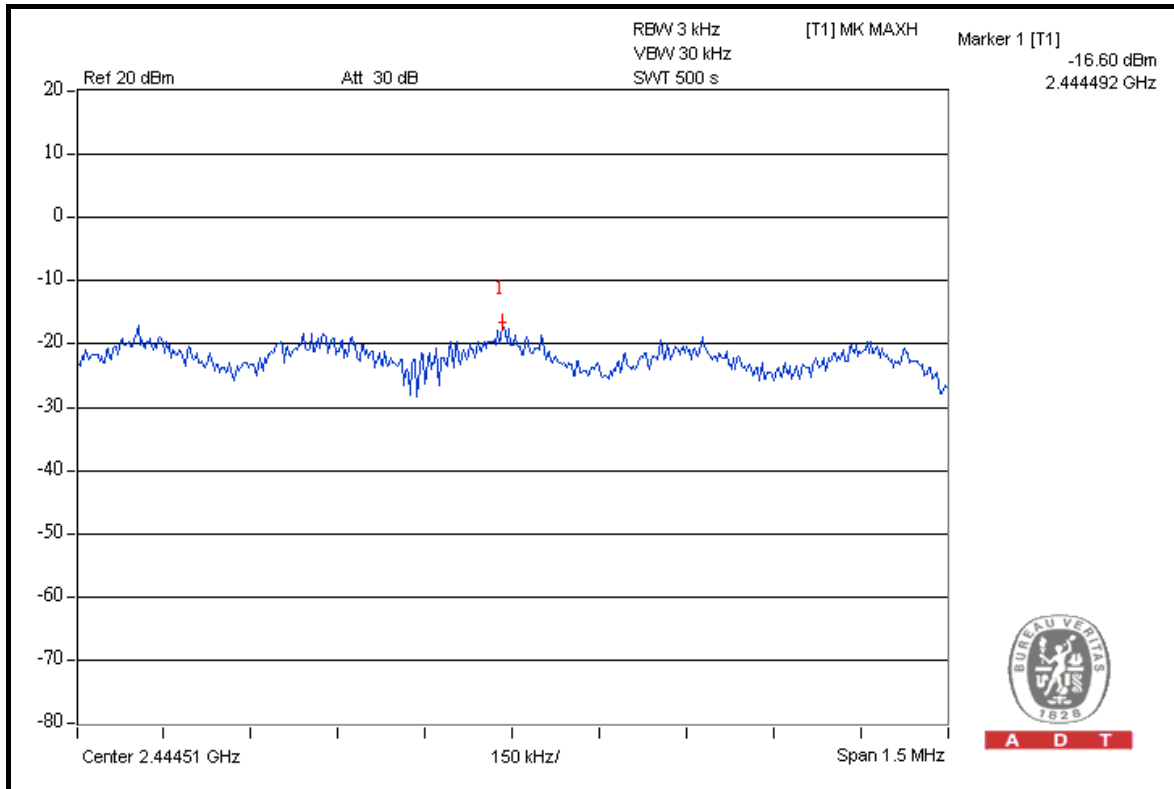


A D T



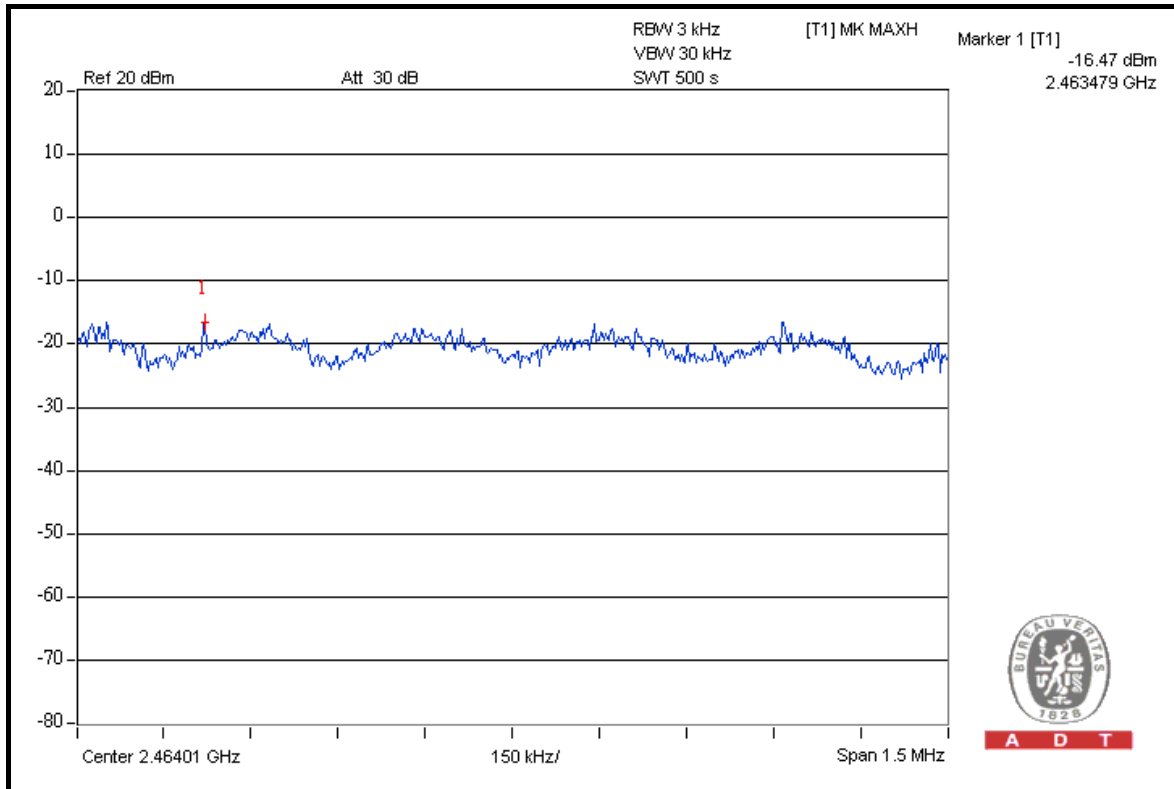
A D T

CH 6



A D T

CH 11

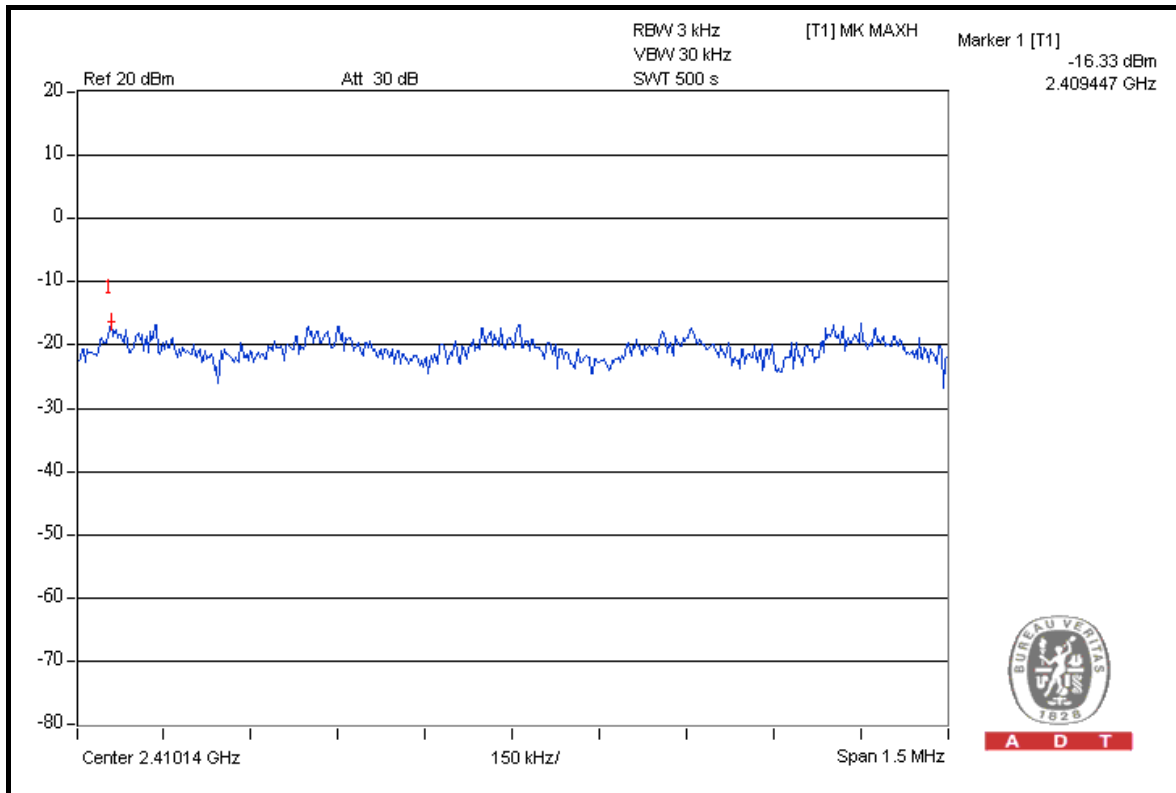


A D T



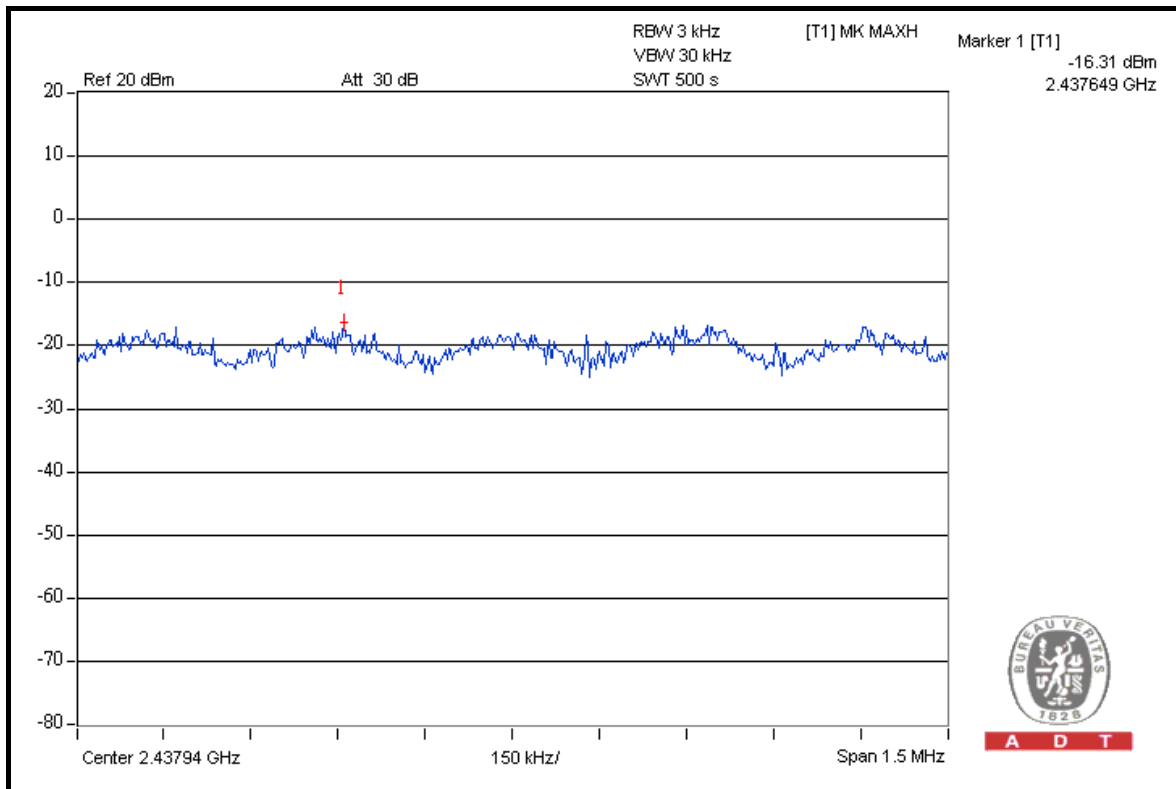
A D T

FOR CHAIN 1: CH 1



A D T

CH 6

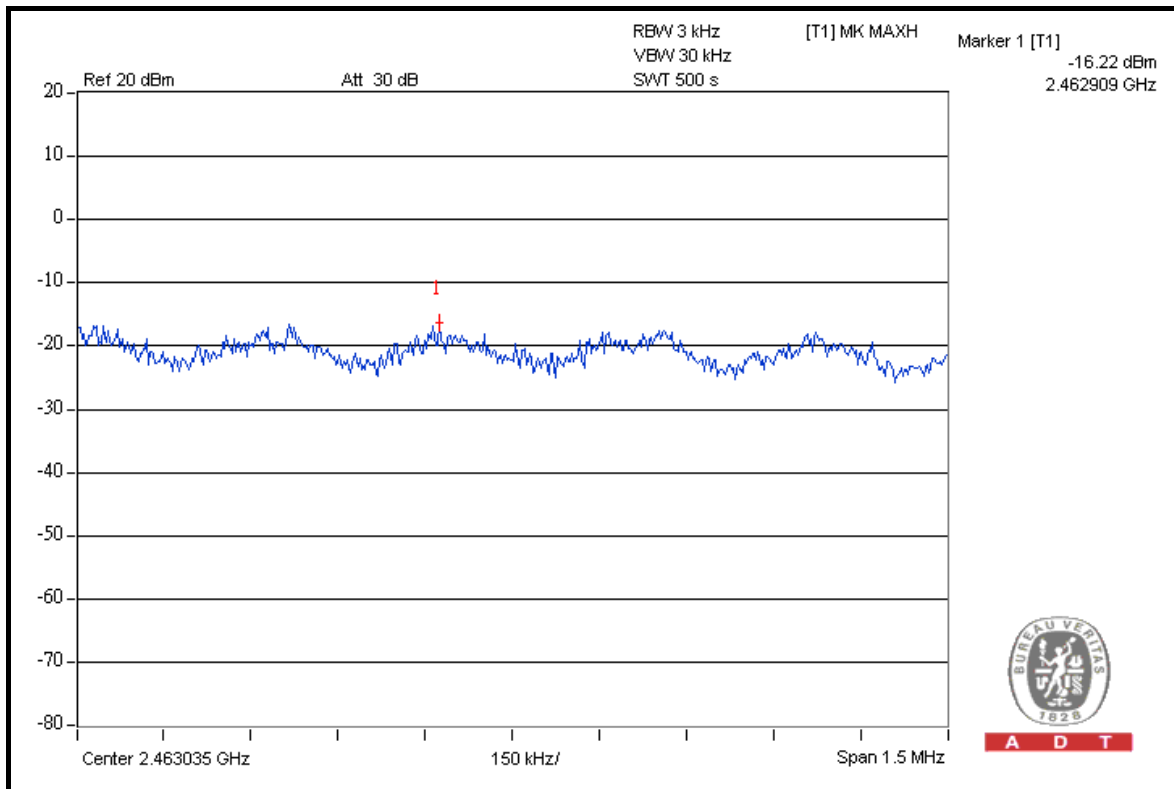


A D T

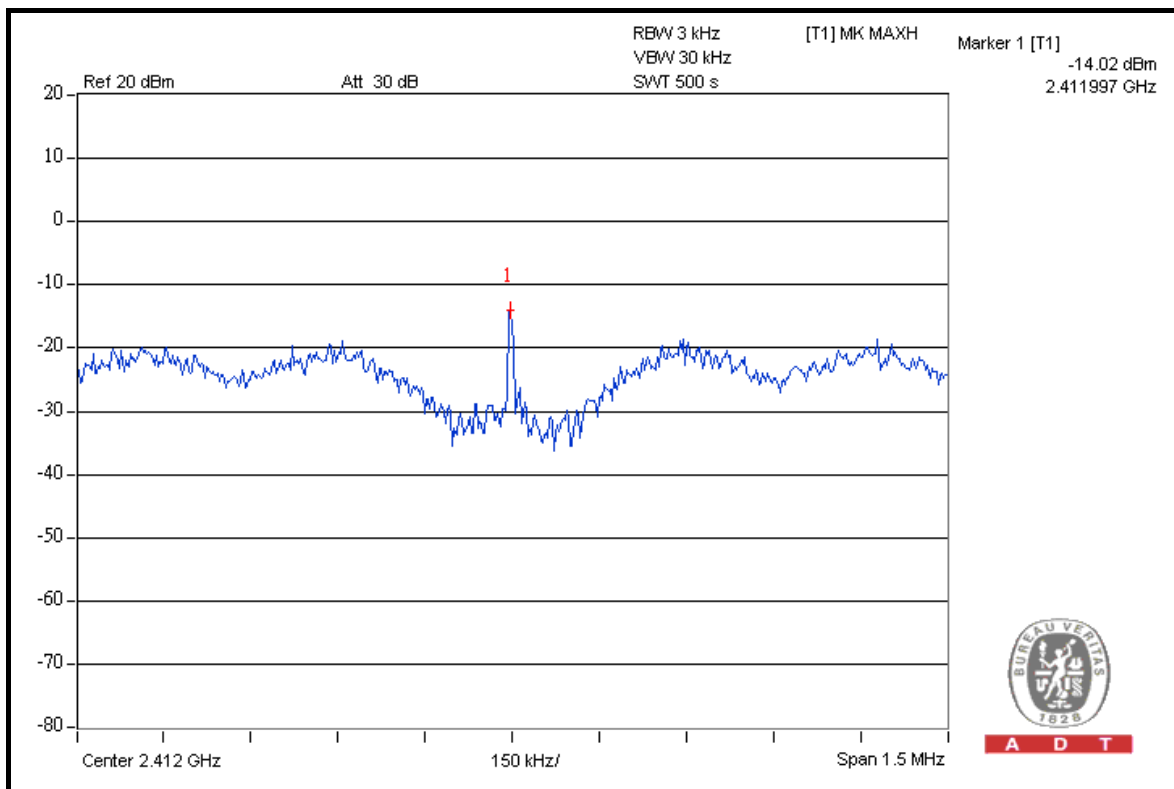


A D T

CH 11



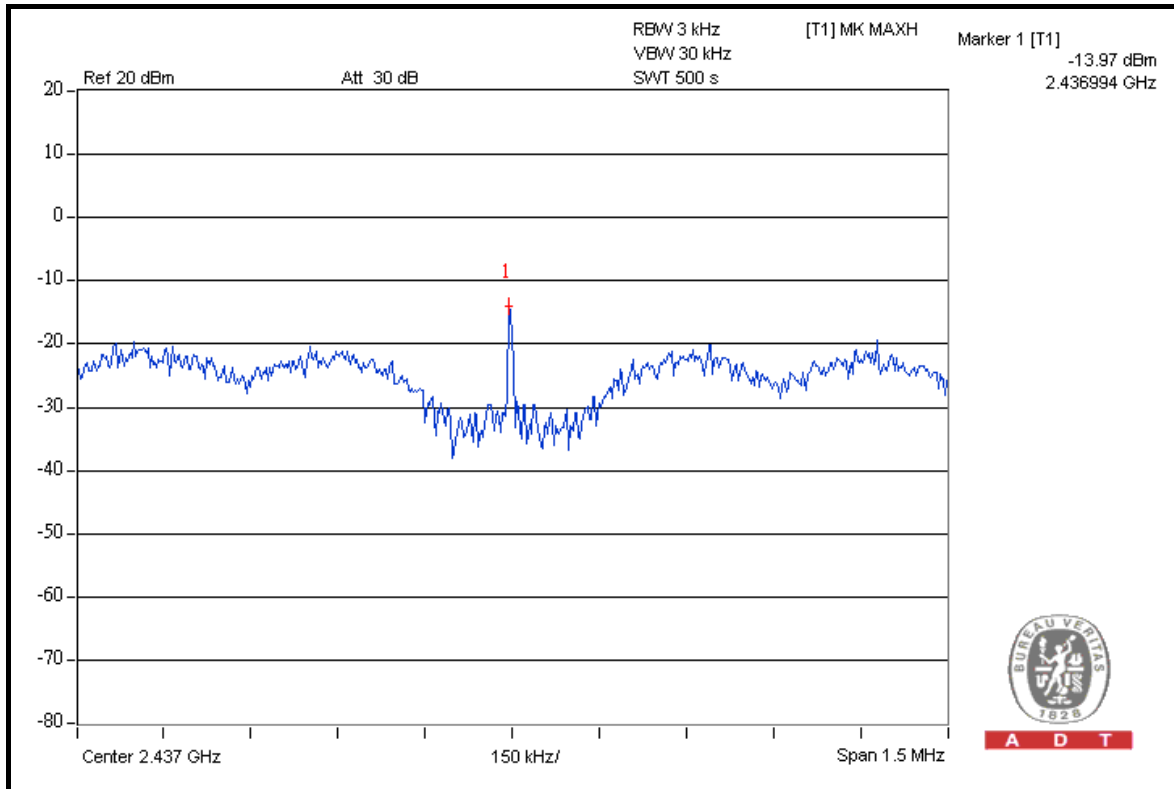
FOR CHAIN 2: CH 1





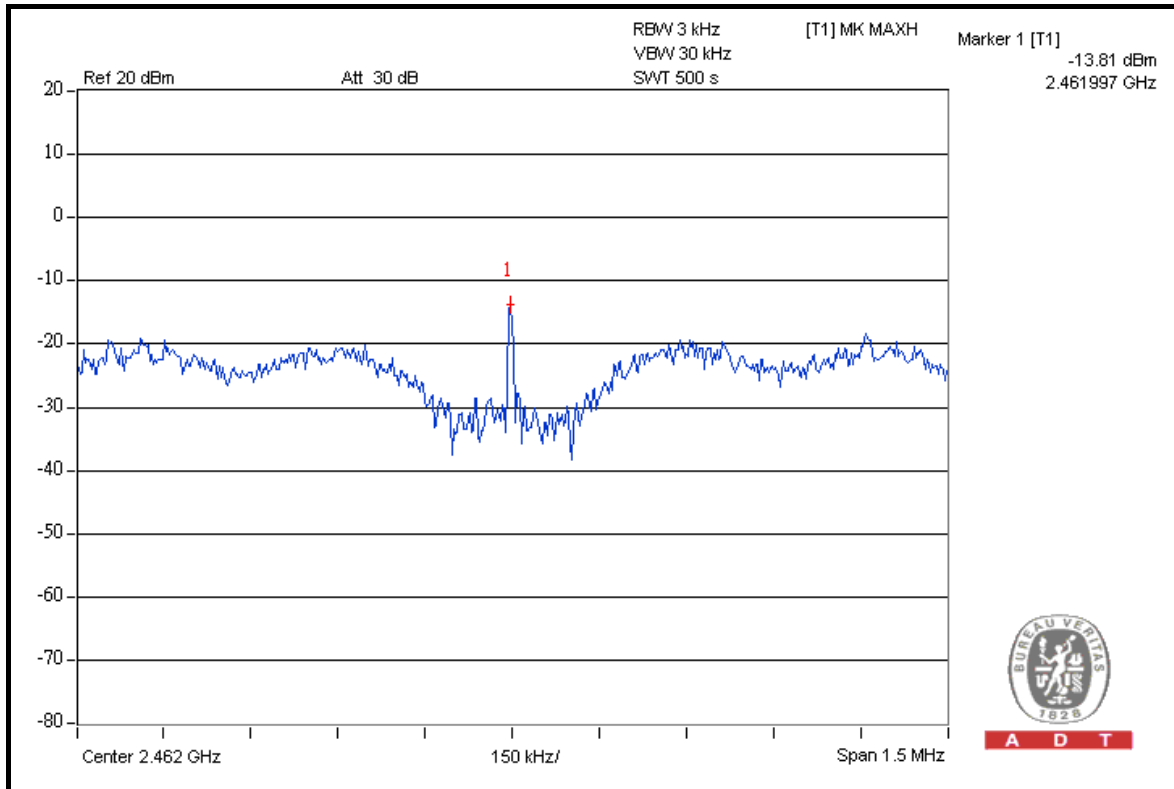
A D T

CH 6



A D T

CH 11



A D T



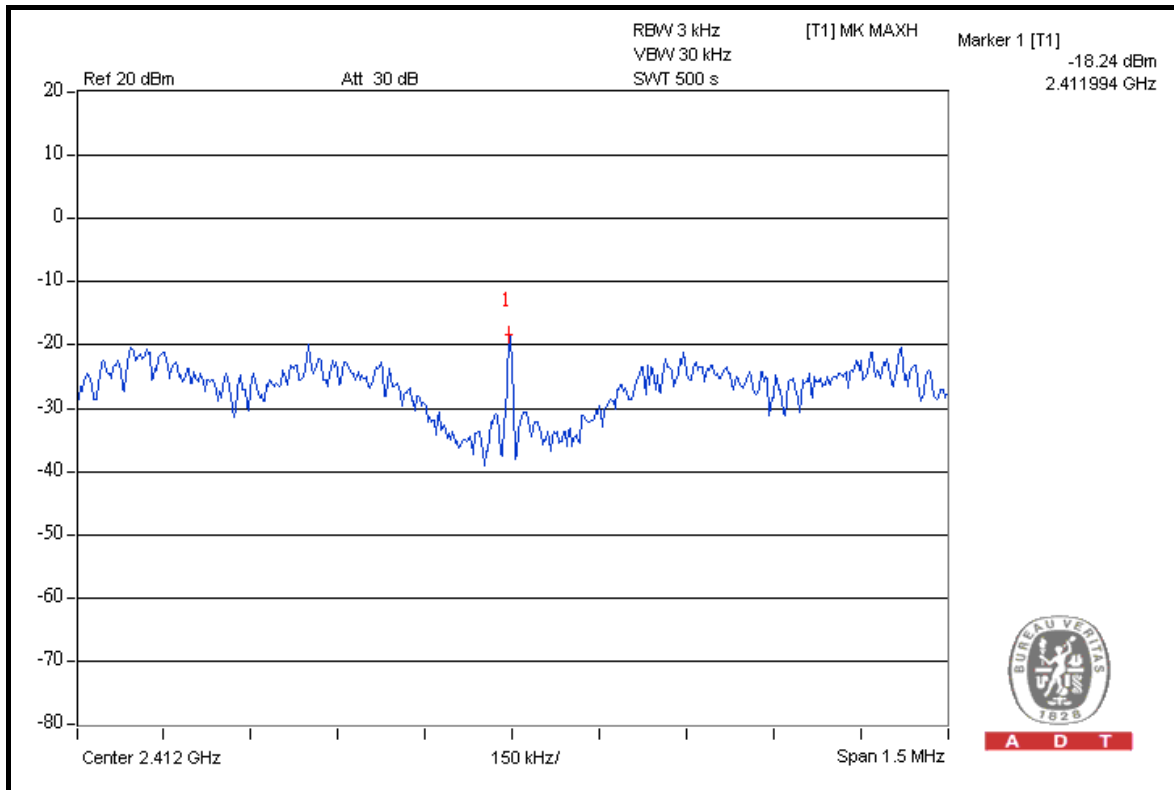
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DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	-18.24	-20.02	-19.51	0.036	-14.42	8	PASS
6	2437	-18.05	-19.87	-19.74	0.037	-14.37	8	PASS
11	2462	-18.34	-19.96	-19.60	0.036	-14.47	8	PASS

FOR CHAIN 0: CH 1

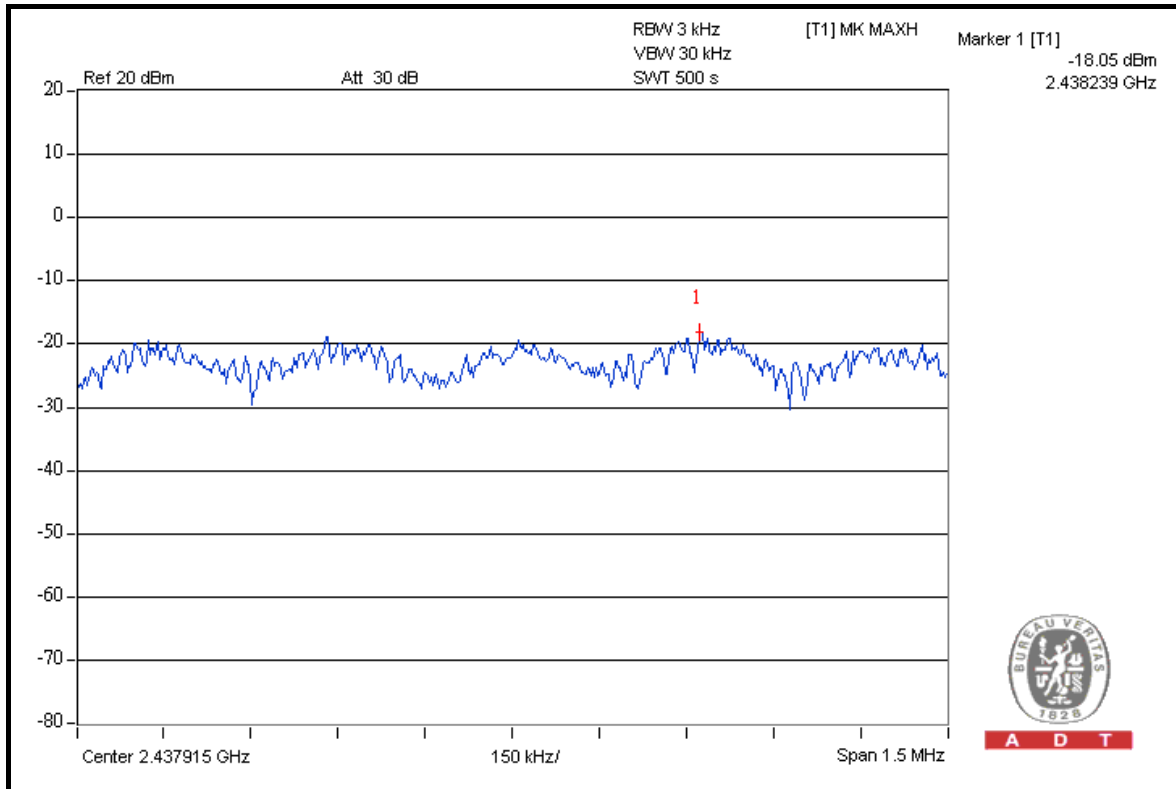


A D T

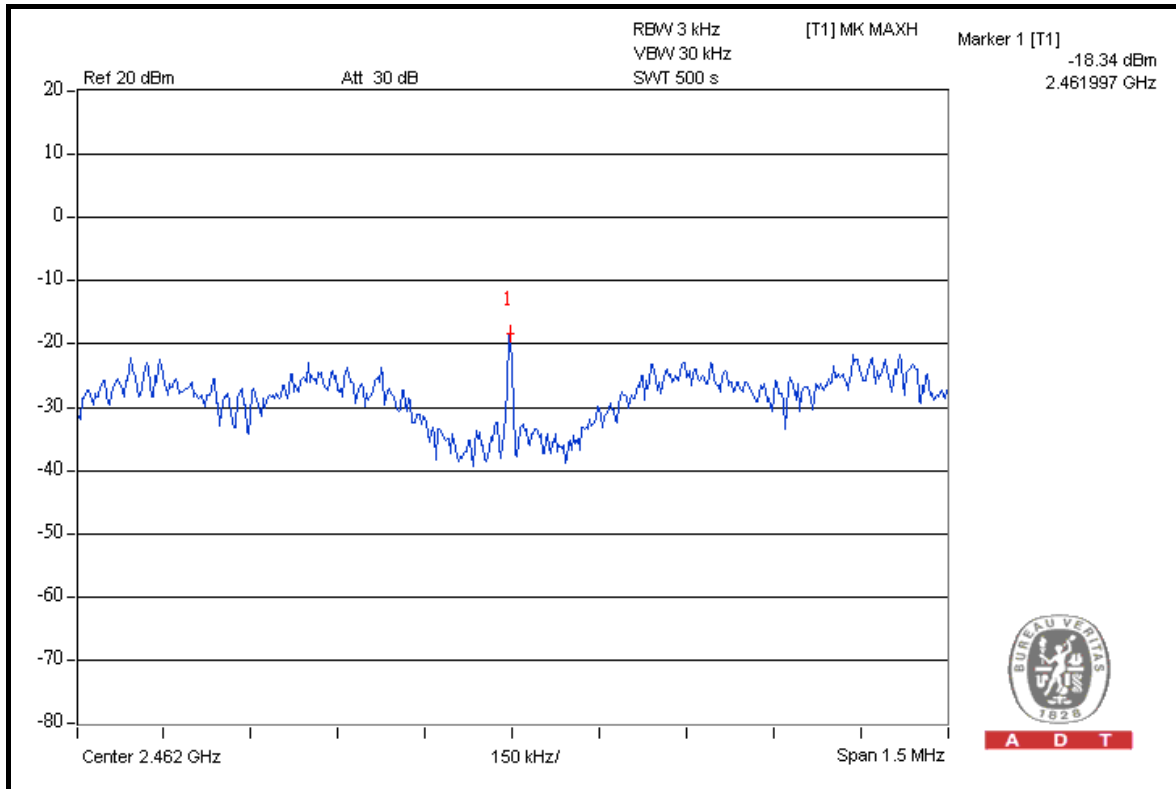


A D T

CH 6



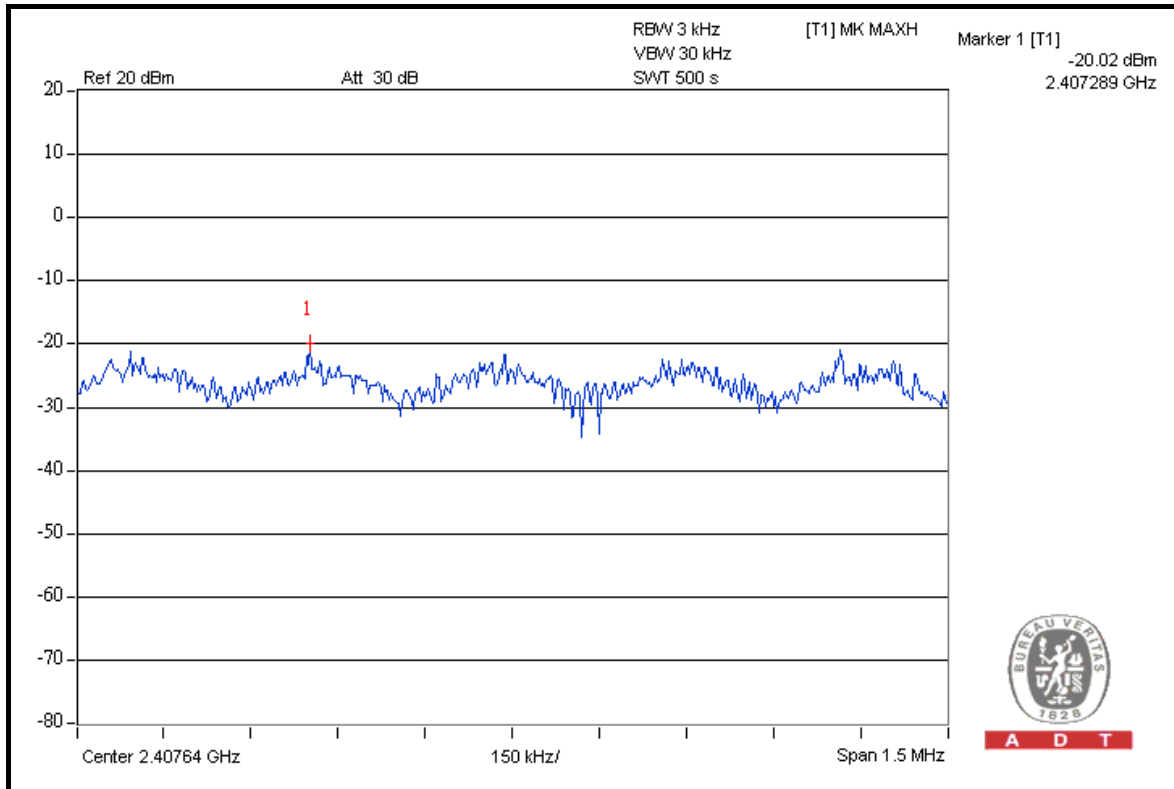
CH 11



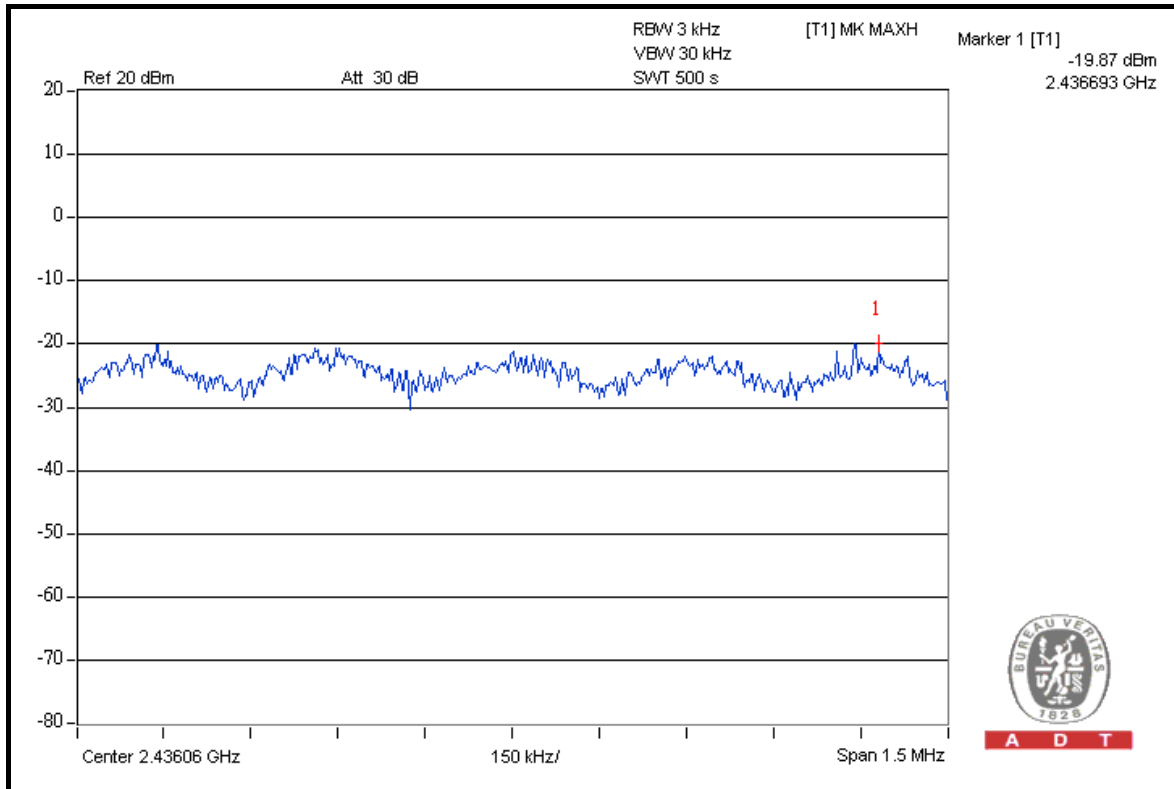


A D T

FOR CHAIN 1: CH 1



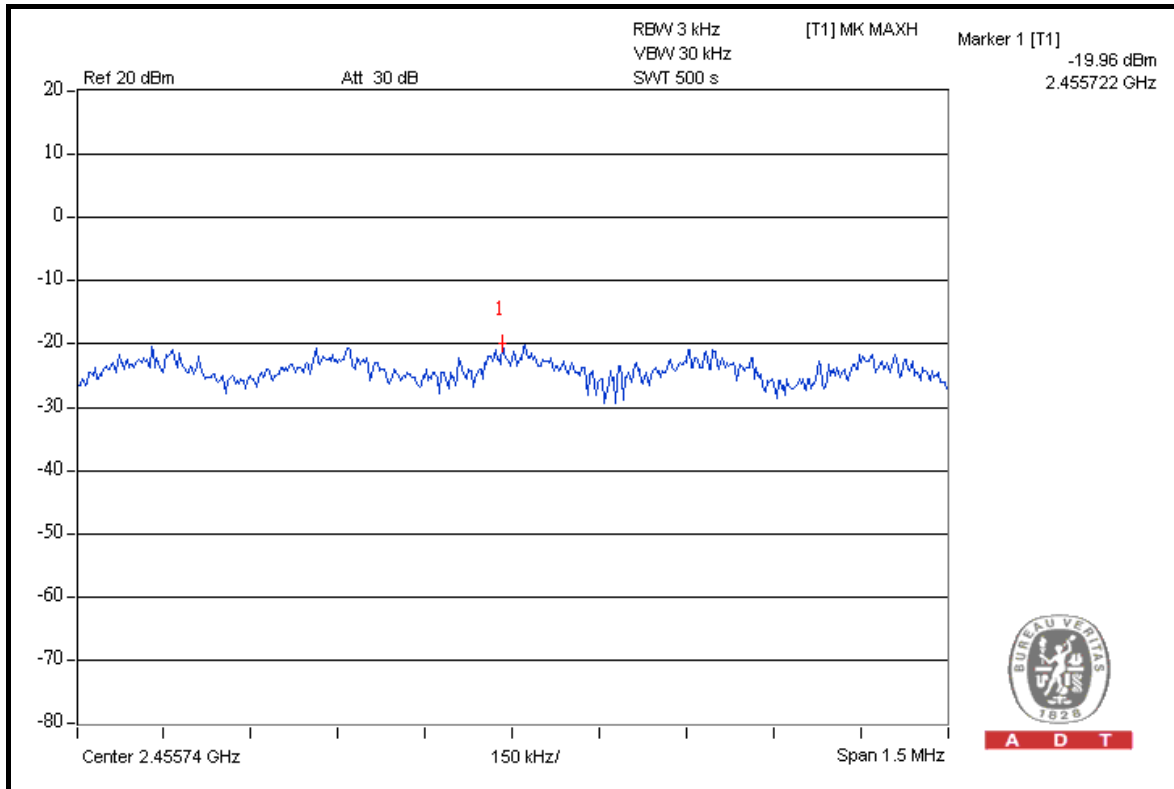
CH 6



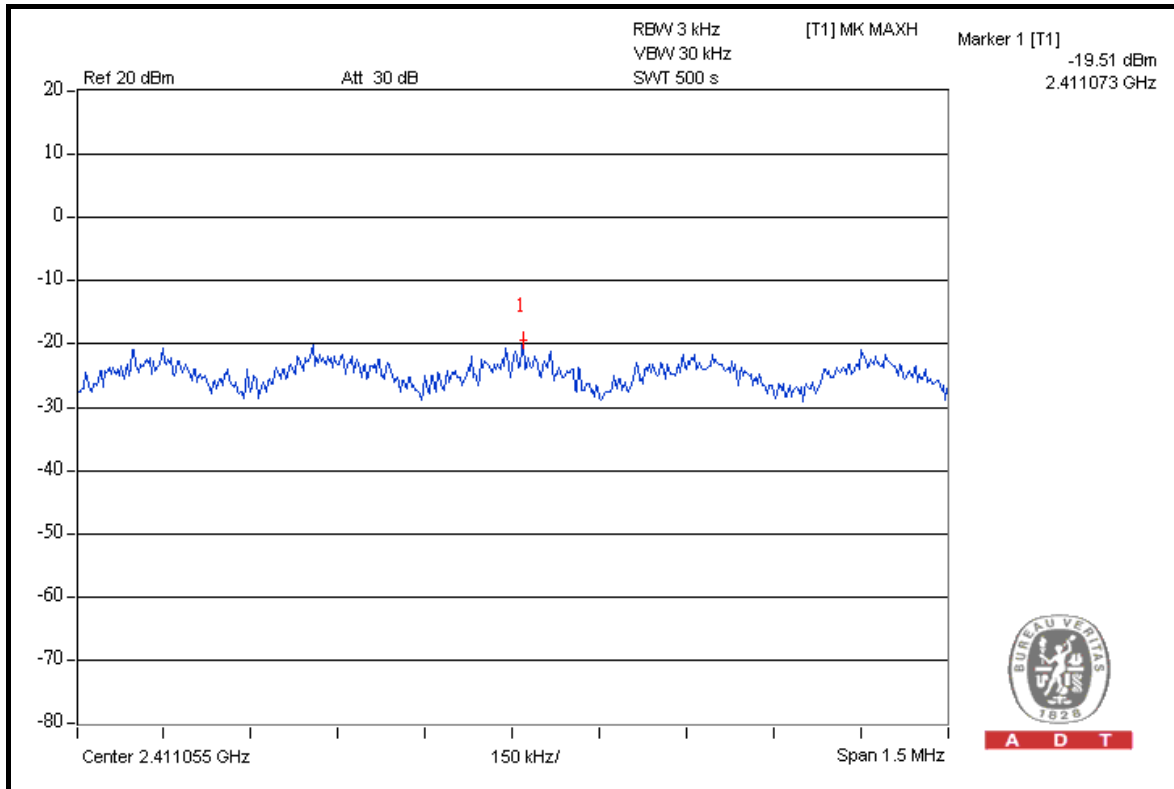


A D T

CH 11



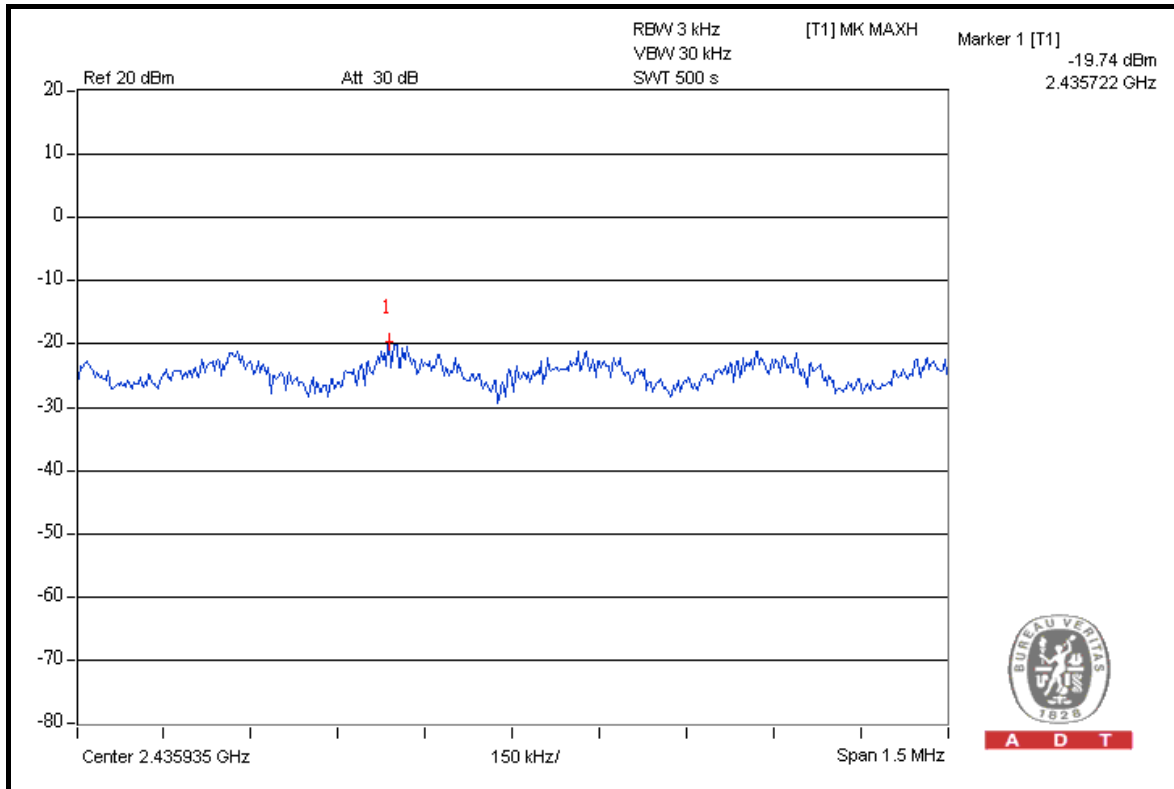
FOR CHAIN 2: CH 1



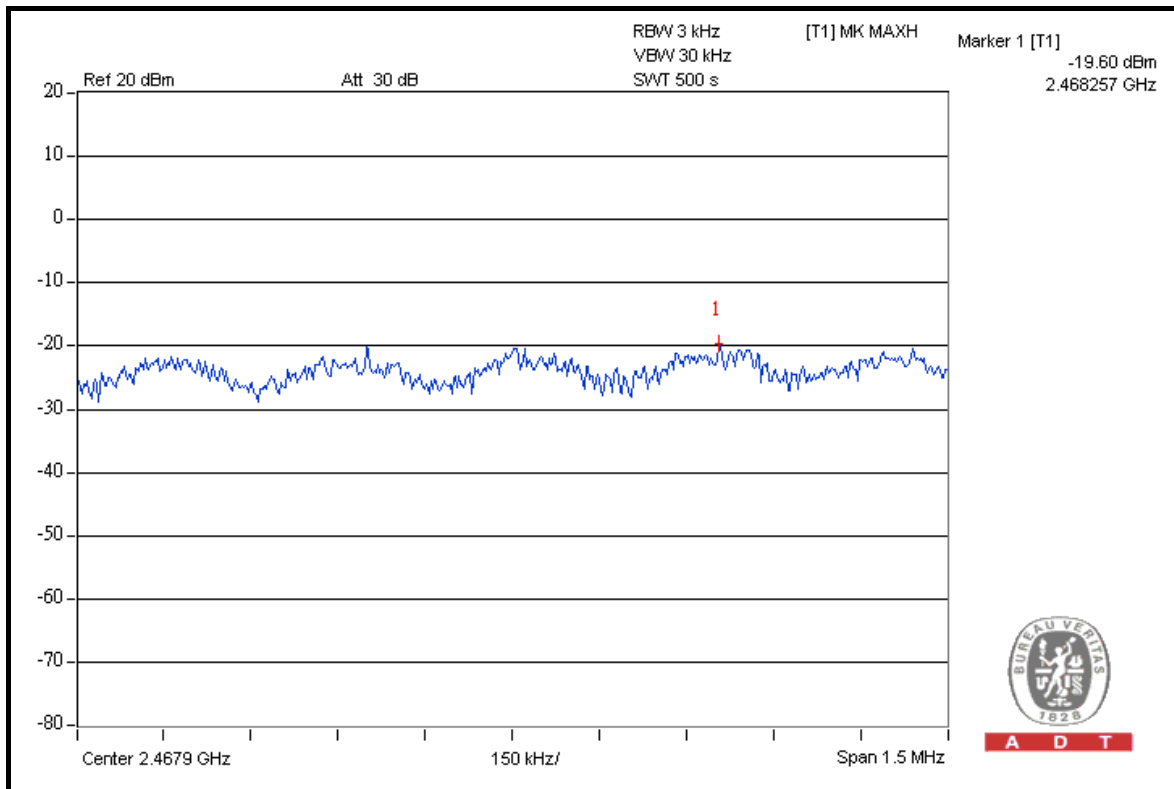


A D T

CH 6



CH 11





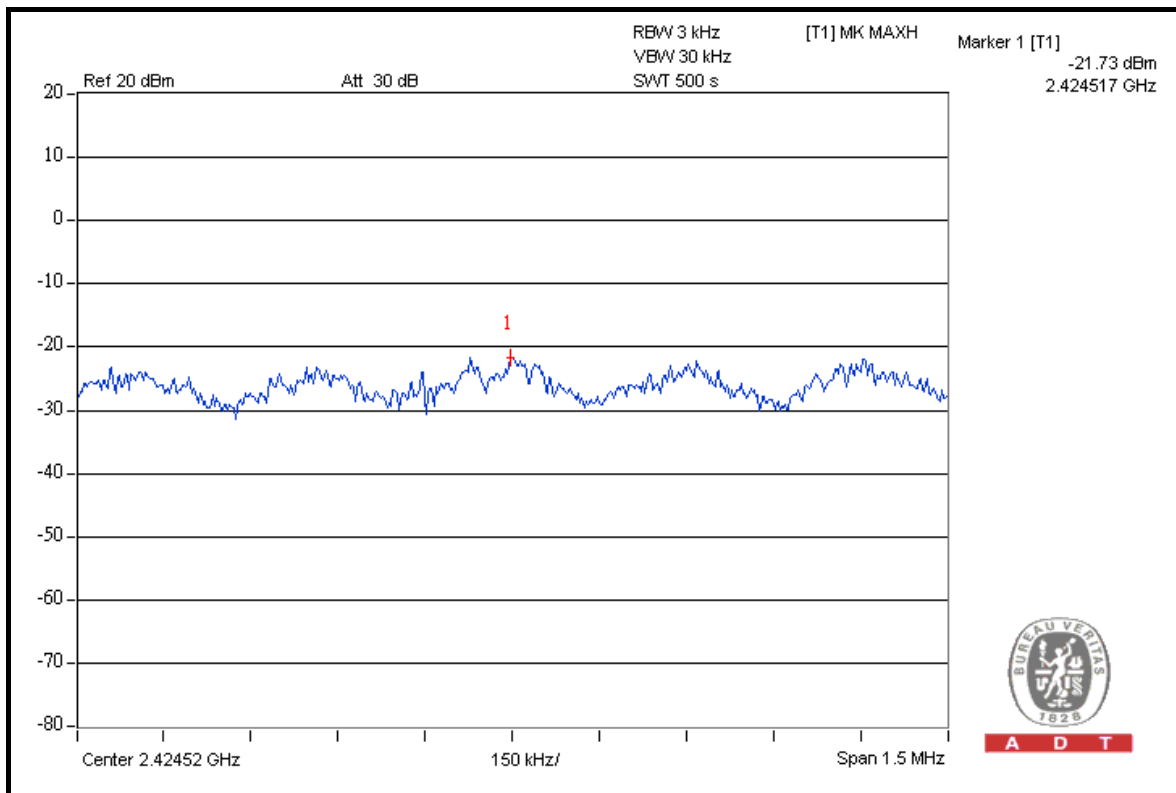
A D T

DRAFT 802.11n (40MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2422	-21.73	-18.86	-12.82	0.072	-11.43	8	PASS
4	2437	-21.73	-18.75	-12.59	0.075	-11.24	8	PASS
7	2452	-21.56	-19.11	-12.67	0.073	-11.35	8	PASS

FOR CHAIN 0: CH 1

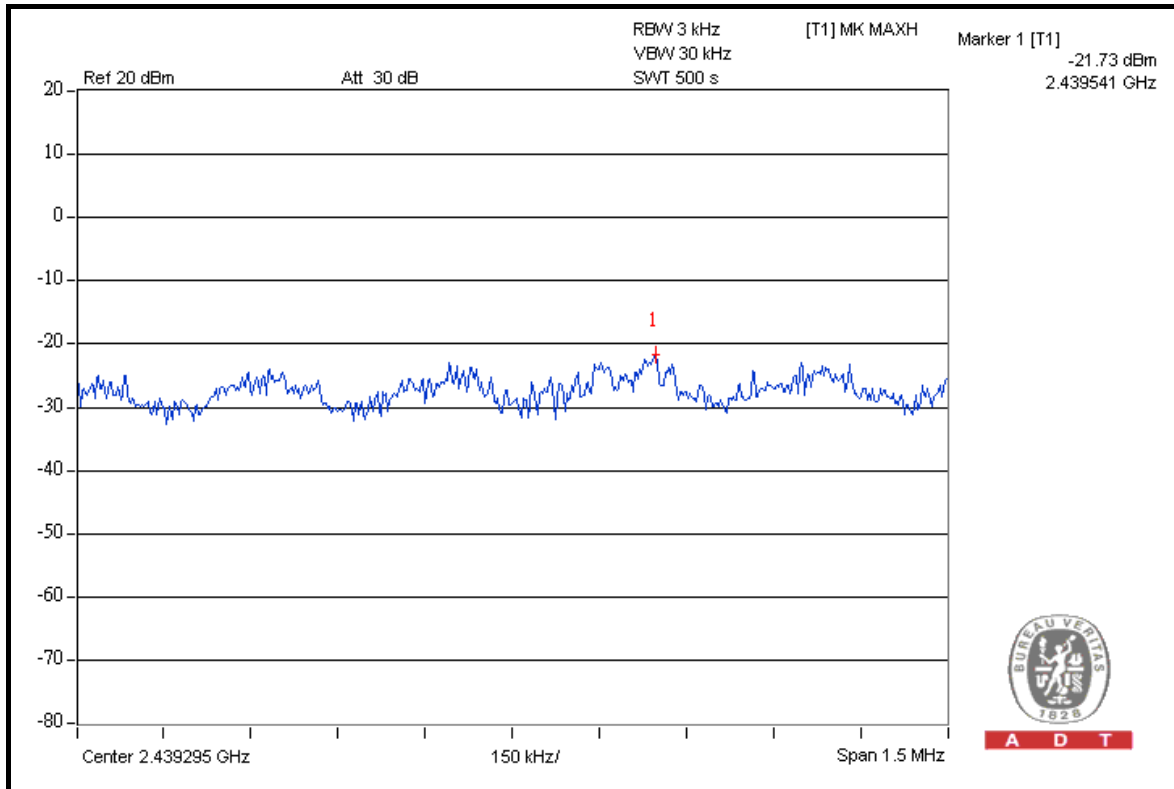


A D T

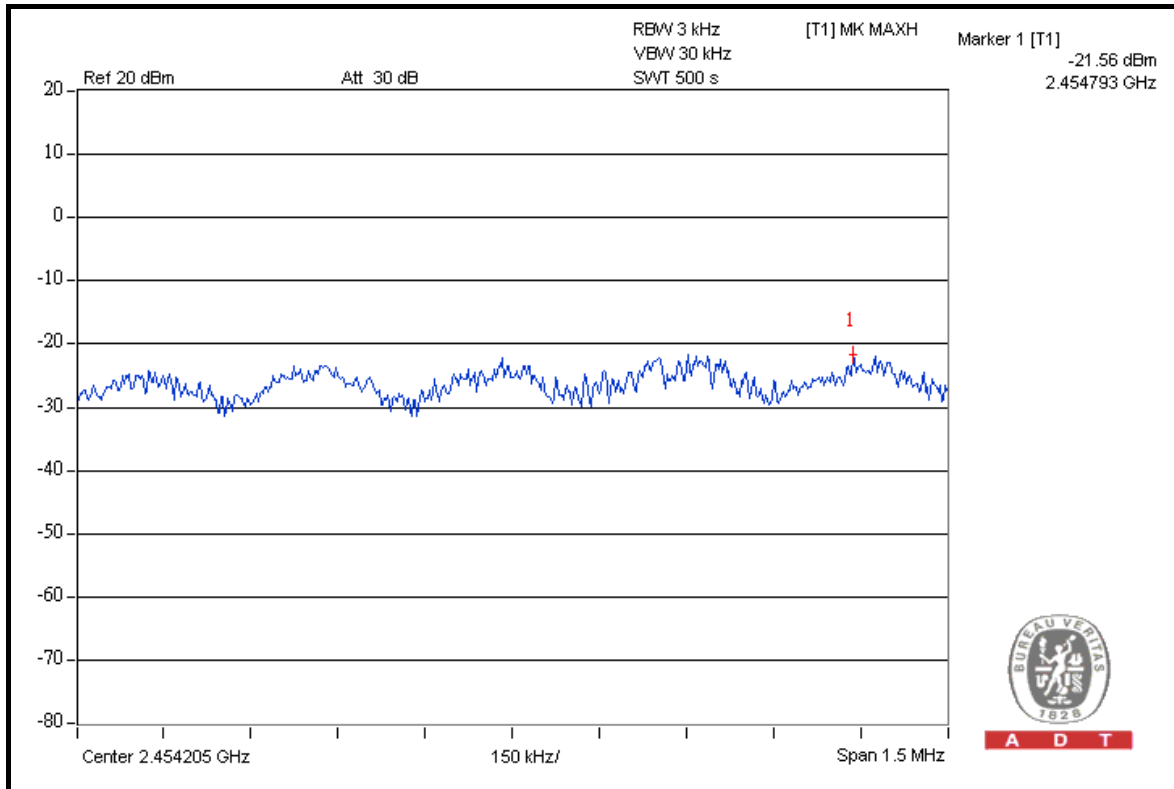


A D T

CH 6



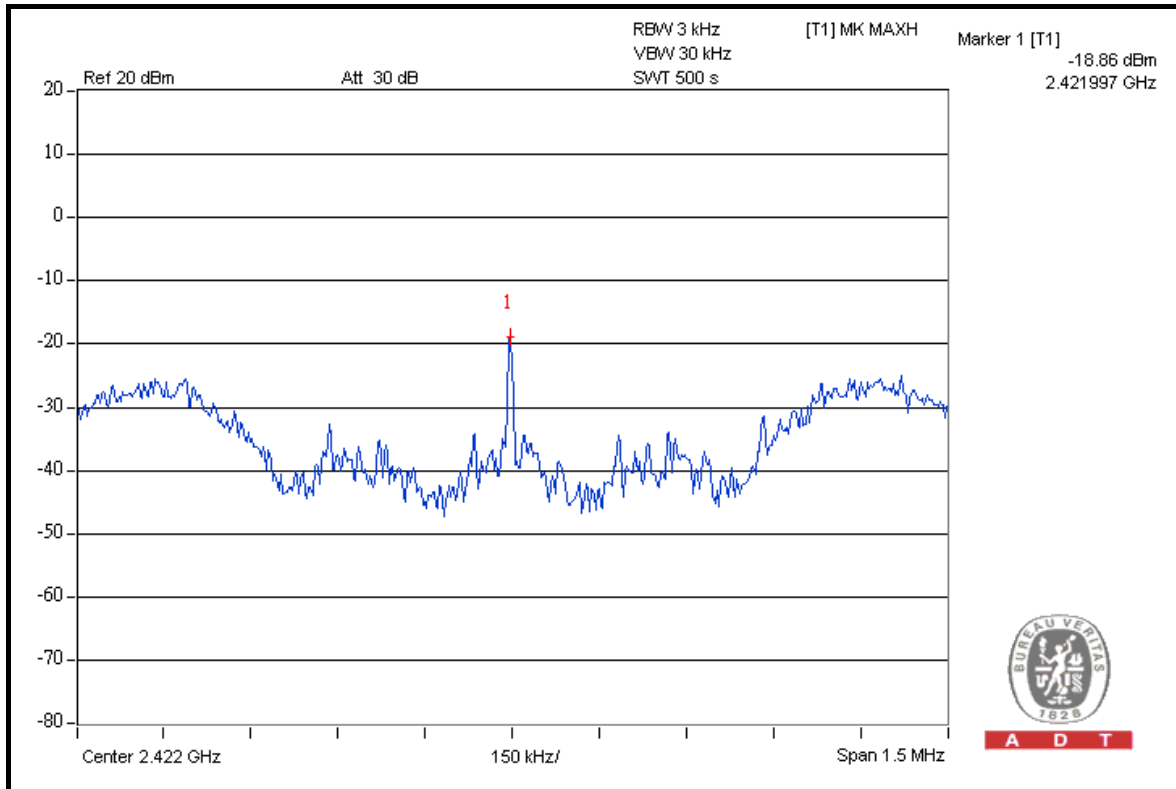
CH 11



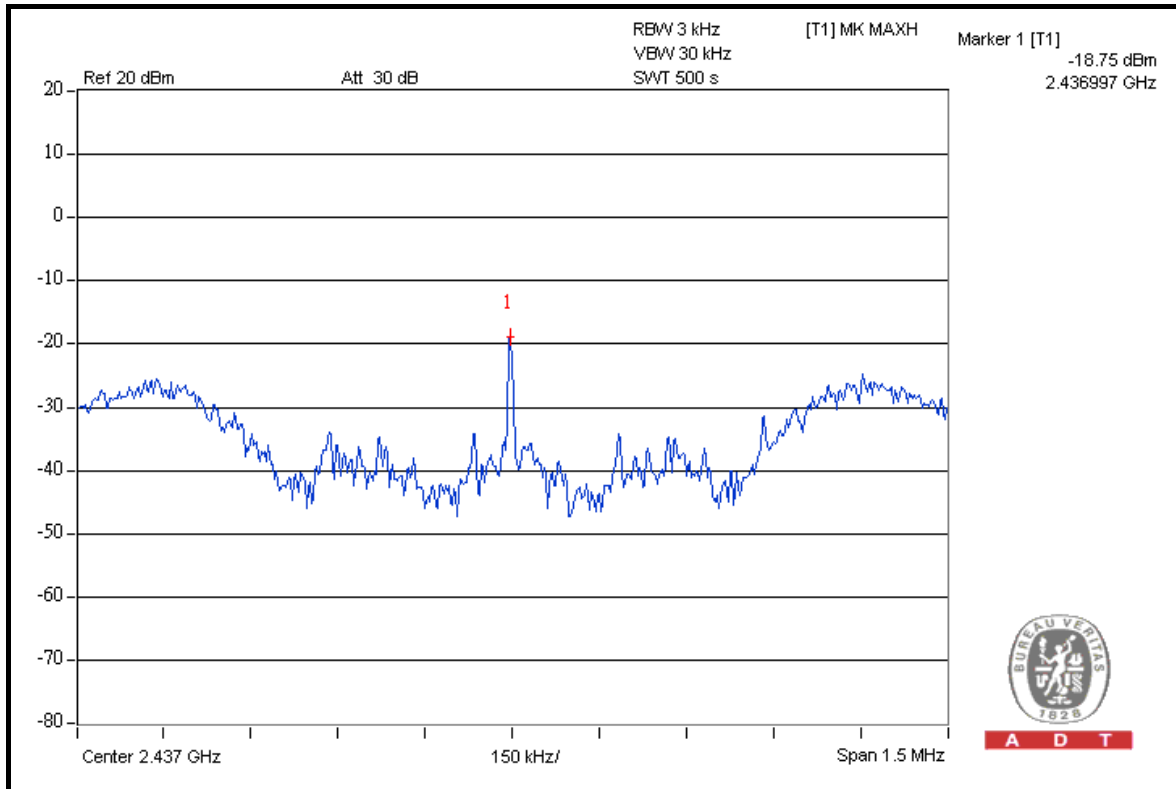


A D T

FOR CHAIN 1: CH 1



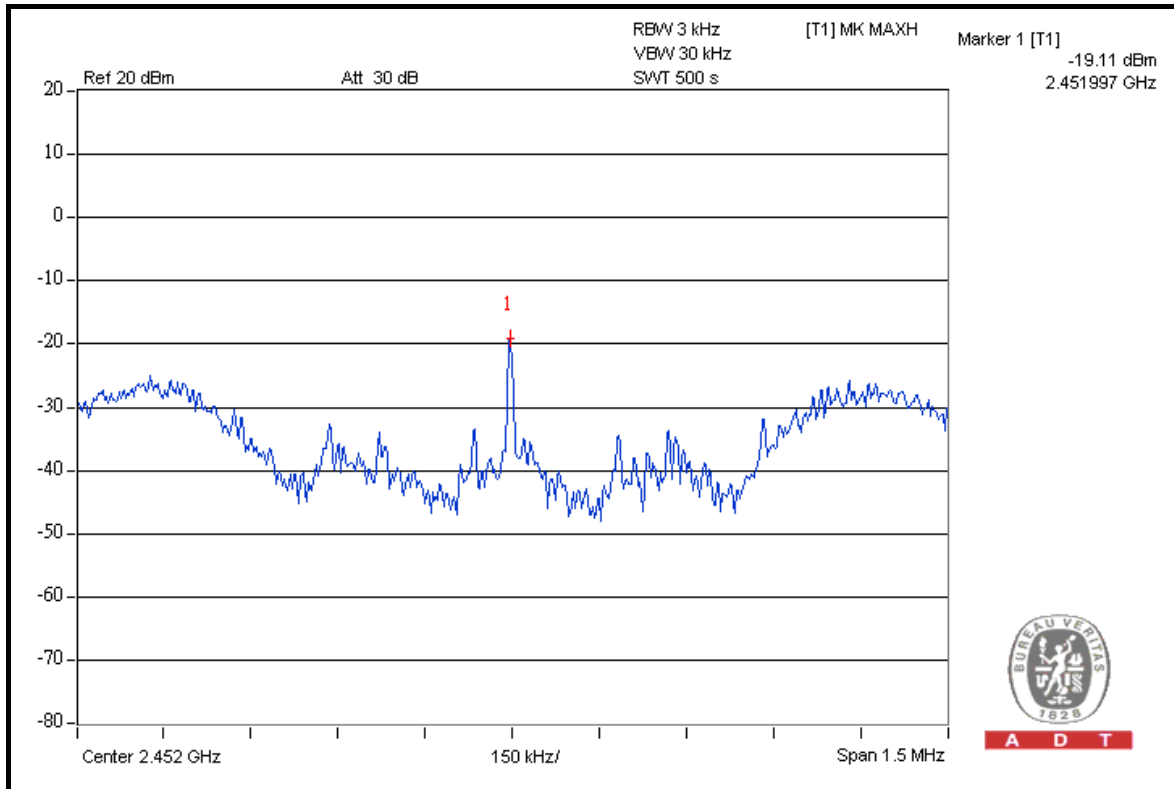
CH 6



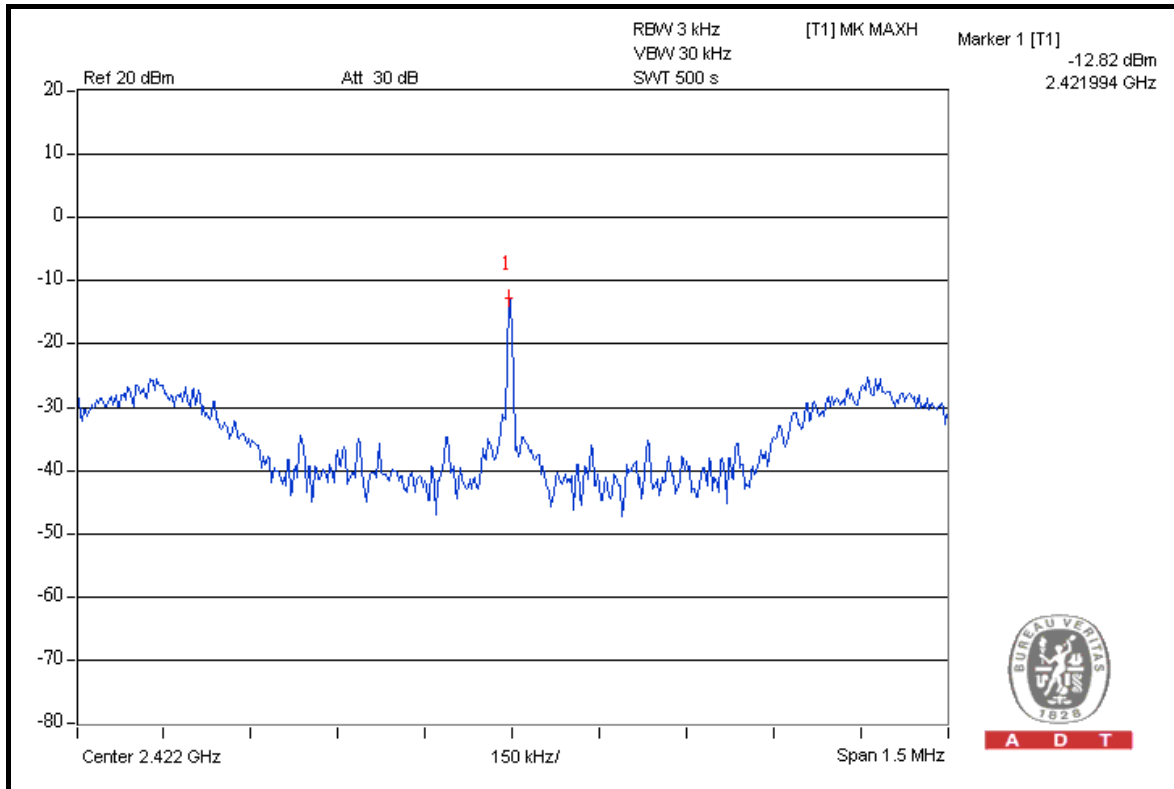


A D T

CH 11



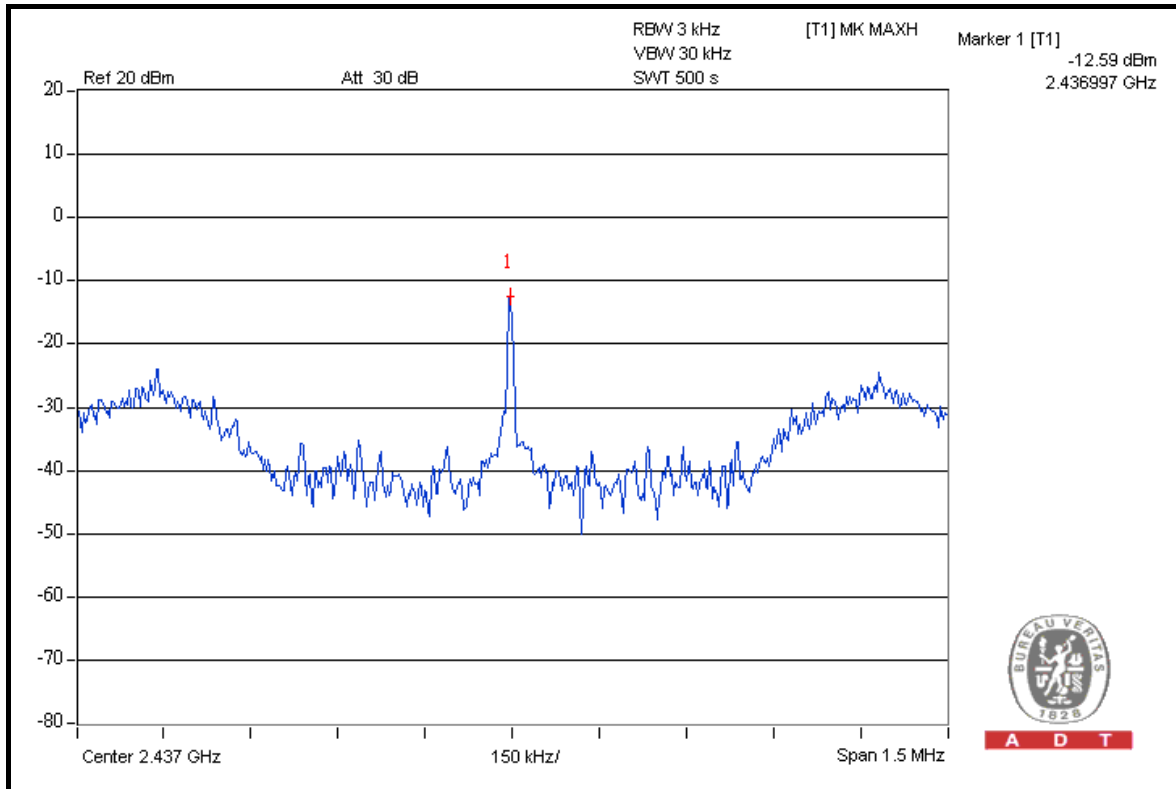
FOR CHAIN 2: CH 1





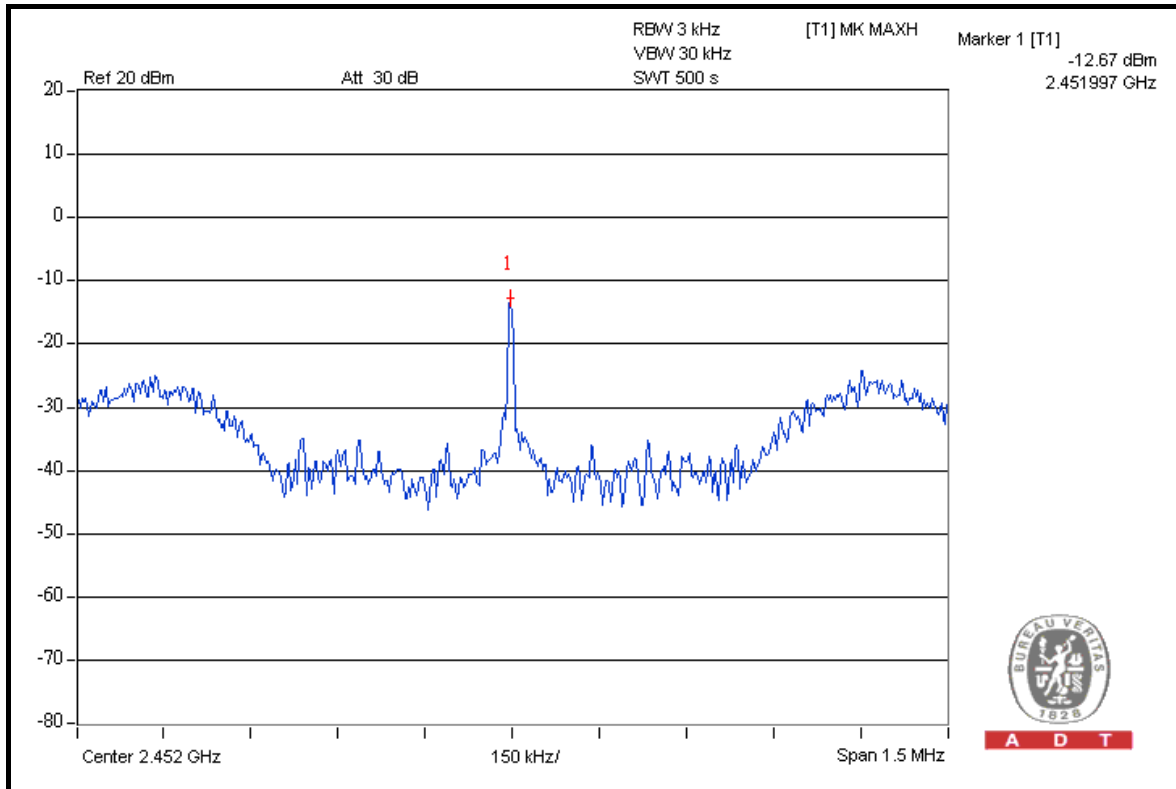
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CH 6



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CH 11



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4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 29, 2008	Dec. 28, 2009
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 08, 2008	Dec. 07, 2009
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 29, 2009	Apr. 28, 2010
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Dec. 29, 2008	Dec. 28, 2009
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009	Jan. 05, 2010
Preamplifier Agilent	8449B	3008A01960	Nov. 03, 2008	Nov. 02, 2009
Preamplifier Agilent	8447D	2944A10631	Nov. 03, 2008	Nov. 02, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274041/4	Aug. 21, 2008	Aug. 20, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 21, 2008	Aug. 20, 2009
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA	NA

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



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- 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. Set both RBW and VBW of spectrum analyzer to 100kHz and 300kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (Peak RBW = 100kHz, VBW = 300kHz) are attached on the following pages.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.

4.6.3 DEVIATION FROM TEST STANDARD

No deviation

4.6.4 EUT OPERATING CONDITION

Same as Item 4.3.6

4.6.5 TEST RESULTS

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

802.11b DSSS MODULATION

TEST MODE A

NOTE 1: The band edge emission plot on the next page shows 56.50dBc between carrier maximum power and local maximum emission in restrict band (2.3886GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 113.51dBuV/m (Peak), so the maximum field strength in restrict band is $113.51 - 56.50 = 57.01$ dBuV/m which is under 74dBuV/m limit.

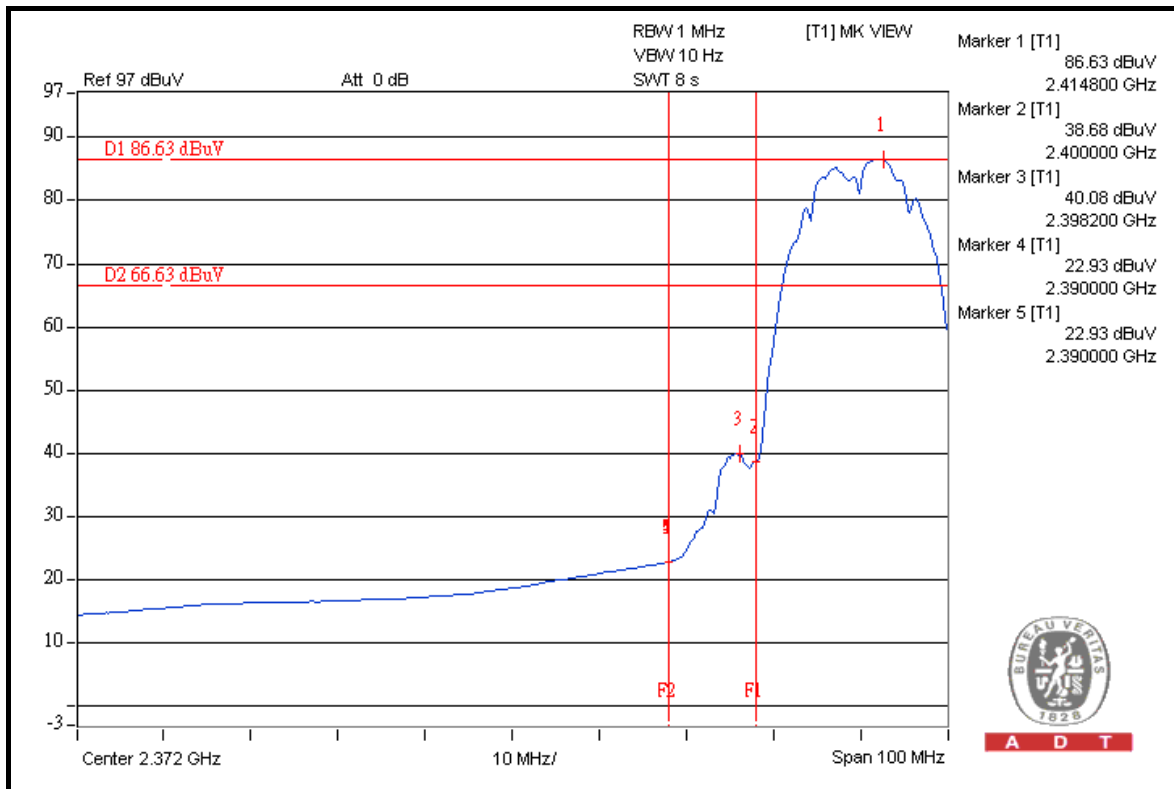
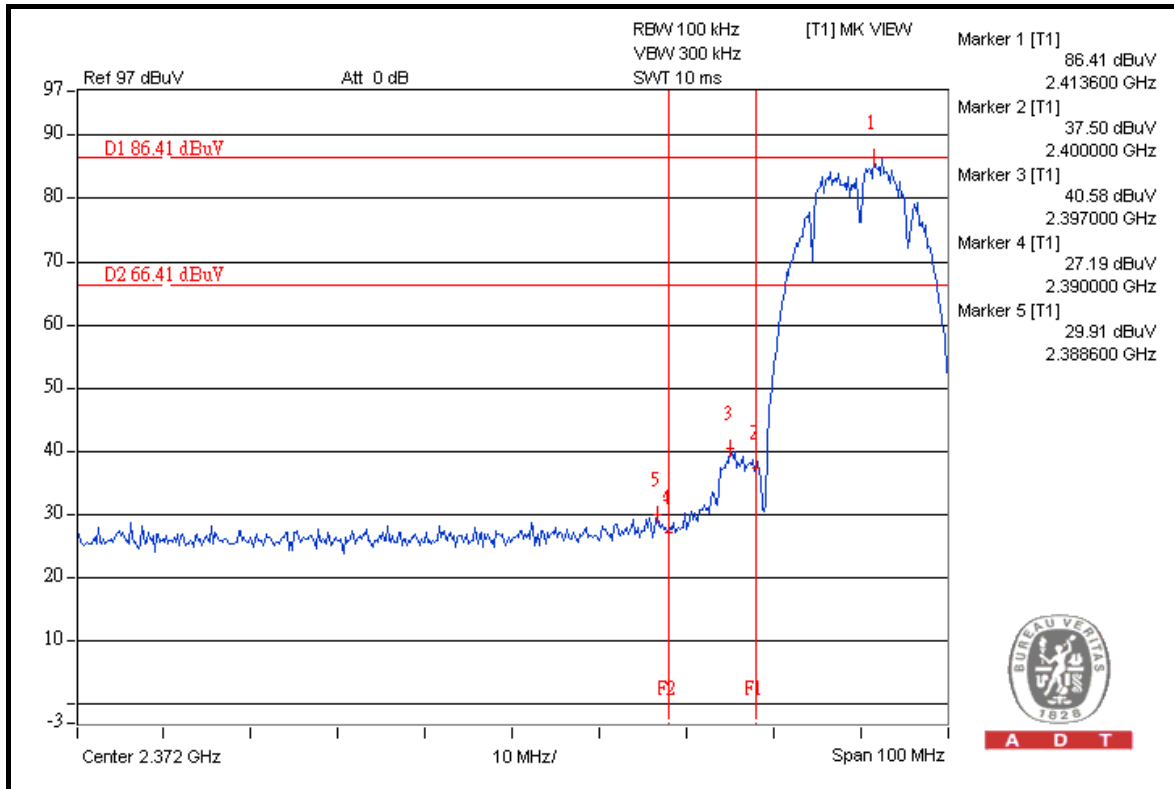
The band edge emission plot of on the next page shows 63.70dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 109.22dBuV/m (Average), so the maximum field strength in restrict band is $109.22 - 63.70 = 45.52$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 55.27dBc between carrier maximum power and local maximum emission in restrict band (2.4988GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 113.63dBuV/m (Peak), so the maximum field strength in restrict band is $113.63 - 55.27 = 58.36$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 61.44dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 110.16dBuV/m (Average), so the maximum field strength in restrict band is $110.16 - 61.44 = 48.72$ dBuV/m which is under 54dBuV/m limit.

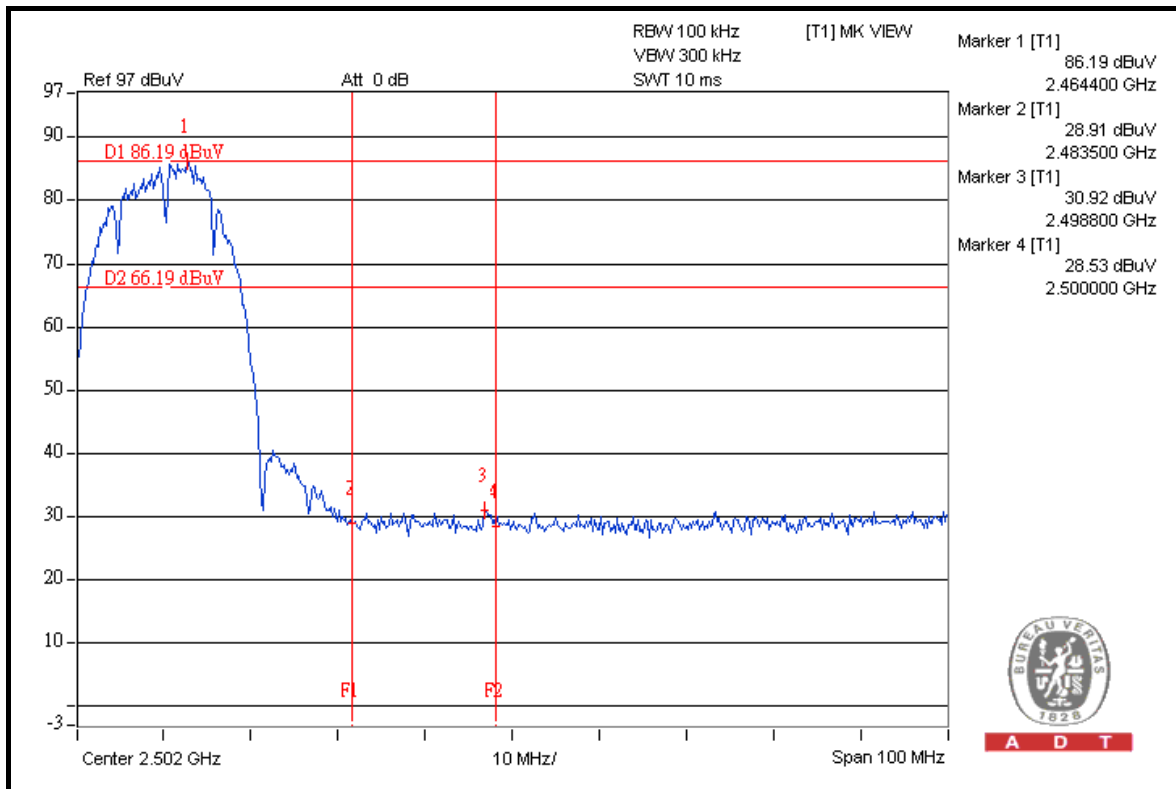
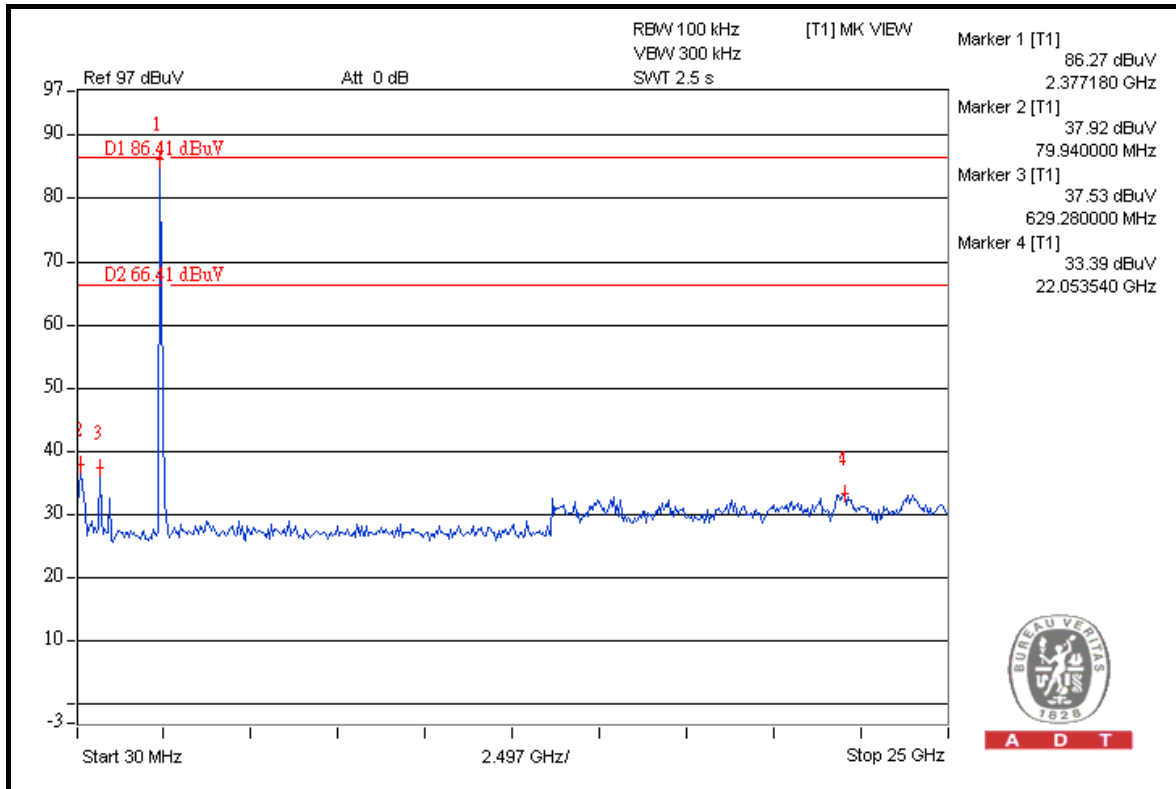


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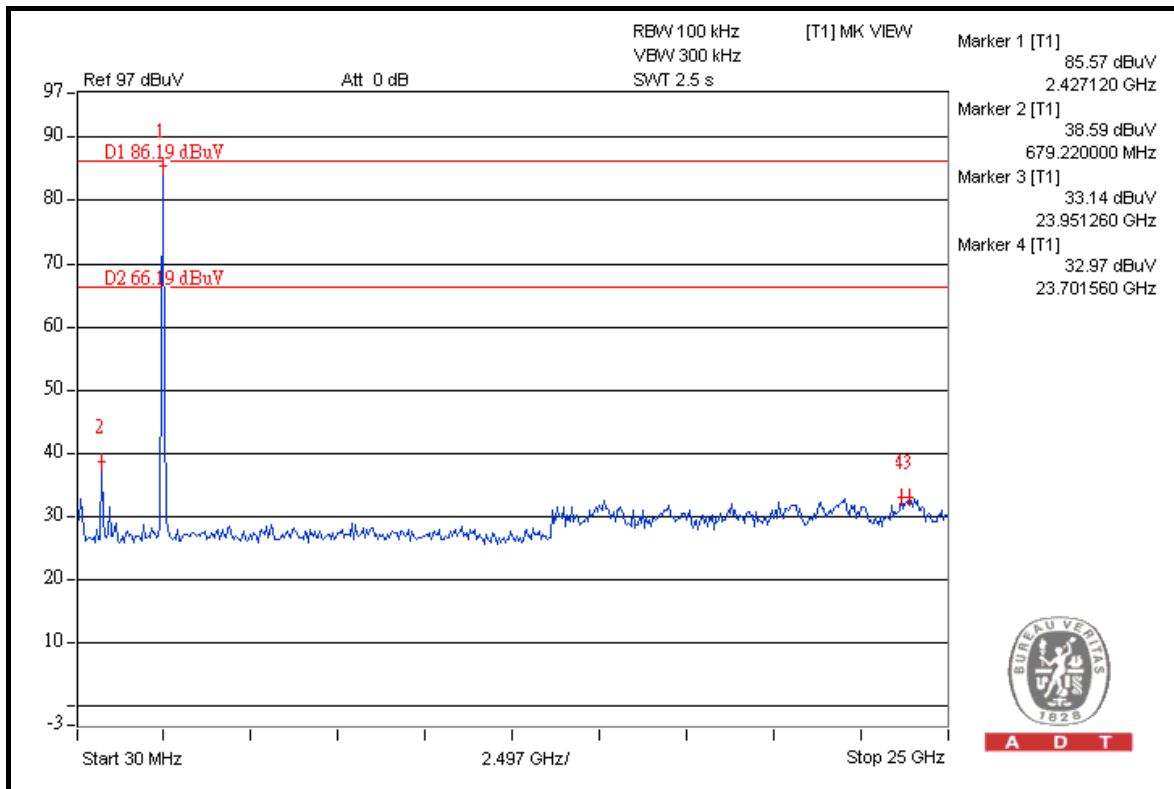
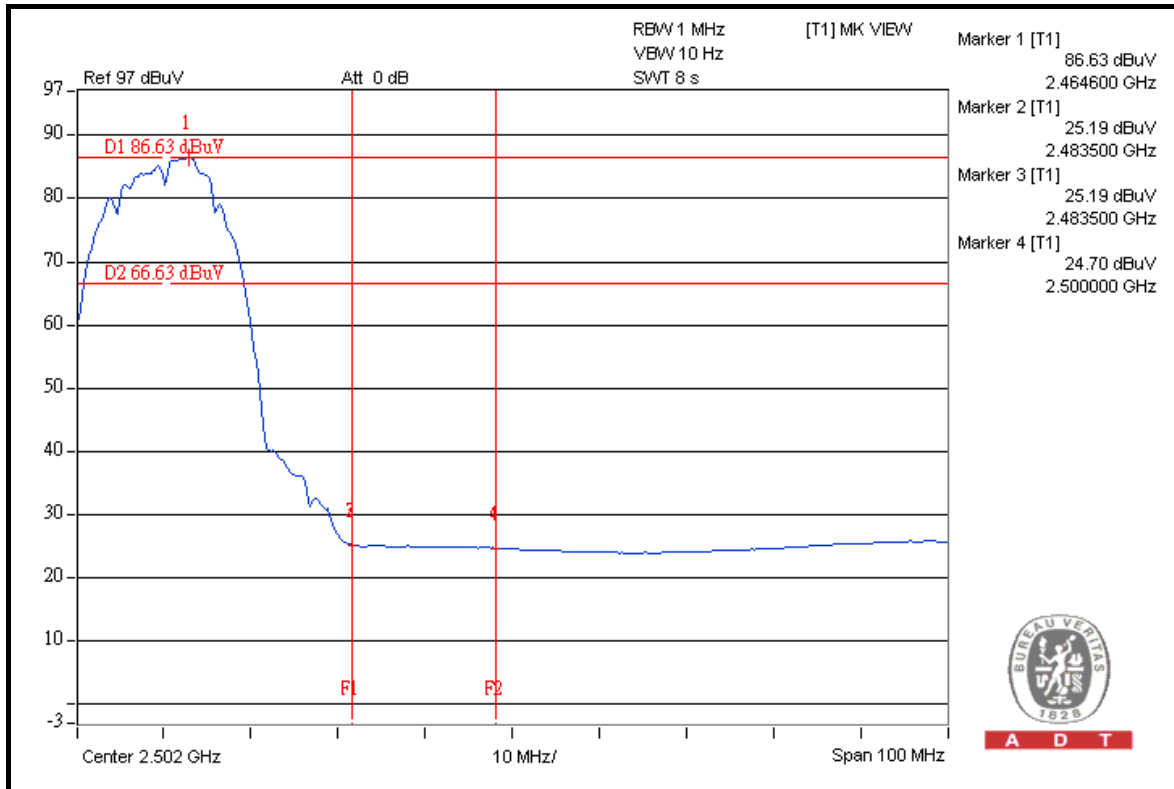


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TEST MODE C

NOTE 1: The band edge emission plot on the next page shows 57.75dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 115.50dBuV/m (Peak), so the maximum field strength in restrict band is $115.50 - 57.75 = 57.75$ dBuV/m which is under 74dBuV/m limit.

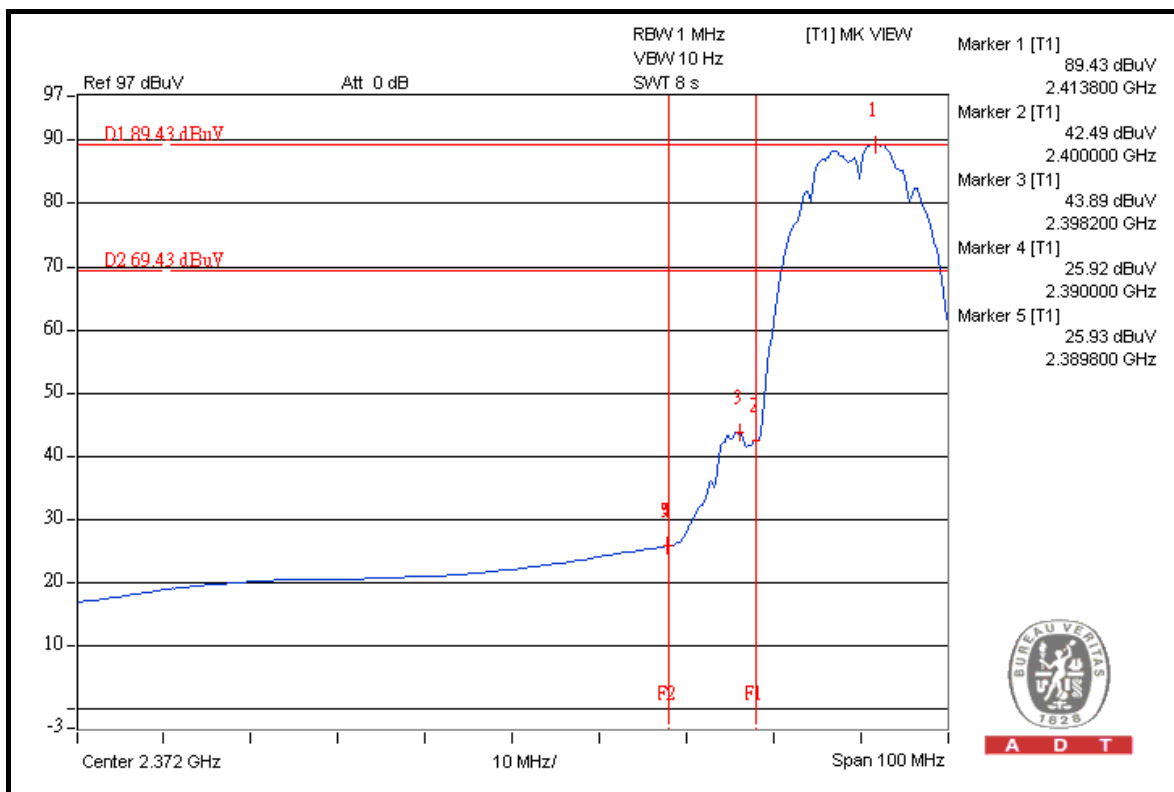
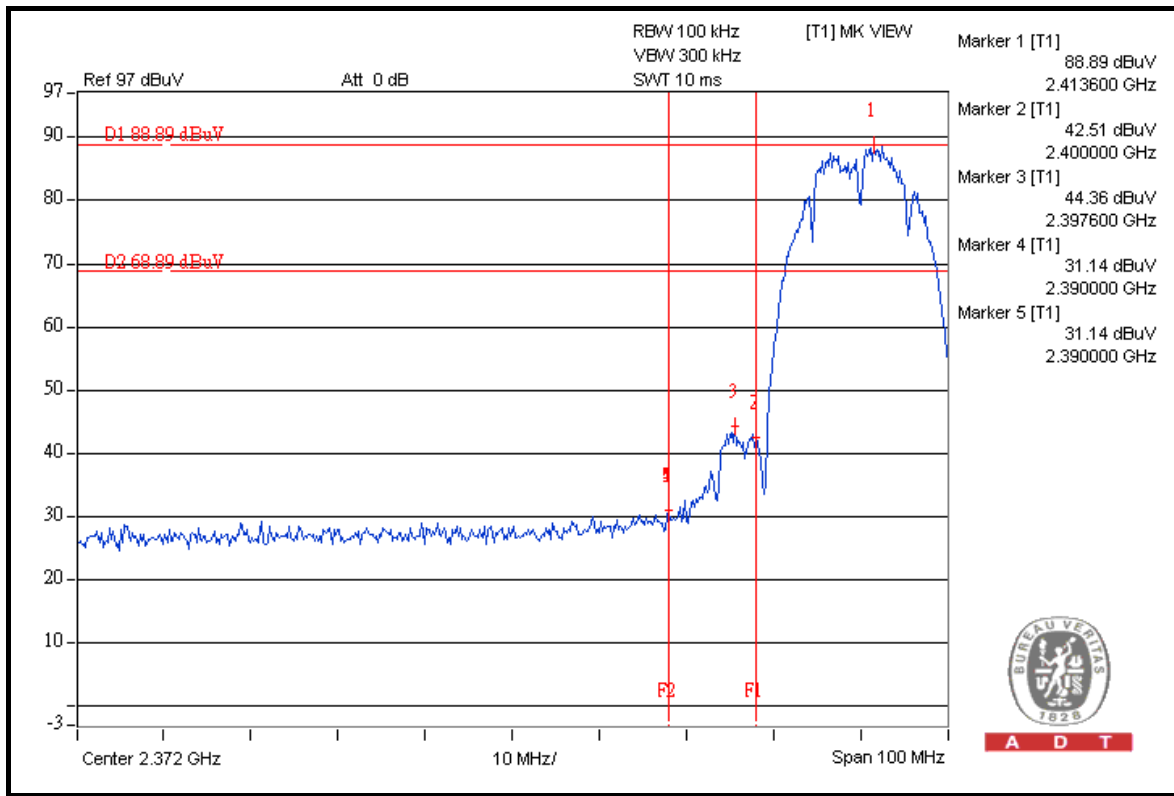
The band edge emission plot of on the next page shows 63.50dBc between carrier maximum power and local maximum emission in restrict band (2.3898GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 111.75dBuV/m (Average), so the maximum field strength in restrict band is $111.75 - 63.50 = 48.25$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 55.47dBc between carrier maximum power and local maximum emission in restrict band (2.4844GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 115.18dBuV/m (Peak), so the maximum field strength in restrict band is $115.18 - 55.47 = 59.71$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 61.06dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 111.04dBuV/m (Average), so the maximum field strength in restrict band is $111.04 - 61.06 = 49.98$ dBuV/m which is under 54dBuV/m limit.

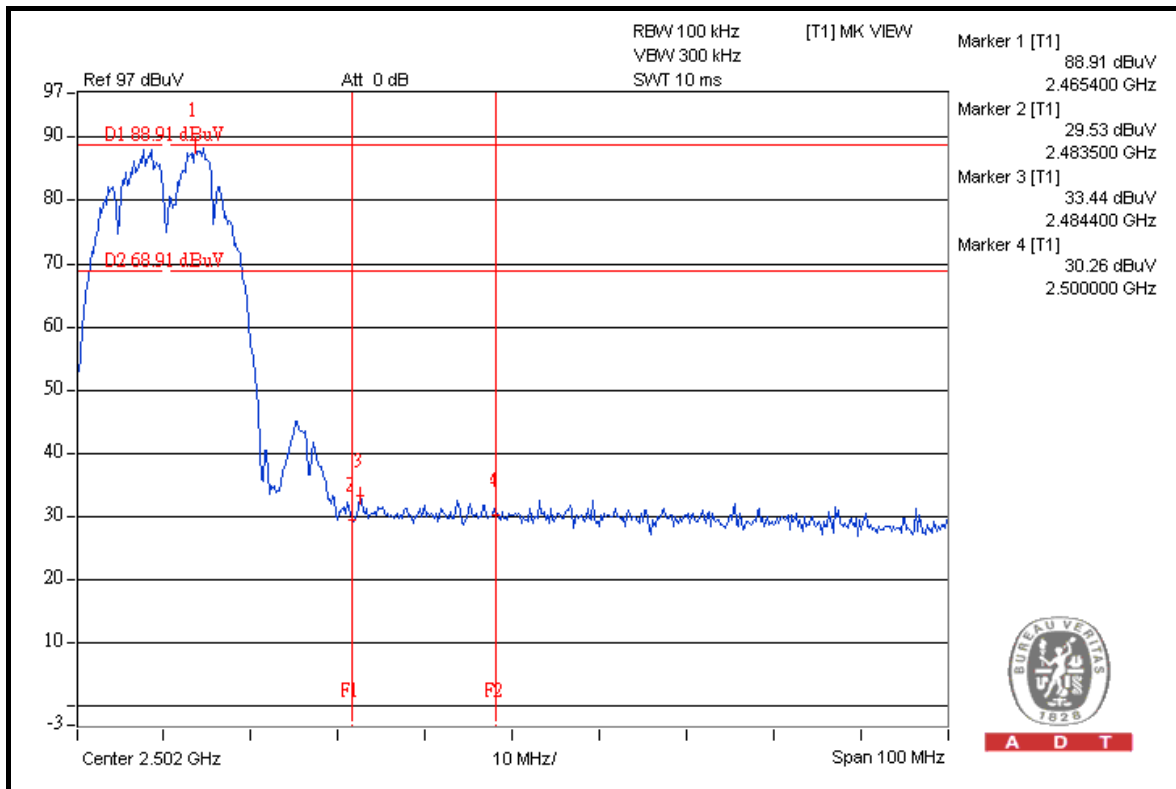
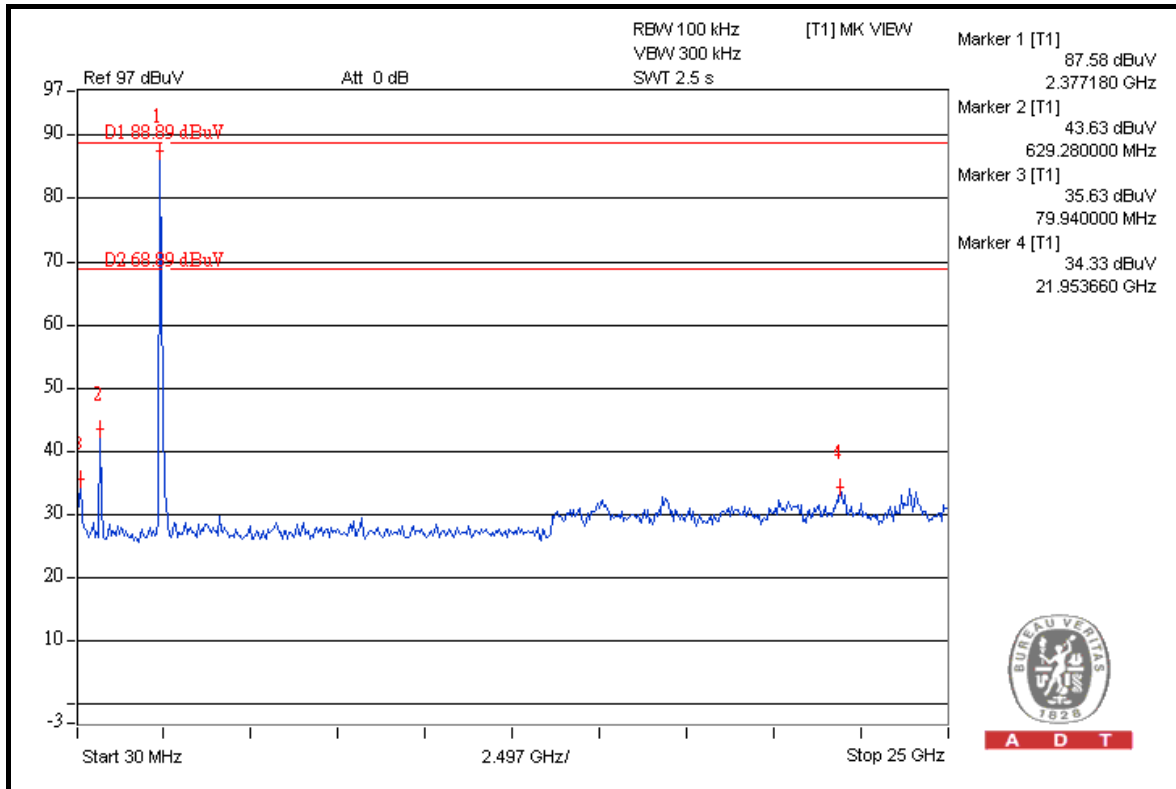


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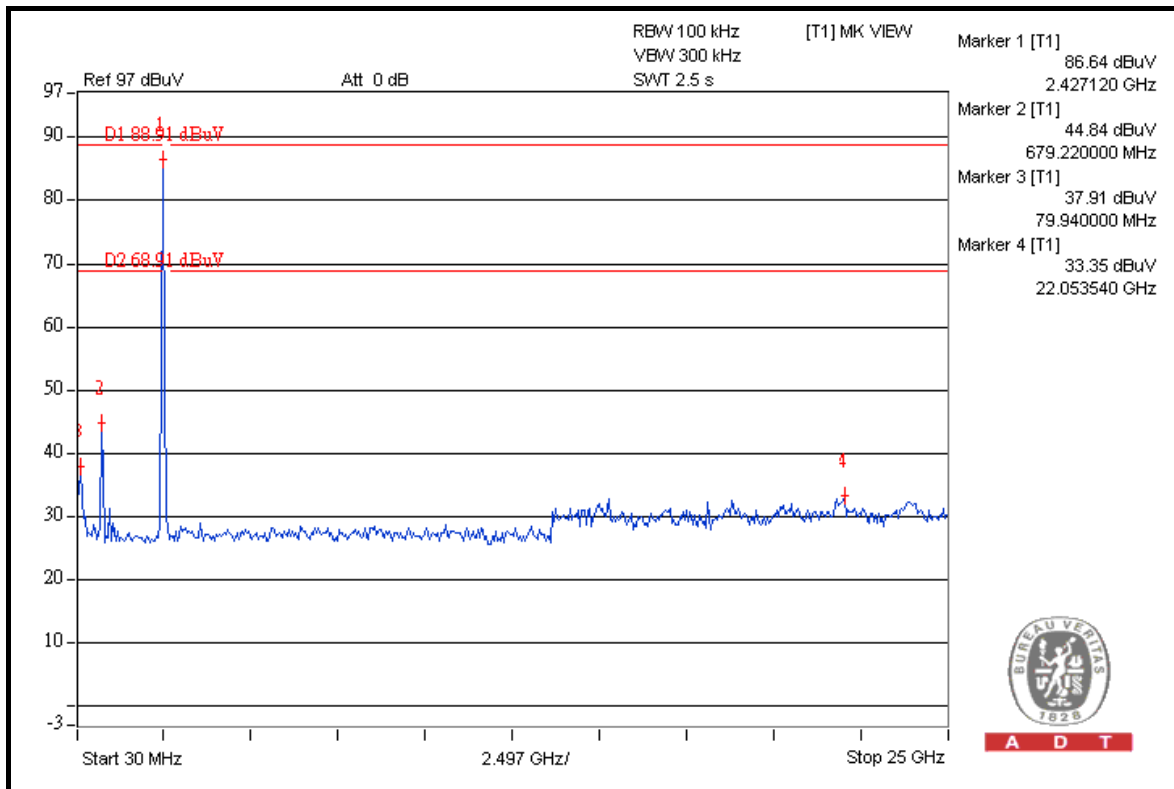
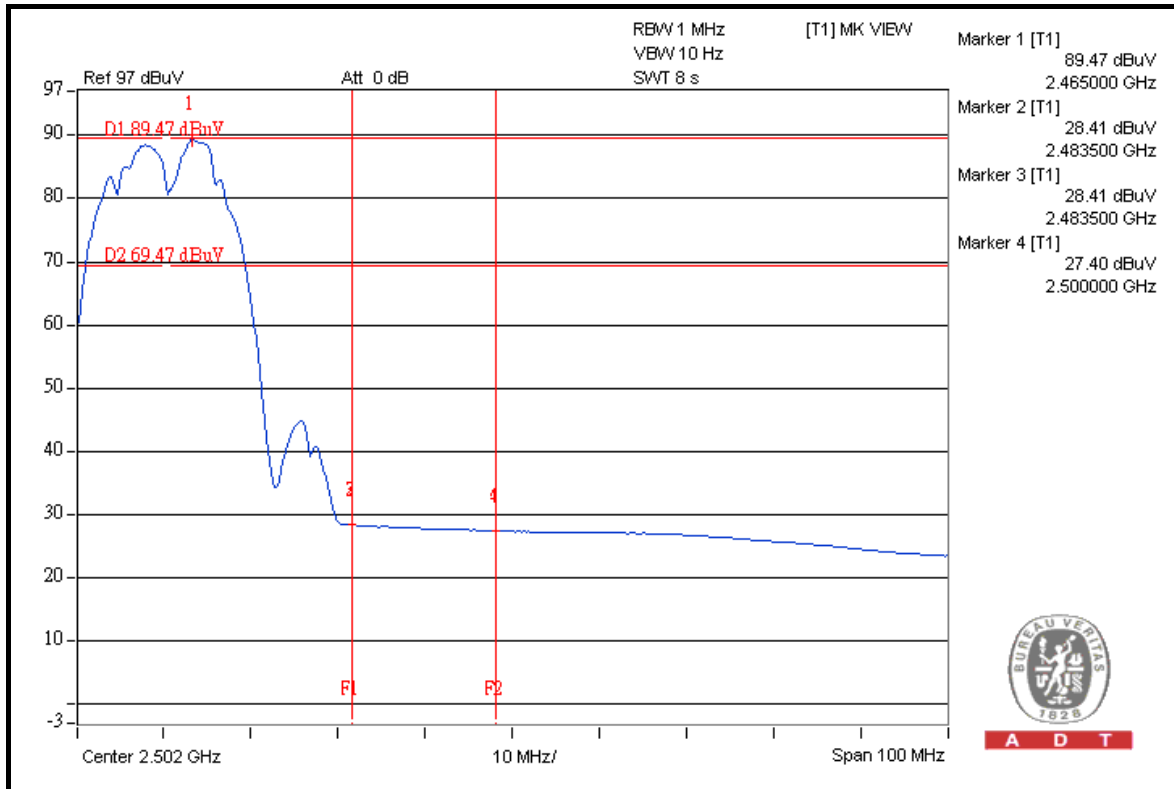


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802.11g OFDM MODULATION

TEST MODE A

NOTE 1: The band edge emission plot on the next page shows 52.15dBc between carrier maximum power and local maximum emission in restrict band (2.3508GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 111.86dBuV/m (Peak), so the maximum field strength in restrict band is $111.86 - 52.15 = 59.71$ dBuV/m which is under 74dBuV/m limit.

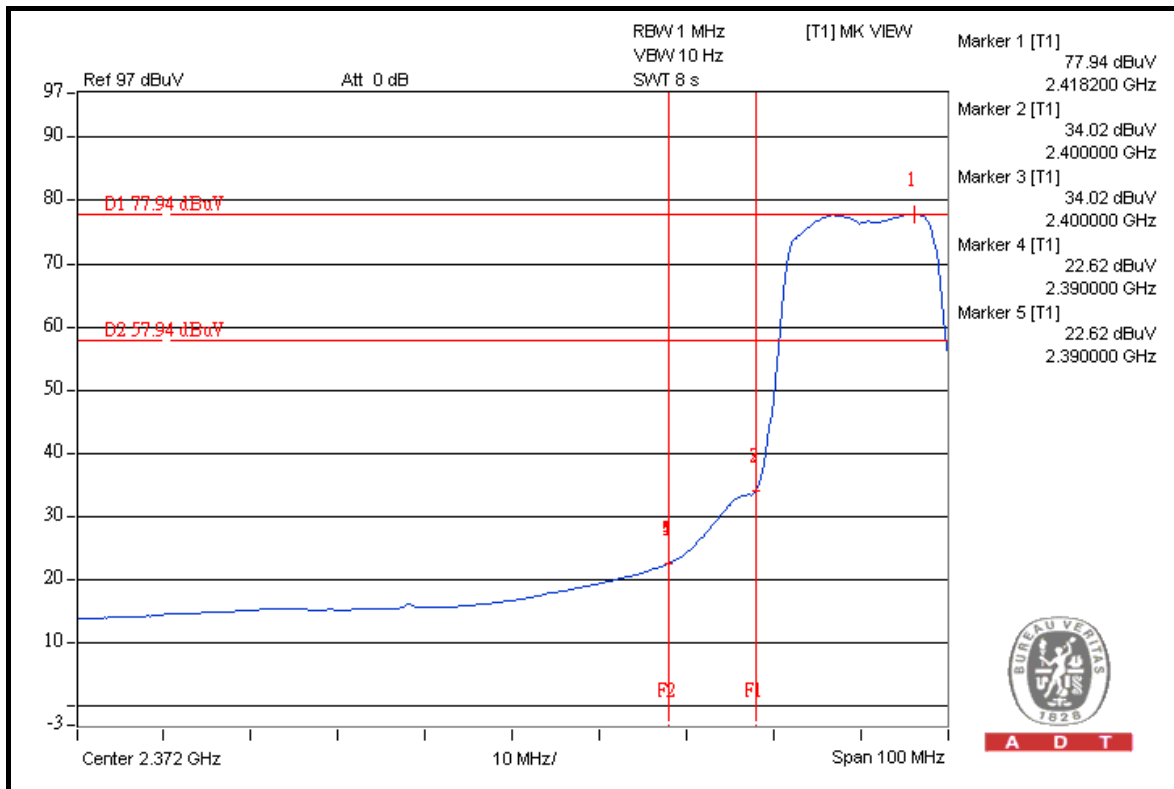
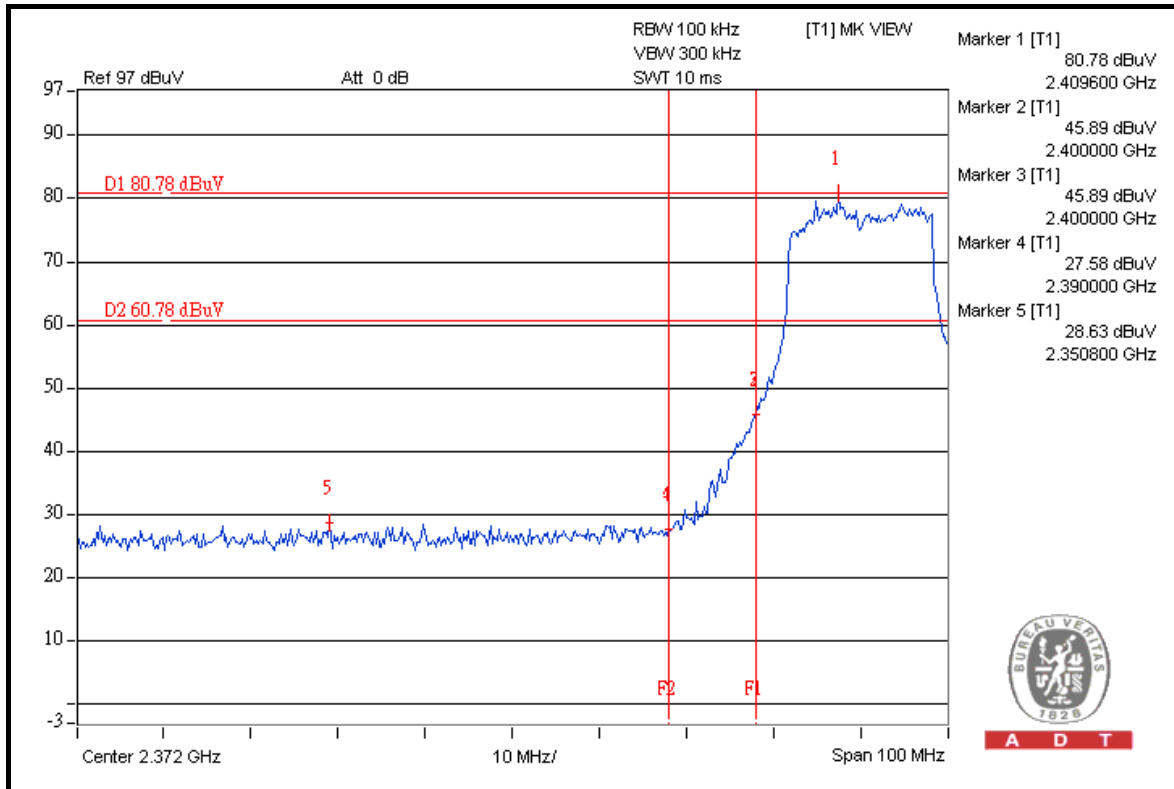
The band edge emission plot of on the next page shows 55.32dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 102.00dBuV/m (Average), so the maximum field strength in restrict band is $102.00 - 55.32 = 46.68$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 49.14dBc between carrier maximum power and local maximum emission in restrict band (2.4926GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 111.85dBuV/m (Peak), so the maximum field strength in restrict band is $111.85 - 49.14 = 62.71$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 52.59dBc between carrier maximum power and local maximum emission in restrict band (2.4844GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 102.26dBuV/m (Average), so the maximum field strength in restrict band is $102.26 - 52.59 = 49.67$ dBuV/m which is under 54dBuV/m limit.

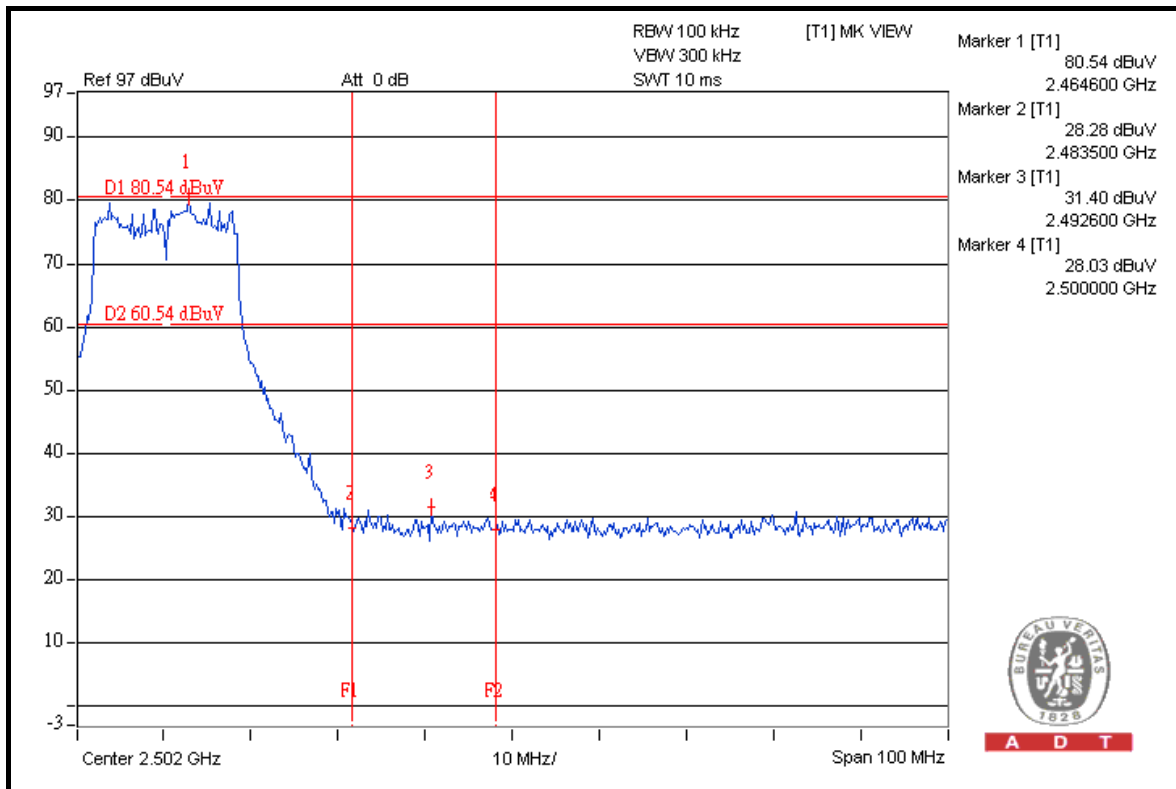
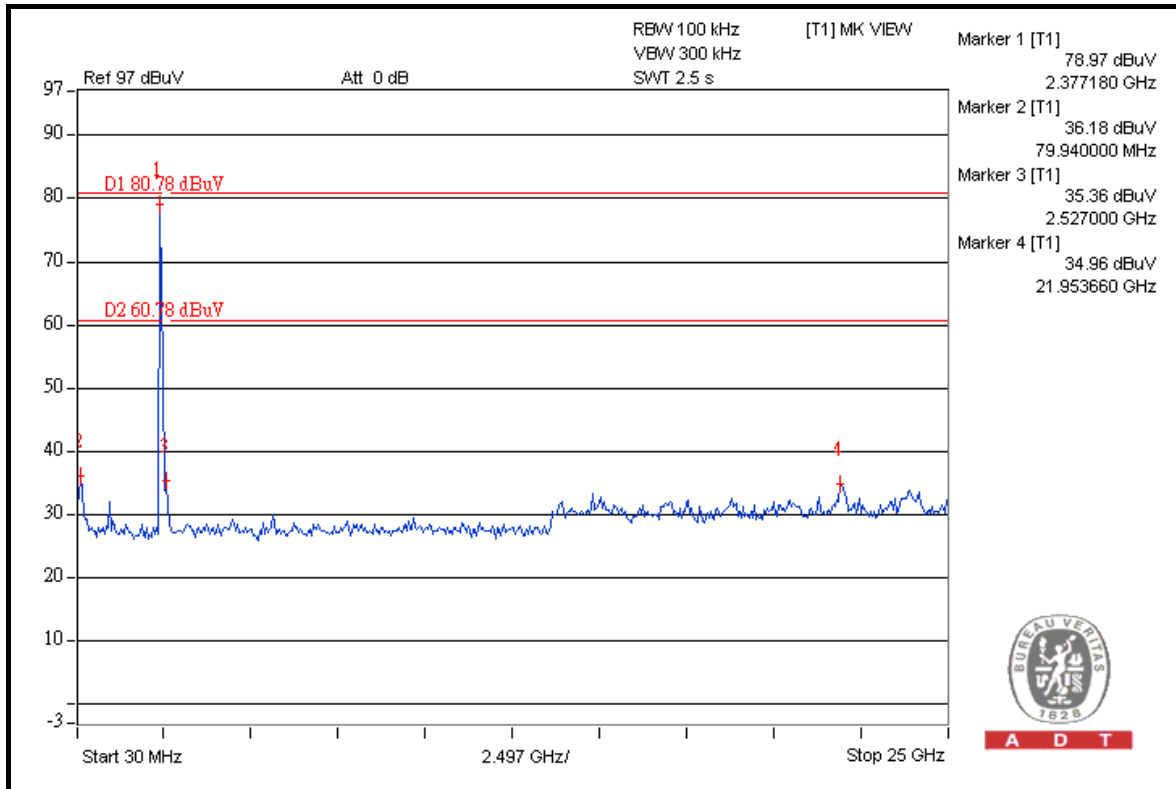


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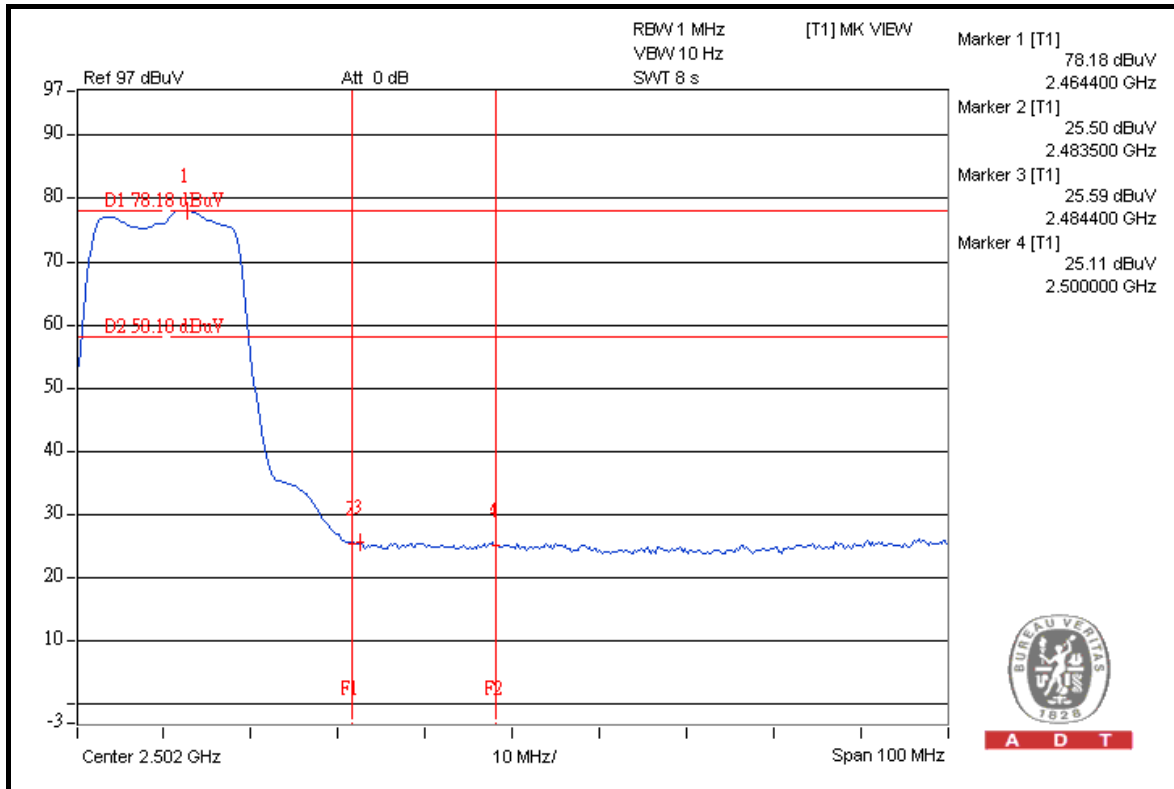


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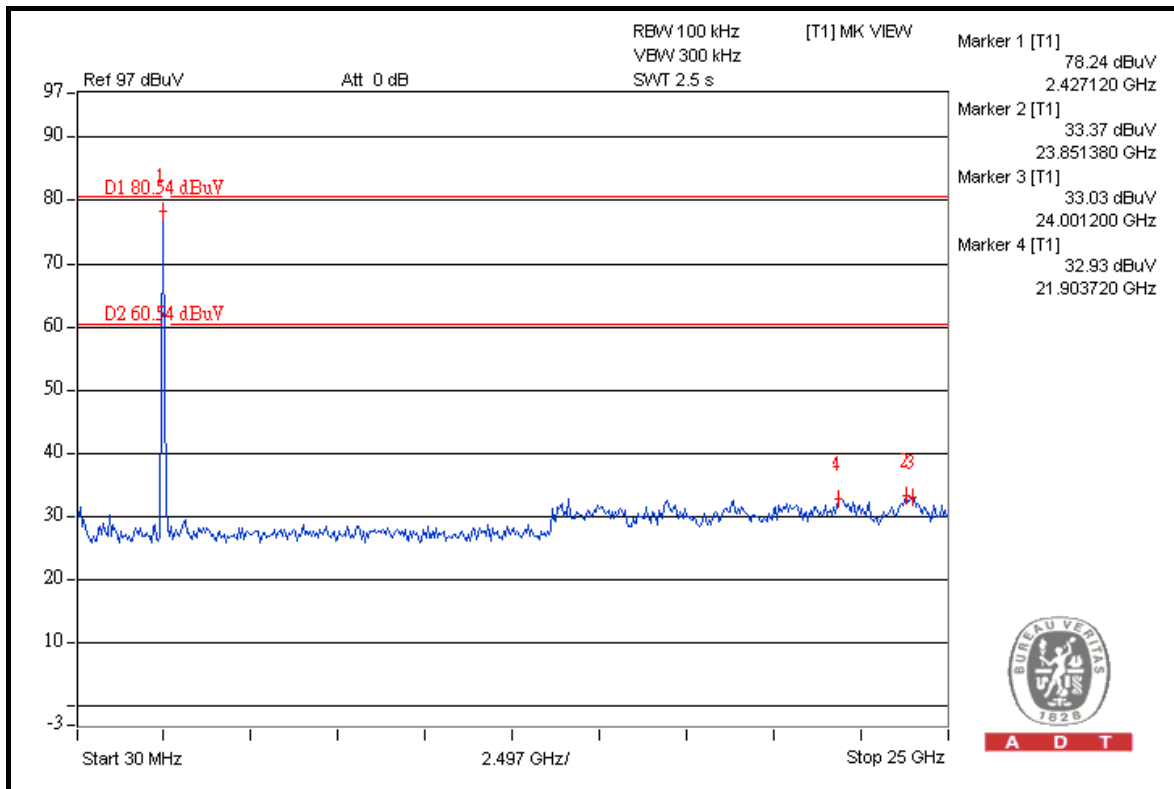




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TEST MODE C

NOTE 1: The band edge emission plot on the next page shows 49.54dBc between carrier maximum power and local maximum emission in restrict band (2.3852GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 114.08dBuV/m (Peak), so the maximum field strength in restrict band is $114.08 - 49.54 = 64.54$ dBuV/m which is under 74dBuV/m limit.

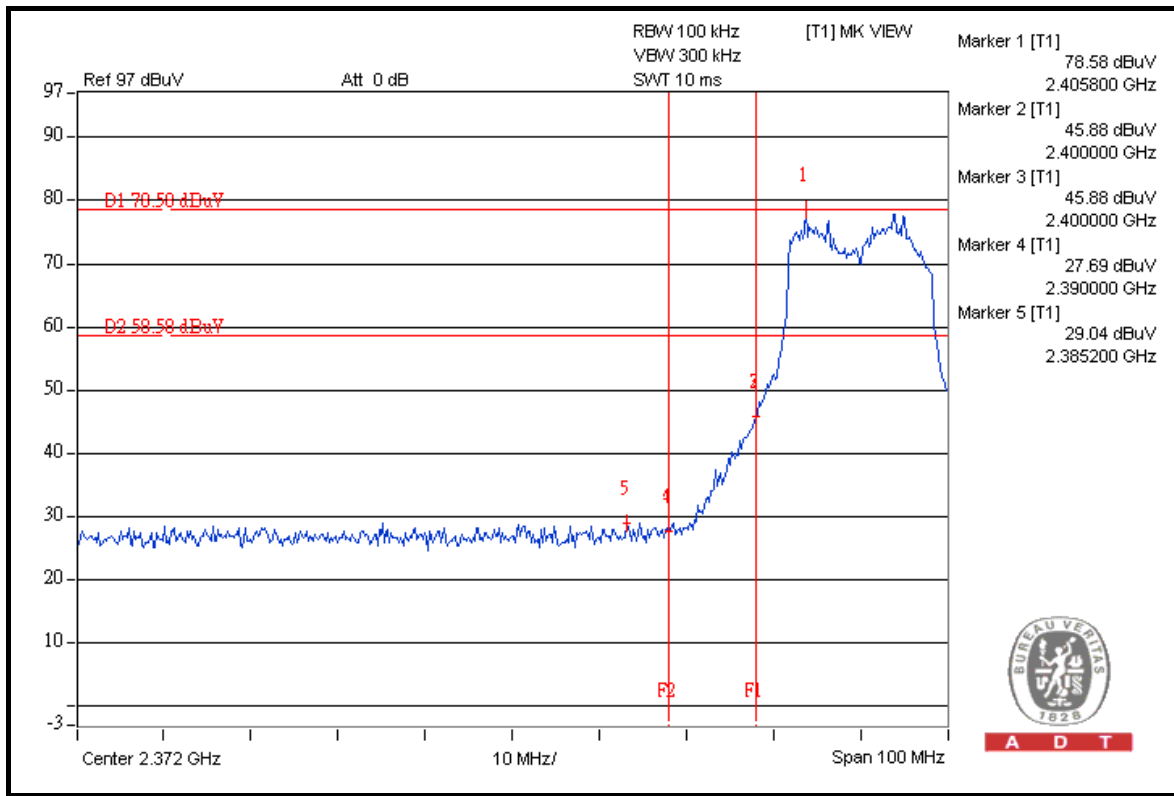
The band edge emission plot of on the next page shows 52.93dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 104.07dBuV/m (Average), so the maximum field strength in restrict band is $104.07 - 52.93 = 51.14$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 46.72dBc between carrier maximum power and local maximum emission in restrict band (2.4940GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 114.06dBuV/m (Peak), so the maximum field strength in restrict band is $114.06 - 46.72 = 67.34$ dBuV/m which is under 74dBuV/m limit.

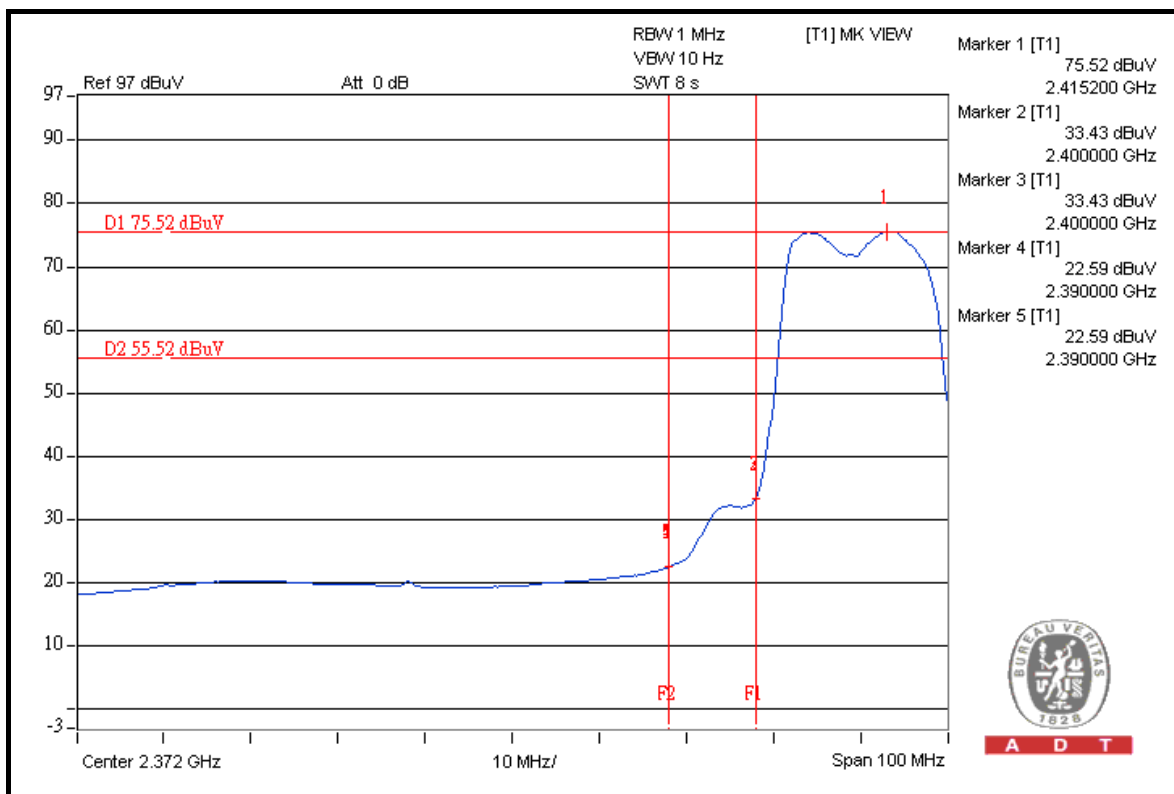
The band edge emission plot on the next third page shows 50.76dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 103.63dBuV/m (Average), so the maximum field strength in restrict band is $103.63 - 50.76 = 52.87$ dBuV/m which is under 54dBuV/m limit.



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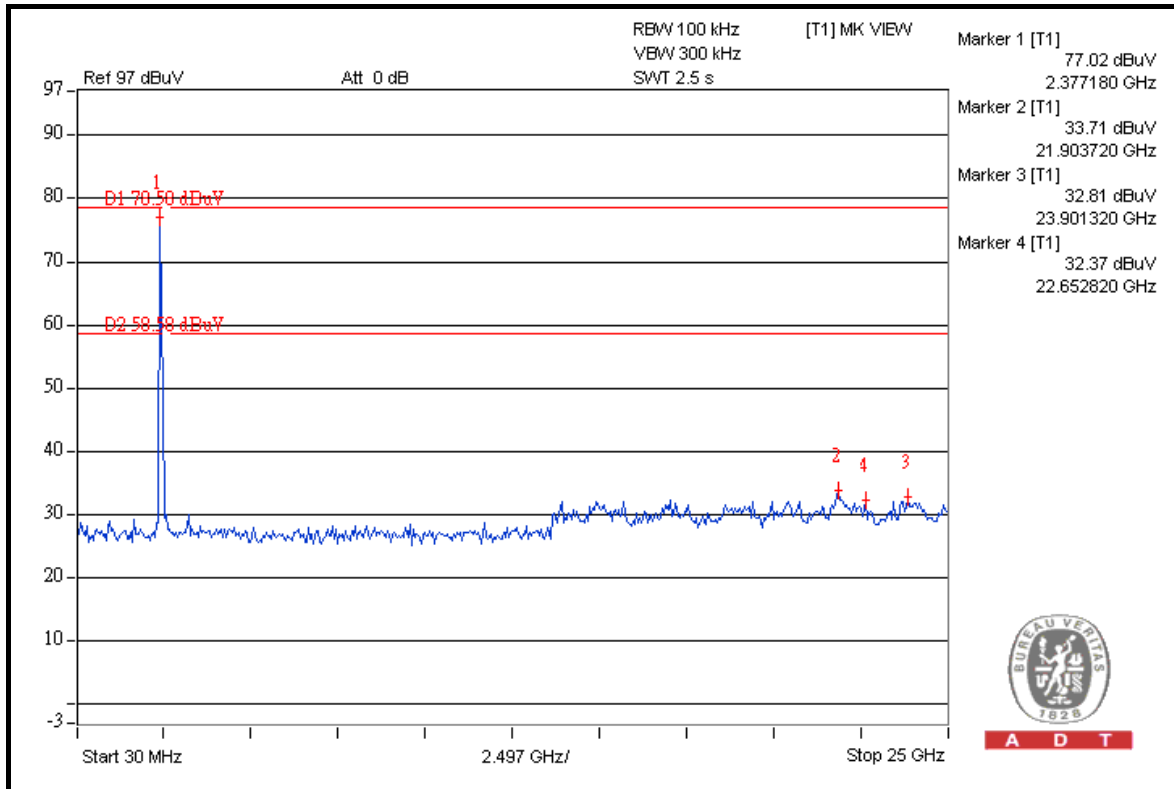
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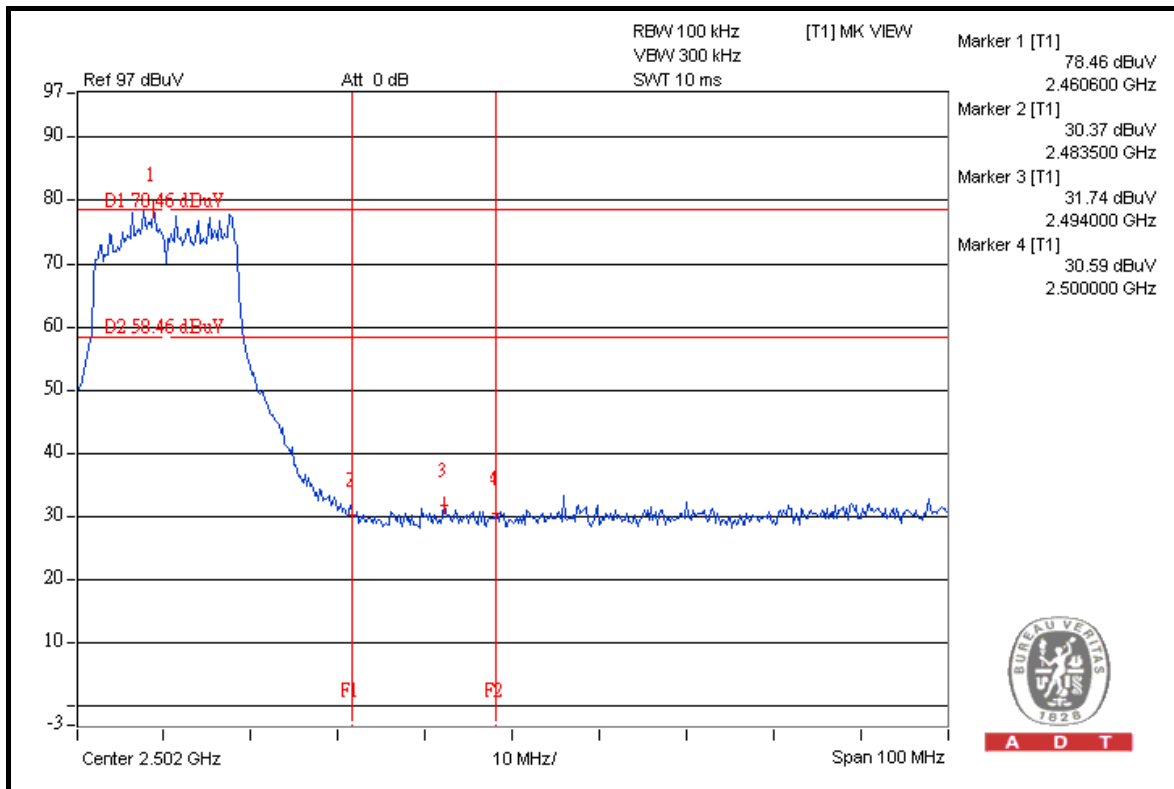
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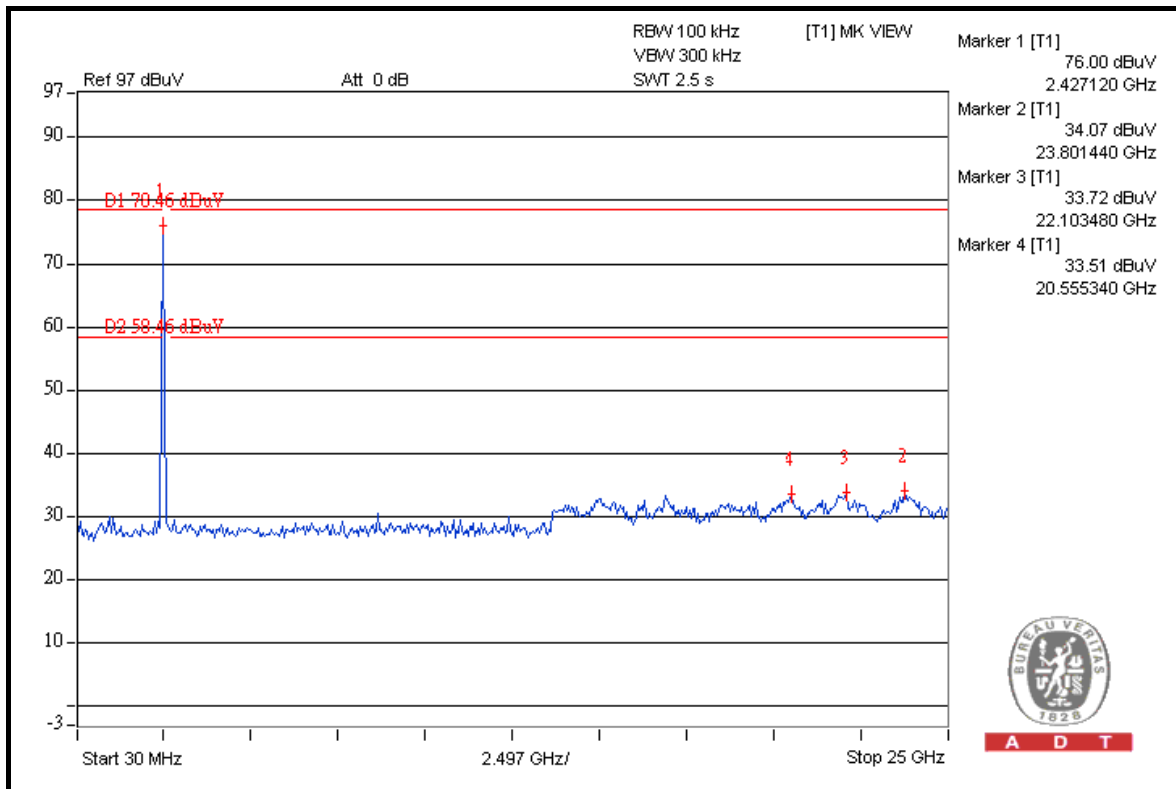
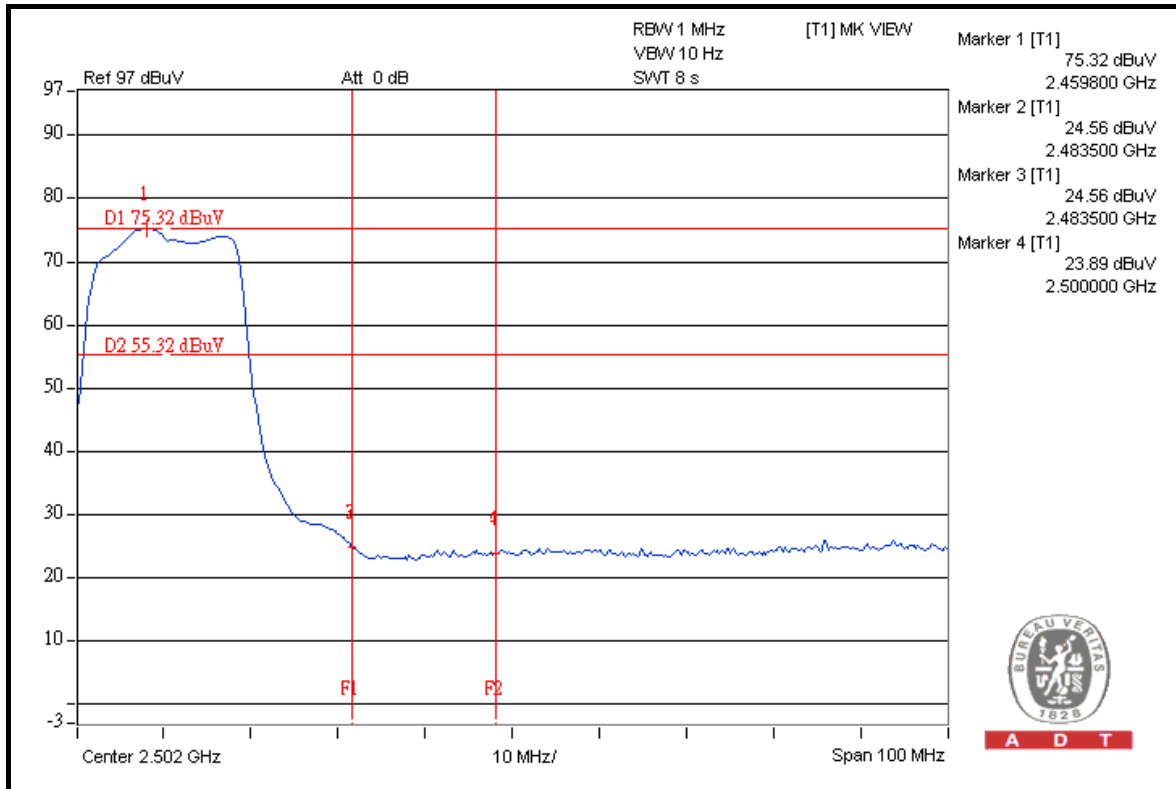
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DRAFT 802.11n (20MHz) OFDM MODULATION

TEST MODE A

NOTE 1: The band edge emission plot on the next page shows 49.81dBc between carrier maximum power and local maximum emission in restrict band (2.3812GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 110.11dBuV/m (Peak), so the maximum field strength in restrict band is $110.11 - 49.81 = 60.30$ dBuV/m which is under 74dBuV/m limit.

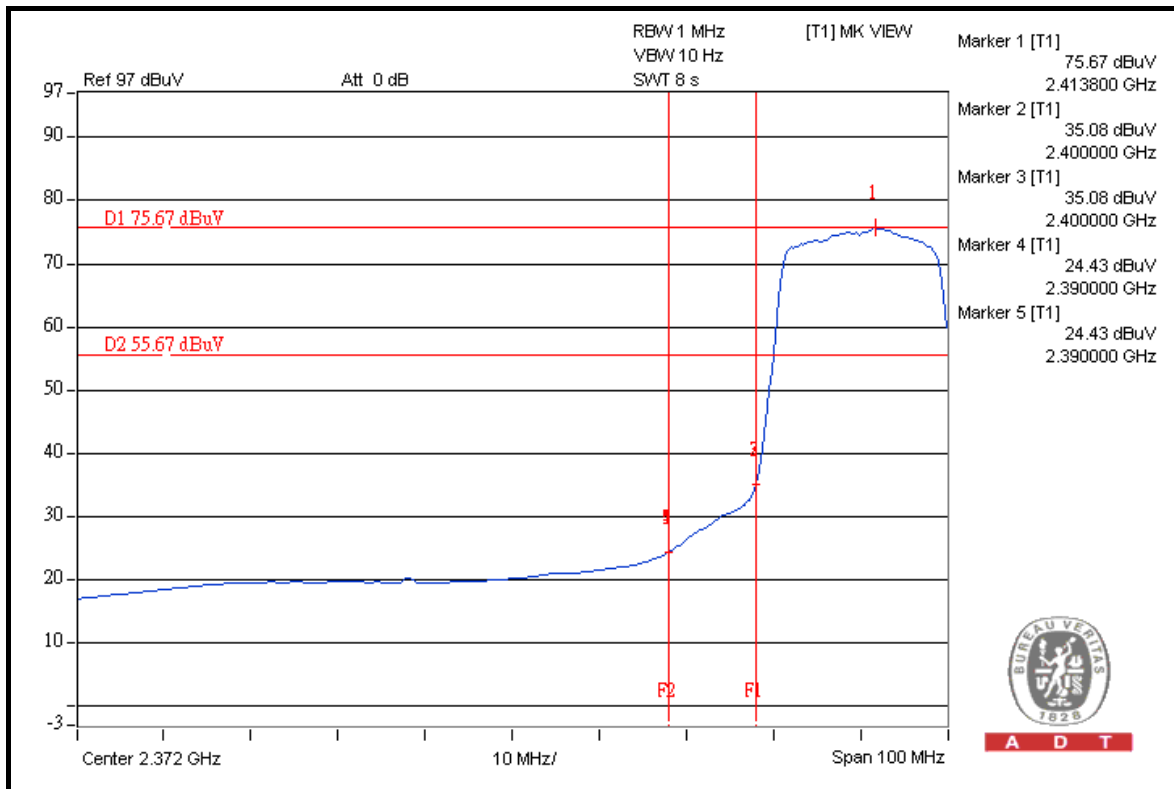
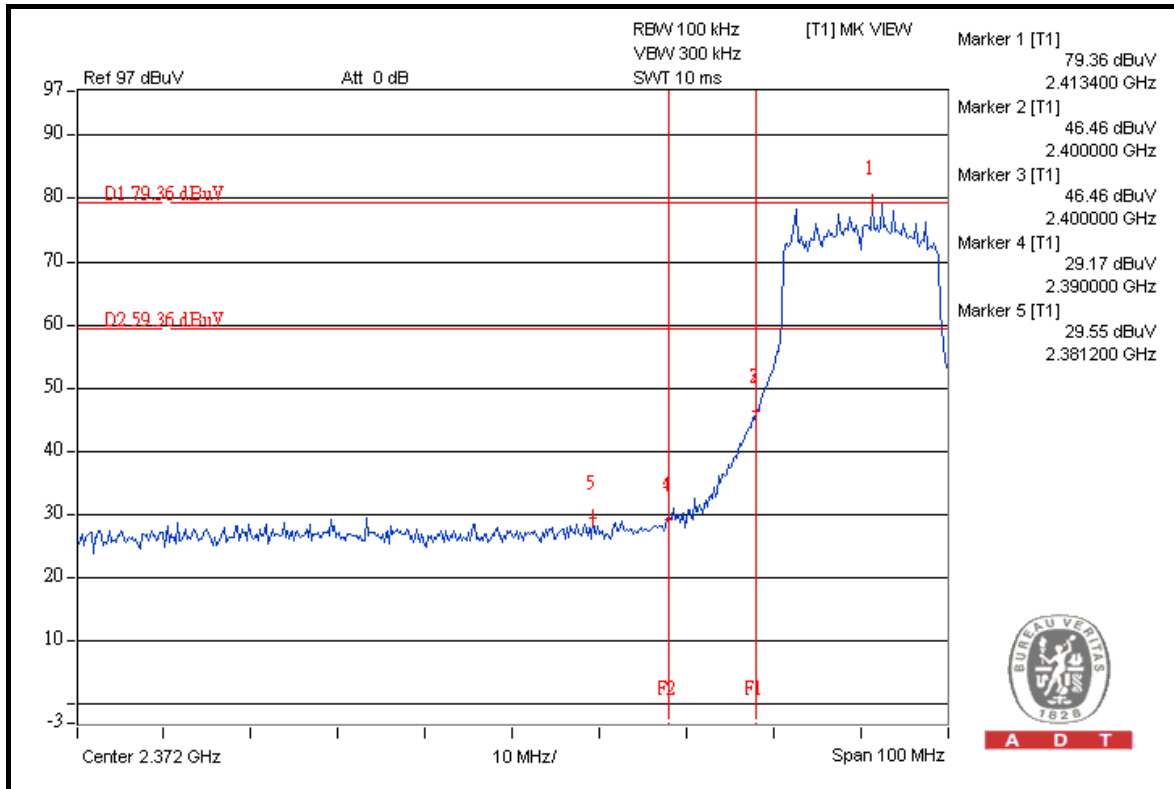
The band edge emission plot of on the next page shows 51.24dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 99.83dBuV/m (Average), so the maximum field strength in restrict band is $99.83 - 51.24 = 48.59$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 48.02dBc between carrier maximum power and local maximum emission in restrict band (2.4842GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 109.95dBuV/m (Peak), so the maximum field strength in restrict band is $109.95 - 48.02 = 61.93$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 51.11dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 99.90dBuV/m (Average), so the maximum field strength in restrict band is $99.90 - 51.11 = 48.79$ dBuV/m which is under 54dBuV/m limit.

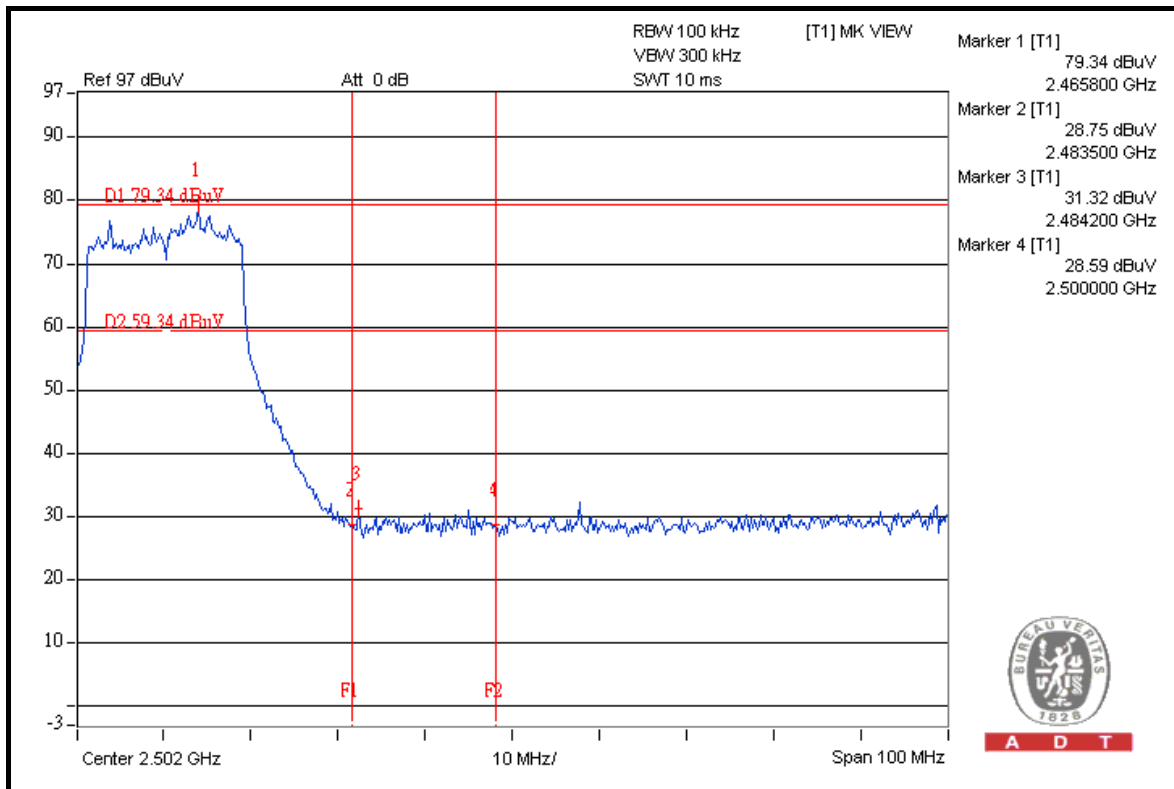
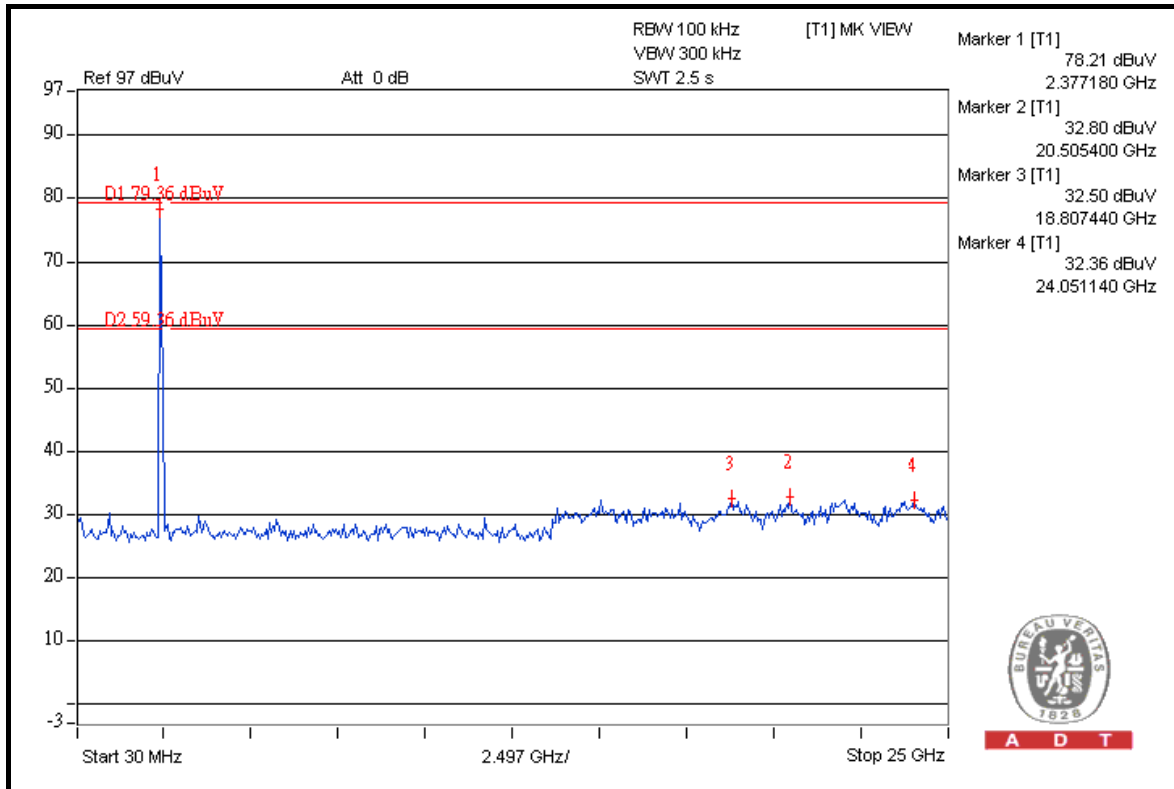


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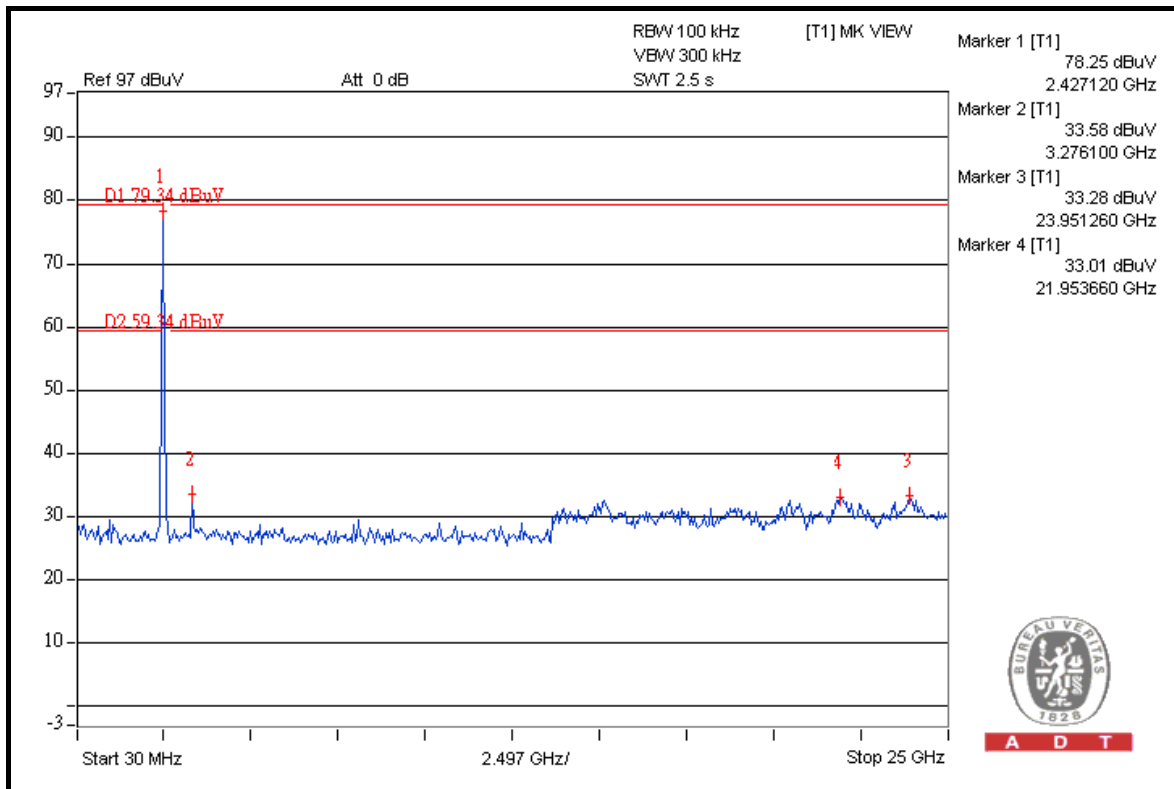
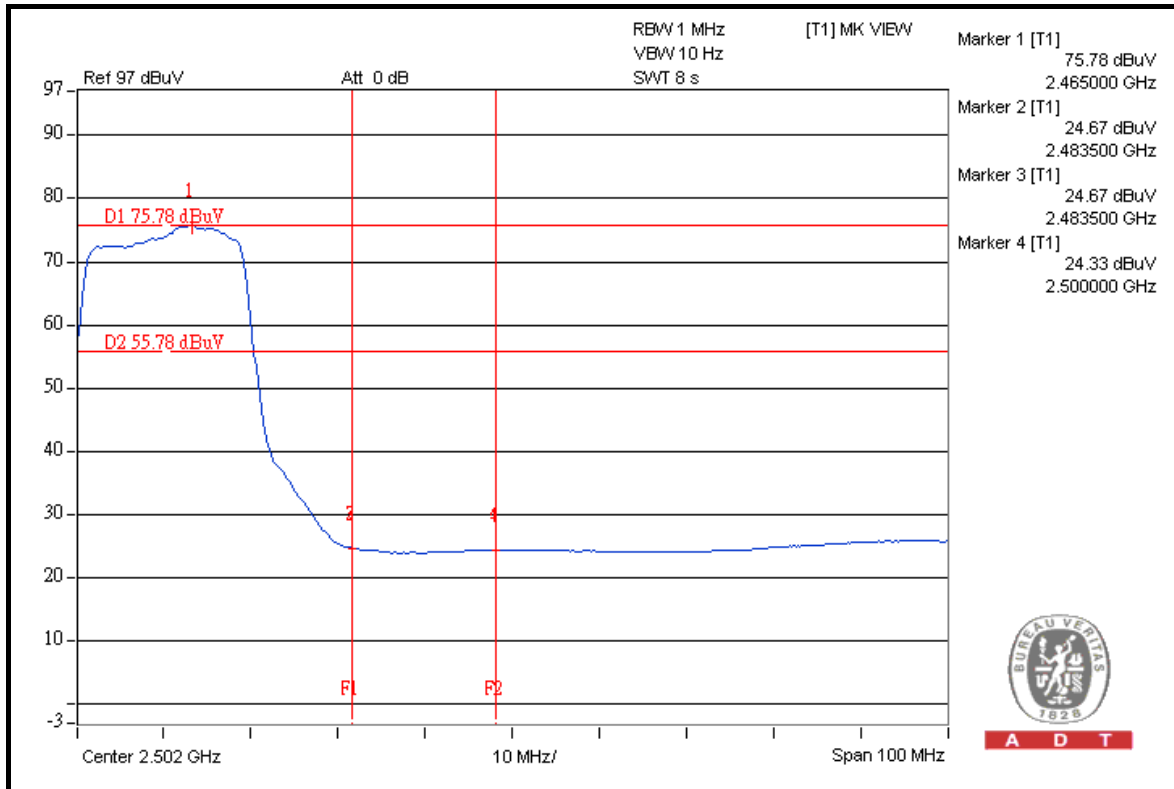


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TEST MODE C

NOTE 1: The band edge emission plot on the next page shows 52.01dBc between carrier maximum power and local maximum emission in restrict band (2.3846GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 112.05dBuV/m (Peak), so the maximum field strength in restrict band is $112.50 - 52.01 = 60.49$ dBuV/m which is under 74dBuV/m limit.

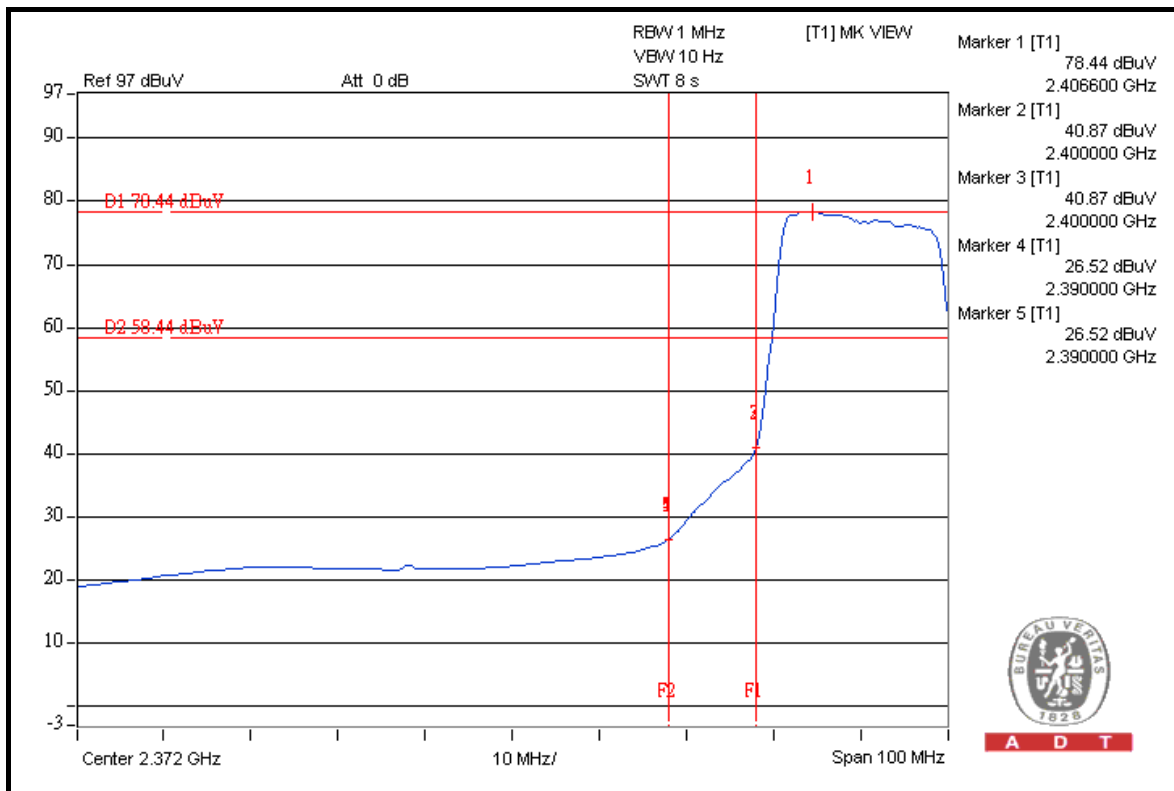
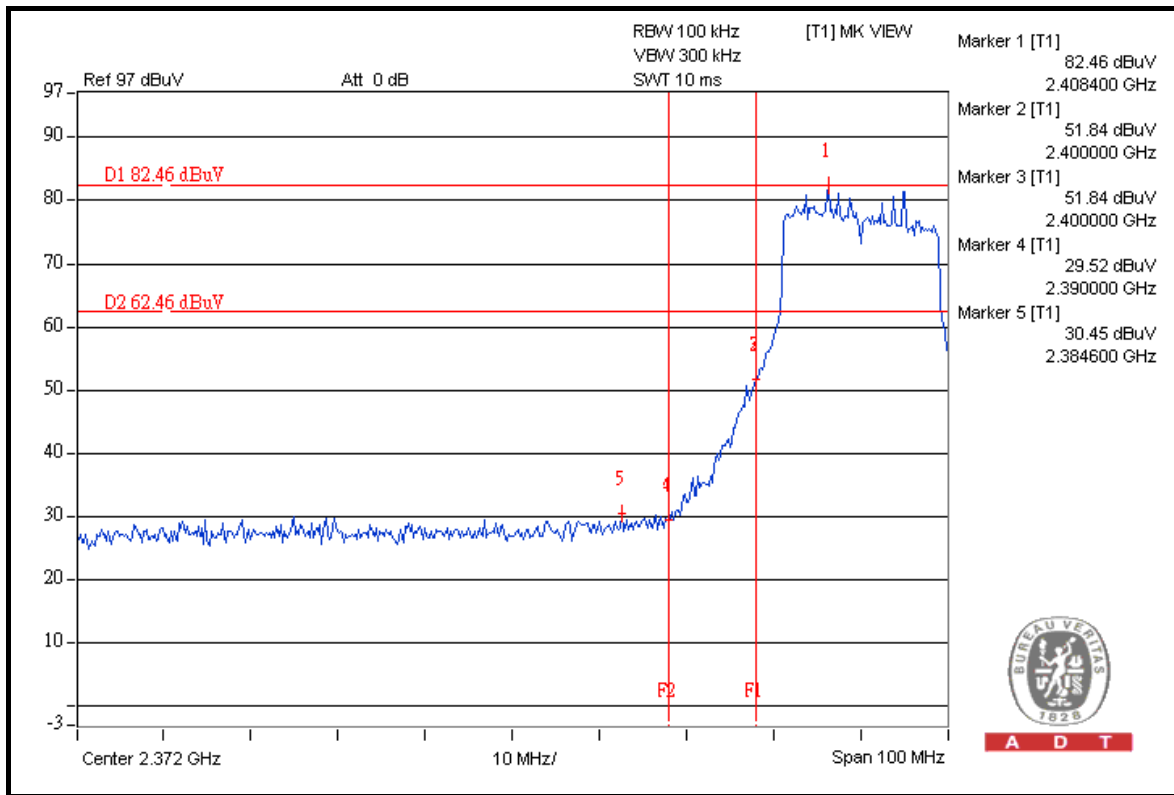
The band edge emission plot of on the next page shows 51.92dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 101.99dBuV/m (Average), so the maximum field strength in restrict band is $101.99 - 51.92 = 50.07$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 48.90dBc between carrier maximum power and local maximum emission in restrict band (2.4836GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 112.06dBuV/m (Peak), so the maximum field strength in restrict band is $112.06 - 48.90 = 63.16$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 49.59dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 11 at the item 4.1.7 is 102.14dBuV/m (Average), so the maximum field strength in restrict band is $102.14 - 49.59 = 52.55$ dBuV/m which is under 54dBuV/m limit.

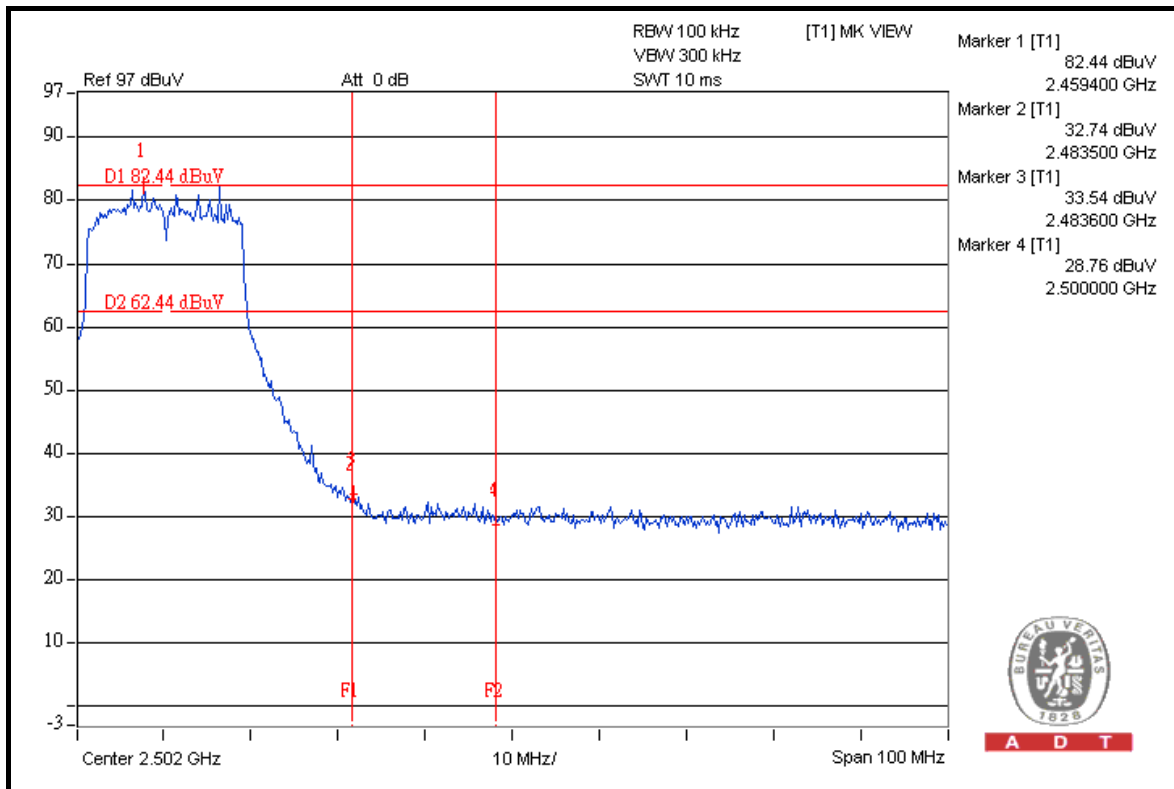
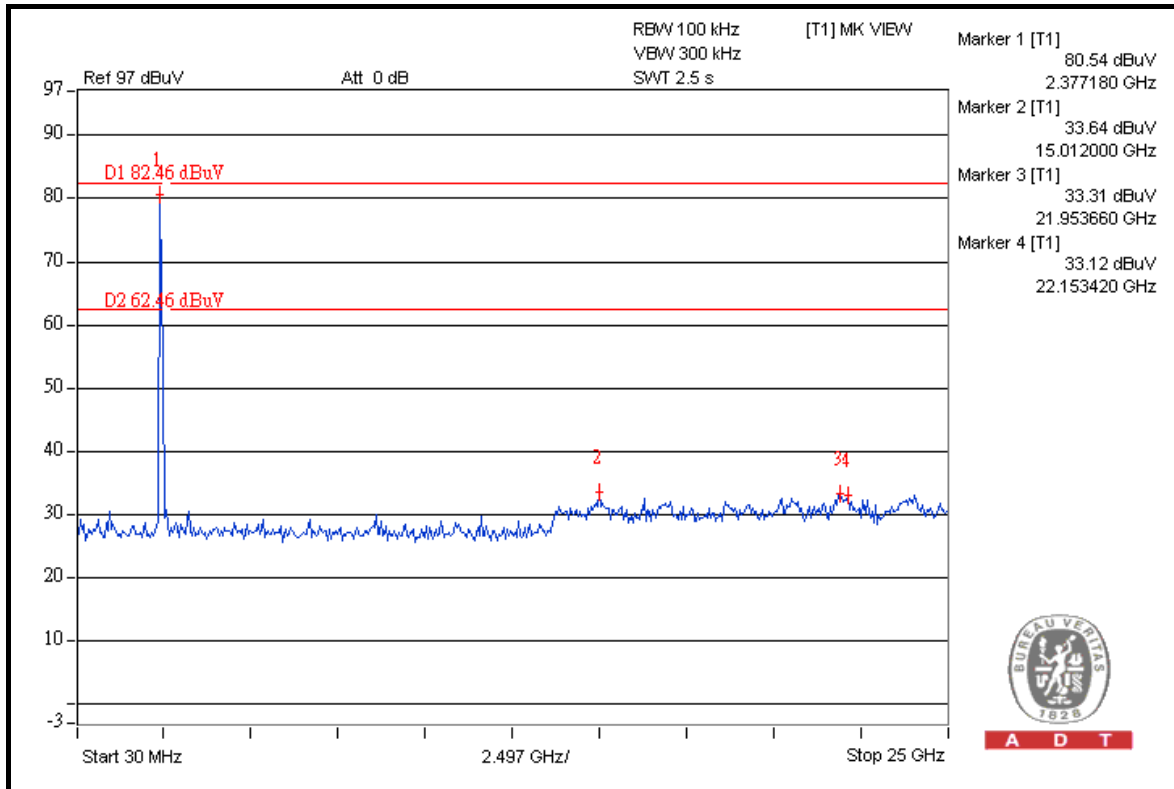


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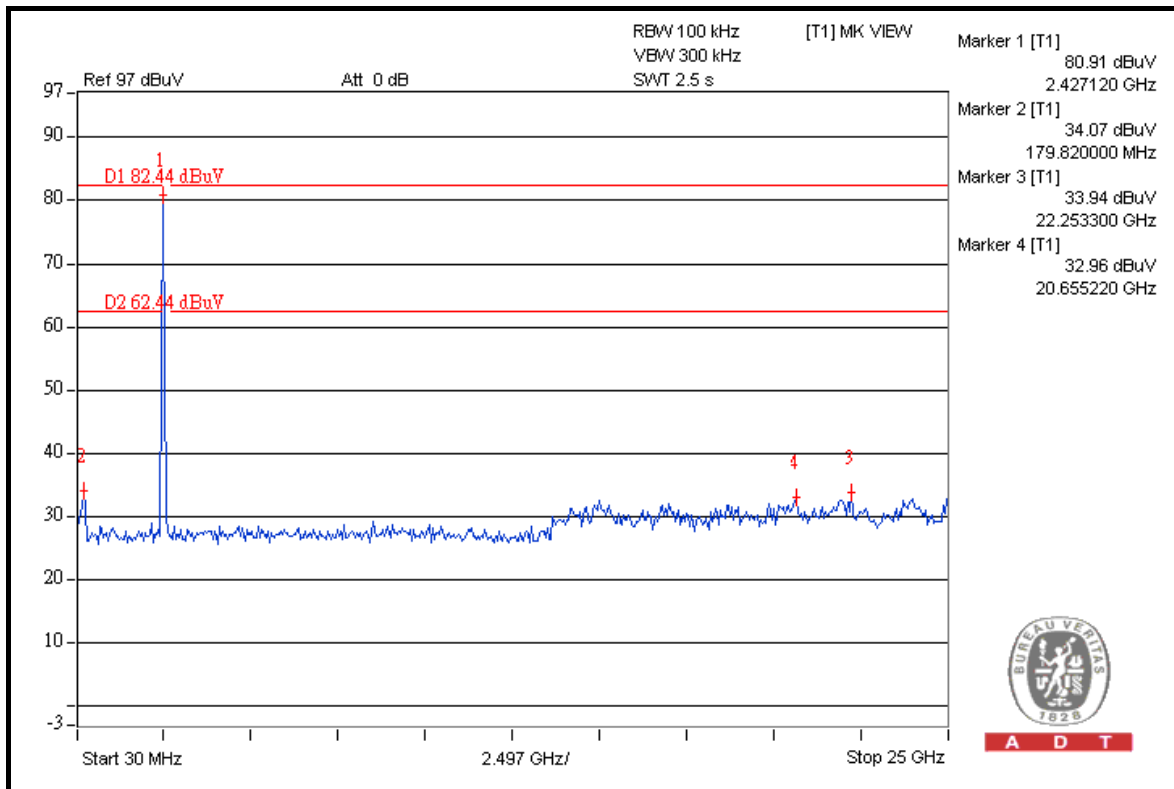
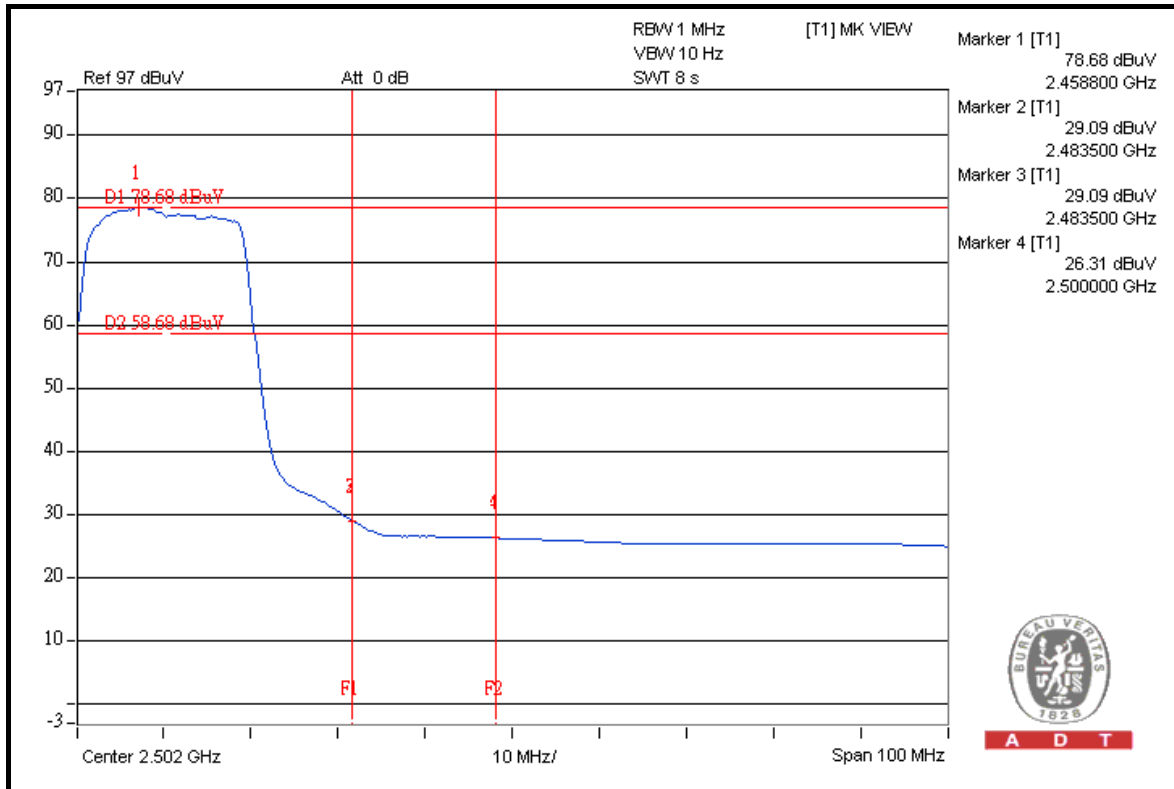


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DRAFT 802.11n (40MHz) OFDM MODULATION

TEST MODE A

NOTE 1: The band edge emission plot on the next page shows 48.60dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 107.82dBuV/m (Peak), so the maximum field strength in restrict band is $107.82 - 48.60 = 59.22$ dBuV/m which is under 74dBuV/m limit.

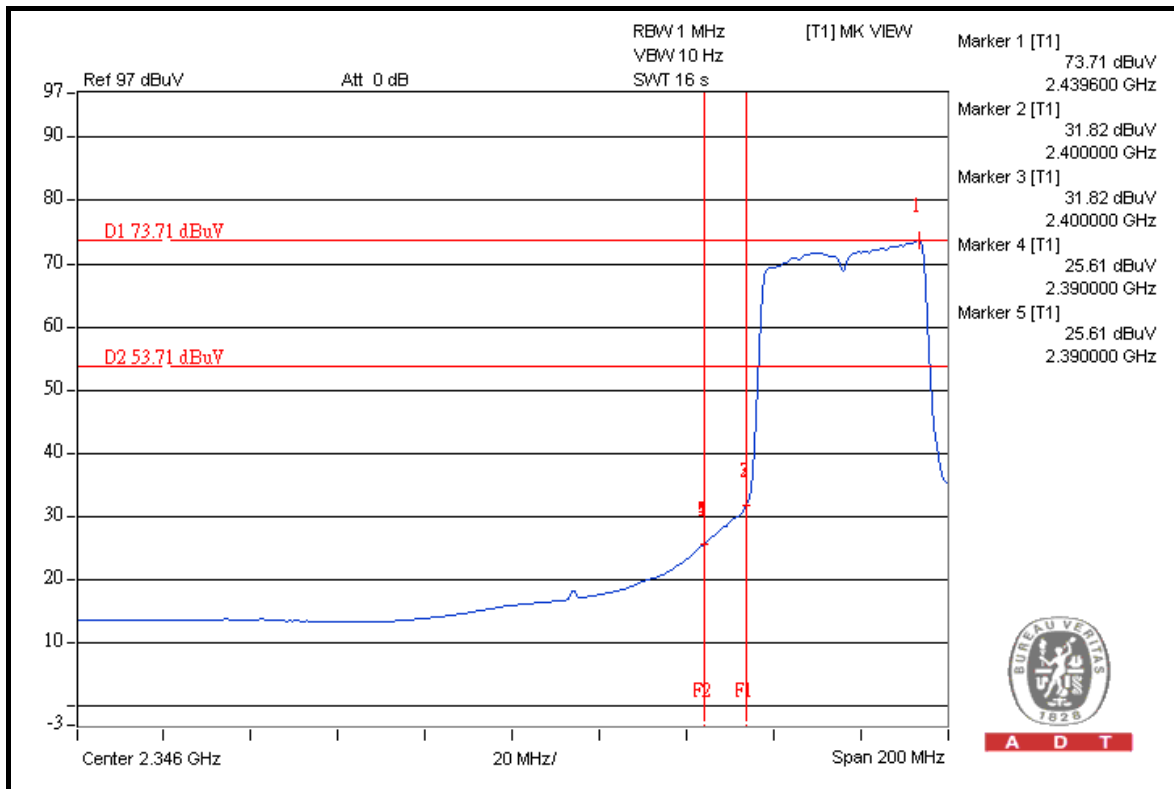
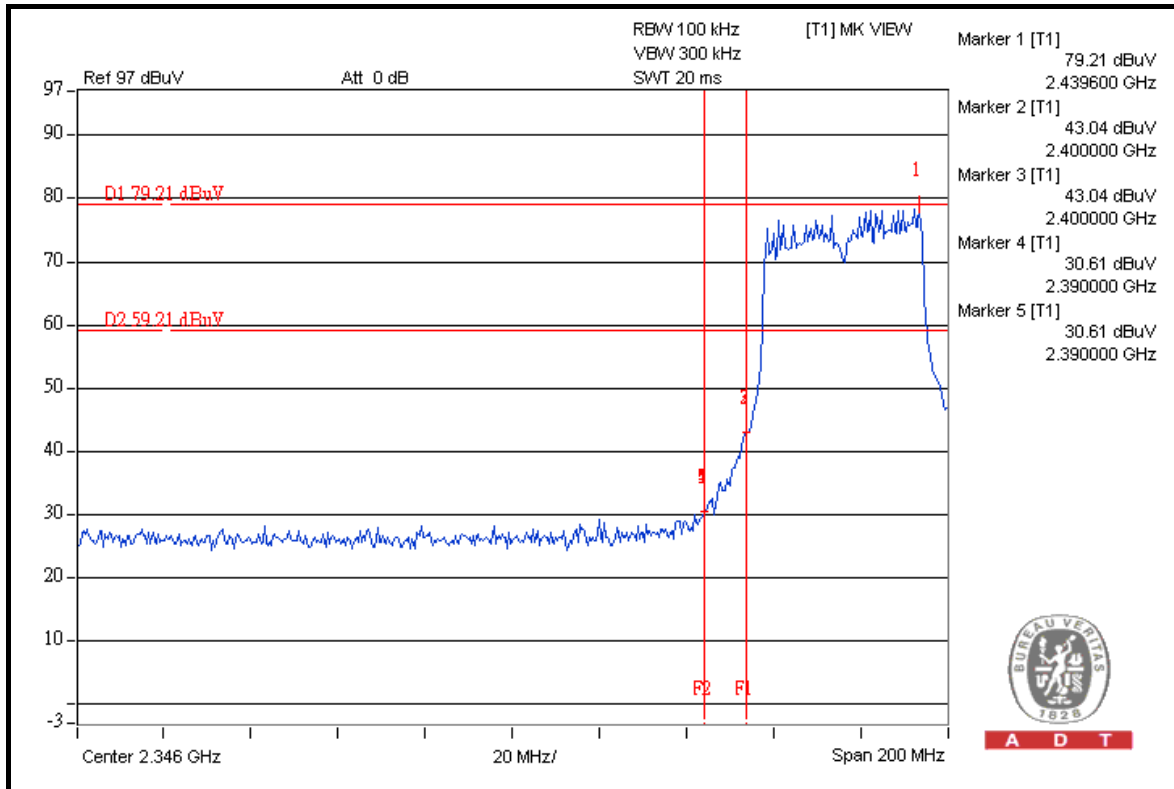
The band edge emission plot of on the next page shows 48.10dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 97.28dBuV/m (Average), so the maximum field strength in restrict band is $97.28 - 48.10 = 49.18$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 45.18dBc between carrier maximum power and local maximum emission in restrict band (2.4980GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 107.39dBuV/m (Peak), so the maximum field strength in restrict band is $107.39 - 45.18 = 62.21$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 46.71dBc between carrier maximum power and local maximum emission in restrict band (2.4900GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 97.28dBuV/m (Average), so the maximum field strength in restrict band is $97.28 - 46.71 = 50.57$ dBuV/m which is under 54dBuV/m limit.

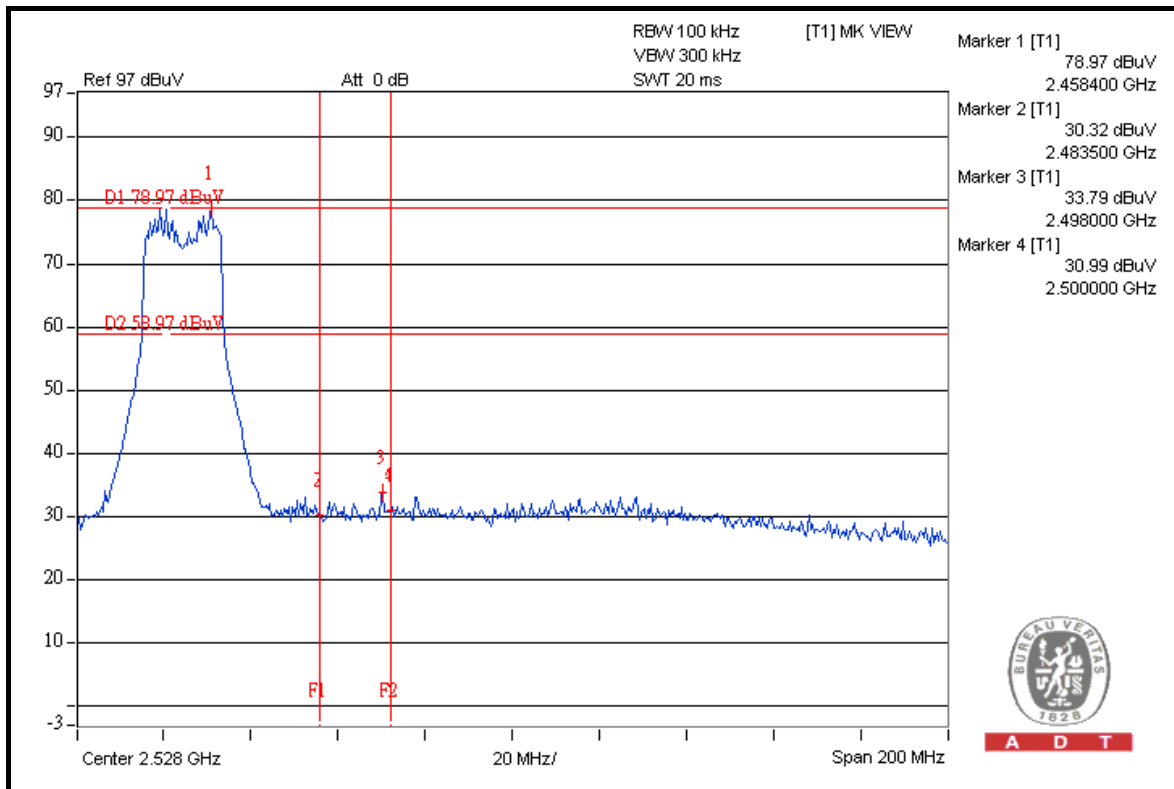
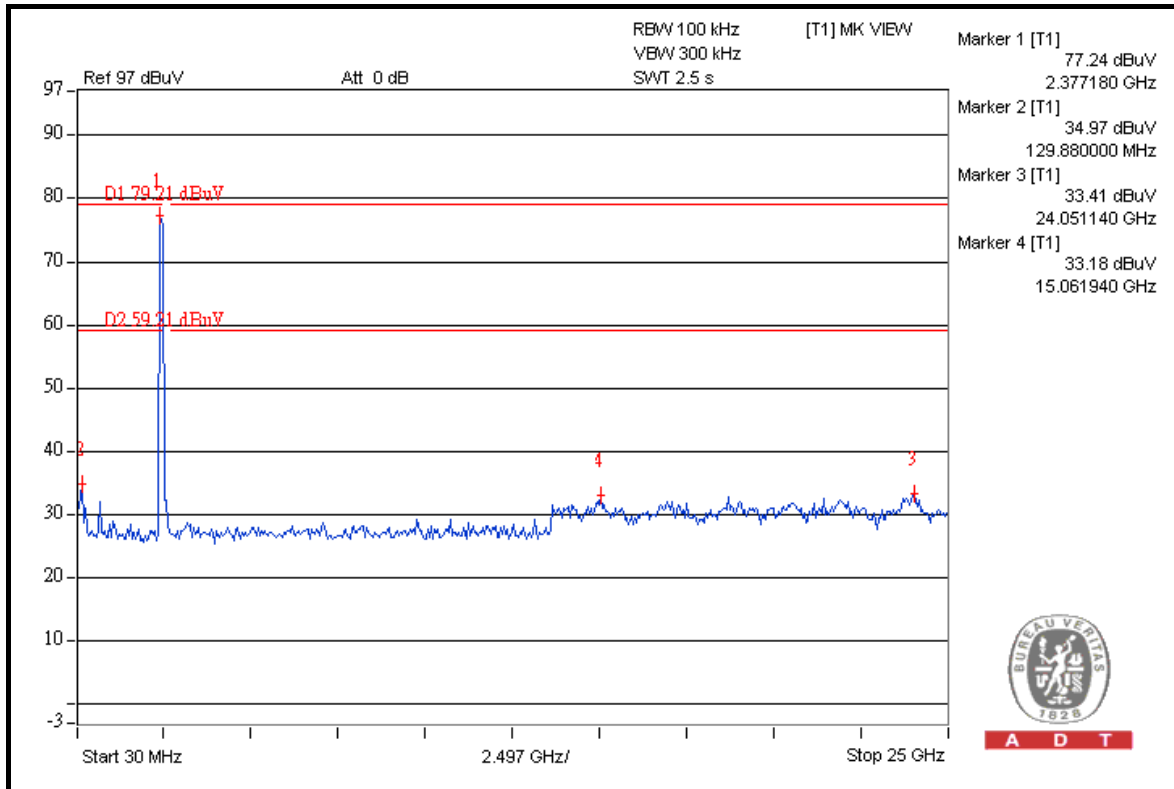


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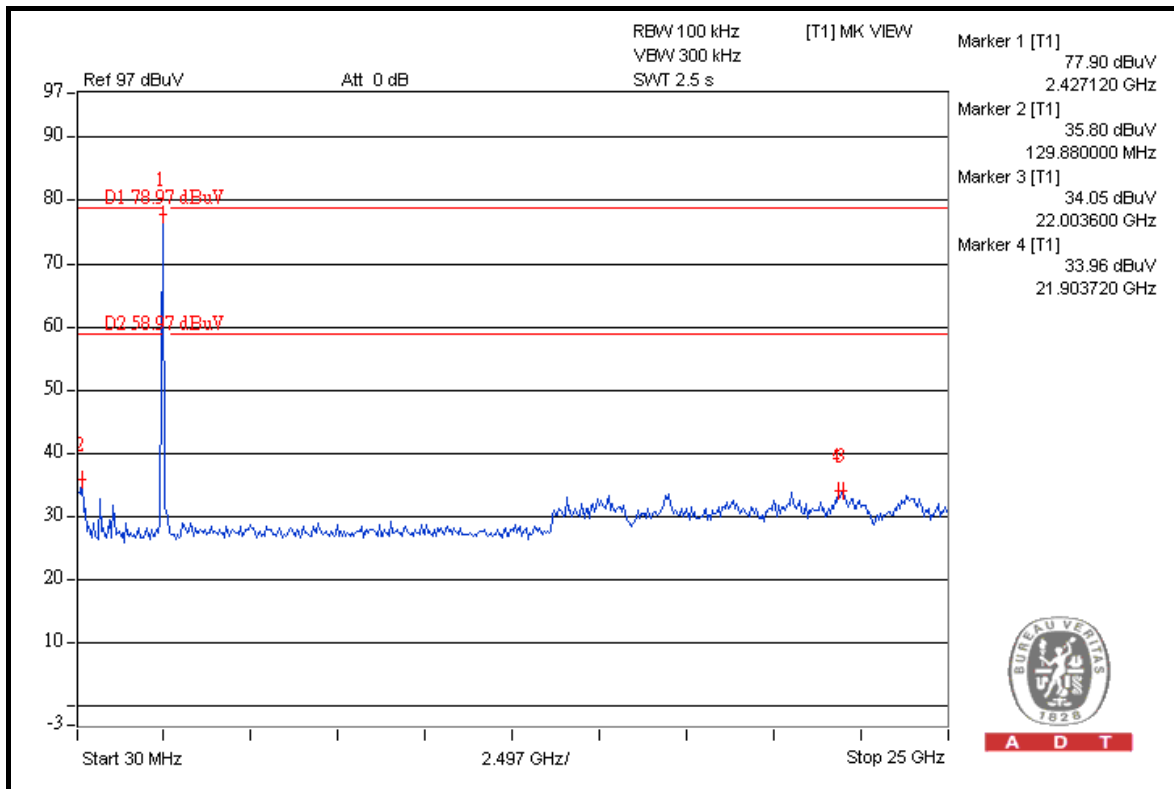
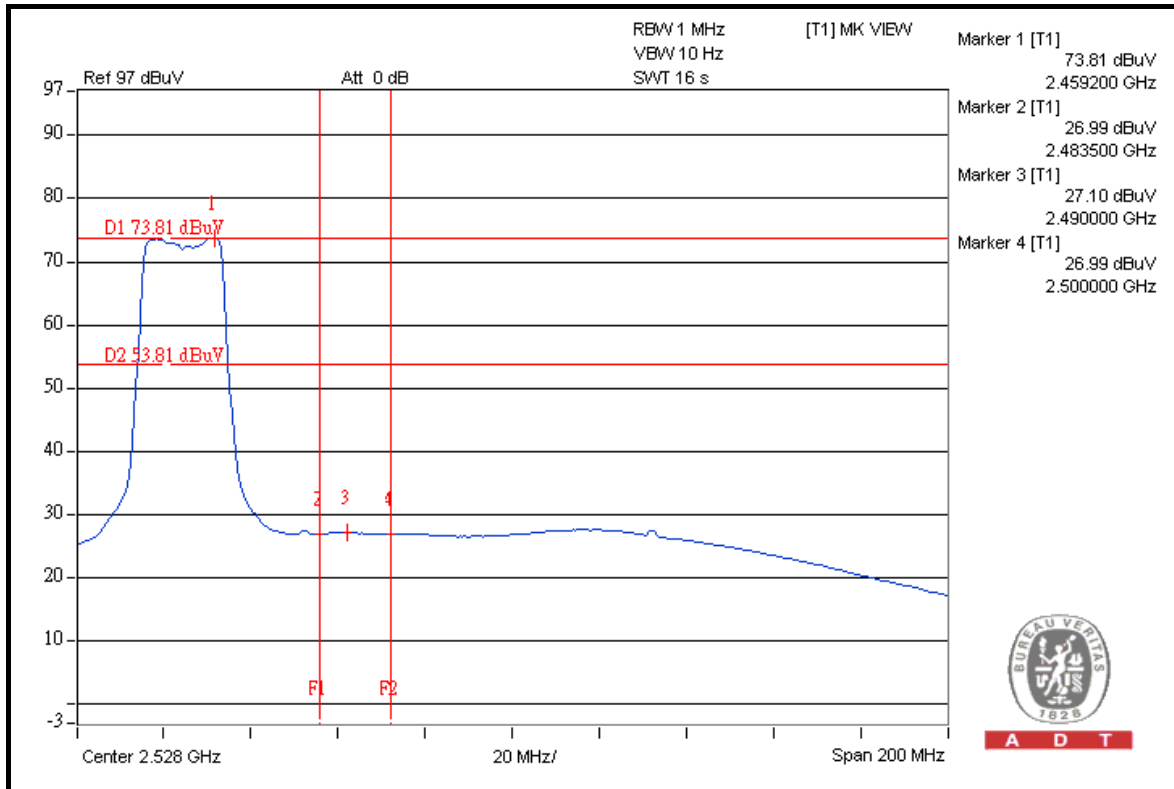


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TEST MODE C

NOTE 1: The band edge emission plot on the next page shows 48.54dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 109.72dBuV/m (Peak), so the maximum field strength in restrict band is $109.72 - 48.54 = 61.18$ dBuV/m which is under 74dBuV/m limit.

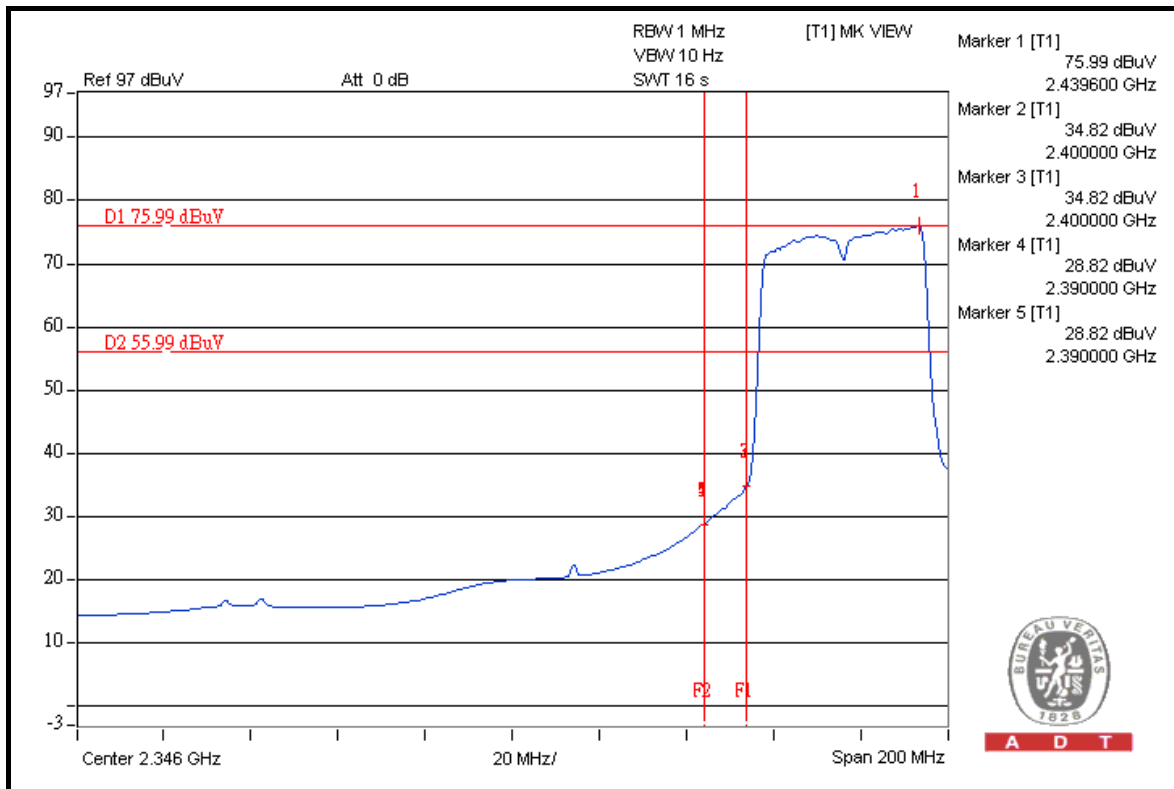
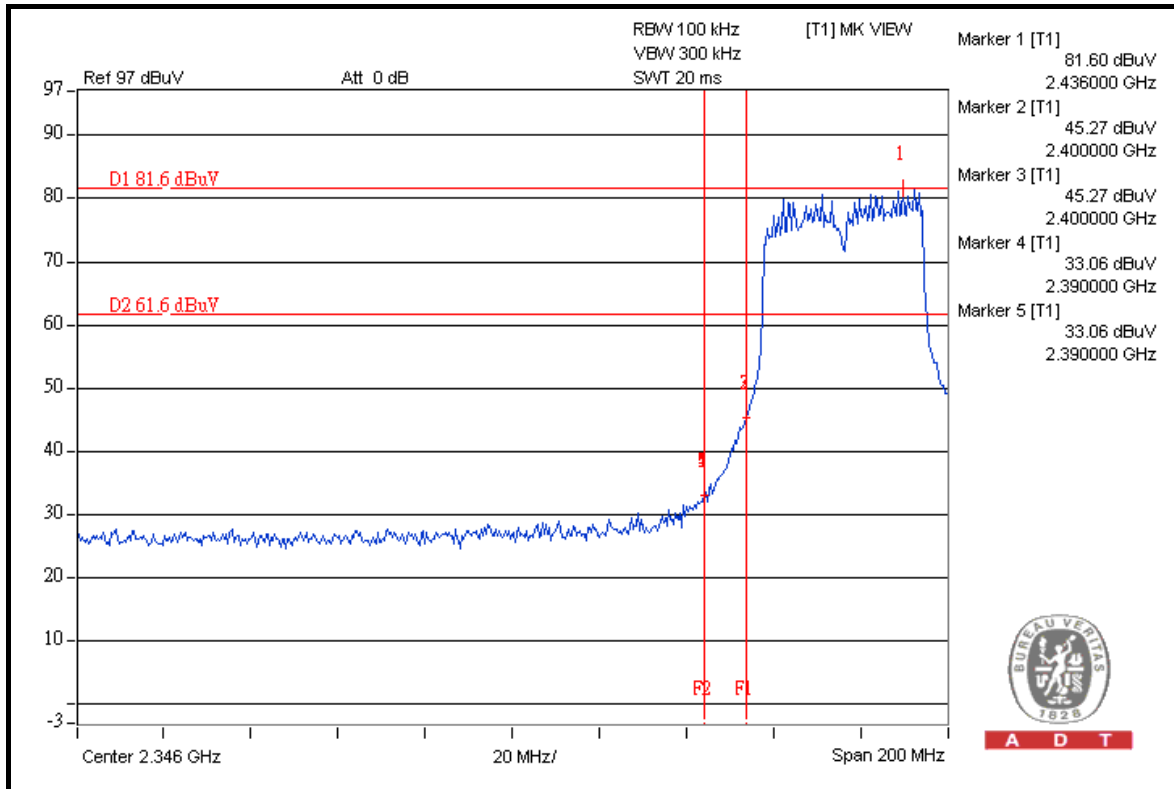
The band edge emission plot of on the next page shows 47.17dBc between carrier maximum power and local maximum emission in restrict band (2.3900GHz). The emission of carrier strength list in the test result of channel 1 at the item 4.1.7 is 98.54dBuV/m (Average), so the maximum field strength in restrict band is $98.54 - 47.17 = 51.37$ dBuV/m which is under 54dBuV/m limit.

NOTE 2: The band edge emission plot on the next second page shows 47.19dBc between carrier maximum power and local maximum emission in restrict band (2.4992GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 109.61dBuV/m (Peak), so the maximum field strength in restrict band is $109.61 - 47.19 = 62.42$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 45.84dBc between carrier maximum power and local maximum emission in restrict band (2.4835GHz). The emission of carrier strength list in the test result of channel 7 at the item 4.1.7 is 98.41dBuV/m (Average), so the maximum field strength in restrict band is $98.41 - 45.84 = 52.57$ dBuV/m which is under 54dBuV/m limit.

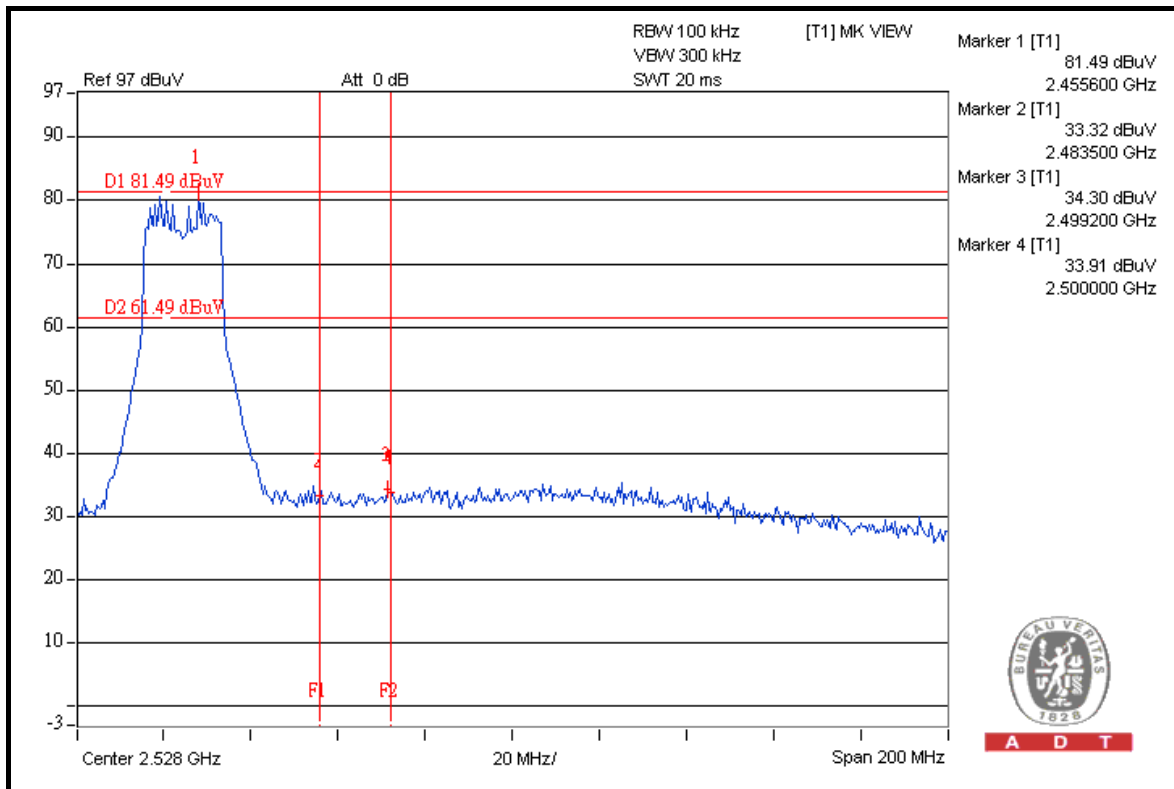
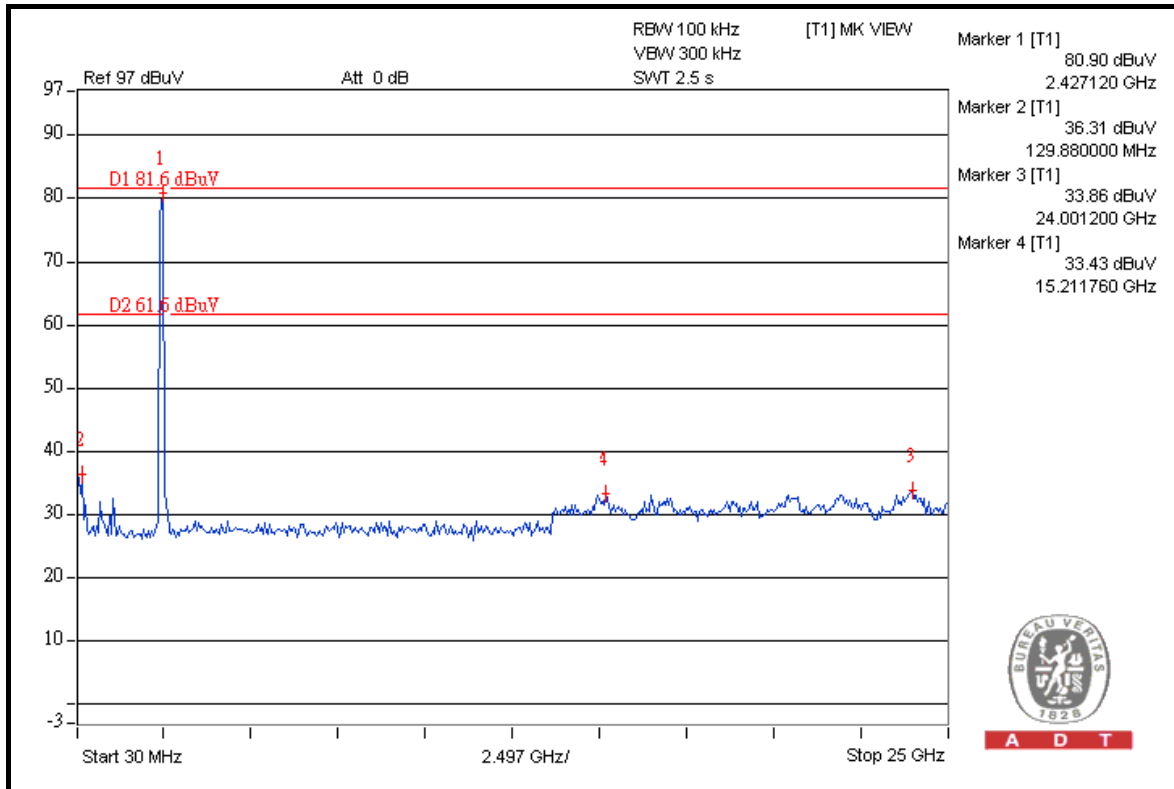


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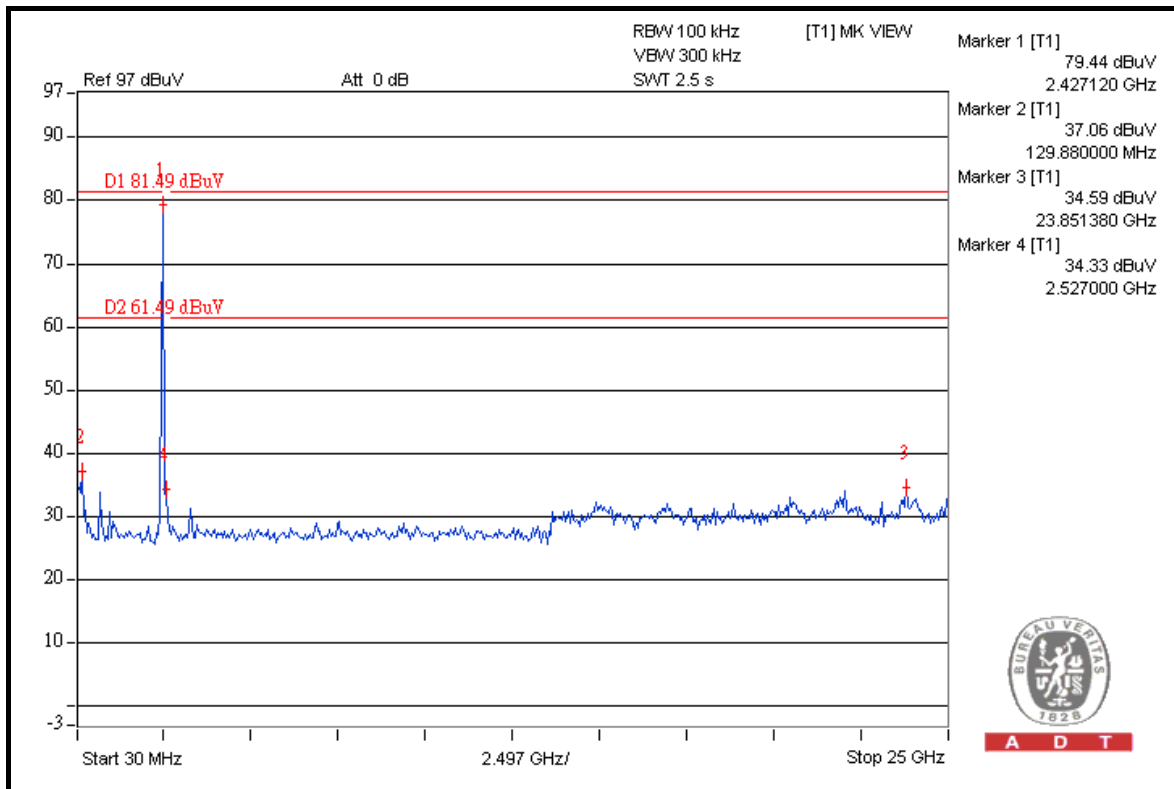
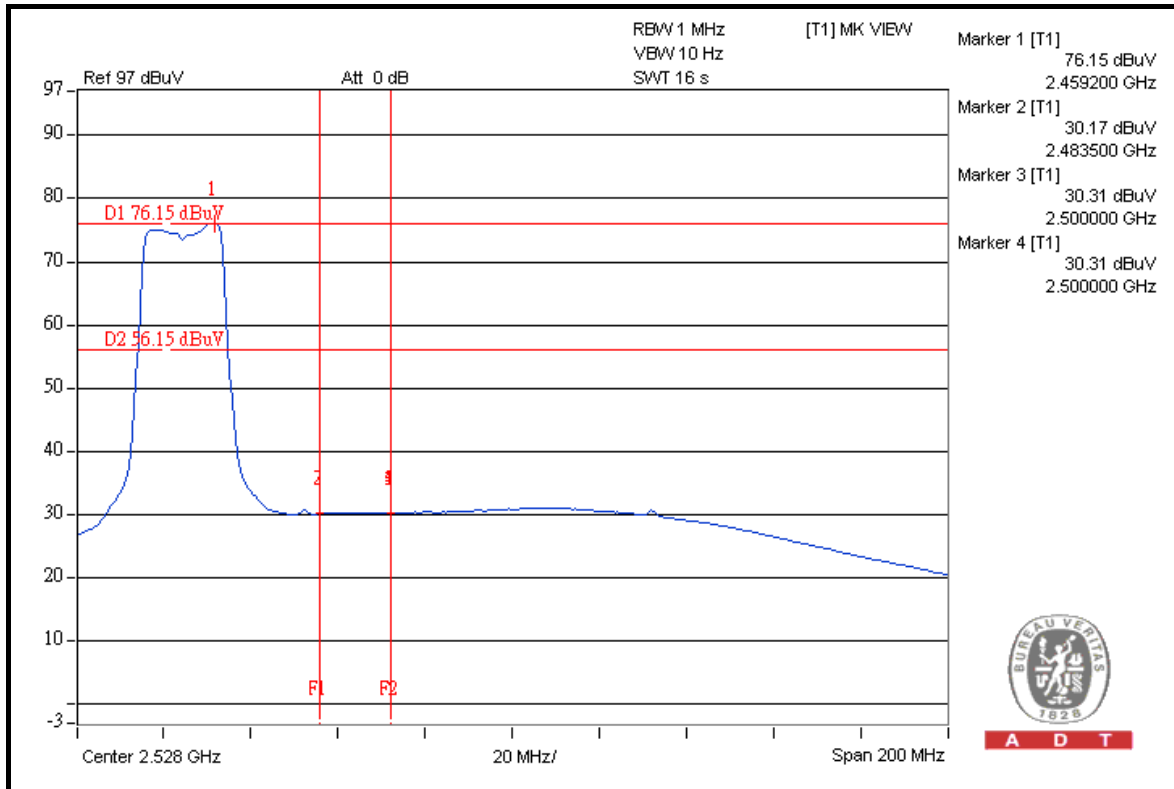


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4.7 ANTENNA REQUIREMENT

4.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.7.2 ANTENNA CONNECTED CONSTRUCTION

The antennas used in this product are Dipole antenna with RSMA connector and Embedded antenna with UFL connector. The maximum gain of the antenna is 2.8dBi.



5. TEST TYPES AND RESULTS (FOR 5.0GHz BAND)

5.1 RADIATED EMISSION MEASUREMENT

5.1.1 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.



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5.1.2 TEST INSTRUMENTS

Above 1GHz Test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 29, 2008	Dec. 28, 2009
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 08, 2008	Dec. 07, 2009
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 29, 2009	Apr. 28, 2010
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Dec. 29, 2008	Dec. 28, 2009
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009	Jan. 05, 2010
Preamplifier Agilent	8449B	3008A01960	Nov. 03, 2008	Nov. 02, 2009
Preamplifier Agilent	8447D	2944A10631	Nov. 03, 2008	Nov. 02, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274041/4	Aug. 21, 2008	Aug. 20, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 21, 2008	Aug. 20, 2009
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	07026401	Aug. 27, 2008	Aug. 26, 2009

- 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 4.
 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 IC7450F-4.



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Below 1GHz Test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ TEST RECEIVER	ESCI	100412	Jul. 22, 2008	Jul. 21, 2009
SCHAFFENR BILOG Antenna	CBL6111D	21872	Apr. 28, 2009	Apr. 27, 2010
CT Turn Table	TT100	NA	NA	NA
CT Tower	AT100	NA	NA	NA
Software	ADT_Radiated_V7.6.15.9.2	NA	NA	NA
ADT RF Switches BOX	EM-H-01-1	1002	Aug. 19, 2008	Aug. 18, 2009
WOKEN RF cable	8D	CABLE-ST5-01	Mar. 05, 2009	Mar. 04, 2010

- 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 Open Site No. 5.
 3. The VCCI Site Registration No. R-1039.
 4. The Industry Canada Reference No. IC 7450E-5
 5. The FCC Site Registration No. 90422.



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5.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber & 3 m open side area. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

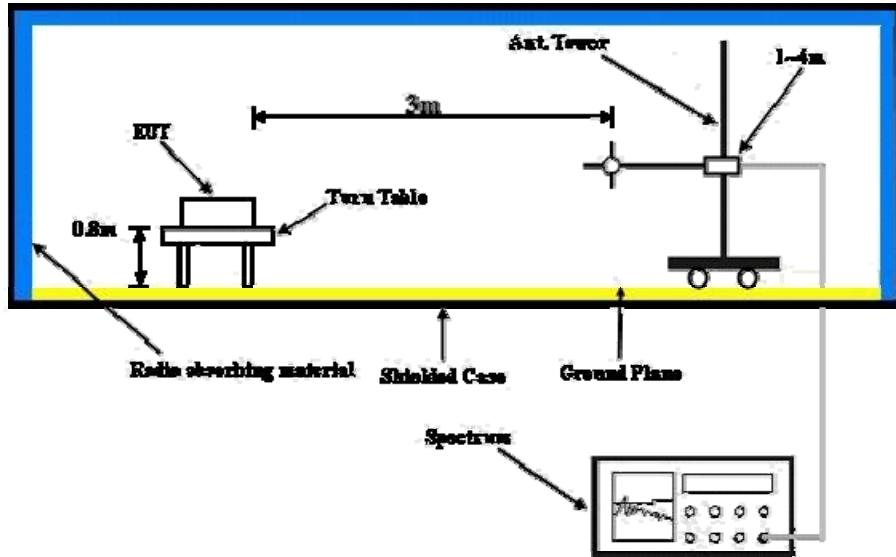
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution 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.

5.1.4 DEVIATION FROM TEST STANDARD

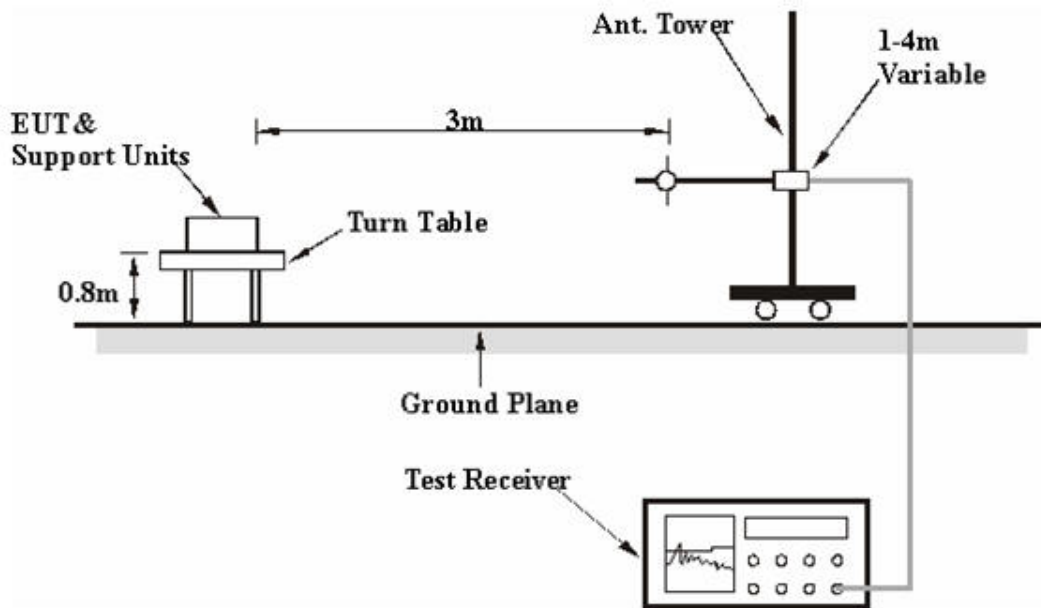
No deviation.

5.1.5 TEST SETUP

Above 1GHz Test:



Below 1GHz Test:



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

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6.



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5.1.7 TEST RESULTS

802.11a OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	48.51 PK	74.00	-25.49	1.19 H	135	19.96	28.55
2	1200.00	43.64 AV	54.00	-10.36	1.19 H	135	15.09	28.55
3	#5725.00	59.74 PK	80.12	-20.38	1.09 H	200	19.71	40.03
4	#5725.00	45.02 AV	70.06	-25.04	1.09 H	200	4.99	40.03
5	*5745.00	100.12 PK			1.58 H	230	60.05	40.07
6	*5745.00	90.06 AV			1.58 H	230	49.99	40.07
7	11490.00	60.64 PK	74.00	-13.36	1.06 H	120	9.49	51.15
8	11490.00	48.35 AV	54.00	-5.65	1.06 H	120	-2.80	51.15
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	1200.00	49.35 PK	74.00	-24.65	1.03 V	302	20.80	28.55
2	1200.00	45.78 AV	54.00	-8.22	1.03 V	302	17.23	28.55
3	#5725.00	74.12 PK	94.21	-20.09	1.31 V	235	34.09	40.03
4	#5725.00	52.45 AV	84.02	-31.57	1.31 V	235	12.42	40.03
5	*5745.00	114.21 PK			1.33 V	207	74.14	40.07
6	*5745.00	104.02 AV			1.33 V	207	63.95	40.07
7	11490.00	60.80 PK	74.00	-13.20	1.20 V	144	9.65	51.15
8	11490.00	48.06 AV	54.00	-5.94	1.20 V	144	-3.09	51.15

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	48.59 PK	74.00	-25.41	1.24 H	144	20.04	28.55
2	1200.00	43.71 AV	54.00	-10.29	1.24 H	144	15.16	28.55
3	*5785.00	102.07 PK			1.42 H	112	61.91	40.16
4	*5785.00	92.66 AV			1.42 H	112	52.50	40.16
5	11570.00	63.18 PK	74.00	-10.82	1.09 H	144	12.15	51.03
6	11570.00	50.86 AV	54.00	-3.14	1.09 H	144	-0.17	51.03
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	1200.00	49.41 PK	74.00	-24.59	1.08 V	277	20.86	28.55
2	1200.00	45.82 AV	54.00	-8.18	1.08 V	277	17.27	28.55
3	*5785.00	116.64 PK			1.28 V	310	76.48	40.16
4	*5785.00	106.61 AV			1.28 V	310	66.45	40.16
5	11570.00	64.07 PK	74.00	-9.93	1.38 V	225	13.04	51.03
6	11570.00	51.86 AV	54.00	-2.14	1.38 V	225	0.83	51.03

- 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 limit value is defined as per 15.247.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	48.44 PK	74.00	-25.56	1.17 H	139	19.89	28.55
2	1200.00	43.61 AV	54.00	-10.39	1.17 H	139	15.06	28.55
3	*5825.00	102.51 PK			1.52 H	219	62.27	40.25
4	*5825.00	92.10 AV			1.52 H	219	51.85	40.25
5	#5850.00	51.86 PK	82.51	-30.65	1.25 H	14	11.56	40.30
6	#5850.00	39.65 AV	72.10	-32.45	1.25 H	14	-0.65	40.30
7	11650.00	62.51 PK	74.00	-11.49	1.29 H	12	11.62	50.89
8	11650.00	50.37 AV	54.00	-3.63	1.29 H	12	-0.52	50.89
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	1200.00	49.51 PK	74.00	-24.49	1.09 V	333	20.96	28.55
2	1200.00	45.96 AV	54.00	-8.04	1.09 V	333	17.41	28.55
3	*5825.00	116.32 PK			1.54 V	51	76.07	40.25
4	*5825.00	106.15 AV			1.54 V	51	65.91	40.25
5	#5850.00	72.42 PK	96.32	-23.90	1.34 V	213	32.12	40.30
6	#5850.00	53.94 AV	86.15	-32.21	1.34 V	213	13.64	40.30
7	11650.00	65.97 PK	74.00	-8.03	1.75 V	134	15.08	50.89
8	11650.00	52.60 AV	54.00	-1.40	1.75 V	134	1.71	50.89

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	47.31 PK	74.00	-26.69	1.13 H	52	17.55	29.76
2	1600.00	43.66 AV	54.00	-10.34	1.13 H	52	13.90	29.76
3	#5725.00	61.18 PK	83.54	-22.36	1.18 H	32	21.15	40.03
4	#5725.00	47.26 AV	73.14	-25.88	1.18 H	32	7.23	40.03
5	*5745.00	103.54 PK			1.48 H	210	63.47	40.07
6	*5745.00	93.14 AV			1.48 H	210	53.07	40.07
7	11490.00	60.41 PK	74.00	-13.59	1.27 H	122	9.26	51.15
8	11490.00	48.03 AV	54.00	-5.97	1.27 H	122	-3.12	51.15
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	1600.00	51.48 PK	74.00	-22.52	1.05 V	37	21.72	29.76
2	1600.00	48.79 AV	54.00	-5.21	1.05 V	37	19.03	29.76
3	#5725.00	76.87 PK	97.39	-20.52	1.25 V	240	36.84	40.03
4	#5725.00	54.51 AV	87.13	-32.62	1.25 V	240	14.48	40.03
5	*5745.00	117.39 PK			1.06 V	169	77.32	40.07
6	*5745.00	107.13 AV			1.06 V	169	67.06	40.07
7	11490.00	60.95 PK	74.00	-13.05	1.33 V	49	9.80	51.15
8	11490.00	48.41 AV	54.00	-5.59	1.33 V	49	-2.74	51.15

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	47.91 PK	74.00	-26.09	1.19 H	56	18.15	29.76
2	1600.00	43.98 AV	54.00	-10.02	1.19 H	56	14.22	29.76
3	*5785.00	105.12 PK			1.26 H	234	64.96	40.16
4	*5785.00	95.74 AV			1.26 H	234	55.58	40.16
5	11570.00	67.73 PK	74.00	-6.27	1.39 H	120	16.70	51.03
6	11570.00	52.89 AV	54.00	-1.11	1.39 H	120	1.86	51.03
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	1600.00	51.57 PK	74.00	-22.43	1.08 V	34	21.81	29.76
2	1600.00	48.84 AV	54.00	-5.16	1.08 V	34	19.08	29.76
3	*5785.00	119.96 PK			1.08 V	177	79.80	40.16
4	*5785.00	109.81 AV			1.08 V	177	69.65	40.16
5	11570.00	66.14 PK	74.00	-7.86	1.01 V	215	15.11	51.03
6	11570.00	52.94 AV	54.00	-1.06	1.01 V	215	1.91	51.03

- 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 limit value is defined as per 15.247.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	47.82 PK	74.00	-26.18	1.16 H	49	18.06	29.76
2	1600.00	43.95 AV	54.00	-10.05	1.16 H	49	14.19	29.76
3	*5825.00	105.68 PK			1.44 H	210	65.44	40.25
4	*5825.00	95.26 AV			1.44 H	210	55.02	40.25
5	#5850.00	81.46 PK	85.68	-4.22	1.54 H	242	41.16	40.30
6	#5850.00	64.99 AV	75.26	-10.27	1.54 H	242	24.69	40.30
7	11650.00	64.83 PK	74.00	-9.17	1.44 H	168	13.94	50.89
8	11650.00	52.77 AV	54.00	-1.23	1.44 H	168	1.88	50.89
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	1600.00	51.54 PK	74.00	-22.46	1.15 V	48	21.78	29.76
2	1600.00	48.86 AV	54.00	-5.14	1.15 V	48	19.10	29.76
3	*5825.00	119.45 PK			1.06 V	183	79.20	40.25
4	*5825.00	109.24 AV			1.06 V	183	68.99	40.25
5	#5850.00	86.99 PK	99.45	-12.46	1.10 V	49	46.69	40.30
6	#5850.00	68.60 AV	89.24	-20.64	1.10 V	49	28.30	40.30
7	11650.00	64.18 PK	74.00	-9.82	1.39 V	218	13.29	50.89
8	11650.00	52.44 AV	54.00	-1.56	1.39 V	218	1.55	50.89

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

DRAFT 802.11n (20MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	48.41 PK	74.00	-25.59	1.18 H	143	19.86	28.55
2	1200.00	43.52 AV	54.00	-10.48	1.18 H	143	14.97	28.55
3	#5725.00	58.05 PK	77.68	-19.63	1.03 H	45	18.02	40.03
4	#5725.00	44.57 AV	67.69	-23.12	1.03 H	45	4.54	40.03
5	*5745.00	97.68 PK			1.87 H	234	57.61	40.07
6	*5745.00	87.69 AV			1.87 H	234	47.62	40.07
7	11490.00	59.72 PK	74.00	-14.28	1.12 H	10	8.57	51.15
8	11490.00	48.27 AV	54.00	-5.73	1.12 H	10	-2.88	51.15
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	1200.00	49.62 PK	74.00	-24.38	1.11 V	286	21.07	28.55
2	1200.00	45.84 AV	54.00	-8.16	1.11 V	286	17.29	28.55
3	#5725.00	65.24 PK	90.54	-25.30	1.42 V	75	25.21	40.03
4	#5725.00	17.51 AV	80.06	-62.55	1.42 V	75	-22.52	40.03
5	*5745.00	110.54 PK			1.30 V	82	70.47	40.07
6	*5745.00	100.06 AV			1.30 V	82	59.99	40.07
7	11490.00	61.96 PK	74.00	-12.04	1.12 V	142	10.81	51.15
8	11490.00	49.30 AV	54.00	-4.70	1.12 V	142	-1.85	51.15

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	48.51 PK	74.00	-25.49	1.09 H	73	19.96	28.55
2	1200.00	43.63 AV	54.00	-10.37	1.09 H	73	15.08	28.55
3	*5785.00	98.12 PK			1.07 H	190	57.96	40.16
4	*5785.00	88.18 AV			1.07 H	190	48.02	40.16
5	11570.00	61.12 PK	74.00	-12.88	1.25 H	31	10.09	51.03
6	11570.00	47.61 AV	54.00	-6.39	1.25 H	31	-3.42	51.03
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	1200.00	49.75 PK	74.00	-24.25	1.19 V	274	21.20	28.55
2	1200.00	45.91 AV	54.00	-8.09	1.19 V	274	17.36	28.55
3	*5785.00	111.42 PK			1.39 V	108	71.26	40.16
4	*5785.00	101.03 AV			1.39 V	108	60.87	40.16
5	11570.00	61.23 PK	74.00	-12.77	1.12 V	42	10.20	51.03
6	11570.00	47.86 AV	54.00	-6.14	1.12 V	42	-3.17	51.03

- 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 limit value is defined as per 15.247.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	48.51 PK	74.00	-25.49	1.22 H	150	19.96	28.55
2	1200.00	43.66 AV	54.00	-10.34	1.22 H	150	15.11	28.55
3	*5825.00	98.19 PK			1.08 H	9	57.94	40.25
4	*5825.00	88.06 AV			1.08 H	9	47.81	40.25
5	#5850.00	57.82 PK	78.19	-20.37	1.15 H	74	17.52	40.30
6	#5850.00	46.01 AV	68.06	-22.05	1.15 H	74	5.71	40.30
7	11650.00	62.23 PK	74.00	-11.77	1.05 H	75	11.34	50.89
8	11650.00	49.15 AV	54.00	-4.85	1.05 H	75	-1.74	50.89
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	1200.00	49.55 PK	74.00	-24.45	1.09 V	299	21.00	28.55
2	1200.00	45.89 AV	54.00	-8.11	1.09 V	299	17.34	28.55
3	*5825.00	111.14 PK			1.29 V	87	70.89	40.25
4	*5825.00	100.78 AV			1.29 V	87	60.53	40.25
5	#5850.00	59.58 PK	91.14	-31.56	1.16 V	321	19.28	40.30
6	#5850.00	46.34 AV	80.78	-34.44	1.16 V	321	6.04	40.30
7	11650.00	61.83 PK	74.00	-12.17	1.10 V	185	10.94	50.89
8	11650.00	48.97 AV	54.00	-5.03	1.10 V	185	-1.92	50.89

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	47.36 PK	74.00	-26.64	1.29 H	59	17.60	29.76
2	1600.00	43.87 AV	54.00	-10.13	1.29 H	59	14.11	29.76
3	#5725.00	59.10 PK	80.87	-21.77	1.16 H	99	19.07	40.03
4	#5725.00	46.64 AV	70.78	-24.14	1.16 H	99	6.61	40.03
5	*5745.00	100.87 PK			1.27 H	124	60.80	40.07
6	*5745.00	90.78 AV			1.27 H	124	50.71	40.07
7	11490.00	61.76 PK	74.00	-12.24	1.09 H	63	10.61	51.15
8	11490.00	49.24 AV	54.00	-4.76	1.09 H	63	-1.91	51.15
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	1600.00	51.22 PK	74.00	-22.78	1.15 V	52	21.46	29.76
2	1600.00	48.93 AV	54.00	-5.07	1.15 V	52	19.17	29.76
3	#5725.00	67.47 PK	93.67	-26.20	1.38 V	254	27.44	40.03
4	#5725.00	49.92 AV	83.03	-33.11	1.38 V	254	9.89	40.03
5	*5745.00	113.67 PK			1.16 V	166	73.60	40.07
6	*5745.00	103.03 AV			1.16 V	166	62.96	40.07
7	11490.00	61.26 PK	74.00	-12.74	1.28 V	84	10.11	51.15
8	11490.00	48.88 AV	54.00	-5.12	1.28 V	84	-2.27	51.15

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	47.42 PK	74.00	-26.58	1.33 H	68	17.66	29.76
2	1600.00	43.94 AV	54.00	-10.06	1.33 H	68	14.18	29.76
3	*5785.00	101.02 PK			1.31 H	241	60.86	40.16
4	*5785.00	91.12 AV			1.31 H	241	50.96	40.16
5	11570.00	59.18 PK	74.00	-14.82	1.07 H	155	8.15	51.03
6	11570.00	46.66 AV	54.00	-7.34	1.07 H	155	-4.37	51.03
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	1600.00	51.63 PK	74.00	-22.37	1.18 V	53	21.87	29.76
2	1600.00	48.95 AV	54.00	-5.05	1.18 V	53	19.19	29.76
3	*5785.00	114.50 PK			1.17 V	164	74.34	40.16
4	*5785.00	104.17 AV			1.17 V	164	64.01	40.16
5	11570.00	59.45 PK	74.00	-14.55	1.08 V	165	8.42	51.03
6	11570.00	46.70 AV	54.00	-7.30	1.08 V	165	-4.33	51.03

- 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 limit value is defined as per 15.247.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	47.25 PK	74.00	-26.75	1.22 H	49	17.49	29.76
2	1600.00	43.61 AV	54.00	-10.39	1.22 H	49	13.85	29.76
3	*5825.00	100.92 PK			1.37 H	144	60.67	40.25
4	*5825.00	91.12 AV			1.37 H	144	50.87	40.25
5	#5850.00	60.85 PK	80.92	-20.07	1.24 H	119	20.55	40.30
6	#5850.00	48.04 AV	71.12	-23.08	1.24 H	119	7.74	40.30
7	11650.00	61.70 PK	74.00	-12.30	1.22 H	14	10.81	50.89
8	11650.00	49.07 AV	54.00	-4.93	1.22 H	14	-1.82	50.89
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	1600.00	51.14 PK	74.00	-22.86	1.12 V	41	21.38	29.76
2	1600.00	48.87 AV	54.00	-5.13	1.12 V	41	19.11	29.76
3	*5825.00	114.23 PK			1.24 V	192	73.98	40.25
4	*5825.00	103.87 AV			1.24 V	192	63.62	40.25
5	#5850.00	61.22 PK	94.23	-33.01	1.22 V	65	20.92	40.30
6	#5850.00	48.24 AV	83.87	-35.63	1.22 V	65	7.94	40.30
7	11650.00	61.19 PK	74.00	-12.81	1.24 V	73	10.30	50.89
8	11650.00	48.77 AV	54.00	-5.23	1.24 V	73	-2.12	50.89

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

DRAFT 802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	48.21 PK	74.00	-25.79	1.19 H	120	19.66	28.55
2	1200.00	43.15 AV	54.00	-10.85	1.19 H	120	14.60	28.55
3	#5725.00	80.12 PK	83.41	-3.29	1.65 H	217	40.09	40.03
4	#5725.00	65.27 AV	73.34	-8.07	1.65 H	217	25.24	40.03
5	*5755.00	103.41 PK			1.09 H	192	63.31	40.10
6	*5755.00	93.34 AV			1.09 H	192	53.24	40.10
7	11510.00	64.77 PK	74.00	-9.23	1.53 H	136	13.64	51.13
8	11510.00	51.51 AV	54.00	-2.49	1.53 H	136	0.38	51.13
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	1200.00	49.36 PK	74.00	-24.64	1.15 V	290	20.81	28.55
2	1200.00	45.48 AV	54.00	-8.52	1.15 V	290	16.93	28.55
3	#5725.00	93.45 PK	96.13	-2.68	1.46 V	110	53.42	40.03
4	#5725.00	77.84 AV	85.51	-7.67	1.46 V	110	37.81	40.03
5	*5755.00	116.13 PK			1.51 V	210	76.03	40.10
6	*5755.00	105.51 AV			1.51 V	210	65.41	40.10
7	11510.00	65.66 PK	74.00	-8.34	1.51 V	223	14.53	51.13
8	11510.00	52.94 AV	54.00	-1.06	1.51 V	223	1.81	51.13

- 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 limit value is defined as per 15.247.
 7. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

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	1200.00	48.02 PK	74.00	-25.98	1.26 H	102	19.47	28.55
2	1200.00	42.98 AV	54.00	-11.02	1.26 H	102	14.43	28.55
3	*5795.00	104.41 PK			1.58 H	216	64.23	40.18
4	*5795.00	93.28 AV			1.58 H	216	53.10	40.18
5	#5850.00	63.47 PK	84.41	-20.94	1.42 H	113	23.17	40.30
6	#5850.00	49.66 AV	73.28	-23.62	1.42 H	113	9.36	40.30
7	11590.00	62.76 PK	74.00	-11.24	1.20 H	75	11.76	51.00
8	11590.00	50.52 AV	54.00	-3.48	1.20 H	75	-0.48	51.00
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	1200.00	49.35 PK	74.00	-24.65	1.16 V	271	20.80	28.55
2	1200.00	45.40 AV	54.00	-8.60	1.16 V	271	16.85	28.55
3	*5795.00	116.24 PK			1.47 V	164	76.06	40.18
4	*5795.00	105.58 AV			1.47 V	164	65.40	40.18
5	#5850.00	74.45 PK	96.24	-21.79	1.35 V	220	34.15	40.30
6	#5850.00	60.17 AV	85.58	-25.41	1.35 V	220	19.87	40.30
7	11590.00	64.60 PK	74.00	-9.40	1.53 V	223	13.60	51.00
8	11590.00	52.22 AV	54.00	-1.78	1.53 V	223	1.22	51.00

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	47.27 PK	74.00	-26.73	1.24 H	63	17.51	29.76
2	1600.00	43.46 AV	54.00	-10.54	1.24 H	63	13.70	29.76
3	#5725.00	82.64 PK	87.53	-4.89	1.47 H	234	42.61	40.03
4	#5725.00	67.85 AV	76.36	-8.51	1.47 H	234	27.82	40.03
5	*5755.00	107.53 PK			1.56 H	214	67.43	40.10
6	*5755.00	96.36 AV			1.56 H	214	56.26	40.10
7	11510.00	61.49 PK	74.00	-12.51	1.20 H	48	10.36	51.13
8	11510.00	48.84 AV	54.00	-5.16	1.20 H	48	-2.29	51.13
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	1600.00	51.48 PK	74.00	-22.52	1.20 V	42	21.72	29.76
2	1600.00	48.81 AV	54.00	-5.19	1.20 V	42	19.05	29.76
3	#5725.00	95.55 PK	99.19	-3.64	1.39 V	110	55.52	40.03
4	#5725.00	79.48 AV	88.62	-9.14	1.39 V	110	39.45	40.03
5	*5755.00	119.19 PK			1.40 V	176	79.09	40.10
6	*5755.00	108.62 AV			1.40 V	176	68.52	40.10
7	11510.00	62.06 PK	74.00	-11.94	1.25 V	106	10.93	51.13
8	11510.00	49.57 AV	54.00	-4.43	1.25 V	106	-1.56	51.13

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

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	1600.00	47.12 PK	74.00	-26.88	1.18 H	96	17.36	29.76
2	1600.00	43.38 AV	54.00	-10.62	1.18 H	96	13.62	29.76
3	*5795.00	107.62 PK			1.42 H	210	67.44	40.18
4	*5795.00	96.42 AV			1.42 H	210	56.24	40.18
5	#5850.00	65.69 PK	87.62	-21.93	1.36 H	186	25.39	40.30
6	#5850.00	51.58 AV	76.42	-24.84	1.36 H	186	11.28	40.30
7	11590.00	62.10 PK	74.00	-11.90	1.05 H	71	11.10	51.00
8	11590.00	50.43 AV	54.00	-3.57	1.05 H	71	-0.57	51.00
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	1600.00	51.64 PK	74.00	-22.36	1.28 V	51	21.88	29.76
2	1600.00	48.97 AV	54.00	-5.03	1.28 V	51	19.21	29.76
3	*5795.00	119.38 PK			1.37 V	112	79.20	40.18
4	*5795.00	108.72 AV			1.37 V	112	68.54	40.18
5	#5850.00	76.20 PK	99.38	-23.18	1.34 V	116	35.90	40.30
6	#5850.00	62.21 AV	88.72	-26.51	1.34 V	116	21.91	40.30
7	11590.00	63.27 PK	74.00	-10.73	1.35 V	80	12.27	51.00
8	11590.00	51.19 AV	54.00	-2.81	1.35 V	80	0.19	51.00

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



A D T

BELOW 1GHz WORST-CASE DATA : 802.11a OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	A
TESTED BY	Tim Mie		

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	133.47	35.84 QP	43.50	-7.66	1.00 H	46	23.13	12.71
2	300.01	36.02 QP	46.00	-9.98	1.47 H	30	20.99	15.03
3	400.00	44.28 QP	46.00	-1.72	2.77 H	156	26.08	18.20
4	533.29	44.01 QP	46.00	-1.99	1.14 H	90	22.14	21.87
5	633.27	41.00 QP	46.00	-5.00	1.00 H	14	16.32	24.68
6	666.59	44.63 QP	46.00	-1.37	2.16 H	300	19.58	25.05
7	766.59	43.00 QP	46.00	-3.00	2.36 H	284	16.41	26.59
8	799.98	44.89 QP	46.00	-1.11	1.01 H	109	17.67	27.22
9	933.32	43.21 QP	46.00	-2.79	1.00 H	320	15.10	28.11
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	75.17	32.69 QP	40.00	-7.31	1.49 V	96	24.58	8.11
2	125.01	35.63 QP	43.50	-7.87	1.00 V	329	22.96	12.67
3	295.29	34.25 QP	46.00	-11.75	1.44 V	98	19.22	15.03
4	400.00	39.85 QP	46.00	-6.15	1.02 V	208	21.65	18.20
5	533.10	37.14 QP	46.00	-8.86	2.14 V	125	15.28	21.86
6	666.64	44.32 QP	46.00	-1.68	1.32 V	205	19.27	25.05
7	699.98	44.60 QP	46.00	-1.40	1.00 V	79	19.26	25.34
8	800.03	42.00 QP	46.00	-4.00	1.21 V	293	14.78	27.22
9	833.24	36.46 QP	46.00	-9.54	1.85 V	4	9.10	27.36
10	933.29	43.99 QP	46.00	-2.01	2.03 V	55	15.88	28.11

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	B
TESTED BY	Tim Mie		

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	233.32	43.02 QP	46.00	-2.98	1.41 H	228	29.70	13.32
2	250.00	40.32 QP	46.00	-5.68	1.42 H	352	25.35	14.97
3	375.06	40.25 QP	46.00	-5.75	1.03 H	245	22.84	17.41
4	400.64	42.68 QP	46.00	-3.32	1.85 H	271	24.46	18.22
5	500.01	36.57 QP	46.00	-9.43	2.34 H	225	15.91	20.66
6	666.63	43.02 QP	46.00	-2.98	1.63 H	204	17.97	25.05
7	699.95	44.10 QP	46.00	-1.90	2.68 H	47	18.76	25.34
8	799.98	36.21 QP	46.00	-9.79	1.75 H	155	8.99	27.22
9	933.28	42.01 QP	46.00	-3.99	2.10 H	229	13.90	28.11
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	84.22	37.17 QP	40.00	-2.83	1.22 V	65	28.02	9.15
2	125.01	34.01 QP	43.50	-9.49	1.12 V	32	21.34	12.67
3	250.02	34.25 QP	46.00	-11.75	1.43 V	299	19.28	14.97
4	400.00	44.48 QP	46.00	-1.52	1.58 V	283	26.28	18.20
5	500.05	42.26 QP	46.00	-3.74	1.00 V	271	21.60	20.66
6	534.02	37.00 QP	46.00	-9.00	1.19 V	154	15.10	21.90
7	666.64	40.68 QP	46.00	-5.32	1.62 V	10	15.63	25.05
8	799.94	40.20 QP	46.00	-5.80	1.30 V	219	12.98	27.22
9	933.28	44.56 QP	46.00	-1.44	1.11 V	205	16.45	28.11

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	C
TESTED BY	Tim Mie		

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	133.26	31.20 QP	43.50	-12.30	1.00 H	201	18.49	12.71
2	233.32	42.11 QP	46.00	-3.89	1.25 H	218	28.79	13.32
3	266.89	36.99 QP	46.00	-9.01	1.10 H	154	21.96	15.03
4	399.99	38.56 QP	46.00	-7.44	1.78 H	224	20.36	18.20
5	500.01	39.61 QP	46.00	-6.39	1.41 H	52	18.95	20.66
6	666.64	39.25 QP	46.00	-6.75	1.42 H	96	14.20	25.05
7	699.97	43.80 QP	46.00	-2.20	1.66 H	85	18.46	25.34
8	799.96	41.02 QP	46.00	-4.98	1.86 H	20	13.80	27.22
9	933.28	39.99 QP	46.00	-6.01	2.21 H	148	11.88	28.11
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	125.01	34.25 QP	43.50	-9.25	1.17 V	142	21.58	12.67
2	366.80	34.52 QP	46.00	-11.48	2.18 V	30	17.37	17.15
3	399.99	36.98 QP	46.00	-9.02	1.89 V	323	18.78	18.20
4	533.32	38.05 QP	46.00	-7.95	1.04 V	141	16.18	21.87
5	666.64	43.01 QP	46.00	-2.99	1.36 V	11	17.96	25.05
6	699.97	42.41 QP	46.00	-3.59	1.39 V	355	17.07	25.34
7	800.04	36.00 QP	46.00	-10.00	1.74 V	230	8.78	27.22
8	933.28	44.92 QP	46.00	-1.08	1.00 V	310	16.81	28.11

- 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.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 71%RH 999hPa	TEST MODE	D
TESTED BY	Tim Mie		

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	166.67	30.50 QP	43.50	-13.00	1.40 H	201	18.48	12.02
2	250.01	41.51 QP	46.00	-4.49	1.12 H	98	26.54	14.97
3	400.00	43.25 QP	46.00	-2.75	1.03 H	225	25.05	18.20
4	533.32	41.32 QP	46.00	-4.68	1.52 H	308	19.45	21.87
5	566.41	43.28 QP	46.00	-2.72	2.09 H	15	20.22	23.06
6	666.63	44.36 QP	46.00	-1.64	1.45 H	154	19.31	25.05
7	766.63	40.80 QP	46.00	-5.20	1.00 H	2	14.21	26.59
8	799.96	42.08 QP	46.00	-3.92	1.00 H	352	14.86	27.22
9	933.28	42.87 QP	46.00	-3.13	2.01 H	98	14.76	28.11
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	84.01	38.03 QP	40.00	-1.97	1.12 V	317	28.90	9.13
2	124.08	32.21 QP	43.50	-11.29	1.11 V	205	19.55	12.66
3	250.01	33.99 QP	46.00	-12.01	1.00 V	185	19.02	14.97
4	400.00	43.05 QP	46.00	-2.95	1.16 V	320	24.85	18.20
5	500.07	42.62 QP	46.00	-3.38	1.05 V	339	21.96	20.66
6	633.30	37.85 QP	46.00	-8.15	1.40 V	87	13.17	24.68
7	666.64	43.09 QP	46.00	-2.91	1.42 V	201	18.04	25.05
8	699.97	44.32 QP	46.00	-1.68	1.74 V	163	18.98	25.34
9	766.63	41.02 QP	46.00	-4.98	2.23 V	207	14.43	26.59
10	933.28	44.30 QP	46.00	-1.70	1.00 V	27	16.19	28.11

- 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

5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 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.

5.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 19, 2008	Nov. 18, 2009
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 31, 2008	Dec. 30, 2009
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jun. 13, 2008	Jun. 12, 2009
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Dec. 04, 2008	Dec. 03, 2009
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.



A D T

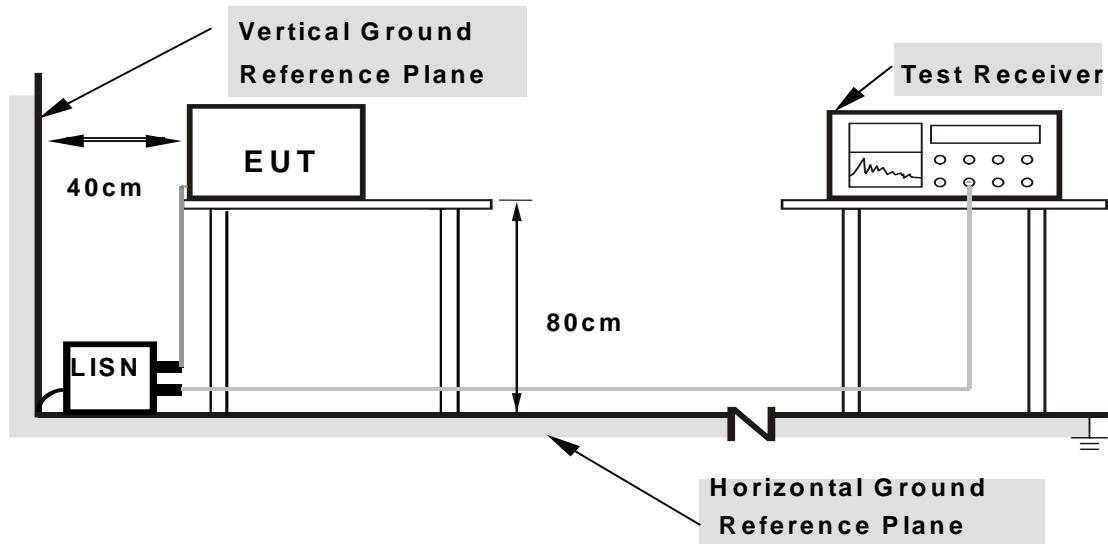
5.2.3 TEST PROCEDURES

- 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.

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 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).

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

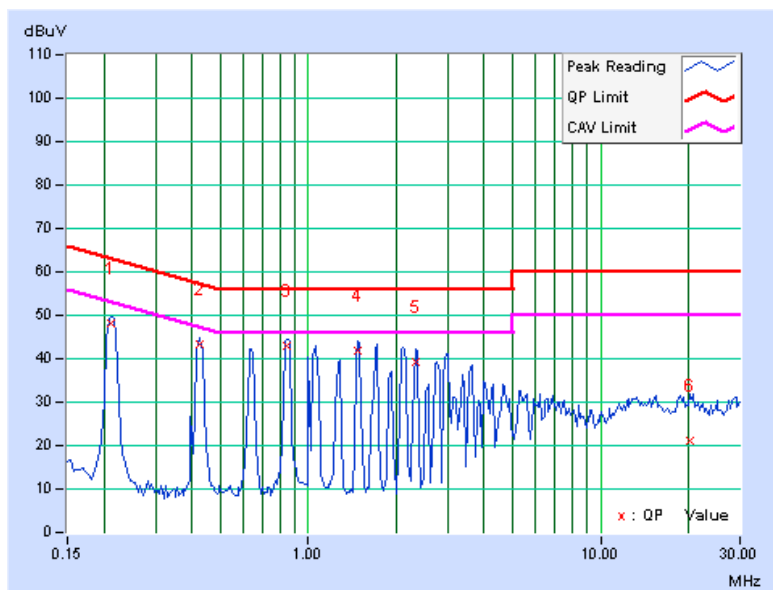
5.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11a OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	A
TESTED BY	Lori Chiu		

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	0.213	0.13	47.88	-	48.01	-	63.11	53.11	-15.10	-
2	0.427	0.14	43.32	-	43.46	-	57.30	47.30	-13.84	-
3	0.849	0.16	42.82	-	42.98	-	56.00	46.00	-13.02	-
4	1.477	0.18	41.55	-	41.73	-	56.00	46.00	-14.27	-
5	2.340	0.21	38.92	-	39.13	-	56.00	46.00	-16.87	-
6	20.270	0.67	20.36	-	21.03	-	60.00	50.00	-38.97	-

- 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.



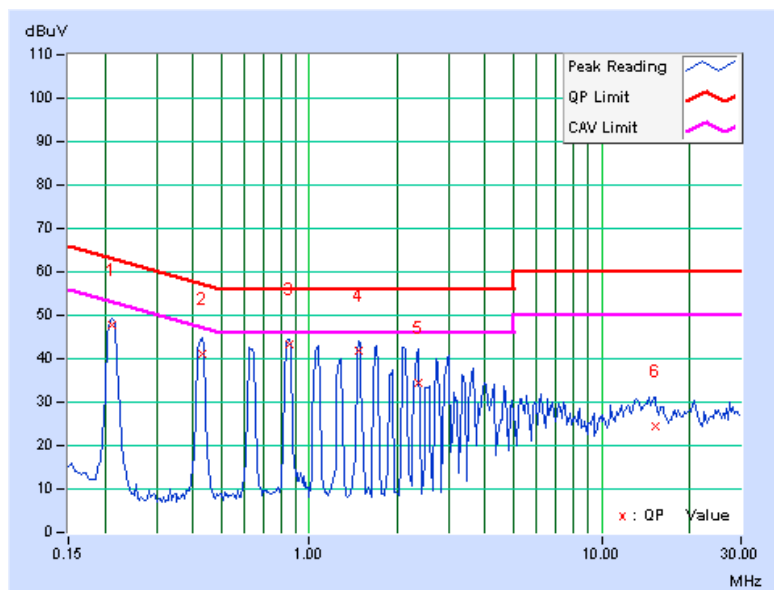


A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	A
TESTED BY	Lori Chiu		

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	0.213	0.13	47.75	-	47.88	-	63.11	53.11	-15.23	-
2	0.431	0.15	40.93	-	41.08	-	57.23	47.23	-16.15	-
3	0.853	0.17	43.00	-	43.17	-	56.00	46.00	-12.83	-
4	1.480	0.18	41.83	-	42.01	-	56.00	46.00	-13.99	-
5	2.367	0.22	34.29	-	34.51	-	56.00	46.00	-21.49	-
6	15.227	0.67	23.72	-	24.39	-	60.00	50.00	-35.61	-

- 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.



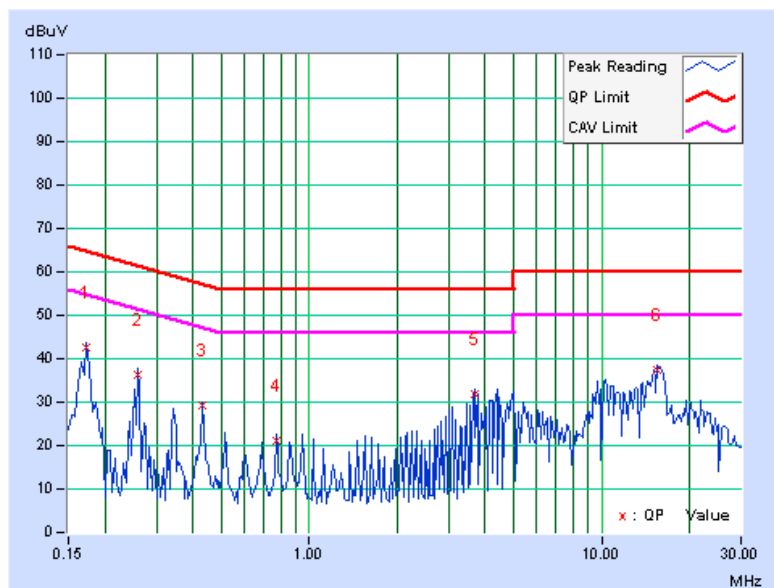


A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	B
TESTED BY	Lori Chiu		

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	0.13	42.42	-	42.55	-	64.79	54.79	-22.24	-
2	0.259	0.13	36.30	-	36.43	-	61.45	51.45	-25.02	-
3	0.431	0.14	29.00	-	29.14	-	57.23	47.23	-28.09	-
4	0.775	0.16	21.07	-	21.23	-	56.00	46.00	-34.77	-
5	3.699	0.27	31.74	-	32.01	-	56.00	46.00	-23.99	-
6	15.488	0.57	36.72	-	37.29	-	60.00	50.00	-22.71	-

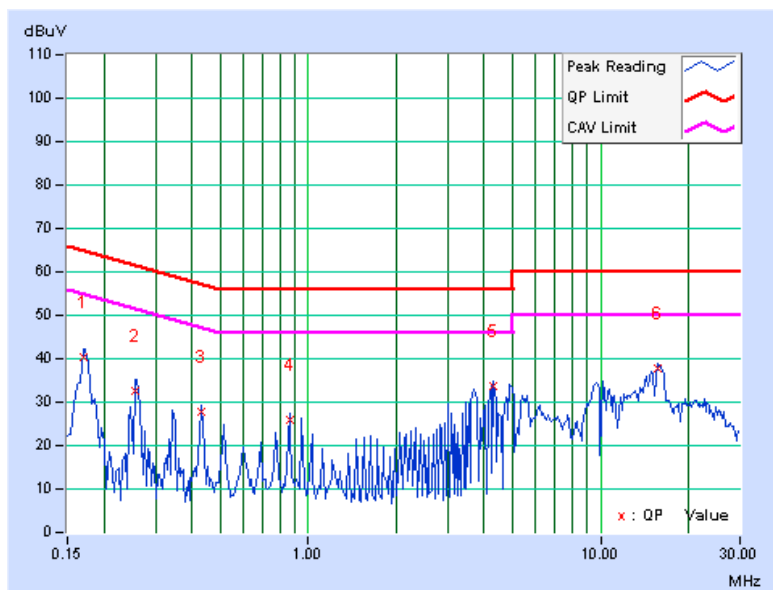
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	B
TESTED BY	Lori Chiu		

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	0.170	0.13	40.17	-	40.30	-	64.98	54.98	-24.68	-
2	0.255	0.14	32.45	-	32.59	-	61.58	51.58	-28.99	-
3	0.431	0.15	27.68	-	27.83	-	57.23	47.23	-29.40	-
4	0.861	0.17	25.77	-	25.94	-	56.00	46.00	-30.06	-
5	4.305	0.31	33.40	-	33.71	-	56.00	46.00	-22.29	-
6	15.664	0.69	37.27	-	37.96	-	60.00	50.00	-22.04	-

- 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.



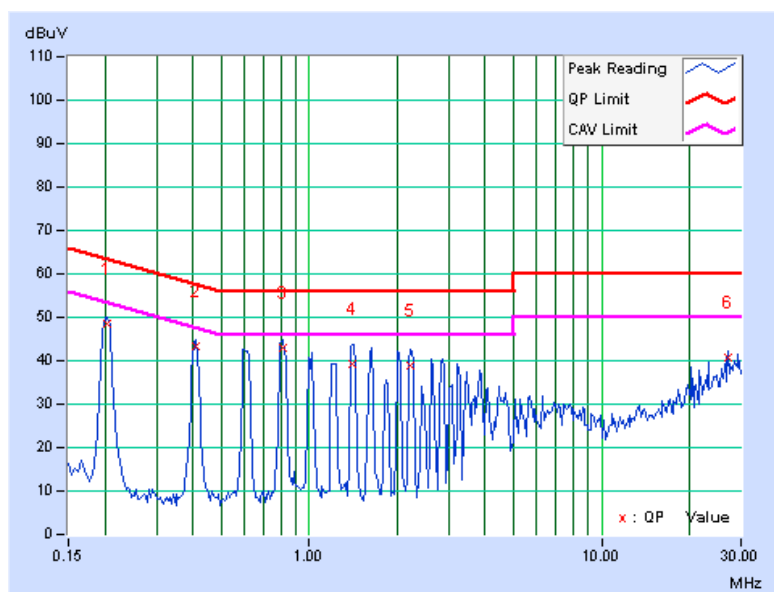


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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	C
TESTED BY	Lori Chiu		

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	0.205	0.13	48.23	-	48.36	-	63.42	53.42	-15.06	-
2	0.408	0.14	43.08	-	43.22	-	57.69	47.69	-14.47	-
3	0.810	0.16	42.89	-	43.05	-	56.00	46.00	-12.95	-
4	1.402	0.18	38.95	-	39.13	-	56.00	46.00	-16.87	-
5	2.227	0.20	38.65	-	38.85	-	56.00	46.00	-17.15	-
6	27.160	0.63	40.10	-	40.73	-	60.00	50.00	-19.27	-

- 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.



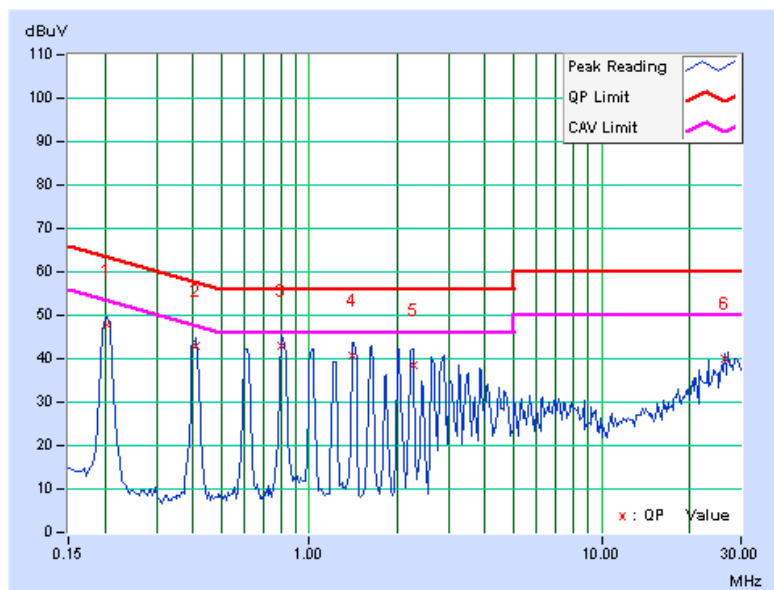


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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	C
TESTED BY	Lori Chiu		

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	0.205	0.13	47.74	-	47.87	-	63.42	53.42	-15.55	-
2	0.412	0.15	42.67	-	42.82	-	57.61	47.61	-14.79	-
3	0.806	0.16	42.87	-	43.03	-	56.00	46.00	-12.97	-
4	1.406	0.18	40.44	-	40.62	-	56.00	46.00	-15.38	-
5	2.262	0.21	38.25	-	38.46	-	56.00	46.00	-17.54	-
6	26.488	0.78	39.12	-	39.90	-	60.00	50.00	-20.10	-

- 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.



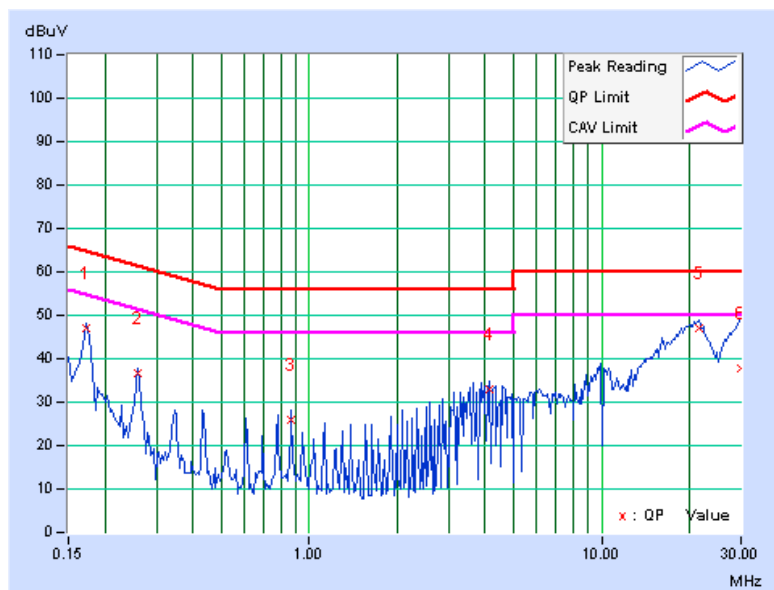


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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	D
TESTED BY	Lori Chiu		

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	0.13	46.88	-	47.01	-	64.79	54.79	-17.78	-
2	0.259	0.13	36.38	-	36.51	-	61.45	51.45	-24.94	-
3	0.865	0.16	25.79	-	25.95	-	56.00	46.00	-30.05	-
4	4.156	0.28	32.54	-	32.82	-	56.00	46.00	-23.18	-
5	21.480	0.66	46.33	-	46.99	-	60.00	50.00	-13.01	-
6	30.000	0.62	37.15	-	37.77	-	60.00	50.00	-22.23	-

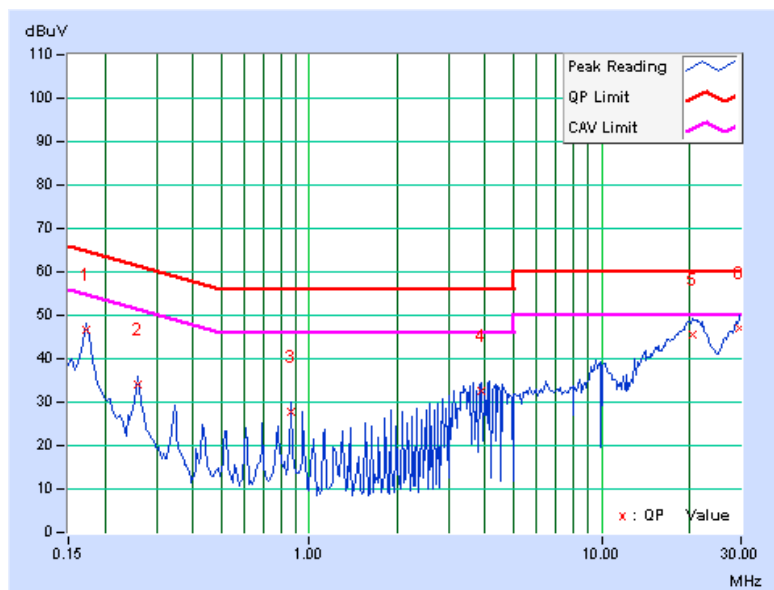
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	D
TESTED BY	Lori Chiu		

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	0.13	46.46	-	46.59	-	64.79	54.79	-18.20	-
2	0.259	0.14	34.00	-	34.14	-	61.45	51.45	-27.32	-
3	0.865	0.17	27.64	-	27.81	-	56.00	46.00	-28.19	-
4	3.895	0.29	32.44	-	32.73	-	56.00	46.00	-23.27	-
5	20.590	0.82	44.88	-	45.70	-	60.00	50.00	-14.30	-
6	29.754	0.76	46.33	-	47.09	-	60.00	50.00	-12.91	-

- 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.



5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100041	May 13, 2009	May 12, 2010

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

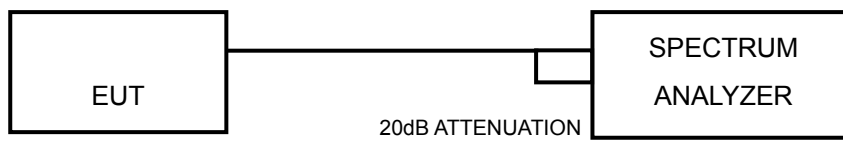
5.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



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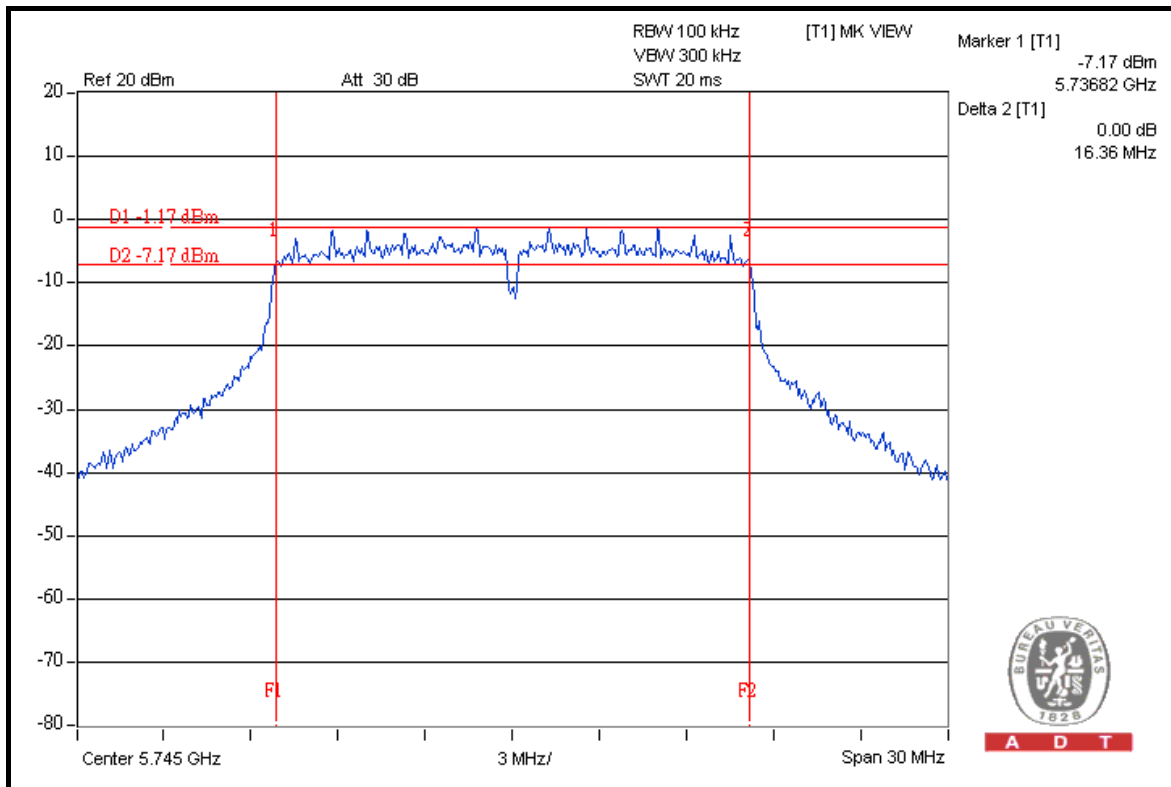
5.3.7 TEST RESULTS

802.11a OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 1		
149	5745	16.36	16.28	16.37	0.5	PASS
157	5785	16.37	16.36	16.37	0.5	PASS
165	5825	16.34	16.35	16.37	0.5	PASS

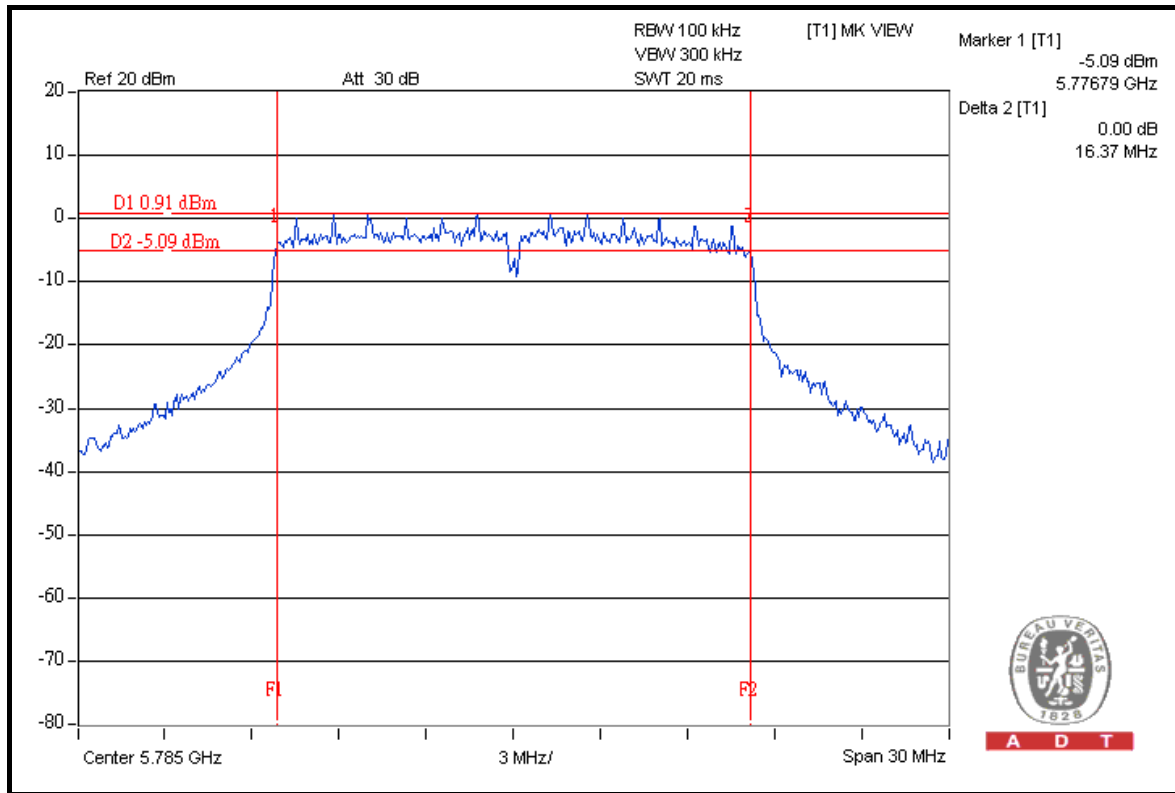
FOR CHAIN 0: CH 149



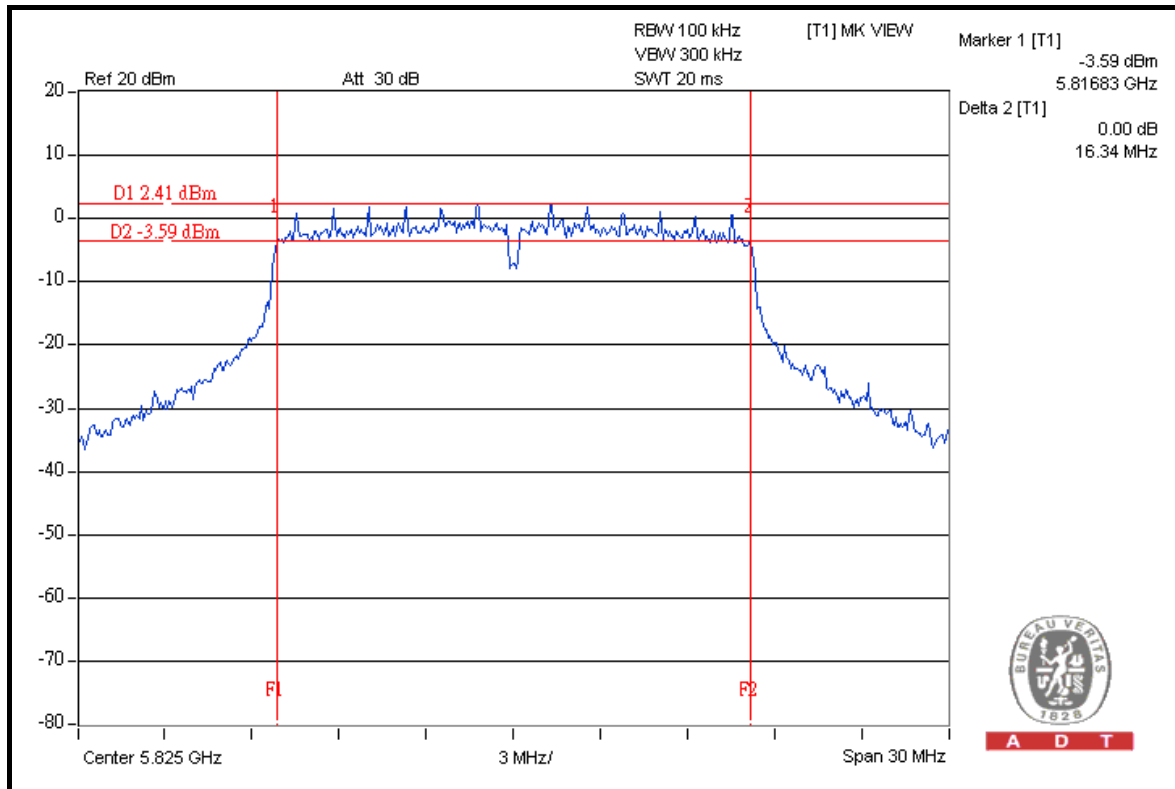


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CH 157



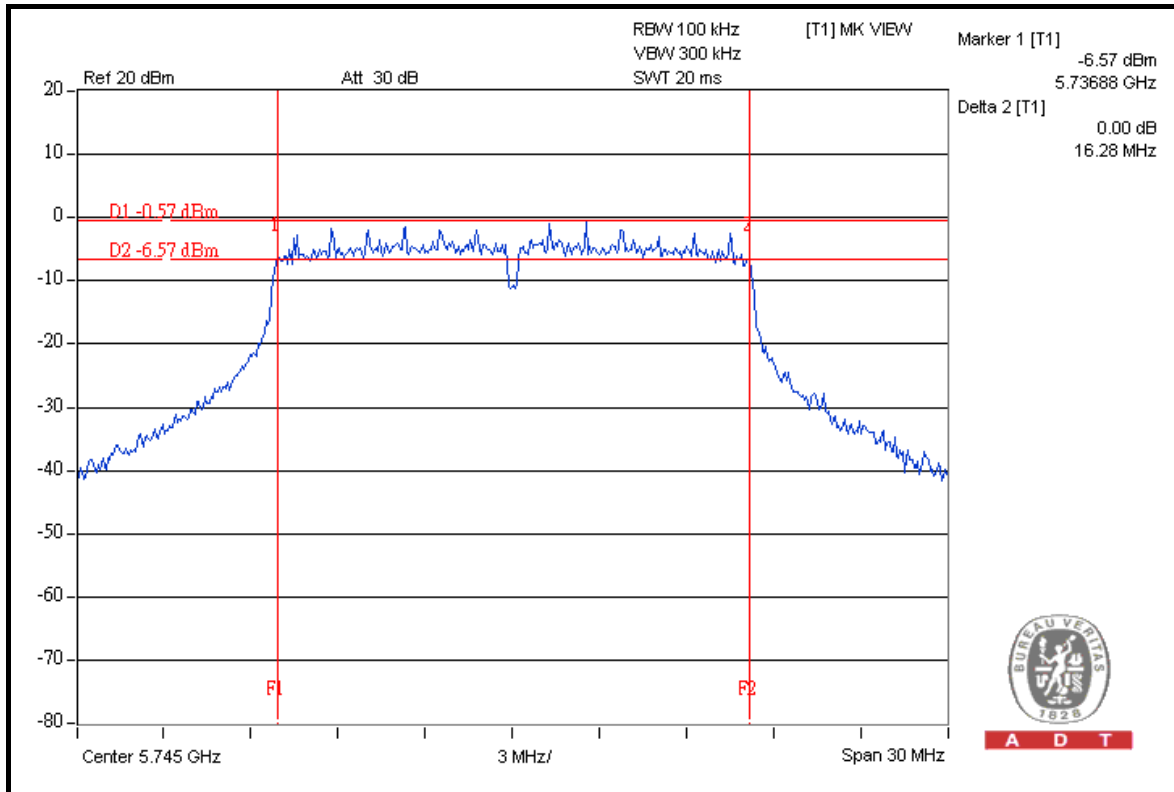
CH 165



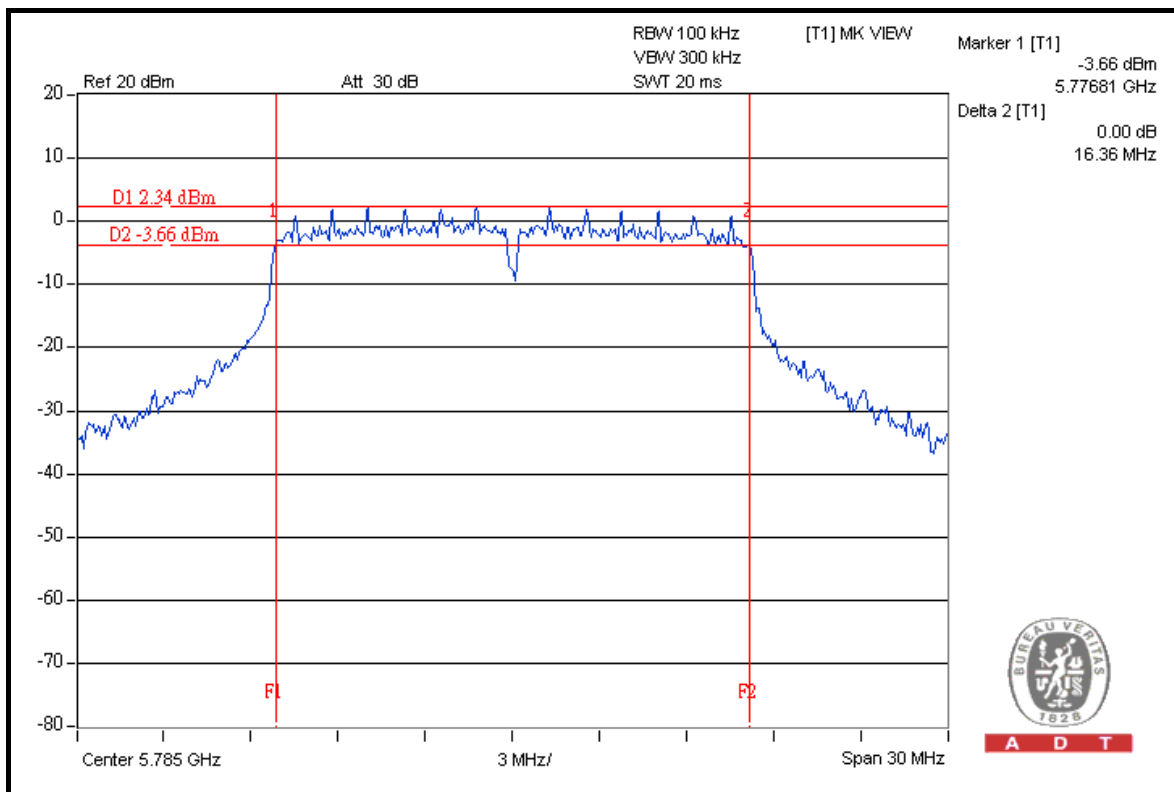


A D T

FOR CHAIN 1: CH 149



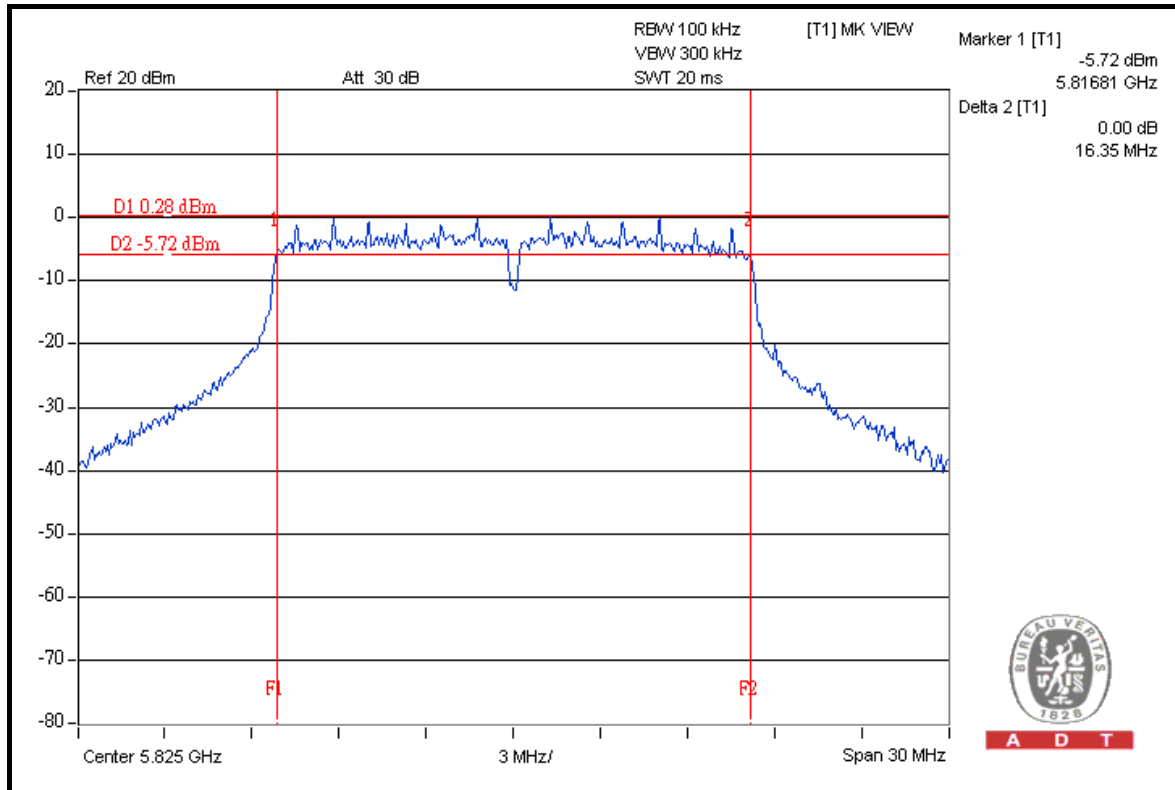
CH 157





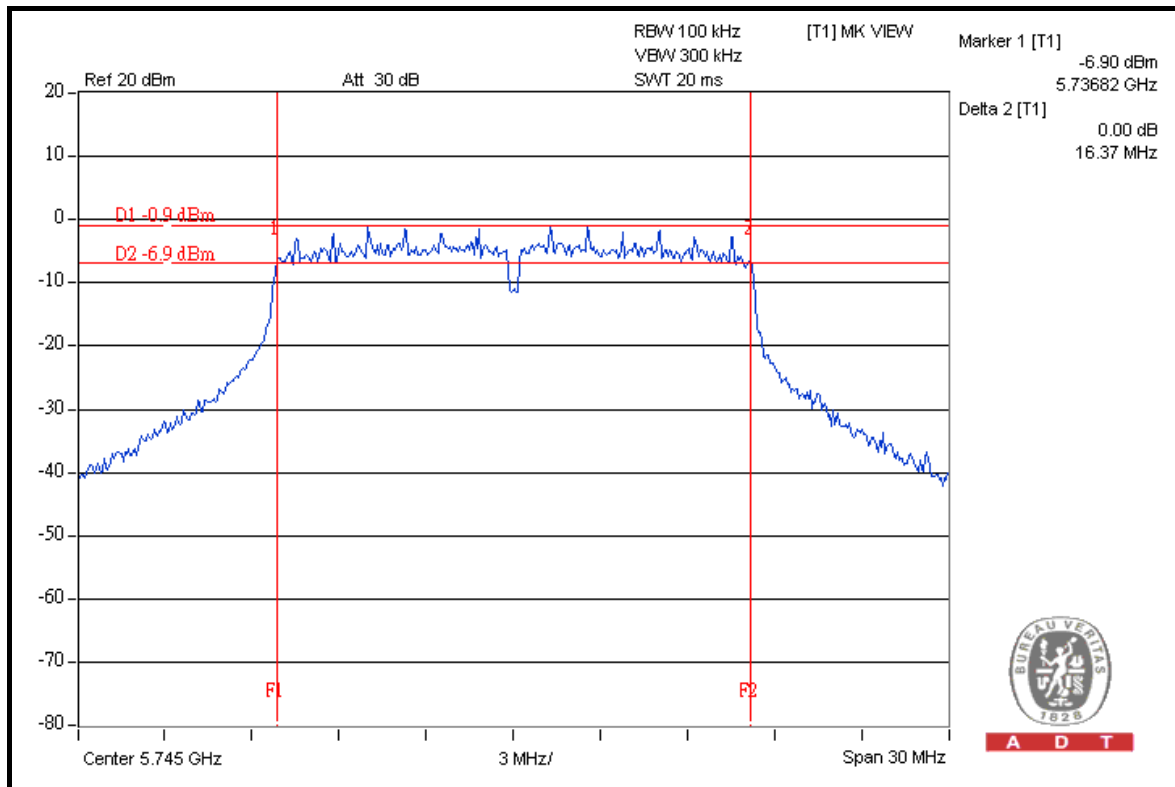
A D T

CH 165



A D T

FOR CHAIN 2: CH 149

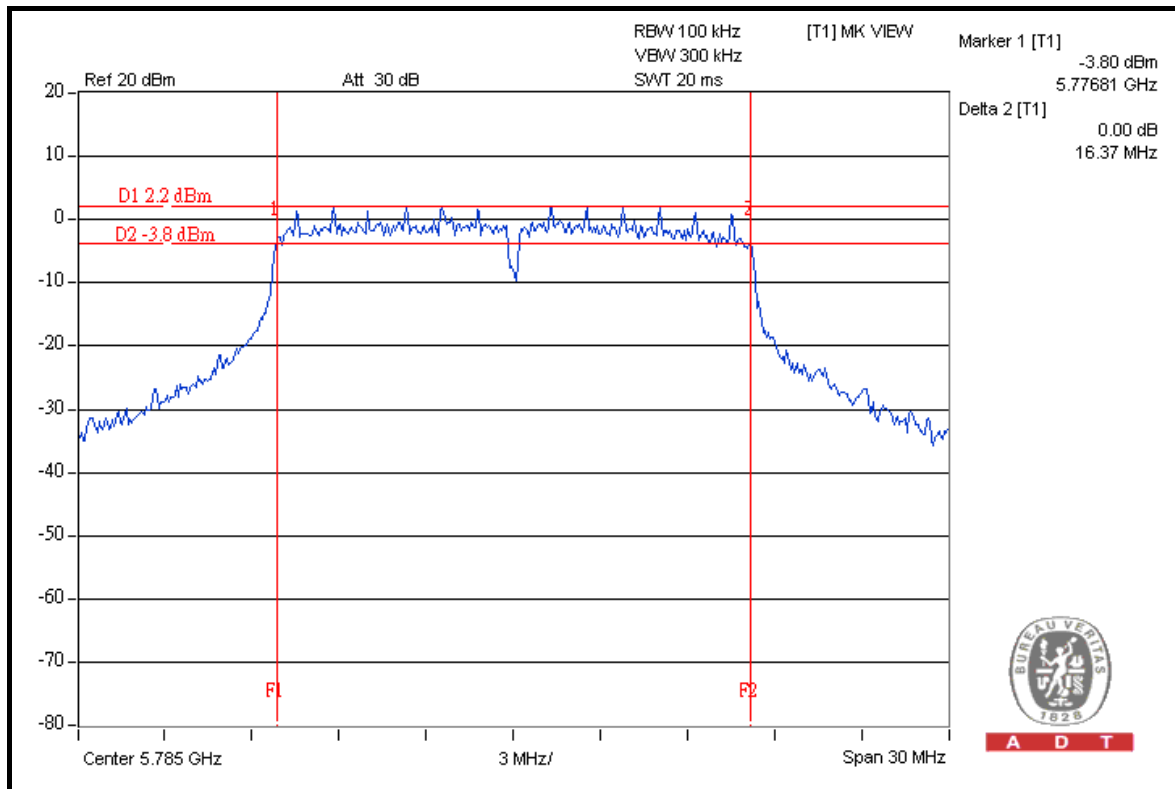


A D T

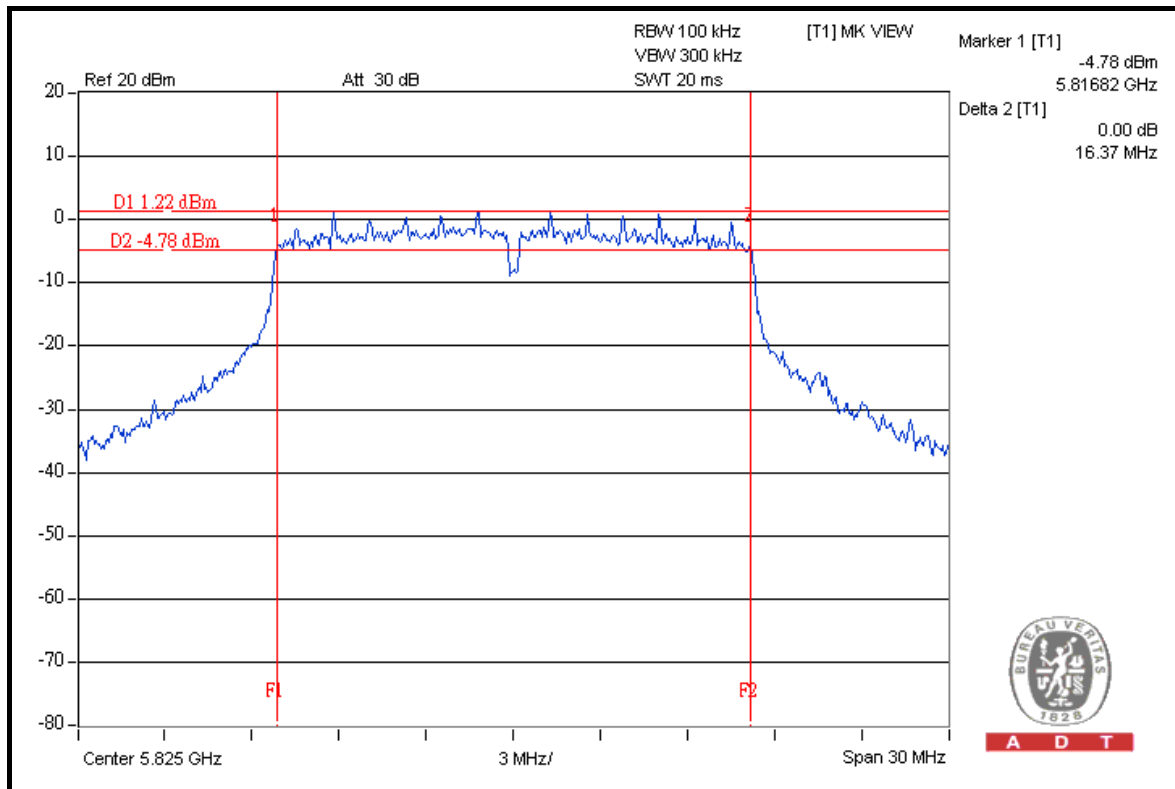


A D T

CH 157



CH 165





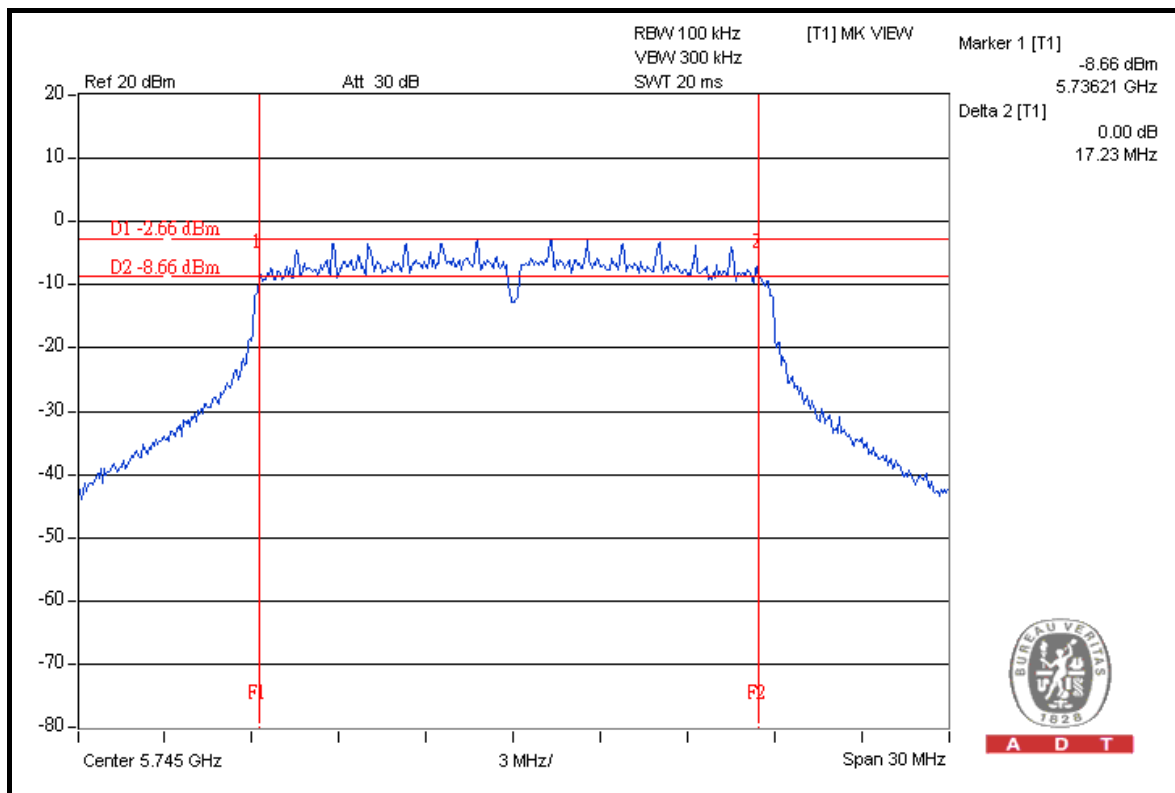
A D T

DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 1		
149	5745	17.23	16.92	16.98	0.5	PASS
157	5785	17.35	17.21	17.20	0.5	PASS
165	5825	17.32	17.22	17.22	0.5	PASS

FOR CHAIN 0: CH 149

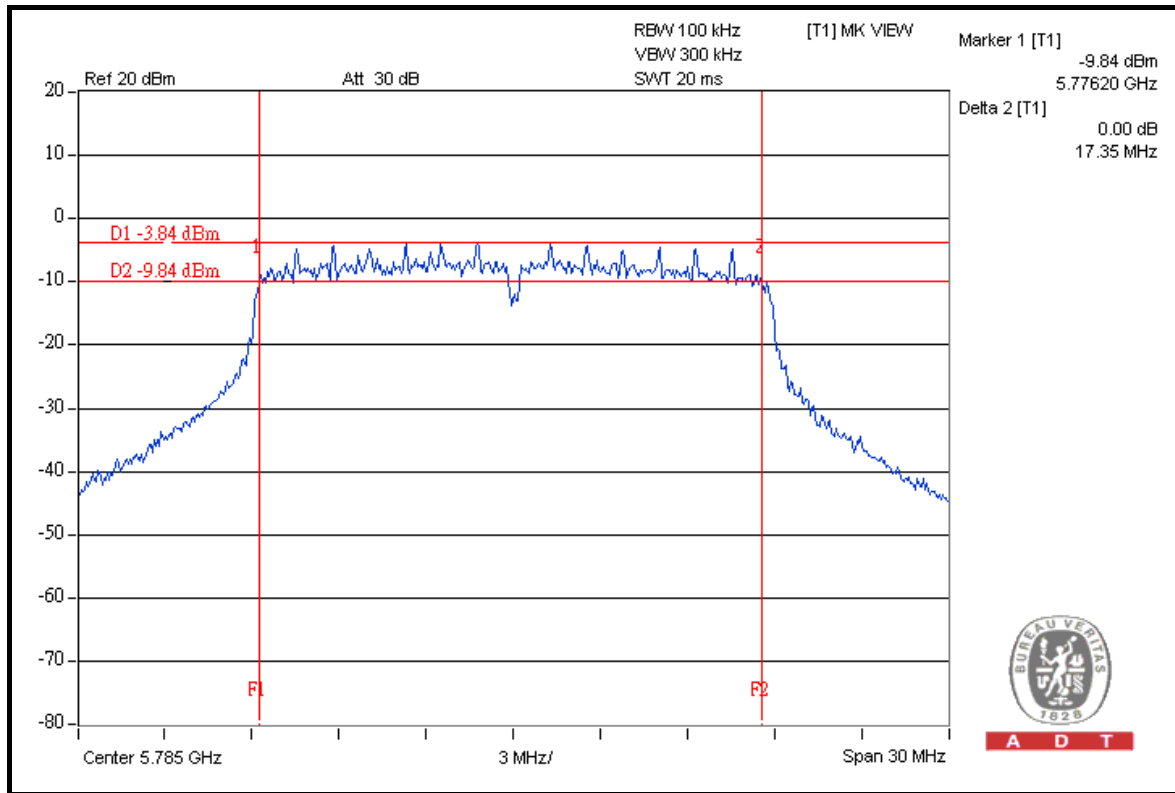


A D T



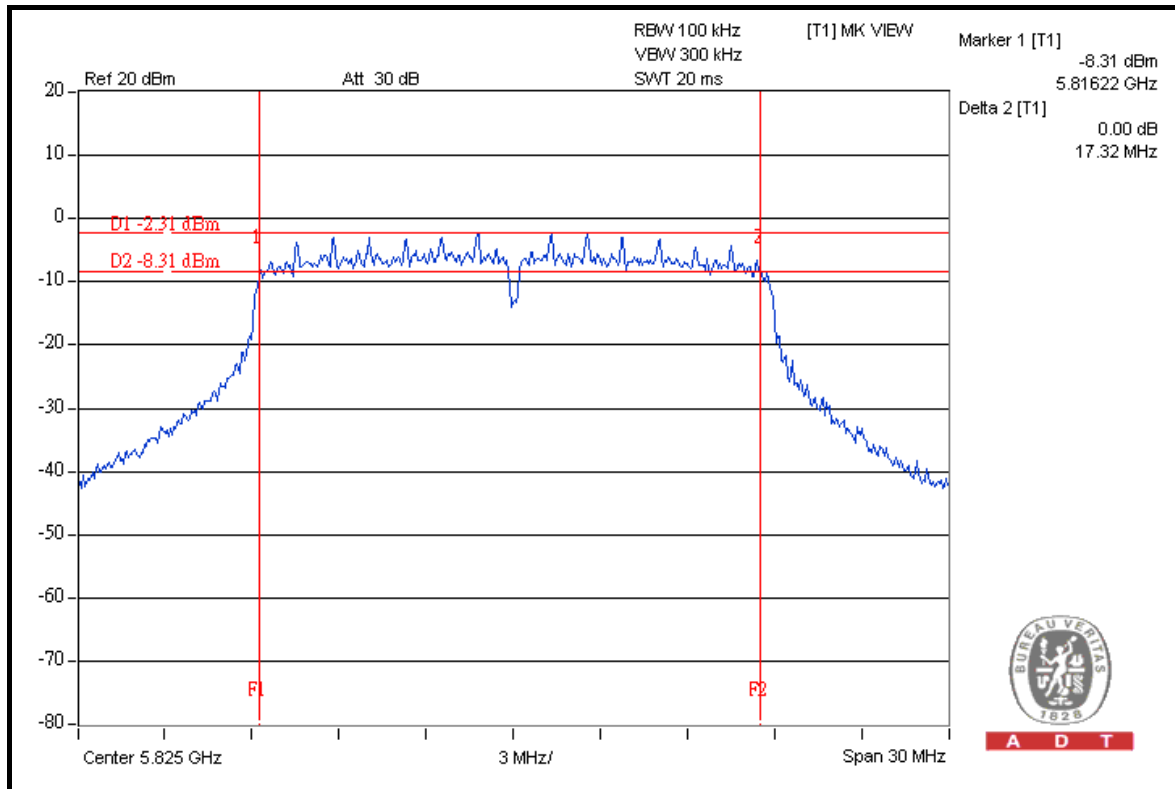
A D T

CH 157



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CH 165

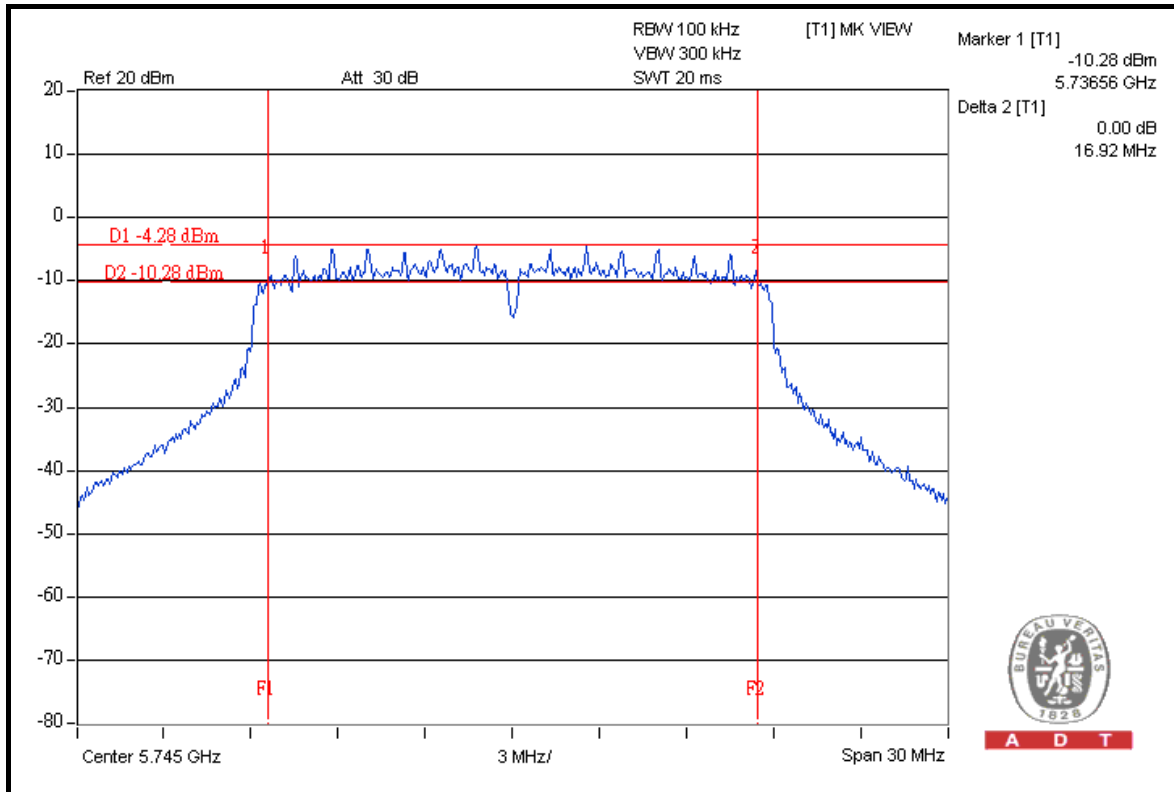


A D T

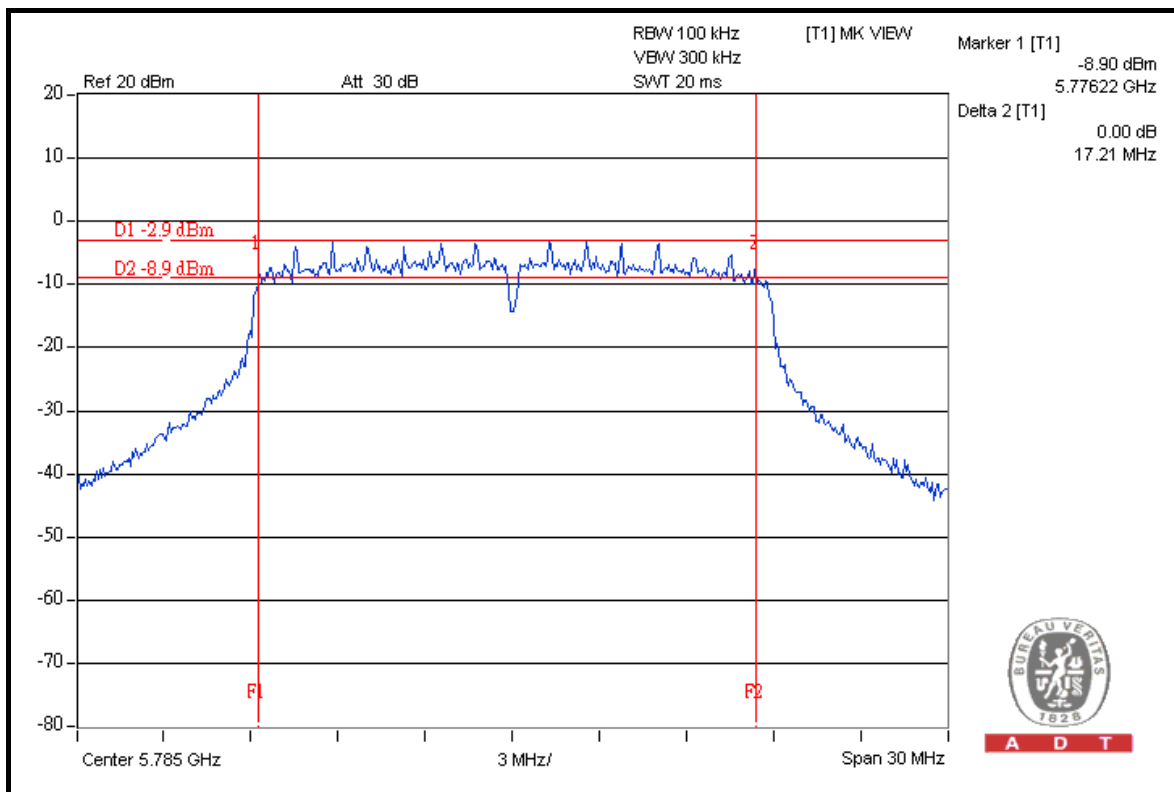


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FOR CHAIN 1: CH 149



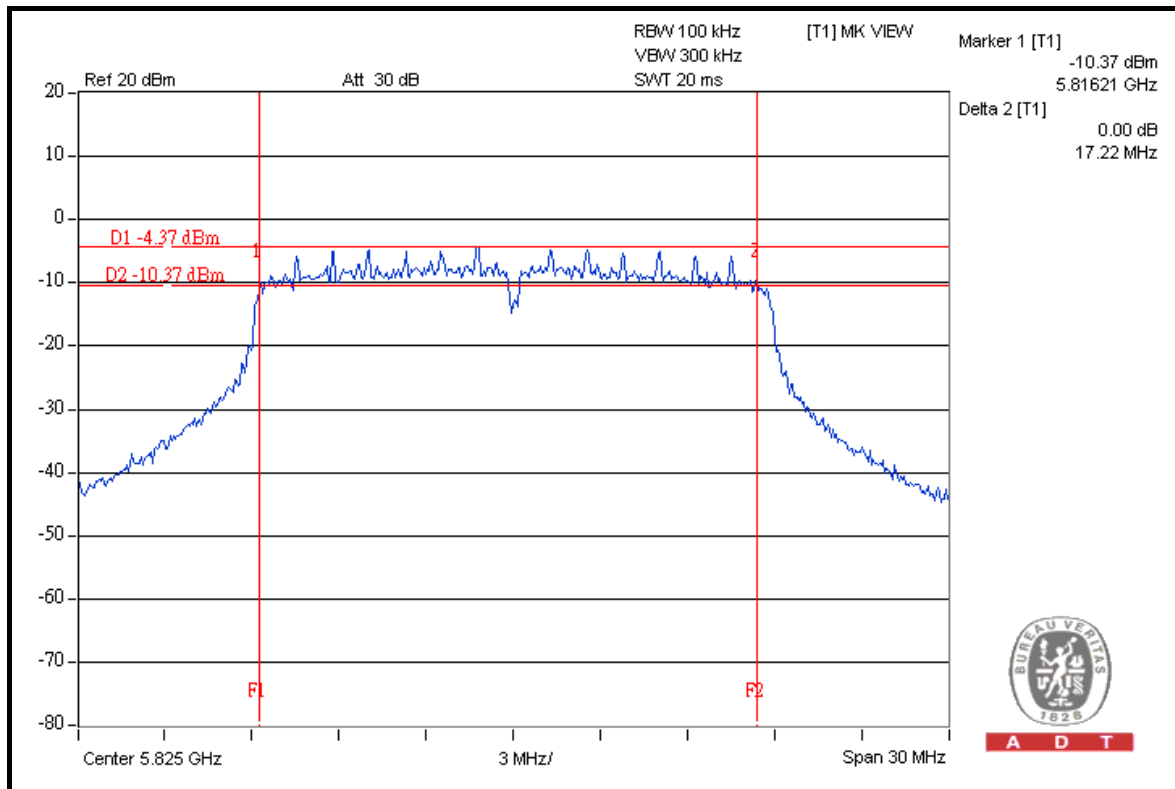
CH 157



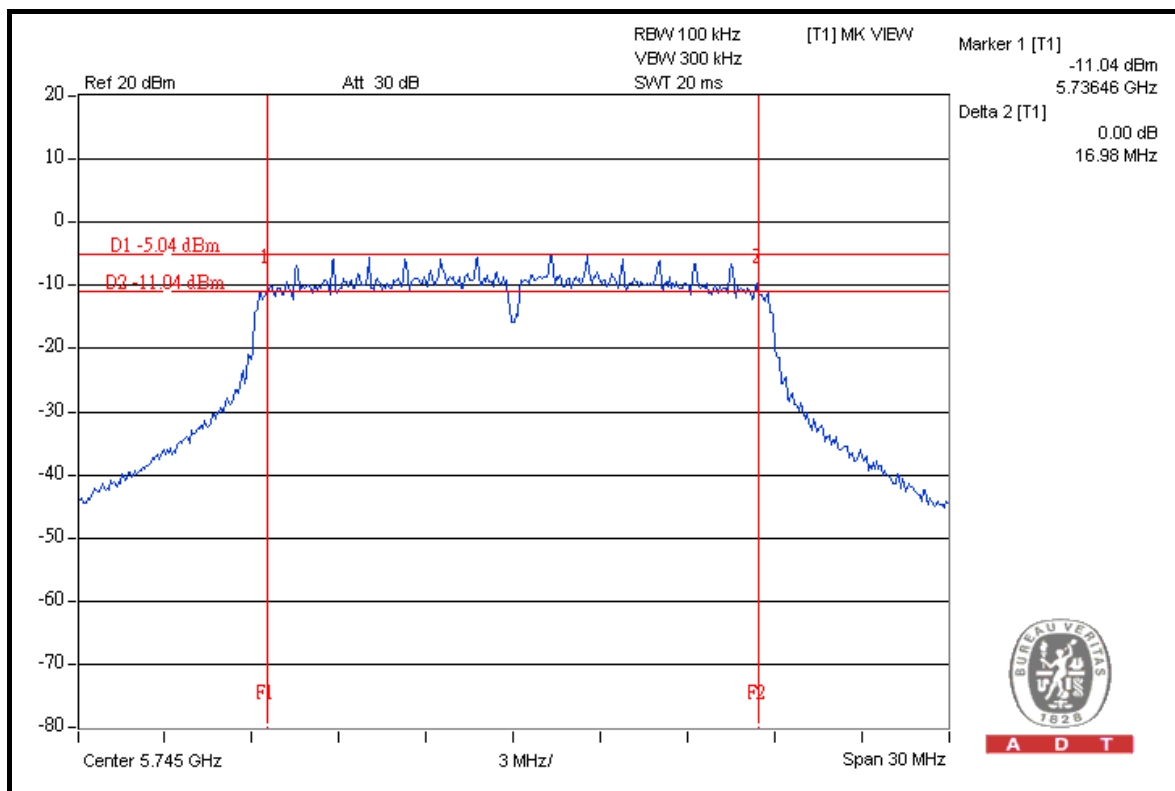


A D T

CH 165



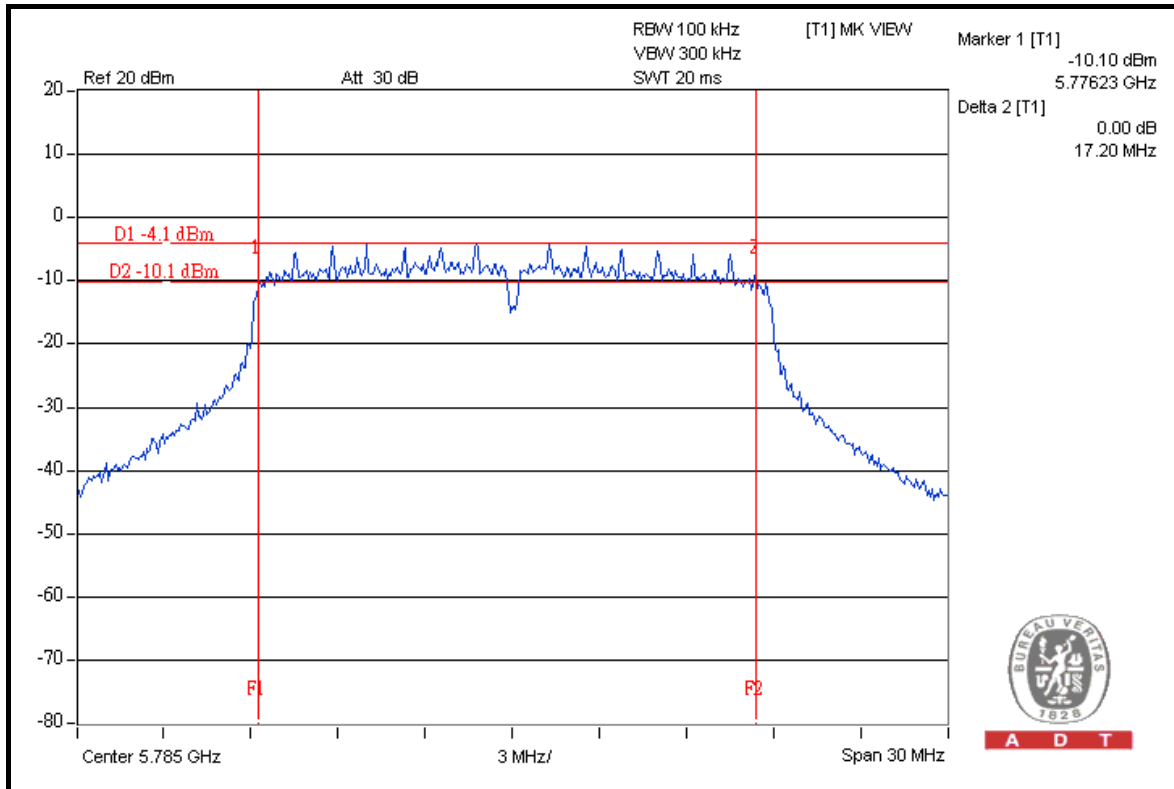
FOR CHAIN 2: CH 149



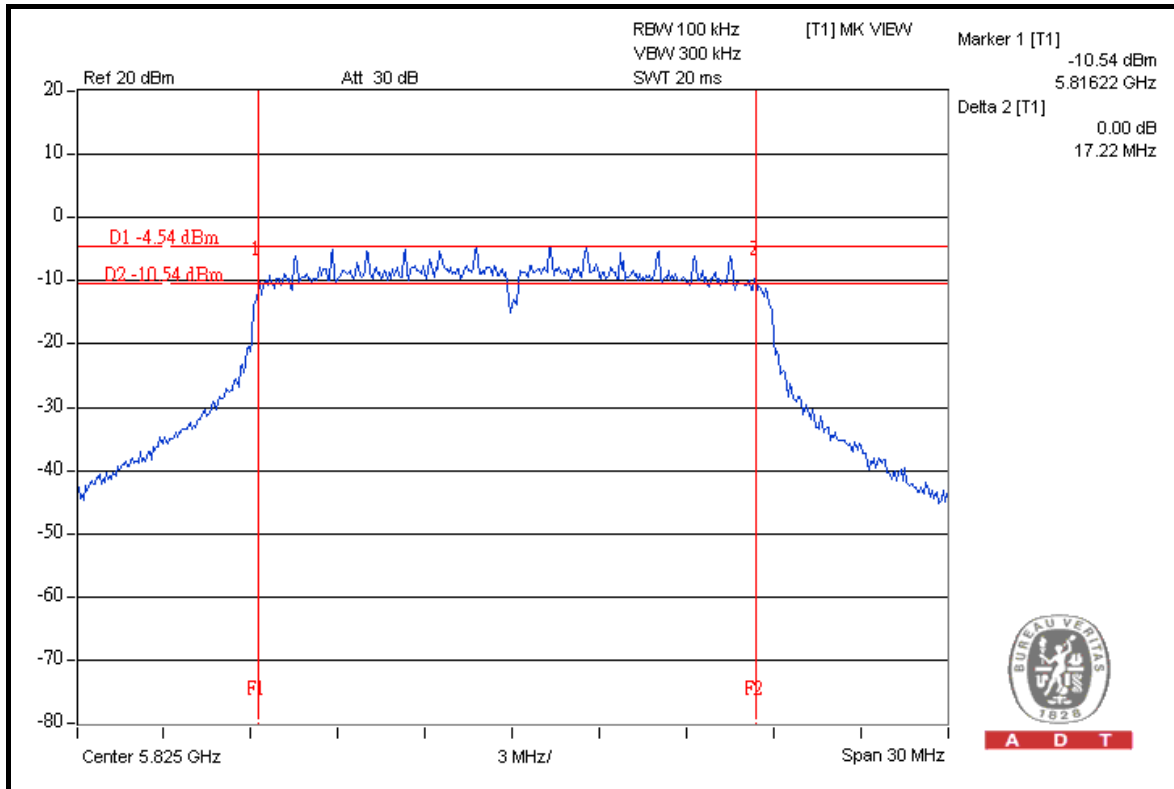


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CH 157



CH 165





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DRAFT 802.11n (40MHz) OFDM MODULATION

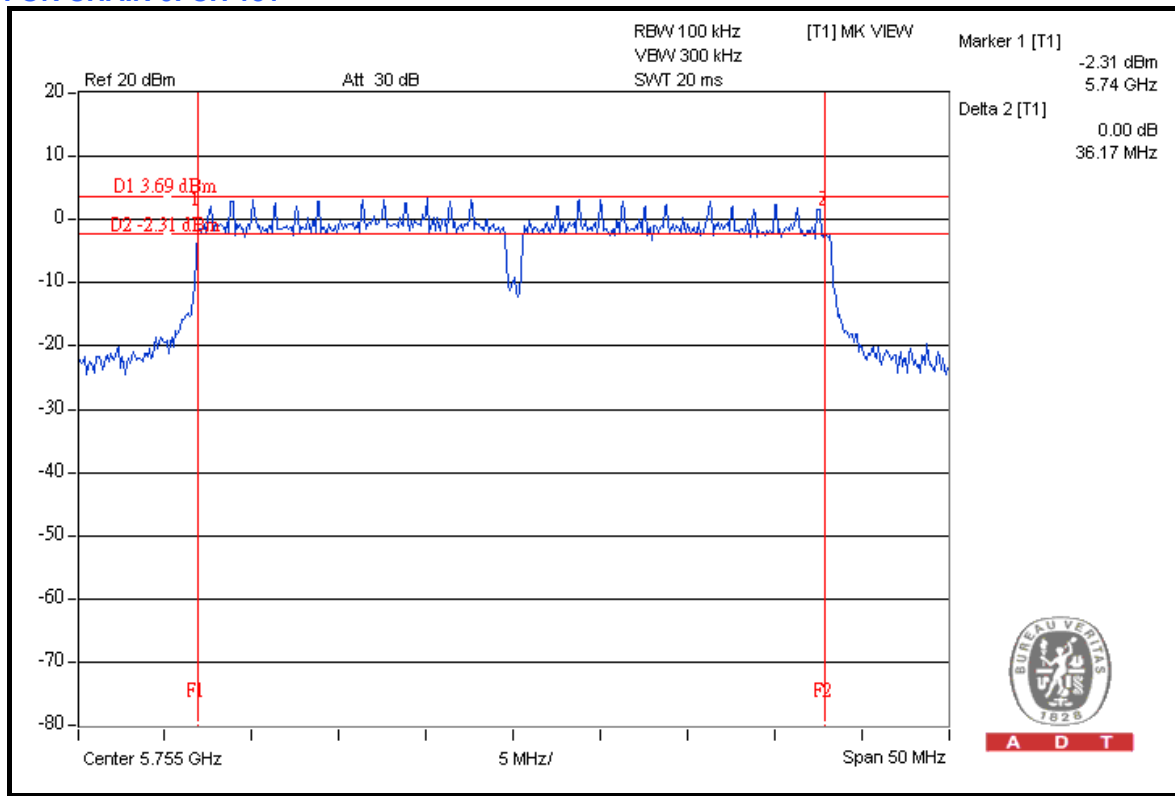
MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
151	5755	36.17	36.37	36.44	0.5	PASS
159	5795	35.91	36.42	36.39	0.5	PASS

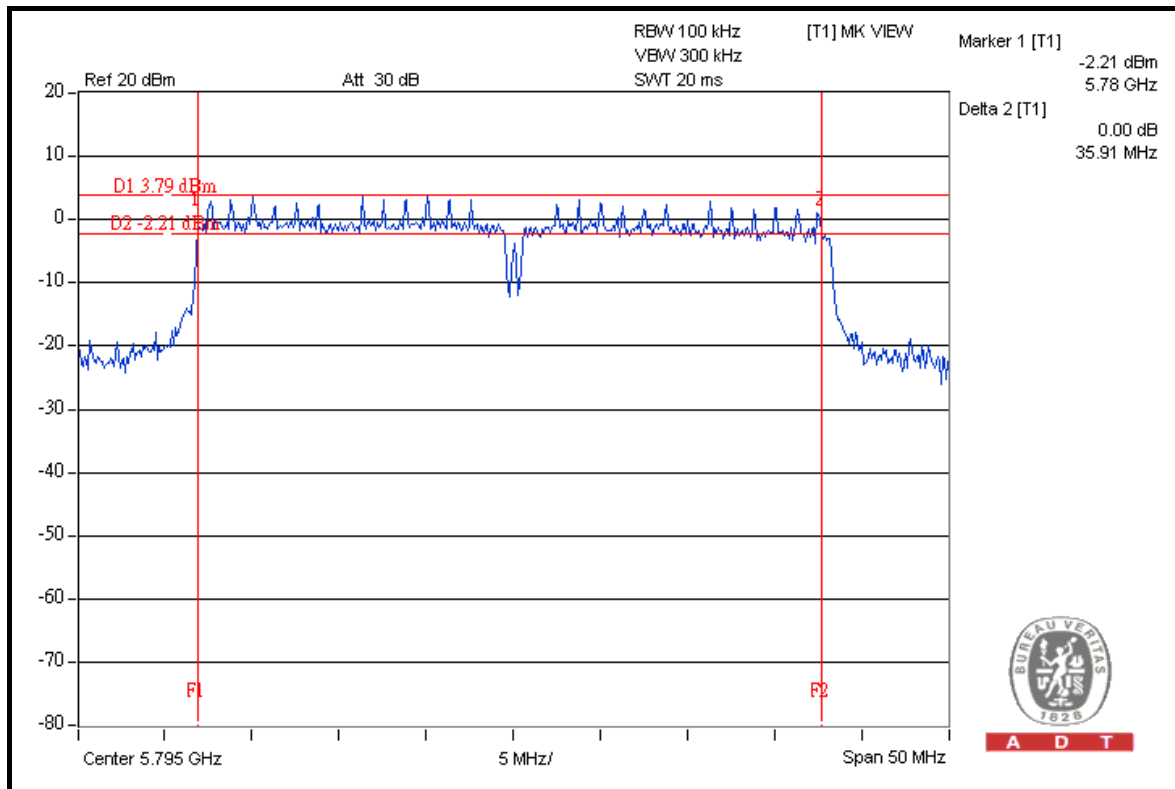


A D T

FOR CHAIN 0: CH 151



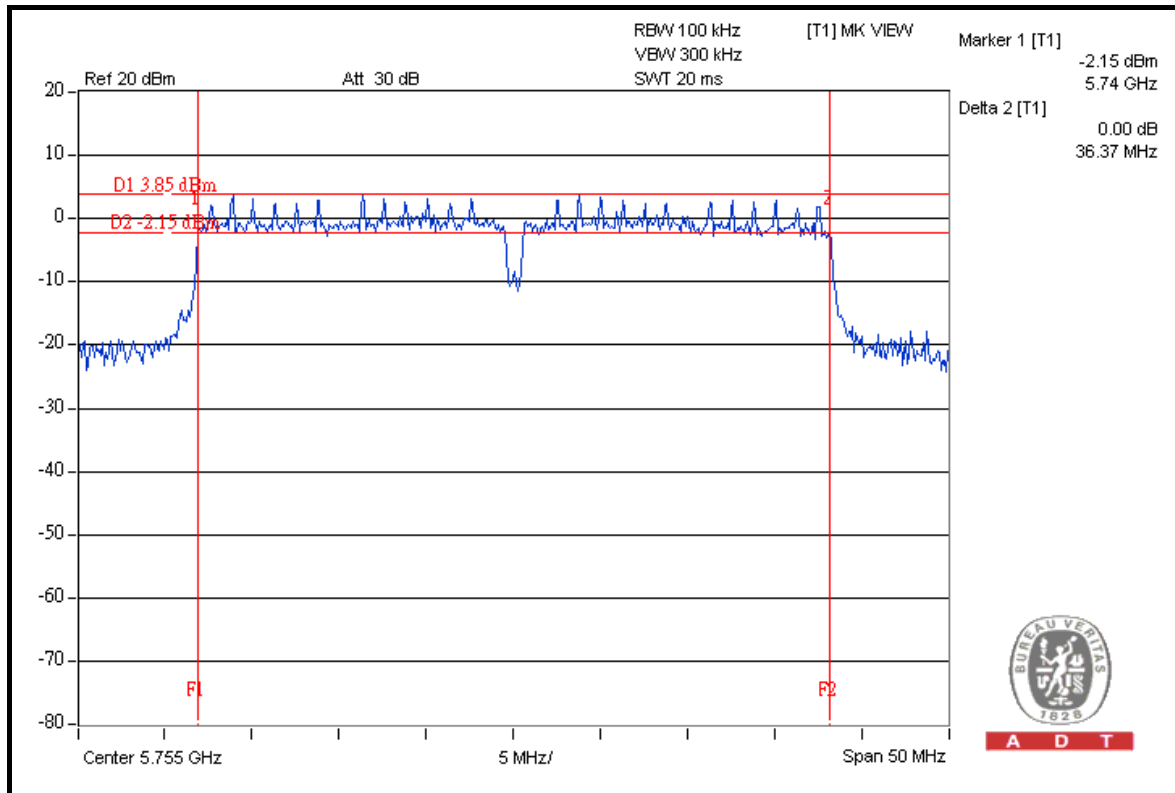
CH 159



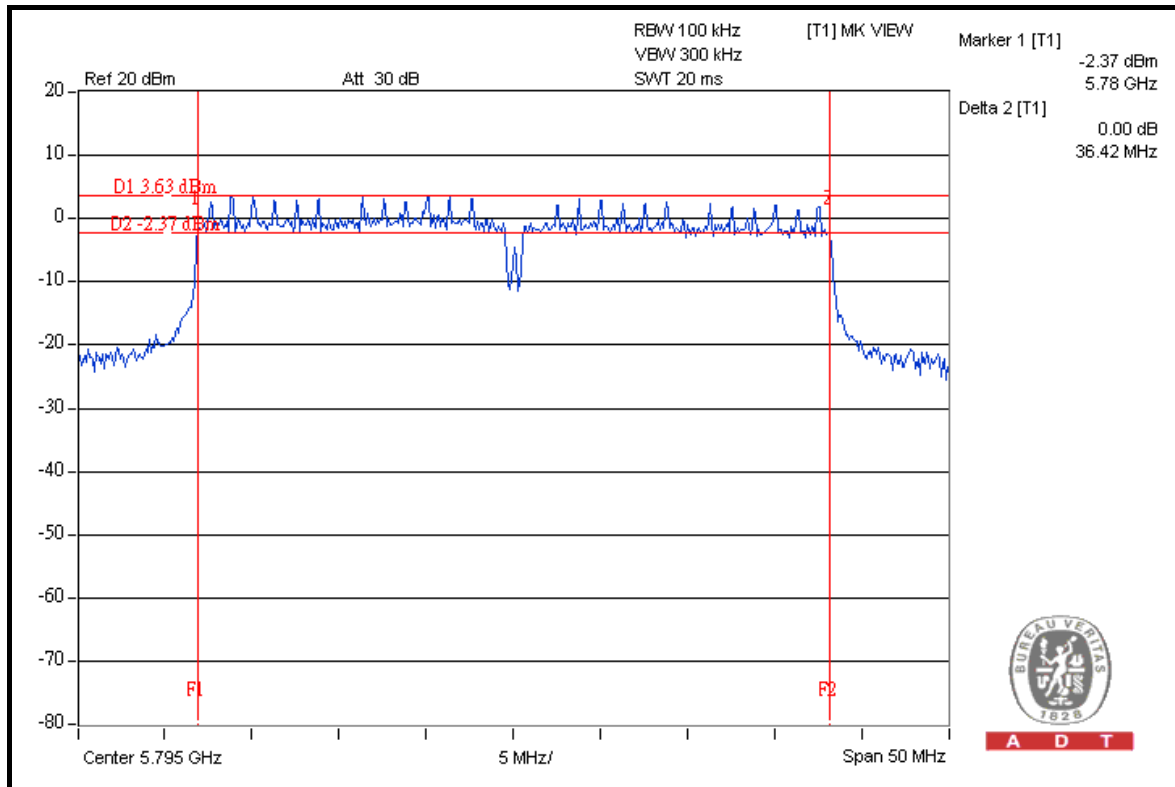


A D T

FOR CHAIN 1: CH 151



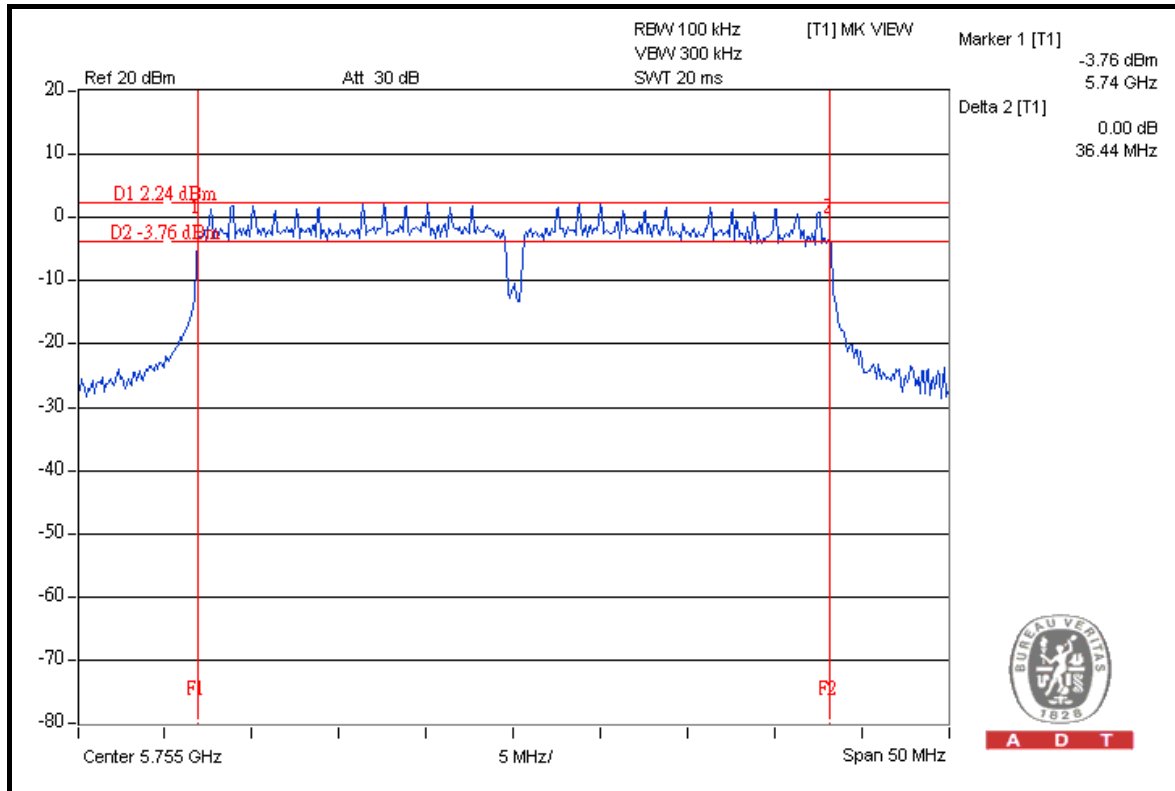
CH 159



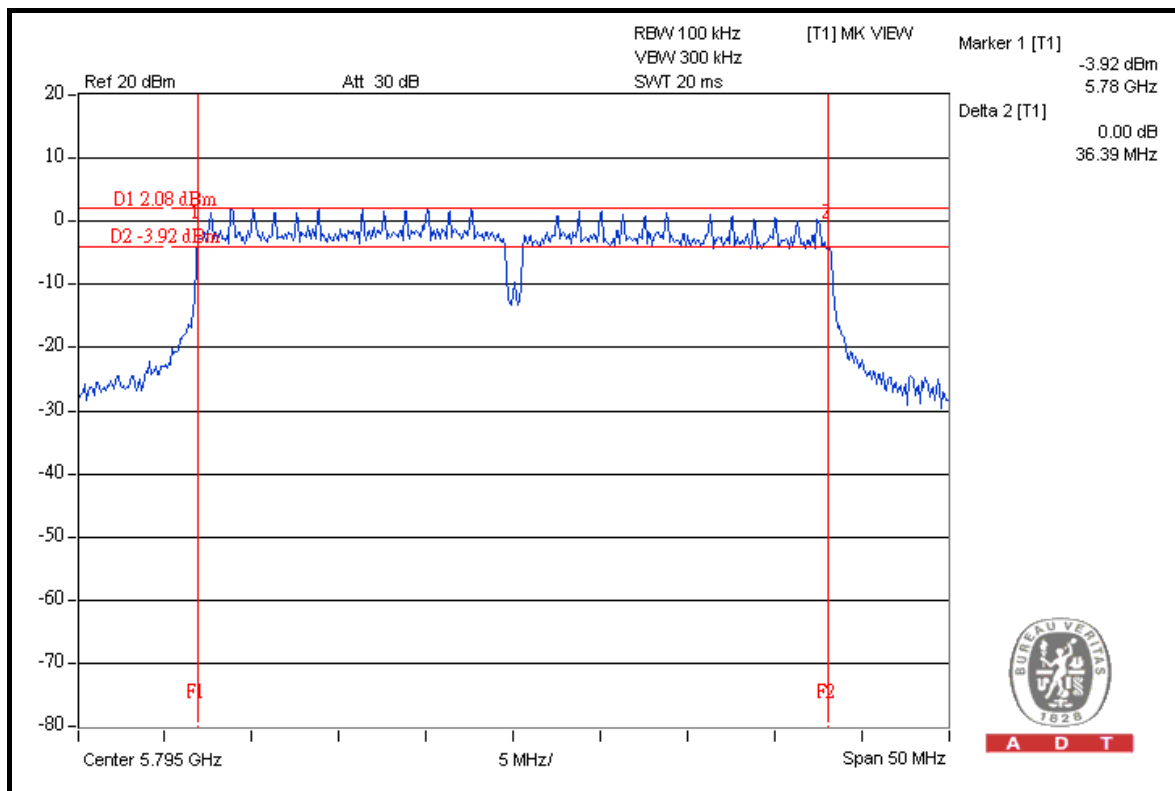


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FOR CHAIN 2: CH 151



CH 159





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5.4 MAXIMUM PEAK OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
High Speed Peak Power Meter	ML2495A	0824012	Aug. 04, 2008	Aug. 03, 2009
Power Sensor	MA2411B	0738138	Aug. 04, 2008	Aug. 03, 2009

- 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 6dB bandwidth of emission.

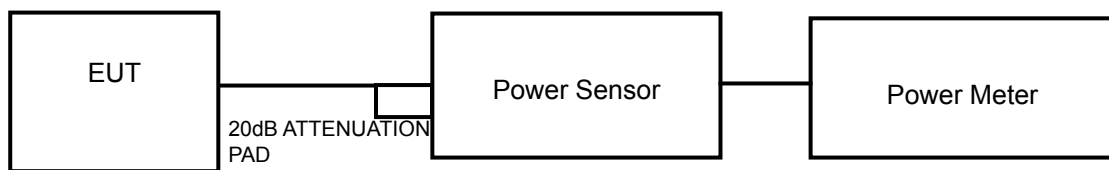
5.4.3 TEST PROCEDURES

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.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation.

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

Same as Item 5.3.6



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5.4.7 TEST RESULTS

802.11a OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	21.03	21.55	21.54	412.215	26.15	30	PASS
157	5785	23.05	24.56	24.56	773.355	28.88	30	PASS
165	5825	24.56	22.53	23.53	690.244	28.39	30	PASS

DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	19.52	18.06	18.03	217.043	23.37	30	PASS
157	5785	18.53	19.54	19.02	241.035	23.82	30	PASS
165	5825	20.04	18.02	18.55	235.927	23.73	30	PASS



A D T

DRAFT 802.11n (40MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
151	5755	24.52	24.04	23.54	762.596	28.82	30	PASS
159	5795	24.53	24.05	23.56	764.876	28.84	30	PASS



5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100041	May 13, 2009	May 12, 2010

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

5.5.3 TEST PROCEDURE

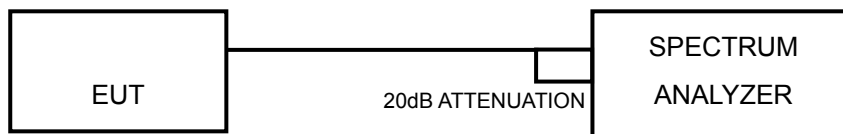
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation.

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

Same as Item 5.3.6.



A D T

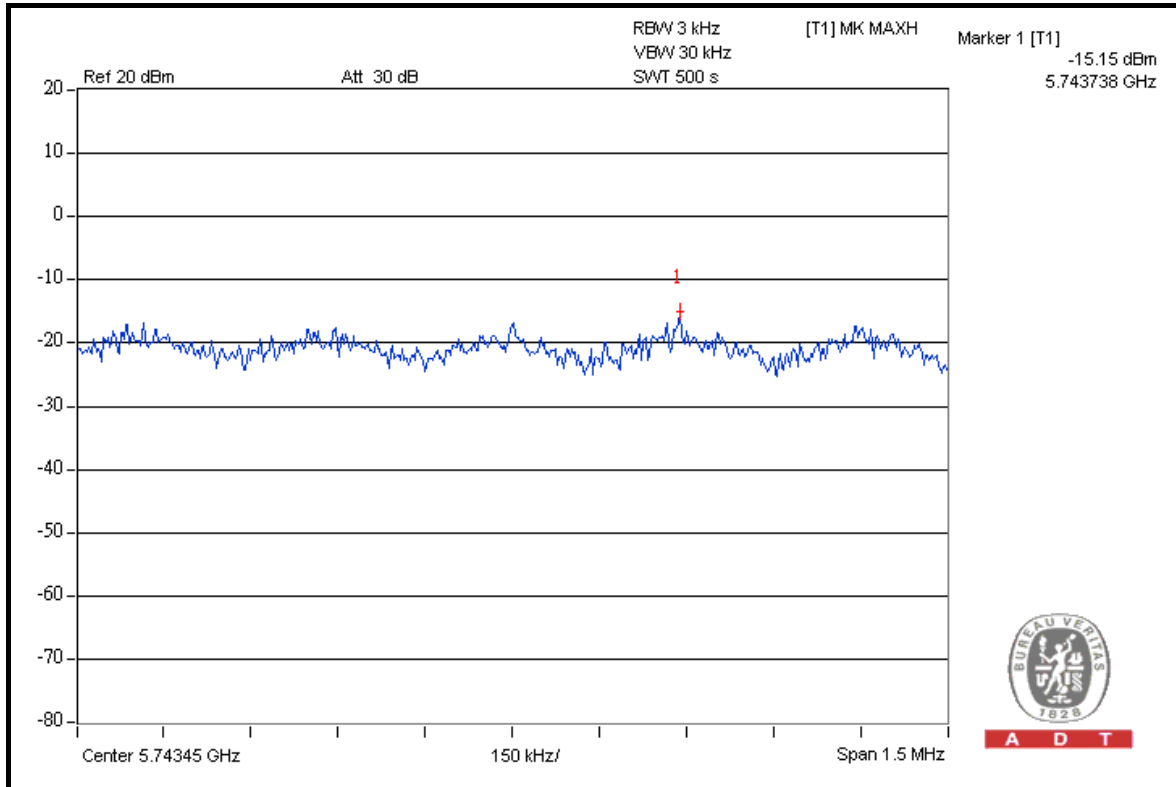
5.5.7 TEST RESULTS

802.11a OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	-15.15	-16.69	-15.76	0.079	-11.05	8	PASS
157	5785	-13.00	-13.53	-12.88	0.146	-8.36	8	PASS
165	5825	-11.82	-15.90	-13.63	0.135	-8.70	8	PASS

FOR CHAIN 0: CH 149

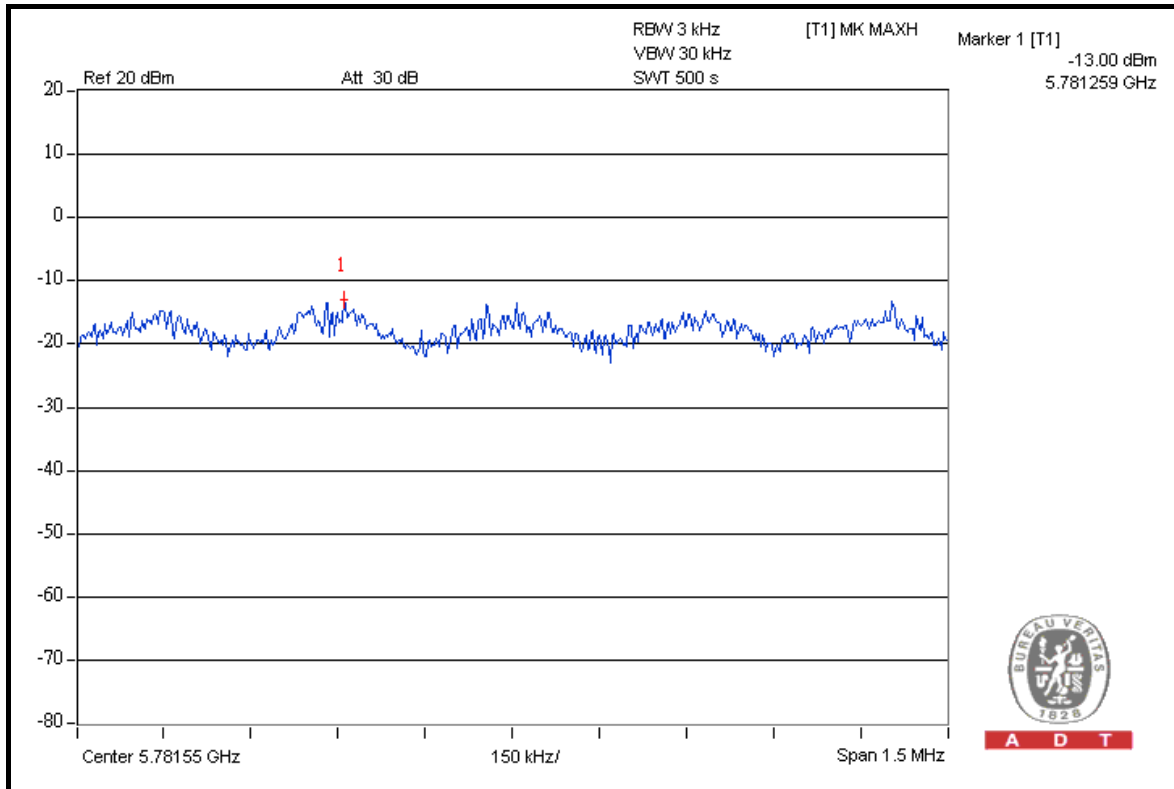


A D T

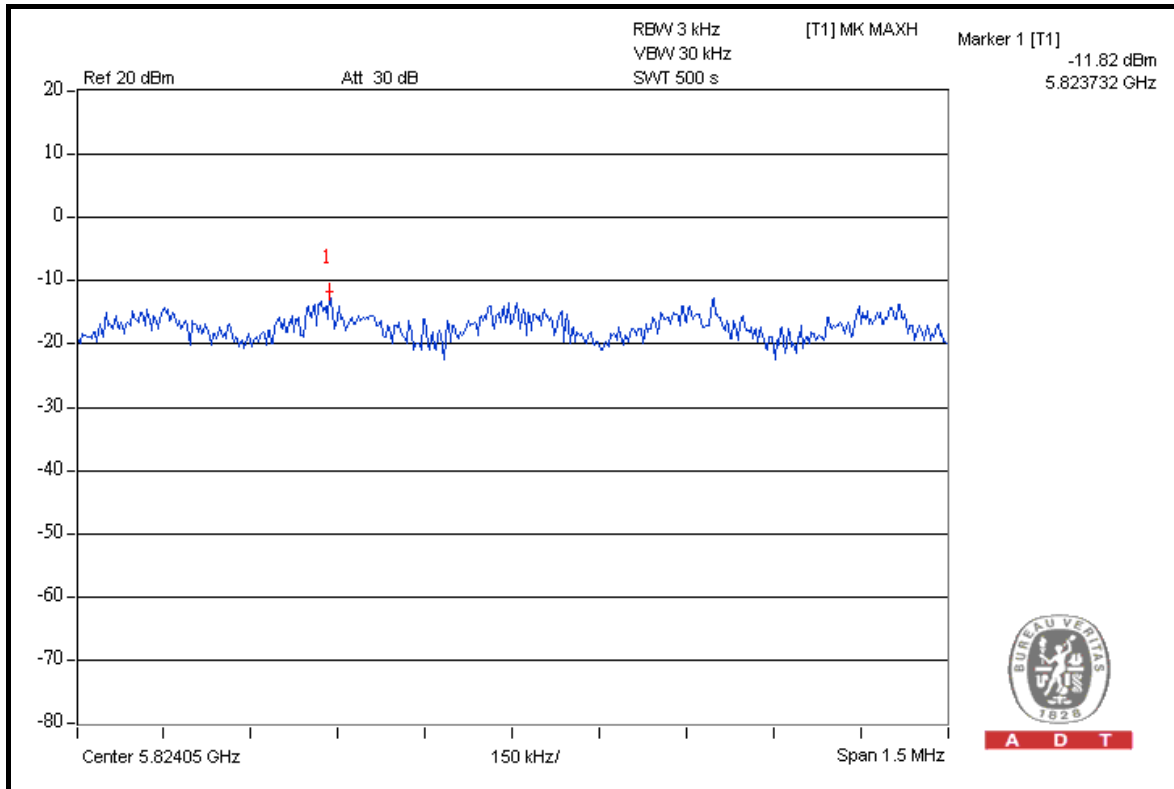


A D T

CH 157



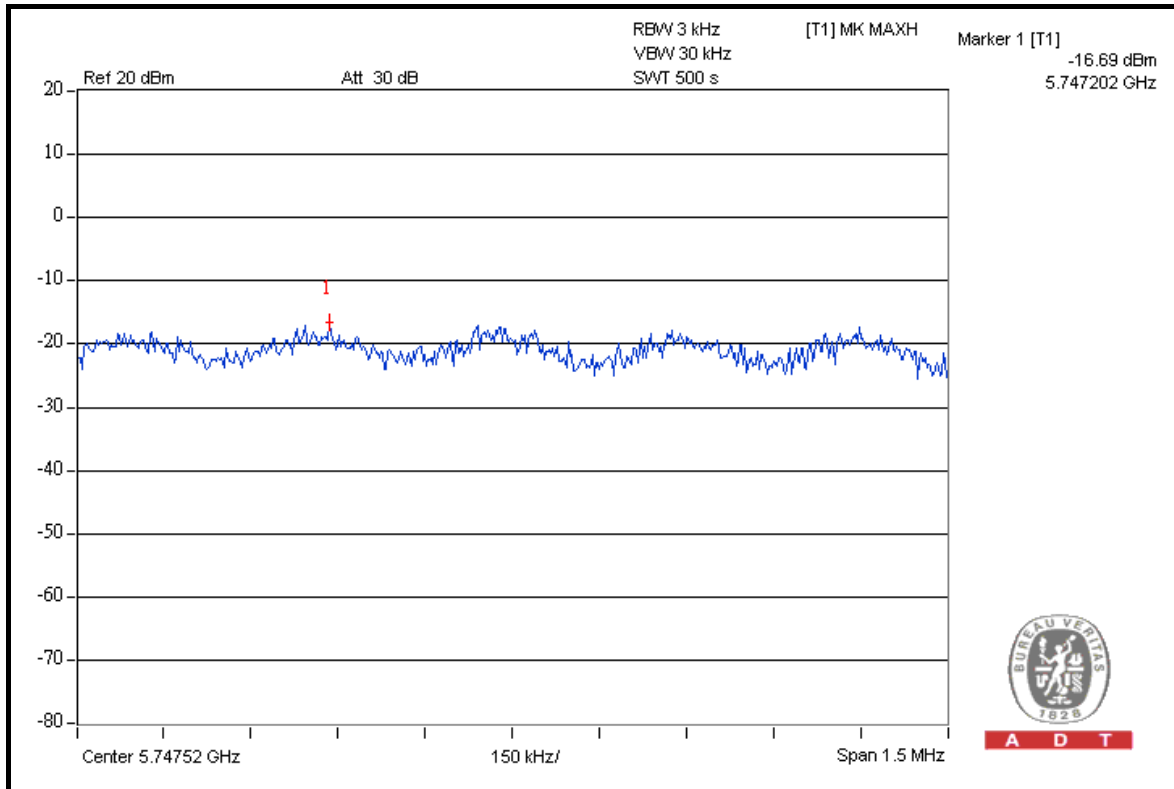
CH 165



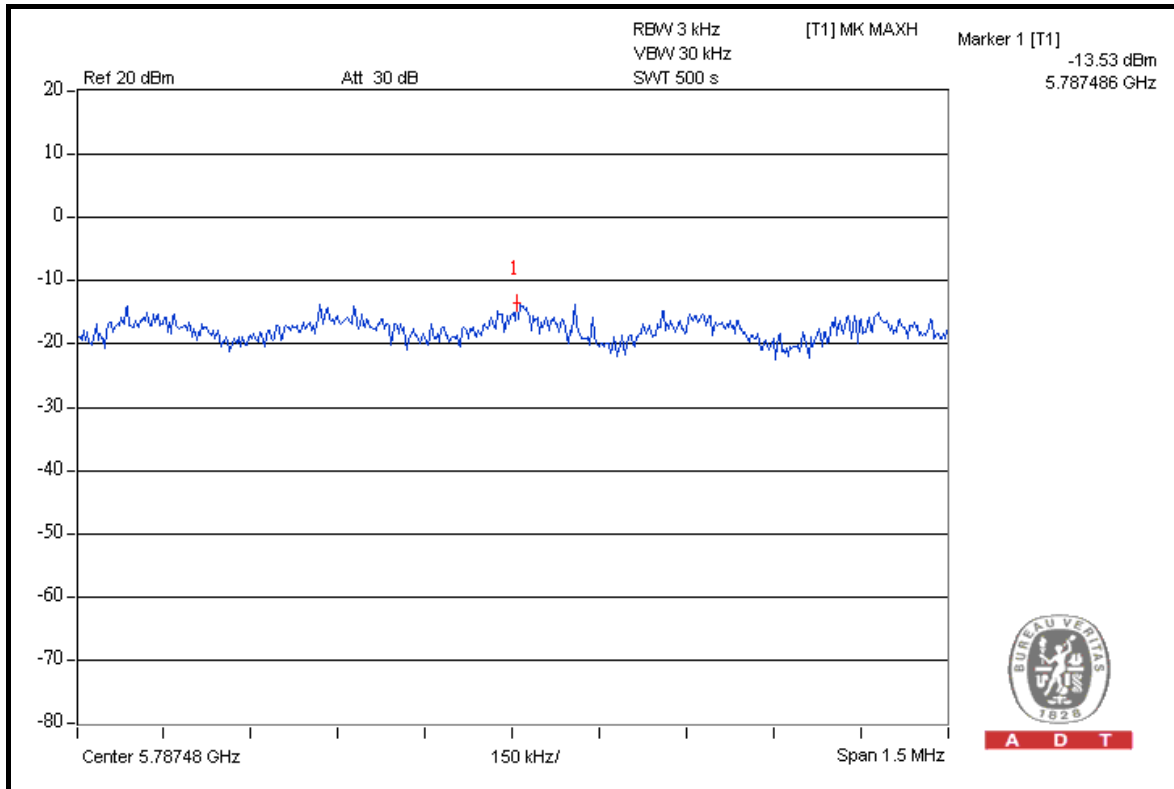


A D T

FOR CHAIN 1: CH 149



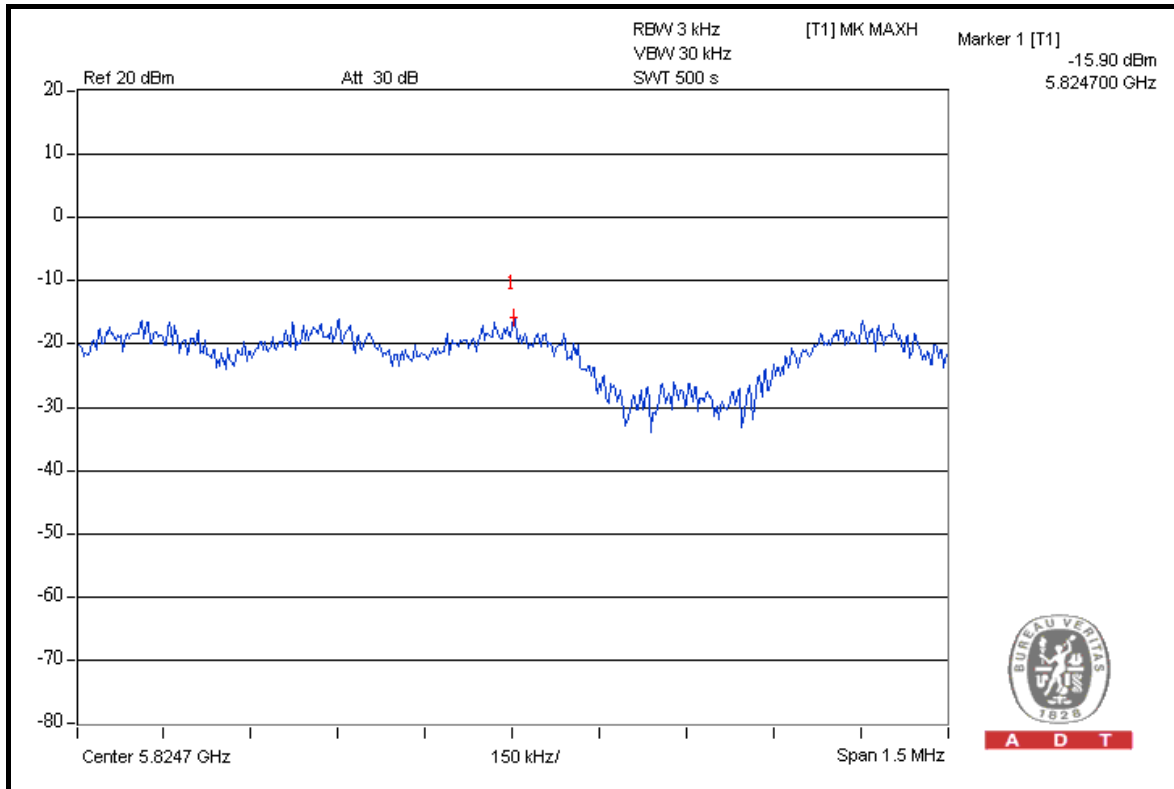
CH 157



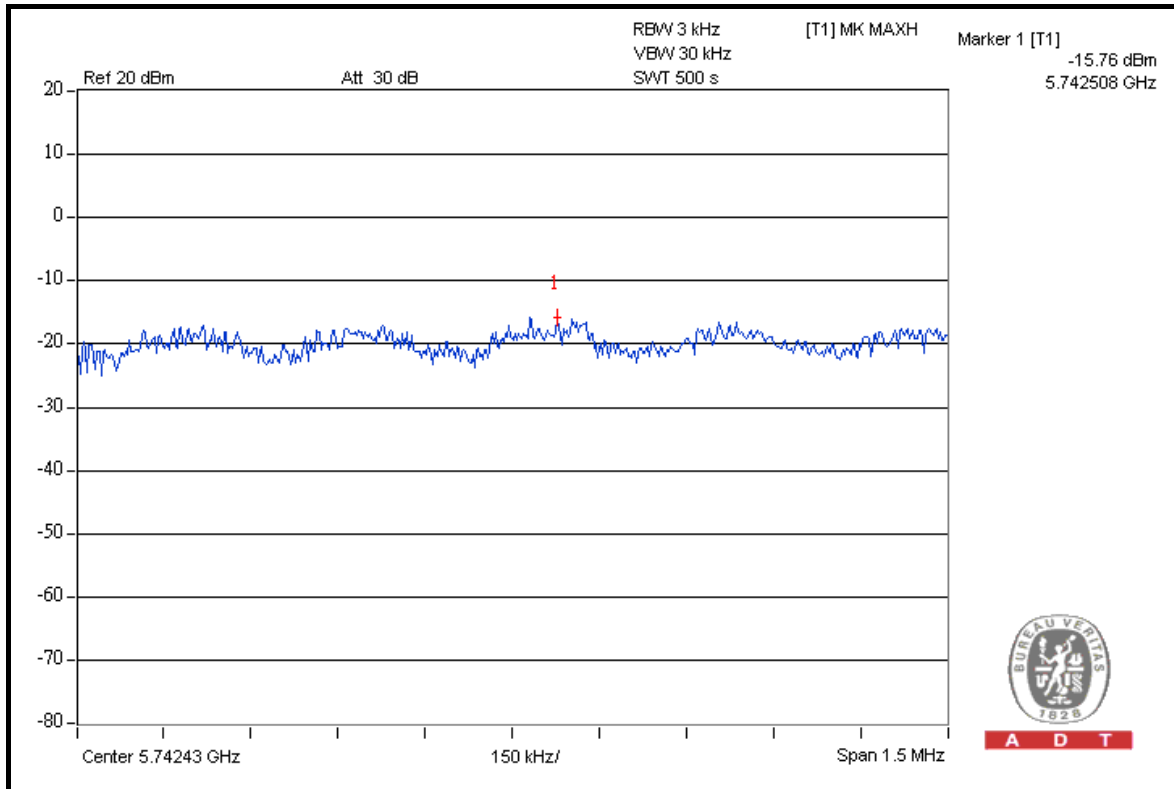


A D T

CH 165



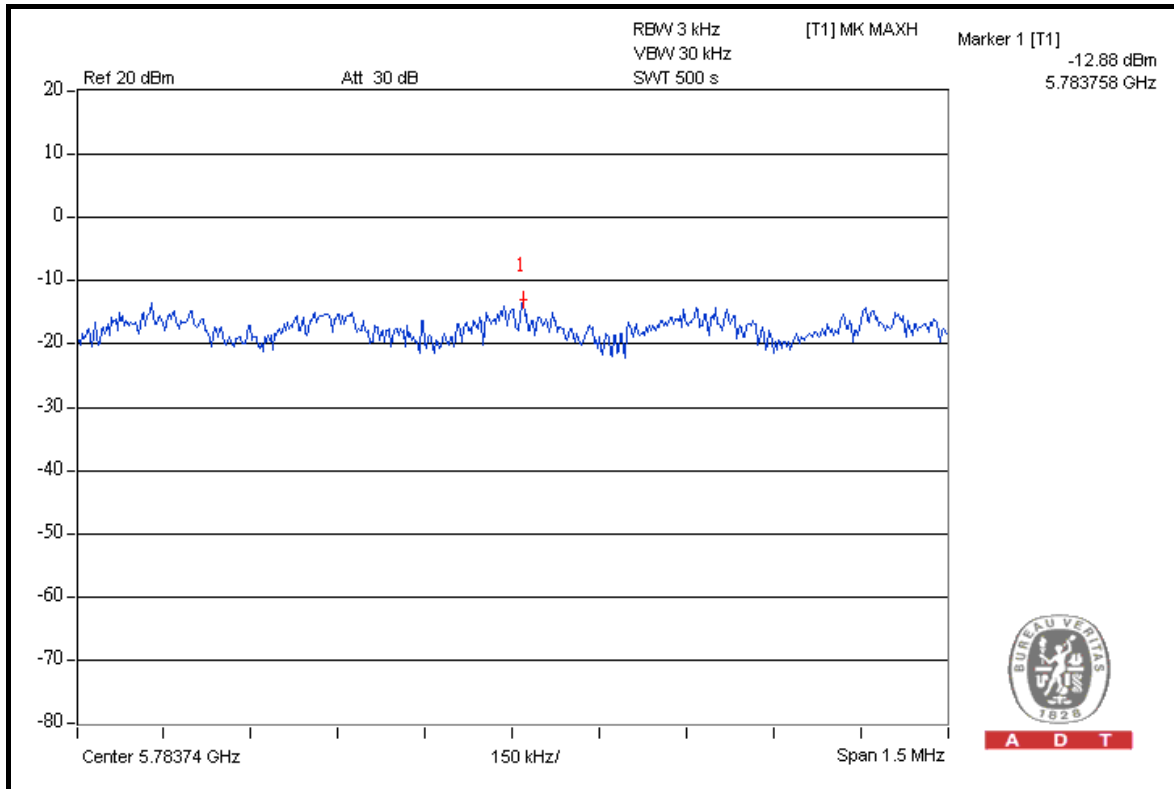
FOR CHAIN 2: CH 149



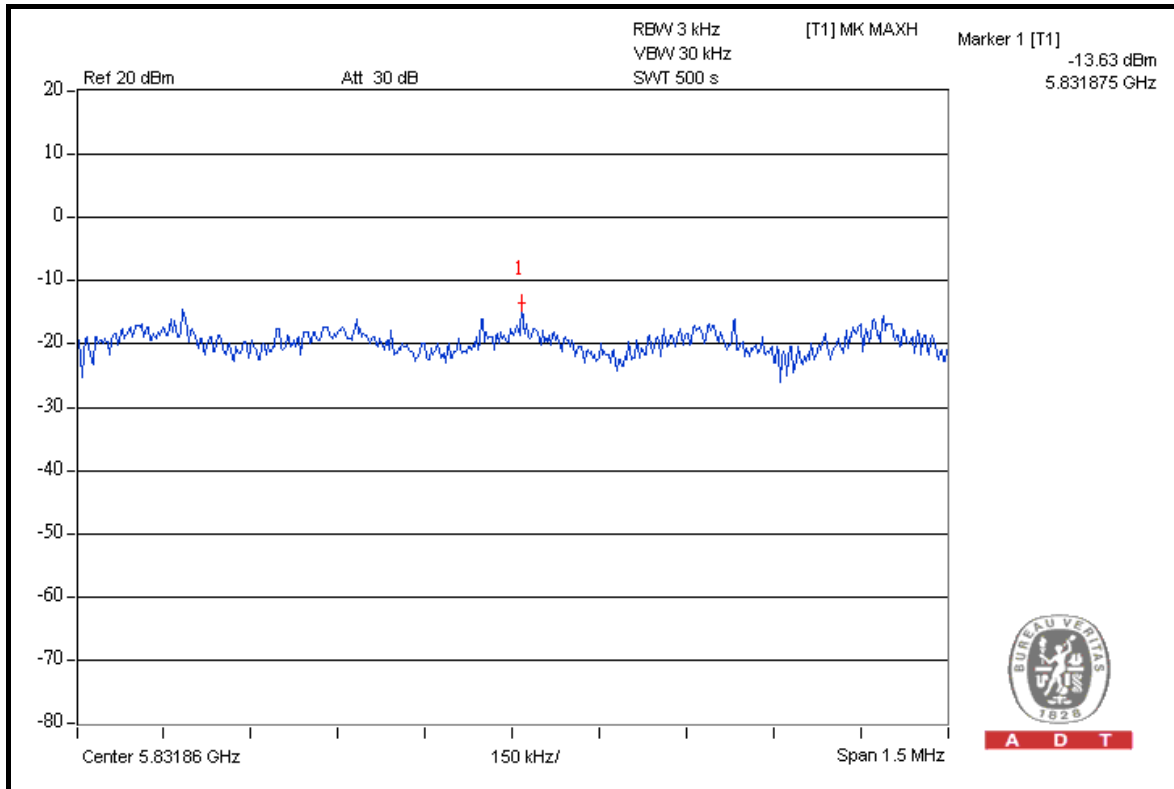


A D T

CH 157



CH 165





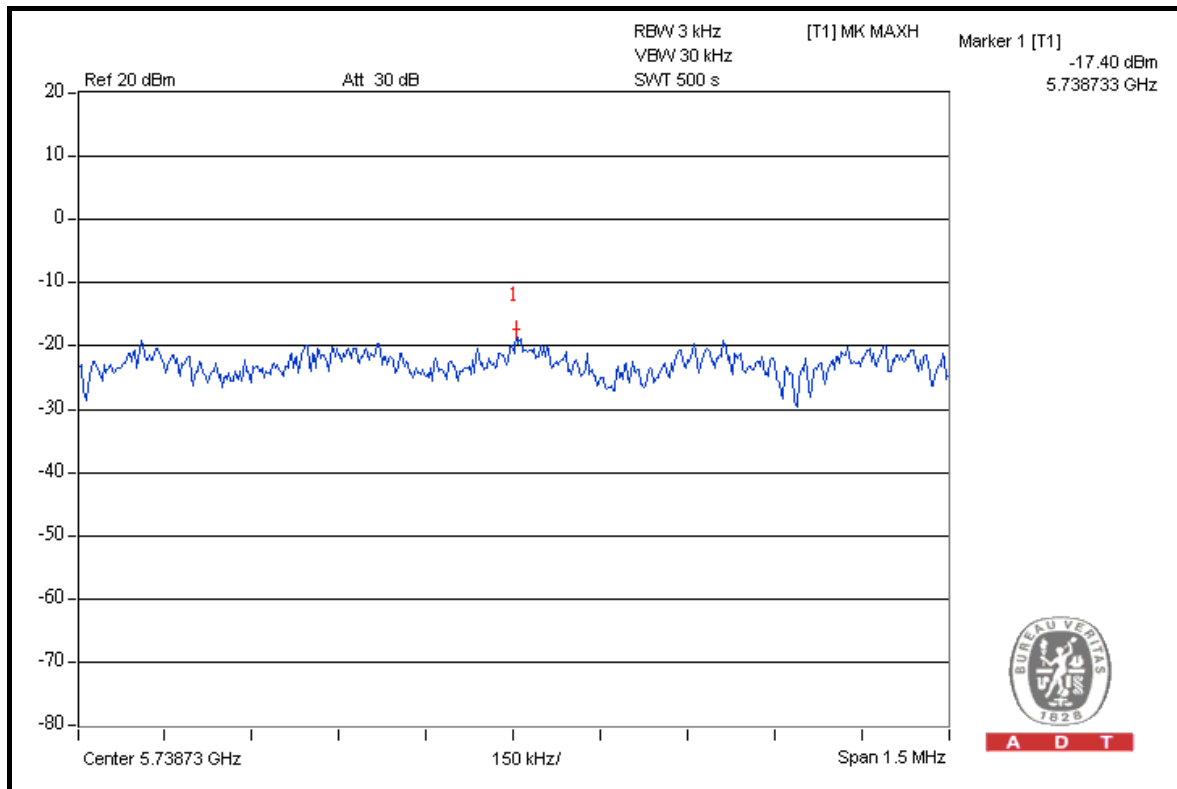
A D T

DRAFT 802.11n (20MHz) OFDM MODULATION

MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 991hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	-17.40	-19.14	-19.26	0.042	-13.74	8	PASS
157	5785	-18.44	-17.75	-18.18	0.046	-13.34	8	PASS
165	5825	-17.02	-19.11	-18.87	0.045	-13.46	8	PASS

FOR CHAIN 0: CH 149

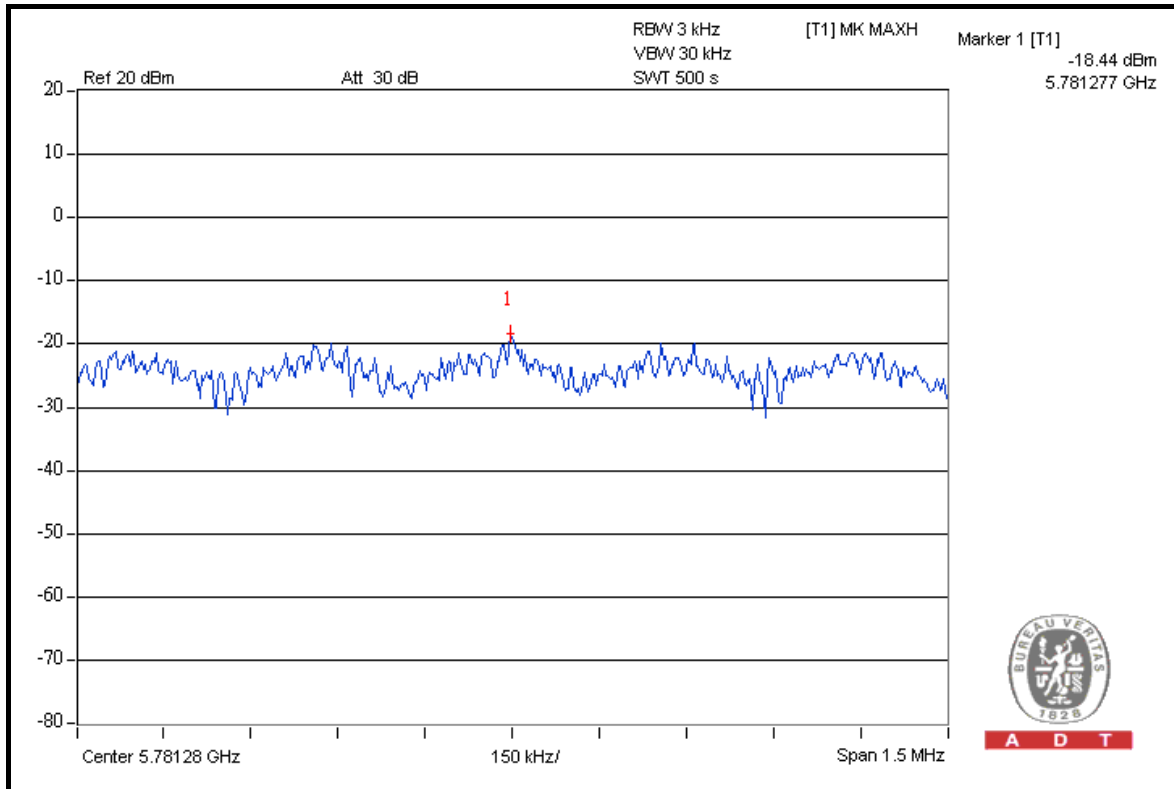


A D T

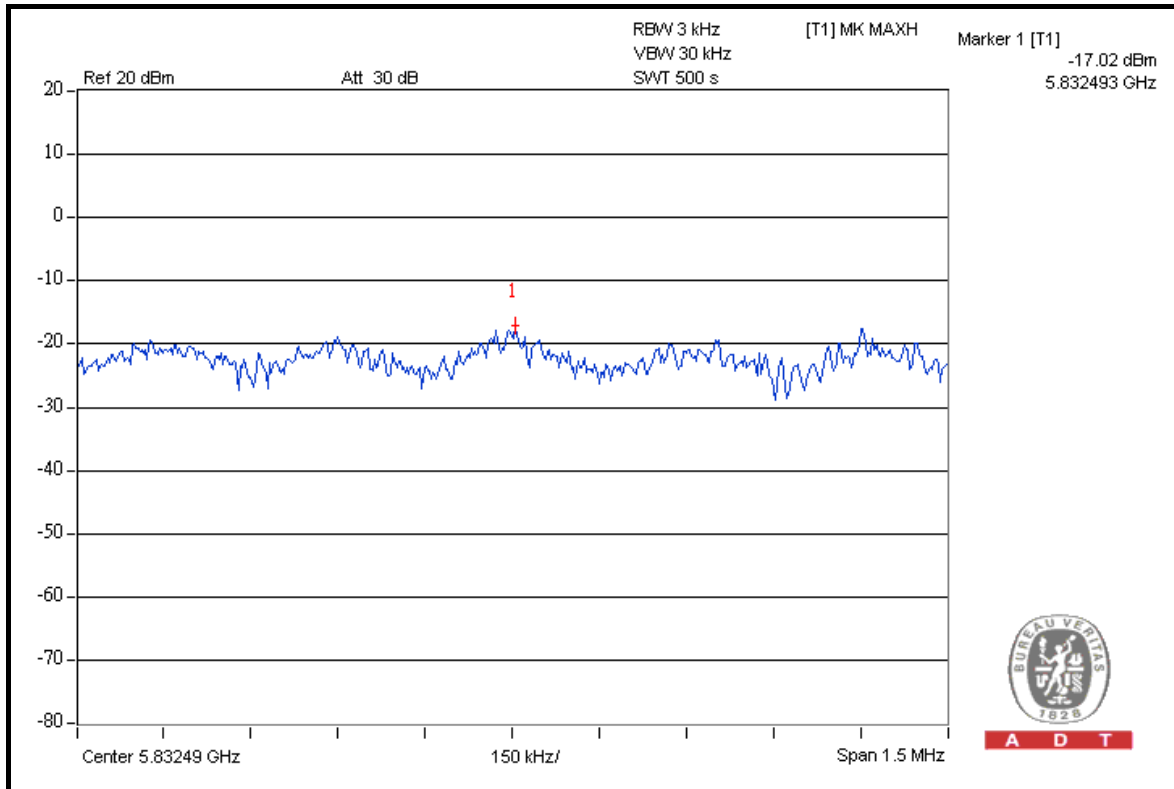


A D T

CH 157



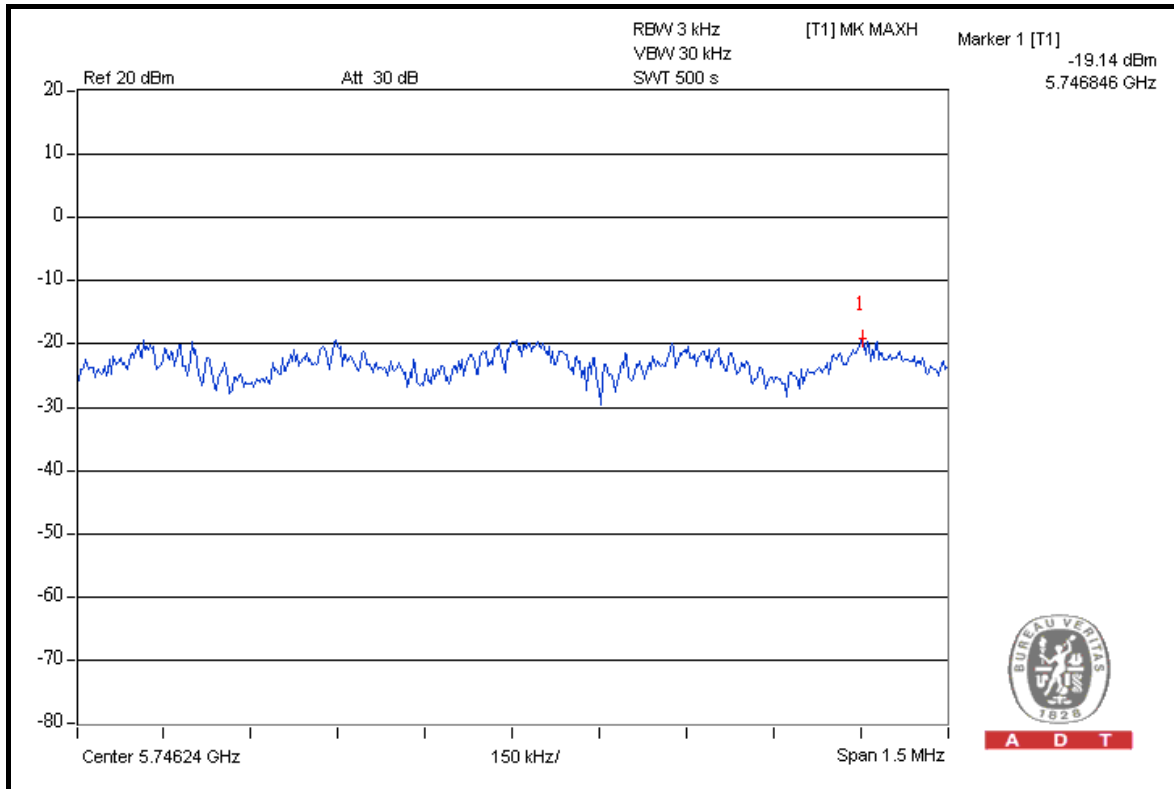
CH 165



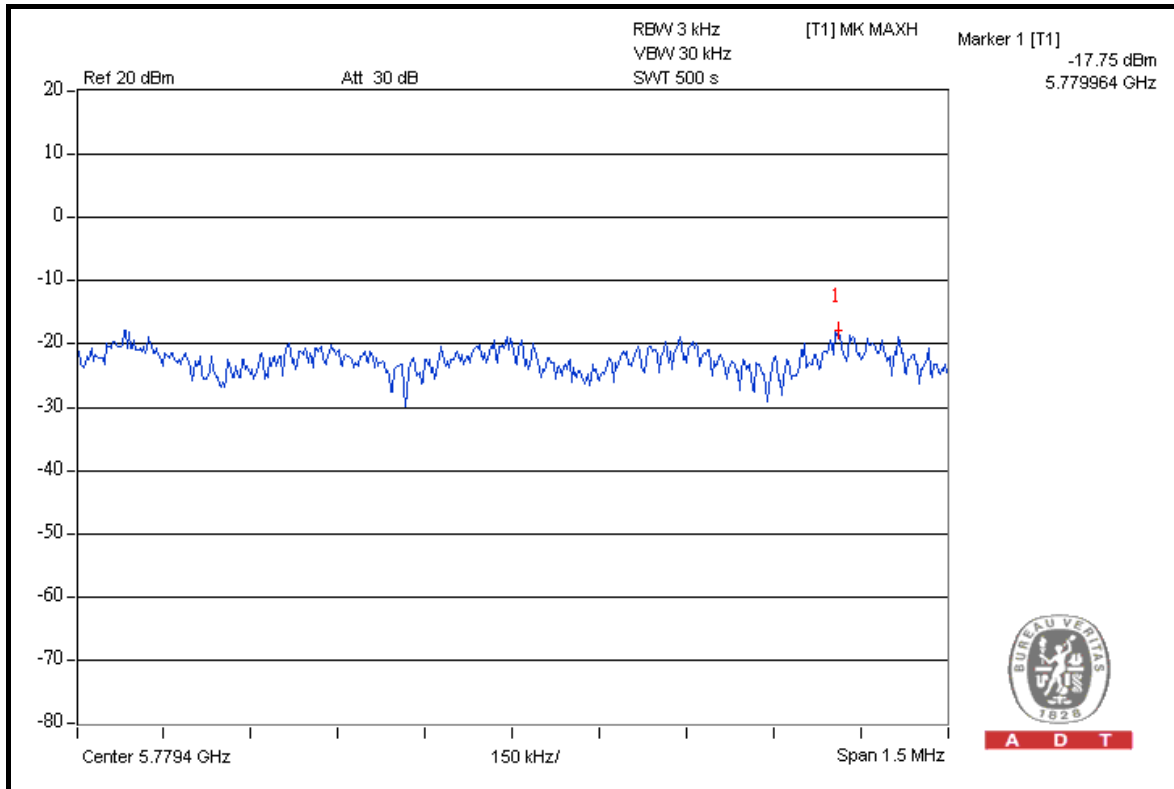


A D T

FOR CHAIN 1: CH 149



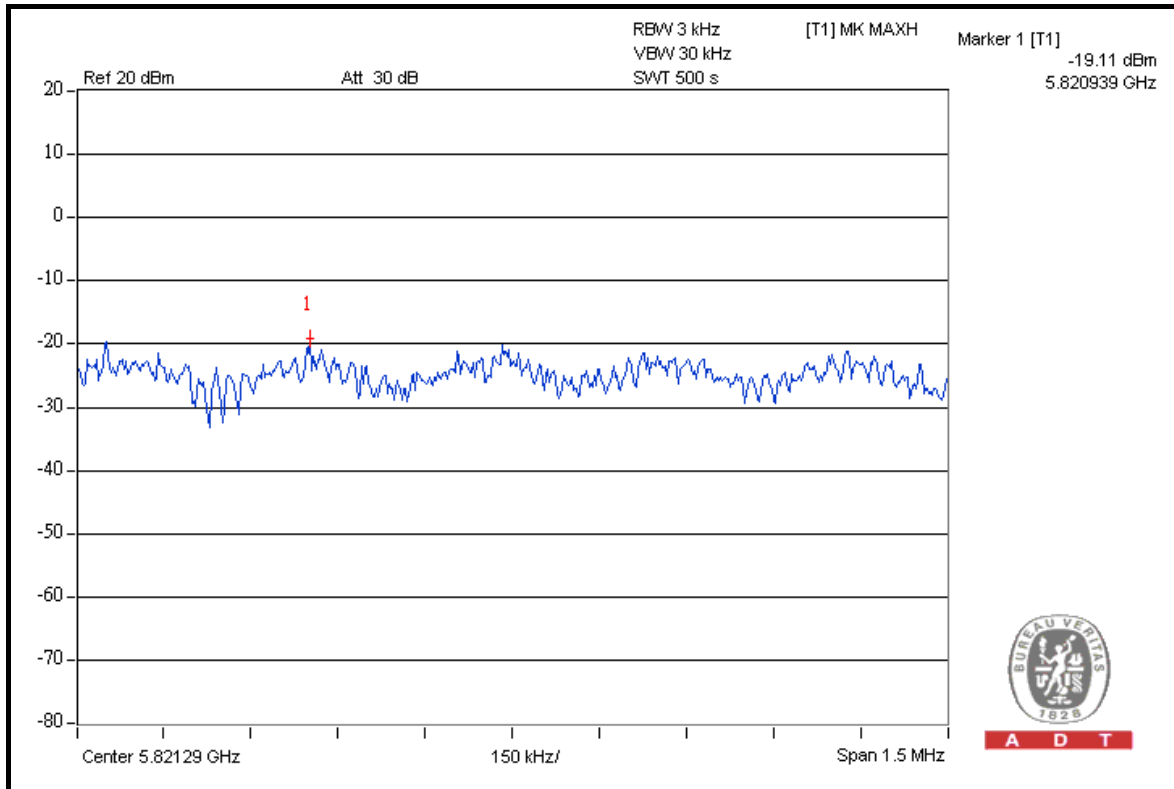
CH 157



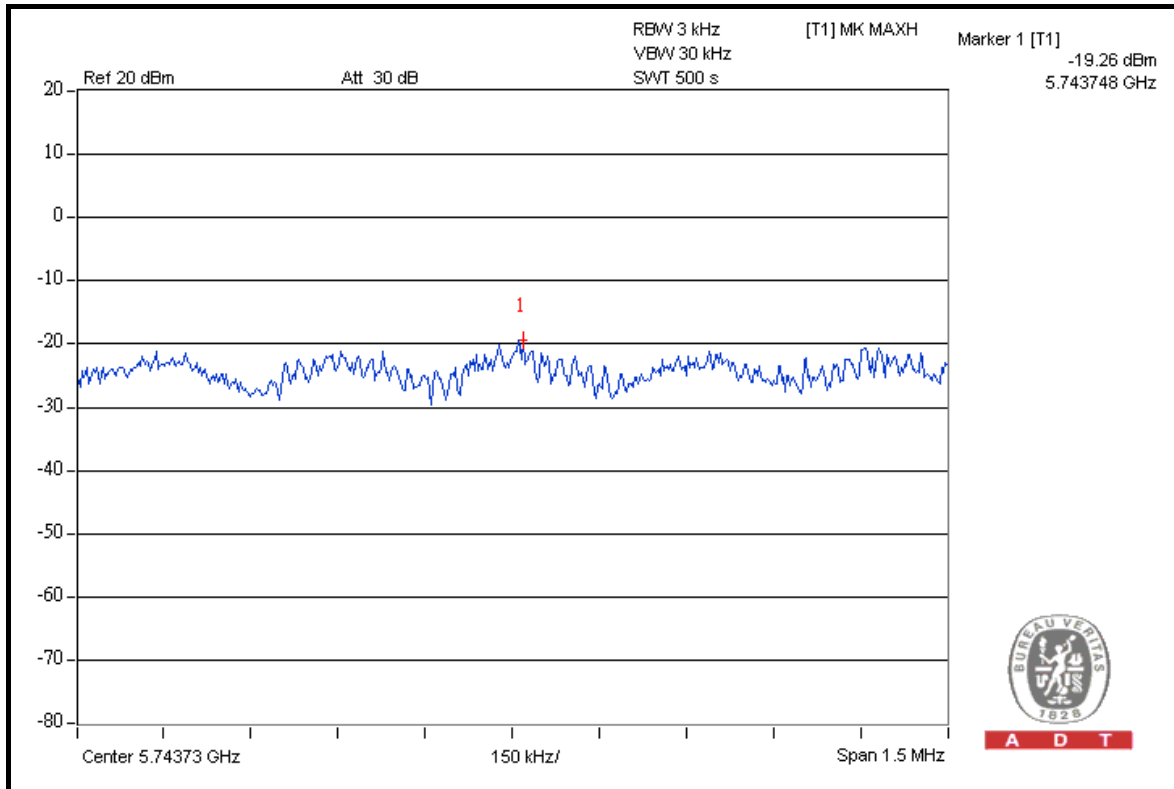


A D T

CH 165



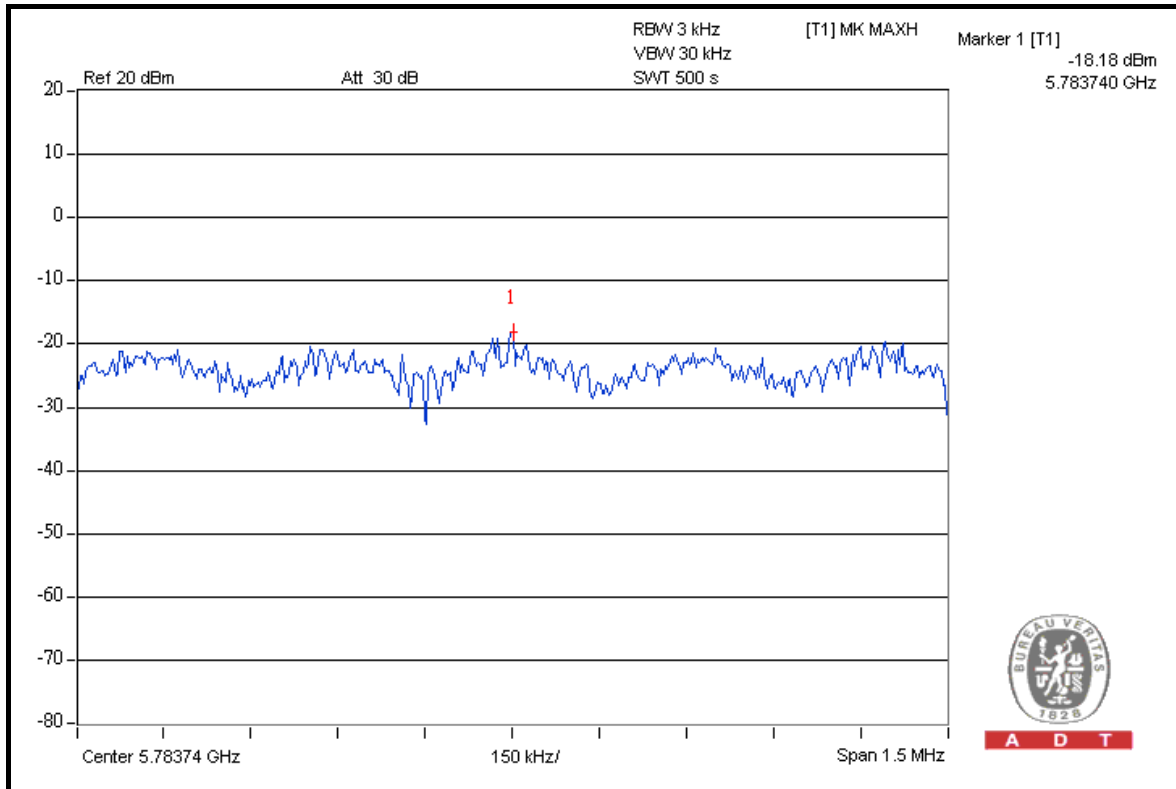
FOR CHAIN 2: CH 149



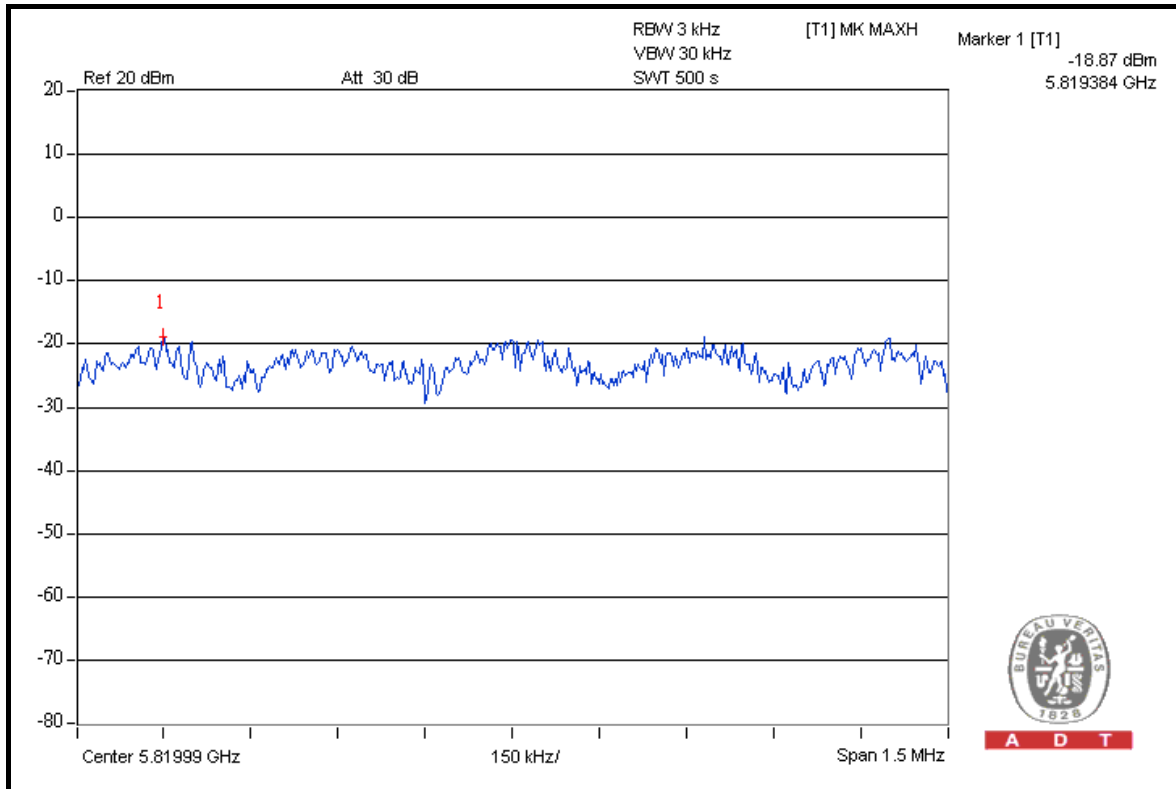


A D T

CH 157



CH 165





A D T

DRAFT 802.11n (40MHz) OFDM MODULATION

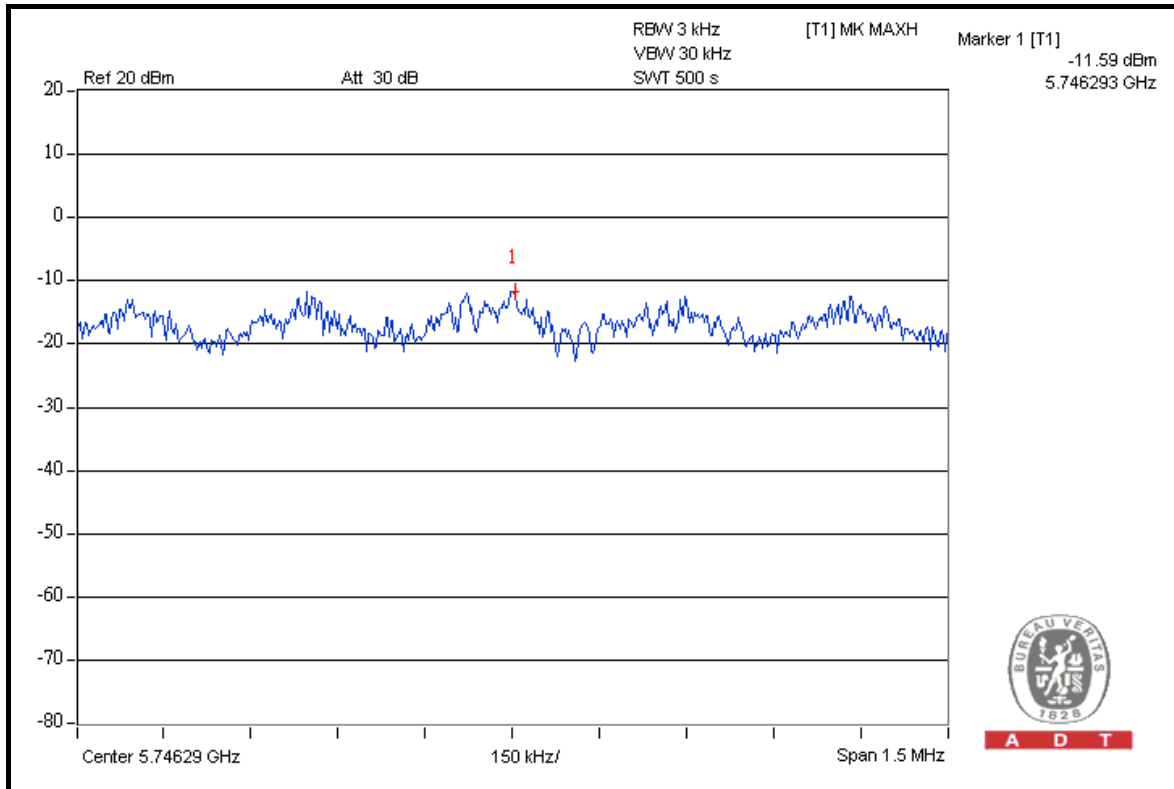
MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65%RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
151	5755	-11.59	-12.08	-12.59	0.186	-7.30	8	PASS
159	5795	-11.67	-12.06	-12.51	0.186	-7.30	8	PASS

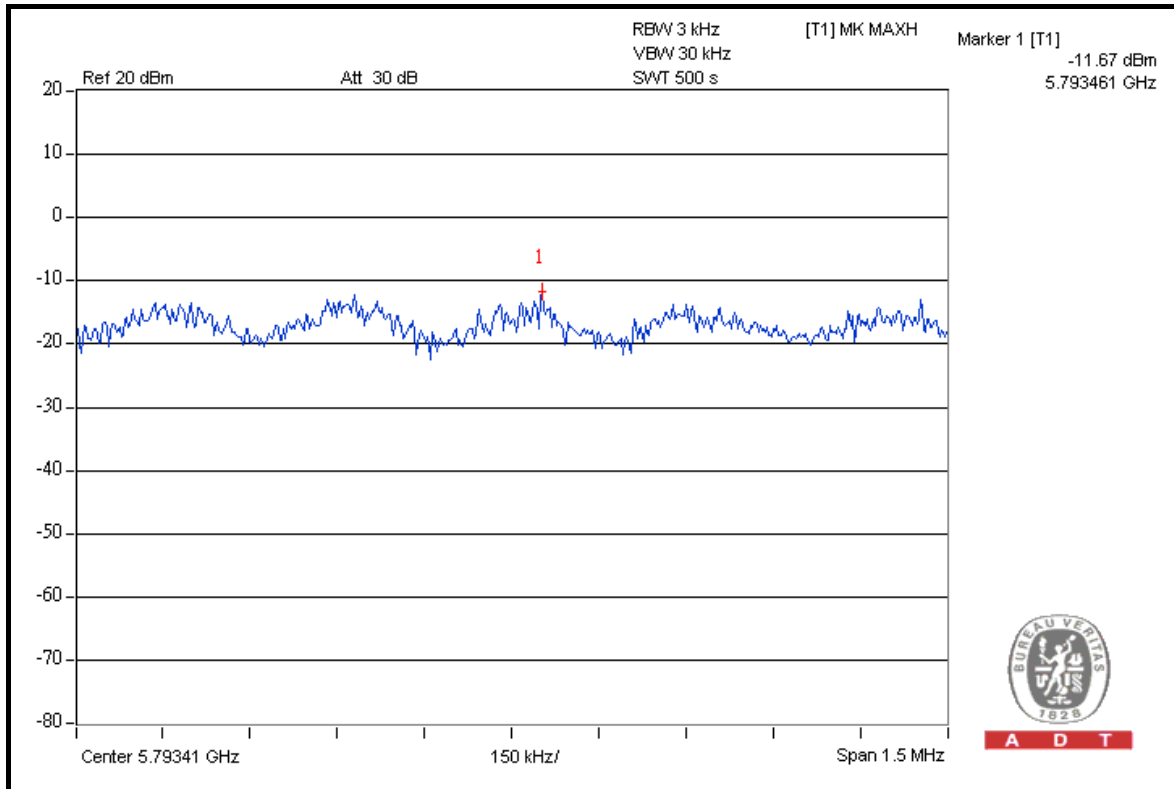


A D T

FOR CHAIN 0: CH 151



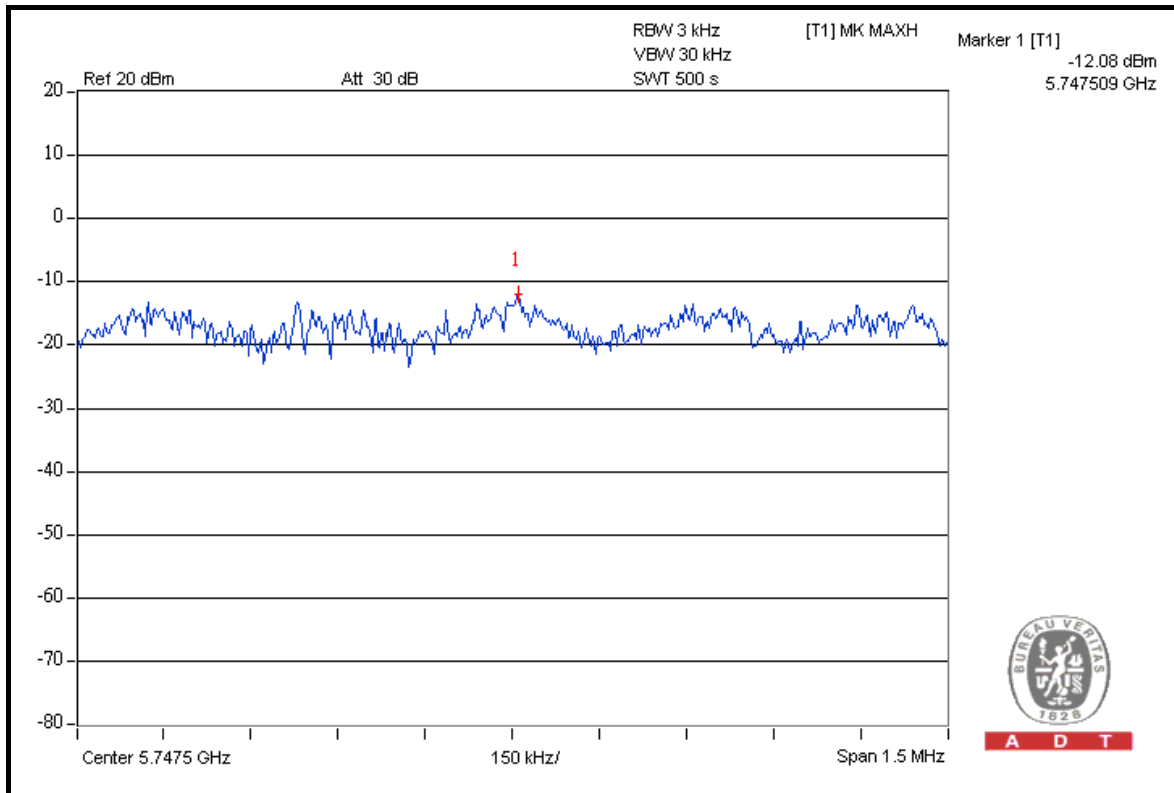
CH 159



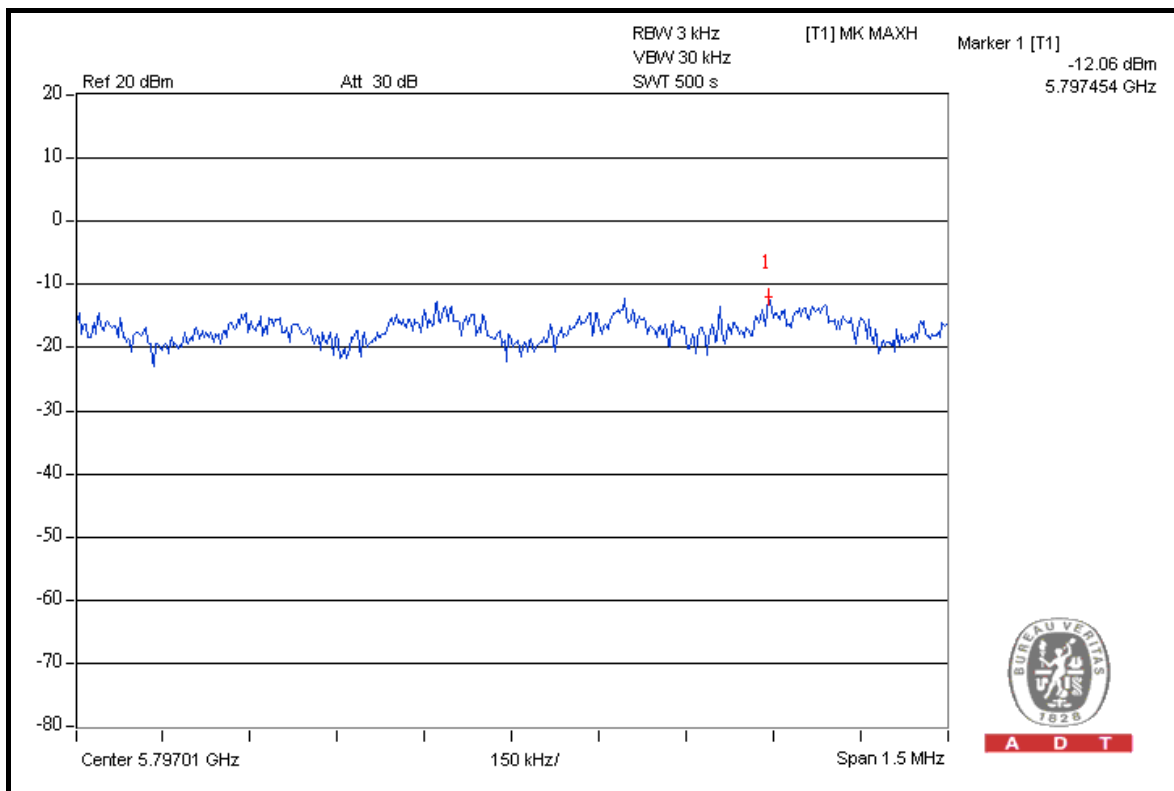


A D T

FOR CHAIN 1: CH 151



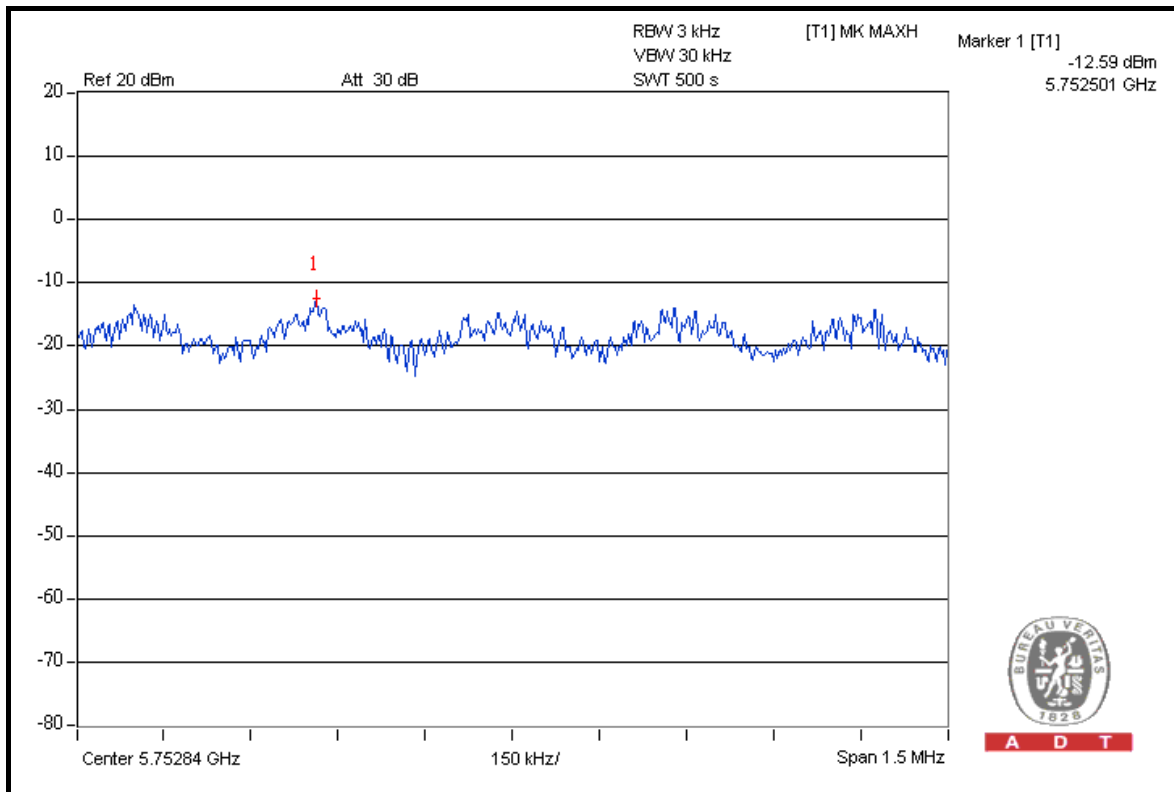
CH 159



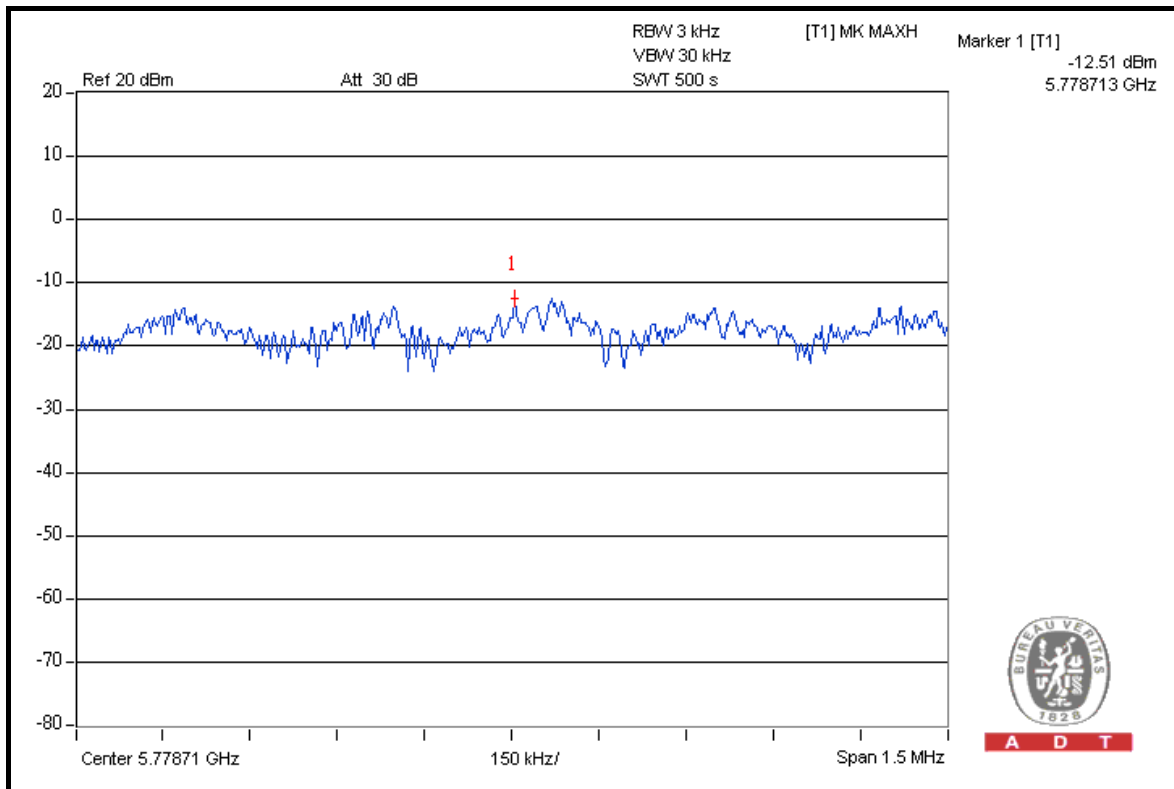


A D T

FOR CHAIN 2: CH 151



CH 159



5.6 BAND EDGES MEASUREMENT

5.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

5.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 29, 2008	Dec. 28, 2009
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 08, 2008	Dec. 07, 2009
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 29, 2009	Apr. 28, 2010
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Dec. 29, 2008	Dec. 28, 2009
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009	Jan. 05, 2010
Preamplifier Agilent	8449B	3008A01960	Nov. 03, 2008	Nov. 02, 2009
Preamplifier Agilent	8447D	2944A10631	Nov. 03, 2008	Nov. 02, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274041/4	Aug. 21, 2008	Aug. 20, 2009
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 21, 2008	Aug. 20, 2009
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	07026401	Aug. 27, 2008	Aug. 26, 2009

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



A D T

5.6.3 TEST PROCEDURE

- 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. Set both RBW and VBW of spectrum analyzer to 100kHz and 300kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.



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5.6.4 DEVIATION FROM TEST STANDARD

No deviation.

5.6.5 EUT OPERATING CONDITION

Same as Item 5.3.6.

5.6.6 TEST RESULTS

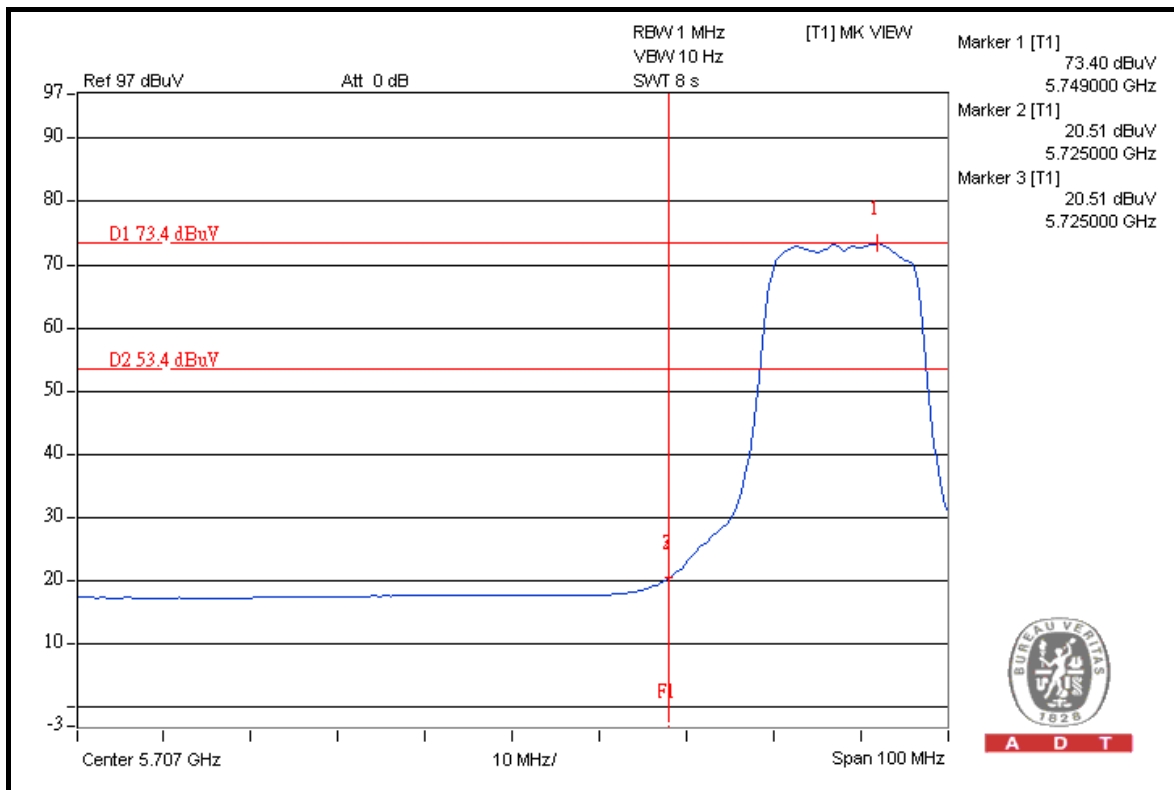
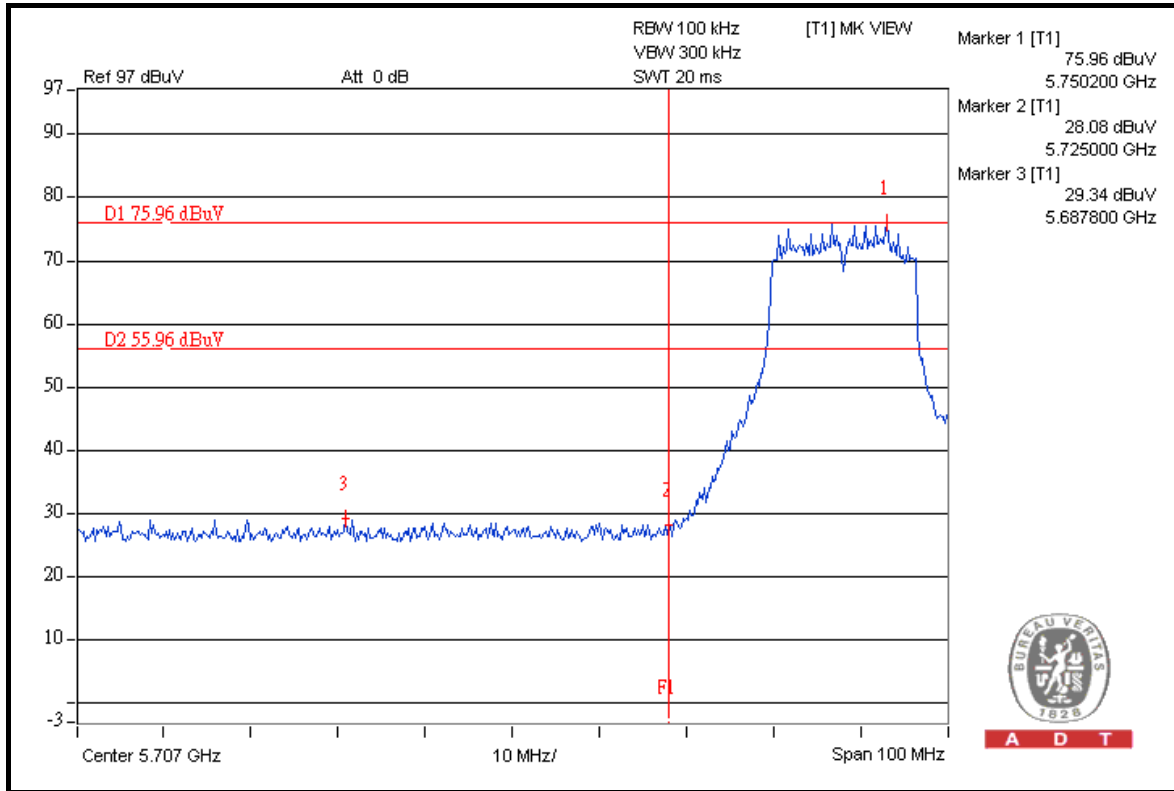
The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).



A D T

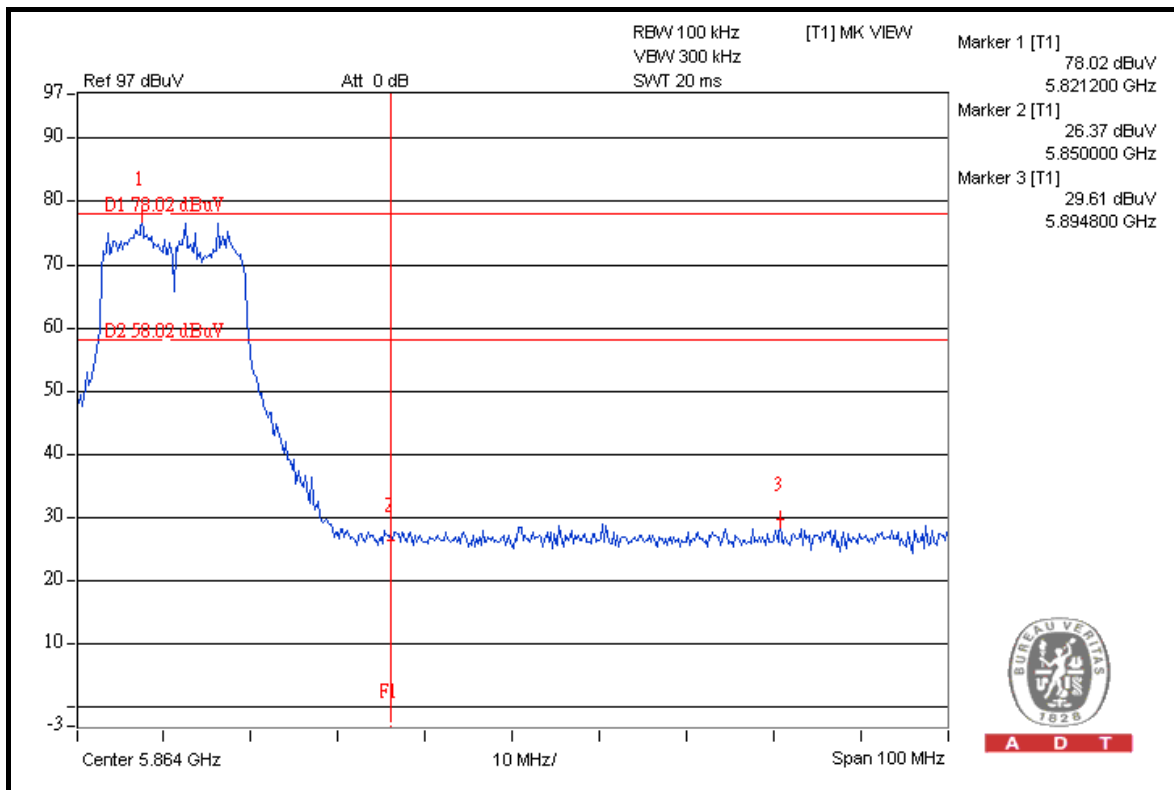
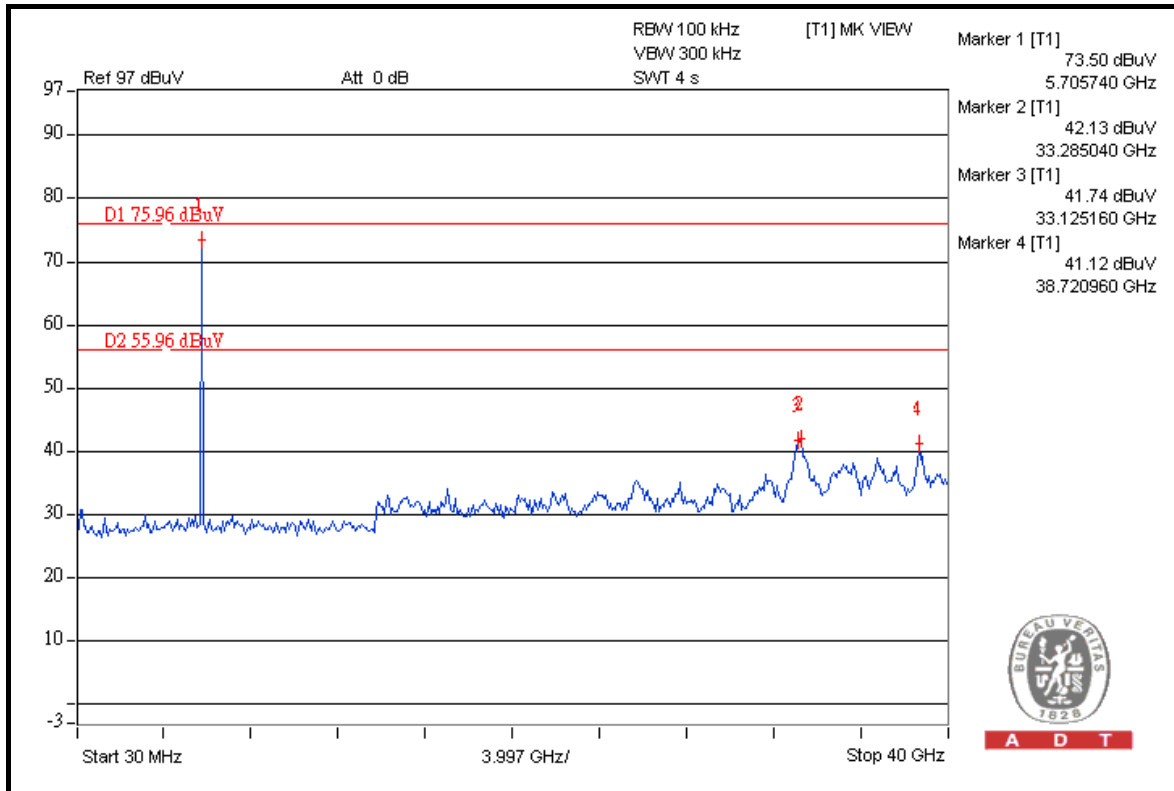
802.11a OFDM MODULATION

TEST MODE A



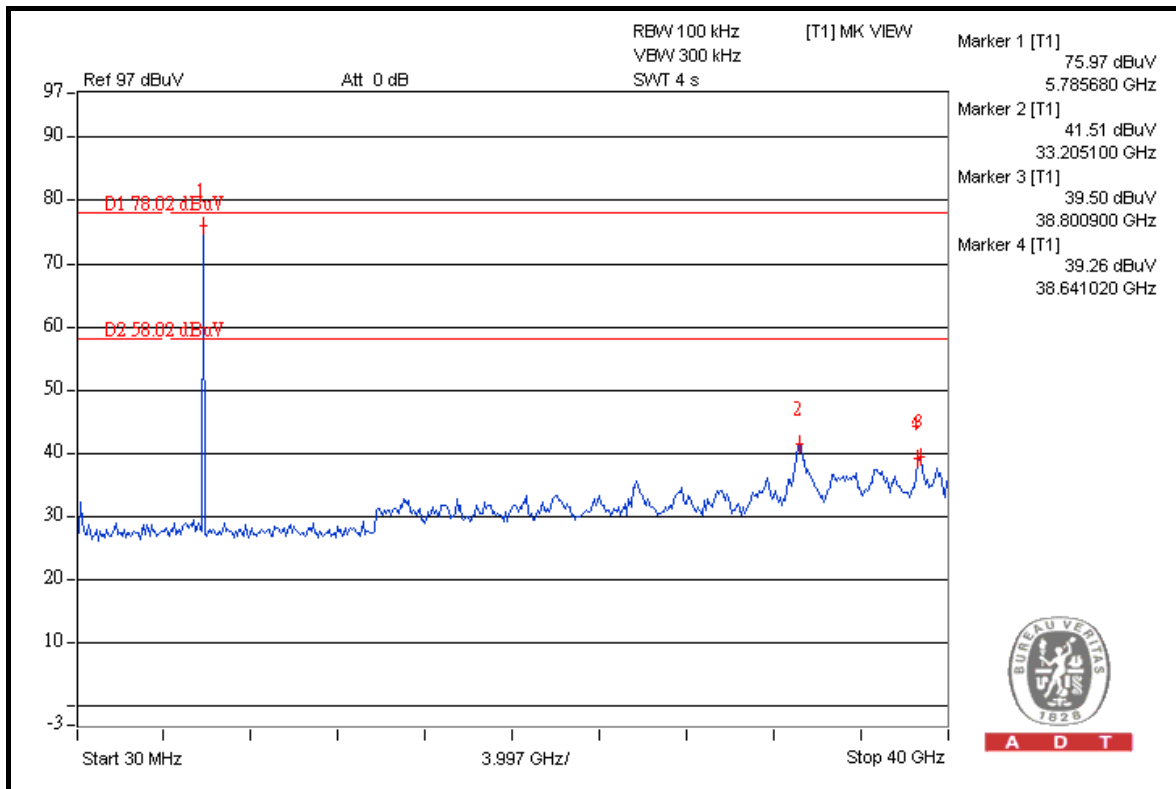
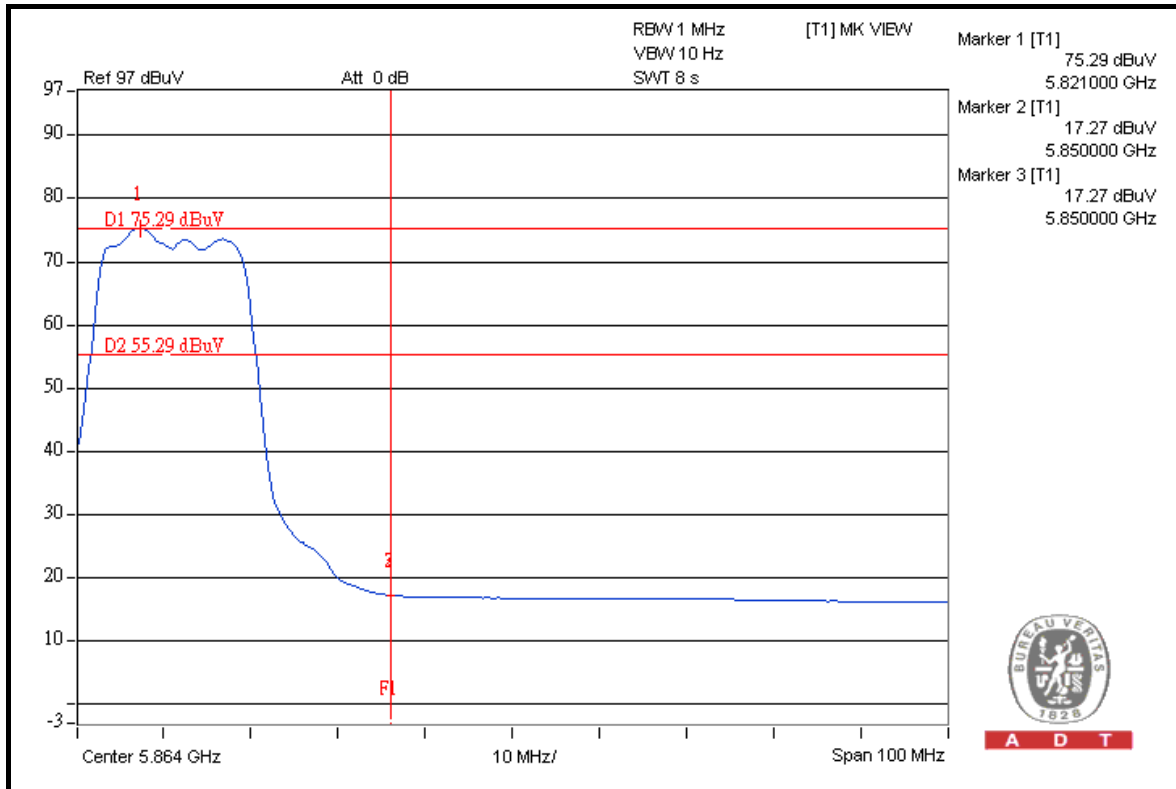


A D T





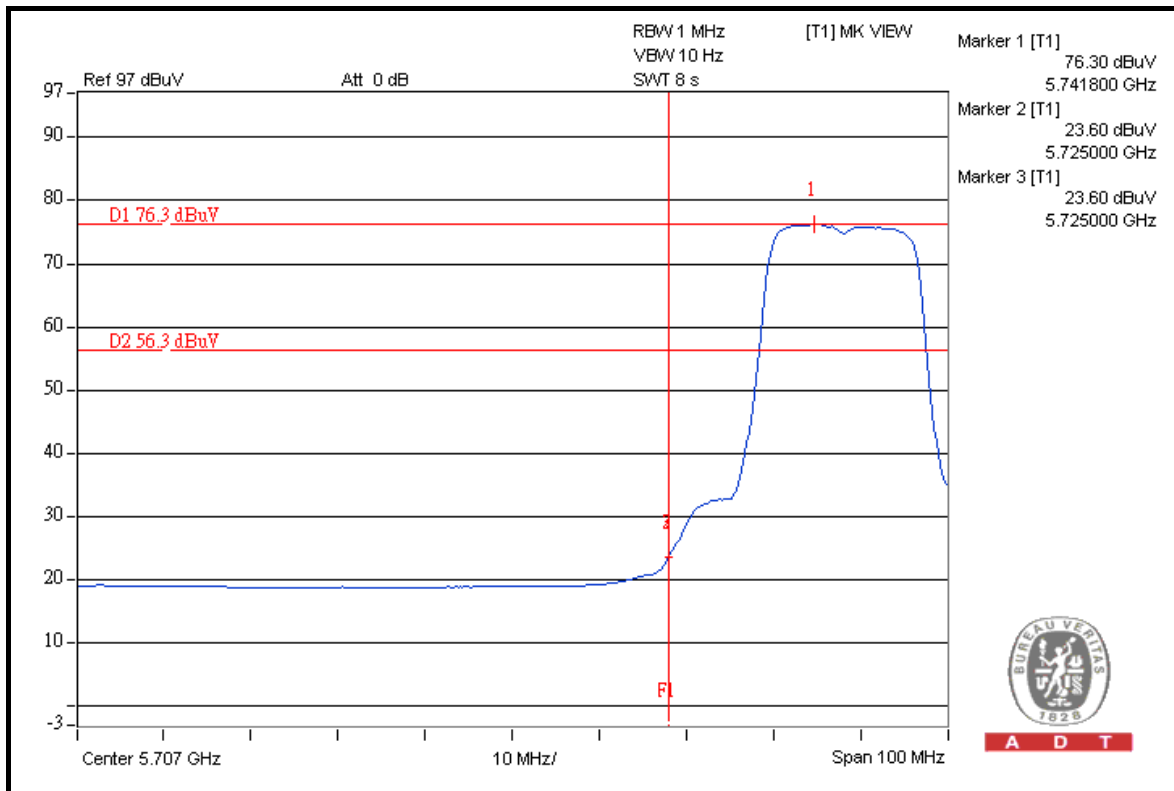
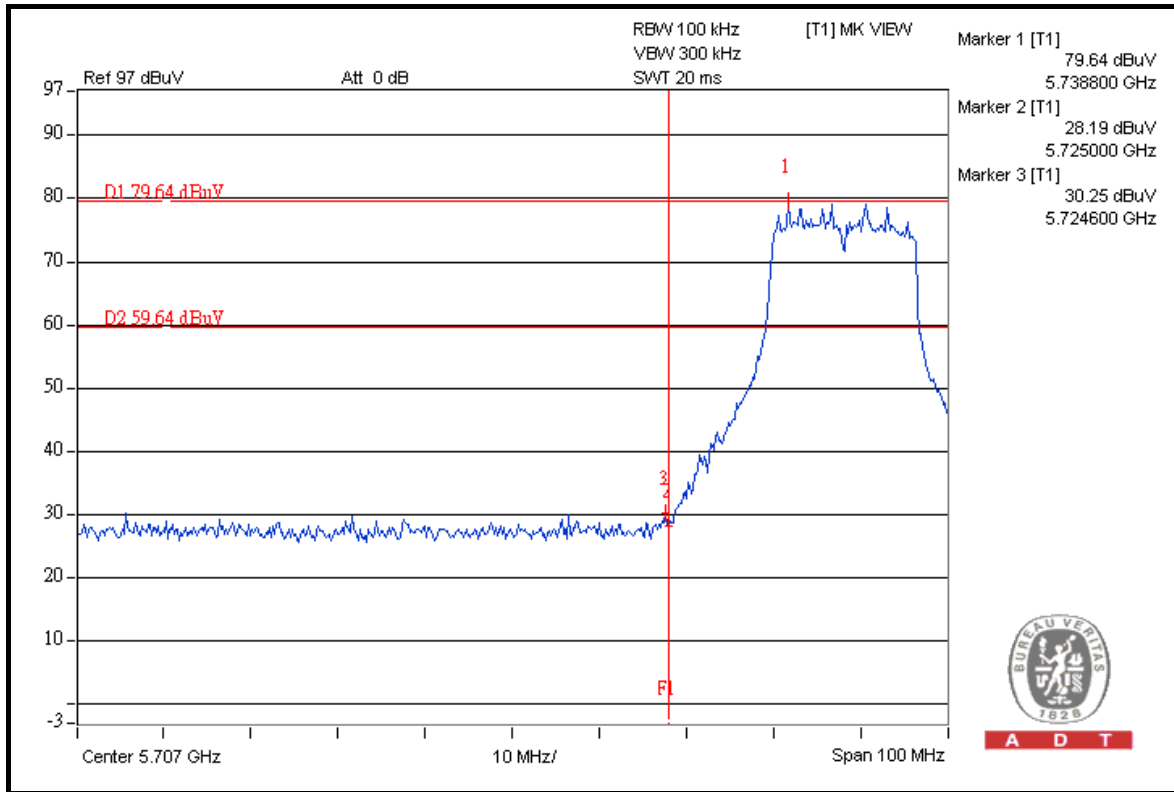
A D T





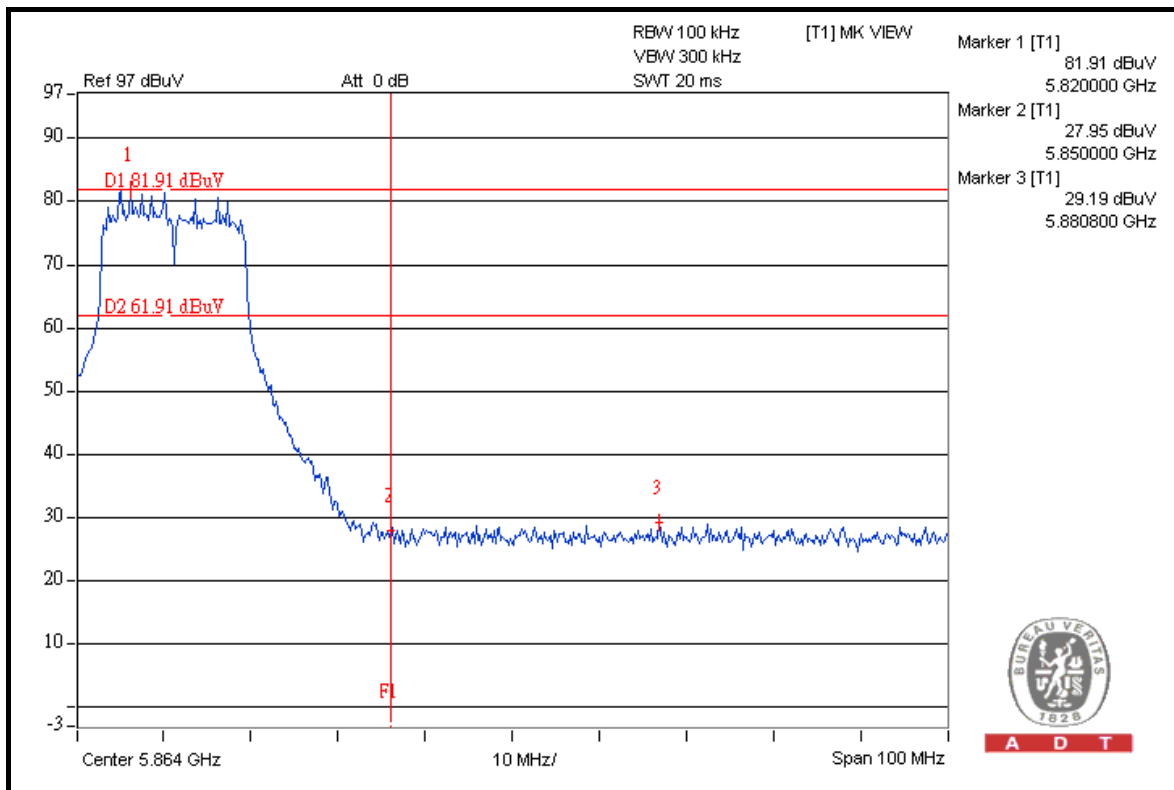
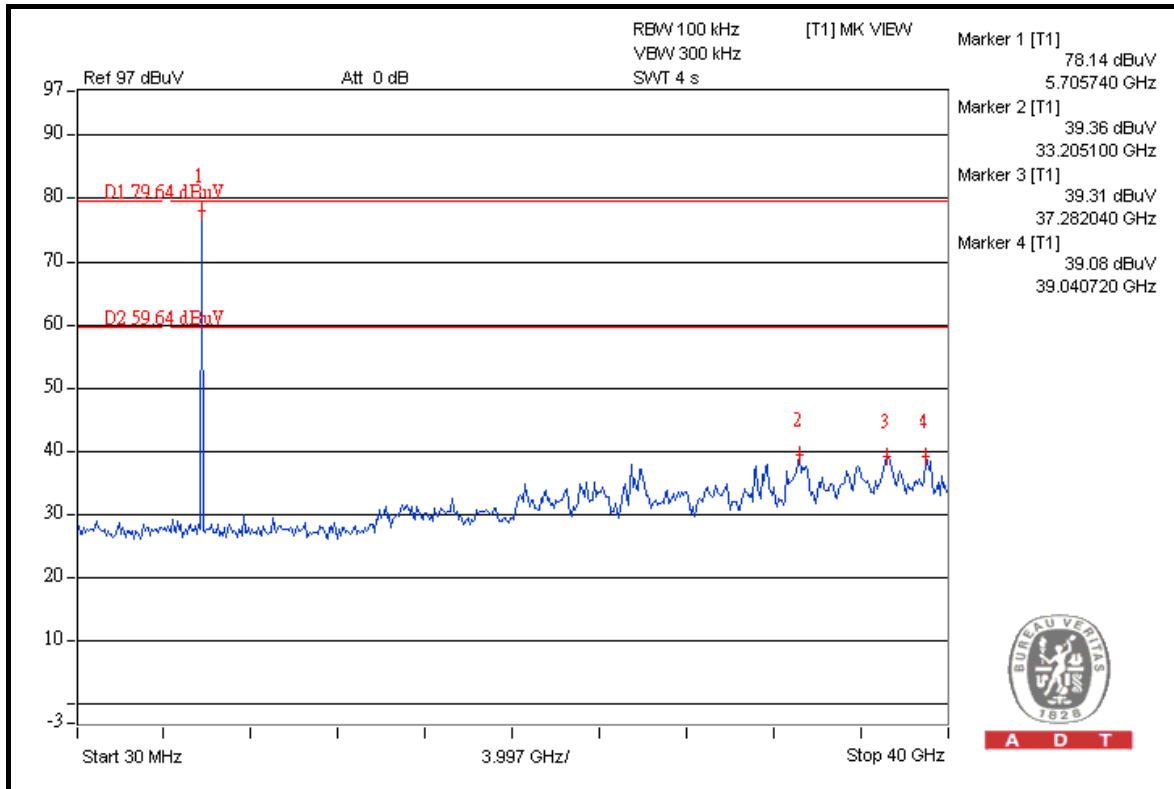
A D T

TEST MODE C



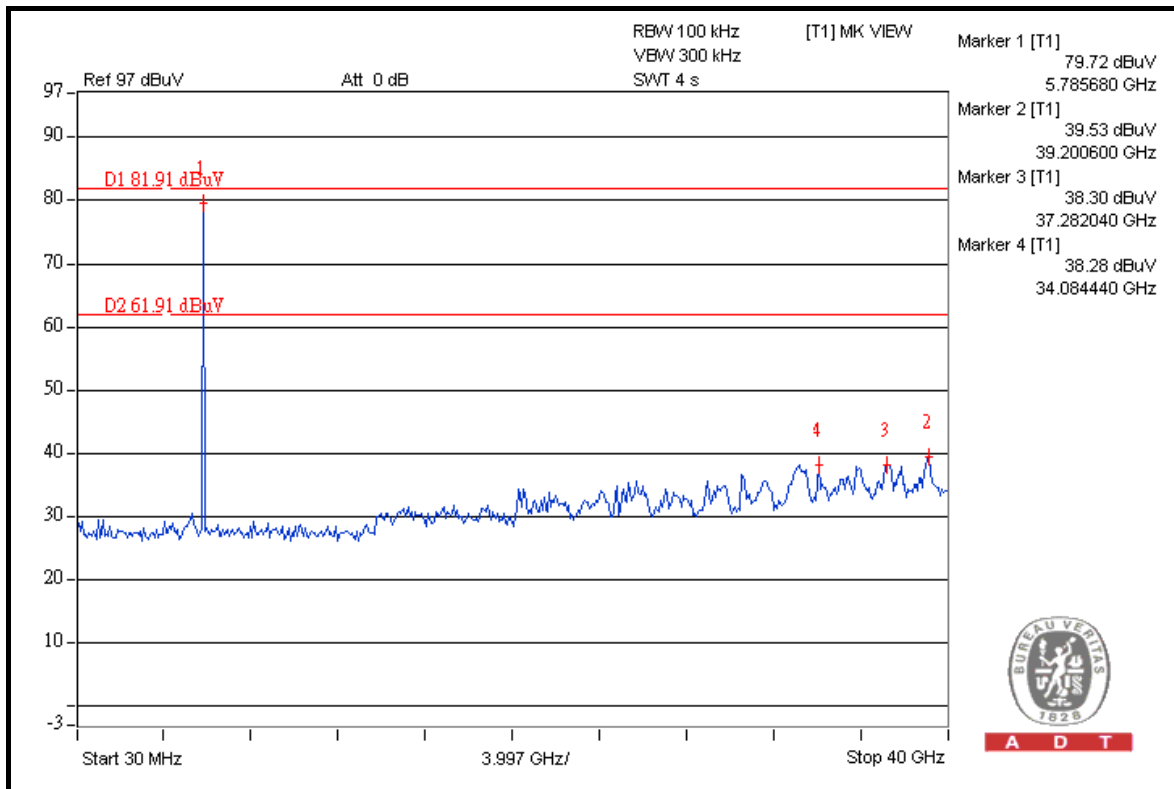
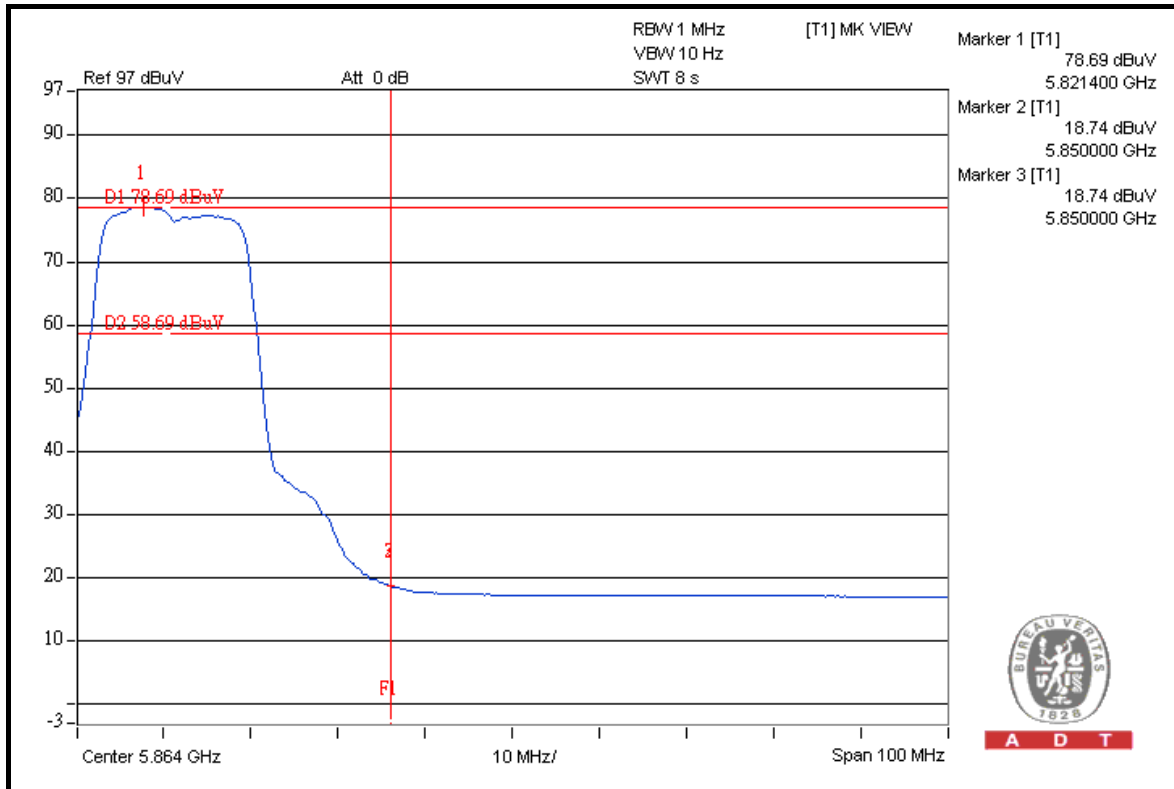


A D T





A D T

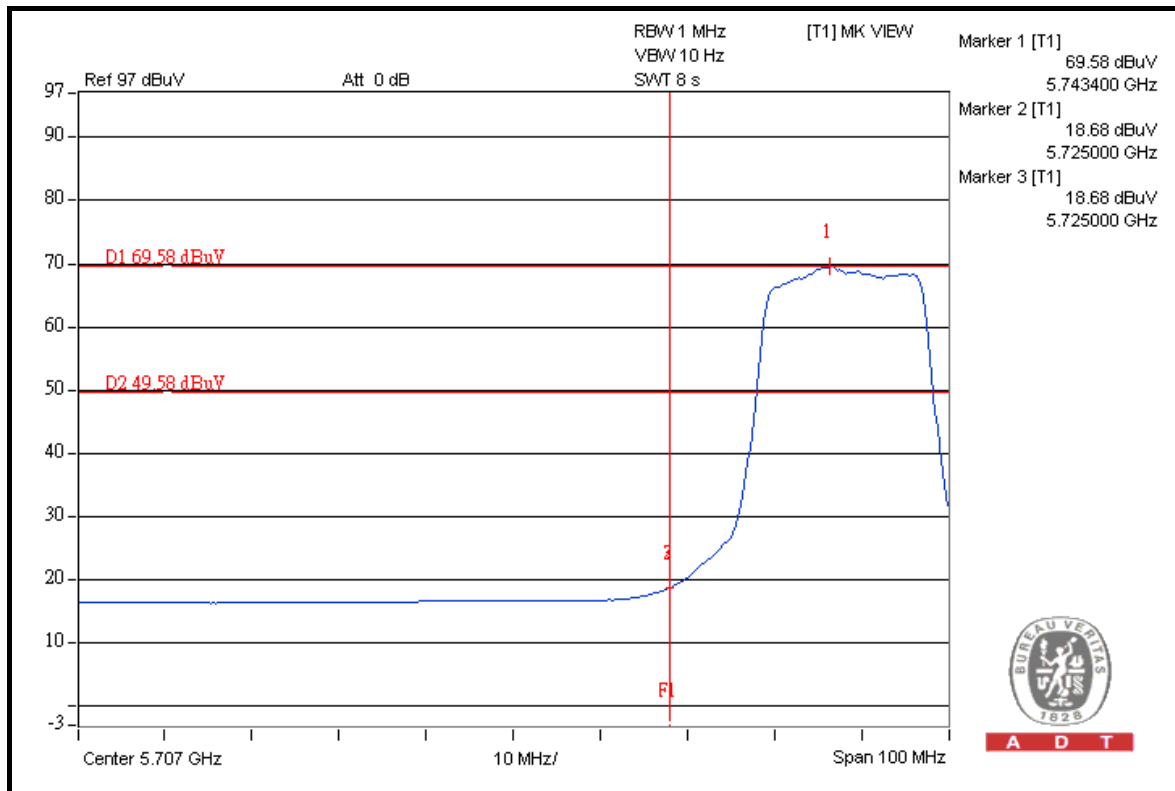
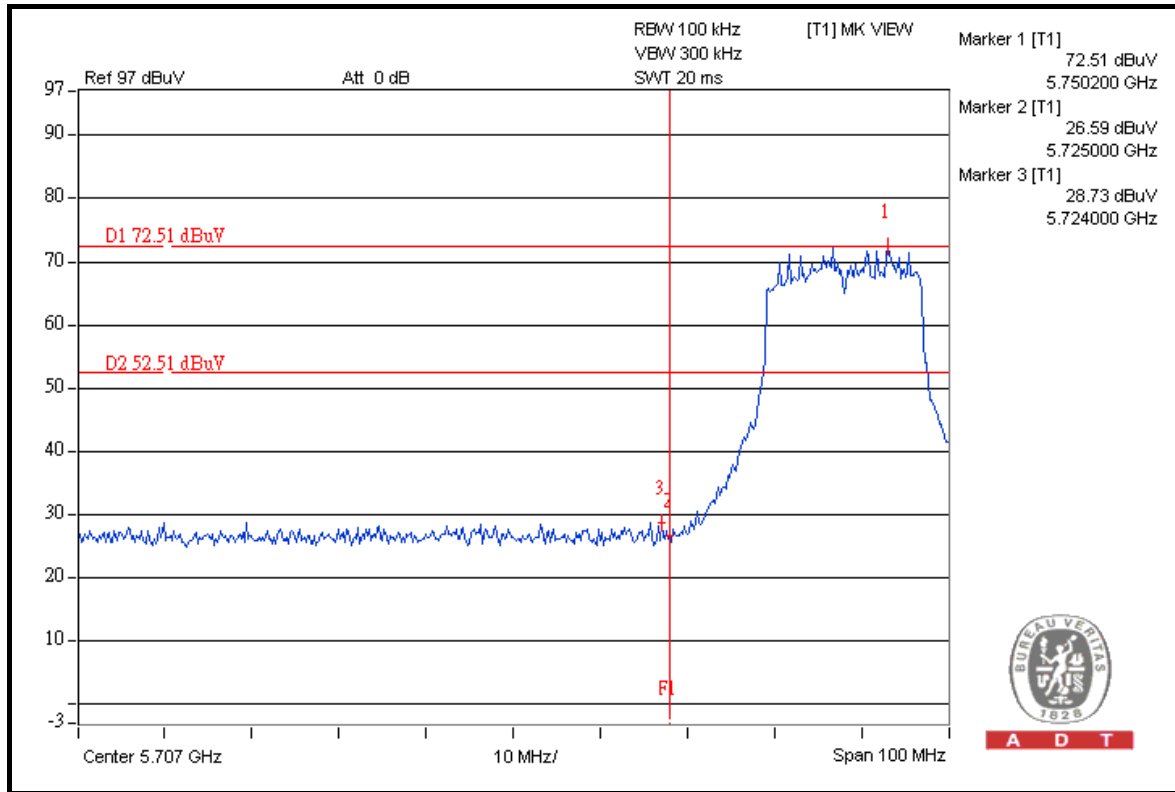




A D T

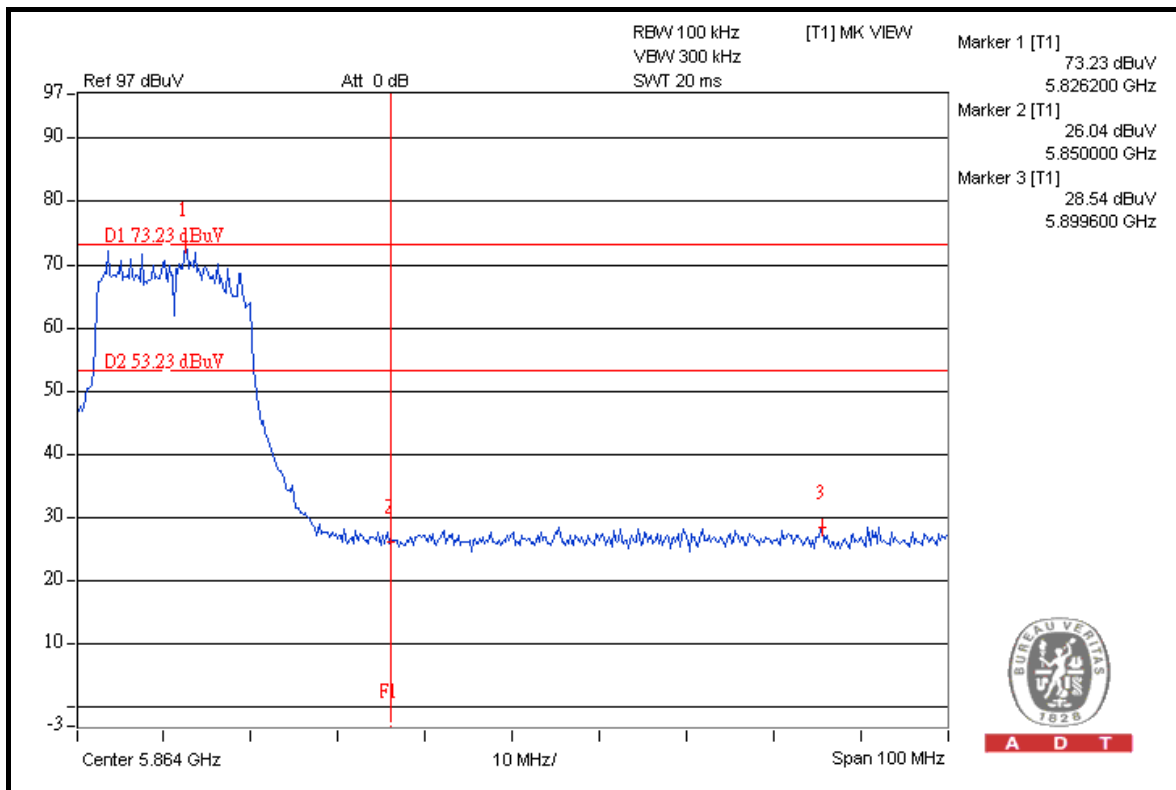
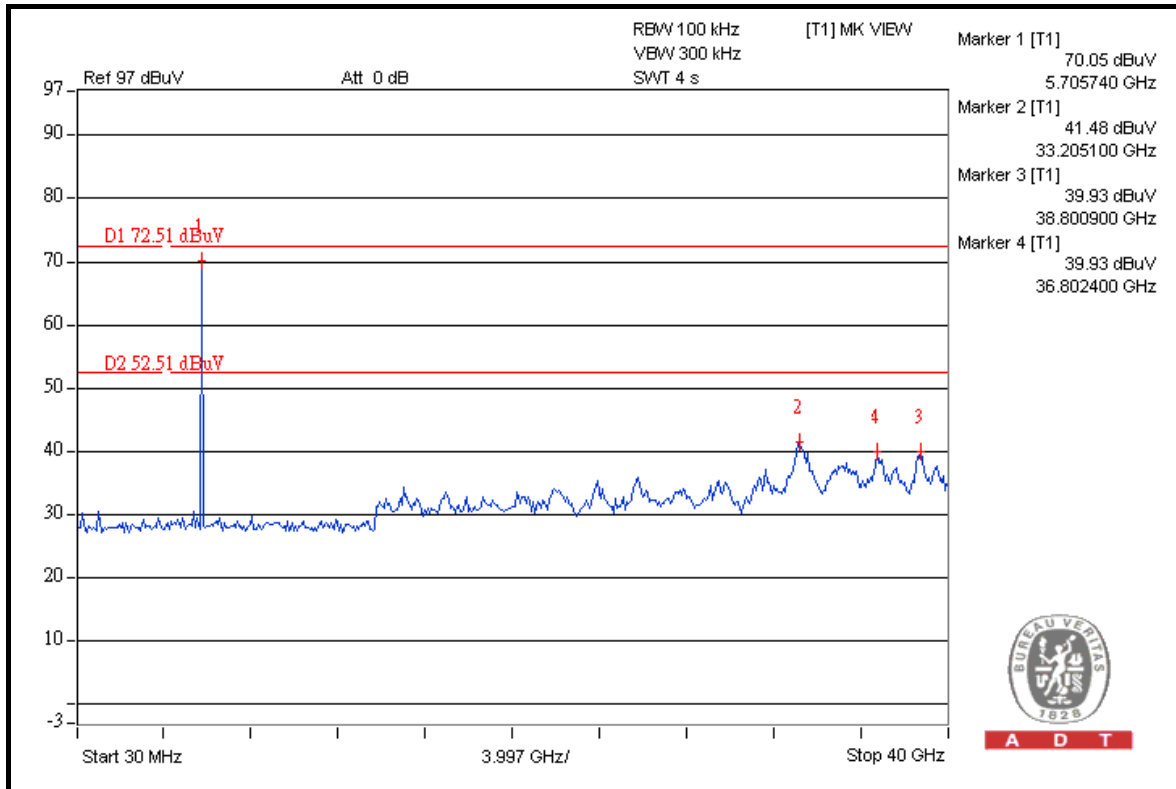
DRAFT 802.11n (20MHz) OFDM MODULATION

TEST MODE A



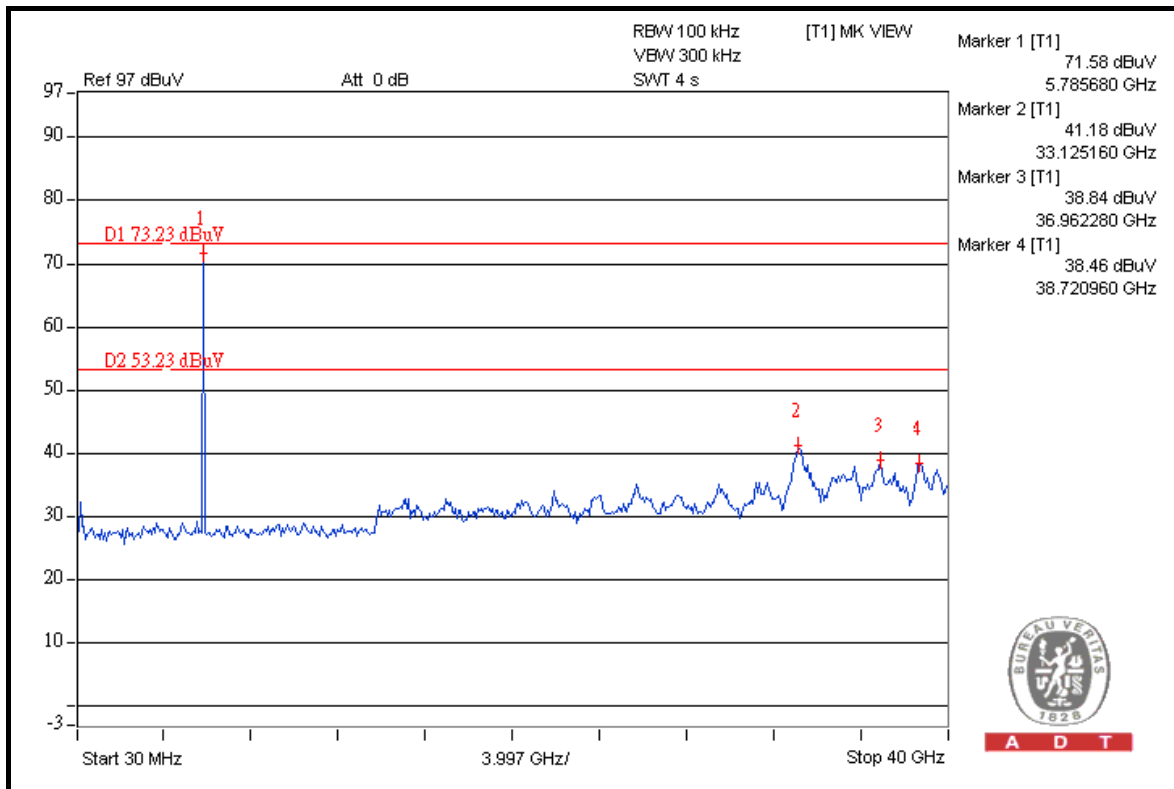
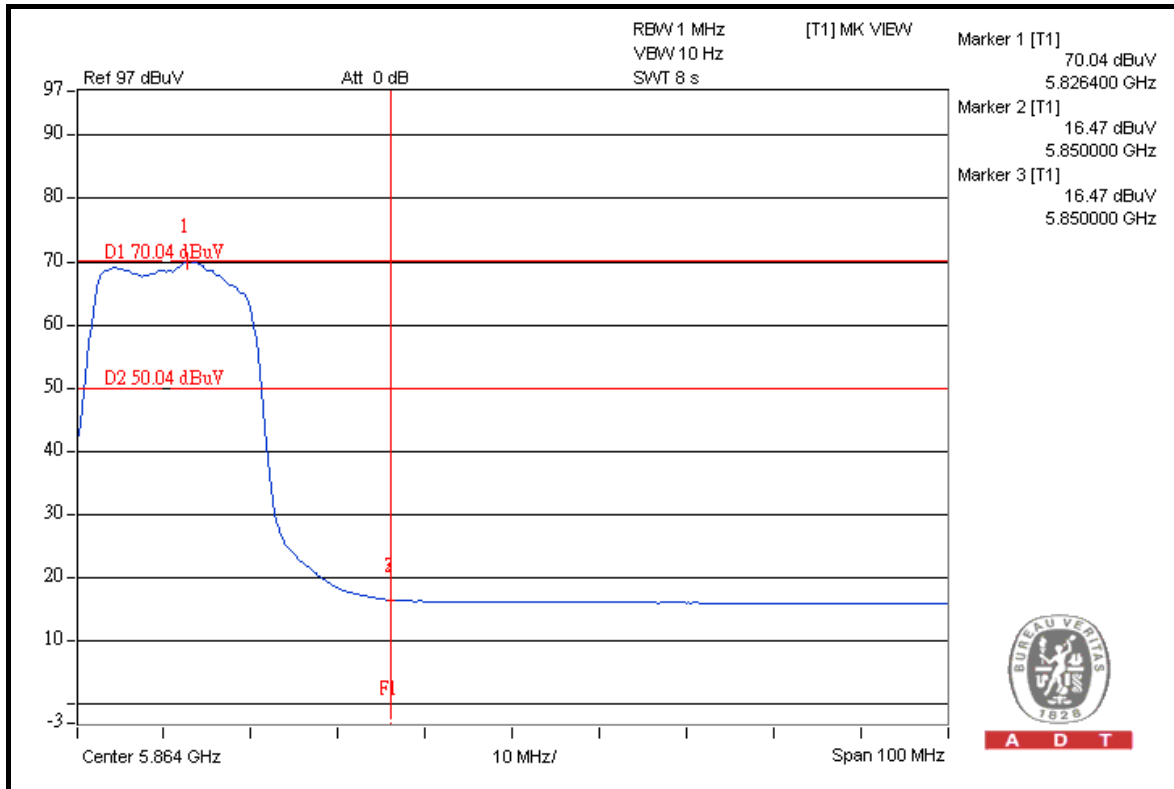


A D T





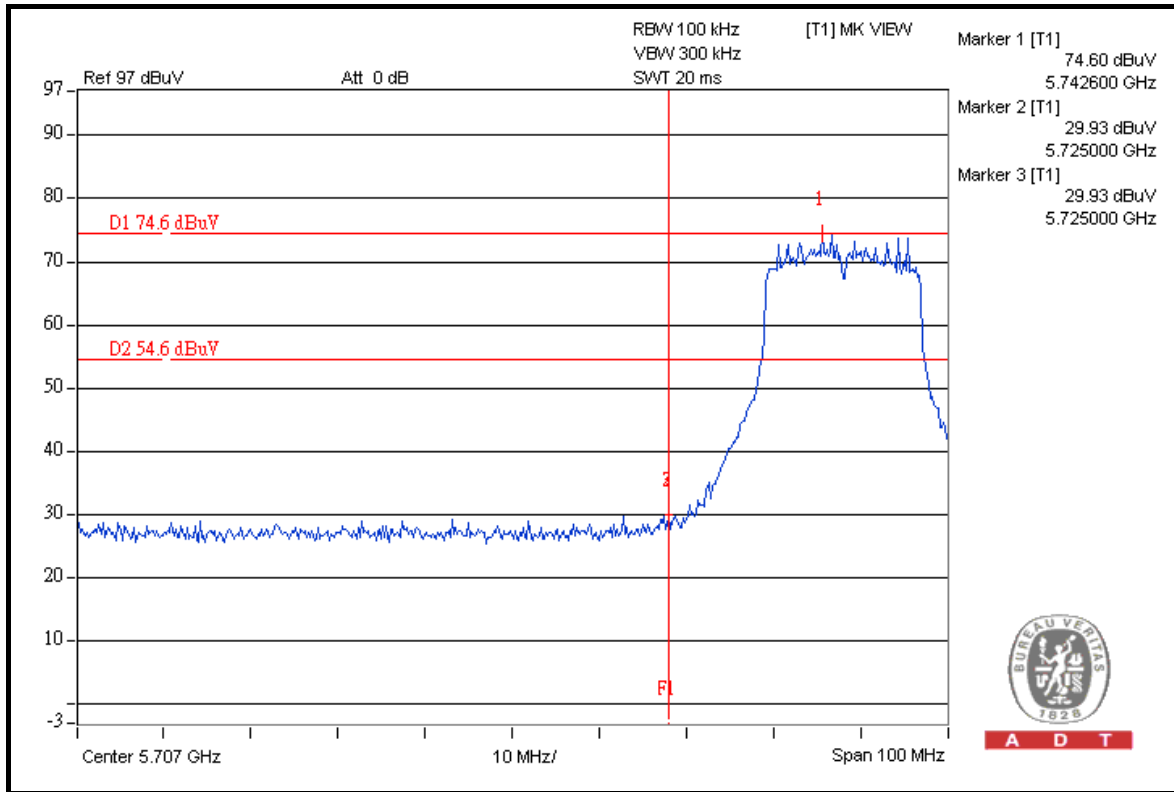
A D T



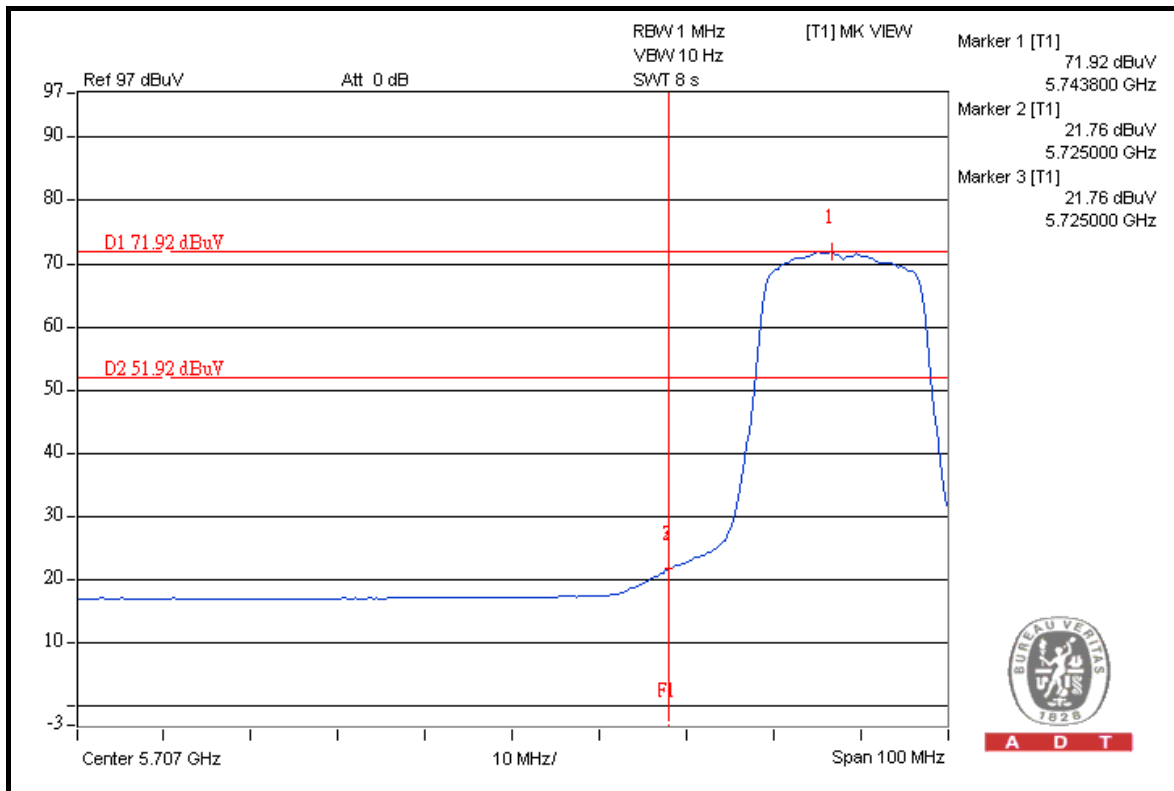


A D T

TEST MODE C



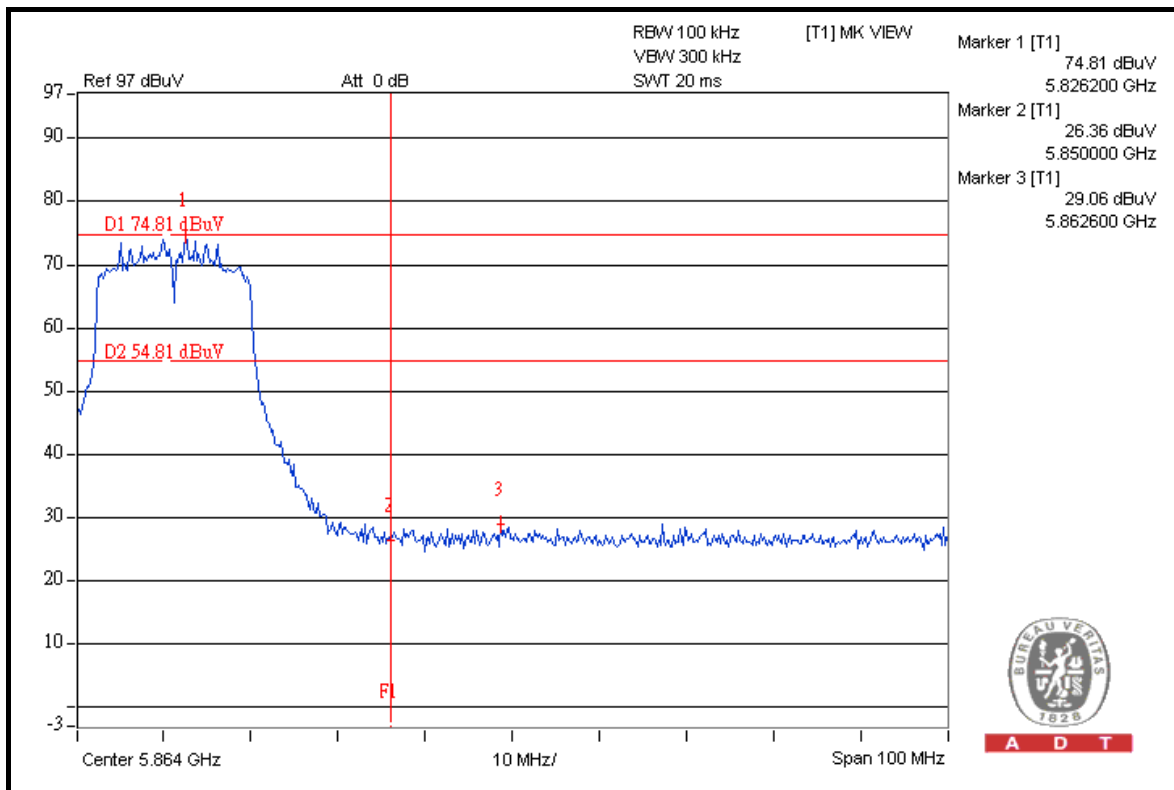
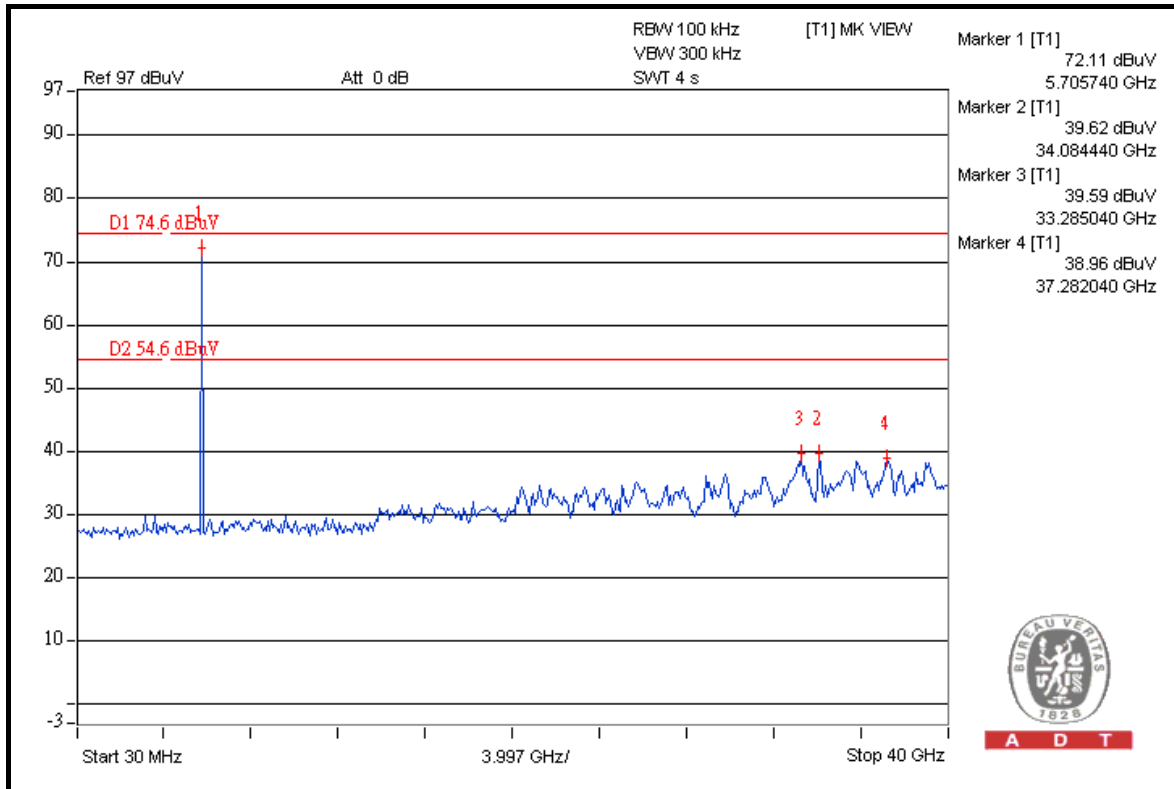
A D T



A D T

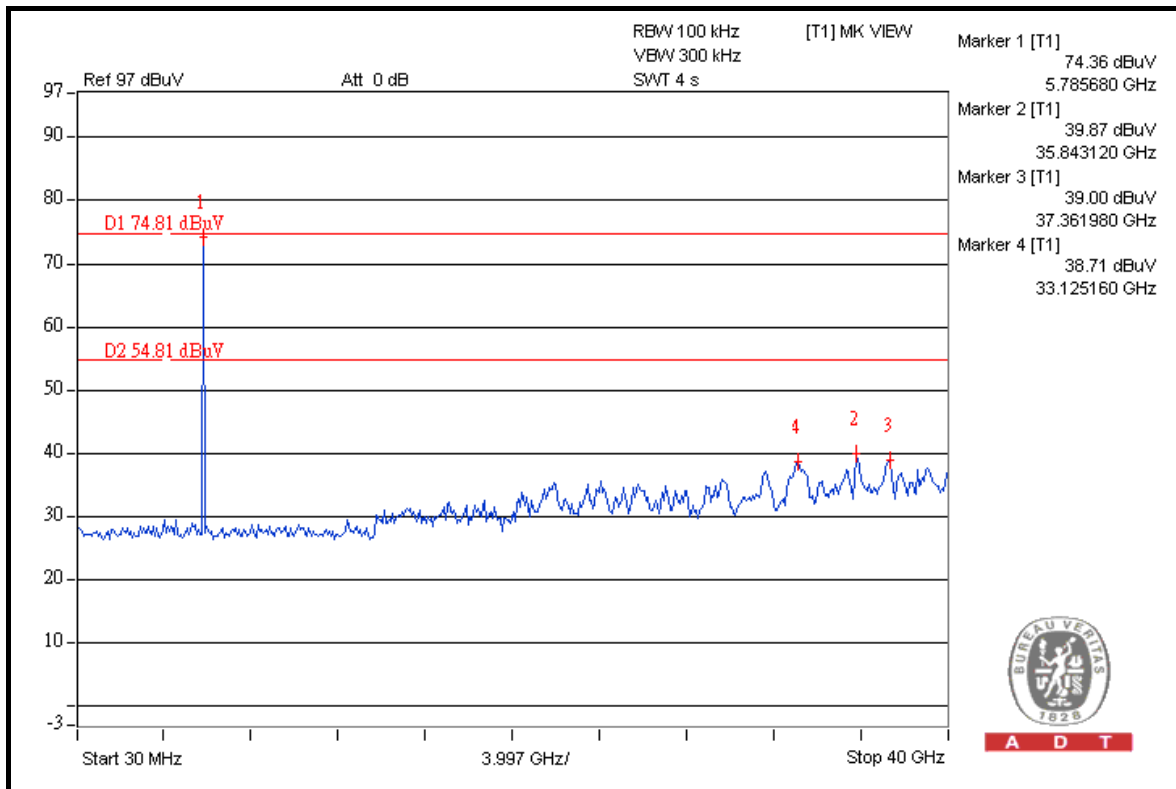
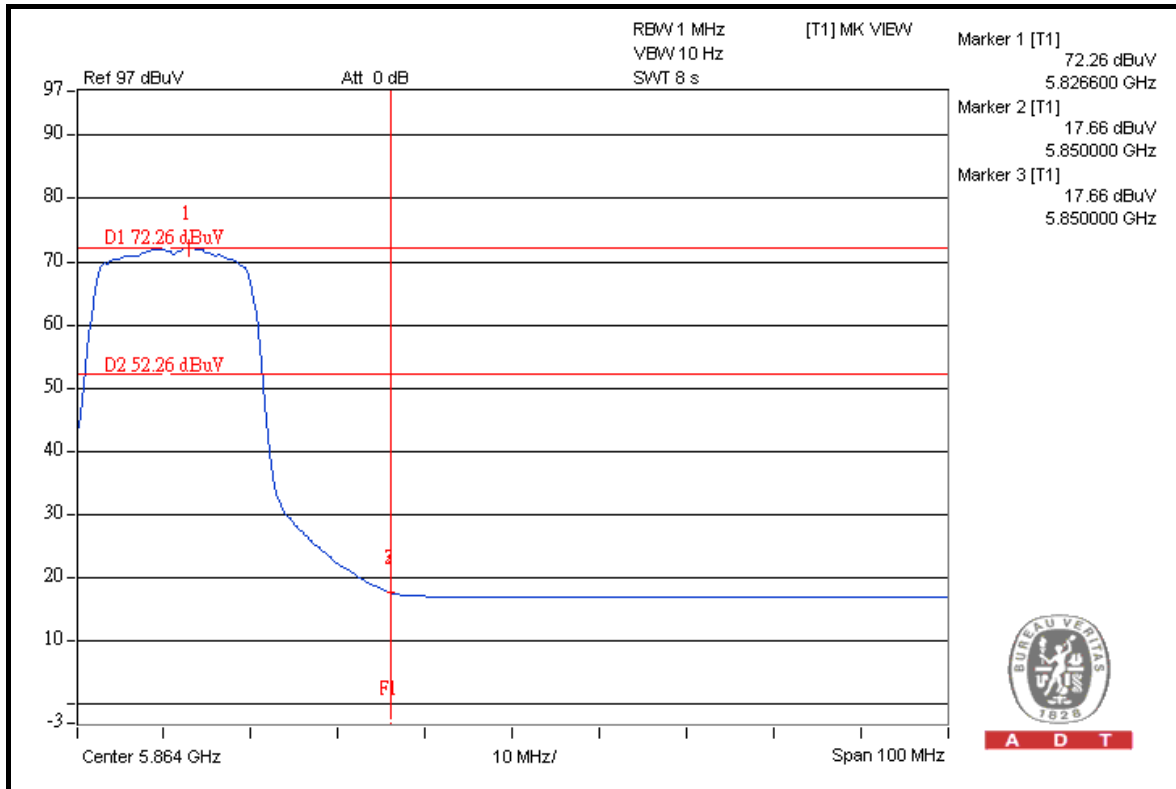


A D T





A D T

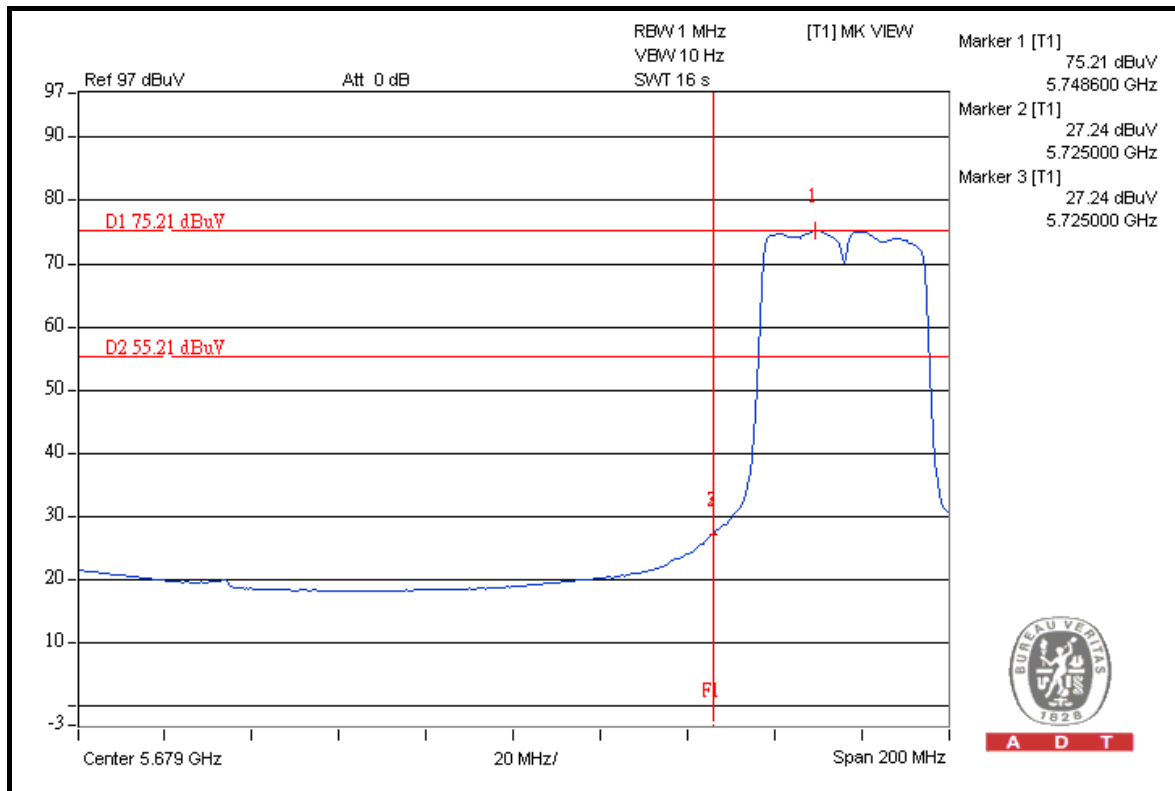
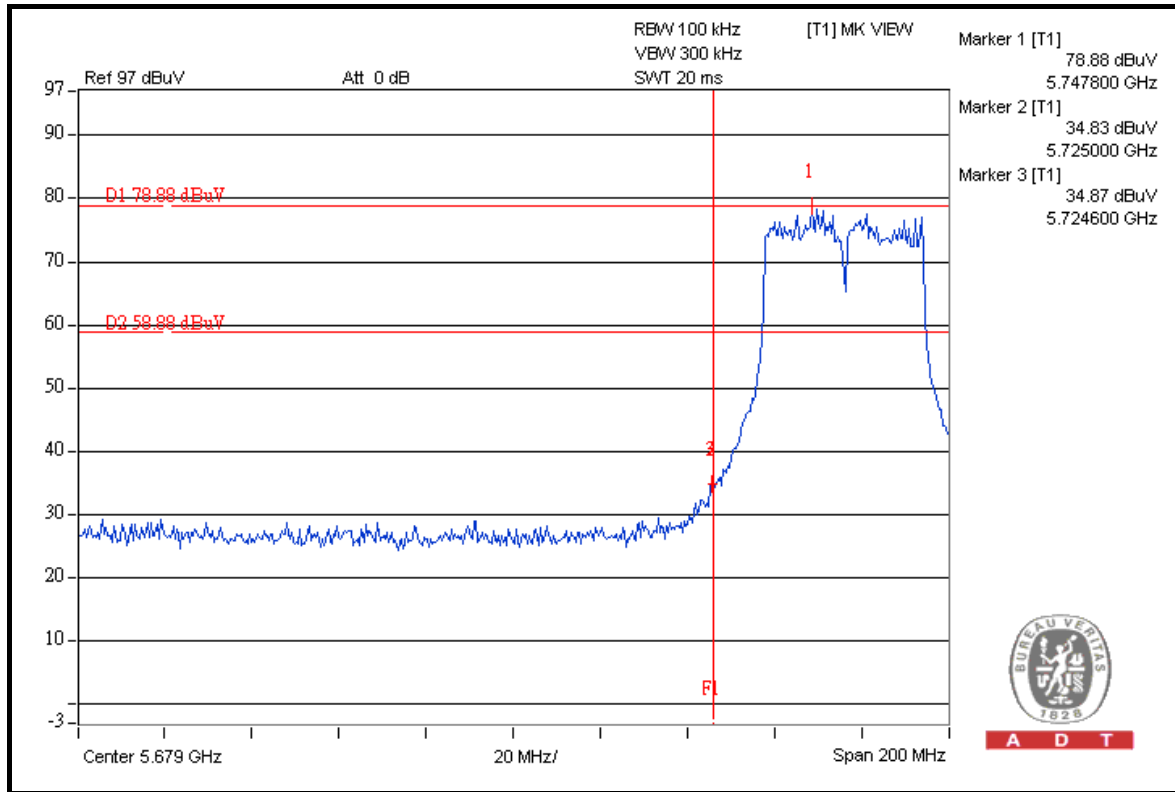




A D T

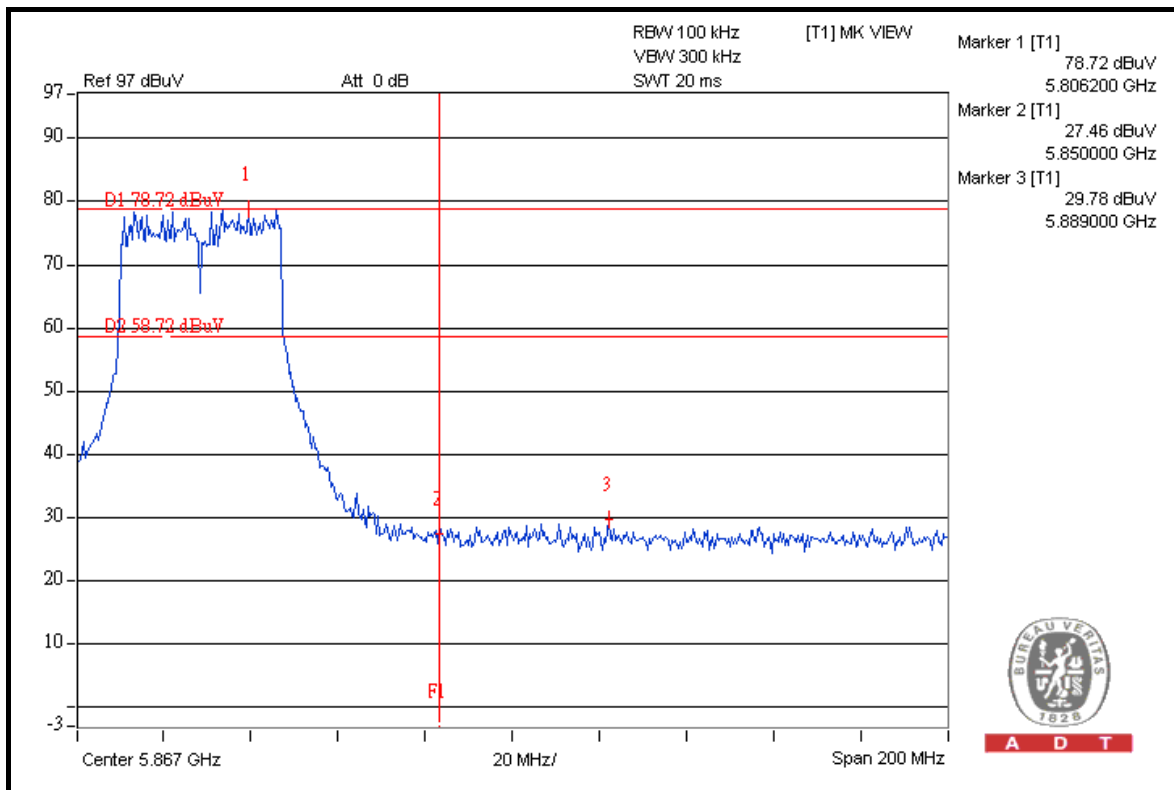
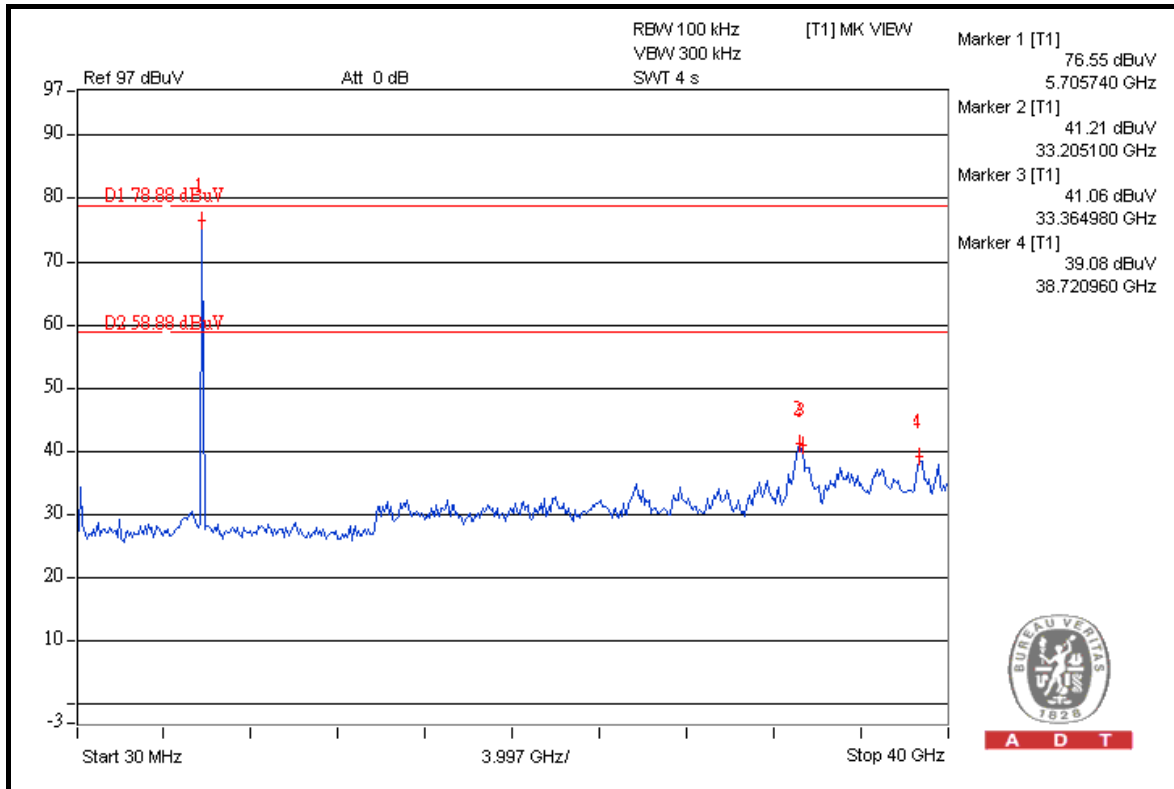
DRAFT 802.11n (40MHz) OFDM MODULATION

TEST MODE A



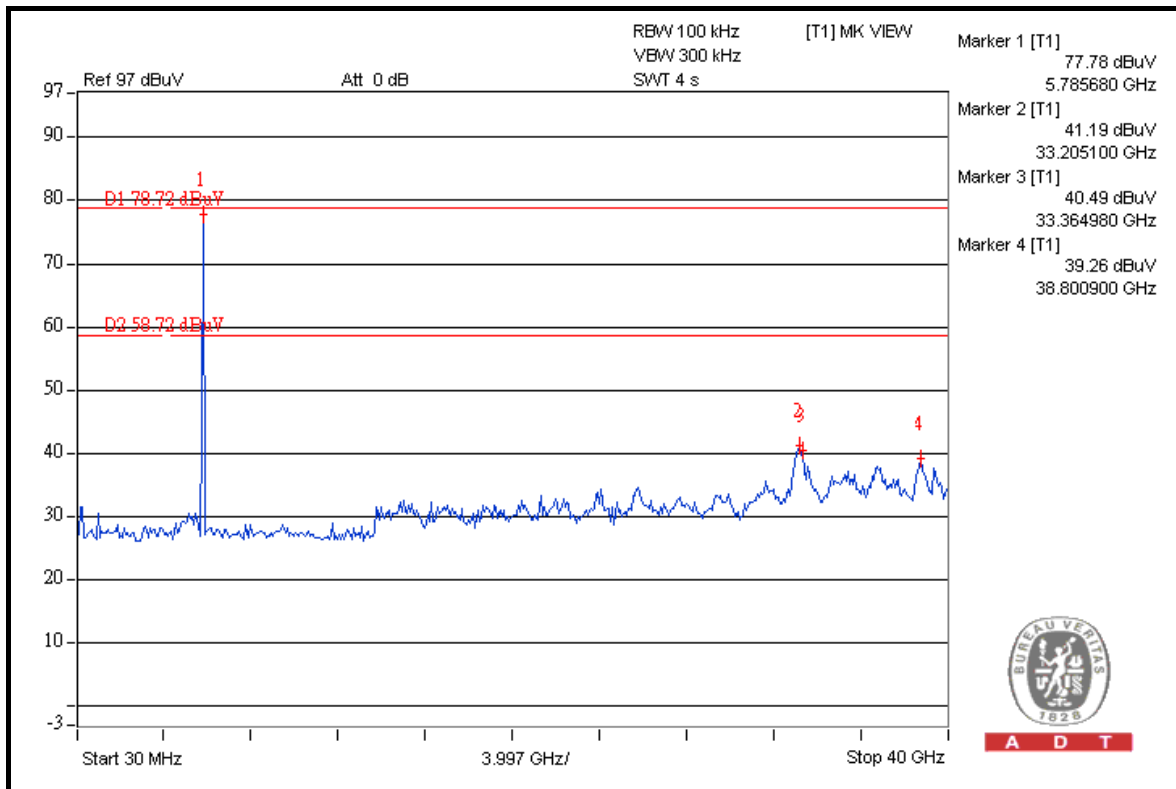
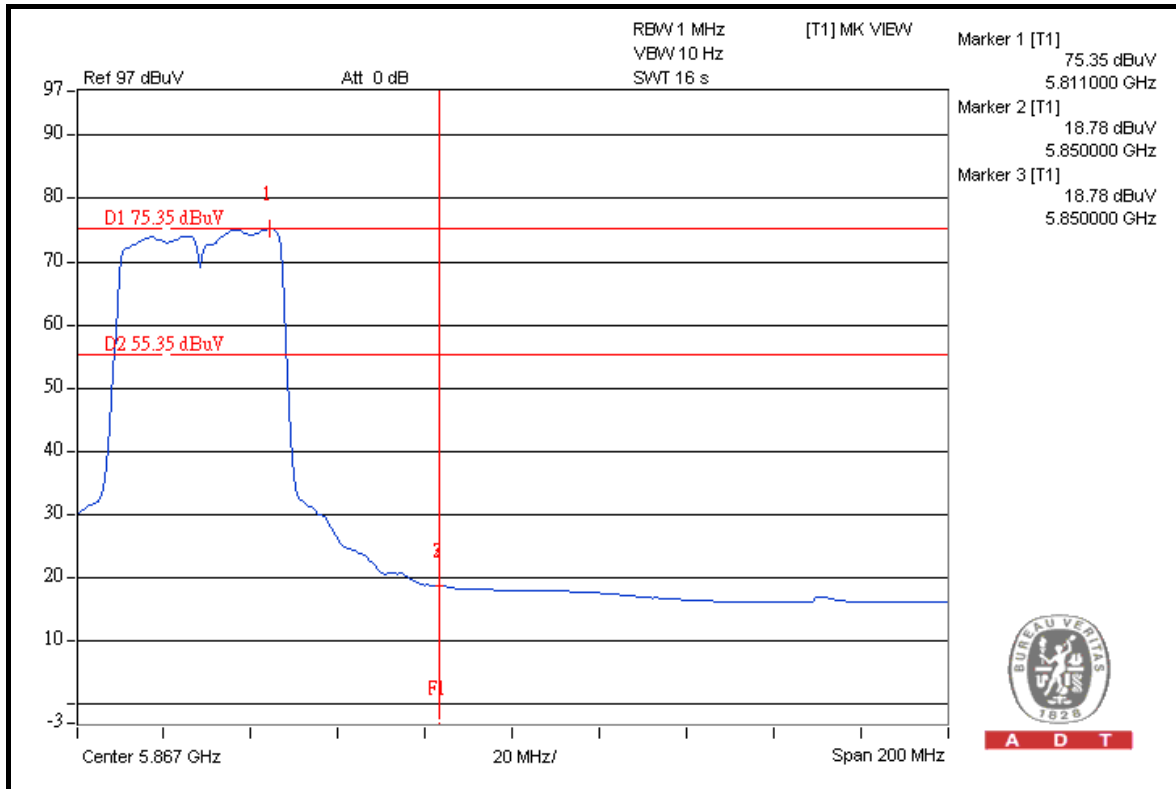


A D T





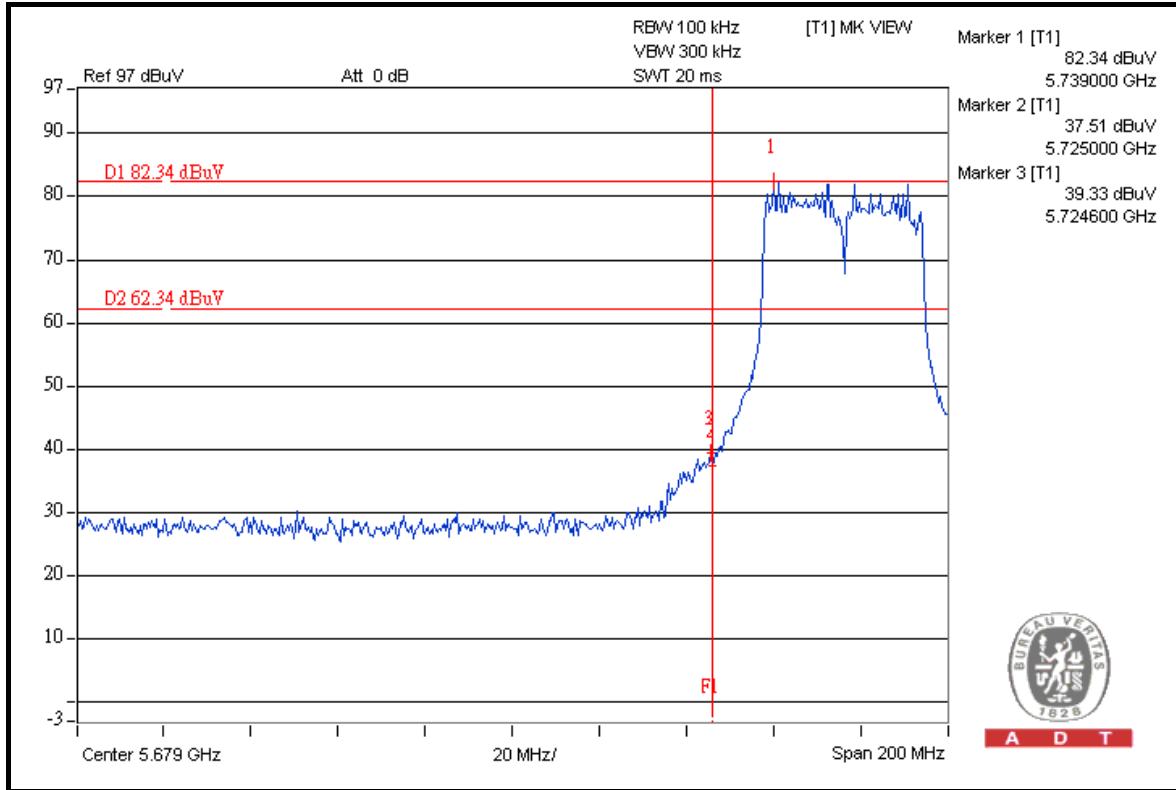
A D T



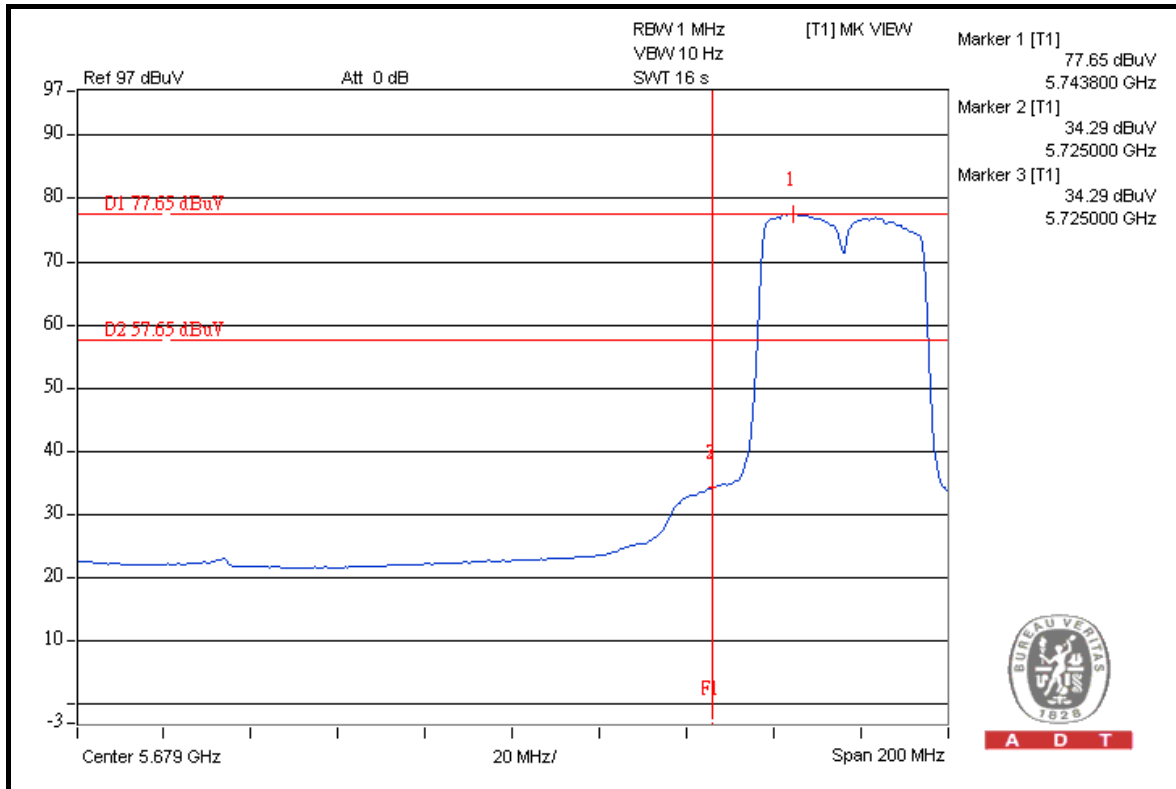


A D T

TEST MODE C



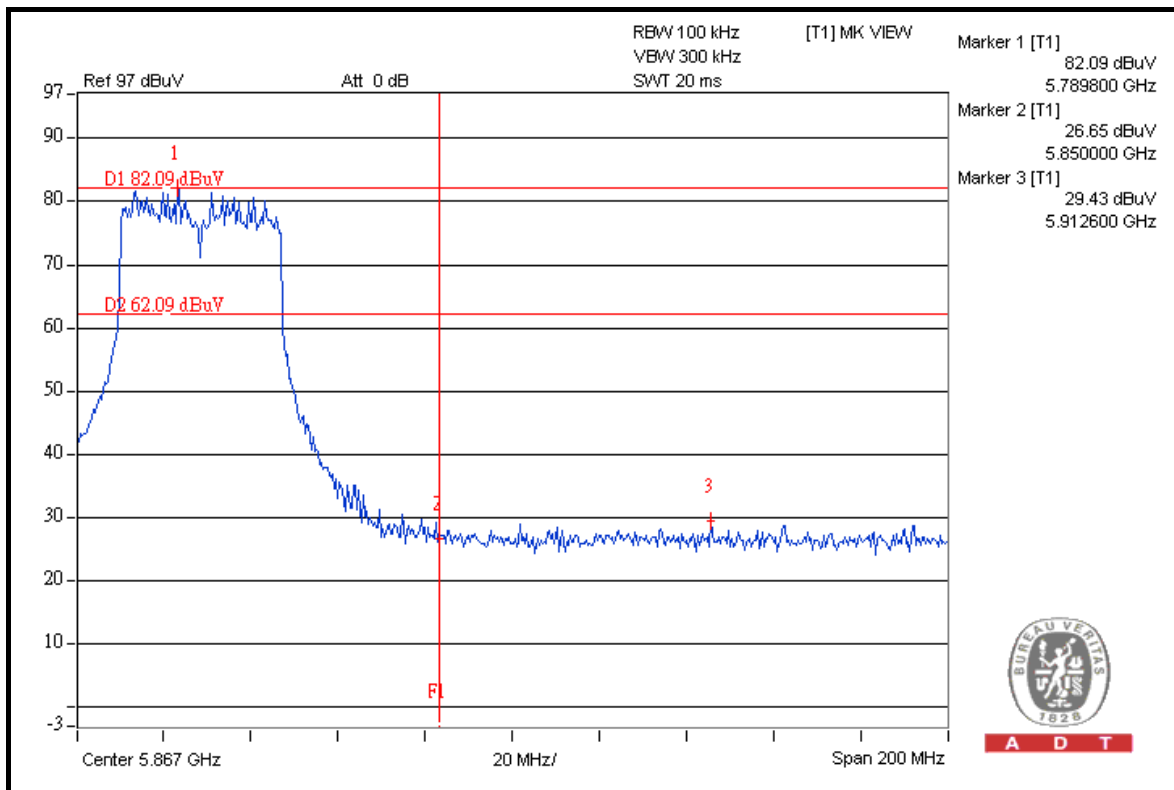
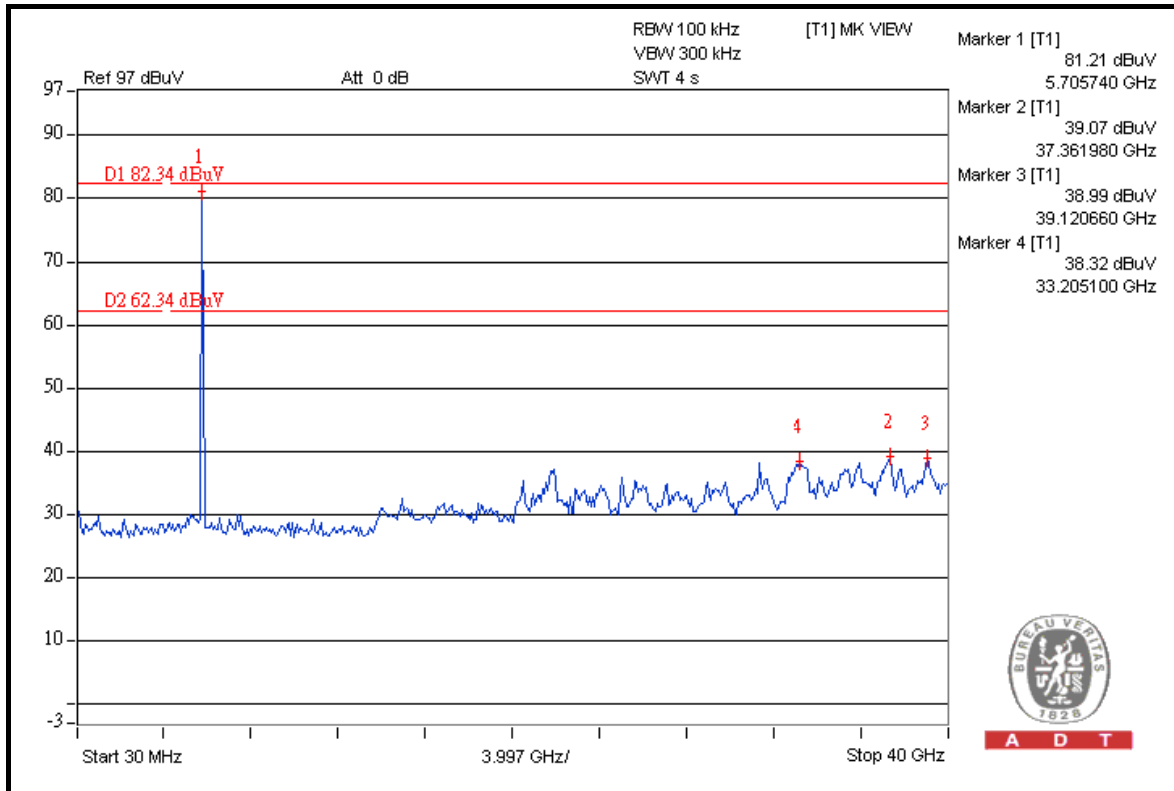
A D T



A D T

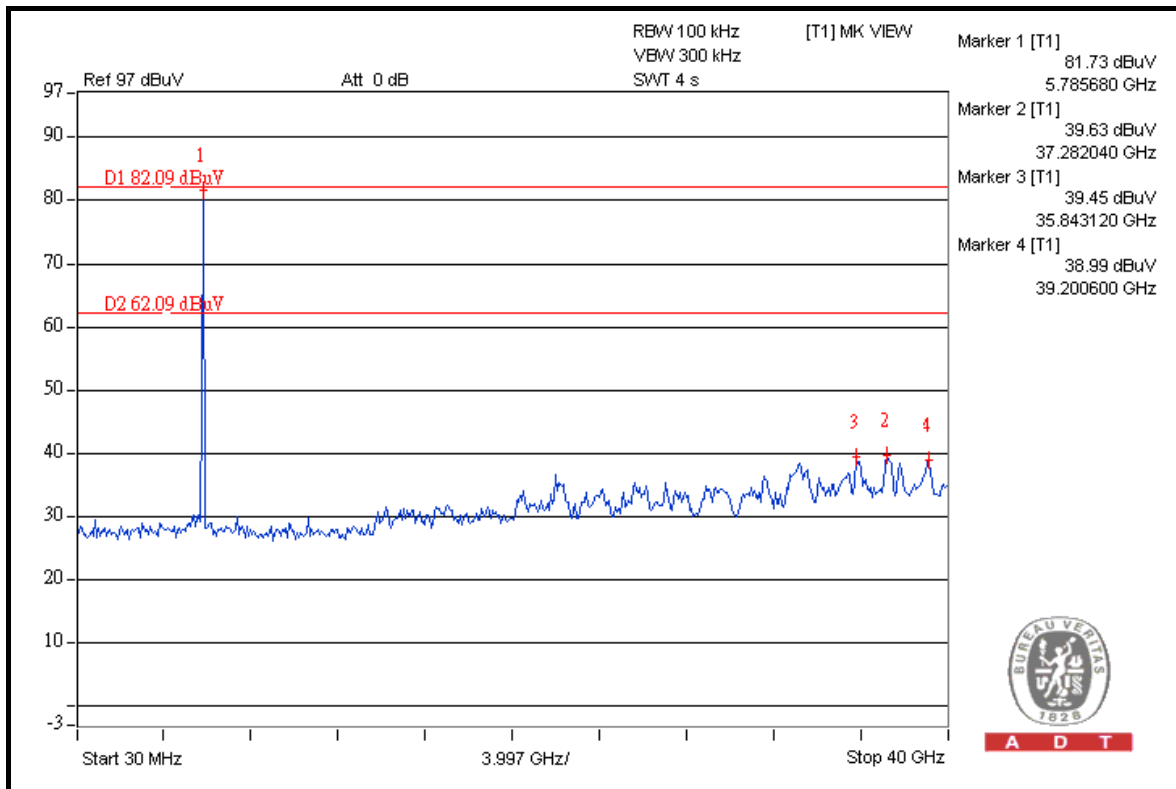
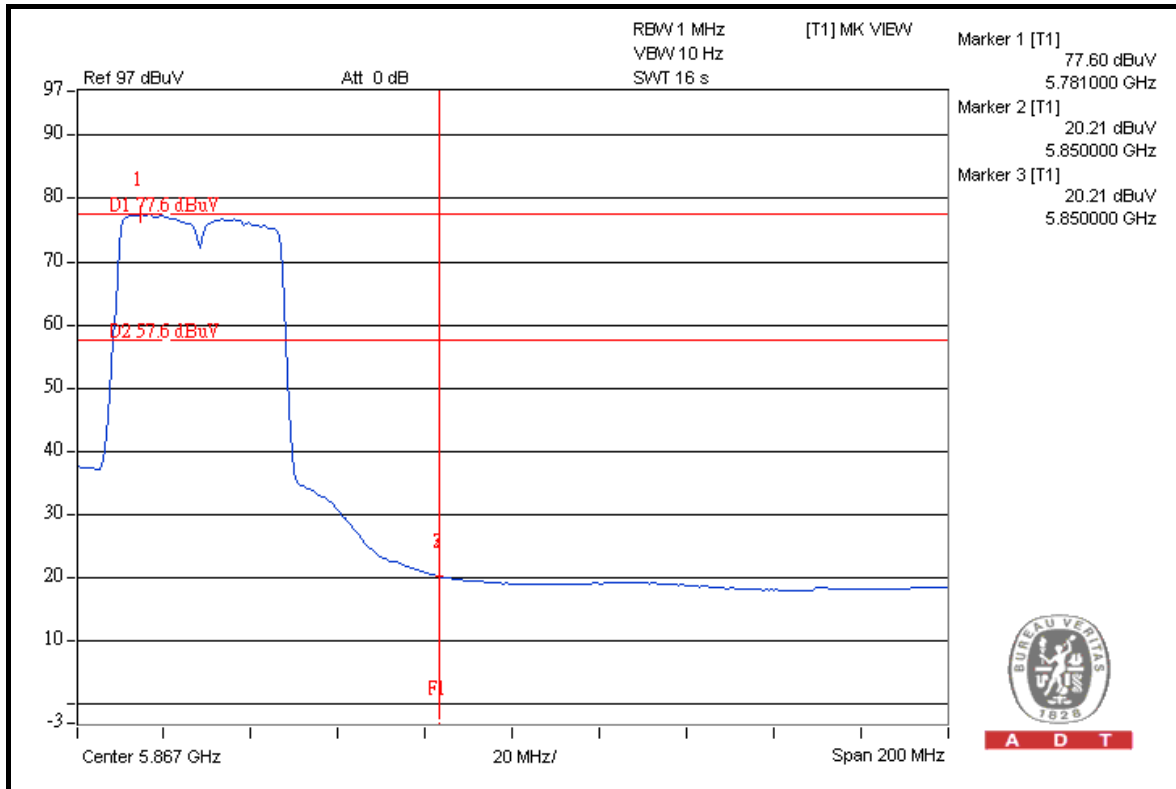


A D T





A D T





A D T

5.7 ANTENNA REQUIREMENT

5.7.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.7.2 ANTENNA CONNECTED CONSTRUCTION

The antennas used in this product are Dipole antenna with RSMA connector and Embedded antenna with UFL connector. The maximum gain of the antenna is 5.1dBi.



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6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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7. 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 by the following approval agencies according to ISO/IEC 17025.

USA	FCC, NVLAP
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	GOST-ASIA(MOU)
Russia	CERTIS(MOU)

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.



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8. 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.

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