



FCC TEST REPORT (15.407)

REPORT NO.: RF960926L01-1

MODEL NO.: WGA600N

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TESTED: Sep. 26 ~ Dec. 04, 2007

ISSUED: Dec. 11, 2007

APPLICANT: Cisco-Linksys LLC

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ISSUED BY: Advance Data Technology Corporation

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1. CERTIFICATION

PRODUCT: Dual-Band Wireless-N Gaming Adapter

MODEL: WGA600N

BRAND: Linksys

APPLICANT: Cisco-Linksys LLC

TEST SAMPLE: ENGINEERING SAMPLE

TESTED: Sep. 26 ~ Dec. 04, 2007

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

ANSI C63.4-2003

The above equipment (Model: WGA600N) has been tested by **Advance Data Technology Corporation**, 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:** Dec. 11, 2007
Andrea Hsia / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE:** Dec. 11, 2007
Responsible for RF Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE:** Dec. 11, 2007
Gary Chang / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -2.62dB at 0.435MHz.
15.407(b)(1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -1.09dB at 5150.00MHz.
15.407(a)(1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.

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	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Dual-Band Wireless-N Gaming Adapter
MODEL NO.	WGA-600N
FCC ID	Q87-WGA600N
POWER SUPPLY	12Vdc from AC Adapter
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 300Mbps
FREQUENCY RANGE	802.11b & 802.11g: 2.412 ~ 2.462GHz 802.11a: 5.150 ~ 5.350GHz, 5.470 ~ 5.725GHz, 5.745 ~ 5.825GHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, draft 802.11n (20MHz) 7 for draft 802.11n (40MHz) 5.0GHz: 5150 ~ 5350MHz: 8 for 802.11a, draft 802.11n (20MHz) 4 for draft 802.11n (40MHz) 5470 ~ 5725MHz: 11 for 802.11a, draft 802.11n (20MHz) 5 for draft 802.11n (40MHz) 5725 ~ 5850MHz: 5 for 802.11a, draft 802.11n (20MHz) 2 for draft 802.11n (40MHz)
OUTPUT POWER	64.714mW for 2400 ~ 2483.5MHz 47.058mW for 5150 ~ 5350MHz 48.135mW for 5470 ~ 5725MHz 54.059mW for 5725 ~ 5850MHz
ANTENNA TYPE	PIFA antenna with 2.37dBi gain (for 2.4GHz) PIFA antenna with 1.00dBi gain (for 5.0GHz)
DATA CABLE	NA
I/O PORTS	RJ45
ASSOCIATED DEVICES	Adapter

NOTE:

- The EUT was operated with following adapter.

BRAND:	Linksys
MODEL:	AD12V/1A-SW
INPUT:	100-240Vac, 50-60Hz, 0.5A
OUTPUT:	12Vdc, 1A MAX
POWER LINE:	1.8m non-shielded cable without core



2. The EUT incorporates a MIMO function. Physically, the card provides two completed transmitters and two receivers.
3. For the 802.11n, the EUT is 2 * 2 spatial MIMO (2Tx & 2Rx) without beam forming function.
4. When the EUT operating in 802.11b, 802.11g, 802.11a, the software operation, which is defined by manufacturer, only set single Tx.
5. When the EUT operating in draft 802.11n, the software operation, which is defined by manufacturer, only set 0 ~ 15 of "MCS" (MCS: Modulation and Coding Schemes) for two Tx.
6. The EUT complies with draft 802.11n standards and backwards compatible with 802.11b, 802.11g, 802.11a products.
7. The EUT operates in the 2.4GHz frequency spectrum with throughput of up to 300Mbps.
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

Operated in 5150 ~ 5350MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5180 MHz	5	5260 MHz
2	5200 MHz	6	5280 MHz
3	5220 MHz	7	5300 MHz
4	5240 MHz	8	5320 MHz

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5190 MHz	3	5270 MHz
2	5230 MHz	4	5310 MHz

Operated in 5470 ~ 5725MHz

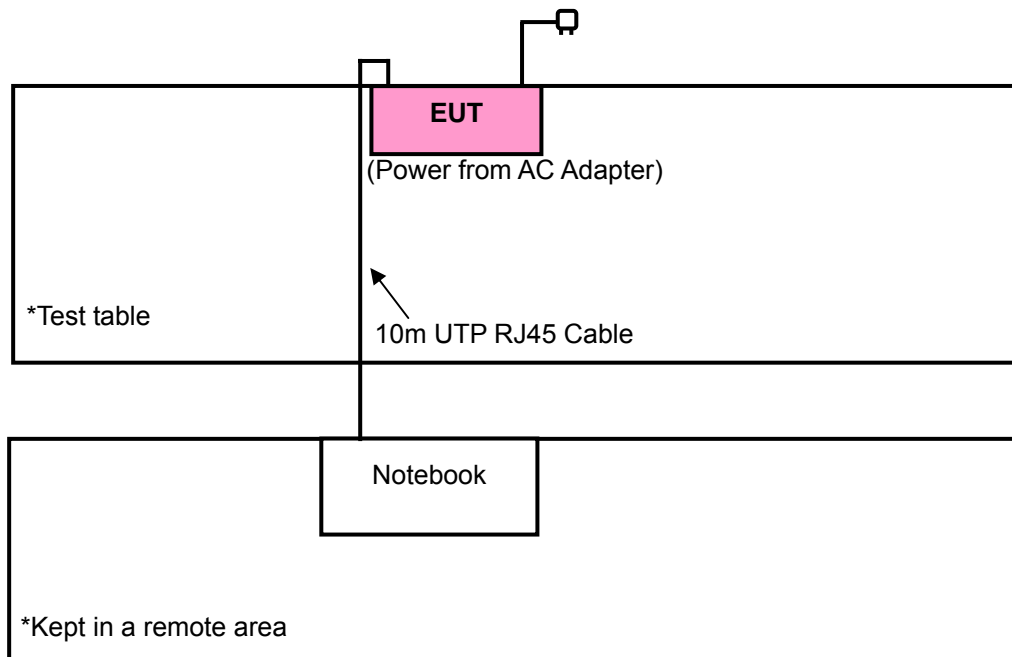
11 channels are provided for 802.11a, draft 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5500 MHz	7	5620 MHz
2	5520 MHz	8	5640 MHz
3	5540 MHz	9	5660 MHz
4	5560 MHz	10	5680 MHz
5	5580 MHz	11	5700 MHz
6	5600 MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5510 MHz	4	5630 MHz
2	5550 MHz	5	5670 MHz
3	5690 MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

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

RADIATED EMISSION TEST (BELOW 1GHz):

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

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	(5.15~5.35GHz)	1 to 8	1	OFDM	BPSK	6
802.11a	(5.47~5.725GHz)	1 to 11	1	OFDM	BPSK	6

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 and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	(5.15~5.35GHz)	1 to 8	1, 2, 4, 5, 7, 8	OFDM	BPSK	6
Draft 802.11n (20MHz)		1 to 8	1, 2, 4, 5, 7, 8	OFDM	BPSK	13
Draft 802.11n (40MHz)		1 to 4	1, 2, 3, 4	OFDM	BPSK	27
802.11a	(5.47~5.725GHz)	1 to 11	1, 6, 11	OFDM	BPSK	6
Draft 802.11n (20MHz)		1 to 11	1, 6, 11	OFDM	BPSK	13
Draft 802.11n (40MHz)		1 to 5	1, 3, 5	OFDM	BPSK	27

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	(5.15~5.35GHz)	1 to 8	1	OFDM	BPSK	6
802.11a	(5.47~5.725GHz)	1 to 11	1	OFDM	BPSK	6

BANDEDGE MEASUREMENT:

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

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	(5.15~5.35GHz)	1 to 8	1, 8	OFDM	BPSK	6
Draft 802.11n (20MHz)		1 to 8	1, 8	OFDM	BPSK	13
Draft 802.11n (40MHz)		1 to 4	1, 4	OFDM	BPSK	27
802.11a	(5.47~5.725GHz)	1 to 11	1, 11	OFDM	BPSK	6
Draft 802.11n (20MHz)		1 to 11	1, 11	OFDM	BPSK	13
Draft 802.11n (40MHz)		1 to 5	1, .5	OFDM	BPSK	27

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.

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	(5.15~5.35GHz)	1 to 8	1, 2, 4, 5, 7, 8	OFDM	BPSK	6
Draft 802.11n (20MHz)		1 to 8	1, 2, 4, 5, 7, 8	OFDM	BPSK	13
Draft 802.11n (40MHz)		1 to 4	1, 2, 3, 4	OFDM	BPSK	27
802.11a	(5.47~5.725GHz)	1 to 11	1, 6, 11	OFDM	BPSK	6
Draft 802.11n (20MHz)		1 to 11	1, 6, 11	OFDM	BPSK	13
Draft 802.11n (40MHz)		1 to 5	1, 3,.5	OFDM	BPSK	27



3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart E (15.407)

ANSI C63.4-2003

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

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.

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

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10m RJ45 cable

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

NOTE 2: Item 1 acted as communication partners to transfer data.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

FREQUENCIES (MHz)	EIRP LIMIT (dBm)		EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m) *NOTE 3	
	PK	AV	PK	AV
5150 ~ 5250	-7	-27	88.3	68.3
5250 ~ 5350	-7	-27	88.3	68.3
5470 ~ 5725	-7	-27	88.3	68.3

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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



4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Jul. 27, 2008
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Feb. 26, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	May 31, 2008
HORN Antenna SCHWARZBECK	9120D	9120D-209	Jun. 28, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 28, 2007
Preamplifier Agilent	8447D	2944A10633	Oct. 28, 2008
Preamplifier Agilent	8449B	3008A01964	Oct. 23, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283402/4	Dec. 06, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	251644/4	Dec. 06, 2008
Software ADT.	ADT_Radiated_V7.6	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA
Turn Table ADT.	TT100.	TT93021703	NA
Turn Table Controller ADT.	SC100.	SC93021703	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 3.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The VCCI Site Registration No. is R-237.
 5. The IC Site Registration No. is IC3789B-3.

4.1.4 TEST PROCEDURES

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

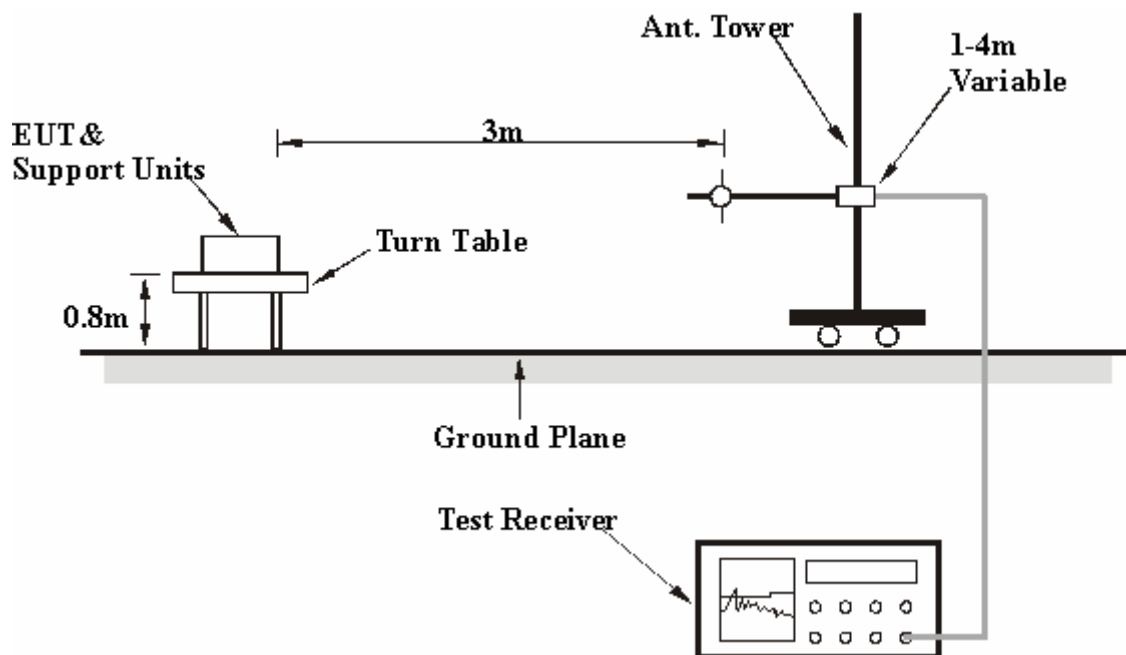
NOTE:

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

4.1.5 DEVIATION FROM TEST STANDARD

No deviation

4.1.6 TEST SETUP



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

4.1.7 EUT OPERATING CONDITION

- a. Placed the EUT on a testing table.
- b. Prepared notebook computer and placed it outside of testing area to act as communication partner for EUT.
- c. The EUT ran a test program (provided by manufacturer) to enable all functions under transmission condition continuously at specific channel frequency.
- d. The necessary accessories enable the EUT in full functions.

4.1.8 TEST RESULTS

FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Morgan Chen		

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	125.17	37.40 QP	43.50	-6.10	2.00 H	76	24.48	12.93
2	148.50	41.59 QP	43.50	-1.91	2.00 H	49	27.52	14.07
3	173.78	35.91 QP	43.50	-7.59	1.50 H	76	22.44	13.47
4	199.05	36.73 QP	43.50	-6.77	1.50 H	130	25.38	11.34
5	500.42	40.69 QP	46.00	-5.31	1.50 H	64	20.40	20.29
6	531.53	41.30 QP	46.00	-4.70	1.50 H	16	20.41	20.90
7	599.58	38.52 QP	46.00	-7.48	1.50 H	163	16.07	22.45
8	700.68	41.88 QP	46.00	-4.12	1.00 H	139	17.67	24.22
9	725.96	42.83 QP	46.00	-3.17	1.00 H	136	17.88	24.95
10	776.51	40.89 QP	46.00	-5.11	1.00 H	121	15.12	25.77
11	799.84	42.99 QP	46.00	-3.01	1.50 H	25	17.11	25.88
12	825.11	42.86 QP	46.00	-3.14	1.50 H	61	16.43	26.42
13	875.67	39.23 QP	46.00	-6.77	2.00 H	346	11.94	27.29
14	926.22	38.30 QP	46.00	-7.70	1.50 H	97	10.32	27.98
15	951.49	38.83 QP	46.00	-7.17	1.50 H	40	10.50	28.33

- 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.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Morgan Chen		

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	47.40	36.53 QP	40.00	-3.47	1.00 V	133	22.01	14.52
2	68.79	30.89 QP	40.00	-9.11	1.00 V	319	18.04	12.85
3	500.42	38.72 QP	46.00	-7.28	1.50 V	349	18.43	20.29
4	531.53	37.96 QP	46.00	-8.04	1.00 V	16	17.06	20.90
5	751.23	36.94 QP	46.00	-9.06	1.00 V	223	11.29	25.65
6	776.51	39.96 QP	46.00	-6.04	1.50 V	235	14.19	25.77
7	799.84	38.76 QP	46.00	-7.24	2.00 V	229	12.88	25.88
8	825.11	39.04 QP	46.00	-6.96	1.50 V	262	12.62	26.42
9	875.67	37.23 QP	46.00	-8.77	1.00 V	334	9.94	27.29
10	932.05	37.83 QP	46.00	-8.17	1.50 V	10	9.77	28.06
11	951.49	37.31 QP	46.00	-8.69	1.50 V	343	8.98	28.33

- 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.



ABOVE 1GHz DATA: 802.11a OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
TESTED BY	Morgan Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	58.56 PK	74.00	-15.44	1.07 H	2	19.67	38.89
2	#5150.00	41.24 AV	54.00	-12.76	1.07 H	2	2.35	38.89
3	*5180.00	107.58 PK			1.07 H	2	68.60	38.98
4	*5180.00	97.12 AV			1.07 H	2	58.14	38.98
5	10360.00	59.55 PK	88.30	-28.75	1.00 H	9	10.01	49.54
6	10360.00	46.64 AV	68.30	-21.66	1.00 H	9	-2.90	49.54

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	57.68 PK	74.00	-16.32	1.08 V	58	18.79	38.89
2	#5150.00	39.89 AV	54.00	-14.11	1.08 V	58	1.00	38.89
3	*5180.00	103.66 PK			1.08 V	58	64.68	38.98
4	*5180.00	93.46 AV			1.08 V	58	54.48	38.98
5	10360.00	59.42 PK	88.30	-28.88	1.00 V	108	9.88	49.54
6	10360.00	46.56 AV	68.30	-21.74	1.00 V	108	-2.98	49.54

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 2	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
TESTED BY	Morgan Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	107.69 PK			1.09 H	8	68.65	39.04
2	*5200.00	97.24 AV			1.09 H	8	58.20	39.04
3	10400.00	59.63 PK	88.30	-28.67	1.00 H	19	9.95	49.68
4	10400.00	46.71 AV	68.30	-21.59	1.00 H	19	-2.97	49.68

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	103.73 PK			1.06 V	46	64.69	39.04
2	*5200.00	93.51 AV			1.06 V	46	54.47	39.04
3	10400.00	59.25 PK	88.30	-29.05	1.00 V	356	9.57	49.68
4	10400.00	46.38 AV	68.30	-21.92	1.00 V	356	-3.30	49.68

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
TESTED BY	Morgan Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	107.93 PK			1.09 H	7	68.82	39.11
2	*5240.00	97.76 AV			1.09 H	7	58.65	39.11
3	#5350.00	50.14 PK	74.00	-23.86	1.09 H	7	10.93	39.21
4	#5350.00	37.58 AV	54.00	-16.42	1.09 H	7	-1.63	39.21
5	10480.00	59.77 PK	88.30	-28.53	1.00 H	4	9.95	49.82
6	10480.00	46.68 AV	68.30	-21.62	1.00 H	4	-3.14	49.82

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	103.95 PK			1.05 V	36	64.84	39.11
2	*5240.00	93.79 AV			1.05 V	36	54.68	39.11
3	#5350.00	51.22 PK	74.00	-22.78	1.05 V	36	12.01	39.21
4	#5350.00	39.76 AV	54.00	-14.24	1.05 V	36	0.55	39.21
5	10480.00	59.35 PK	88.30	-28.95	1.00 V	111	9.53	49.82
6	10480.00	46.42 AV	68.30	-21.88	1.00 V	111	-3.40	49.82

- 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 falling in the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 5	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	106.21 PK			1.01 H	192	67.49	38.72
2	*5260.00	96.37 AV			1.01 H	192	57.65	38.72
3	10520.00	58.66 PK	88.30	-29.64	1.13 H	4	9.55	49.12
4	10520.00	45.77 AV	68.30	-22.53	1.13 H	4	-3.34	49.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	102.50 PK			1.47 V	101	63.78	38.72
2	*5260.00	92.83 AV			1.47 V	101	54.11	38.72
3	10520.00	58.59 PK	88.30	-29.71	1.00 V	105	9.47	49.12
4	10520.00	45.68 AV	68.30	-22.62	1.00 V	105	-3.44	49.12

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	106.93 PK			1.00 H	164	68.17	38.76
2	*5300.00	96.58 AV			1.00 H	164	57.82	38.76
3	#10600.00	58.54 PK	74.00	-15.46	1.00 H	217	9.24	49.30
4	#10600.00	45.47 AV	54.00	-8.53	1.00 H	217	-3.83	49.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	102.66 PK			1.00 V	179	63.90	38.76
2	*5300.00	92.72 AV			1.00 V	179	53.96	38.76
3	#10600.00	58.36 PK	74.00	-15.64	1.00 V	167	9.06	49.30
4	#10600.00	45.33 AV	54.00	-8.67	1.00 V	167	-3.97	49.30

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 8	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	106.80 PK			1.00 H	160	68.02	38.78
2	*5320.00	96.76 AV			1.00 H	160	57.98	38.78
3	#5350.00	48.11 PK	74.00	-25.89	1.00 H	160	9.30	38.81
4	#5350.00	36.04 AV	54.00	-17.96	1.00 H	160	-2.77	38.81
5	#10640.00	58.79 PK	74.00	-15.21	1.00 H	309	9.46	49.33
6	#10640.00	45.13 AV	54.00	-8.87	1.00 H	309	-4.20	49.33

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	102.58 PK			1.00 V	253	63.80	38.78
2	*5320.00	92.79 AV			1.00 V	253	54.01	38.78
3	#5350.00	48.07 PK	74.00	-25.93	1.00 V	155	9.26	38.81
4	#5350.00	35.88 AV	54.00	-18.12	1.00 V	155	-2.93	38.81
5	#10640.00	58.29 PK	74.00	-15.71	1.00 V	342	8.96	49.33
6	#10640.00	44.82 AV	54.00	-9.18	1.00 V	342	-4.51	49.33

- 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 falling in the restricted band.

DRAFT 802.11n (20MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 66%RH, 991hPa
TESTED BY	Morgan Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	61.67 PK	74.00	-12.33	1.00 H	304	22.78	38.89
2	#5150.00	42.51 AV	54.00	-11.49	1.00 H	304	3.62	38.89
3	*5180.00	113.42 PK			1.00 H	305	74.44	38.98
4	*5180.00	103.61 AV			1.00 H	305	64.63	38.98
5	10360.00	60.72 PK	88.30	-27.58	1.00 H	16	11.18	49.54
6	10360.00	47.88 AV	68.30	-20.42	1.00 H	16	-1.66	49.54

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	60.28 PK	74.00	-13.72	1.03 V	43	21.39	38.89
2	#5150.00	41.21 AV	54.00	-12.79	1.03 V	43	2.32	38.89
3	*5180.00	109.46 PK			1.03 V	42	70.48	38.98
4	*5180.00	99.27 AV			1.03 V	42	60.29	38.98
5	10360.00	61.21 PK	88.30	-27.09	1.00 V	118	11.67	49.54
6	10360.00	48.23 AV	68.30	-20.07	1.00 V	118	-1.31	49.54

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 2	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 66%RH, 991hPa
TESTED BY	Morgan Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	113.55 PK			1.01 H	317	74.51	39.04
2	*5200.00	103.82 AV			1.01 H	317	64.78	39.04
3	10400.00	61.22 PK	88.30	-27.08	1.00 H	145	11.54	49.68
4	10400.00	47.90 AV	68.30	-20.40	1.00 H	145	-1.78	49.68

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	109.64 PK			1.03 V	205	70.60	39.04
2	*5200.00	99.51 AV			1.03 V	205	60.47	39.04
3	10400.00	61.68 PK	88.30	-26.62	1.00 V	324	12.00	49.68
4	10400.00	48.32 AV	68.30	-19.98	1.00 V	324	-1.36	49.68

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
TESTED BY	Morgan Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	113.73 PK			1.03 H	316	74.62	39.11
2	*5240.00	103.94 AV			1.03 H	316	64.83	39.11
3	#5350.00	53.27 PK	74.00	-20.73	1.03 H	315	14.06	39.21
4	#5350.00	40.54 AV	54.00	-13.46	1.03 H	315	1.33	39.21
5	10480.00	60.92 PK	88.30	-27.38	1.00 H	168	11.10	49.82
6	10480.00	47.49 AV	68.30	-20.81	1.00 H	168	-2.33	49.82

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	109.82 PK			1.00 V	187	70.71	39.11
2	*5240.00	99.68 AV			1.00 V	187	60.57	39.11
3	#5350.00	52.96 PK	74.00	-21.04	1.00 V	191	13.75	39.21
4	#5350.00	40.28 AV	54.00	-13.72	1.00 V	191	1.07	39.21
5	10480.00	61.38 PK	88.30	-26.92	1.05 V	204	11.56	49.82
6	10480.00	47.89 AV	68.30	-20.41	1.05 V	204	-1.93	49.82

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 5	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	113.60 PK			1.00 H	152	74.88	38.72
2	*5260.00	103.73 AV			1.00 H	152	65.01	38.72
3	10520.00	59.97 PK	88.30	-28.33	1.00 H	197	10.86	49.12
4	10520.00	46.50 AV	68.30	-21.80	1.00 H	197	-2.61	49.12

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5260.00	108.18 PK			1.00 V	310	69.46	38.72
2	*5260.00	98.79 AV			1.00 V	310	60.07	38.72
3	10520.00	60.83 PK	88.30	-27.47	1.00 V	152	11.72	49.12
4	10520.00	47.06 AV	68.30	-21.24	1.00 V	152	-2.05	49.12

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	114.63 PK			1.02 H	163	75.87	38.76
2	*5300.00	104.38 AV			1.02 H	163	65.62	38.76
3	#10600.00	59.61 PK	74.00	-14.39	1.20 H	25	10.31	49.30
4	#10600.00	46.36 AV	54.00	-7.64	1.20 H	25	-2.94	49.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	109.24 PK			1.03 V	358	70.48	38.76
2	*5300.00	99.97 AV			1.03 V	358	61.21	38.76
3	#10600.00	60.96 PK	74.00	-13.04	1.02 V	330	11.66	49.30
4	#10600.00	46.89 AV	54.00	-7.11	1.02 V	330	-2.41	49.30

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 8	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	114.16 PK			1.00 H	164	75.38	38.78
2	*5320.00	104.47 AV			1.00 H	164	65.69	38.78
3	#5350.00	53.17 PK	74.00	-20.83	1.00 H	164	14.36	38.81
4	#5350.00	41.34 AV	54.00	-12.66	1.00 H	164	2.53	38.81
5	#10640.00	60.41 PK	74.00	-13.59	1.00 H	193	11.08	49.33
6	#10640.00	46.57 AV	54.00	-7.43	1.00 H	193	-2.76	49.33

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	109.72 PK			1.00 V	6	70.94	38.78
2	*5320.00	99.62 AV			1.00 V	6	60.84	38.78
3	#5350.00	52.81 PK	74.00	-21.19	1.00 V	6	14.00	38.81
4	#5350.00	40.91 AV	54.00	-13.09	1.00 V	6	2.10	38.81
5	#10640.00	61.14 PK	74.00	-12.86	1.04 V	211	11.81	49.33
6	#10640.00	47.99 AV	54.00	-6.01	1.04 V	211	-1.34	49.33

- 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 falling in the restricted band.

DRAFT 802.11n (40MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 66%RH, 991hPa
TESTED BY	Morgan Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5150.00	72.91 PK	74.00	-1.09	1.02 H	317	34.02	38.89
2	#5150.00	50.47 AV	54.00	-3.53	1.02 H	317	11.58	38.89
3	*5190.00	111.01 PK			1.03 H	317	72.00	39.01
4	*5190.00	99.86 AV			1.03 H	317	60.85	39.01
5	10380.00	59.40 PK	88.30	-28.90	1.07 H	15	9.79	49.61
6	10380.00	46.76 AV	68.30	-21.54	1.07 H	15	-2.85	49.61

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	#5150.00	67.27 PK	74.00	-6.73	1.03 V	32	28.38	38.89
2	#5150.00	45.22 AV	54.00	-8.78	1.03 V	32	6.33	38.89
3	*5190.00	104.16 PK			1.03 V	32	65.15	39.01
4	*5190.00	94.62 AV			1.03 V	32	55.61	39.01
5	10380.00	59.10 PK	88.30	-29.20	1.02 V	356	9.49	49.61
6	10380.00	46.34 AV	68.30	-21.96	1.02 V	356	-3.27	49.61

- 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.
 6. “ # “: The radiated frequency falling in the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 2	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 66%RH, 991hPa
TESTED BY	Morgan Chen		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5230.00	112.01 PK			1.02 H	318	72.92	39.09
2	*5230.00	101.74 AV			1.02 H	318	62.65	39.09
3	#5350.00	57.07 PK	74.00	-16.93	1.02 H	318	17.86	39.21
4	#5350.00	44.27 AV	54.00	-9.73	1.02 H	318	5.05	39.21
5	10460.00	61.42 PK	88.30	-26.88	1.02 H	54	11.63	49.79
6	10460.00	48.14 AV	68.30	-20.16	1.02 H	54	-1.65	49.79

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	*5230.00	107.32 PK			1.03 V	28	68.23	39.09
2	*5230.00	96.86 AV			1.03 V	28	57.77	39.09
3	#5350.00	56.98 PK	74.00	-17.02	1.04 V	29	17.77	39.21
4	#5350.00	44.21 AV	54.00	-9.79	1.04 V	29	5.00	39.21
5	10460.00	62.13 PK	88.30	-26.17	1.00 V	116	12.34	49.79
6	10460.00	48.57 AV	68.30	-19.73	1.00 V	116	-1.22	49.79

- 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.
 6. “ # “: The radiated frequency falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Brad Wu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	111.23 PK			1.06 H	344	72.50	38.73
2	*5270.00	100.92 AV			1.06 H	344	62.19	38.73
3	10540.00	59.86 PK	88.30	-28.44	1.06 H	13	10.70	49.16
4	10540.00	47.10 AV	68.30	-21.20	1.06 H	13	-2.06	49.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5270.00	106.46 PK			1.04 V	31	67.73	38.73
2	*5270.00	95.93 AV			1.04 V	31	57.20	38.73
3	10540.00	59.44 PK	88.30	-28.86	1.14 V	28	10.28	49.16
4	10540.00	47.81 AV	68.30	-20.49	1.14 V	28	-1.35	49.16

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Brad Wu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	111.06 PK			1.02 H	349	72.29	38.77
2	*5310.00	100.84 AV			1.02 H	349	62.07	38.77
3	#5350.00	66.75 PK	74.00	-7.25	1.02 H	349	27.94	38.81
4	#5350.00	51.61 AV	54.00	-2.39	1.02 H	349	12.80	38.81
5	#10620.00	59.80 PK	74.00	-14.20	1.08 H	26	10.49	49.32
6	#10620.00	47.05 AV	54.00	-6.95	1.08 H	26	-2.26	49.32

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5310.00	106.24 PK			1.05 V	36	67.47	38.77
2	*5310.00	95.71 AV			1.05 V	36	56.94	38.77
3	#5350.00	61.12 PK	74.00	-12.88	1.05 V	36	22.31	38.81
4	#5350.00	46.03 AV	54.00	-7.97	1.05 V	36	7.22	38.81
5	#10620.00	59.86 PK	74.00	-14.14	1.09 V	34	10.54	49.32
6	#10620.00	48.23 AV	54.00	-5.77	1.09 V	34	-1.09	49.32

- 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 falling in the restricted band.



FOR FREQUENCY BAND: 5.47 ~ 5.725GHz
BELOW 1GHz WORST-CASE DATA

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Quasi-Peak
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Morgan Chen

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	150.45	38.60 QP	43.50	-4.90	1.50 H	70	24.45	14.15
2	500.42	40.14 QP	46.00	-5.86	1.50 H	31	19.84	20.29
3	531.53	40.10 QP	46.00	-5.90	1.50 H	34	19.21	20.90
4	700.68	41.90 QP	46.00	-4.10	1.00 H	136	17.69	24.22
5	725.96	42.57 QP	46.00	-3.43	1.00 H	136	17.62	24.95
6	776.51	41.00 QP	46.00	-5.00	1.00 H	340	15.23	25.77
7	799.84	43.22 QP	46.00	-2.78	1.00 H	19	17.34	25.88
8	825.11	42.71 QP	46.00	-3.29	1.00 H	22	16.28	26.42
9	875.67	39.64 QP	46.00	-6.36	1.50 H	172	12.36	27.29
10	926.22	39.07 QP	46.00	-6.93	1.50 H	103	11.10	27.98

- 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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Quasi-Peak
TRANSFER RATE	6Mbps	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60 Hz	TESTED BY	Morgan Chen

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	57.12	36.85 QP	40.00	-3.15	1.50 V	139	22.61	14.24
2	70.73	31.87 QP	40.00	-8.13	1.00 V	10	19.33	12.54
3	148.50	32.54 QP	43.50	-10.96	1.50 V	166	18.46	14.07
4	500.42	35.24 QP	46.00	-10.76	2.00 V	163	14.95	20.29
5	531.53	36.58 QP	46.00	-9.42	1.00 V	10	15.68	20.90
6	700.68	36.65 QP	46.00	-9.35	1.50 V	331	12.43	24.22
7	725.96	36.40 QP	46.00	-9.60	1.50 V	343	11.45	24.95
8	776.51	37.89 QP	46.00	-8.11	1.50 V	169	12.12	25.77
9	799.84	38.34 QP	46.00	-7.66	2.00 V	163	12.46	25.88
10	825.11	39.76 QP	46.00	-6.24	1.00 V	10	13.33	26.42
11	875.67	38.66 QP	46.00	-7.34	1.00 V	10	11.37	27.29
12	932.05	38.29 QP	46.00	-7.71	1.50 V	304	10.23	28.06
13	951.49	35.94 QP	46.00	-10.06	1.50 V	331	7.61	28.33

- 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.



ABOVE 1GHz DATA: 802.11a OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5460.00	48.60 PK	74.00	-25.40	1.00 H	197	9.61	38.99
2	#5460.00	36.84 AV	54.00	-17.16	1.00 H	197	-2.15	38.99
3	5470.00	50.19 PK	88.30	-38.11	1.00 H	197	11.18	39.01
4	5470.00	37.33 AV	68.30	-30.97	1.00 H	197	-1.68	39.01
5	*5500.00	106.28 PK			1.00 H	197	67.21	39.07
6	*5500.00	96.69 AV			1.00 H	197	57.62	39.07
7	#11000.00	60.22 PK	74.00	-13.78	1.00 H	123	10.33	49.89
8	#11000.00	46.89 AV	54.00	-7.11	1.00 H	123	-3.00	49.89

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	#5460.00	48.37 PK	74.00	-25.63	1.06 V	266	9.38	38.99
2	#5460.00	36.58 AV	54.00	-17.42	1.06 V	266	-2.41	38.99
3	5470.00	50.04 PK	88.30	-38.26	1.06 V	266	11.03	39.01
4	5470.00	37.16 AV	68.30	-31.14	1.06 V	266	-1.85	39.01
5	*5500.00	102.58 PK			1.06 V	266	63.51	39.07
6	*5500.00	92.33 AV			1.06 V	266	53.26	39.07
7	#11000.00	59.58 PK	74.00	-14.42	1.00 V	29	9.69	49.89
8	#11000.00	46.69 AV	54.00	-7.31	1.00 V	29	-3.20	49.89

- 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 radiated frequency falling in the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

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	*5600.00	106.37 PK			1.00 H	196	67.08	39.29
2	*5600.00	96.66 AV			1.00 H	196	57.37	39.29
3	#11200.00	58.64 PK	74.00	-15.36	1.00 H	196	8.86	49.78
4	#11200.00	45.38 AV	54.00	-8.62	1.00 H	196	-4.40	49.78

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	*5600.00	102.86 PK			1.00 V	12	63.57	39.29
2	*5600.00	92.68 AV			1.00 V	12	53.39	39.29
3	#11200.00	58.37 PK	74.00	-15.63	1.02 V	222	8.59	49.78
4	#11200.00	45.25 AV	54.00	-8.75	1.02 V	222	-4.53	49.78

- 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 falling in the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 40 GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak(PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	106.57 PK			1.00 H	198	67.01	39.56
2	*5700.00	96.51 AV			1.00 H	198	56.95	39.56
3	5725.00	49.22 PK	88.30	-39.08	1.00 H	198	9.61	39.61
4	5725.00	37.54 AV	68.30	-30.76	1.00 H	198	-2.07	39.61
5	#11400.00	56.48 PK	74.00	-17.52	1.05 H	35	6.62	49.86
6	#11400.00	46.11 AV	54.00	-7.89	1.05 H	35	-3.75	49.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	102.59 PK			1.00 V	165	63.03	39.56
2	*5700.00	92.09 AV			1.00 V	165	52.53	39.56
3	5725.00	49.10 PK	88.30	-39.20	1.00 V	165	9.49	39.61
4	5725.00	37.38 AV	68.30	-30.92	1.00 V	165	-2.23	39.61
5	#11400.00	56.29 PK	74.00	-17.71	1.00 V	264	6.43	49.86
6	#11400.00	46.05 AV	54.00	-7.95	1.00 V	264	-3.81	49.86

- 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 falling in the restricted band.



DRAFT 802.11n (20MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5460.00	51.94 PK	74.00	-22.06	1.00 H	155	12.95	38.99
2	#5460.00	40.91 AV	54.00	-13.09	1.00 H	155	1.92	38.99
3	5470.00	53.41 PK	88.30	-34.89	1.00 H	155	14.40	39.01
4	5470.00	40.68 AV	68.30	-27.62	1.00 H	155	1.67	39.01
5	*5500.00	114.53 PK			1.00 H	155	75.46	39.07
6	*5500.00	104.16 AV			1.00 H	155	65.09	39.07
7	#11000.00	61.18 PK	74.00	-12.82	1.00 H	228	11.29	49.89
8	#11000.00	48.09 AV	54.00	-5.91	1.00 H	228	-1.80	49.89

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	#5460.00	51.85 PK	74.00	-22.15	1.00 V	1	12.86	38.99
2	#5460.00	40.79 AV	54.00	-13.21	1.00 V	1	1.80	38.99
3	5470.00	53.28 PK	88.30	-35.02	1.00 V	1	14.27	39.01
4	5470.00	40.55 AV	68.30	-27.75	1.00 V	1	1.54	39.01
5	*5500.00	109.27 PK			1.00 V	1	70.19	39.07
6	*5500.00	99.24 AV			1.00 V	1	60.16	39.07
7	#11000.00	61.32 PK	74.00	-12.68	1.09 V	316	11.43	49.89
8	#11000.00	48.50 AV	54.00	-5.50	1.09 V	316	-1.39	49.89

- 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 radiated frequency falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	24deg. C, 67%RH, 991hPa
TESTED BY	Lori Chiu		

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	*5600.00	113.73 PK			1.00 H	215	74.44	39.29
2	*5600.00	103.66 AV			1.00 H	215	64.37	39.29
3	#11200.00	60.54 PK	74.00	-13.46	1.02 H	322	10.76	49.78
4	#11200.00	47.50 AV	54.00	-6.50	1.02 H	322	-2.28	49.78

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	*5600.00	108.50 PK			1.00 V	216	69.21	39.29
2	*5600.00	98.49 AV			1.00 V	216	59.20	39.29
3	#11200.00	60.76 PK	74.00	-13.24	1.01 V	126	10.98	49.78
4	#11200.00	47.85 AV	54.00	-6.15	1.01 V	126	-1.93	49.78

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Lori Chiu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	113.68 PK			1.00 H	96	74.12	39.56
2	*5700.00	103.76 AV			1.00 H	96	64.20	39.56
3	5725.00	53.90 PK	88.30	-34.40	1.00 H	96	14.29	39.61
4	5725.00	41.71 AV	68.30	-26.59	1.00 H	96	2.10	39.61
5	#11400.00	59.78 PK	74.00	-14.22	1.07 H	98	9.92	49.86
6	#11400.00	46.80 AV	54.00	-7.20	1.07 H	98	-3.06	49.86

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	108.24 PK			1.00 V	313	68.68	39.56
2	*5700.00	98.09 AV			1.00 V	313	58.53	39.56
3	5725.00	53.78 PK	88.30	-34.52	1.00 V	313	14.17	39.61
4	5725.00	41.69 AV	68.30	-26.61	1.00 V	313	2.08	39.61
5	#11400.00	60.01 PK	74.00	-13.99	1.00 V	13	10.15	49.86
6	#11400.00	46.94 AV	54.00	-7.06	1.00 V	13	-2.92	49.86

- 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 falling in the restricted band.

DRAFT 802.11n (40MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Brad Wu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5460.00	67.72 PK	74.00	-6.28	1.01 H	347	28.73	38.99
2	#5460.00	51.83 AV	54.00	-2.17	1.01 H	347	12.84	38.99
3	5470.00	72.95 PK	88.30	-15.35	1.01 H	347	33.94	39.01
4	5470.00	56.38 AV	68.30	-11.92	1.01 H	347	17.37	39.01
5	*5510.00	110.14 PK			1.01 H	347	71.04	39.10
6	*5510.00	99.85 AV			1.01 H	347	60.75	39.10
7	#11000.00	62.27 PK	74.00	-11.73	1.02 H	16	12.38	49.89
8	#11000.00	48.71 AV	54.00	-5.29	1.02 H	16	-1.18	49.89

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	#5460.00	63.58 PK	74.00	-10.42	1.05 V	40	24.59	38.99
2	#5460.00	46.25 AV	54.00	-7.75	1.05 V	40	7.26	38.99
3	5470.00	68.22 PK	88.30	-20.08	1.05 V	40	29.21	39.01
4	5470.00	52.13 AV	68.30	-16.17	1.05 V	40	13.12	39.01
5	*5510.00	105.38 PK			1.05 V	40	66.28	39.10
6	*5510.00	94.81 AV			1.05 V	40	55.71	39.10
7	#11000.00	61.40 PK	74.00	-12.60	1.04 V	28	11.51	49.89
8	#11000.00	48.21 AV	54.00	-5.79	1.04 V	28	-1.68	49.89

- 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 radiated frequency falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Brad Wu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5590.00	110.35 PK			1.02 H	350	71.08	39.27
2	*5590.00	100.08 AV			1.02 H	350	60.81	39.27
3	#11180.00	62.46 PK	74.00	-11.54	1.13 H	241	12.69	49.77
4	#11180.00	48.95 AV	54.00	-5.05	1.13 H	241	-0.82	49.77

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	*5590.00	105.46 PK			1.06 V	42	66.19	39.27
2	*5590.00	94.95 AV			1.06 V	42	55.68	39.27
3	#11180.00	62.13 PK	74.00	-11.87	1.10 V	236	12.36	49.77
4	#11180.00	48.54 AV	54.00	-5.46	1.10 V	236	-1.23	49.77

- 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 falling in the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 5	FREQUENCY RANGE	1 ~ 40GHz
MODULATION TYPE	BPSK	DETECTOR FUNCTION	Peak (PK) Average (AV)
INPUT POWER (SYSTEM)	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	23deg. C, 69%RH, 991hPa
TESTED BY	Brad Wu		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	109.72 PK			1.15 H	344	70.24	39.48
2	*5670.00	99.94 AV			1.15 H	344	60.46	39.48
3	5725.00	57.19 PK	88.30	-31.11	1.15 H	344	17.58	39.61
4	5725.00	42.23 AV	68.30	-26.07	1.15 H	344	2.62	39.61
5	#11340.00	61.55 PK	74.00	-12.45	1.08 H	256	11.74	49.81
6	#11340.00	48.58 AV	54.00	-5.42	1.08 H	256	-1.23	49.81

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5670.00	105.14 PK	88.30	16.84	1.08 V	45	65.66	39.48
2	*5670.00	94.63 AV	68.30	26.33	1.08 V	45	55.15	39.48
3	5725.00	54.08 PK	88.30	-34.22	1.08 V	45	14.47	39.61
4	5725.00	39.11 AV	68.30	-29.19	1.08 V	45	-0.50	39.61
5	#11340.00	62.28 PK	74.00	-11.72	1.04 V	263	12.47	49.81
6	#11340.00	48.66 AV	54.00	-5.34	1.04 V	263	-1.15	49.81

- 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 falling in the restricted band.

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.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Sep. 21, 2008
RF signal cable Woken	5D-FB	Cable-HYCO3-01	Jan. 06, 2008
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 08, 2008
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 16, 2008
Software ADT	ADT_Cond_V3	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.

4.2.3 TEST PROCEDURES

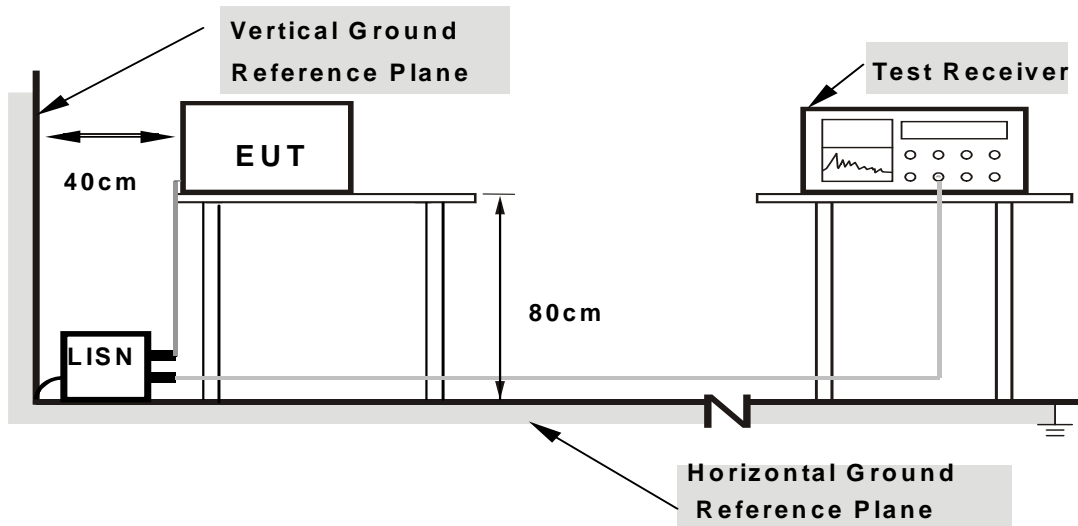
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

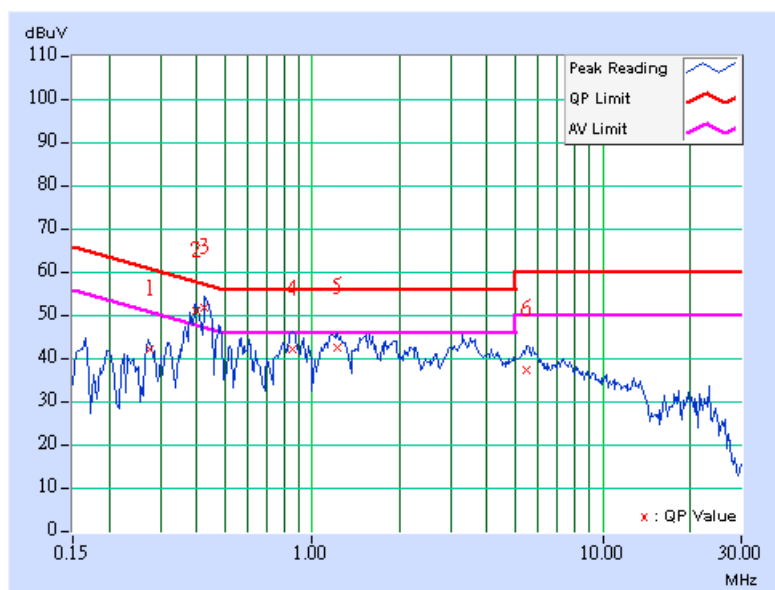
4.2.7 TEST RESULTS

FOR FREQUENCY BAND: 5.15 ~ 5.35GHz
 CONDUCTED WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 68%RH, 991hPa	6dB BANDWIDTH	9kHz
TESTED BY	Dean Wang		

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	0.277	0.10	41.76	-	41.86	-	60.89
2	0.400	0.10	50.92	45.02	51.02	45.12	57.85	47.85	-6.83	-2.73
3	0.427	0.10	51.48	42.41	51.58	42.51	57.30	47.30	-5.72	-4.79
4	0.857	0.11	41.89	-	42.00	-	56.00	46.00	-14.00	-
5	1.219	0.13	42.12	-	42.25	-	56.00	46.00	-13.75	-
6	5.457	0.29	37.04	-	37.33	-	60.00	50.00	-22.67	-

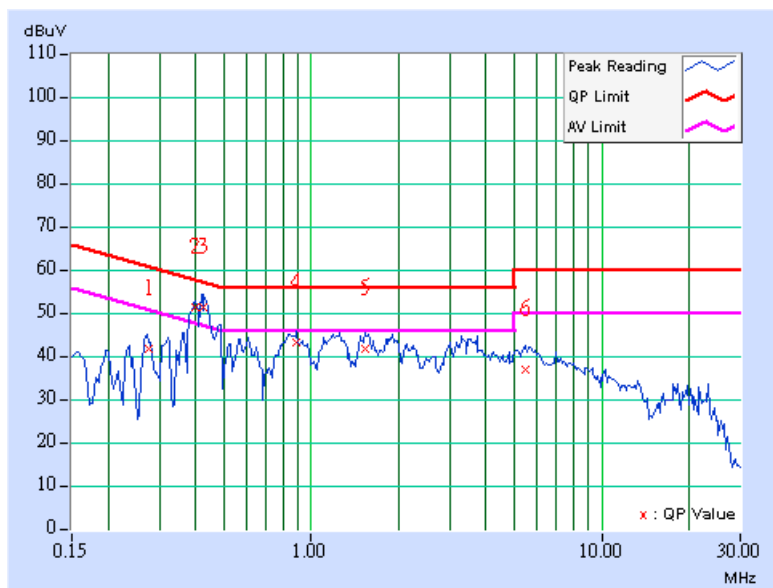
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 68%RH, 991hPa	6dB BANDWIDTH	9kHz
TESTED BY	Dean Wang		

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	0.276	0.10	41.67	-	41.77	-	60.93	50.93	-19.16	-
2	0.401	0.10	51.11	44.92	51.21	45.02	57.83	47.83	-6.62	-2.81
3	0.427	0.10	51.32	42.35	51.42	42.45	57.30	47.30	-5.88	-4.85
4	0.888	0.11	43.20	-	43.31	-	56.00	46.00	-12.69	-
5	1.531	0.17	41.60	-	41.77	-	56.00	46.00	-14.23	-
6	5.441	0.29	36.82	-	37.11	-	60.00	50.00	-22.89	-

- 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.

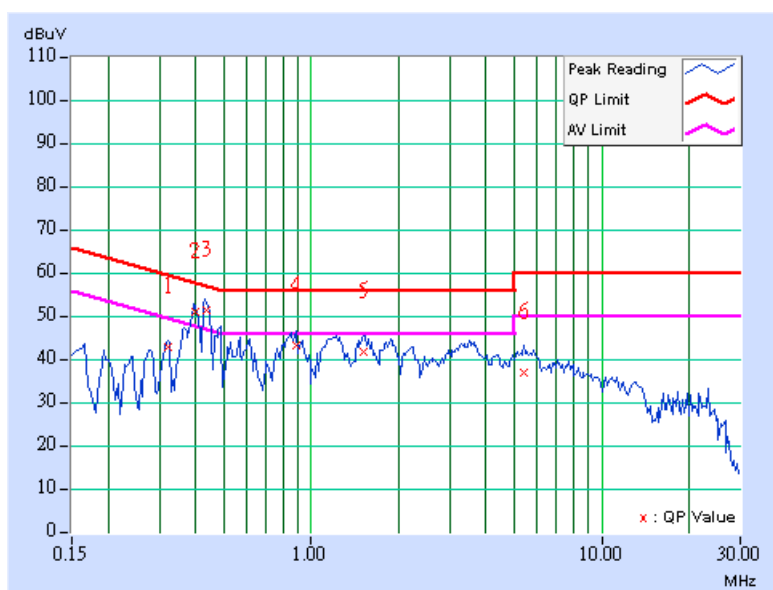


FOR FREQUENCY BAND: 5.470 ~ 5.725GHz

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 68%RH, 991hPa	6dB BANDWIDTH	9kHz
TESTED BY	Dean Wang		

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	0.322	0.10	42.66	-	42.76	-	59.66	49.66	-16.90	-
2	0.399	0.10	50.78	44.87	50.88	44.97	57.88	47.88	-7.00	-2.91
3	0.435	0.10	51.28	44.43	51.38	44.53	57.16	47.16	-5.77	-2.62
4	0.892	0.11	43.19	-	43.30	-	56.00	46.00	-12.70	-
5	1.512	0.17	41.42	-	41.59	-	56.00	46.00	-14.41	-
6	5.367	0.29	36.92	-	37.21	-	60.00	50.00	-22.79	-

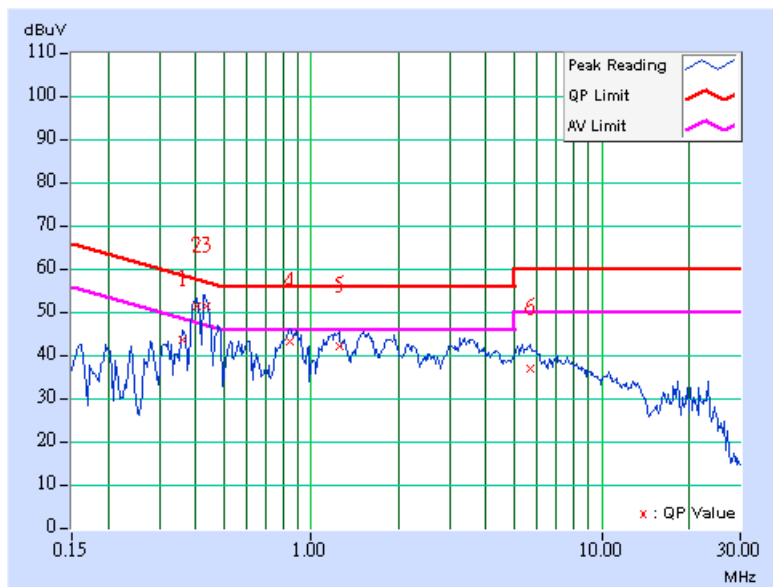
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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 1	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	26deg. C, 68%RH, 991hPa	6dB BANDWIDTH	9kHz
TESTED BY	Dean Wang		

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	0.361	0.10	43.25	-	43.35	-	58.71	48.71	-15.36	-
2	0.404	0.10	51.34	44.14	51.44	44.24	57.77	47.77	-6.33	-3.53
3	0.436	0.11	50.99	44.27	51.10	44.38	57.13	47.13	-6.03	-2.75
4	0.845	0.18	43.02	-	43.20	-	56.00	46.00	-12.80	-
5	1.246	0.21	41.93	-	42.14	-	56.00	46.00	-13.86	-
6	5.695	0.32	36.84	-	37.16	-	60.00	50.00	-22.84	-

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



4.3 PEAK TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

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

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

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

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 3MHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

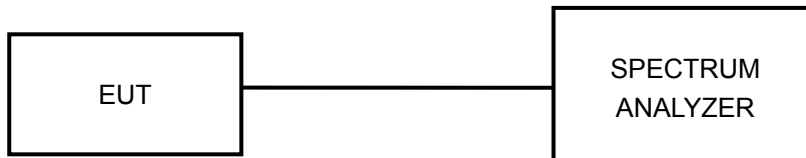
NOTE: The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

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 specific channel frequencies individually.



4.3.7 TEST RESULTS

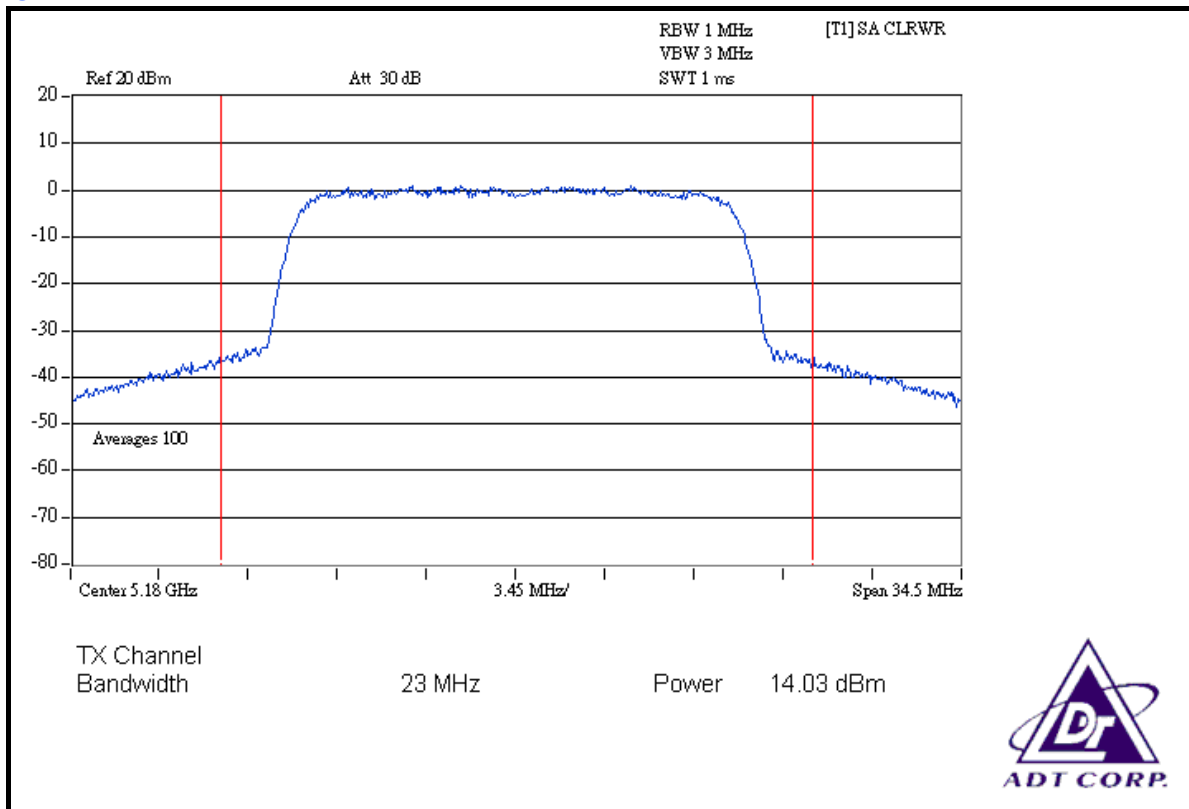
FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

802.11a OFDM MODULATION:

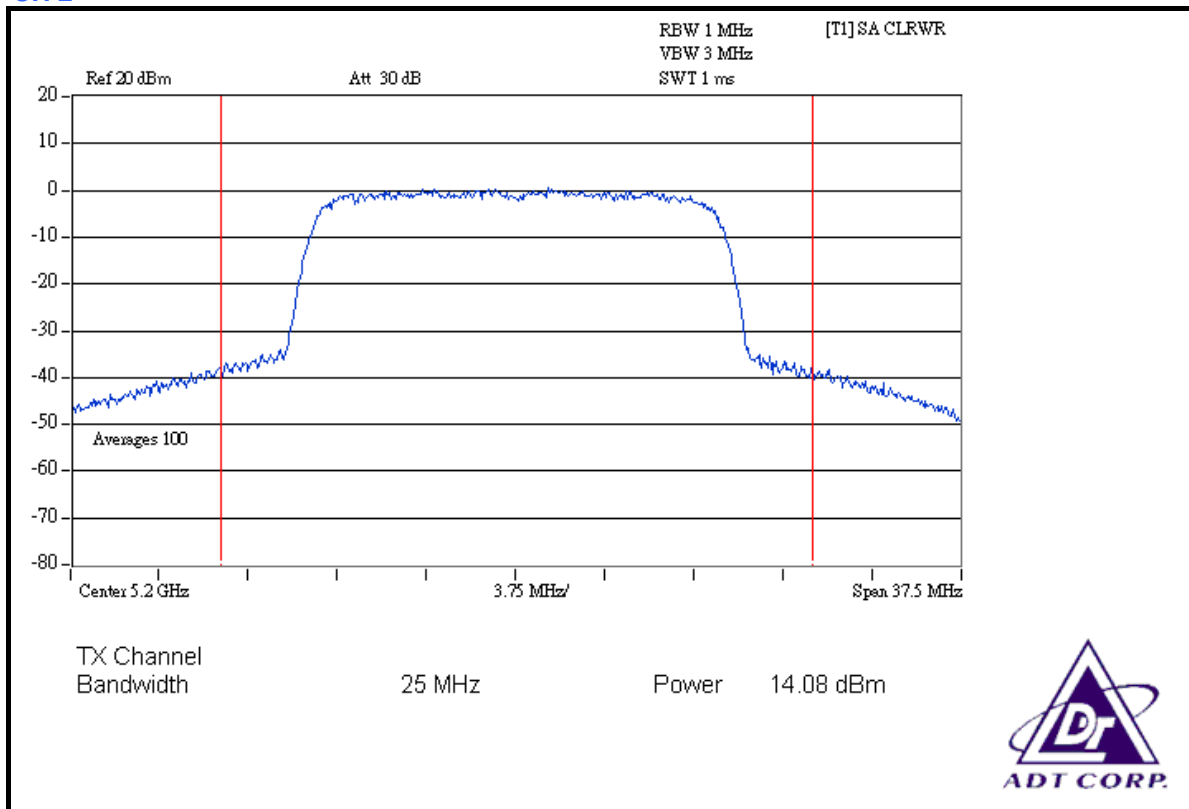
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	5180	25.293	14.03	17.00	PASS
2	5200	25.586	14.08	17.00	PASS
4	5240	25.704	14.10	17.00	PASS
5	5260	25.351	14.04	24.00	PASS
7	5300	25.235	14.02	24.00	PASS
8	5320	25.586	14.08	24.00	PASS

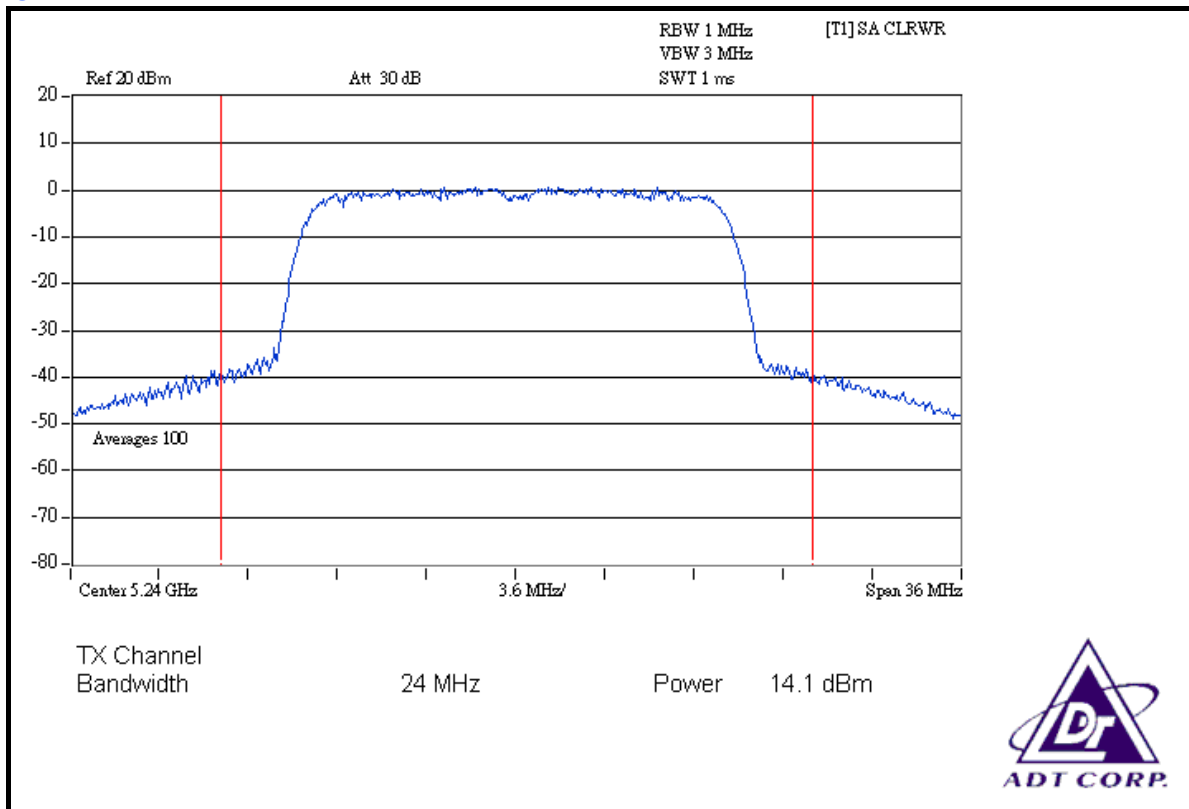
CH 1



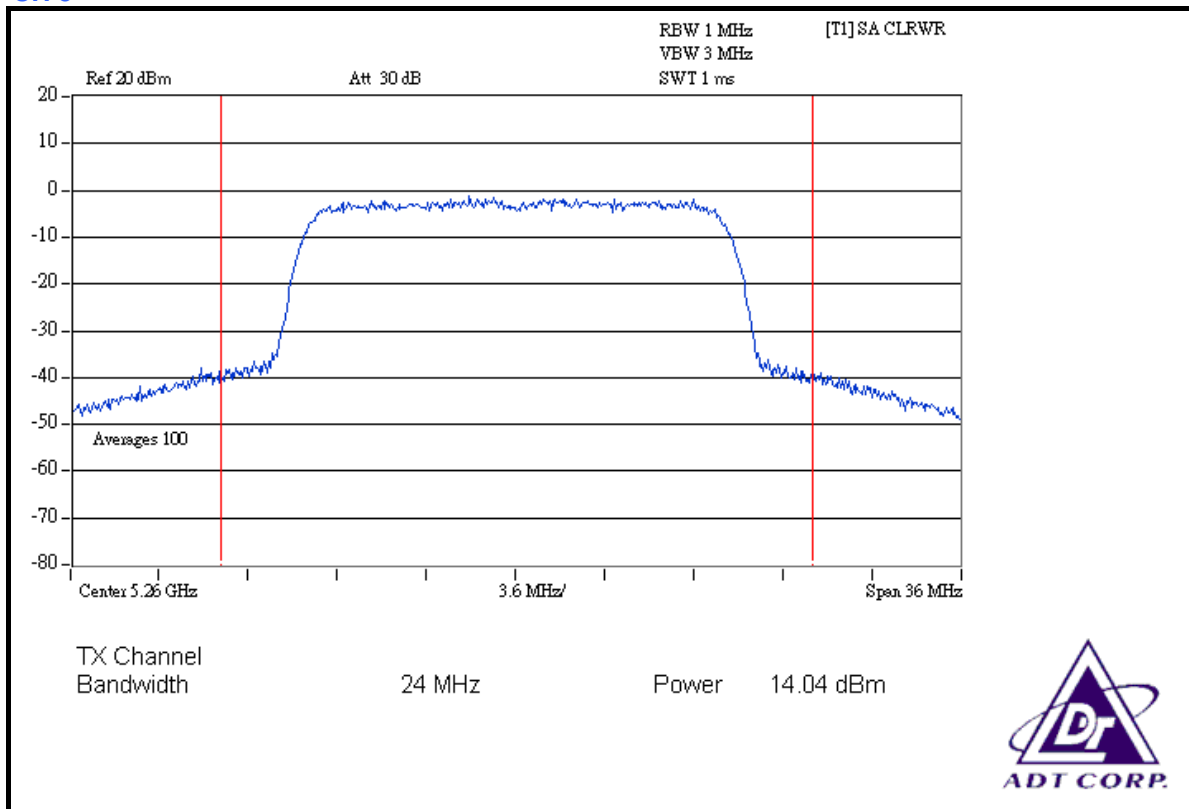
CH 2



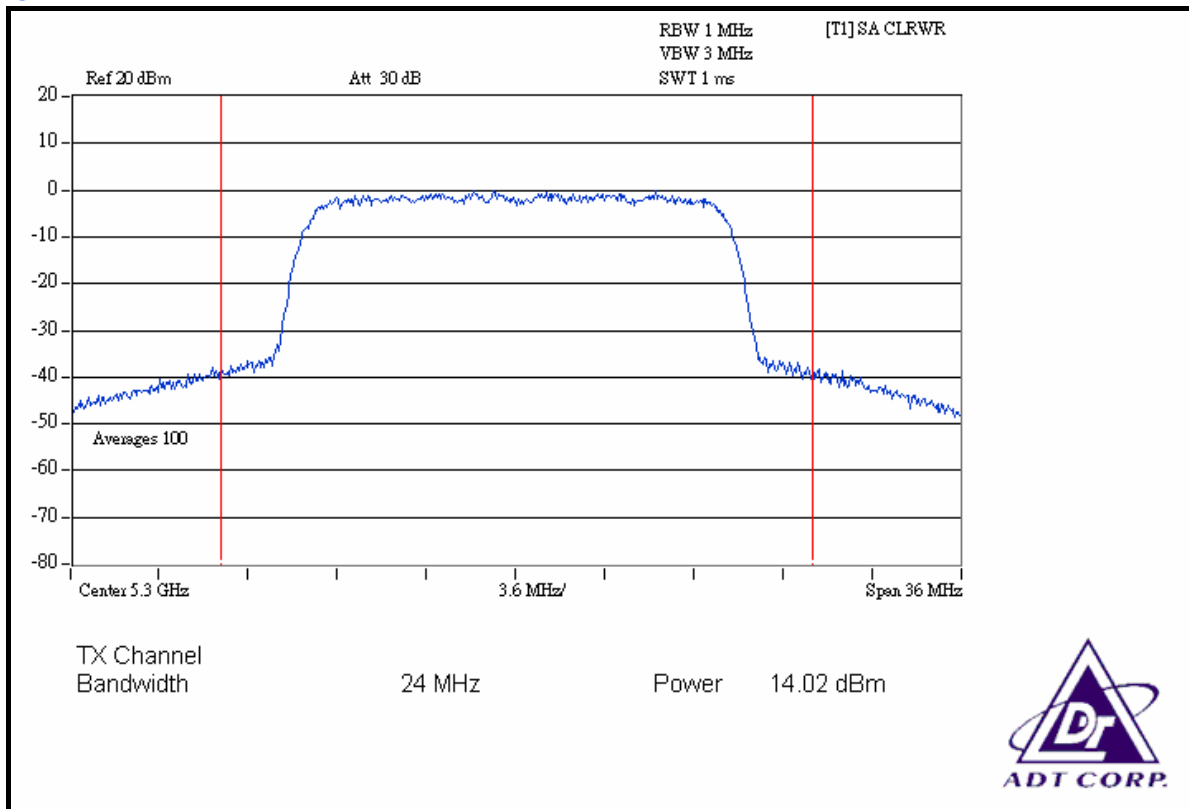
CH 4



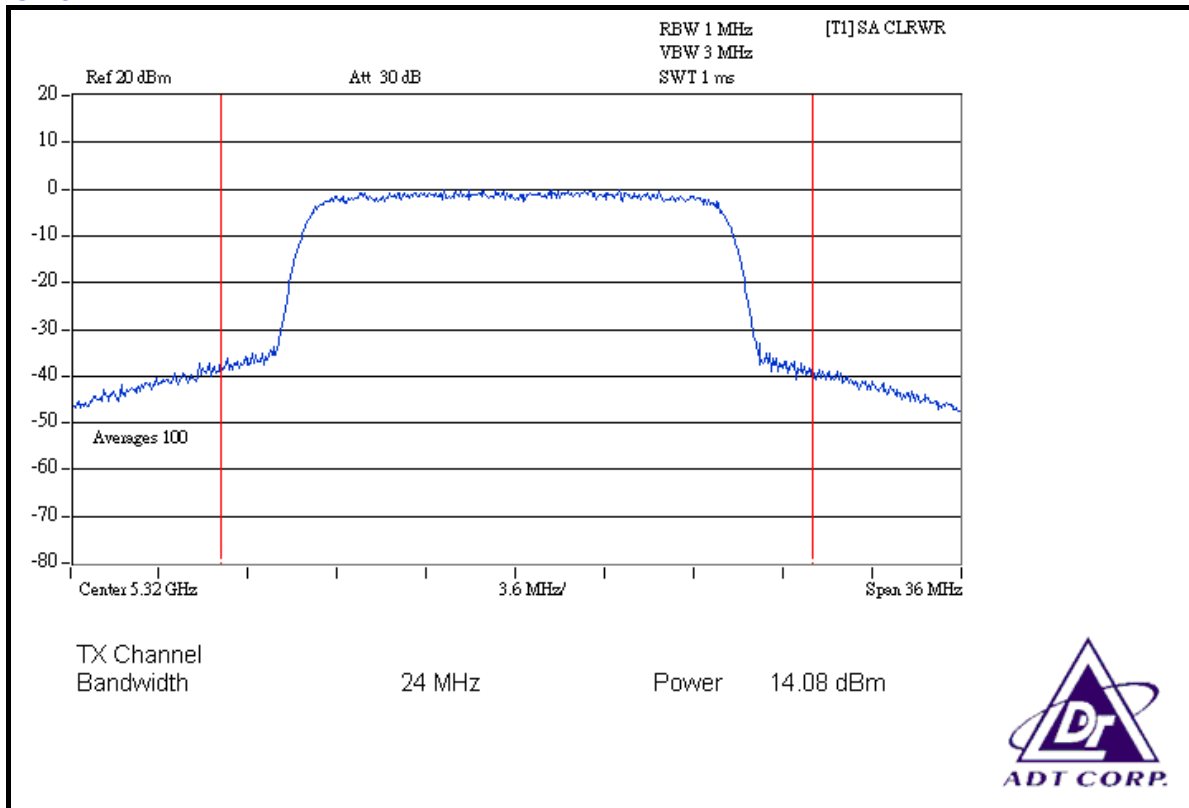
CH 5



CH 7



CH 8



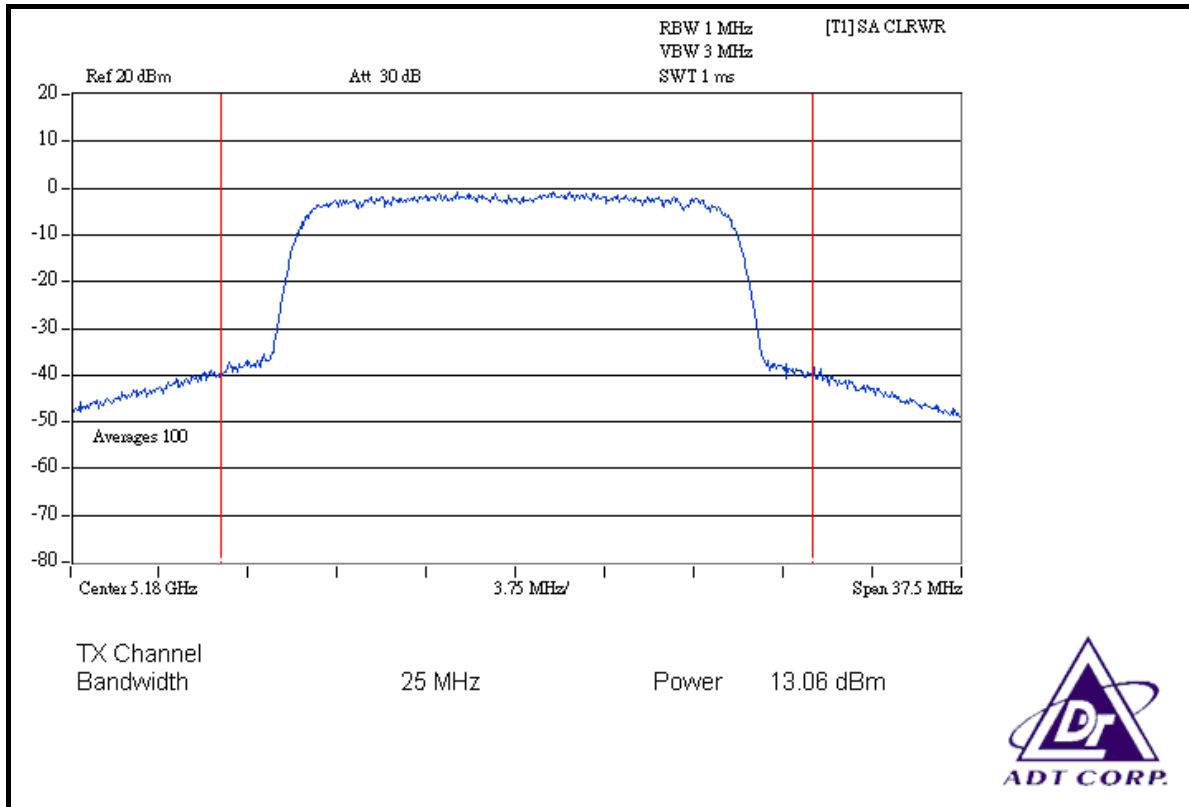


DRAFT 802.11n (20MHz) OFDM MODULATION:

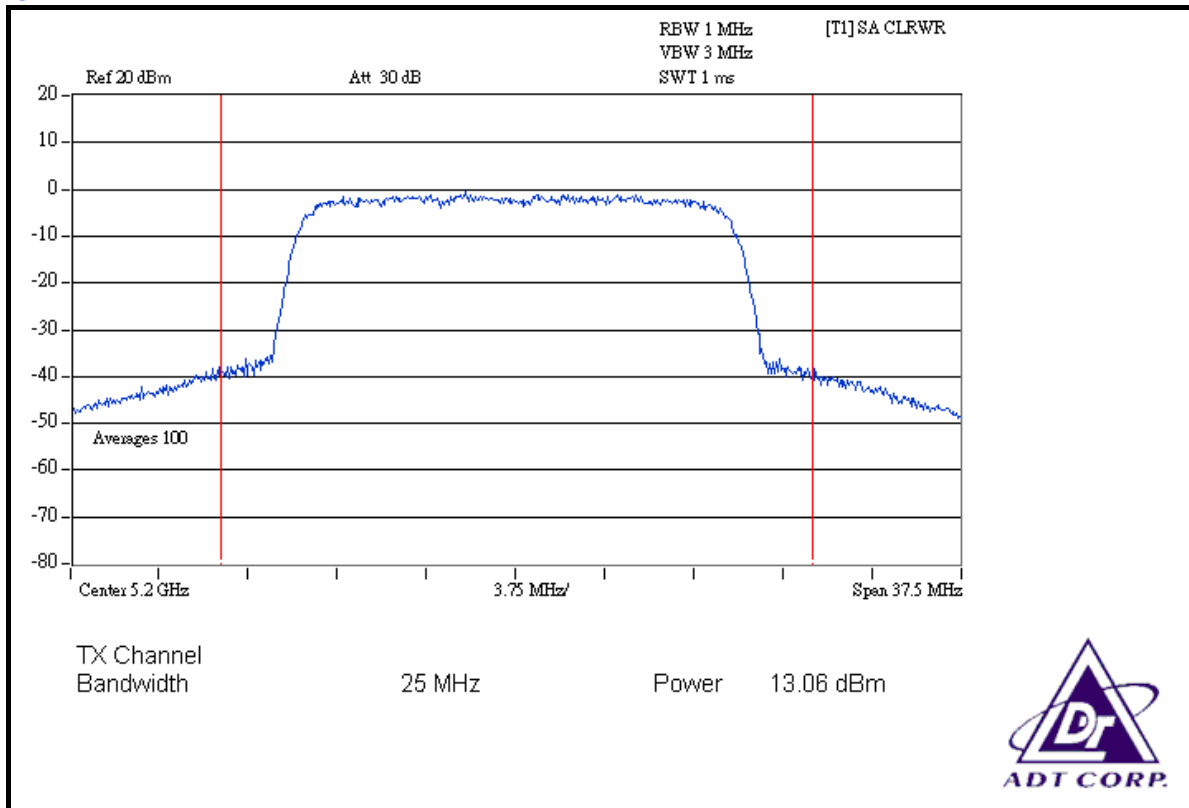
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	5180	20.230	25.235	13.06	14.02	45.465	16.577	17.00	PASS
2	5200	20.230	25.645	13.06	14.09	45.875	16.616	17.00	PASS
4	5240	20.184	25.410	13.05	14.05	45.594	16.589	17.00	PASS
5	5260	17.458	26.303	12.42	14.20	43.761	16.411	24.00	PASS
7	5300	18.030	26.424	12.56	14.22	44.454	16.479	24.00	PASS
8	5320	20.512	26.546	13.12	14.24	47.058	16.726	24.00	PASS

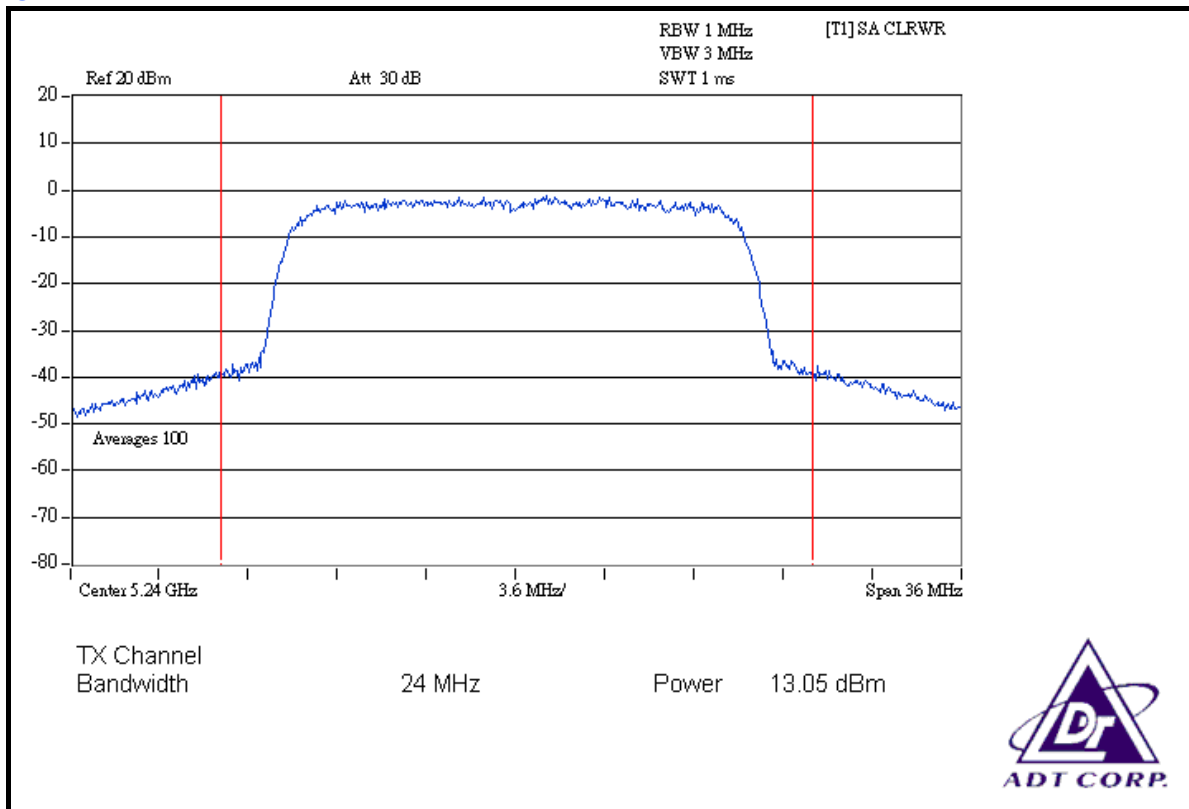
FOR CHAIN 0: CH 1



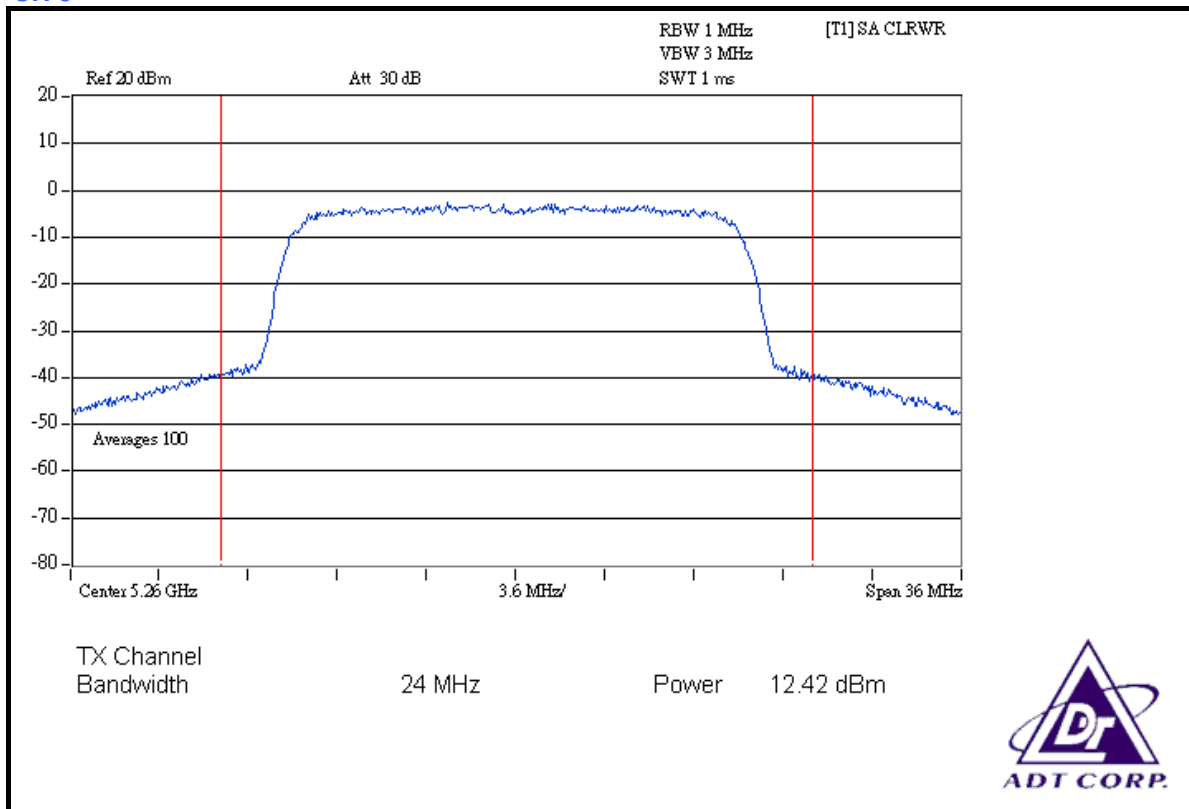
CH 2



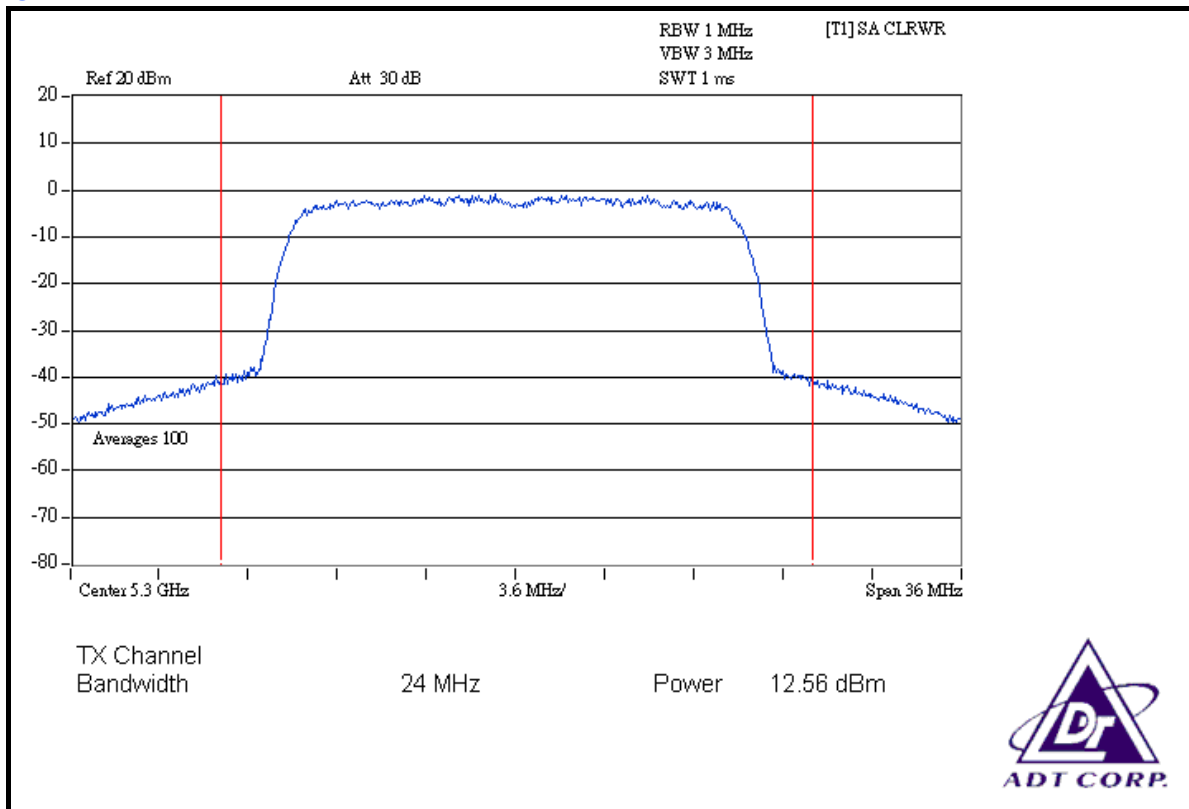
CH 4



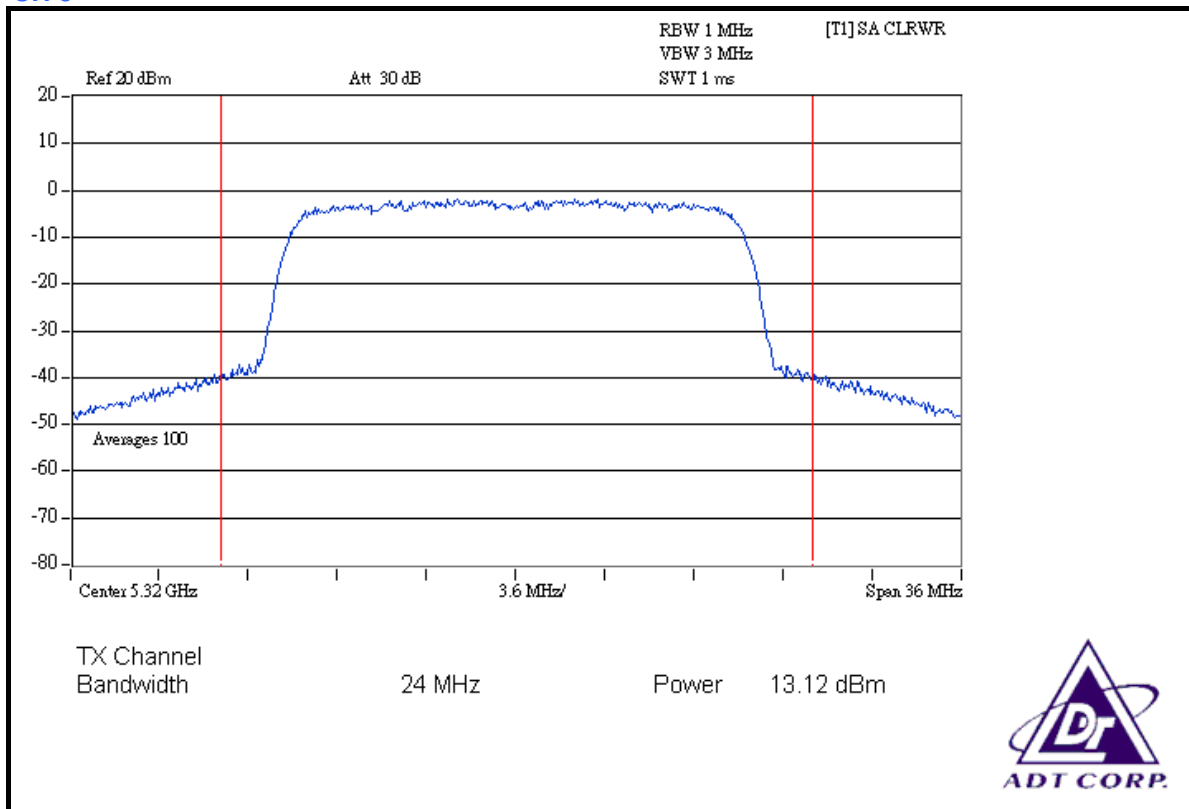
CH 5



CH 7

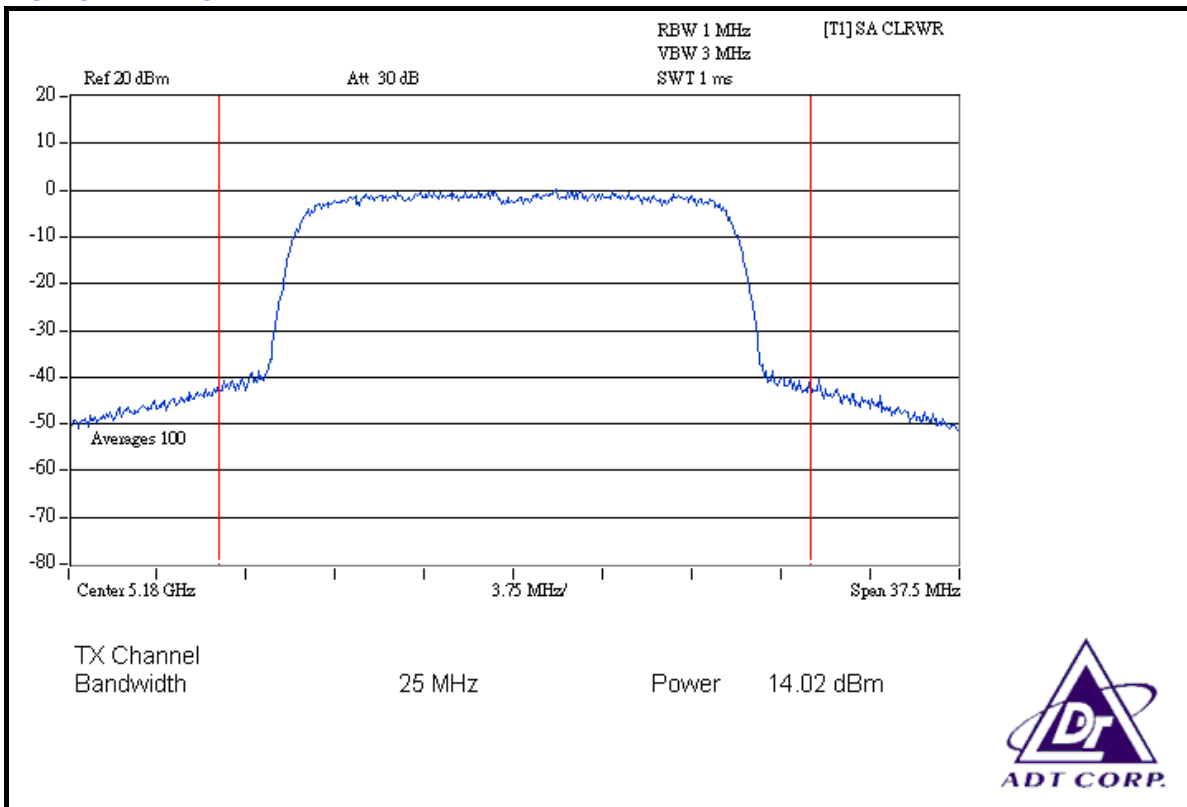


CH 8

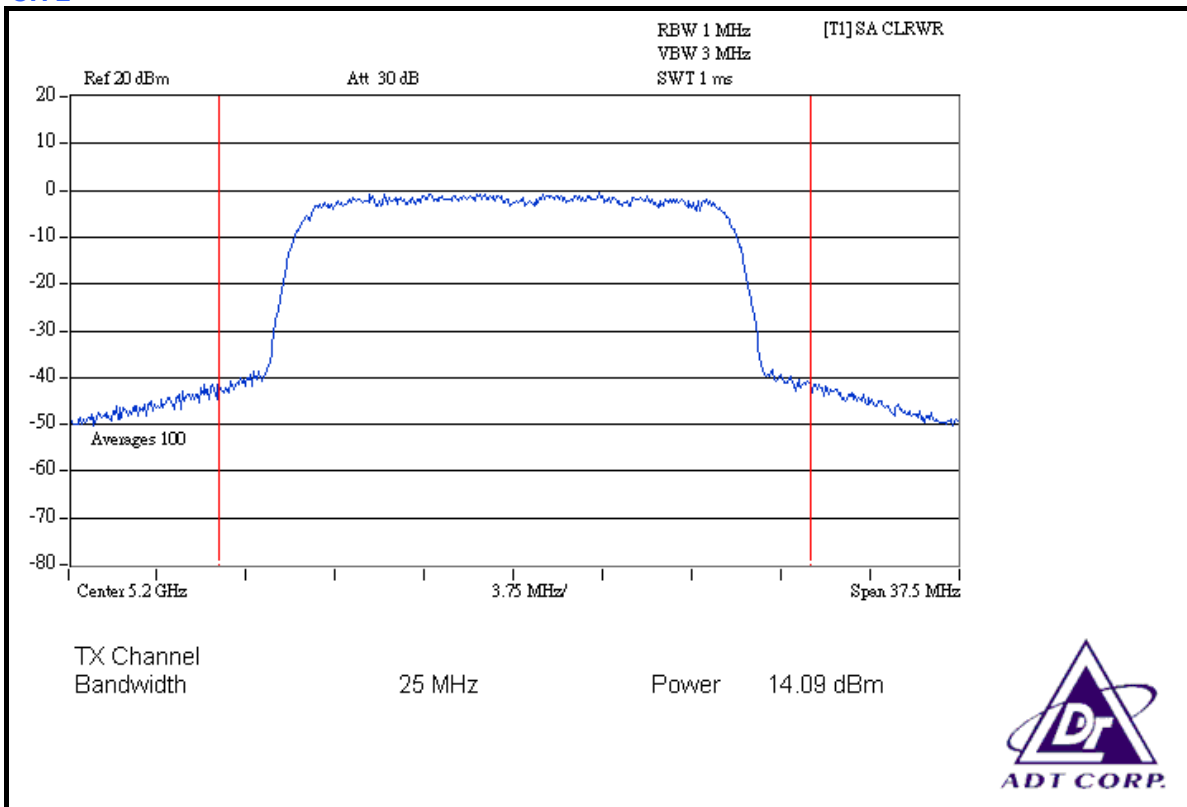




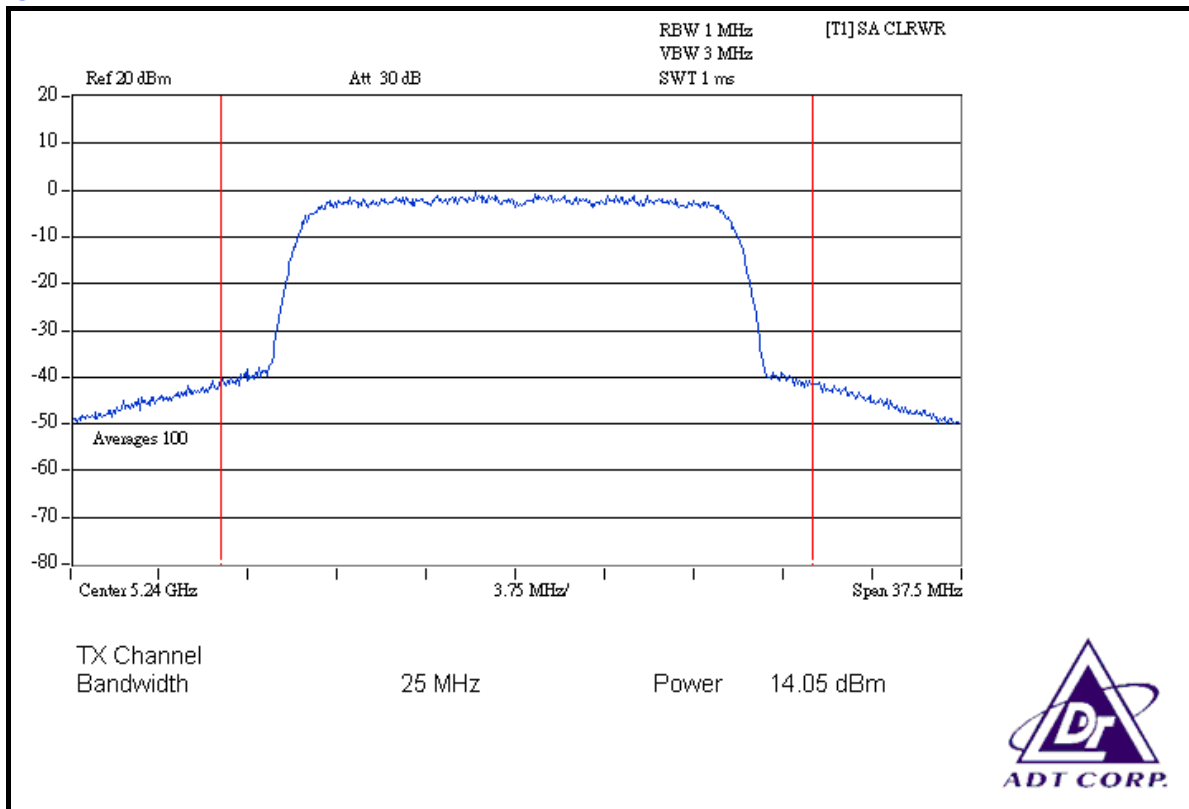
FOR CHAIN 1: CH 1



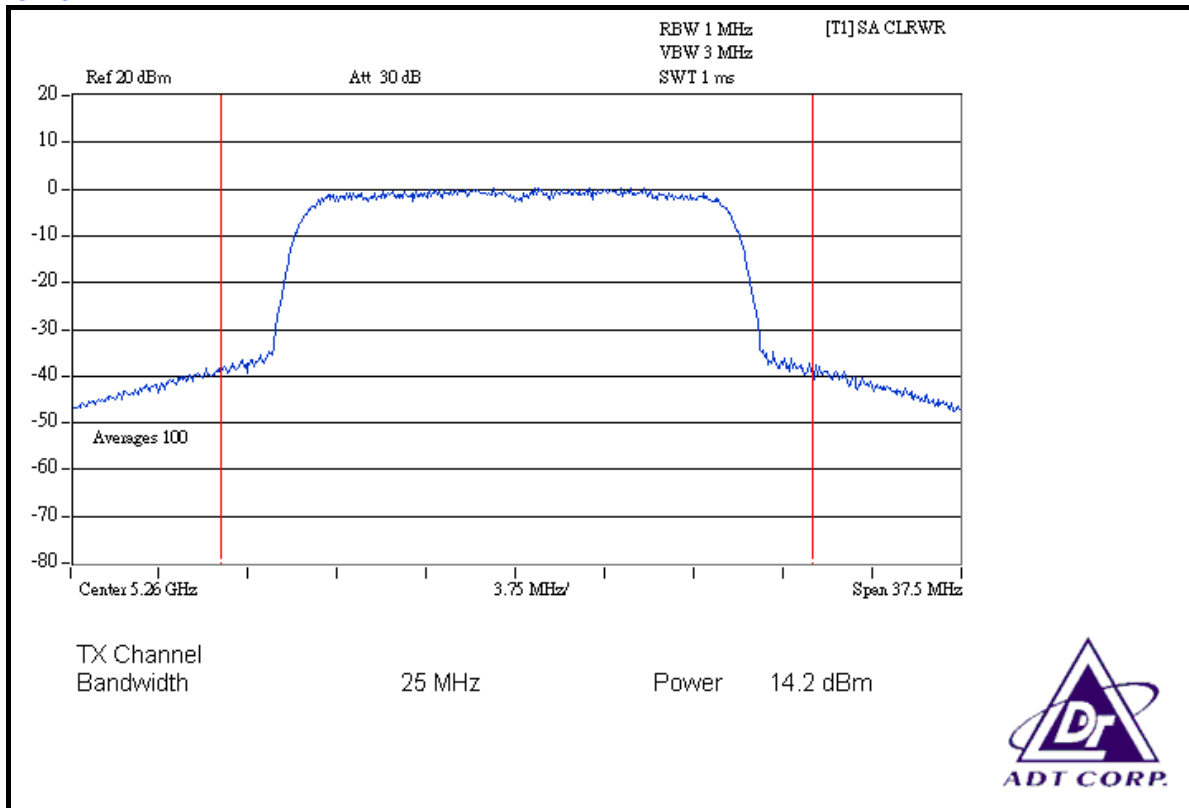
CH 2



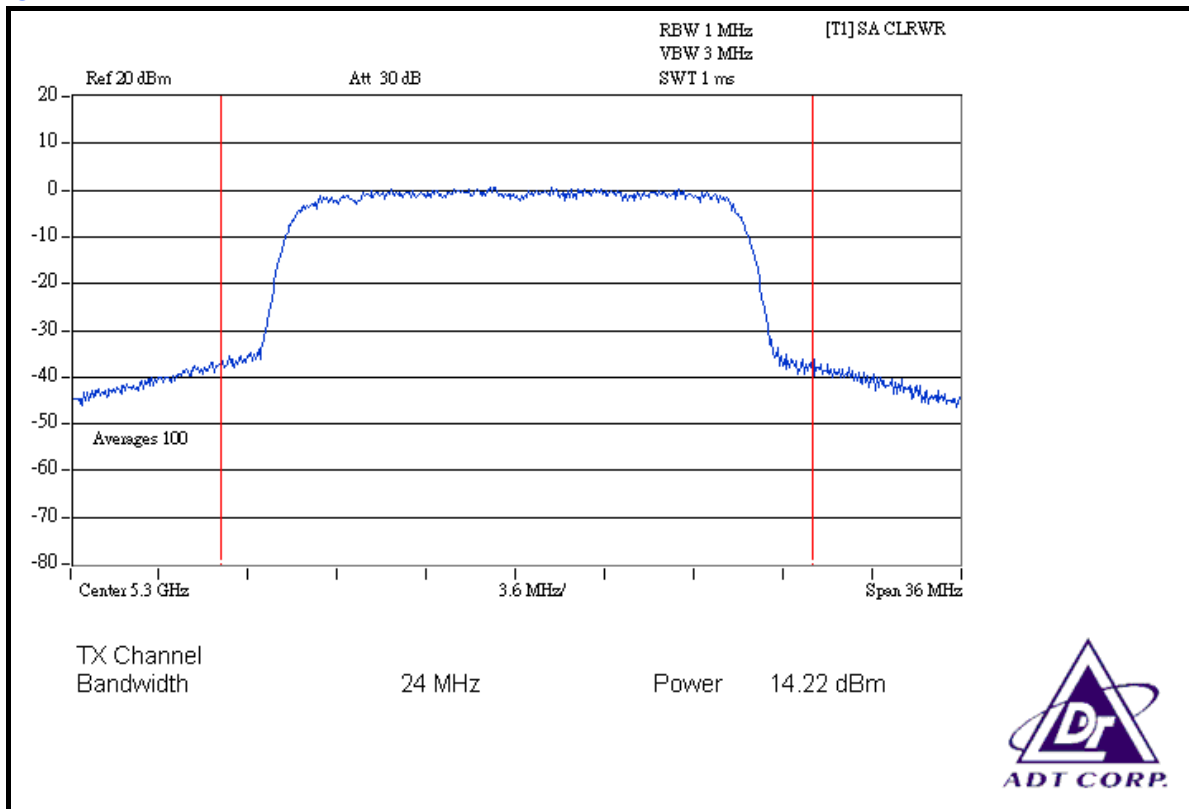
CH 4



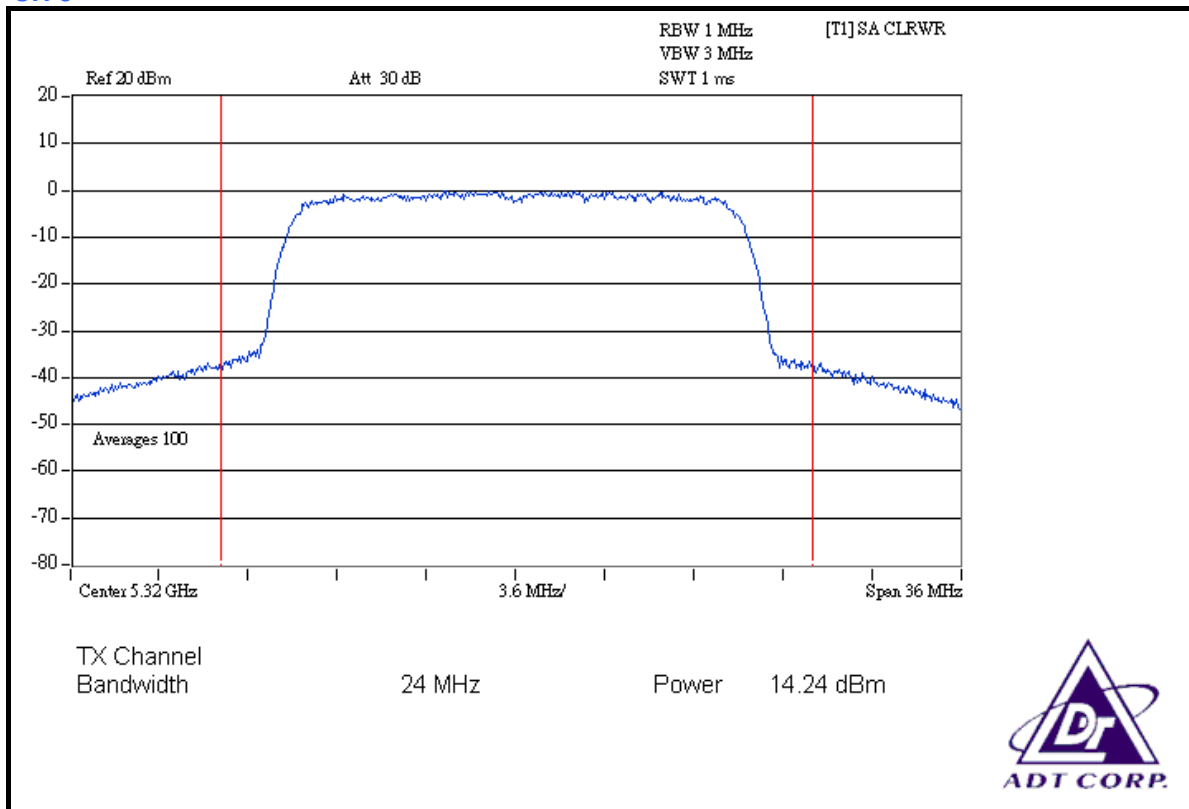
CH 5



CH 7



CH 8



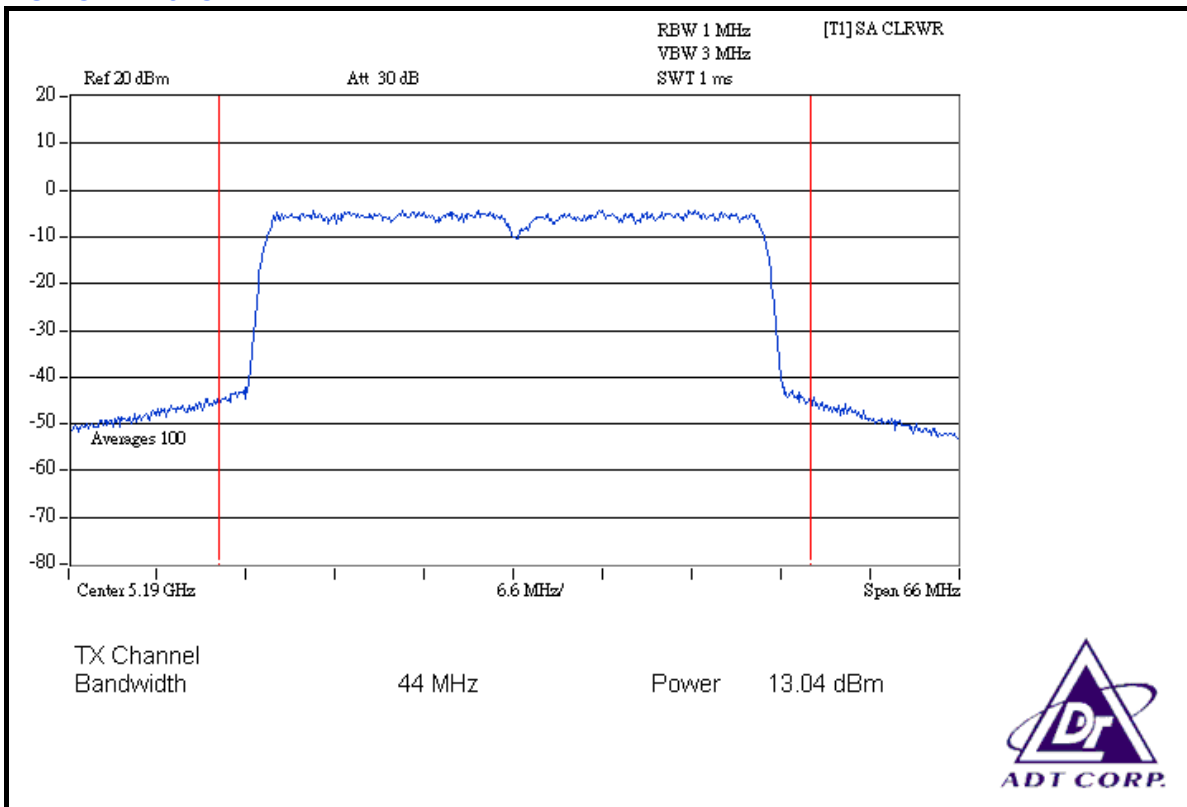


DRAFT 802.11n (40MHz) OFDM MODULATION:

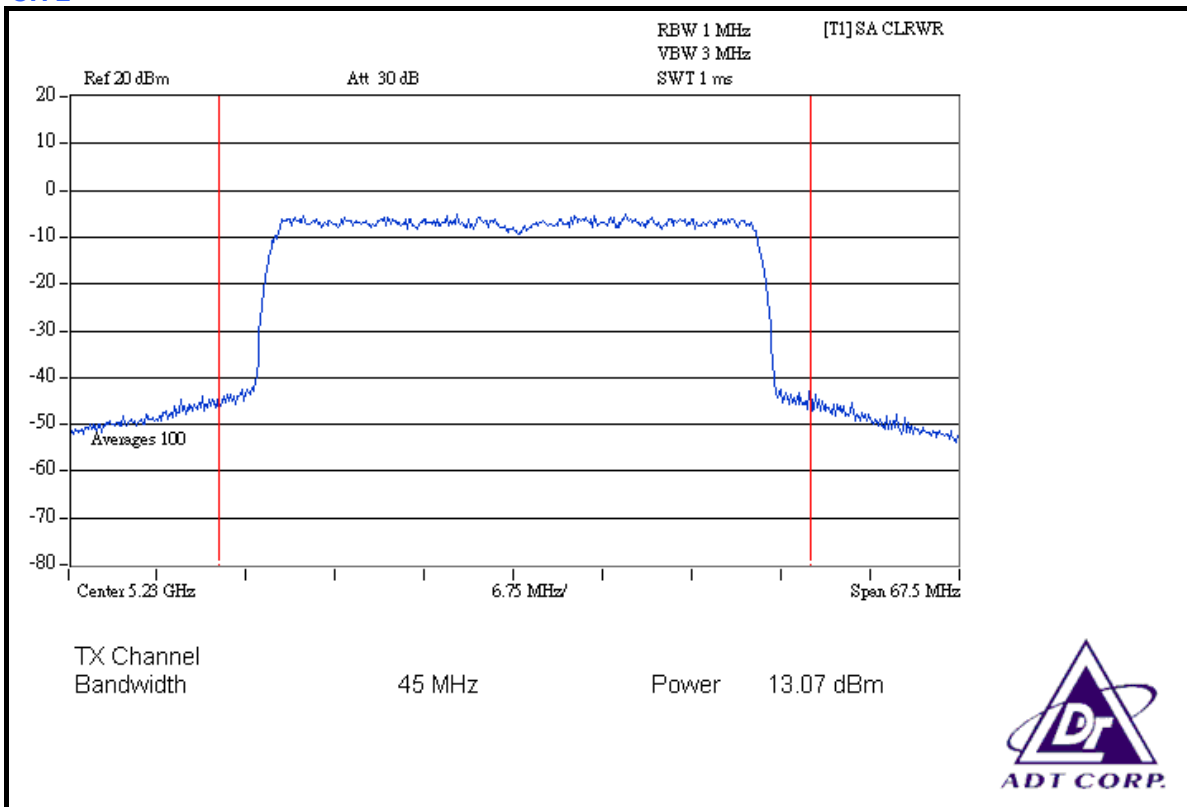
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	5190	20.137	25.645	13.04	14.09	45.782	16.607	17.00	PASS
2	5230	20.277	25.351	13.07	14.04	45.628	16.592	17.00	PASS
3	5270	16.634	27.227	12.21	14.35	43.861	16.421	24.00	PASS
4	5310	17.539	27.164	12.44	14.34	44.703	16.503	24.00	PASS

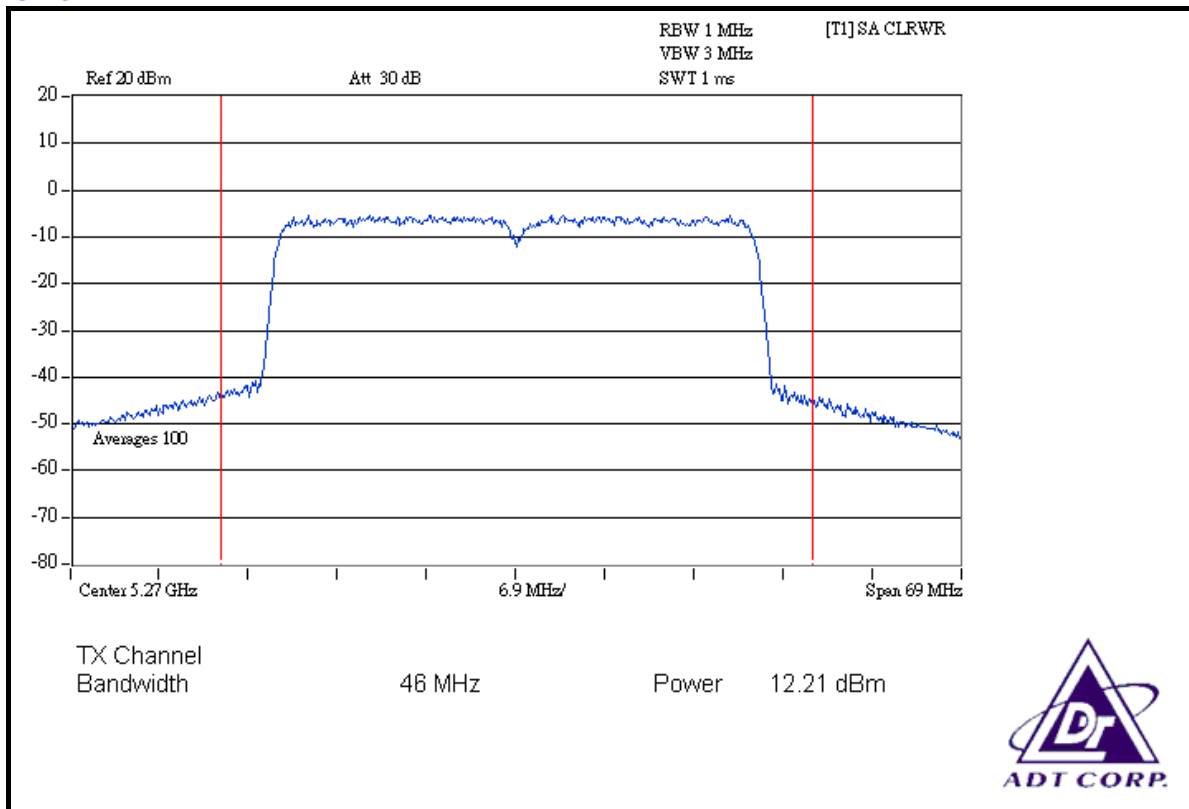
FOR CHAIN 0: CH 1



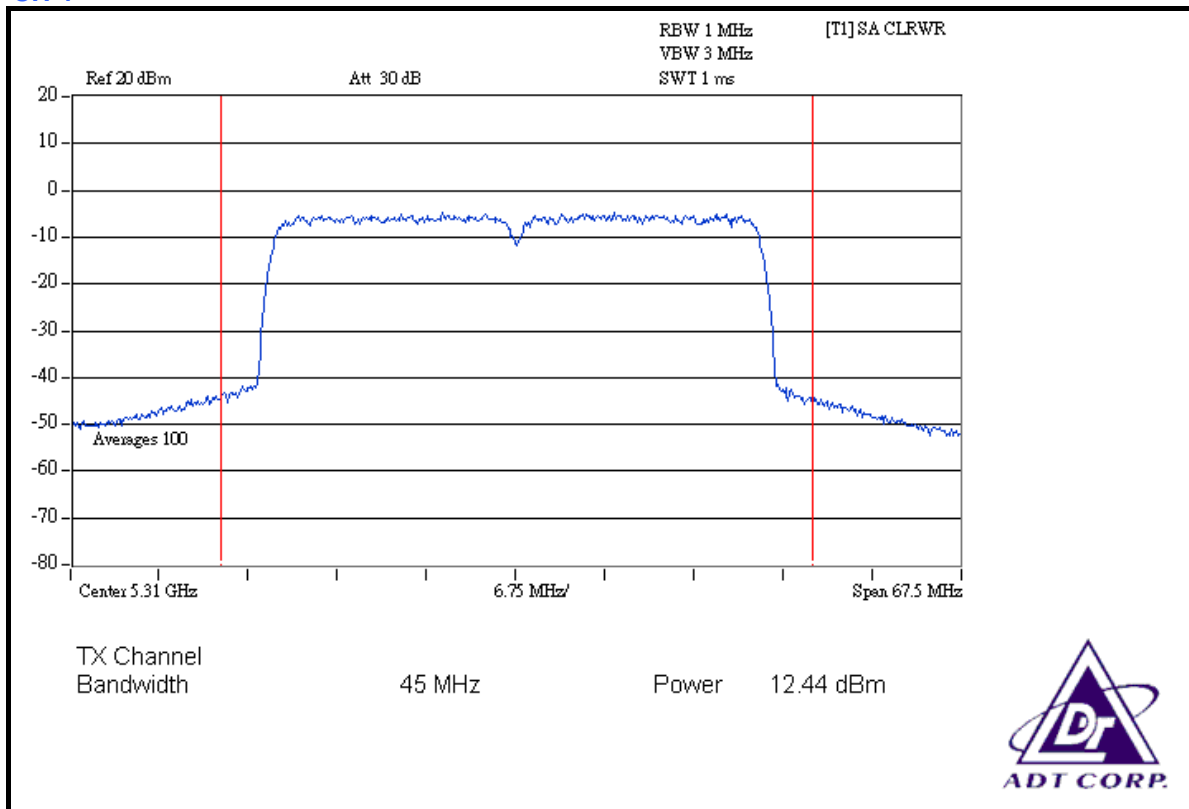
CH 2



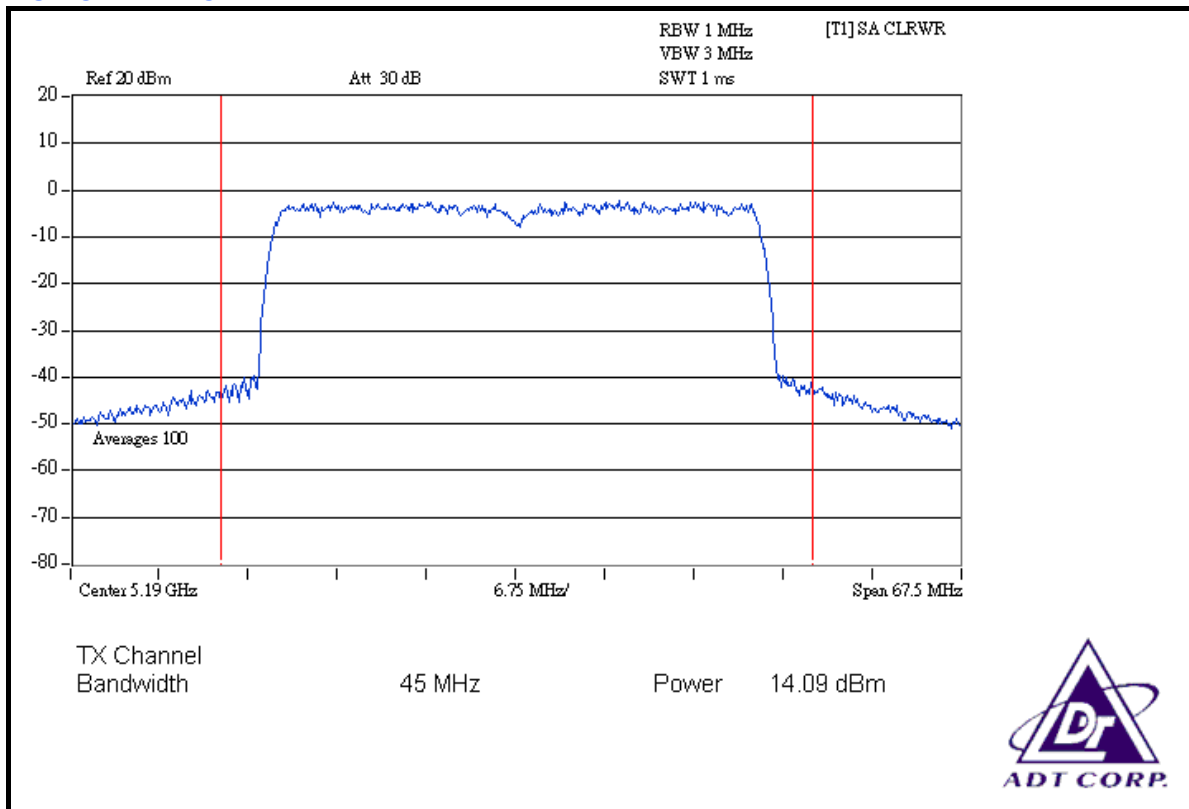
CH 3



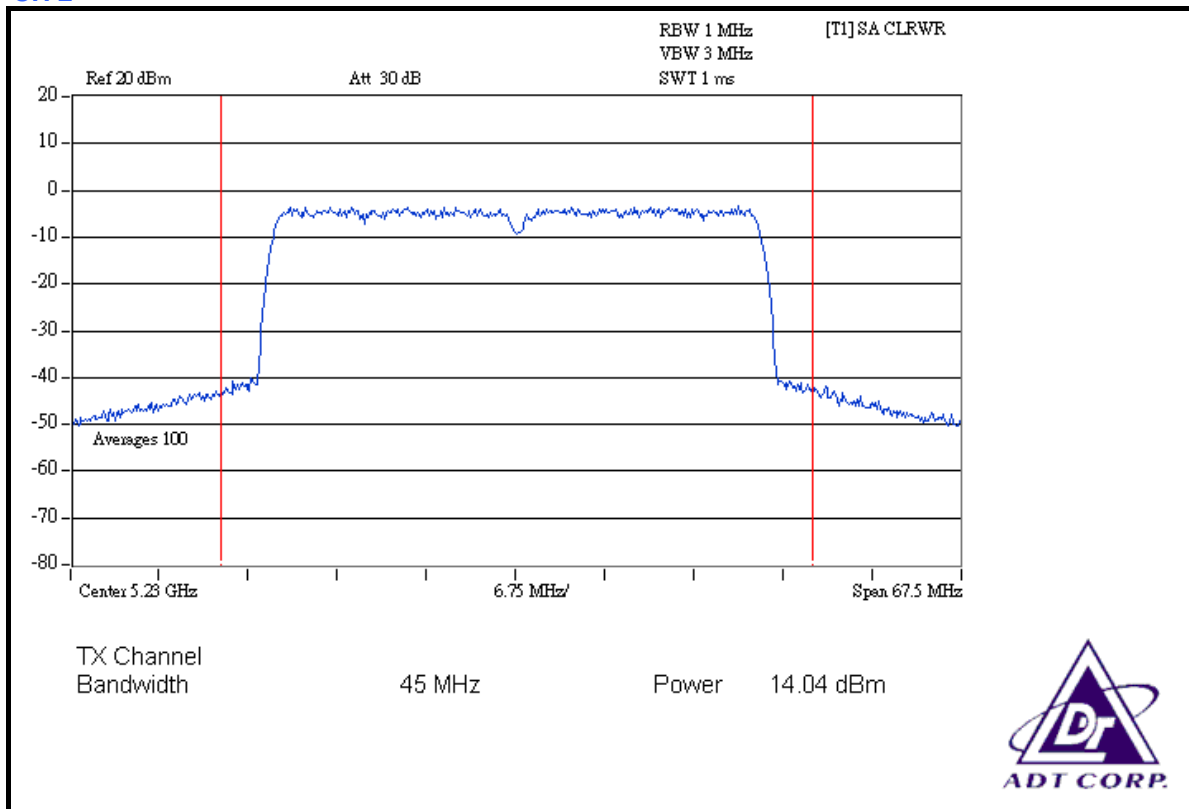
CH 4



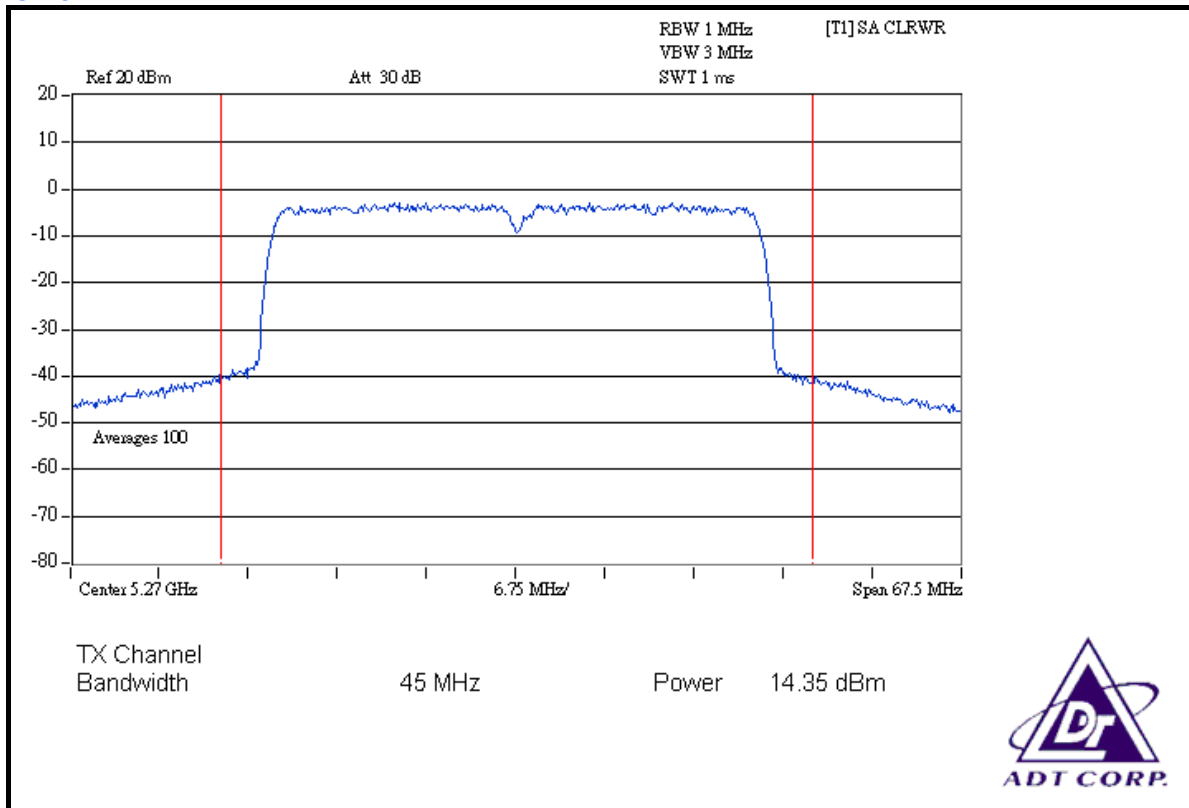
FOR CHAIN 1: CH 1



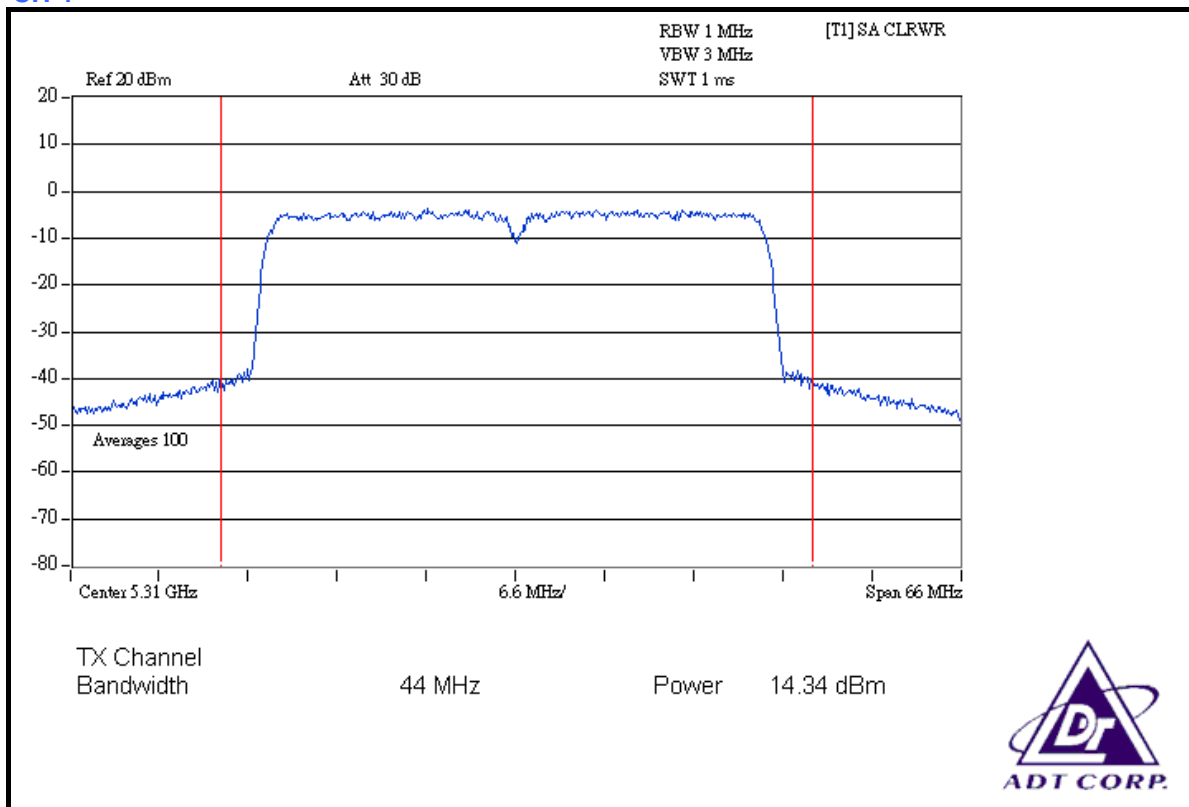
CH 2



CH 3



CH 4



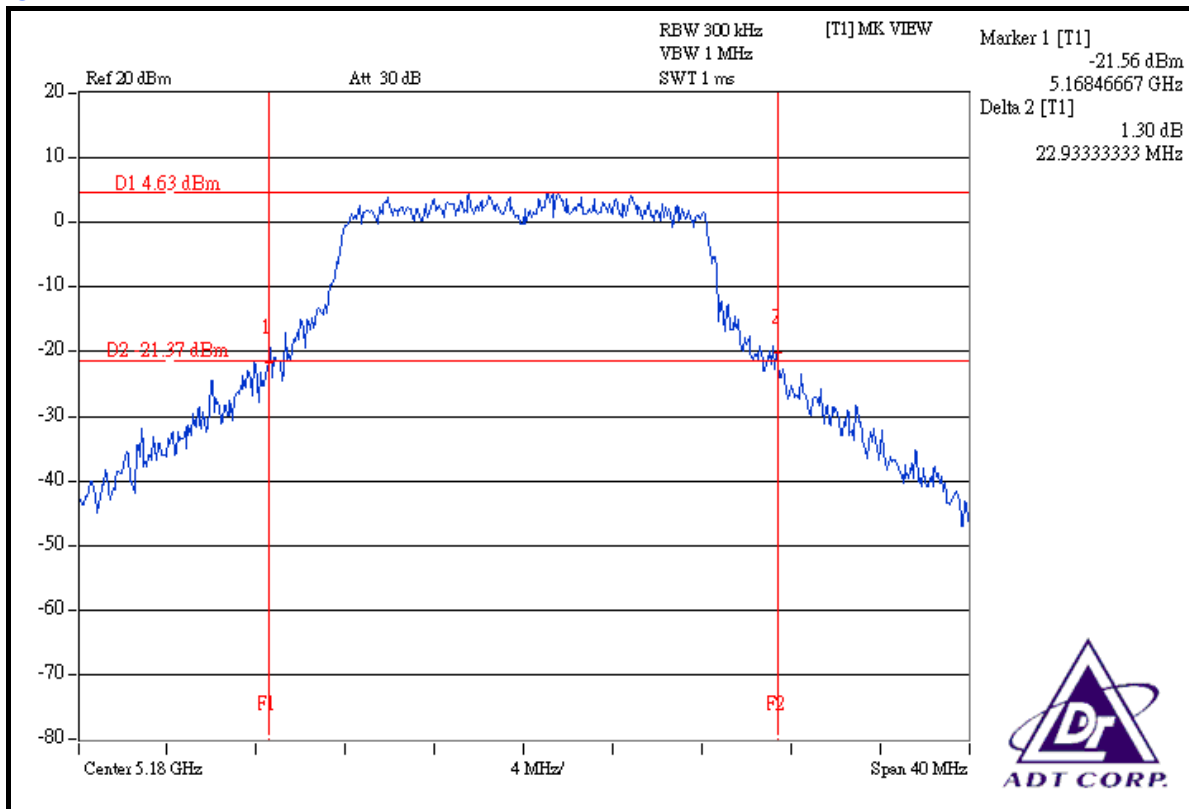


26dB OCCUPIED BANDWIDTH: 802.11a OFDM MODULATION:

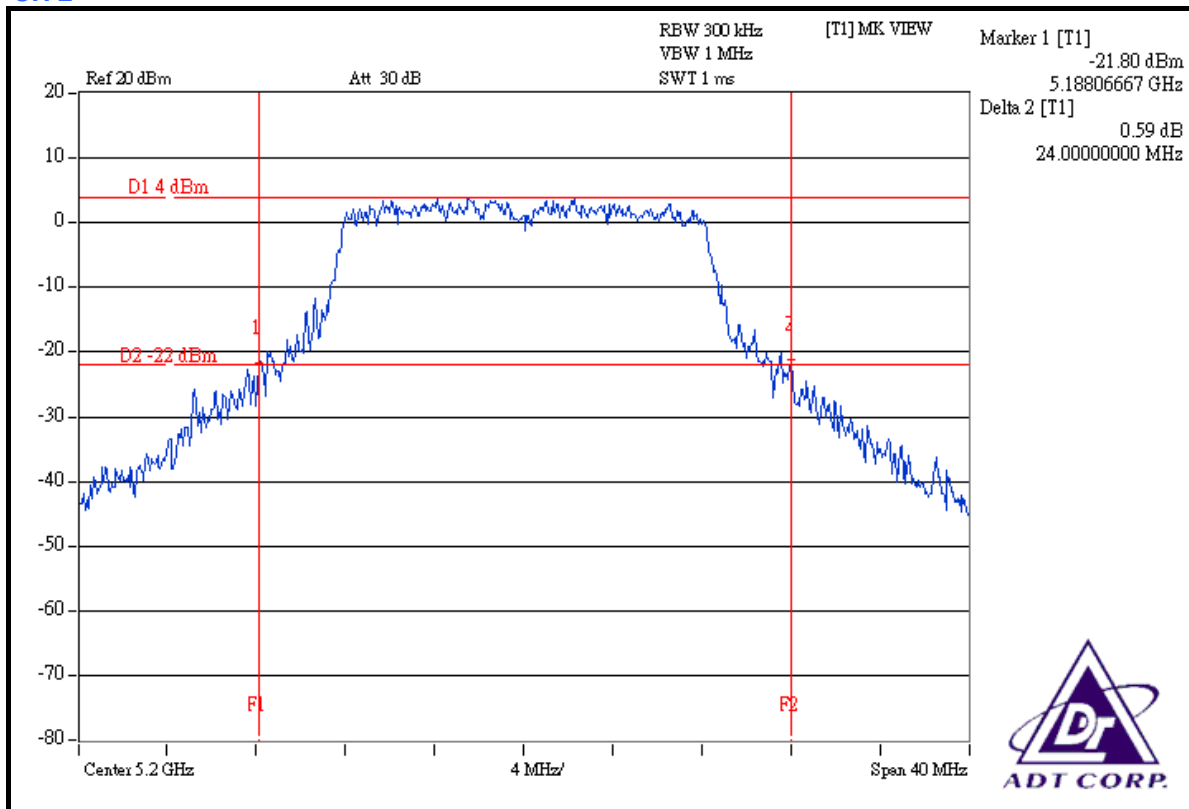
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
1	5180	22.93	PASS
2	5200	24.00	PASS
4	5240	23.13	PASS
5	5260	23.91	PASS
7	5300	23.90	PASS
8	5320	23.73	PASS

CH 1

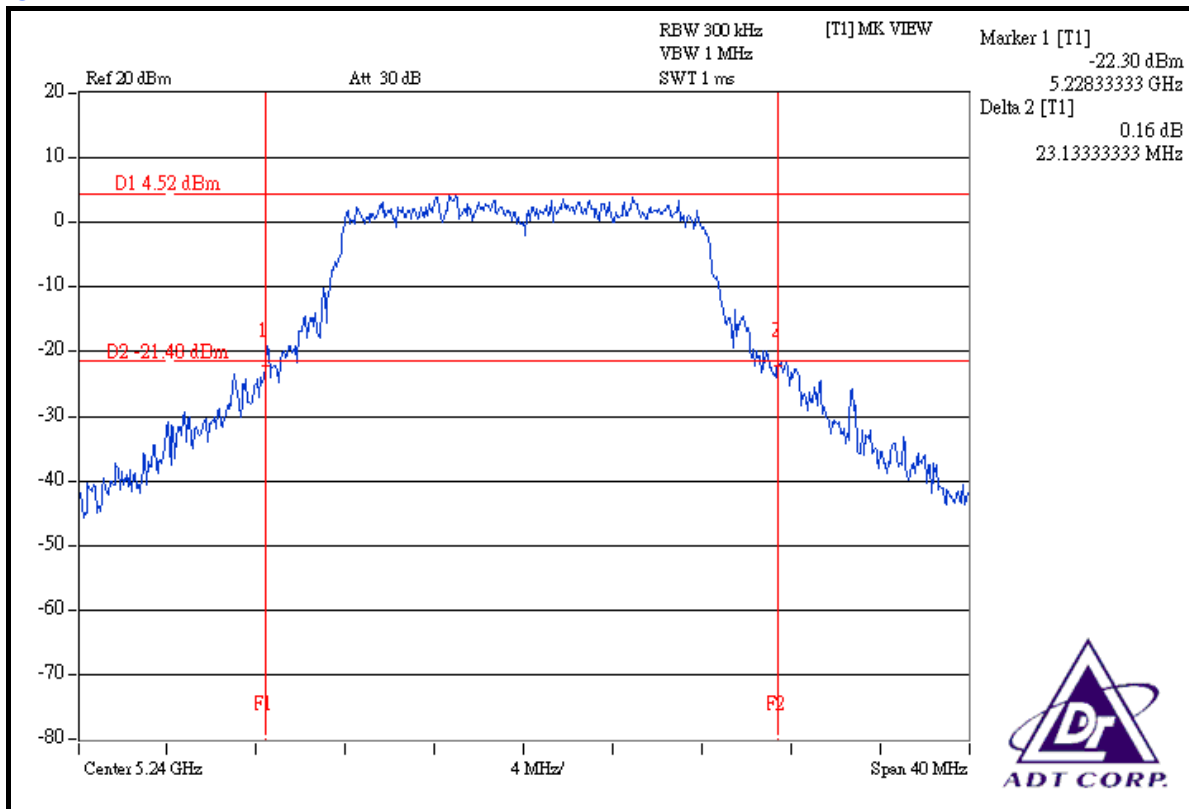


CH 2

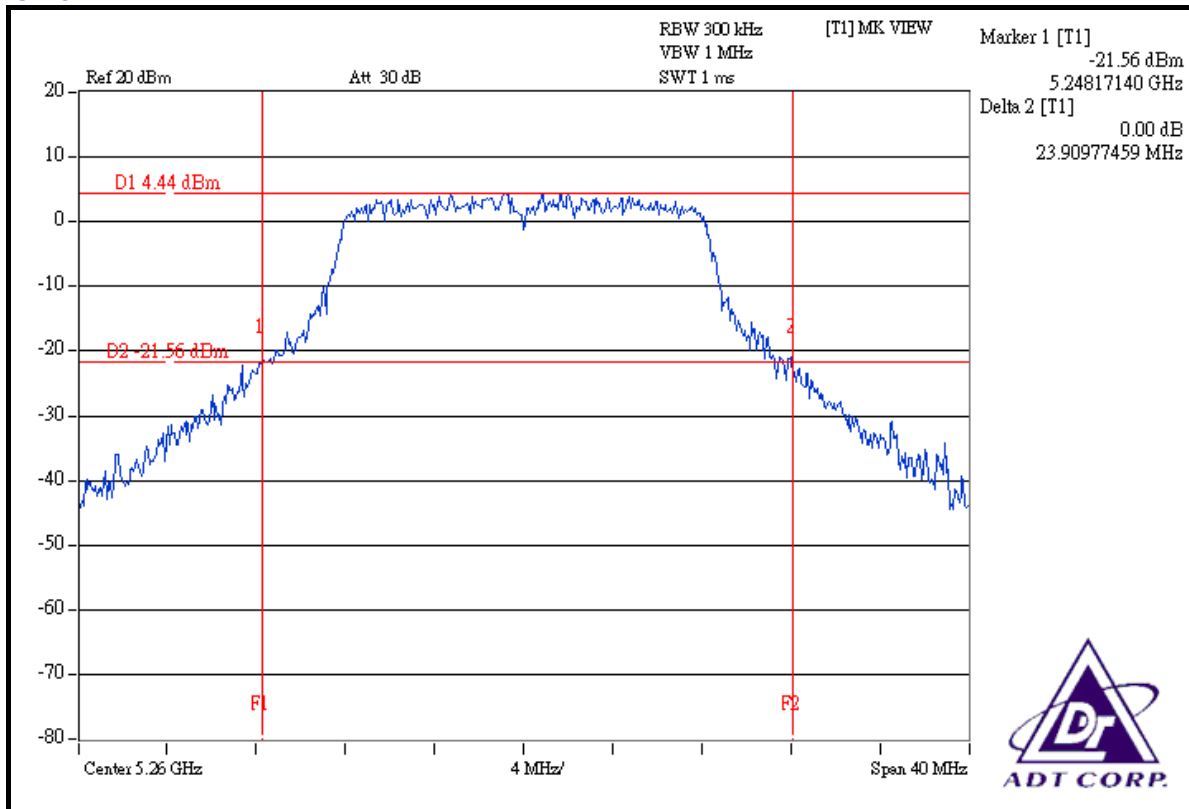




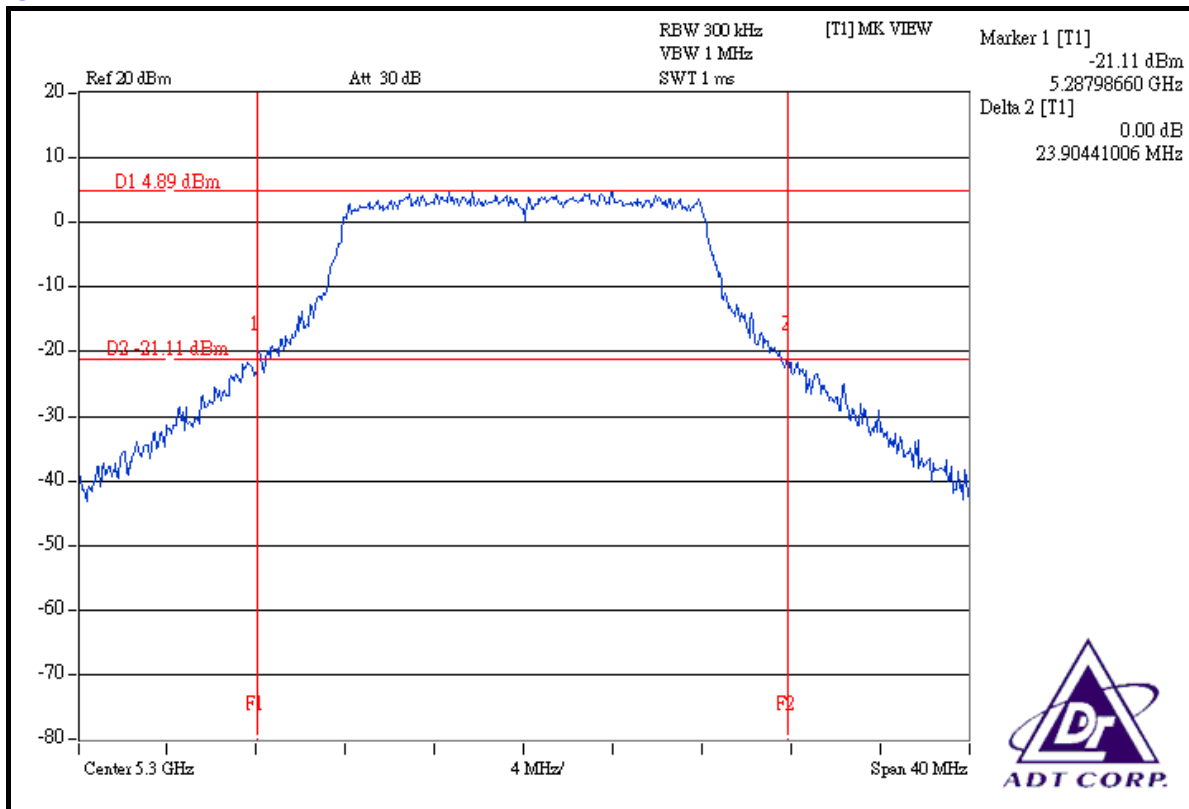
CH 4



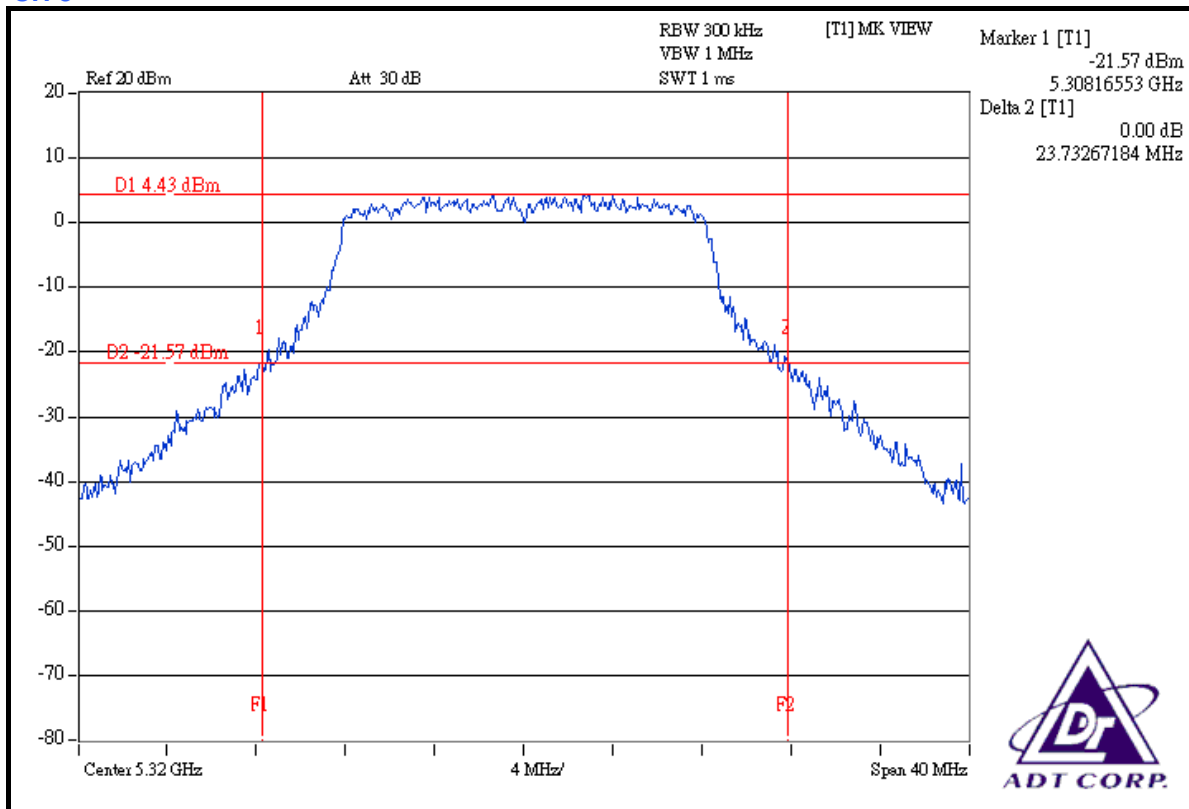
CH 5



CH 7



CH 8



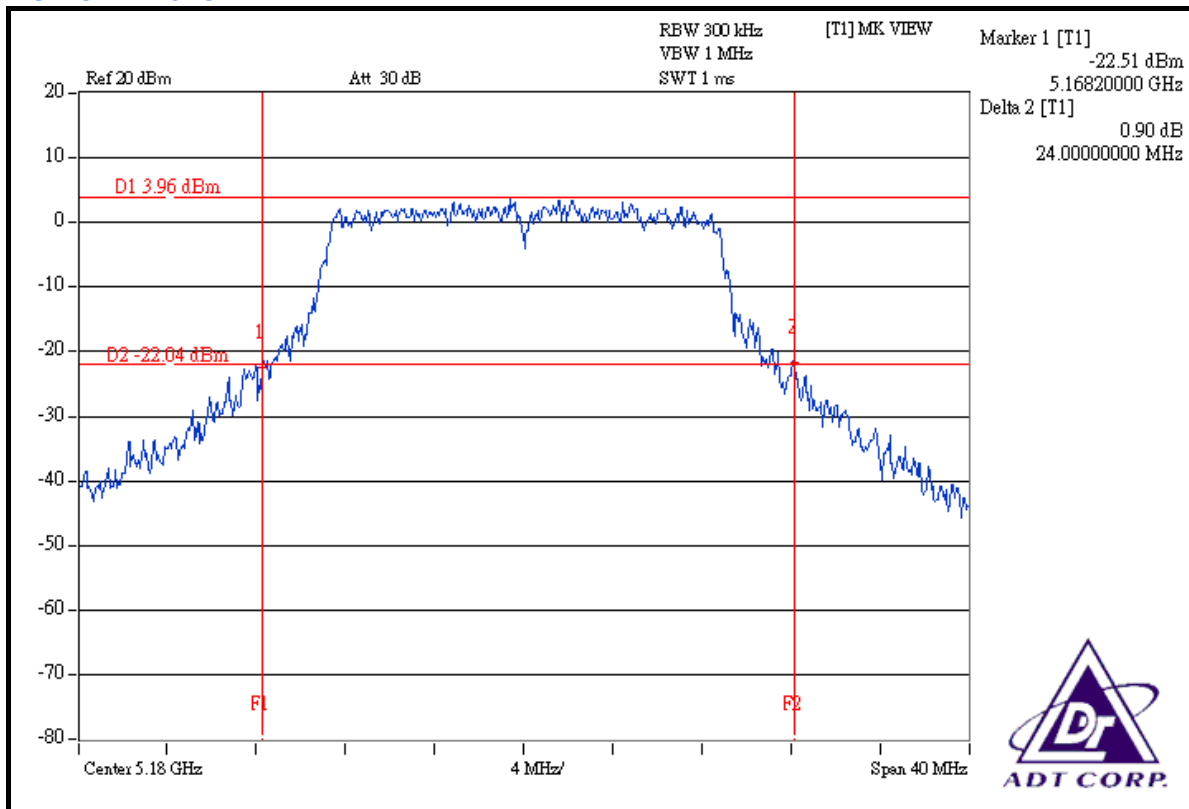


DRAFT 802.11n (20MHz) OFDM MODULATION:

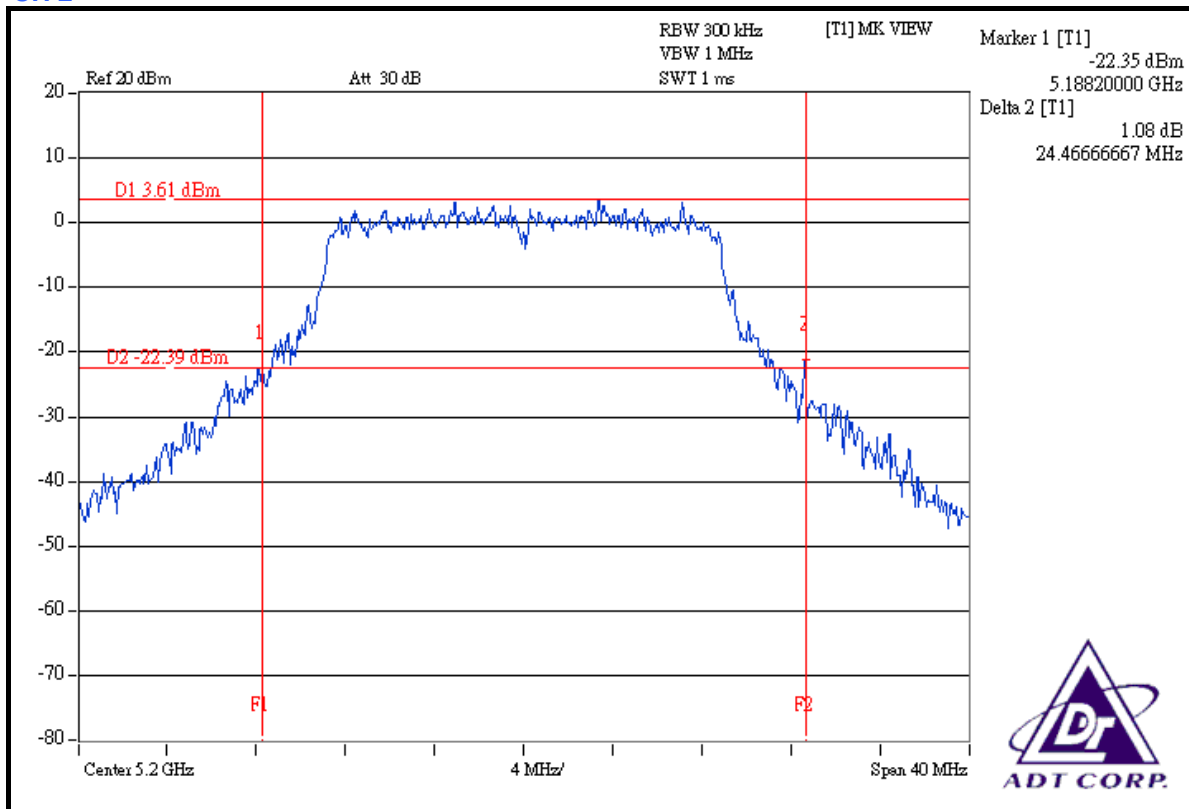
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
1	5180	24.00	24.13	PASS
2	5200	24.47	24.27	PASS
4	5240	23.87	24.80	PASS
5	5260	23.68	24.28	PASS
7	5300	23.98	23.89	PASS
8	5320	23.46	23.84	PASS

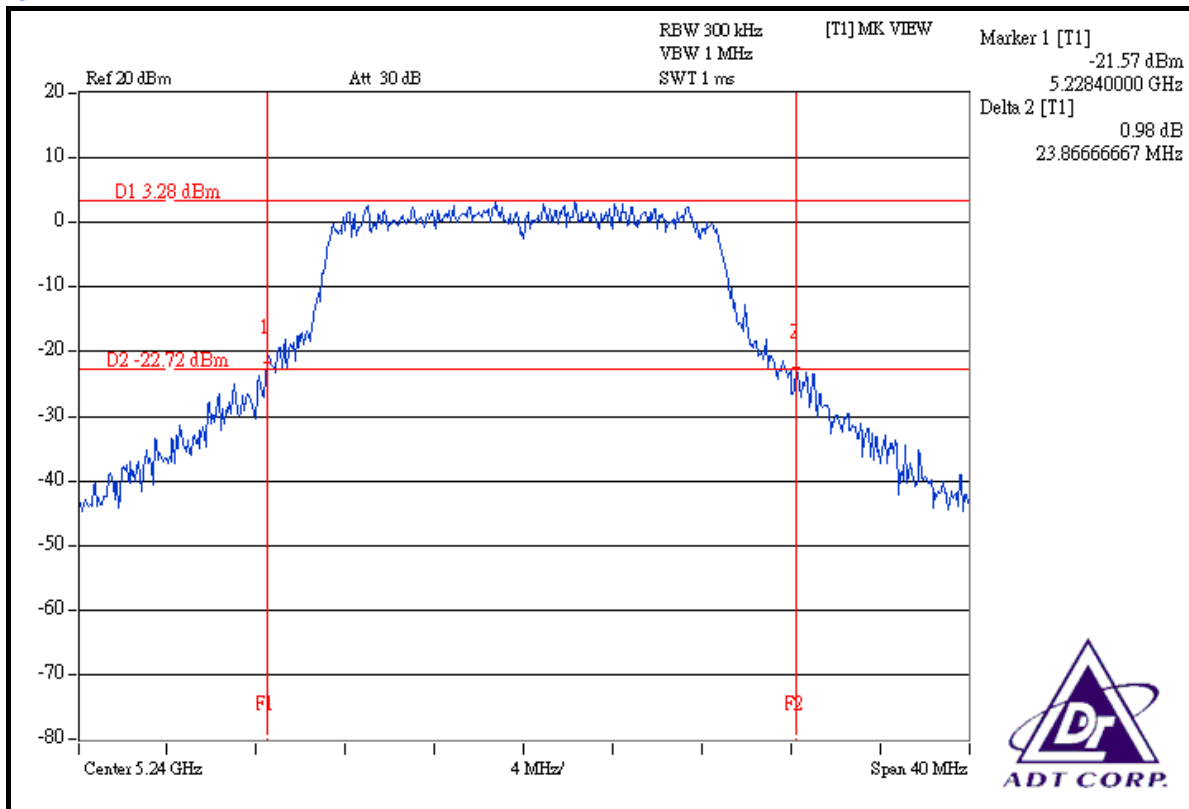
FOR CHAIN 0: CH 1



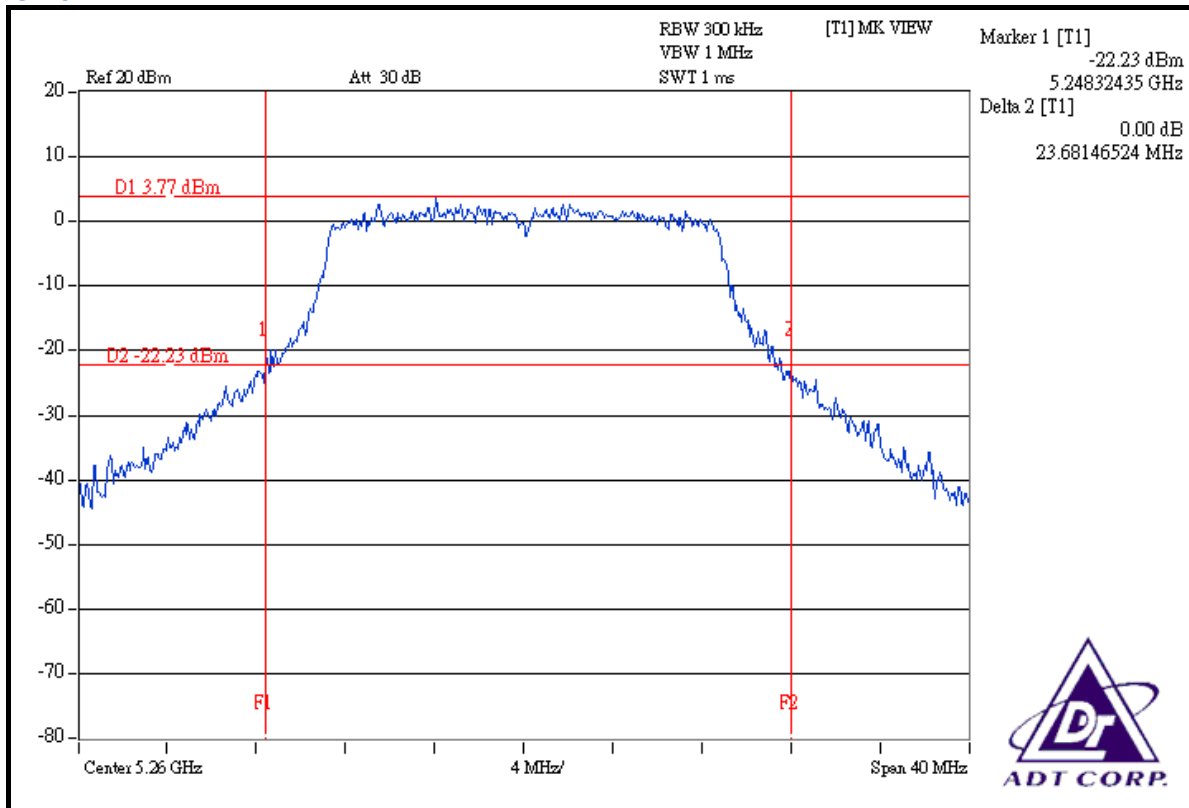
CH 2



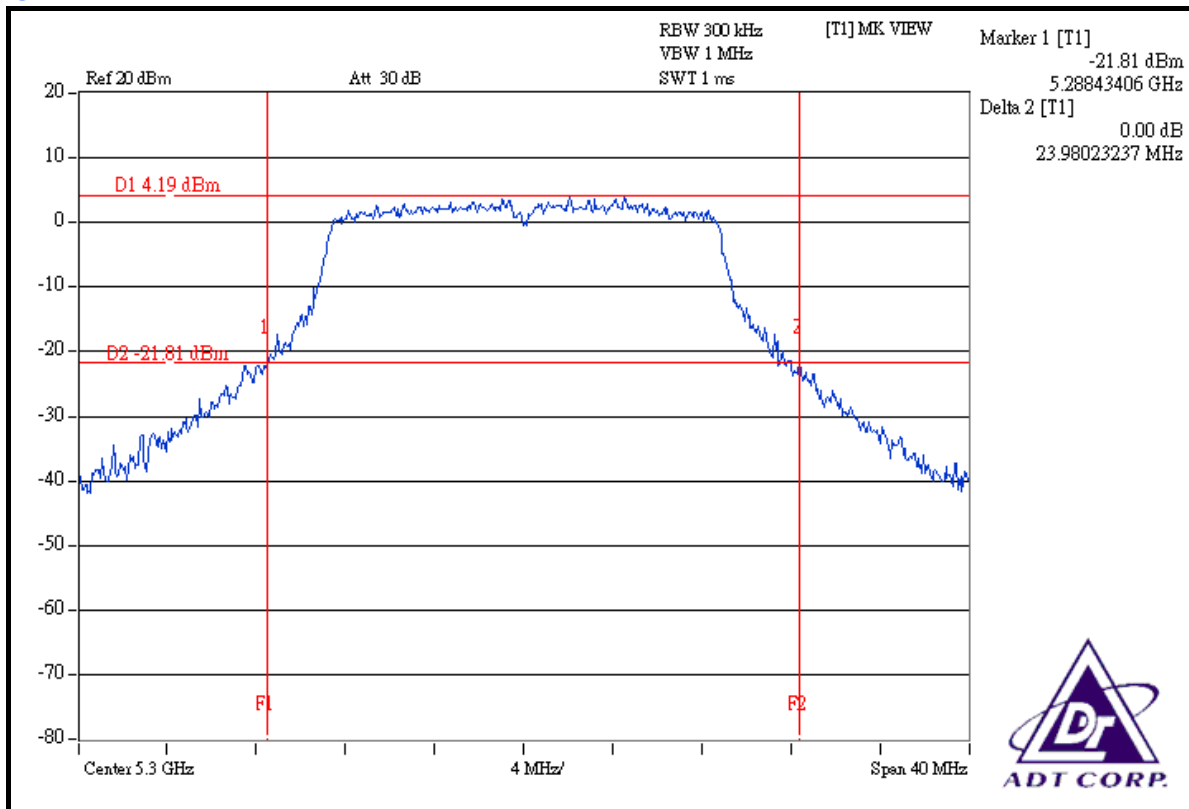
CH 4



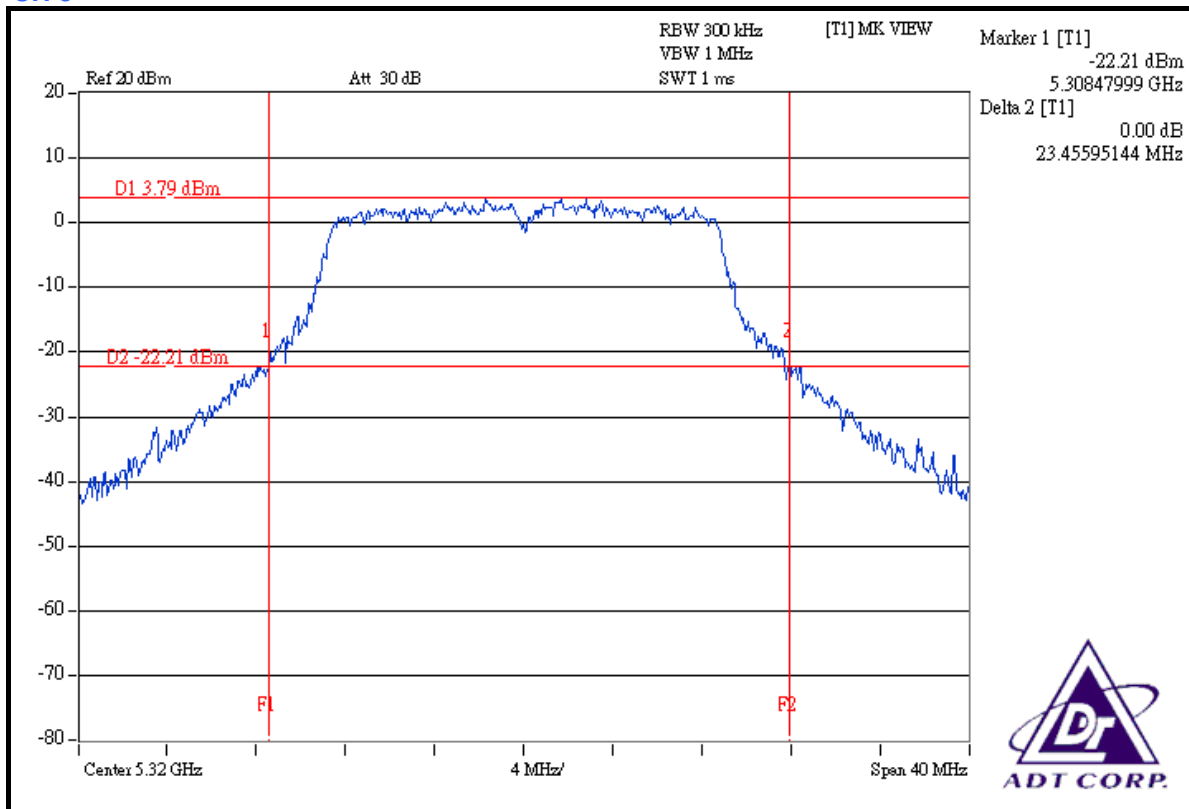
CH 5



CH 7

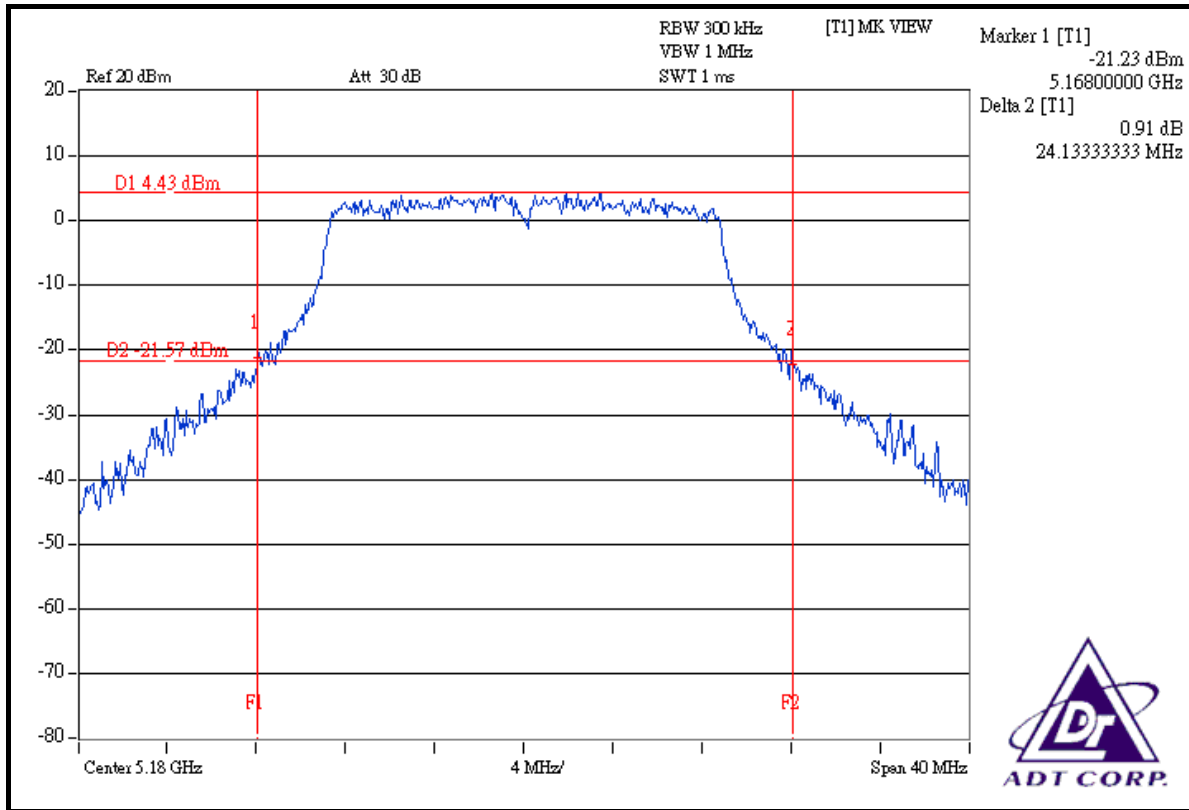


CH 8

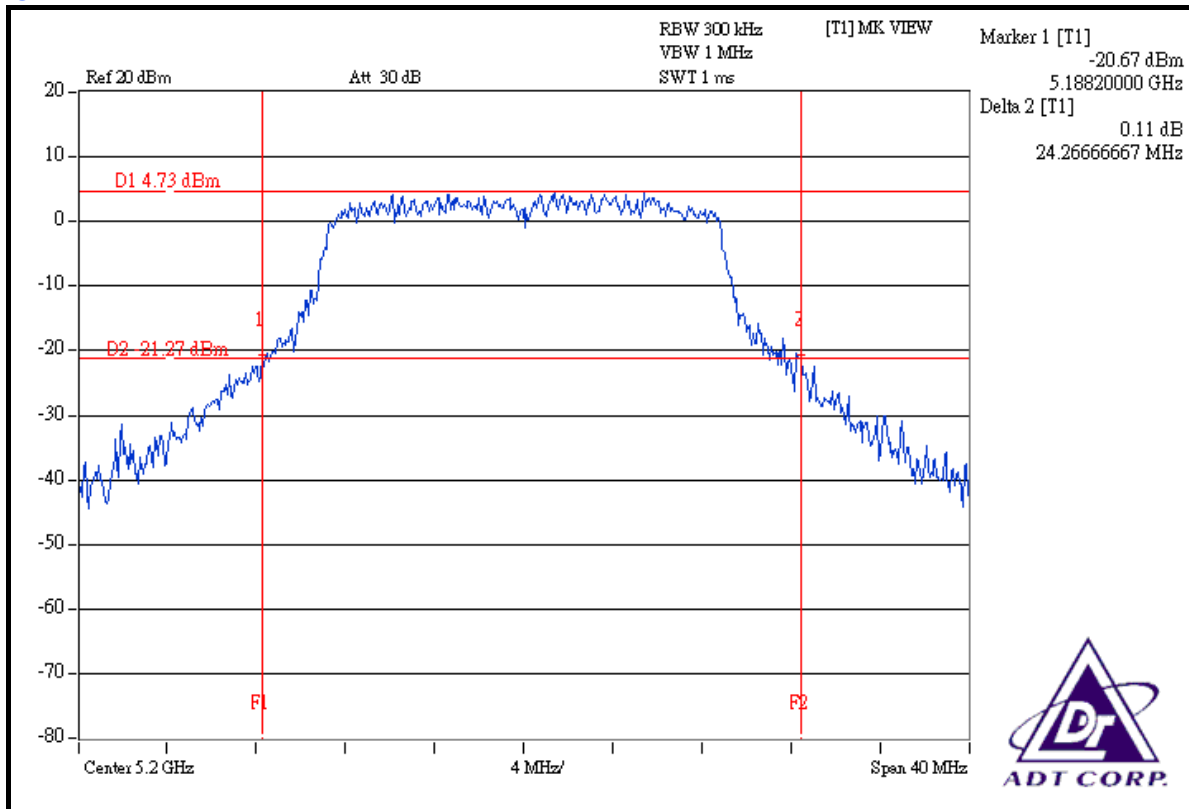




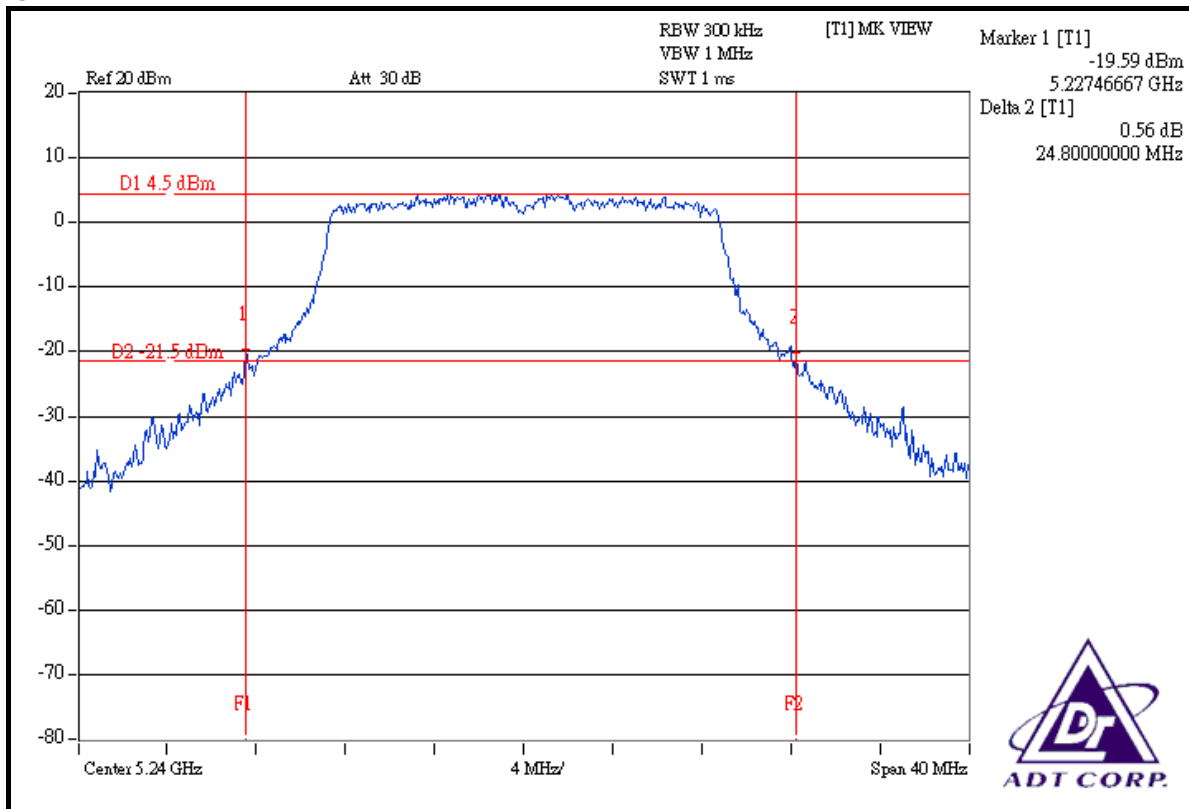
FOR CHAIN 1: CH 1



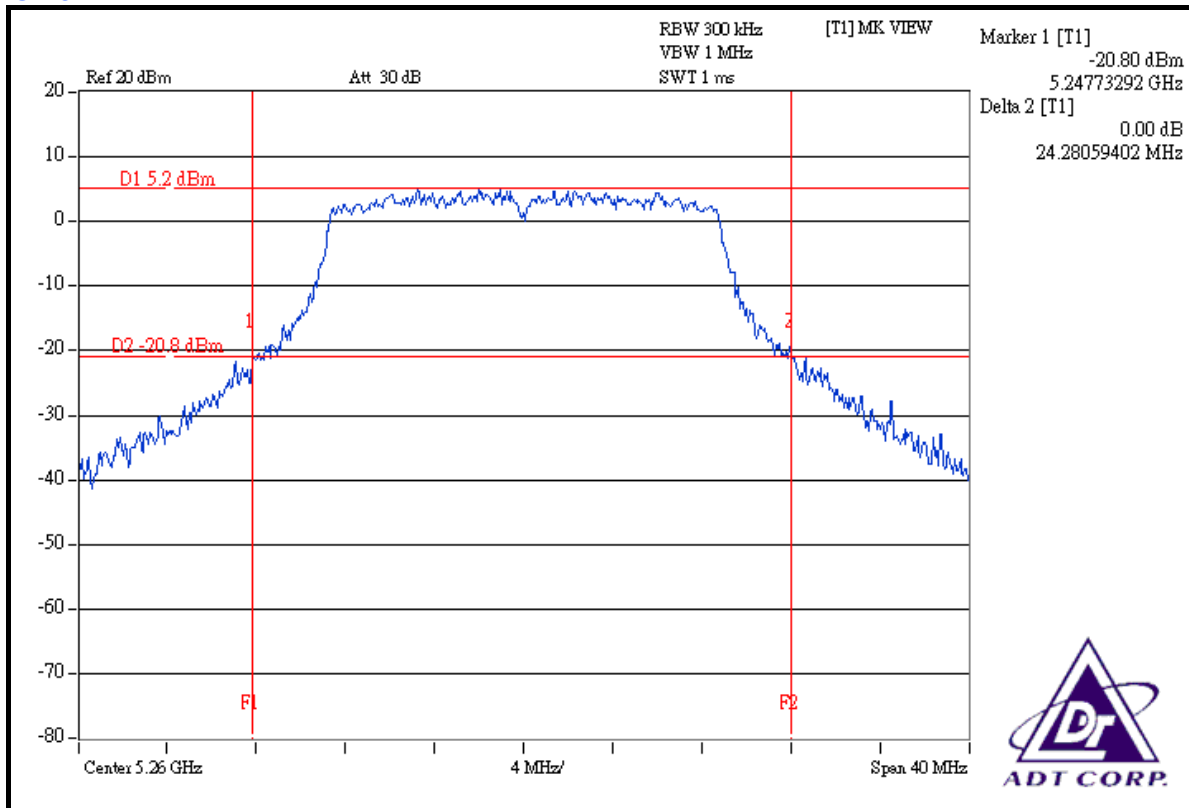
CH 2



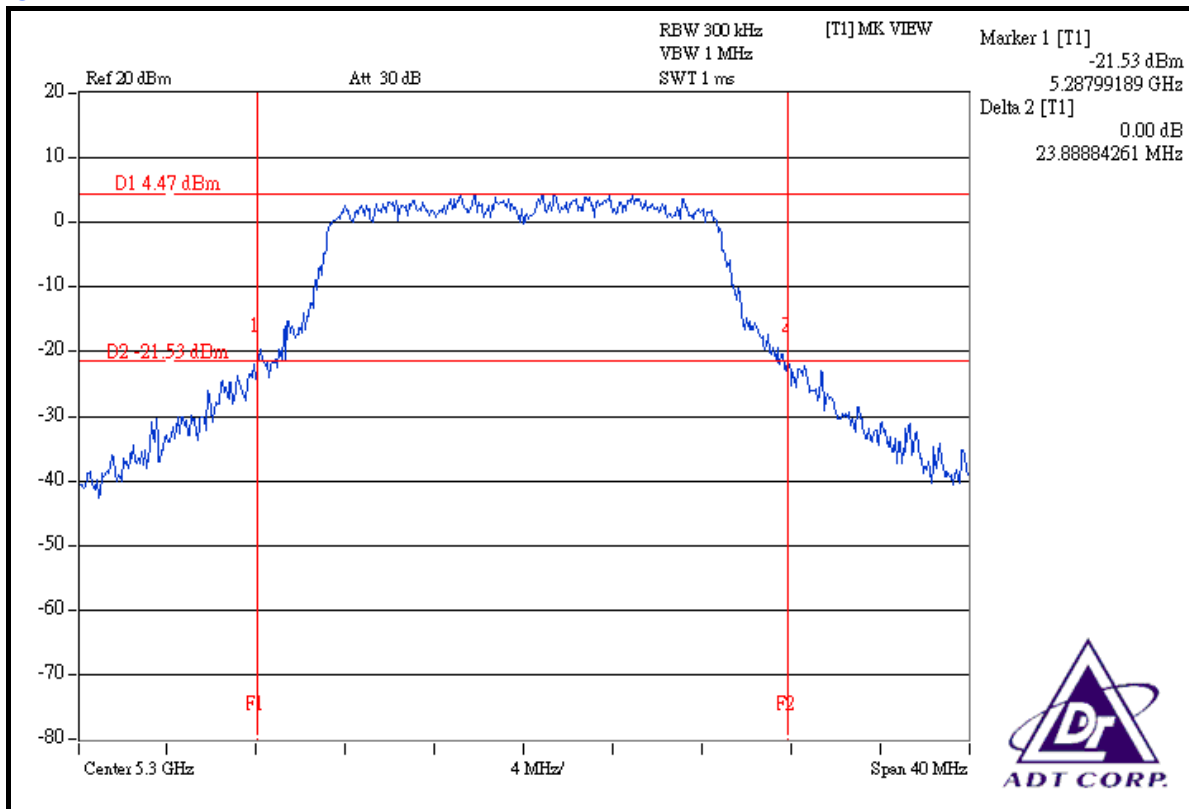
CH 4



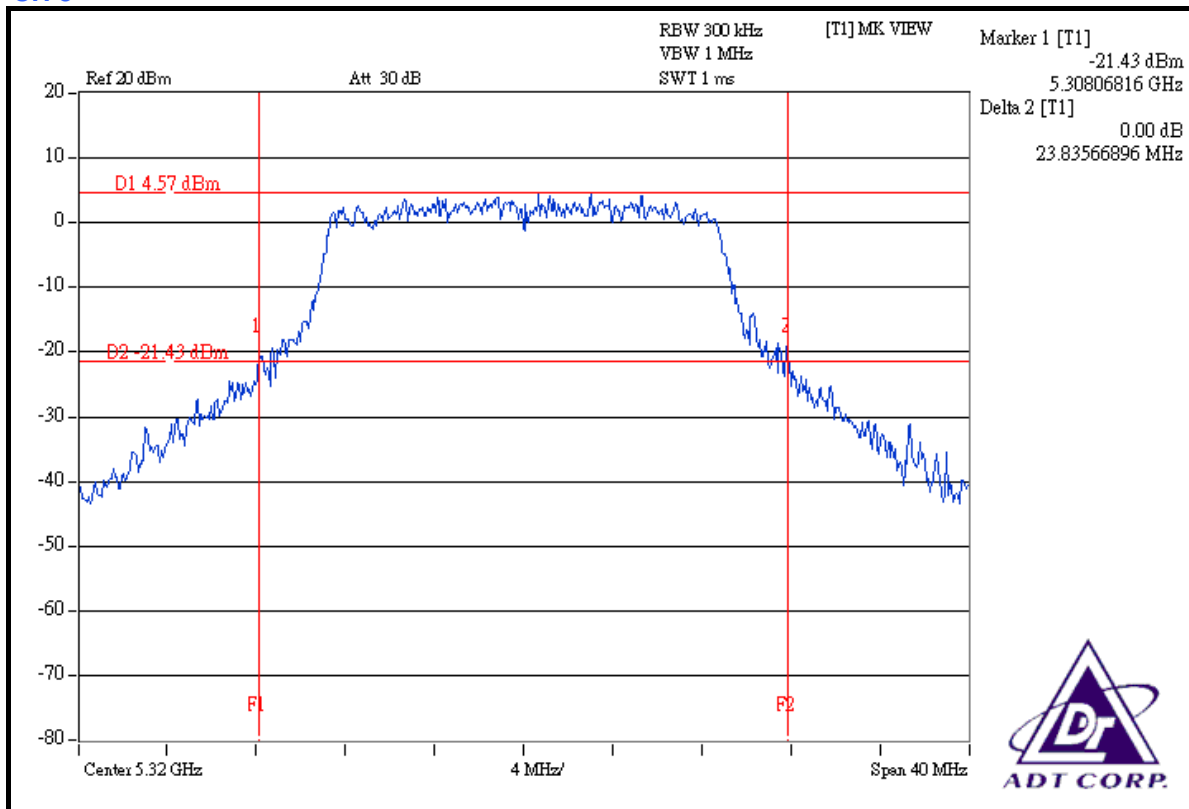
CH 5



CH 7



CH 8



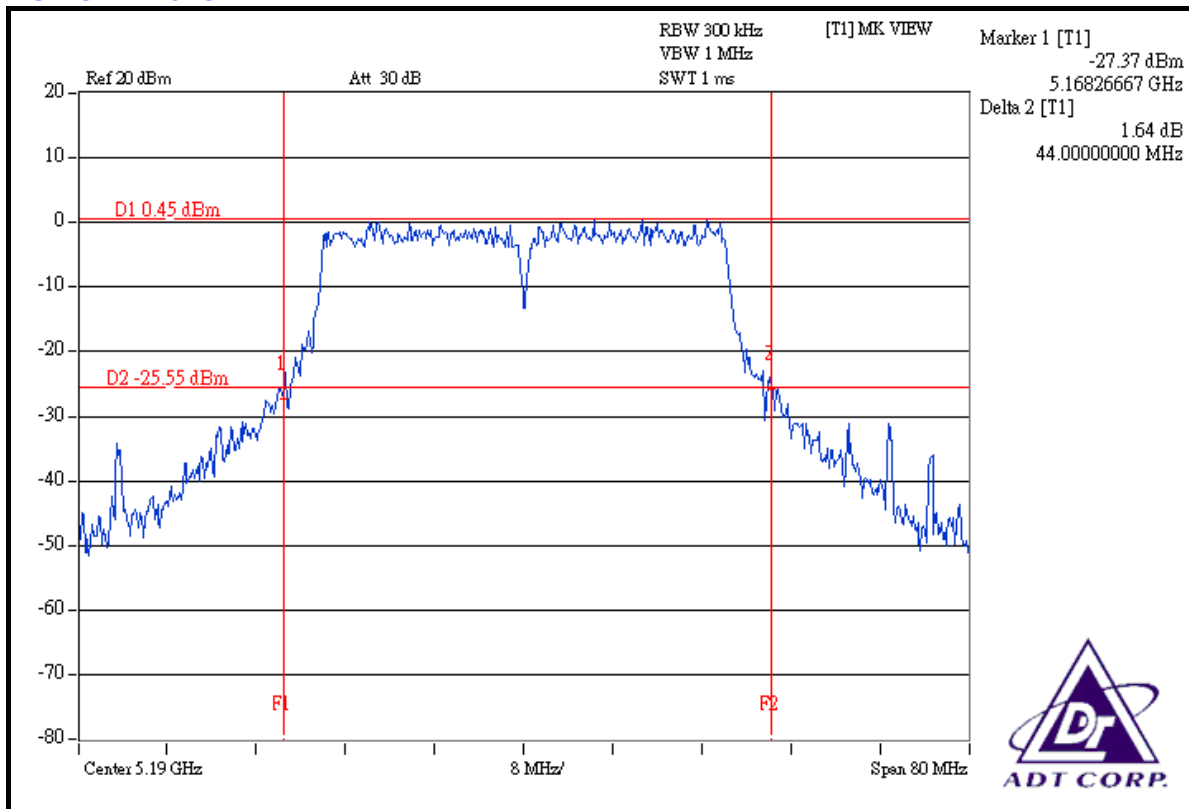


DRAFT 802.11n (40MHz) OFDM MODULATION:

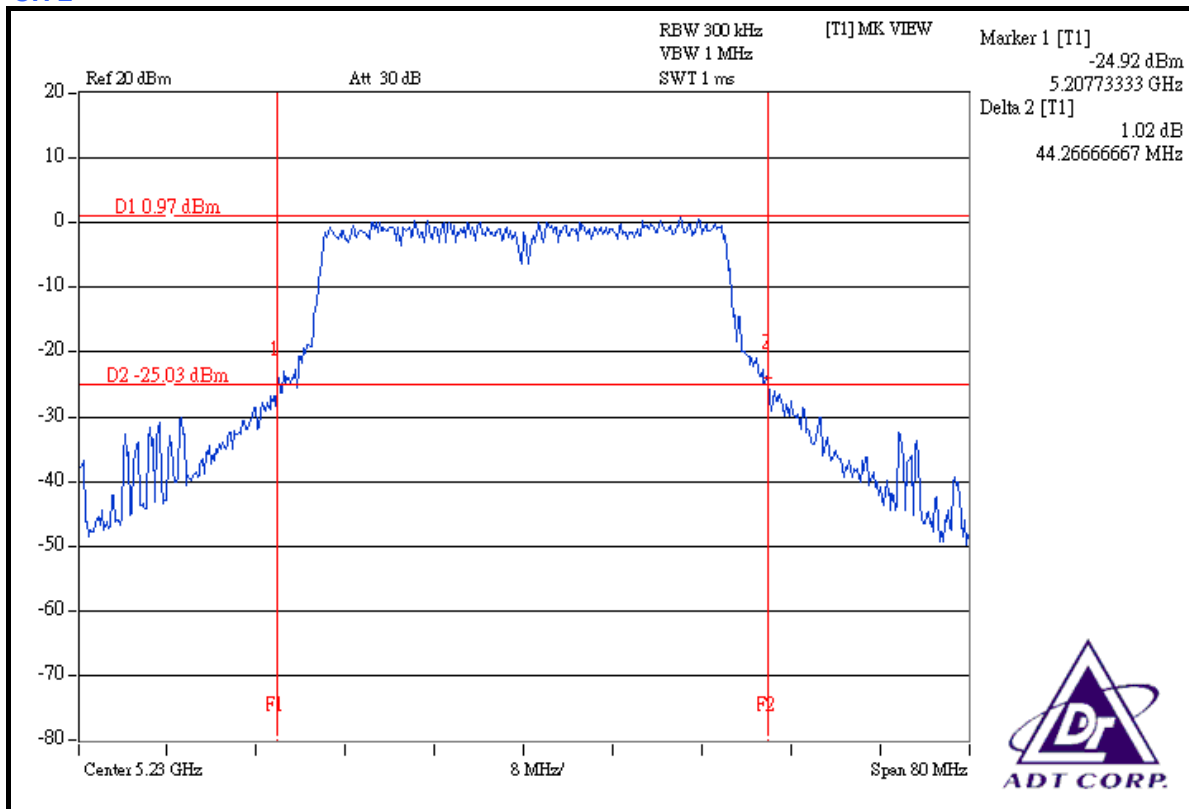
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
1	5190	44.00	44.67	PASS
2	5230	44.27	44.67	PASS
3	5270	45.31	44.11	PASS
4	5310	44.19	43.14	PASS

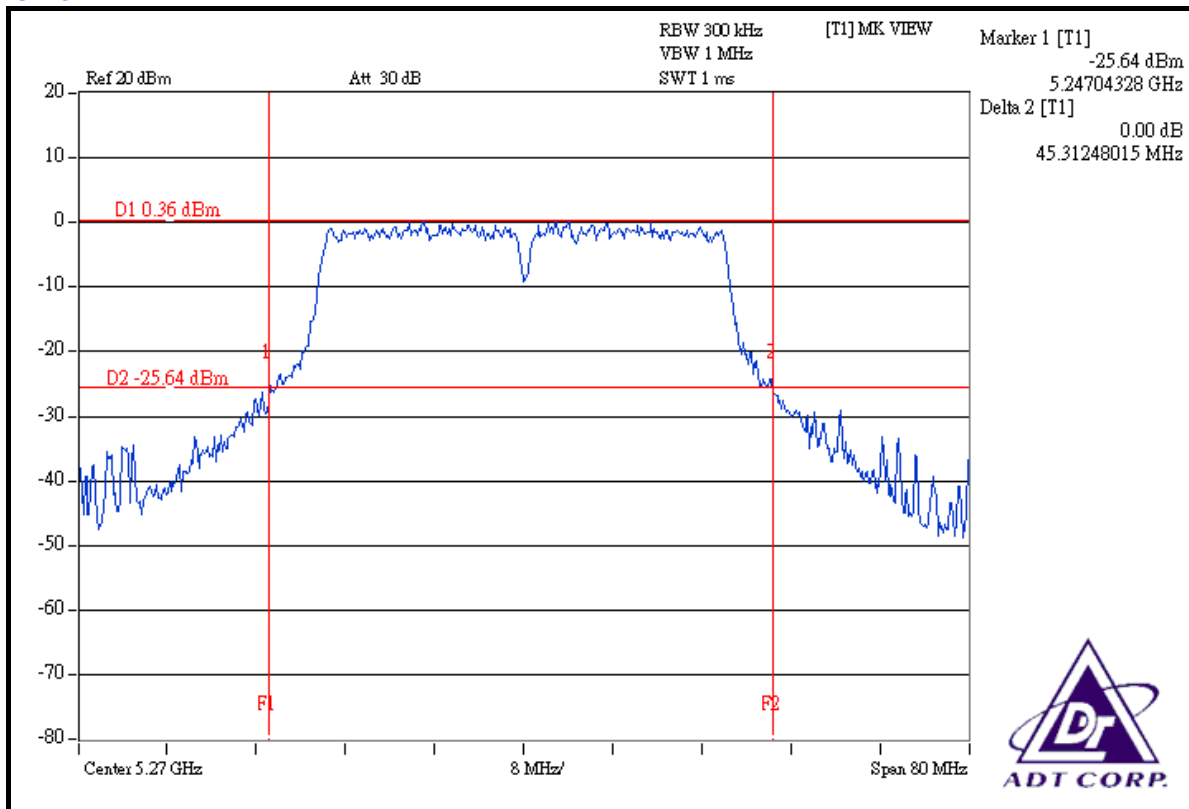
FOR CHAIN 0: CH 1



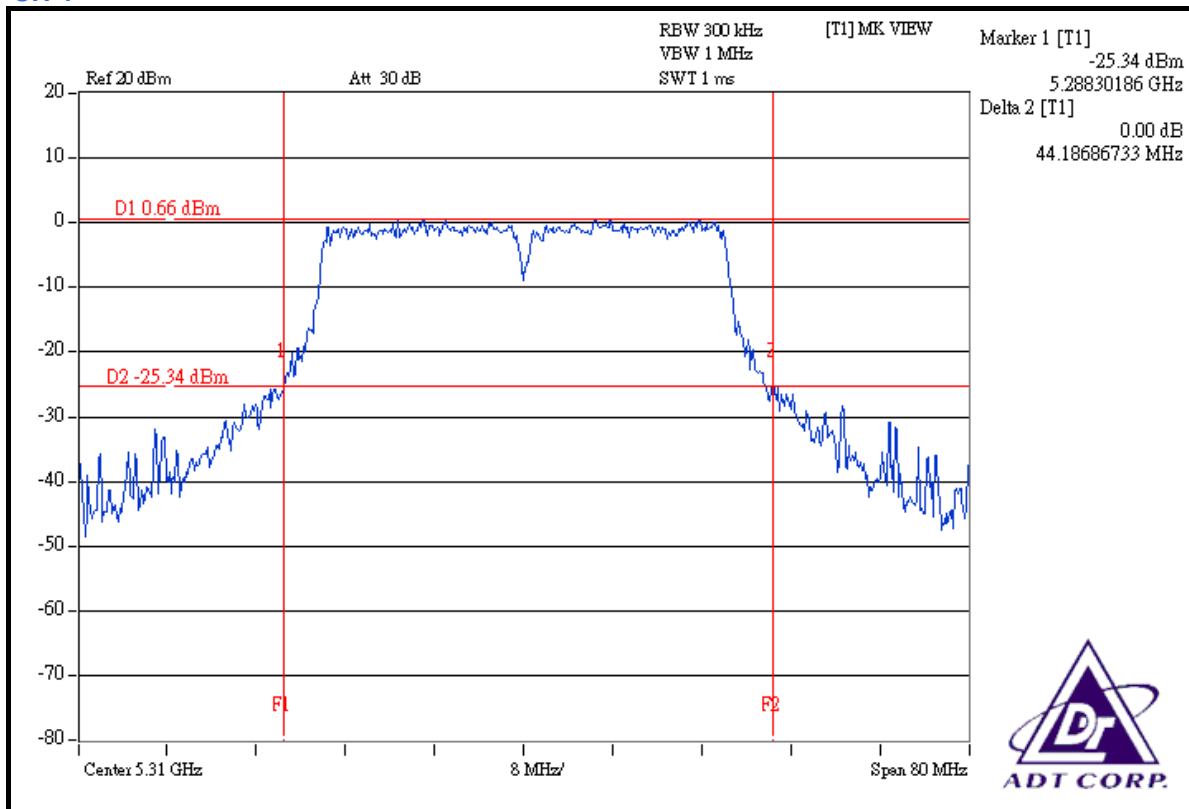
CH 2



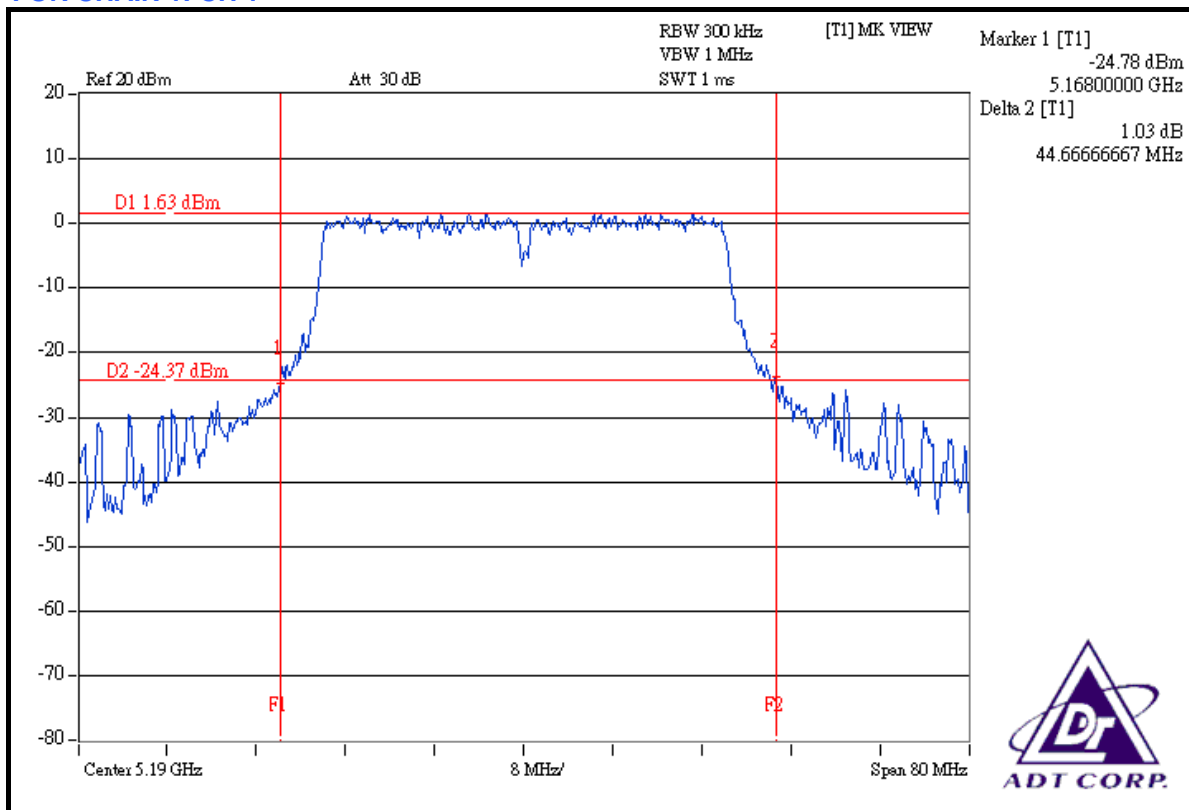
CH 3



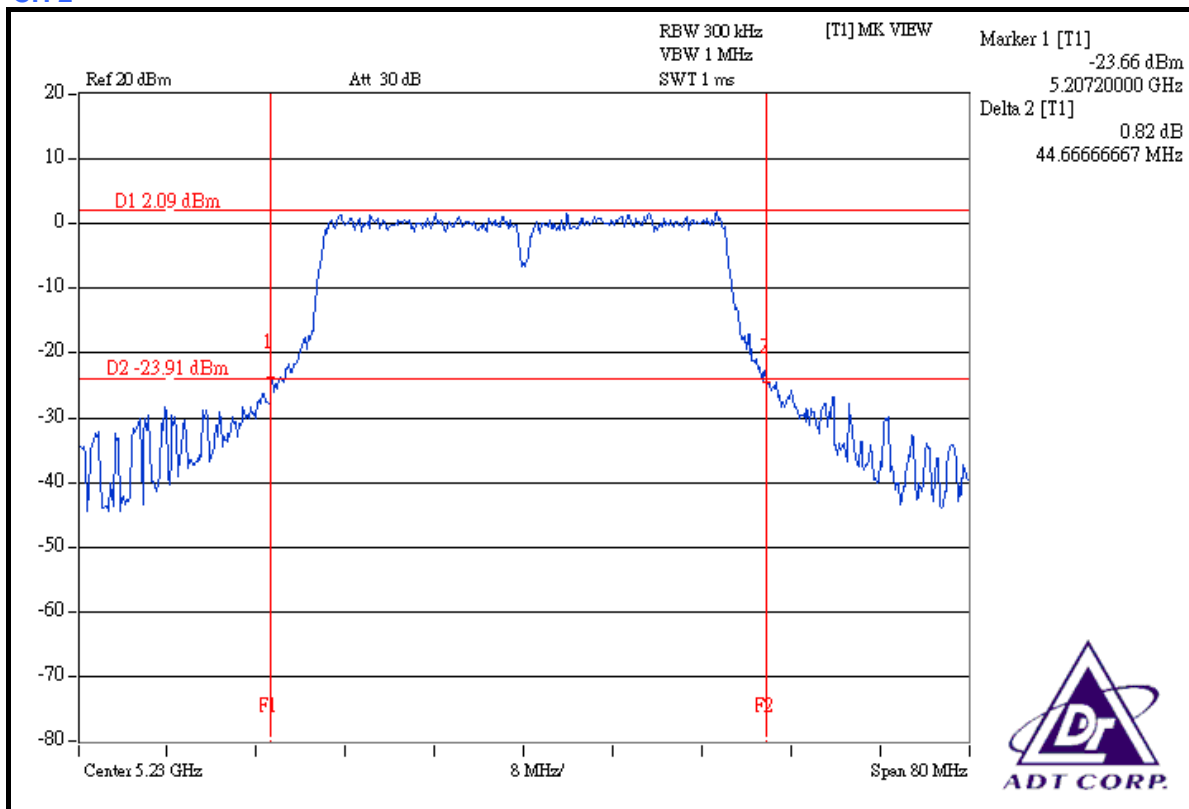
CH 4



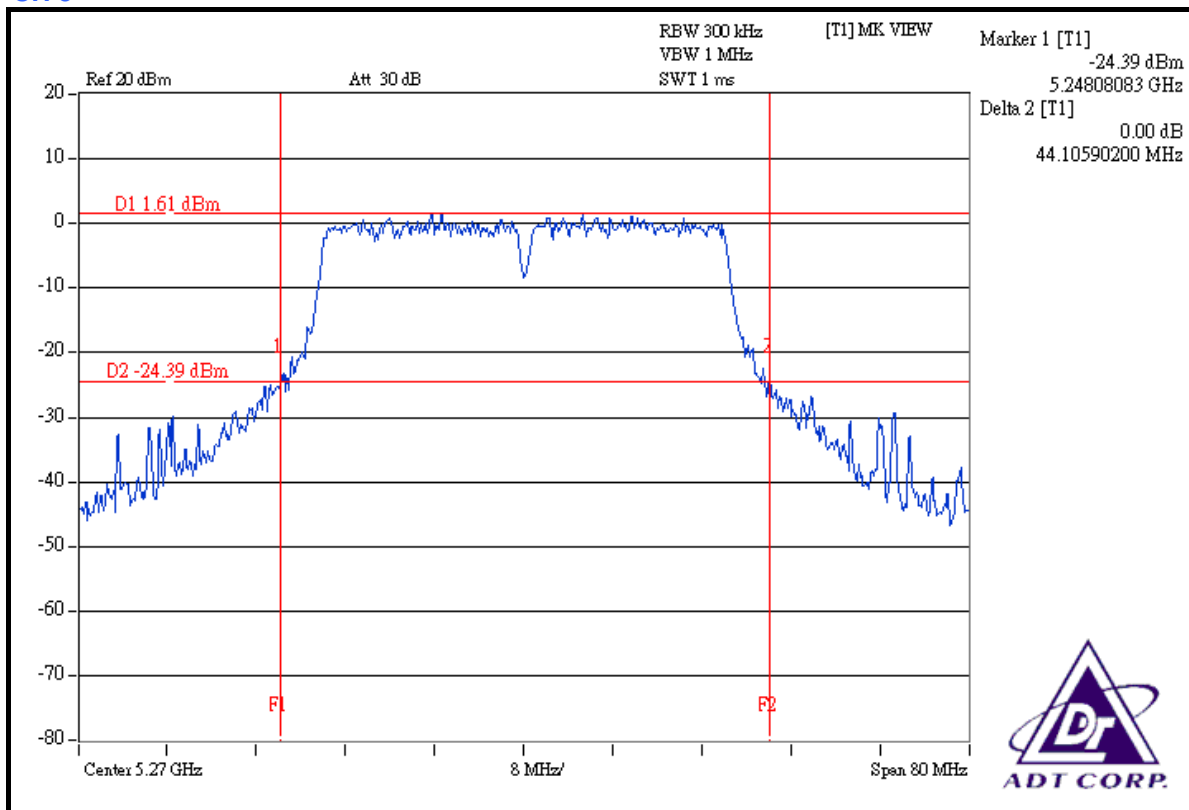
FOR CHAIN 1: CH 1



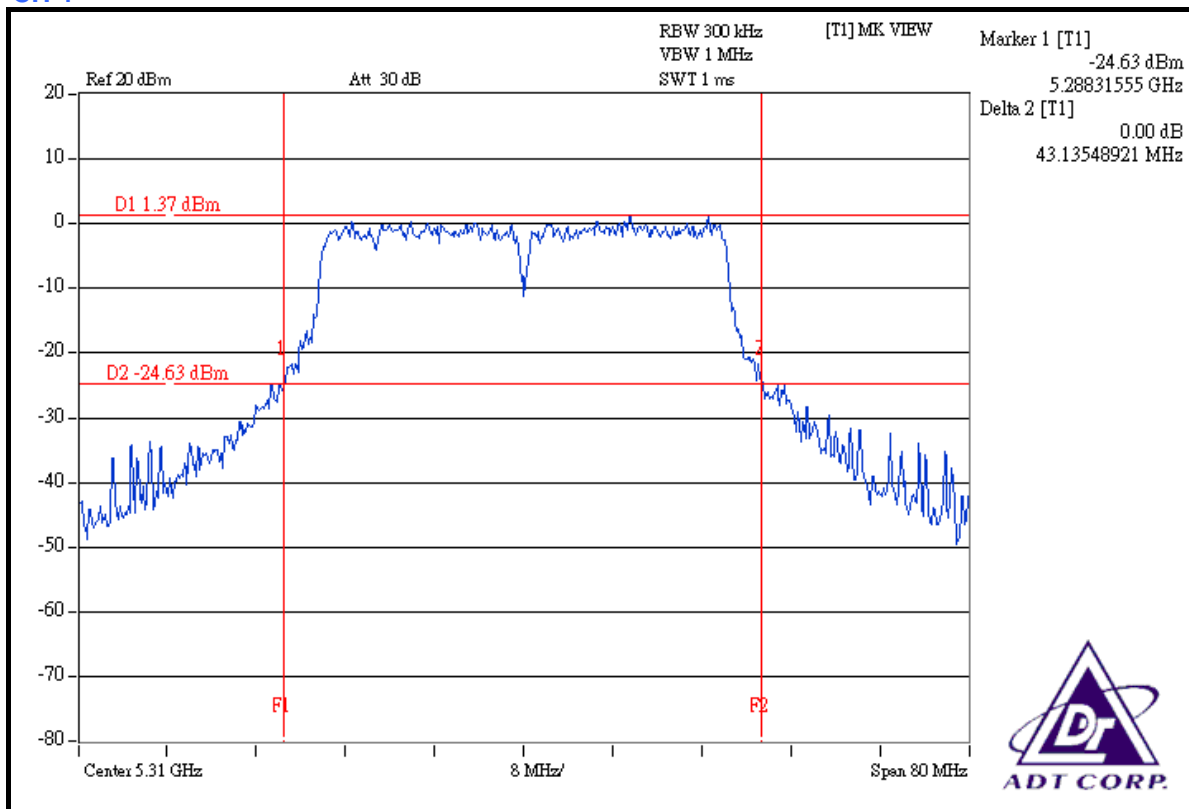
CH 2



CH 3



CH 4





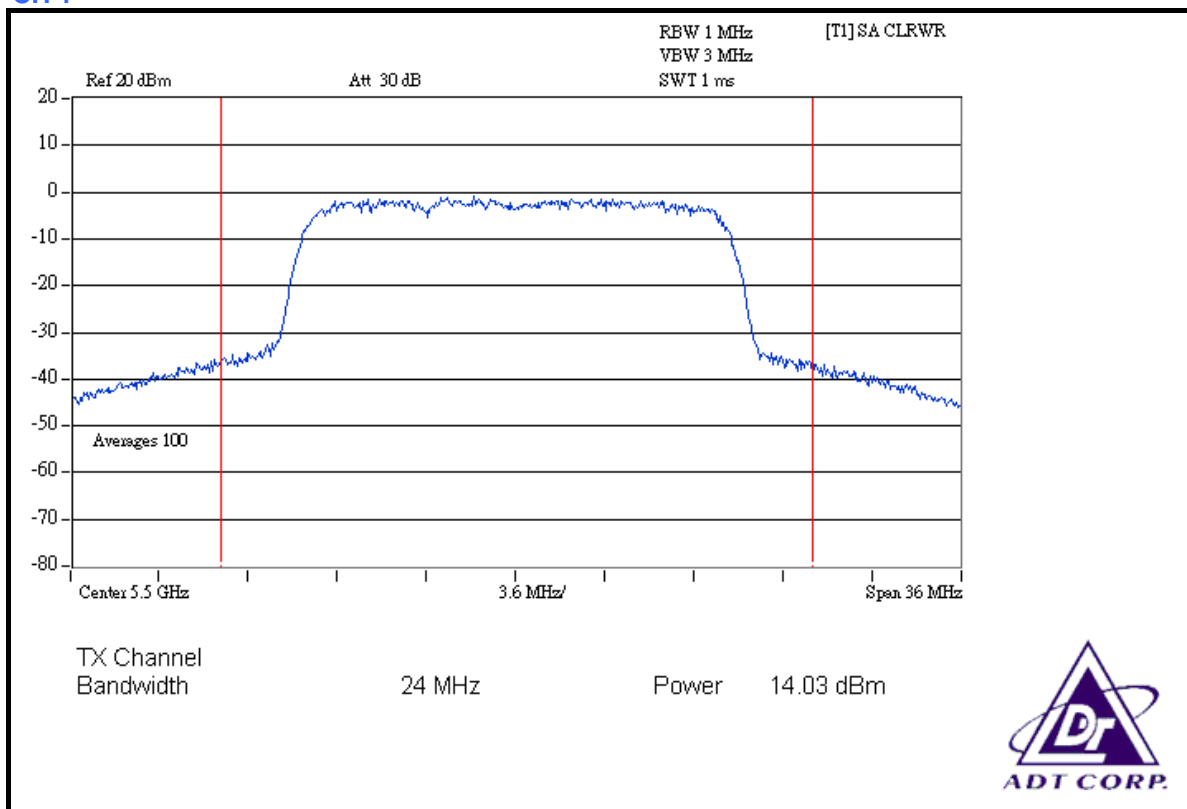
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

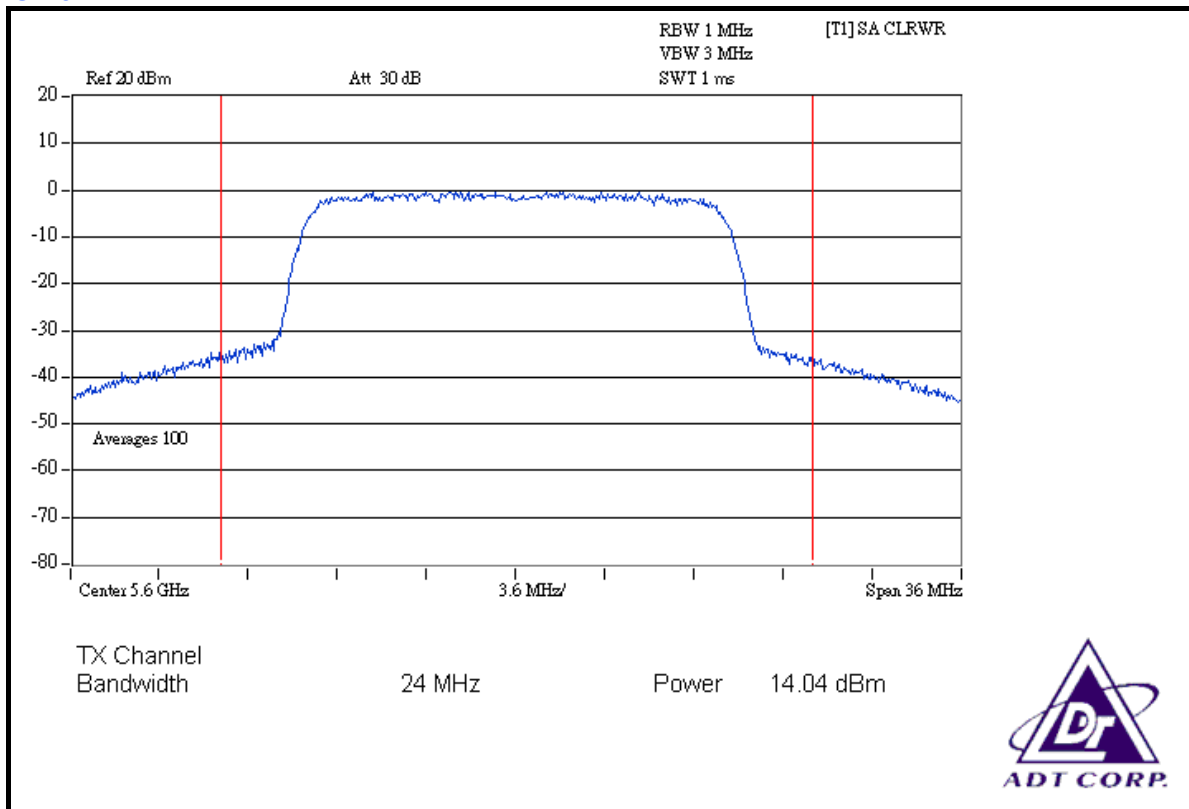
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	5500	25.293	14.03	24.00	PASS
6	5600	25.351	14.04	24.00	PASS
11	5700	25.410	14.05	24.00	PASS

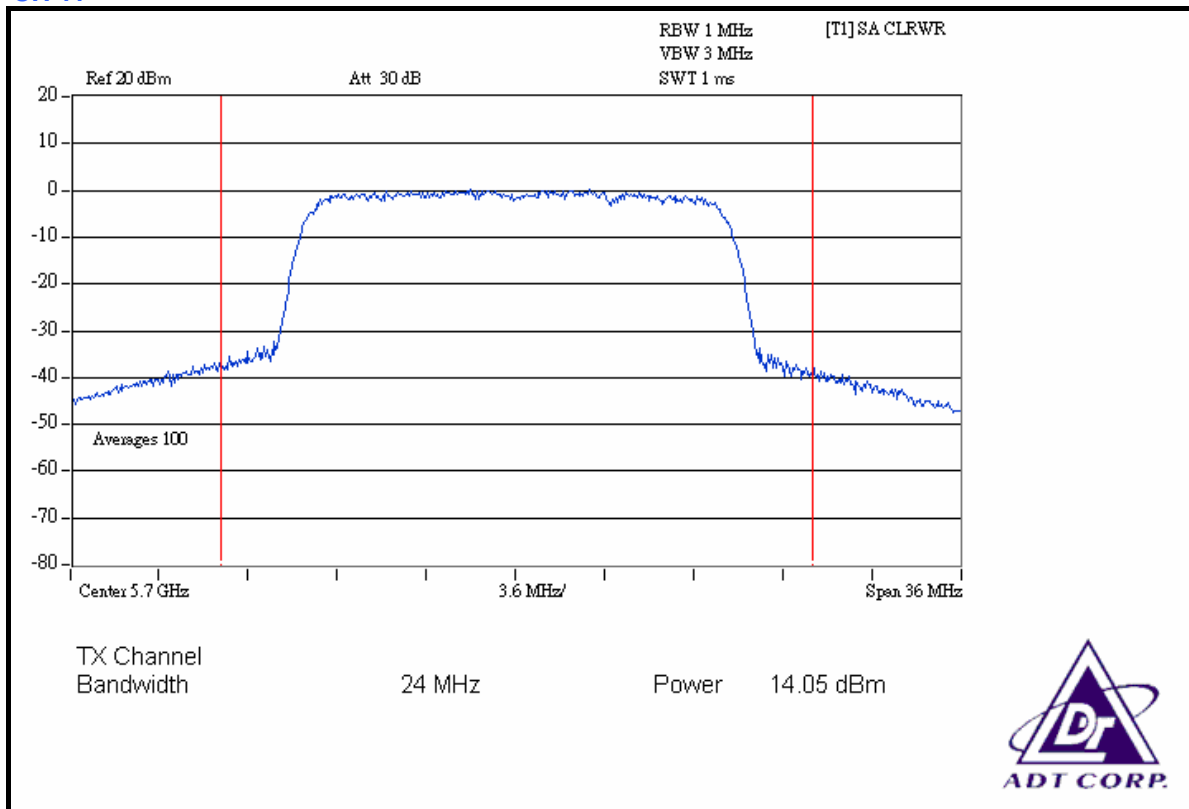
CH 1



CH 6



CH 11



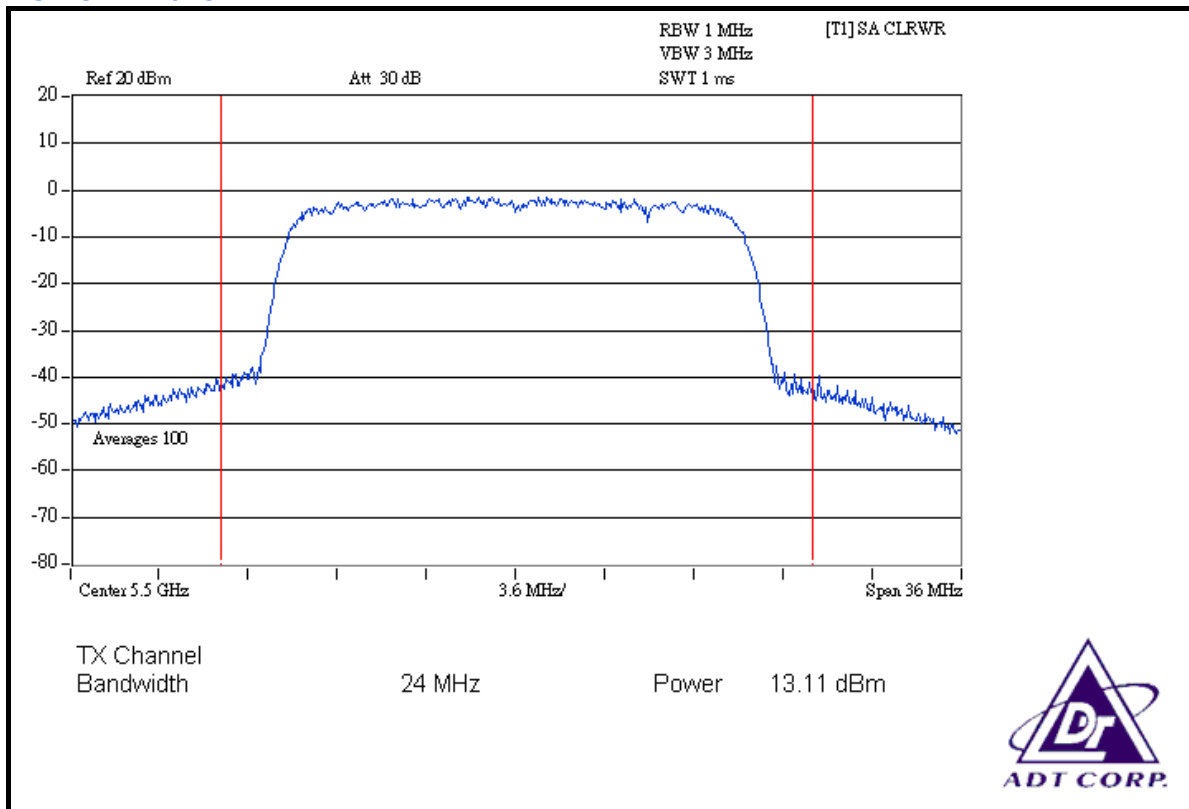


DRAFT 802.11n (20MHz) OFDM MODULATION:

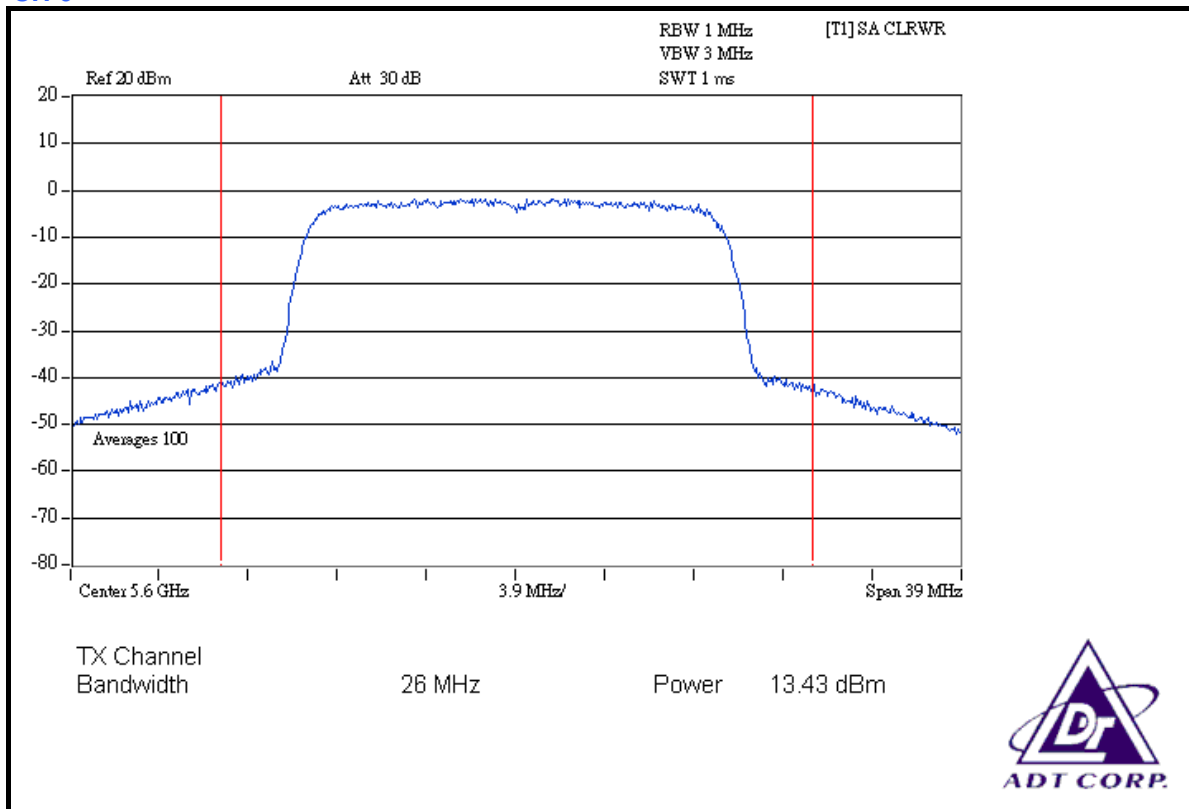
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	5500	20.464	22.646	13.11	13.55	43.110	16.346	24.00	PASS
6	5600	22.029	24.378	13.43	13.87	46.407	16.666	24.00	PASS
11	5700	21.330	23.496	13.29	13.71	44.826	16.515	24.00	PASS

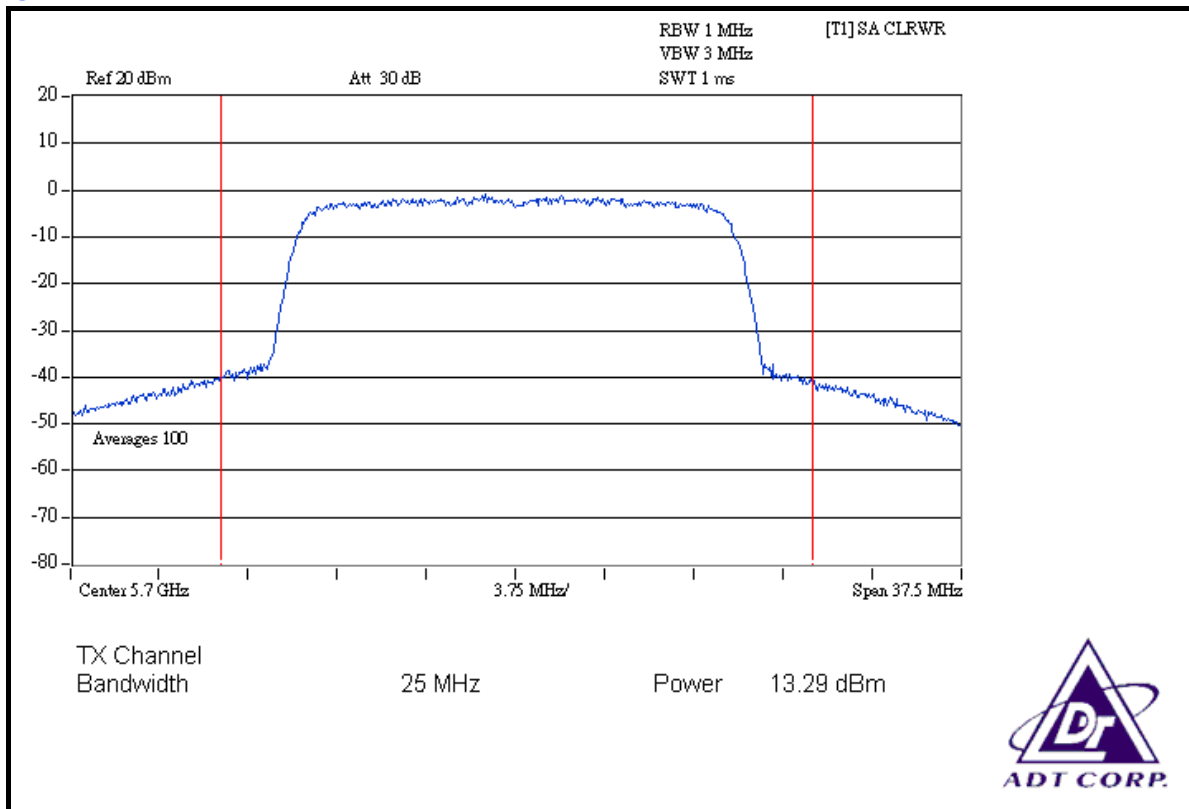
FOR CHAIN 0: CH 1



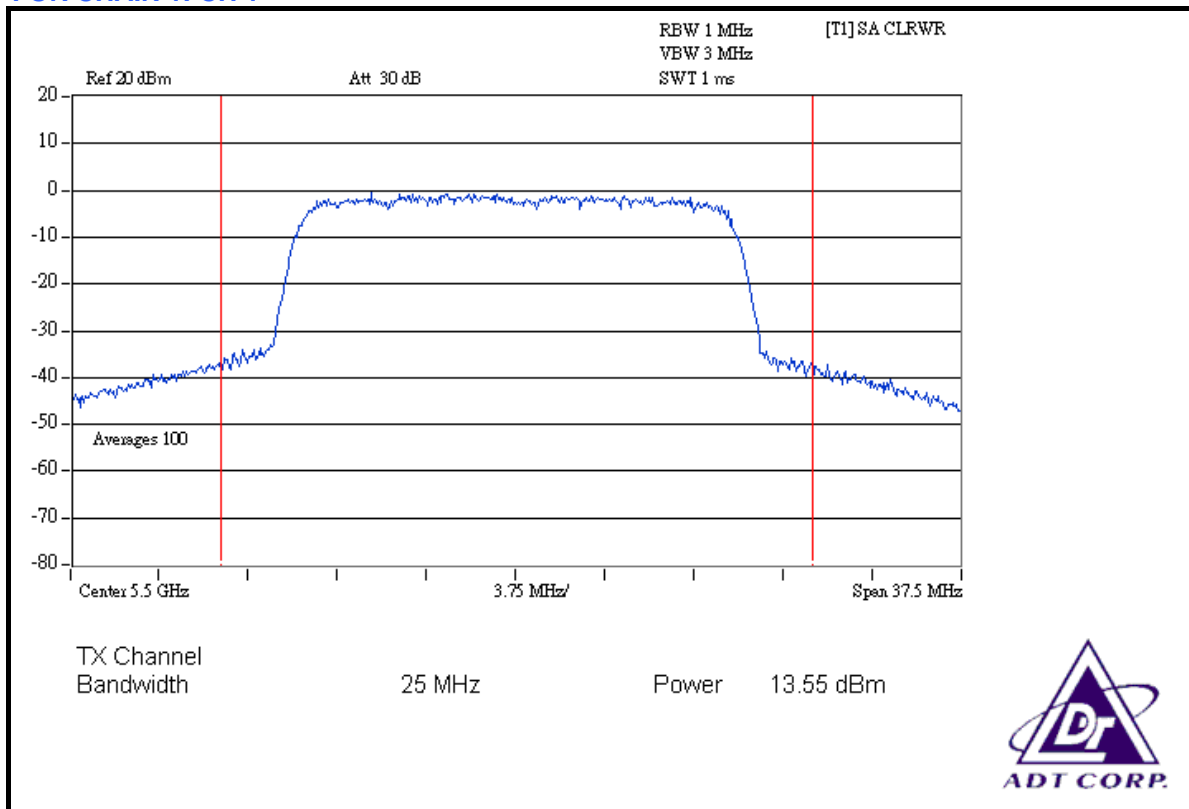
CH 6



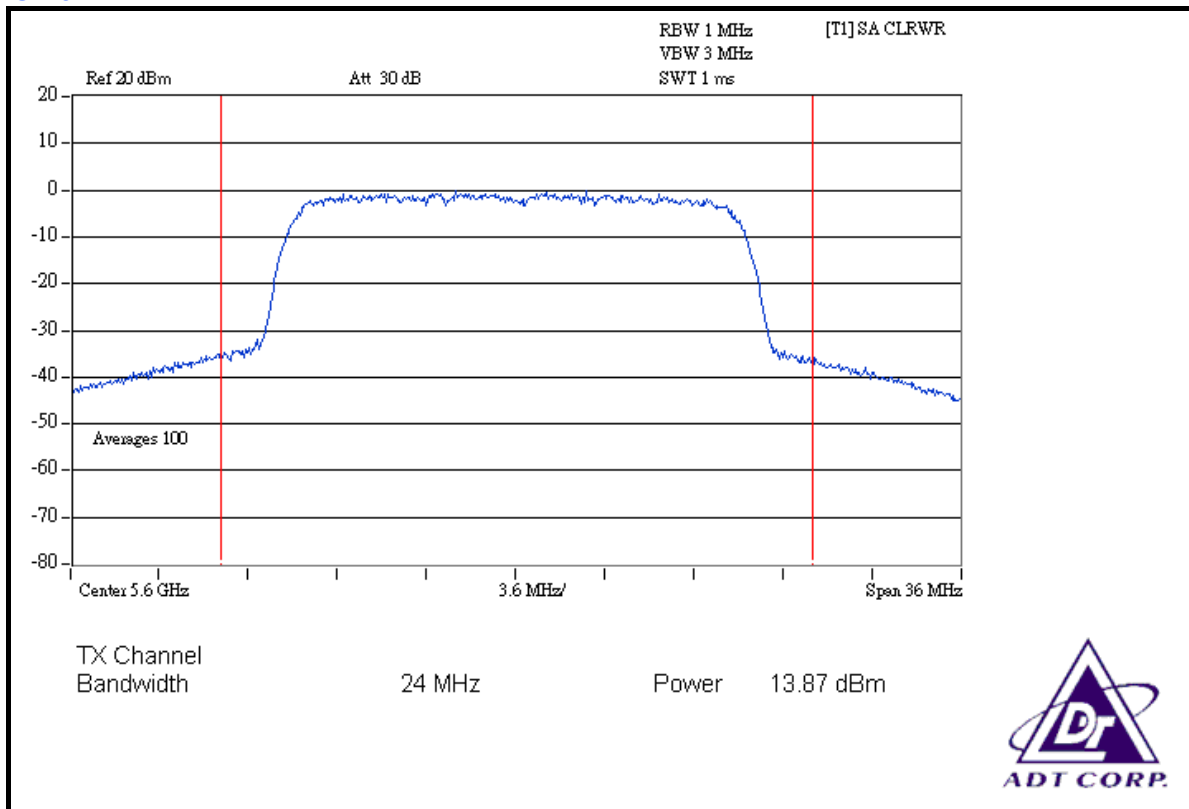
CH 11



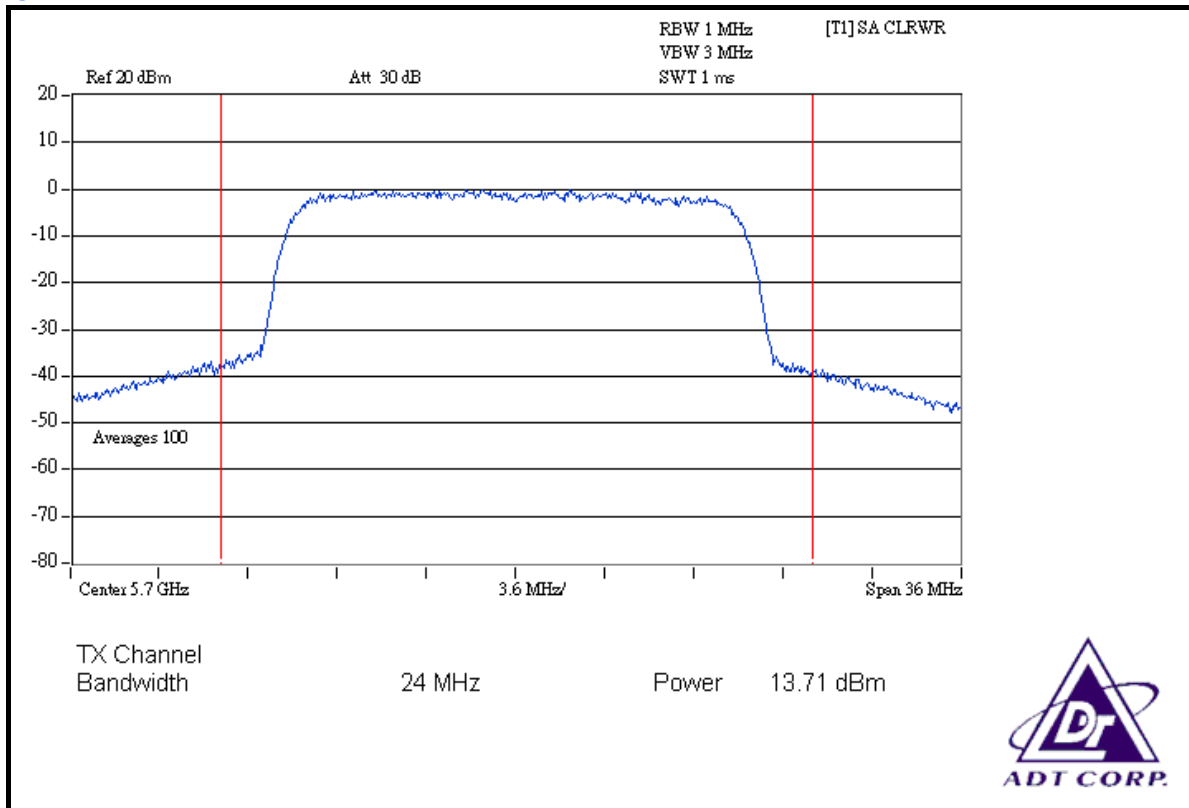
FOR CHAIN 1: CH 1



CH 6



CH 11



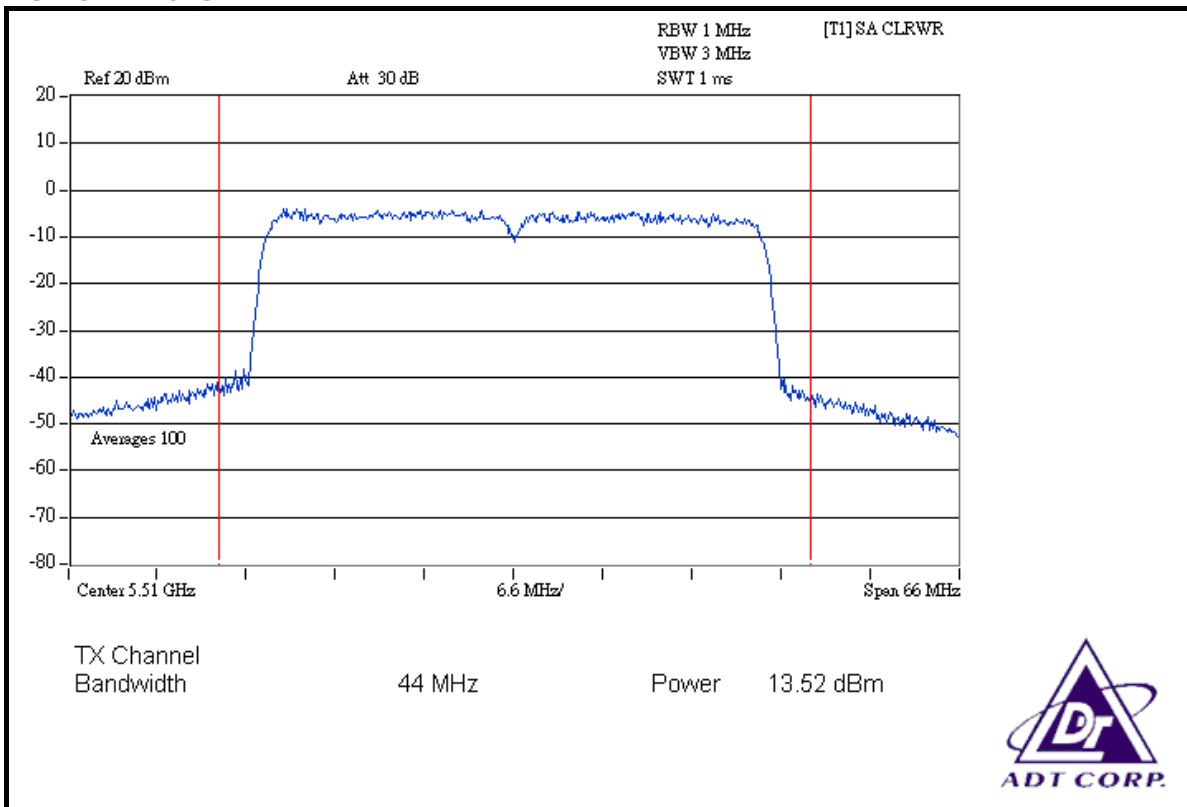


DRAFT 802.11n (40MHz) OFDM MODULATION:

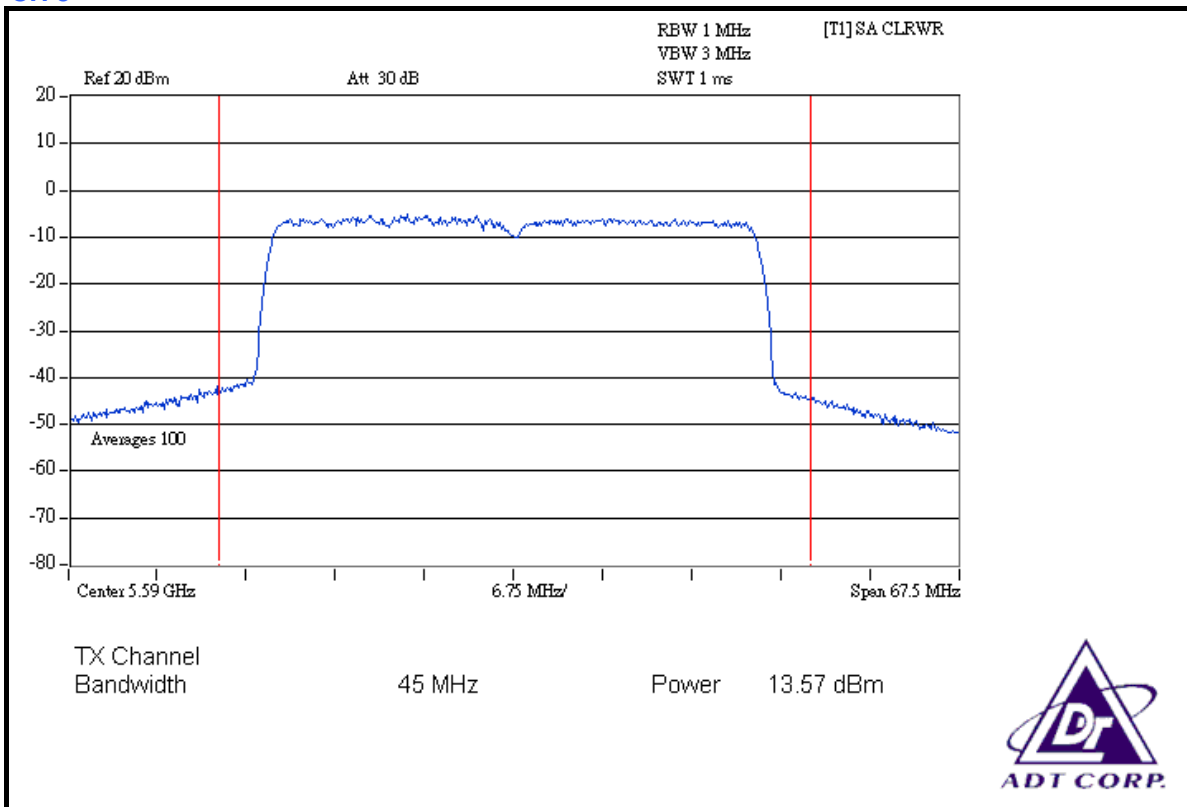
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	5510	22.490	25.645	13.52	14.09	48.135	16.825	24.00	PASS
3	5590	22.751	23.988	13.57	13.80	46.739	16.697	24.00	PASS
5	5670	22.029	24.155	13.43	13.83	46.184	16.645	24.00	PASS

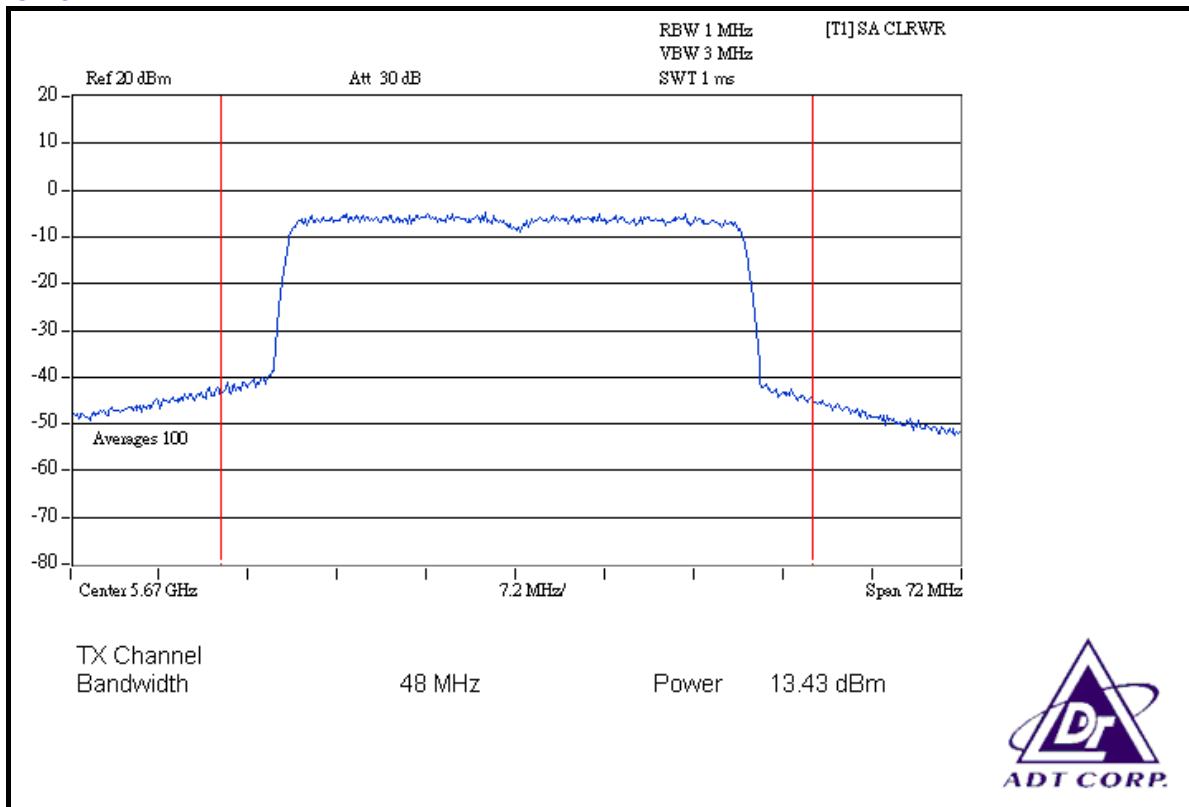
FOR CHAIN 0: CH 1



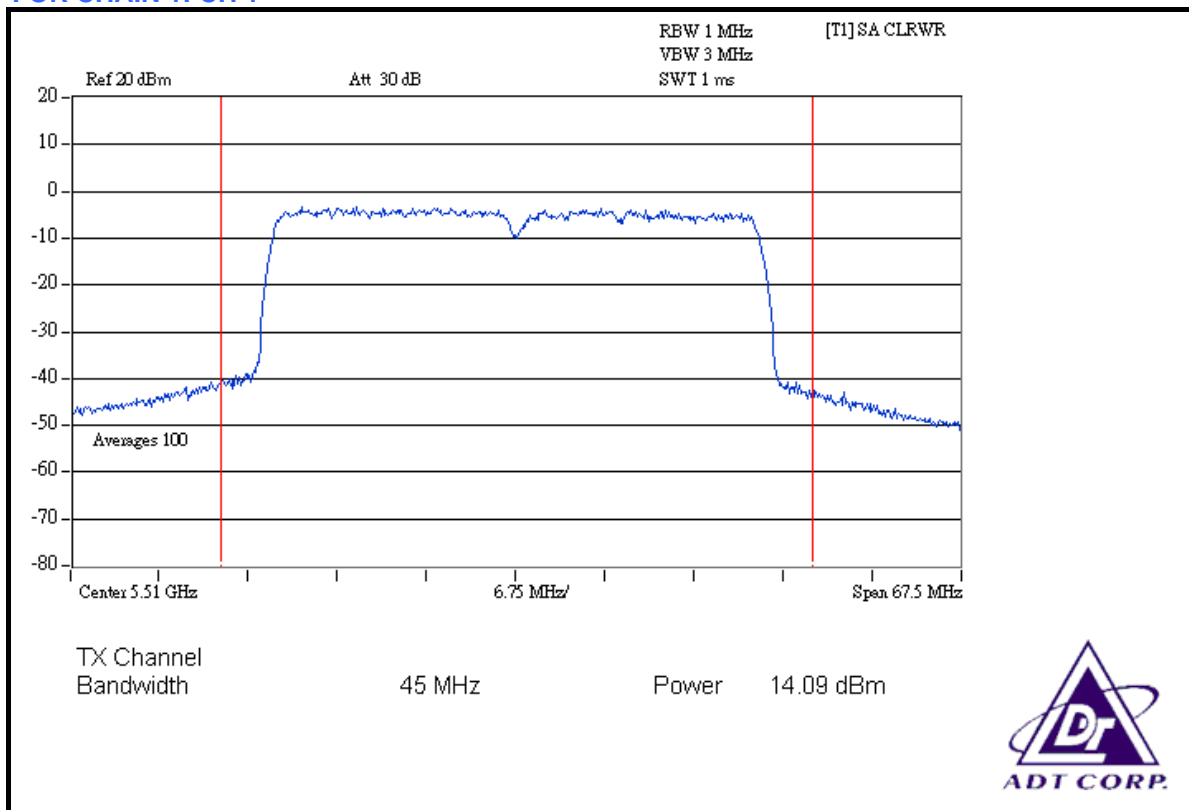
CH 3



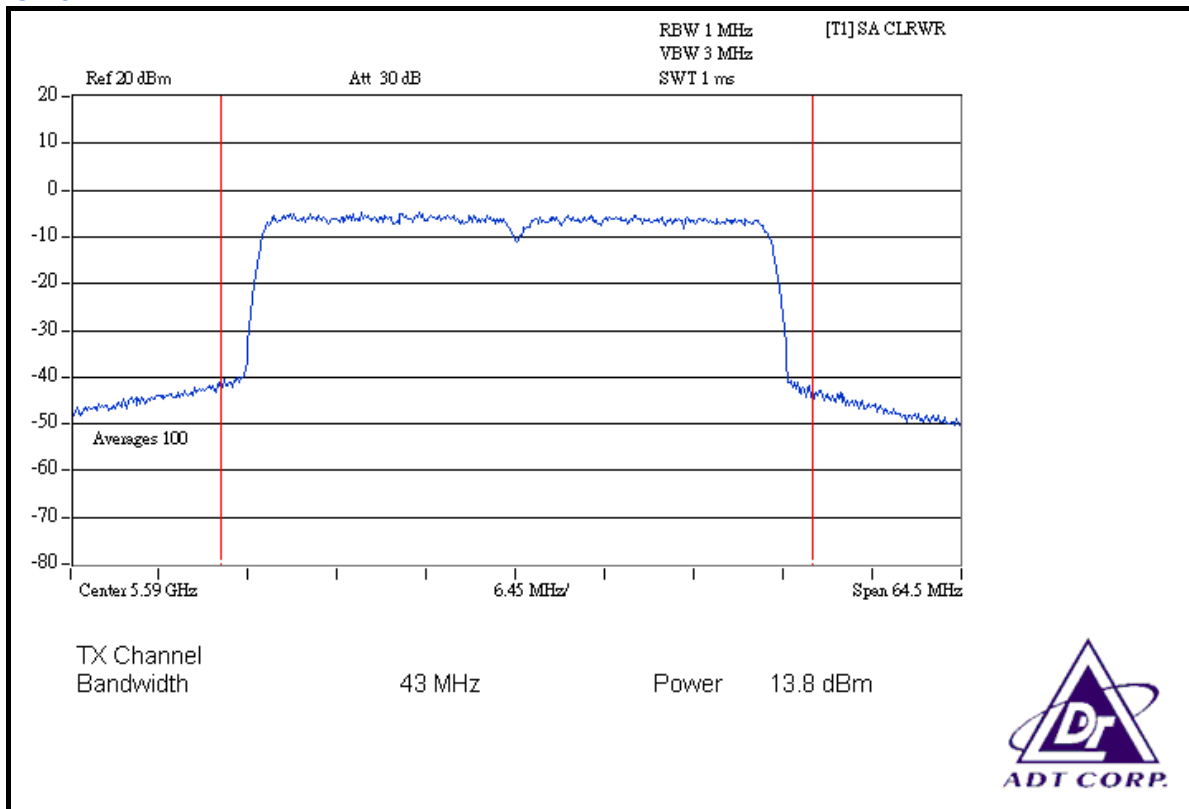
CH 5



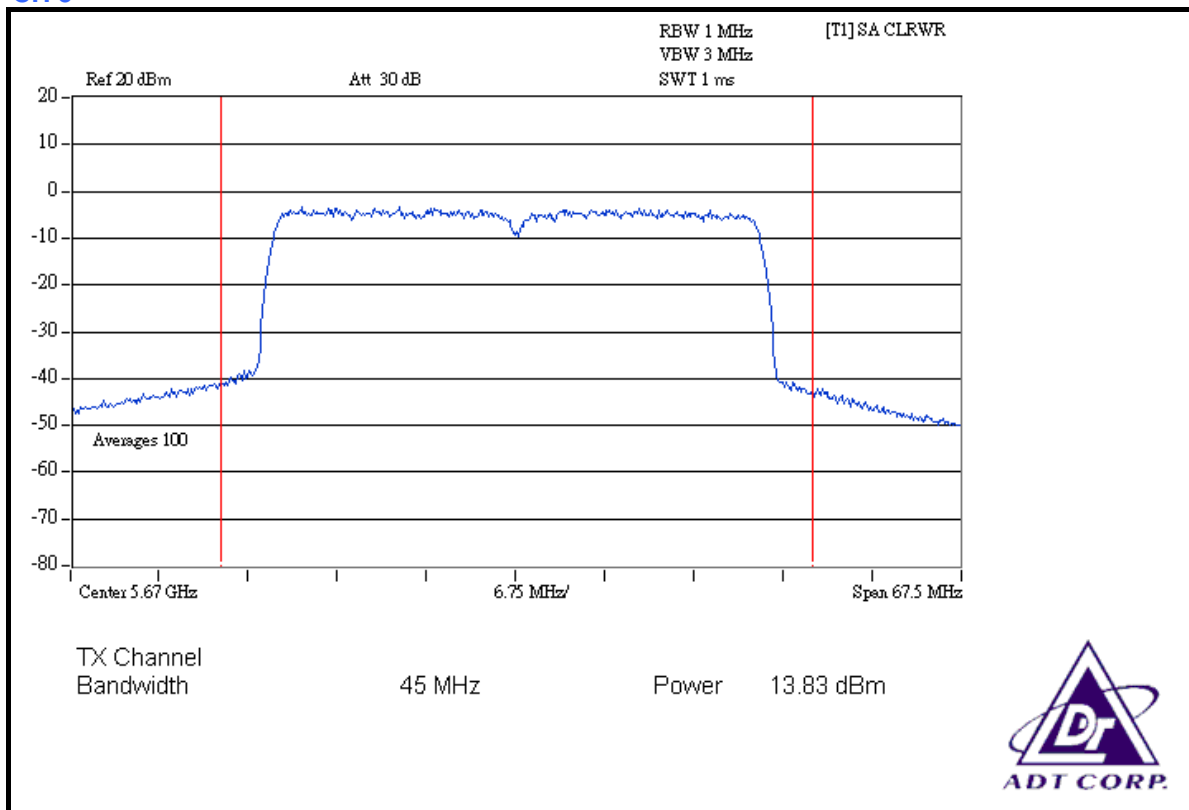
FOR CHAIN 1: CH 1



CH 3



CH 5



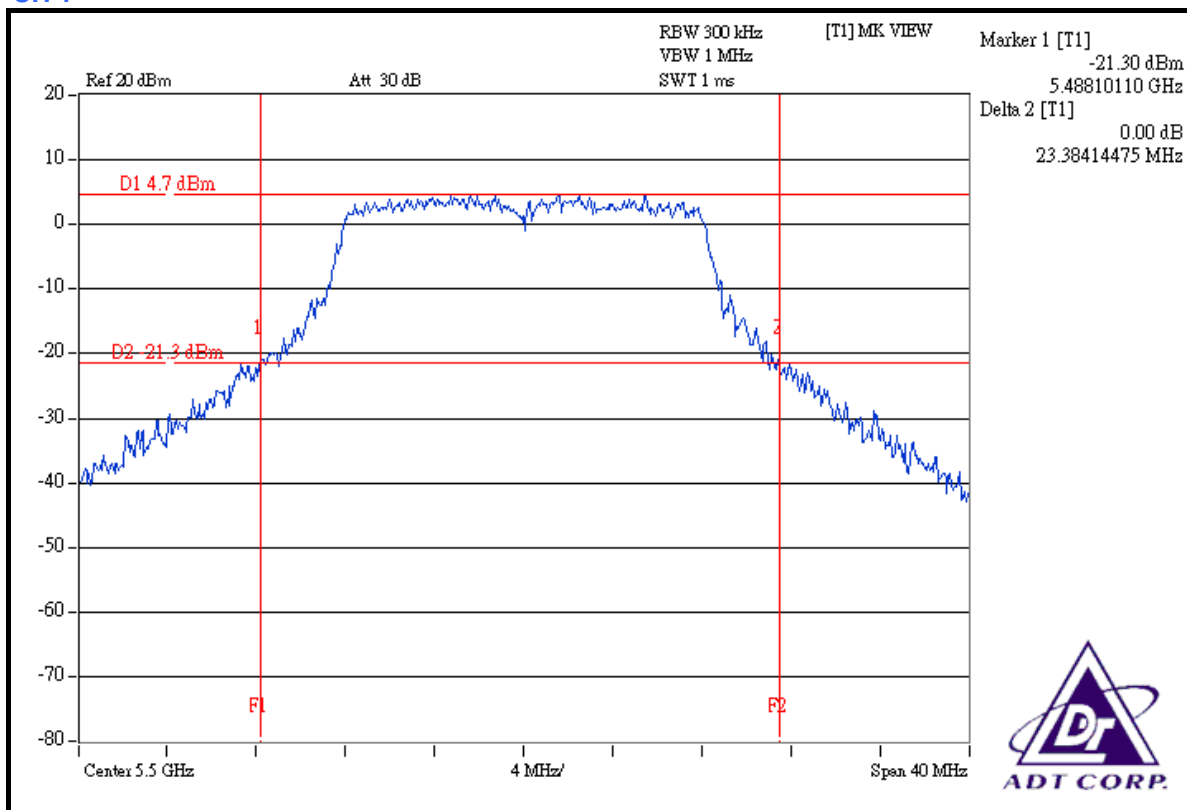


26dB OCCUPIED BANDWIDTH: 802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

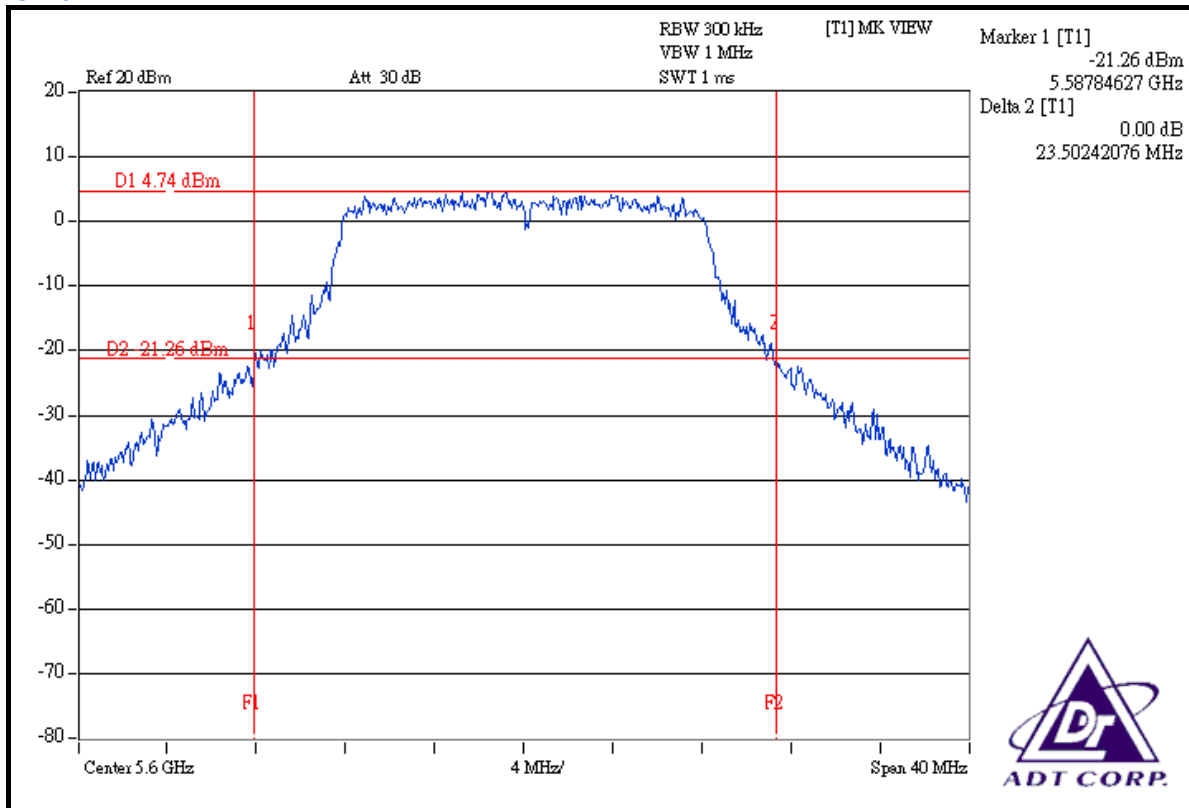
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
1	5500	23.38	PASS
6	5600	23.50	PASS
11	5700	23.74	PASS

CH 1

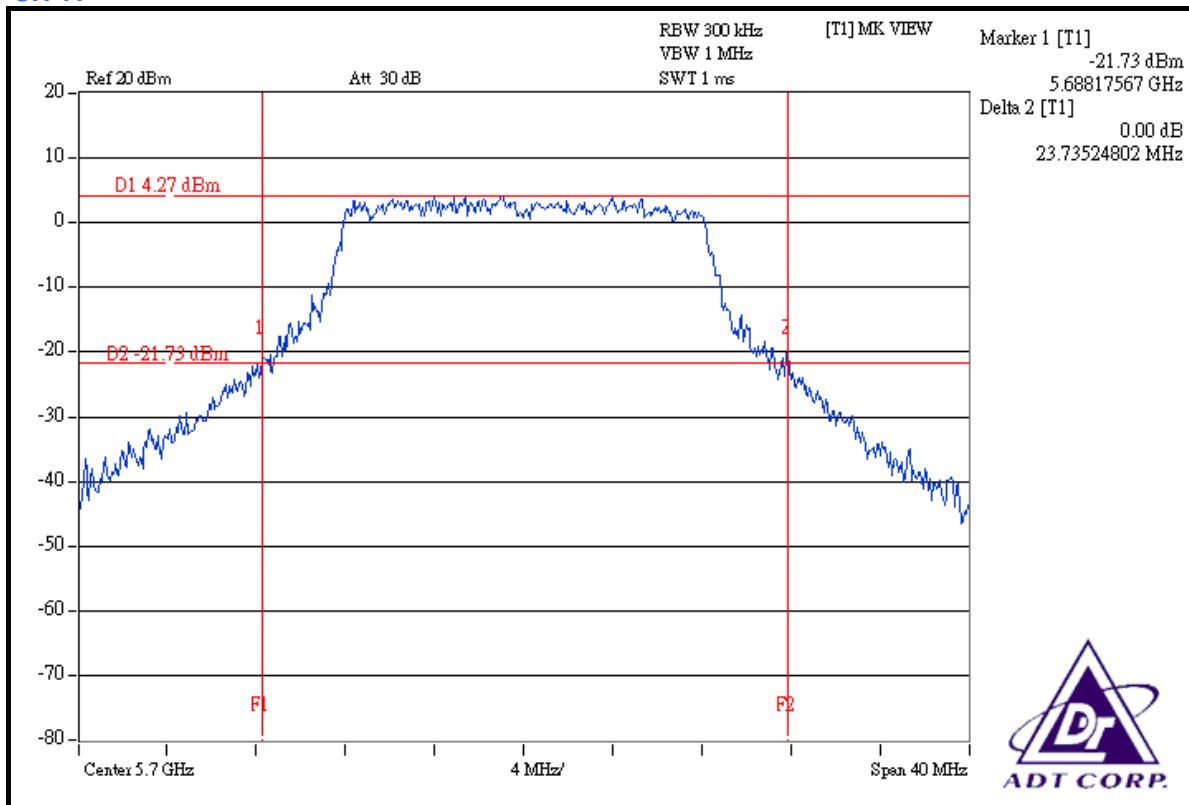




CH 6



CH 11



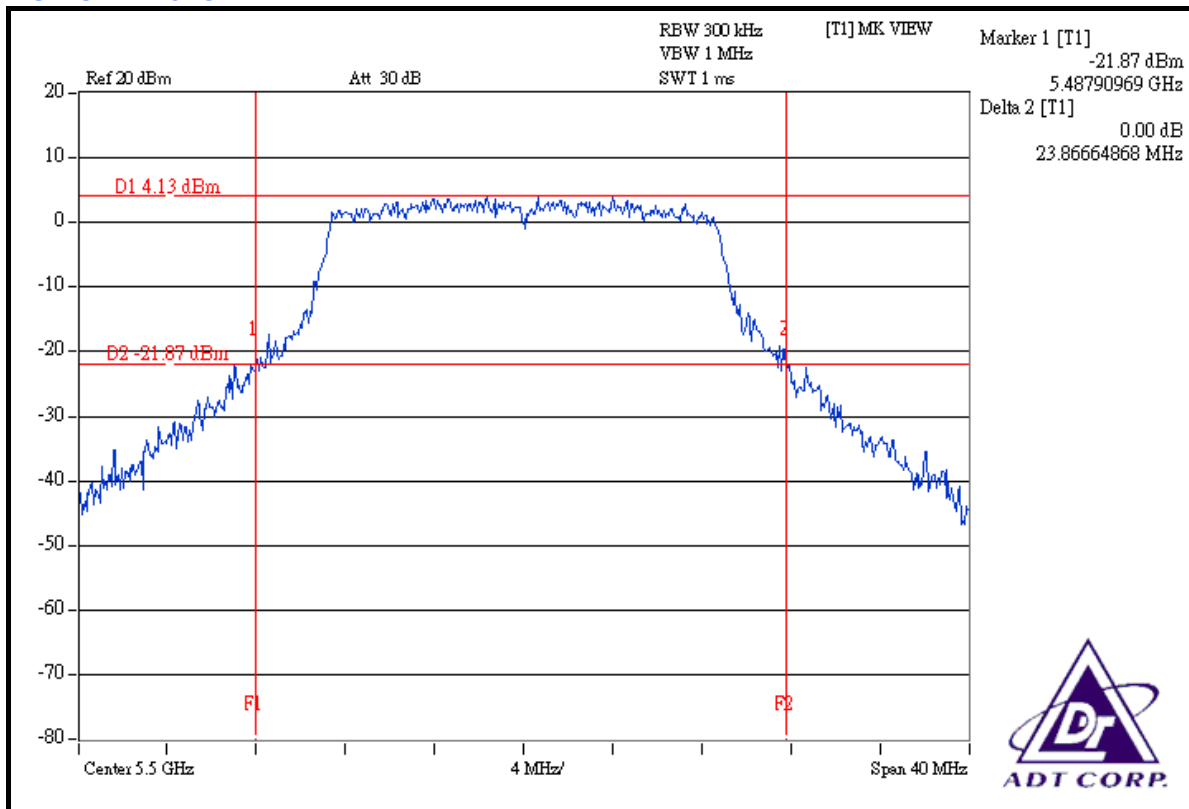


DRAFT 802.11n (20MHz) OFDM MODULATION:

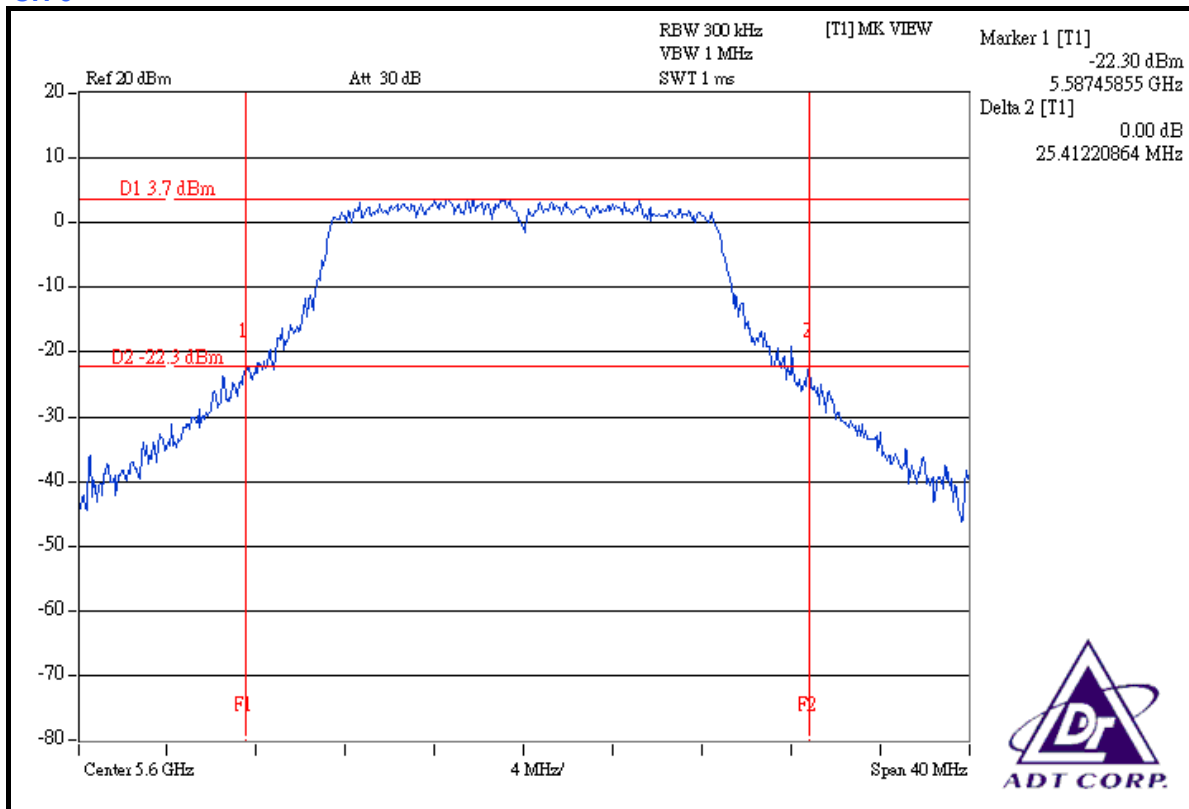
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
1	5500	23.87	24.06	PASS
6	5600	25.41	23.57	PASS
11	5700	24.06	23.99	PASS

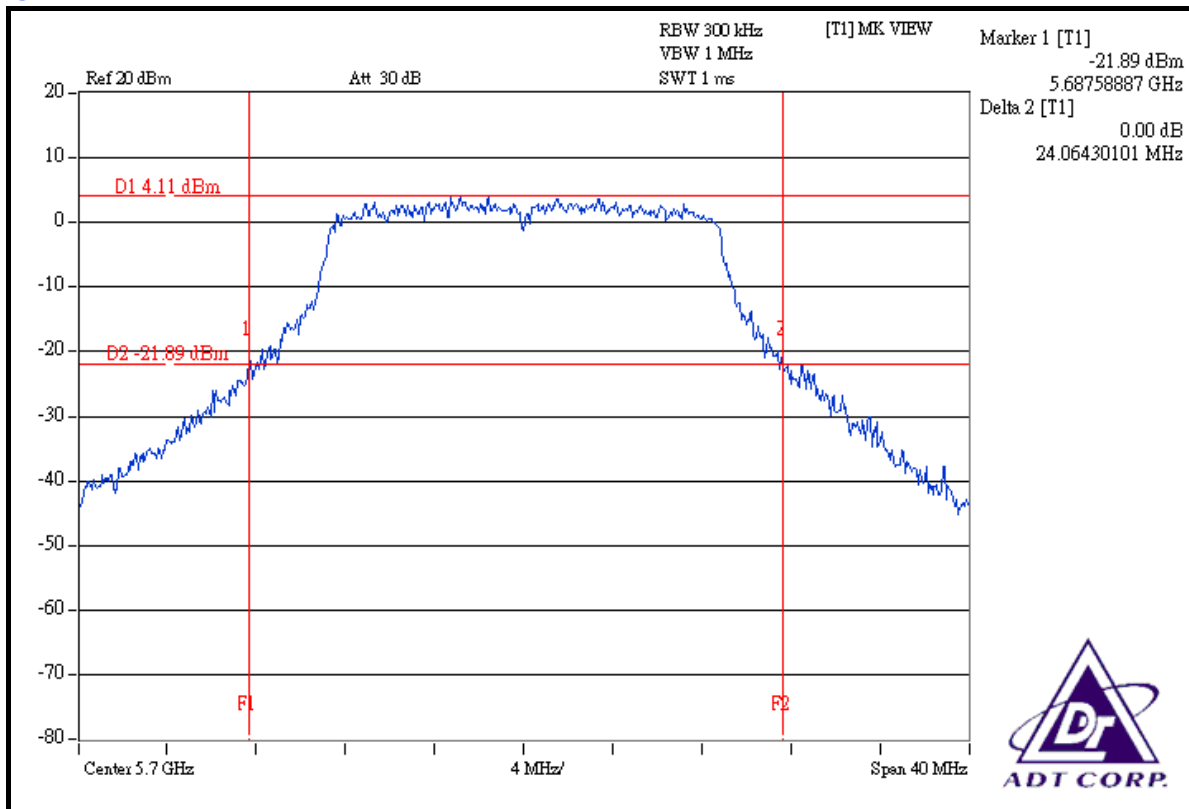
FOR CHAIN 0: CH 1



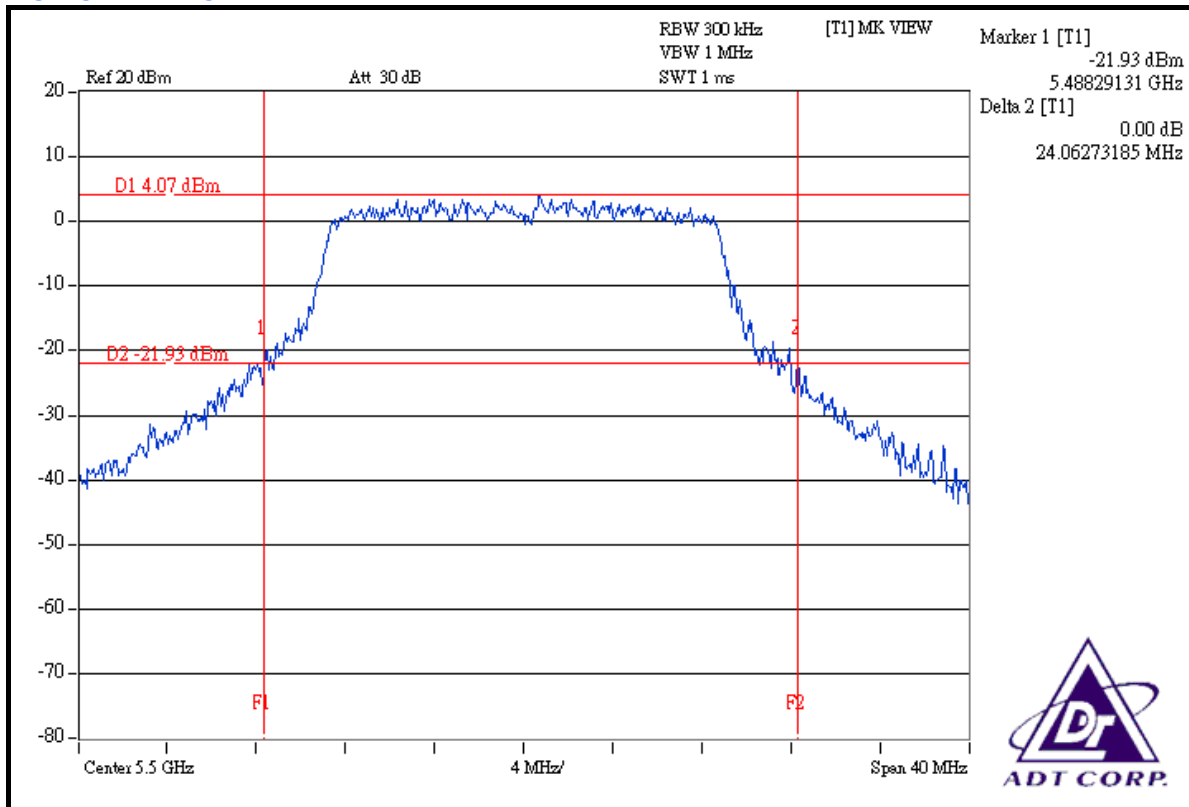
CH 6



CH 11

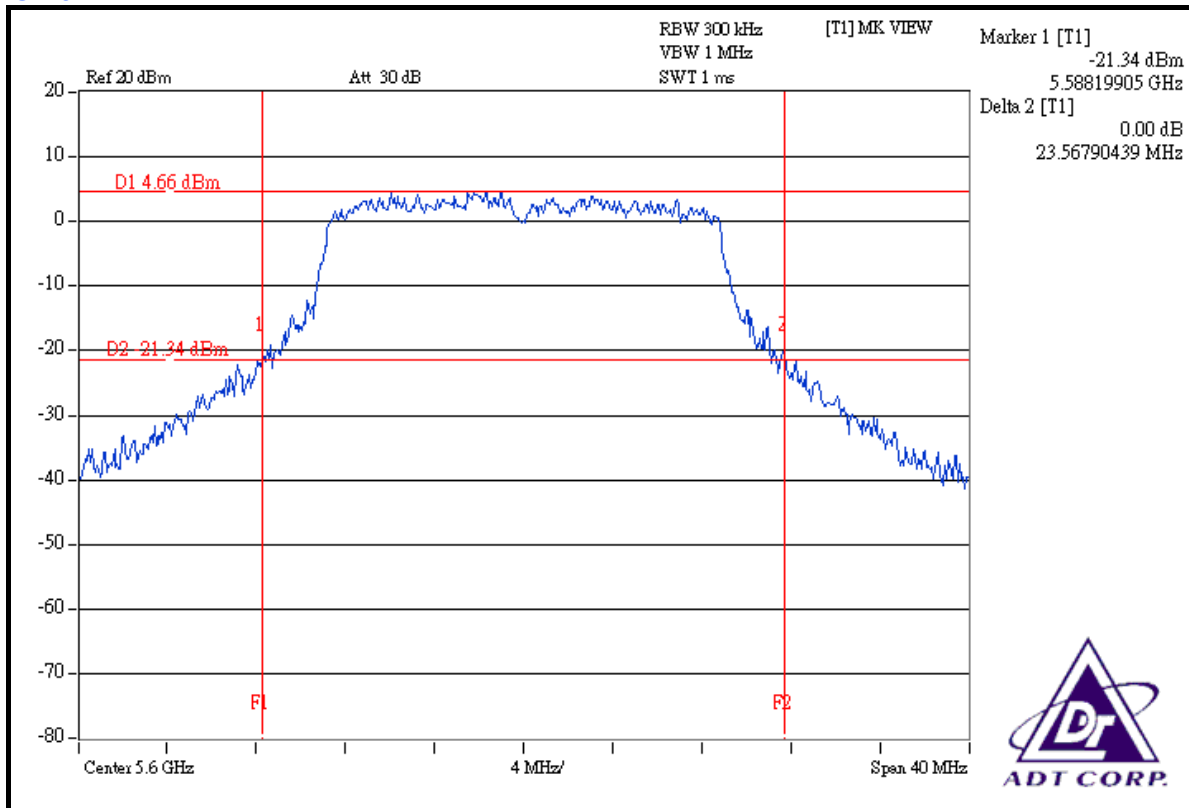


FOR CHAIN 1: CH 1

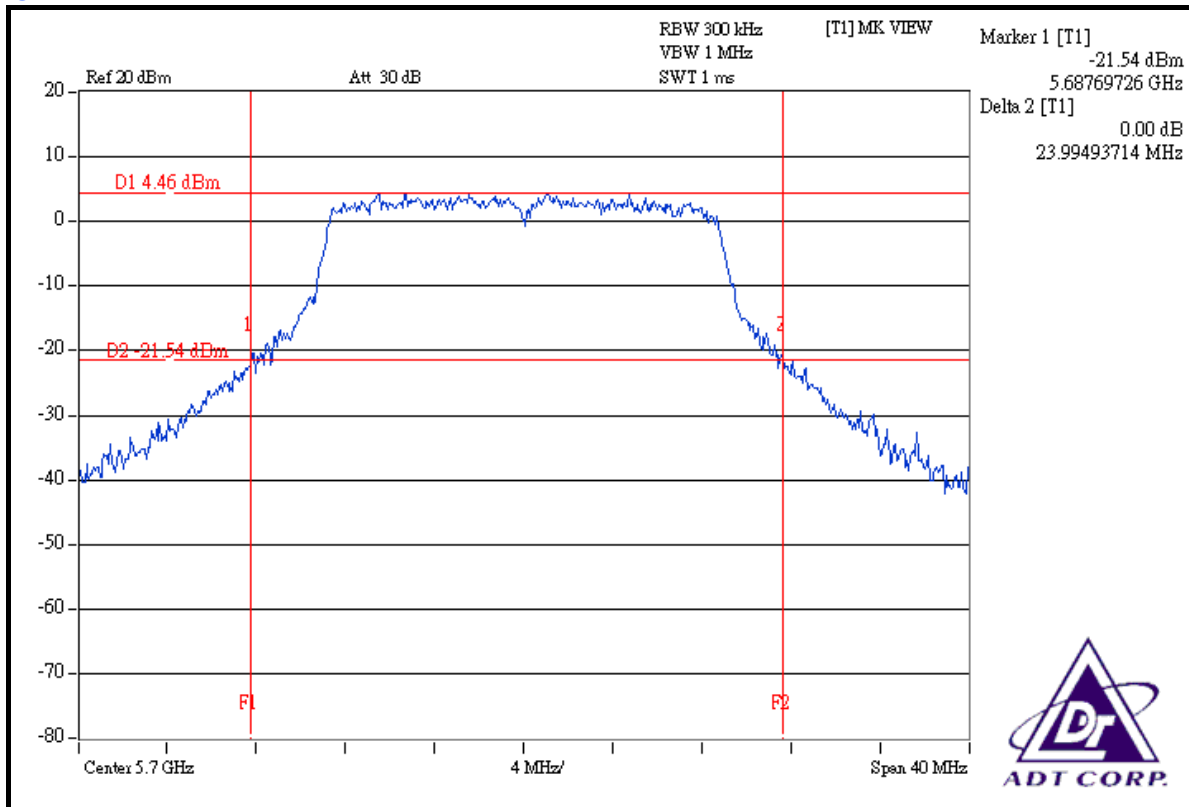




CH 6



CH 11



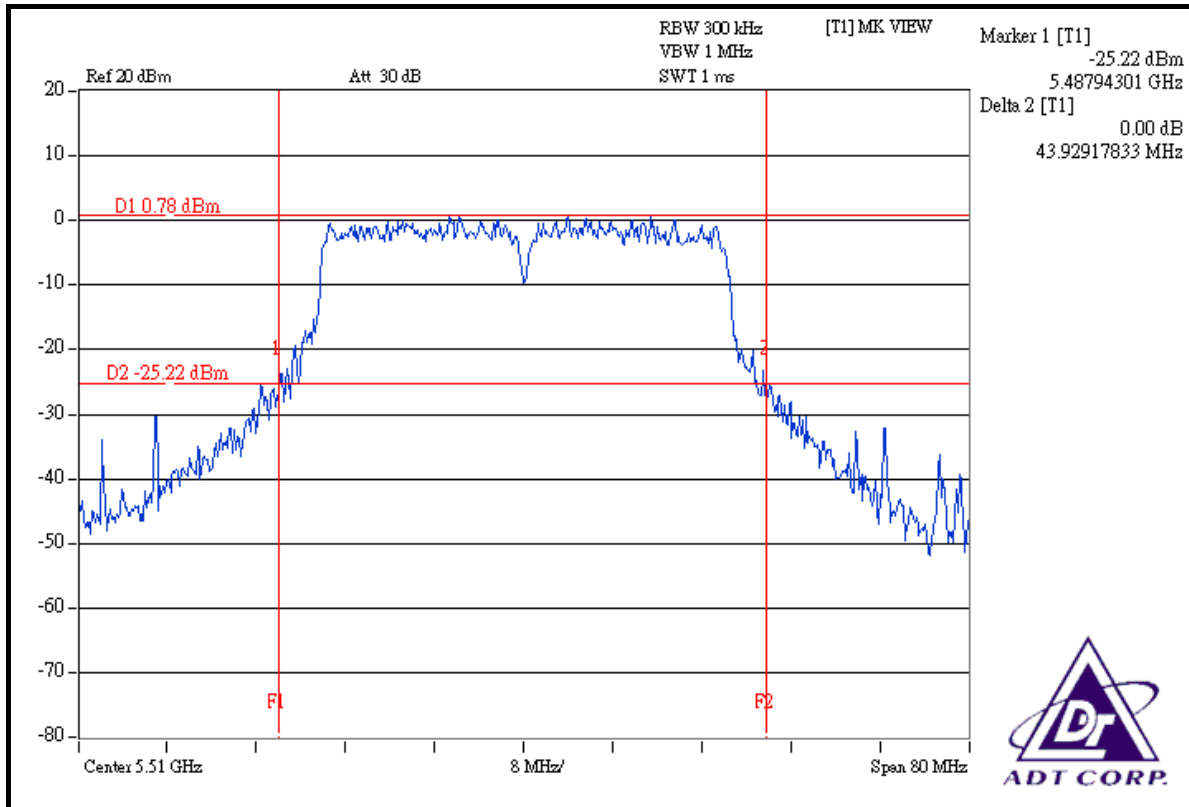


DRAFT 802.11n (40MHz) OFDM MODULATION:

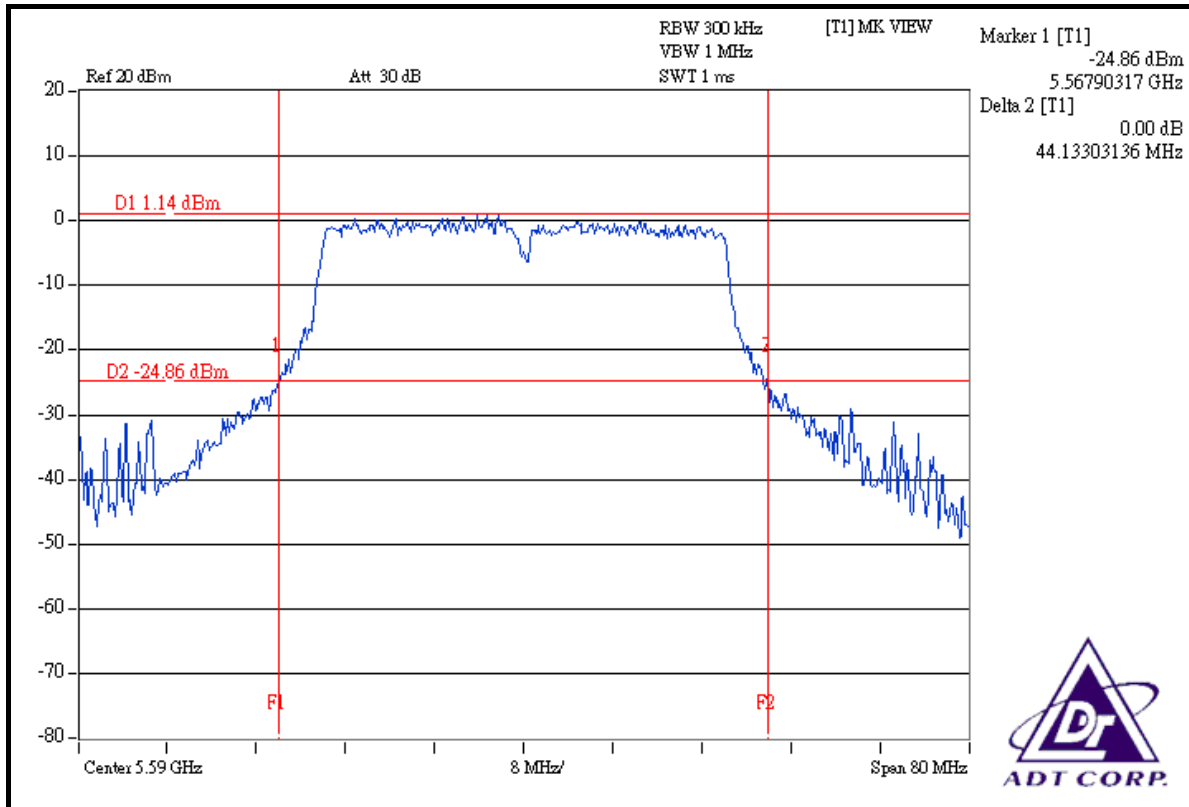
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
1	5510	43.93	44.71	PASS
3	5590	44.13	42.57	PASS
5	5670	47.23	44.76	PASS

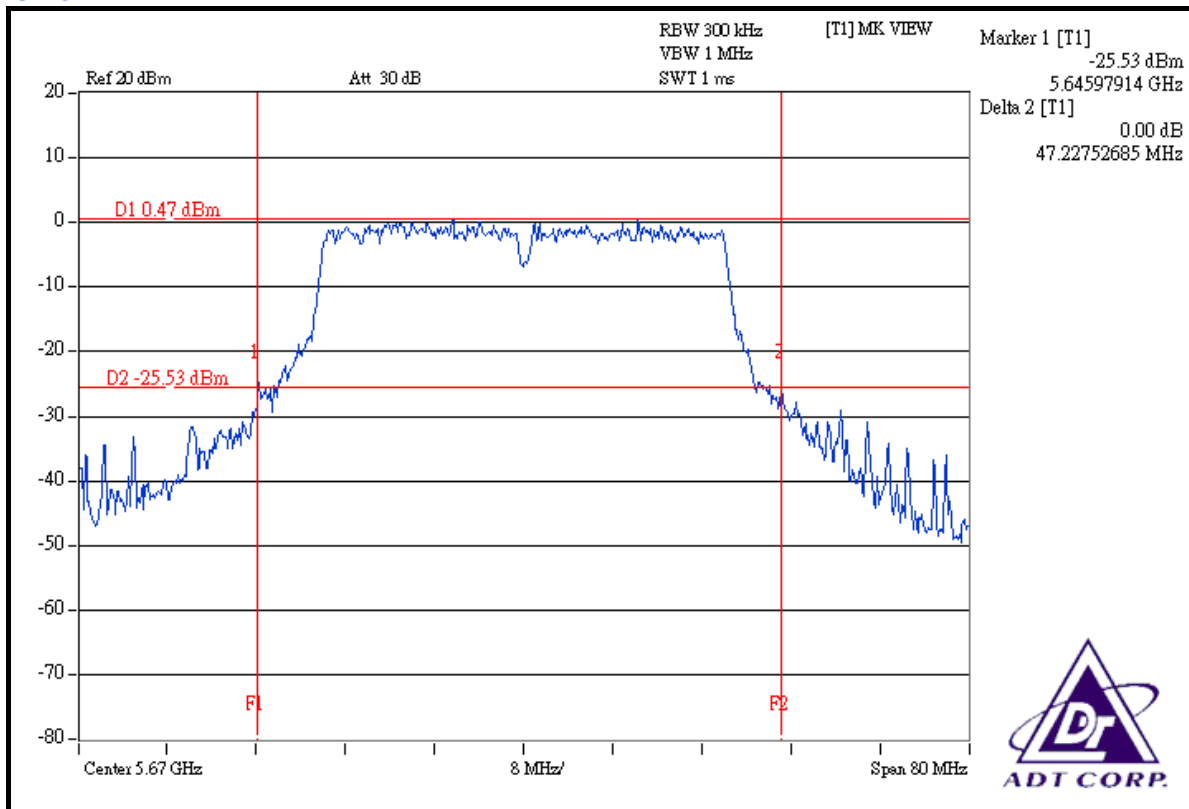
FOR CHAIN 0: CH 1



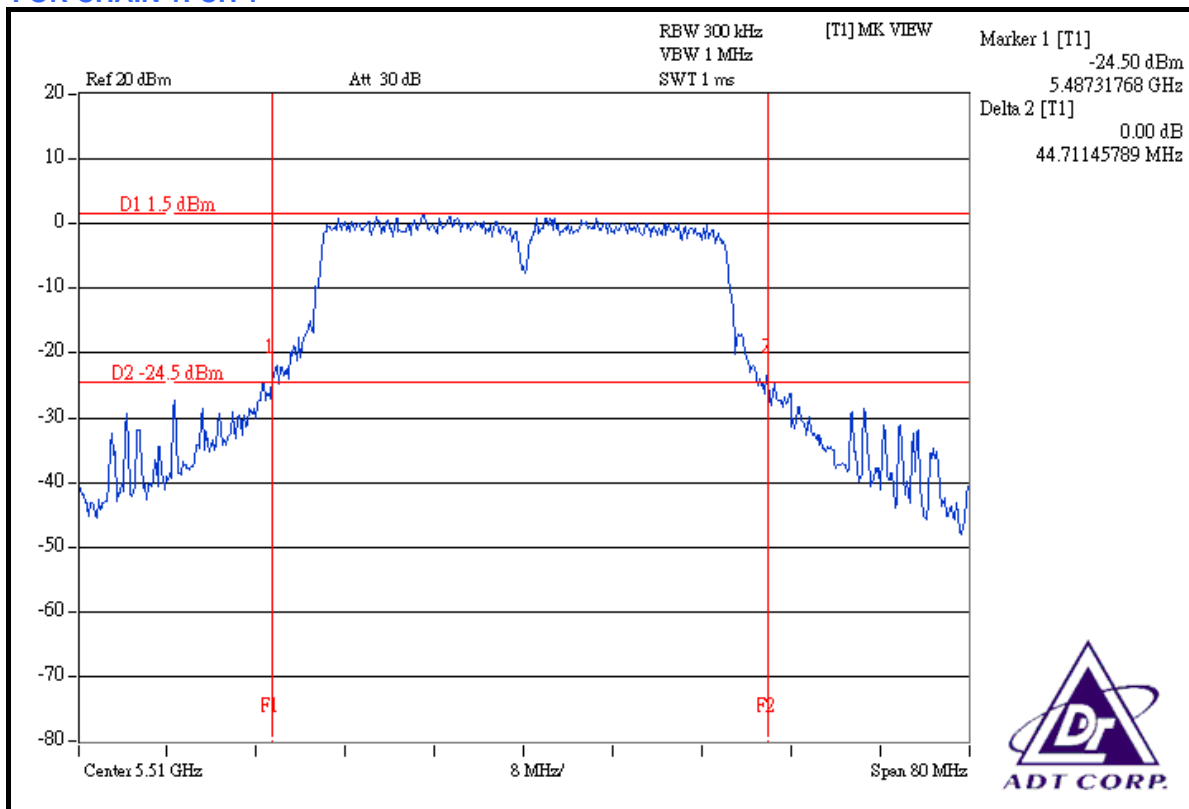
CH 3



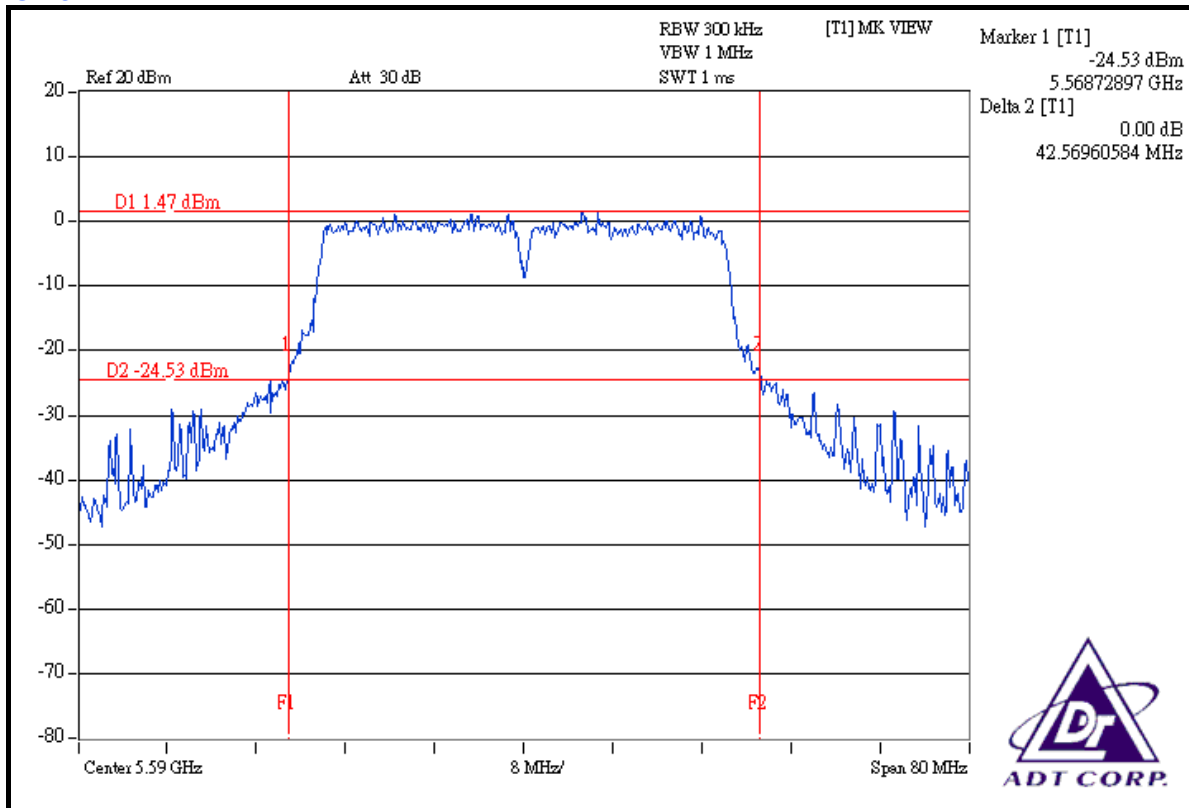
CH 5



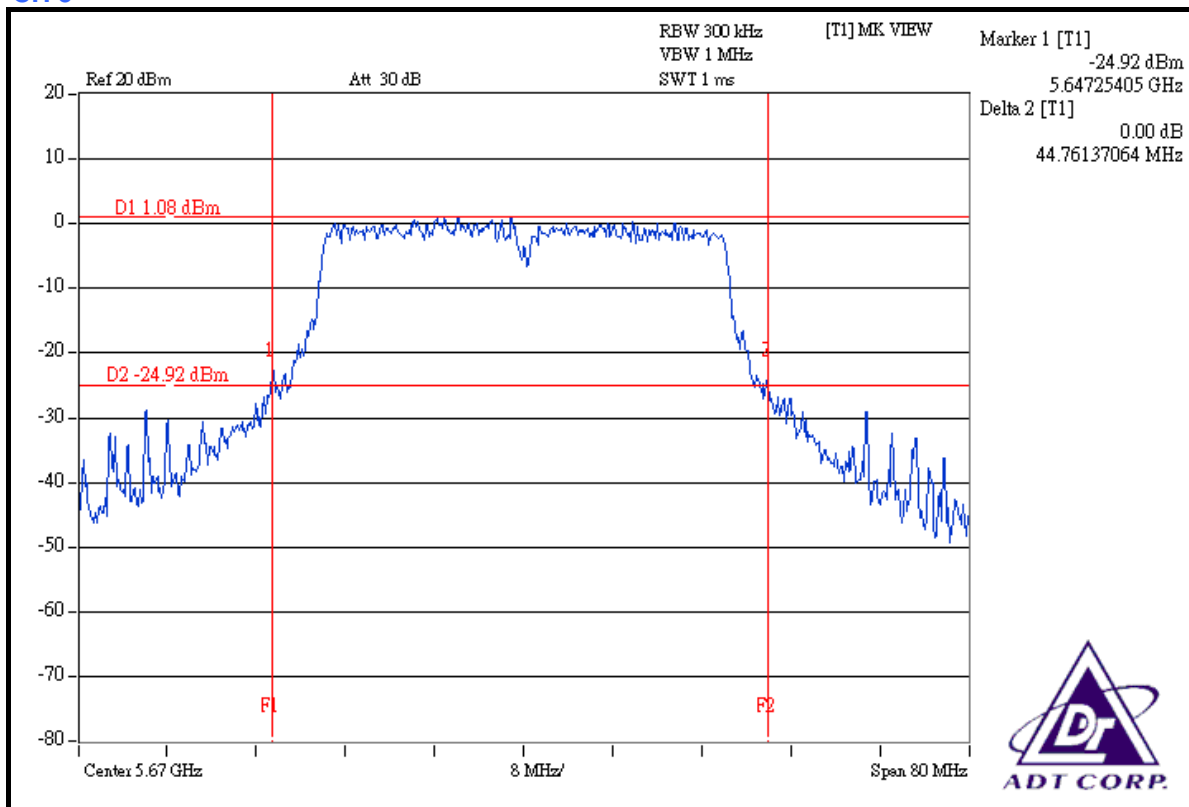
FOR CHAIN 1: CH 1



CH 3



CH 5



4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

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

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

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

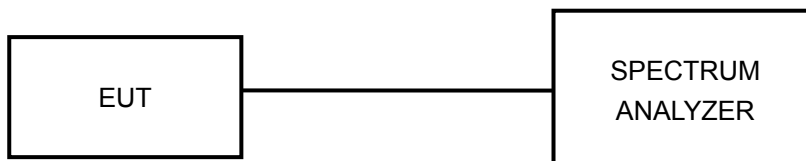
4.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 (RB = 1MHz, VB = 3MHz) and 2 (RB = 1MHz, VB = 300kHz).
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

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



4.4.7 TEST RESULTS

FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

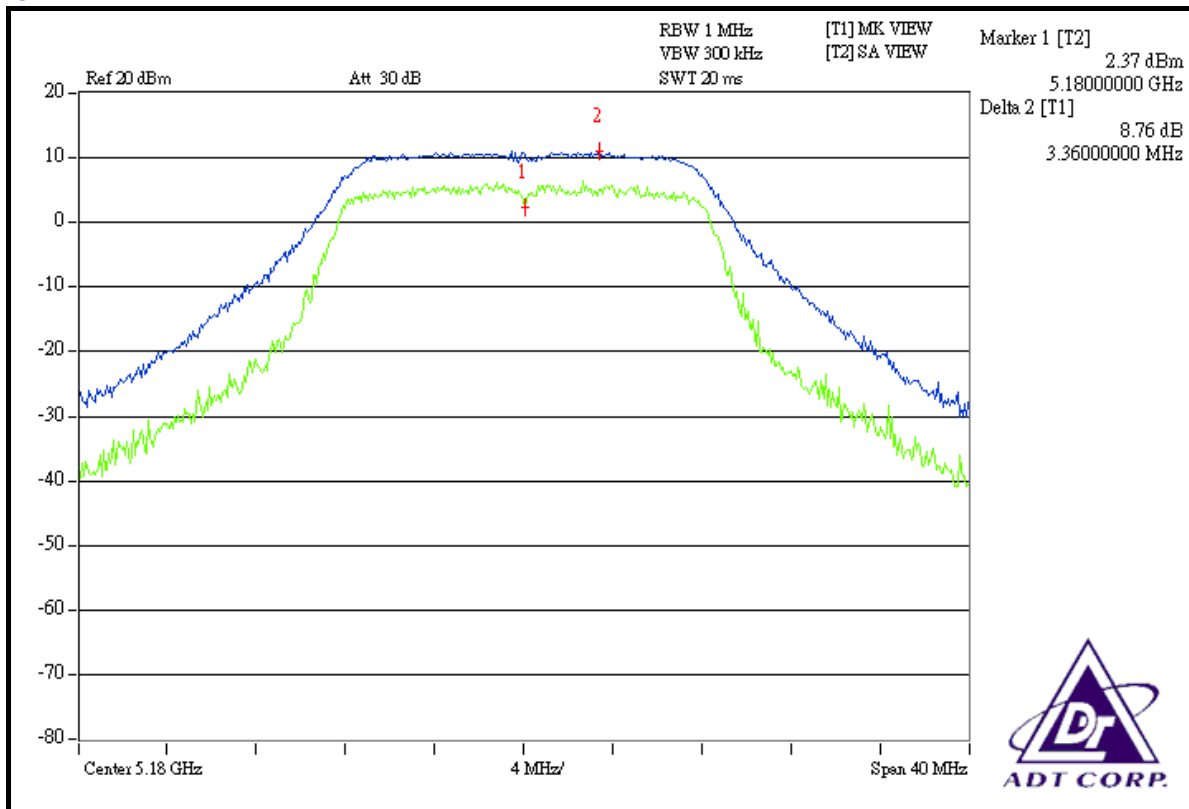
802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

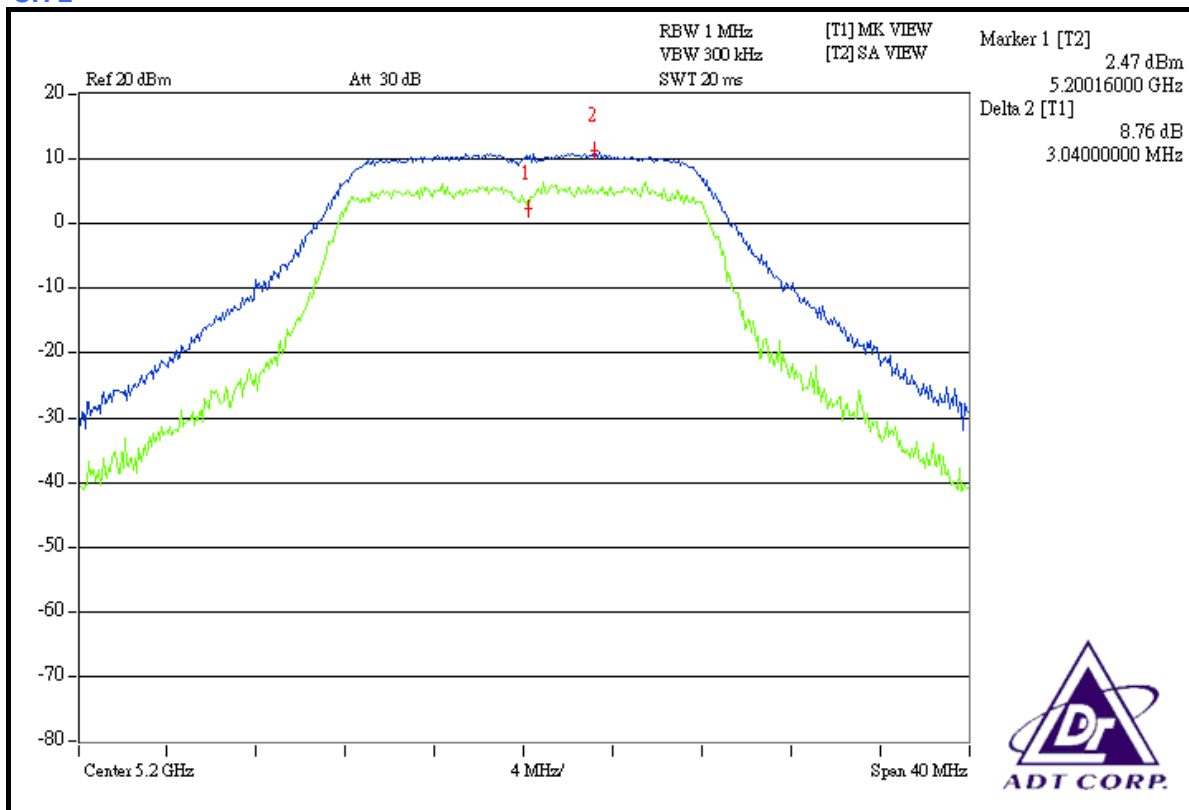
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS / FAIL
1	5180	8.76	13	PASS
2	5200	8.76	13	PASS
4	5240	8.40	13	PASS
5	5260	8.74	13	PASS
7	5300	8.17	13	PASS
8	5320	8.13	13	PASS



CH 1

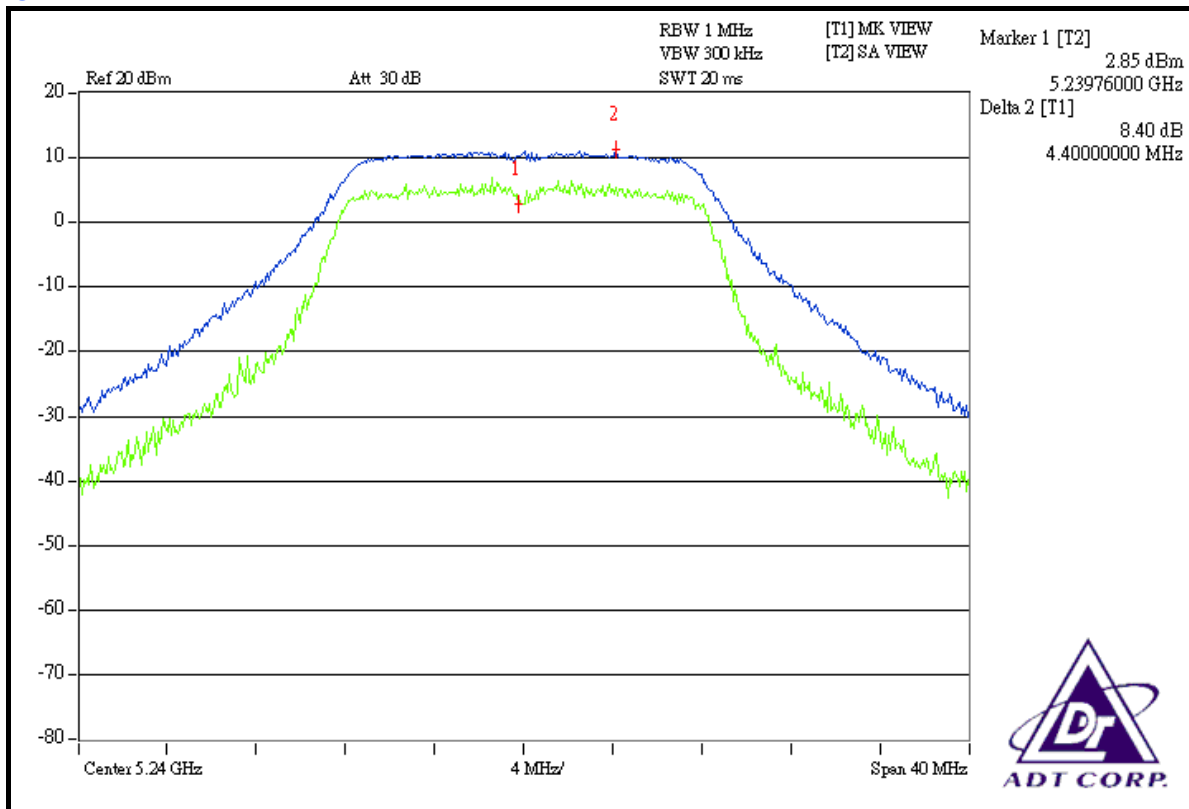


CH 2

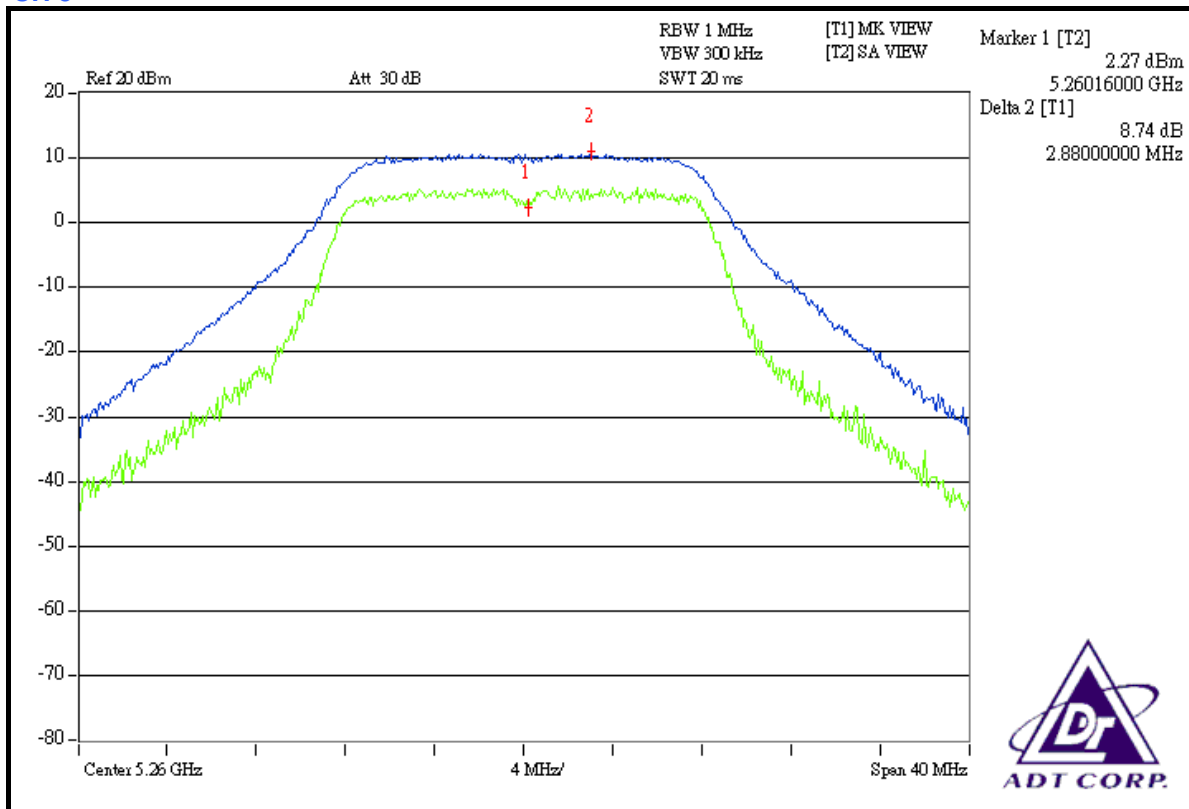




CH 4

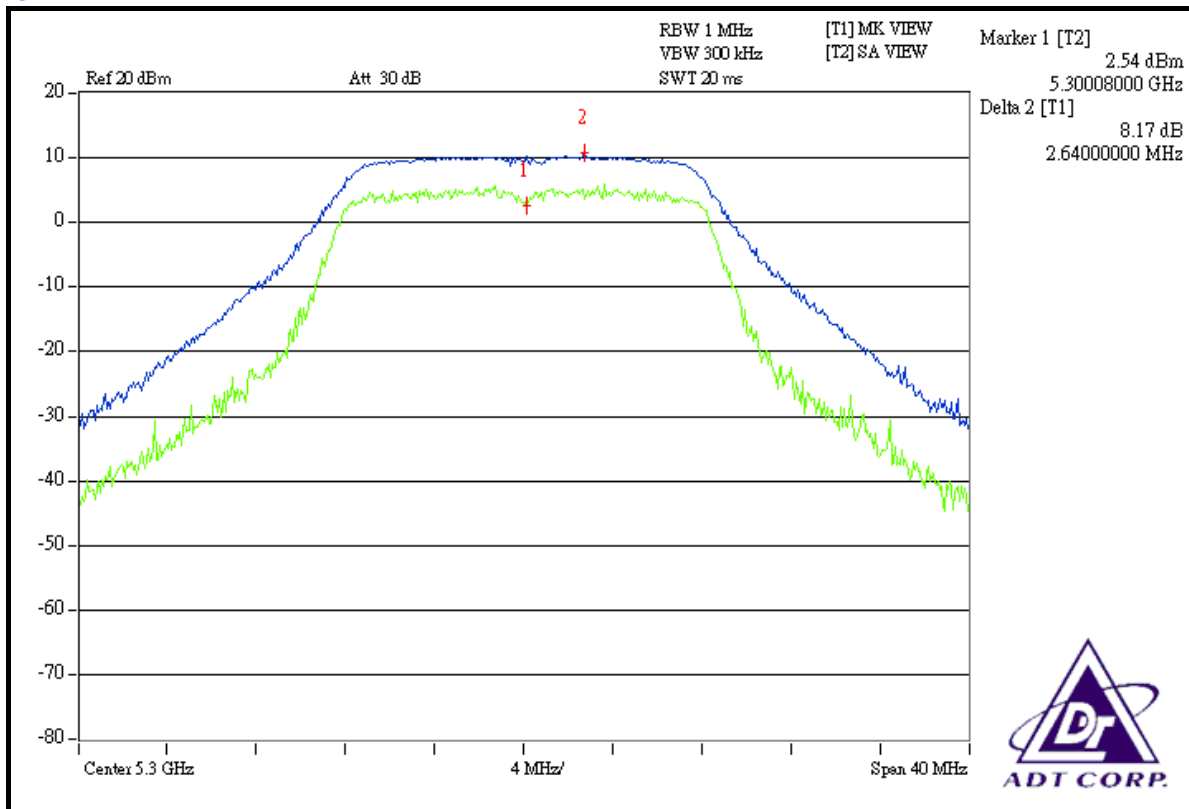


CH 5

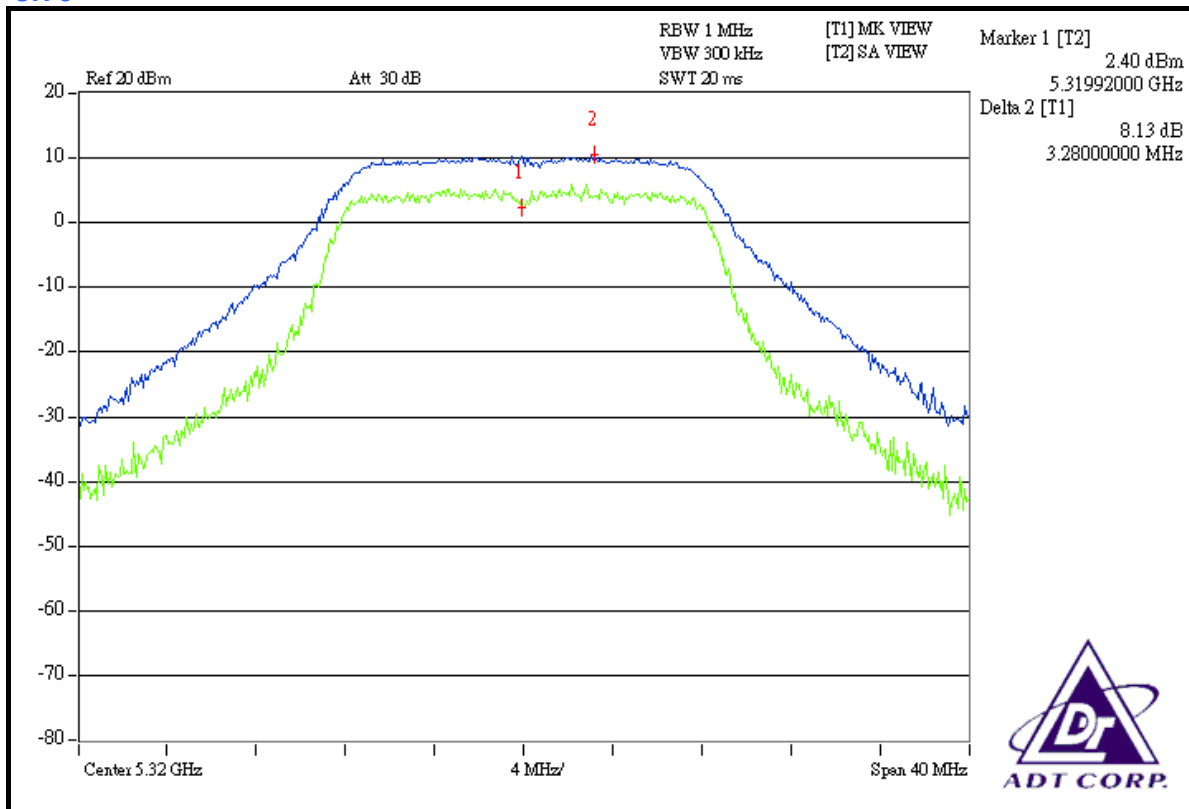




CH 7



CH 8





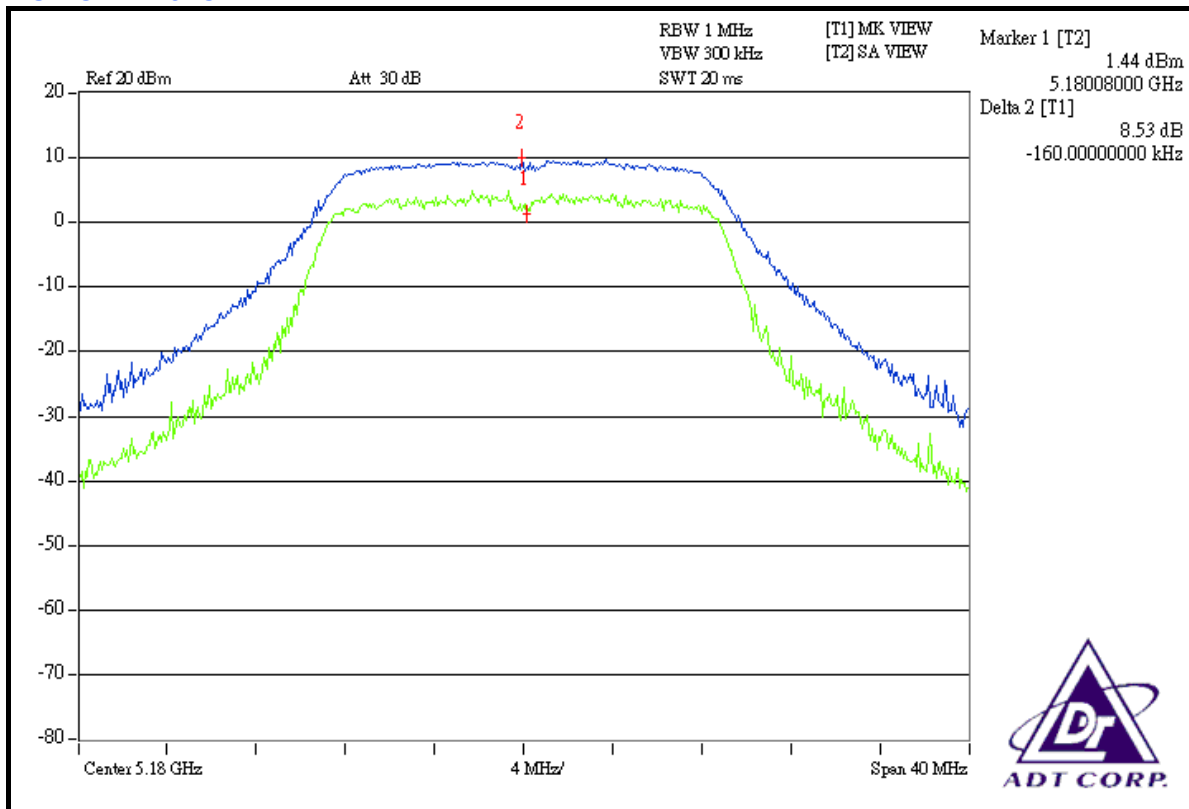
DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

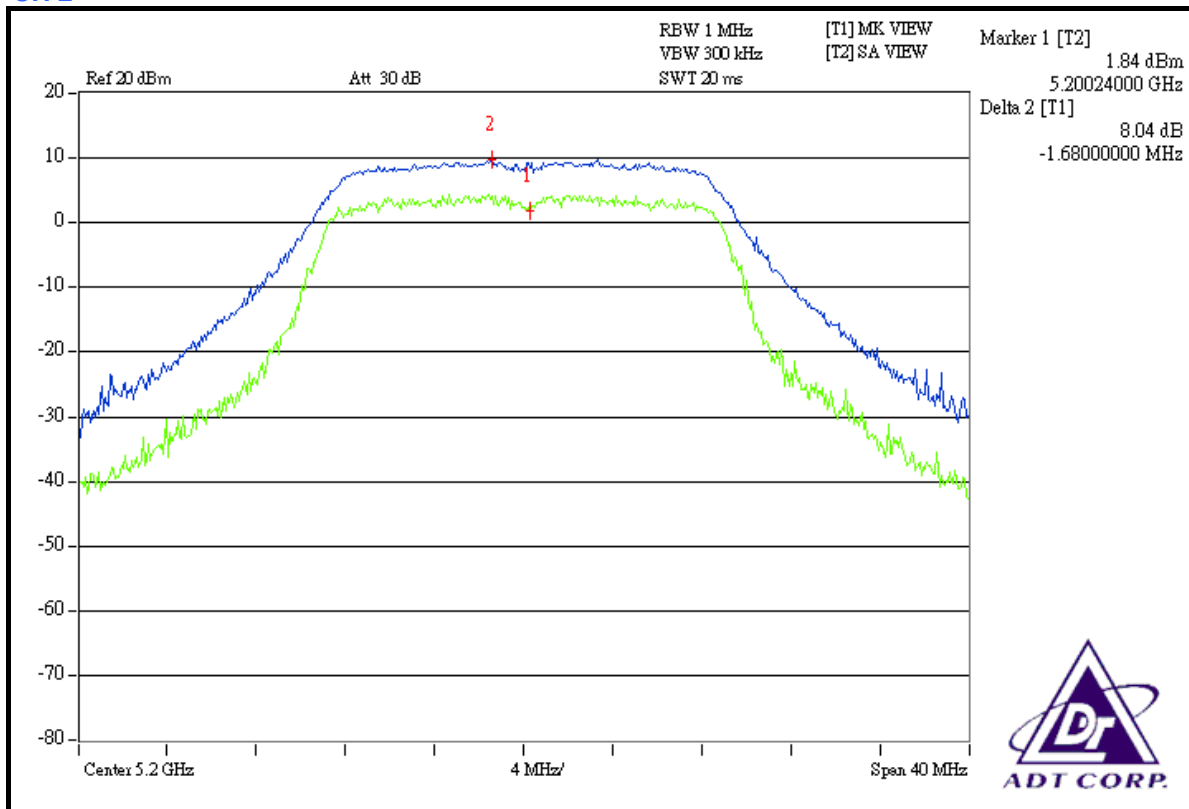
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
1	5180	8.53	9.05	13	PASS
2	5200	8.04	8.78	13	PASS
4	5240	8.55	9.13	13	PASS
5	5260	8.11	8.40	13	PASS
7	5300	8.37	8.30	13	PASS
8	5320	8.66	8.46	13	PASS



FOR CHAIN 0: CH 1

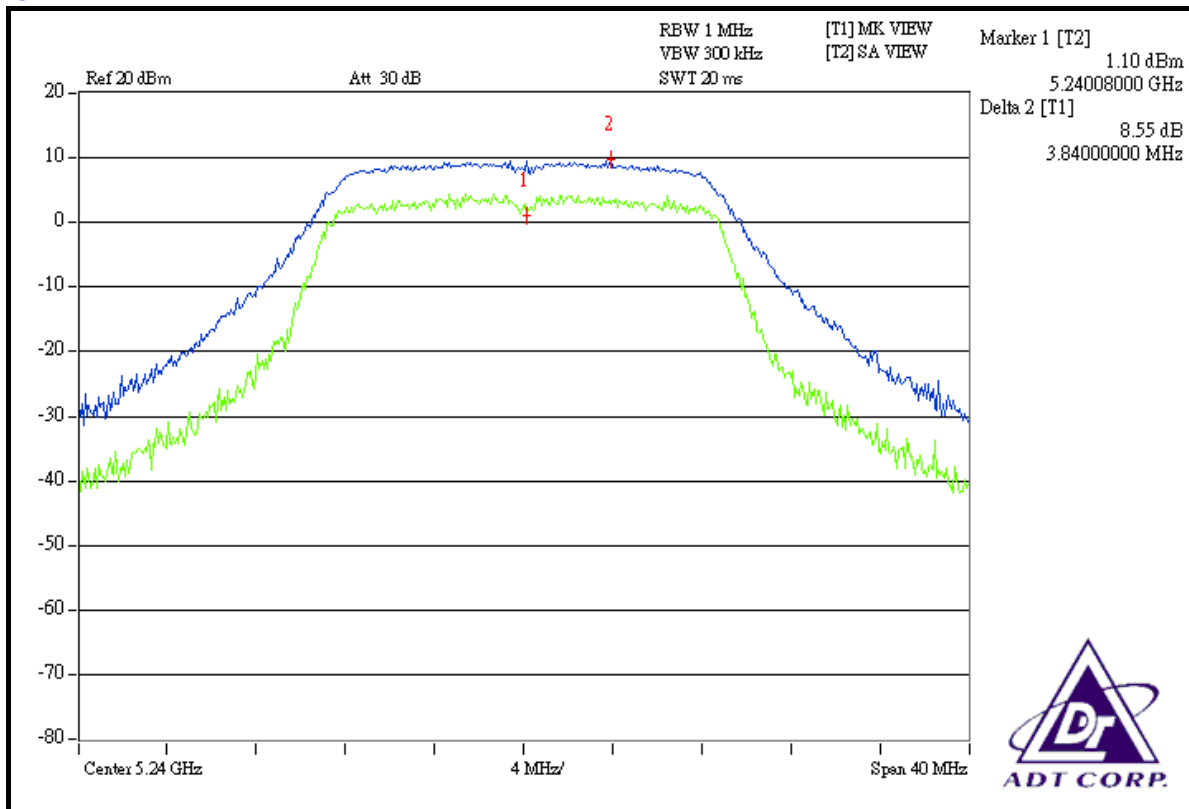


CH 2

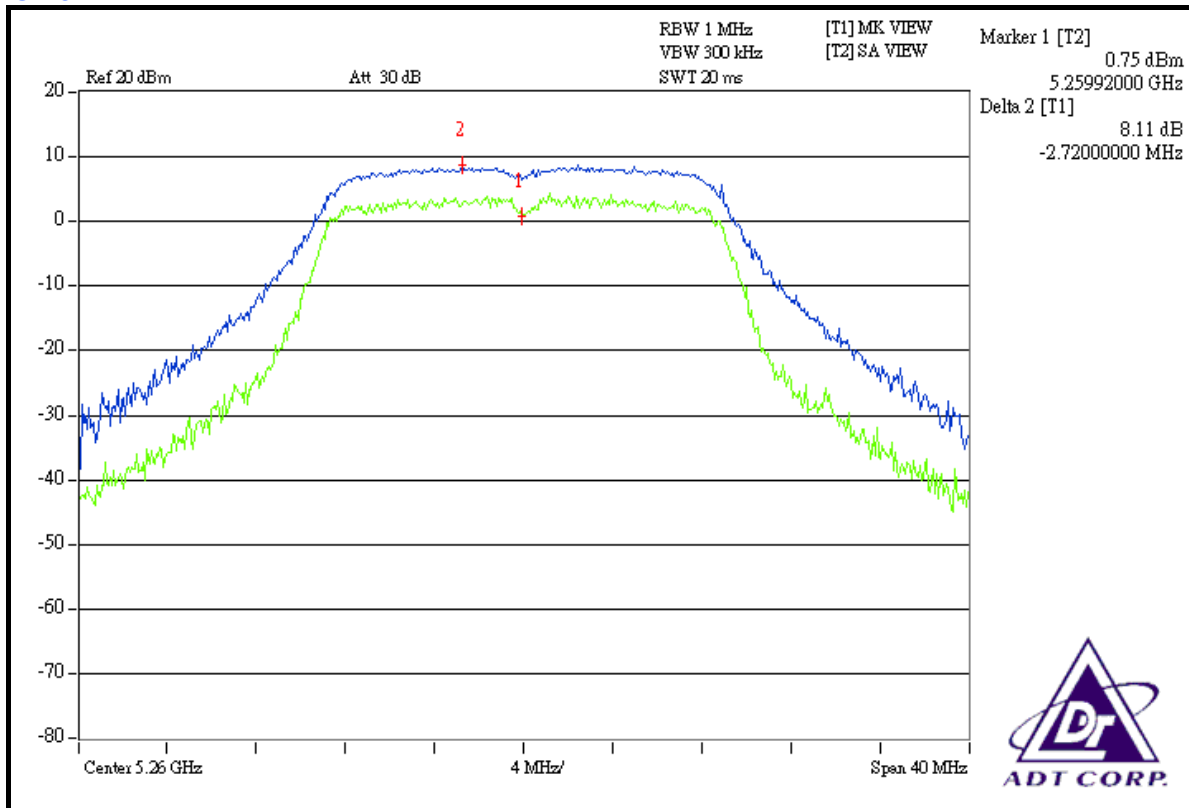




CH 4

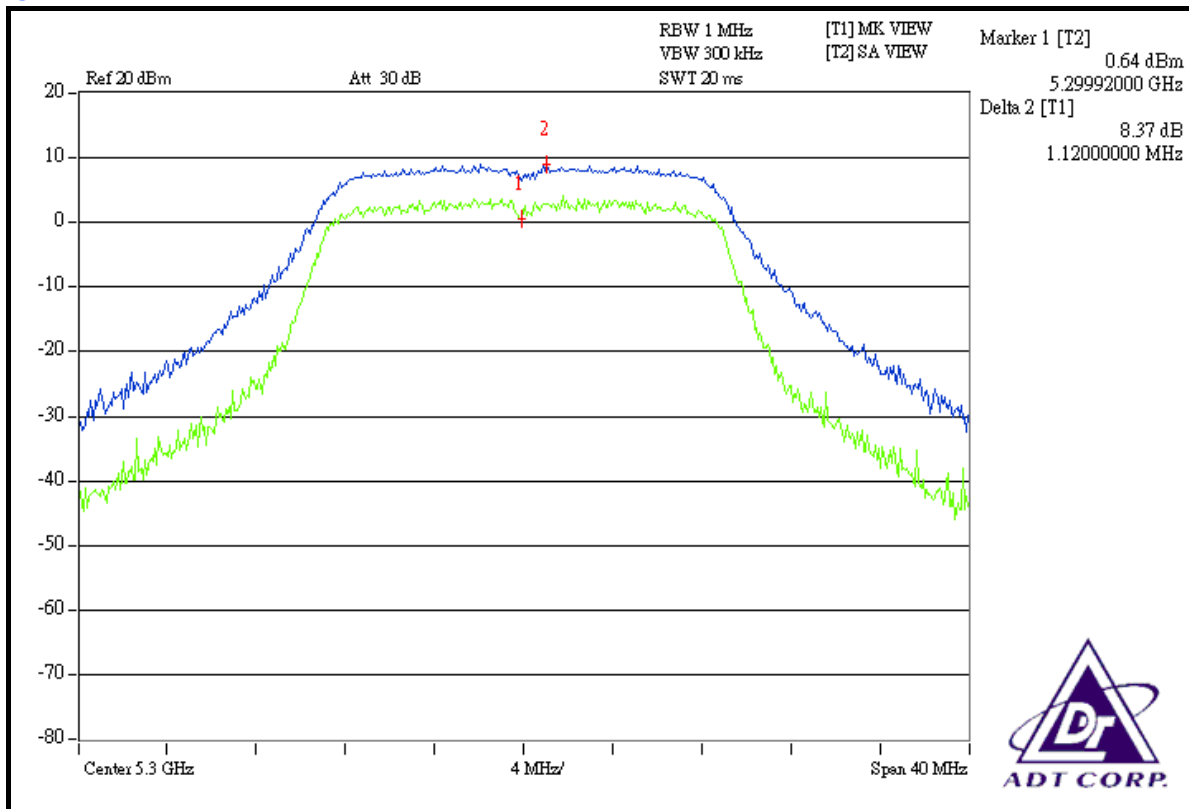


CH 5

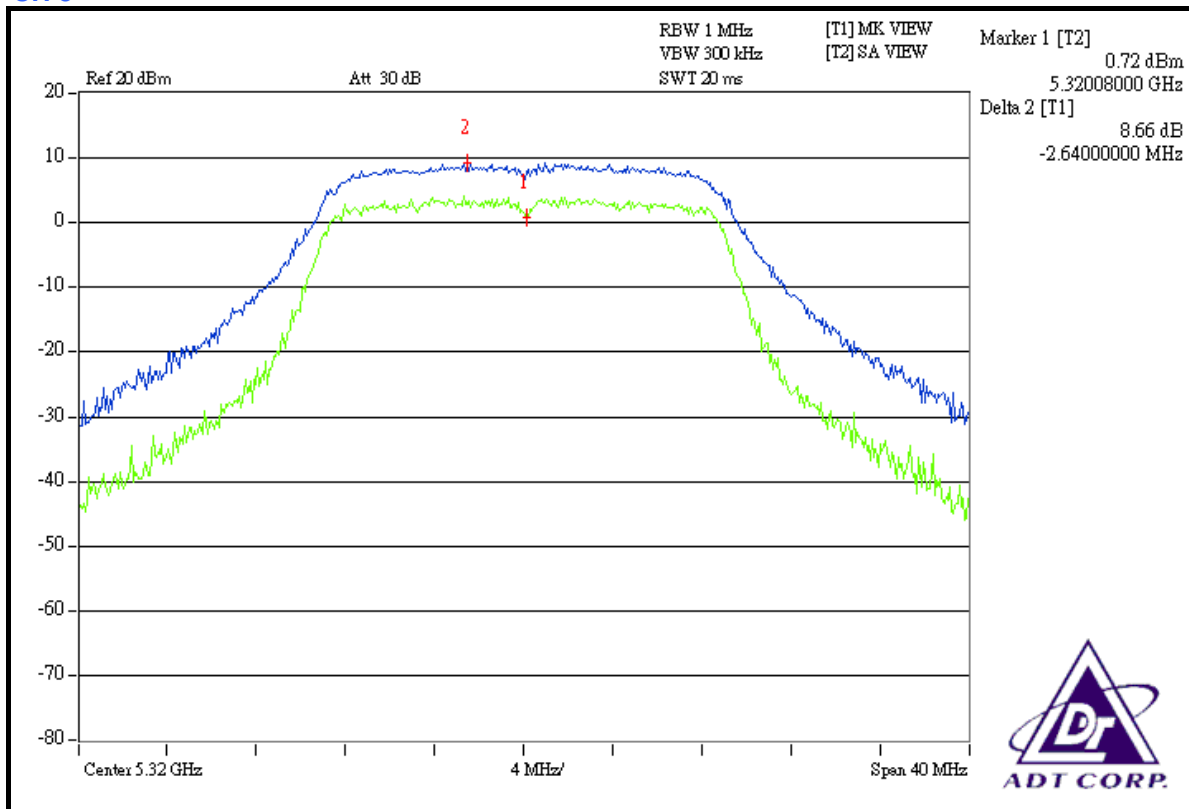




CH 7

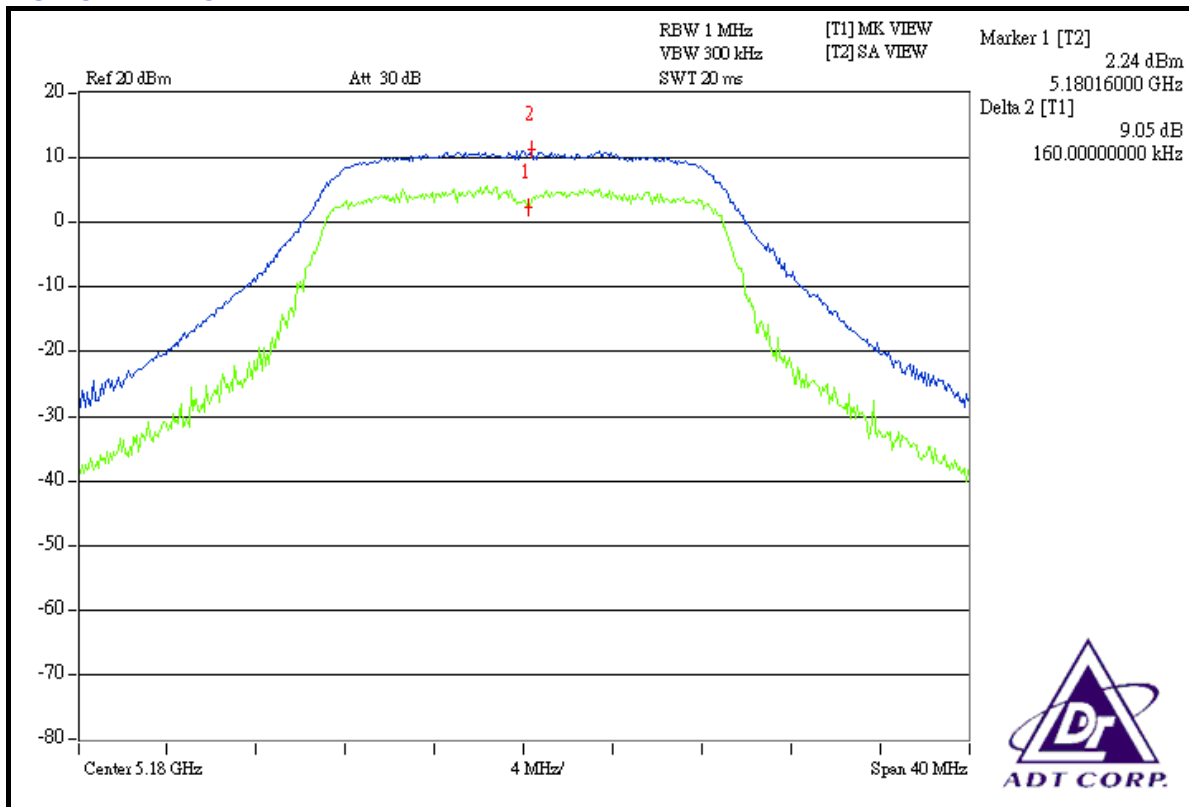


CH 8

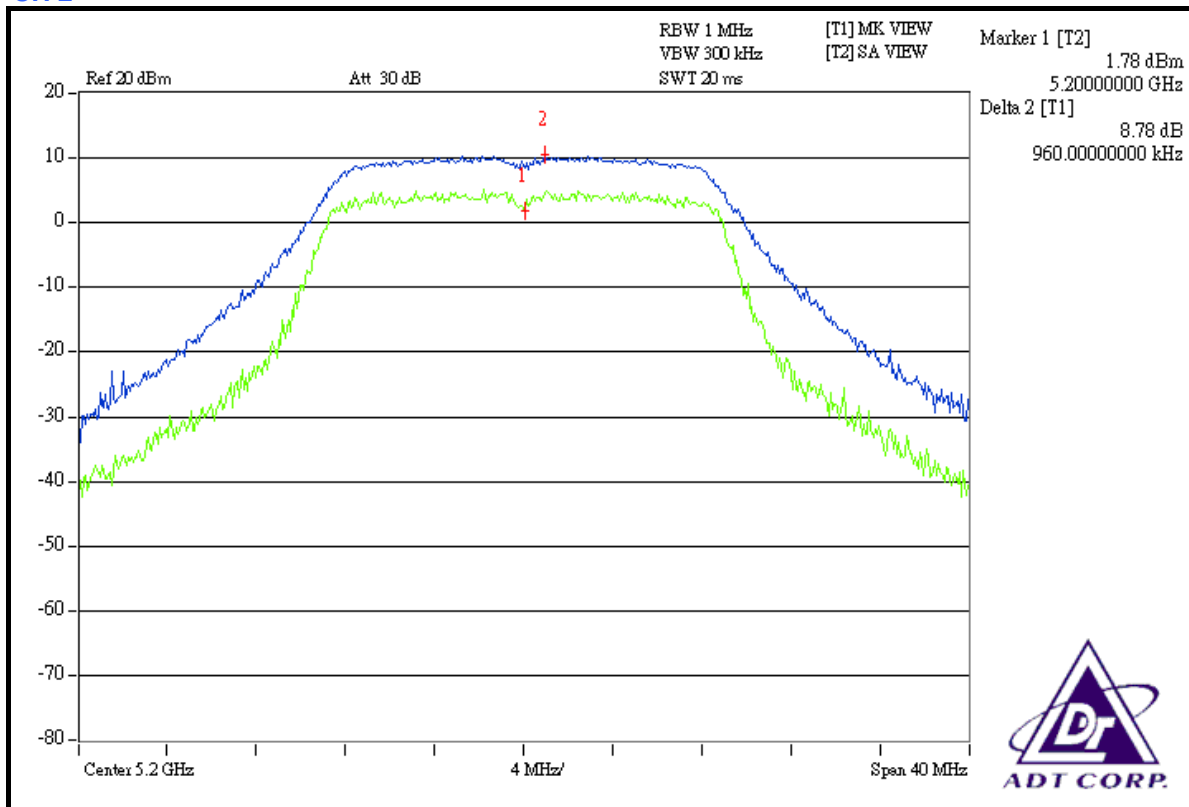




FOR CHAIN 1: CH 1

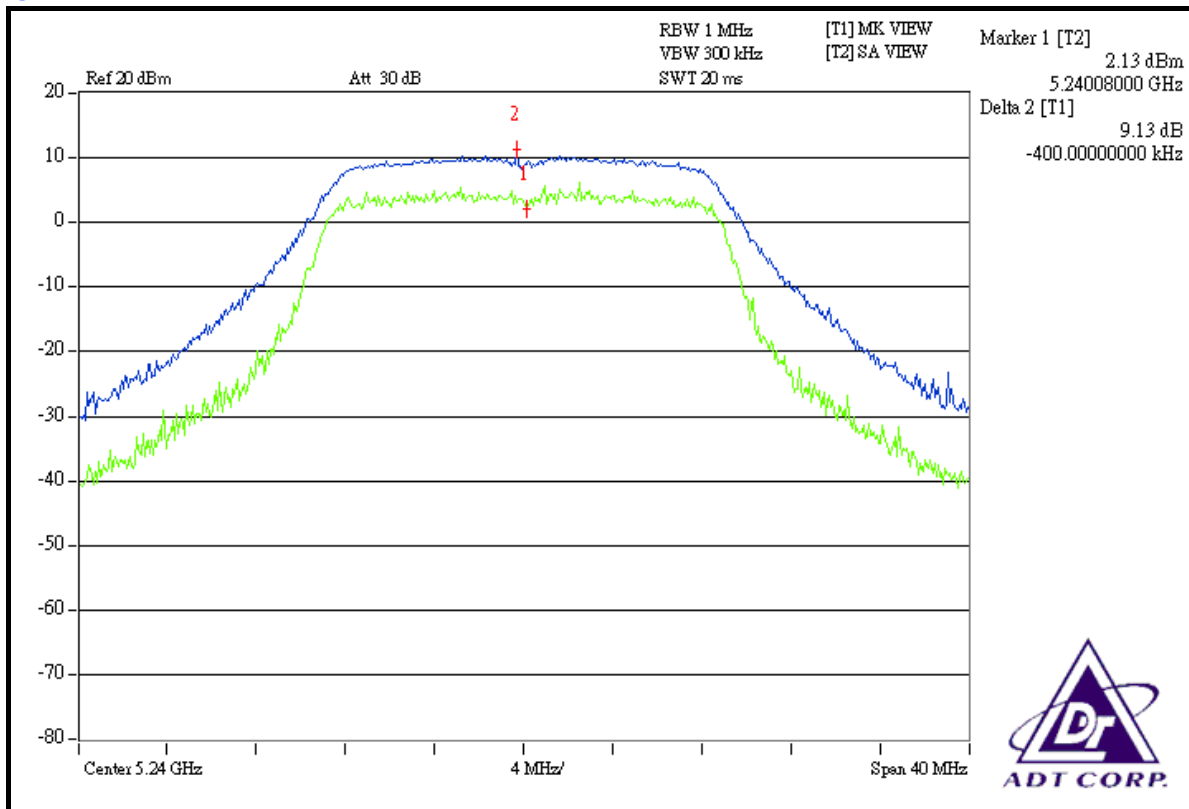


CH 2

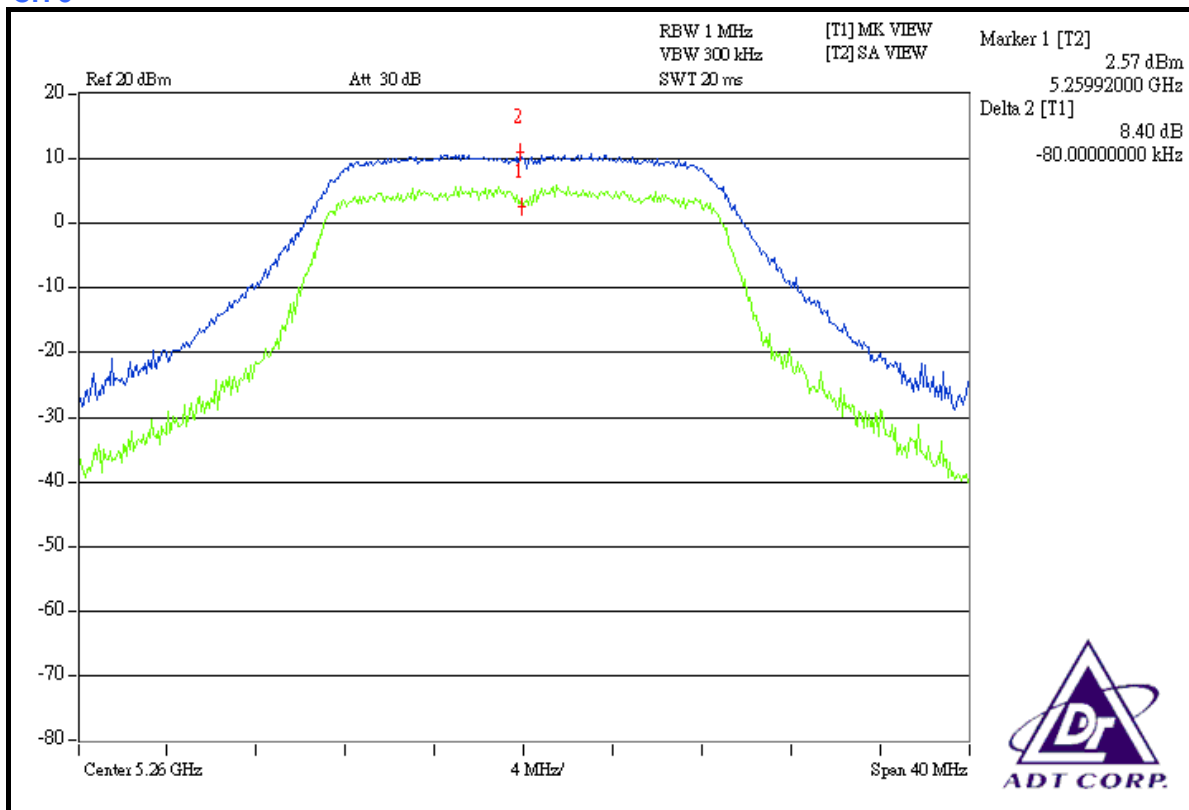




CH 4

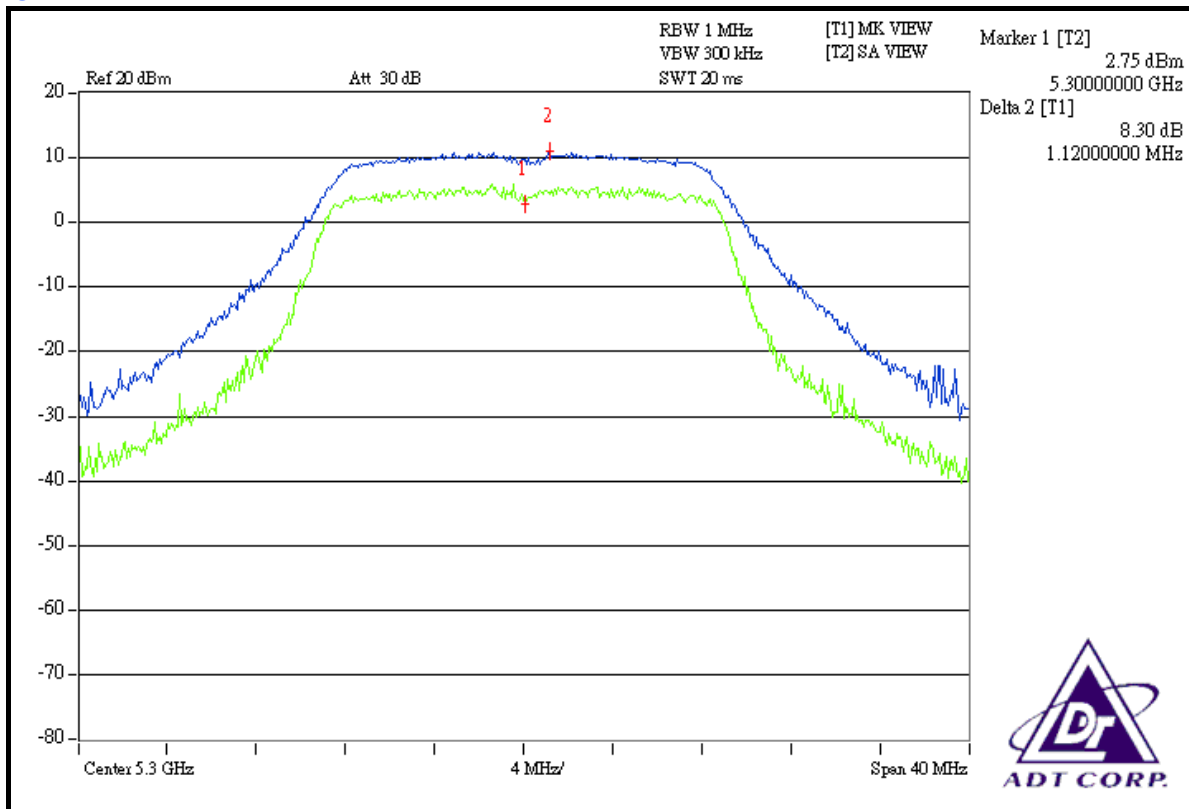


CH 5

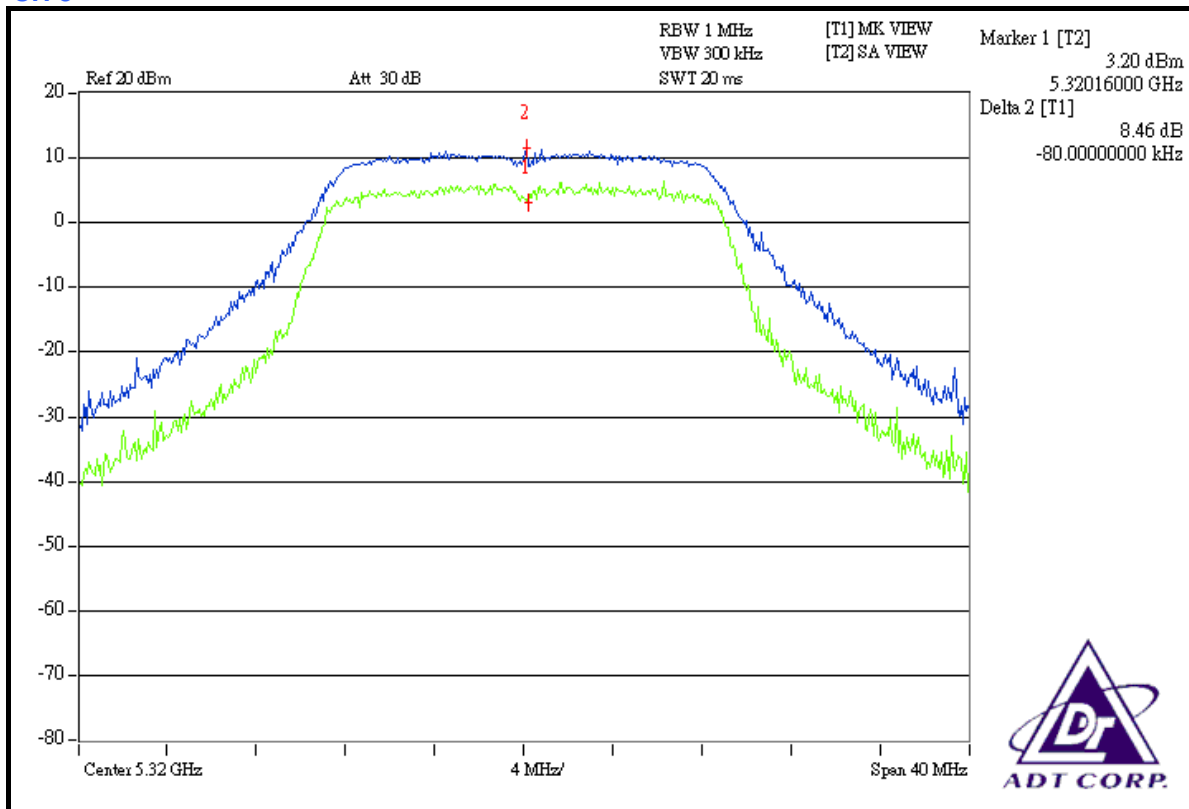




CH 7



CH 8





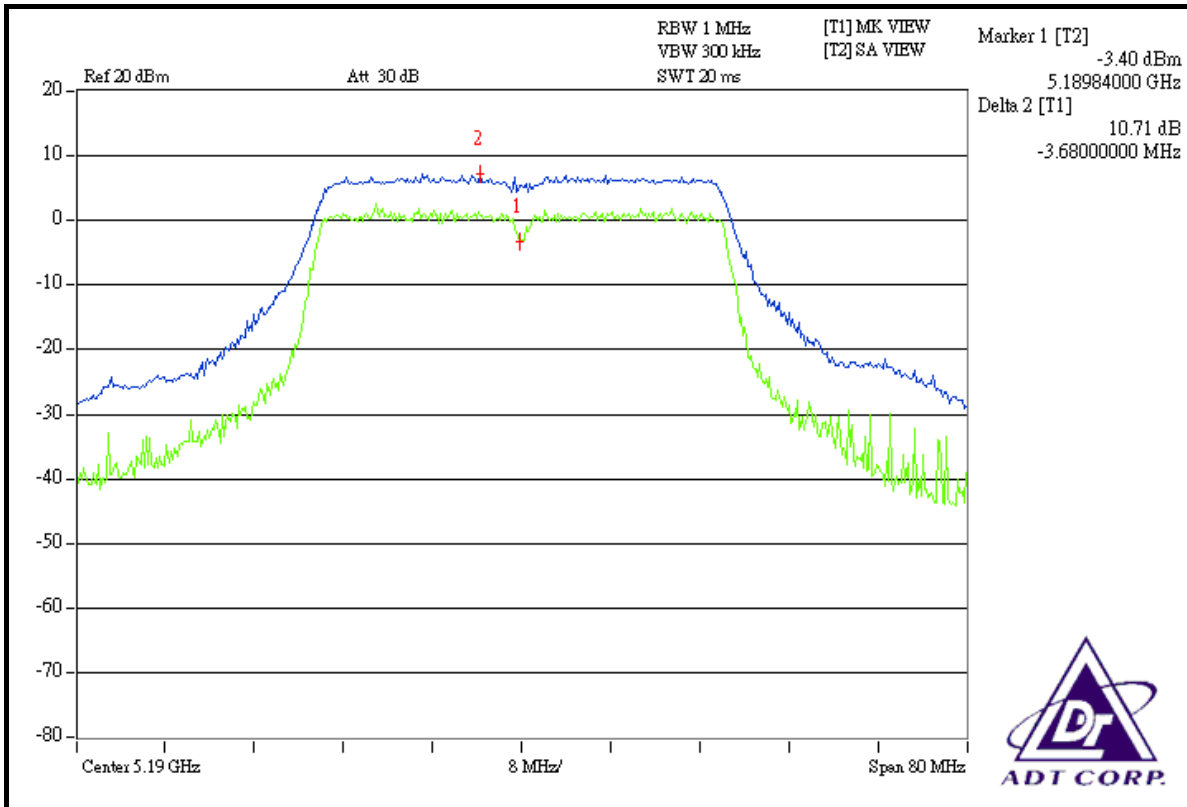
DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

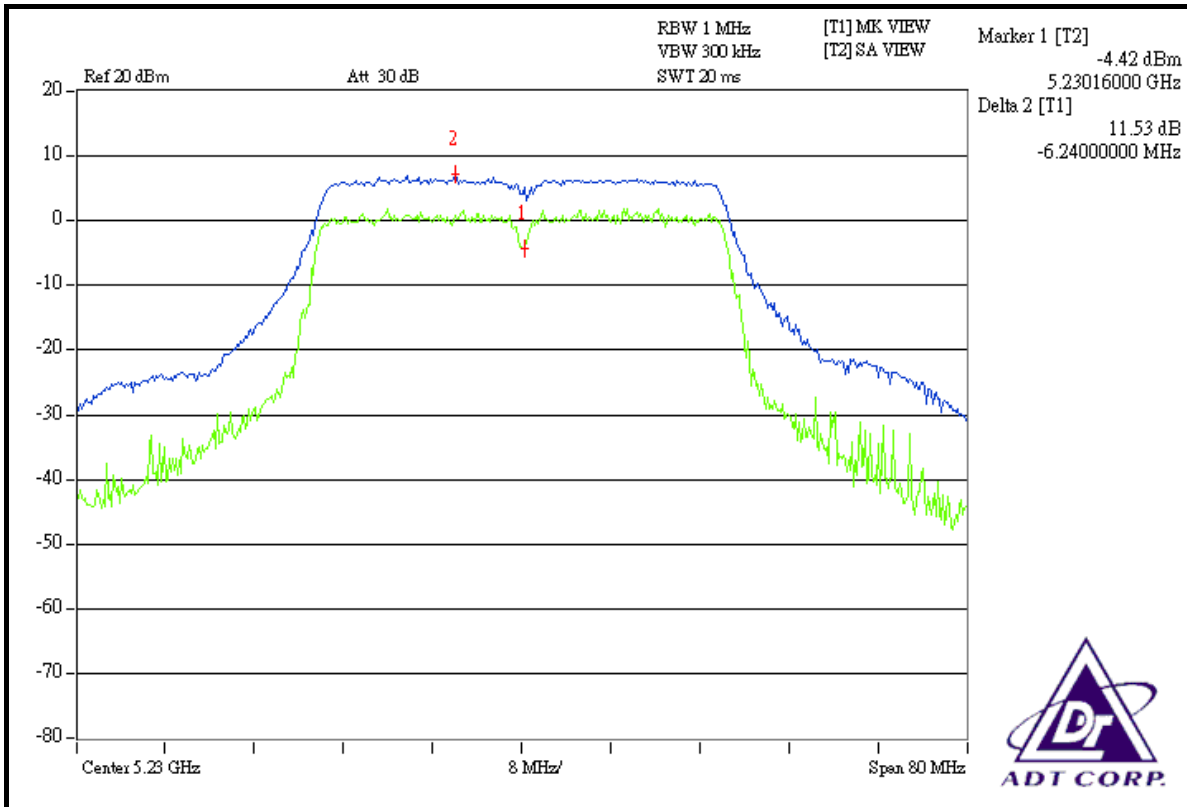
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
1	5190	10.71	9.70	13	PASS
2	5230	11.53	11.01	13	PASS
3	5270	10.04	11.44	13	PASS
4	5310	11.36	11.51	13	PASS



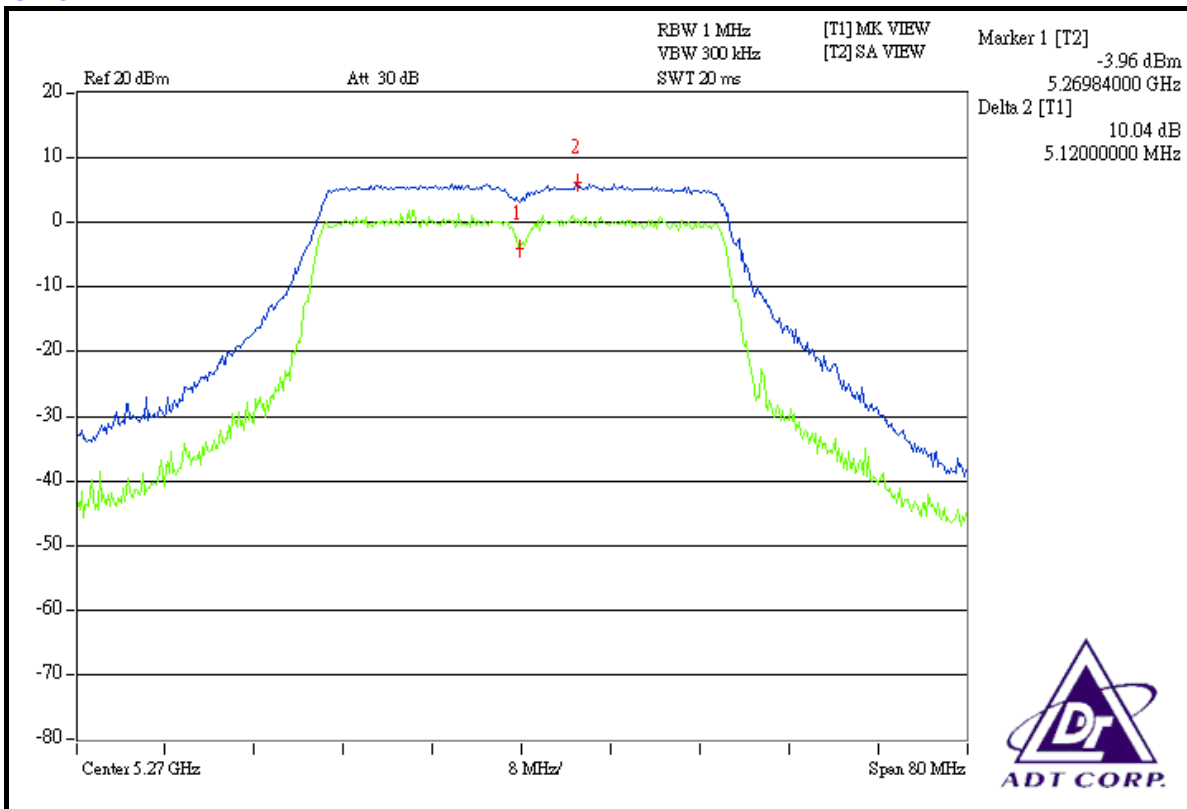
FOR CHAIN 0: CH 1



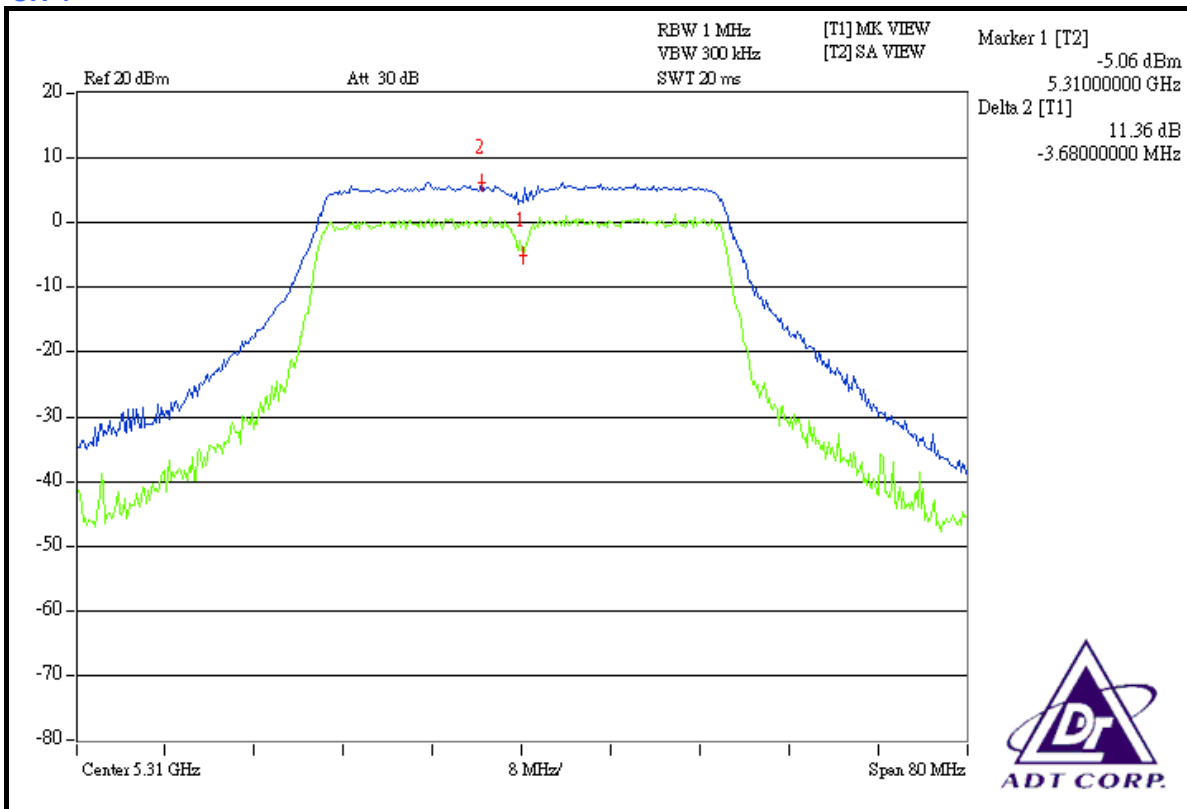
CH 2



CH 3

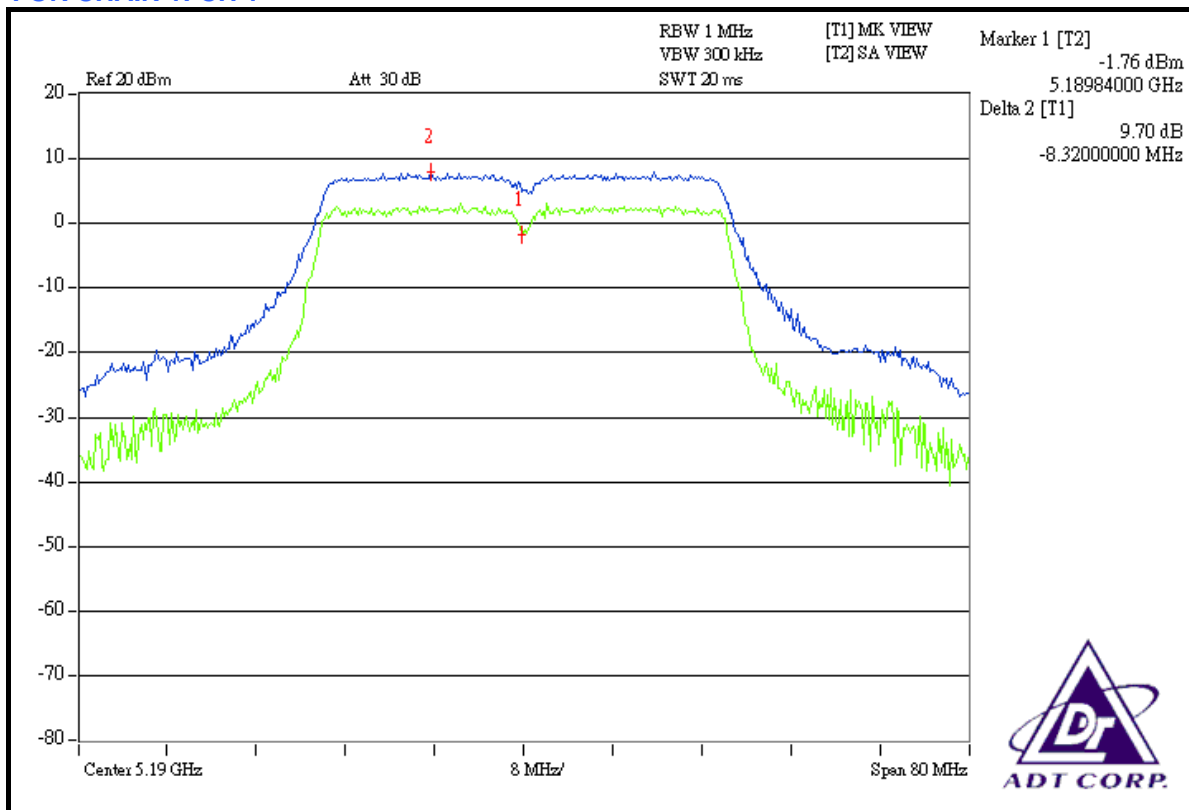


CH 4

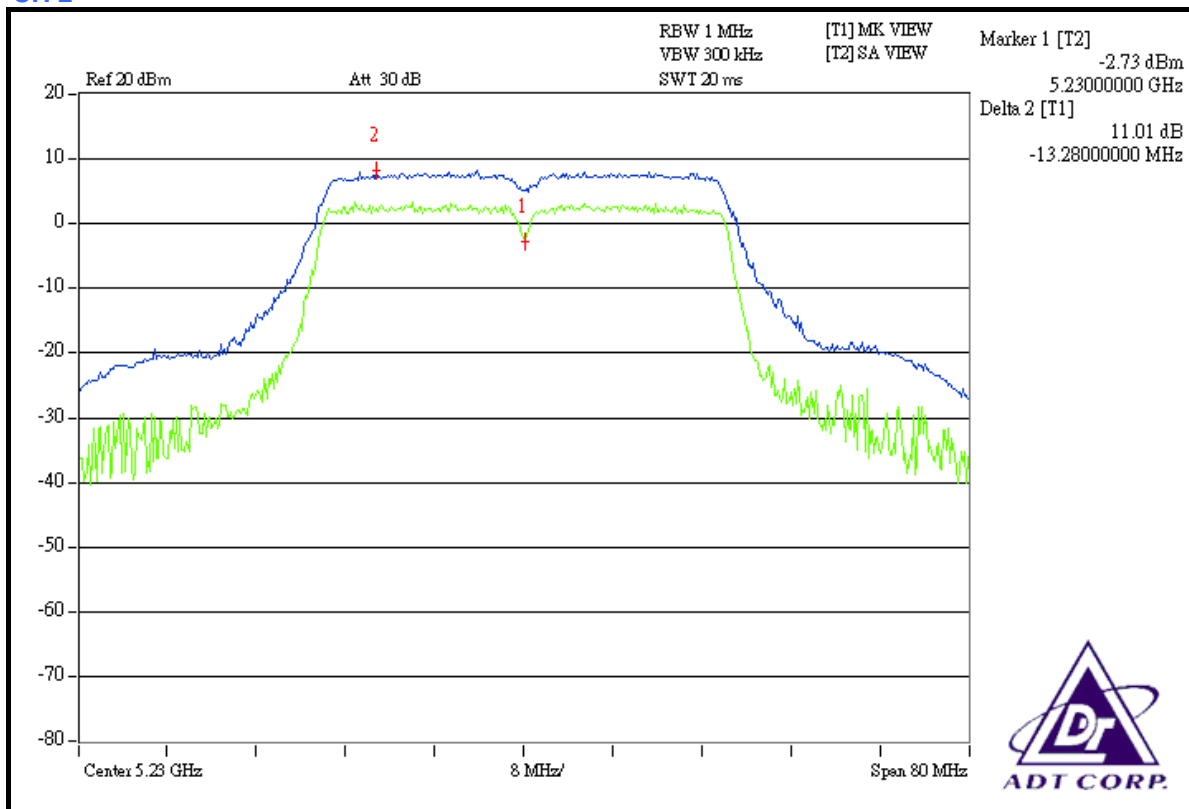




FOR CHAIN 1: CH 1

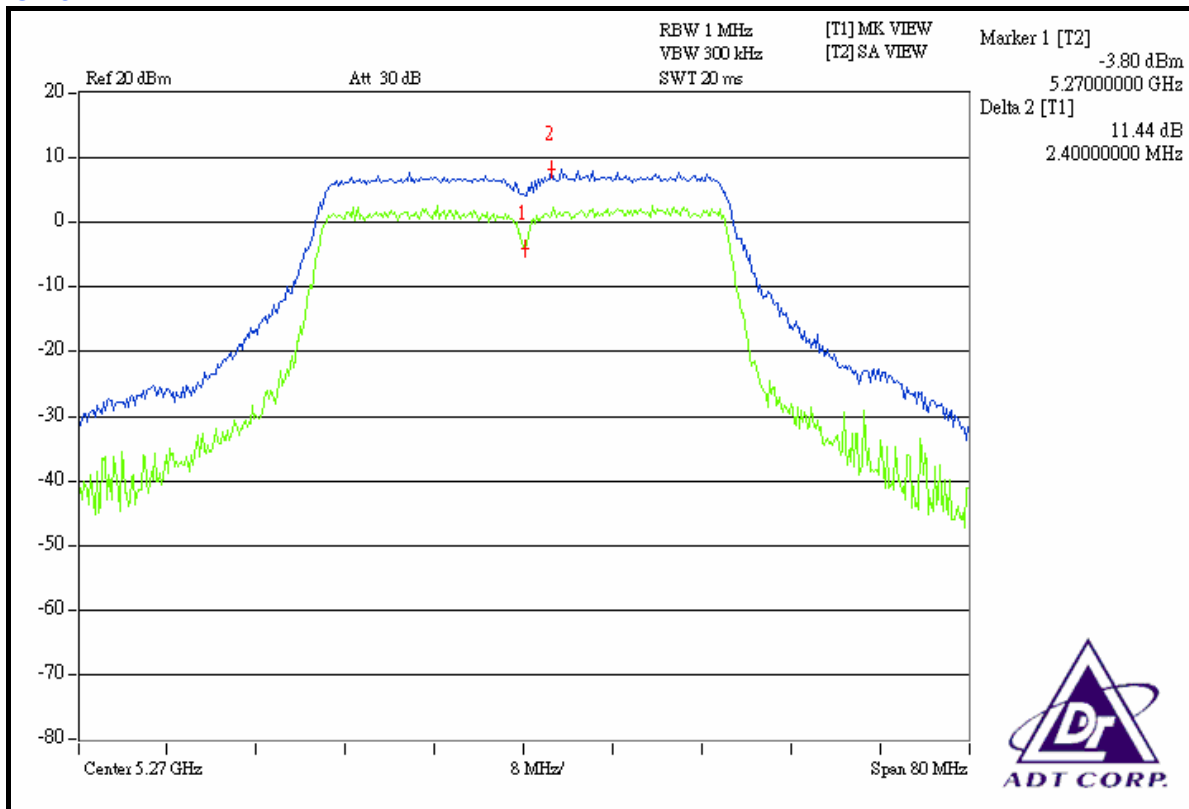


CH 2

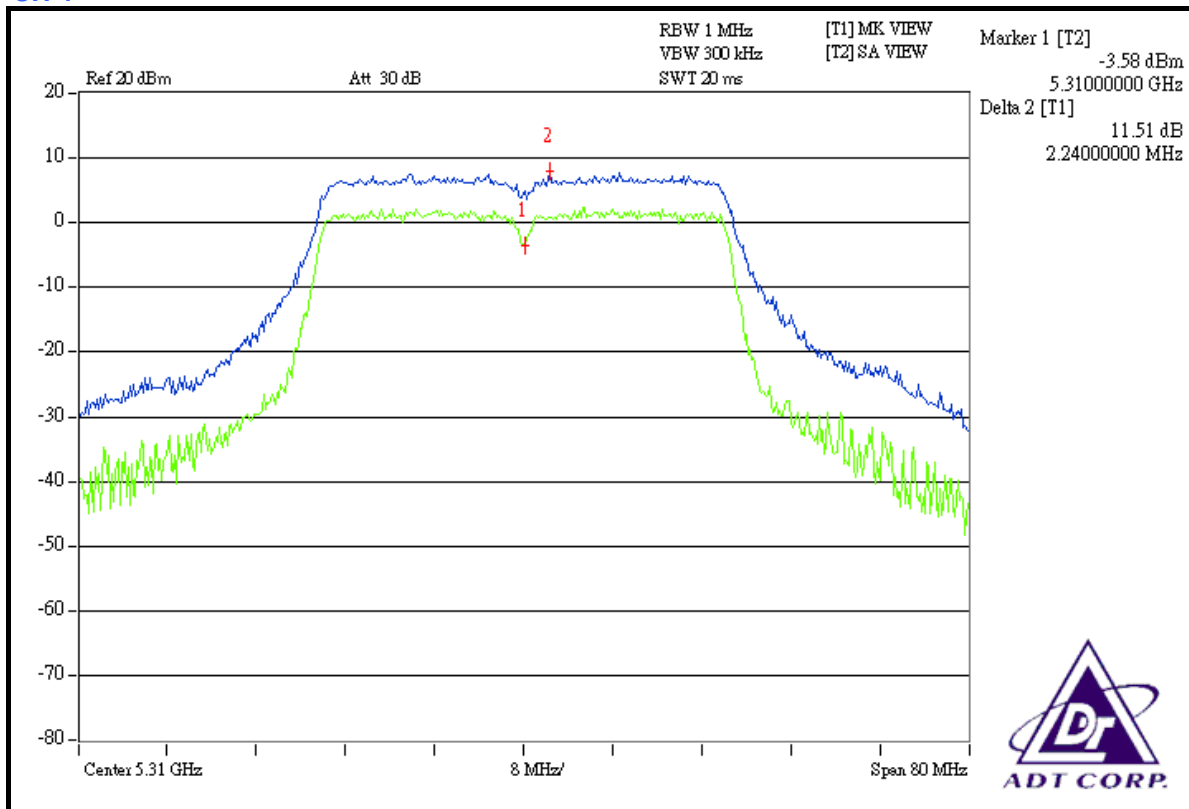




CH 3



CH 4





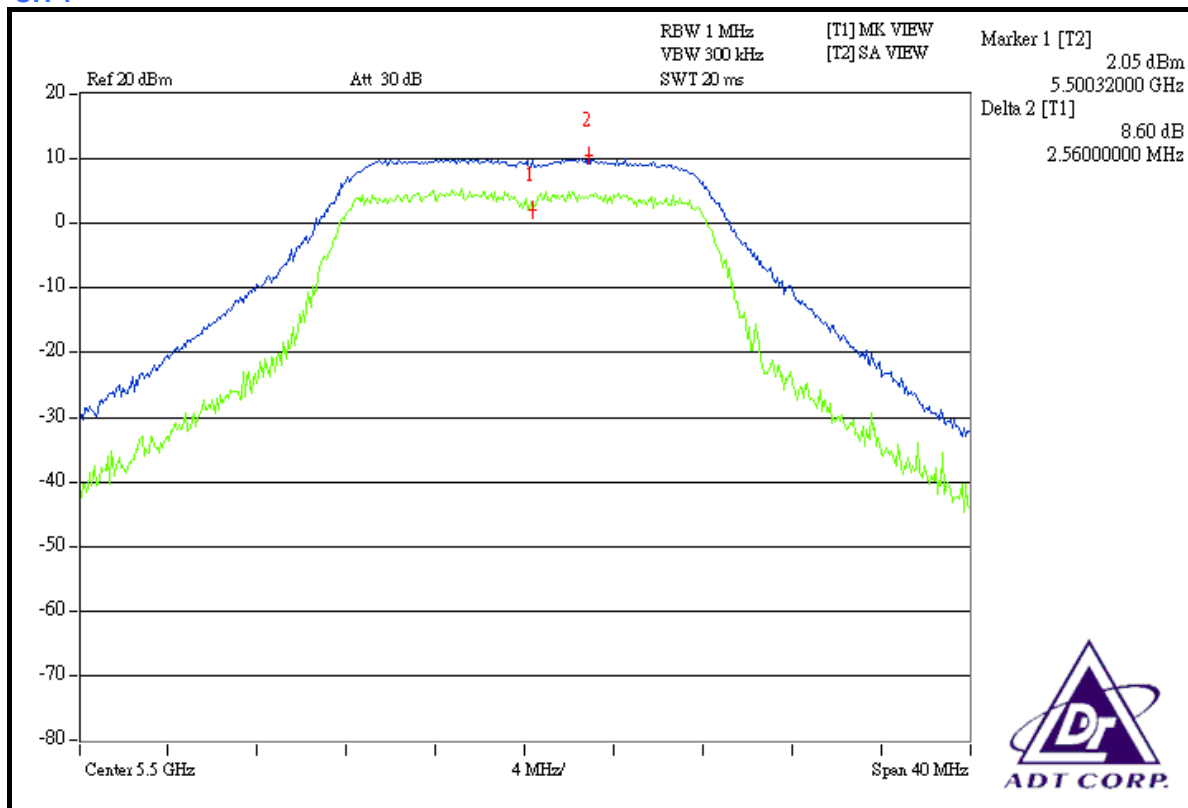
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

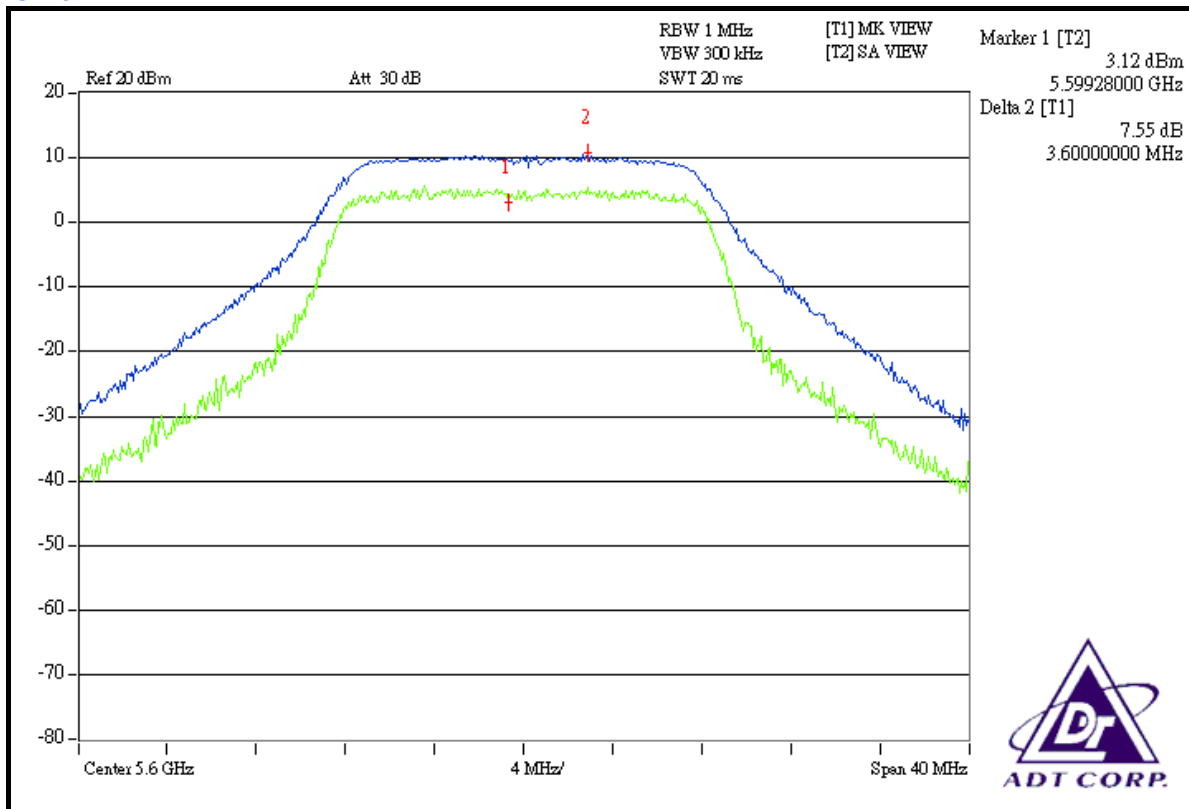
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS / FAIL
1	5500	8.60	13	PASS
6	5600	7.55	13	PASS
11	5700	7.65	13	PASS

CH 1

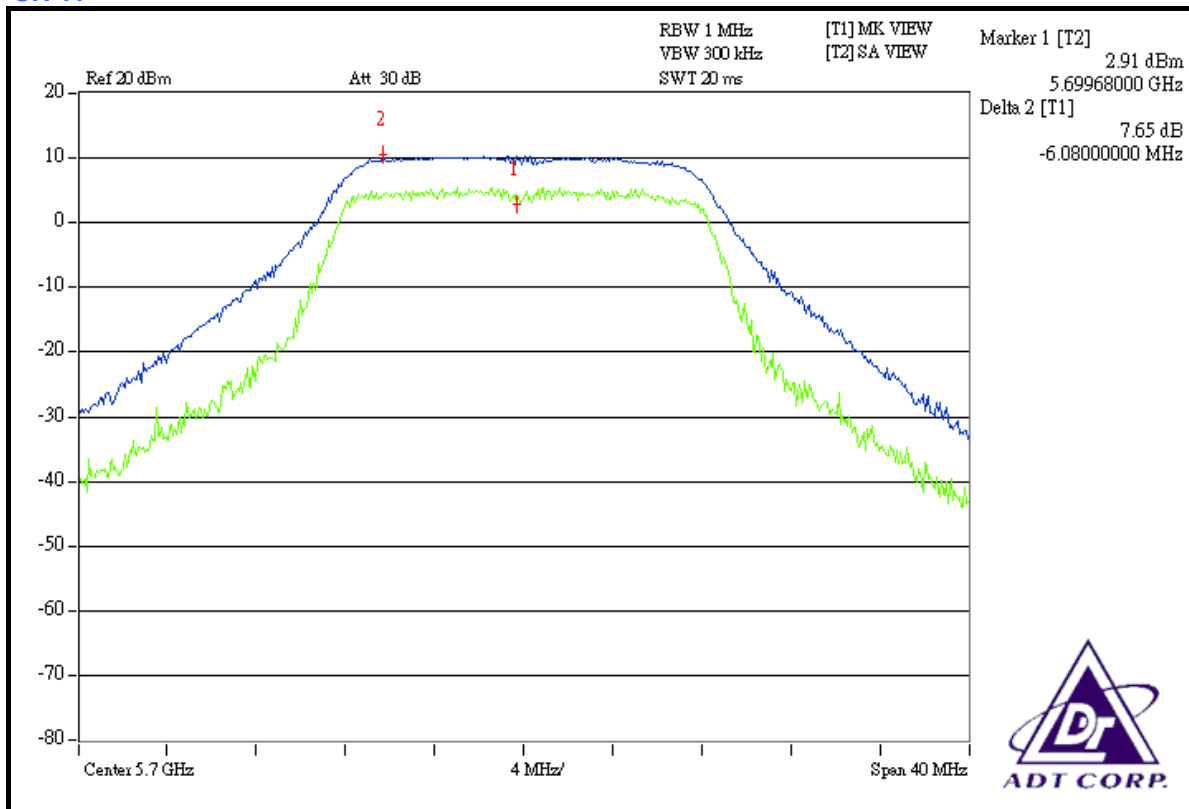




CH 6



CH 11





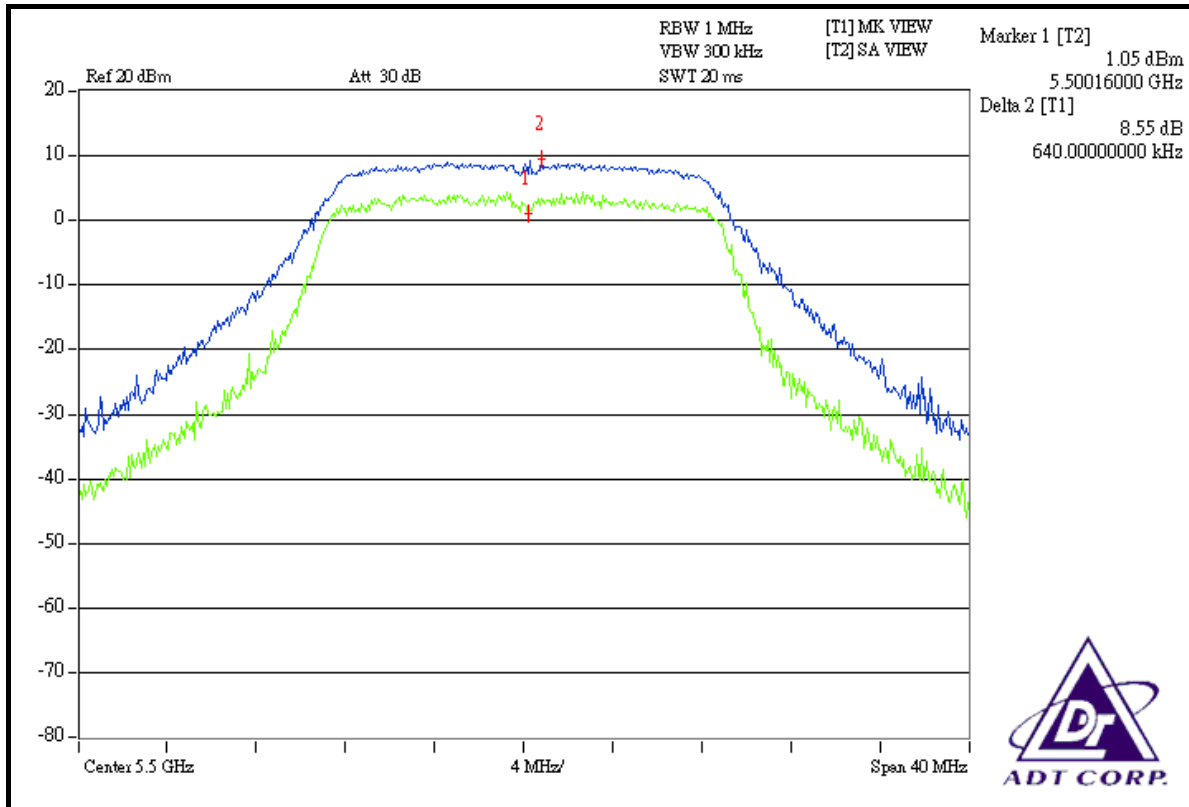
DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

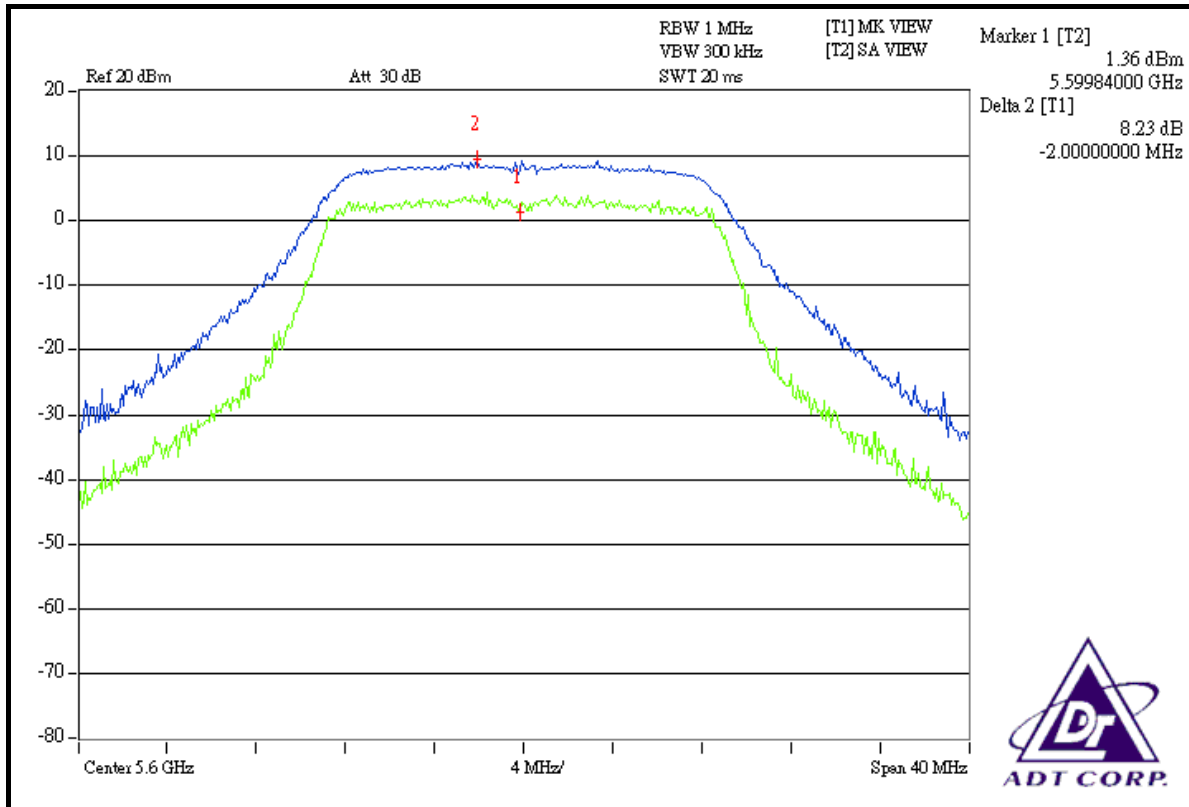
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
1	5500	8.55	8.77	13	PASS
6	5600	8.23	8.69	13	PASS
11	5700	8.25	8.39	13	PASS



FOR CHAIN 0: CH 1

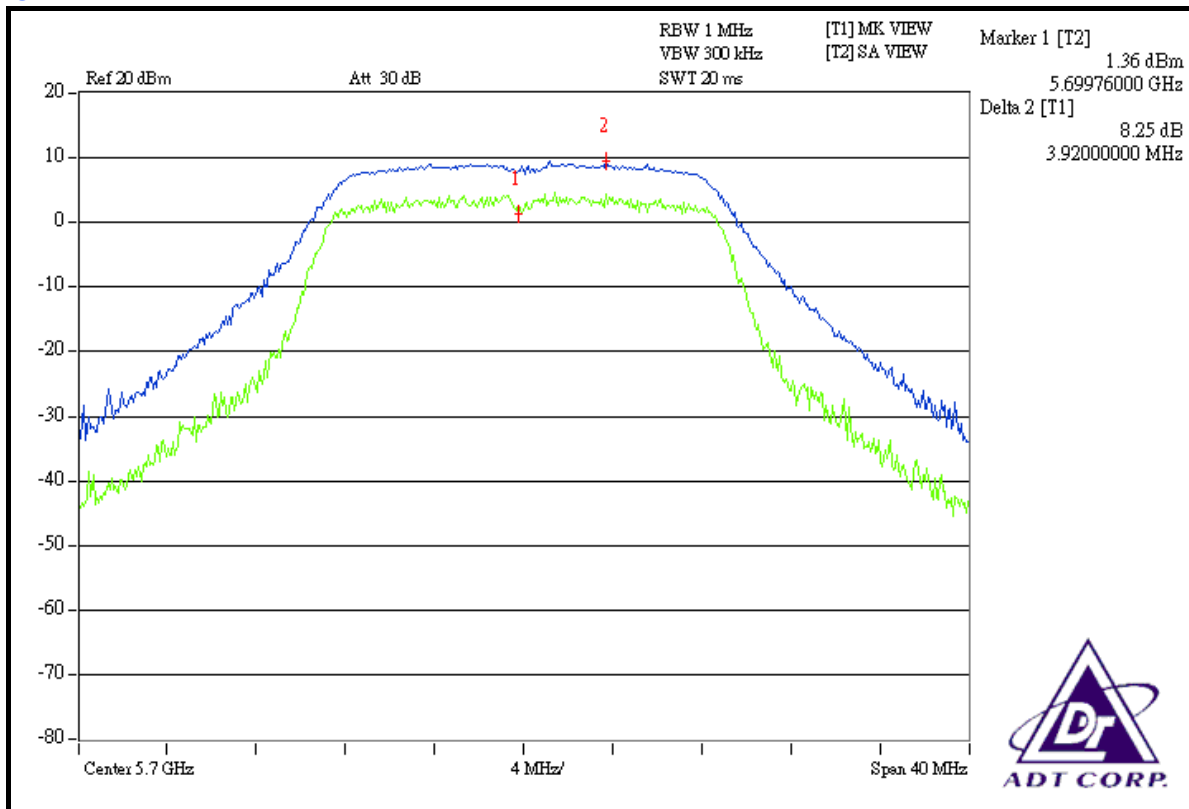


CH 6

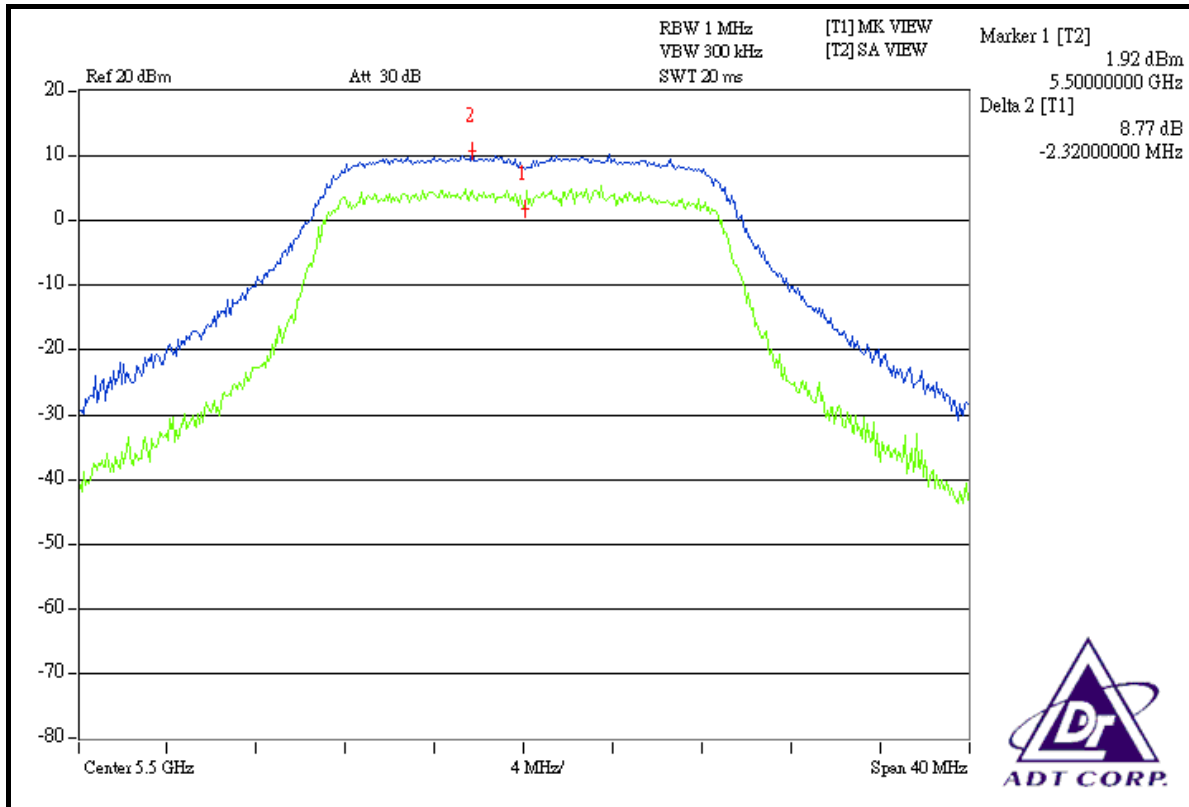




CH 11

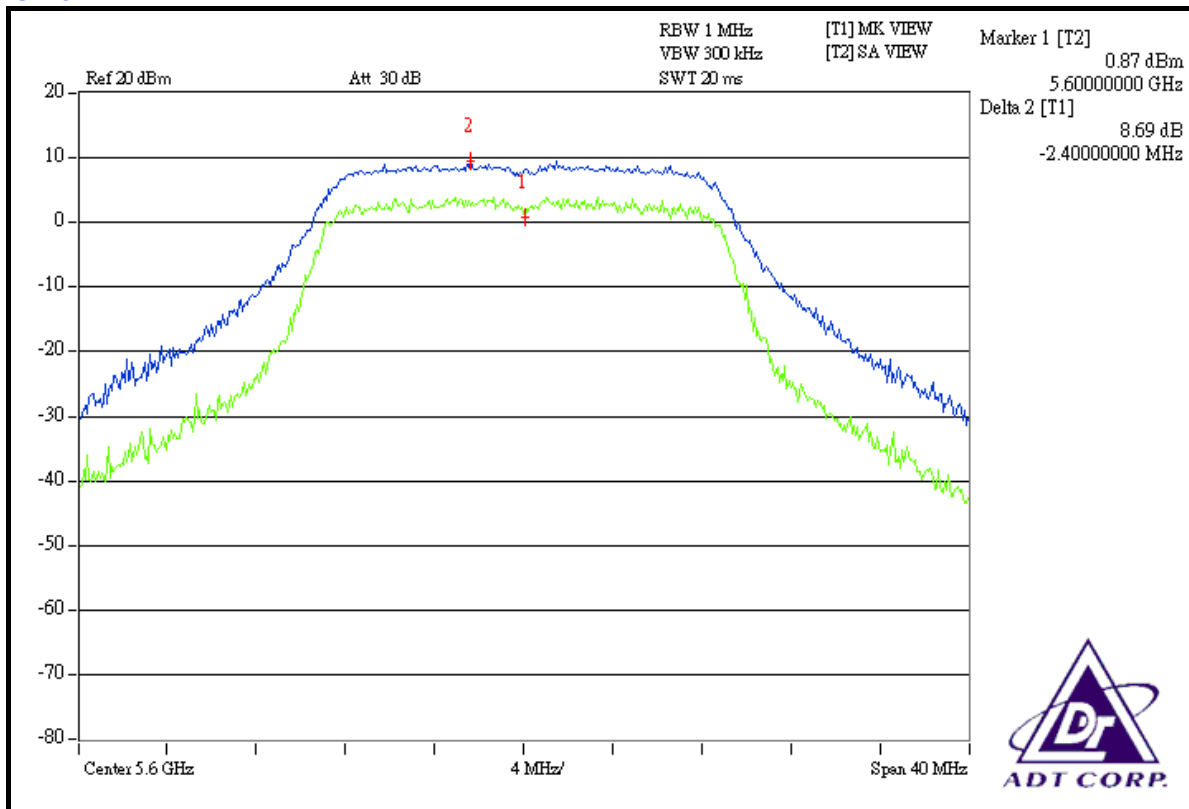


FOR CHAIN 1: CH 1

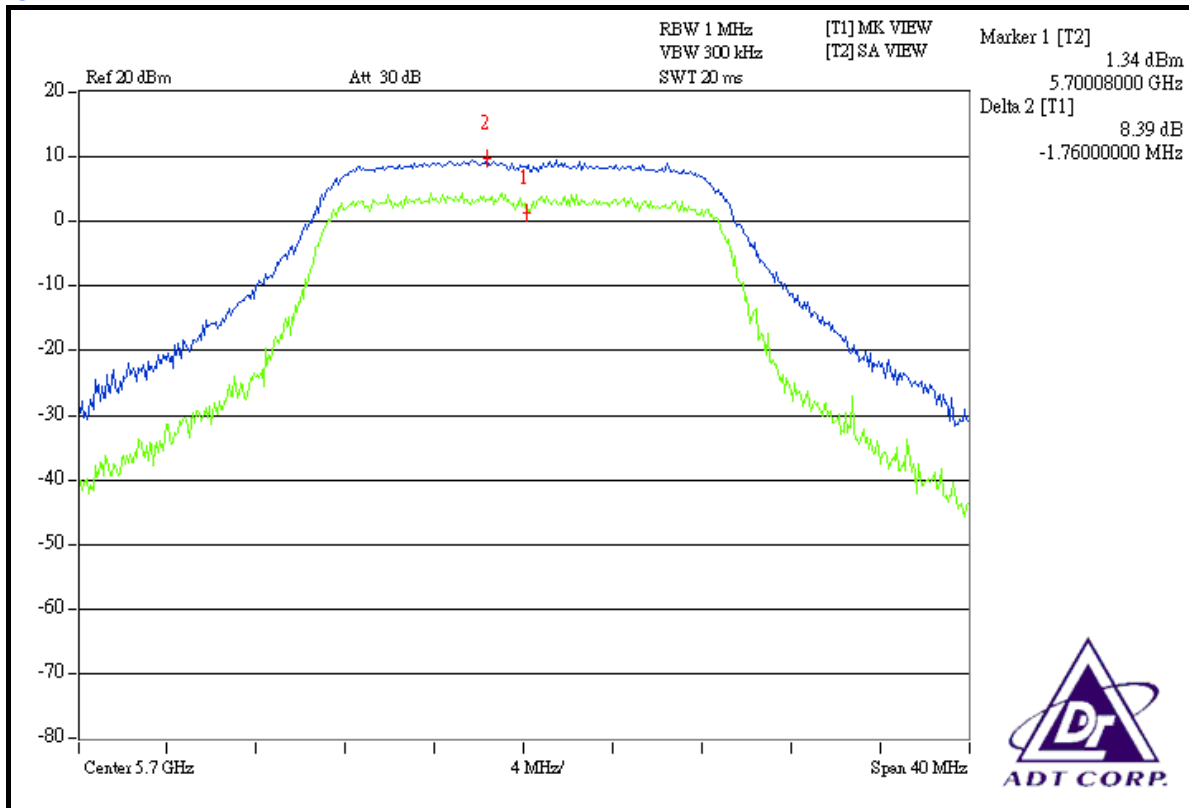




CH 6



CH 11





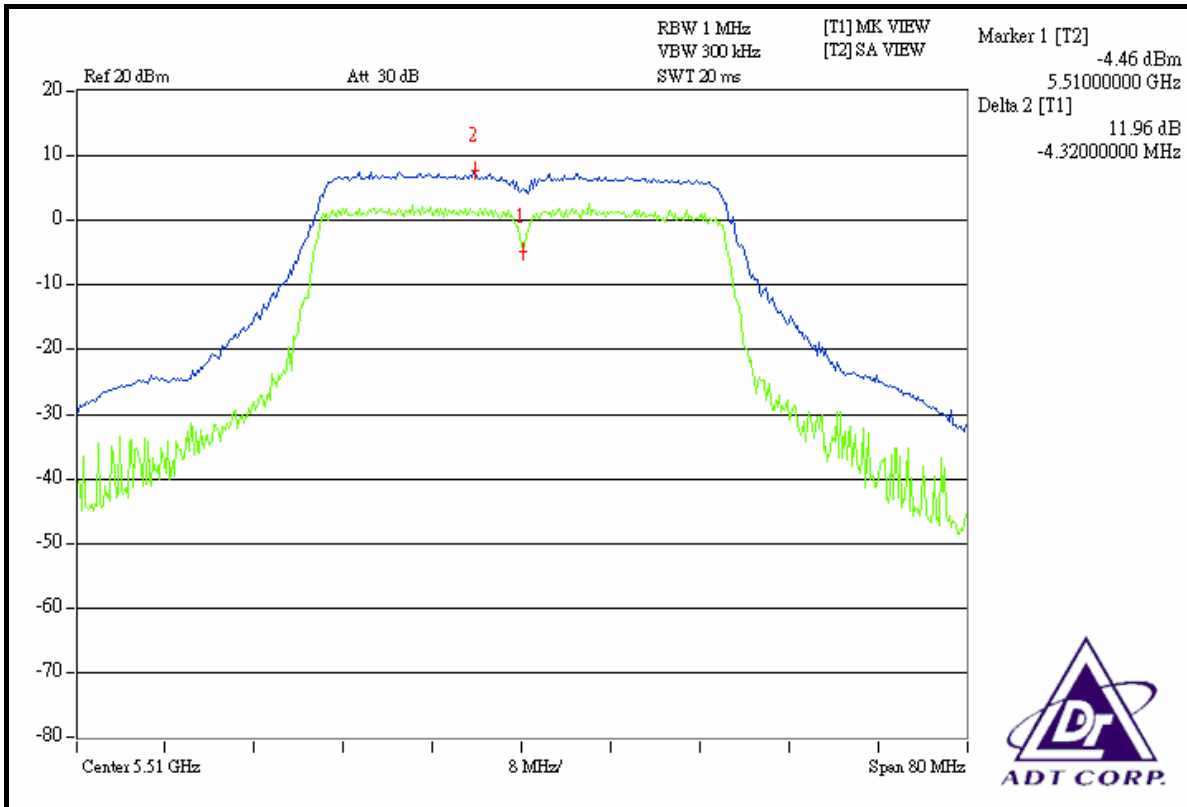
DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

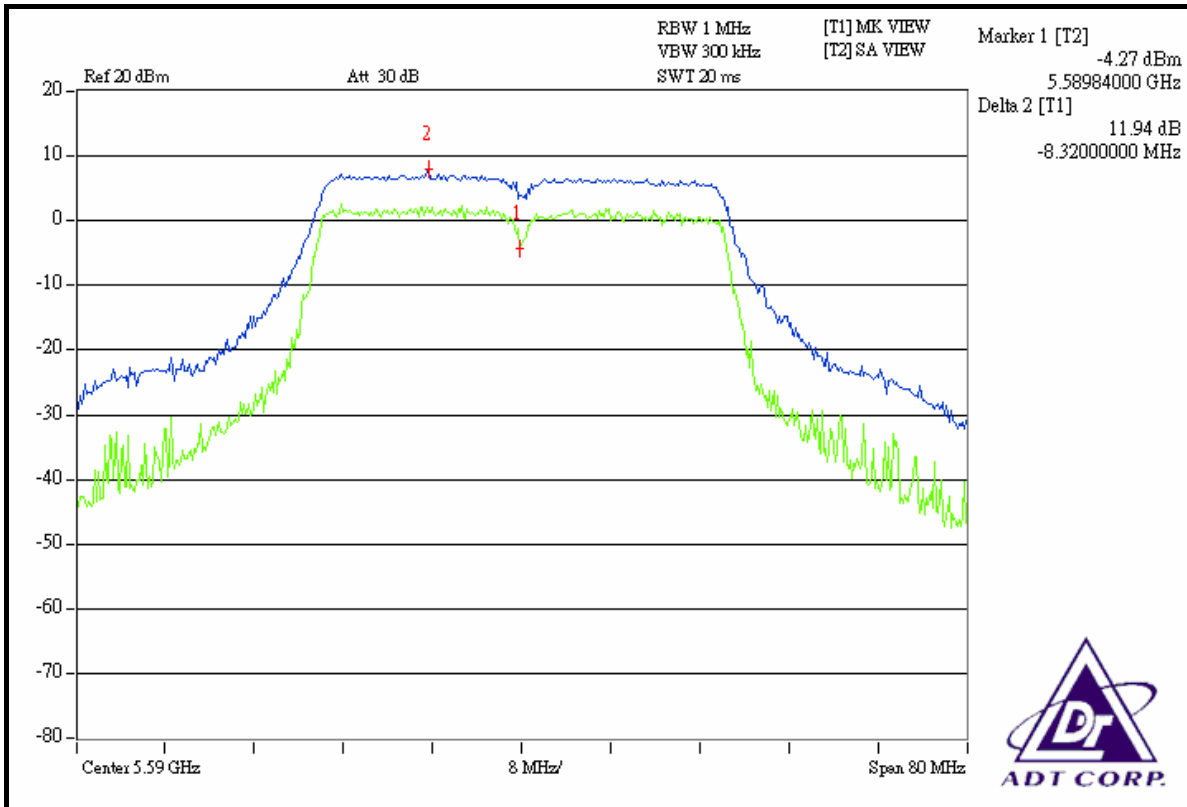
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
1	5510	11.96	11.33	13	PASS
3	5590	11.94	10.78	13	PASS
5	5670	10.69	9.72	13	PASS



FOR CHAIN 0: CH 1

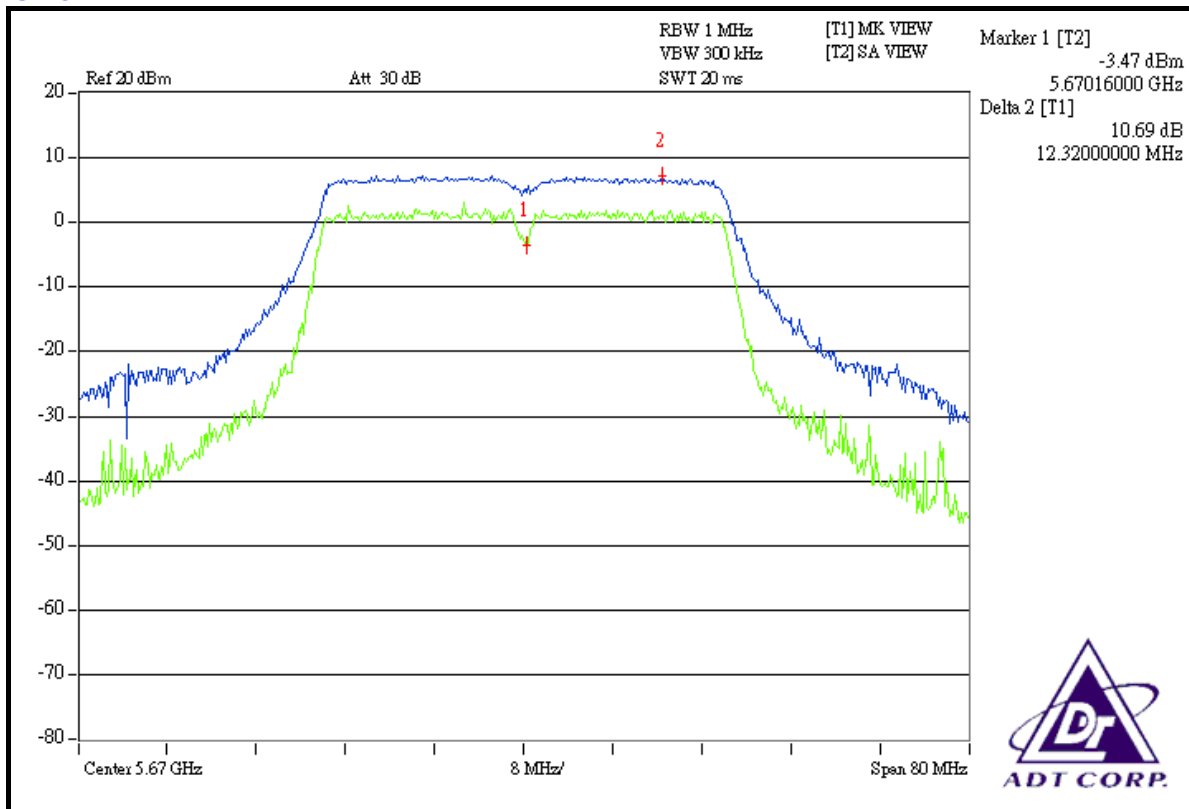


CH 3

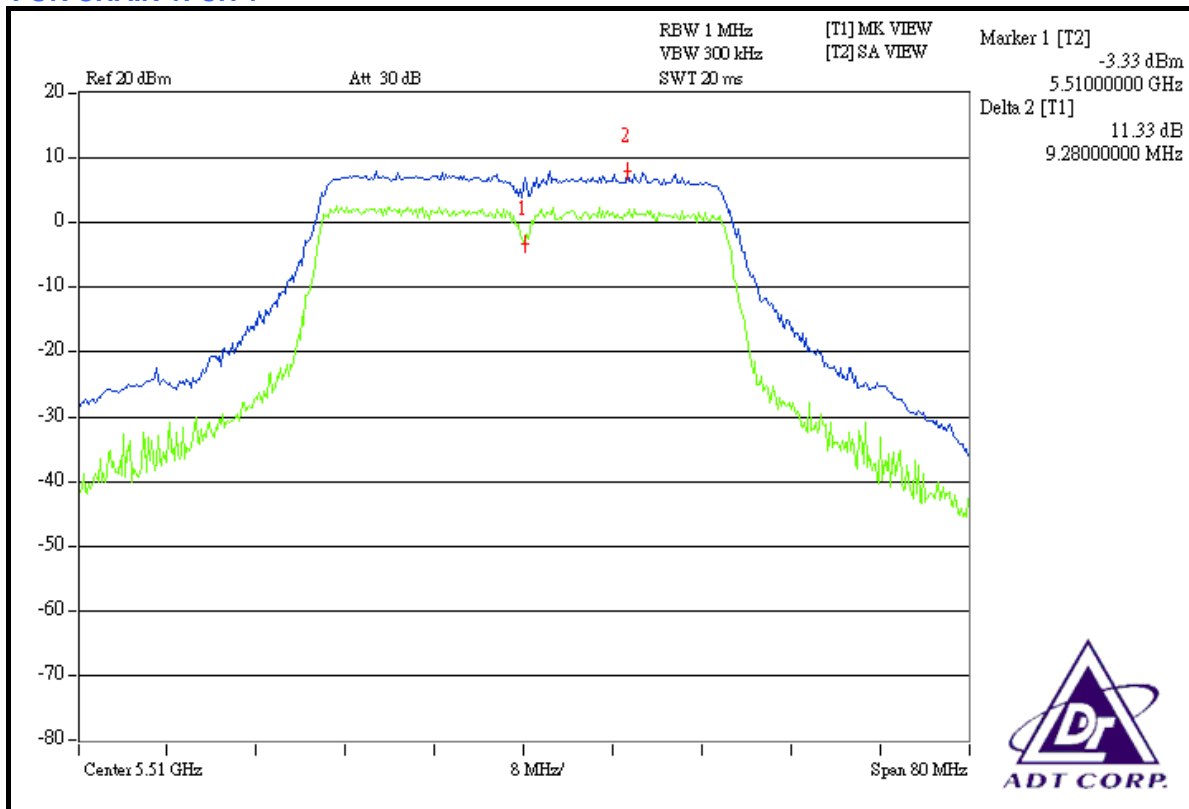




CH 5

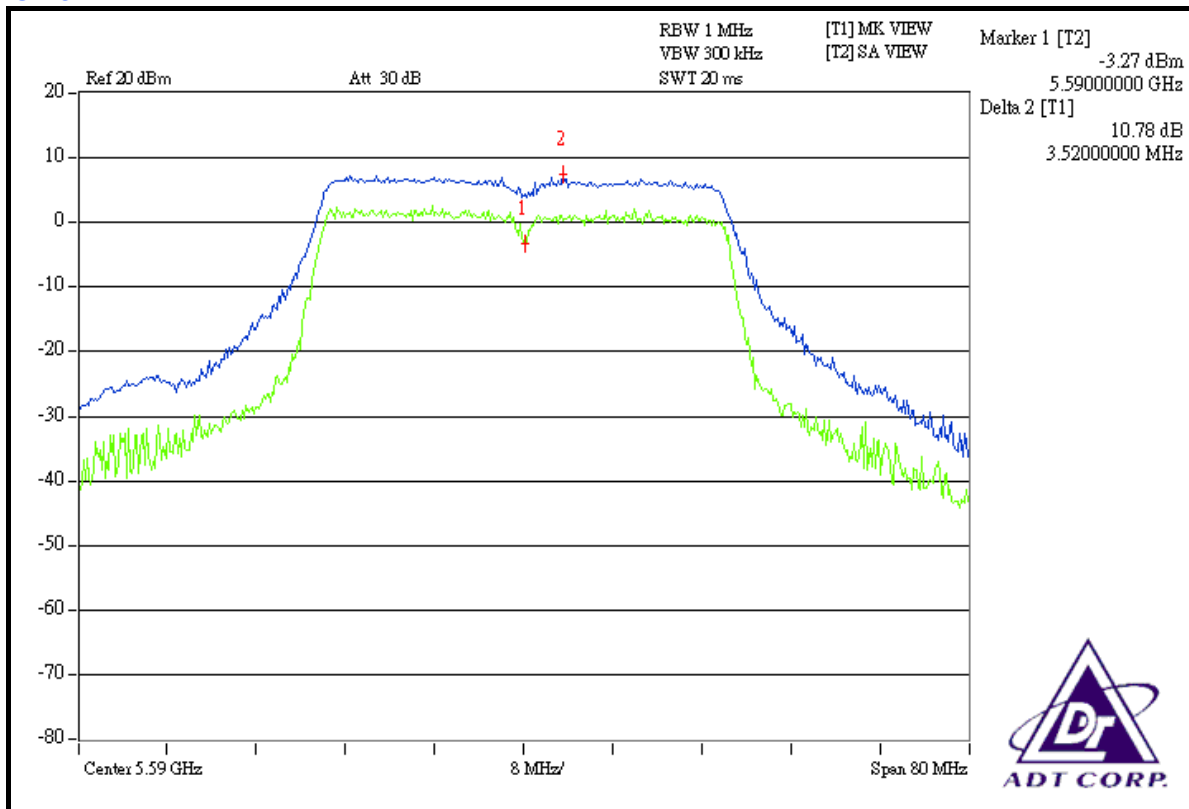


FOR CHAIN 1: CH 1

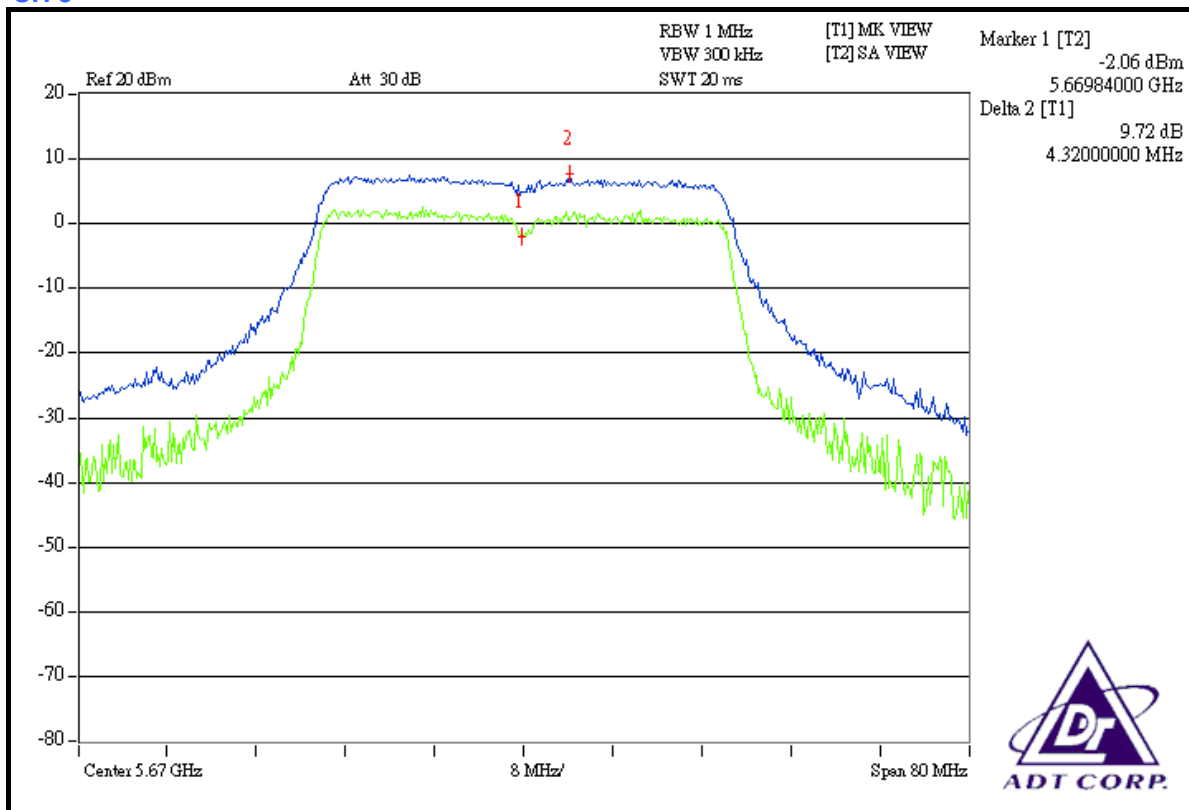




CH 3



CH 5



4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008

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

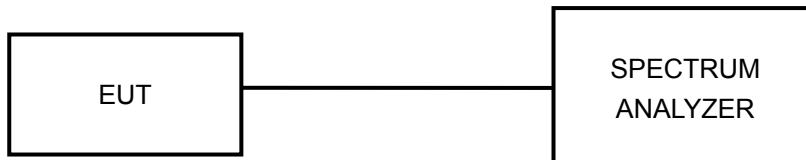
4.5.3 TEST PROCEDURES

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

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6

4.5.7 TEST RESULTS

FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

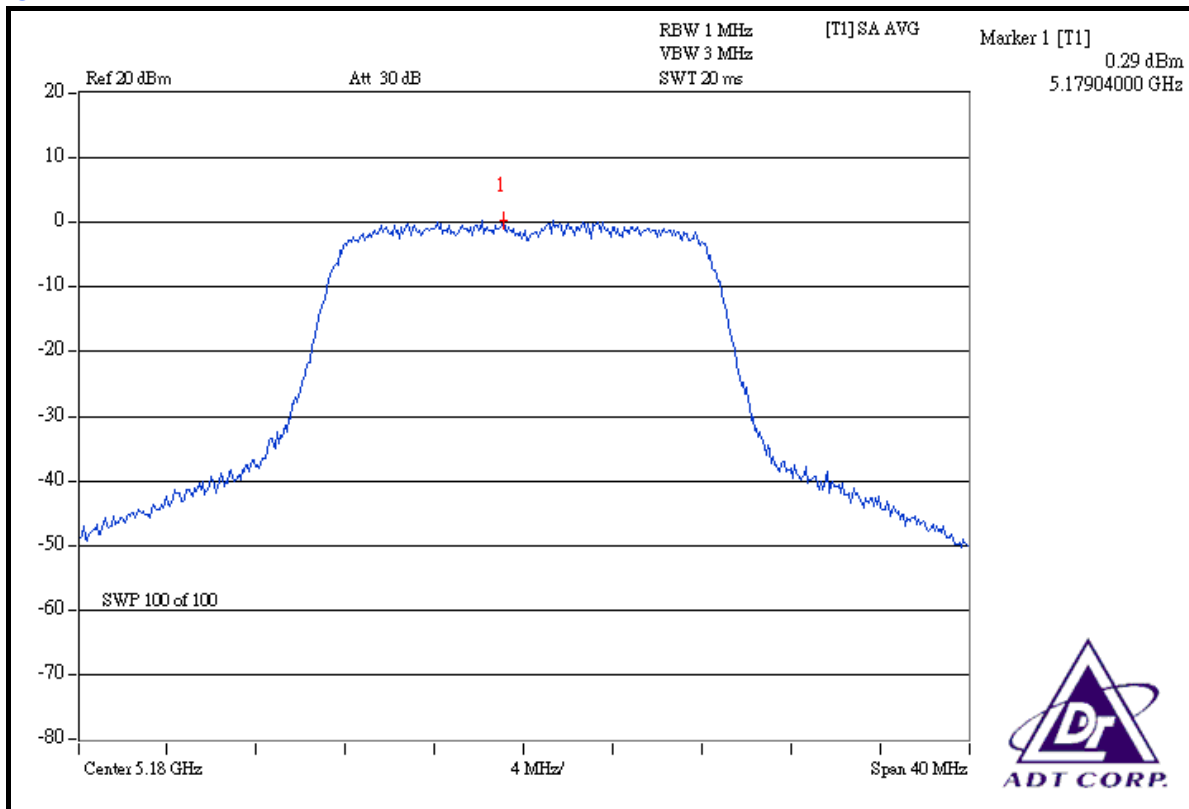
802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

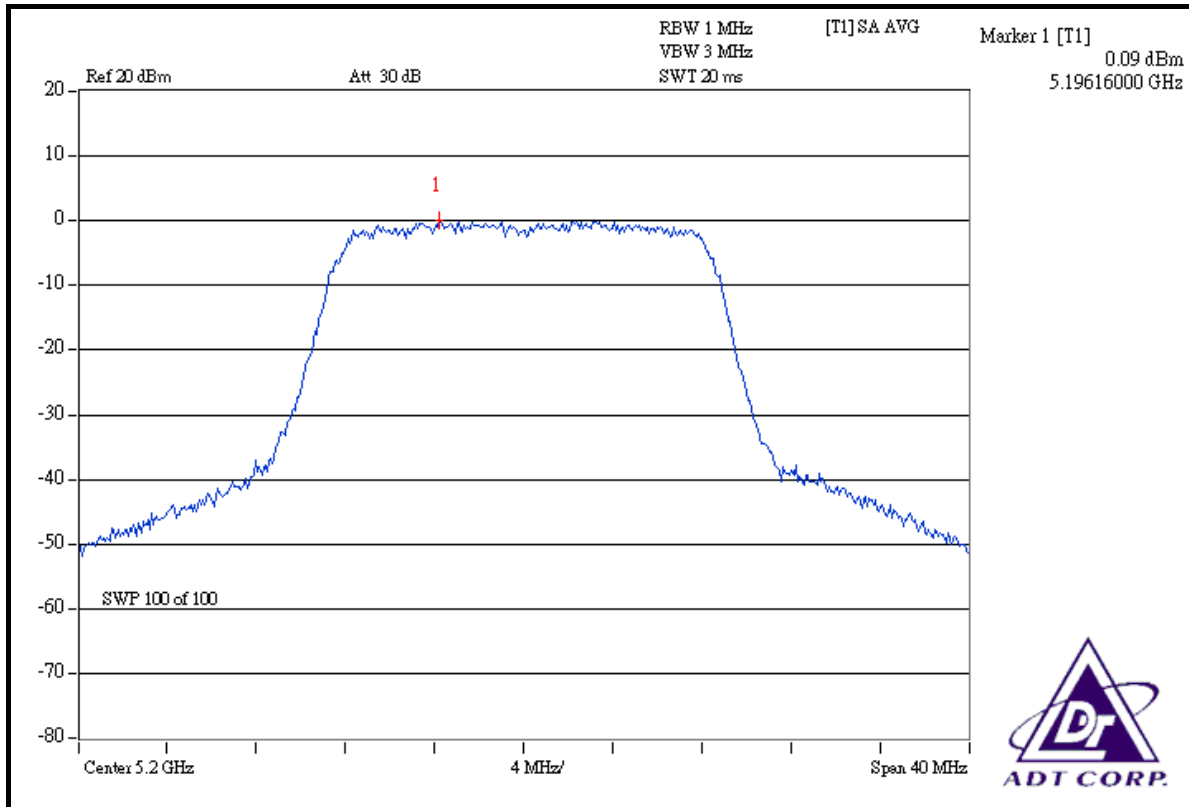
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	5180	0.29	4	PASS
2	5200	0.09	4	PASS
4	5240	0.11	4	PASS
5	5260	0.26	11	PASS
7	5300	0.34	11	PASS
8	5320	0.20	11	PASS



CH 1

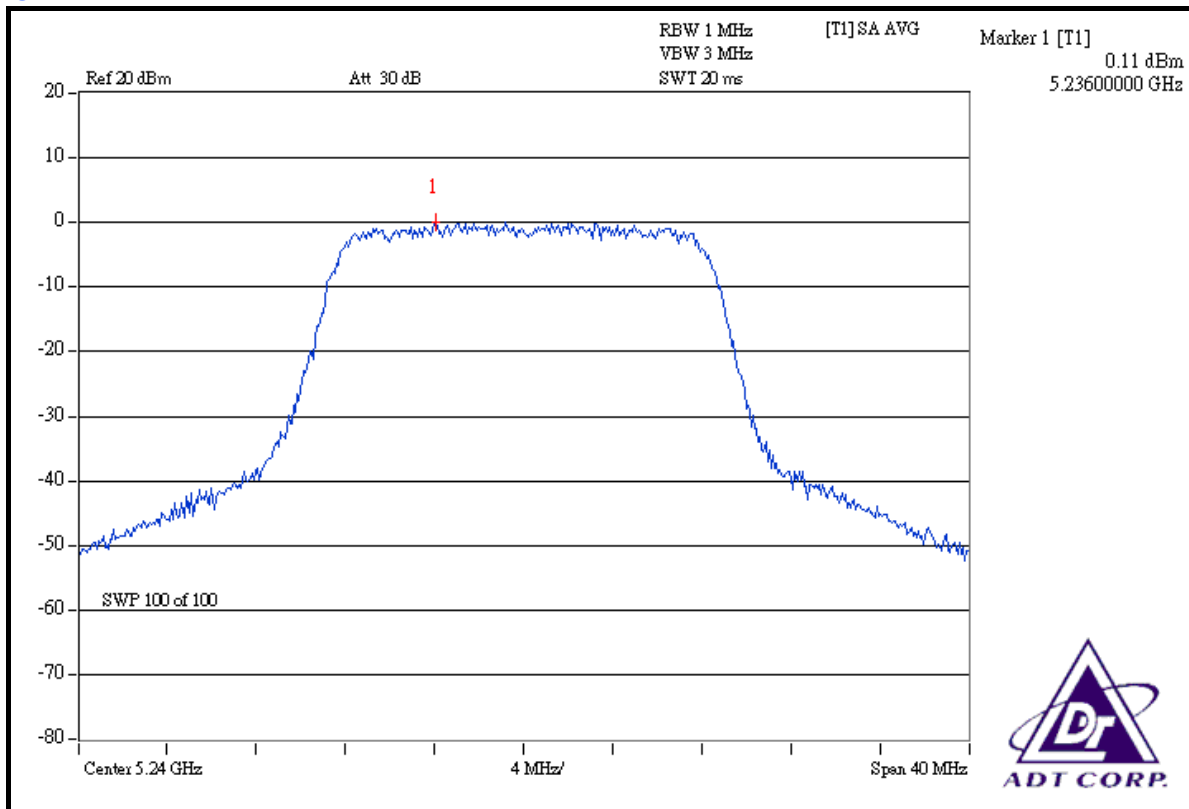


CH 2

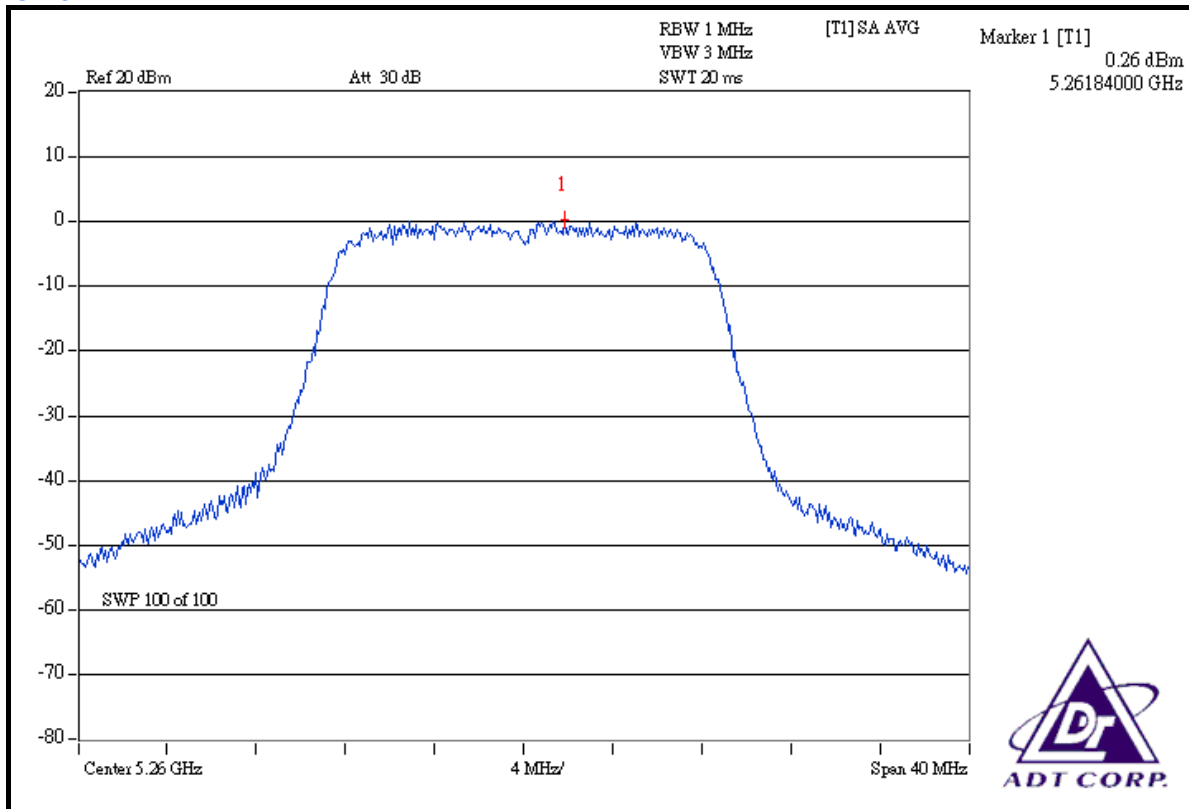




CH 4

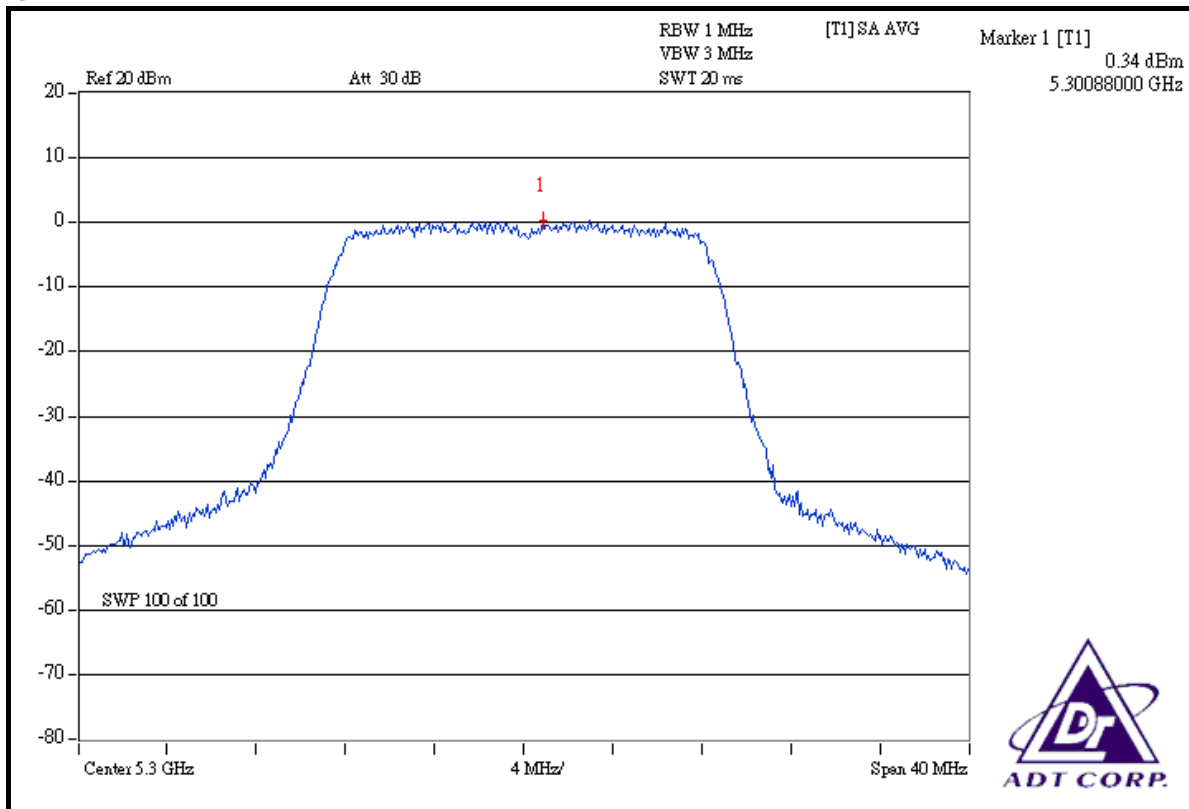


CH 5

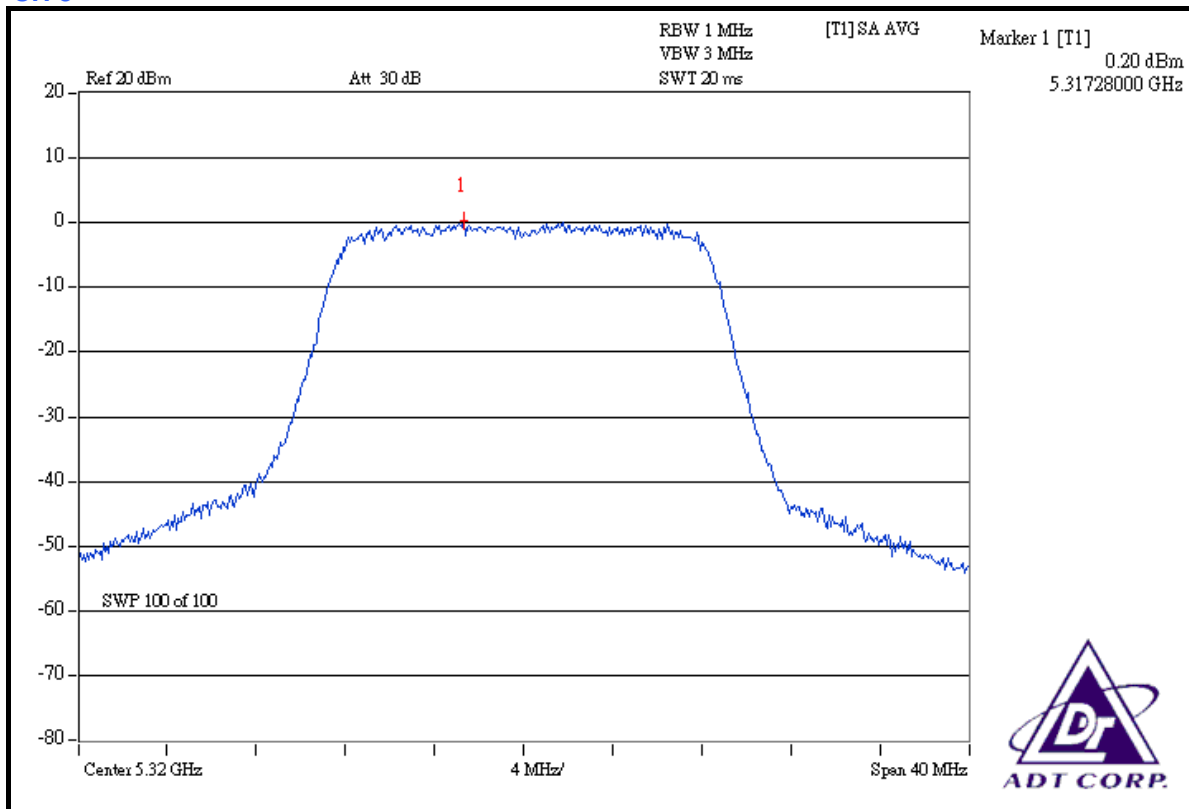




CH 7



CH 8





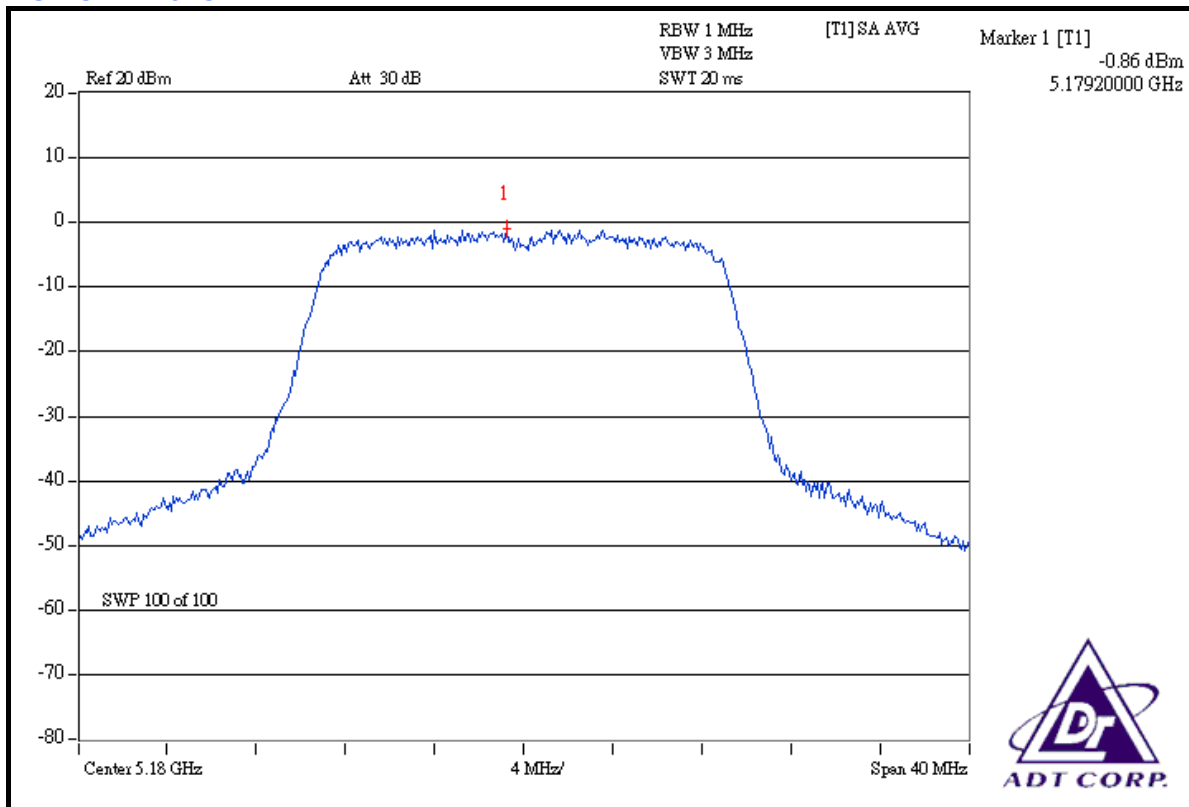
DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

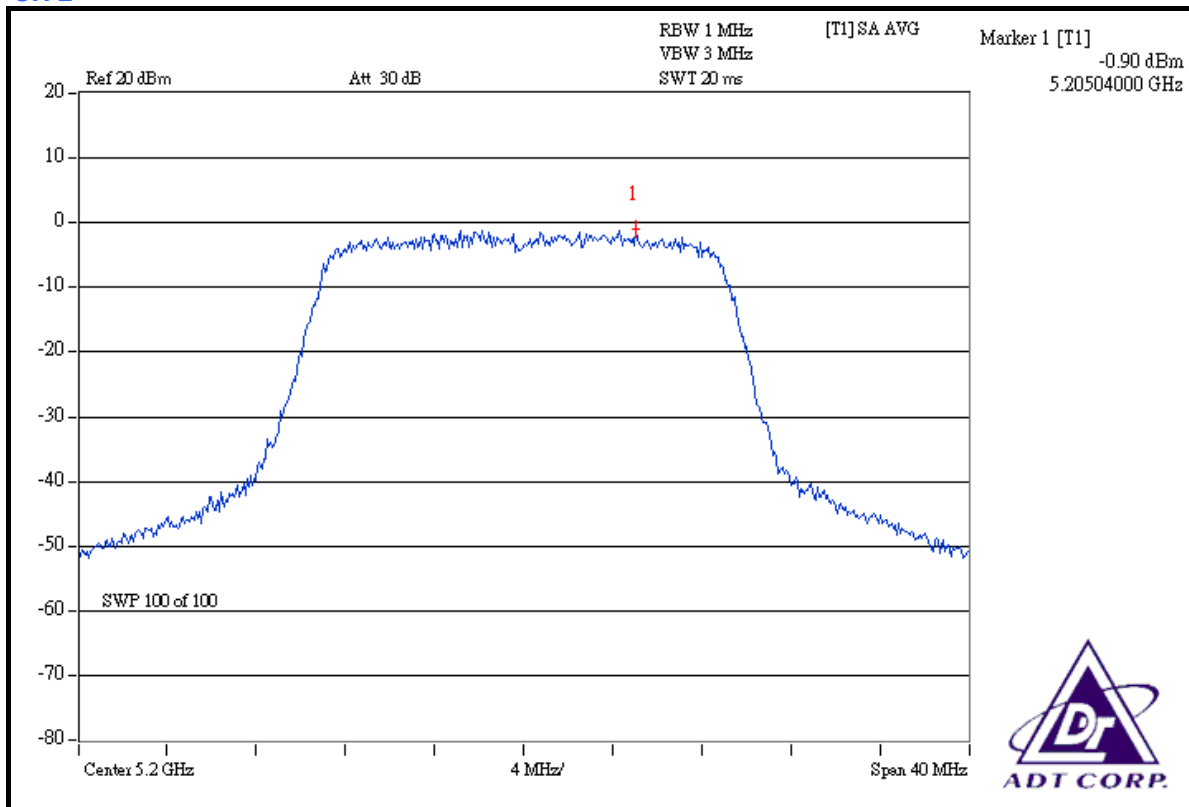
CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (mW)		RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	5180	0.820	0.859	-0.86	-0.66	1.679	2.251	4	PASS
2	5200	0.813	0.849	-0.90	-0.71	1.662	2.206	4	PASS
4	5240	0.778	0.891	-1.09	-0.50	1.669	2.225	4	PASS
5	5260	0.678	0.873	-1.69	-0.59	1.551	1.906	11	PASS
7	5300	0.700	0.849	-1.55	-0.71	1.549	1.901	11	PASS
8	5320	0.794	0.887	-1.00	-0.52	1.681	2.256	11	PASS



FOR CHAIN 0: CH 1

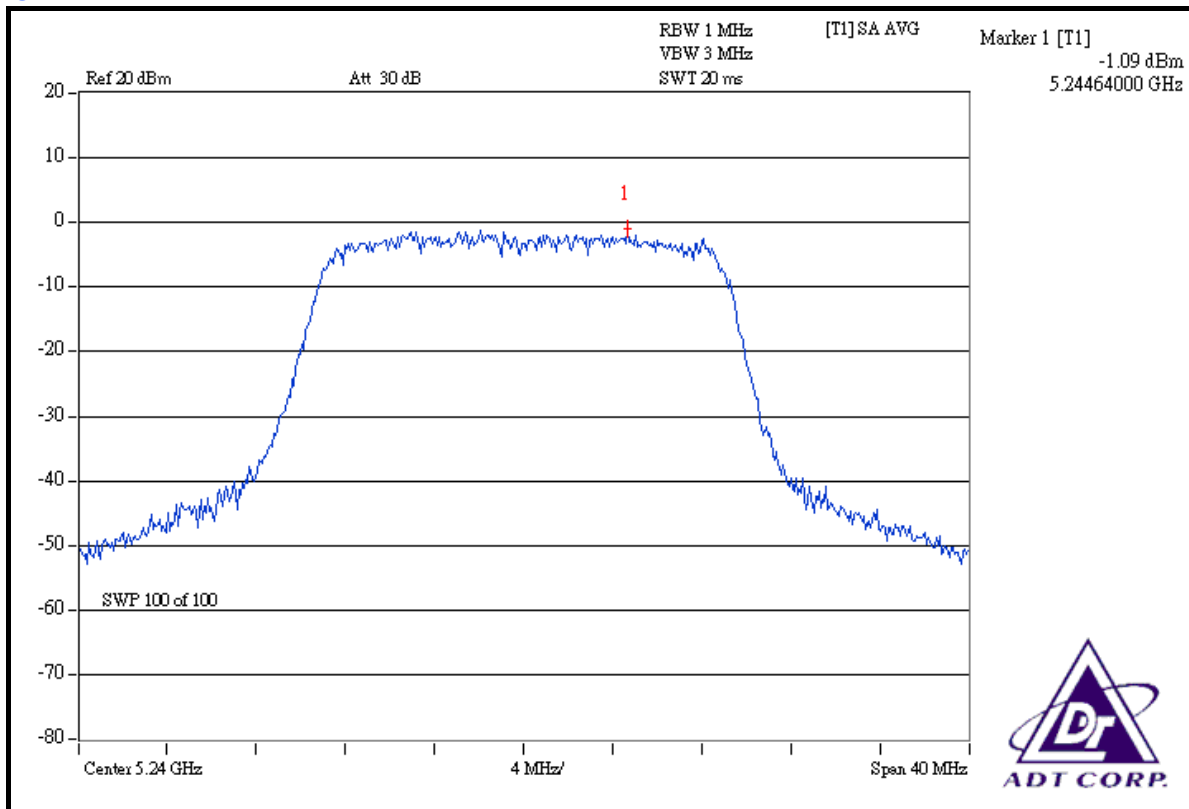


CH 2

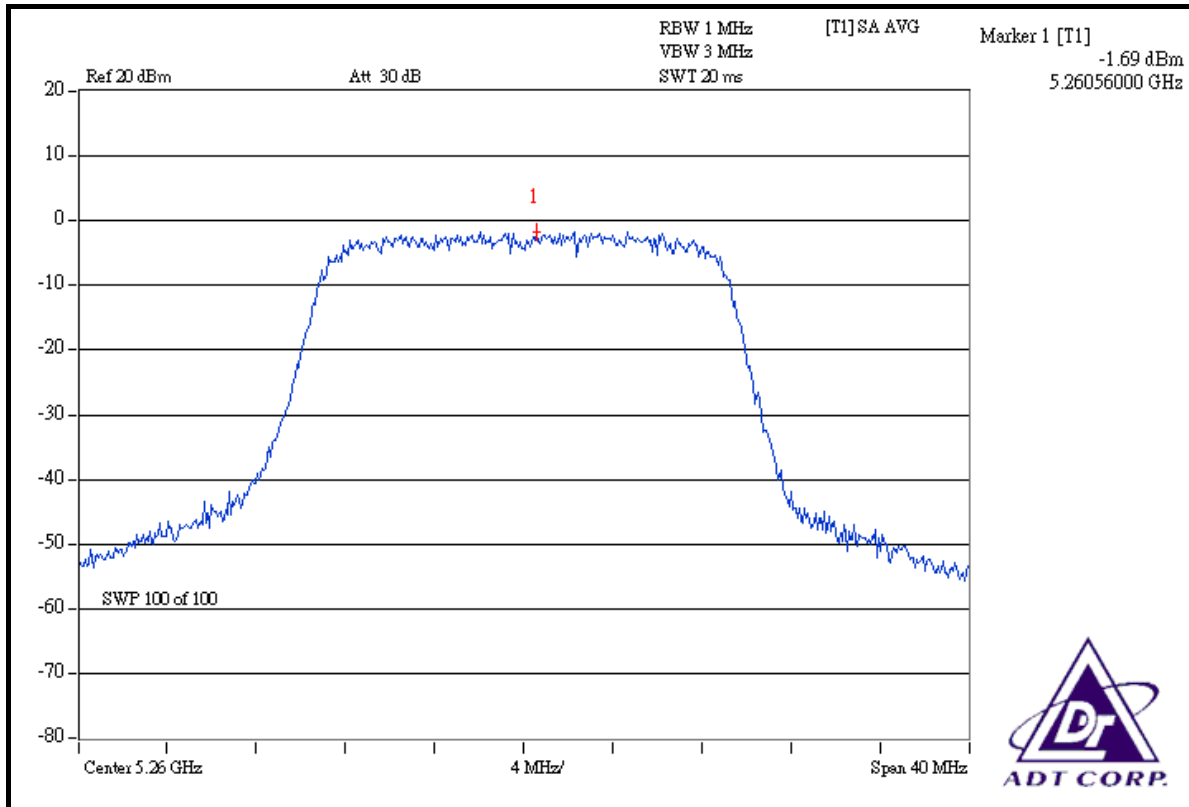




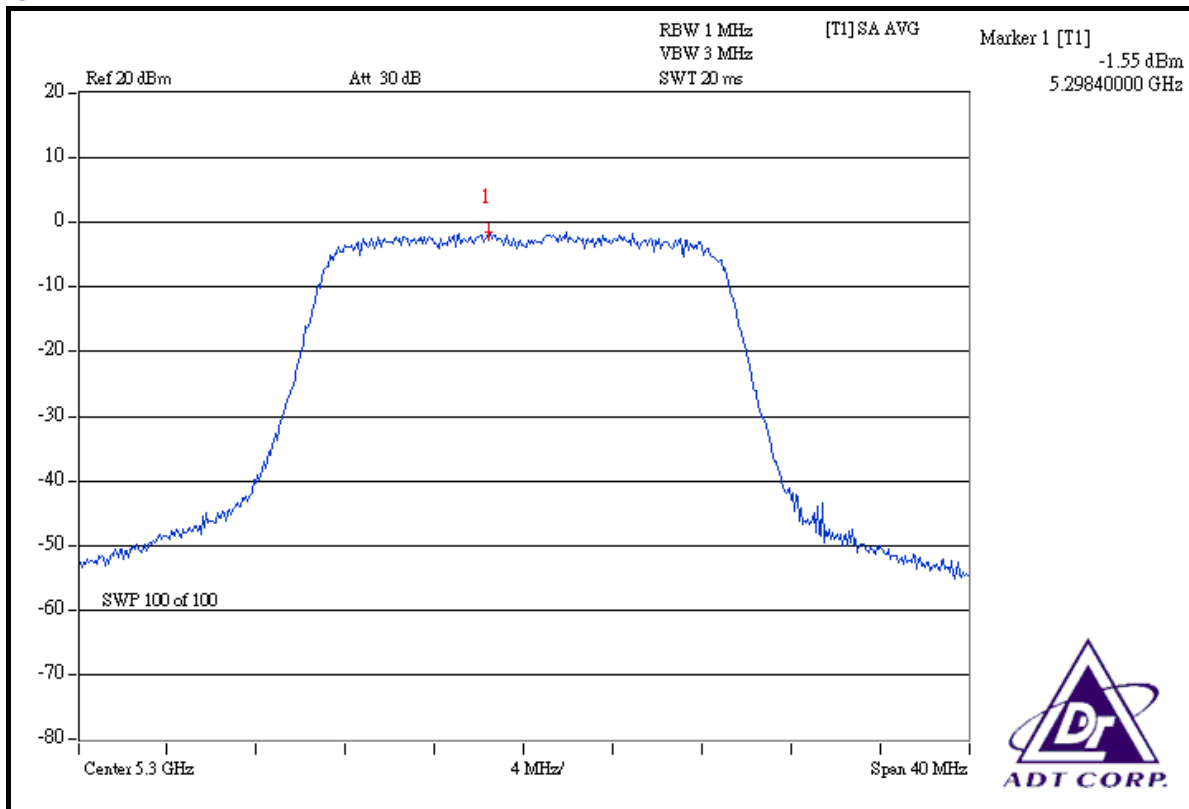
CH 4



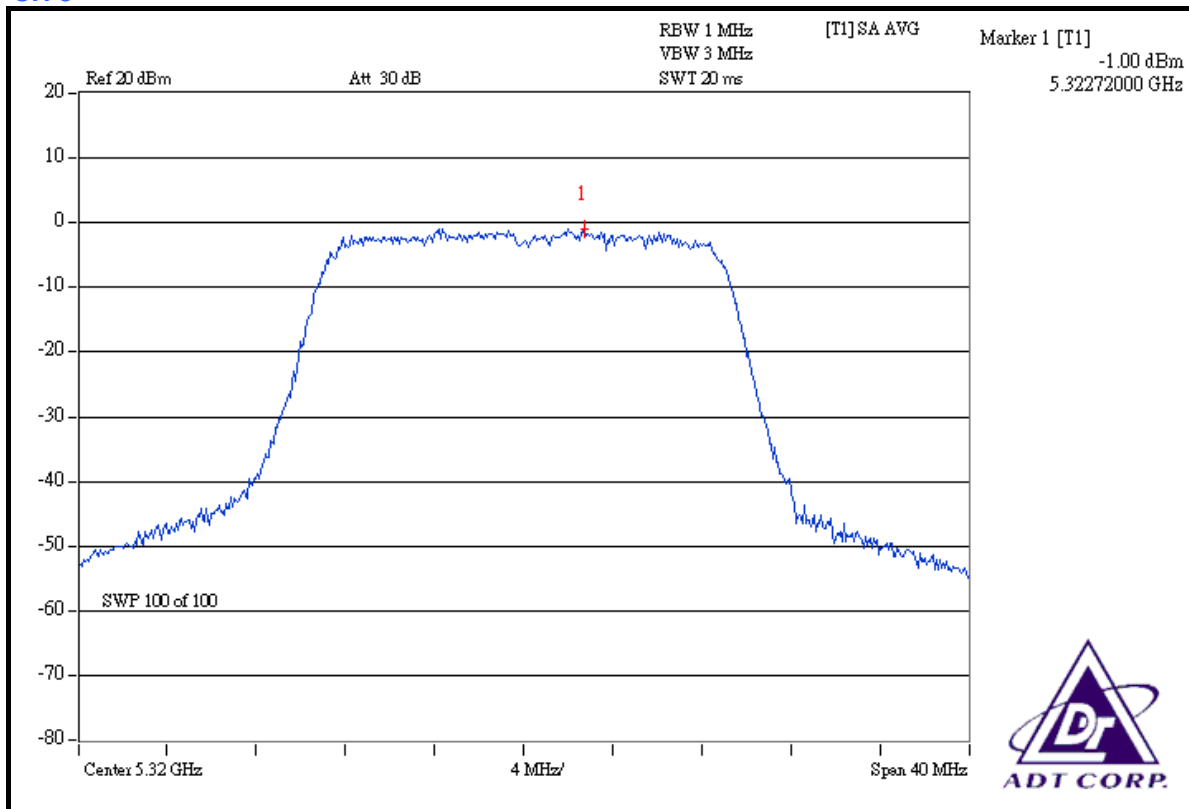
CH 5



CH 7

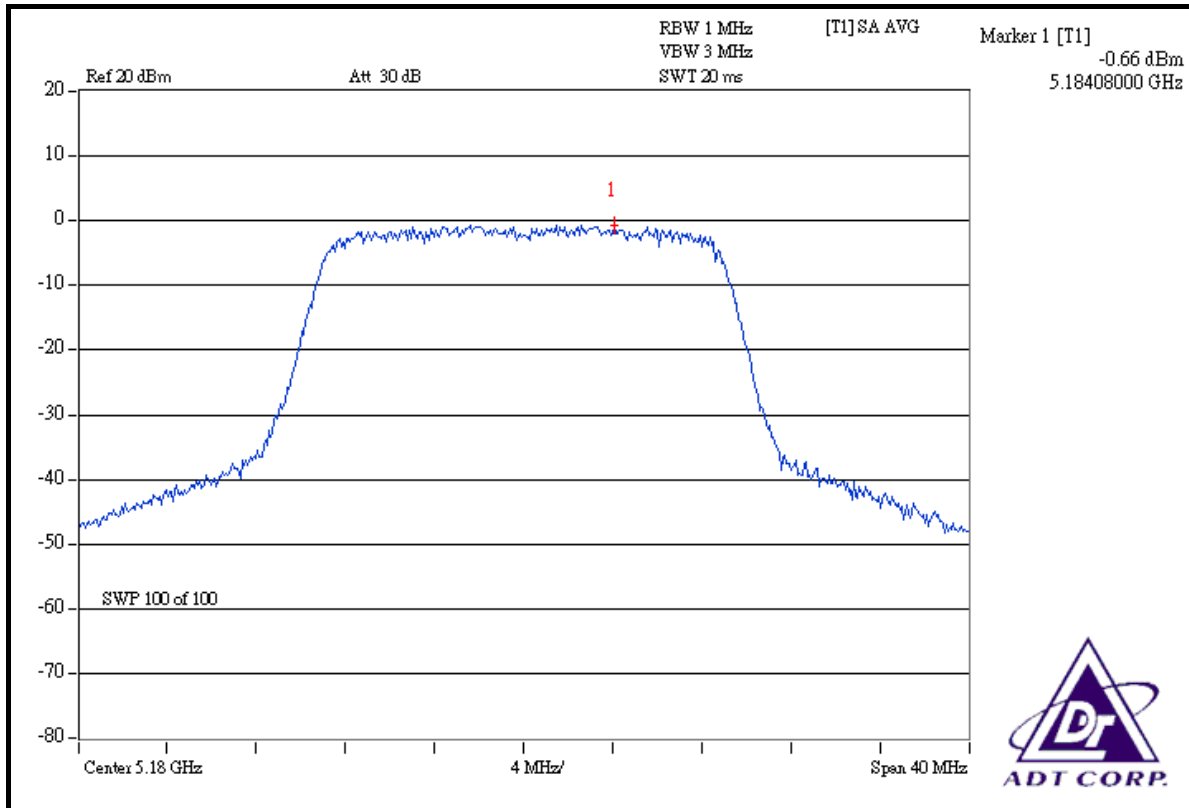


CH 8

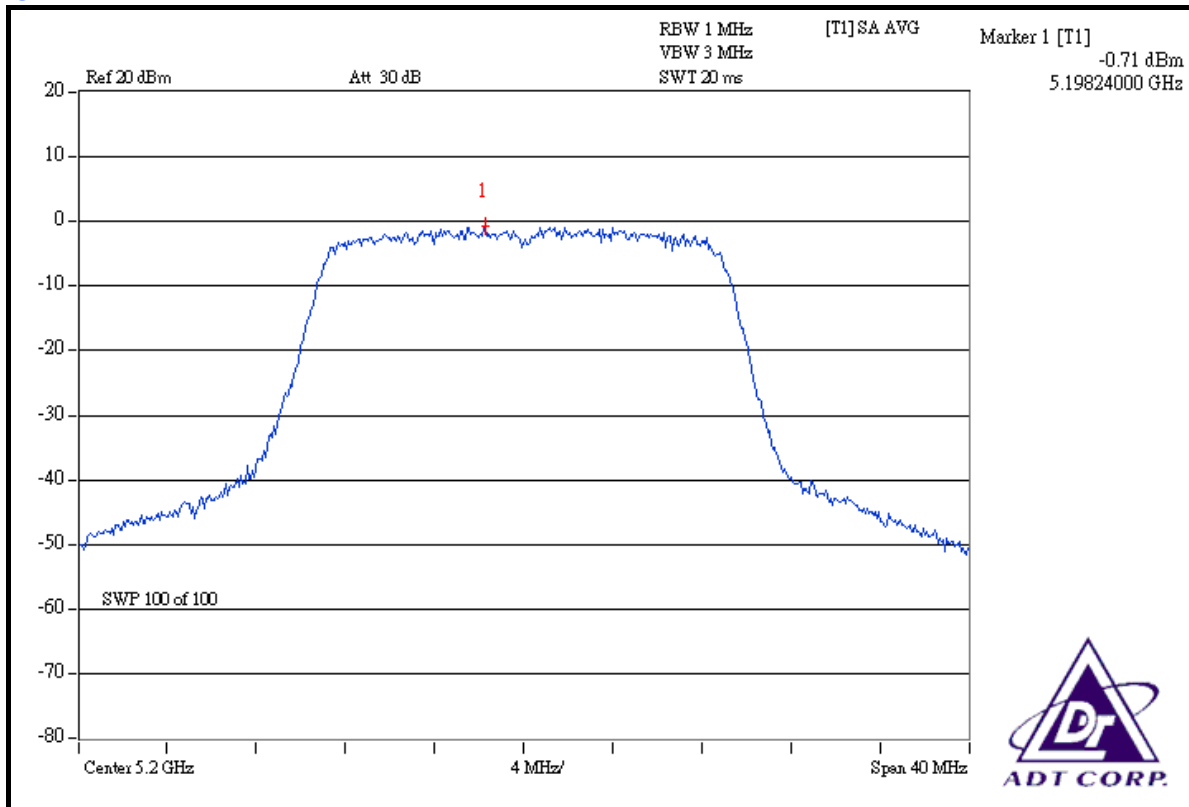




FOR CHAIN 1: CH 1

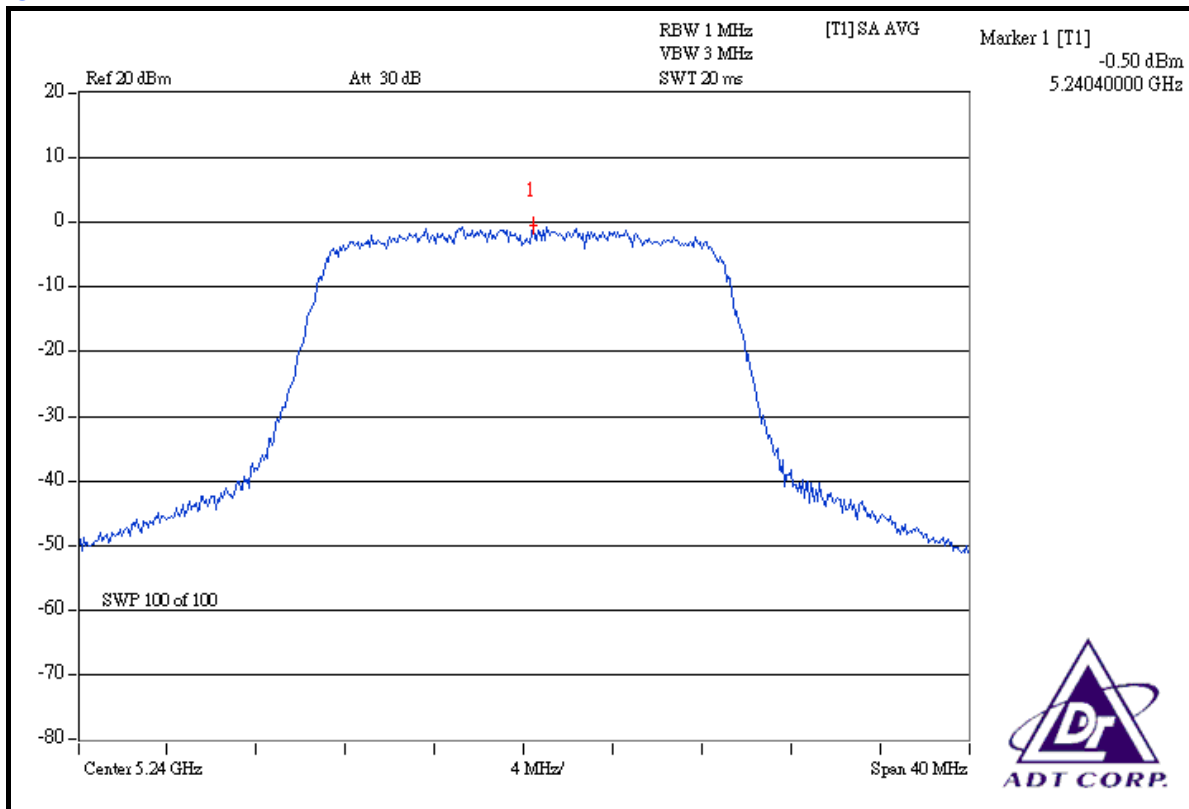


CH 2

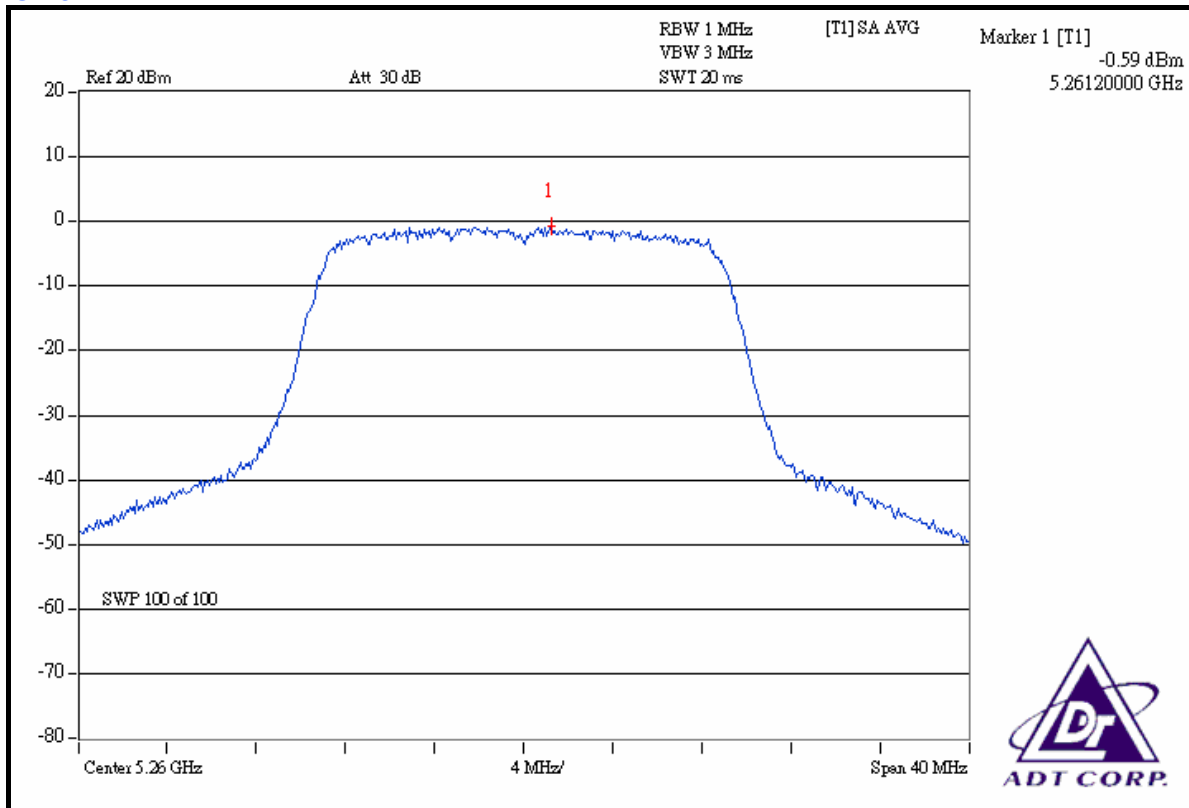




CH 4

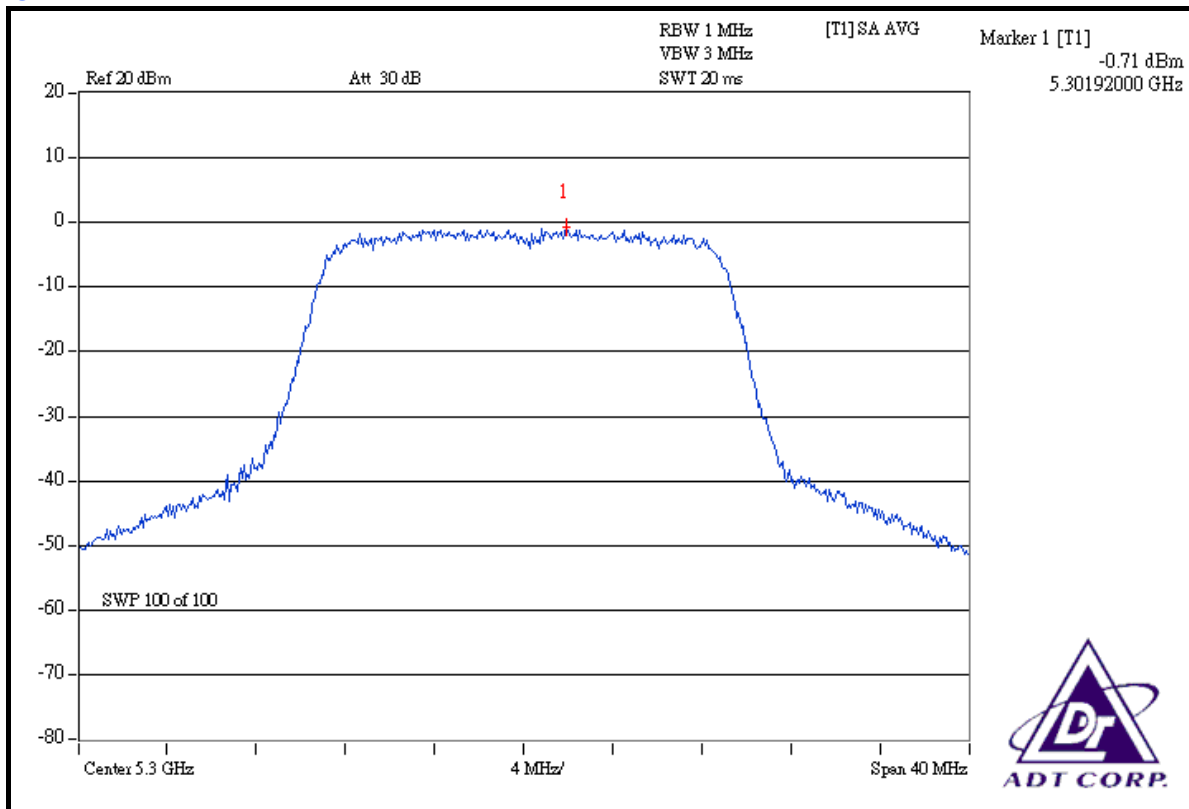


CH 5

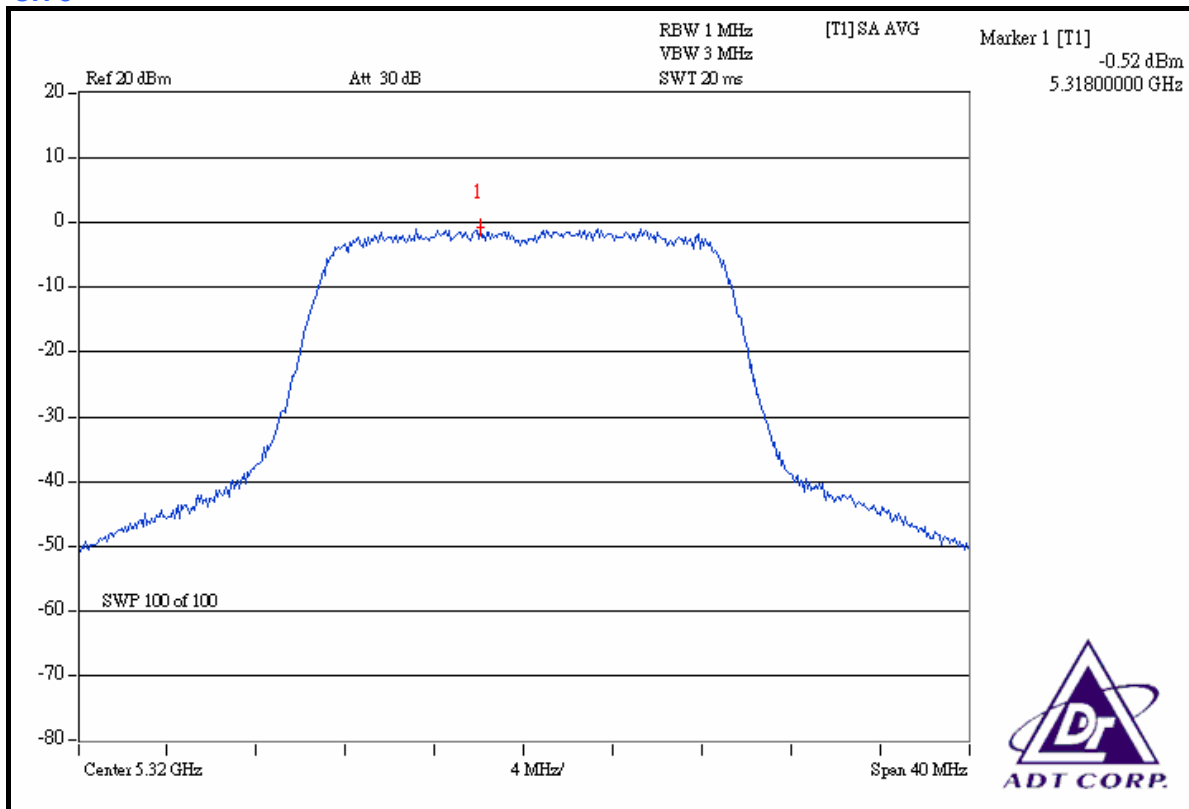




CH 7



CH 8





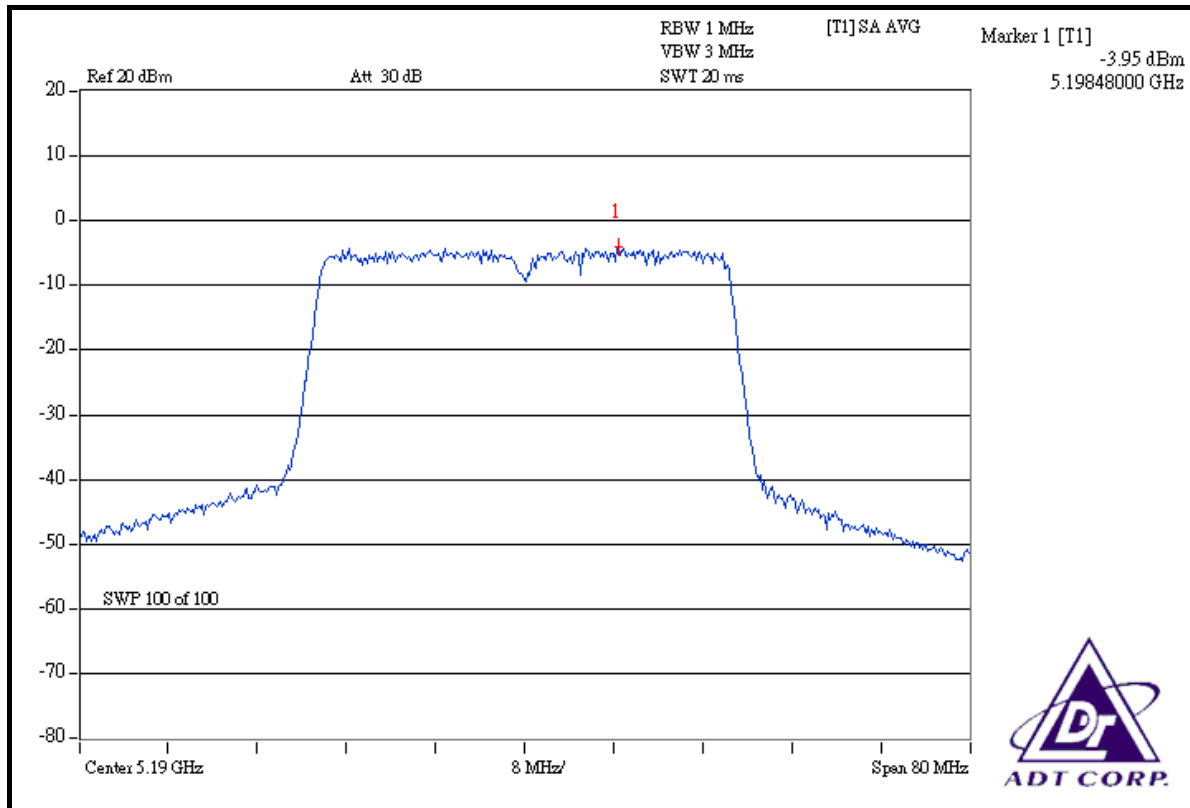
DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

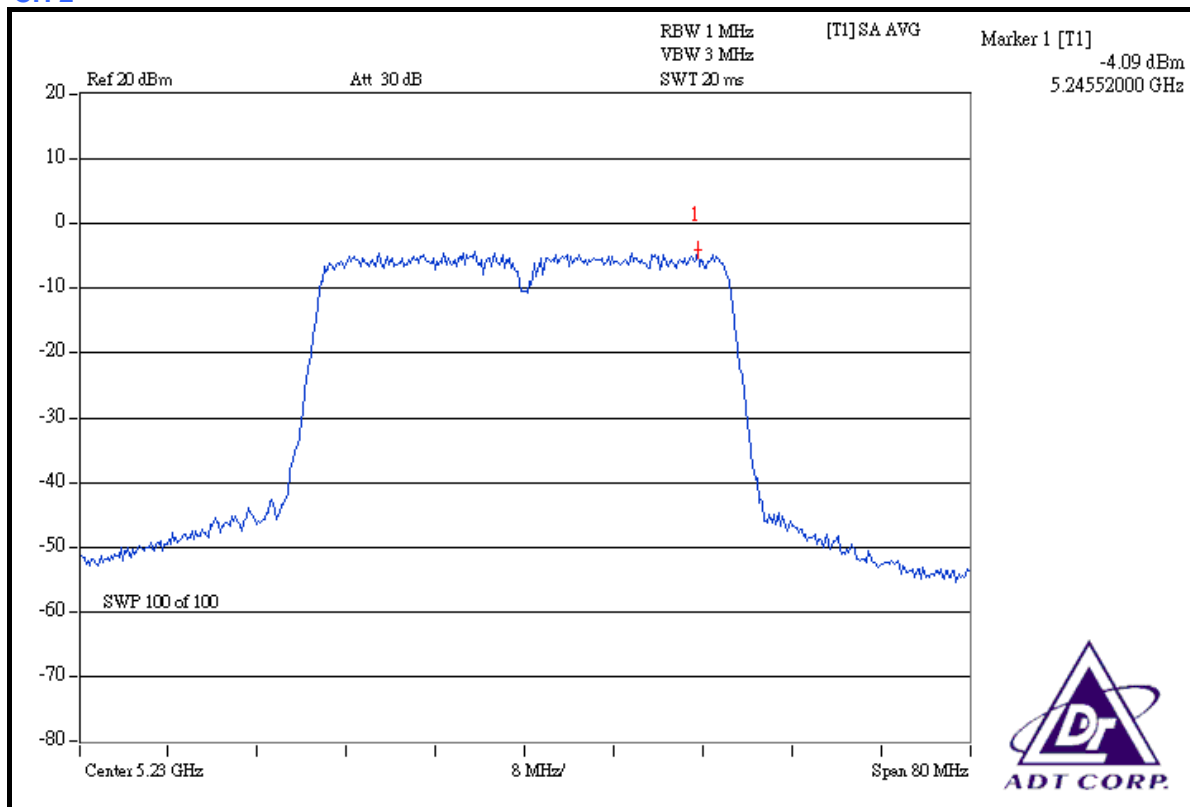
CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (mW)		RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	5190	0.403	0.473	-3.95	-3.25	0.876	-0.575	4	PASS
2	5230	0.390	0.480	-4.09	-3.19	0.870	-0.605	4	PASS
3	5270	0.325	0.494	-4.88	-3.06	0.819	-0.867	11	PASS
4	5310	0.348	0.457	-4.59	-3.40	0.805	-0.942	11	PASS



FOR CHAIN 0: CH 1

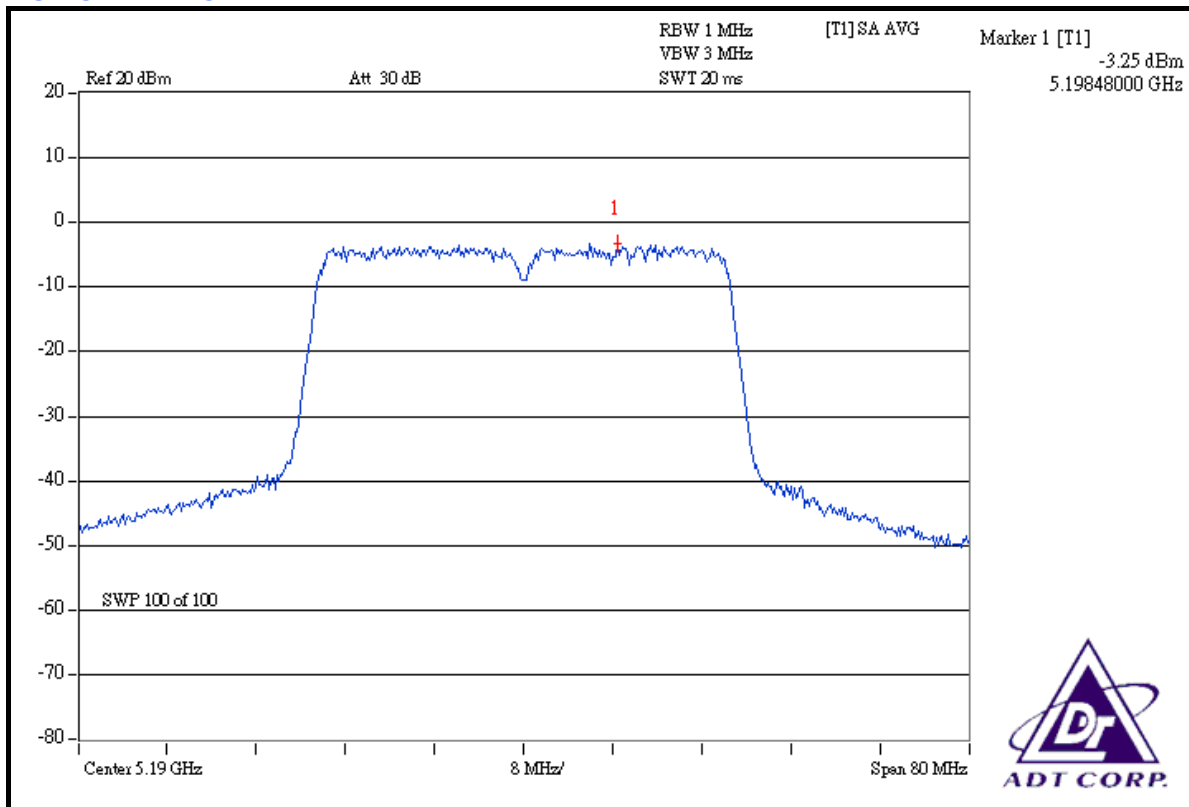


CH 2

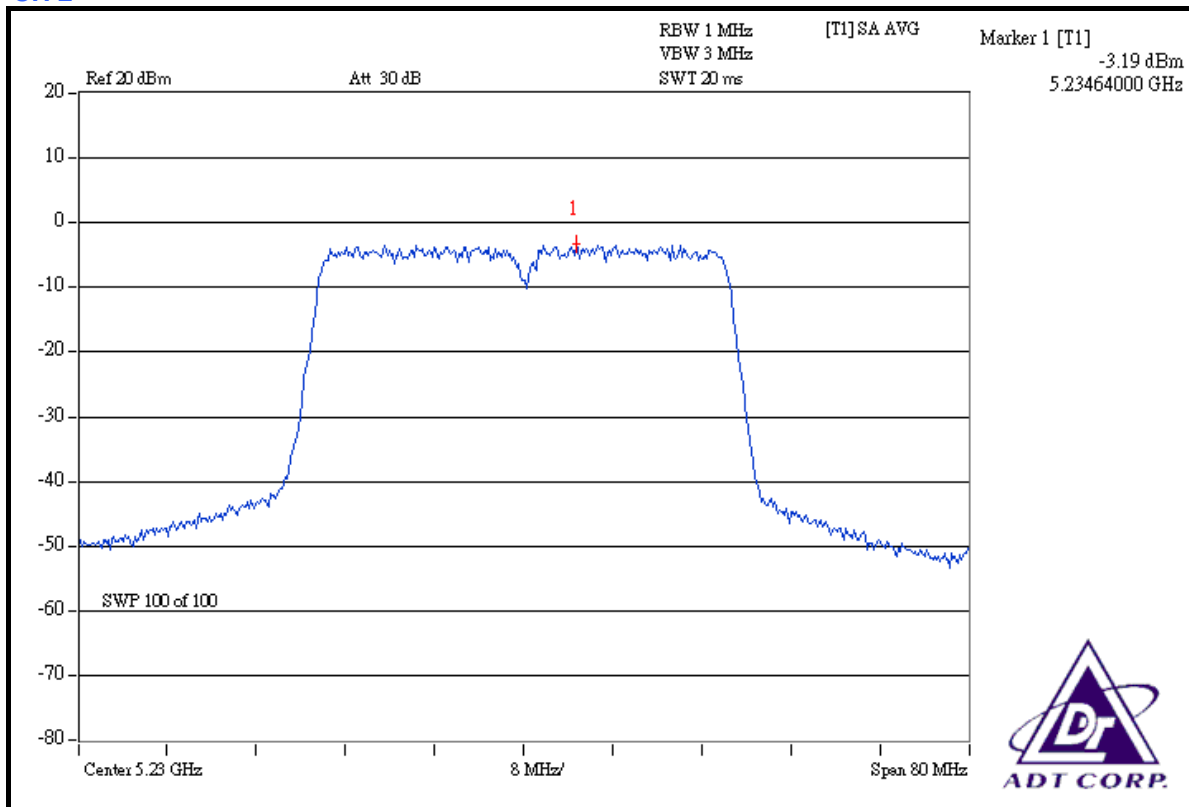




FOR CHAIN 1: CH 1

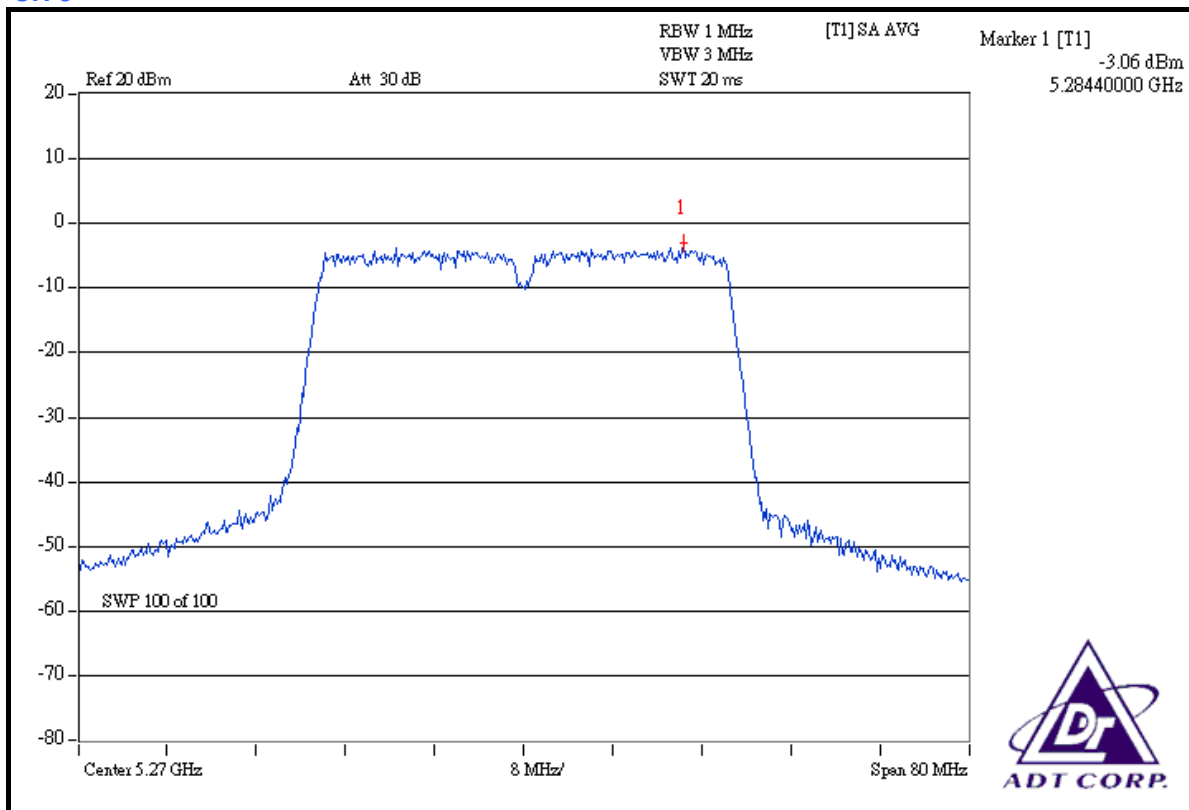


CH 2

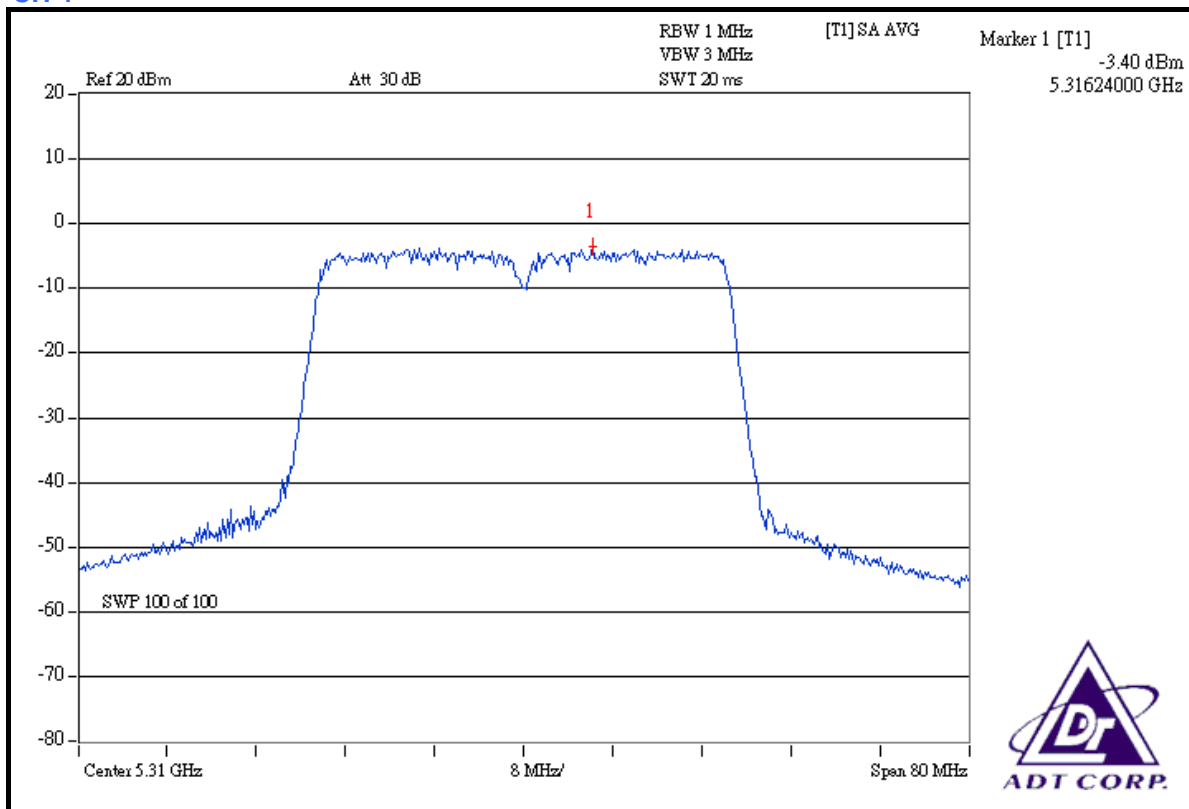




CH 3



CH 4



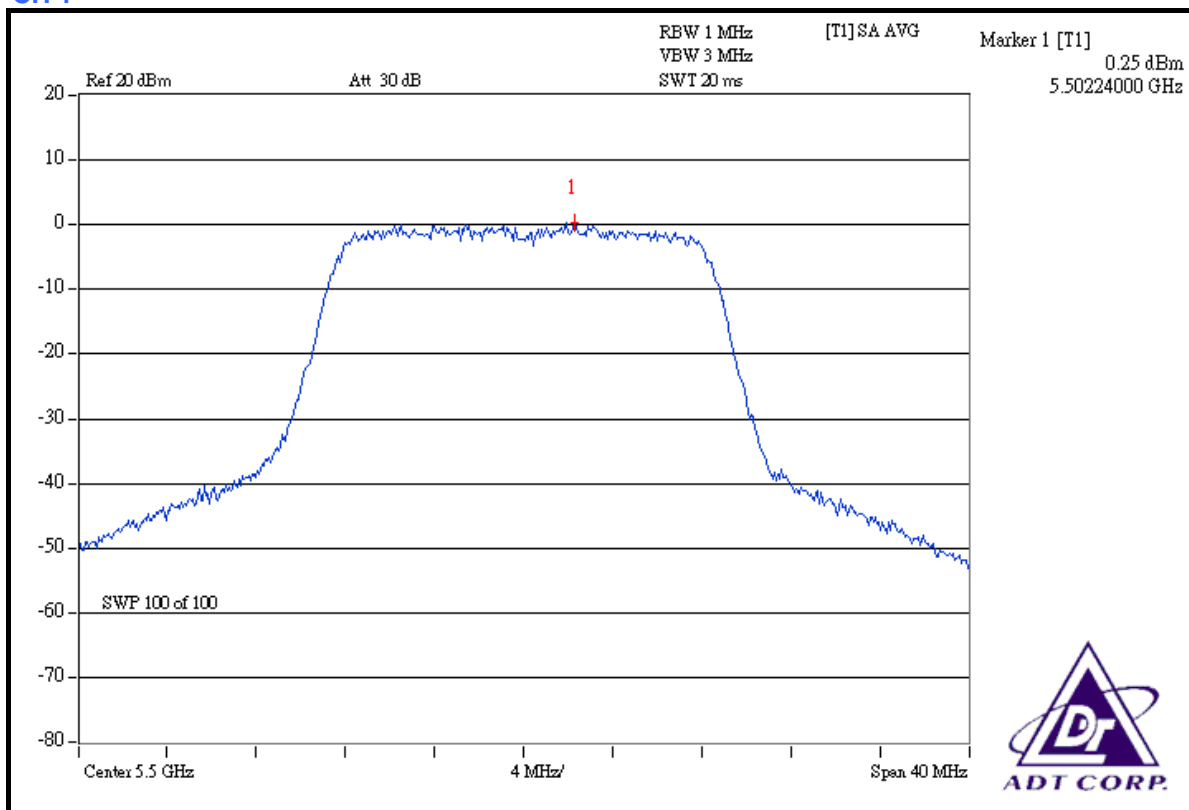
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

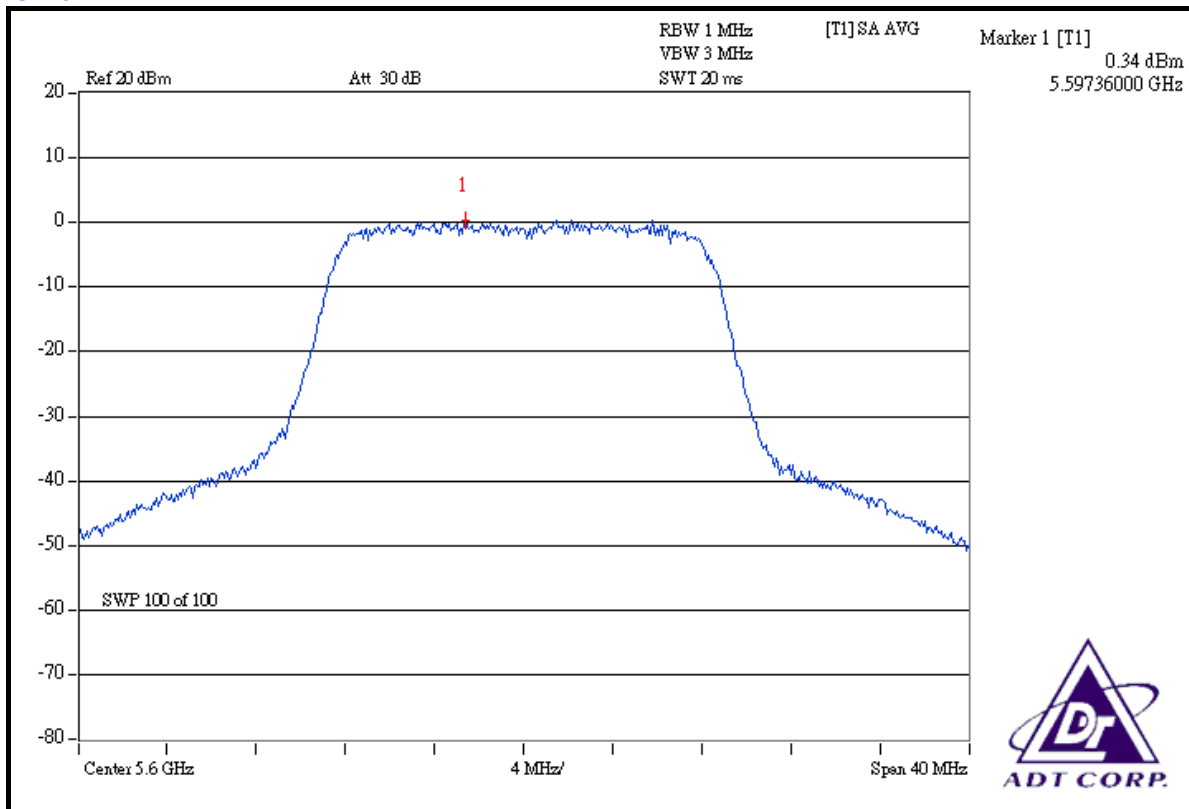
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	5500	0.25	11	PASS
6	5600	0.34	11	PASS
11	5700	0.18	11	PASS

CH 1

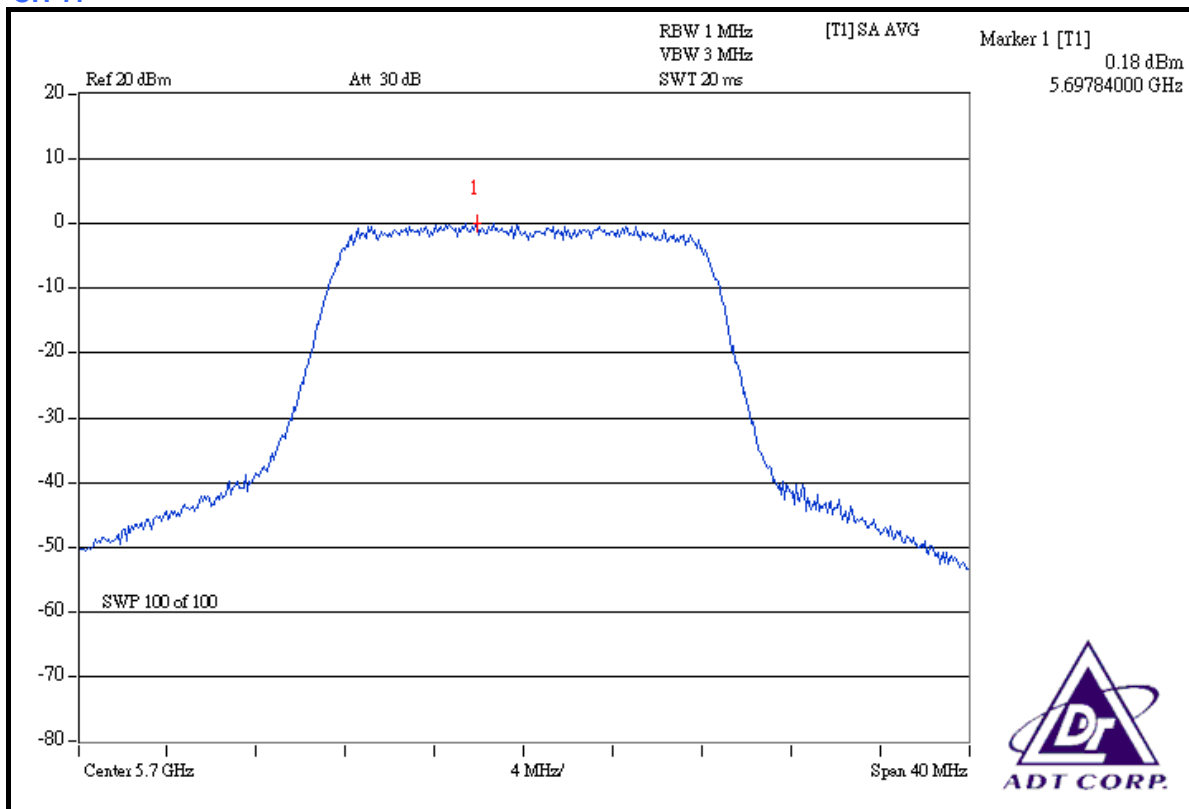




CH 6



CH 11





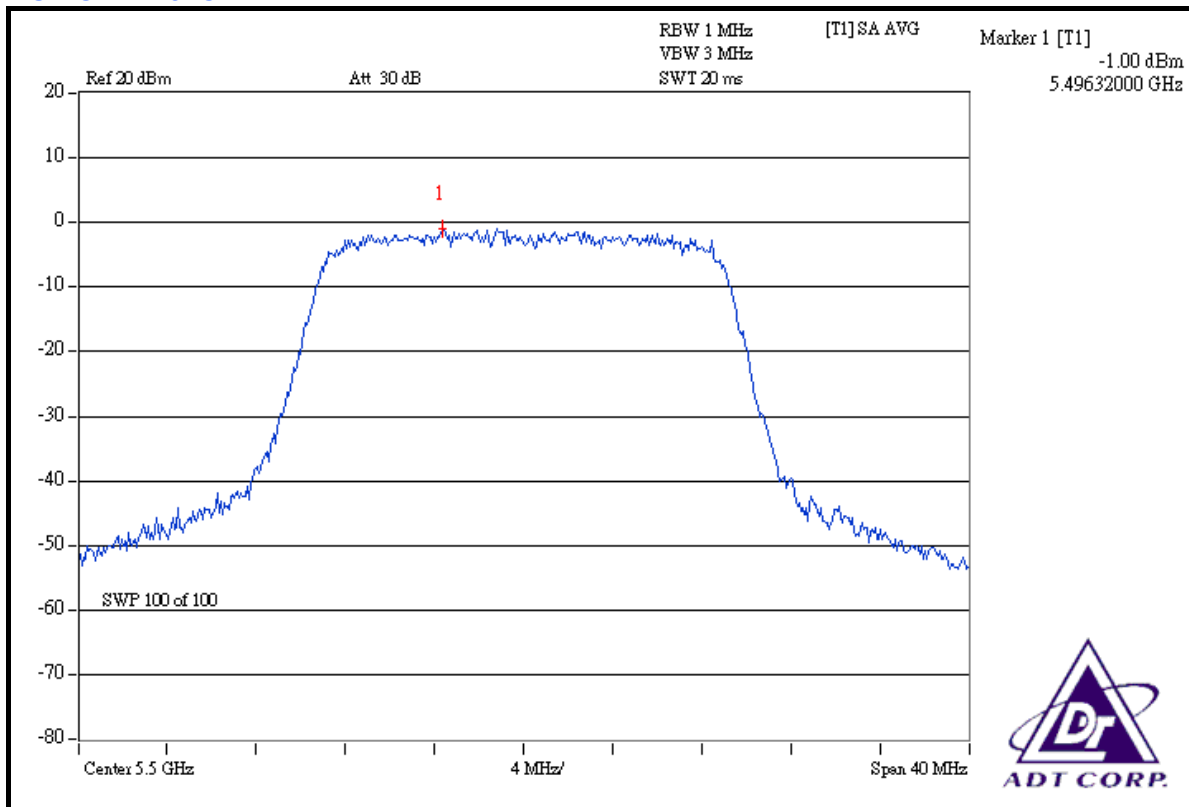
DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

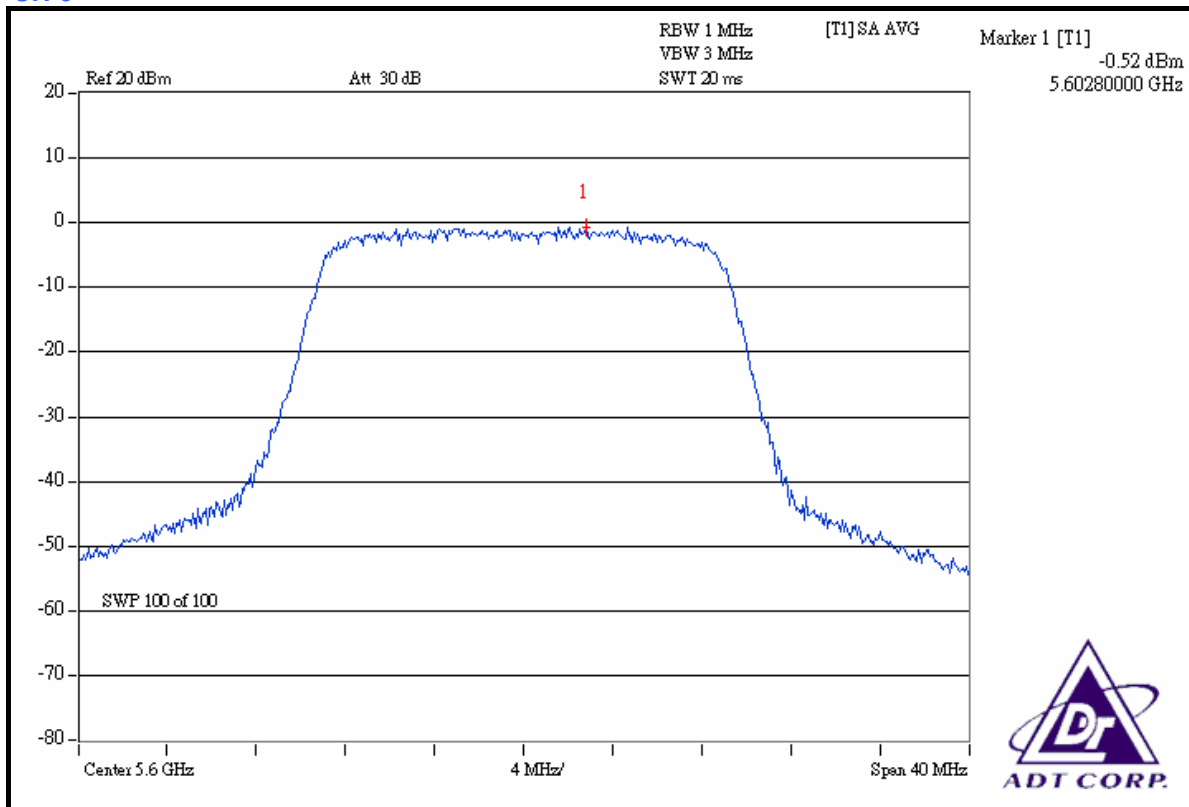
CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (mW)		RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	5500	0.794	0.789	-1.00	-1.03	1.583	1.995	11	PASS
6	5600	0.887	0.830	-0.52	-0.81	1.717	2.348	11	PASS
11	5700	0.802	0.809	-0.96	-0.92	1.611	2.071	11	PASS



FOR CHAIN 0: CH 1

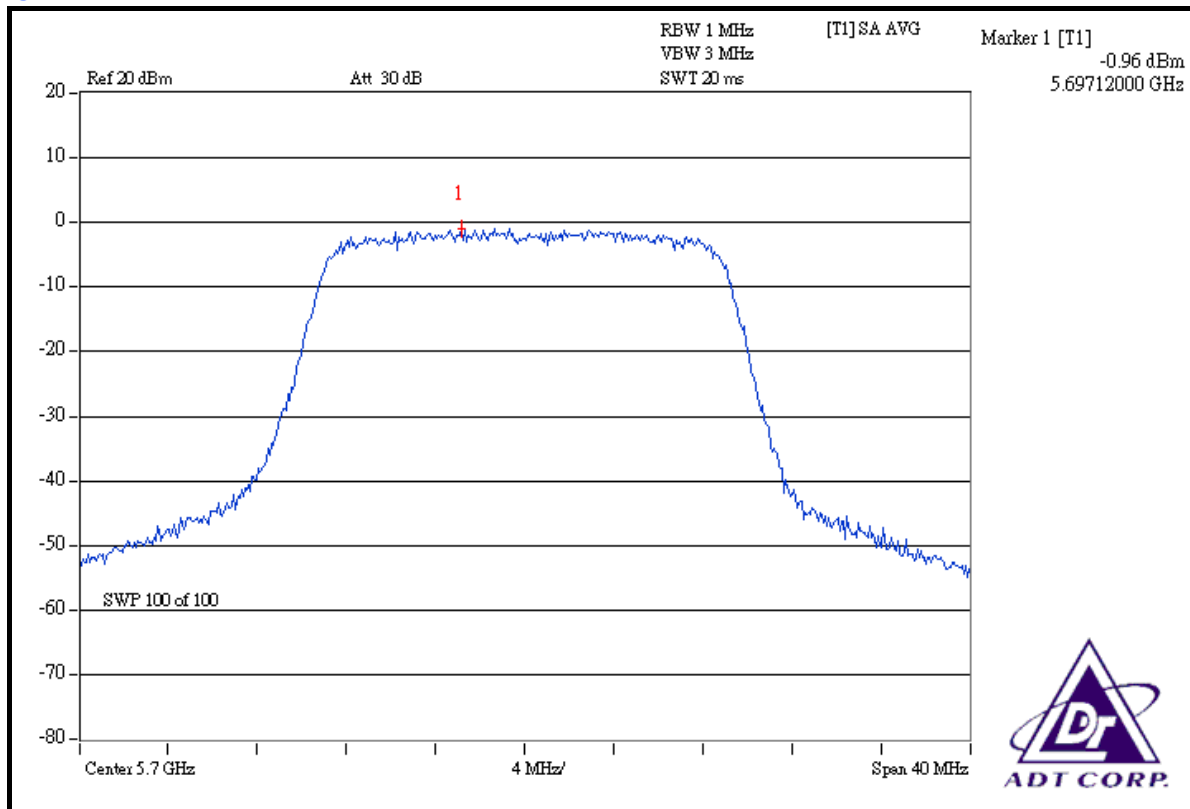


CH 6

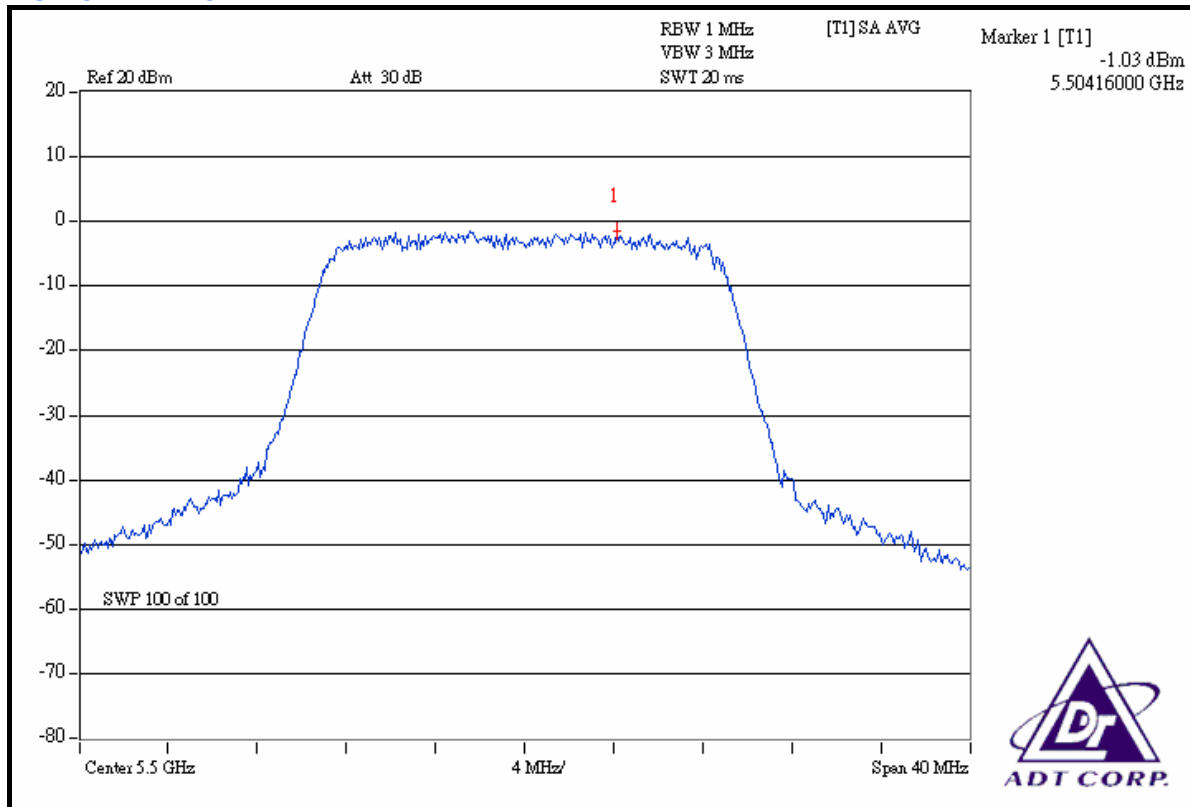




CH 11

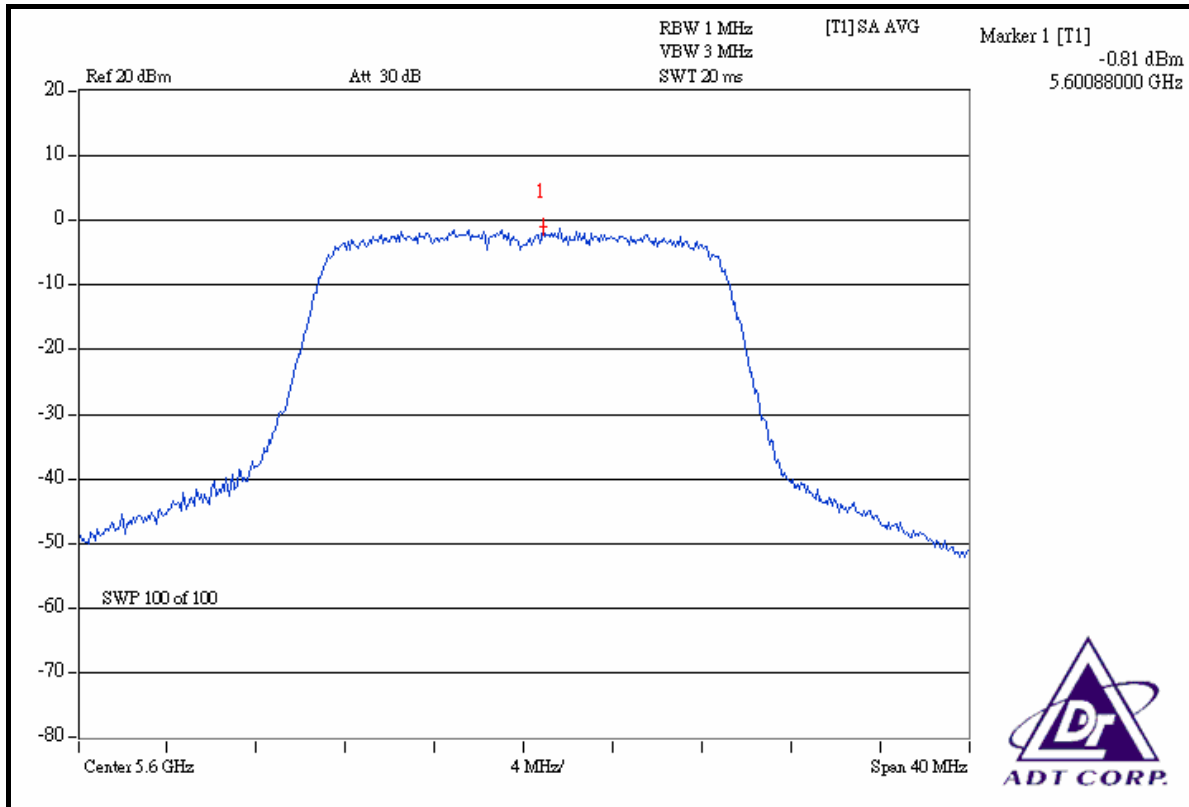


FOR CHAIN 1: CH 1

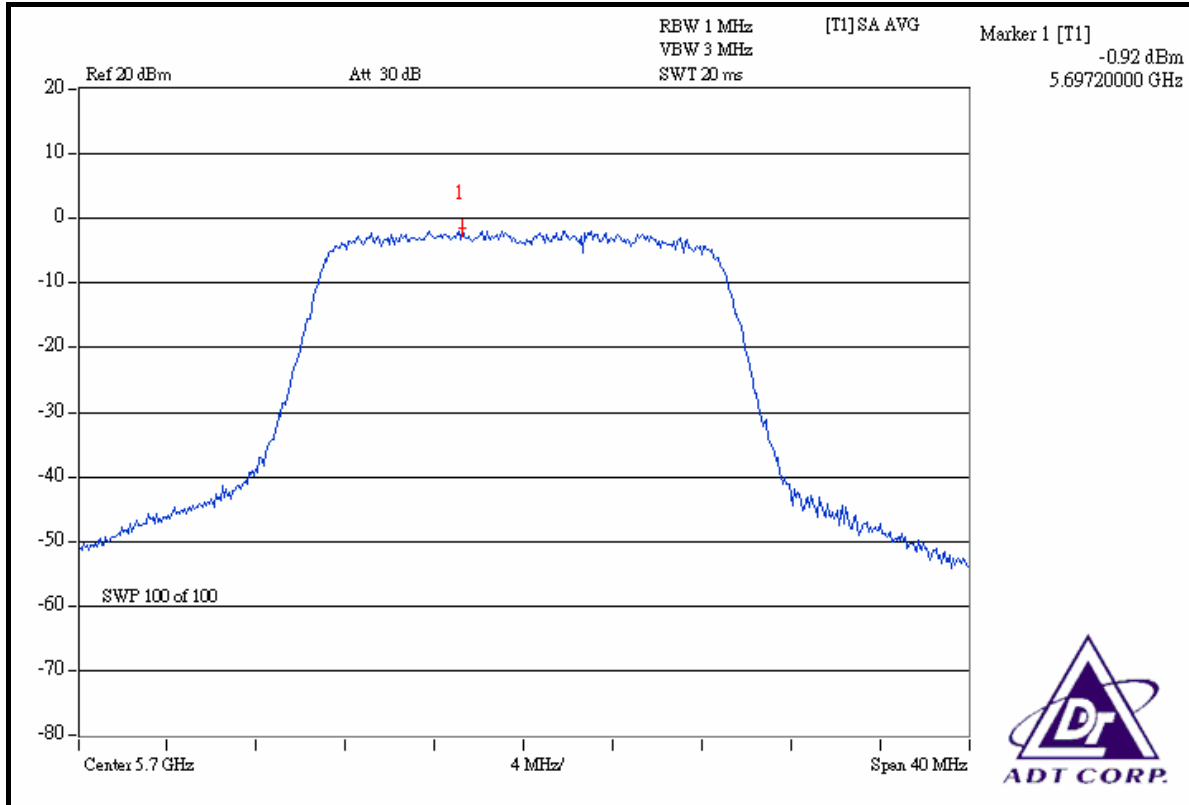




CH 6



CH 11





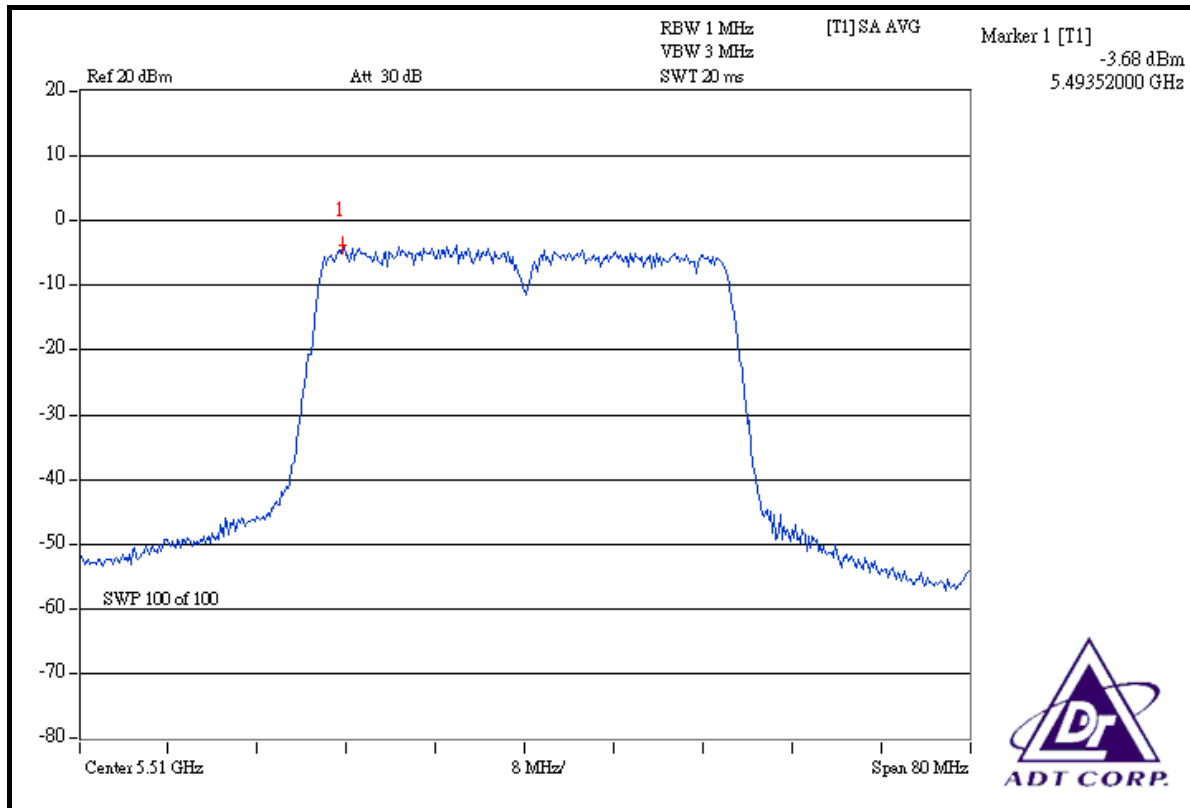
DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	TESTED BY	Long Chen

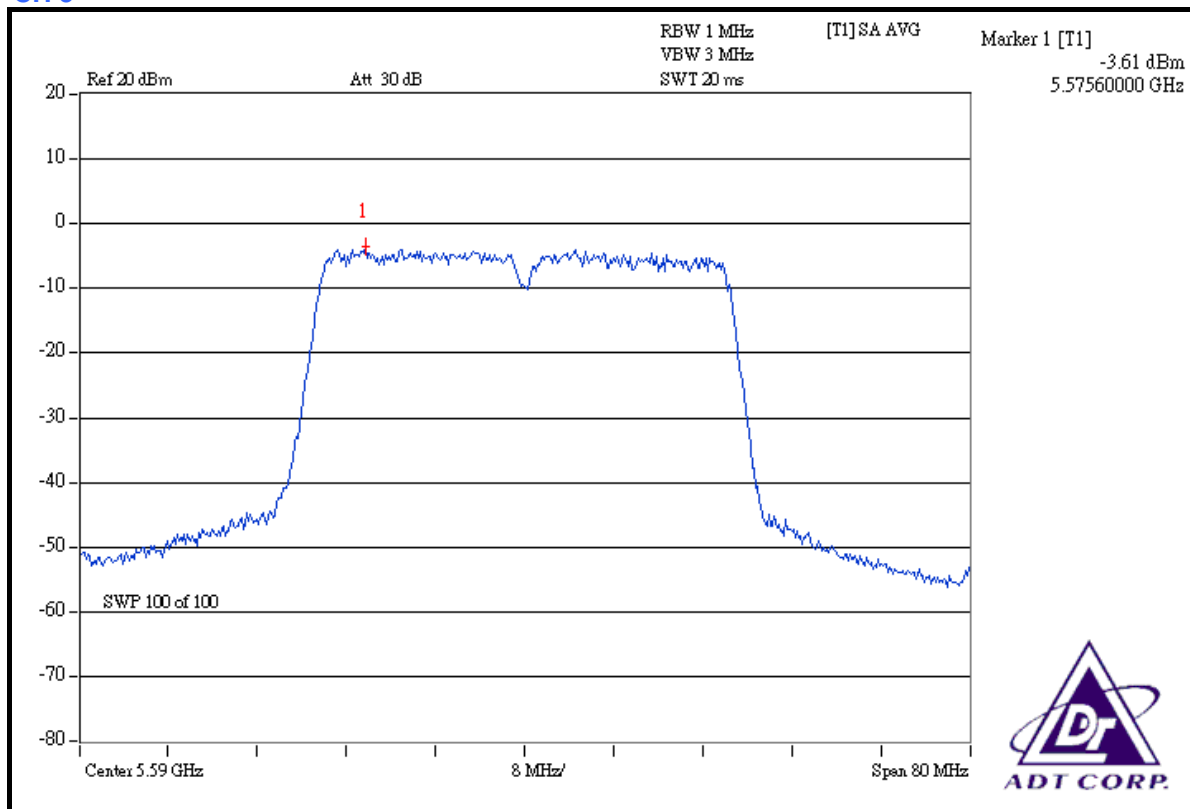
CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (mW)		RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	5510	0.429	0.465	-3.68	-3.33	0.894	-0.487	11	PASS
3	5590	0.436	0.438	-3.61	-3.59	0.874	-0.585	11	PASS
5	5670	0.439	0.431	-3.58	-3.66	0.870	-0.605	11	PASS



FOR CHAIN 0: CH 1

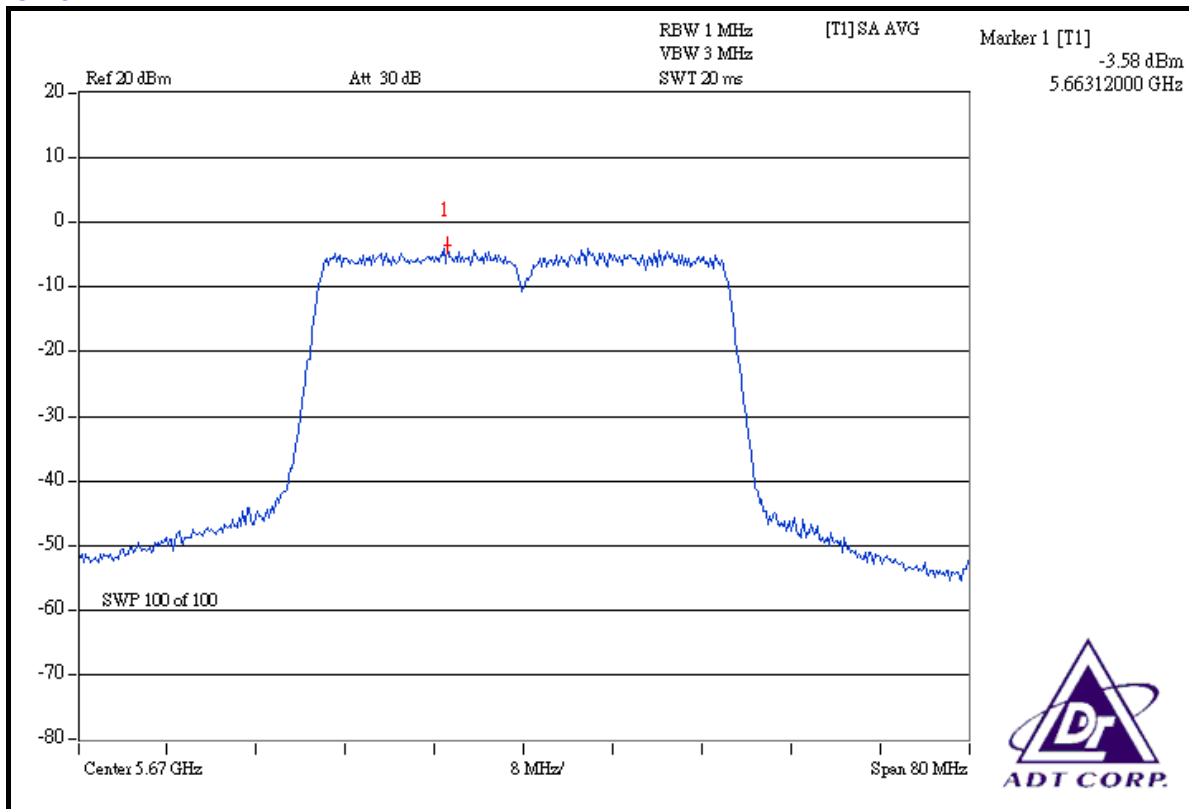


CH 3

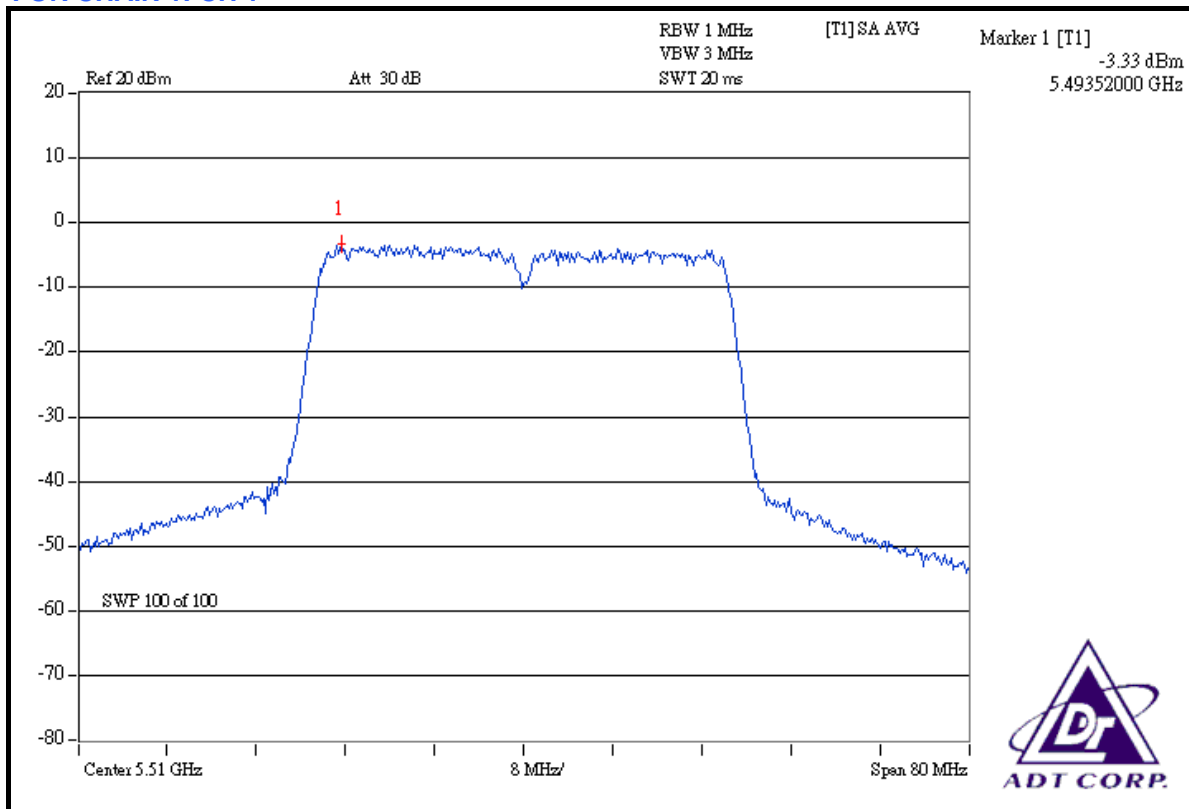




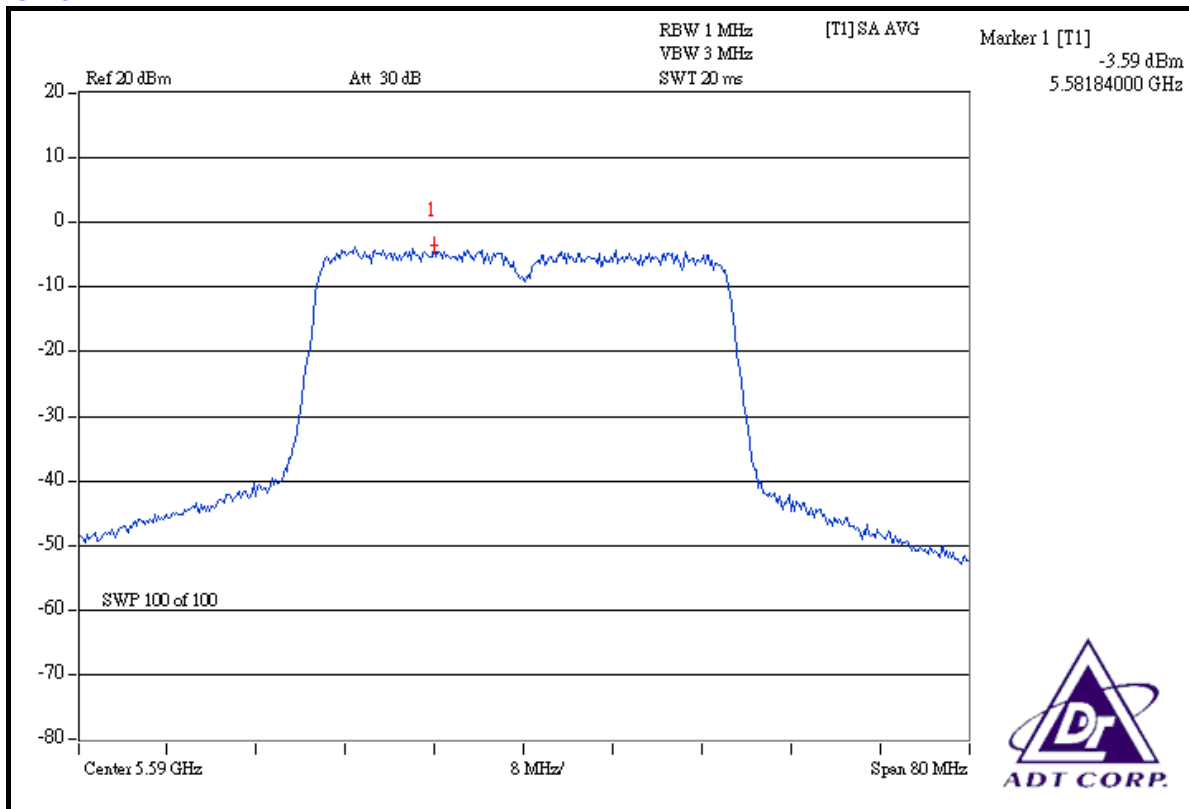
CH 5



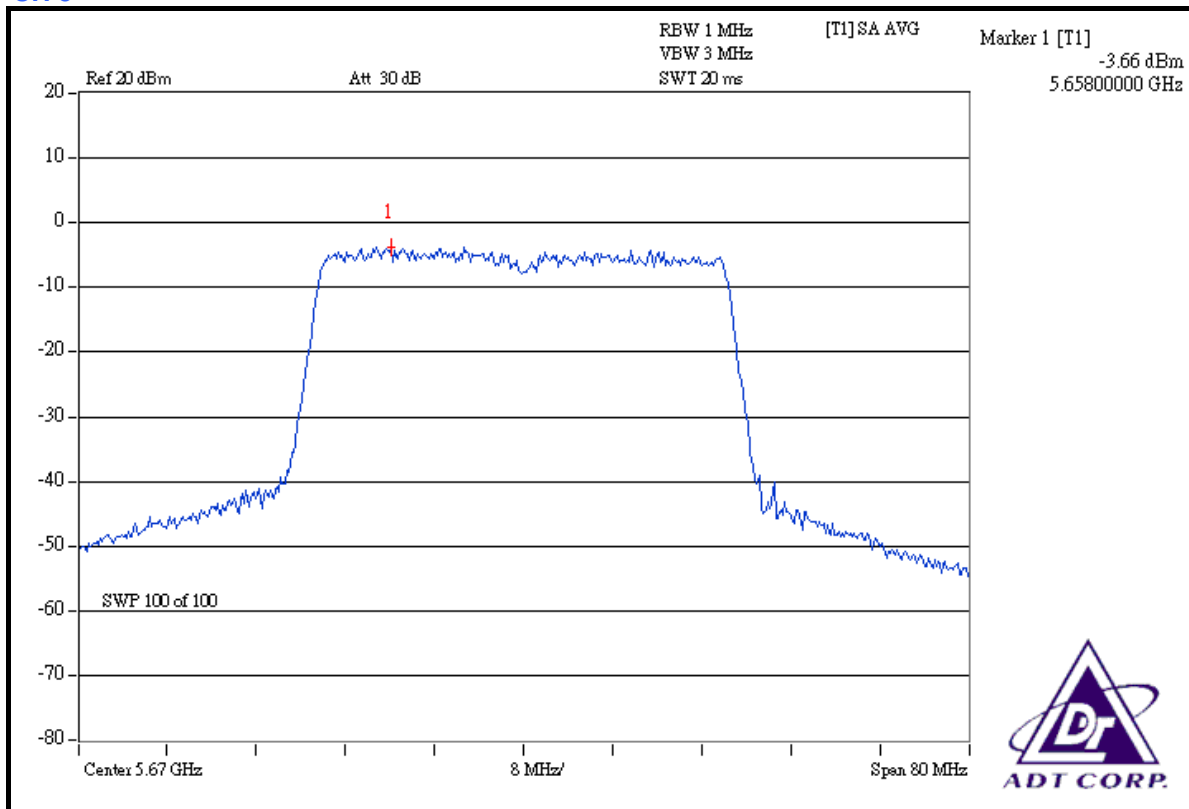
FOR CHAIN 1: CH 1



CH 3



CH 5



4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ANRITSU SPECTRUM ANALYZER	MS2667C	M10281	Mar. 07, 2008
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W981030	Jun. 28, 2008

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

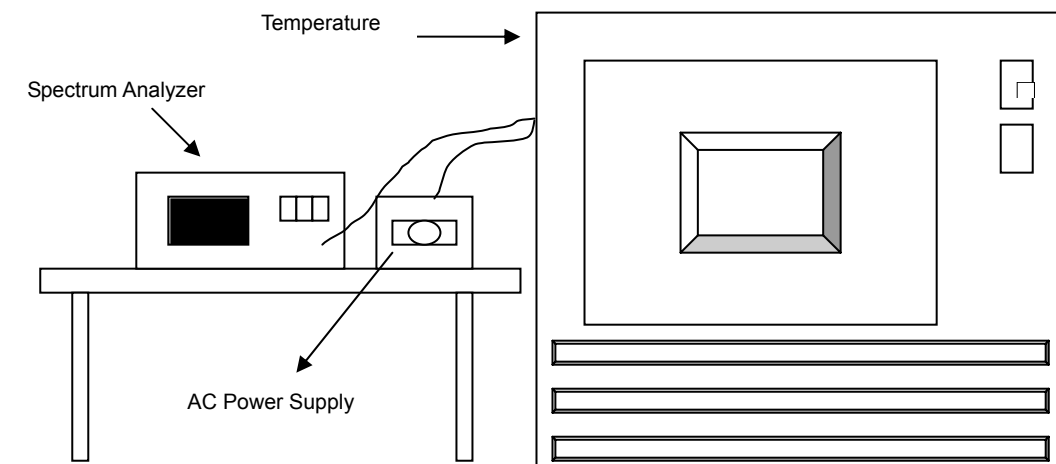
4.6.3 TEST PROCEDURE

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6



4.6.7 TEST RESULTS

OPERATING FREQUENCY: 5200MHz						LIMIT: ± 0.01%			
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5199.875405	-0.0023961	5199.915231	-0.0016302	5199.940851	-0.0011375	5199.942603	-0.0011038
	110.0	5199.891405	-0.0020884	5199.927231	-0.0013994	5199.944251	-0.0010721	5199.946503	-0.0010288
	93.5	5199.894205	-0.0020345	5199.927631	-0.0013917	5199.949451	-0.0009721	5199.953703	-0.0008903
40	126.5	5199.886505	-0.0021826	5199.924231	-0.0014571	5199.945251	-0.0010529	5199.947503	-0.0010096
	110.0	5199.892705	-0.0020634	5199.933031	-0.0012879	5199.950051	-0.0009606	5199.951603	-0.0009307
	93.5	5199.904305	-0.0018403	5199.940931	-0.0011359	5199.952951	-0.0009048	5199.958203	-0.0008038
30	126.5	5199.887805	-0.0021576	5199.930331	-0.0013398	5199.950951	-0.0009432	5199.953703	-0.0008903
	110.0	5199.893605	-0.0020461	5199.945931	-0.0010398	5199.958551	-0.0007971	5199.953703	-0.0008903
	93.5	5199.911705	-0.0016980	5199.954331	-0.0008782	5199.959651	-0.0007759	5199.963903	-0.0006942
20	126.5	5199.894805	-0.0020230	5199.934231	-0.0012648	5199.954251	-0.0008798	5199.958803	-0.0007922
	110.0	5199.895105	-0.0020172	5199.951631	-0.0009302	5199.962051	-0.0007298	5199.963203	-0.0007076
	93.5	5199.919405	-0.0015499	5199.962831	-0.0007148	5199.963551	-0.0007009	5199.966603	-0.0006422
10	126.5	5199.902005	-0.0018845	5199.945031	-0.0010571	5199.961651	-0.0007375	5199.965203	-0.0006692
	110.0	5199.910605	-0.0017191	5199.955931	-0.0008475	5199.963951	-0.0006932	5199.966603	-0.0006422
	93.5	5199.925505	-0.0014326	5199.967631	-0.0006225	5199.971651	-0.0005452	5199.976603	-0.0004499
0	126.5	5199.905705	-0.0018134	5199.952031	-0.0009225	5199.965251	-0.0006682	5199.970603	-0.0005653
	110.0	5199.917205	-0.0015922	5199.961431	-0.0007417	5199.972051	-0.0005375	5199.973703	-0.0005057
	93.5	5199.931805	-0.0013115	5199.970731	-0.0005629	5199.974051	-0.0004990	5199.979303	-0.0003980
-10	126.5	5199.917805	-0.0015807	5199.957531	-0.0008167	5199.972051	-0.0005375	5199.975503	-0.0004711
	110.0	5199.924305	-0.0014557	5199.967531	-0.0006244	5199.975251	-0.0004759	5199.980403	-0.0003769
	93.5	5199.938905	-0.0011749	5199.973931	-0.0005013	5199.978951	-0.0004048	5199.983703	-0.0003134
-20	126.5	5199.922705	-0.0014865	5199.963931	-0.0006936	5199.975551	-0.0004702	5199.980603	-0.0003730
	110.0	5199.928105	-0.0013826	5199.971931	-0.0005398	5199.981751	-0.0003509	5199.983603	-0.0003153
	93.5	5199.942905	-0.0010980	5199.981331	-0.0003590	5199.982951	-0.0003279	5199.984603	-0.0002961
-30	126.5	5199.928005	-0.0013845	5199.970731	-0.0005629	5199.981851	-0.0003490	5199.983003	-0.0003269
	110.0	5199.942405	-0.0011076	5199.977031	-0.0004417	5199.984251	-0.0003029	5199.987603	-0.0002384
	93.5	5199.945505	-0.0010480	5199.986531	-0.0002590	5199.988351	-0.0002240	5199.990803	-0.0001769



4.7 BAND EDGES MEASUREMENT

4.7.1 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
802.11a:			
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 28, 2008
DRAFT 802.11n (20MHz), DRAFT 802.11n (40MHz):			
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Feb. 26, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	May 31, 2008
HORN Antenna SCHWARZBECK	9120D	9120D-209	Jun. 28, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 28, 2007
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283402/4	Dec. 06, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	251644/4	Dec. 06, 2008
Software ADT.	ADT_Radiated_V7.6	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA
Turn Table ADT.	TT100.	TT93021703	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA

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

4.7.2 TEST PROCEDURE

802.11a:

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

DRAFT 802.11n (20MHz), DRAFT 802.11n (40MHz):

- 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 1MHz / 3MHz 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

4.7.3 EUT OPERATING CONDITION

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

4.7.4 TEST RESULTS

For signals in the restricted bands above and below the 5.15 to 5.35GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

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

802.11a OFDM MODULATION:

FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

Channel 1 (5180MHz)

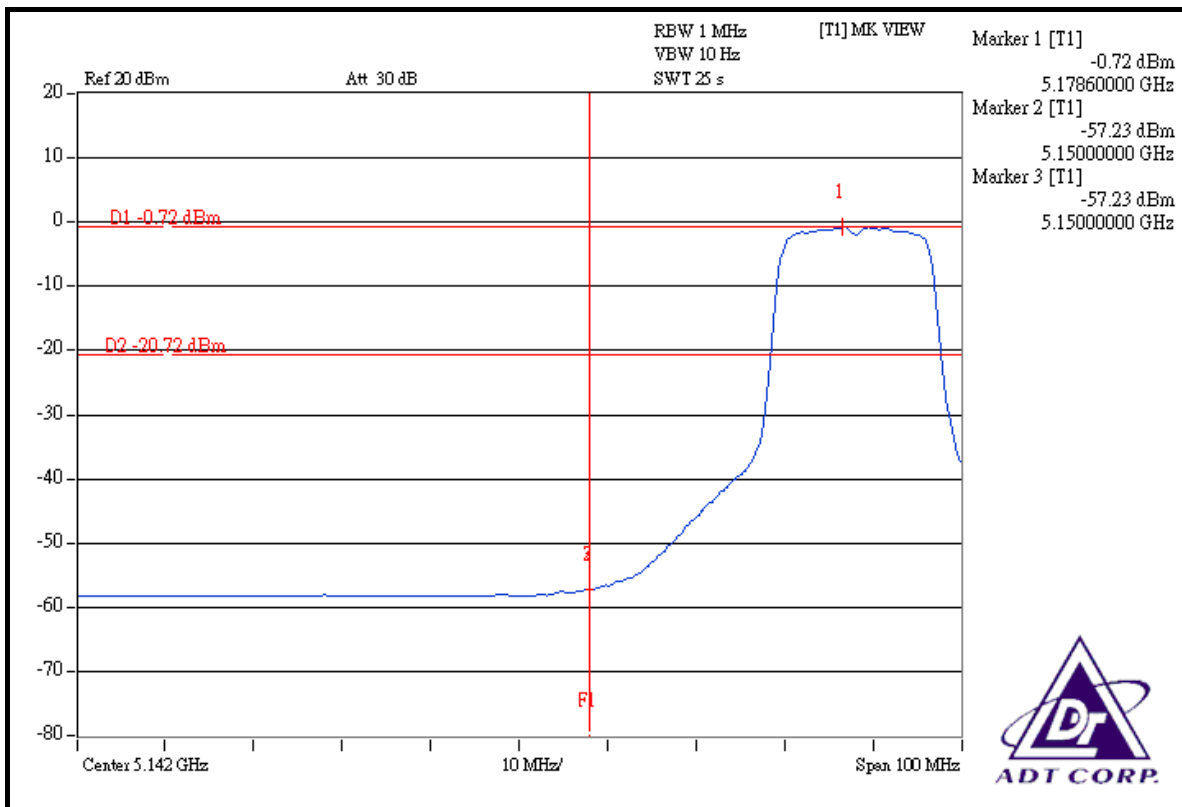
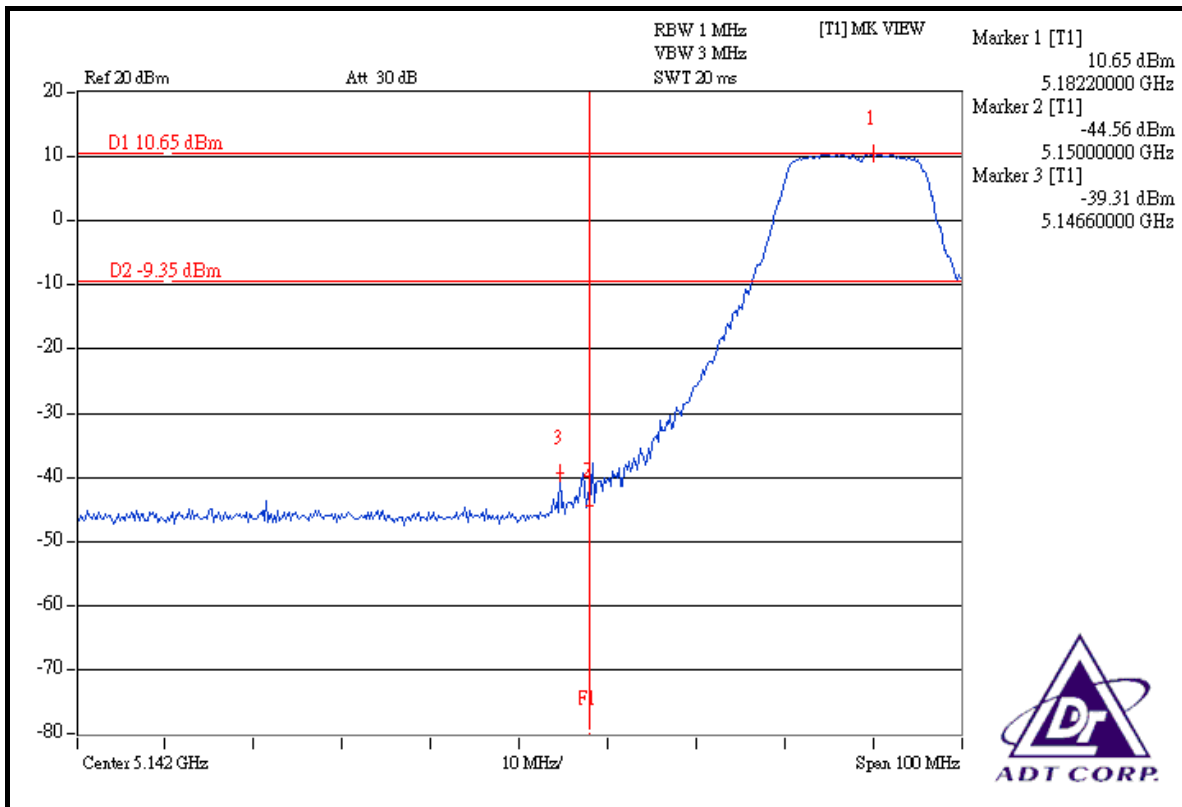
The band edge emission plot on the next page shows 49.96dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 107.58dBuV/m (Peak), so the maximum field strength in restrict band is $107.58 - 49.96 = 57.62$ dBuV/m which is under 74dBuV/m limit.

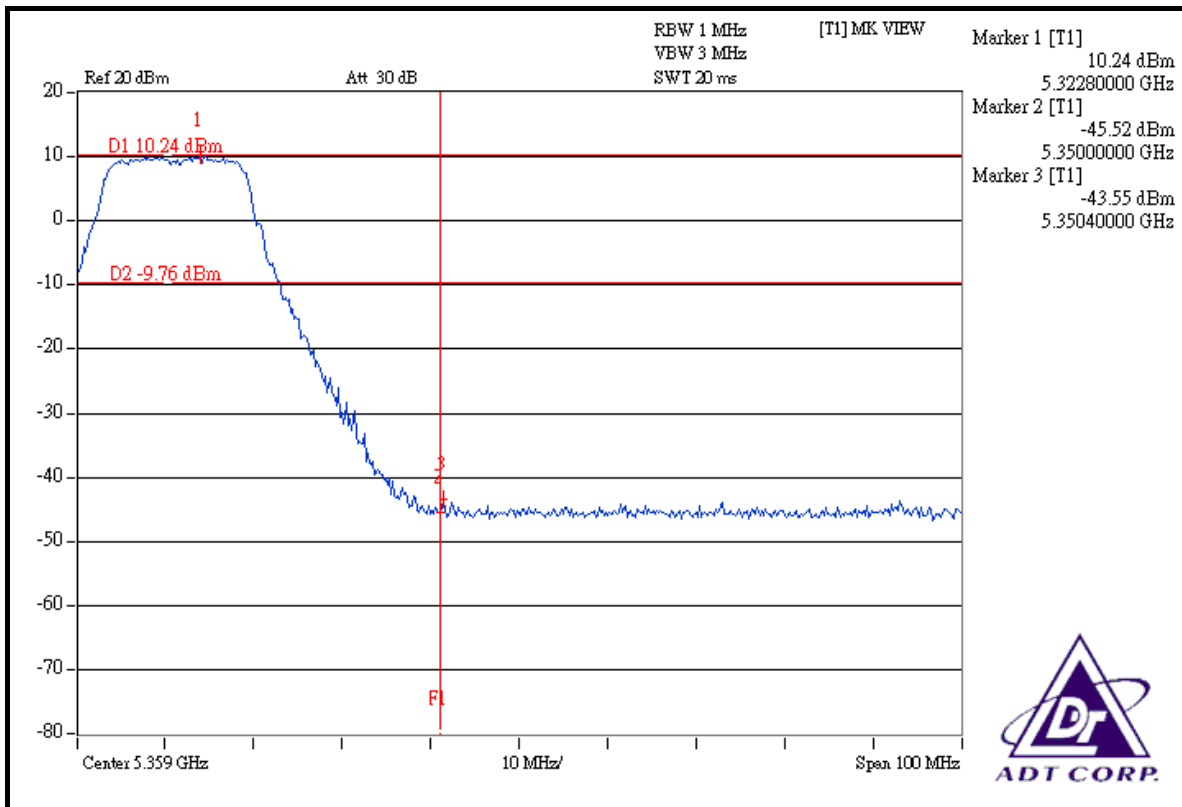
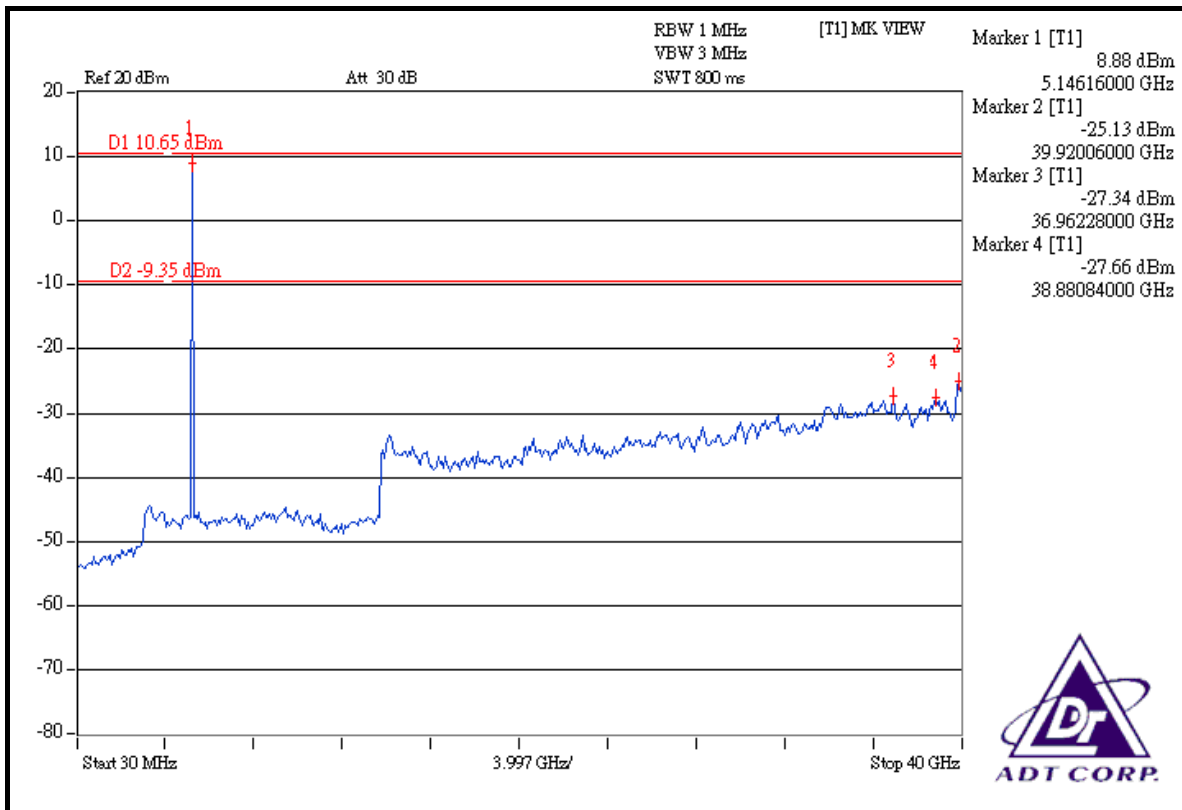
The band edge emission plot on the next page shows 56.51dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 97.12dBuV/m (Average), so the maximum field strength in restrict band is $97.12 - 56.51 = 40.61$ dBuV/m which is under 54dBuV/m limit.

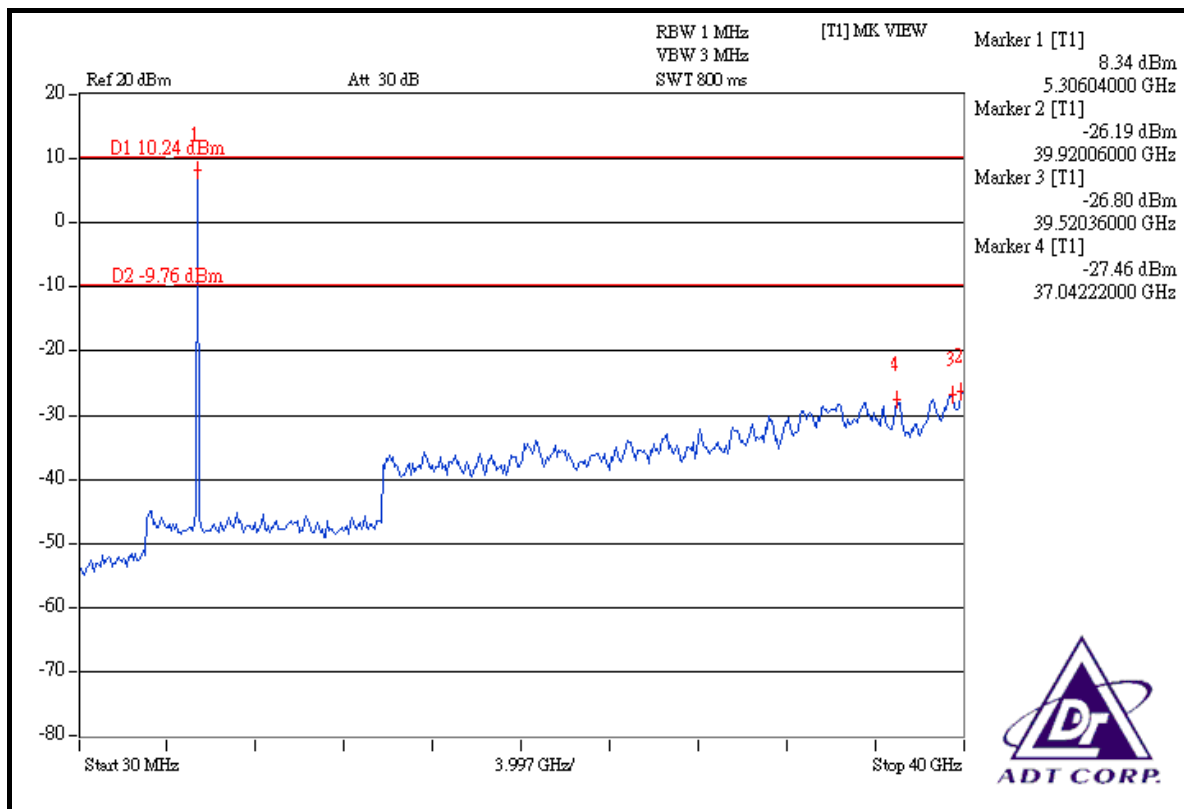
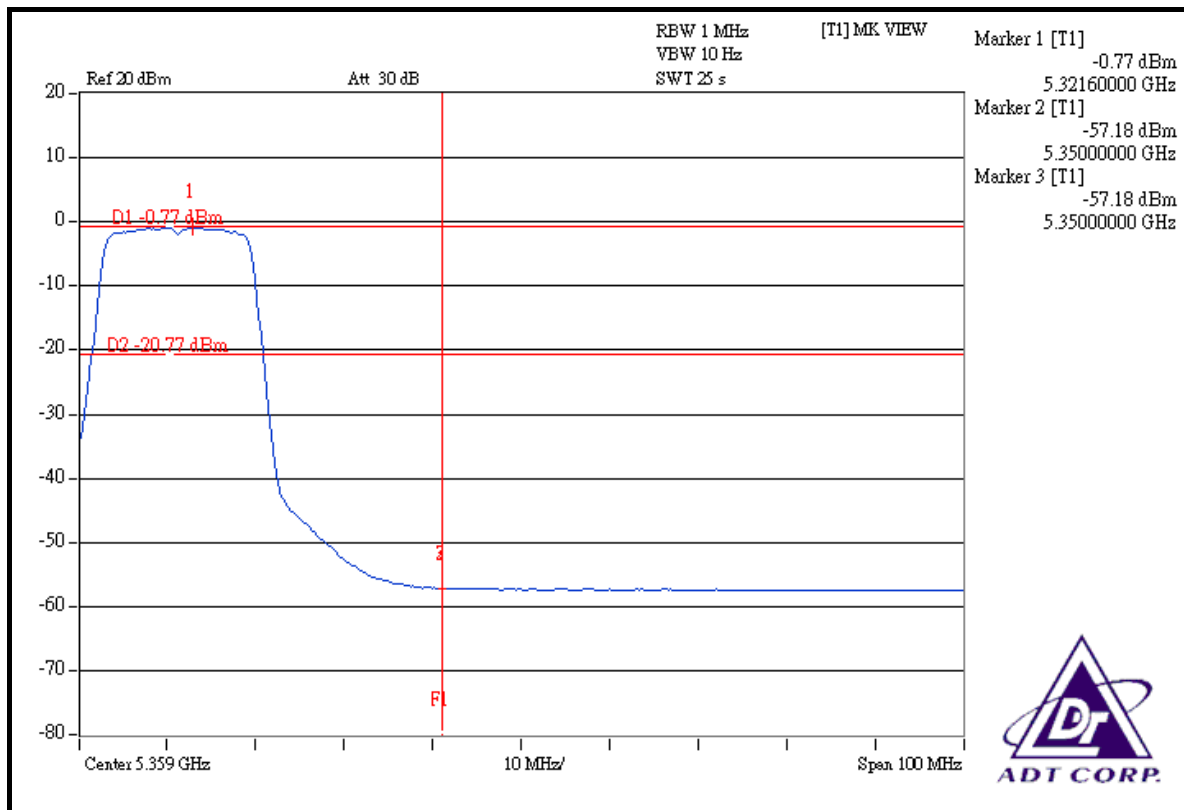
Channel 8 (5320MHz)

The band edge emission plot on the next second page shows 53.79dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 106.80dBuV/m (Peak), so the maximum field strength in restrict band is $106.80 - 53.79 = 53.01$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 56.41dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 96.76dBuV/m (Average), so the maximum field strength in restrict band is $96.76 - 56.41 = 40.35$ dBuV/m which is under 54dBuV/m limit.







DRAFT 802.11n (20MHz) OFDM MODULATION:

Channel 1 (5180MHz)

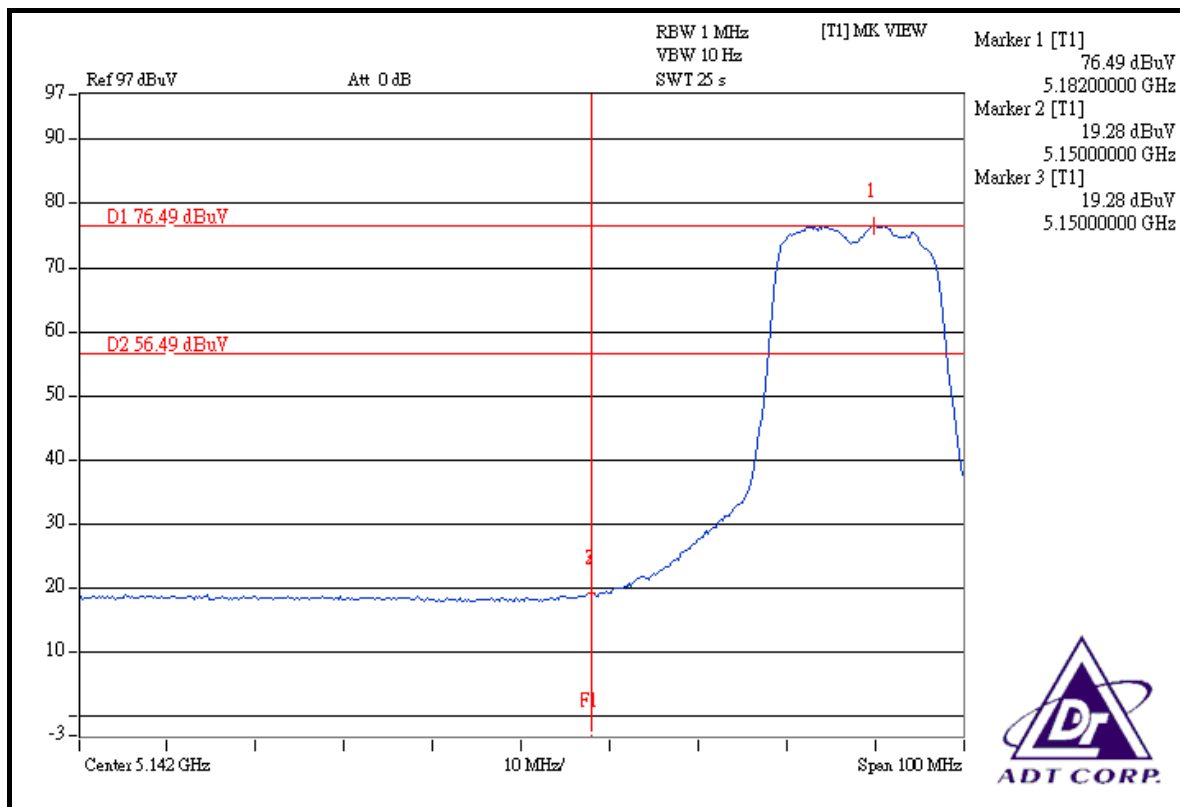
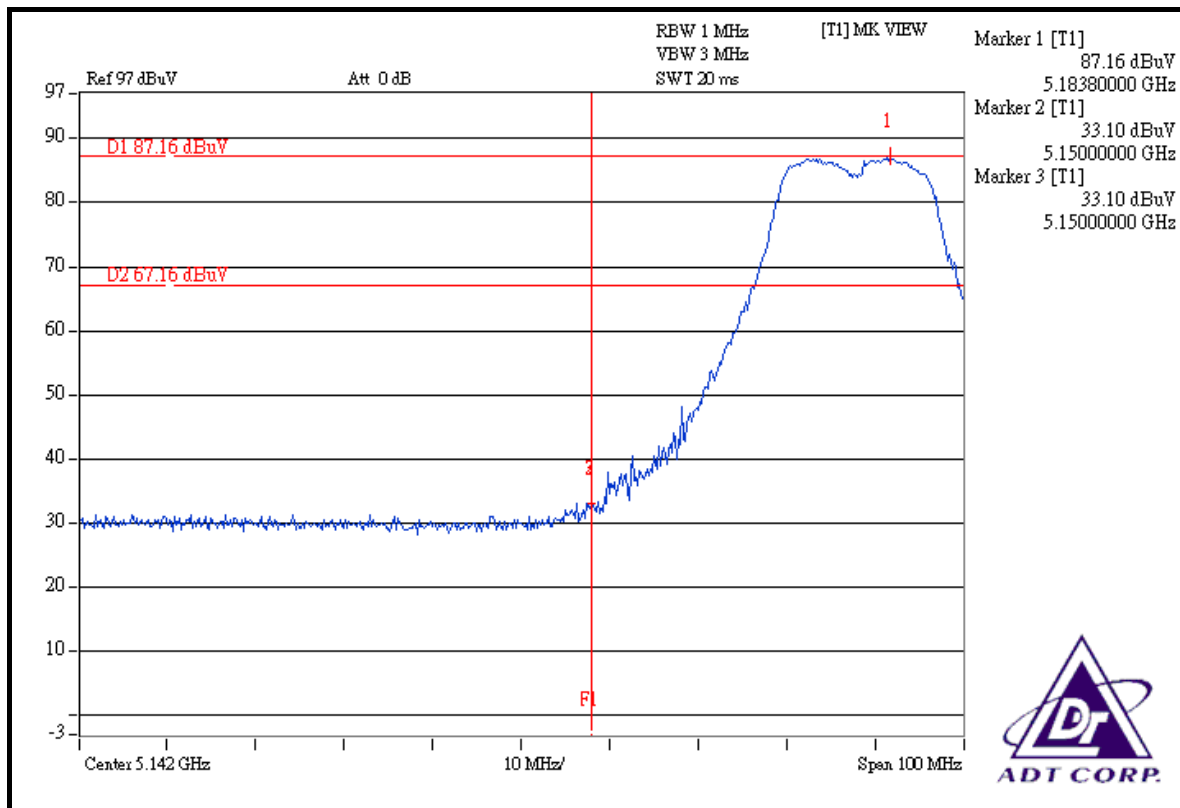
The band edge emission plot on the next page shows 54.06dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 113.42dBuV/m (Peak), so the maximum field strength in restrict band is $113.42 - 54.06 = 59.36$ dBuV/m which is under 74dBuV/m limit.

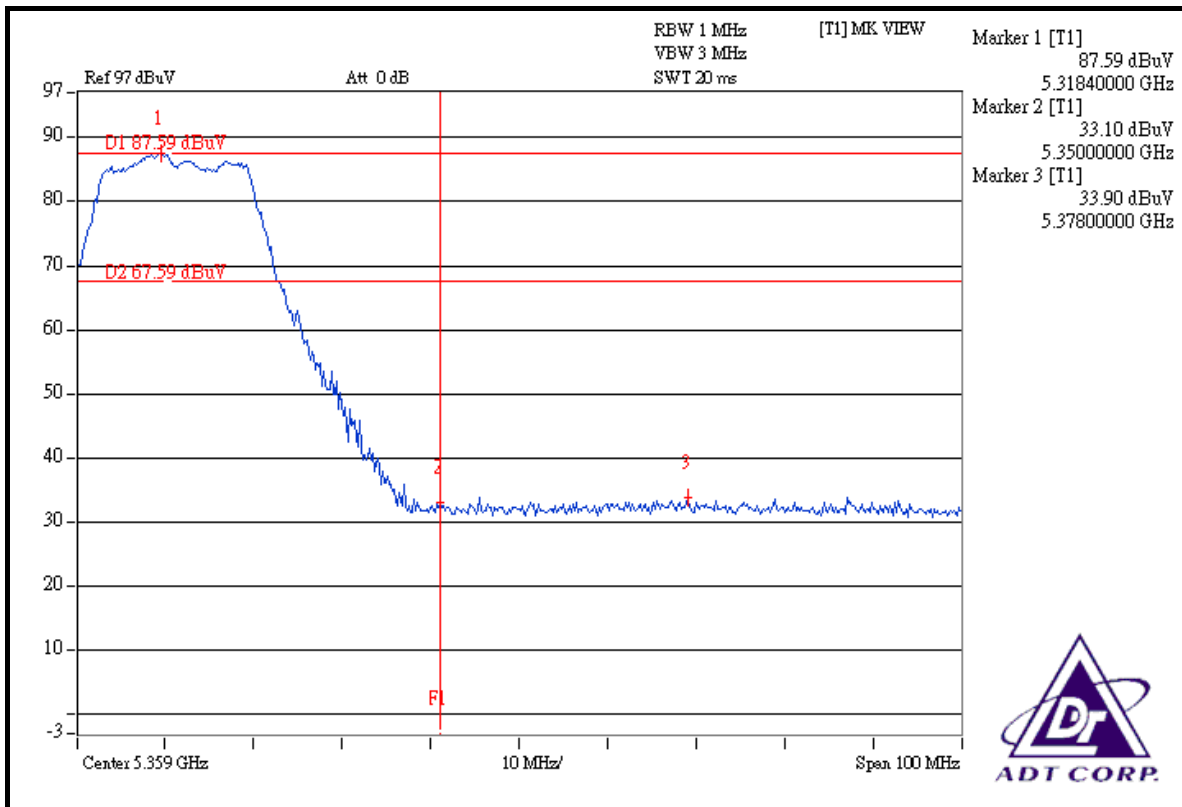
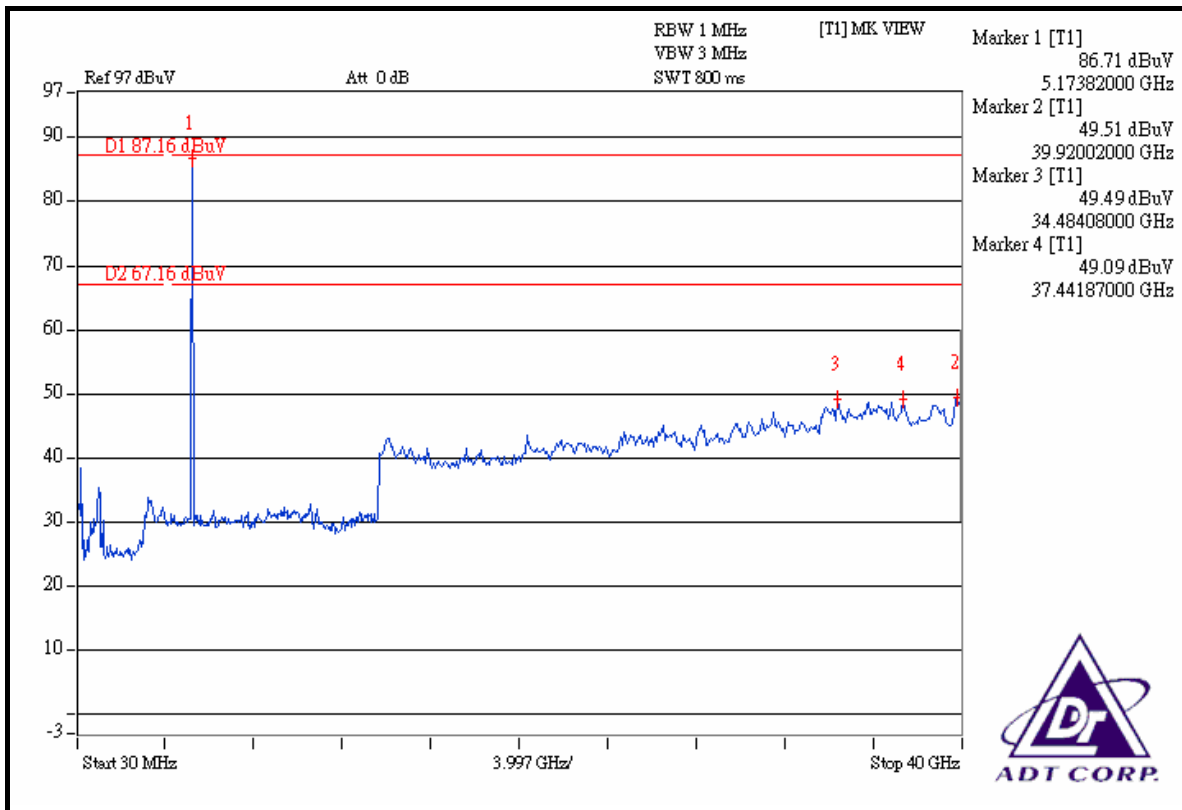
The band edge emission plot on the next page shows 57.21dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 103.61dBuV/m (Average), so the maximum field strength in restrict band is $103.61 - 57.21 = 46.40$ dBuV/m which is under 54dBuV/m limit.

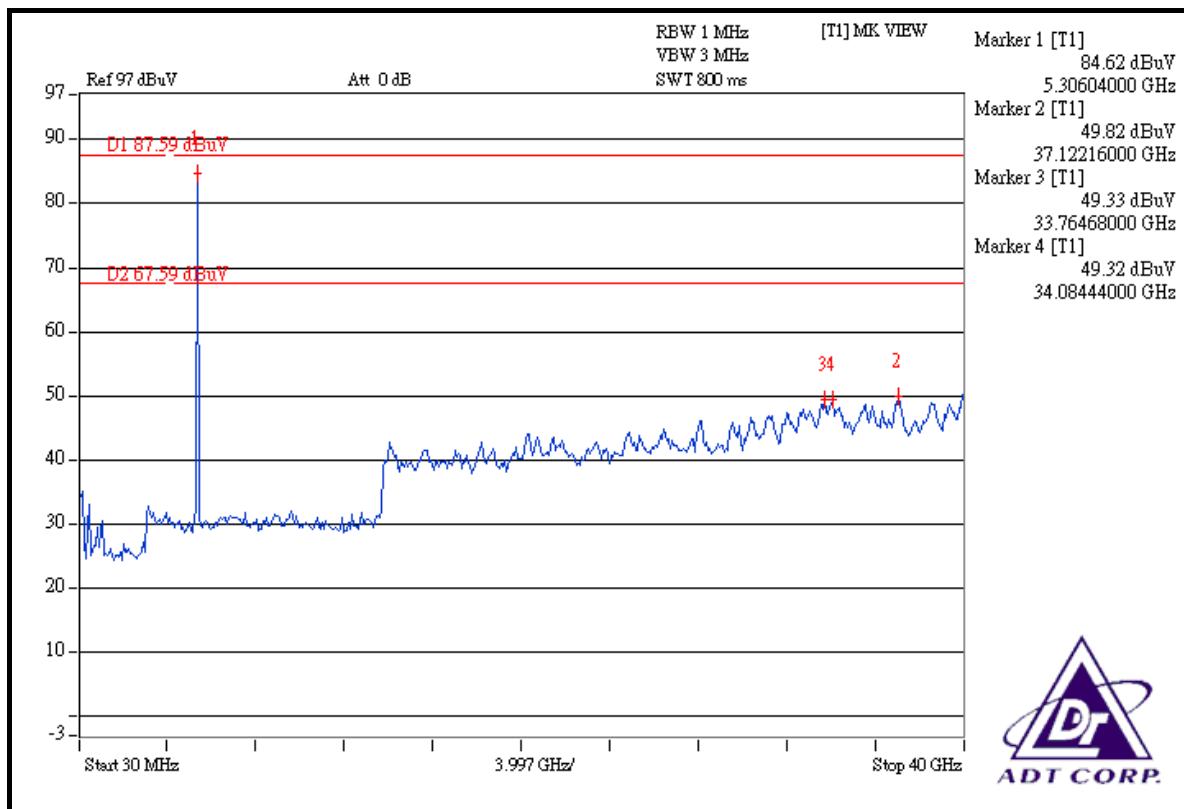
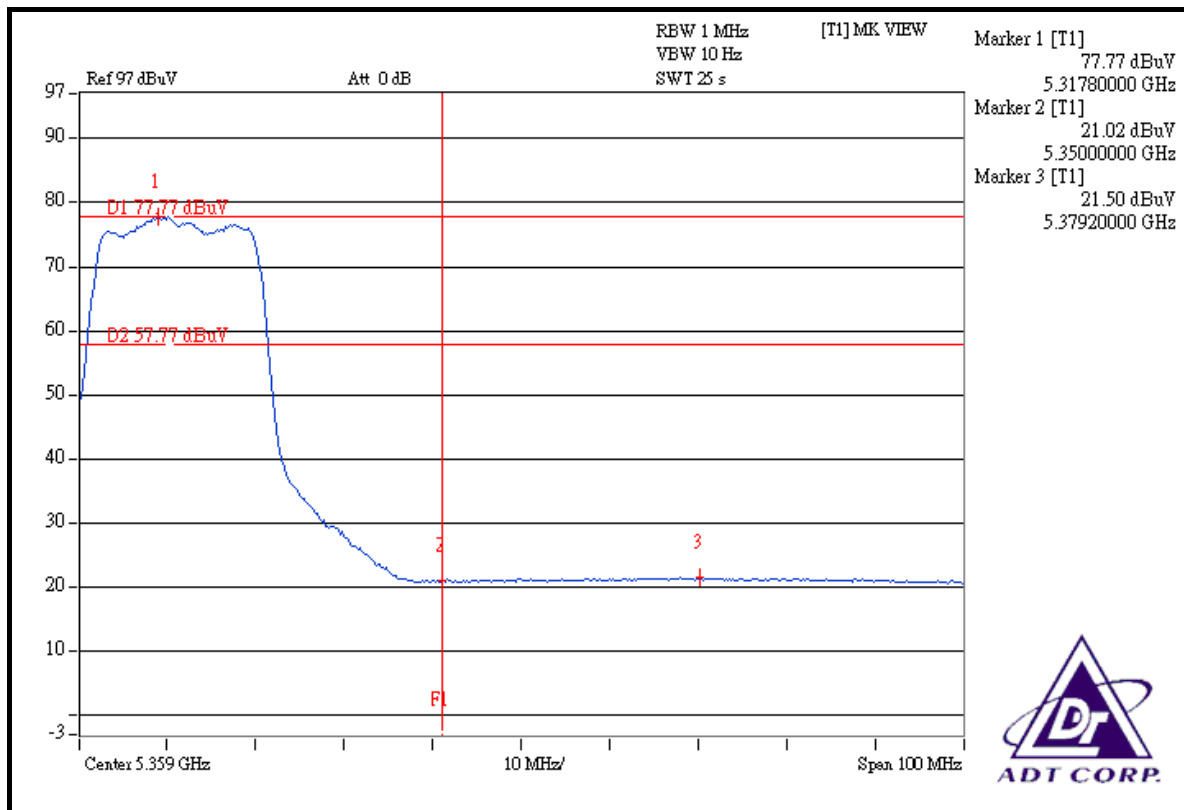
Channel 8 (5320MHz)

The band edge emission plot on the next second page shows 53.69dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 114.16dBuV/m (Peak), so the maximum field strength in restrict band is $114.16 - 53.69 = 60.47$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 56.27dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 is 104.47dBuV/m (Average), so the maximum field strength in restrict band is $104.47 - 56.27 = 48.20$ dBuV/m which is under 54dBuV/m limit.







DRAFT 802.11n (40MHz) OFDM MODULATION:

Channel 1 (5190MHz)

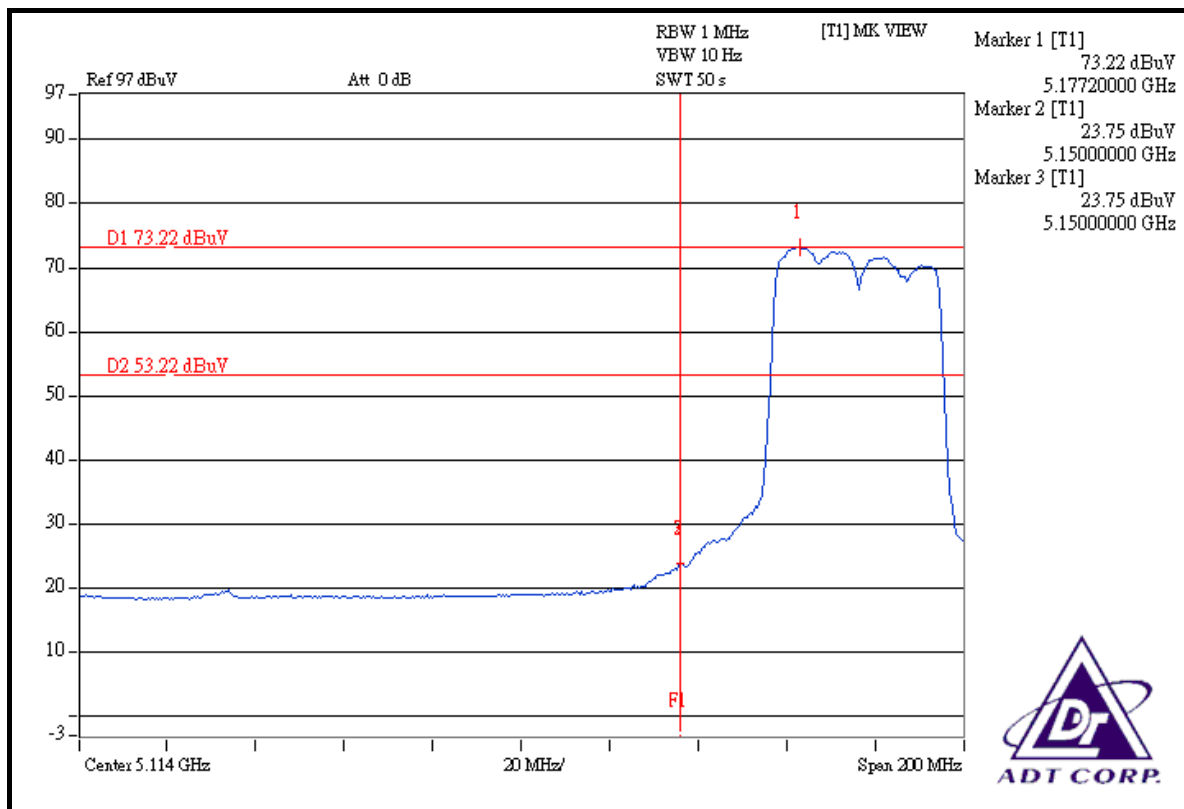
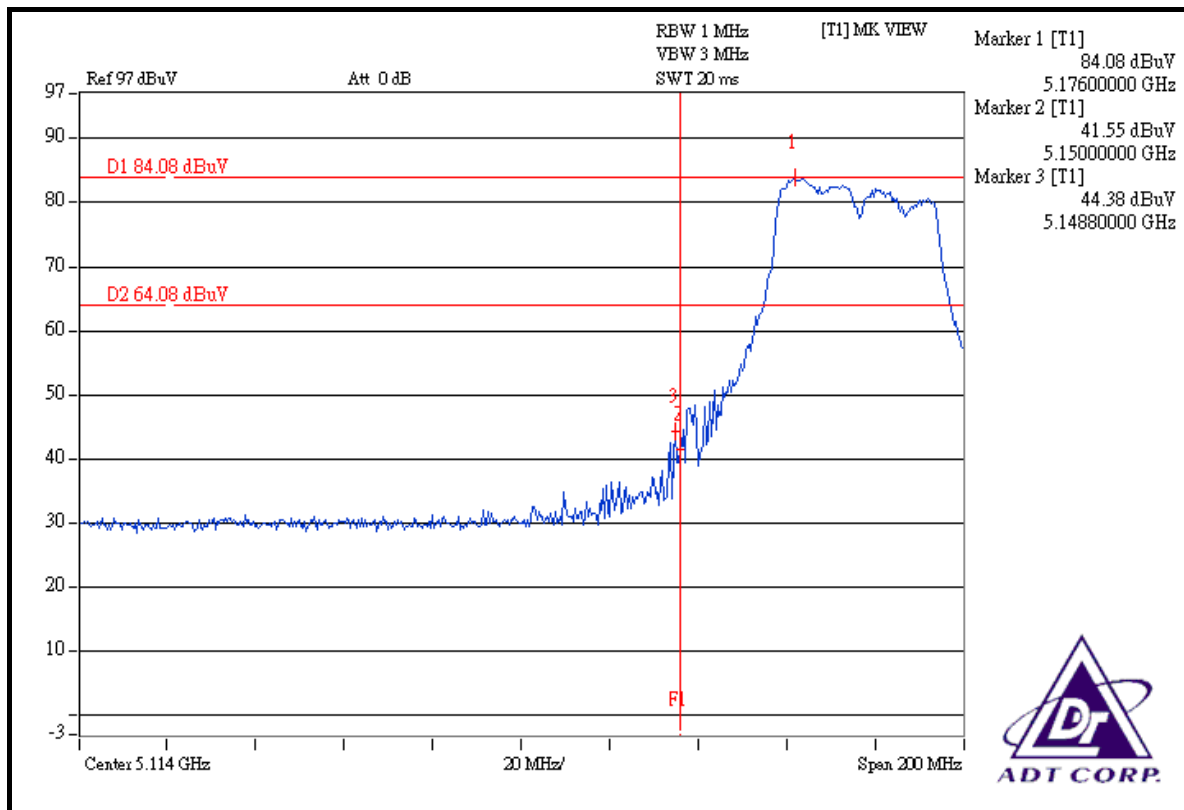
The band edge emission plot on the next page shows 39.70dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 111.01dBuV/m (Peak), so the maximum field strength in restrict band is $111.01 - 39.70 = 71.31$ dBuV/m which is under 74dBuV/m limit.

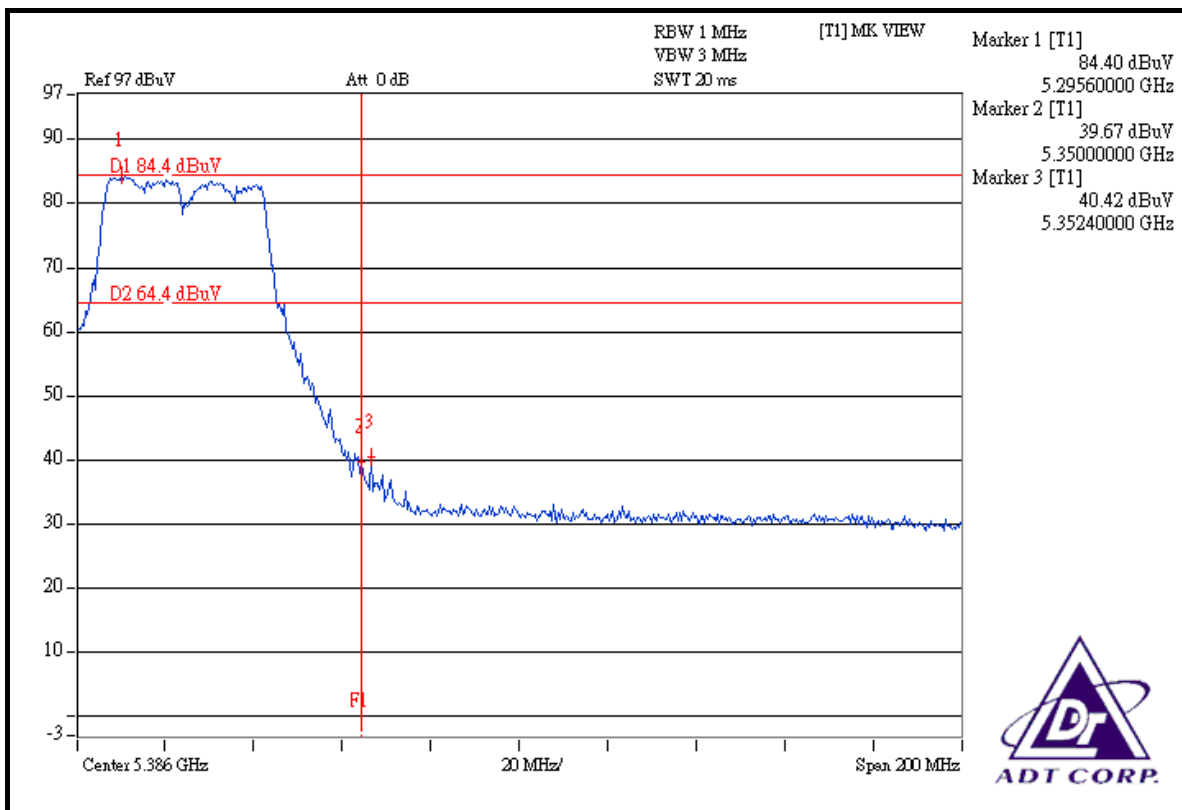
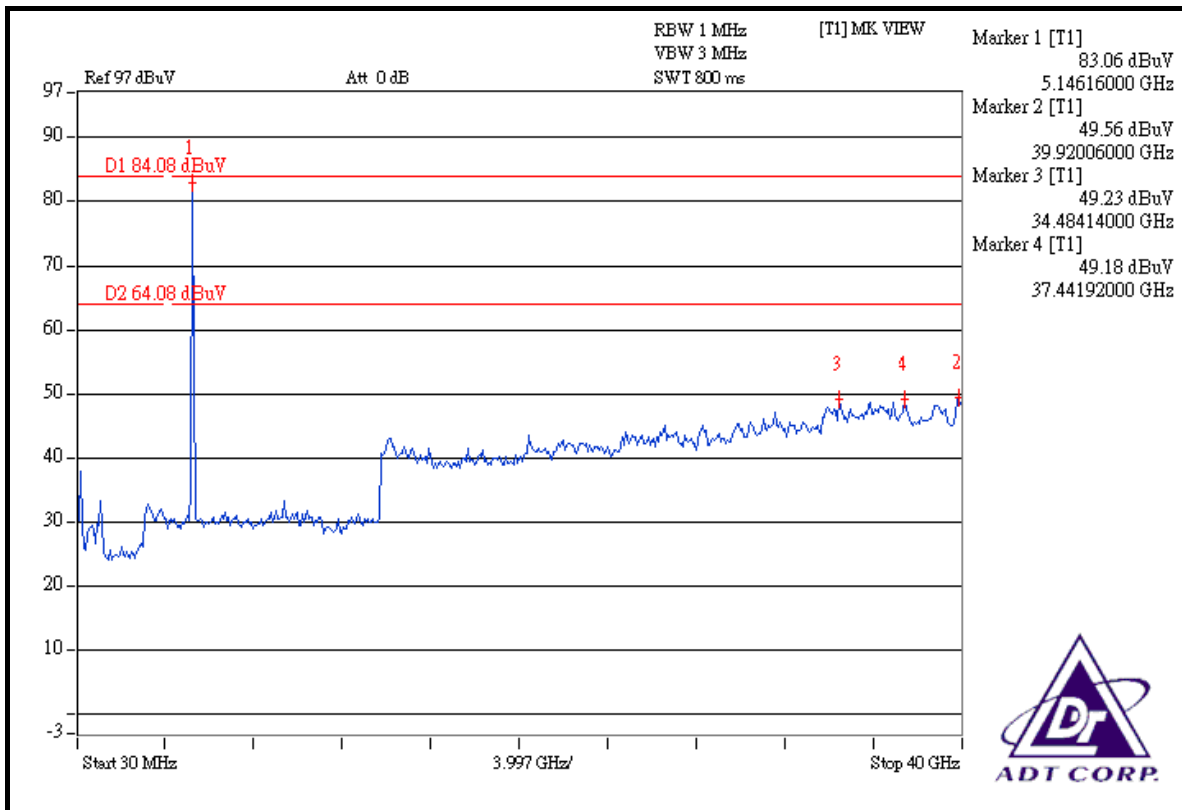
The band edge emission plot on the next page shows 49.47dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 99.86dBuV/m (Average), so the maximum field strength in restrict band is $99.86 - 49.47 = 50.39$ dBuV/m which is under 54dBuV/m limit.

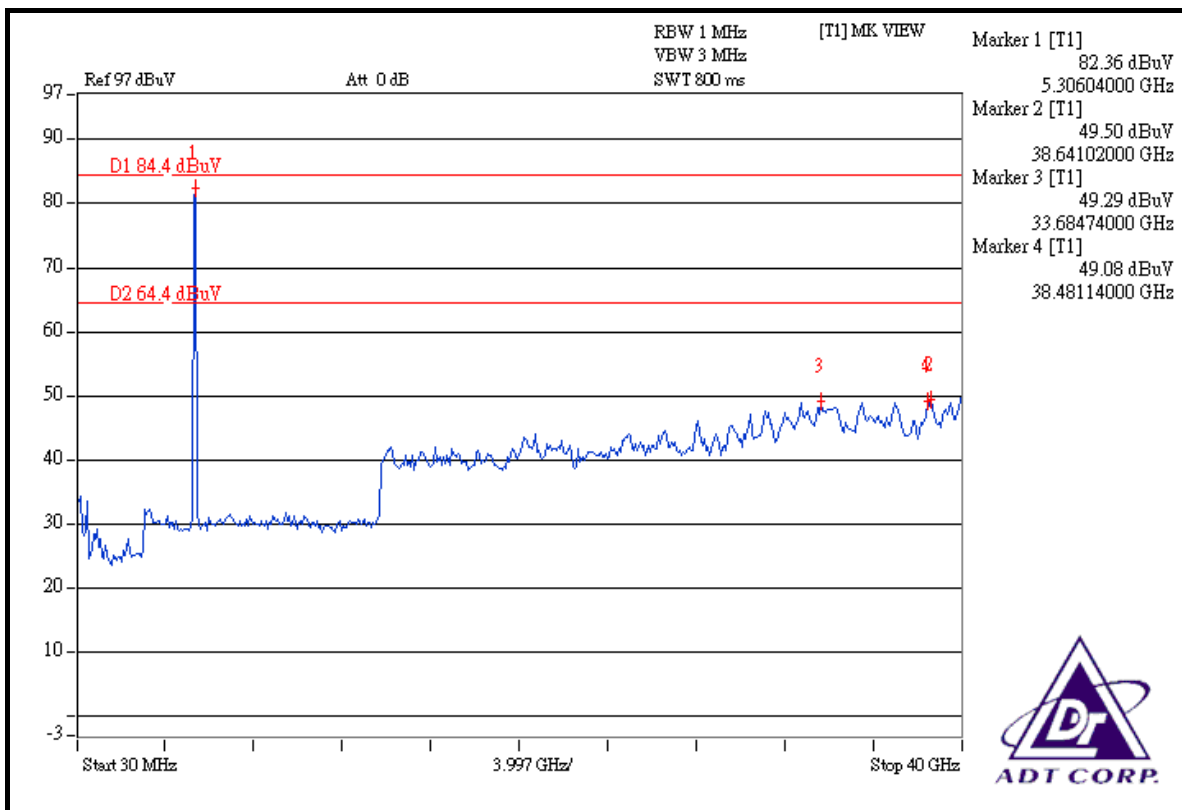
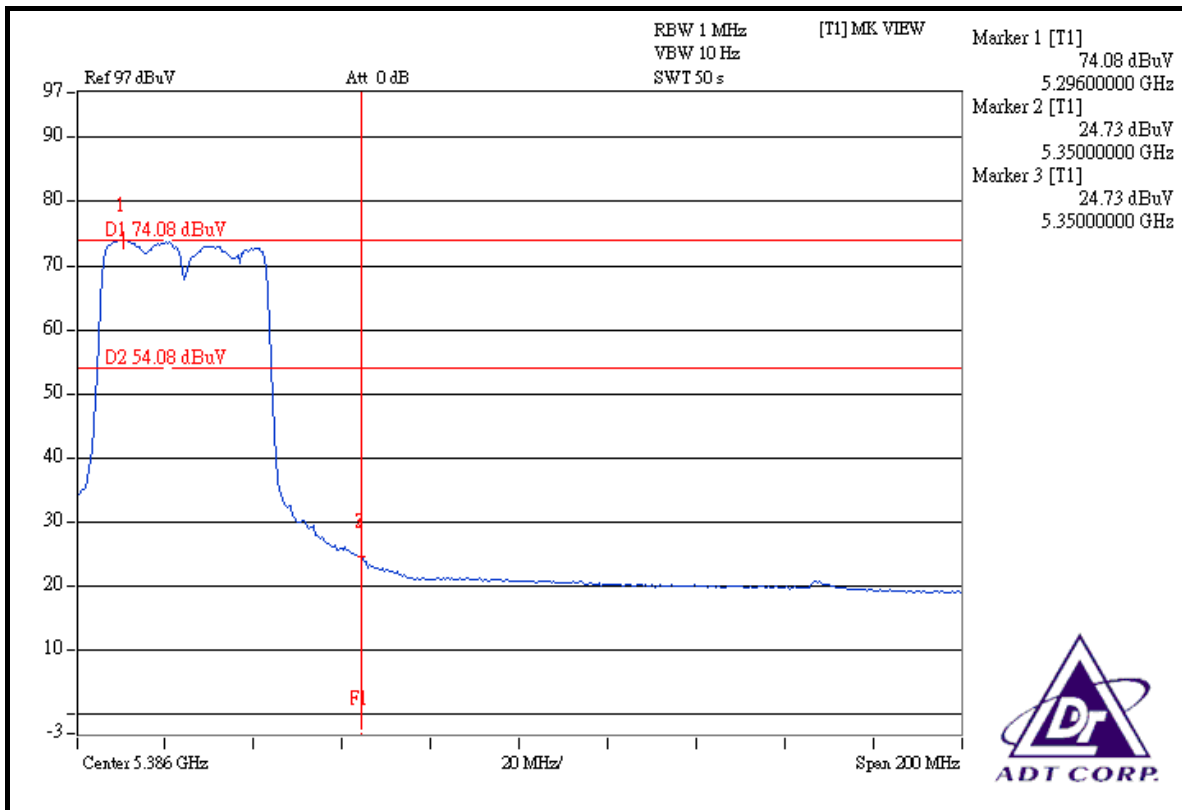
Channel 4 (5310MHz)

The band edge emission plot on the next second page shows 43.98dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 4 is 111.06dBuV/m (Peak), so the maximum field strength in restrict band is $111.06 - 43.98 = 67.08$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 49.35dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 4 is 100.84dBuV/m (Average), so the maximum field strength in restrict band is $100.84 - 49.35 = 51.49$ dBuV/m which is under 54dBuV/m limit.







FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

Channel 1 (5500MHz)

The band edge emission plot (5460MHz) on the next page shows 54.42dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 106.28dBuV/m (Peak), so the maximum field strength in restrict band is $106.28 - 54.42 = 51.86$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot (5460MHz) on the next page shows 56.18dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 96.69dBuV/m (Average), so the maximum field strength in restrict band is $96.69 - 56.18 = 40.51$ dBuV/m which is under 54dBuV/m limit.

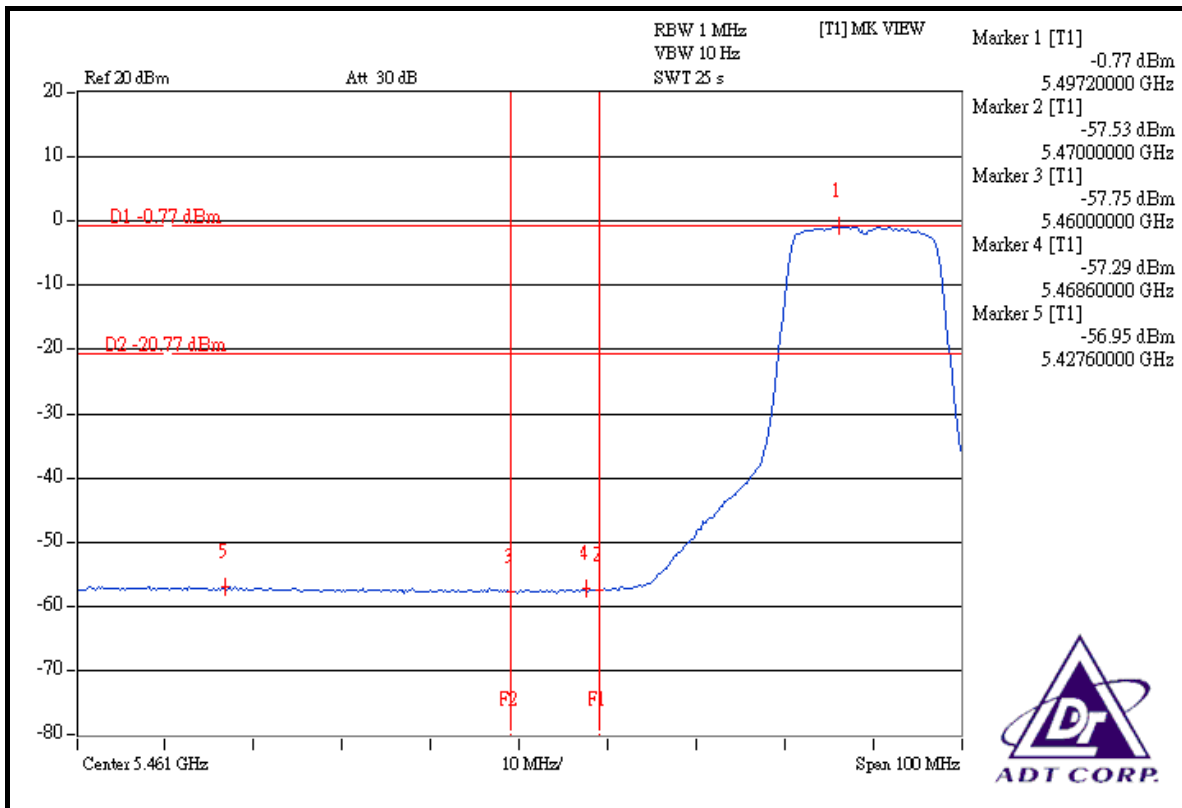
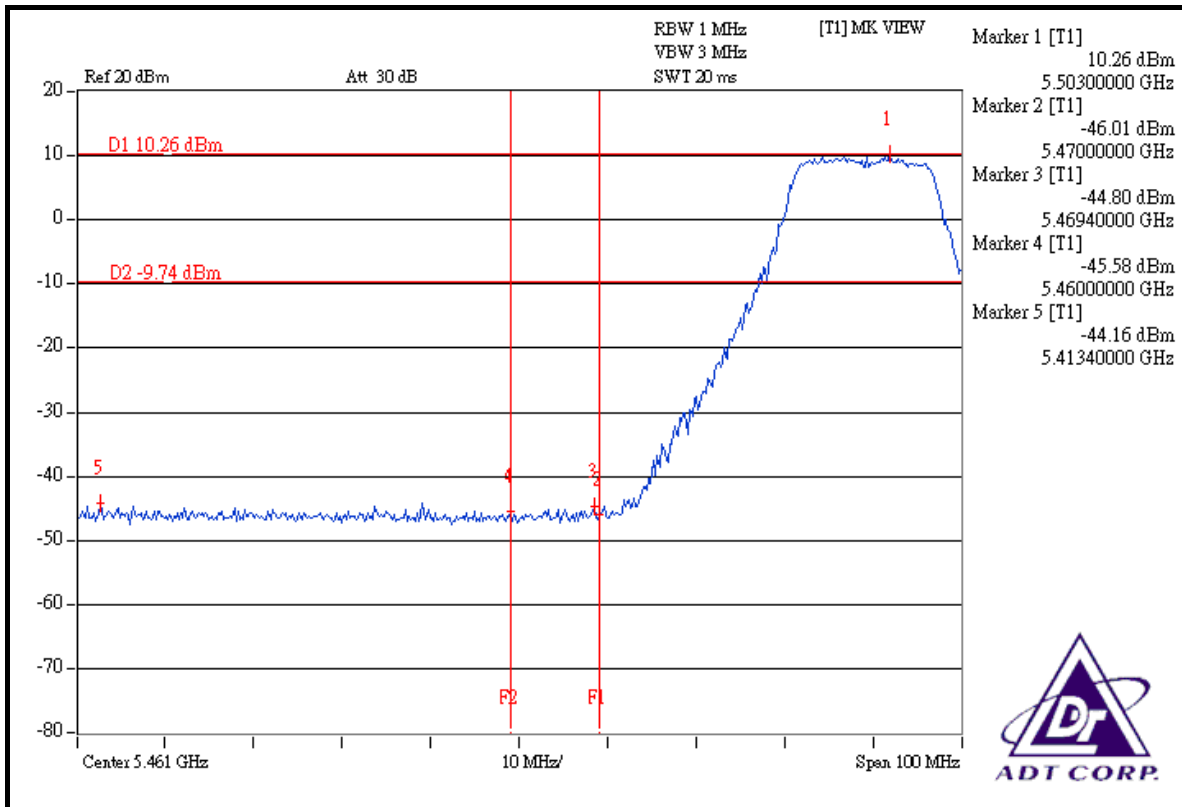
The band edge emission plot (5470MHz) on the next page shows 55.06dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 106.28dBuV/m (Peak), so the maximum field strength in restrict band is $106.28 - 55.06 = 51.22$ dBuV/m which is under 88.30dBuV/m limit.

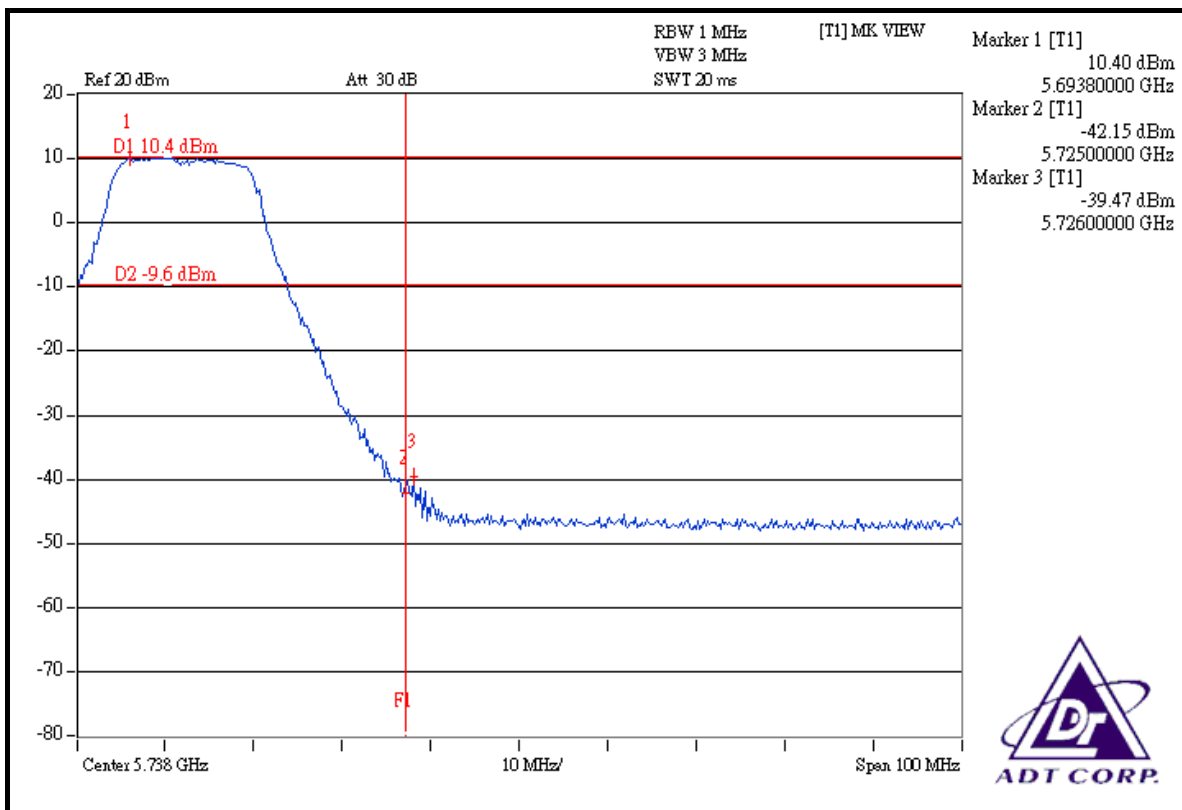
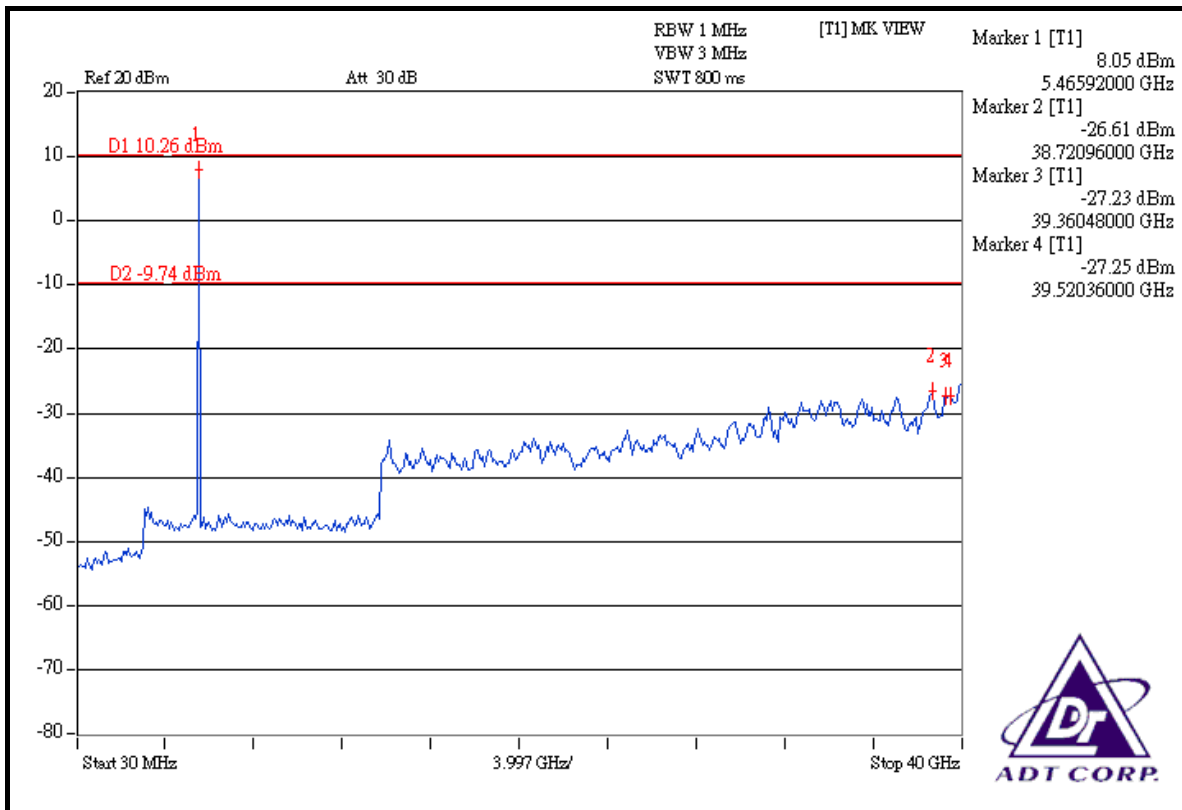
The band edge emission plot (5470MHz) on the next page shows 56.52dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 96.69dBuV/m (Average), so the maximum field strength in restrict band is $96.69 - 56.52 = 40.17$ dBuV/m which is under 68.30dBuV/m limit.

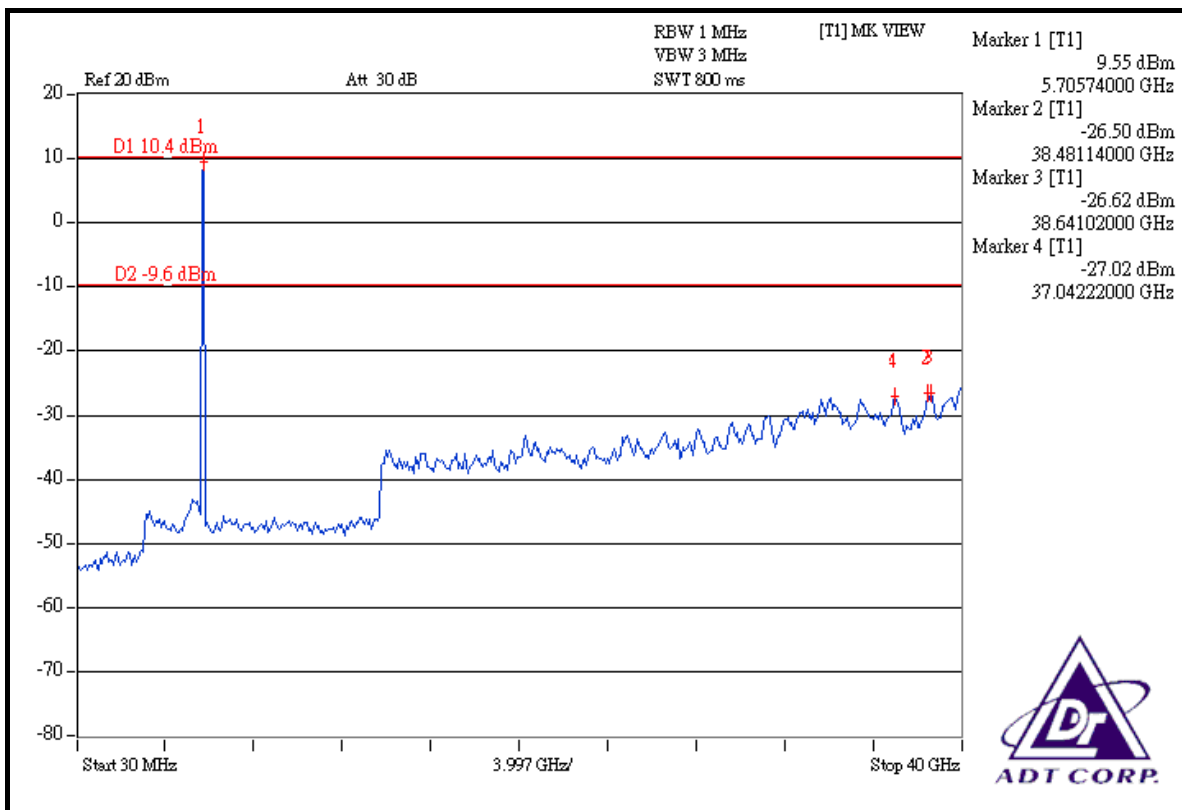
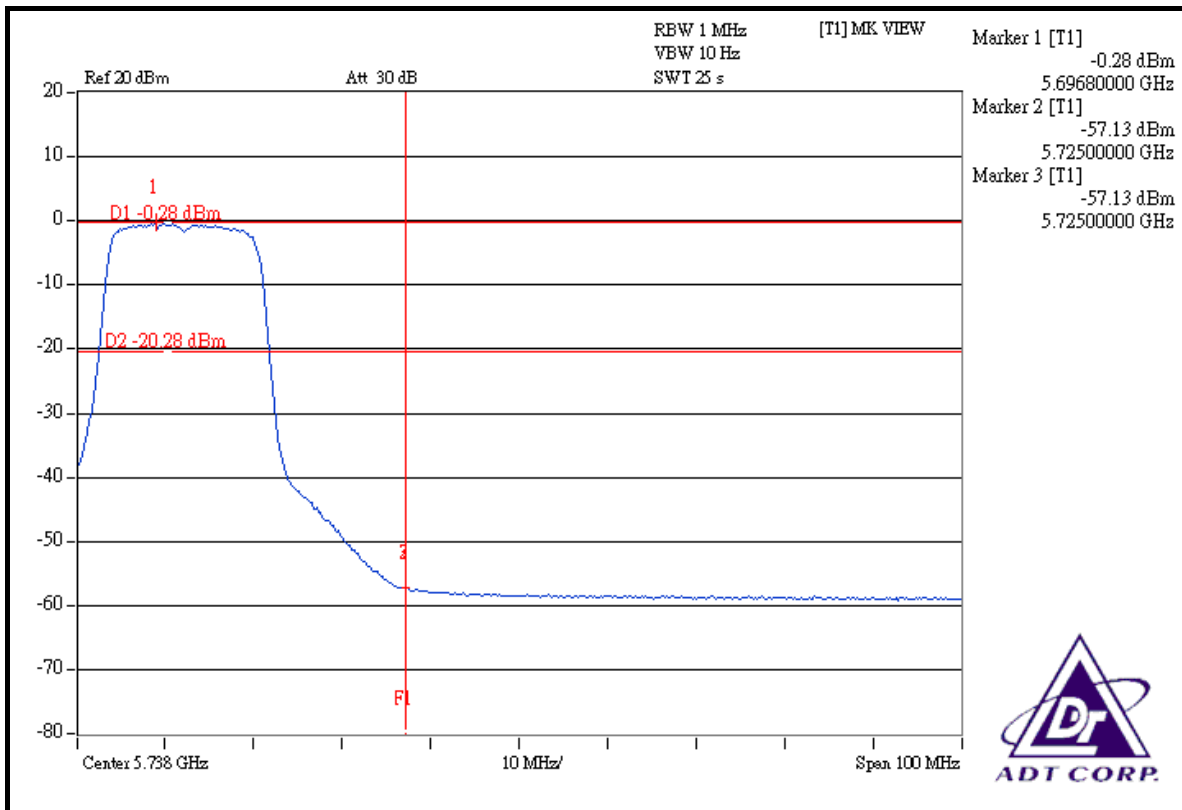
Channel 11 (5700MHz)

The band edge emission plot (5725MHz) on the next second page shows 49.87dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 11 is 106.57dBuV/m (Peak), so the maximum field strength in restrict band is $106.57 - 49.87 = 56.70$ dBuV/m which is under 88.3dBuV/m limit.

The band edge emission plot (5725MHz) on the next third page shows 56.85dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 11 is 96.51dBuV/m (Average), so the maximum field strength in restrict band is $96.51 - 56.85 = 39.66$ dBuV/m which is under 68.3dBuV/m limit.







DRAFT 802.11n (20MHz) OFDM MODULATION: **Channel 1 (5500MHz)**

The band edge emission plot (5460MHz) on the next page shows 54.59dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 114.53dBuV/m (Peak), so the maximum field strength in restrict band is $114.53 - 54.59 = 59.94$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot (5460MHz) on the next page shows 56.47dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 104.16dBuV/m (Average), so the maximum field strength in restrict band is $104.16 - 56.47 = 47.69$ dBuV/m which is under 54dBuV/m limit.

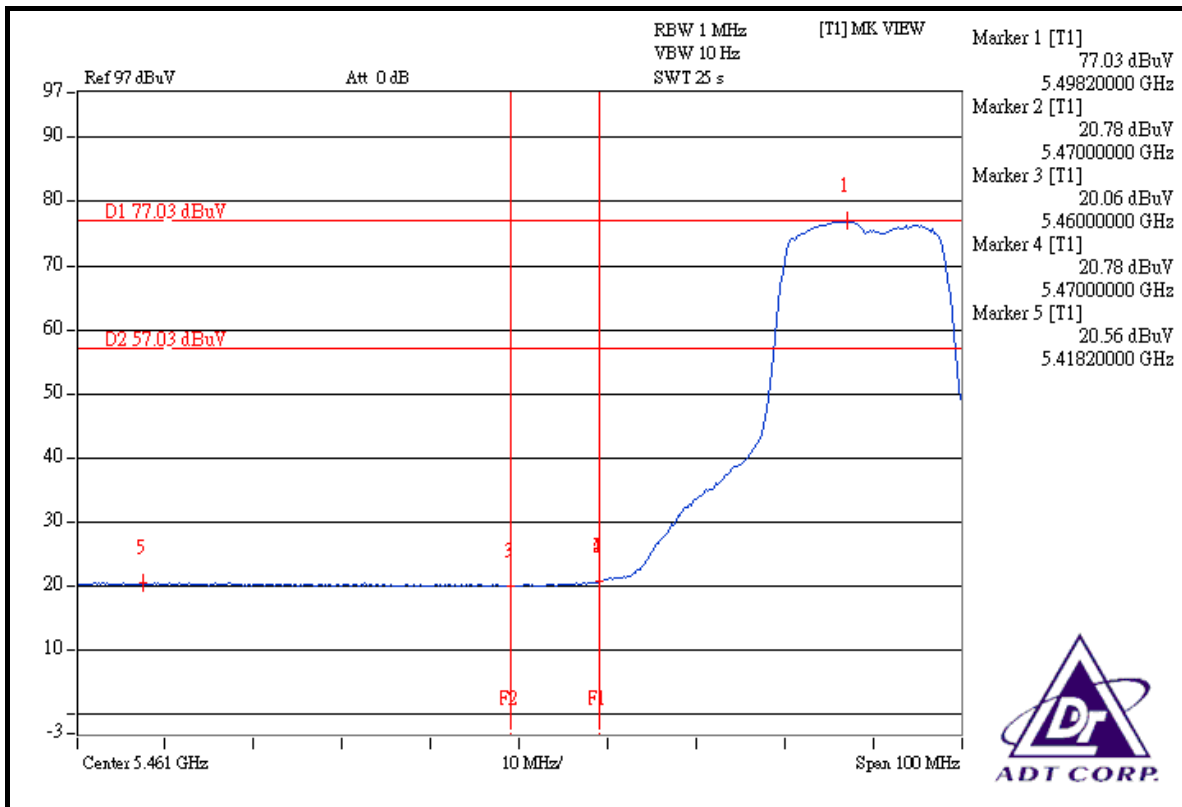
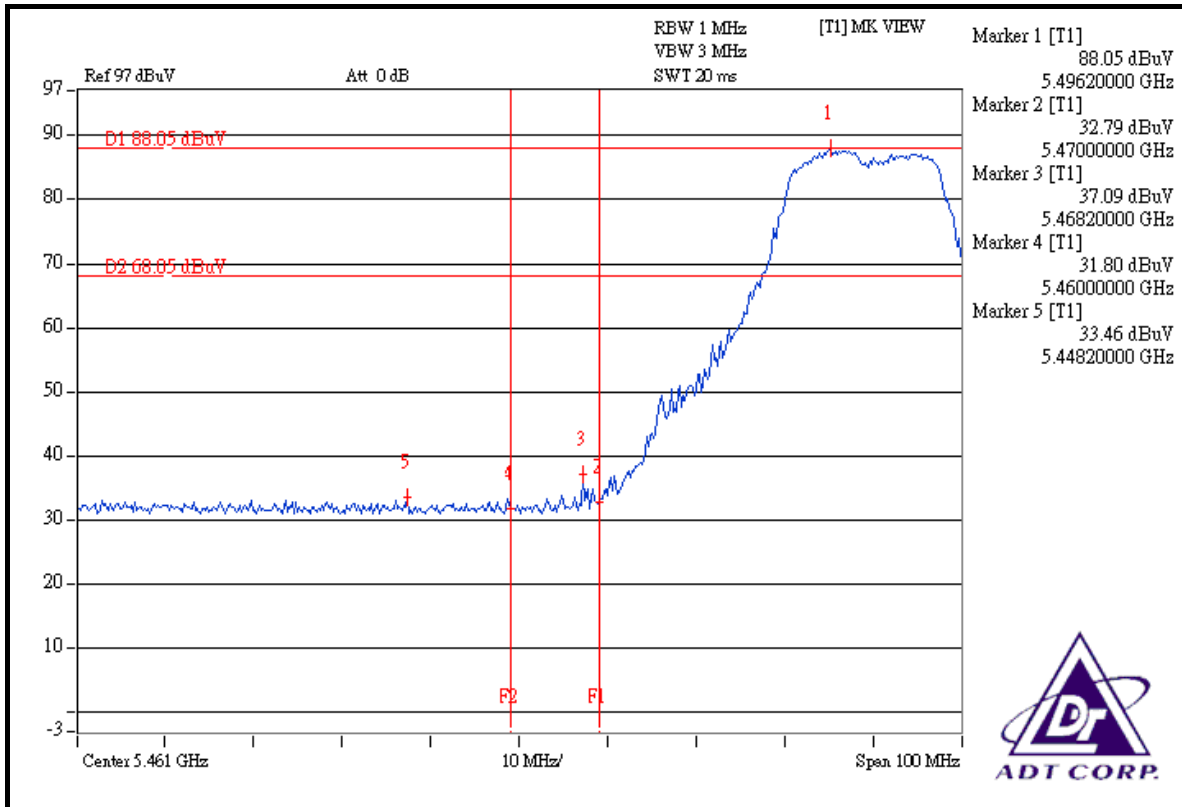
The band edge emission plot (5470MHz) on the next page shows 50.96dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 114.53dBuV/m (Peak), so the maximum field strength in restrict band is $114.53 - 50.96 = 63.57$ dBuV/m which is under 88.30dBuV/m limit.

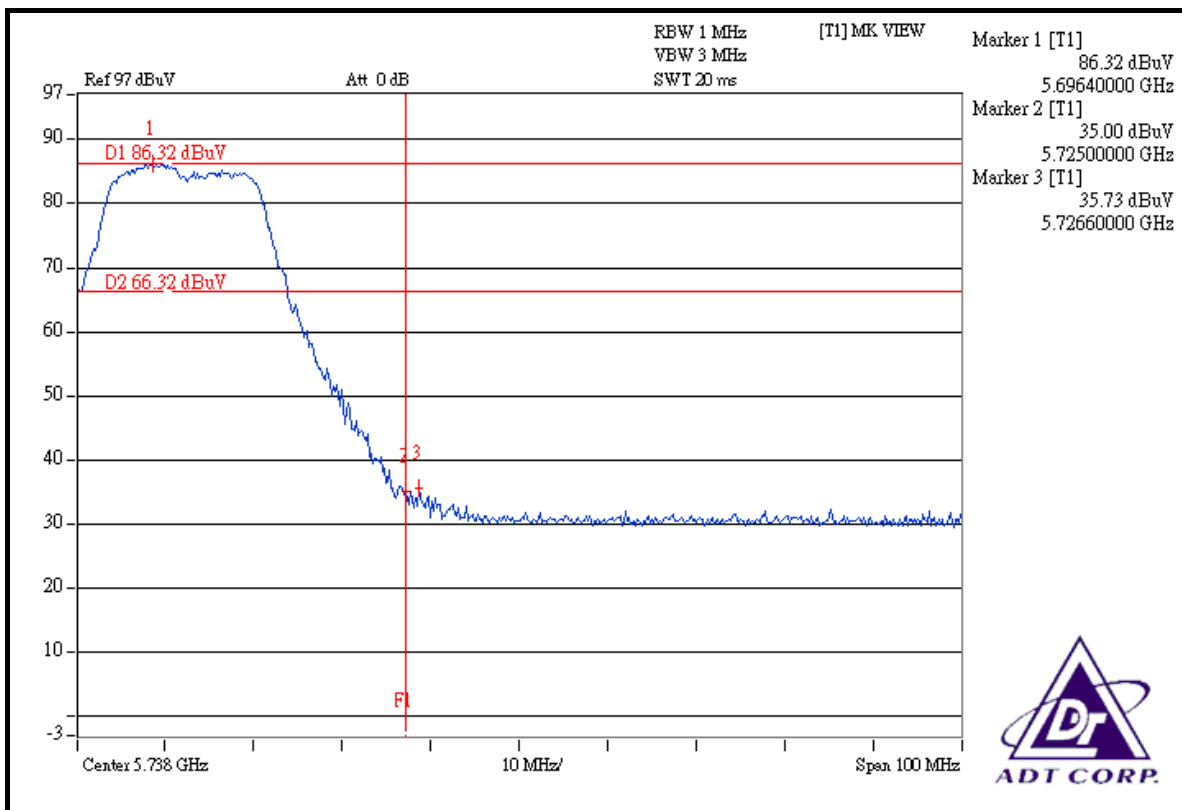
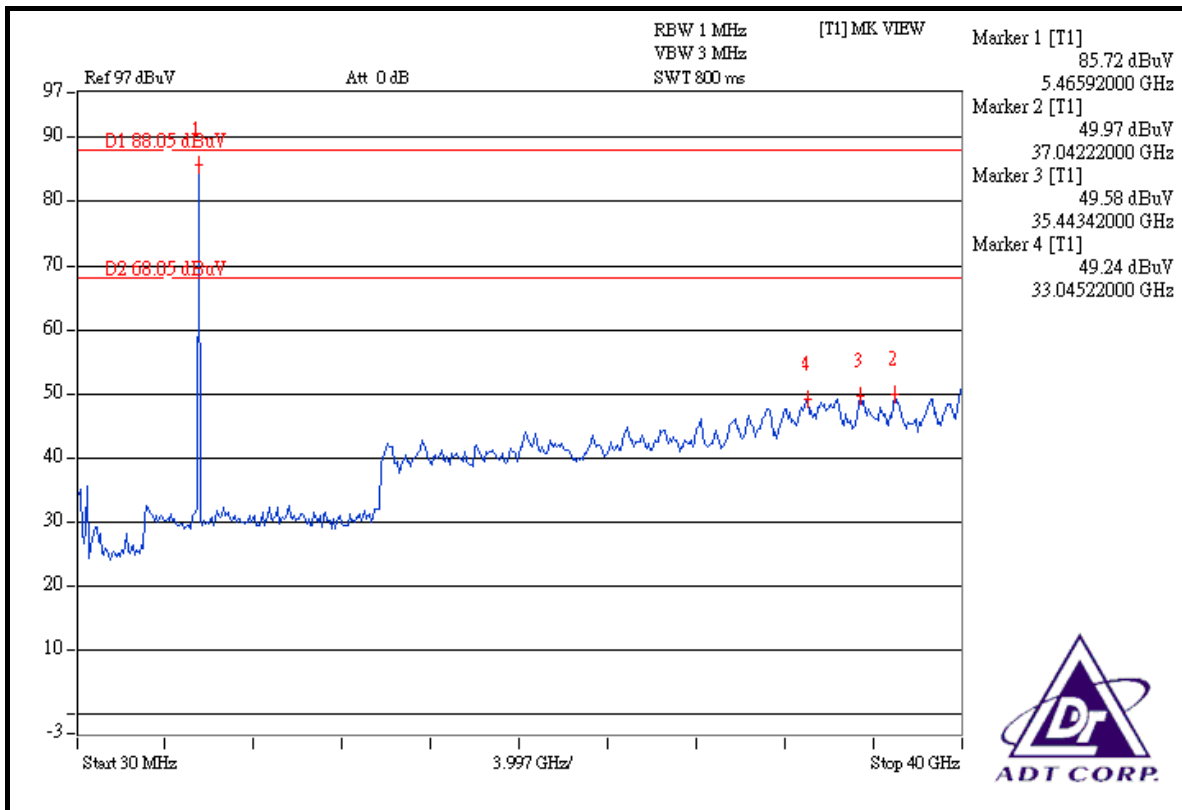
The band edge emission plot (5470MHz) on the next page shows 56.25dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 104.16dBuV/m (Average), so the maximum field strength in restrict band is $104.16 - 56.25 = 47.91$ dBuV/m which is under 68.30dBuV/m limit.

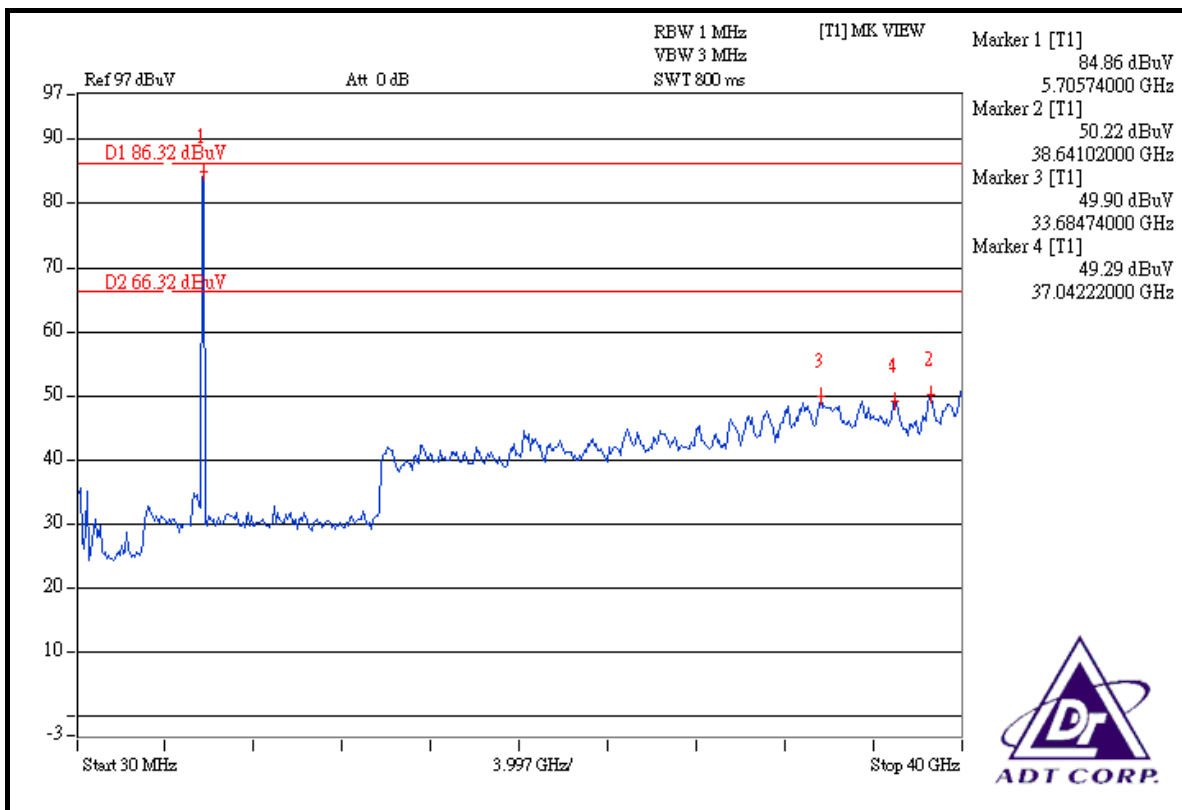
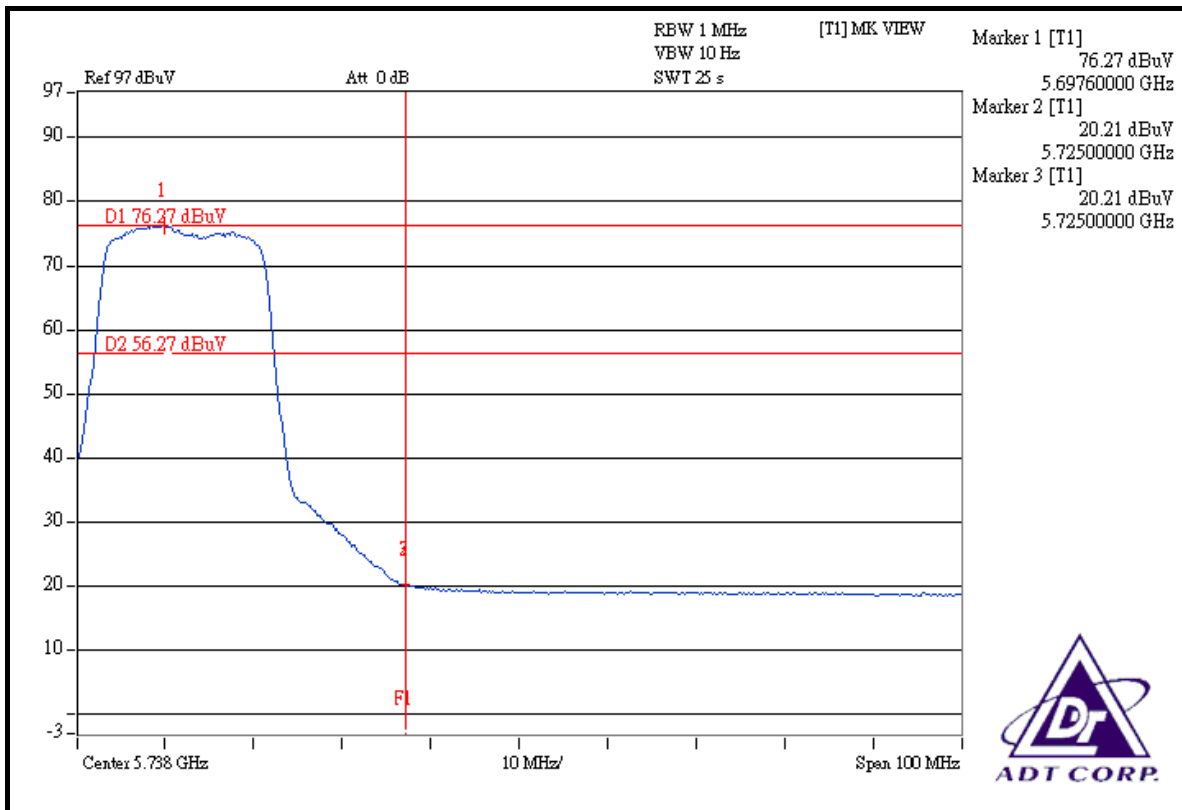
Channel 11 (5700MHz)

The band edge emission plot (5725MHz) on the next second page shows 50.59dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 11 is 113.68dBuV/m (Peak), so the maximum field strength in restrict band is $113.68 - 50.59 = 63.09$ dBuV/m which is under 88.3dBuV/m limit.

The band edge emission plot (5725MHz) on the next third page shows 56.06dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 11 is 103.76dBuV/m (Average), so the maximum field strength in restrict band is $103.76 - 56.06 = 47.70$ dBuV/m which is under 68.3dBuV/m limit.







DRAFT 802.11n (40MHz) OFDM MODULATION:

Channel 1 (5510MHz)

The band edge emission plot (5460MHz) on the next page shows 42.72dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 110.14dBuV/m (Peak), so the maximum field strength in restrict band is $110.14 - 42.72 = 67.42$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot (5460MHz) on the next page shows 48.25dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 99.85dBuV/m (Average), so the maximum field strength in restrict band is $99.85 - 48.25 = 51.60$ dBuV/m which is under 54dBuV/m limit.

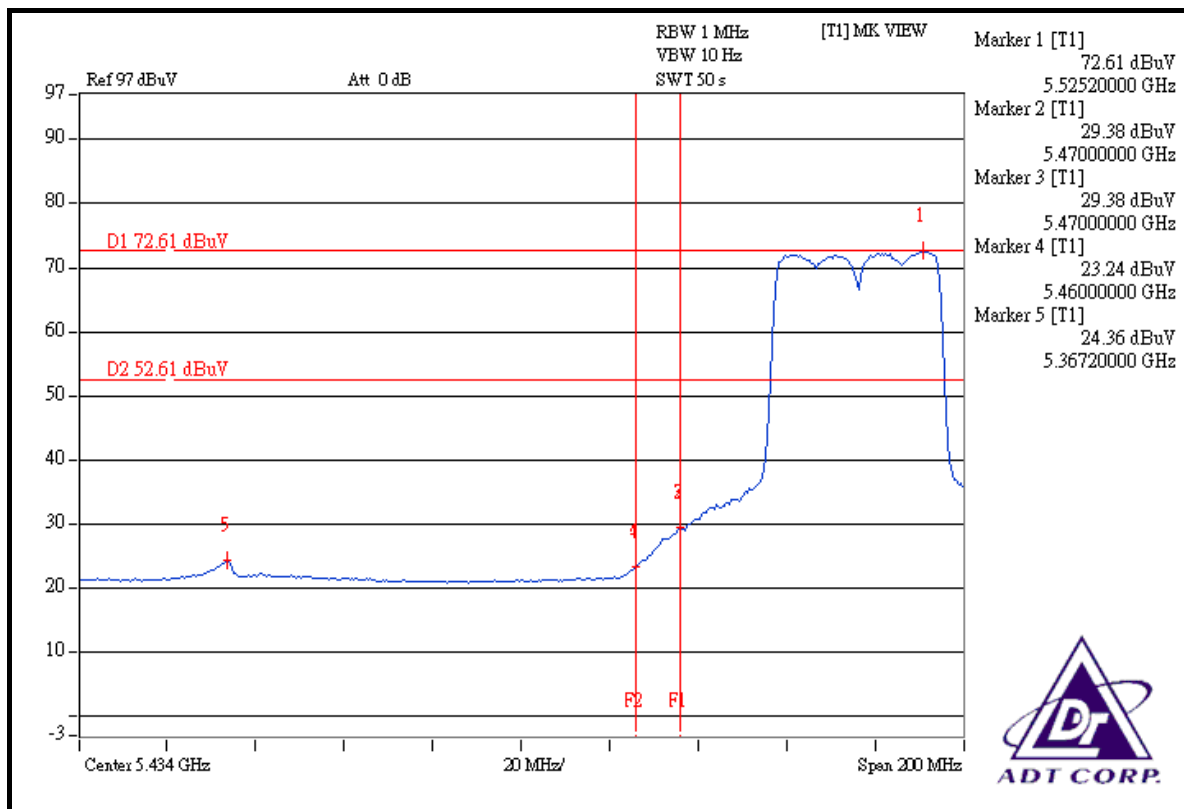
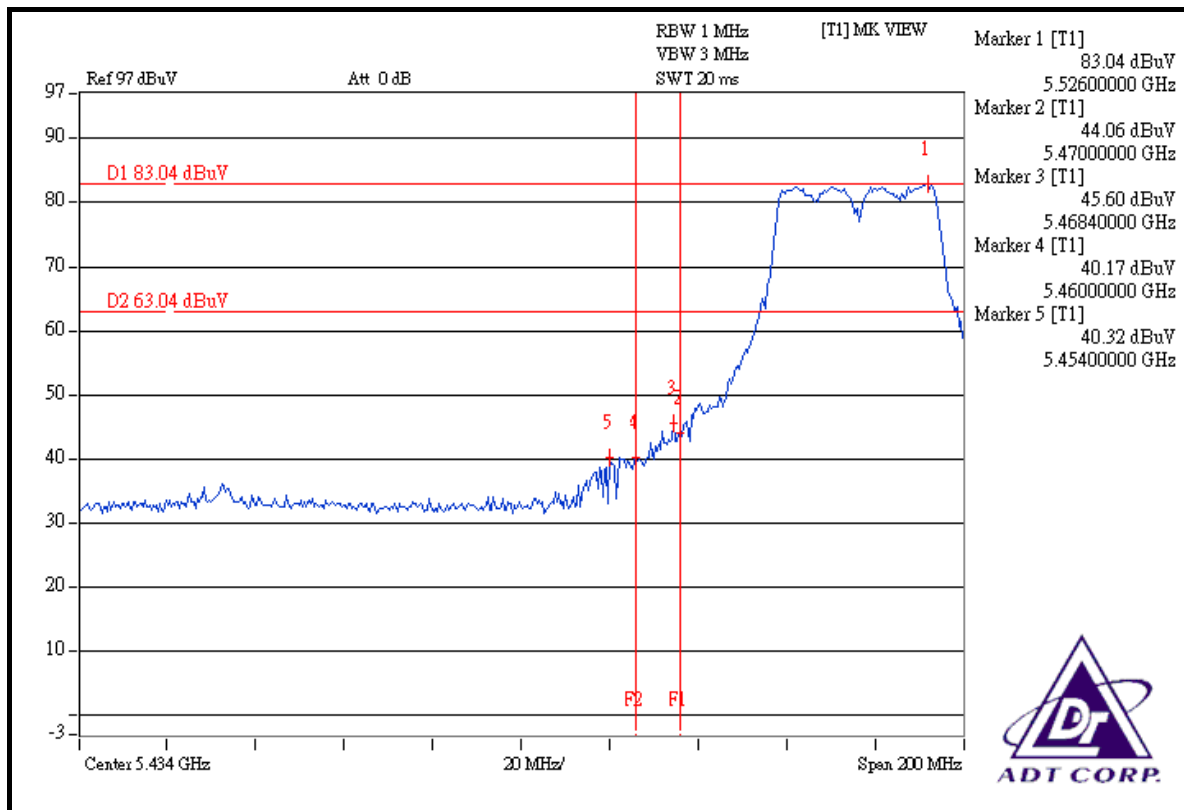
The band edge emission plot (5470MHz) on the next page shows 37.44dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 110.14dBuV/m (Peak), so the maximum field strength in restrict band is $110.14 - 37.44 = 72.70$ dBuV/m which is under 88.3dBuV/m limit.

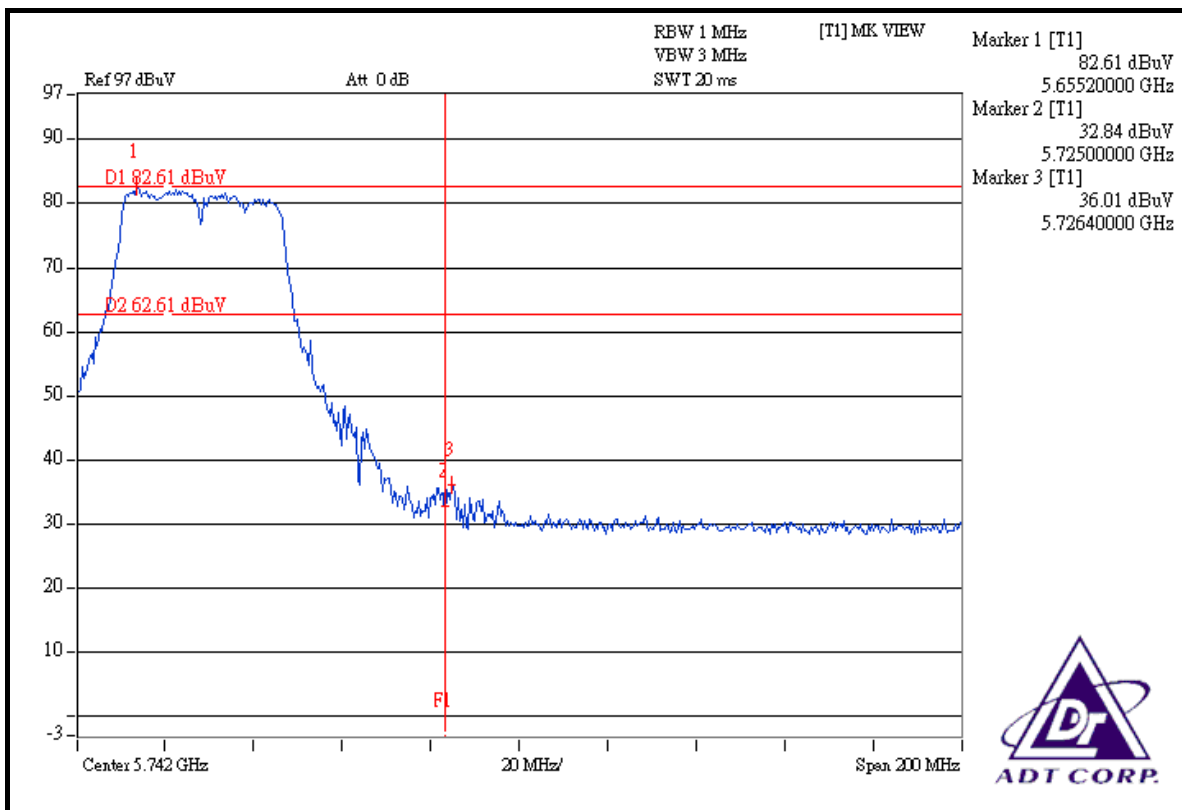
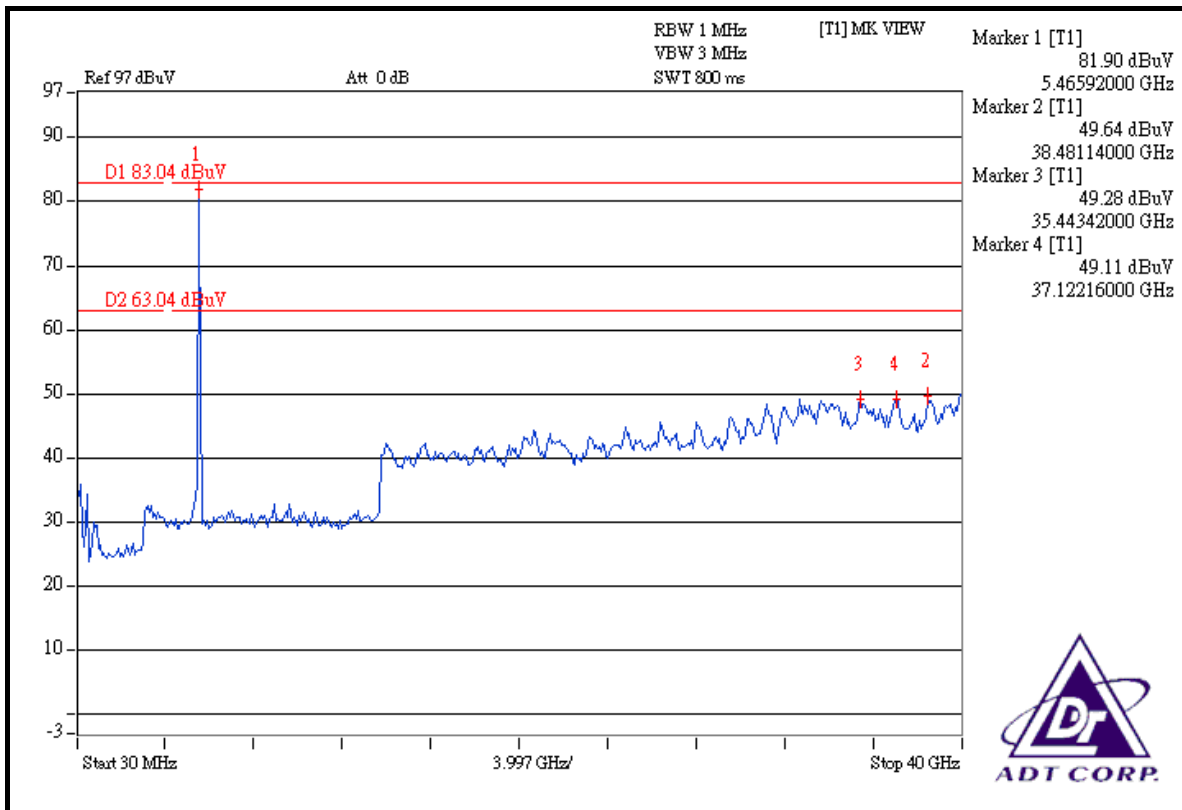
The band edge emission plot (5470MHz) on the next page shows 43.23dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 99.85dBuV/m (Average), so the maximum field strength in restrict band is $99.85 - 43.23 = 56.62$ dBuV/m which is under 68.30dBuV/m limit.

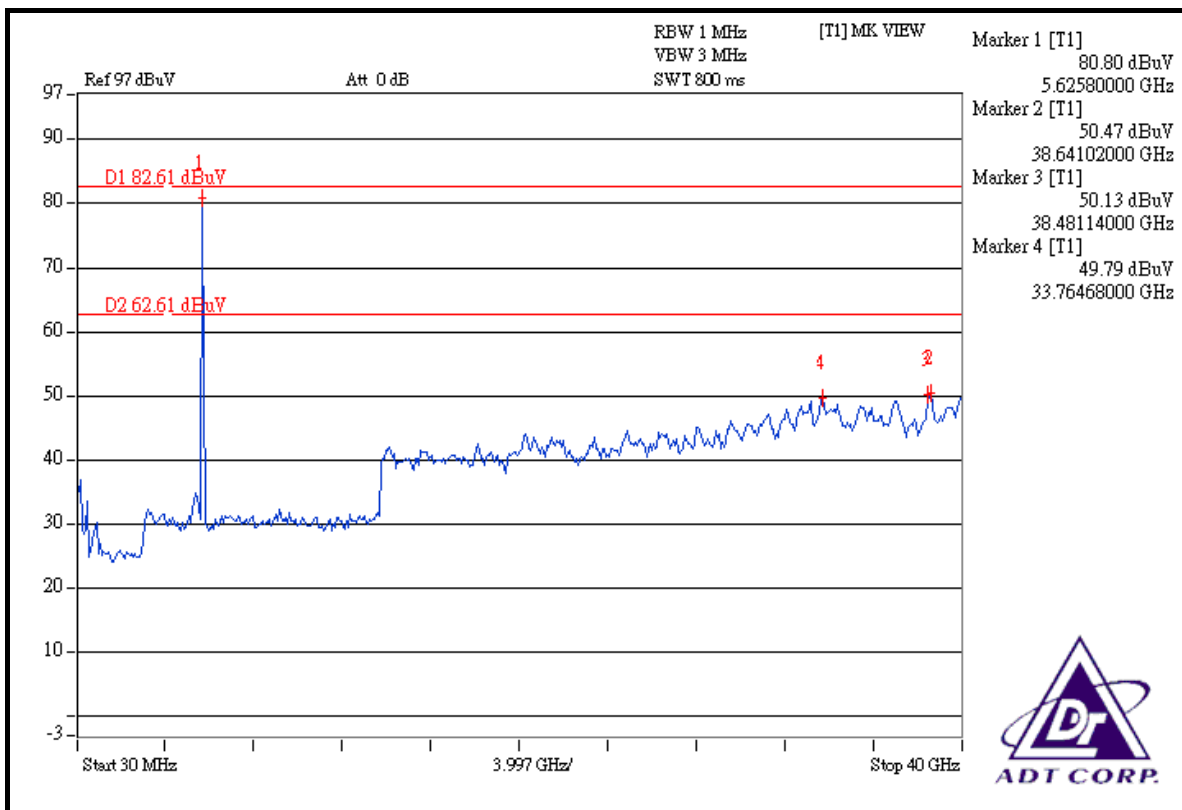
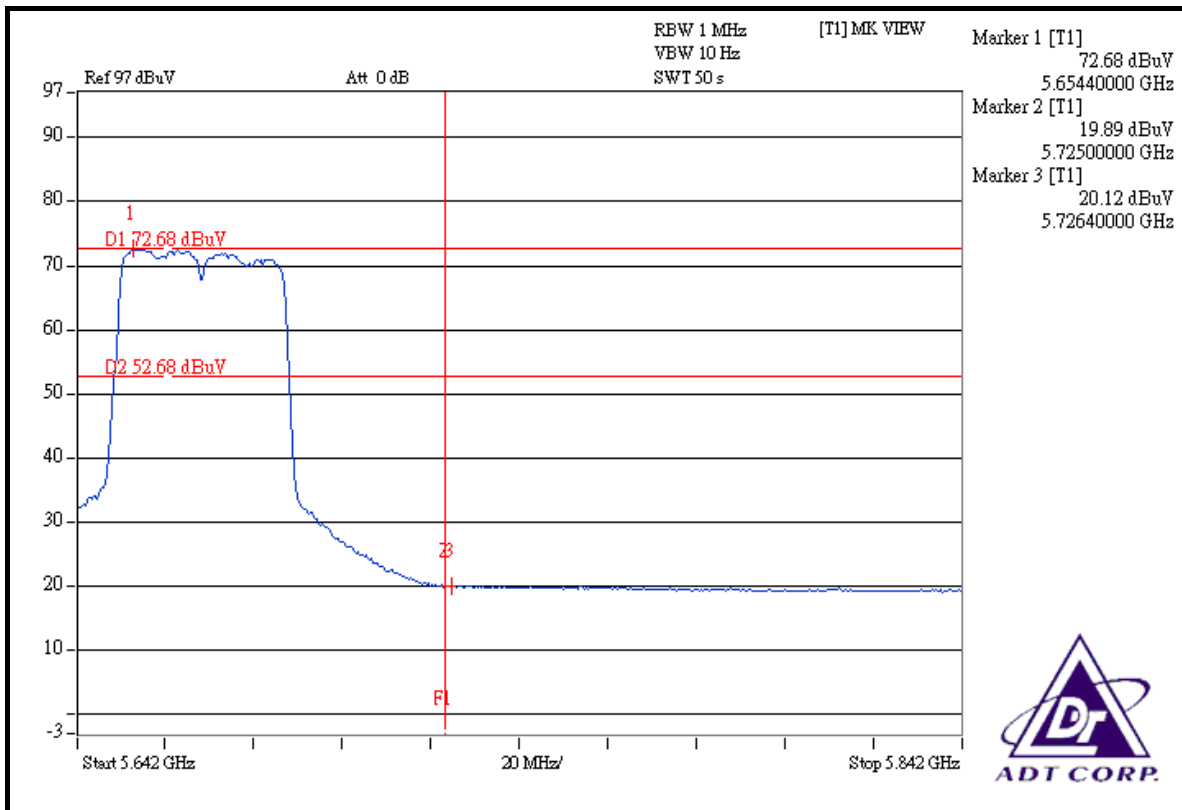
Channel 5 (5670MHz)

The band edge emission plot (5725MHz) on the next second page shows 46.60dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 5 is 109.72dBuV/m (Peak), so the maximum field strength in restrict band is $109.72 - 46.60 = 63.12$ dBuV/m which is under 88.3dBuV/m limit.

The band edge emission plot (5725MHz) on the next third page shows 52.56dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 5 is 99.94dBuV/m (Average), so the maximum field strength in restrict band is $99.94 - 52.56 = 47.38$ dBuV/m which is under 68.3dBuV/m limit.







4.8 ANTENNA REQUIREMENT

4.8.1 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 15.407(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.

4.8.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is PIFA antenna without connector. The maximum Gain of the antenna is 1.0dBi.



5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



6. INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., 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, UL, A2LA
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.

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

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