

**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	30deg. C, 55%RH 960hPa	TESTED BY	Wen Yu

**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	2390.00	64.36 PK	74.00	-9.64	1.52 H	177	34.08	30.28
2	2390.00	51.26 AV	54.00	-2.74	1.52 H	177	20.98	30.28
3	*2422.00	110.43 PK			1.50 H	278	80.03	30.40
4	*2422.00	98.65 AV			1.50 H	278	68.25	30.40
5	4844.00	54.45 PK	74.00	-19.55	1.26 H	45	17.61	36.84
6	4844.00	41.26 AV	54.00	-12.74	1.26 H	45	4.42	36.84

**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	2389.00	57.97 PK	74.00	-16.03	1.29 V	167	27.69	30.28
2	2389.00	45.99 AV	54.00	-8.01	1.29 V	167	15.71	30.28
3	*2422.00	101.40 PK			1.29 V	167	71.00	30.40
4	*2422.00	90.60 AV			1.29 V	167	60.20	30.40
5	4844.00	52.57 PK	74.00	-21.43	1.44 V	355	15.73	36.84
6	4844.00	39.16 AV	54.00	-14.84	1.44 V	355	2.32	36.84

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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	30deg. C, 55%RH 960hPa	TESTED BY	Wen Yu

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	*2437.00	112.05 PK			1.48 H	282	81.59	30.46
2	*2437.00	100.83 AV			1.48 H	282	70.37	30.46
3	4874.00	54.62 PK	74.00	-19.38	1.21 H	41	17.70	36.92
4	4874.00	41.36 AV	54.00	-12.64	1.21 H	41	4.44	36.92
5	7311.00	52.83 PK	74.00	-21.17	1.02 H	32	9.69	43.14
6	7311.00	39.03 AV	54.00	-14.97	1.02 H	32	-4.11	43.14
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	*2437.00	103.34 PK			1.28 V	167	72.88	30.46
2	*2437.00	92.30 AV			1.28 V	167	61.84	30.46
3	4874.00	52.60 PK	74.00	-21.40	1.00 V	356	15.68	36.92
4	4874.00	39.21 AV	54.00	-14.79	1.00 V	356	2.29	36.92
5	7311.00	52.63 PK	74.00	-21.37	1.16 V	311	9.49	43.14
6	7311.00	38.17 AV	54.00	-15.83	1.16 V	311	-4.97	43.14

- 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	30deg. C, 55%RH 960hPa	TESTED BY	Wen Yu

**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	*2452.00	111.69 PK			1.51 H	269	81.18	30.51
2	*2452.00	97.38 AV			1.51 H	269	66.87	30.51
3	2483.50	71.90 PK	74.00	-2.10	1.51 H	288	41.27	30.63
4	2483.50	51.46 AV	54.00	-2.54	1.51 H	288	20.83	30.63
5	4904.00	54.58 PK	74.00	-19.42	1.30 H	35	17.58	37.00
6	4904.00	41.36 AV	54.00	-12.64	1.30 H	35	4.36	37.00
7	7356.00	52.81 PK	74.00	-21.19	1.00 H	32	9.68	43.13
8	7356.00	38.92 AV	54.00	-15.08	1.00 H	32	-4.21	43.13

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

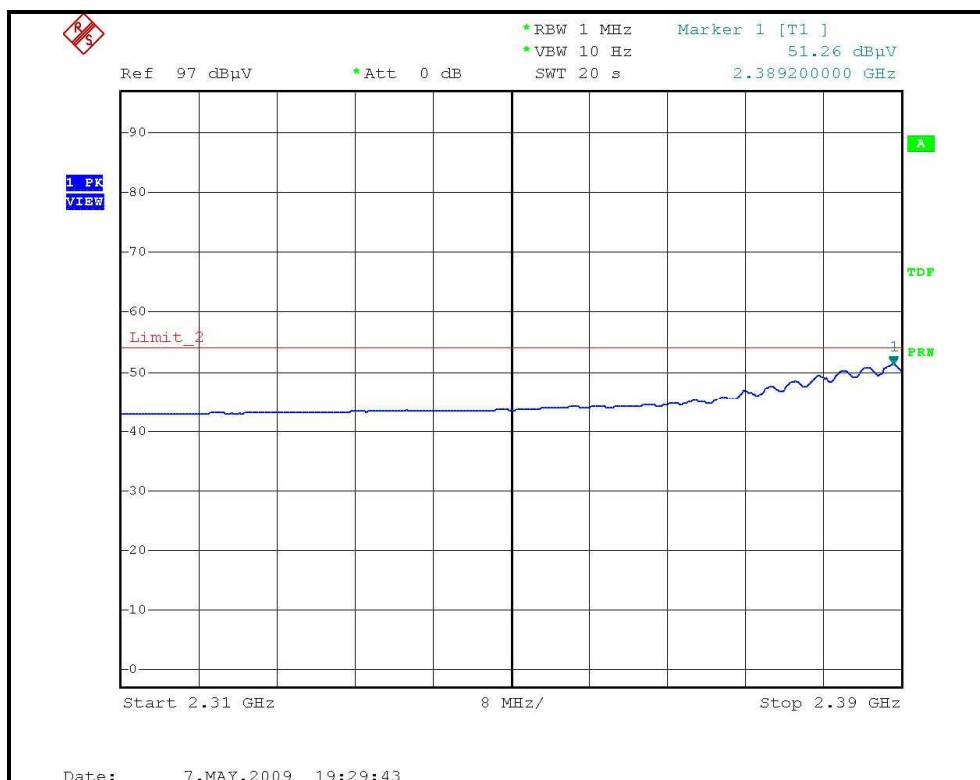
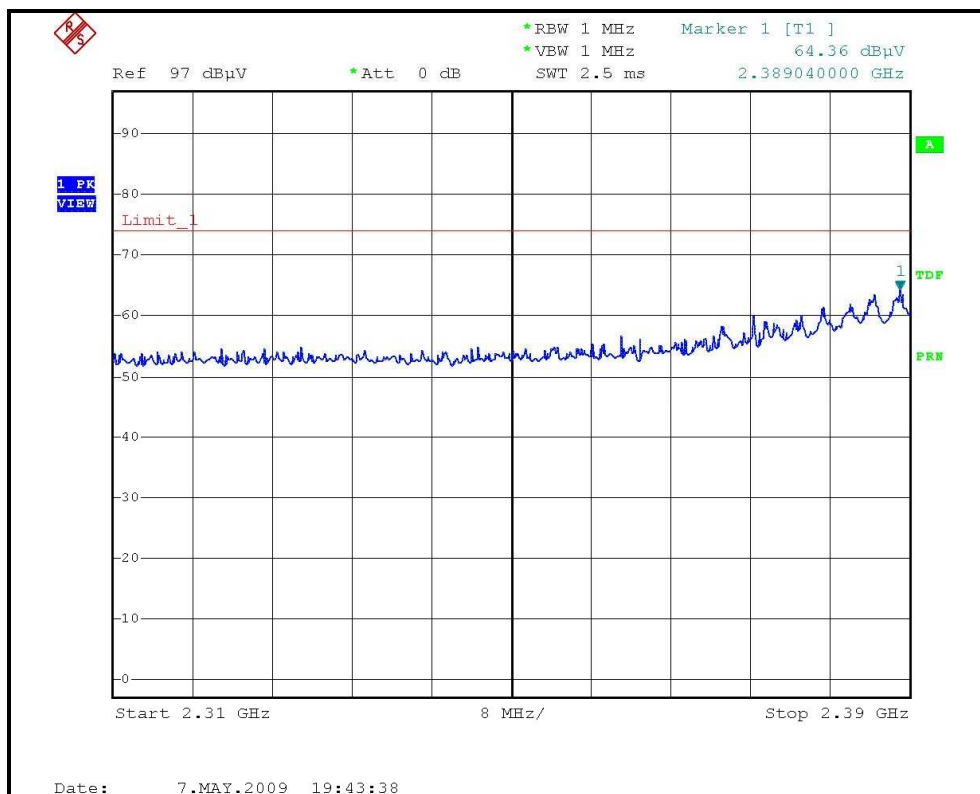
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	101.80 PK			1.29 V	166	71.29	30.51
2	*2452.00	91.10 AV			1.29 V	166	60.59	30.51
3	2484.00	61.11 PK	74.00	-12.89	1.29 V	166	30.48	30.63
4	2484.00	46.44 AV	54.00	-7.56	1.29 V	166	15.81	30.63
5	4904.00	52.77 PK	74.00	-21.23	1.10 V	351	15.77	37.00
6	4904.00	39.42 AV	54.00	-14.58	1.10 V	351	2.42	37.00
7	7356.00	52.83 PK	74.00	-21.17	1.33 V	344	9.70	43.13
8	7356.00	38.42 AV	54.00	-15.58	1.33 V	344	-4.71	43.13

- 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.



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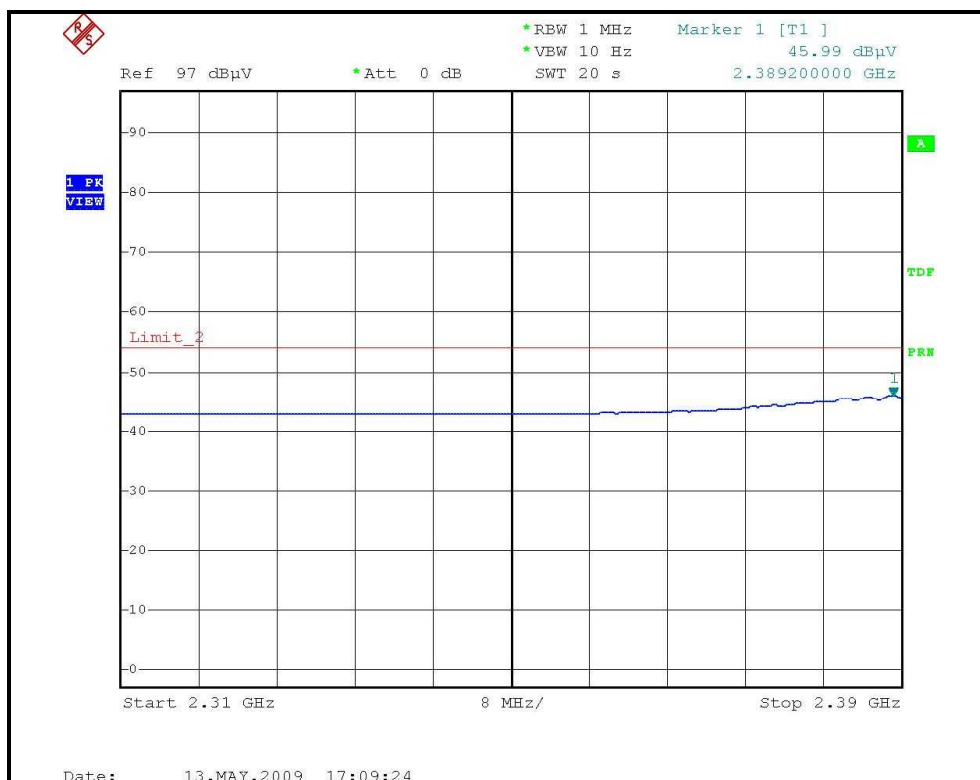
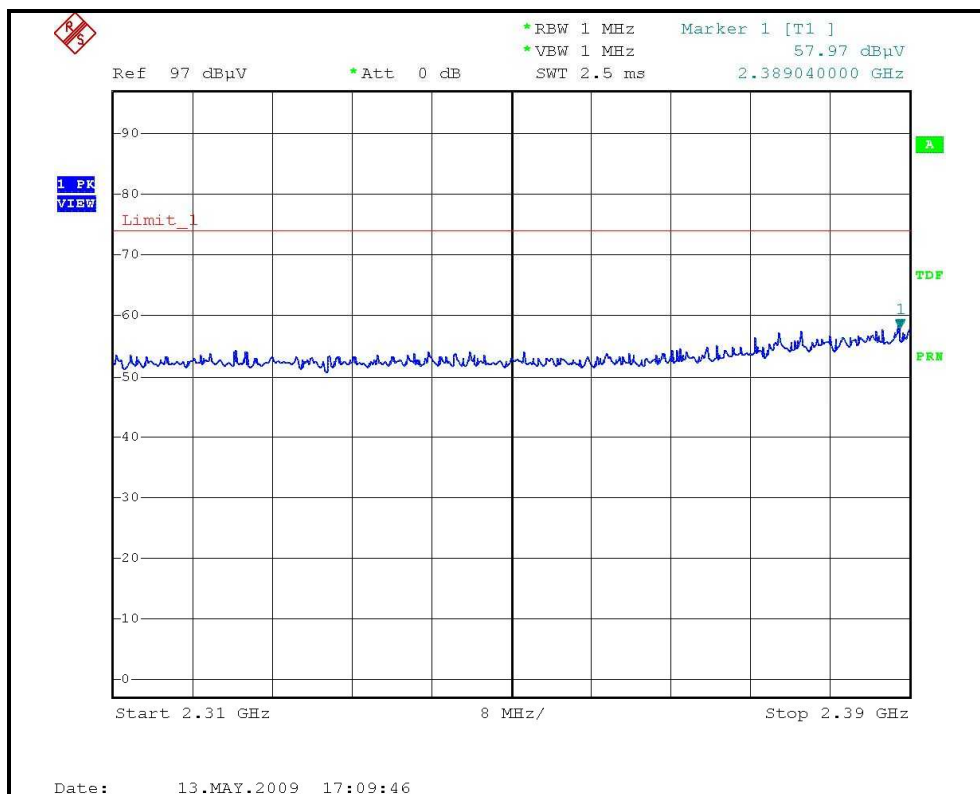
# RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH1, HORIZONTAL )





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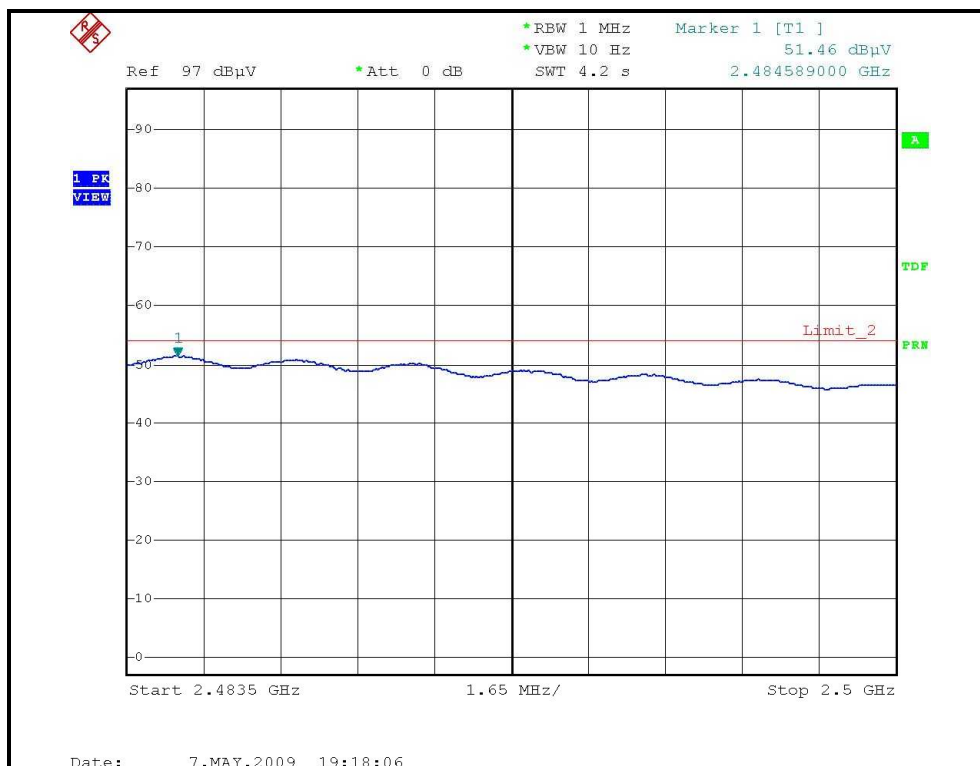
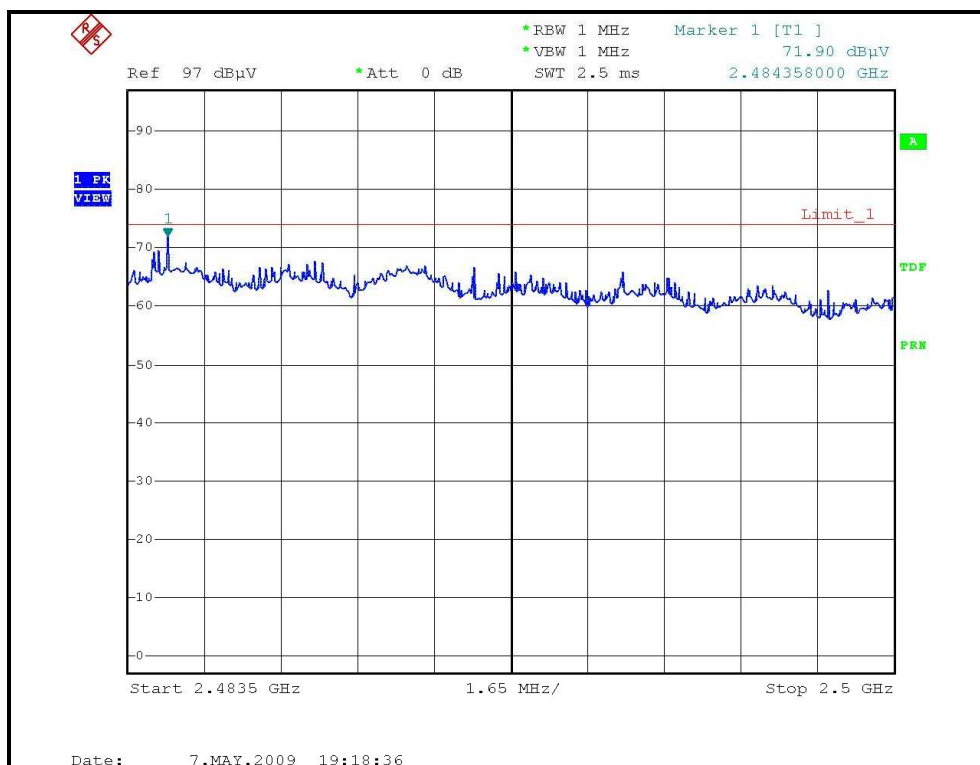
# RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH1, VERTICAL )





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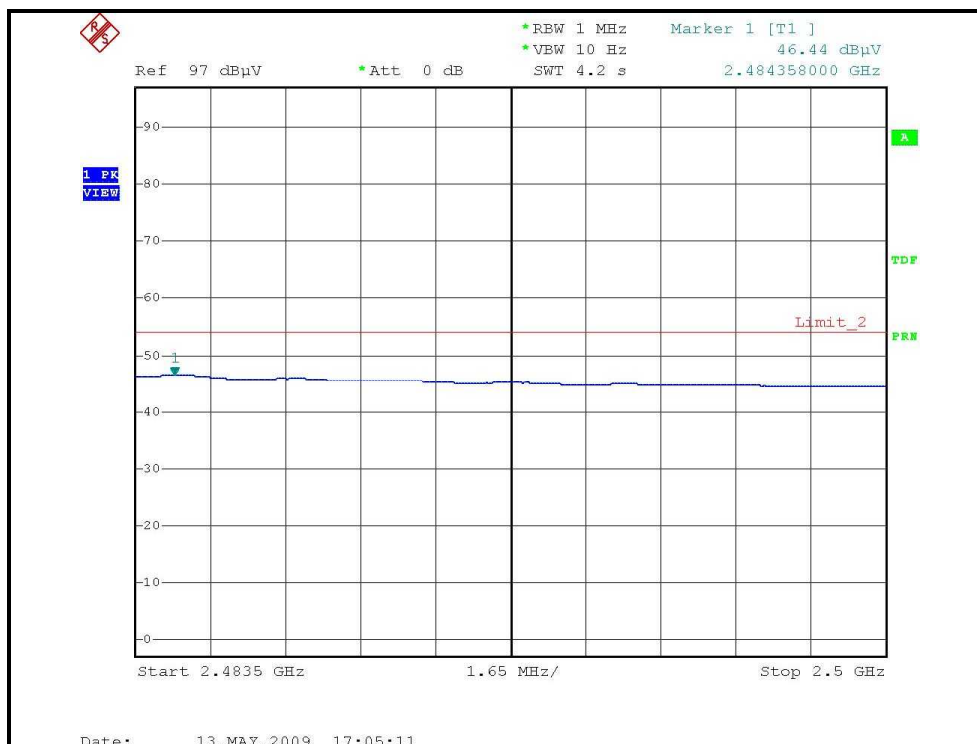
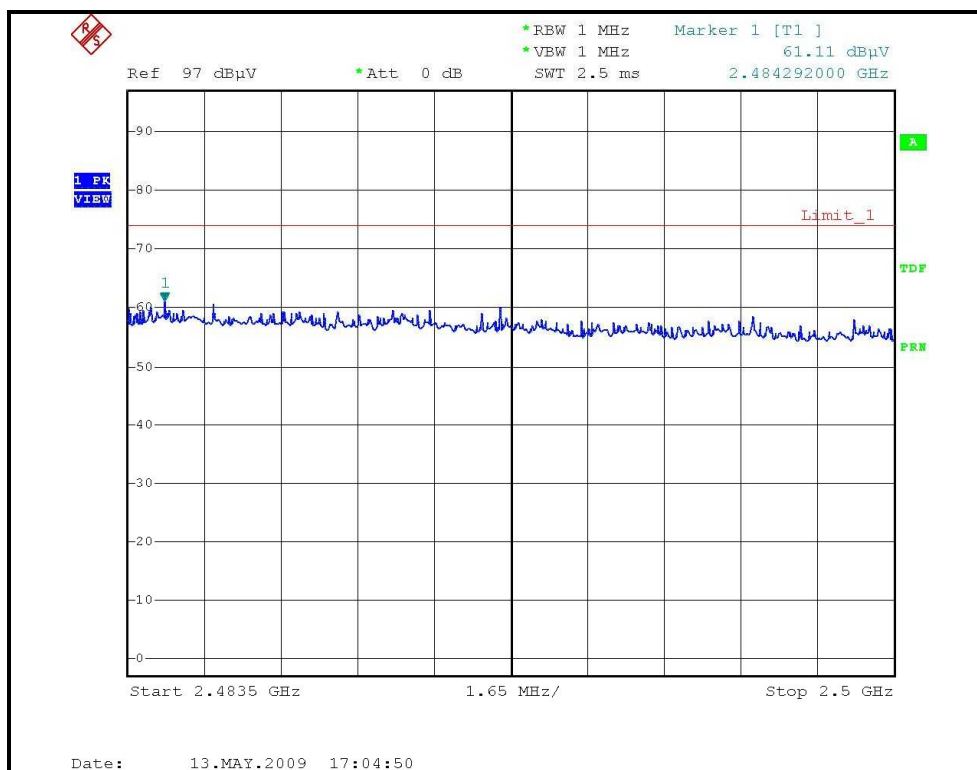
### RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH7, HORIZONTAL )





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### RESTRICTED BANDEDGE (DRAFT 802.11n (40MHz) MODE, CH7, VERTICAL )





### 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.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 09, 2008	Dec. 08, 2009

**NOTE:**

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 2.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

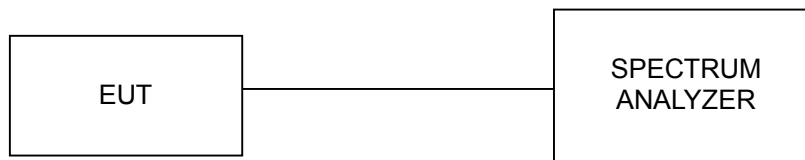
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

#### 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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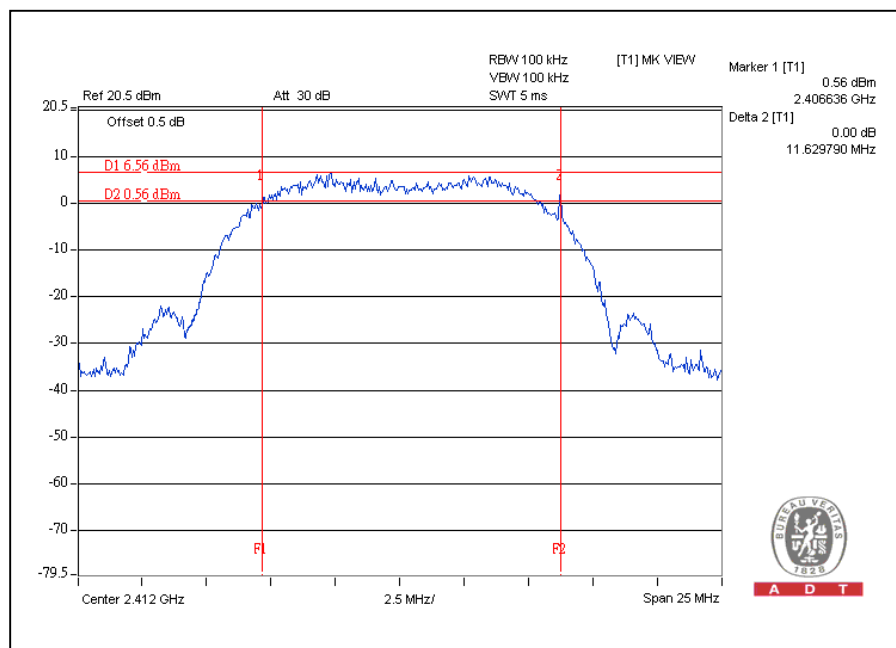
### 4.3.7 TEST RESULTS

#### 802.11b DSSS MODULATION:

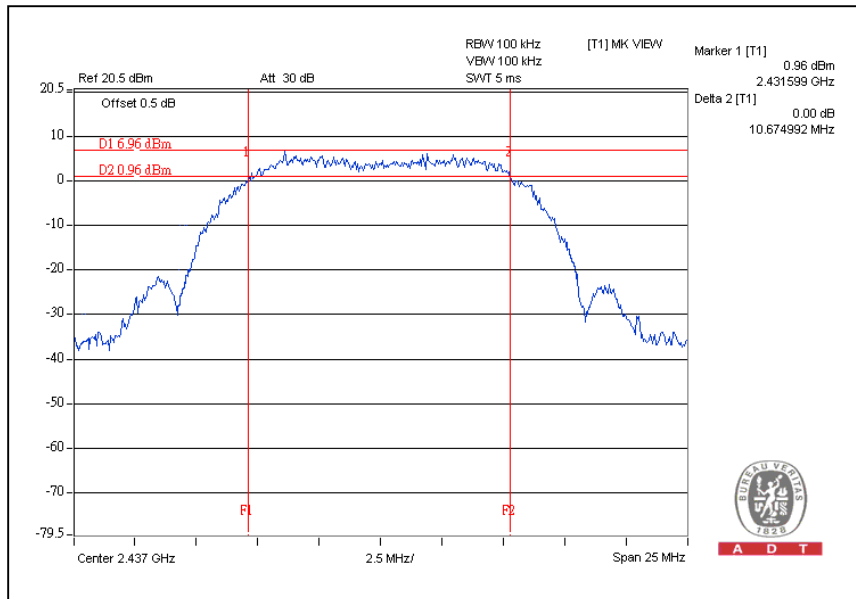
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<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	11.629	0.5	PASS
6	2437	10.674	0.5	PASS
11	2462	10.818	0.5	PASS

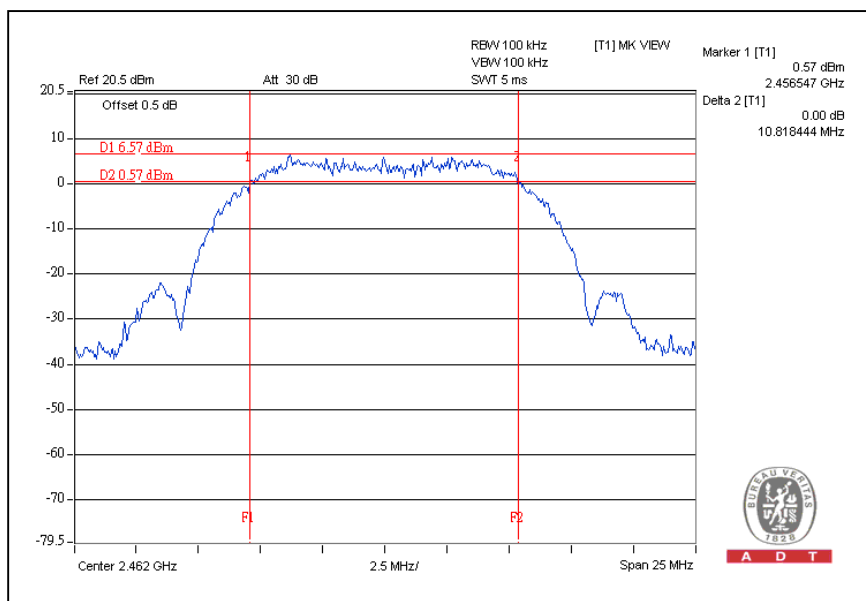
CH1



### CH6



### CH11





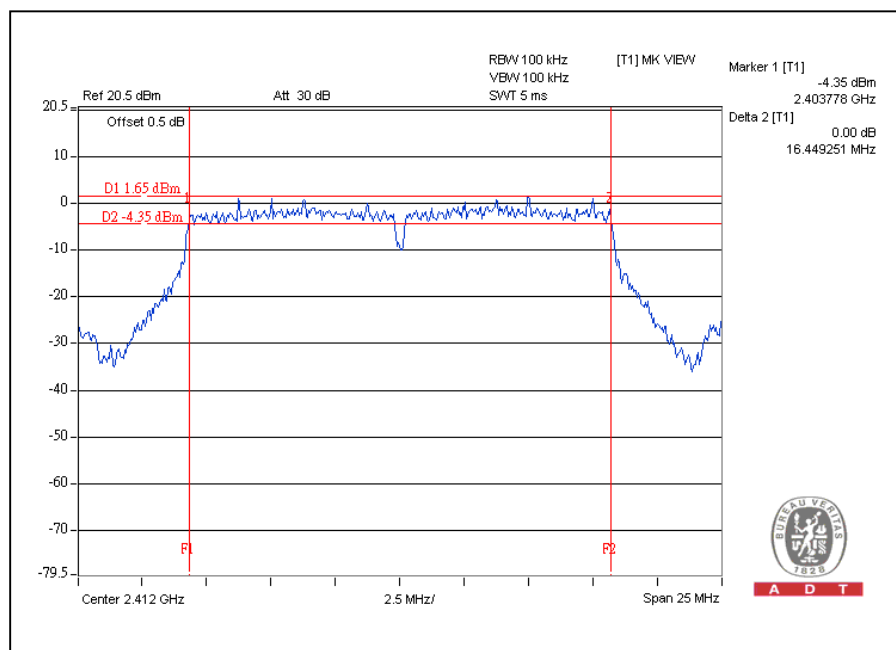
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### 802.11g OFDM MODULATION:

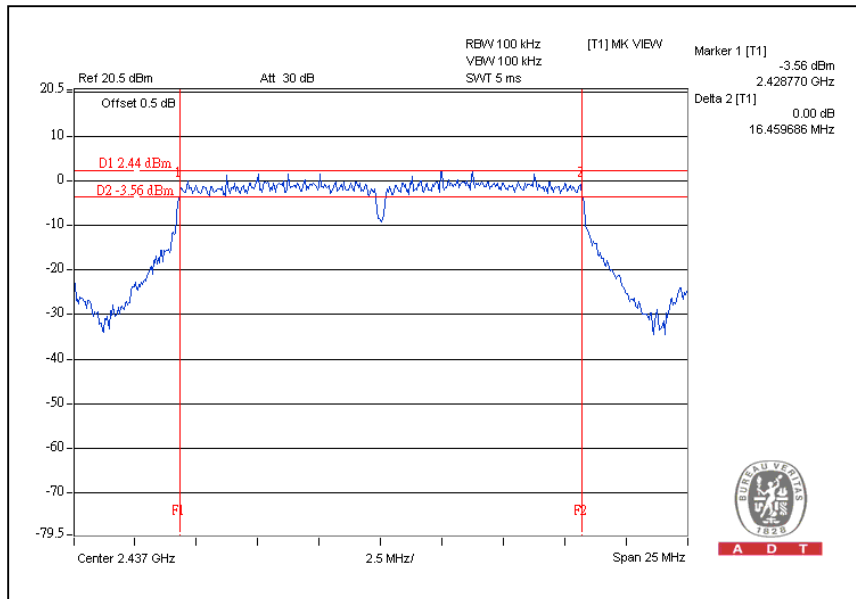
<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	6Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.449	0.5	PASS
6	2437	16.459	0.5	PASS
11	2462	16.445	0.5	PASS

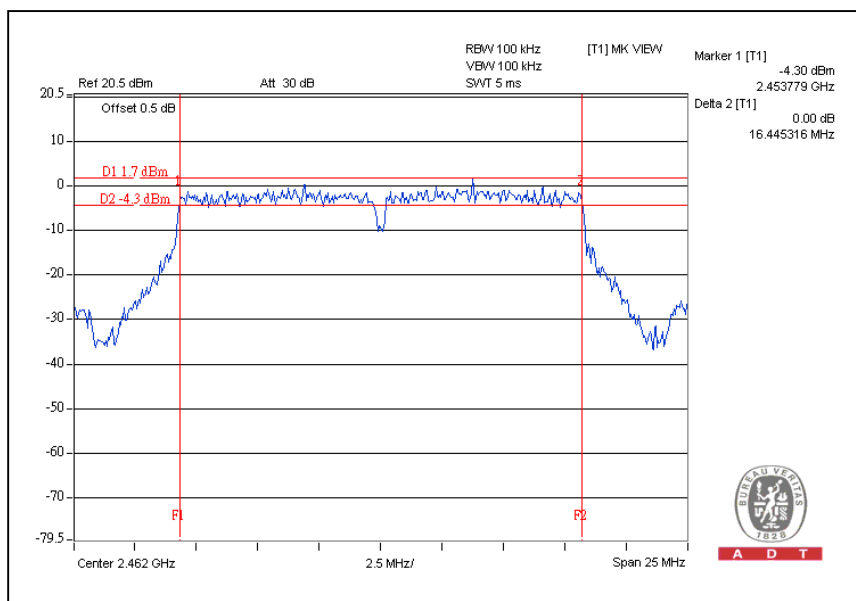
CH1



### CH6



### CH11



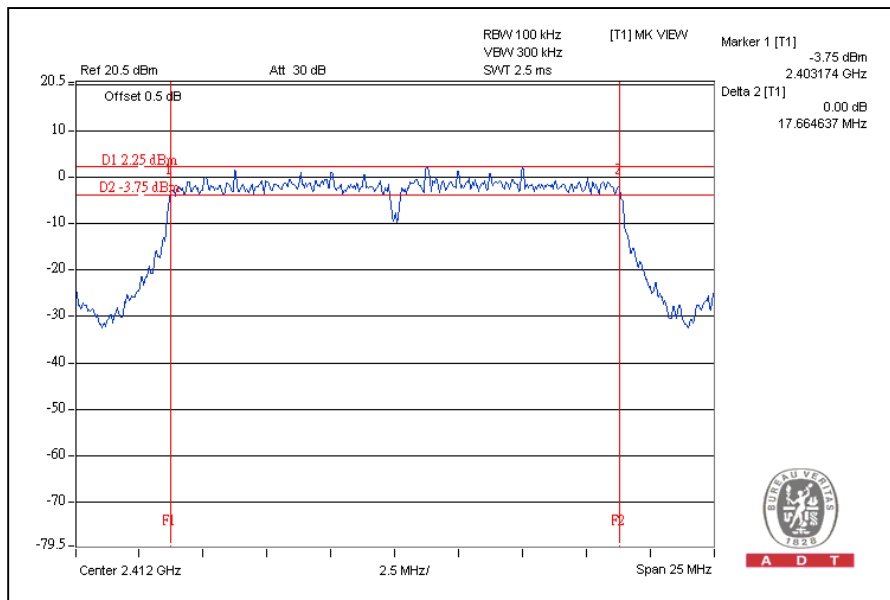


**DRAFT 802.11n (20MHz) OFDM MODULATION:**

<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	13Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN(0)	CHAIN(1)		
1	2412	17.664	17.651	0.5	PASS
6	2437	17.687	17.678	0.5	PASS
11	2462	17.661	17.698	0.5	PASS

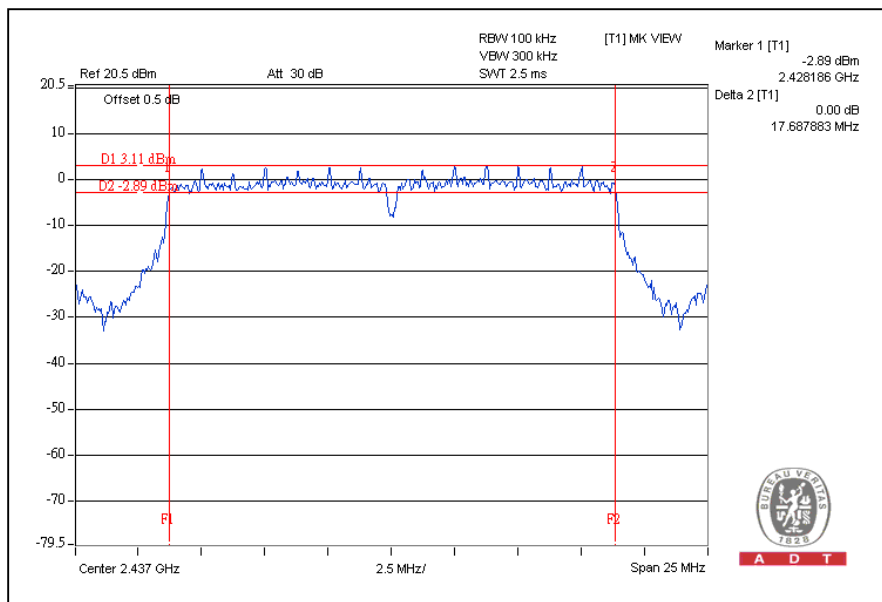
For Chain(0): CH1



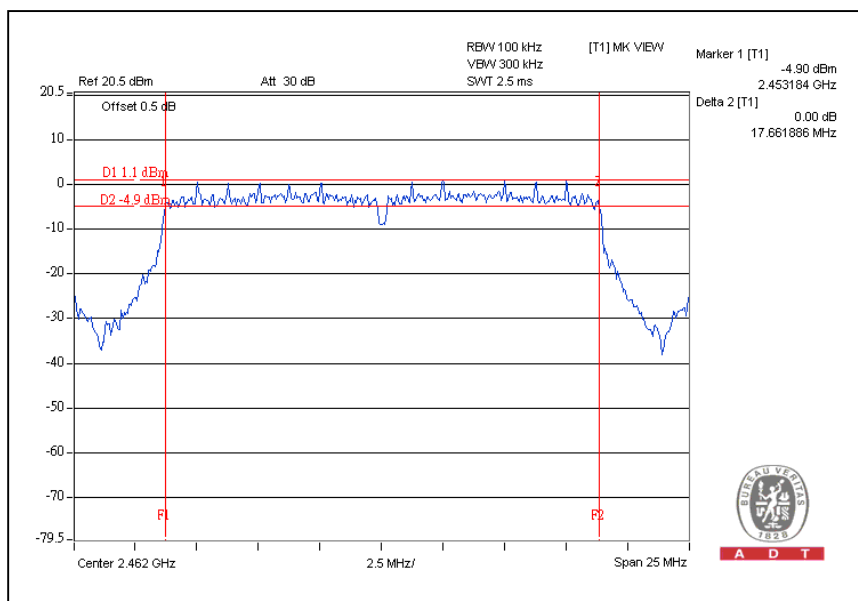


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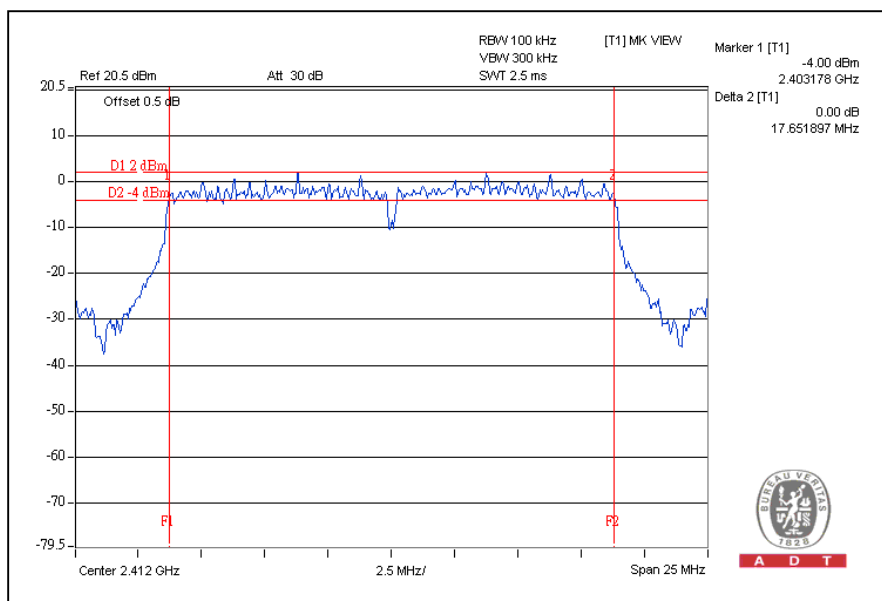
### CH6



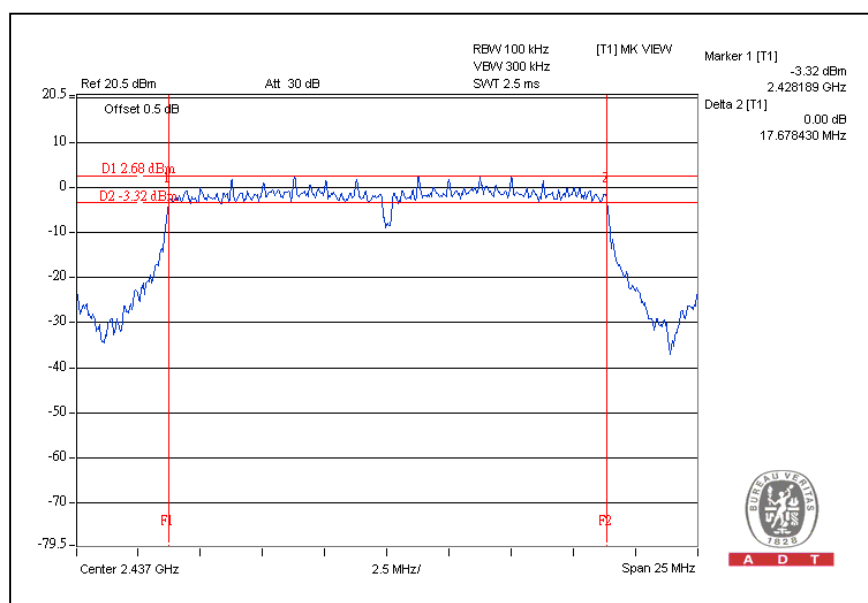
### CH11



### For CHAIN(1): CH1



### CH6

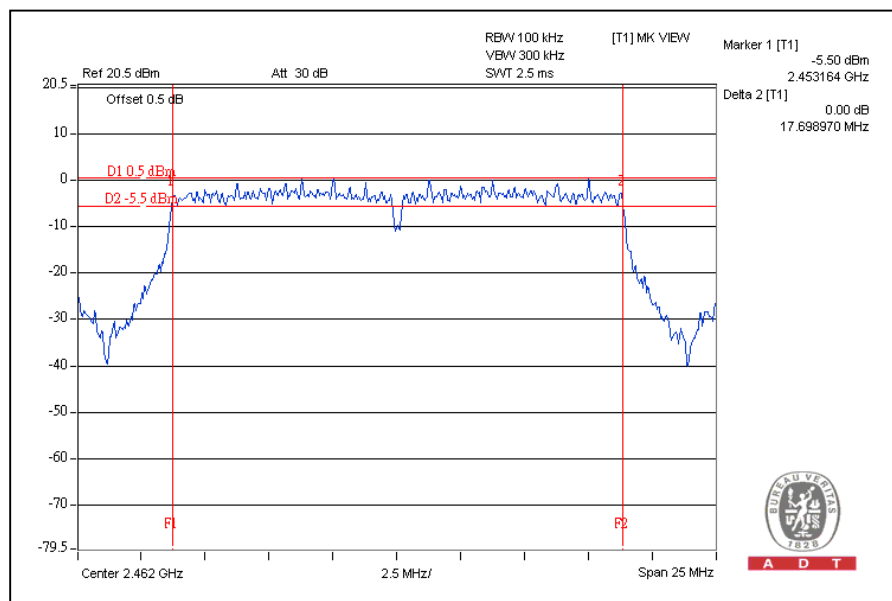






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CH11





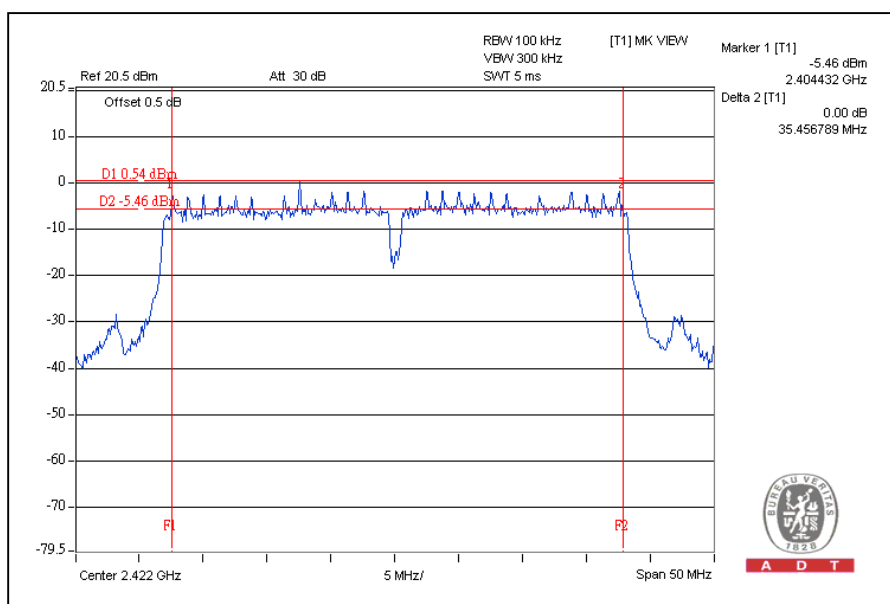
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### DRAFT 802.11n (40MHz) OFDM MODULATION:

<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	27Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN(0)	CHAIN(1)		
1	2422	35.456	35.833	0.5	PASS
4	2437	36.434	36.440	0.5	PASS
7	2452	36.415	36.417	0.5	PASS

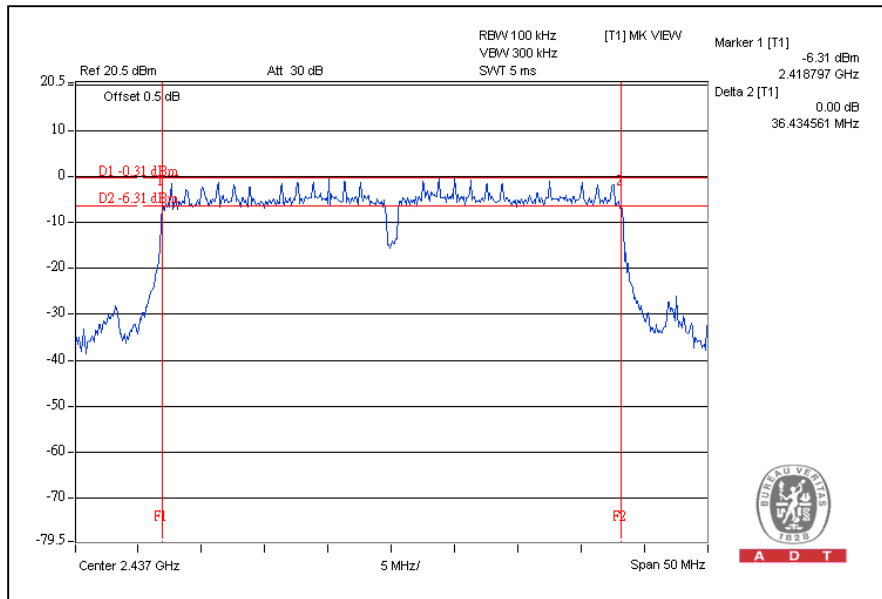
For Chain (0): CH1



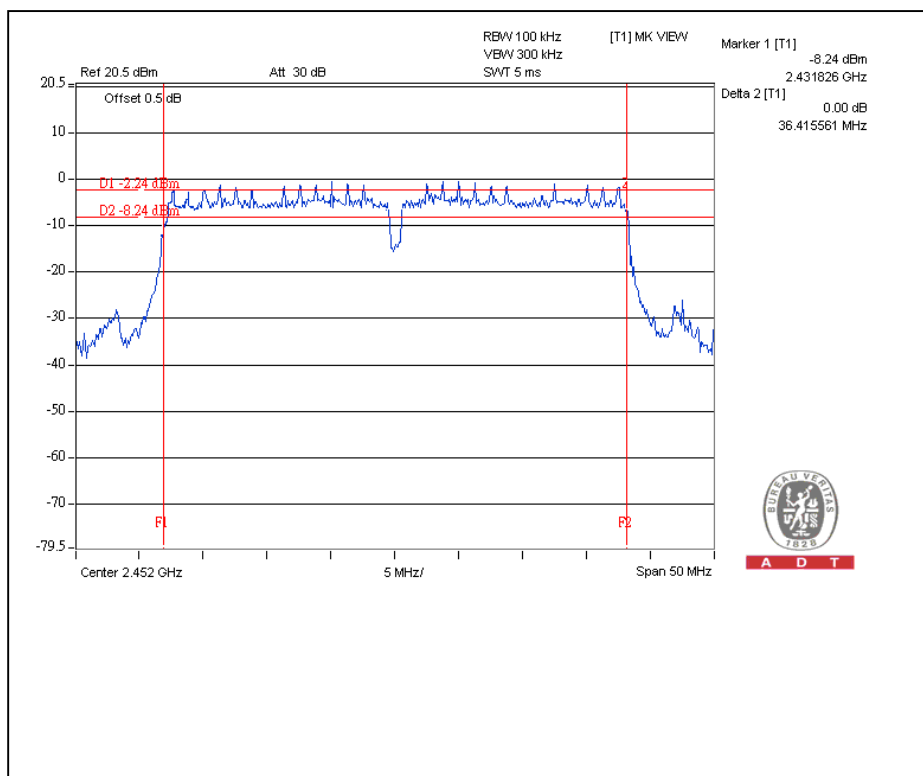


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### CH4



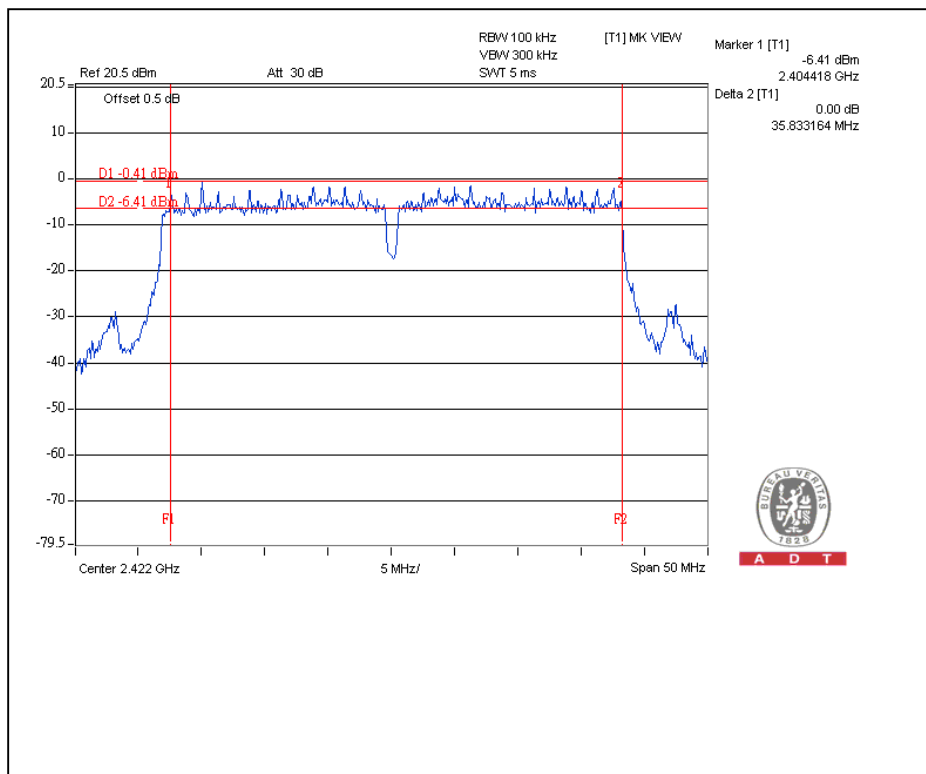
### CH7



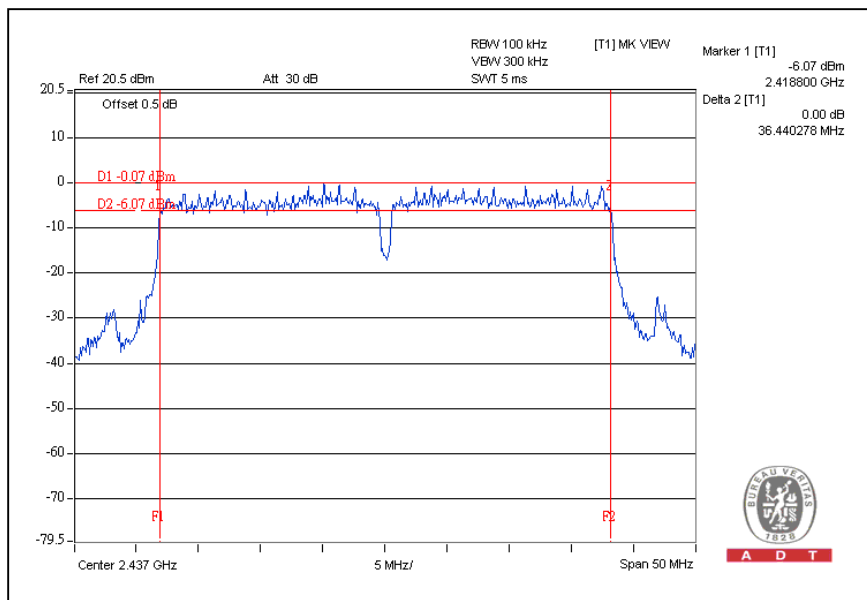


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### For Chain (1): CH1



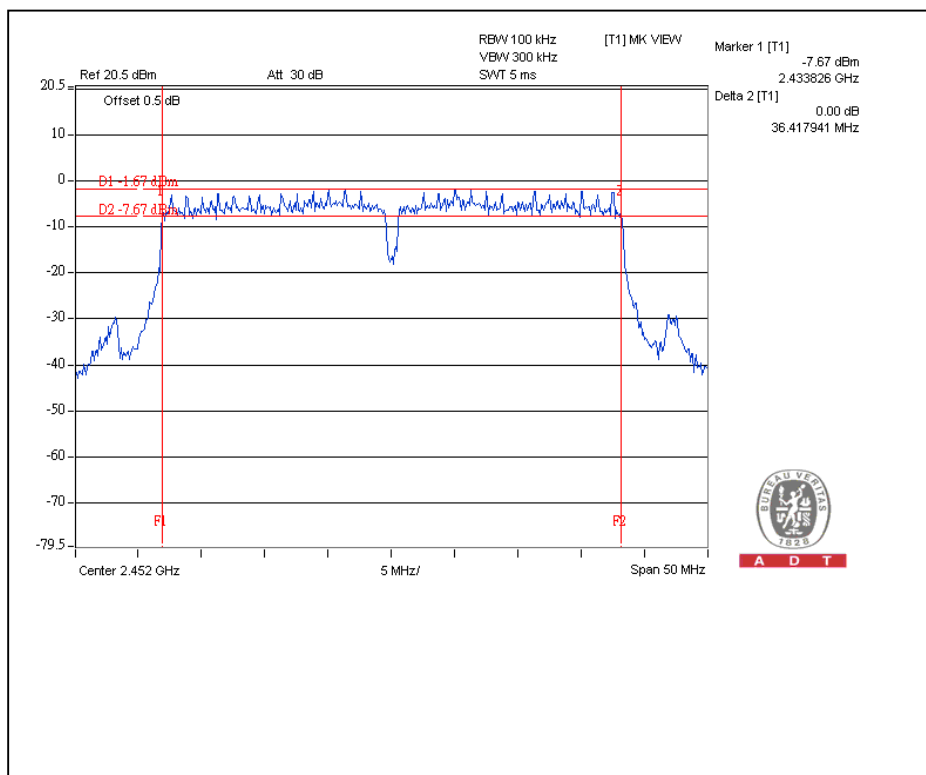
### CH4





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CH7





#### 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.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100037	Aug. 13, 2008	Aug. 12, 2009
Agilent SIGNAL GENERATOR	E8257C	MY43320668	Dec. 26, 2007	May 07, 2009
Anritsu Power Meter	ML2495A	0824006	June 14, 2008	June 13, 2009
Pulse Power Sensor	MA2411B	0738172	April 17, 2009	April 16, 2010

**NOTE:**

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

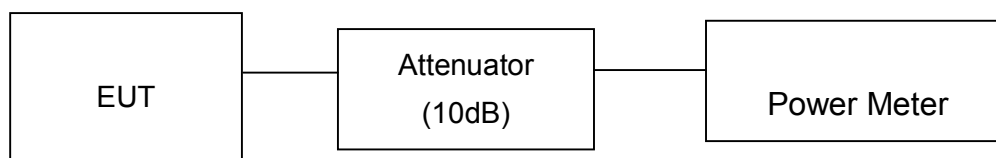
##### 4.4.3 TEST PROCEDURES

1. The transmitter output was connected to the power meter through an attenuator; the bandwidth of the fundamental frequency was measured with the power meter.
2. 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



### 4.4.3 TEST RESULTS

#### 802.11b DSSS MODULATION:

<b>MODULATION TYPE</b>	DBPSK	<b>TRANSFER RATE</b>	1Mbps
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 96hPa
<b>TESTED BY</b>	Rex Huang		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	134.9	21.3	30	PASS
6	2437	131.8	21.2	30	PASS
11	2462	128.8	21.1	30	PASS

#### 802.11g OFDM MODULATION:

<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	6Mbps
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 965hPa
<b>TESTED BY</b>	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	2412	269.2	24.3	30	PASS
6	2437	309.0	24.9	30	PASS
11	2462	295.1	24.7	30	PASS



**DRAFT 802.11n (20MHz) OFDM MODULATION:**

<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	13Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN(0)	CHAIN(1)				
1	2412	25.7	25.7	743.1	28.7	30	PASS
6	2437	25.5	25.7	726.3	28.6	30	PASS
11	2462	25.41	25.5	701.6	28.5	30	PASS

**DRAFT 802.11n (40MHz) OFDM MODULATION:**

<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	27Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN(0)	CHAIN(1)				
1	2422	24.6	25.9	677.4	28.3	30	PASS
4	2437	25.	26.2	805.9	29.1	30	PASS
7	2452	24.5	25.8	662.0	28.2	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.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 09, 2008	Dec. 08, 2009

**NOTE:**

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 2.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

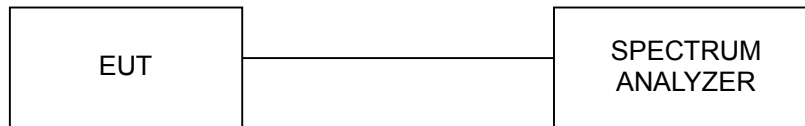
The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

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 4.1.6



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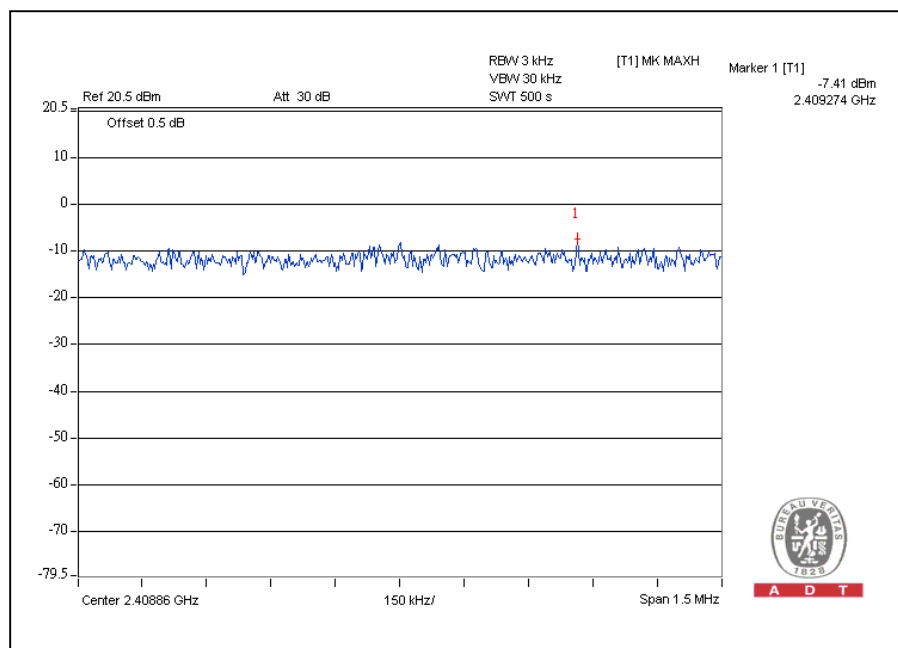
### 4.5.7 TEST RESULTS

#### 802.11b DSSS MODULATION:

<b>MODULATION TYPE</b>	DBPSK	<b>TRANSFER RATE</b>	1Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz )	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-7.4	8	PASS
6	2437	-8.0	8	PASS
11	2462	-6.1	8	PASS

CH1

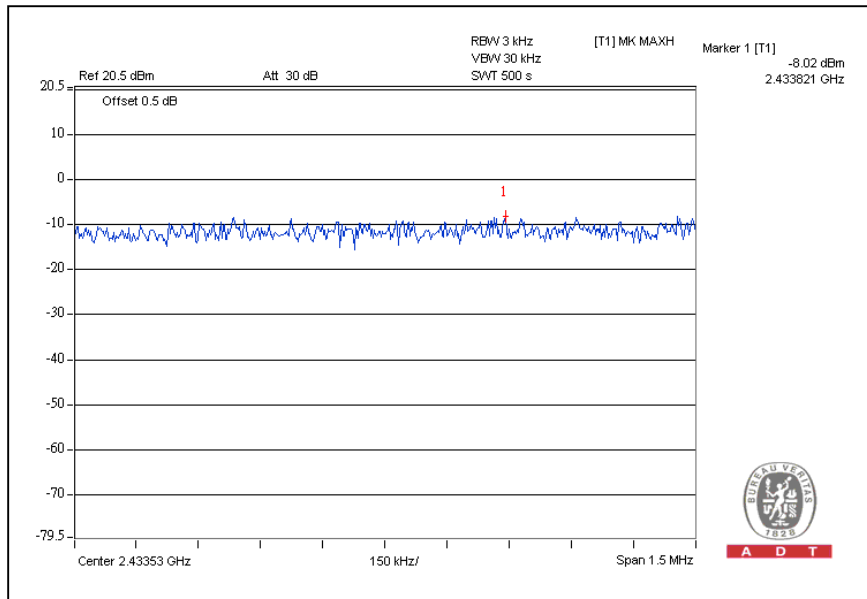


A D T

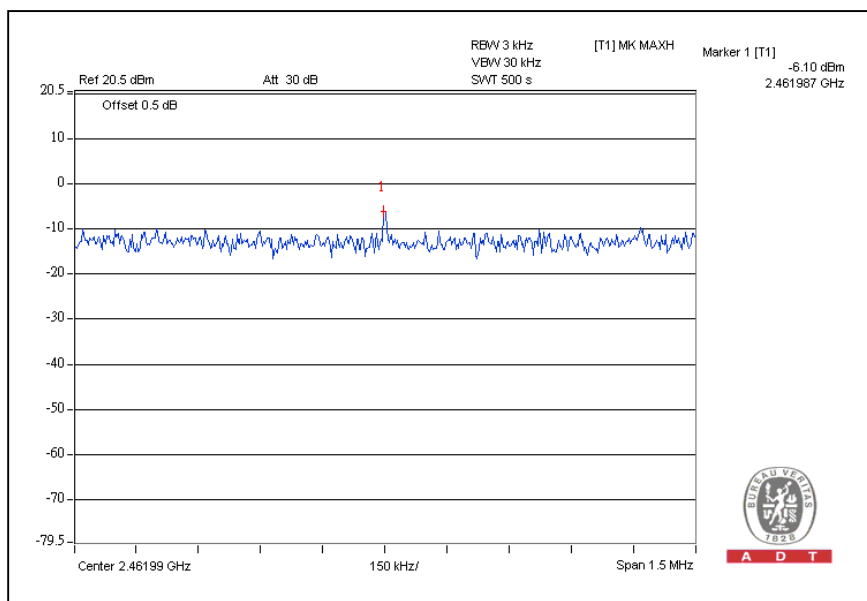


A D T

### CH6



### CH11





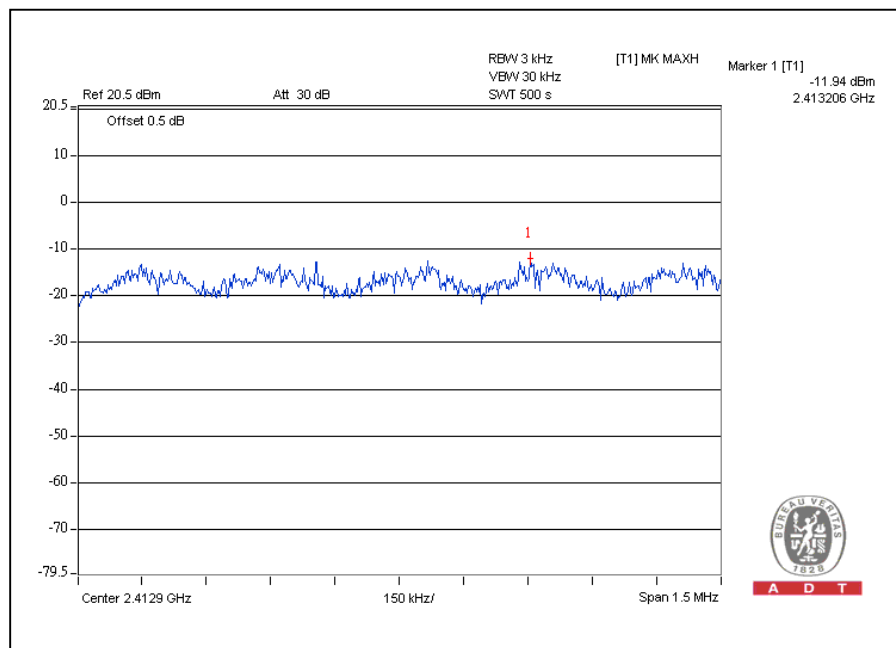
A D T

### 802.11g OFDM MODULATION:

<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	6Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	2412	-11.9	8	PASS
6	2437	-11.2	8	PASS
11	2462	-11.8	8	PASS

CH1

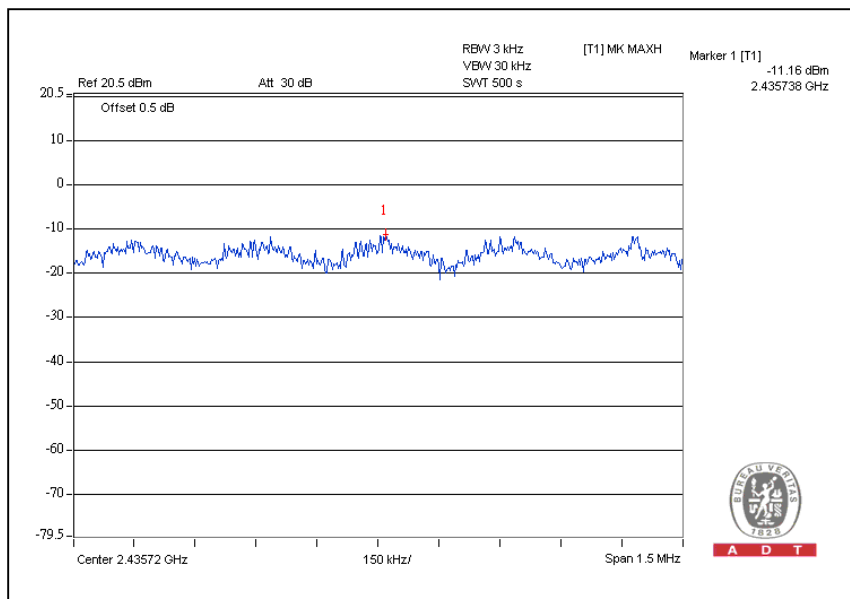


A D T

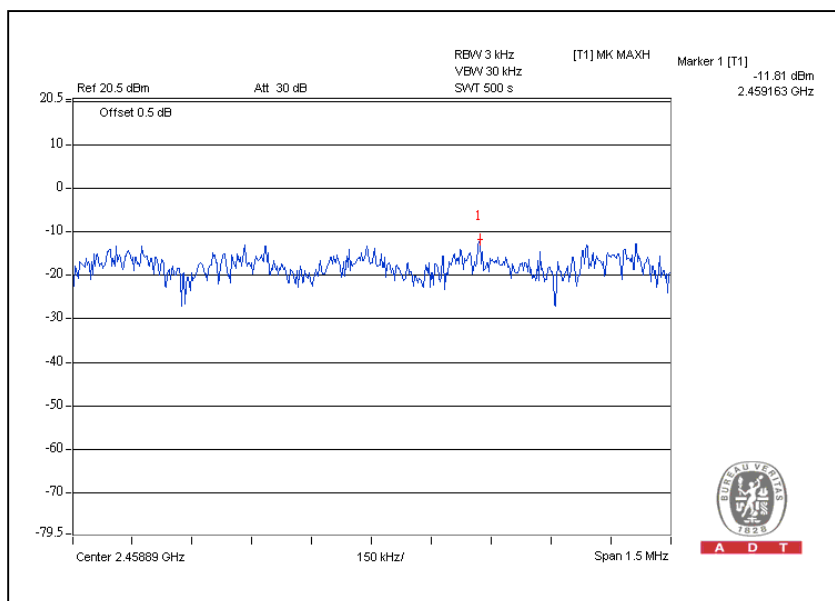


A D T

### CH6



### CH11





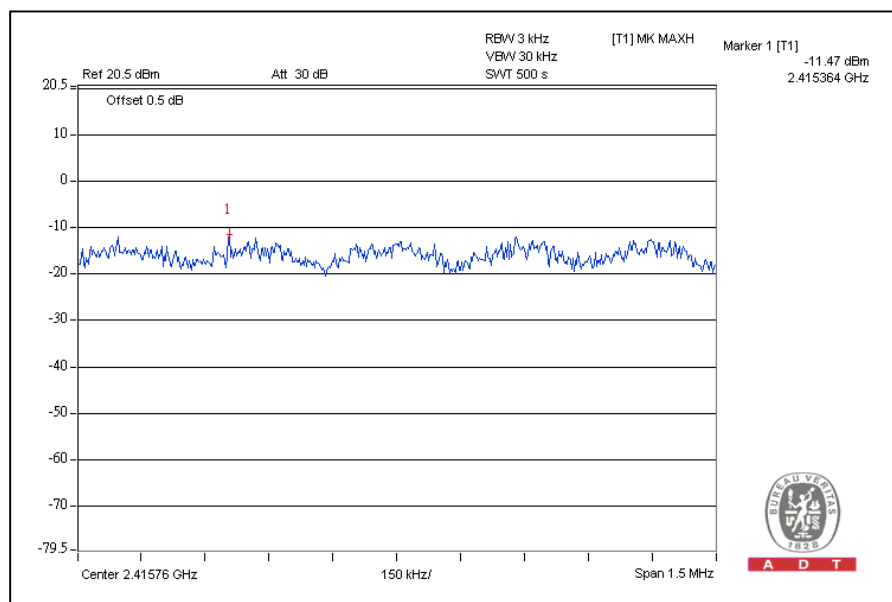
A D T

### DRAFT 802.11n (20MHz) OFDM MODULATION:

<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	13Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN(0)	CHAIN(1)				
1	2412	-11.5	-10.5	0.2	-7.0	8	PASS
6	2437	-11.0	-11.2	0.2	-7.0	8	PASS
11	2462	-11.1	-14.1	0.1	-10.	8	PASS

For Chain(0): CH1

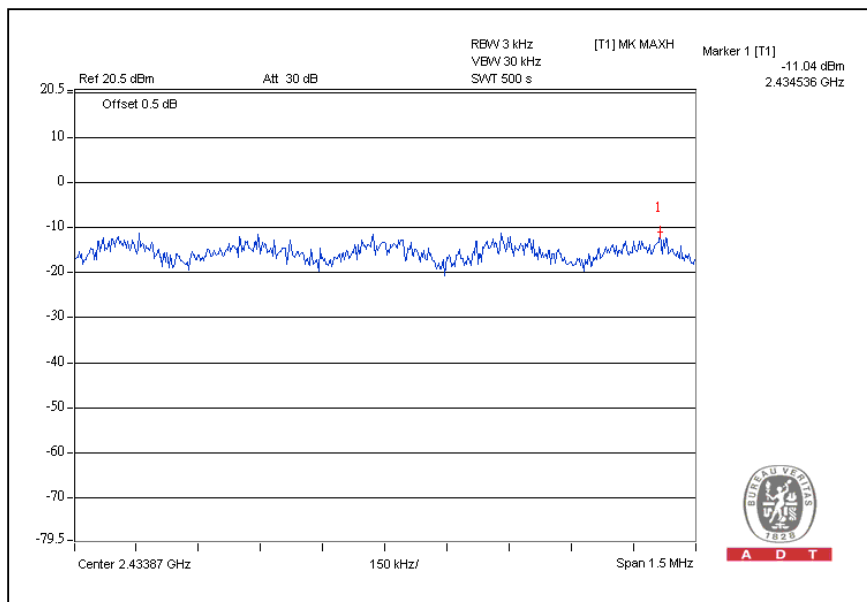


A D T

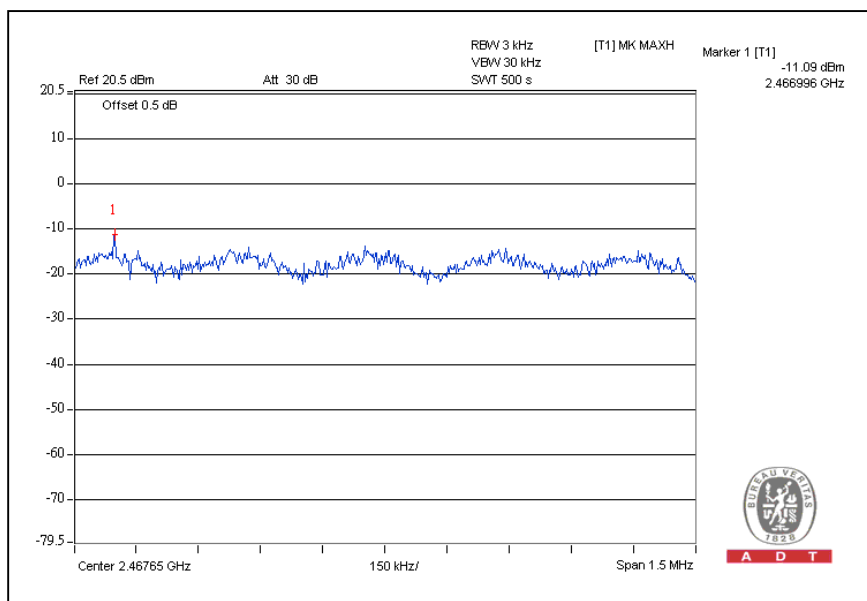


A D T

### CH6



### CH11

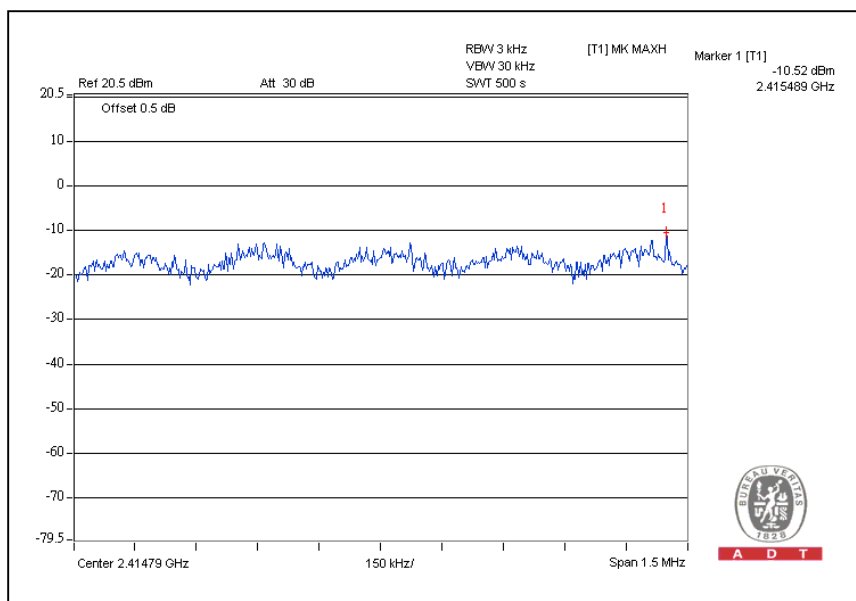




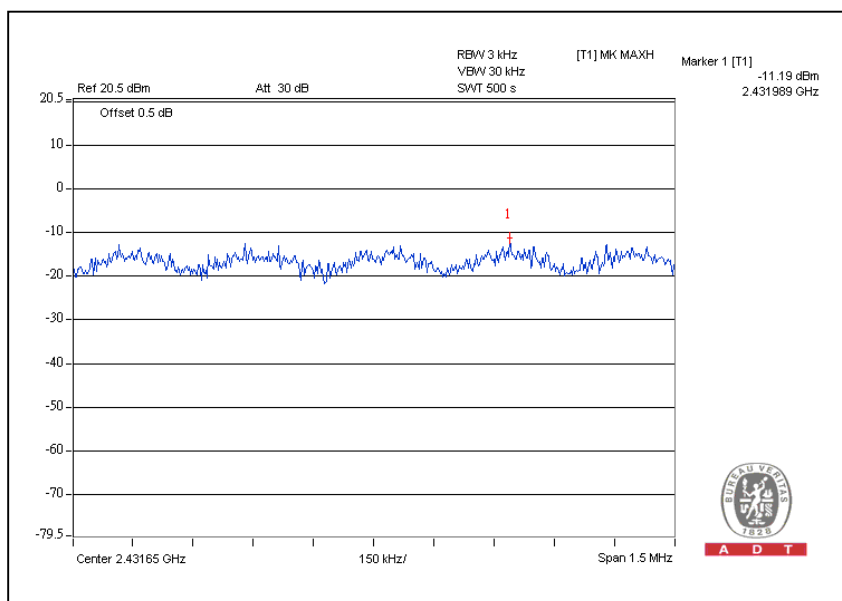


A D T

### For Chain (1): CH1



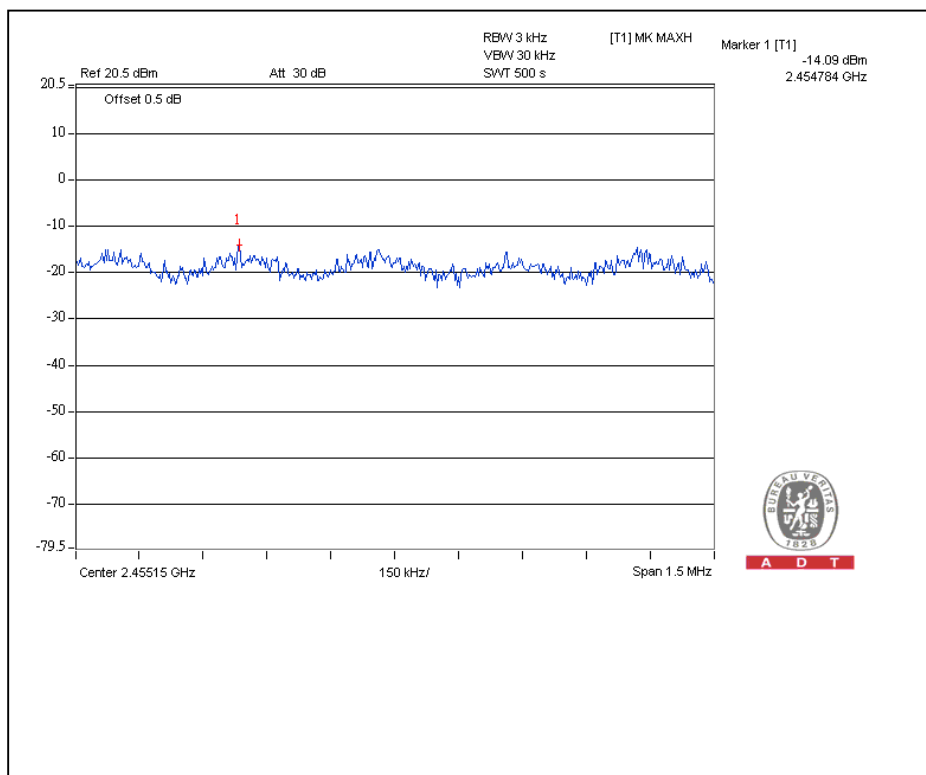
### CH6





A D T

CH11





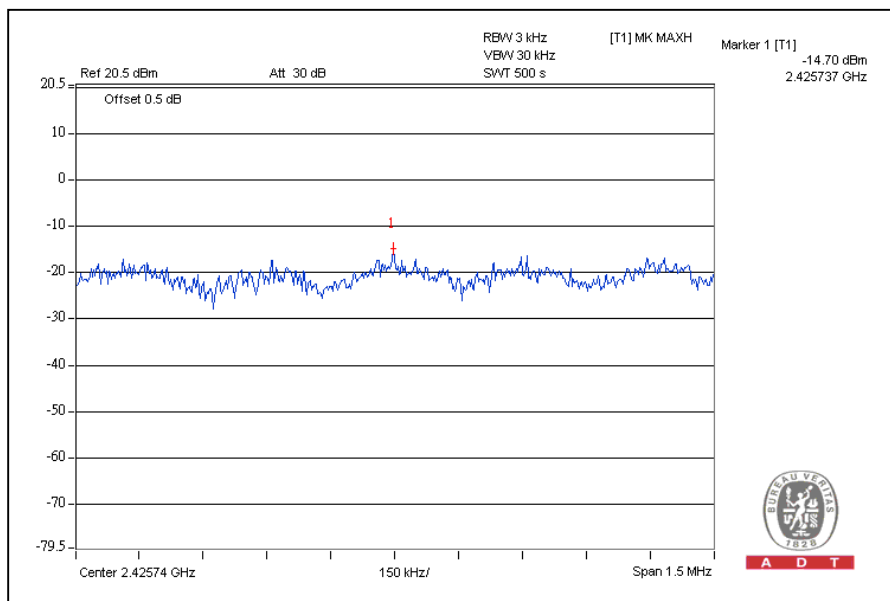
A D T

### DRAFT 802.11n (40MHz) OFDM MODULATION:

<b>MODULATION TYPE</b>	BPSK	<b>TRANSFER RATE</b>	27Mbps
<b>INPUT POWER (SYSTEM)</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	25deg.C, 60%RH, 963hPa
<b>TESTED BY</b>	Frank Liu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
		CHAIN(0)	CHAIN(1)				
1	2422	-14.7	-15.4	0.1	-10.0	8	PASS
4	2437	-15.1	-13.8	0.1	-10.0	8	PASS
7	2452	-17.3	-16.3	0.04	-14.0	8	PASS

For Chain (0): CH1

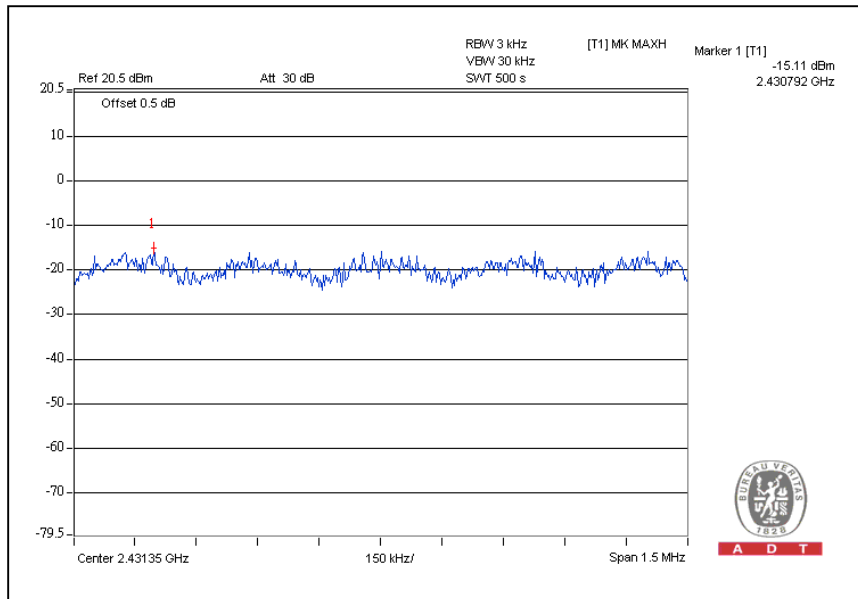


A D T

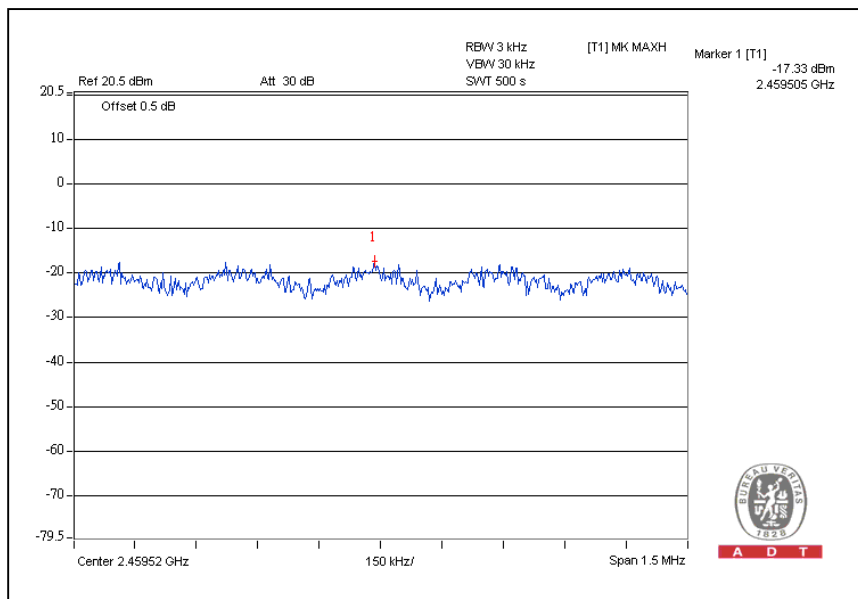


A D T

### CH4



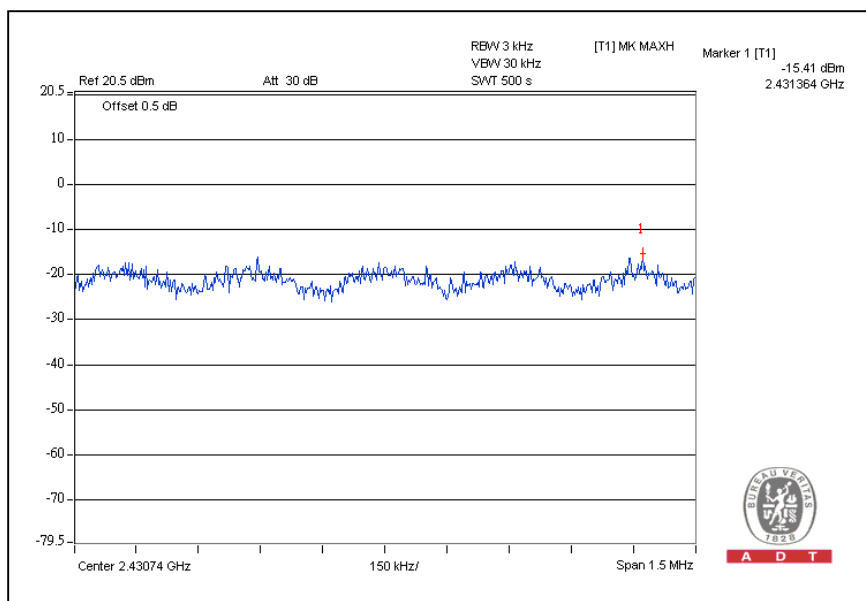
### CH7



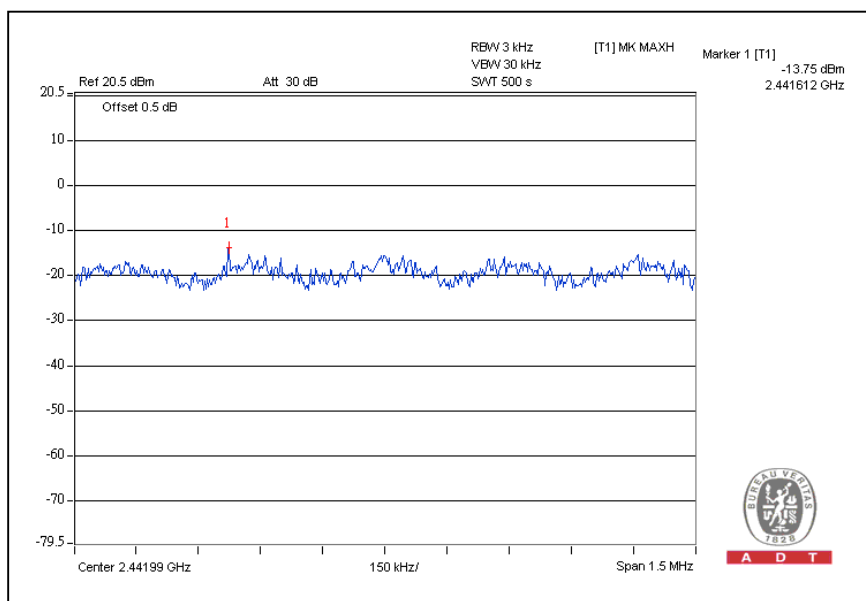


A D T

### For Chain (1): CH1



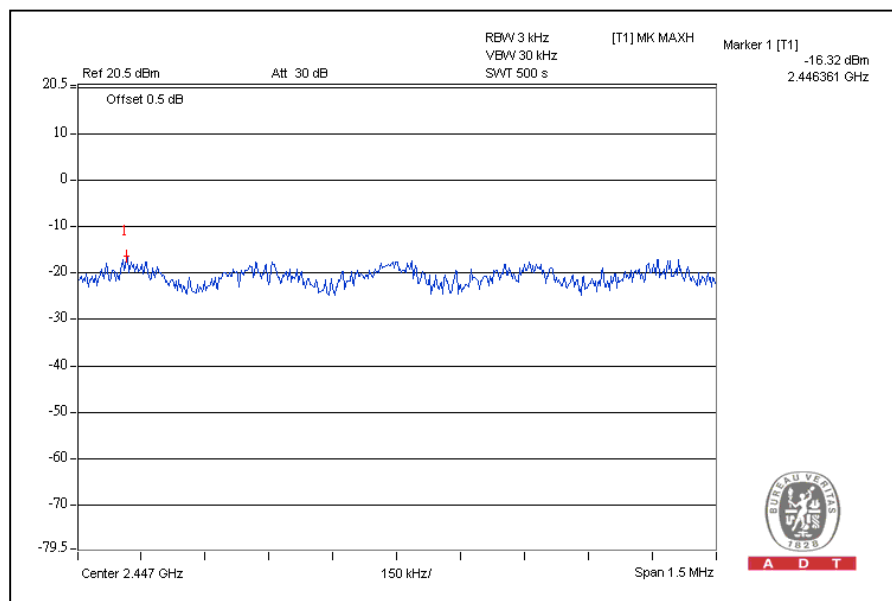
### CH4





A D T

CH7





## 4.6 CONDUCTED EMISSION AND BAND EDGES MEASUREMENT

### 4.6.1 LIMITS OF CONDUCTED EMISSION AND 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.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100036	Dec. 09, 2008	Dec. 08, 2009

**NOTE:**

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 4.6.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set both RBW and VBW of spectrum analyzer to 100kHz and 300kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

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



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#### 4.6.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.6.5 EUT OPERATING CONDITION

Same as Item 4.1.6

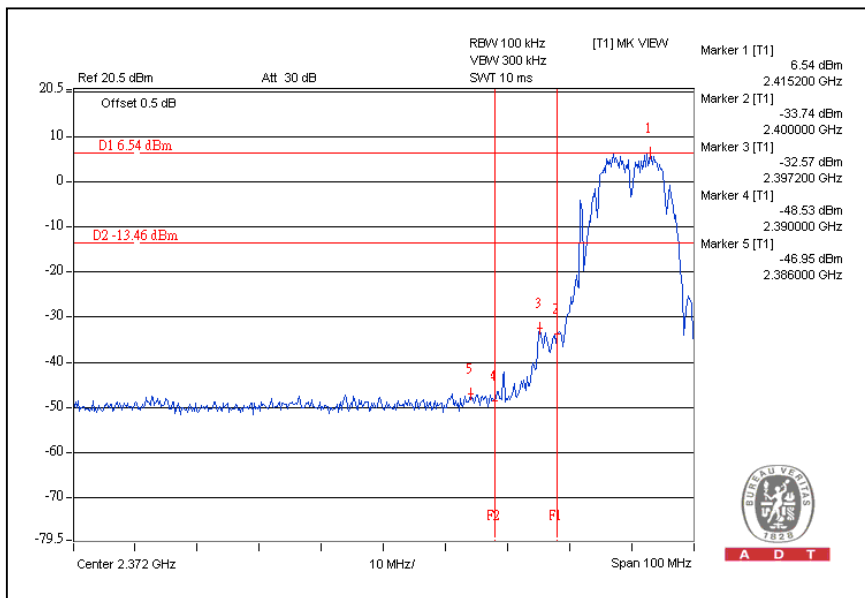
#### 4.6.6 TEST RESULTS

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).

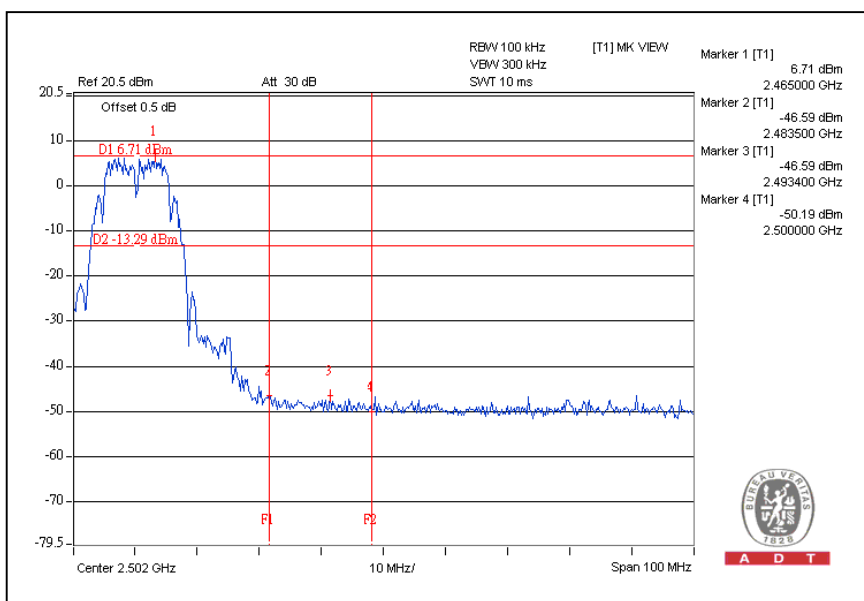


### 802.11b DSSS MODULATION:

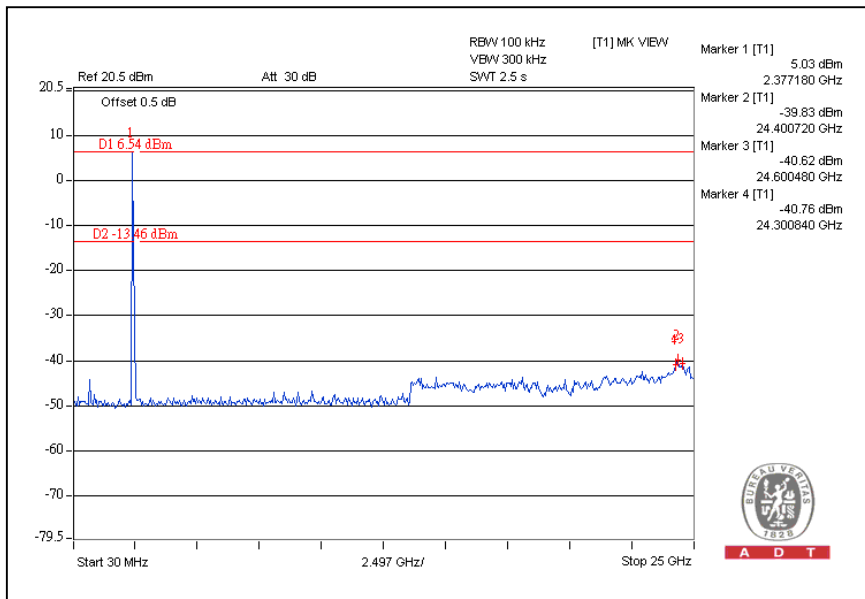
#### CH1



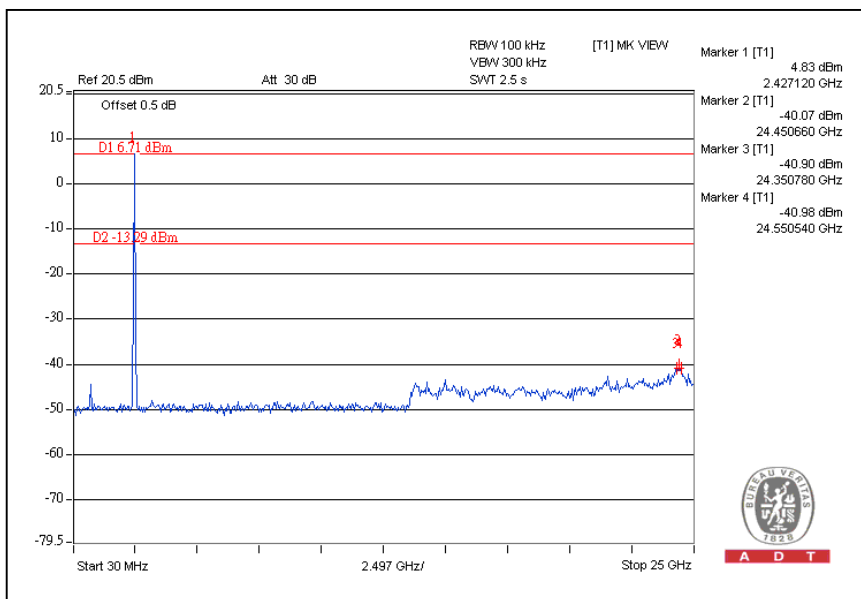
#### CH11



# CH1



# CH11

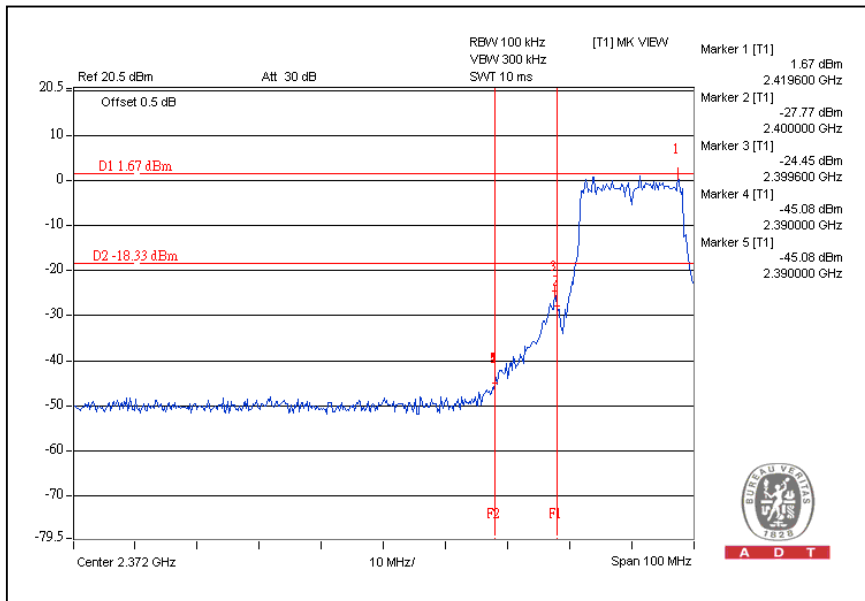




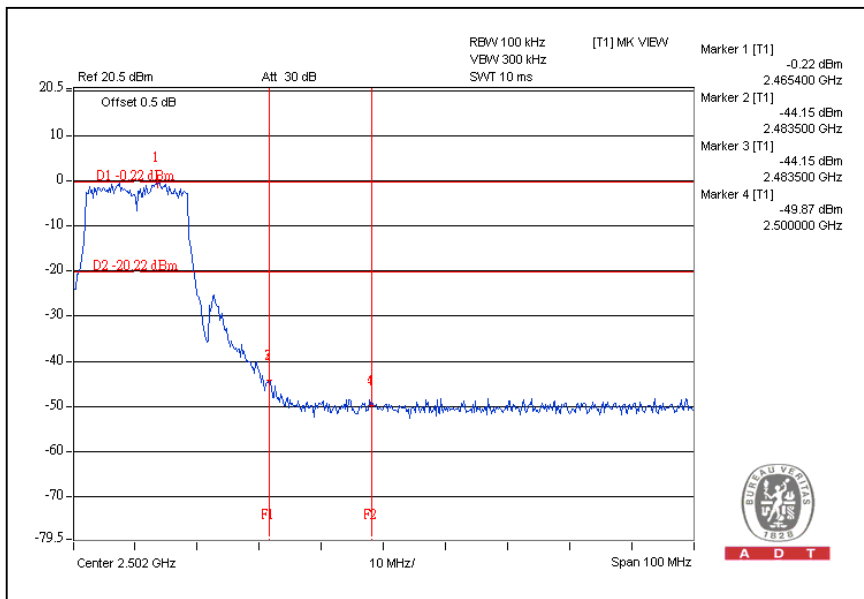
A D T

# 802.11g OFDM MODULATION:

## CH 1



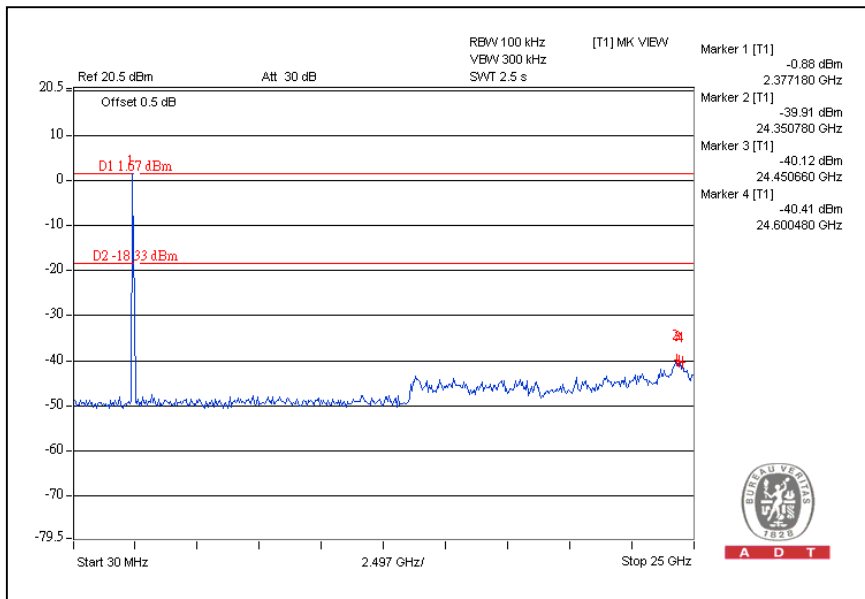
## CH11



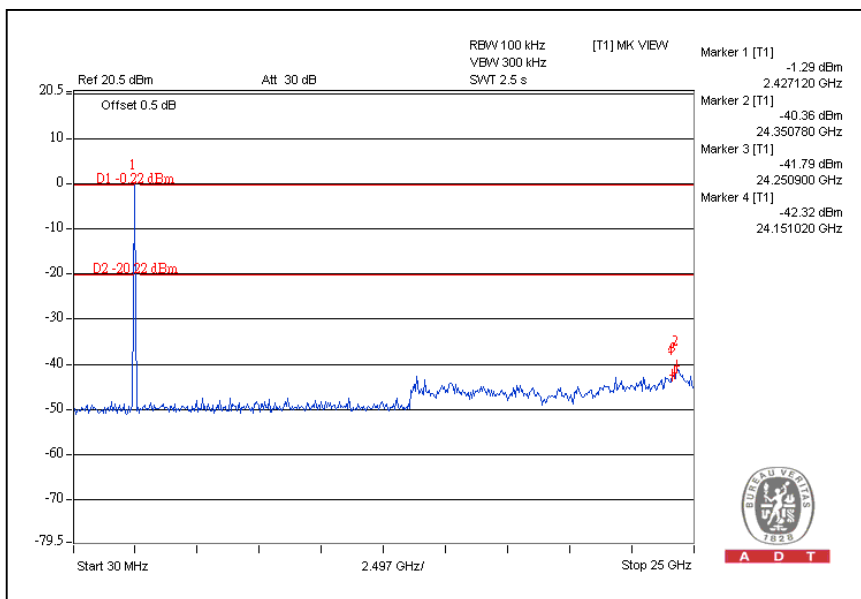


A D T

# CH1

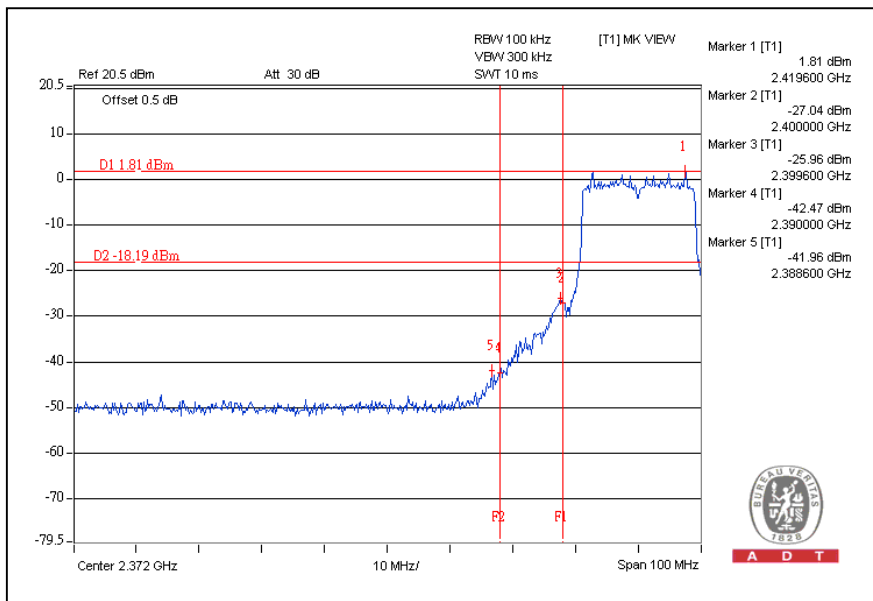


# CH11

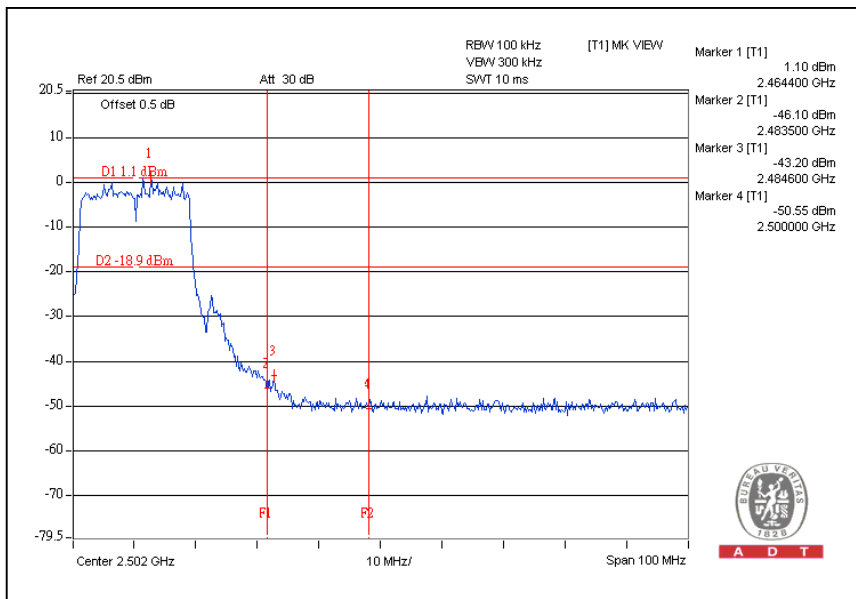


## DRAFT 802.11n (20MHz) OFDM MODULATION:

For Chain (0):CH1



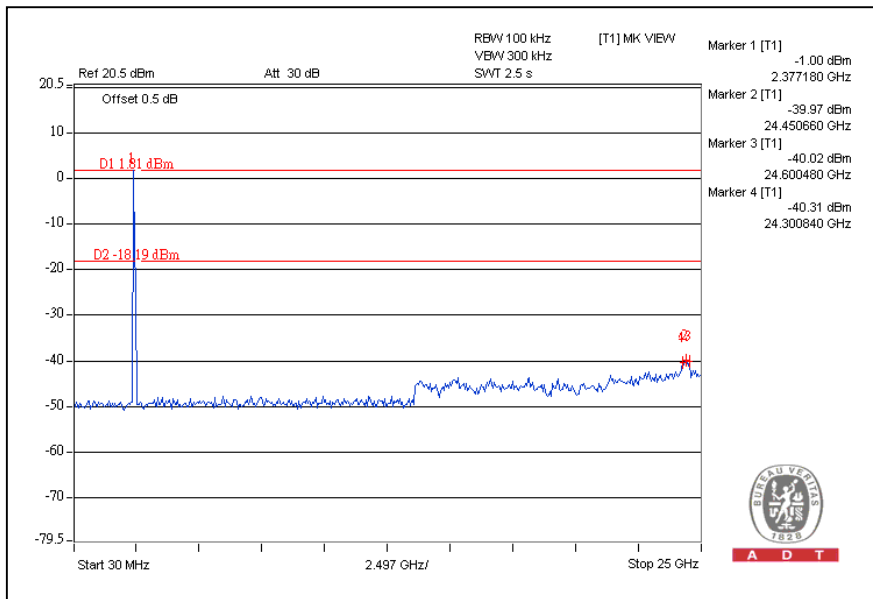
CH11



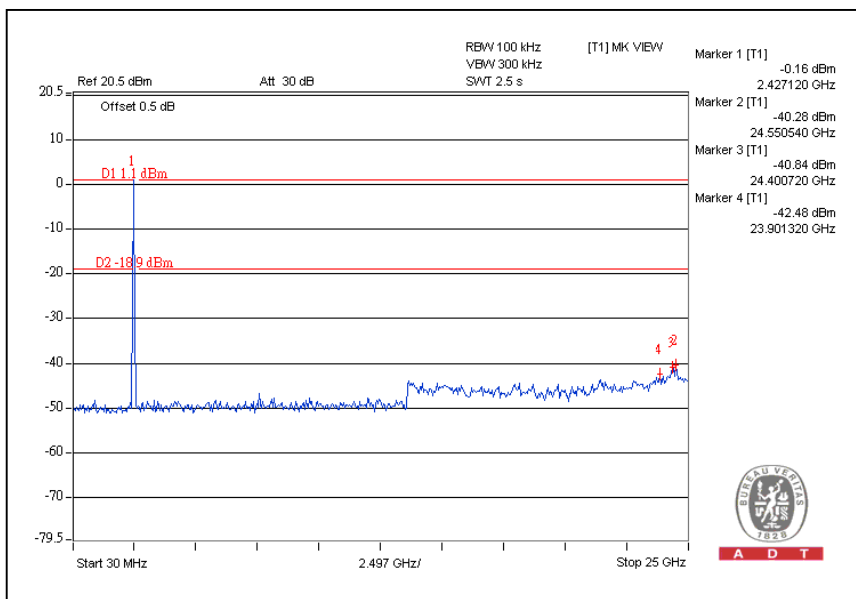


A D T

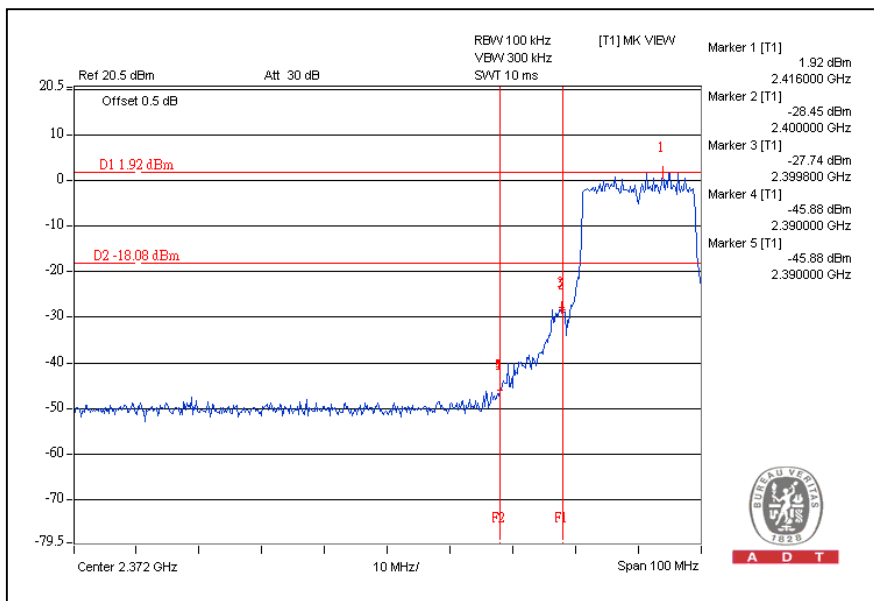
# CH1



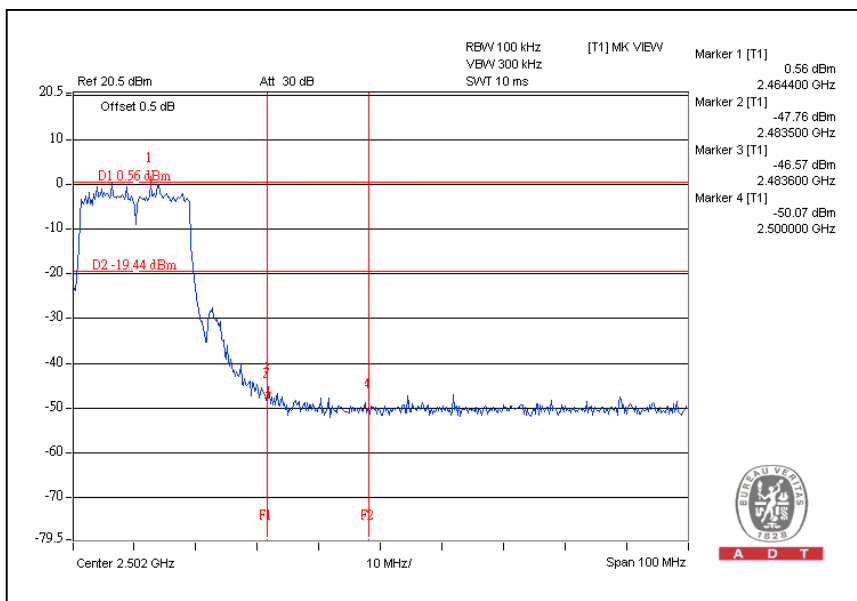
# CH11



### For Chain (1):CH1



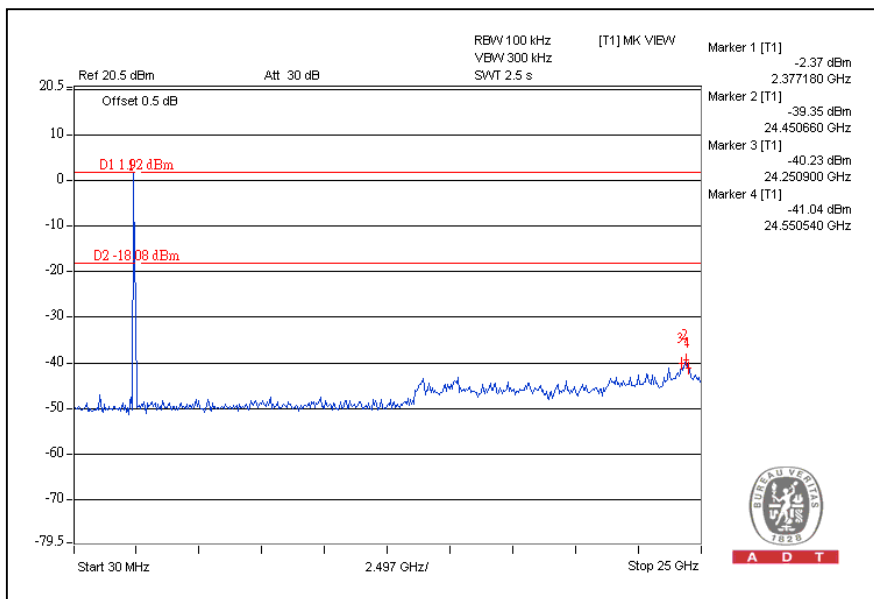
### CH11



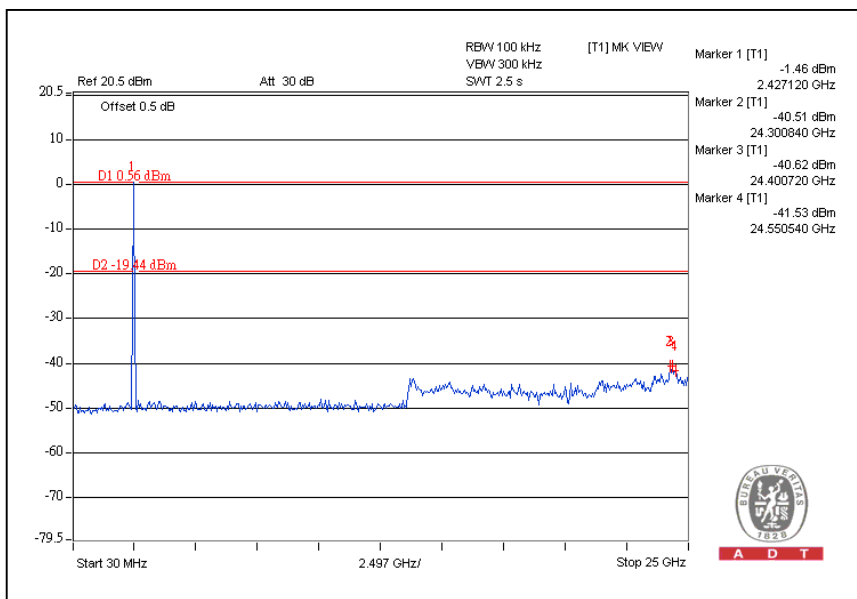


A D T

# CH1



# CH11

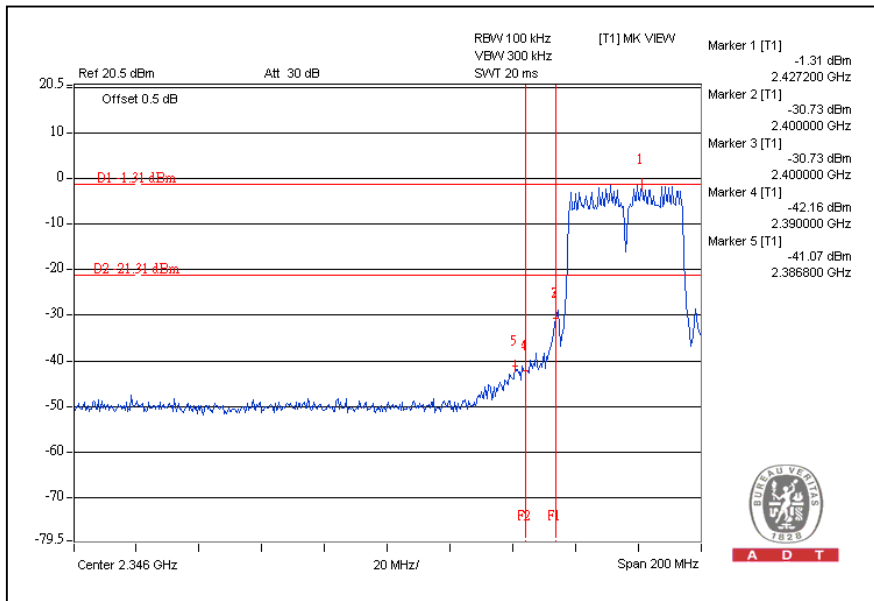




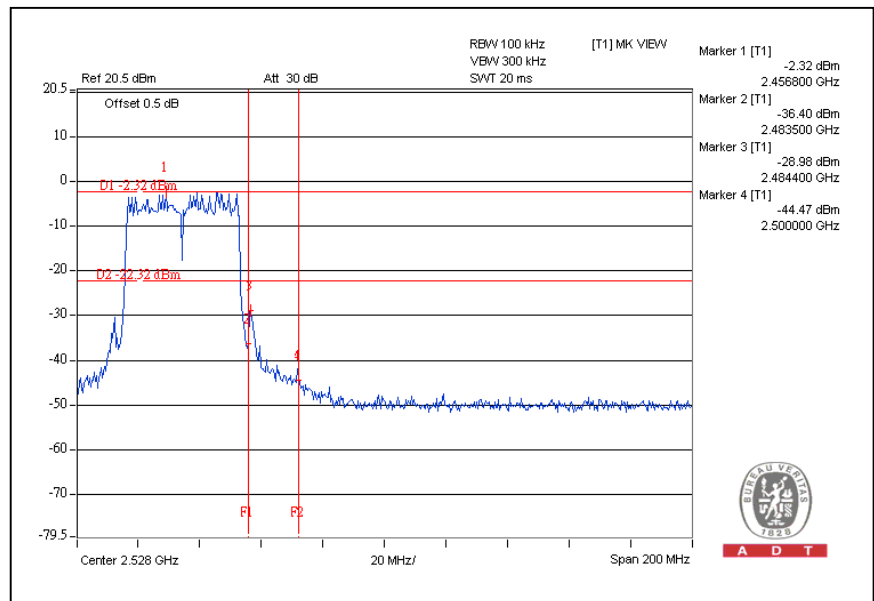


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# DRAFT 802.11n (40MHz) OFDM MODULATION: For Chain (0):CH1



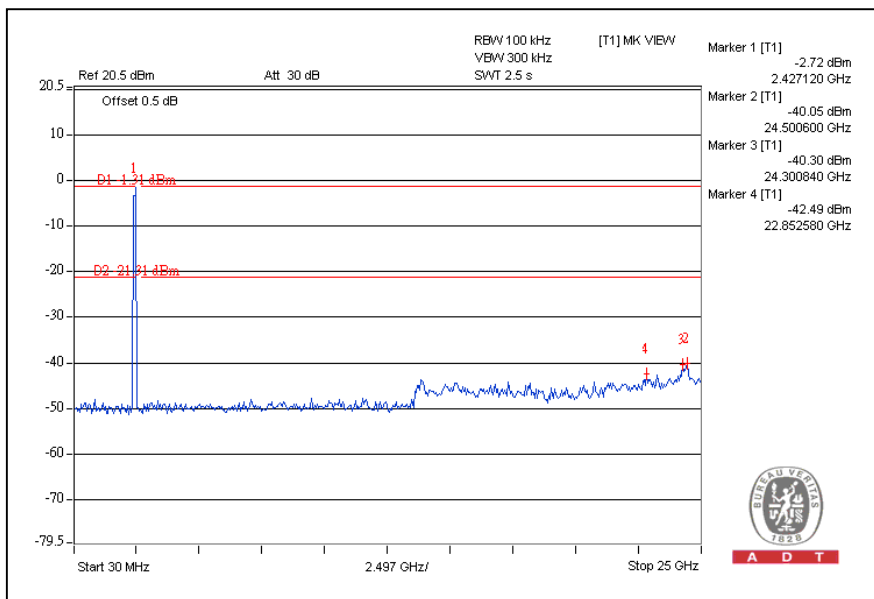
CH7



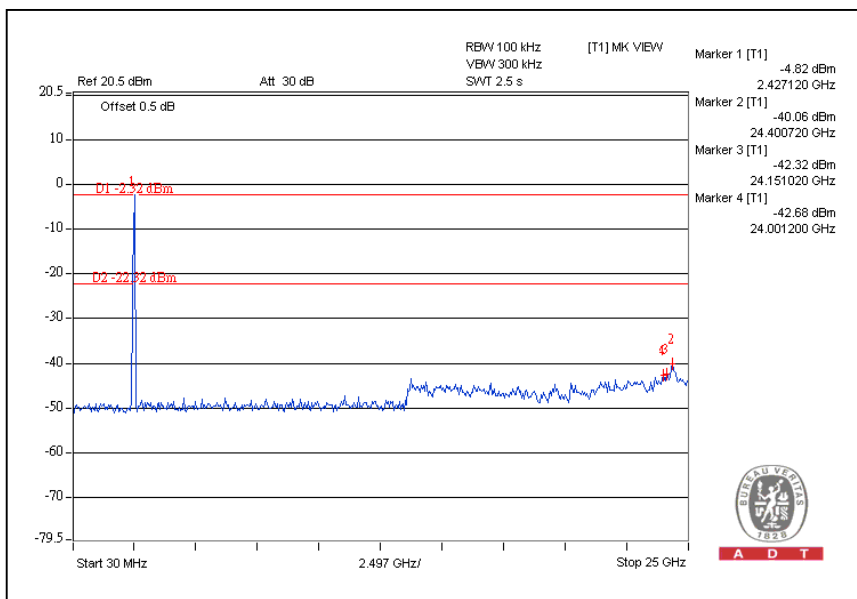


A D T

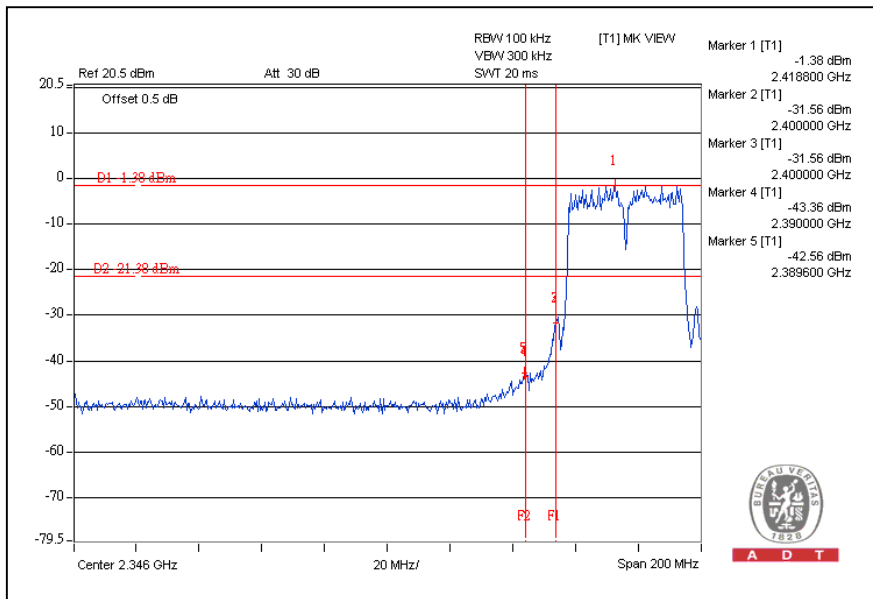
# CH1



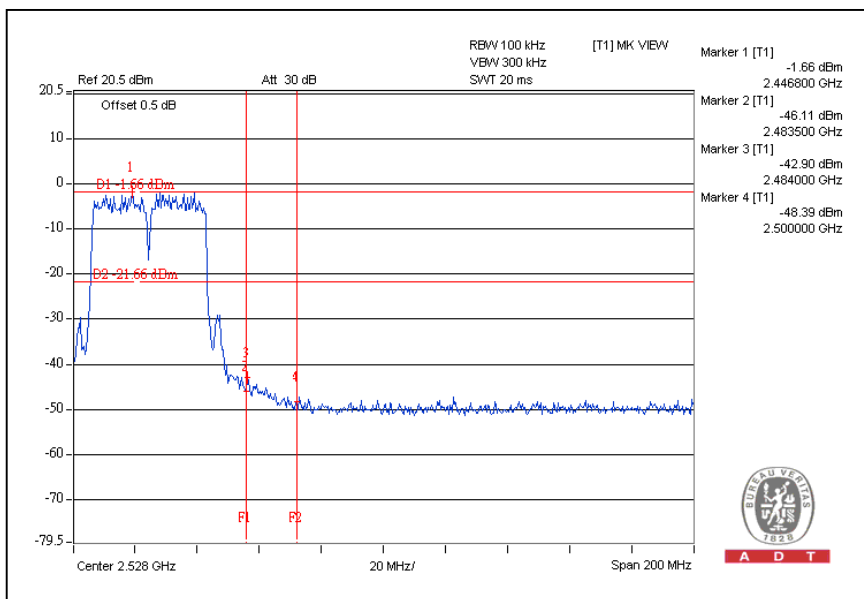
# CH7



### For Chain (1):CH1



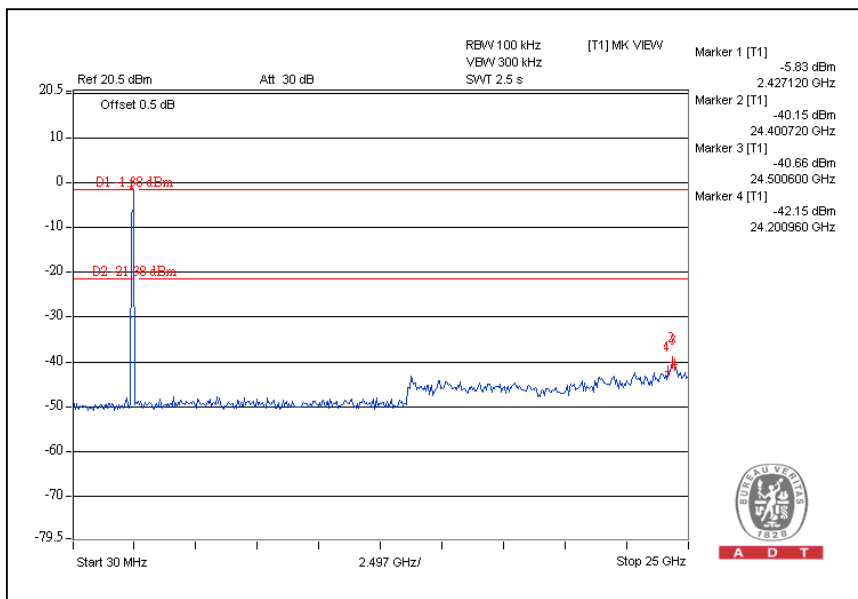
### CH7



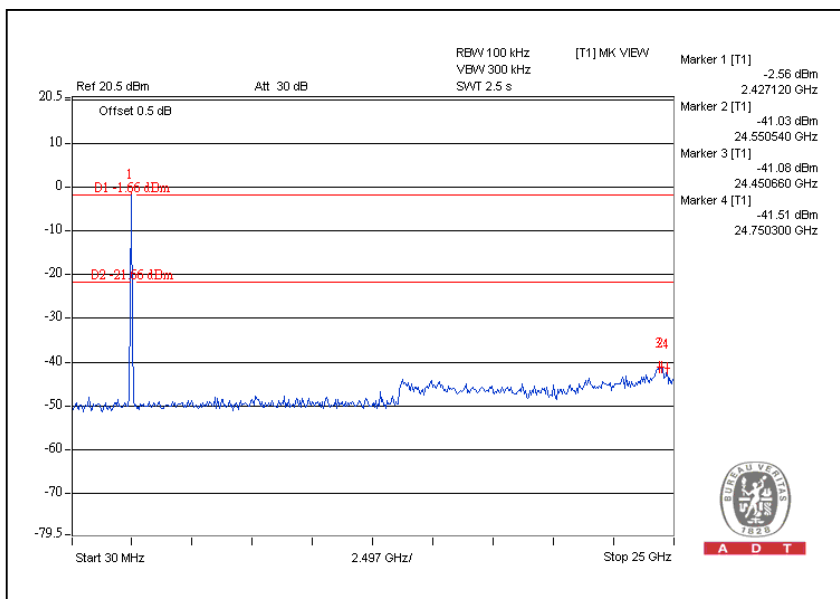


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# CH1



# CH7



## 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 antenna used in this product is Pifa antenna without Connector. The maximum Gain of the antenna is 1.5dBi.



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## 5. 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.

<b>USA</b>	FCC, NVLAP
<b>Germany</b>	TUV Rheinland
<b>Japan</b>	VCCI
<b>Norway</b>	NEMKO
<b>Canada</b>	INDUSTRY CANADA, CSA
<b>R.O.C.</b>	TAF, BSMI, NCC
<b>Netherlands</b>	Telefication
<b>Singapore</b>	GOST-ASIA(MOU)
<b>Russia</b>	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](http://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: 886-2-26052943

**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](http://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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## **6. APPENDIX - A MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

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

**--- END ---**