FCC TEST REPORT (15.407)

REPORT NO.: RF970131L13

MODEL NO.: WNDA3100

RECEIVED: Jan. 31, 2008

TESTED: Feb. 16 ~ Feb. 21, 2008

ISSUED: Mar. 04, 2008

APPLICANT: NETGEAR, INC.

ADDRESS: 4500 GREAT AMERICA PARKWAY SANTA CLARA CA95054 U.S.A.

ISSUED BY: Advance Data Technology Corporation

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd., Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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1. CERTIFICATION

PRODUCT: RangeMax Dual Band Wireless-N USB Adapter
MODEL: WNDA3100
BRAND: NETGEAR
APPLICANT: NETGEAR, INC.
TEST SAMPLE: ENGINEERING SAMPLE
TESTED: Feb. 16 ~ Feb. 21, 2008
STANDARDS: **FCC Part 15, Subpart E (Section 15.407)**
ANSI C63.4-2003

The above equipment (Model: WNDA3100) 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 : Ivy Lin , **DATE:** Mar. 04, 2008
Ivy Lin / Specialist

TECHNICAL ACCEPTANCE : Long Chen , **DATE:** Mar. 04, 2008
Responsible for RF
Long Chen / Senior Engineer

APPROVED BY : Gary Chang , **DATE:** Mar. 04, 2008
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 -16.89dB at 0.170MHz.
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 -1.48dB at 848.45MHz.
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	RangeMax Dual Band Wireless-N USB Adapter
MODEL NO.	WNDA3100
FCC ID	PY307300073
POWER SUPPLY	5Vdc from host equipment
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	2.4GHz: 2400 ~ 2483.5MHz 5.0GHz: 5150~5250/ 5250~5350/ 5470~5725/ 5725~5850 MHz
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) 5475 ~ 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	49.774mW for 5250 ~ 5350MHz 49.317mW for 5470 ~ 5725MHz
ANTENNA TYPE	Refer to Note 1
DATA CABLE	1.6m shielded USB cable
I/O PORTS	USB
ASSOCIATED DEVICES	NA

NOTE:

1. There are two antennas provided to this EUT, please refer to the following table:

No.	Antenna Type	For 2.4GHz Gain (dBi)	For 5GHz Gain (dBi)
1	Printed Antenna	2.83	4.25
2	Printed Antenna	3.73	4.99

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

	1TX	2TX
802.11b	√	-
802.11g	√	-
802.11a	√	-
Draft 802.11n (20MHz)	-	√
Draft 802.11n (40MHz)	-	√

3. This report is for class II permissive change which adds 5250 ~ 5350MHz and 5470 ~ 5725MHz and these additional bands are added by software.
4. 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):

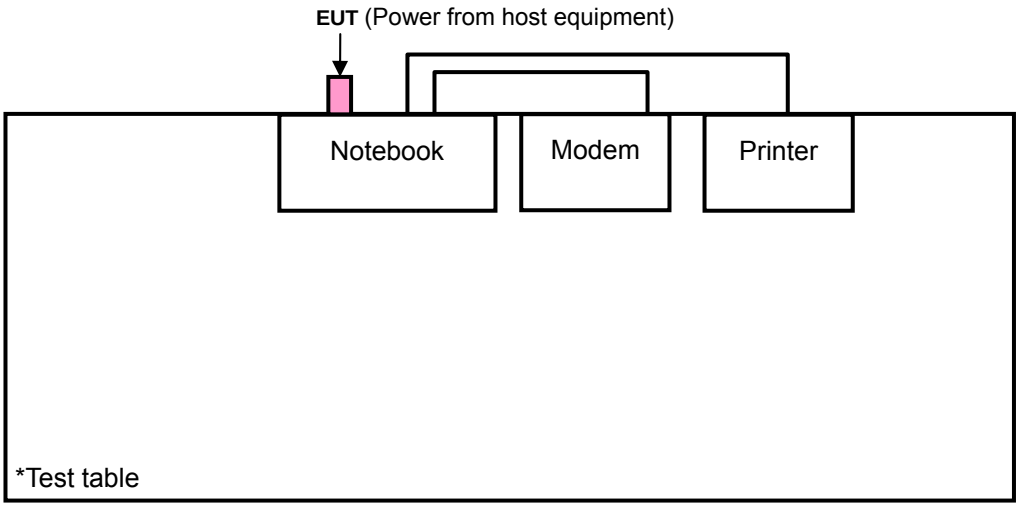
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5500 MHz	7	5620 MHz
2	5520 MHz	8	5640 MHz
3	5540 MHz	9	5660 MHz
4	5560 MHz	10	5680 MHz
5	5580 MHz	11	5700 MHz
6	5600 MHz		

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

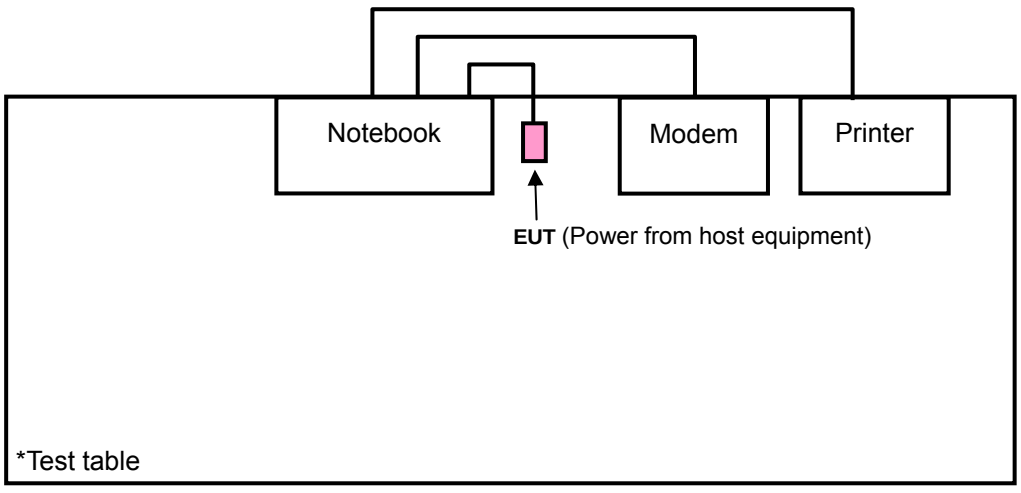
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	5510 MHz	4	5630 MHz
2	5550 MHz	5	5670 MHz
3	5690 MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

<Test mode A>



<Test mode B>



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE<1G	RE≥1G	APCM	
A	√	√	√	√	Without USB cable
B	-	√	-	-	With USB cable

Where **PLC:** Power Line Conducted Emission **RE<1G:** Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement

"-" **:** Not effective.

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.

EUT CONFIGURE MODE	MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	(5.25~5.35GHz)	5 to 8	5, 7, 8	OFDM	BPSK	6
	Draft 802.11n (20MHz)		5 to 8	5, 7, 8	OFDM	BPSK	7.2
	Draft 802.11n (40MHz)		3 to 4	3, 4	OFDM	BPSK	15
	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	7.2
	Draft 802.11n (40MHz)		1 to 5	1, 3, 5	OFDM	BPSK	15

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.

EUT CONFIGURE MODE	MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	(5.25~5.35GHz)	5 to 8	8	OFDM	BPSK	6
B	802.11a	(5.25~5.35GHz)	5 to 8	8	OFDM	BPSK	6

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
B	802.11a	(5.25~5.35GHz)	5 to 8	8	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.

EUT CONFIGURE MODE	MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	(5.25~5.35GHz)	5 to 8	5, 7, 8	OFDM	BPSK	6
	Draft 802.11n (20MHz)		5 to 8	5, 7, 8	OFDM	BPSK	7.2
	Draft 802.11n (40MHz)		3 to 4	3, 4	OFDM	BPSK	15
	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	7.2
	Draft 802.11n (40MHz)		1 to 5	1, 3, 5	OFDM	BPSK	15

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	(5.25~5.35GHz)	5 to 8	5, 8	OFDM	BPSK	6
	Draft 802.11n (20MHz)		5 to 8	5, 8	OFDM	BPSK	7.2
	Draft 802.11n (40MHz)		3 to 4	3, 4	OFDM	BPSK	15
	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	7.2
	Draft 802.11n (40MHz)		1 to 5	1, 5	OFDM	BPSK	15

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	DELL	PP05L	9954115984	E2K24CLNS
2	PRINTER	EPSON	LQ-300+	DCGY047265	FCC DoC Approved
3	MODEM	ACEEX	1414V/3	0401008269	IFAXDM1414

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8m braid shielded wire , DB25 connector , w/o core.
3	1.2m braid shielded wire , DB25 & DB9 connector , w/o core.

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

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:

$$E = \frac{1000000\sqrt{30P}}{3}$$ μV/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	100269	Aug. 05, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-153	Jan. 03, 2009
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Jul. 30, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 06, 2009
Preamplifier Agilent	8449B	3008A01910	Sep. 19, 2008
Preamplifier Agilent	8447D	2944A10638	Dec. 19, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274039/223650	Nov. 07, 2008
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 09, 2008
Software	ADT_Radiated_V7.6	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA
Turn Table EMCO	2087-2.03	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	07026401	Apr. 23, 2008

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 9.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The IC Site Registration No. is IC3789B-9.

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 camber. 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.

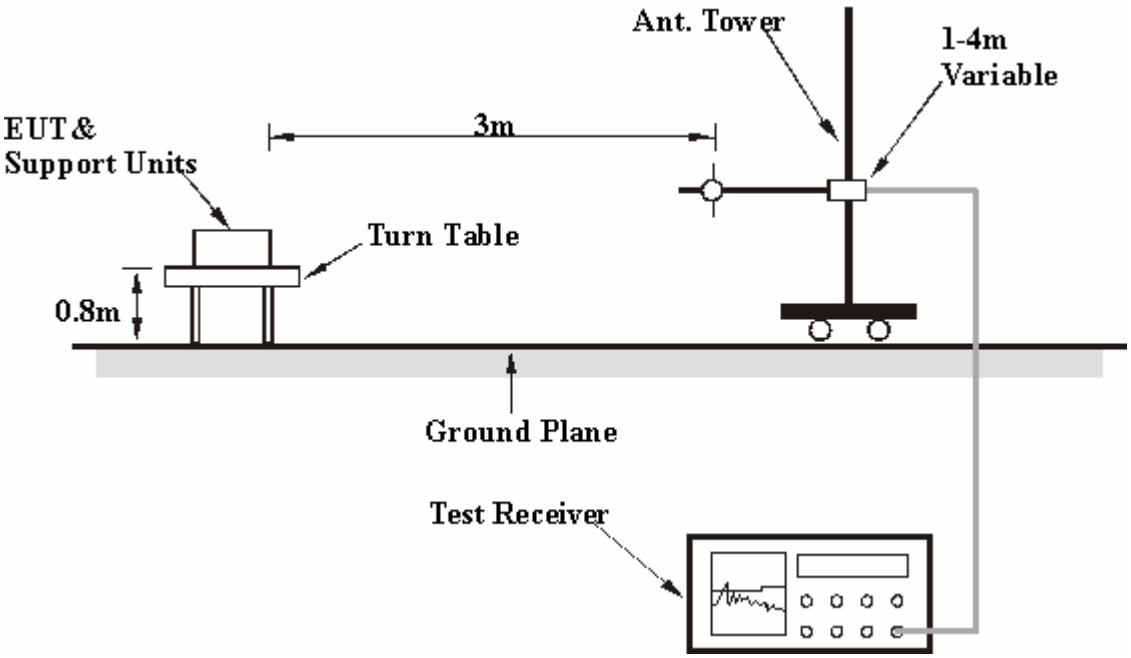
NOTE:

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.

4.1.5 DEVIATION FROM TEST STANDARD

No deviation

4.1.6 TEST SETUP



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

4.1.7 EUT OPERATING CONDITION

a. Connected the EUT to notebook and placed on a testing table.
b. The notebook ran a test program (provided by manufacturer) to enable EUT under transmitting condition continuously at specific channel frequency.
c. The necessary accessories enable the system in full functions.

4.1.8 TEST RESULTS

FOR FREQUENCY BAND: 5.25 ~ 5.35GHz
ABOVE 1GHz DATA: 802.11a OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 5	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	105.44 PK			1.04 H	158	66.72	38.72
2	*5260.00	95.02 AV			1.04 H	158	56.30	38.72
3	10520.00	57.88 PK	88.30	-30.42	1.04 H	355	8.76	49.12
4	10520.00	44.59 AV	68.30	-23.71	1.04 H	355	-4.53	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	100.59 PK			1.45 V	7	61.87	38.72
2	*5260.00	90.65 AV			1.45 V	7	51.93	38.72
3	10520.00	57.22 PK	88.30	-31.08	1.04 V	22	8.10	49.12
4	10520.00	44.31 AV	68.30	-23.99	1.04 V	22	-4.81	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	105.52 PK			1.12 H	255	66.76	38.76
2	*5300.00	95.50 AV			1.12 H	255	56.74	38.76
3	#10600.00	57.53 PK	74.00	-16.47	1.12 H	158	8.23	49.30
4	#10600.00	44.39 AV	54.00	-9.61	1.12 H	158	-4.91	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	101.67 PK			1.12 V	61	62.91	38.76
2	*5300.00	91.00 AV			1.12 V	61	52.24	38.76
3	#10600.00	57.63 PK	74.00	-16.37	1.02 V	197	8.33	49.30
4	#10600.00	44.25 AV	54.00	-9.75	1.02 V	197	-5.05	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	105.35 PK			1.09 H	254	66.57	38.78
2	*5320.00	94.87 AV			1.09 H	254	56.09	38.78
3	#5350.00	55.38 PK	74.00	-18.62	1.09 H	254	16.57	38.81
4	#5350.00	39.00 AV	54.00	-15.00	1.09 H	254	0.19	38.81
5	#10640.00	56.74 PK	74.00	-17.26	1.09 H	221	7.41	49.33
6	#10640.00	43.94 AV	54.00	-10.06	1.09 H	221	-5.39	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	100.00 PK			1.10 V	59	61.22	38.78
2	*5320.00	89.83 AV			1.10 V	59	51.05	38.78
3	#5350.00	49.47 PK	74.00	-24.53	1.10 V	59	10.66	38.81
4	#5350.00	35.88 AV	54.00	-18.12	1.10 V	59	-2.93	38.81
5	#10640.00	56.31 PK	74.00	-17.69	1.10 V	19	6.98	49.33
6	#10640.00	43.20 AV	54.00	-10.80	1.10 V	19	-6.13	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 5	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	106.02 PK			1.03 H	50	67.30	38.72
2	*5260.00	95.46 AV			1.03 H	50	56.74	38.72
3	10520.00	57.66 PK	88.30	-30.64	1.03 H	256	8.54	49.12
4	10520.00	44.38 AV	68.30	-23.92	1.03 H	256	-4.74	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	101.33 PK			1.71 V	211	62.61	38.72
2	*5260.00	91.01 AV			1.71 V	211	52.29	38.72
3	10520.00	57.22 PK	88.30	-31.08	1.30 V	289	8.10	49.12
4	10520.00	44.30 AV	68.30	-24.00	1.30 V	289	-4.82	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	106.14 PK			1.00 H	181	67.38	38.76
2	*5300.00	95.65 AV			1.00 H	181	56.89	38.76
3	#10600.00	57.47 PK	74.00	-16.53	1.02 H	35	8.17	49.30
4	#10600.00	44.40 AV	54.00	-9.60	1.02 H	35	-4.90	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	101.14 PK			1.00 V	231	62.38	38.76
2	*5300.00	90.75 AV			1.00 V	231	51.99	38.76
3	#10600.00	57.46 PK	74.00	-16.54	1.07 V	66	8.16	49.30
4	#10600.00	44.13 AV	54.00	-9.87	1.07 V	66	-5.17	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	105.28 PK			1.00 H	180	66.50	38.78
2	*5320.00	95.12 AV			1.00 H	180	56.34	38.78
3	#5350.00	49.71 PK	74.00	-24.29	1.00 H	180	10.90	38.81
4	#5350.00	36.61 AV	54.00	-17.39	1.00 H	180	-2.20	38.81
5	#10640.00	57.55 PK	74.00	-16.45	1.11 H	321	8.22	49.33
6	#10640.00	44.62 AV	54.00	-9.38	1.11 H	321	-4.71	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	101.07 PK			1.00 V	278	62.29	38.78
2	*5320.00	90.99 AV			1.00 V	278	52.21	38.78
3	#5350.00	49.65 PK	74.00	-24.35	1.00 V	278	10.84	38.81
4	#5350.00	36.58 AV	54.00	-17.42	1.00 V	278	-2.23	38.81
5	#10640.00	57.26 PK	74.00	-16.74	1.00 V	6	7.93	49.33
6	#10640.00	44.53 AV	54.00	-9.47	1.00 V	6	-4.80	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 3	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	103.83 PK			1.12 H	64	65.09	38.73
2	*5270.00	93.75 AV			1.12 H	64	55.01	38.73
3	10540.00	57.62 PK	88.30	-30.68	1.12 H	325	8.46	49.16
4	10540.00	44.78 AV	68.30	-23.52	1.12 H	325	-4.38	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	100.16 PK			1.59 V	22	61.42	38.73
2	*5270.00	89.59 AV			1.59 V	22	50.85	38.73
3	10540.00	57.54 PK	88.30	-30.76	1.06 V	213	8.38	49.16
4	10540.00	44.68 AV	68.30	-23.62	1.06 V	213	-4.48	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	103.20 PK			1.49 H	75	64.43	38.77
2	*5310.00	93.30 AV			1.49 H	75	54.53	38.77
3	#5350.00	55.32 PK	74.00	-18.68	1.49 H	75	16.51	38.81
4	#5350.00	42.11 AV	54.00	-11.89	1.49 H	75	3.30	38.81
5	#10620.00	57.80 PK	74.00	-16.20	1.30 H	256	8.48	49.32
6	#10620.00	44.81 AV	54.00	-9.19	1.30 H	256	-4.51	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	99.78 PK			1.00 V	358	61.01	38.77
2	*5310.00	88.91 AV			1.00 V	358	50.14	38.77
3	#5350.00	55.01 PK	74.00	-18.99	1.00 V	358	16.20	38.81
4	#5350.00	41.89 AV	54.00	-12.11	1.00 V	358	3.08	38.81
5	#10620.00	57.62 PK	74.00	-16.38	1.24 V	57	8.30	49.32
6	#10620.00	44.35 AV	54.00	-9.65	1.24 V	57	-4.97	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

802.11a OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	48.96 PK	74.00	-25.04	1.00 H	170	9.97	38.99
2	#5460.00	36.54 AV	54.00	-17.46	1.00 H	170	-2.45	38.99
3	5470.00	49.80 PK	88.30	-38.50	1.00 H	170	10.79	39.01
4	5470.00	36.66 AV	68.30	-31.64	1.00 H	170	-2.35	39.01
5	*5500.00	104.47 PK			1.00 H	170	65.40	39.07
6	*5500.00	94.08 AV			1.00 H	170	55.01	39.07
7	#11000.00	58.55 PK	74.00	-15.45	1.00 H	219	8.66	49.89
8	#11000.00	45.42 AV	54.00	-8.58	1.00 H	219	-4.47	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	48.85 PK	74.00	-25.15	1.50 V	349	9.86	38.99
2	#5460.00	36.34 AV	54.00	-17.66	1.50 V	349	-2.65	38.99
3	5470.00	49.72 PK	88.30	-38.58	1.50 V	349	10.71	39.01
4	5470.00	36.59 AV	68.30	-31.71	1.50 V	349	-2.42	39.01
5	*5500.00	99.25 PK			1.50 V	349	60.18	39.07
6	*5500.00	88.98 AV			1.50 V	349	49.91	39.07
7	#11000.00	58.43 PK	74.00	-15.57	1.01 V	65	8.54	49.89
8	#11000.00	45.39 AV	54.00	-8.61	1.01 V	65	-4.50	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	104.10 PK			1.00 H	159	64.81	39.29
2	*5600.00	93.80 AV			1.00 H	159	54.51	39.29
3	#11200.00	58.55 PK	74.00	-15.45	1.00 H	179	8.77	49.78
4	#11200.00	45.13 AV	54.00	-8.87	1.00 H	179	-4.65	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	99.07 PK			1.24 V	30	59.78	39.29
2	*5600.00	88.62 AV			1.24 V	30	49.33	39.29
3	#11200.00	58.43 PK	74.00	-15.57	1.02 V	223	8.65	49.78
4	#11200.00	45.04 AV	54.00	-8.96	1.02 V	223	-4.74	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	104.43 PK			1.01 H	209	64.87	39.56
2	*5700.00	94.37 AV			1.01 H	209	54.81	39.56
3	5725.00	48.47 PK	88.30	-39.83	1.01 H	209	8.86	39.61
4	5725.00	35.78 AV	68.30	-32.52	1.01 H	209	-3.83	39.61
5	#11400.00	59.88 PK	74.00	-14.12	1.01 H	264	10.02	49.86
6	#11400.00	45.60 AV	54.00	-8.40	1.01 H	264	-4.26	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	99.34 PK			1.33 V	24	59.78	39.56
2	*5700.00	88.85 AV			1.33 V	24	49.29	39.56
3	5725.00	48.35 PK	88.30	-39.95	1.33 V	24	8.74	39.61
4	5725.00	35.55 AV	68.30	-32.75	1.33 V	24	-4.06	39.61
5	#11400.00	59.71 PK	74.00	-14.29	1.00 V	101	9.85	49.86
6	#11400.00	45.52 AV	54.00	-8.48	1.00 V	101	-4.34	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	47.41 PK	74.00	-26.59	1.05 H	19	8.42	38.99
2	#5460.00	35.66 AV	54.00	-18.34	1.05 H	19	-3.33	38.99
3	5470.00	48.84 PK	88.30	-39.46	1.05 H	19	9.83	39.01
4	5470.00	35.81 AV	68.30	-32.49	1.05 H	19	-3.20	39.01
5	*5500.00	104.87 PK			1.05 H	19	65.80	39.07
6	*5500.00	94.64 AV			1.05 H	19	55.57	39.07
7	#11000.00	57.67 PK	74.00	-16.33	1.52 H	208	7.78	49.89
8	#11000.00	44.70 AV	54.00	-9.30	1.52 H	208	-5.19	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	47.32 PK	74.00	-26.68	1.05 V	218	8.33	38.99
2	#5460.00	35.59 AV	54.00	-18.41	1.05 V	218	-3.40	38.99
3	5470.00	48.77 PK	88.30	-39.53	1.05 V	218	9.76	39.01
4	5470.00	35.75 AV	68.30	-32.55	1.05 V	218	-3.26	39.01
5	*5500.00	100.84 PK			1.05 V	218	61.77	39.07
6	*5500.00	90.67 AV			1.05 V	218	51.60	39.07
7	#11000.00	57.63 PK	74.00	-16.37	1.25 V	253	7.74	49.89
8	#11000.00	44.20 AV	54.00	-9.80	1.25 V	253	-5.69	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	104.27 PK			1.09 H	207	64.98	39.29
2	*5600.00	94.31 AV			1.09 H	207	55.02	39.29
3	#11200.00	57.62 PK	74.00	-16.38	1.02 H	110	7.84	49.78
4	#11200.00	44.19 AV	54.00	-9.81	1.02 H	110	-5.59	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	100.13 PK			1.44 V	267	60.84	39.29
2	*5600.00	90.32 AV			1.44 V	267	51.03	39.29
3	#11200.00	57.21 PK	74.00	-16.79	1.23 V	9	7.43	49.78
4	#11200.00	44.00 AV	54.00	-10.00	1.23 V	9	-5.78	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	104.66 PK			1.07 H	199	65.10	39.56
2	*5700.00	94.30 AV			1.07 H	199	54.74	39.56
3	5725.00	48.69 PK	88.30	-39.61	1.07 H	199	9.08	39.61
4	5725.00	36.37 AV	68.30	-31.93	1.07 H	199	-3.24	39.61
5	#11400.00	57.78 PK	74.00	-16.22	1.11 H	208	7.92	49.86
6	#11400.00	44.81 AV	54.00	-9.19	1.11 H	208	-5.05	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	100.75 PK			1.35 V	166	61.19	39.56
2	*5700.00	90.48 AV			1.35 V	166	50.92	39.56
3	5725.00	48.52 PK	88.30	-39.78	1.35 V	166	8.91	39.61
4	5725.00	36.01 AV	68.30	-32.29	1.35 V	166	-3.60	39.61
5	#11400.00	57.63 PK	74.00	-16.37	1.52 V	336	7.77	49.86
6	#11400.00	44.22 AV	54.00	-9.78	1.52 V	336	-5.64	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	48.54 PK	74.00	-25.46	1.10 H	199	9.55	38.99
2	#5460.00	36.94 AV	54.00	-17.06	1.10 H	199	-2.05	38.99
3	5470.00	57.03 PK	88.30	-31.27	1.10 H	199	18.02	39.01
4	5470.00	41.58 AV	68.30	-26.72	1.10 H	199	2.57	39.01
5	*5510.00	102.62 PK			1.10 H	199	63.52	39.10
6	*5510.00	92.54 AV			1.10 H	199	53.44	39.10
7	#11020.00	58.71 PK	74.00	-15.29	1.11 H	34	8.86	49.86
8	#11020.00	44.91 AV	54.00	-9.09	1.11 H	34	-4.94	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	#5460.00	48.37 PK	74.00	-25.63	1.24 V	133	9.38	38.99
2	#5460.00	36.56 AV	54.00	-17.44	1.24 V	133	-2.43	38.99
3	5470.00	56.86 PK	88.30	-31.44	1.24 V	133	17.85	39.01
4	5470.00	41.13 AV	68.30	-27.17	1.24 V	133	2.12	39.01
5	*5510.00	100.01 PK			1.24 V	133	60.91	39.10
6	*5510.00	89.46 AV			1.24 V	133	50.36	39.10
7	#11020.00	58.10 PK	74.00	-15.90	1.23 V	208	8.24	49.86
8	#11020.00	44.67 AV	54.00	-9.33	1.23 V	208	-5.19	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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 3	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	102.35 PK			1.20 H	207	63.08	39.27
2	*5590.00	92.68 AV			1.20 H	207	53.41	39.27
3	#11180.00	58.67 PK	74.00	-15.33	1.00 H	6	8.90	49.77
4	#11180.00	44.85 AV	54.00	-9.15	1.00 H	6	-4.92	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	100.24 PK			1.30 V	325	60.97	39.27
2	*5590.00	89.89 AV			1.30 V	325	50.62	39.27
3	#11180.00	57.65 PK	74.00	-16.35	1.18 V	125	7.88	49.77
4	#11180.00	44.23 AV	54.00	-9.77	1.18 V	125	-5.54	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
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH 1030hPa	TESTED BY	Lori Chiu
TEST MODE	A		

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	102.74 PK			1.08 H	199	63.26	39.48
2	*5670.00	92.27 AV			1.08 H	199	52.79	39.48
3	5725.00	48.61 PK	88.30	-39.69	1.08 H	199	9.00	39.61
4	5725.00	36.64 AV	68.30	-31.66	1.08 H	199	-2.97	39.61
5	#11340.00	58.76 PK	74.00	-15.24	1.00 H	200	8.95	49.81
6	#11340.00	44.66 AV	54.00	-9.34	1.00 H	200	-5.15	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	100.58 PK			1.00 V	266	61.10	39.48
2	*5670.00	89.96 AV			1.00 V	266	50.48	39.48
3	5725.00	47.58 PK	88.30	-40.72	1.00 V	266	7.97	39.61
4	5725.00	35.87 AV	68.30	-32.43	1.00 V	266	-3.74	39.61
5	#11340.00	57.49 PK	74.00	-16.51	1.00 V	124	7.68	49.81
6	#11340.00	44.08 AV	54.00	-9.92	1.00 V	124	-5.73	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.

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 8	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1030hPa	TESTED BY	Dean Wang
TEST MODE	A		

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	169.89	35.98 QP	43.50	-7.52	1.50 H	304	22.18	13.80
2	440.14	37.94 QP	46.00	-8.06	2.50 H	10	19.35	18.59
3	488.75	40.26 QP	46.00	-5.74	2.50 H	190	20.10	20.16
4	607.35	36.43 QP	46.00	-9.57	1.50 H	49	13.12	23.31
5	667.63	36.91 QP	46.00	-9.09	1.25 H	106	12.30	24.61
6	720.12	37.23 QP	46.00	-8.77	2.50 H	127	11.75	25.48
7	**848.45**	**44.52 QP**	**46.00**	**-1.48**	**1.25 H**	**307**	**17.39**	**27.13**
8	930.11	40.76 QP	46.00	-5.24	1.00 H	10	12.47	28.29
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	34.65 QP	40.00	-5.35	1.25 V	169	20.65	14.00
2	78.51	34.51 QP	40.00	-5.49	1.00 V	274	23.23	11.28
3	132.95	33.93 QP	43.50	-9.57	1.25 V	253	20.93	13.00
4	440.14	37.82 QP	46.00	-8.18	1.25 V	244	19.23	18.59
5	720.12	36.53 QP	46.00	-9.47	1.25 V	160	11.05	25.48
6	848.45	42.93 QP	46.00	-3.07	1.50 V	283	15.80	27.13
7	935.94	43.74 QP	46.00	-2.26	1.25 V	79	15.38	28.36

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 8	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH 1030hPa	TESTED BY	Dean Wang
TEST MODE	B		

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	103.78	33.47 QP	43.50	-10.03	1.25 H	109	22.97	10.49
2	169.89	40.24 QP	43.50	-3.26	1.00 H	82	26.44	13.80
3	239.88	43.26 QP	46.00	-2.74	1.00 H	214	30.03	13.23
4	465.42	35.28 QP	46.00	-10.72	1.25 H	64	15.88	19.40
5	719.95	43.72 QP	46.00	-2.28	1.18 H	310	18.24	25.48
6	955.38	35.88 QP	46.00	-10.12	1.25 H	196	7.29	28.59
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	129.06	35.93 QP	43.50	-7.57	1.25 V	64	23.17	12.77
2	239.88	42.82 QP	46.00	-3.18	1.00 V	10	29.59	13.23
3	465.42	39.10 QP	46.00	-6.90	1.00 V	46	19.69	19.40
4	582.08	36.65 QP	46.00	-9.35	1.00 V	73	13.98	22.67
5	720.12	43.53 QP	46.00	-2.47	2.00 V	31	18.05	25.48
6	953.44	34.71 QP	46.00	-11.29	1.00 V	283	6.15	28.56

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

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	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, 2009
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 09, 2009
LISN SCHWARZBECK	NNBL 8226-2	8226-142	May 07, 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.

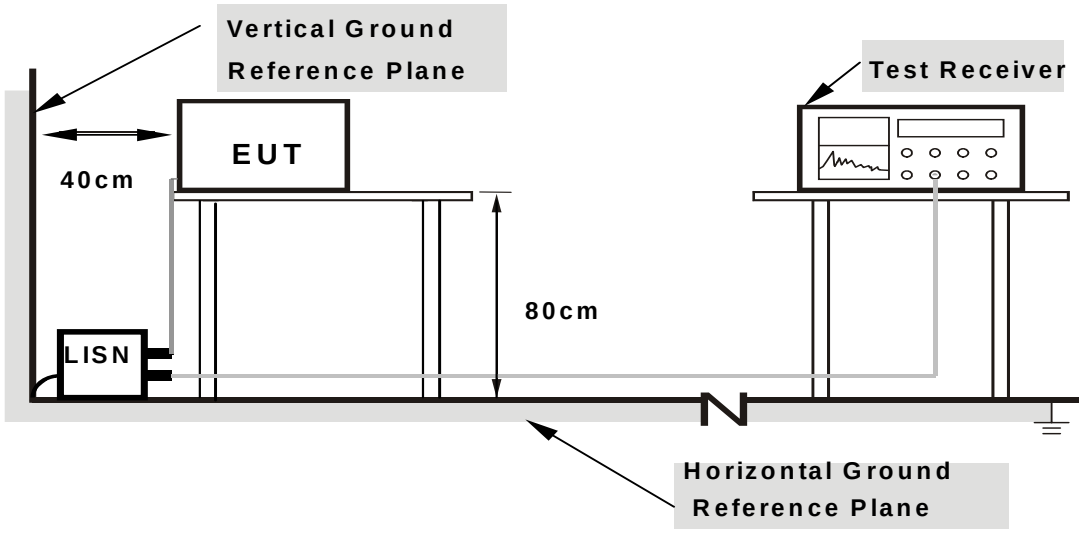
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.7 TEST RESULTS

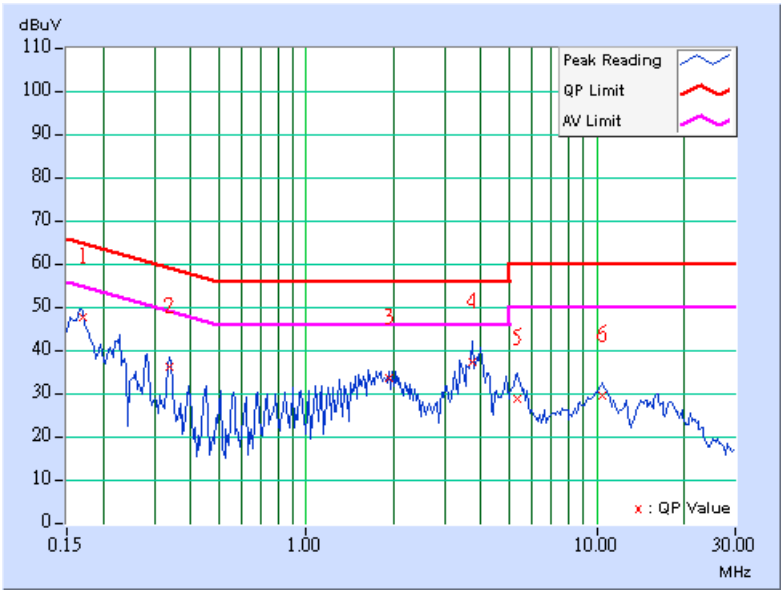
FOR FREQUENCY BAND: 5.25 ~ 5.35GHz

CONDUCTED WORST-CASE DATA: 802.11a OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 8	**PHASE**	Line 1
MODULATION TYPE	BPSK	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1030hPa	**6dB BANDWIDTH**	9kHz
TESTED BY	Match Tsui		

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.10	47.42	-	47.52	-	64.98	54.98	-17.46	-
2	0.338	0.10	36.12	-	36.22	-	59.26	49.26	-23.04	-
3	1.922	0.21	33.18	-	33.39	-	56.00	46.00	-22.61	-
4	3.734	0.27	37.08	-	37.35	-	56.00	46.00	-18.65	-
5	5.305	0.29	28.66	-	28.95	-	60.00	50.00	-31.05	-
6	10.406	0.34	29.19	-	29.53	-	60.00	50.00	-30.47	-

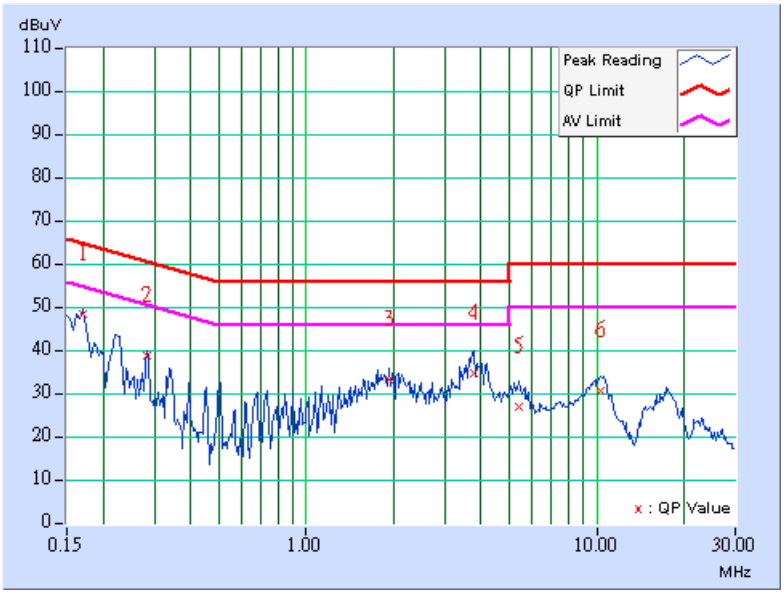
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 8	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 1030hPa	6dB BANDWIDTH	9kHz
TESTED BY	Match Tsui		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.170**	**0.10**	**47.99**	**-**	**48.09**	**-**	**64.98**	**54.98**	**-16.89**	**-**
2	0.283	0.10	38.47	-	38.57	-	60.73	50.73	-22.16	-
3	1.926	0.22	32.88	-	33.10	-	56.00	46.00	-22.90	-
4	3.793	0.27	34.36	-	34.63	-	56.00	46.00	-21.37	-
5	5.430	0.32	26.61	-	26.93	-	60.00	50.00	-33.07	-
6	10.281	0.43	30.44	-	30.87	-	60.00	50.00	-29.13	-

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.

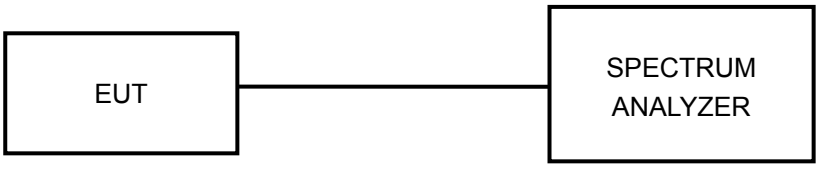
4.3.3 TEST PROCEDURE

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 300KHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

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

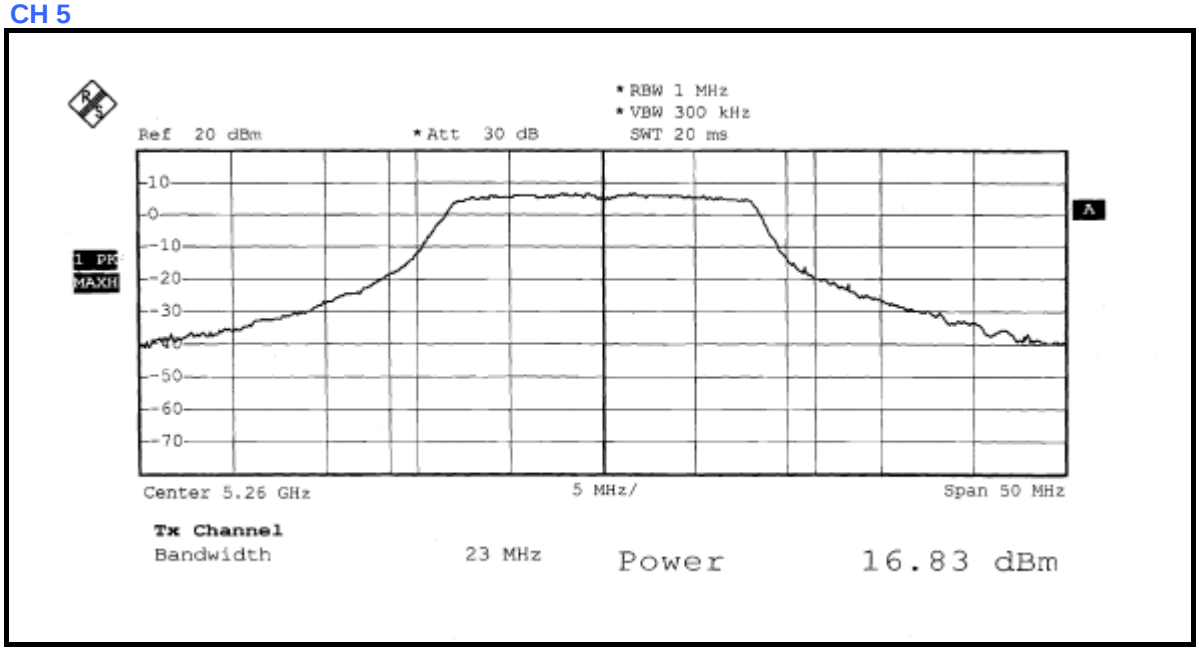
FOR FREQUENCY BAND: 5.25 ~ 5.35GHz

PEAK POWER OUTPUT: 802.11a OFDM MODULATION:

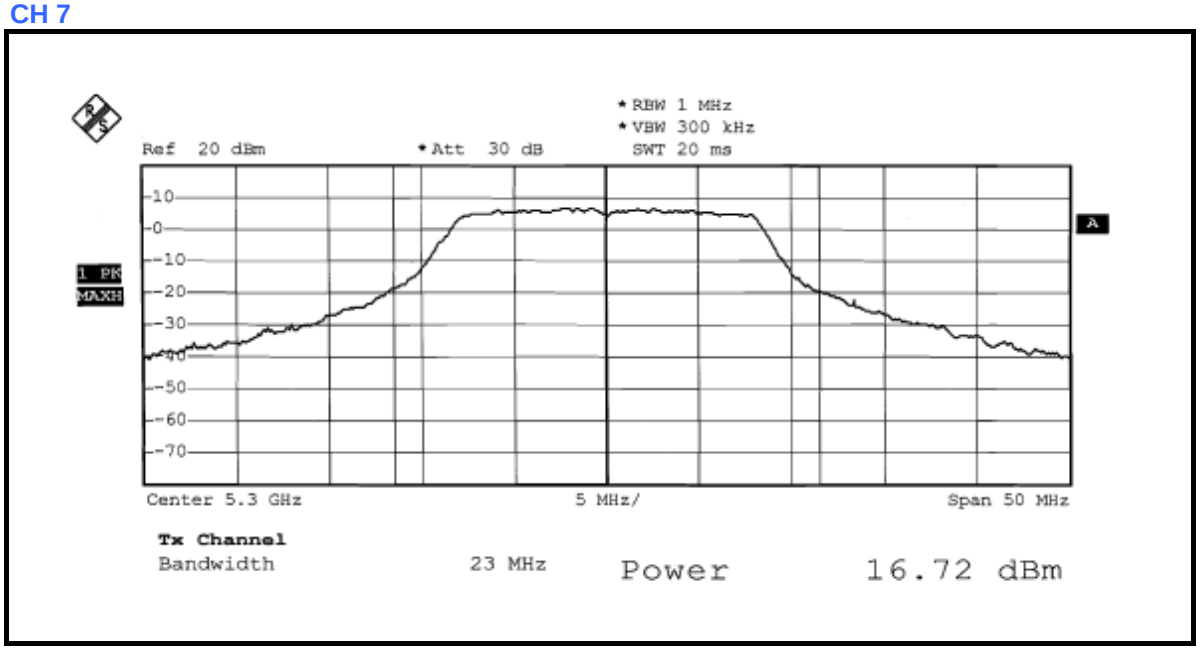
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
5	5260	48.19	16.83	17.00	PASS
7	5300	46.99	16.72	17.00	PASS
8	5320	49.77	16.97	17.00	PASS

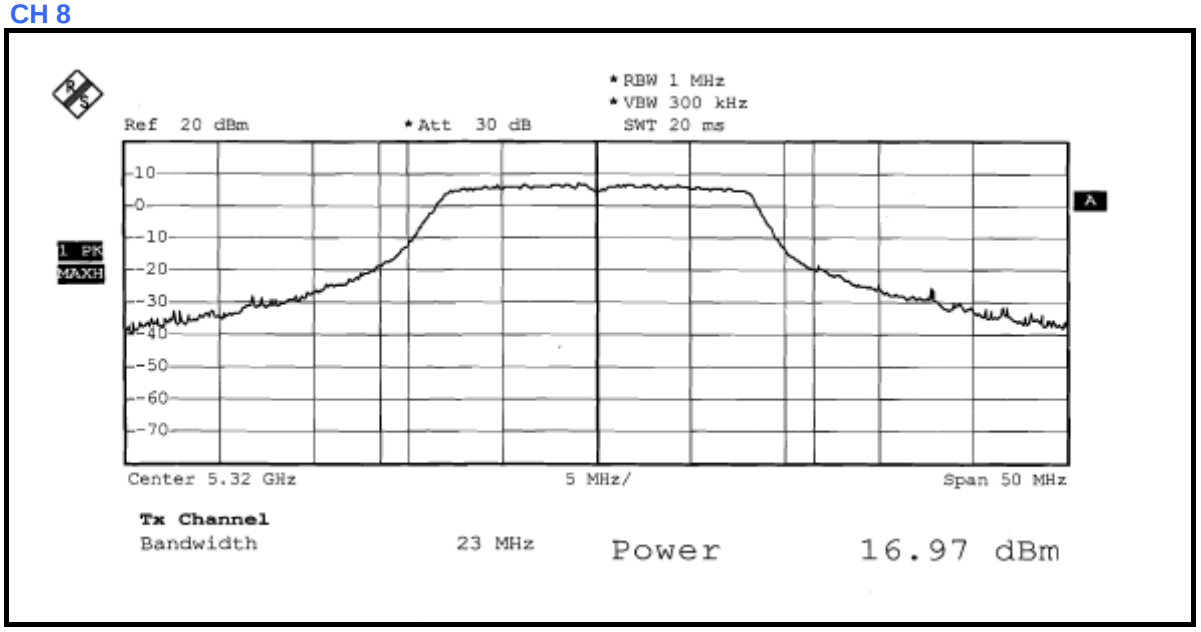
CH 5



CH 7


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Ref 20 dBm
Att 30 dB
10
0
-10
-20
-30
-40
-50
-60
-70
1 PK
MAXH
A
Center 5.3 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth
23 MHz
Power
16.72 dBm

CH 8

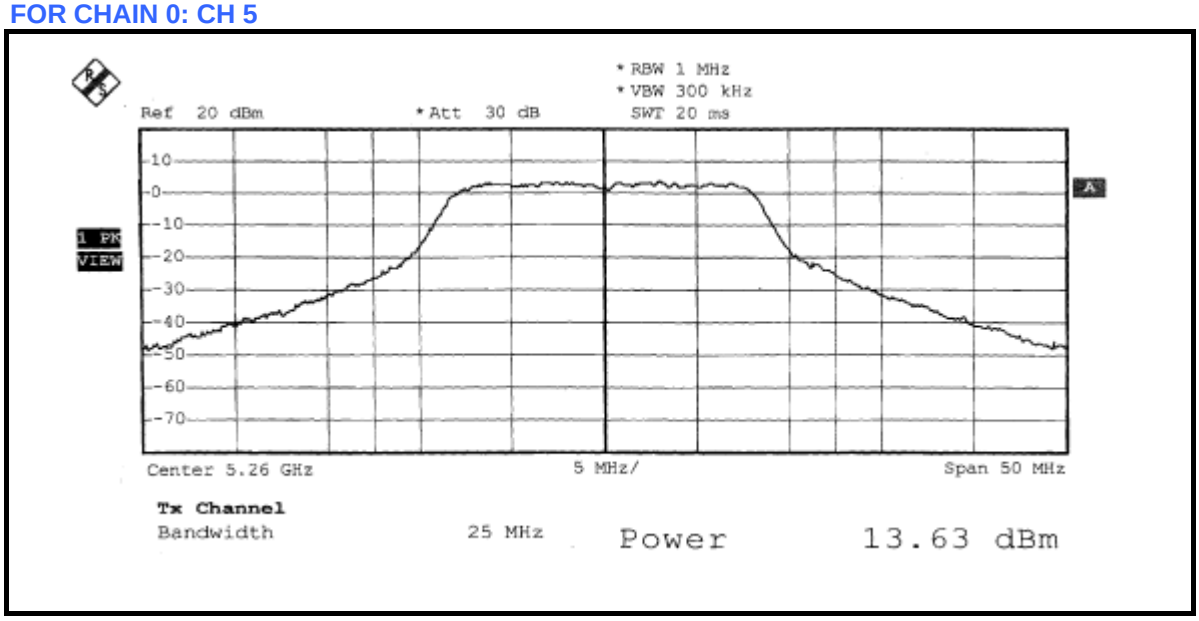

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
Ref 20 dBm
Att 30 dB
10
0
-10
-20
-30
-40
-50
-60
-70
1 PK
MAXH
A
Center 5.32 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth
23 MHz
Power
16.97 dBm

DRAFT 802.11n (20MHz) OFDM MODULATION:

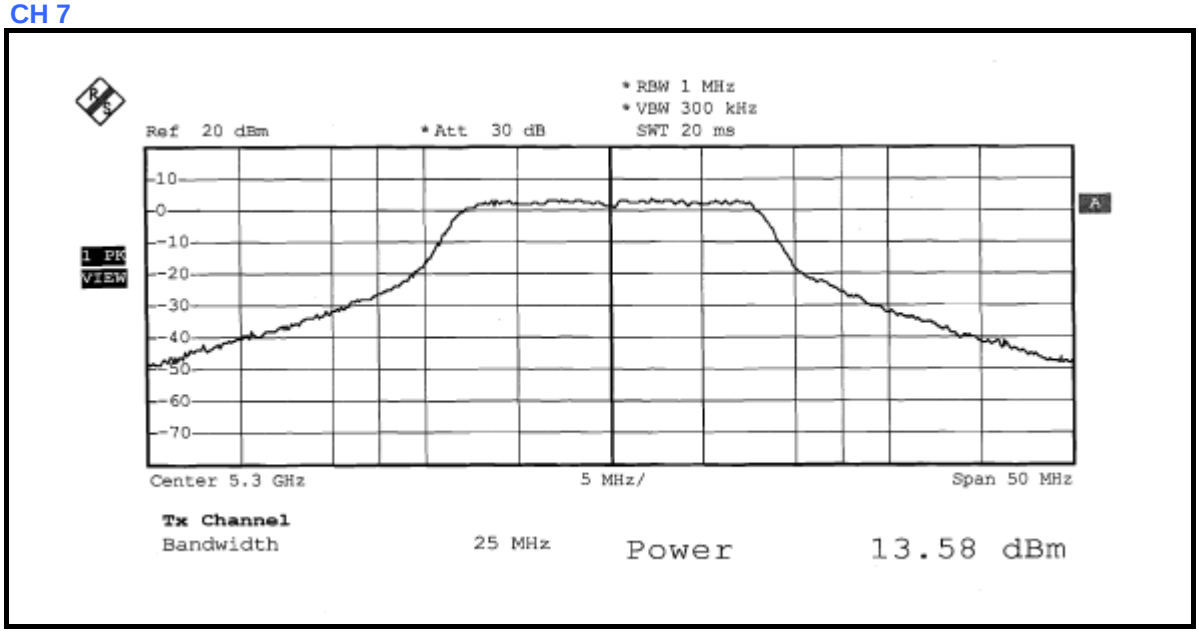
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
5	5260	13.63	13.55	45.71	16.60	17.00	PASS
7	5300	13.58	13.64	45.92	16.62	17.00	PASS
8	5320	13.79	13.71	47.43	16.76	17.00	PASS

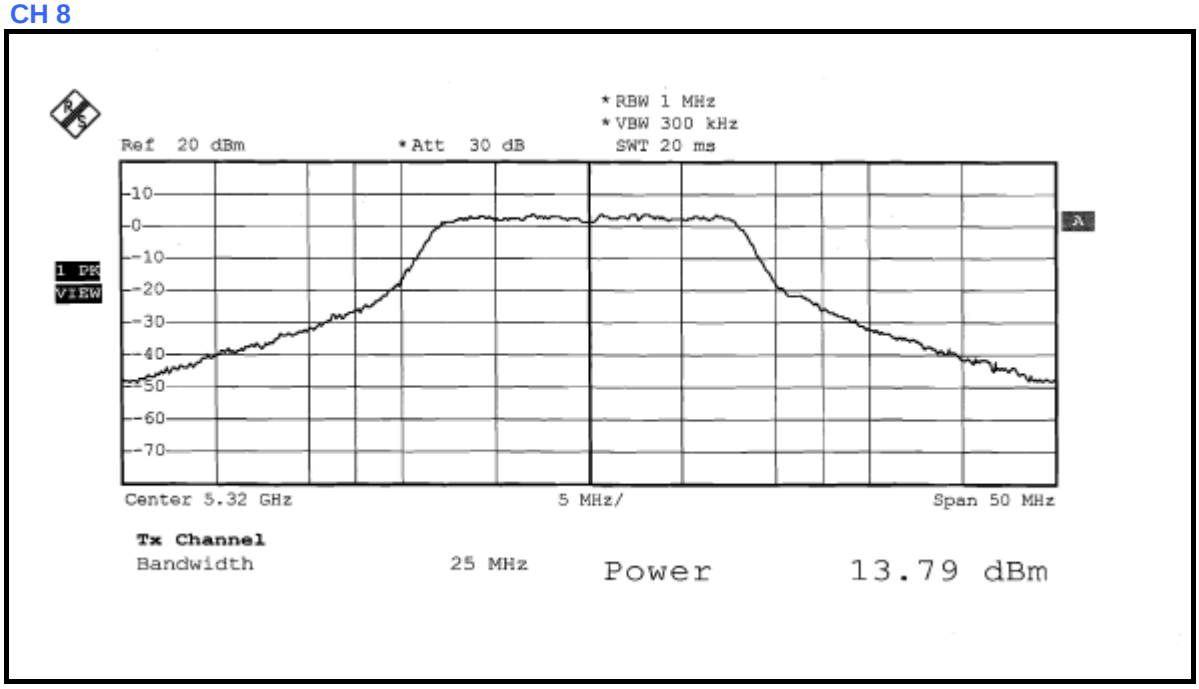
FOR CHAIN 0: CH 5



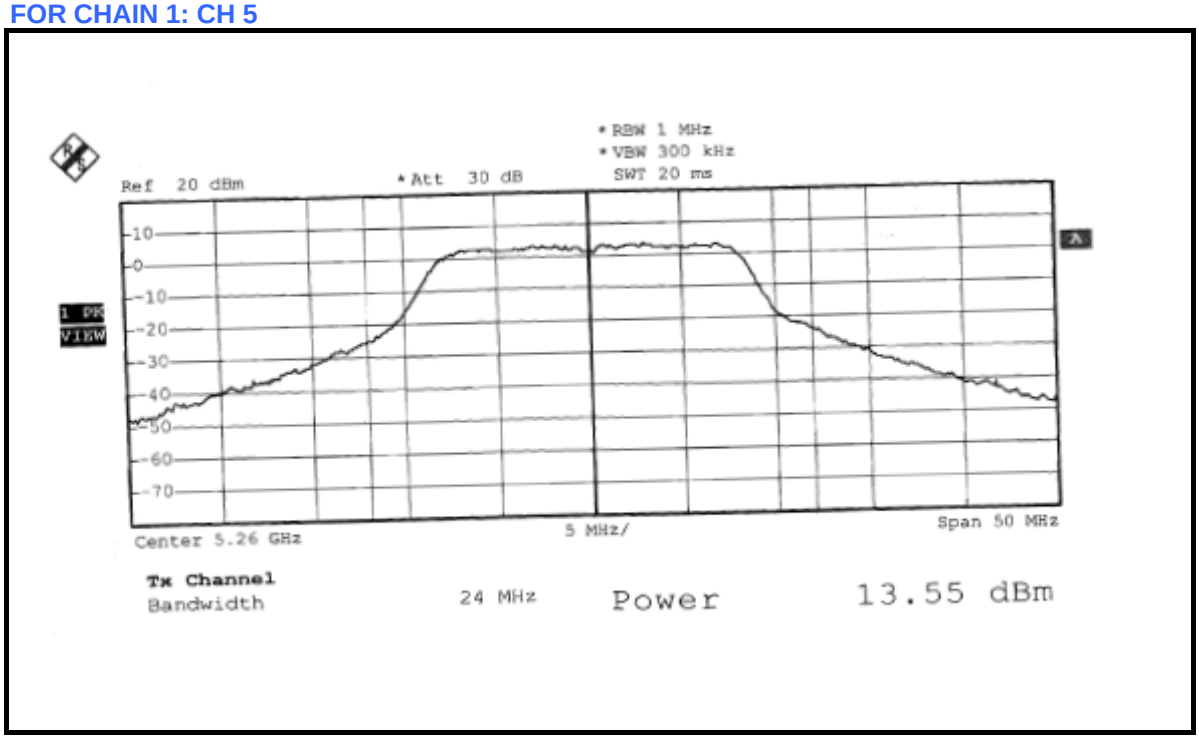
CH 7



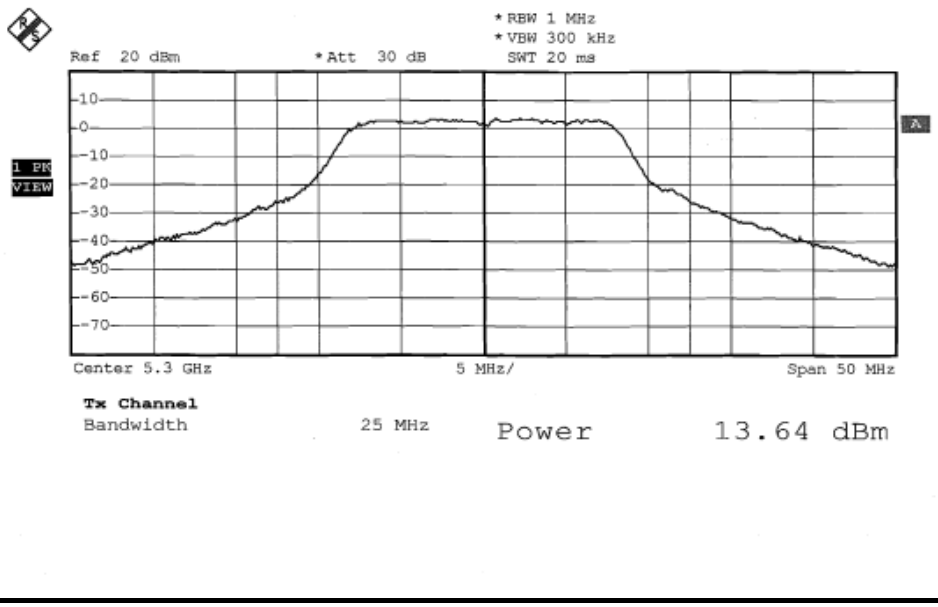
CH 8



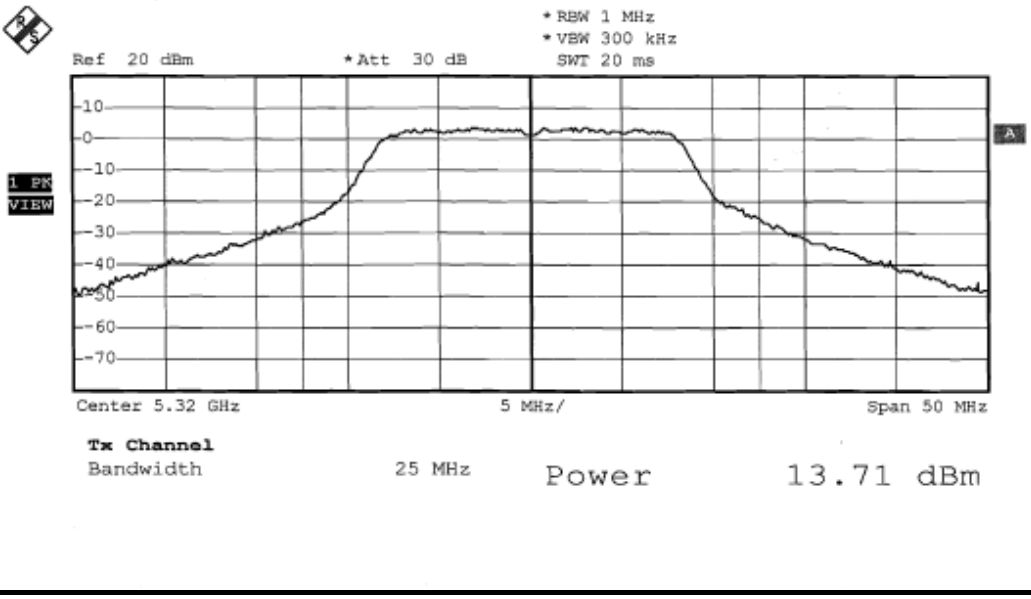
FOR CHAIN 1: CH 5



CH 7


*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Ref 20 dBm
*Att 30 dB
1 PK VIEW
A
10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.3 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth
25 MHz
Power
13.64 dBm

CH 8

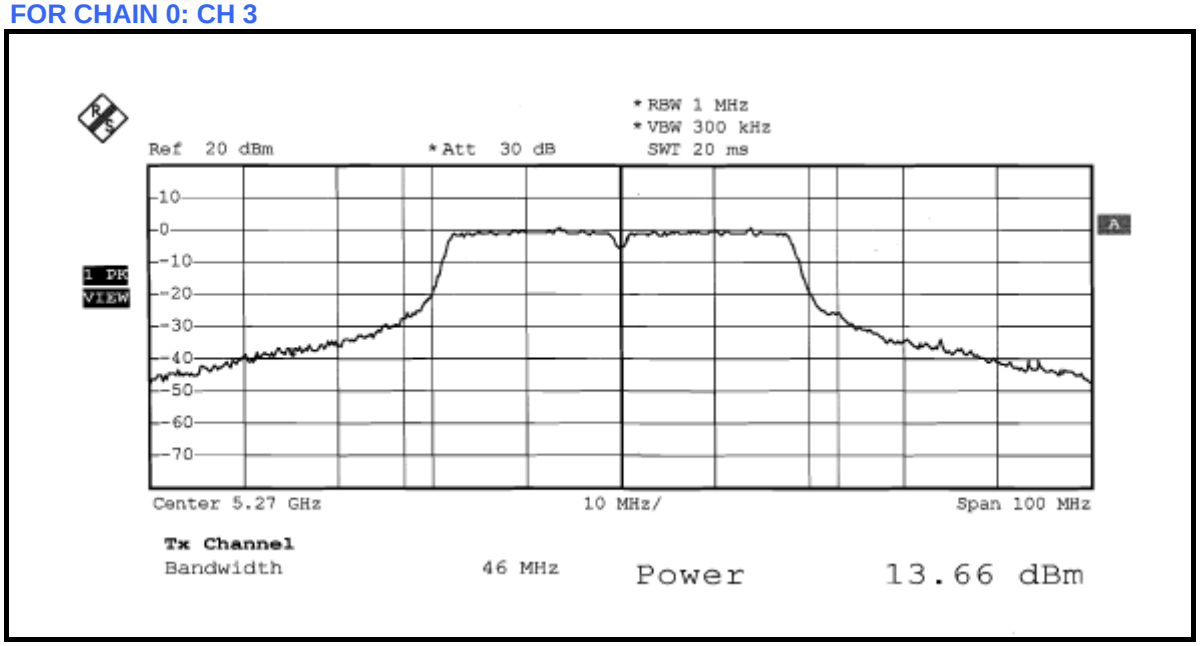

*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Ref 20 dBm
*Att 30 dB
1 PK VIEW
A
10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.32 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth
25 MHz
Power
13.71 dBm

DRAFT 802.11n (40MHz) OFDM MODULATION:

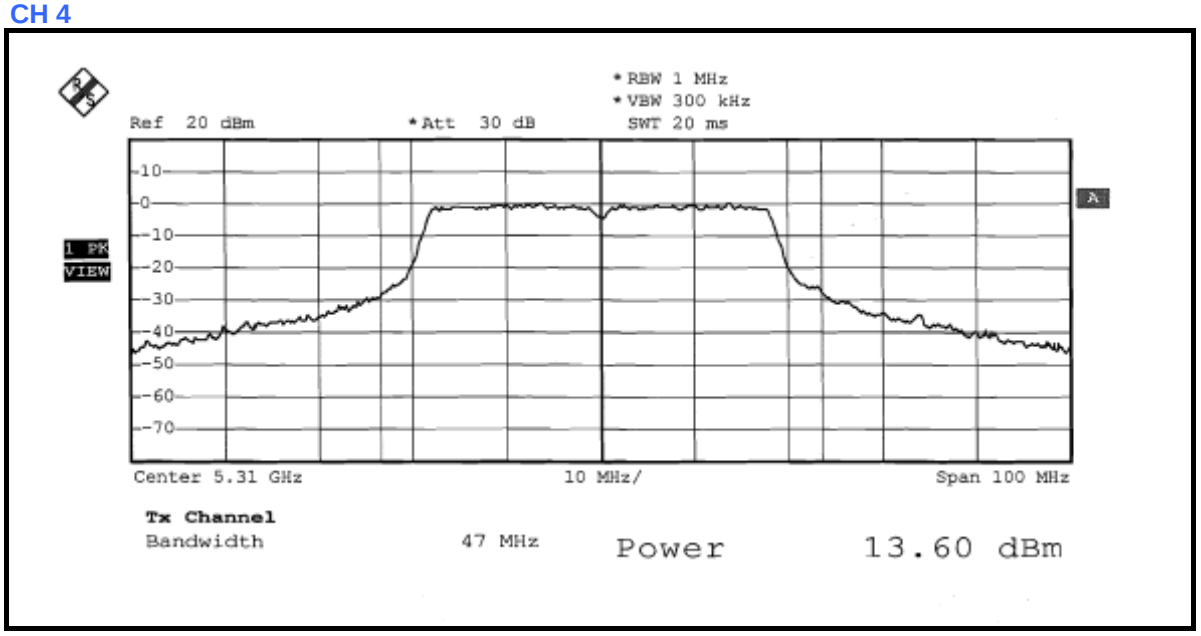
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
3	5270	13.66	13.59	46.08	16.64	17.00	PASS
4	5310	13.60	13.61	45.87	16.62	17.00	PASS

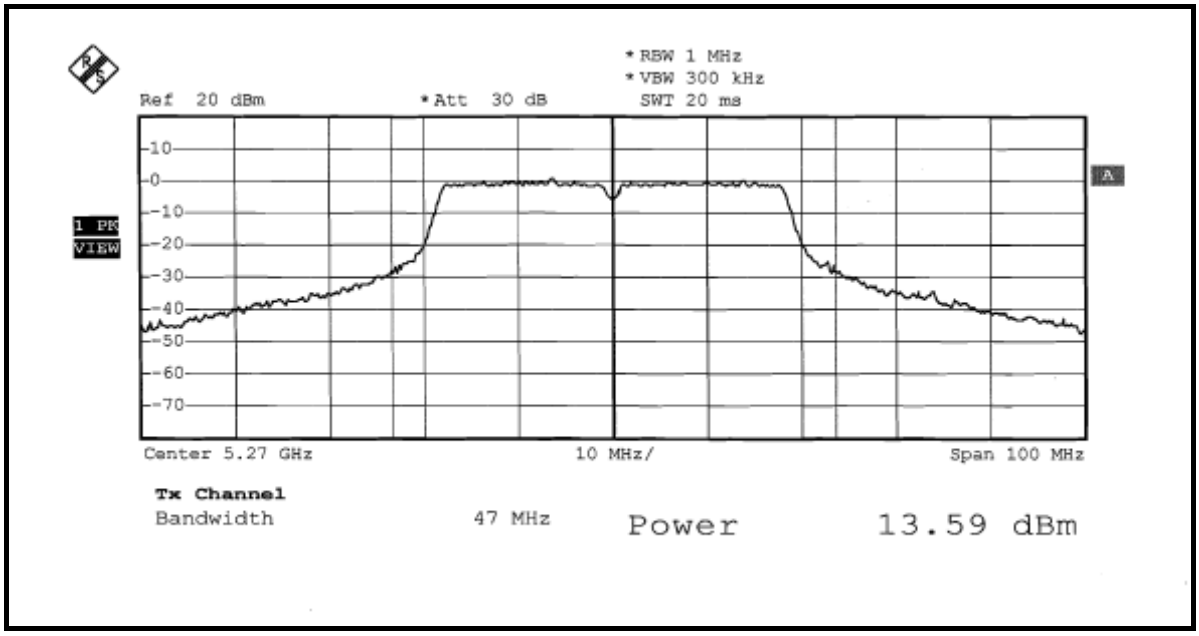
FOR CHAIN 0: CH 3



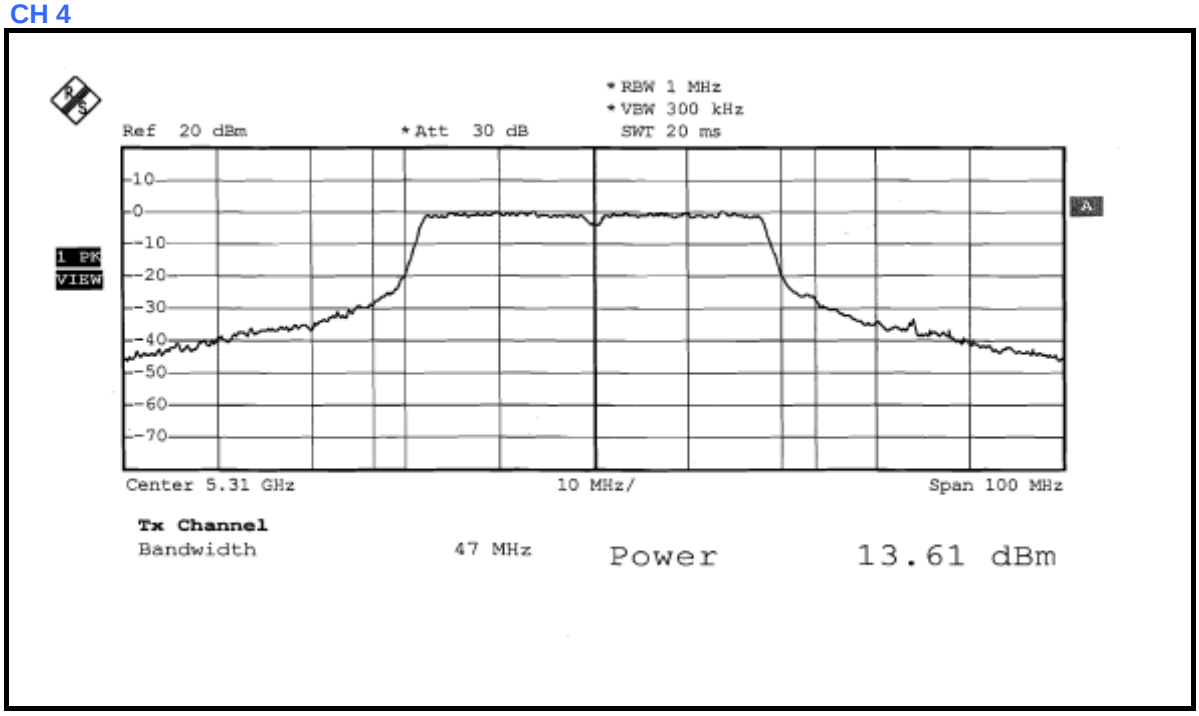
CH 4



FOR CHAIN 1: CH 3



CH 4



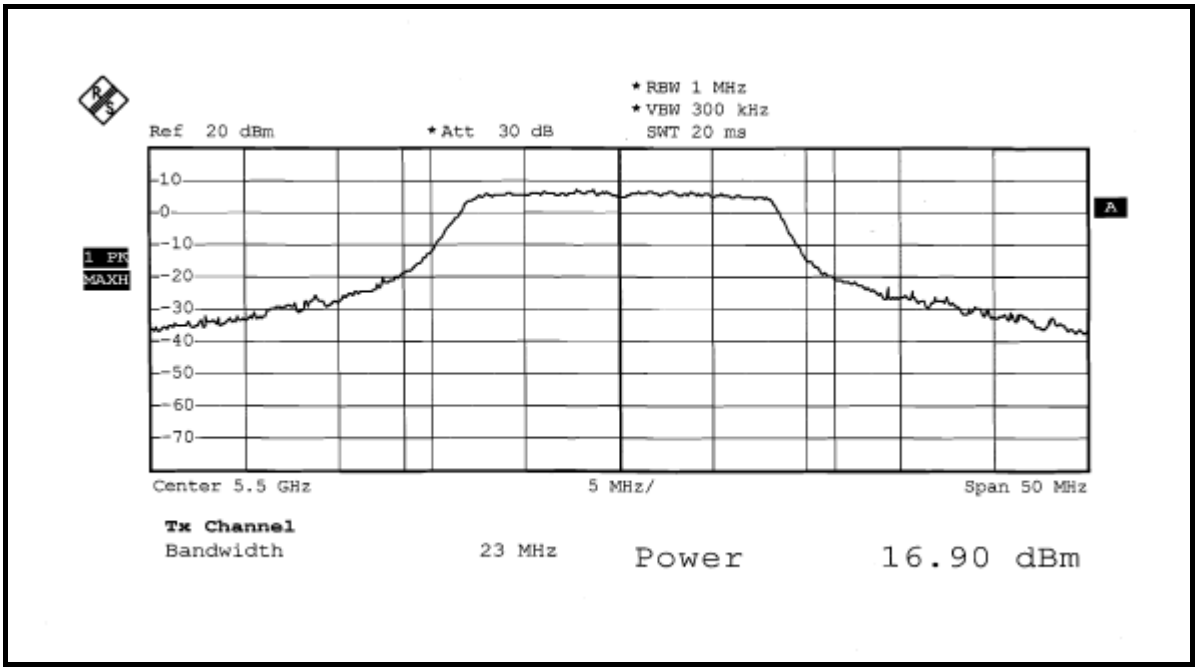
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

PEAK POWER OUTPUT: 802.11a OFDM MODULATION:

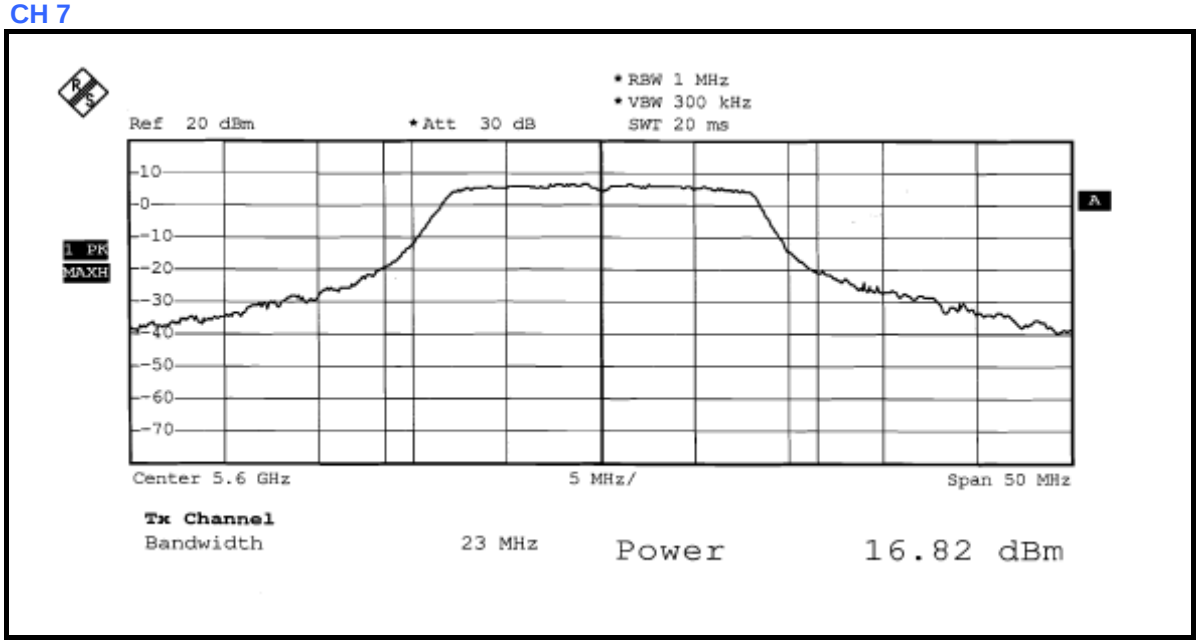
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
1	5500	48.98	16.90	17.00	PASS
6	5600	48.08	16.82	17.00	PASS
11	5700	49.32	16.93	17.00	PASS

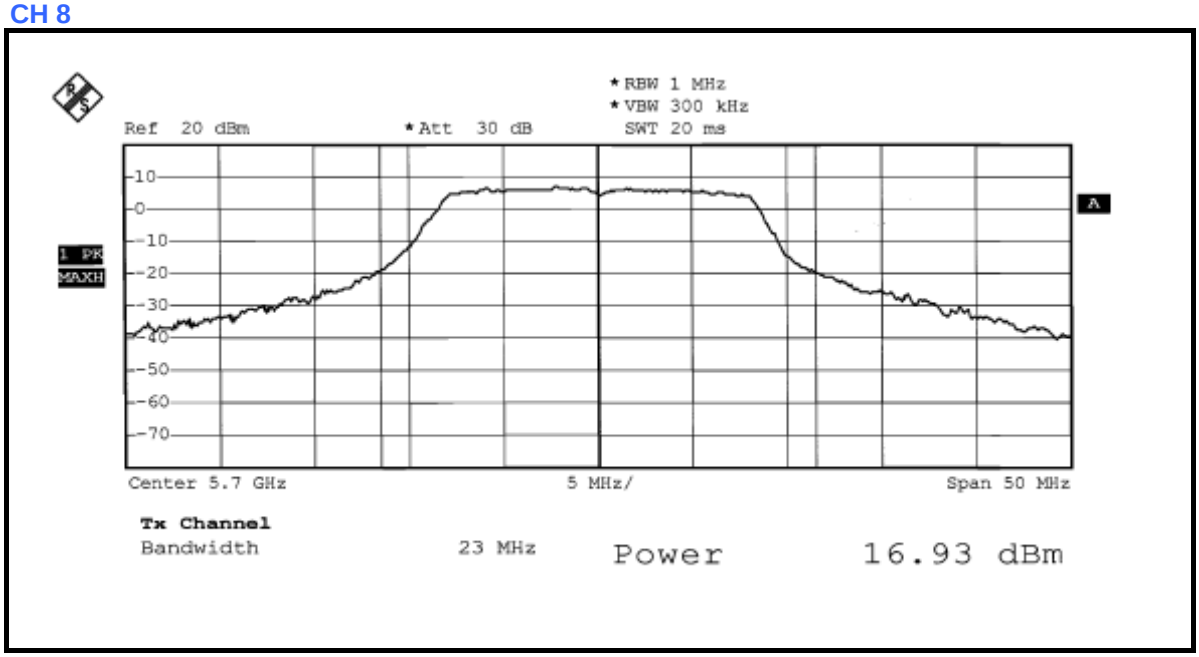
CH 5



CH 7


*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Ref 20 dBm
*Att 30 dB
10
0
-10
-20
-30
-40
-50
-60
-70
1 PK
MAXH
A
Center 5.6 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth
23 MHz
Power
16.82 dBm

CH 8

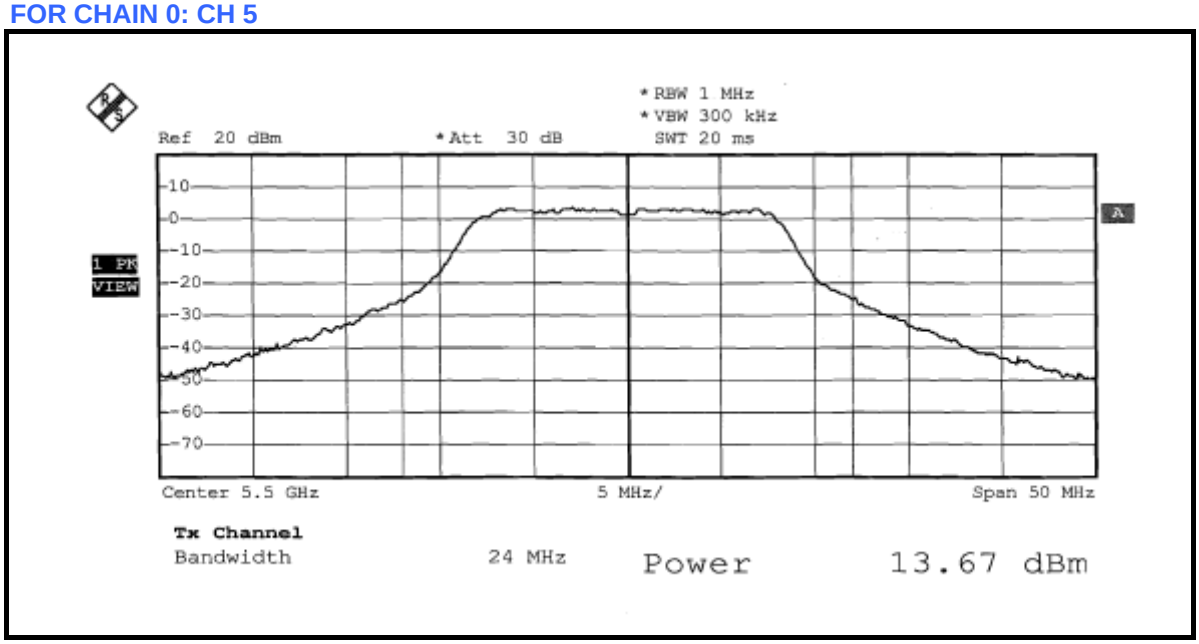

*RBW 1 MHz
*VBW 300 kHz
SWT 20 ms
Ref 20 dBm
*Att 30 dB
10
0
-10
-20
-30
-40
-50
-60
-70
1 PK
MAXH
A
Center 5.7 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth
23 MHz
Power
16.93 dBm

DRAFT 802.11n (20MHz) OFDM MODULATION:

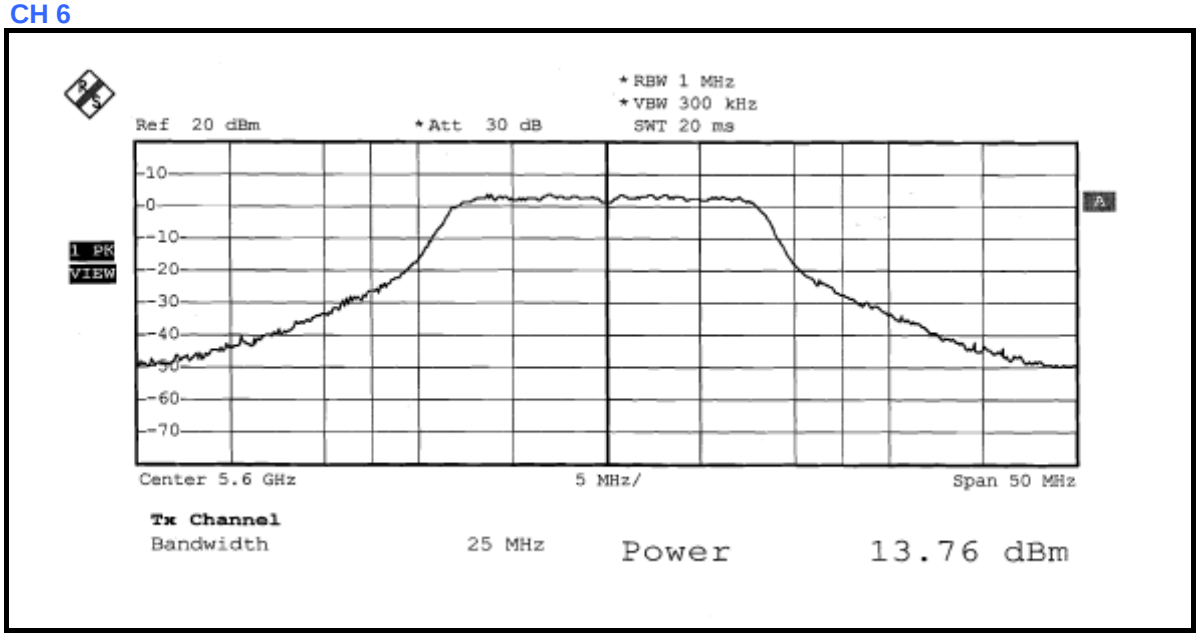
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	5500	13.67	13.74	46.94	16.72	17.00	PASS
6	5600	13.76	13.68	47.10	16.73	17.00	PASS
11	5700	13.75	13.88	48.15	16.83	17.00	PASS

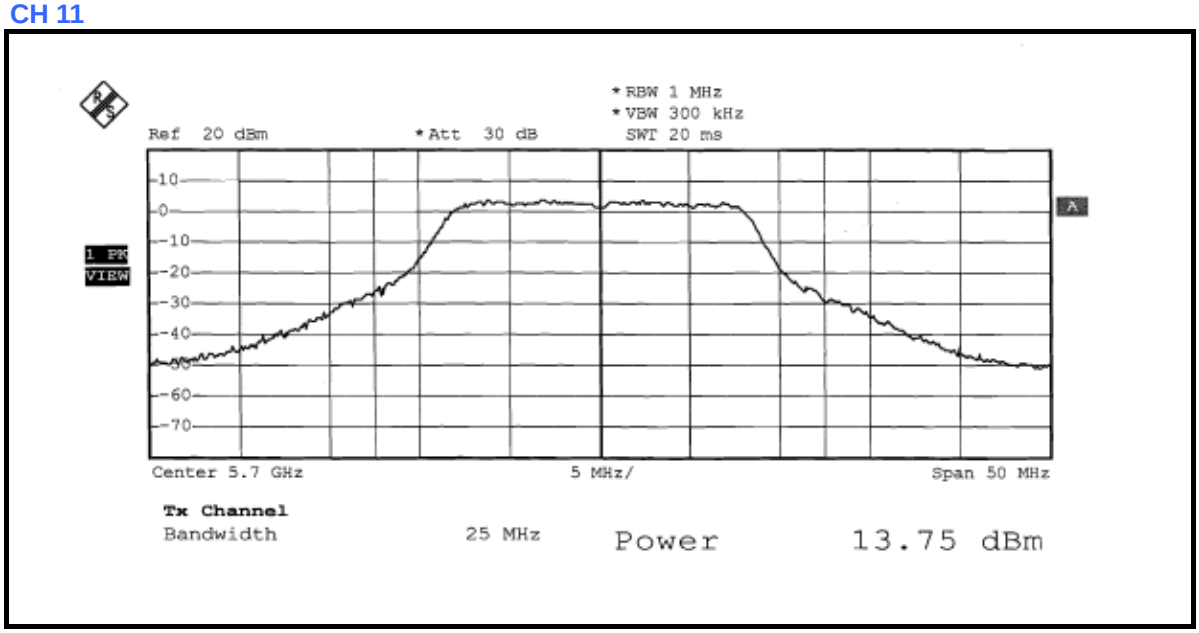
FOR CHAIN 0: CH 5



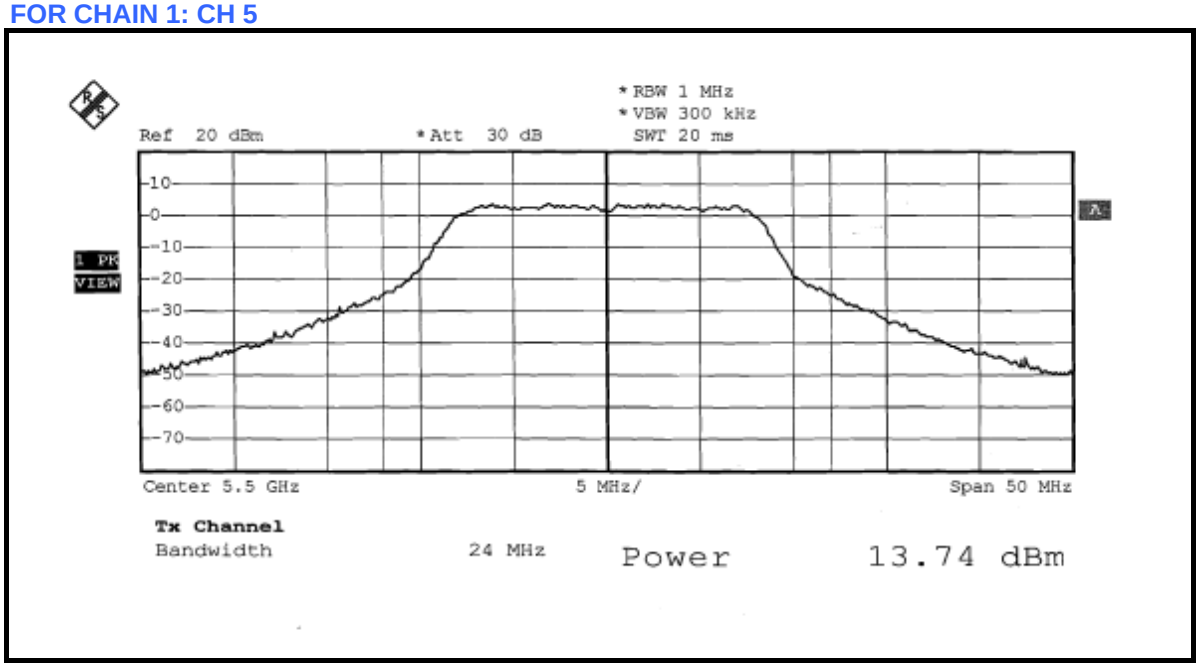
CH 6



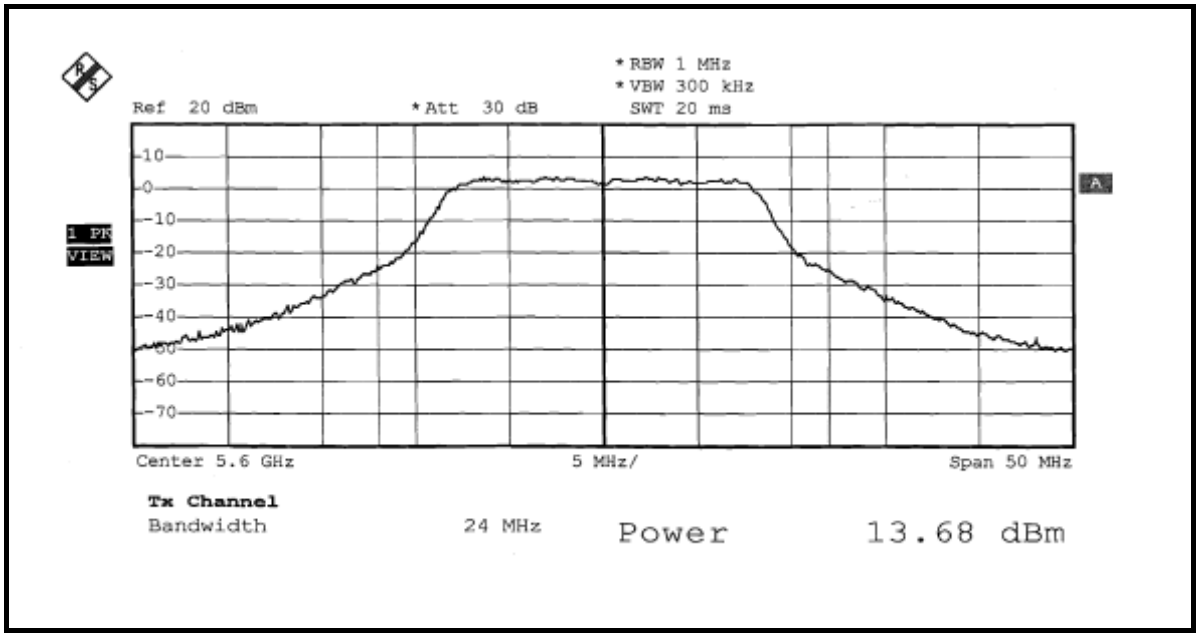
CH 11



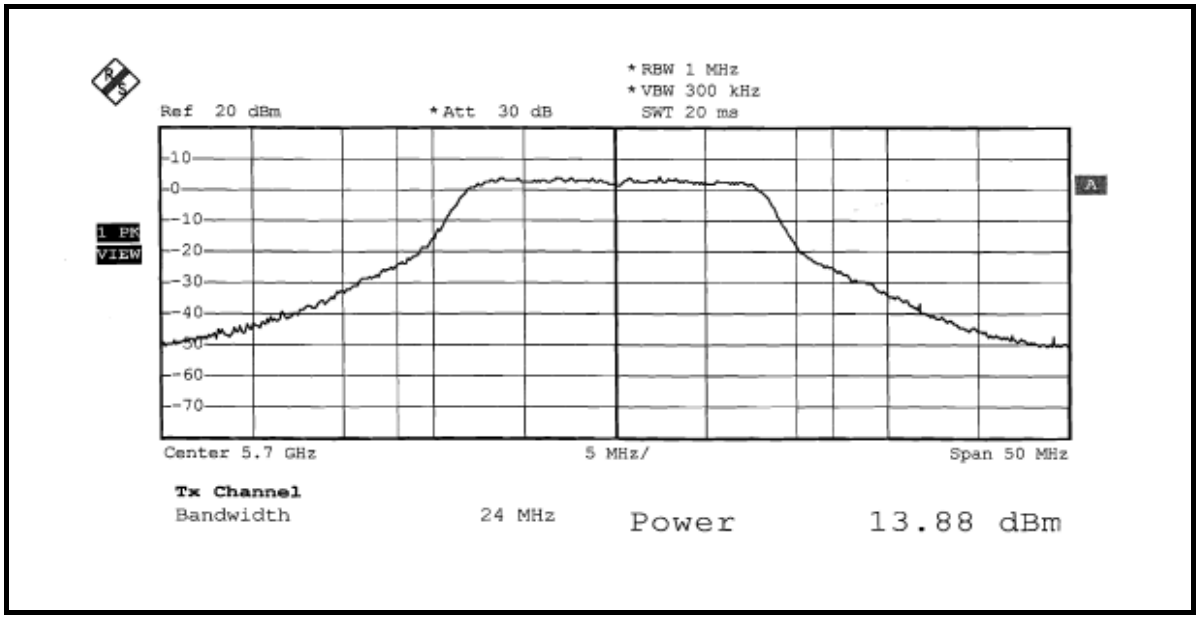
FOR CHAIN 1: CH 5



CH 6


*RBW 1 MHz
*VBW 300 kHz
Ref 20 dBm
*Att 30 dB
SWT 20 ms
1 PK VIEW
A
10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.6 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth
24 MHz
Power
13.68 dBm

CH 11

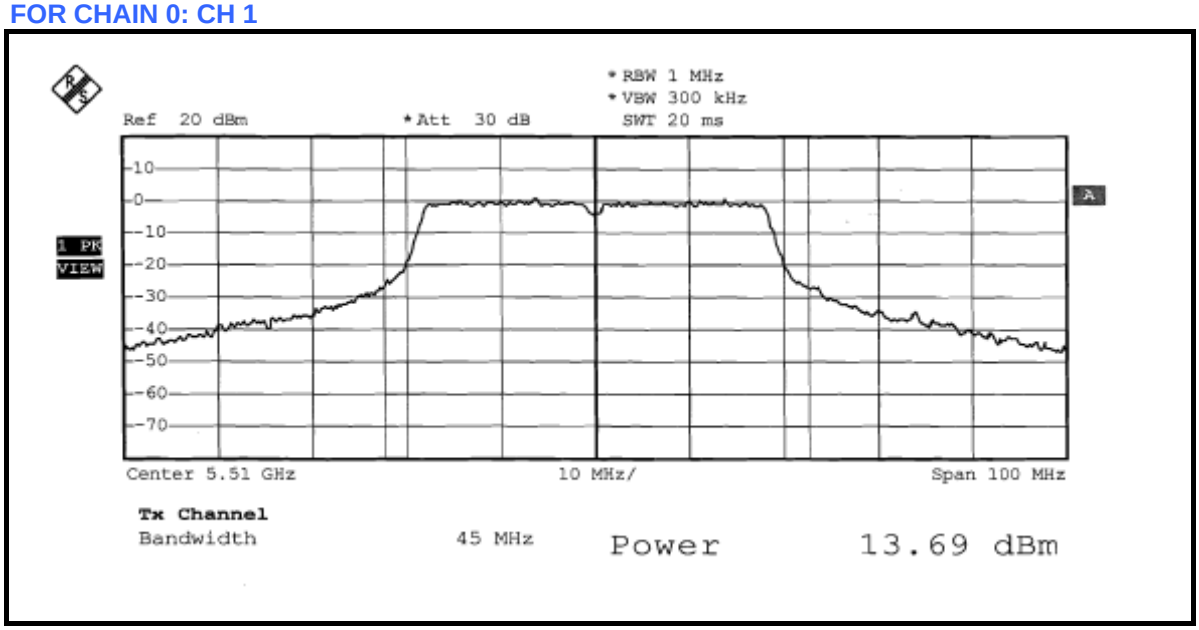

*RBW 1 MHz
*VBW 300 kHz
Ref 20 dBm
*Att 30 dB
SWT 20 ms
1 PK VIEW
A
10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.7 GHz
5 MHz/
Span 50 MHz
Tx Channel
Bandwidth
24 MHz
Power
13.88 dBm

DRAFT 802.11n (40MHz) OFDM MODULATION:

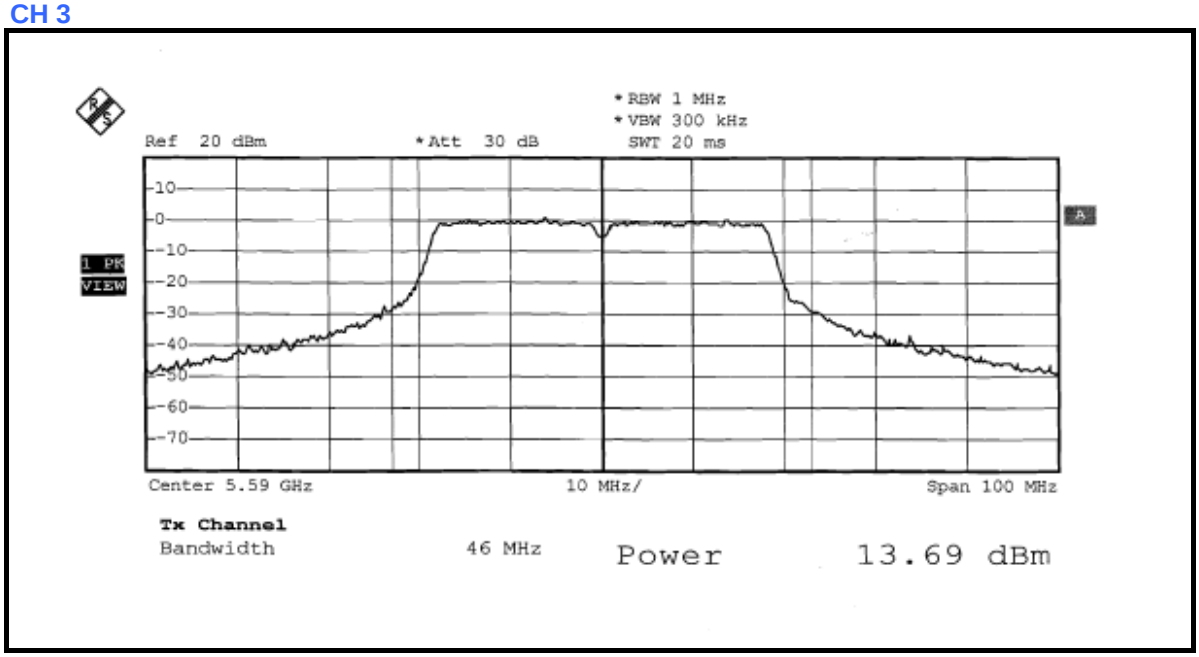
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	5510	13.69	13.67	46.67	16.69	17.00	PASS
3	5590	13.69	13.68	46.72	16.70	17.00	PASS
5	5670	13.75	13.74	47.37	16.76	17.00	PASS

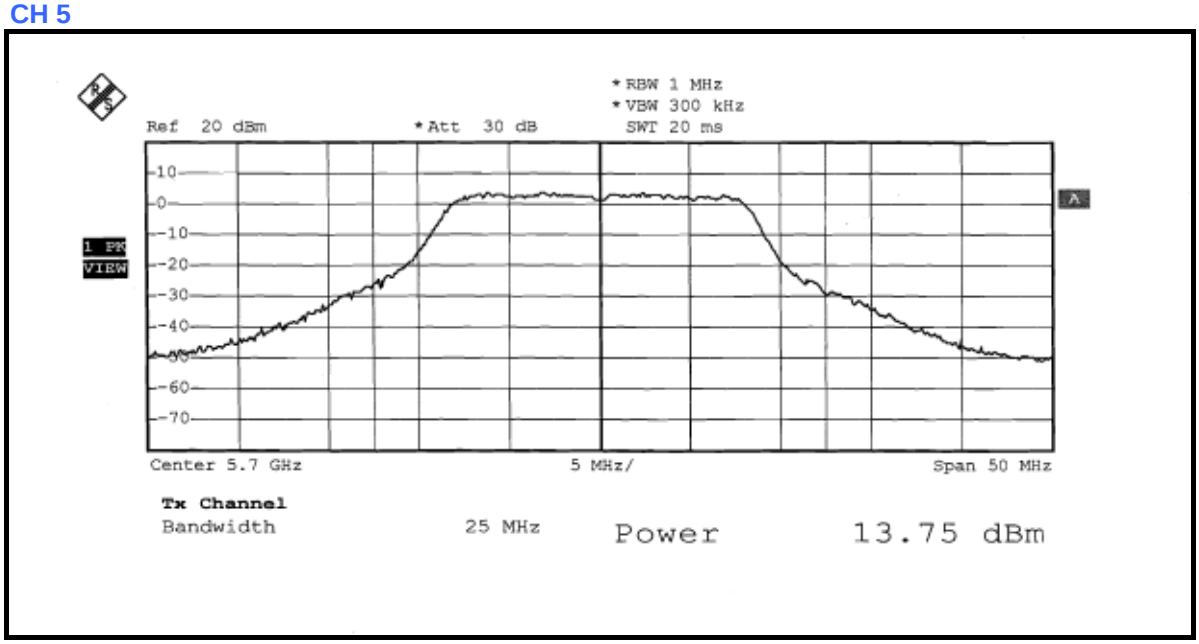
FOR CHAIN 0: CH 1



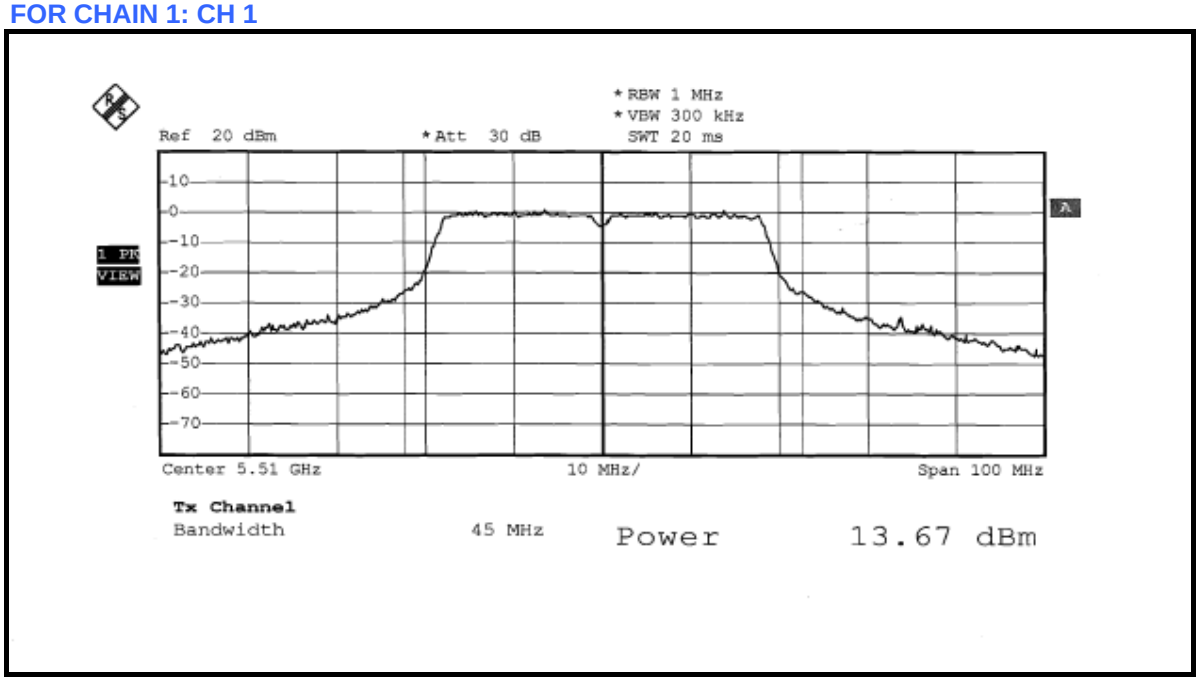
CH 3



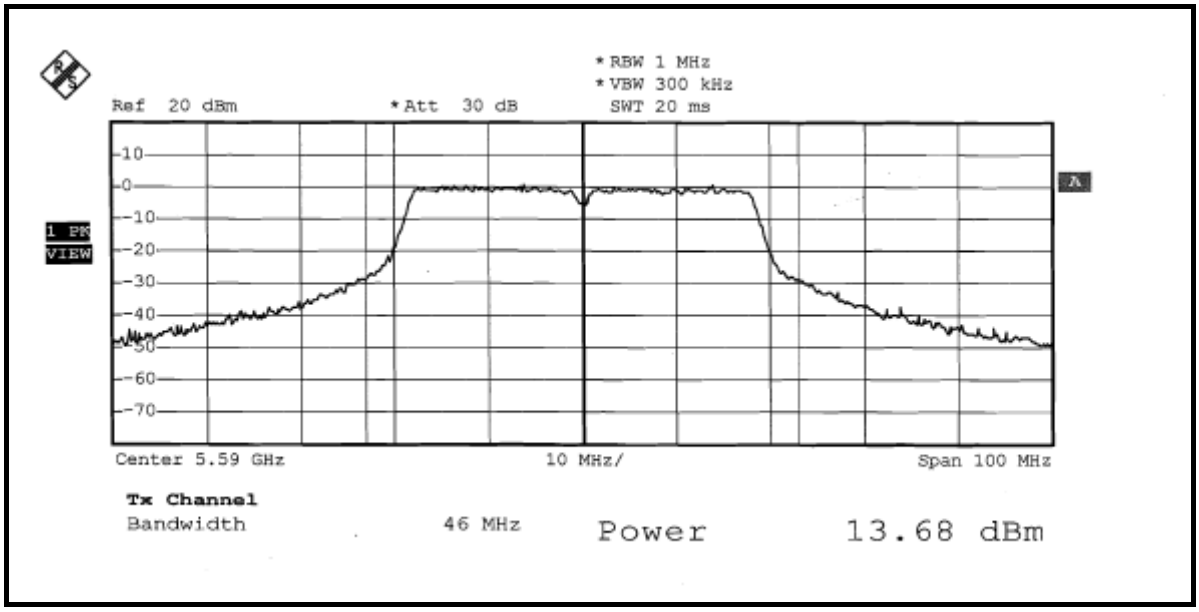
CH 5



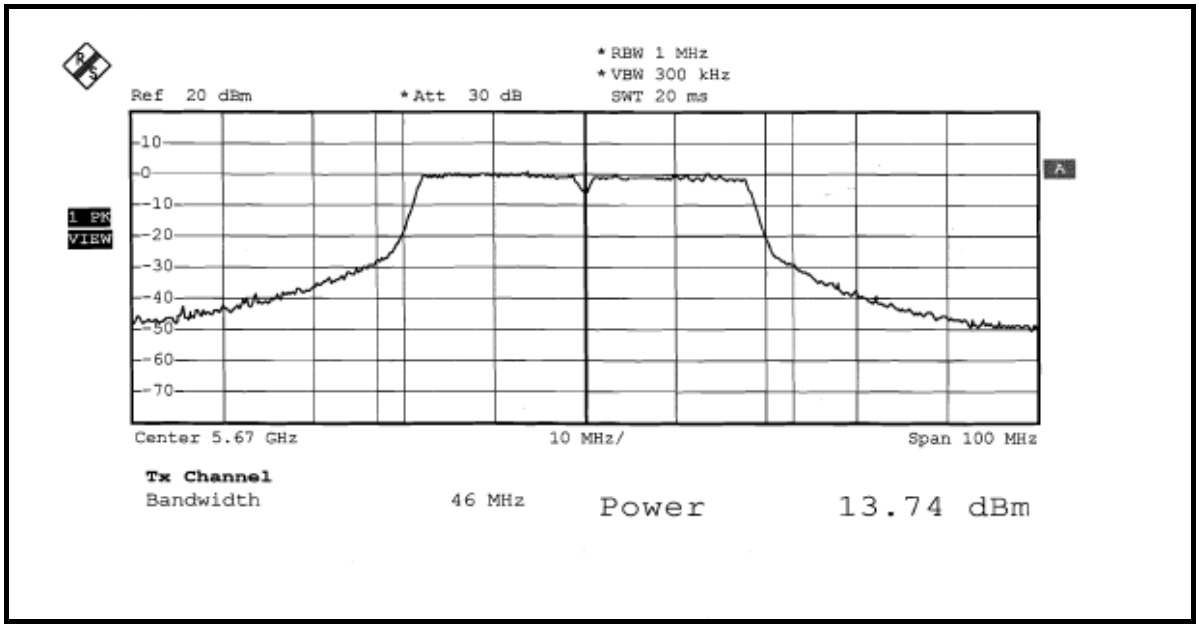
FOR CHAIN 1: CH 1



CH 3


*RBW 1 MHz
*VBW 300 kHz
Ref 20 dBm
*Att 30 dB
SWT 20 ms
1 PK VIEW
10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.59 GHz
10 MHz/
Span 100 MHz
Tx Channel
Bandwidth
46 MHz
Power
13.68 dBm

CH 5

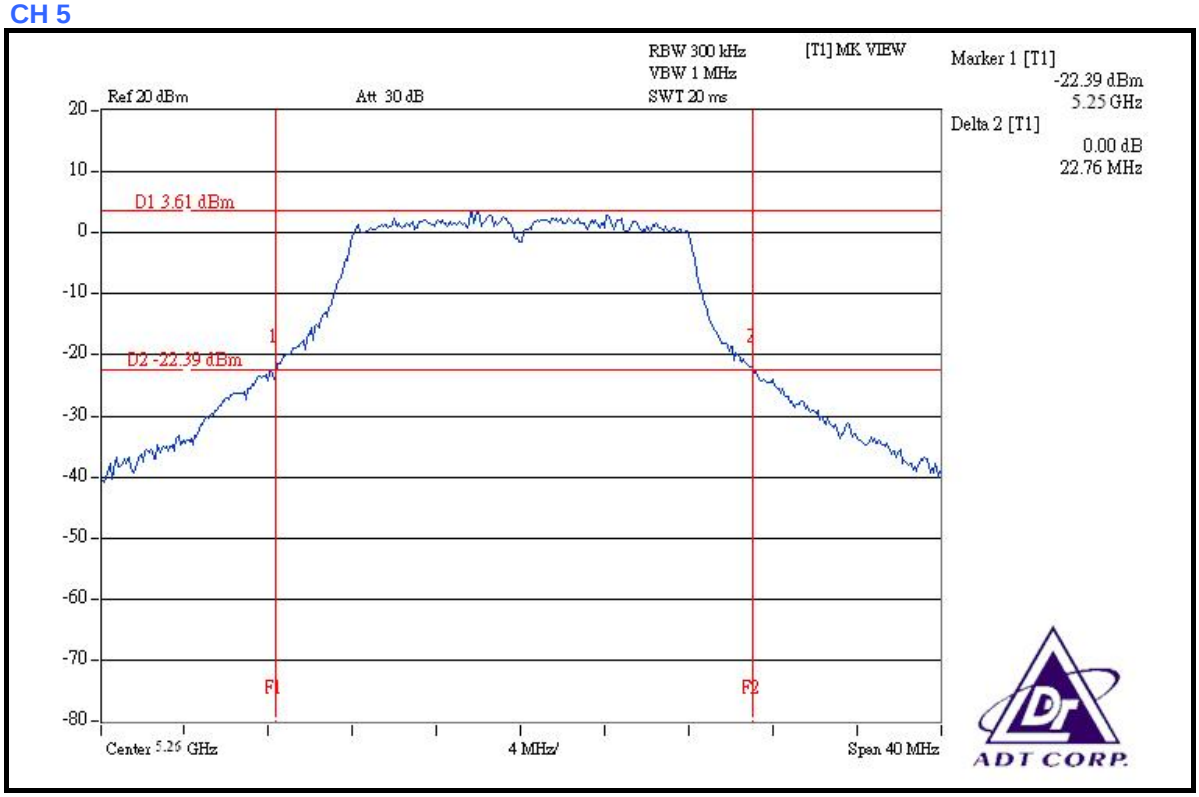

*RBW 1 MHz
*VBW 300 kHz
Ref 20 dBm
*Att 30 dB
SWT 20 ms
1 PK VIEW
10
0
-10
-20
-30
-40
-50
-60
-70
Center 5.67 GHz
10 MHz/
Span 100 MHz
Tx Channel
Bandwidth
46 MHz
Power
13.74 dBm

FOR FREQUENCY BAND: 5.25 ~ 5.35GHz
26dB OCCUPIED BANDWIDTH: 802.11a OFDM MODULATION:

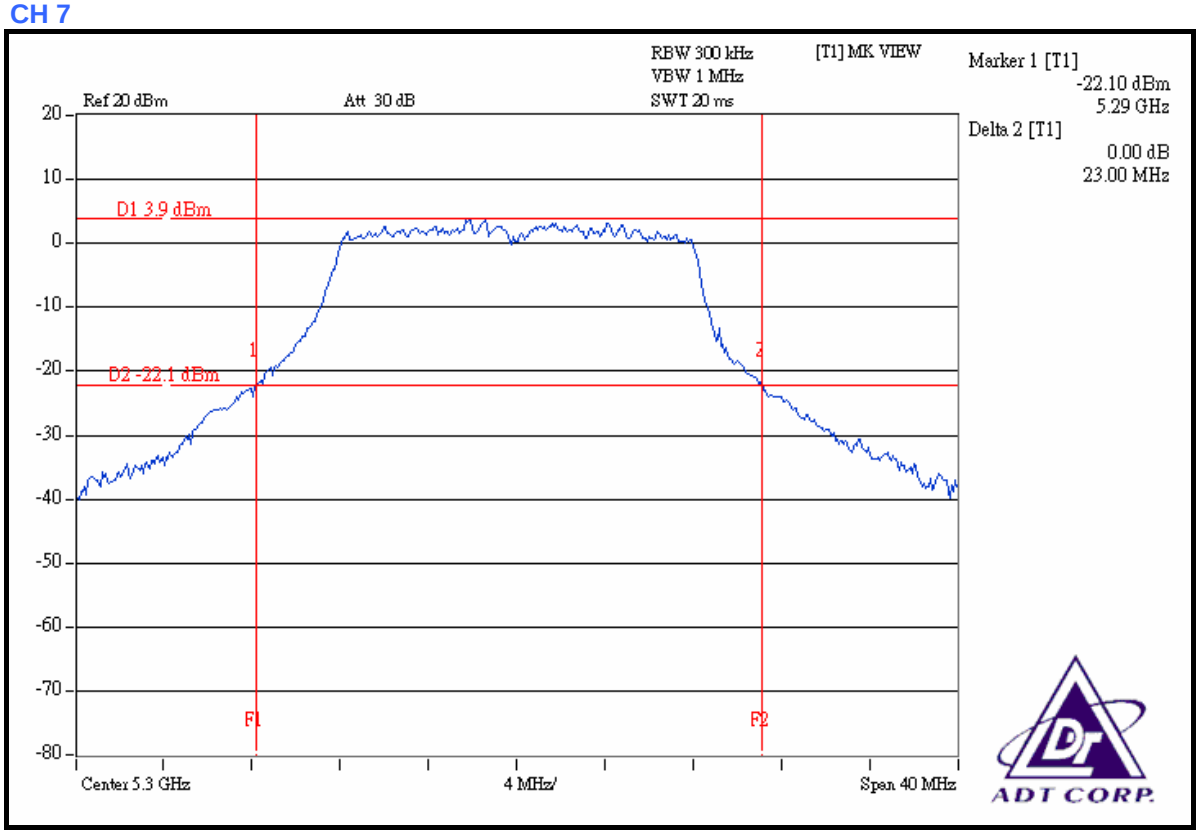
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
5	5260	22.76	PASS
7	5300	23.00	PASS
8	5320	22.95	PASS

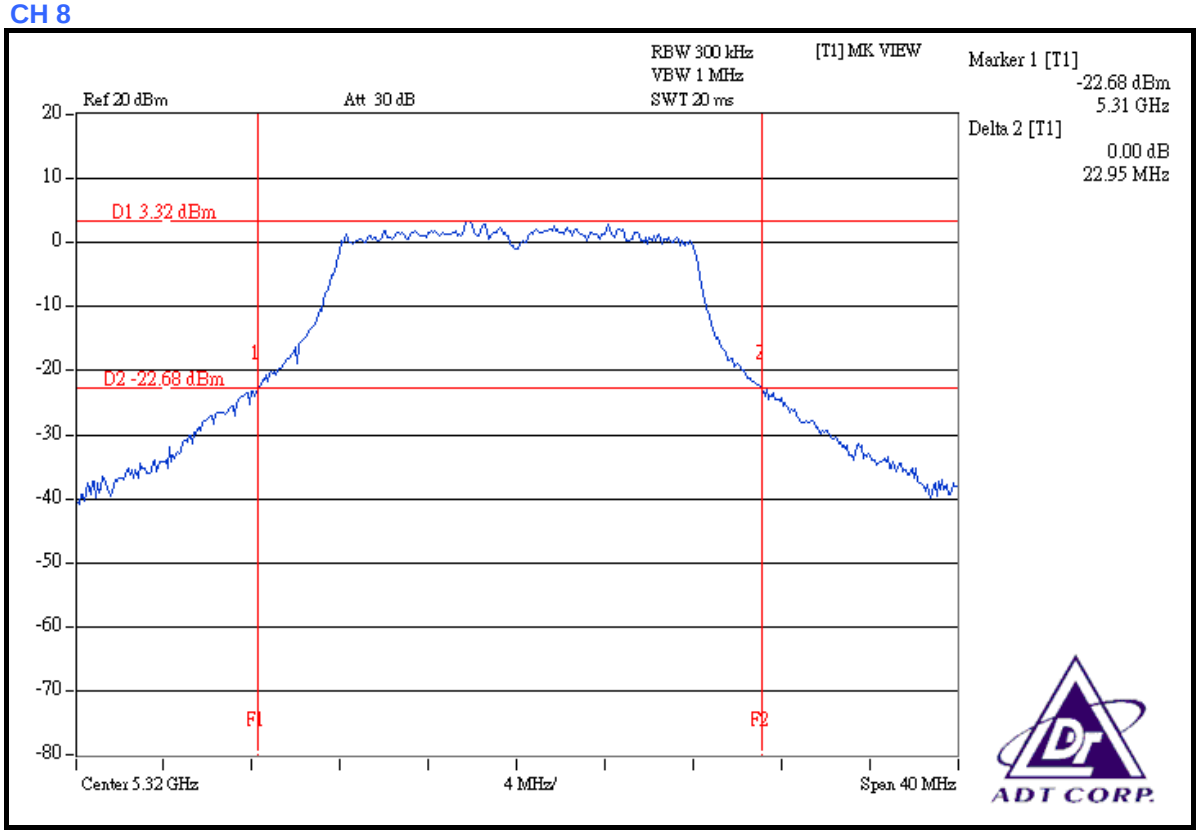
CH 5



CH 7


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-22.10 dBm
5.29 GHz
Delta 2 [T1]
0.00 dB
23.00 MHz
Ref 20 dBm
Att 30 dB
D1 3.9 dBm
D2 -22.1 dBm
F1
F2
Center 5.3 GHz
4 MHz/
Span 40 MHz

CH 8

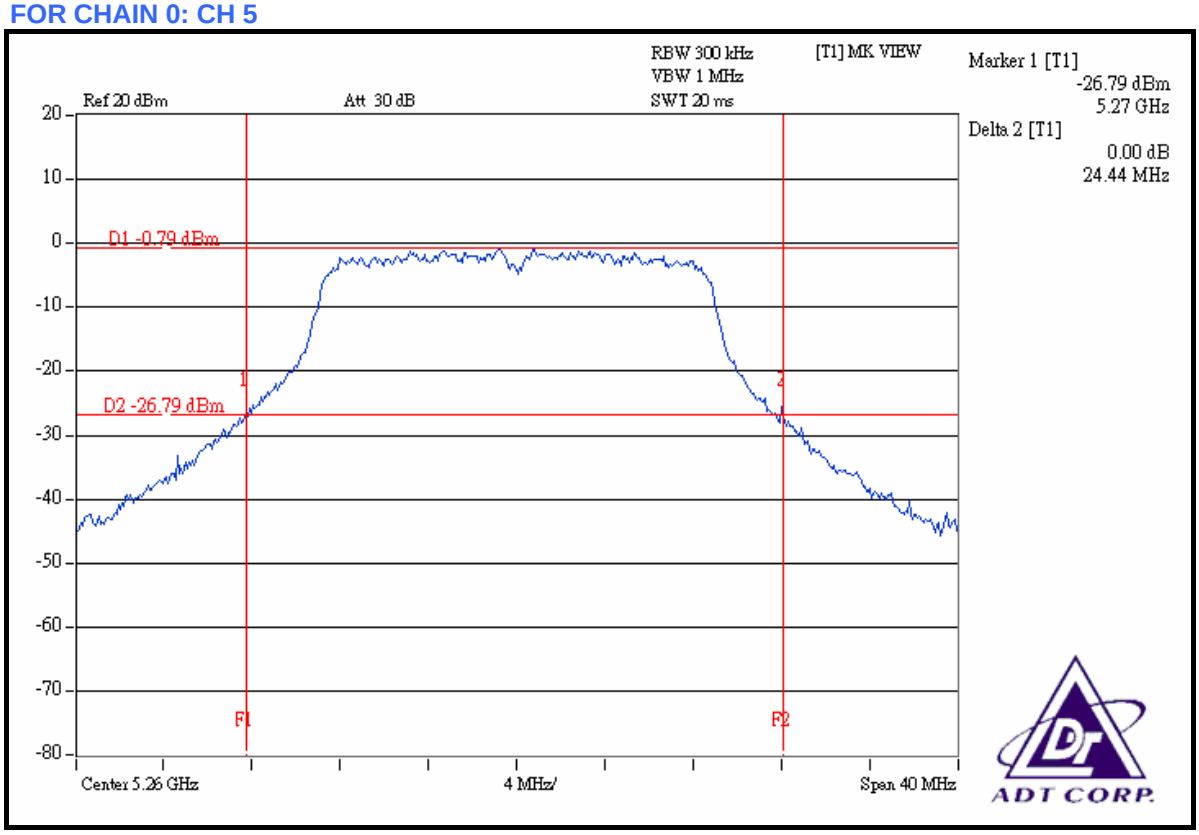

RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-22.68 dBm
5.31 GHz
Delta 2 [T1]
0.00 dB
22.95 MHz
Ref 20 dBm
Att 30 dB
D1 3.32 dBm
D2 -22.68 dBm
F1
F2
Center 5.32 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

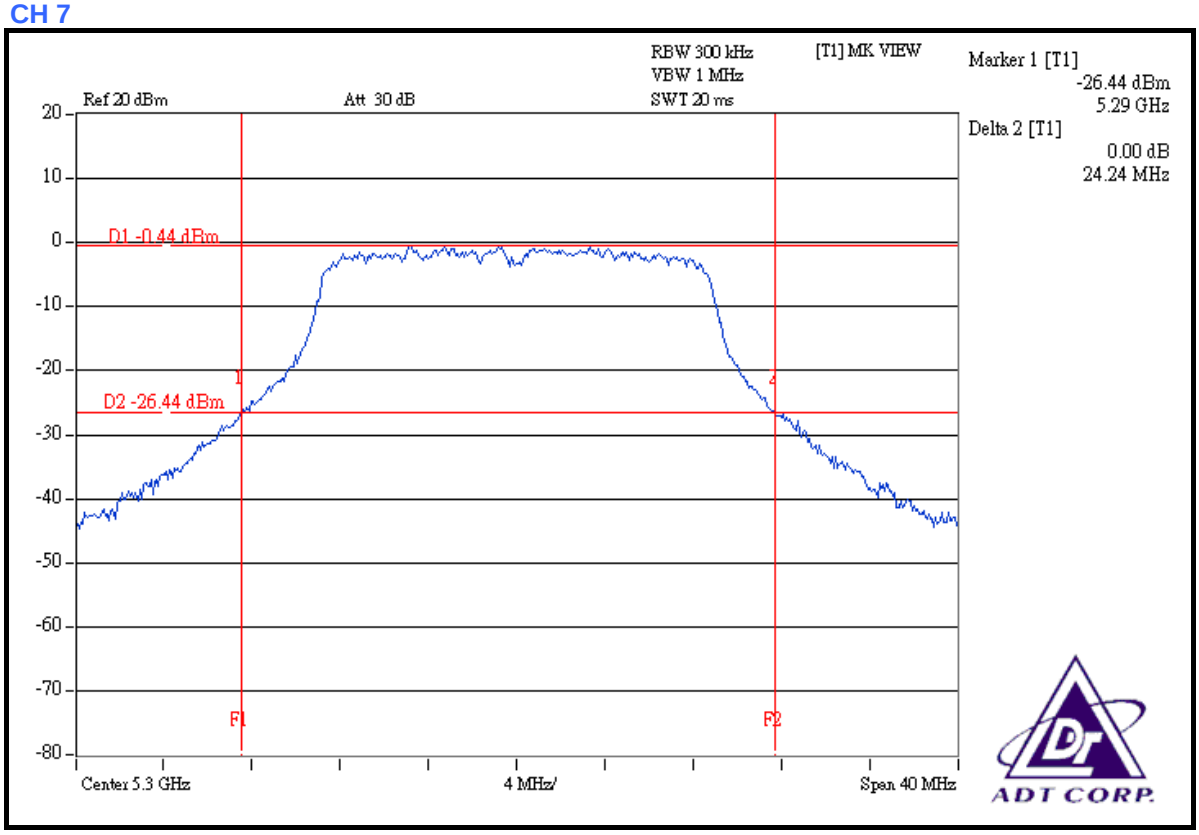
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
5	5260	24.44	23.86	PASS
7	5300	24.24	24.09	PASS
8	5320	24.55	24.13	PASS

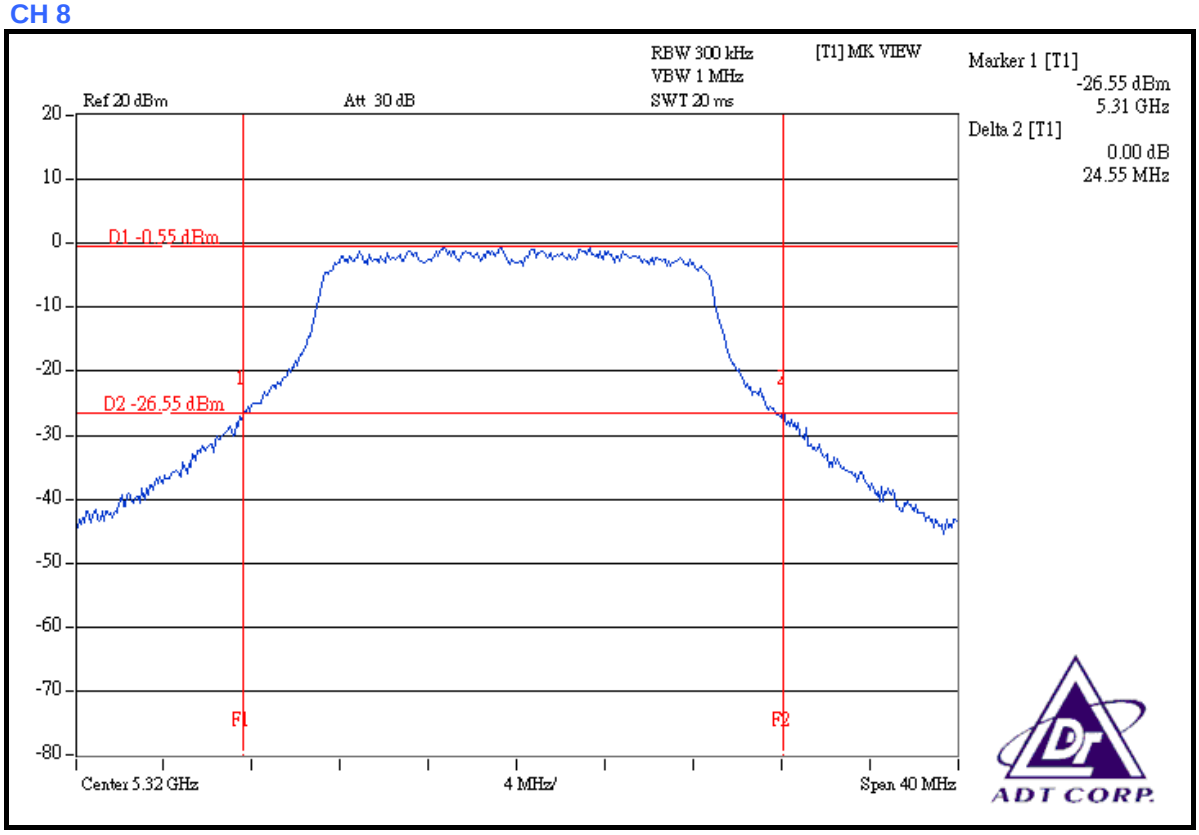
FOR CHAIN 0: CH 5



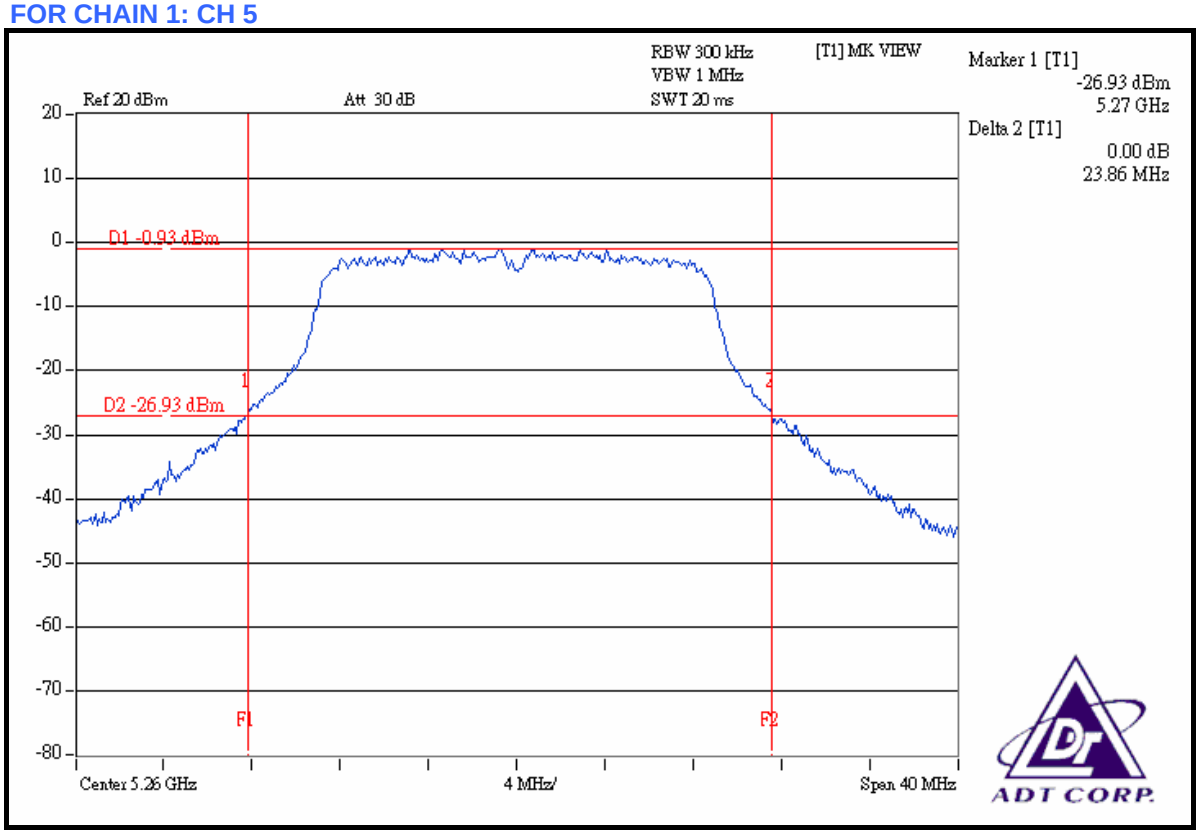
CH 7



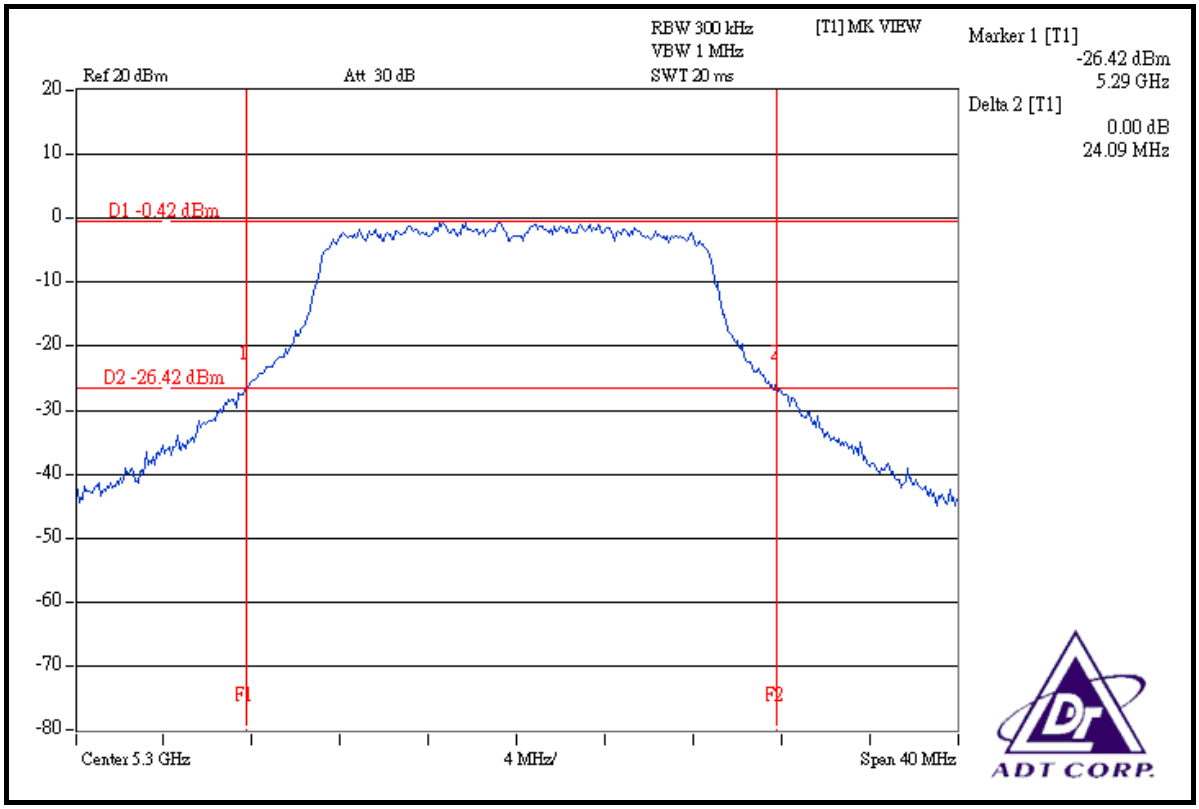
CH 8



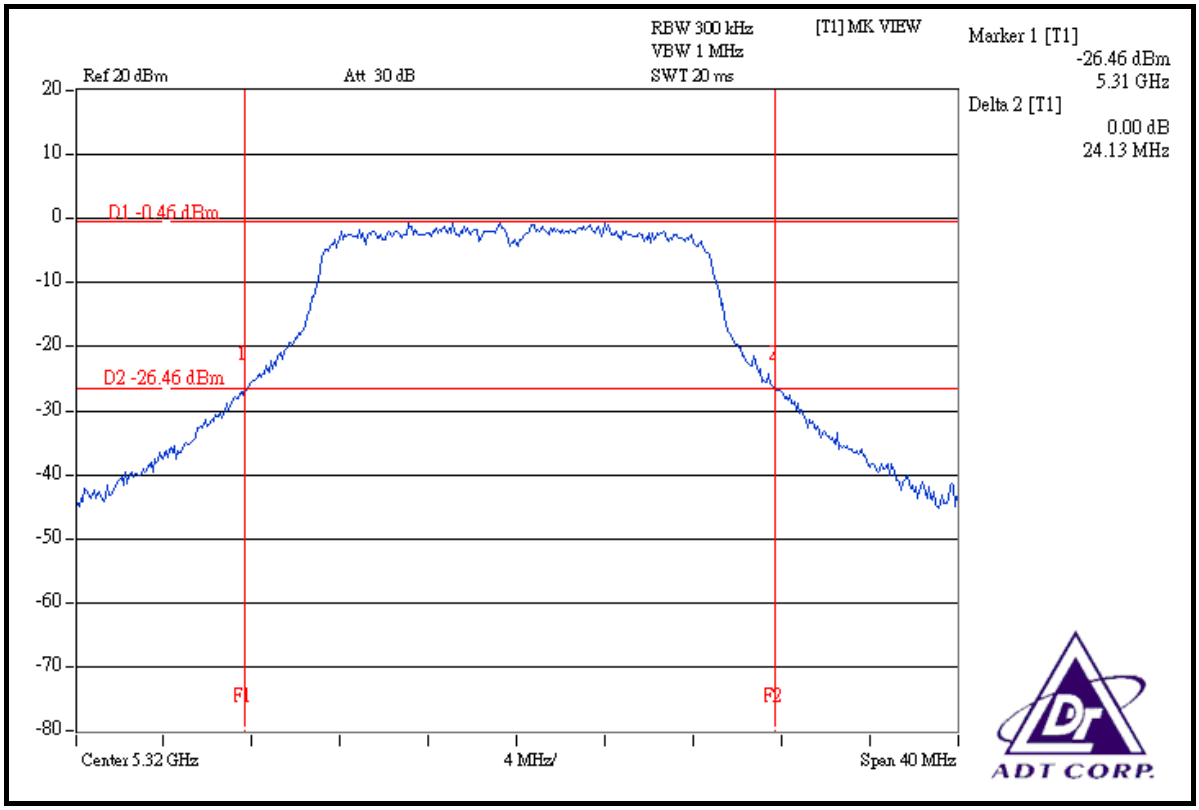
FOR CHAIN 1: CH 5



CH 7


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-26.42 dBm
5.29 GHz
Delta 2 [T1]
0.00 dB
24.09 MHz
Ref 20 dBm
Att 30 dB
D1 -0.42 dBm
D2 -26.42 dBm
F1
F2
Center 5.3 GHz
4 MHz/
Span 40 MHz

CH 8

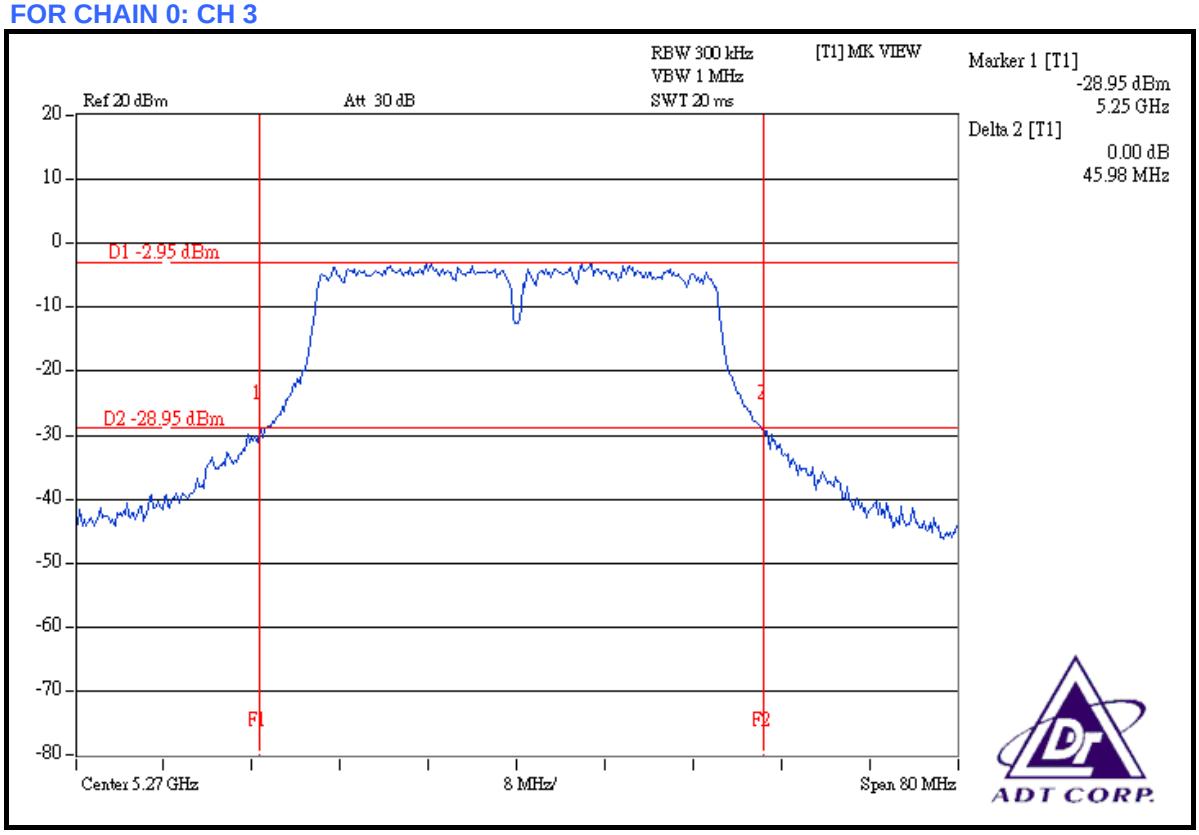

RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-26.46 dBm
5.31 GHz
Delta 2 [T1]
0.00 dB
24.13 MHz
Ref 20 dBm
Att 30 dB
D1 -0.46 dBm
D2 -26.46 dBm
F1
F2
Center 5.32 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

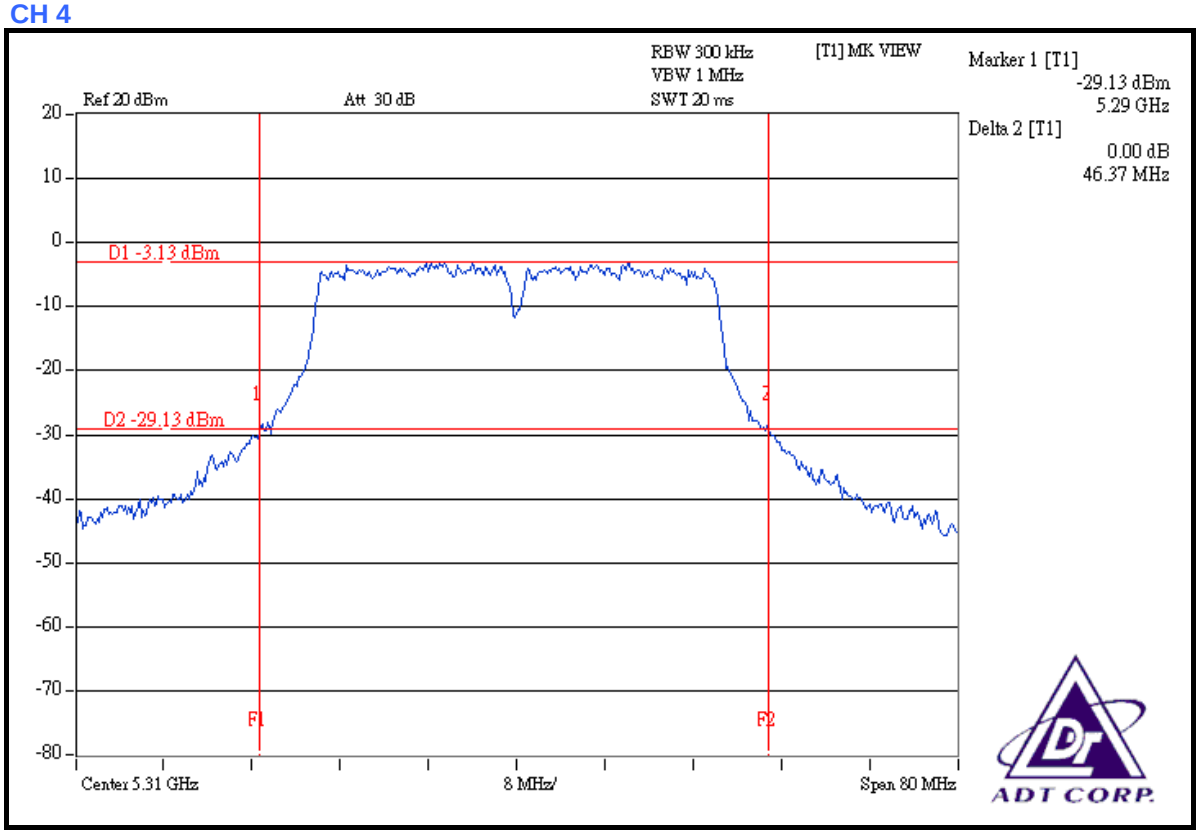
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
3	5270	45.98	46.15	PASS
4	5310	46.37	46.31	PASS

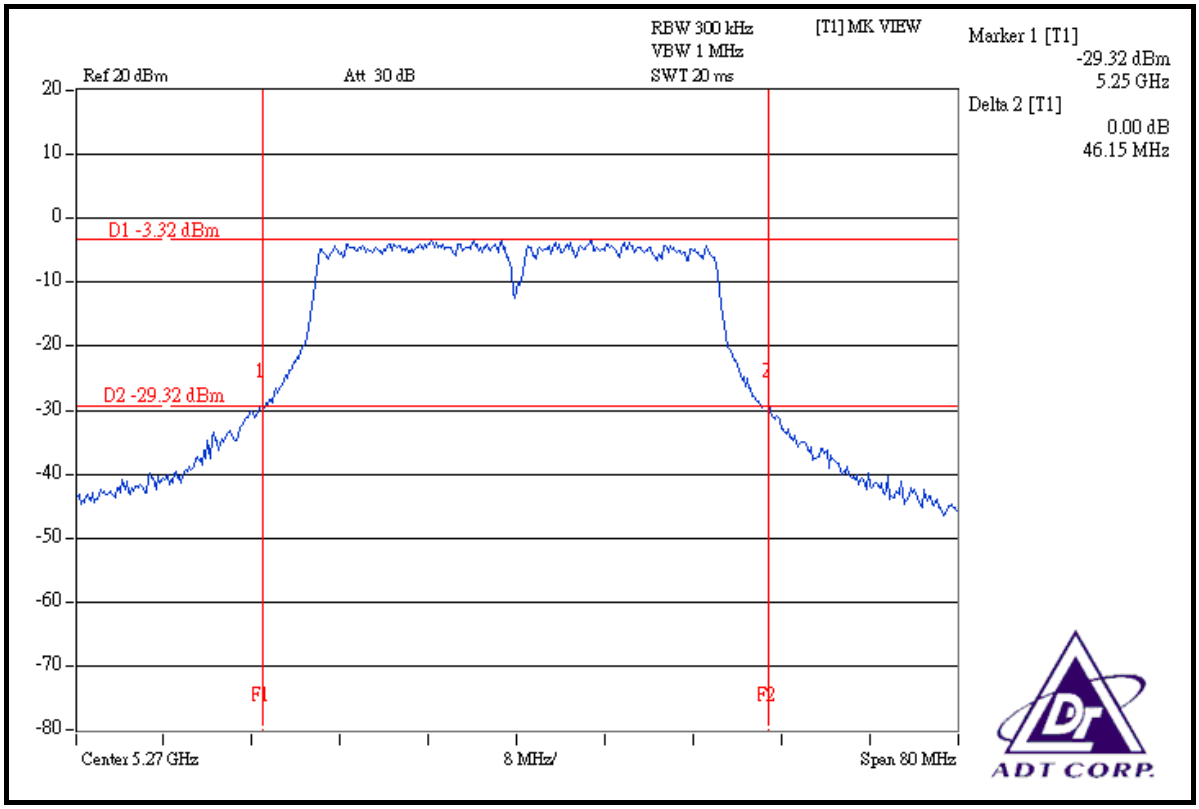
FOR CHAIN 0: CH 3



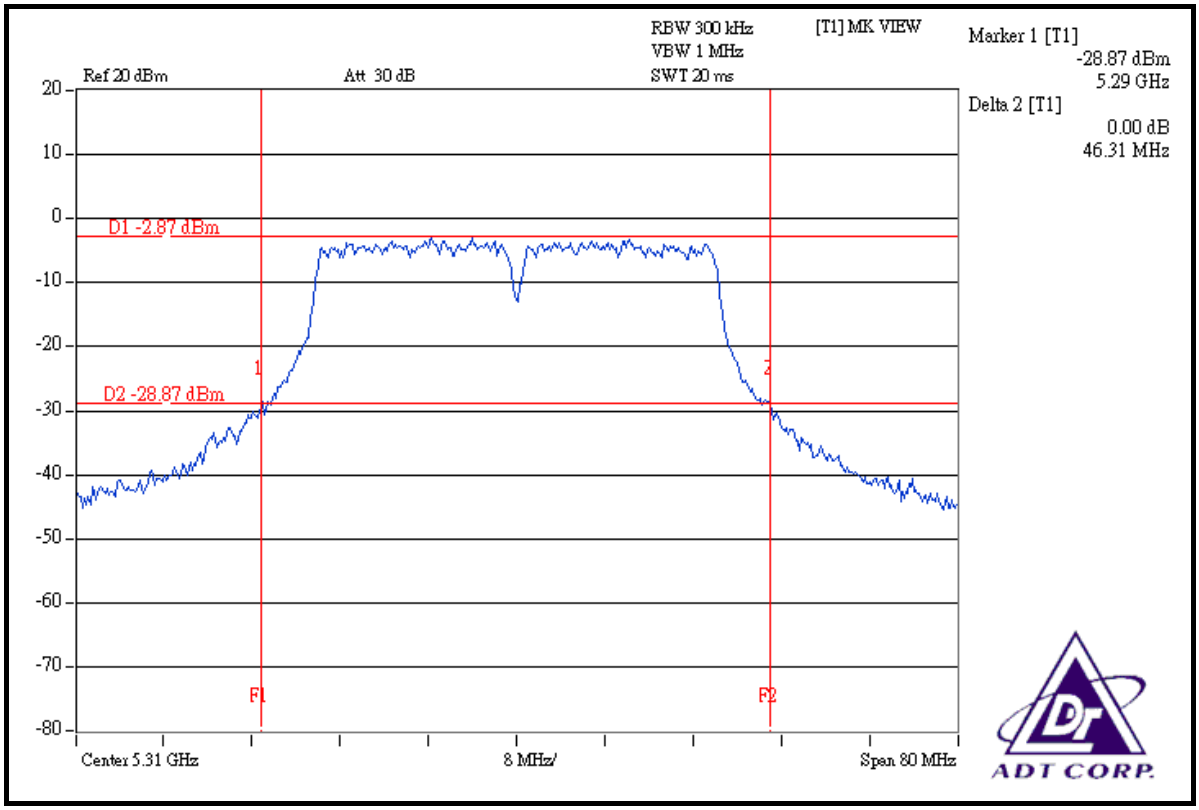
CH 4



FOR CHAIN 1: CH 3



CH 4



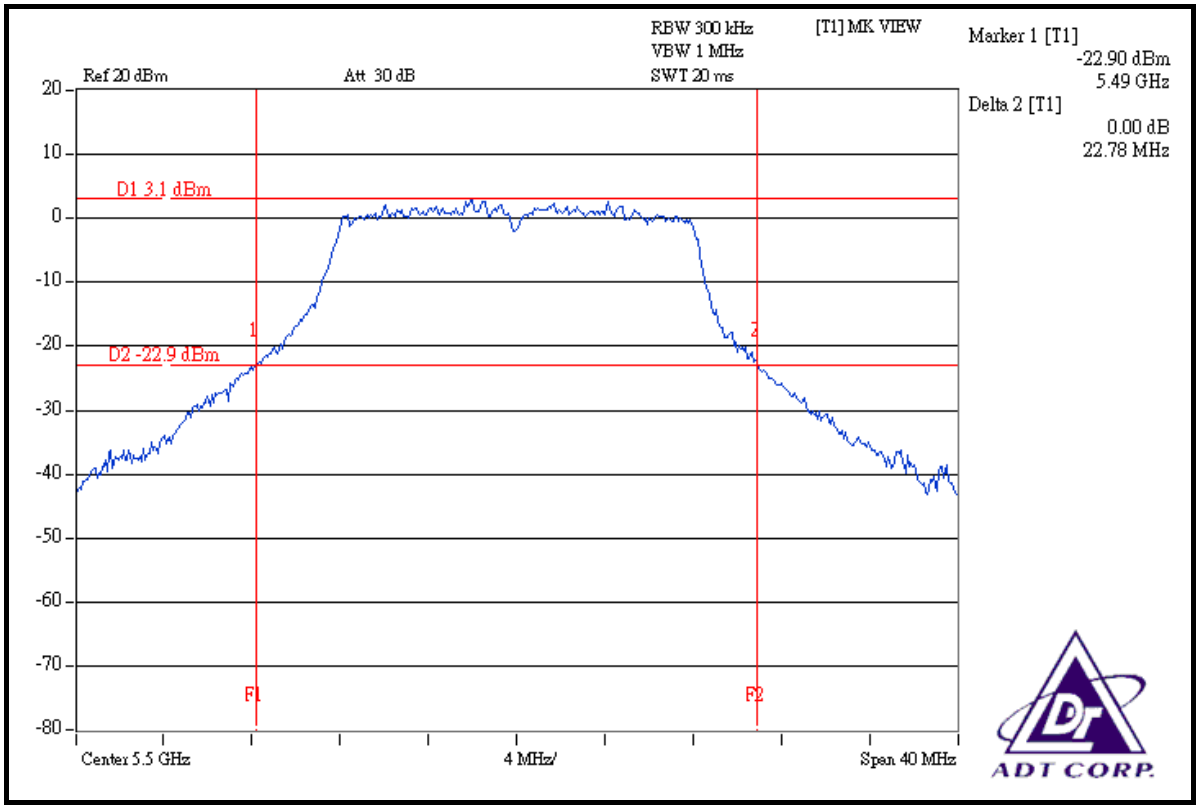
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

26dB OCCUPIED BANDWIDTH: 802.11a OFDM MODULATION:

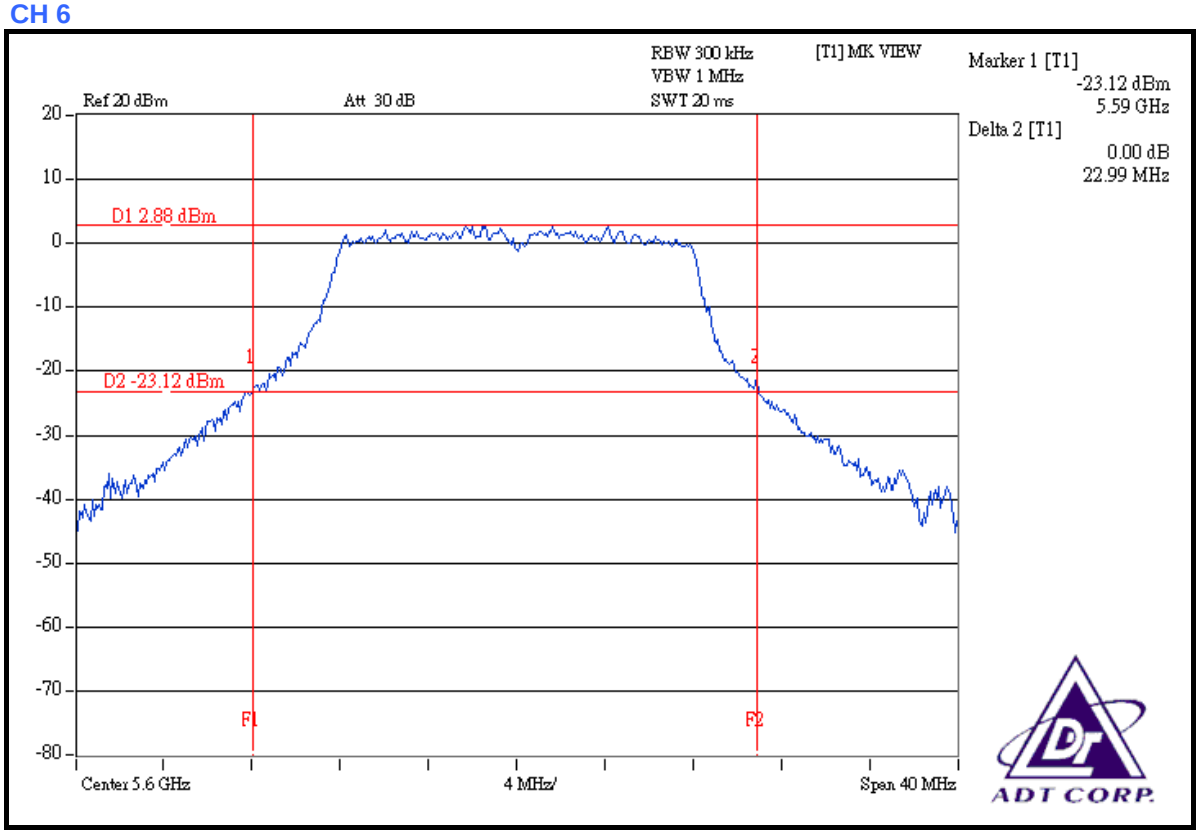
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
1	5500	22.78	PASS
6	5600	22.99	PASS
11	5700	22.77	PASS

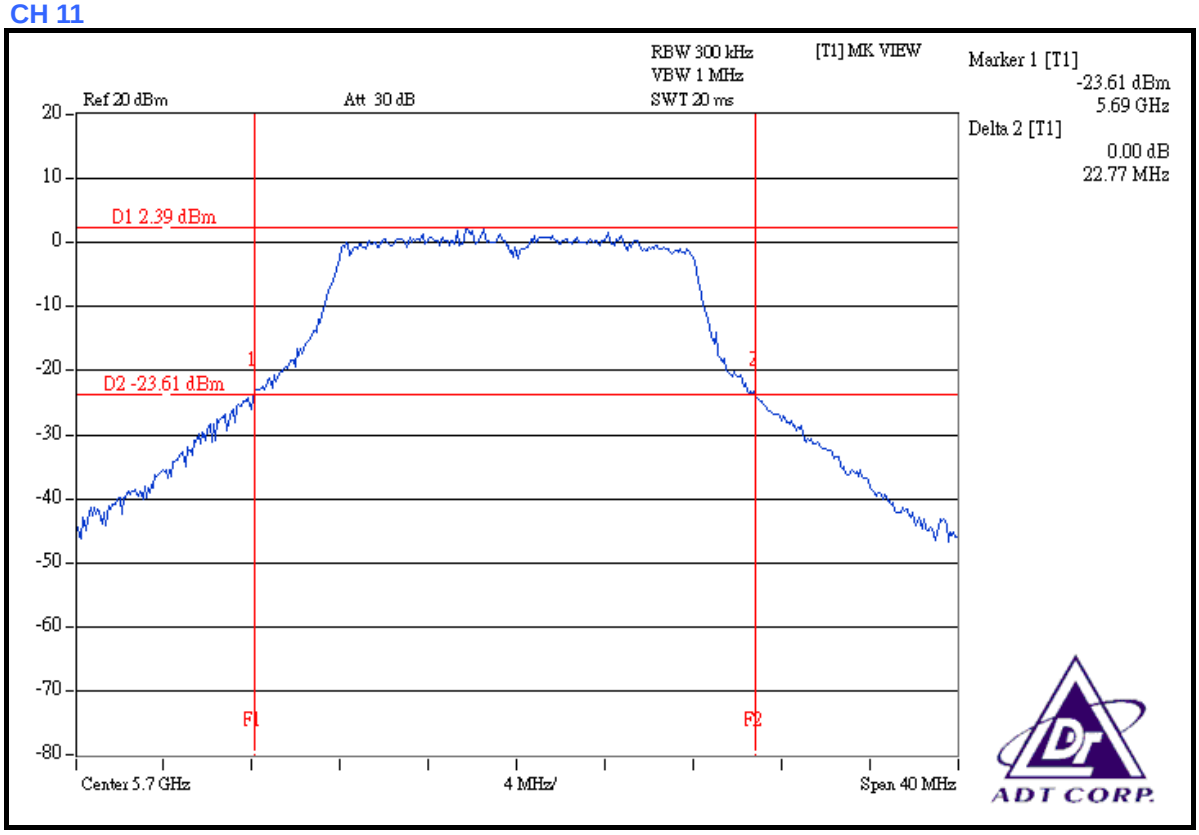
CH 1



CH 6


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-23.12 dBm
5.59 GHz
Delta 2 [T1]
0.00 dB
22.99 MHz
Ref 20 dBm
Att 30 dB
D1 2.88 dBm
D2 -23.12 dBm
F1
F2
Center 5.6 GHz
4 MHz/
Span 40 MHz

CH 11

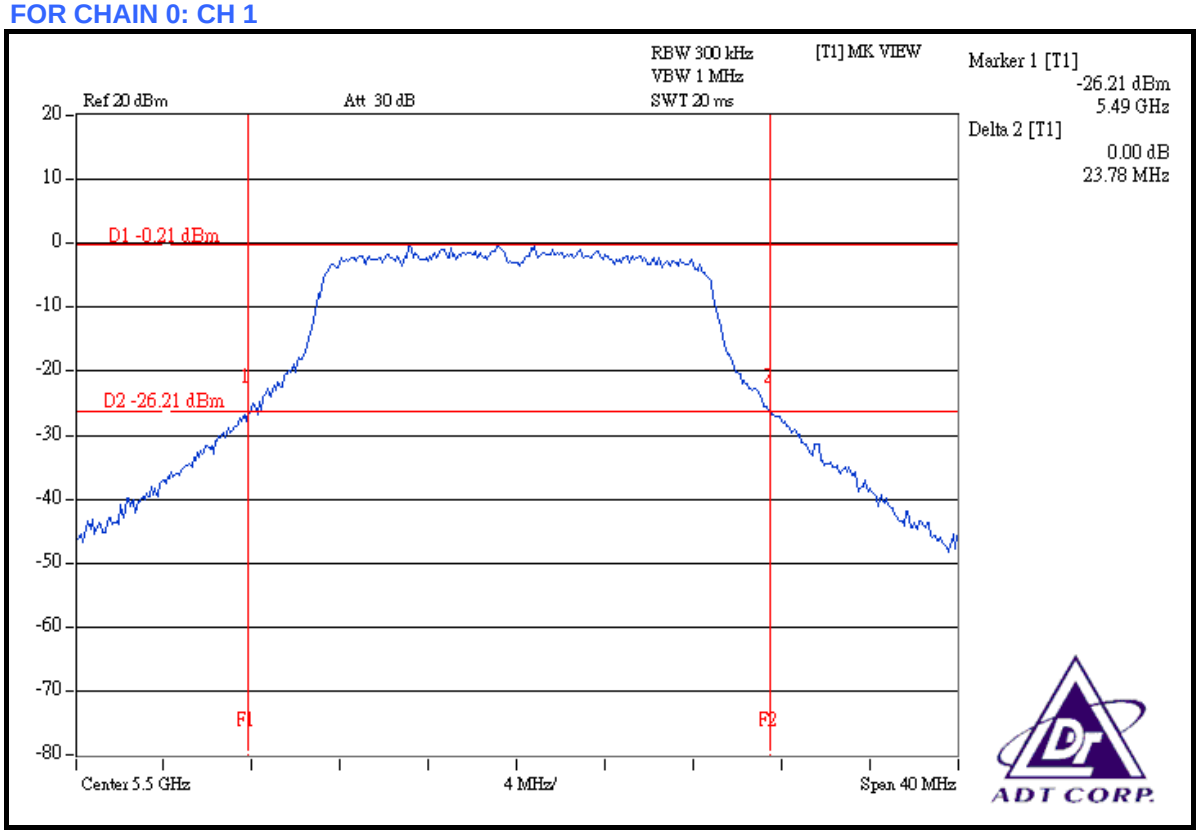

RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-23.61 dBm
5.69 GHz
Delta 2 [T1]
0.00 dB
22.77 MHz
Ref 20 dBm
Att 30 dB
D1 2.39 dBm
D2 -23.61 dBm
F1
F2
Center 5.7 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

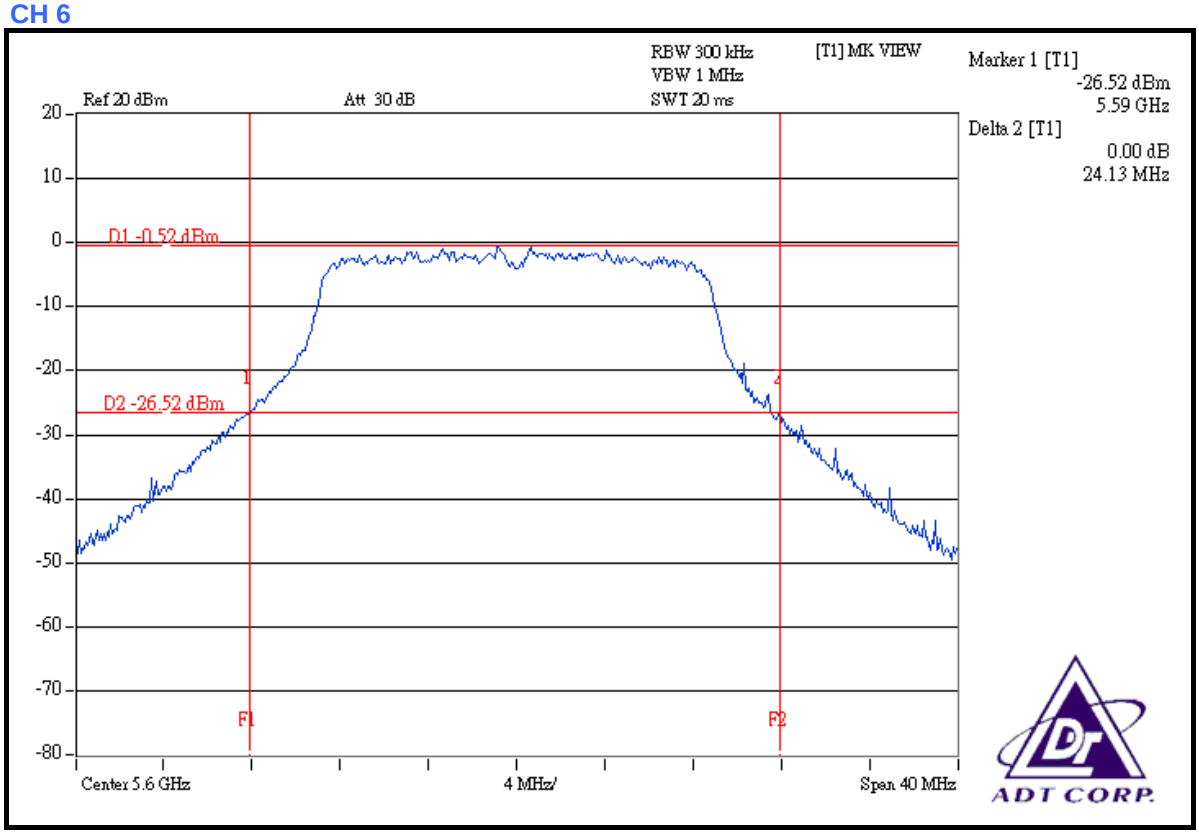
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
1	5500	23.78	23.87	PASS
6	5600	24.13	23.81	PASS
11	5700	24.26	23.80	PASS

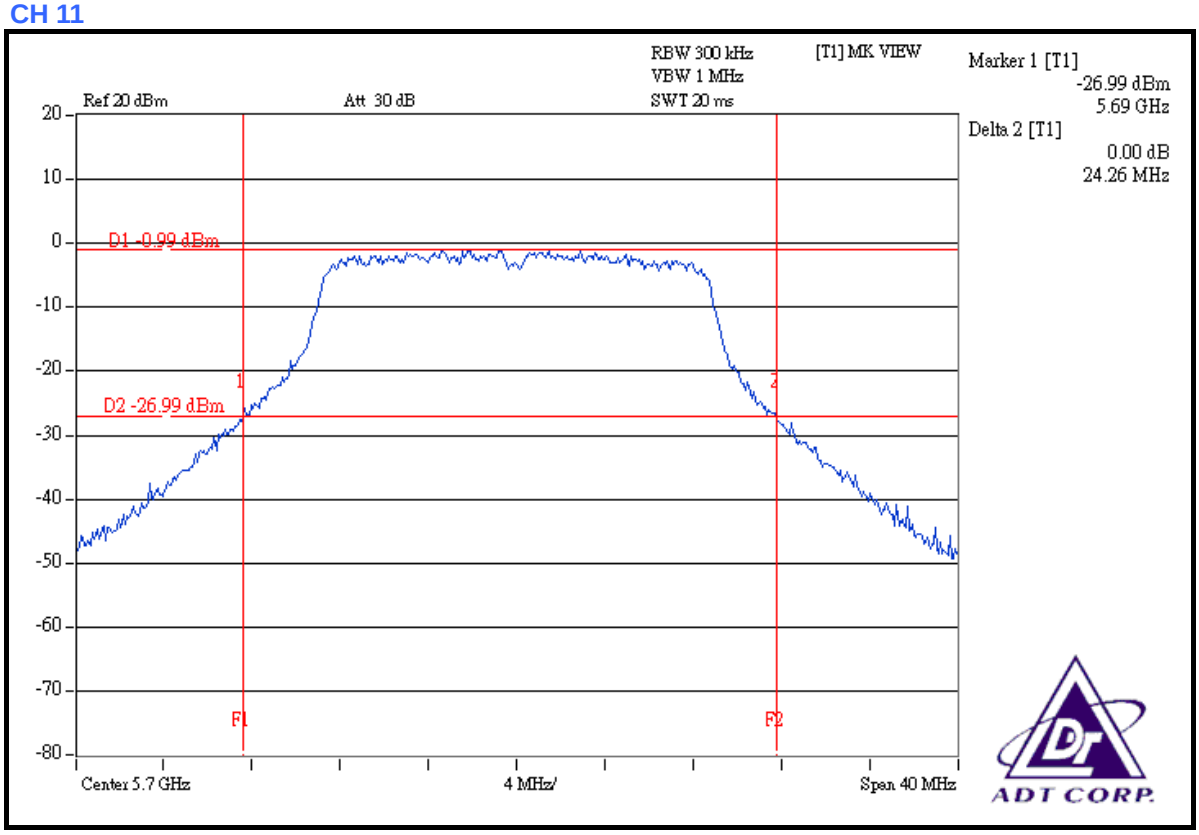
FOR CHAIN 0: CH 1



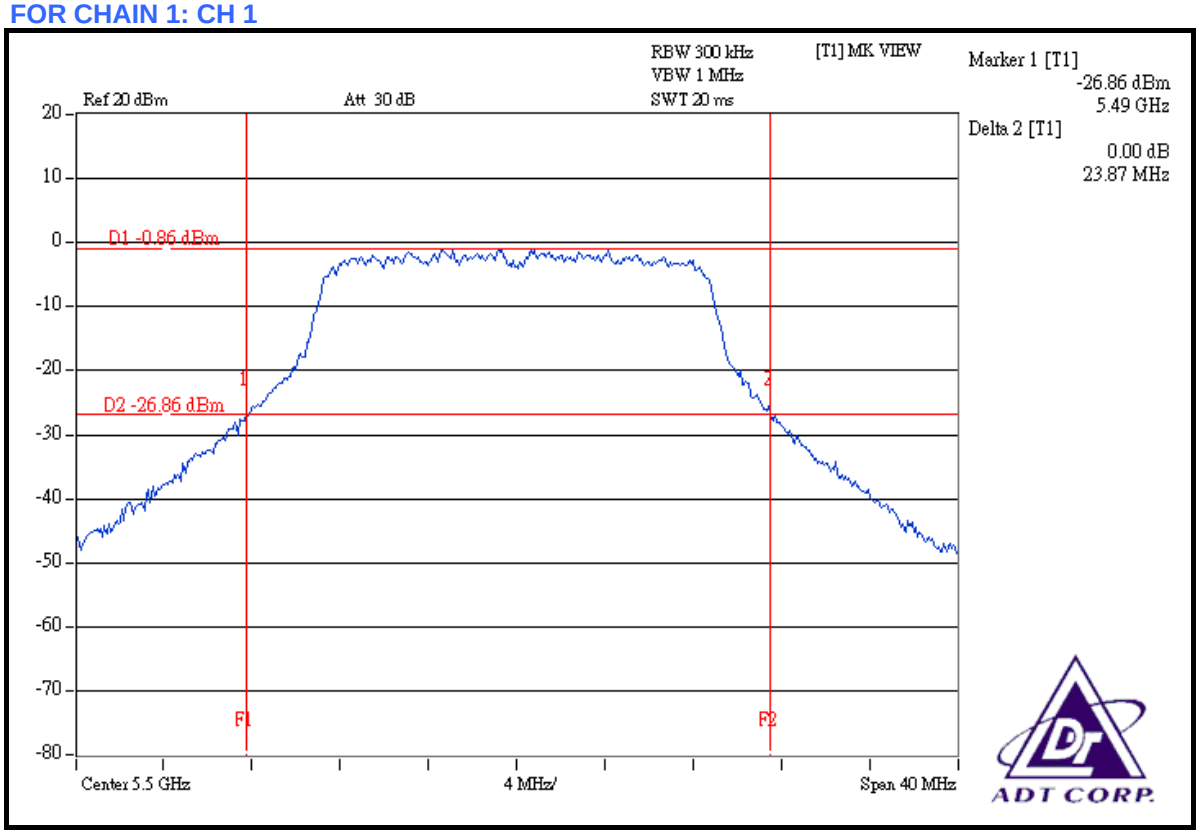
CH 6



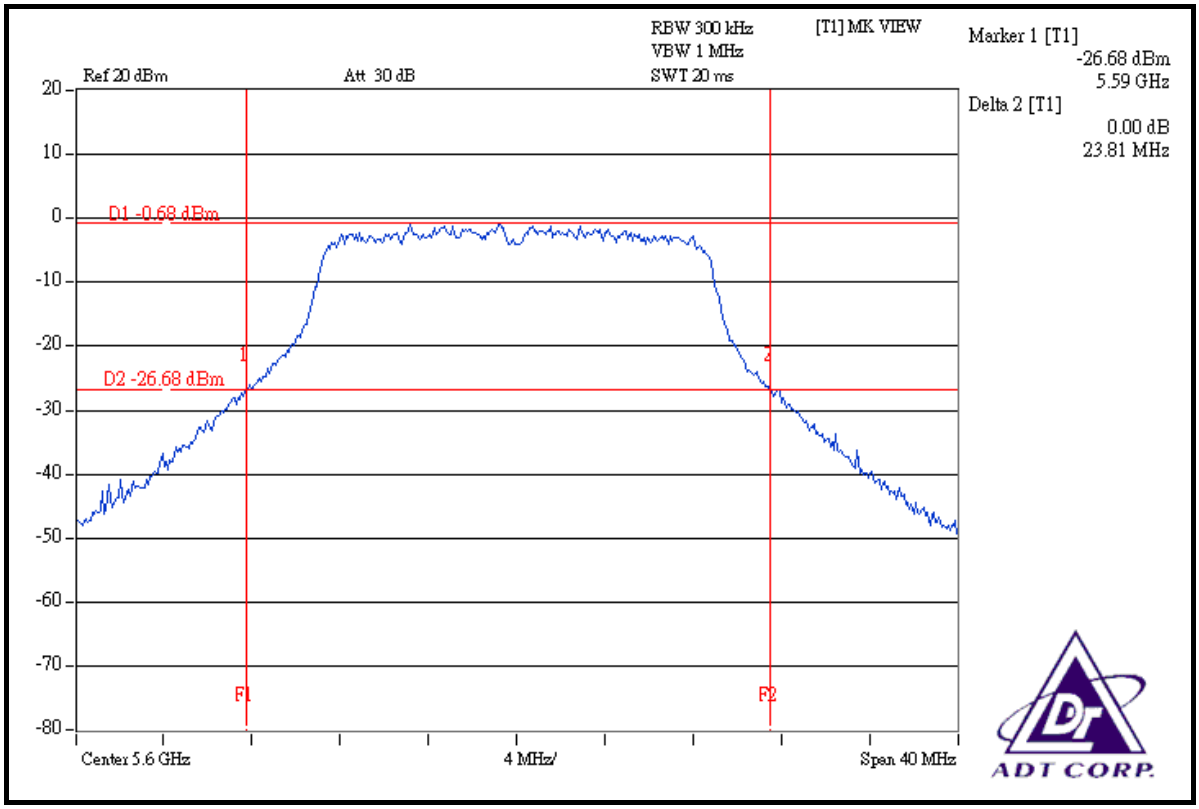
CH 11



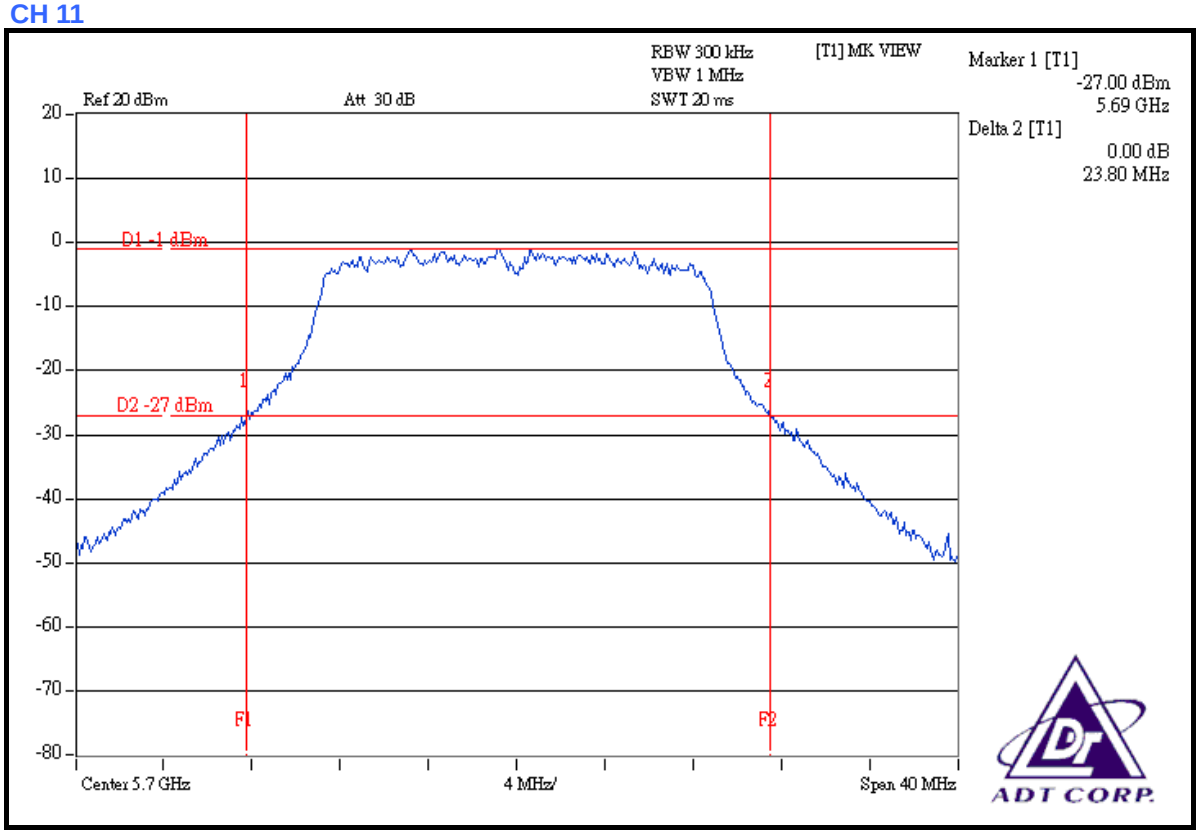
FOR CHAIN 1: CH 1



CH 6


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-26.68 dBm
5.59 GHz
Delta 2 [T1]
0.00 dB
23.81 MHz
Ref 20 dBm
Att 30 dB
D1 -0.68 dBm
D2 -26.68 dBm
F1
F2
Center 5.6 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 11

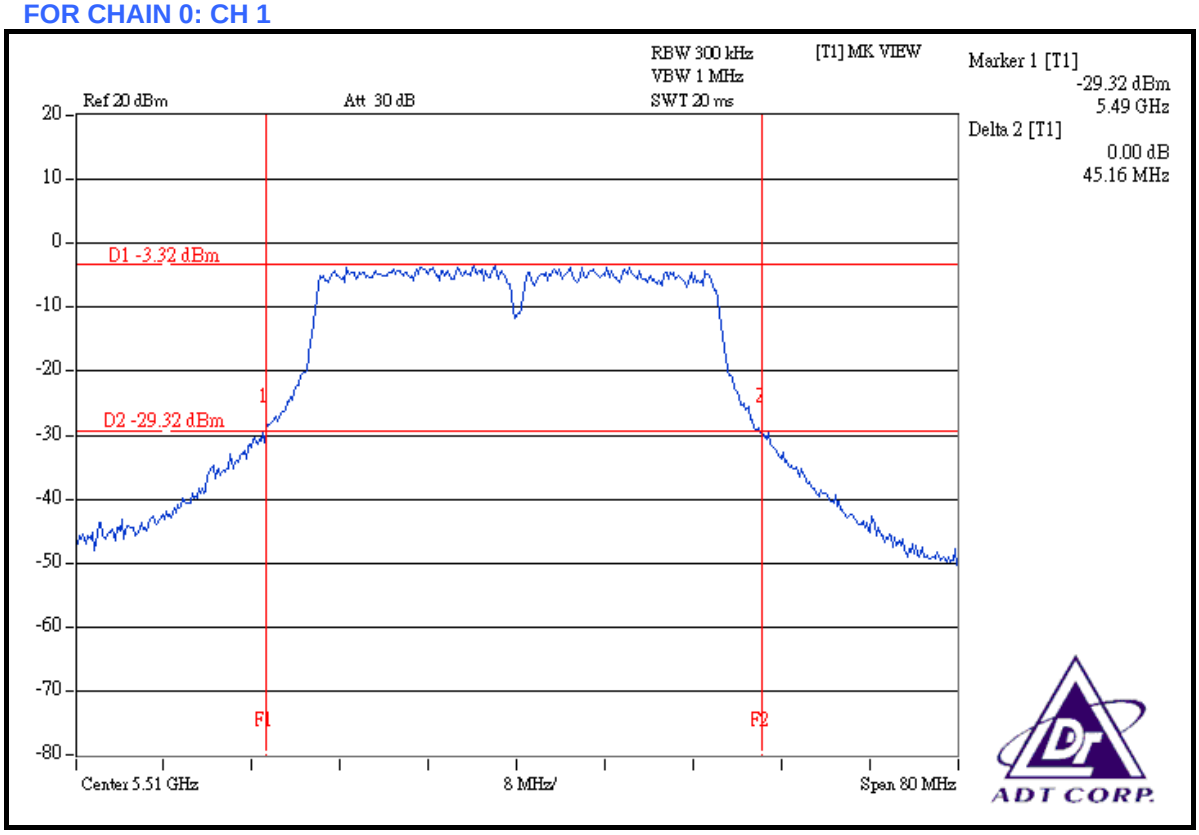

RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-27.00 dBm
5.69 GHz
Delta 2 [T1]
0.00 dB
23.80 MHz
Ref 20 dBm
Att 30 dB
D1 -1 dBm
D2 -27 dBm
F1
F2
Center 5.7 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (40MHz) OFDM MODULATION:

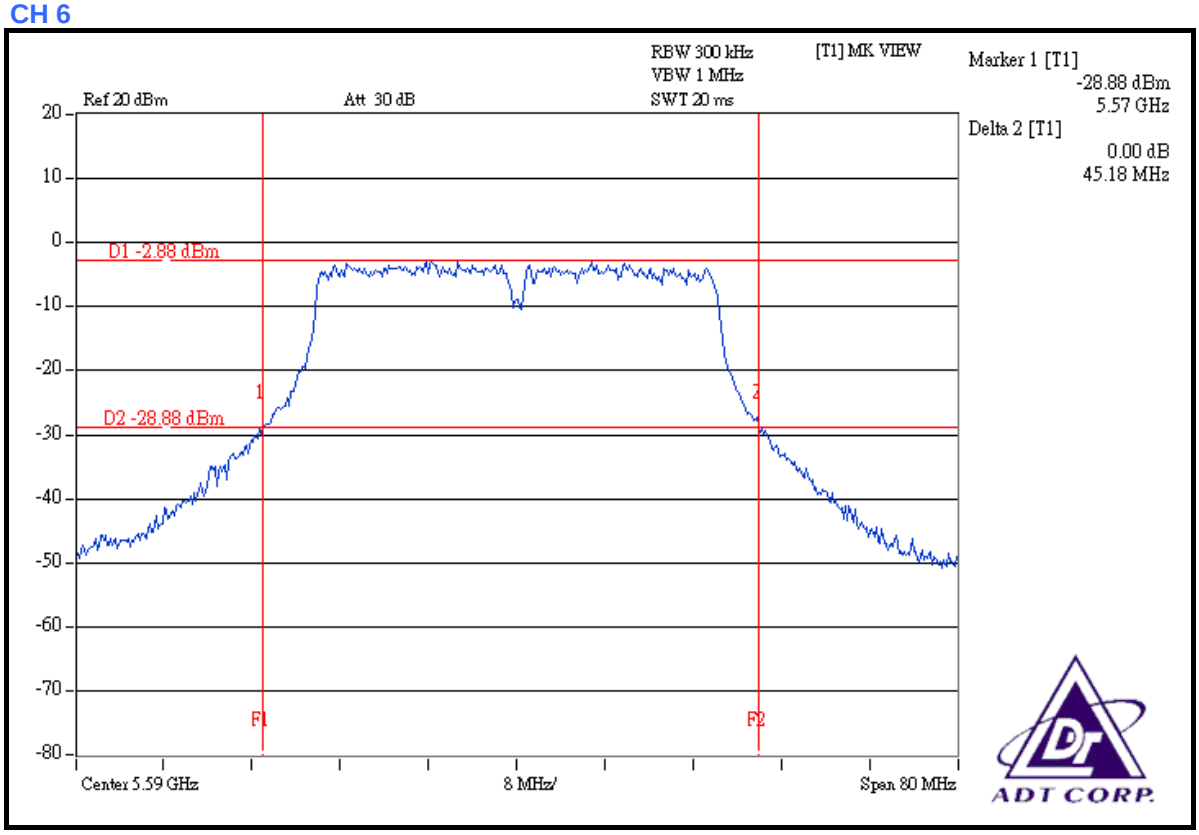
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
1	5510	45.16	44.49	PASS
3	5590	45.18	45.10	PASS
5	5670	45.41	45.48	PASS

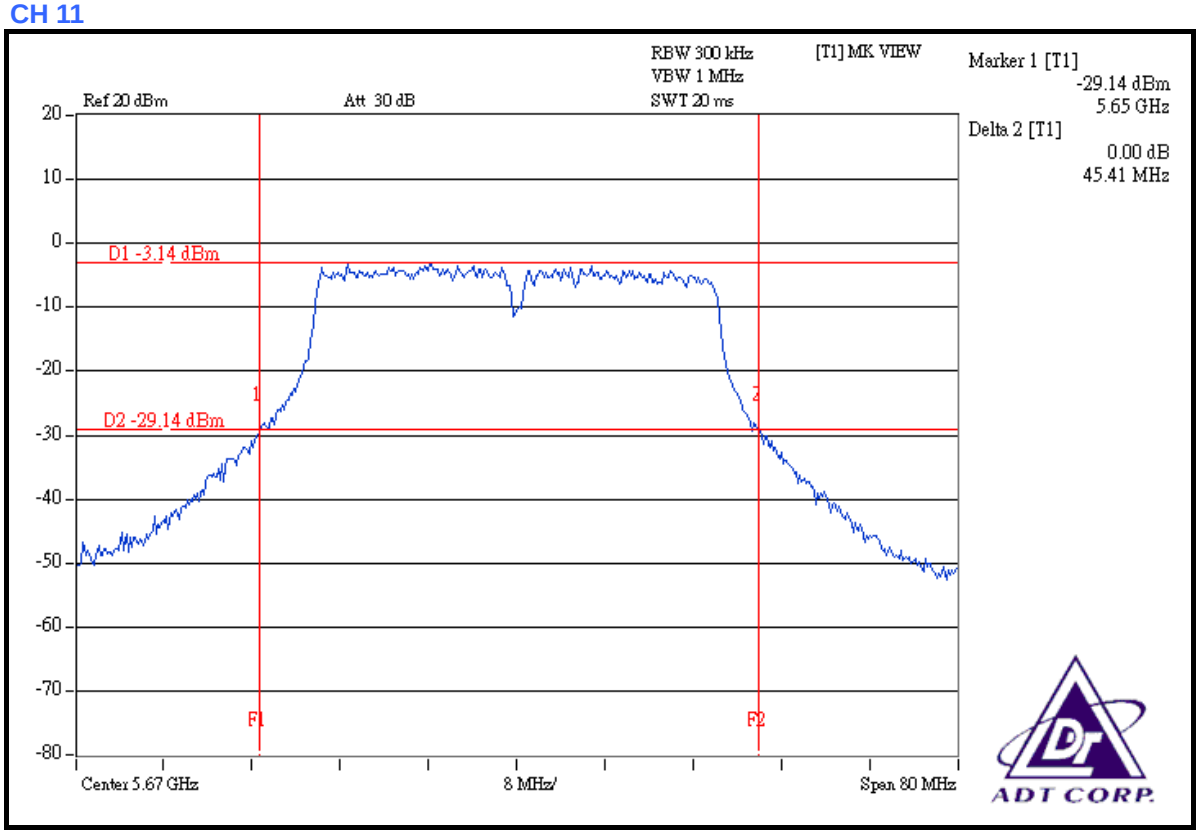
FOR CHAIN 0: CH 1



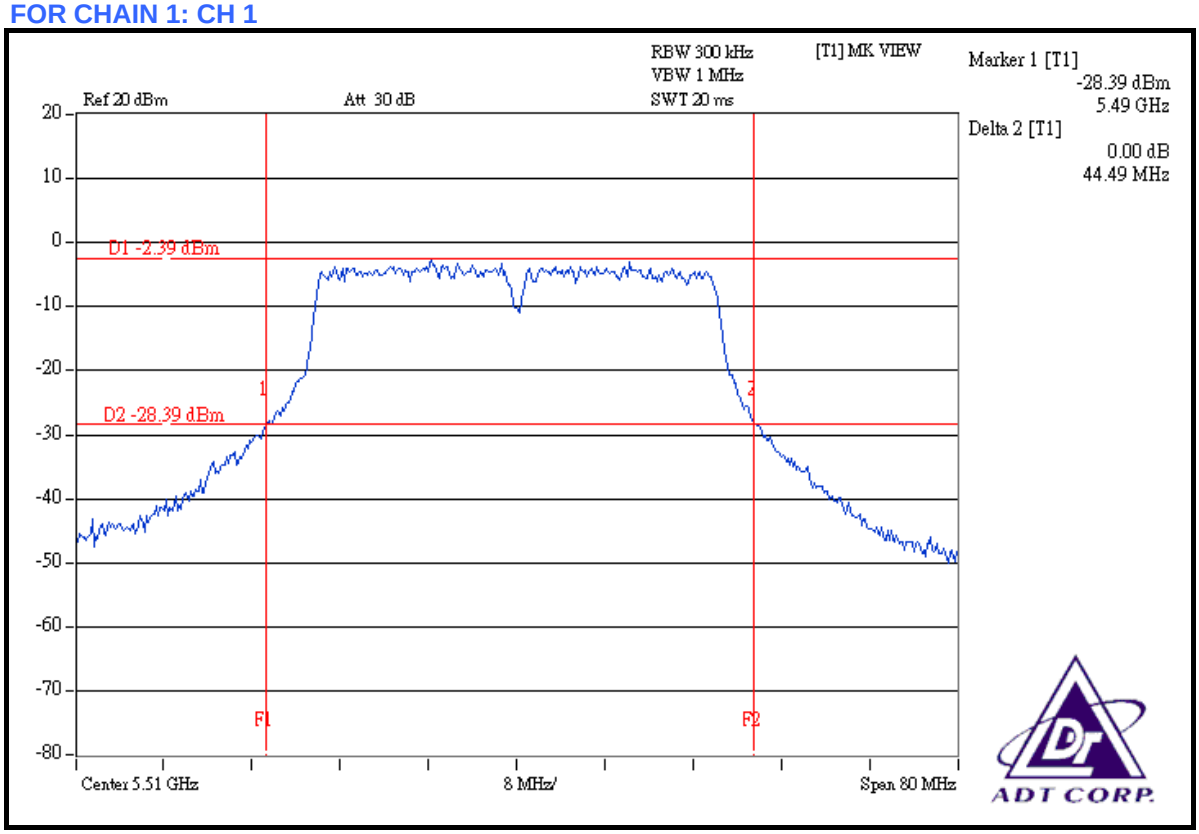
CH 6



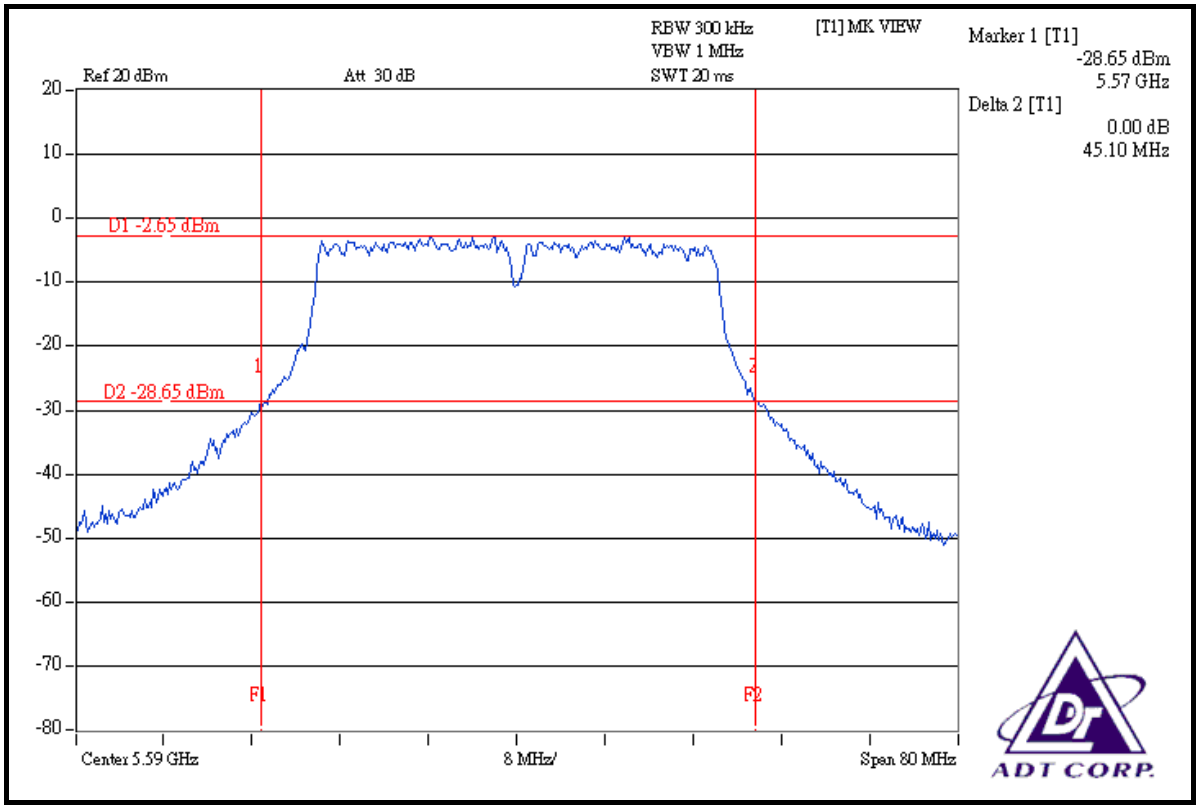
CH 11



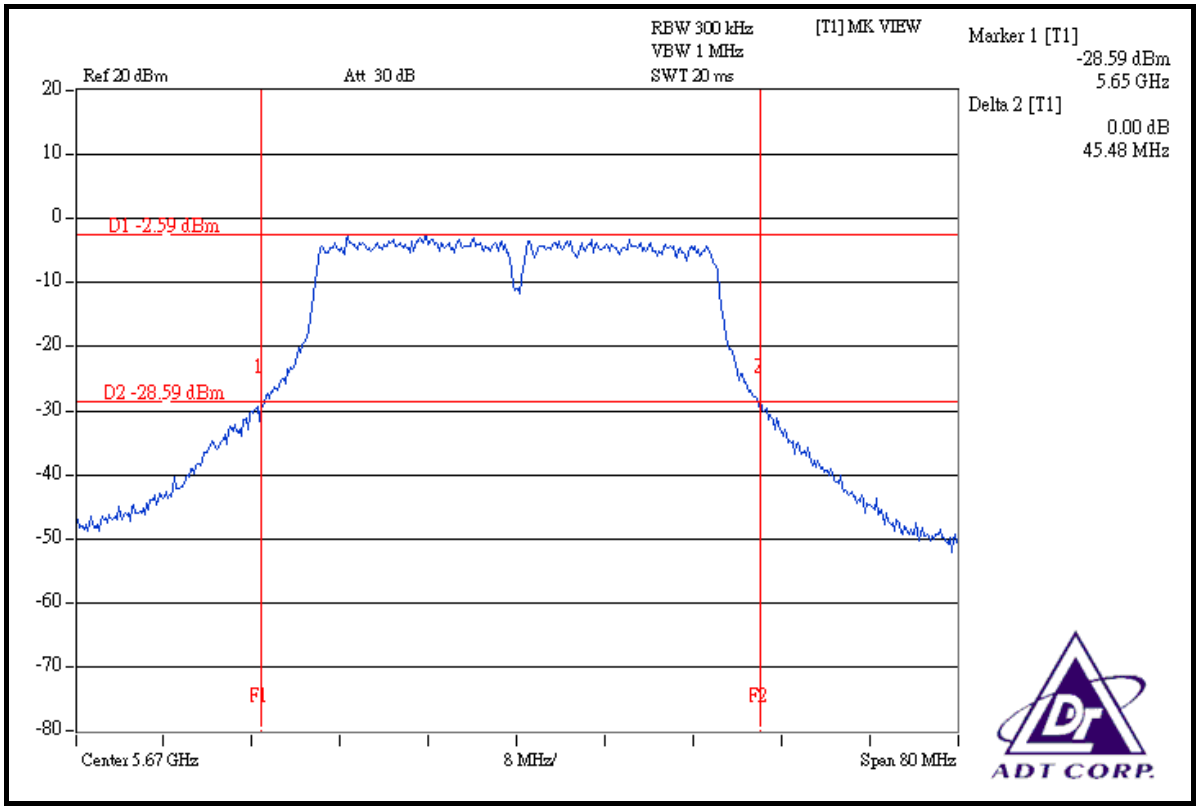
FOR CHAIN 1: CH 1



CH 6


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-28.65 dBm
5.57 GHz
Delta 2 [T1]
0.00 dB
45.10 MHz
Ref 20 dBm
Att 30 dB
D1 -2.65 dBm
D2 -28.65 dBm
F1
F2
Center 5.59 GHz
8 MHz/
Span 80 MHz

CH 11


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-28.59 dBm
5.65 GHz
Delta 2 [T1]
0.00 dB
45.48 MHz
Ref 20 dBm
Att 30 dB
D1 -2.59 dBm
D2 -28.59 dBm
F1
F2
Center 5.67 GHz
8 MHz/
Span 80 MHz

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.

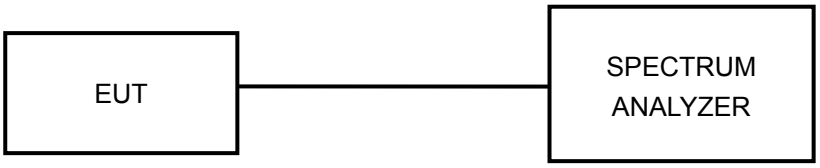
4.4.3 TEST PROCEDURE

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

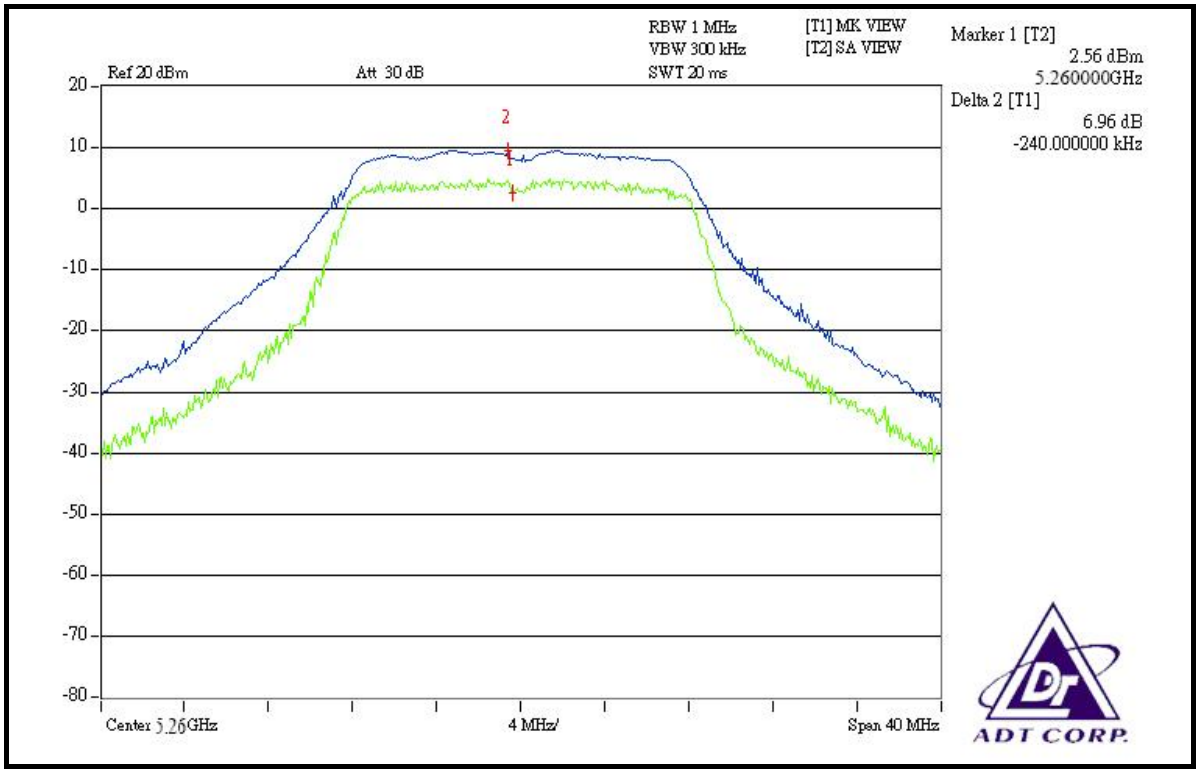
FOR FREQUENCY BAND: 5.25 ~ 5.35GHz

802.11a OFDM MODULATION:

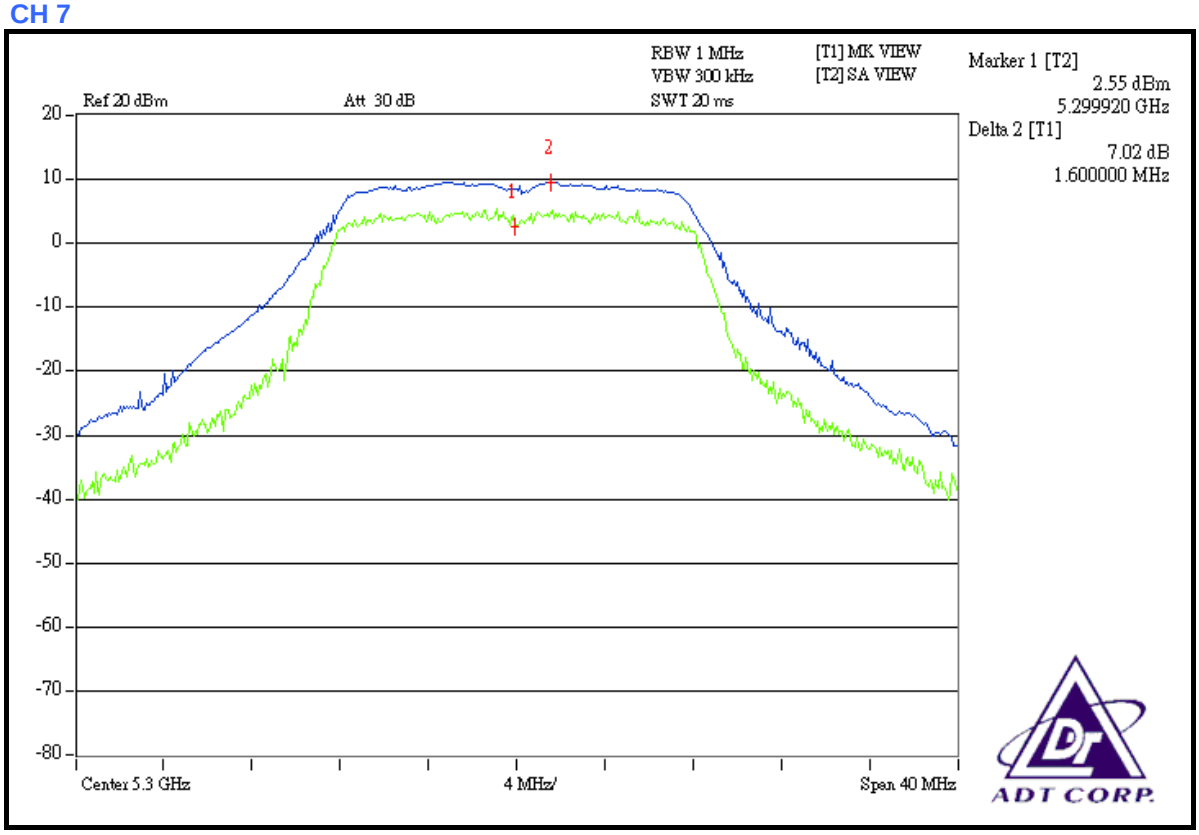
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS / FAIL
5	5260	6.96	13	PASS
7	5300	7.02	13	PASS
8	5320	7.67	13	PASS

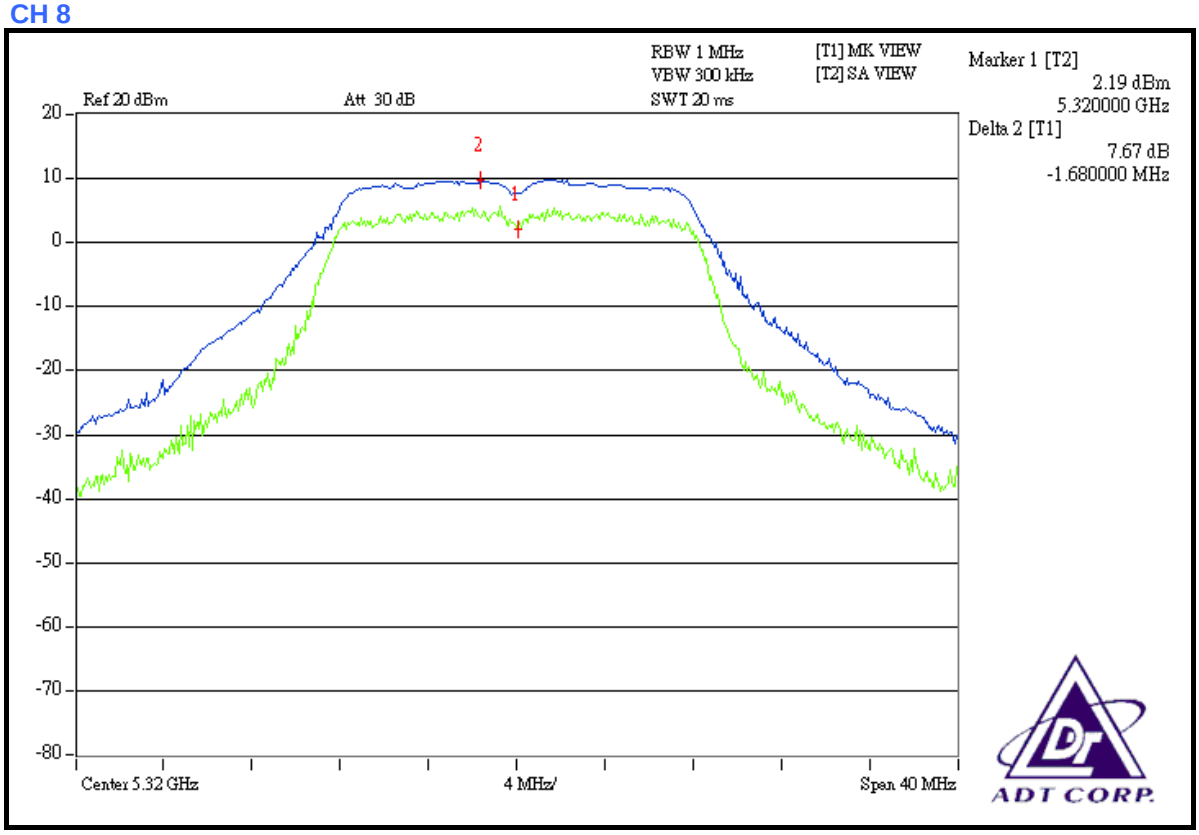
CH 5



CH 7


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
2.55 dBm
5.299920 GHz
Delta 2 [T1]
7.02 dB
1.600000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.3 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 8

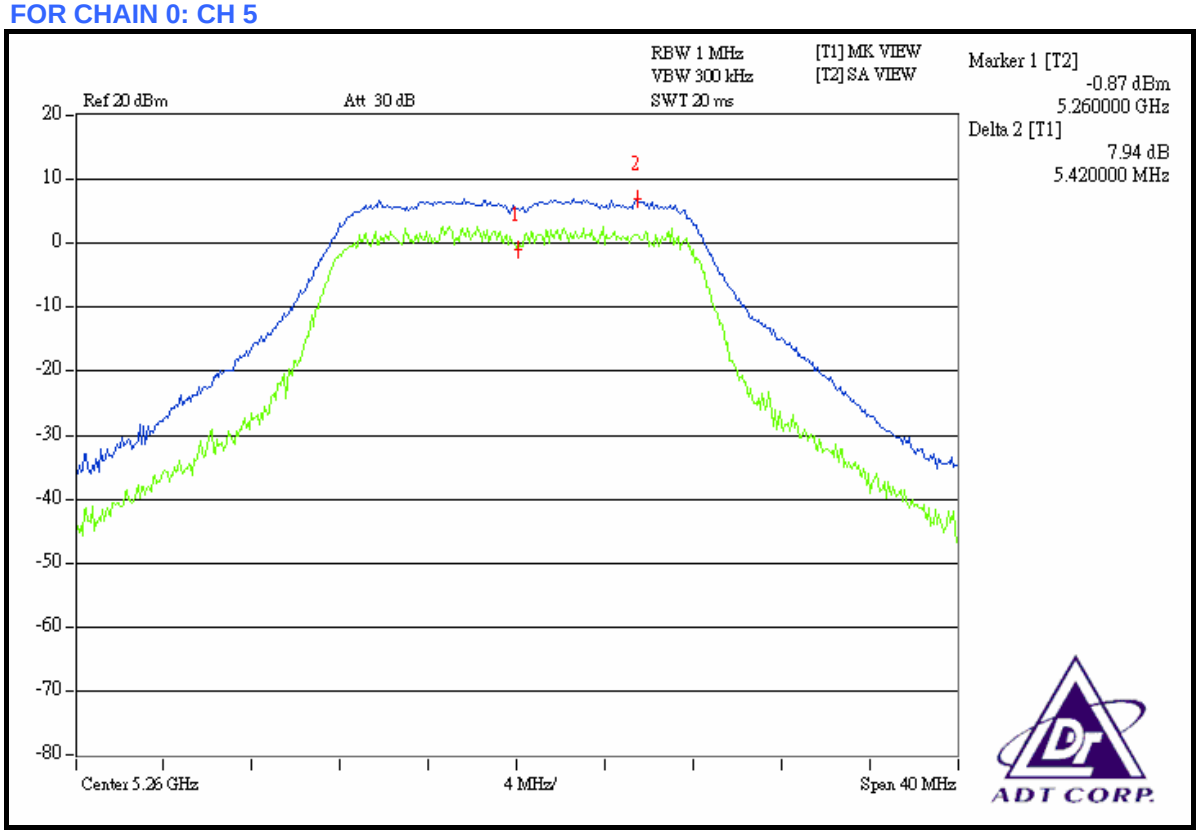

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
2.19 dBm
5.320000 GHz
Delta 2 [T1]
7.67 dB
-1.680000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.32 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (20MHz) OFDM MODULATION:

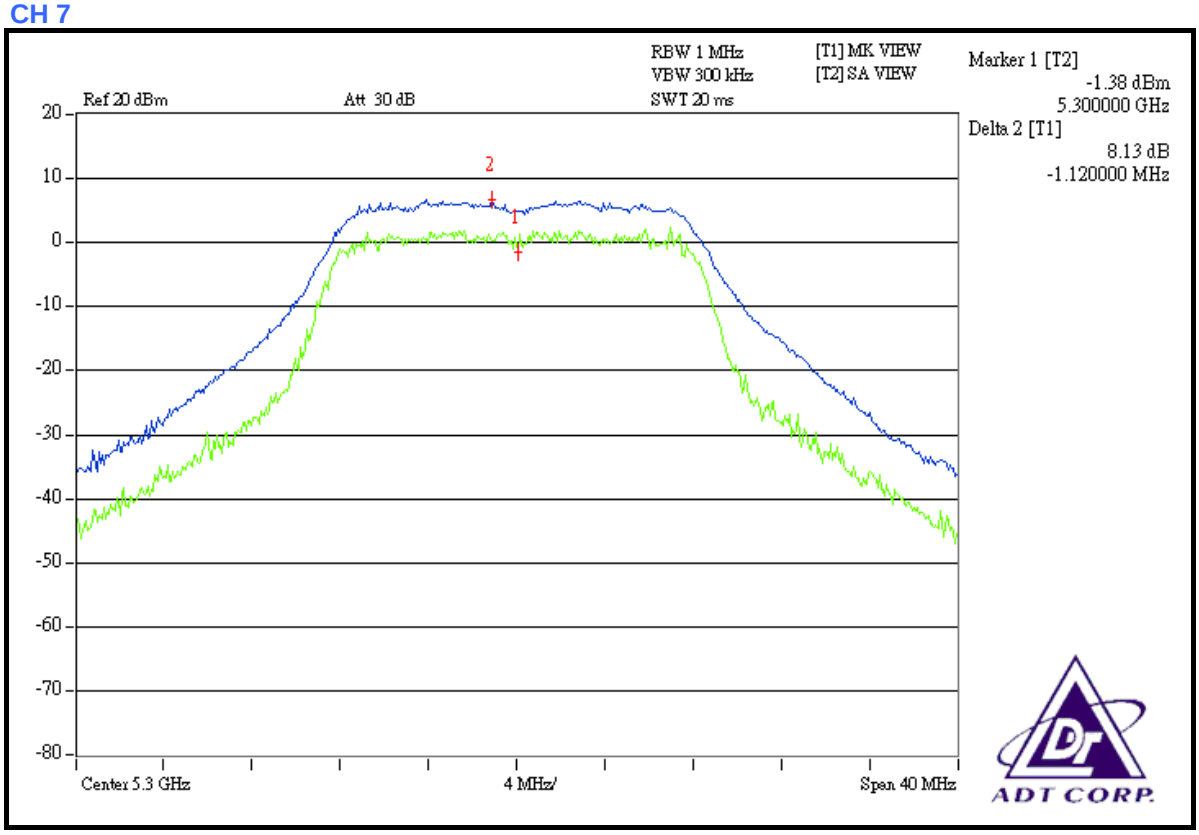
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
5	5260	7.94	7.93	13	PASS
7	5300	8.13	7.04	13	PASS
8	5320	7.66	8.14	13	PASS

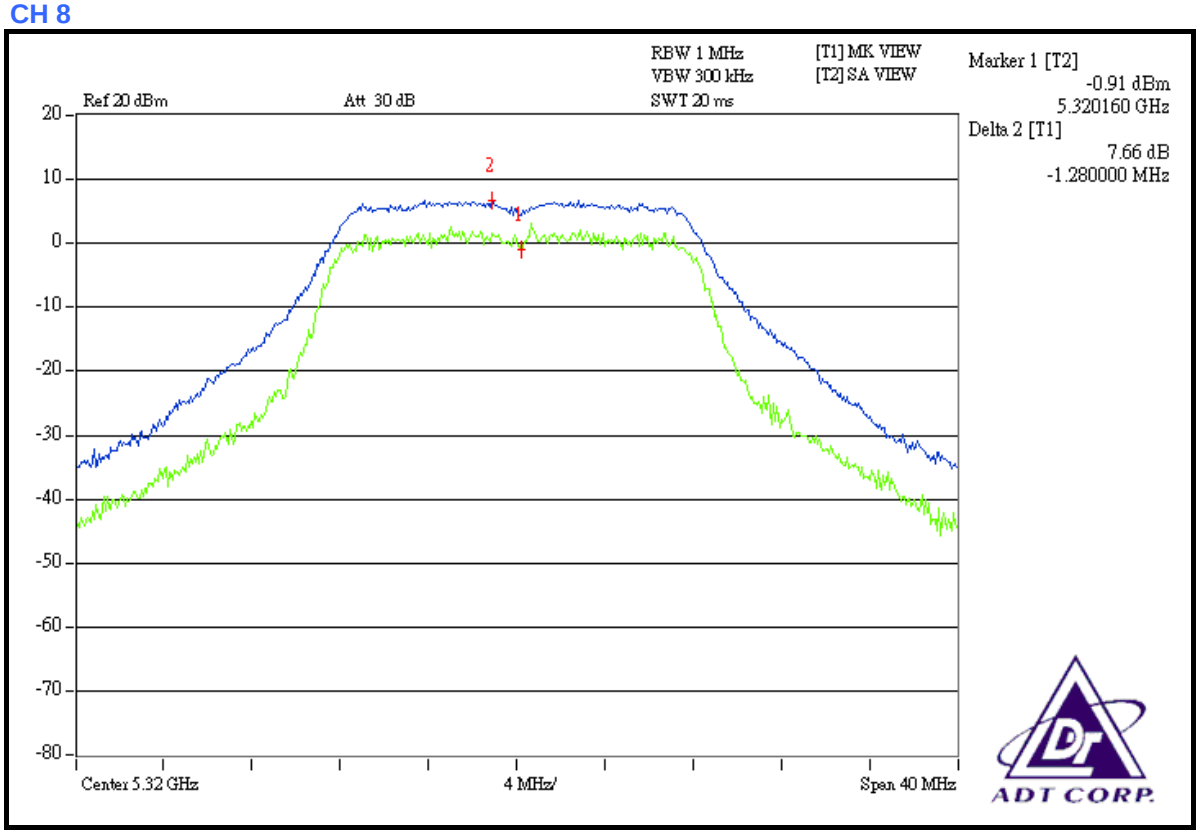
FOR CHAIN 0: CH 5



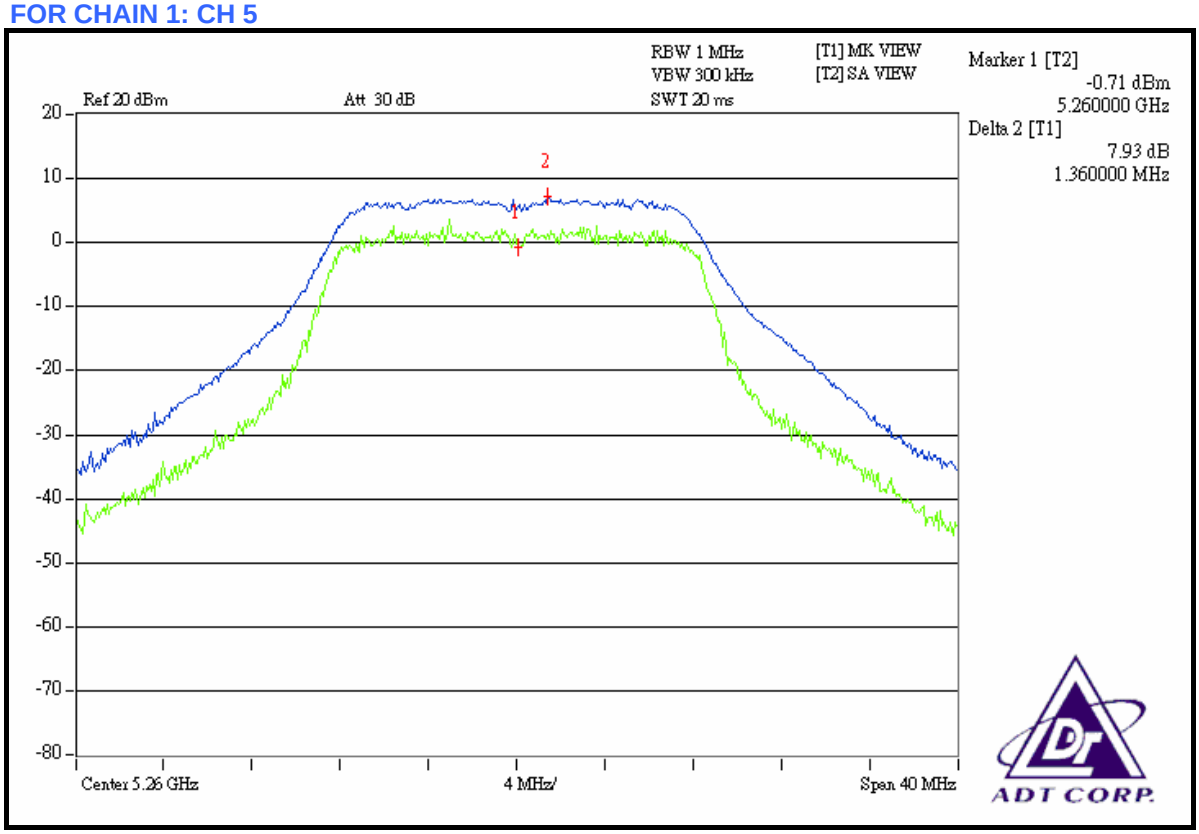
CH 7



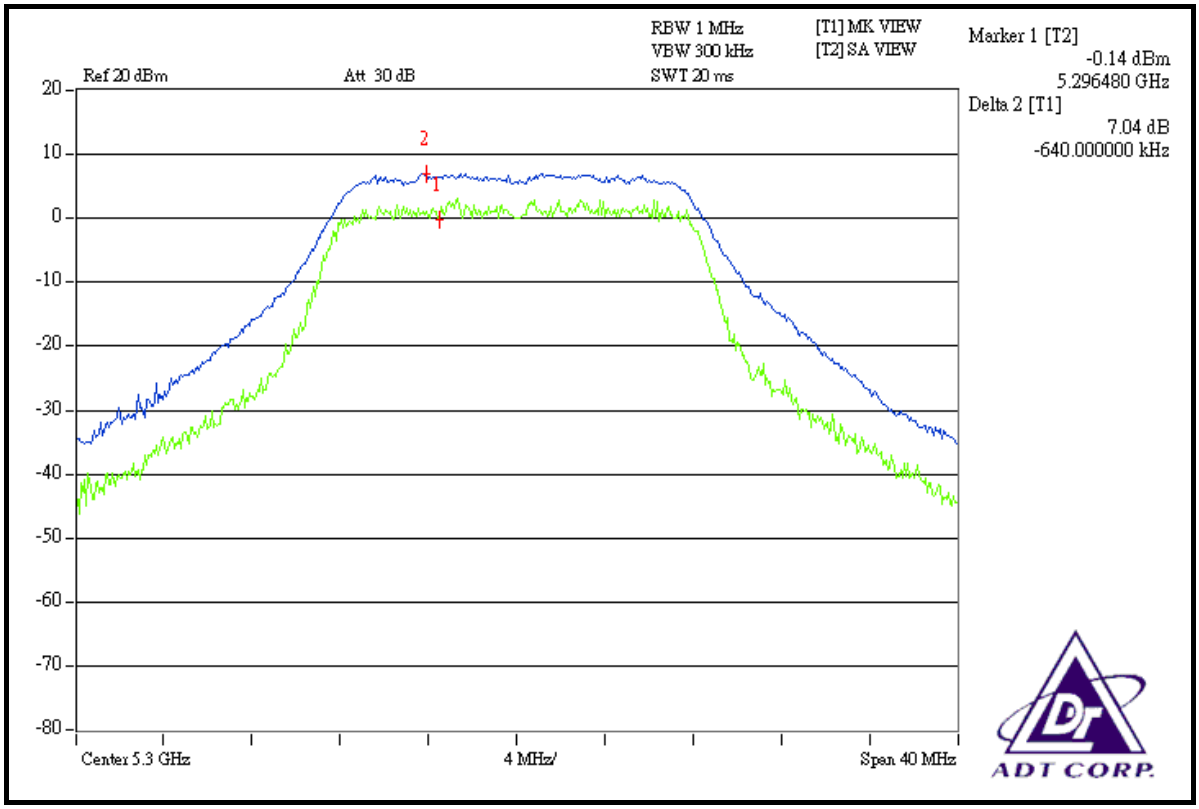
CH 8



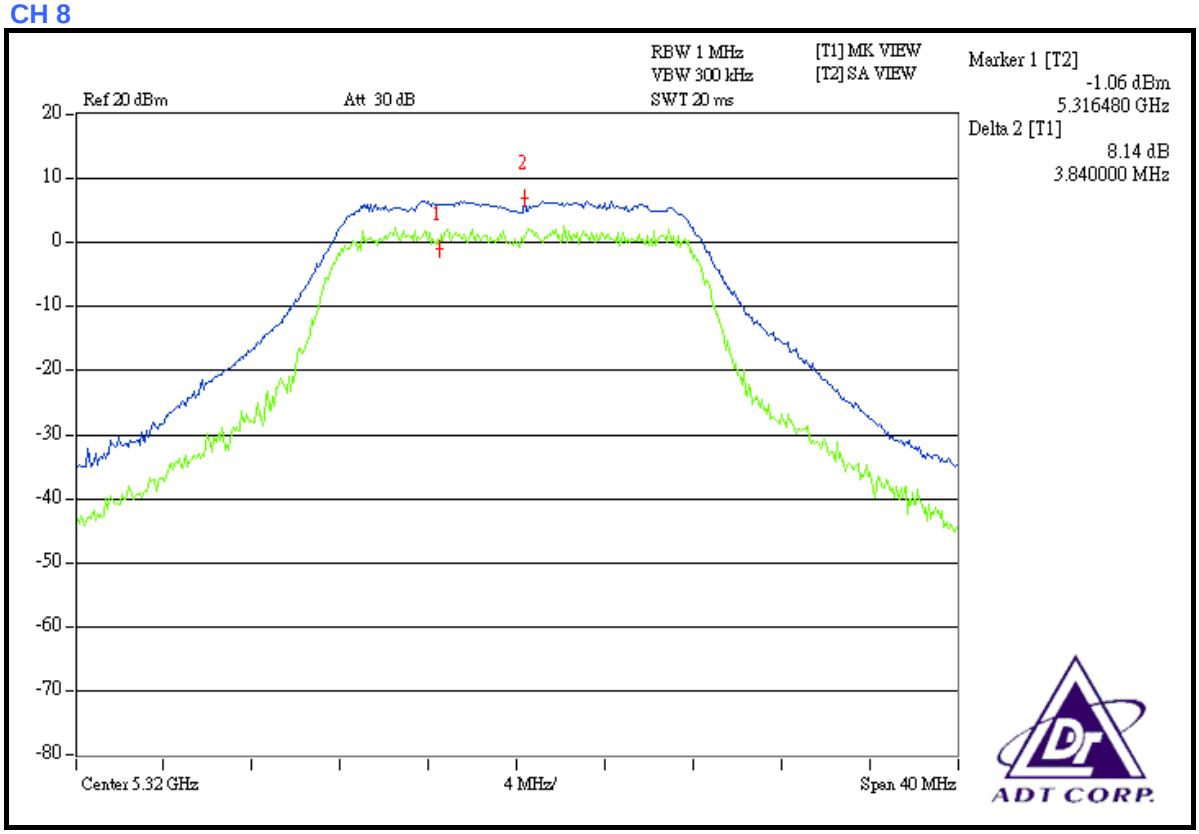
FOR CHAIN 1: CH 5



CH 7


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-0.14 dBm
5.296480 GHz
Delta 2 [T1]
7.04 dB
-640.000000 kHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.3 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 8

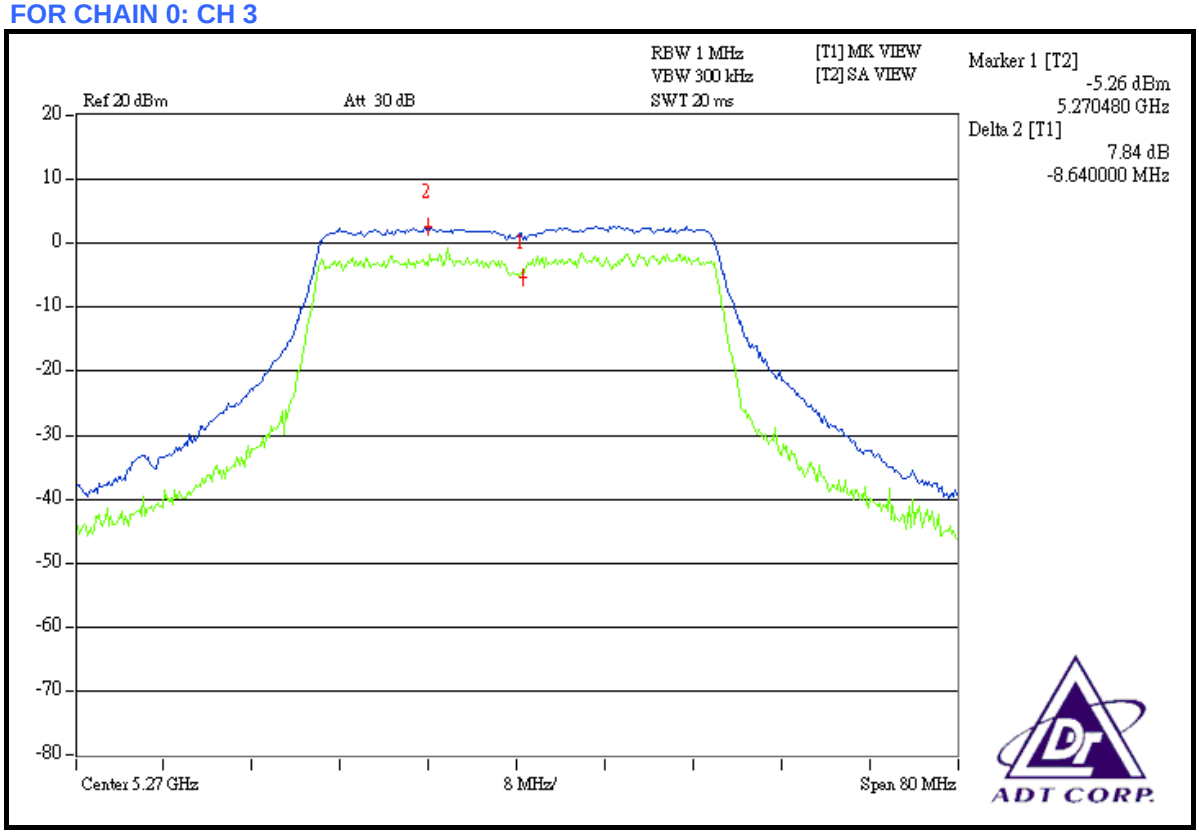

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-1.06 dBm
5.316480 GHz
Delta 2 [T1]
8.14 dB
3.840000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.32 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (40MHz) OFDM MODULATION:

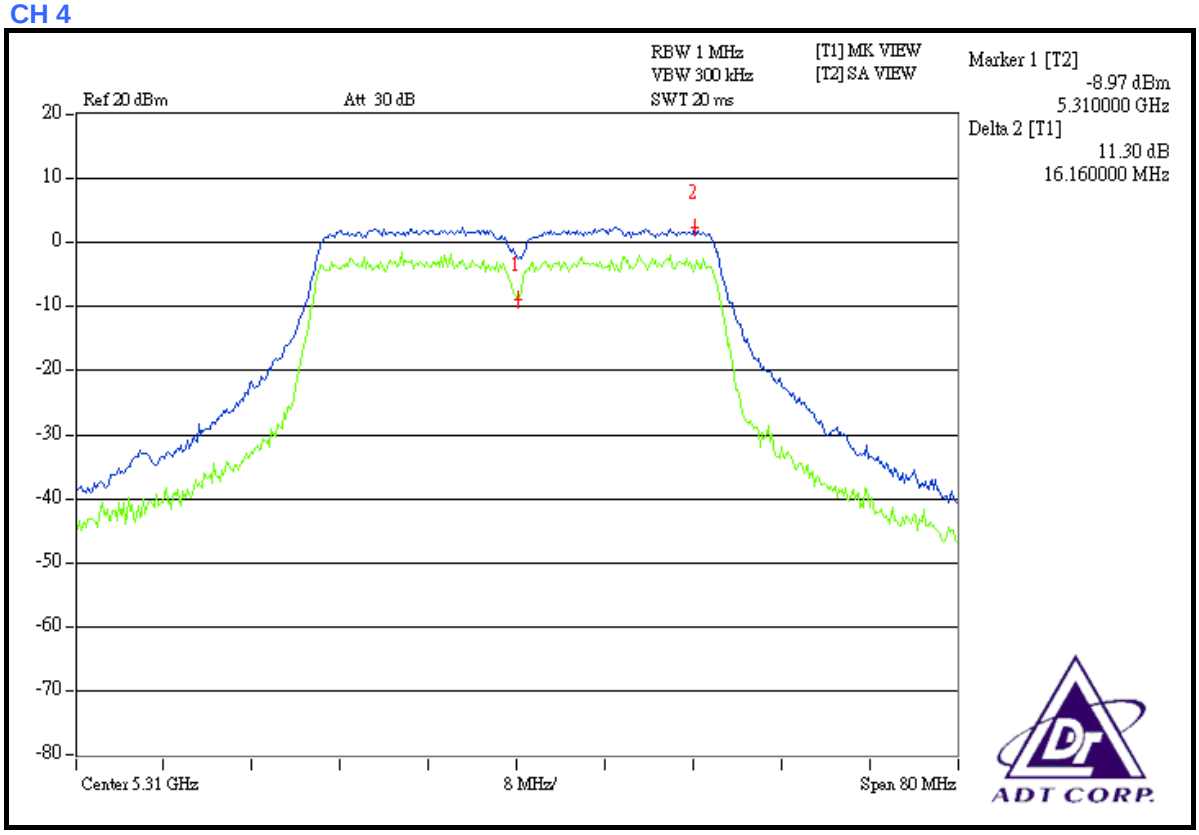
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
3	5270	7.84	8.72	13	PASS
4	5310	11.30	7.94	13	PASS

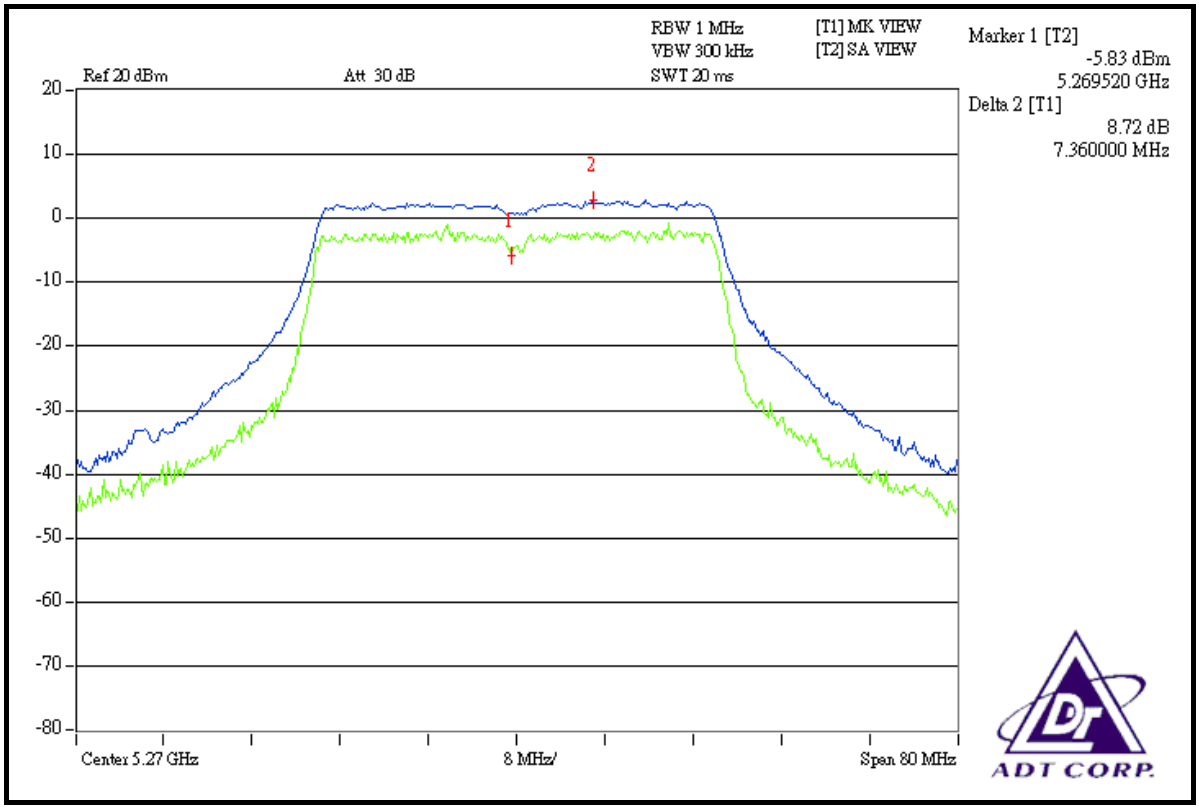
FOR CHAIN 0: CH 3



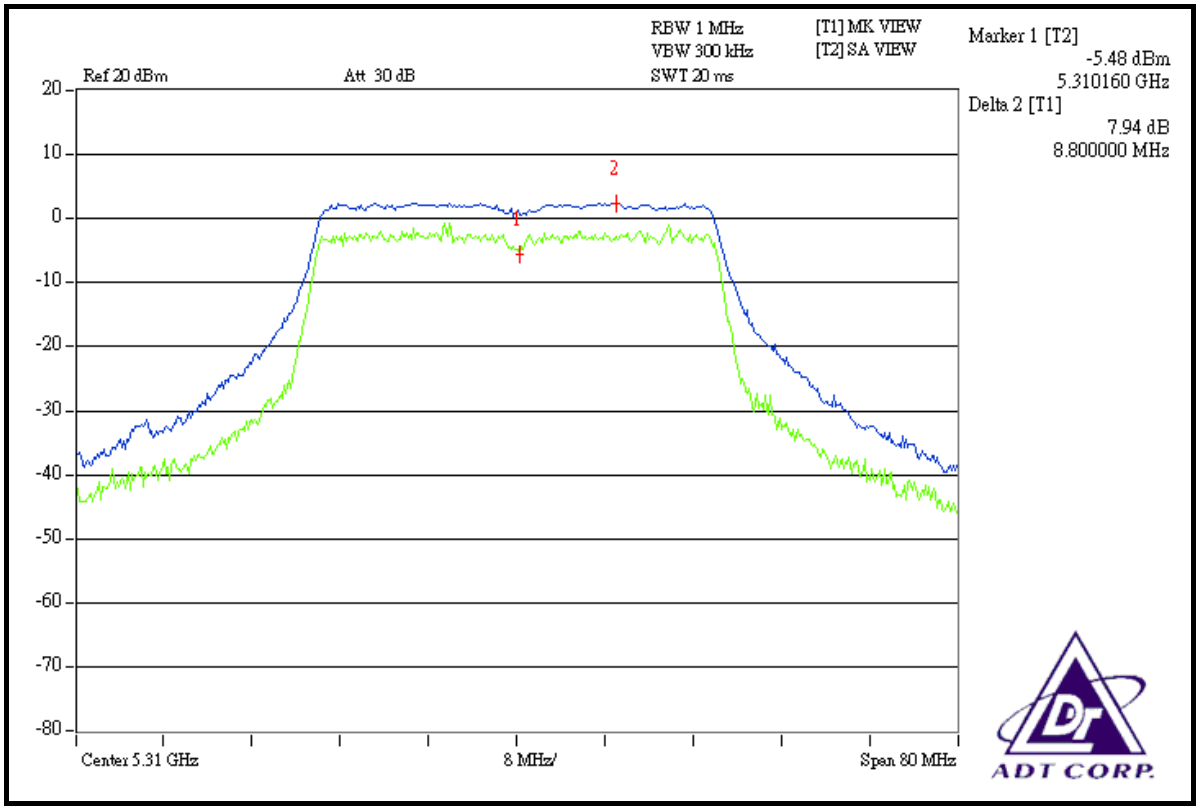
CH 4



FOR CHAIN 1: CH 3



CH 4



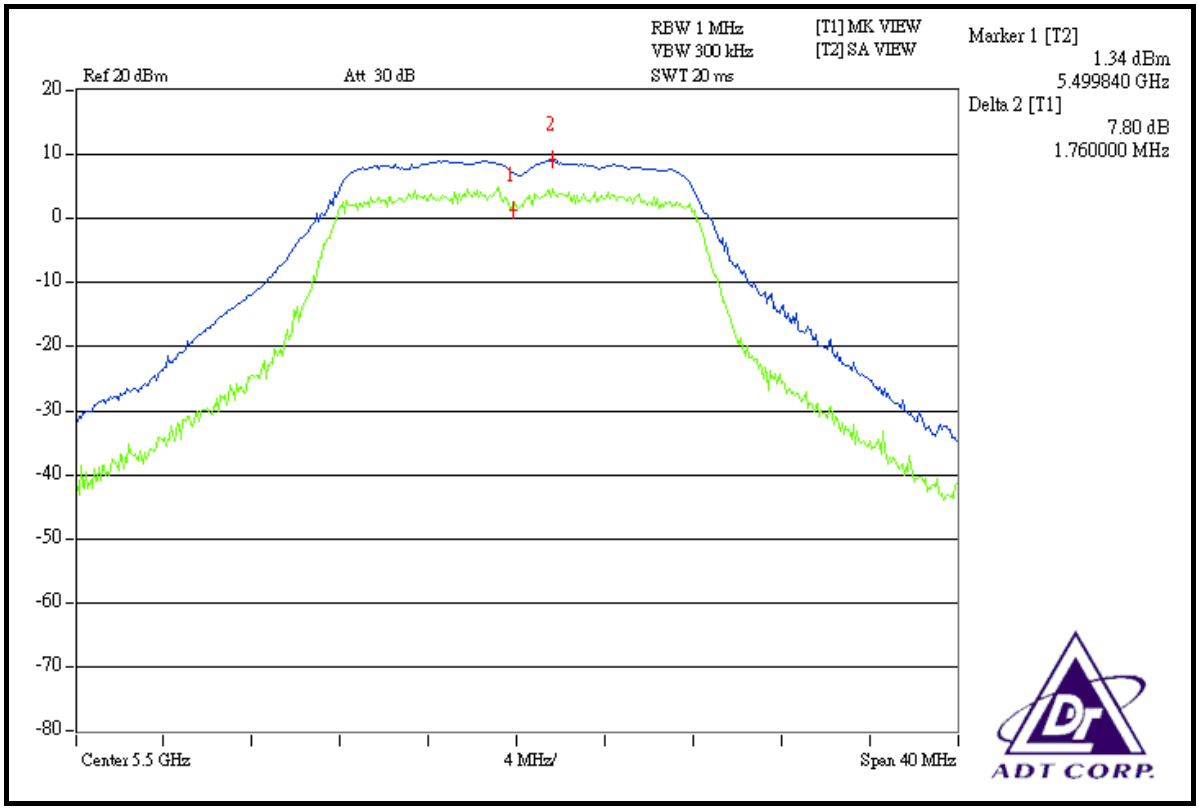
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

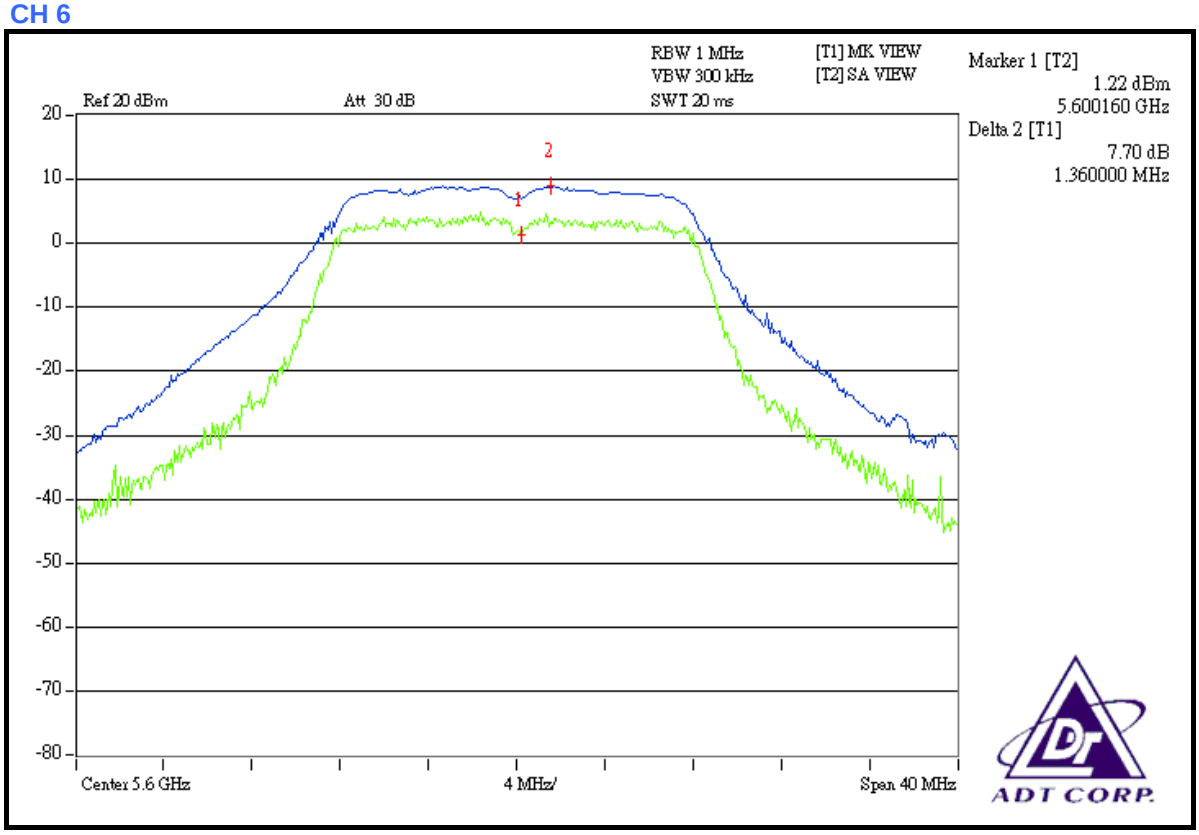
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS / FAIL
1	5500	7.80	13	PASS
6	5600	7.70	13	PASS
11	5700	7.70	13	PASS

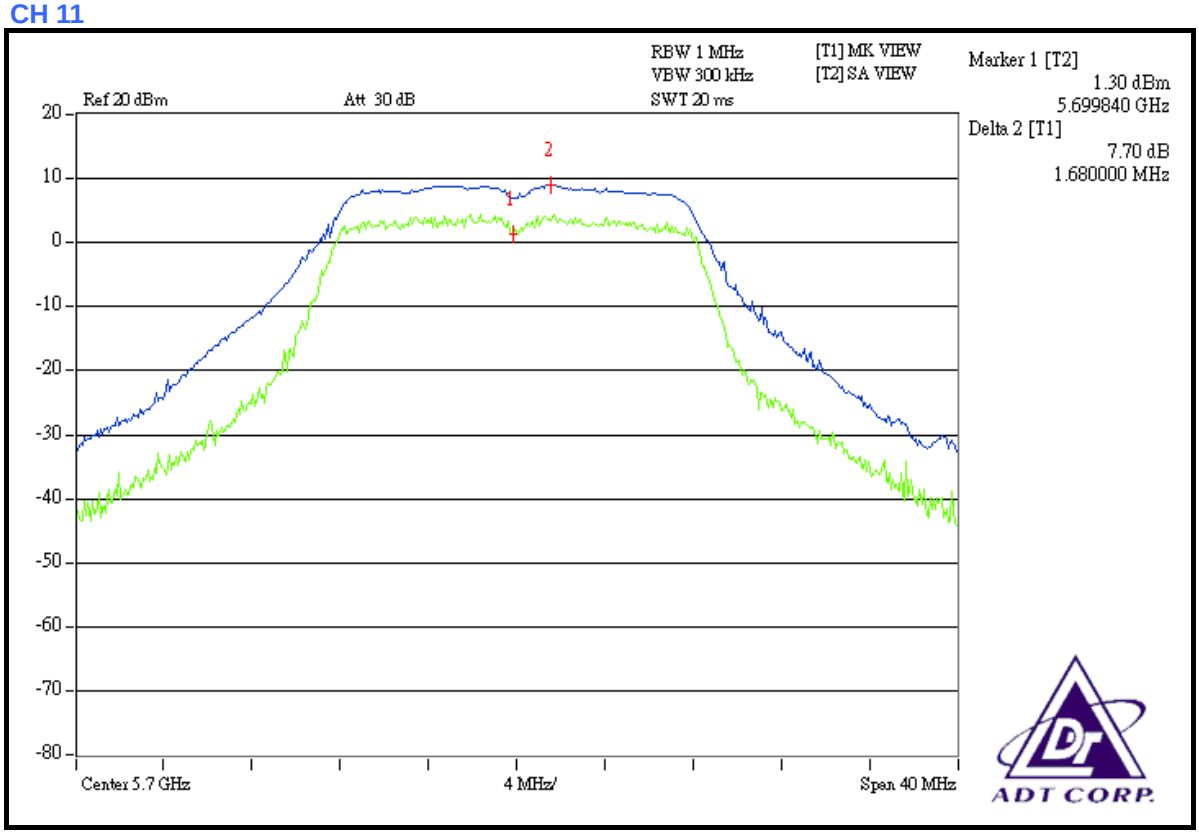
CH 1



CH 6


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
1.22 dBm
5.600160 GHz
Delta 2 [T1]
7.70 dB
1.360000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.6 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 11

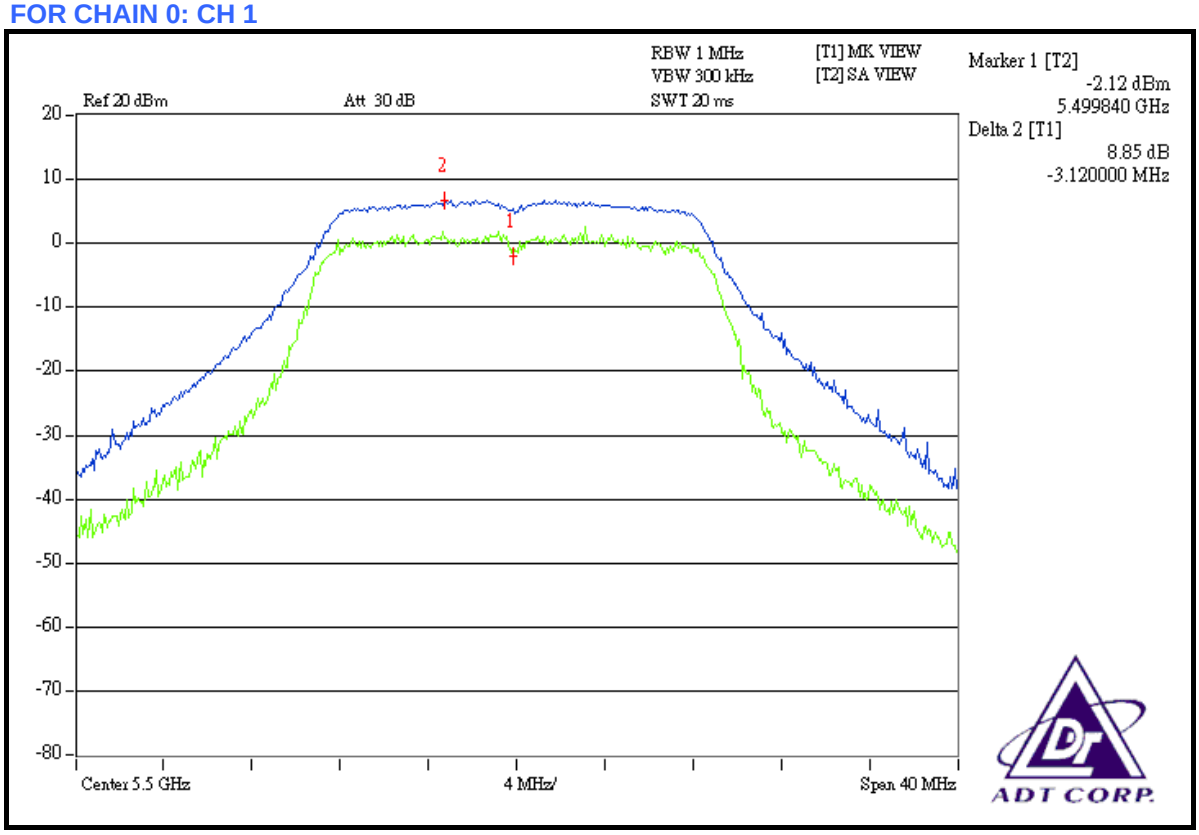

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
1.30 dBm
5.699840 GHz
Delta 2 [T1]
7.70 dB
1.680000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.7 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (20MHz) OFDM MODULATION:

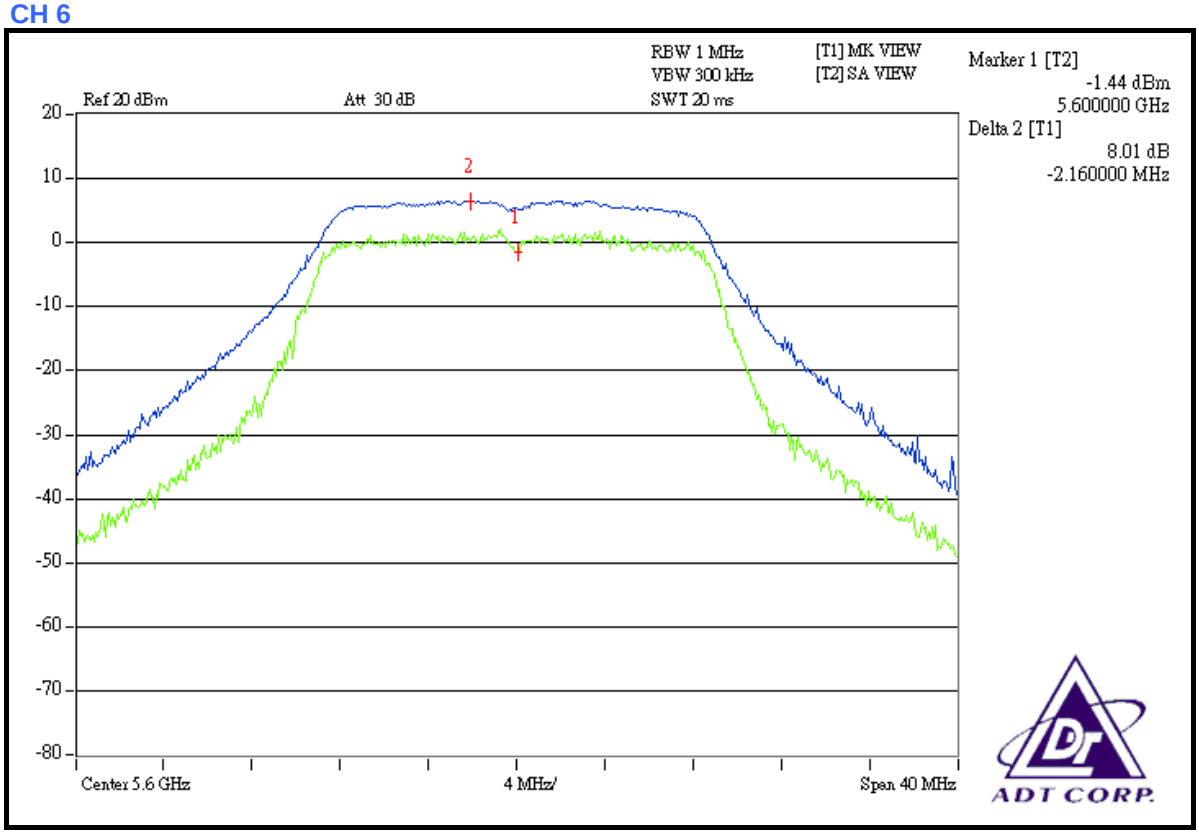
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
1	5500	8.85	7.75	13	PASS
6	5600	8.01	8.03	13	PASS
11	5700	8.17	8.03	13	PASS

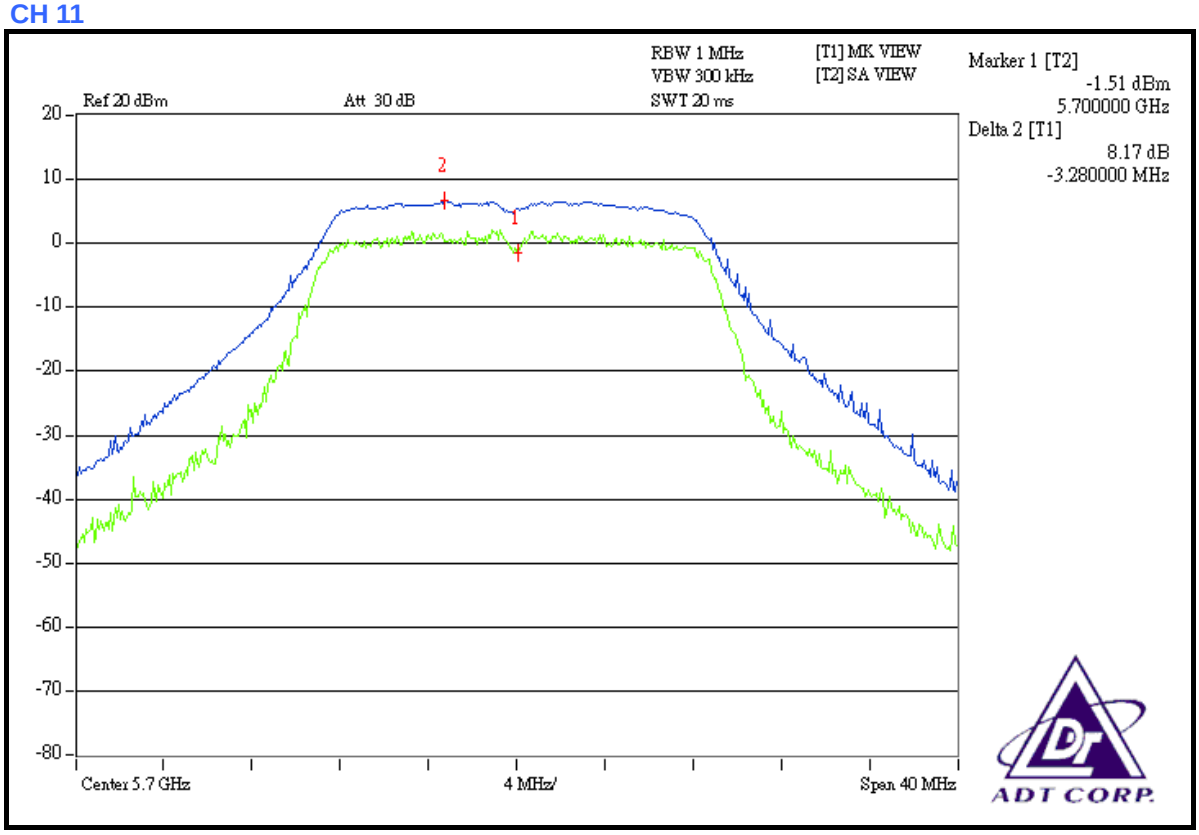
FOR CHAIN 0: CH 1



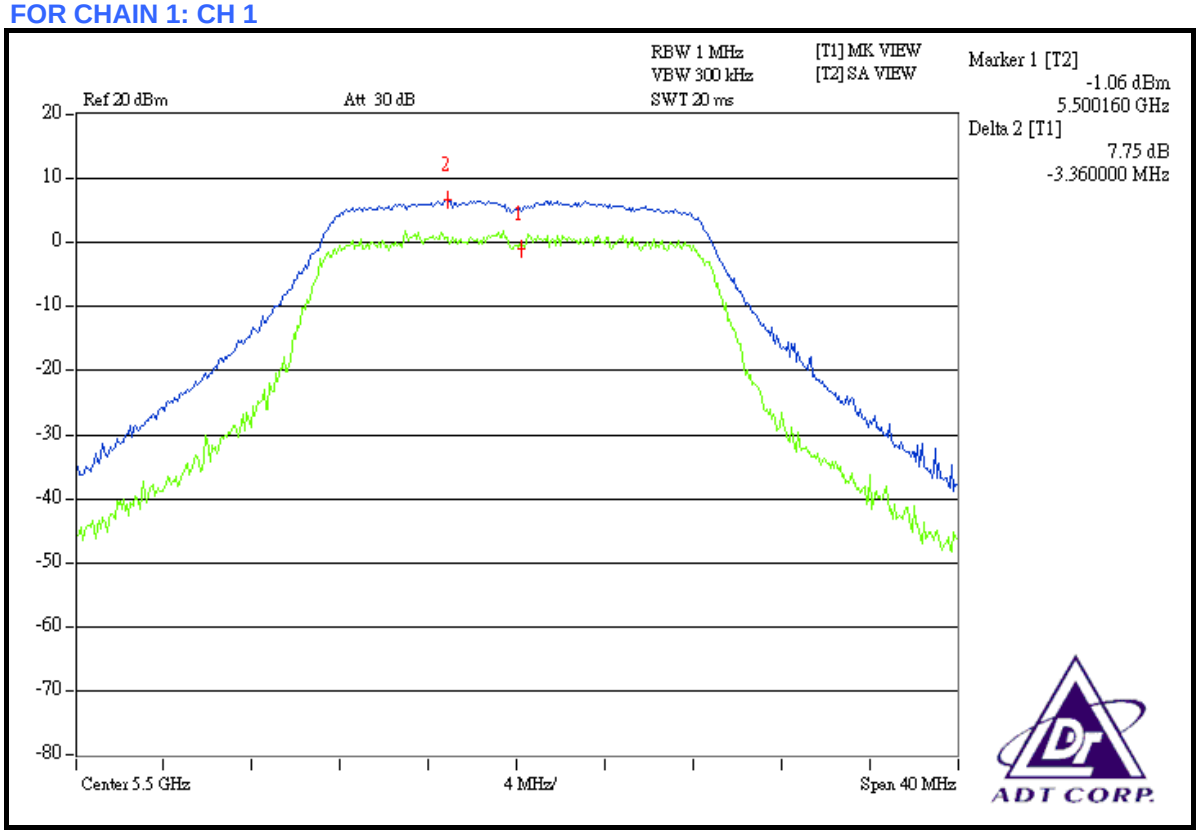
CH 6



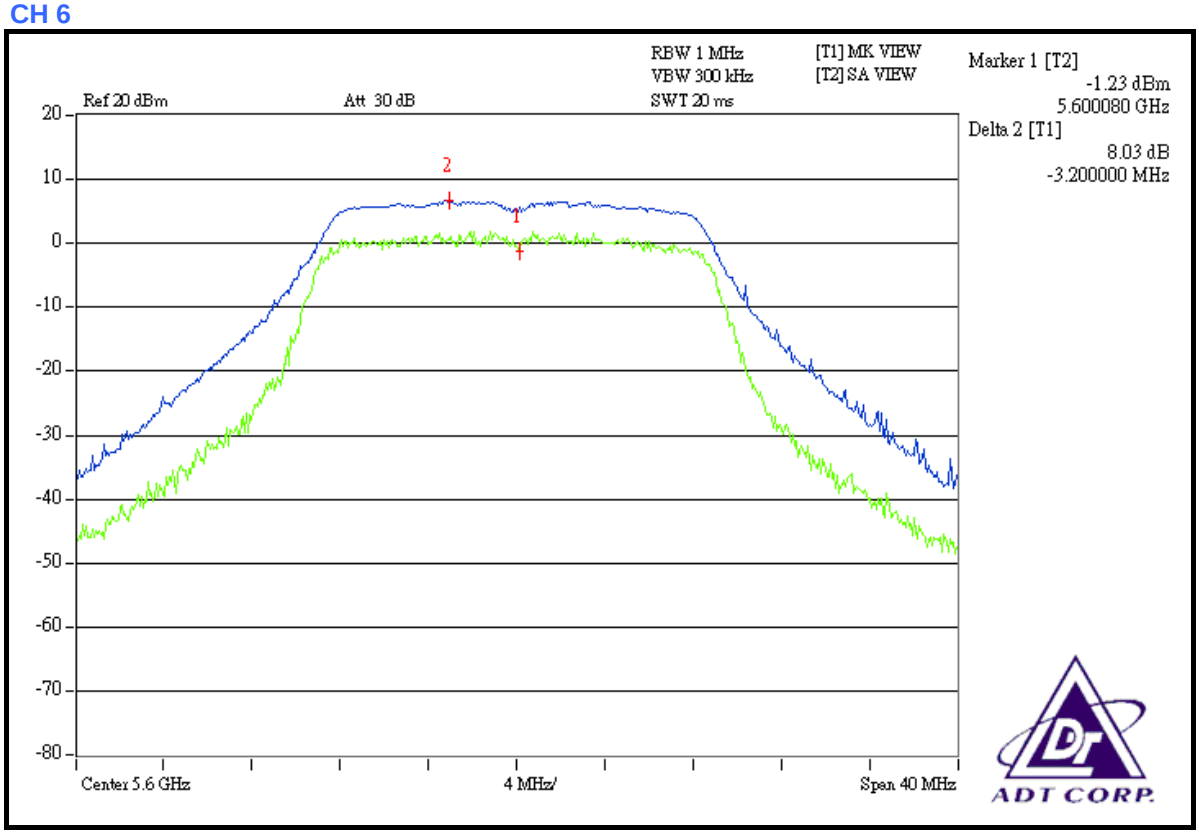
CH 11



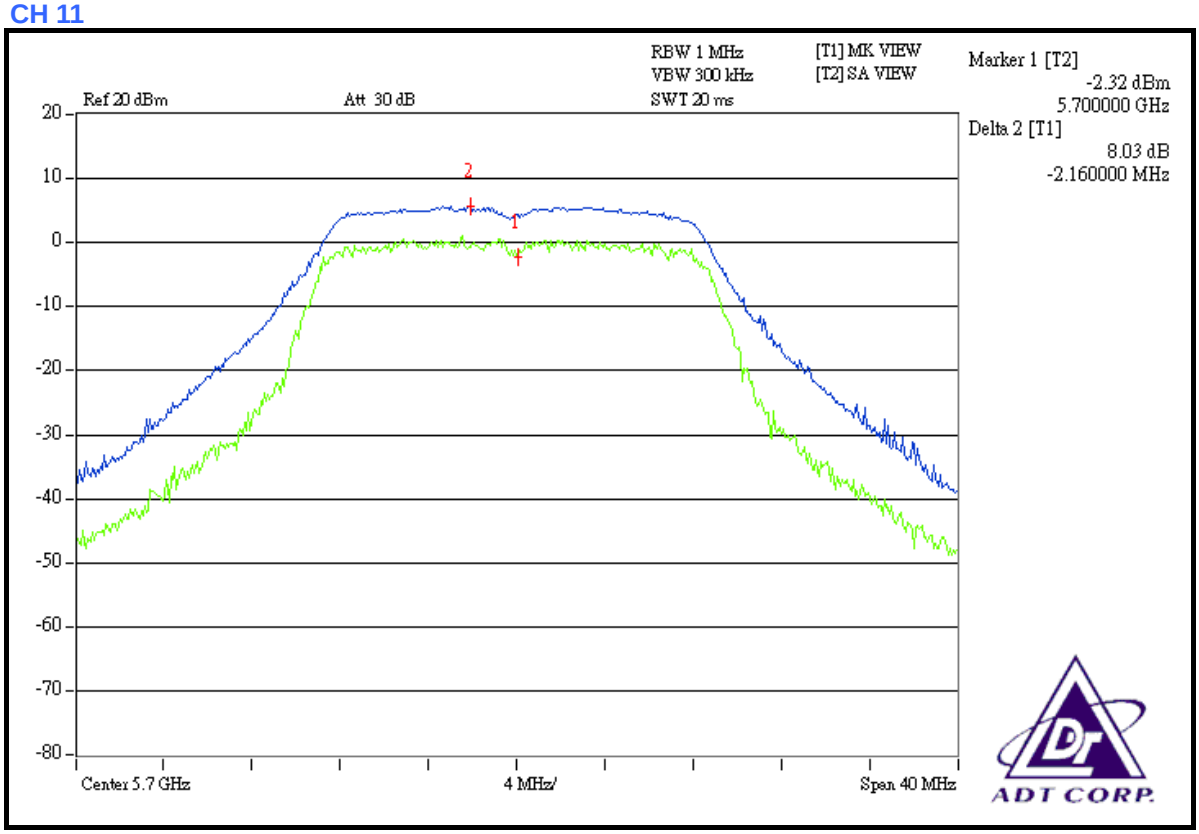
FOR CHAIN 1: CH 1



CH 6


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-1.23 dBm
5.600080 GHz
Delta 2 [T1]
8.03 dB
-3.200000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.6 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 11

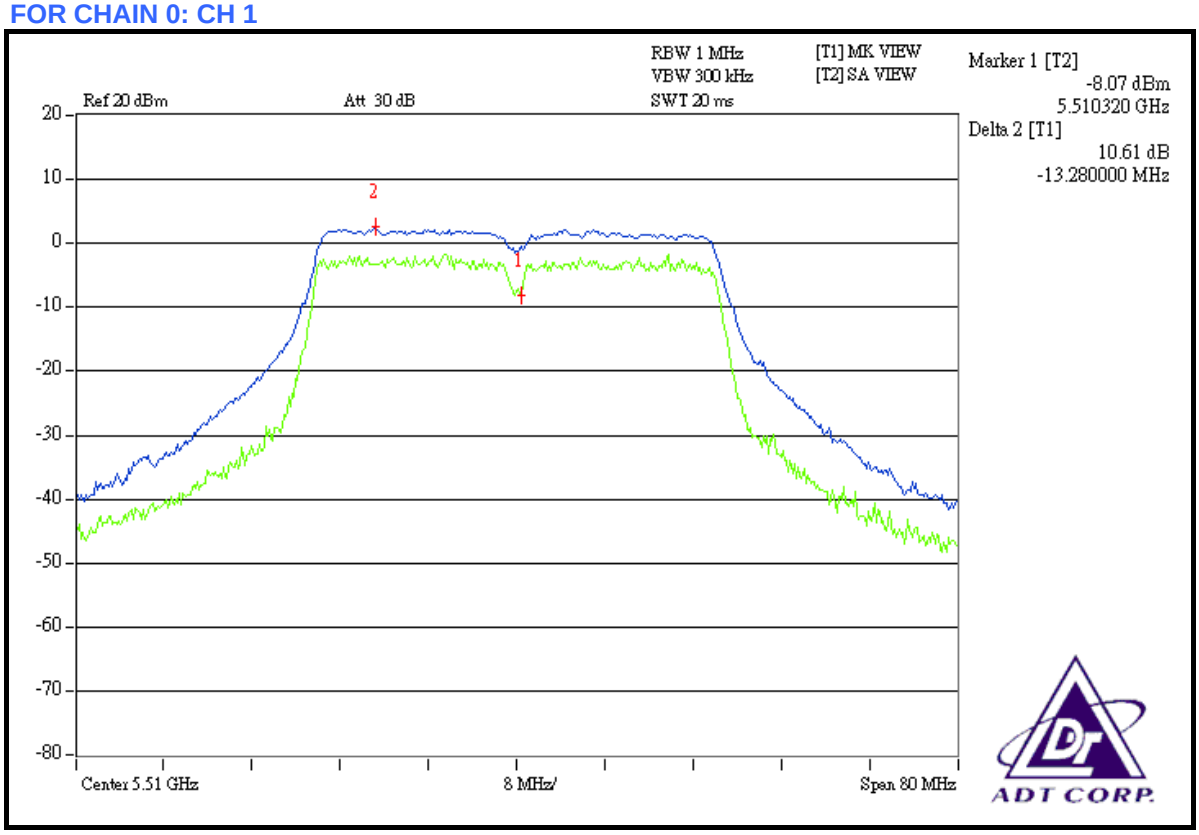

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-2.32 dBm
5.700000 GHz
Delta 2 [T1]
8.03 dB
-2.160000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.7 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (40MHz) OFDM MODULATION:

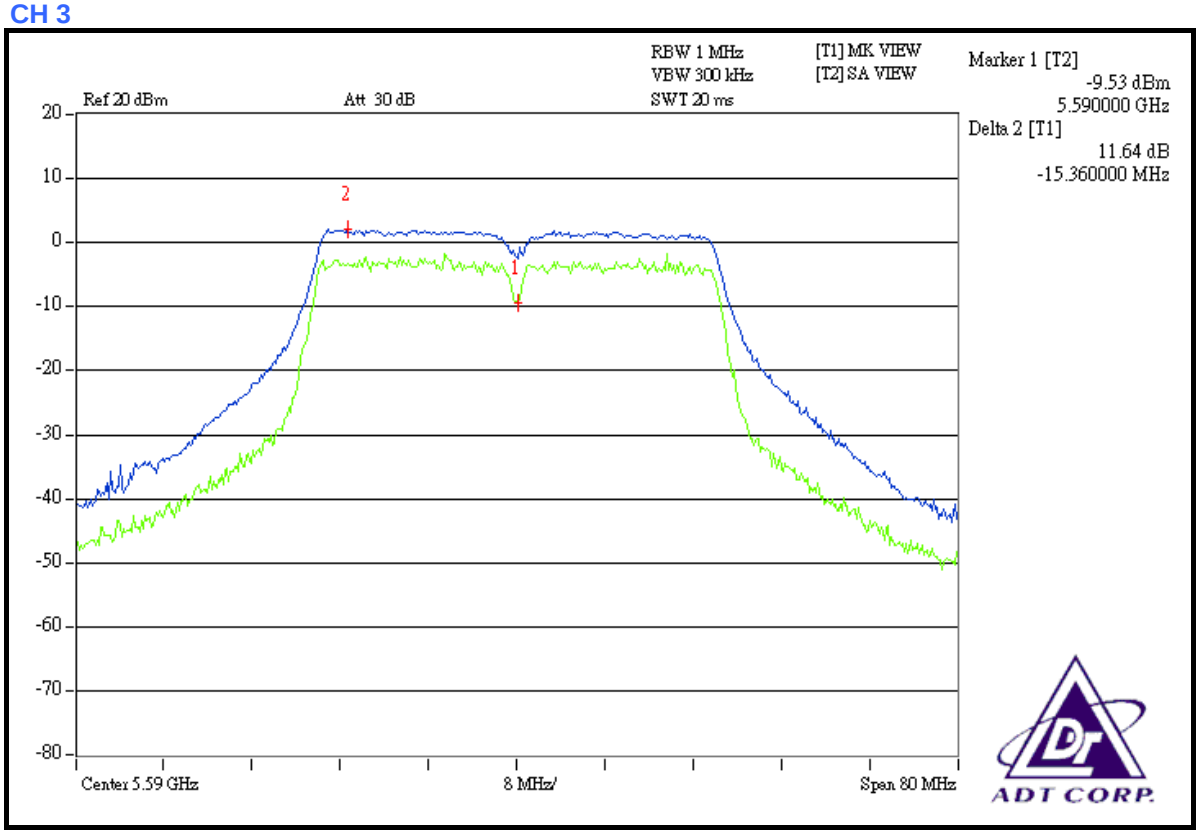
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
1	5510	10.61	11.55	13	PASS
3	5590	11.64	10.78	13	PASS
5	5670	10.23	9.31	13	PASS

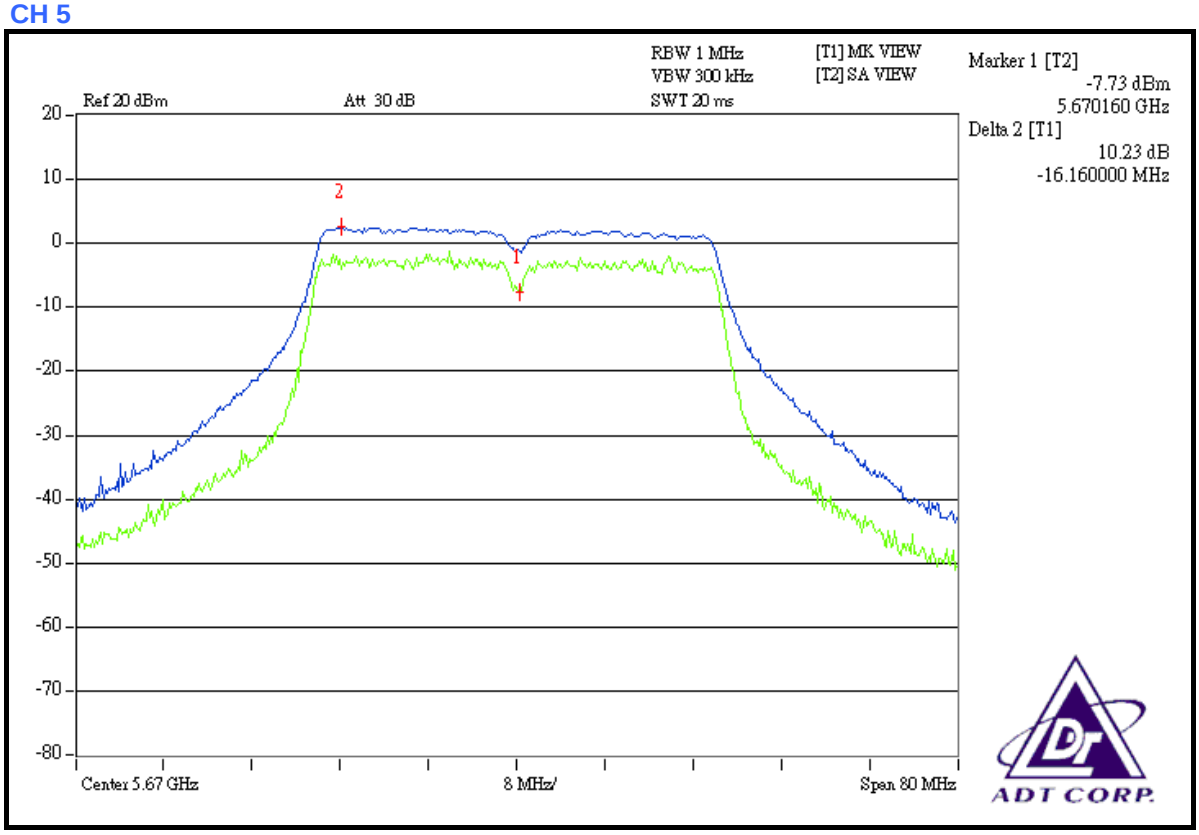
FOR CHAIN 0: CH 1



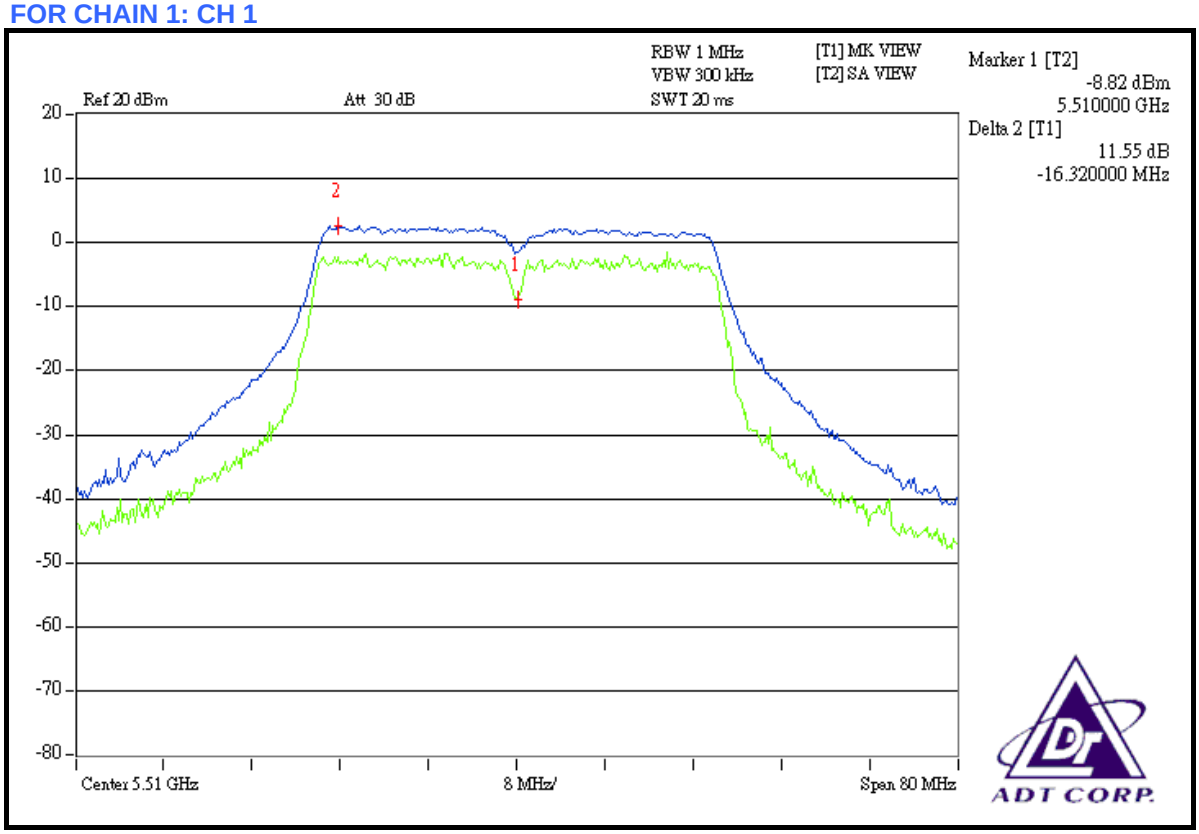
CH 3



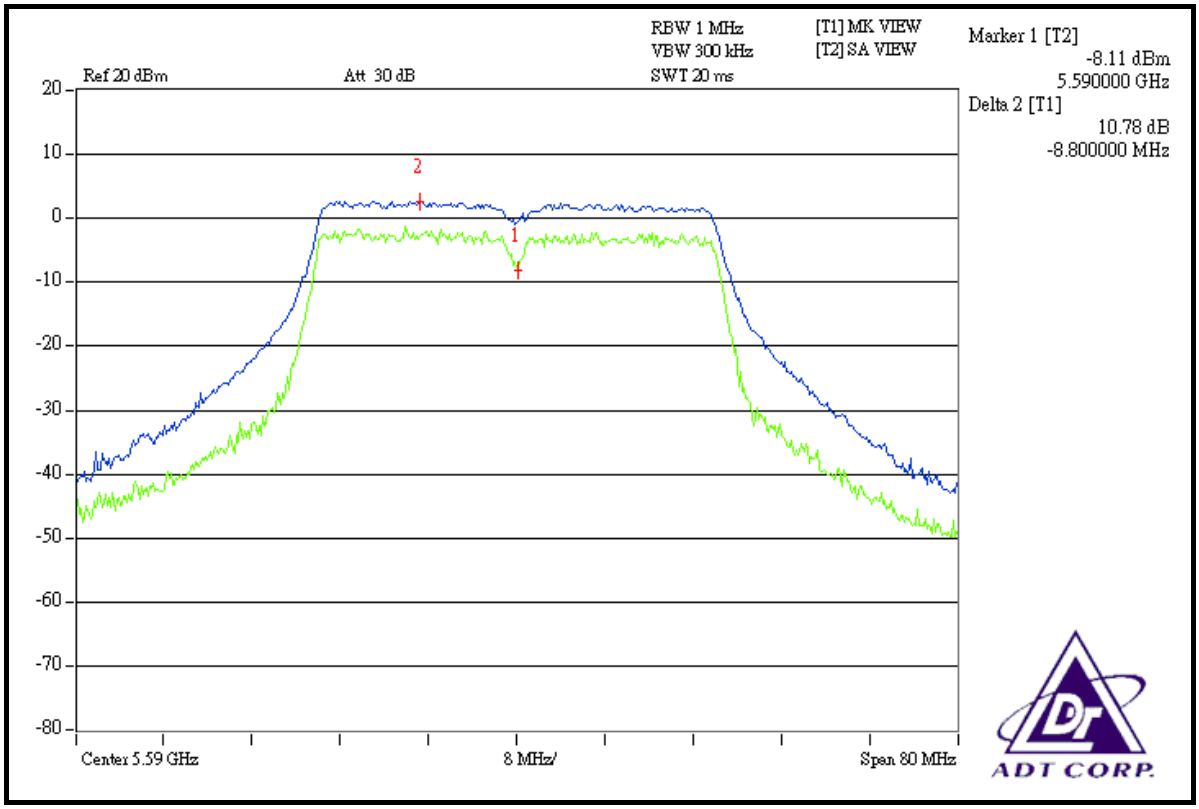
CH 5



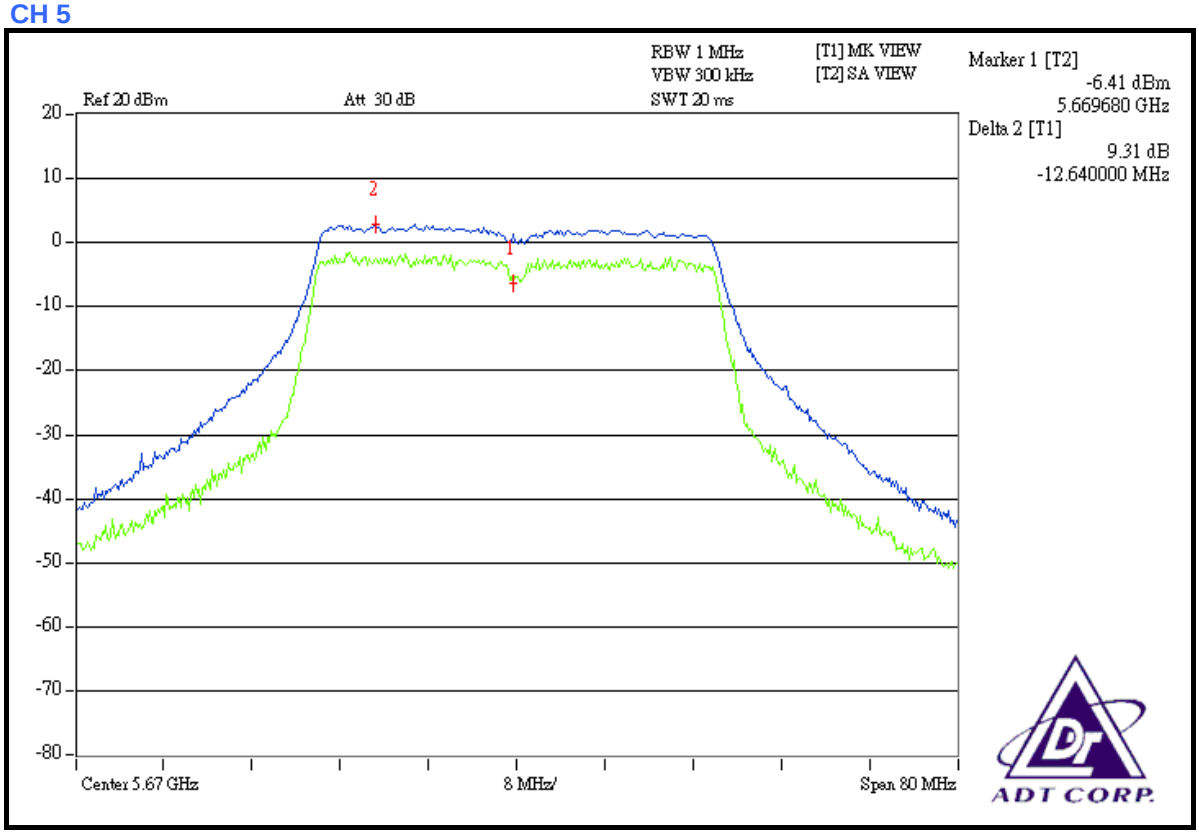
FOR CHAIN 1: CH 1



CH 3


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-8.11 dBm
5.590000 GHz
Delta 2 [T1]
10.78 dB
-8.800000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.59 GHz
8 MHz/
Span 80 MHz
ADT CORP.

CH 5


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-6.41 dBm
5.669680 GHz
Delta 2 [T1]
9.31 dB
-12.640000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.67 GHz
8 MHz/
Span 80 MHz
ADT CORP.

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

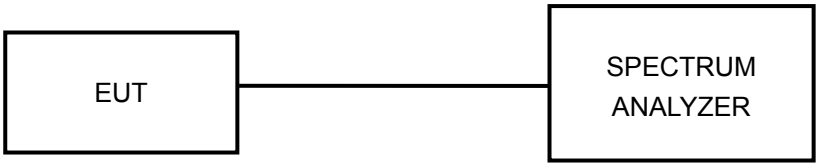
a. The transmitter output was connected to the spectrum analyzer.

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

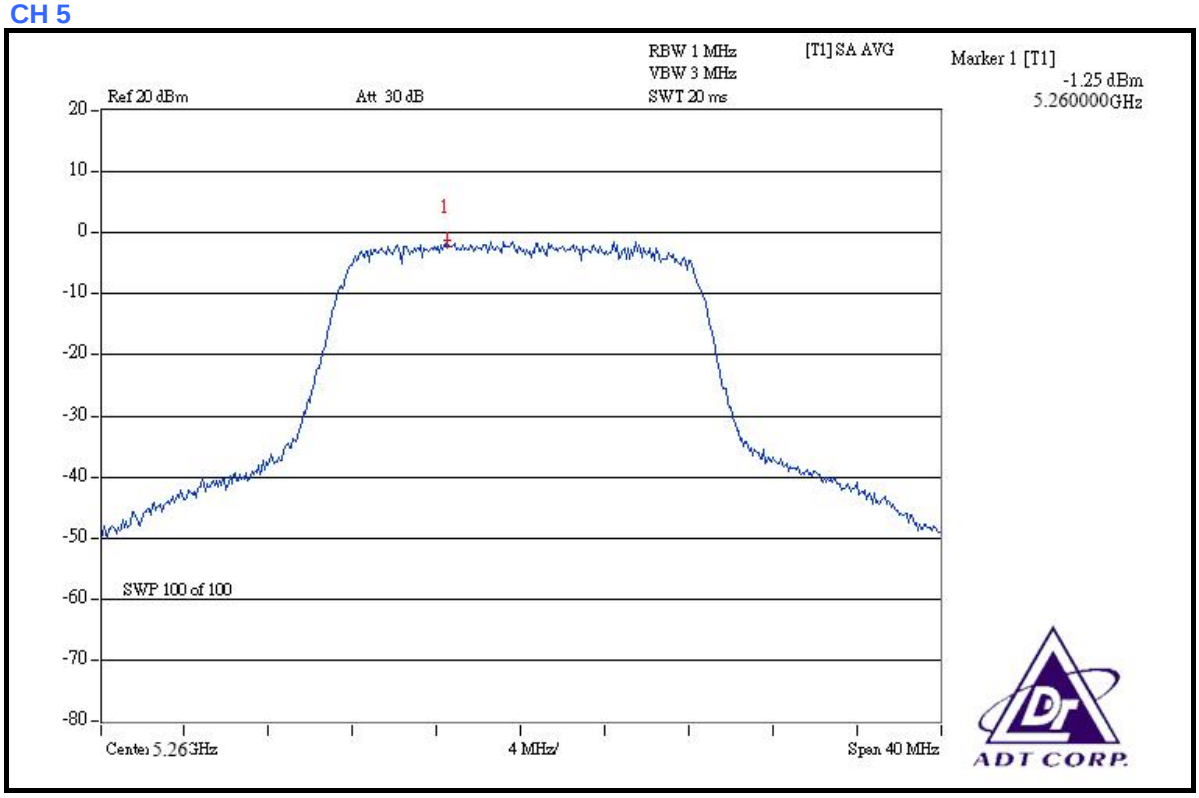
4.5.7 TEST RESULTS

FOR FREQUENCY BAND: 5.25 ~ 5.35GHz
802.11a OFDM MODULATION:

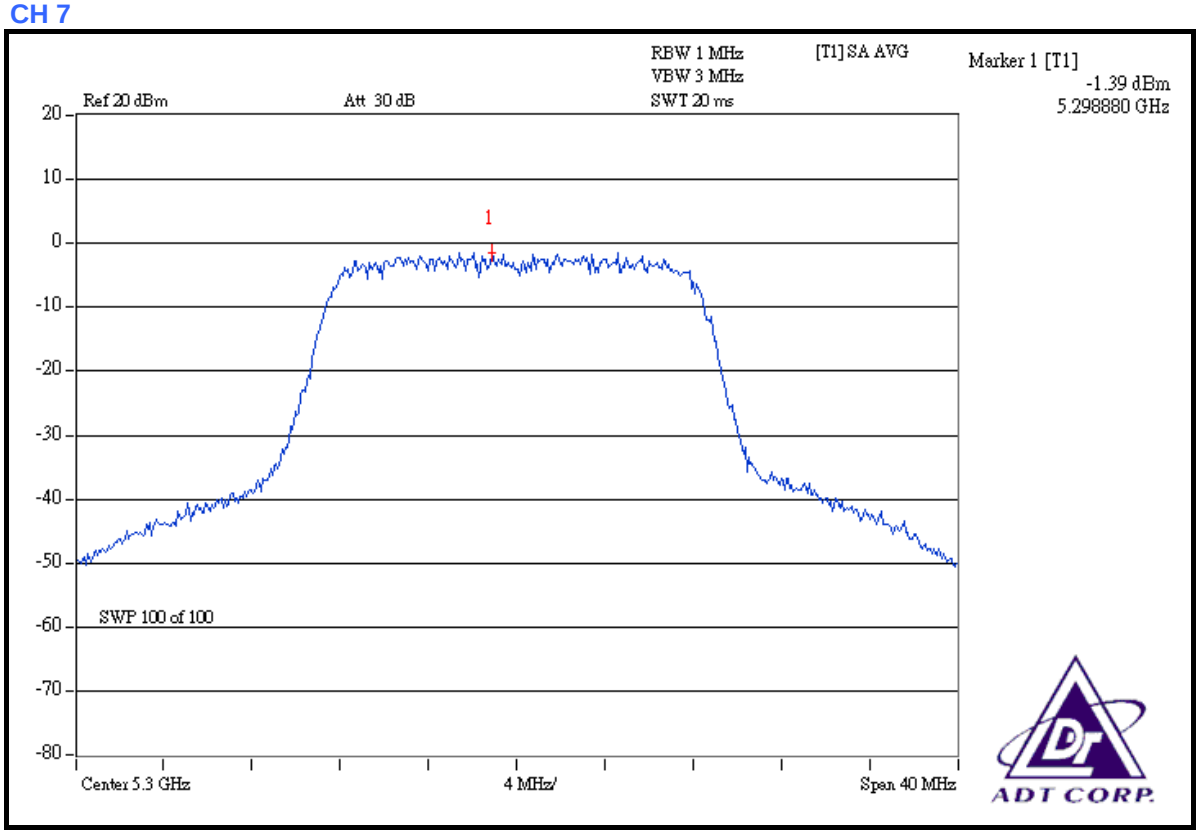
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
5	5260	-1.25	4	PASS
7	5300	-1.39	4	PASS
8	5320	-1.45	4	PASS

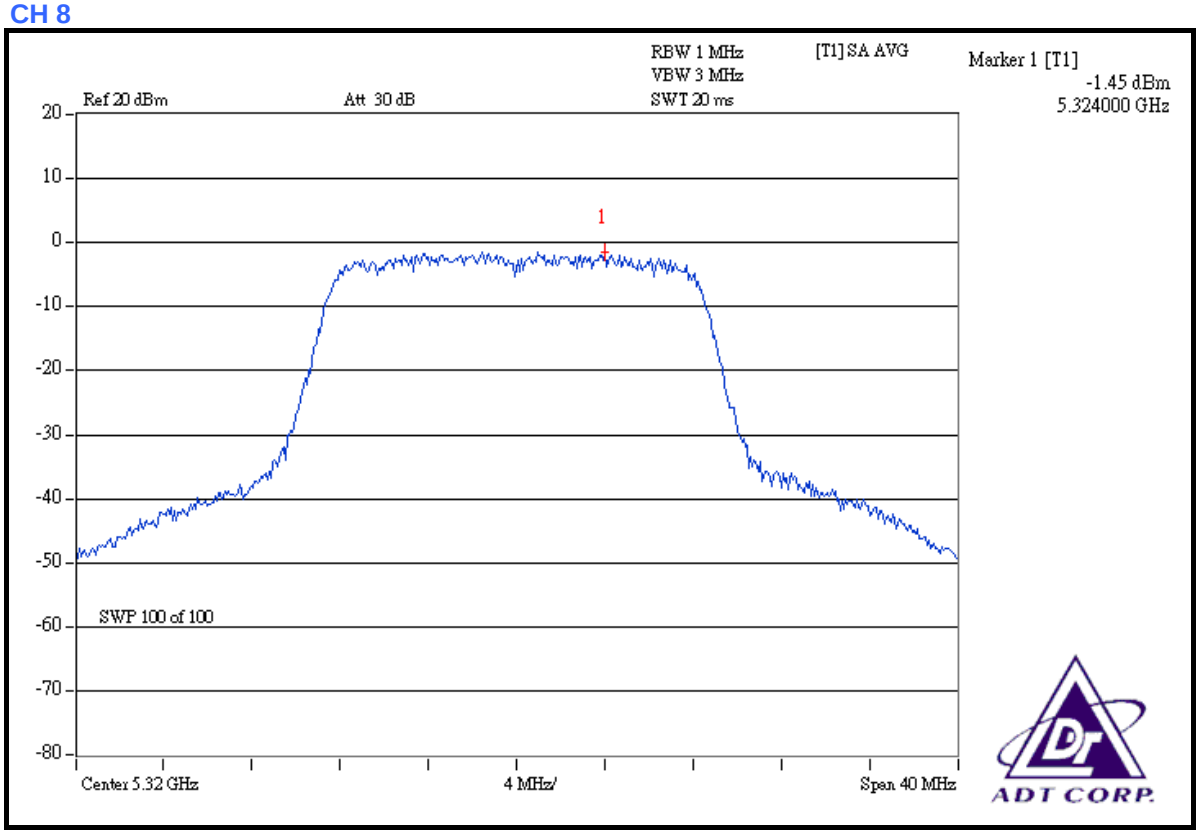
CH 5



CH 7


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.39 dBm
5.298880 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.3 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 8

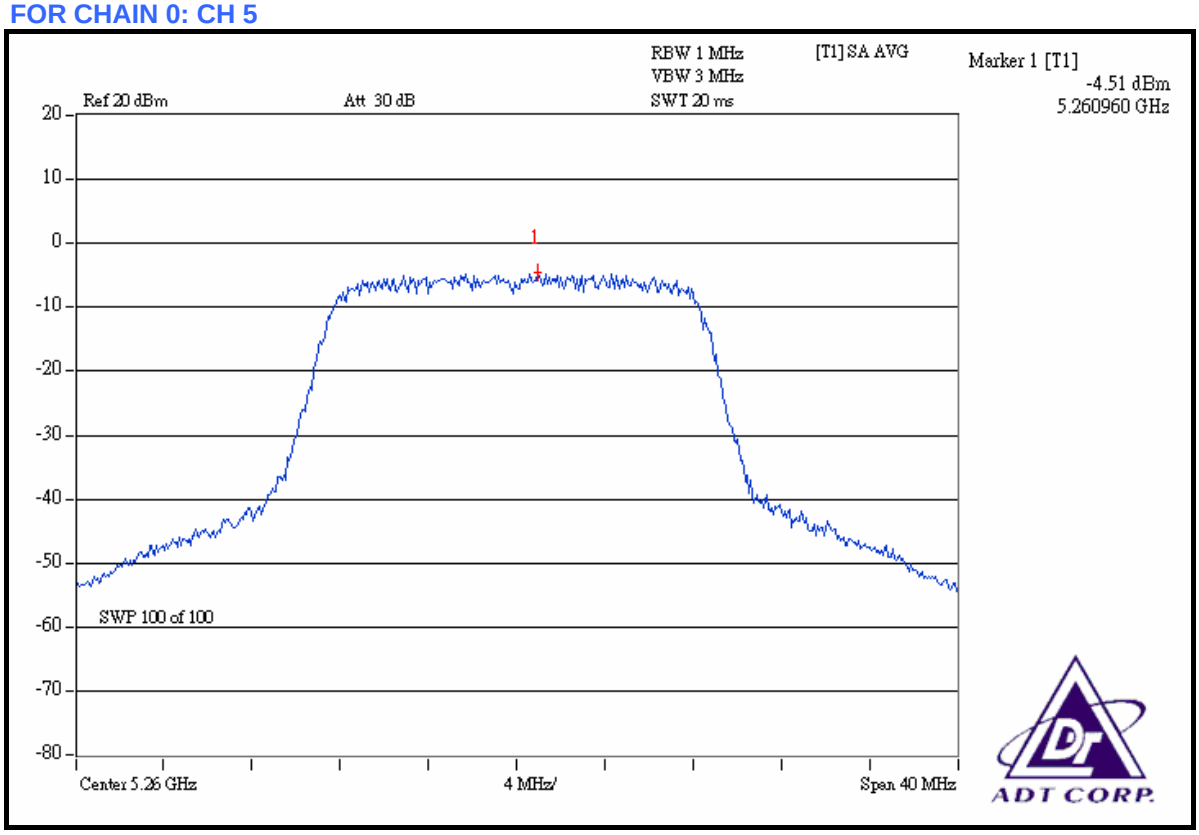

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.45 dBm
5.324000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.32 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (20MHz) OFDM MODULATION:

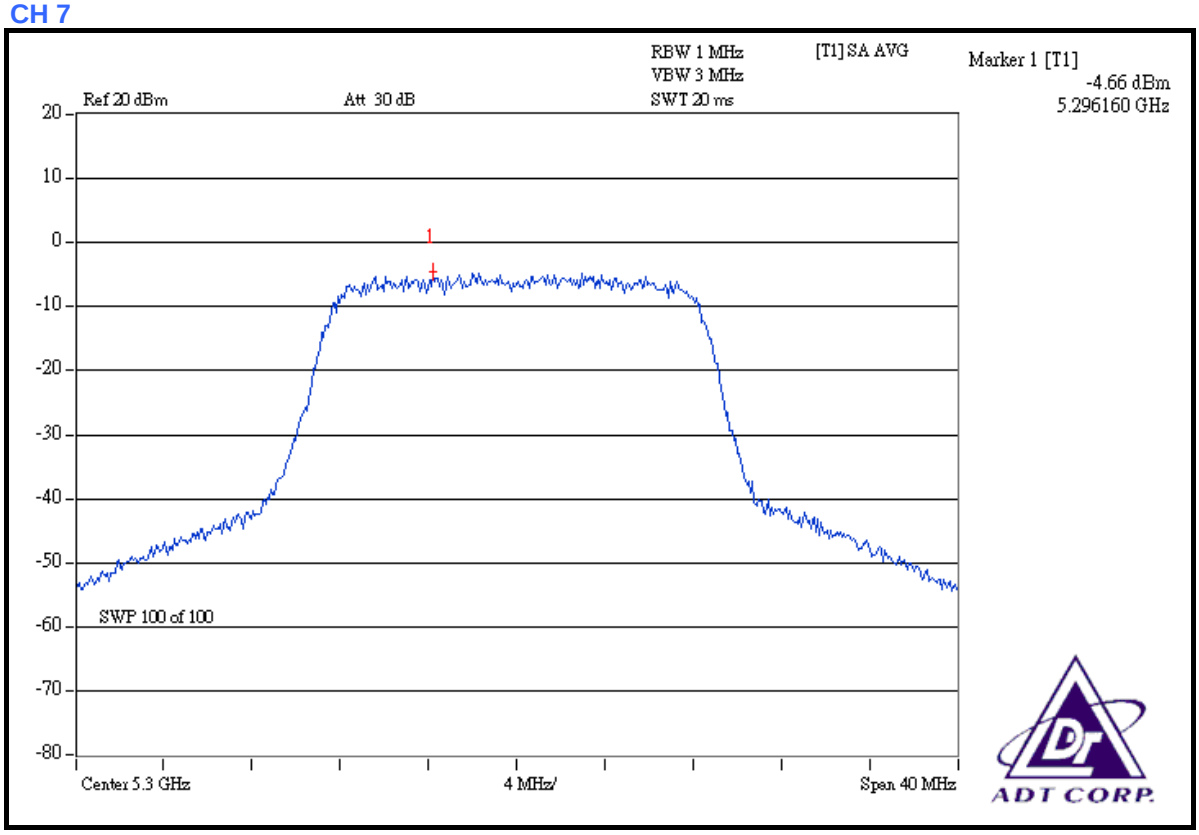
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
5	5260	-4.51	-3.88	0.76	-1.17	11	PASS
7	5300	-4.66	-3.94	0.74	-1.27	11	PASS
8	5320	-4.39	-3.99	0.76	-1.18	11	PASS

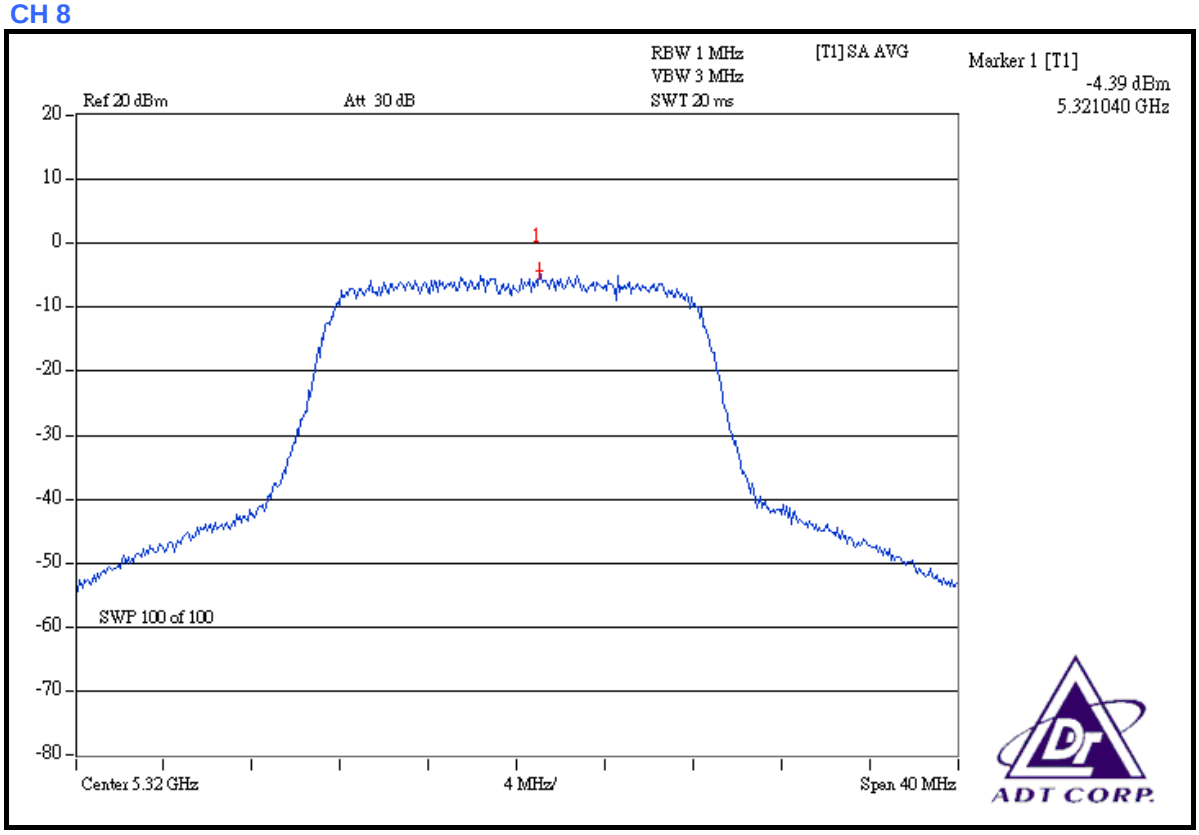
FOR CHAIN 0: CH 5



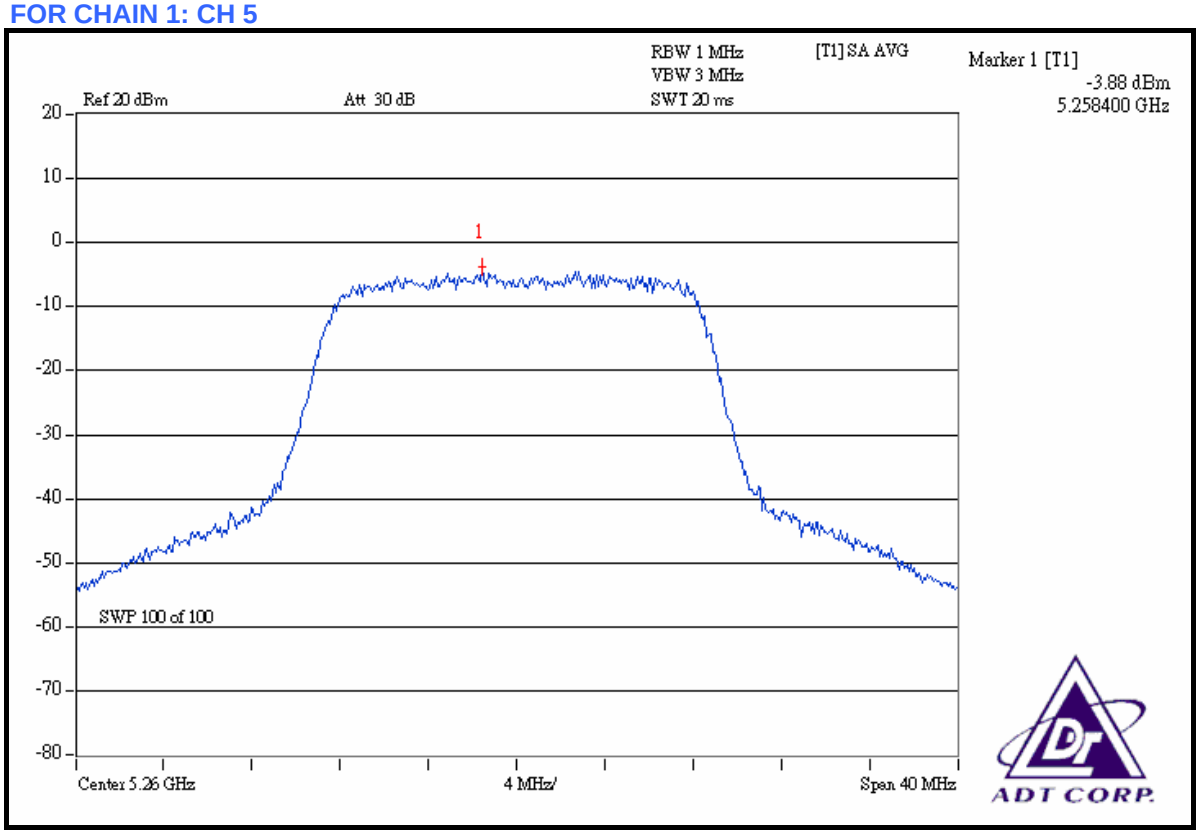
CH 7



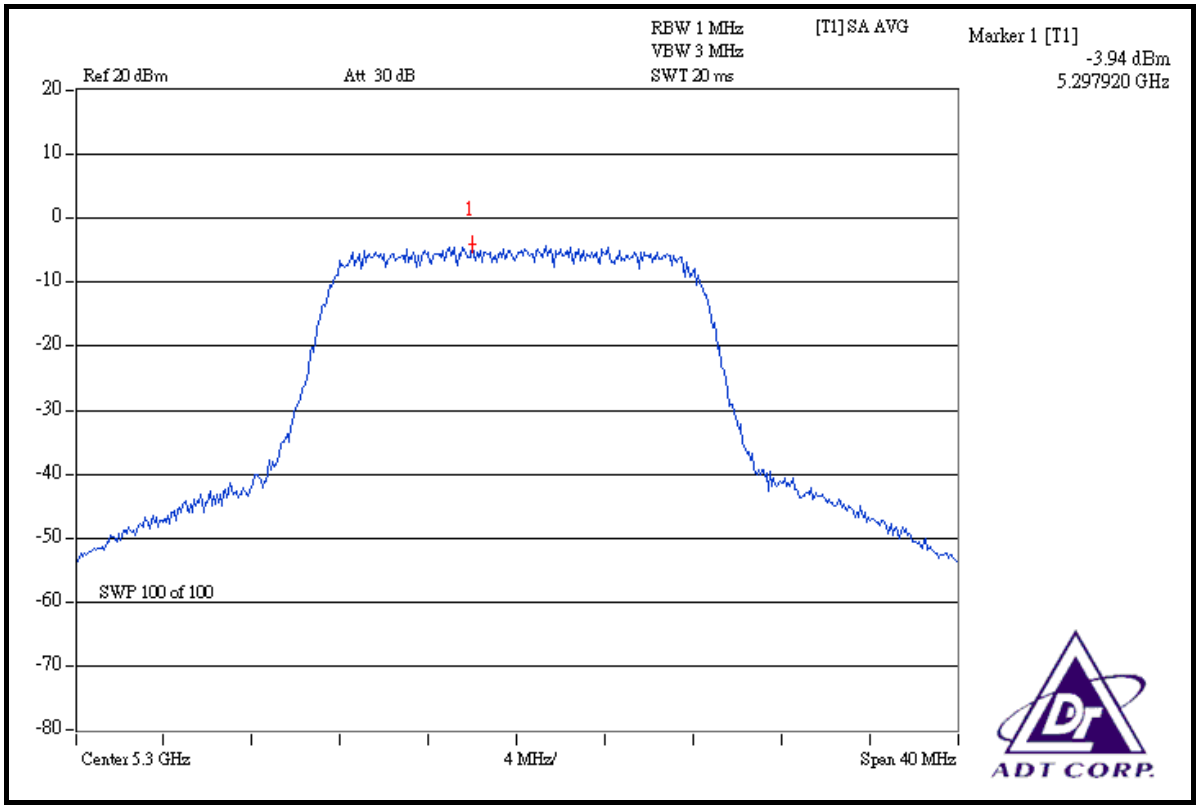
CH 8



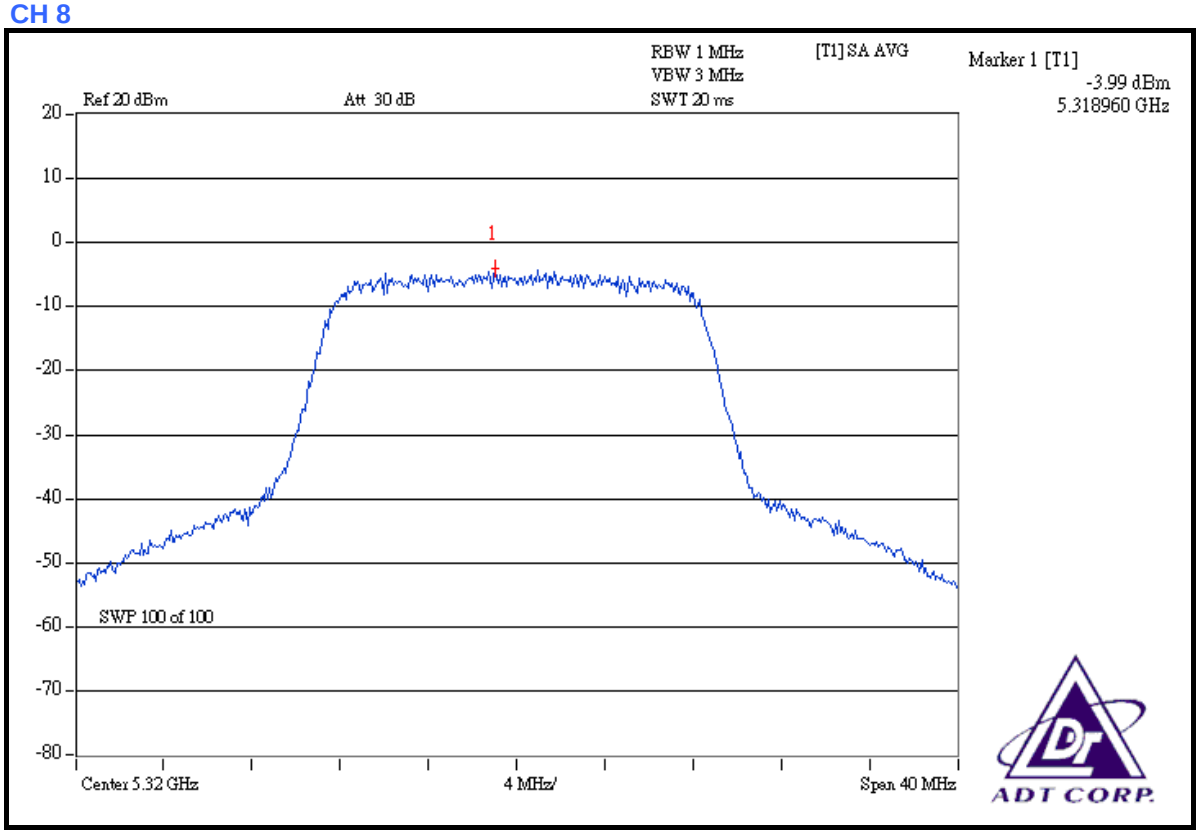
FOR CHAIN 1: CH 5



CH 7


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-3.94 dBm
5.297920 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.3 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 8

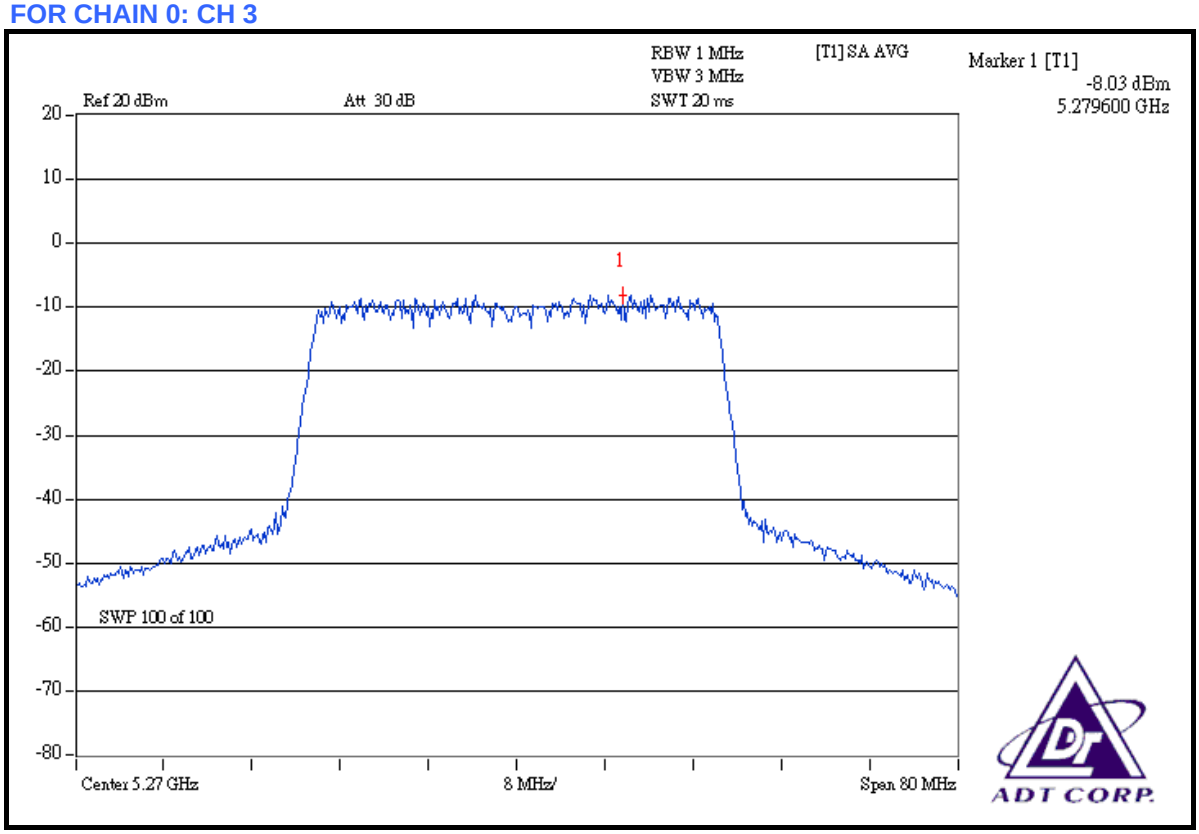

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-3.99 dBm
5.318960 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.32 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (40MHz) OFDM MODULATION:

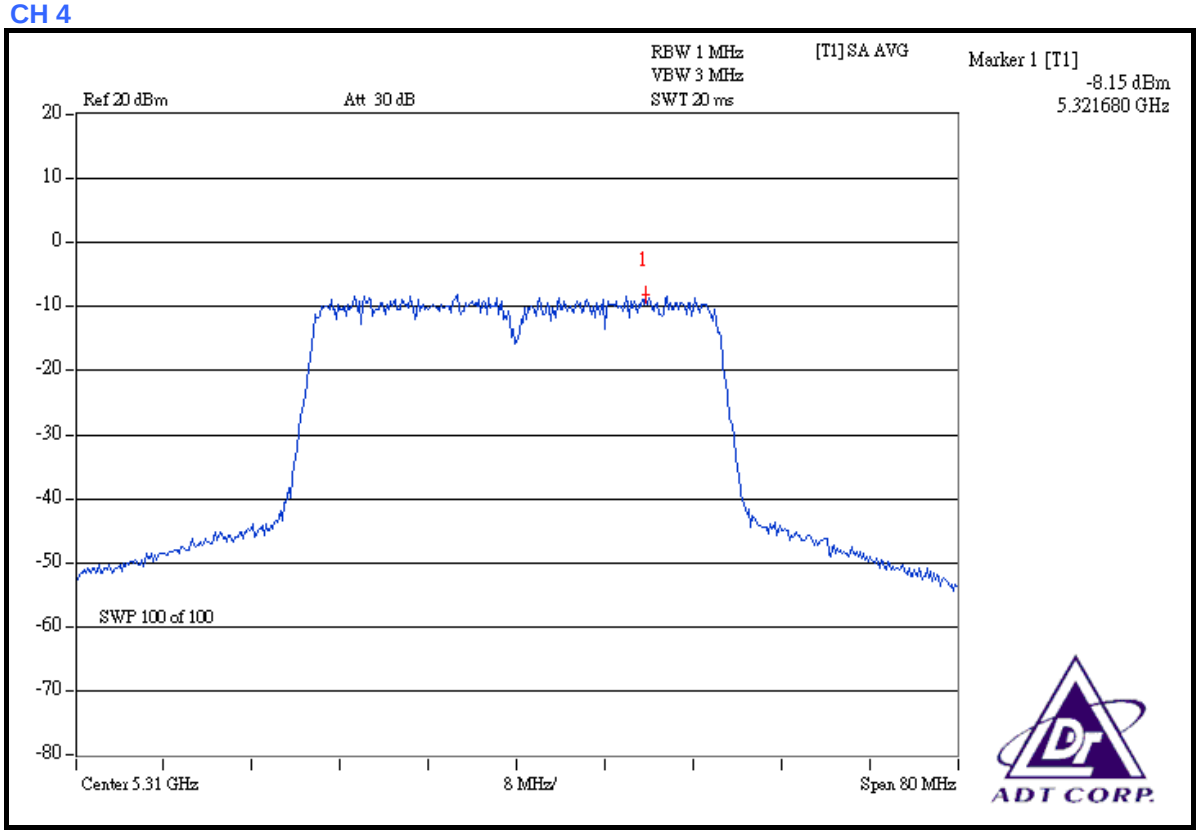
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
3	5270	-8.03	-7.88	0.32	-4.90	11	PASS
4	5310	-8.15	-7.76	0.32	-4.94	11	PASS

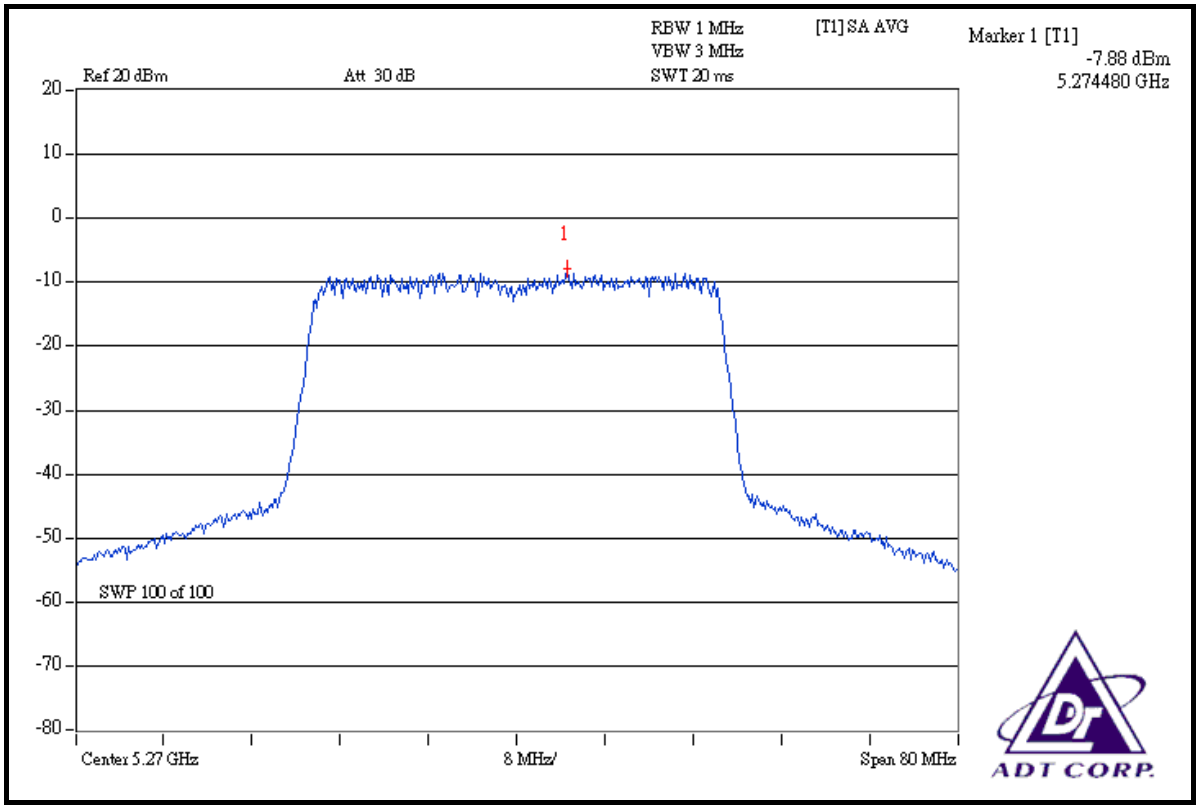
FOR CHAIN 0: CH 3



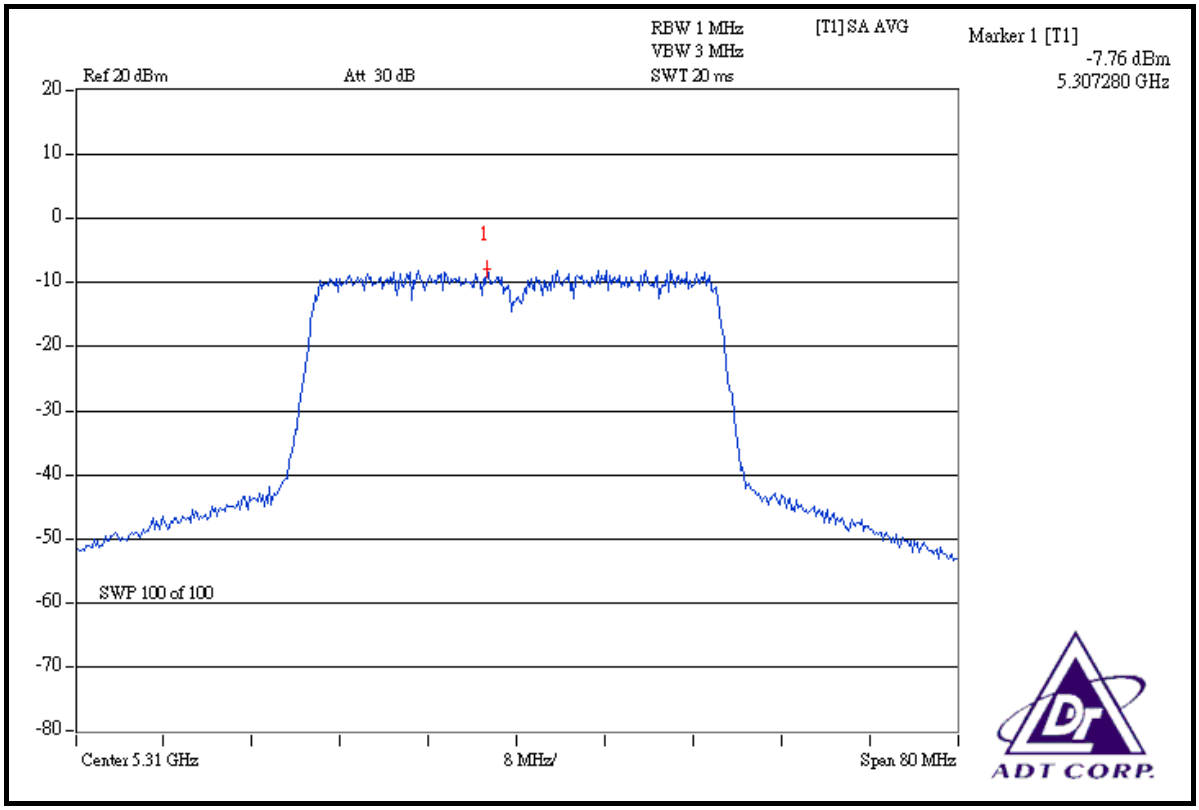
CH 4



FOR CHAIN 1: CH 1



CH 2



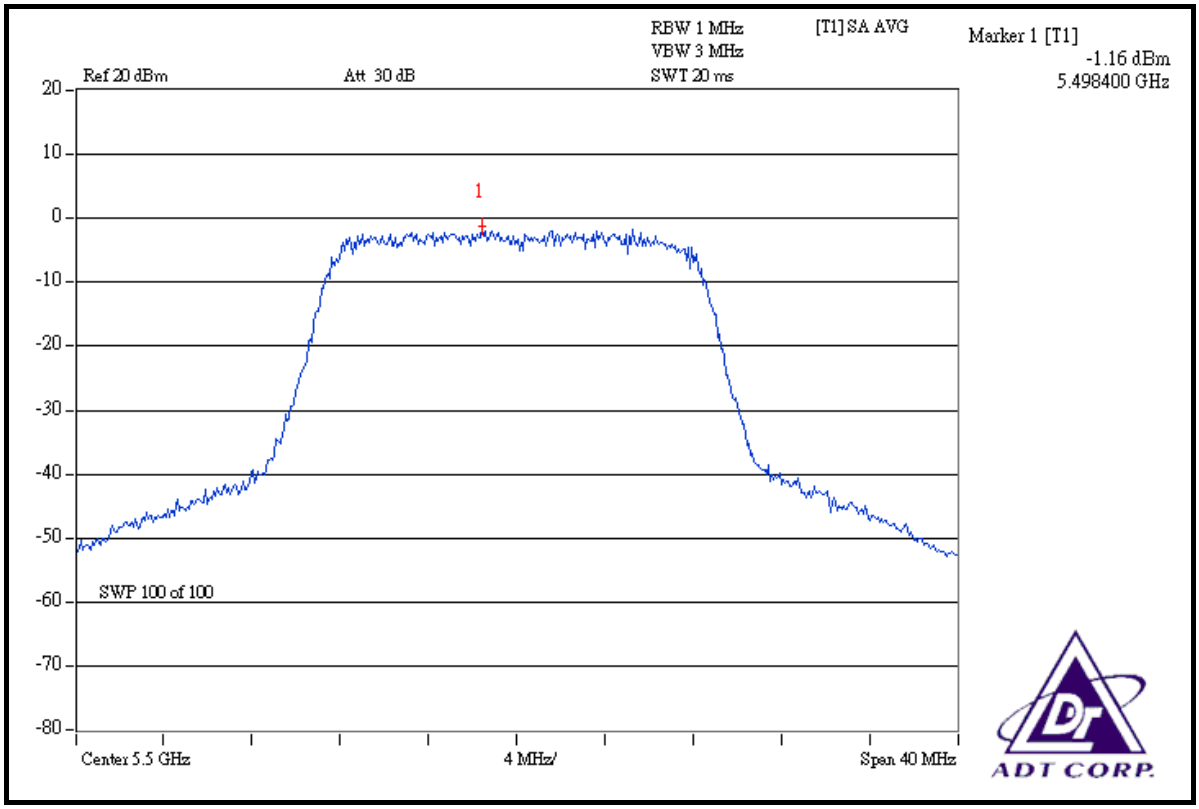
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

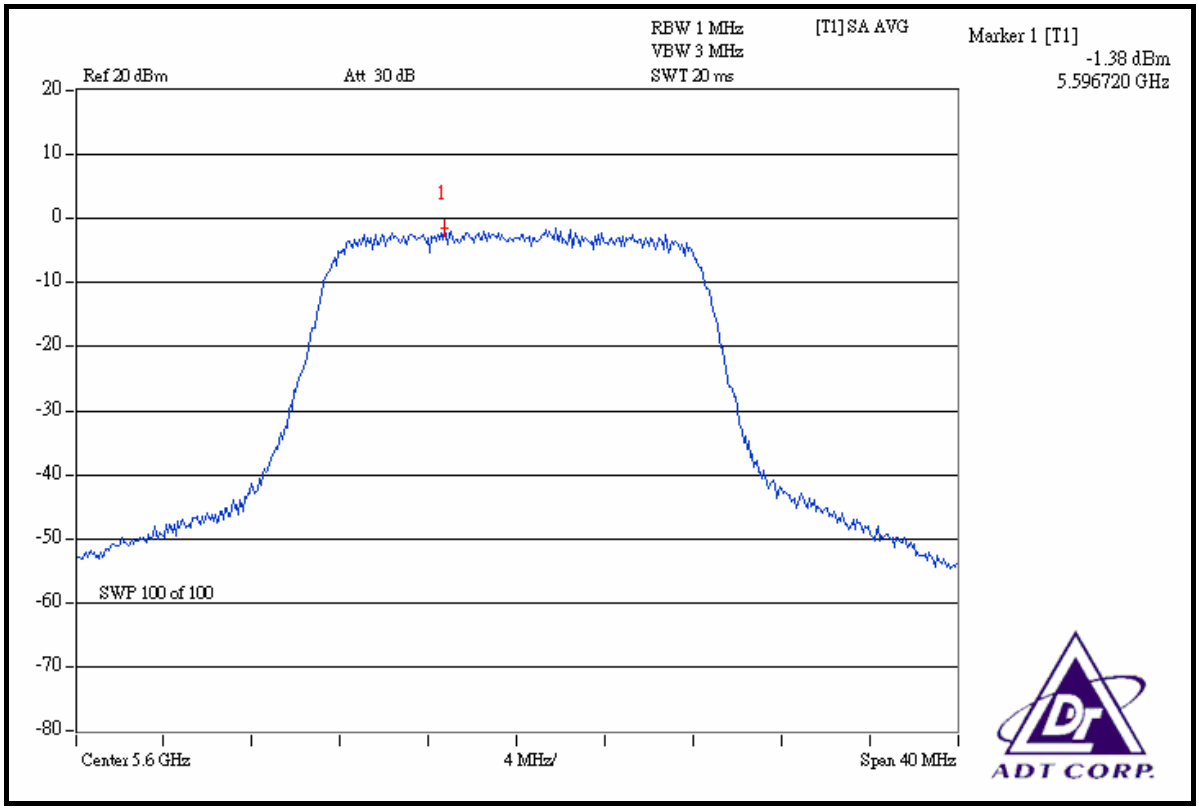
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 65%RH, 1026hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
1	5500	-1.16	11	PASS
6	5600	-1.38	11	PASS
11	5700	-1.33	11	PASS

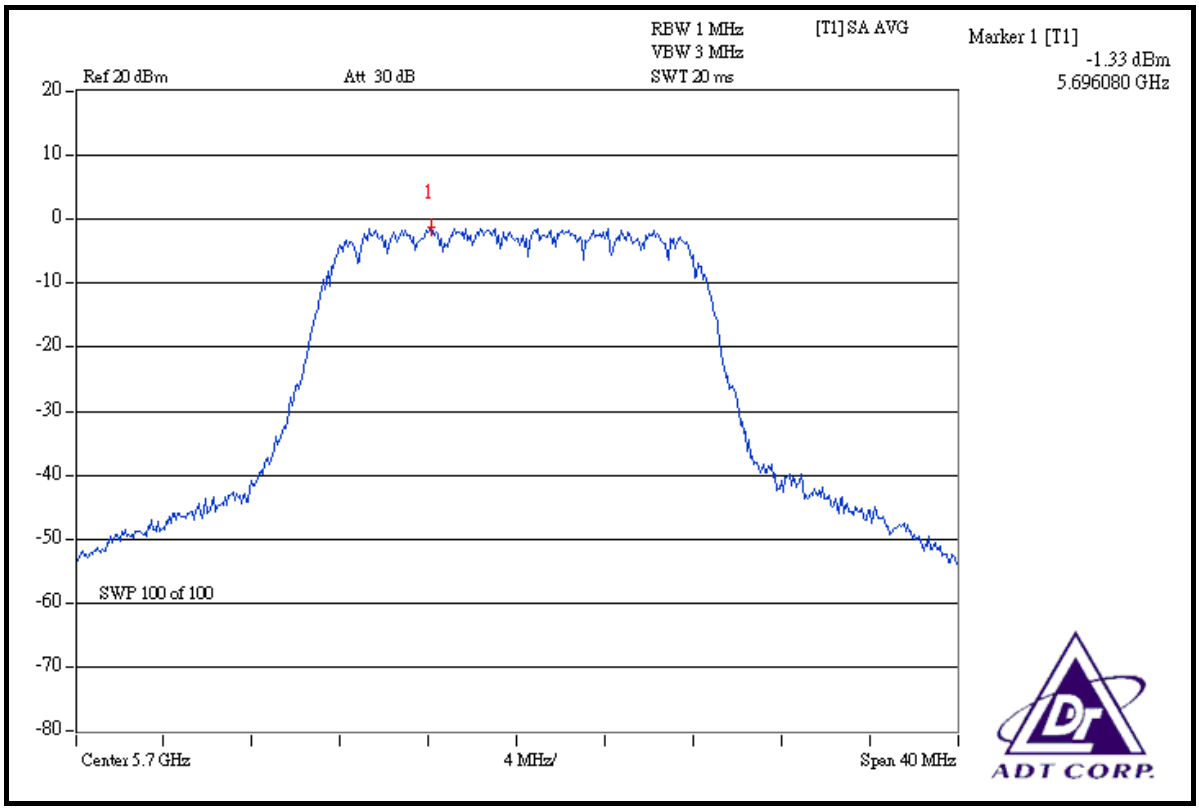
CH 1


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.16 dBm
5.498400 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.5 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 6


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.38 dBm
5.596720 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.6 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 11

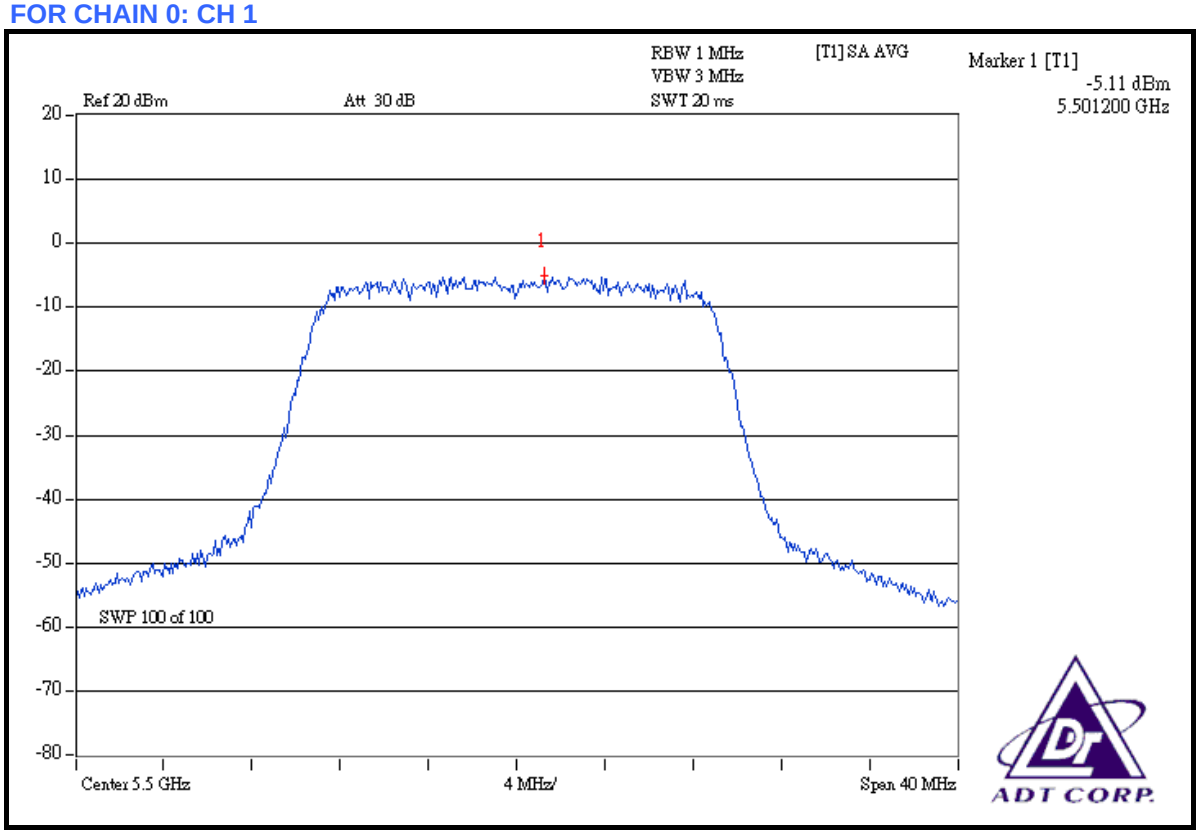

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.33 dBm
5.696080 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.7 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (20MHz) OFDM MODULATION:

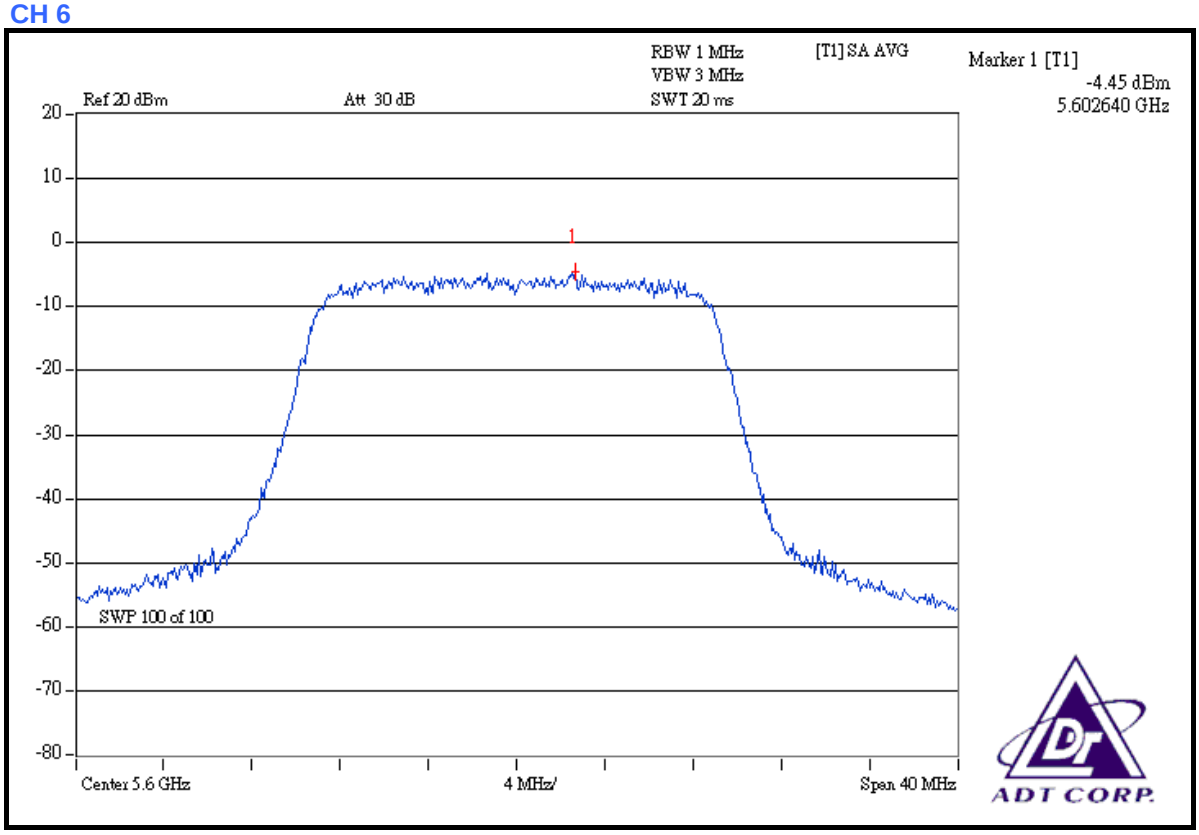
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	5500	-5.11	-4.73	0.65	-1.91	11	PASS
6	5600	-4.45	-4.21	0.74	-1.32	11	PASS
11	5700	-5.03	-4.76	0.65	-1.88	11	PASS

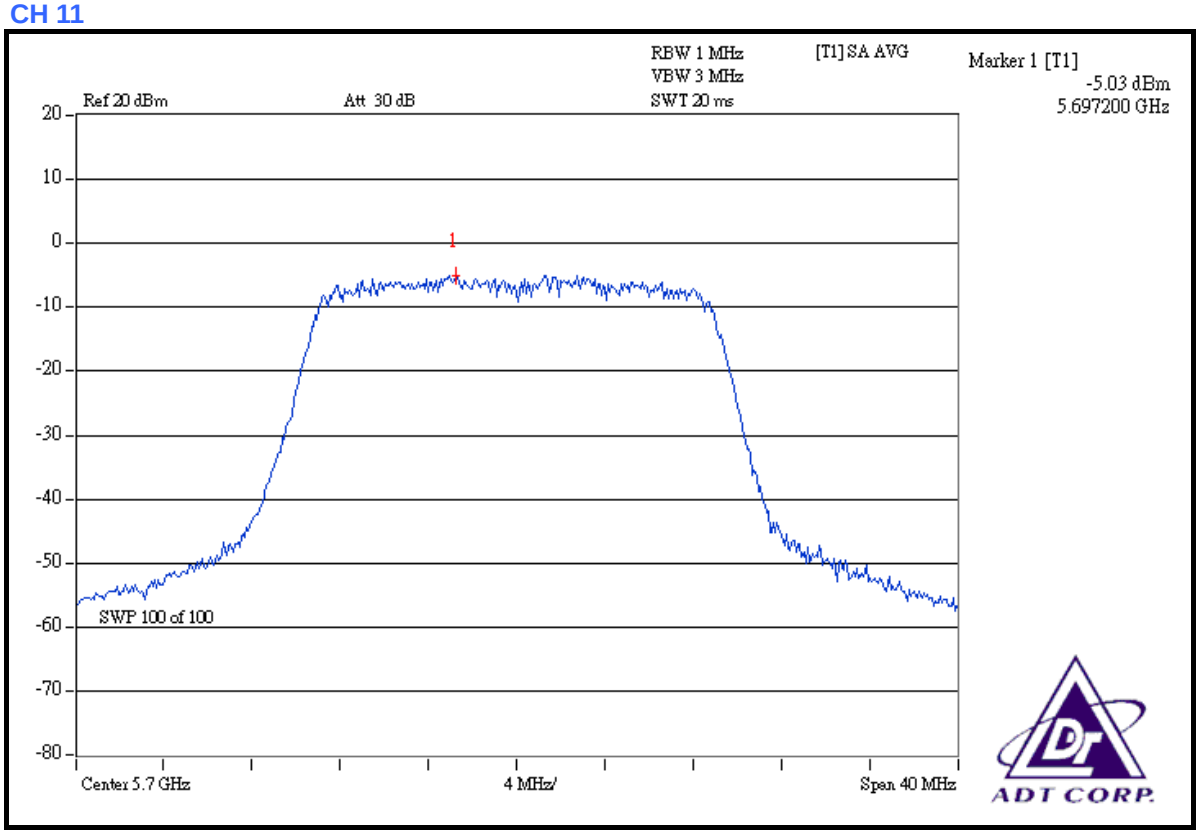
FOR CHAIN 0: CH 1



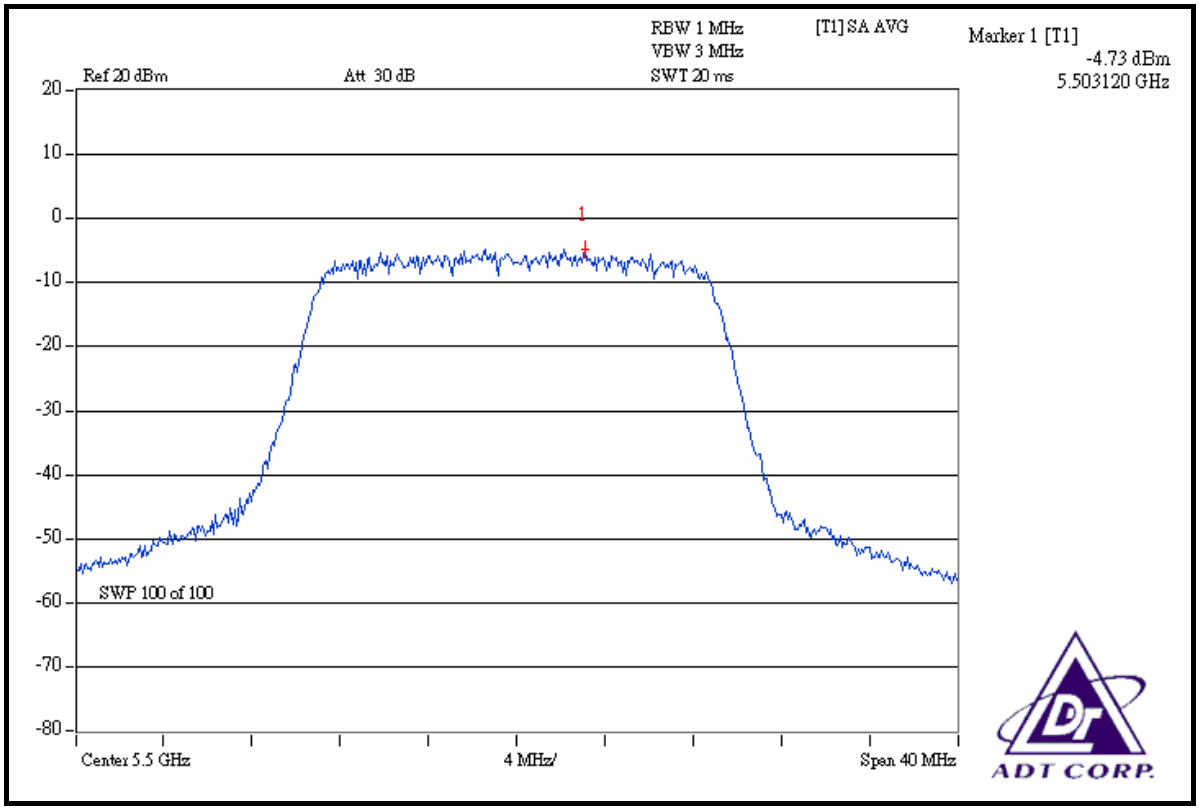
CH 6



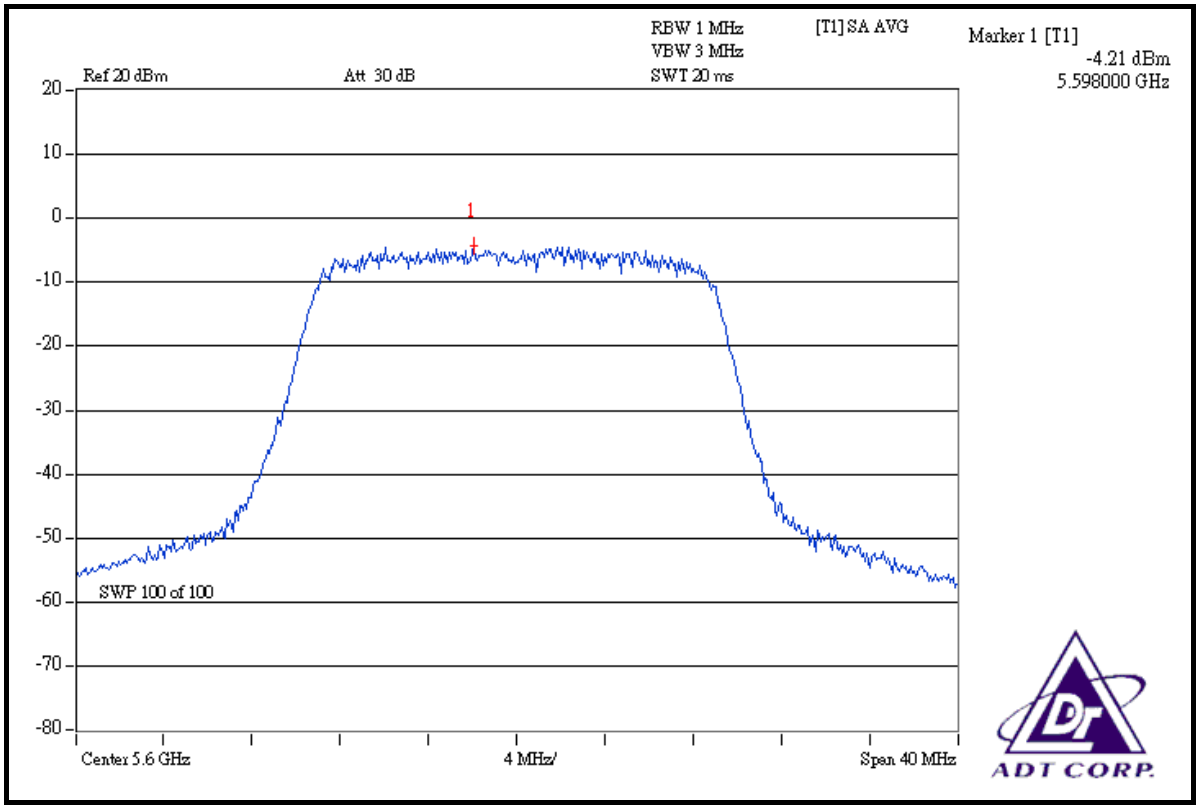
CH 11



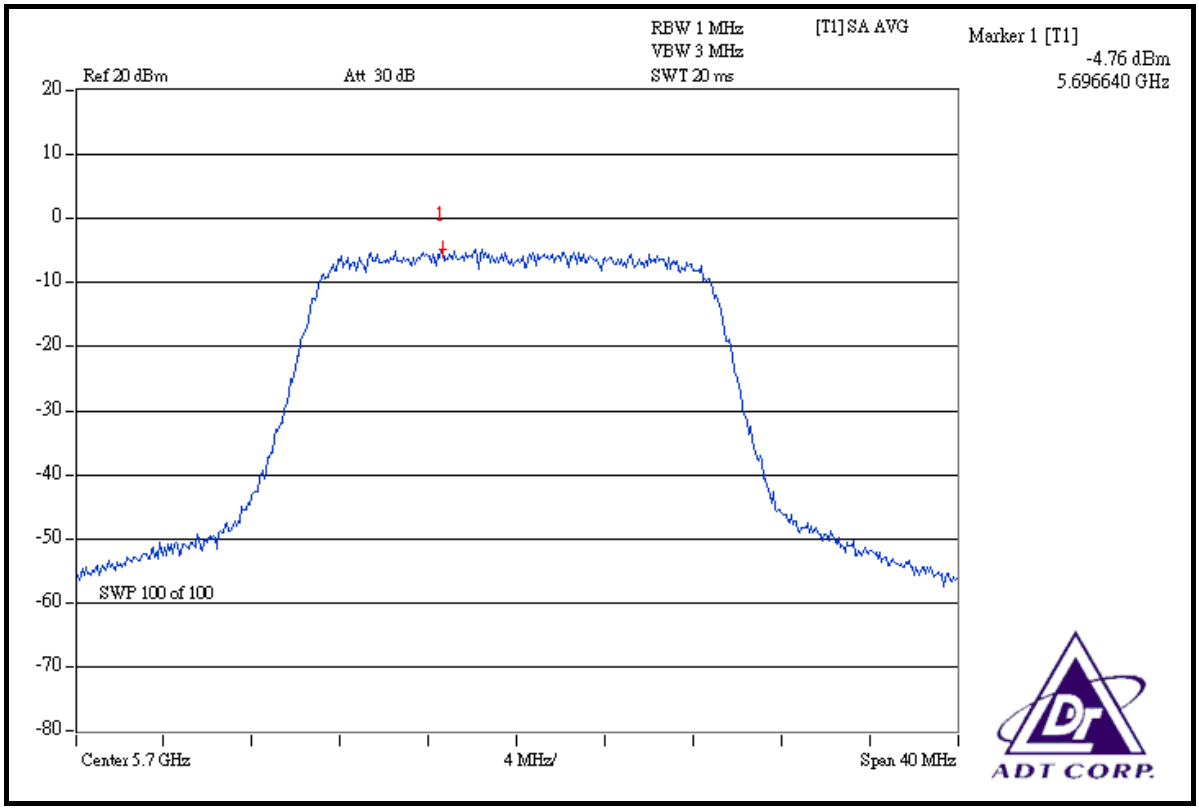
FOR CHAIN 1: CH 1



CH 6


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-4.21 dBm
5.598000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.6 GHz
4 MHz/
Span 40 MHz
ADT CORP.

CH 11

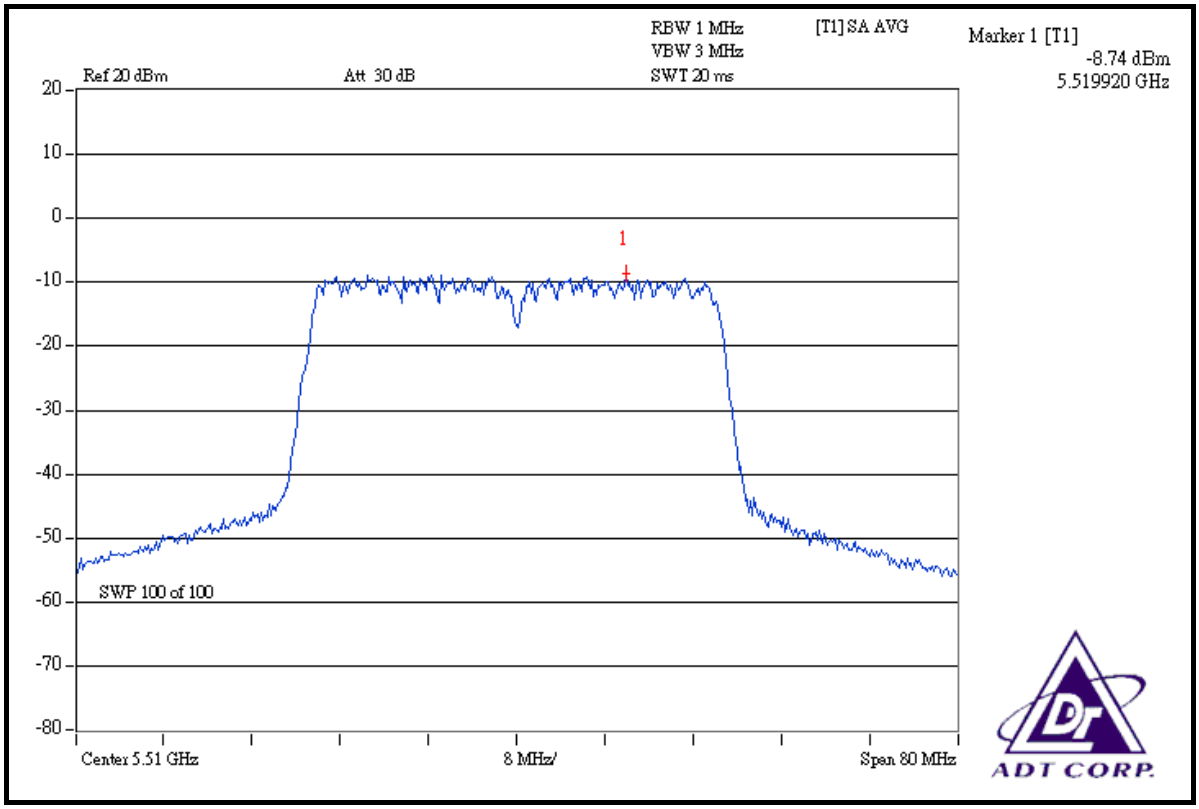

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-4.76 dBm
5.696640 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.7 GHz
4 MHz/
Span 40 MHz
ADT CORP.

DRAFT 802.11n (40MHz) OFDM MODULATION:

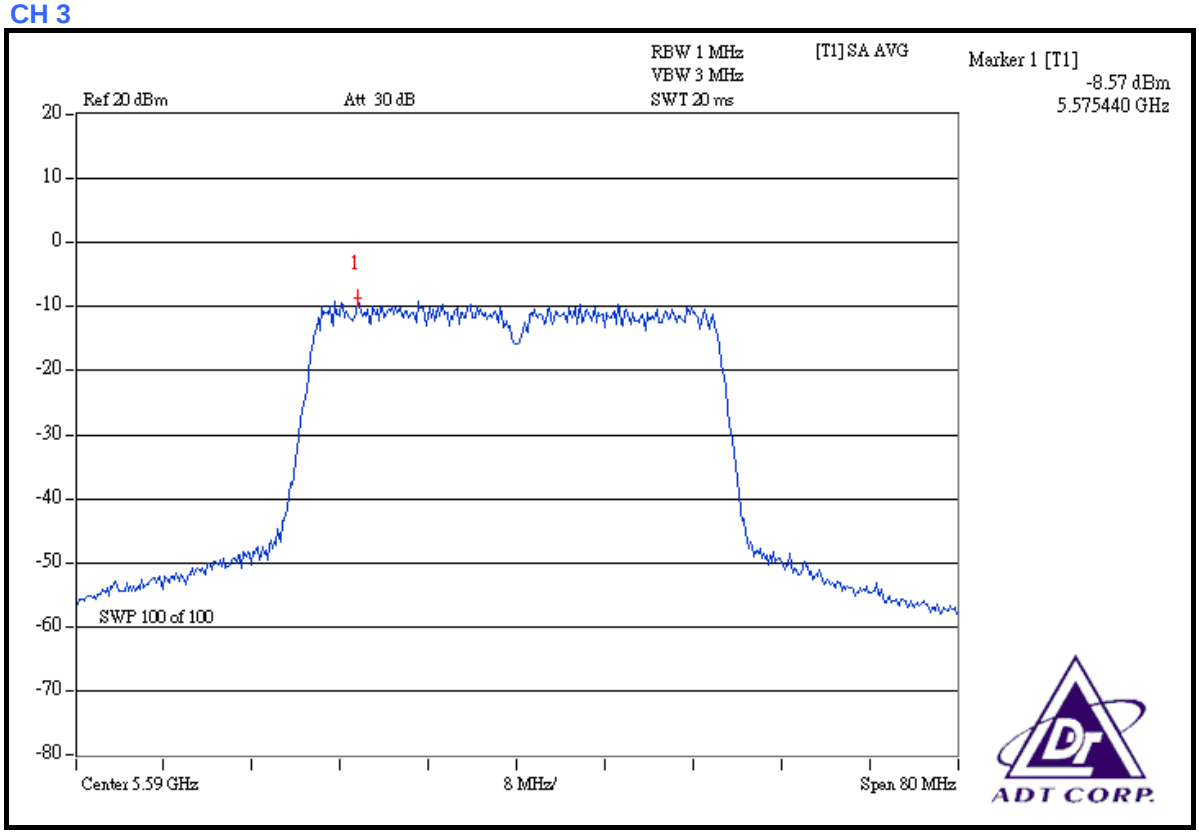
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 991hPa
INPUT POWER (SYSTEM)	120Vac, 60Hz	**TESTED BY**	Brad Wu

CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	5510	-8.74	-8.49	0.28	-5.60	11	PASS
3	5590	-8.57	-8.52	0.28	-5.53	11	PASS
5	5670	-8.59	-8.34	0.28	-5.45	11	PASS

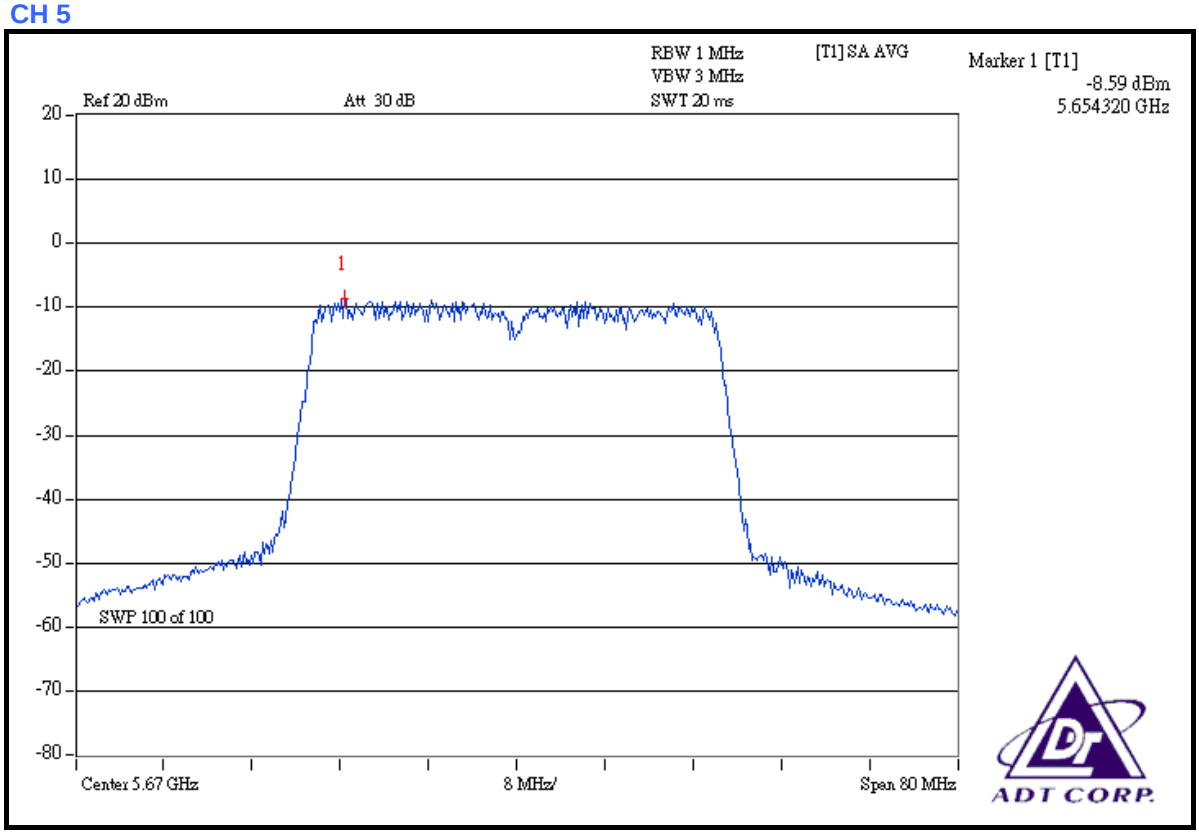
FOR CHAIN 0: CH 1



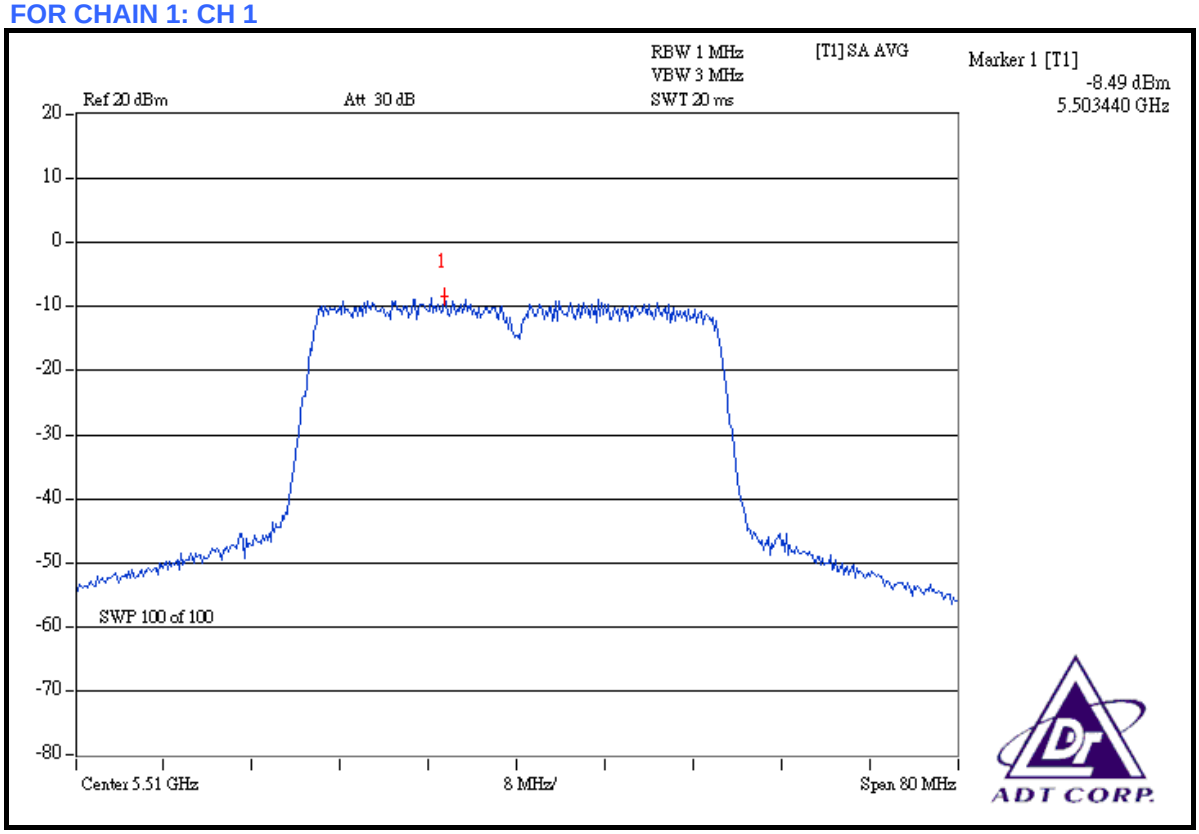
CH 3



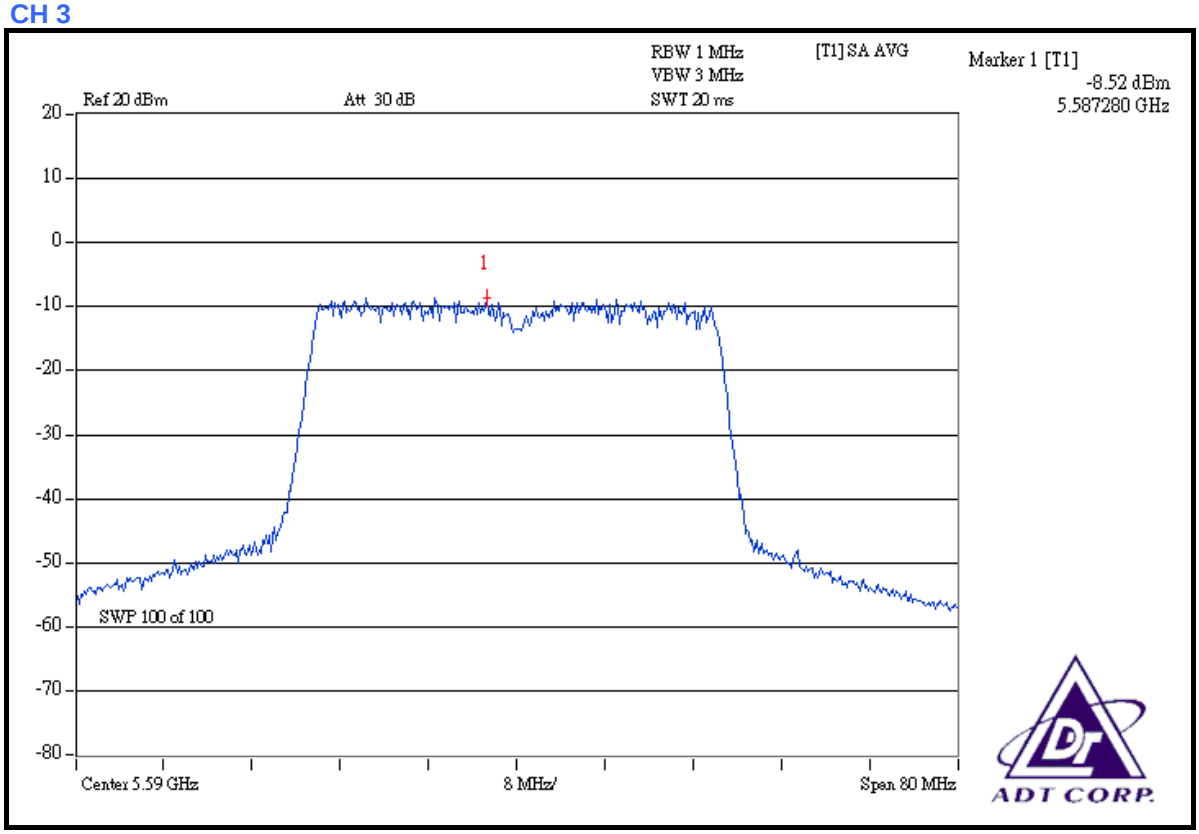
CH 5



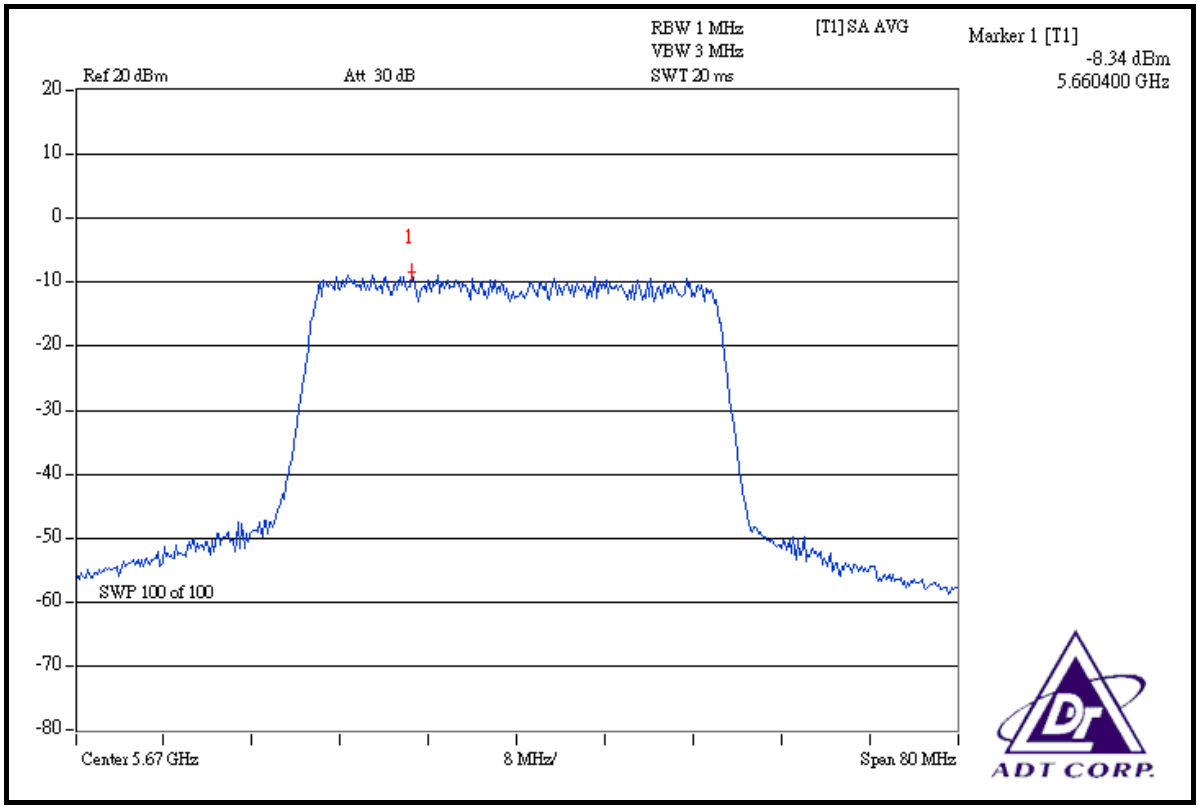
FOR CHAIN 1: CH 1



CH 3


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-8.52 dBm
5.587280 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.59 GHz
8 MHz/
Span 80 MHz
ADT CORP.

CH 5


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-8.34 dBm
5.660400 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.67 GHz
8 MHz/
Span 80 MHz
ADT CORP.

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.

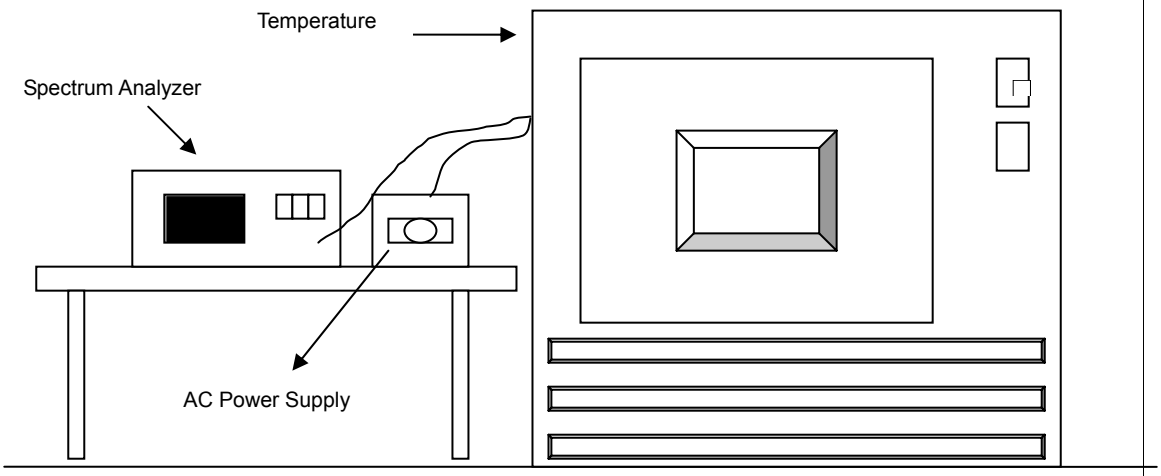
4.6.3 TEST PROCEDURE

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: 5320MHz						LIMIT: ± 0.01%			
TEMP. (℃)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.907251	-0.0017434	5319.917863	-0.0015439	5319.941154	-0.0011061	5319.937565	-0.0011736
	110.0	5319.924331	-0.0014223	5319.929954	-0.0013167	5319.944554	-0.0010422	5319.943355	-0.0010647
	93.5	5319.926558	-0.0013805	5319.930344	-0.0013093	5319.949754	-0.0009445	5319.948215	-0.0009734
40	126.5	5319.918836	-0.0015256	5319.926945	-0.0013732	5319.945554	-0.0010234	5319.945665	-0.0010213
	110.0	5319.925049	-0.0014089	5319.935693	-0.0012088	5319.950354	-0.0009332	5319.948545	-0.0009672
	93.5	5319.936645	-0.0011909	5319.943853	-0.0010554	5319.953254	-0.0008787	5319.955685	-0.0008330
30	126.5	5319.920131	-0.0015013	5319.933263	-0.0012545	5319.951254	-0.0009163	5319.949889	-0.0009419
	110.0	5319.925931	-0.0013923	5319.948654	-0.0009651	5319.958854	-0.0007734	5319.949865	-0.0009424
	93.5	5319.944045	-0.0010518	5319.958243	-0.0007849	5319.959954	-0.0007527	5319.962315	-0.0007084
20	126.5	5319.927241	-0.0013676	5319.936813	-0.0011877	5319.954554	-0.0008542	5319.956455	-0.0008185
	110.0	5319.927481	-0.0013631	5319.955243	-0.0008413	5319.962354	-0.0007076	5319.958365	-0.0007826
	93.5	5319.951746	-0.0009070	5319.964843	-0.0006608	5319.964324	-0.0006706	5319.964545	-0.0006664
10	126.5	5319.935231	-0.0012175	5319.949243	-0.0009541	5319.962084	-0.0007127	5319.962865	-0.0006980
	110.0	5319.943231	-0.0010671	5319.957743	-0.0007943	5319.964353	-0.0006701	5319.963535	-0.0006854
	93.5	5319.958131	-0.0007870	5319.974443	-0.0004804	5319.971962	-0.0005270	5319.974255	-0.0004839
0	126.5	5319.938036	-0.0011647	5319.954823	-0.0008492	5319.965767	-0.0006435	5319.967215	-0.0006163
	110.0	5319.949461	-0.0009500	5319.964253	-0.0006719	5319.973814	-0.0004922	5319.968455	-0.0005929
	93.5	5319.964241	-0.0006722	5319.973456	-0.0004989	5319.974363	-0.0004819	5319.976385	-0.0004439
-10	126.5	5319.950136	-0.0009373	5319.960363	-0.0007451	5319.972349	-0.0005197	5319.972455	-0.0005178
	110.0	5319.956581	-0.0008161	5319.972443	-0.0005180	5319.976114	-0.0004490	5319.975915	-0.0004527
	93.5	5319.971261	-0.0005402	5319.975343	-0.0004635	5319.979385	-0.0003875	5319.979958	-0.0003767
-20	126.5	5319.955251	-0.0008411	5319.966813	-0.0006238	5319.975827	-0.0004544	5319.977575	-0.0004215
	110.0	5319.961458	-0.0007245	5319.975343	-0.0004635	5319.982062	-0.0003372	5319.978135	-0.0004110
	93.5	5319.974931	-0.0004712	5319.984236	-0.0002963	5319.984543	-0.0002905	5319.982665	-0.0003258
-30	126.5	5319.962531	-0.0007043	5319.975364	-0.0004631	5319.983264	-0.0003146	5319.978175	-0.0004102
	110.0	5319.975831	-0.0004543	5319.979652	-0.0003825	5319.985834	-0.0002663	5319.983852	-0.0003035
	93.5	5319.977865	-0.0004161	5319.988113	-0.0002234	5319.988654	-0.0002133	5319.987011	-0.0002442

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	100040	Jun. 28, 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. 24, 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 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 lose 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 filed strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

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

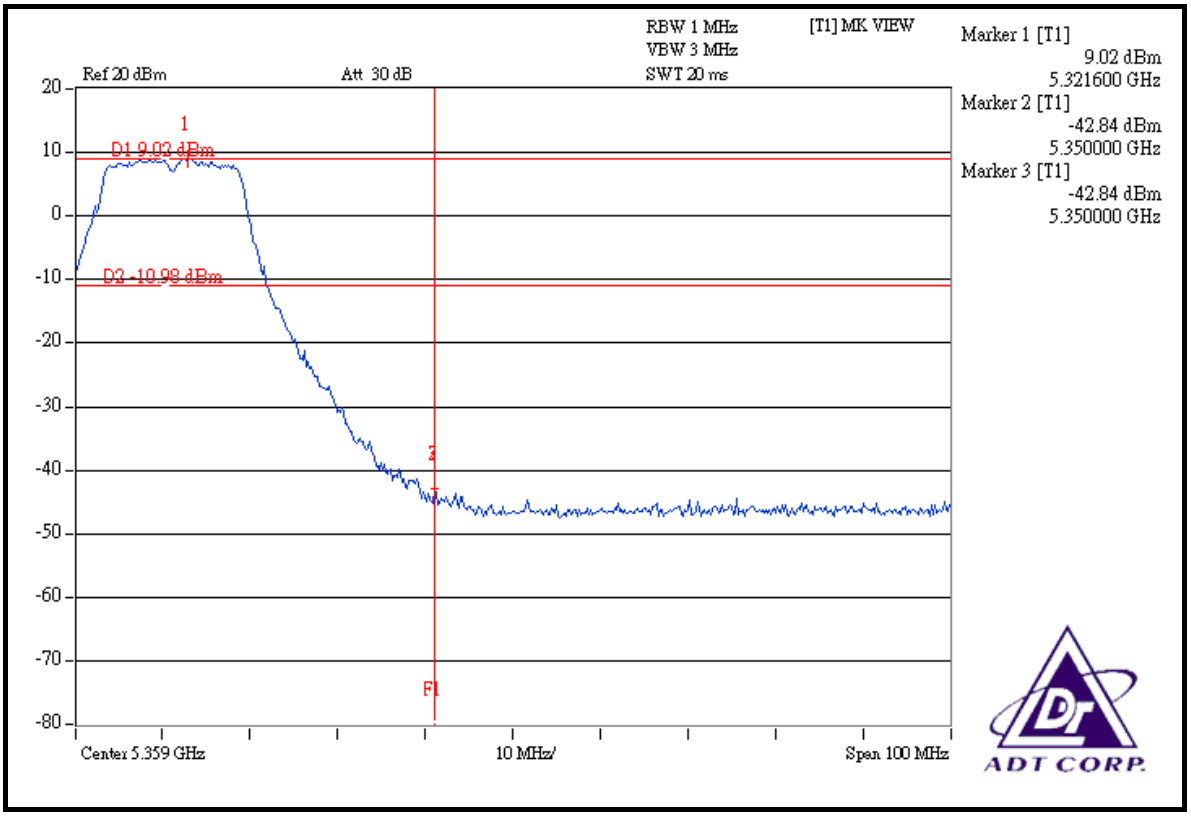
FOR FREQUENCY BAND: 5.25 ~ 5.35GHz

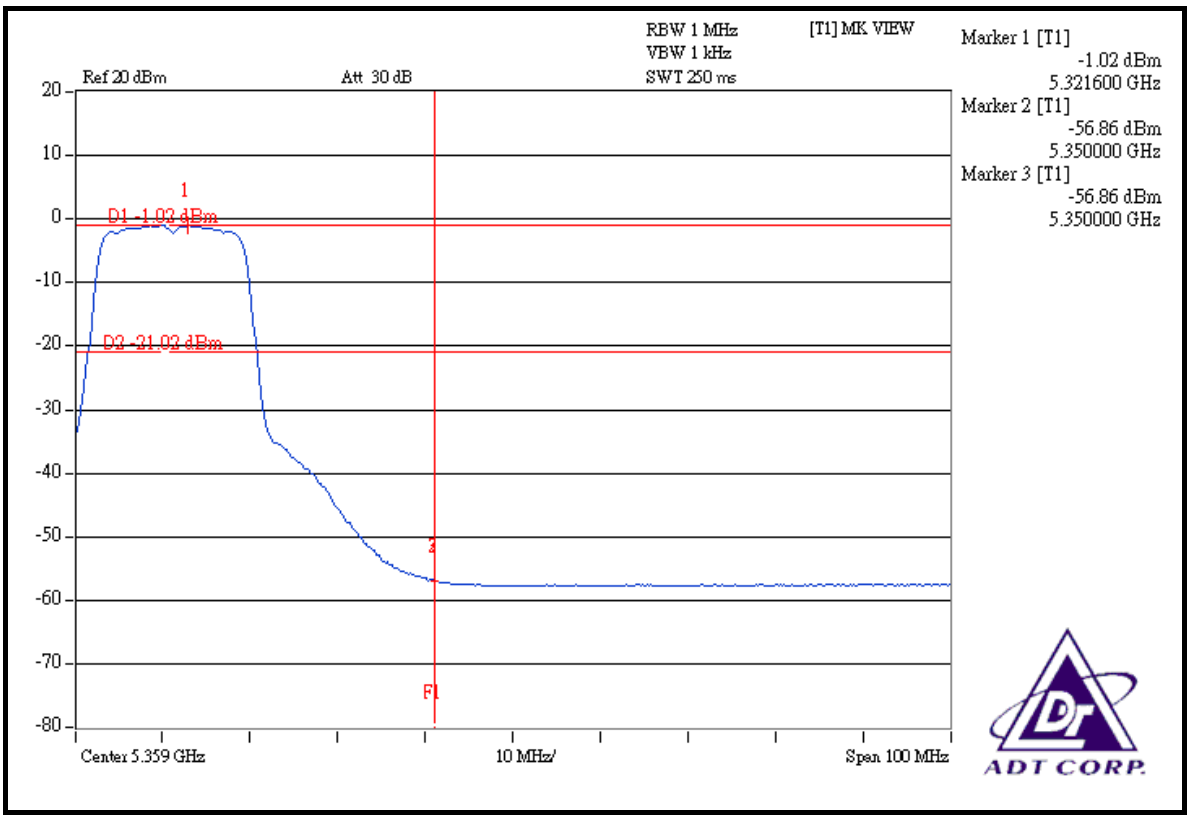
802.11a OFDM MODULATION:

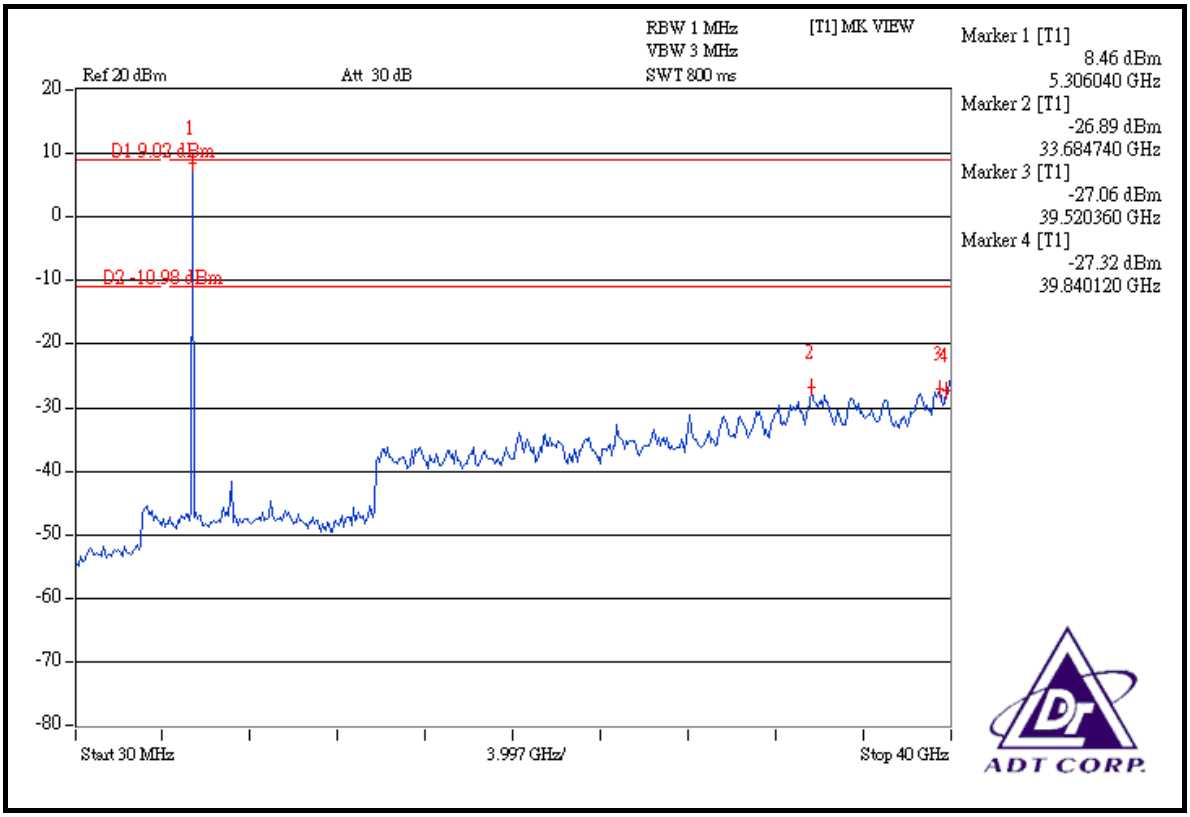
Channel 8 (5320MHz)

The band edge emission plot on the next second page shows 51.86dBc 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 105.35dBuV/m (Peak), so the maximum field strength in restrict band is 105.35 – 51.86 = 53.49dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 55.84dBc 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 94.87dBuV/m (Average), so the maximum field strength in restrict band is 94.87 – 55.84 = 39.03dBuV/m which is under 54dBuV/m limit.


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 9.02 dBm
D2 -10.98 dBm
Marker 1 [T1]
9.02 dBm
5.321600 GHz
Marker 2 [T1]
-42.84 dBm
5.350000 GHz
Marker 3 [T1]
-42.84 dBm
5.350000 GHz
Center 5.359 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -1.02 dBm
D2 -21.02 dBm
Marker 1 [T1]
-1.02 dBm
5.321600 GHz
Marker 2 [T1]
-56.86 dBm
5.350000 GHz
Marker 3 [T1]
-56.86 dBm
5.350000 GHz
Center 5.359 GHz
10 MHz/
Span 100 MHz

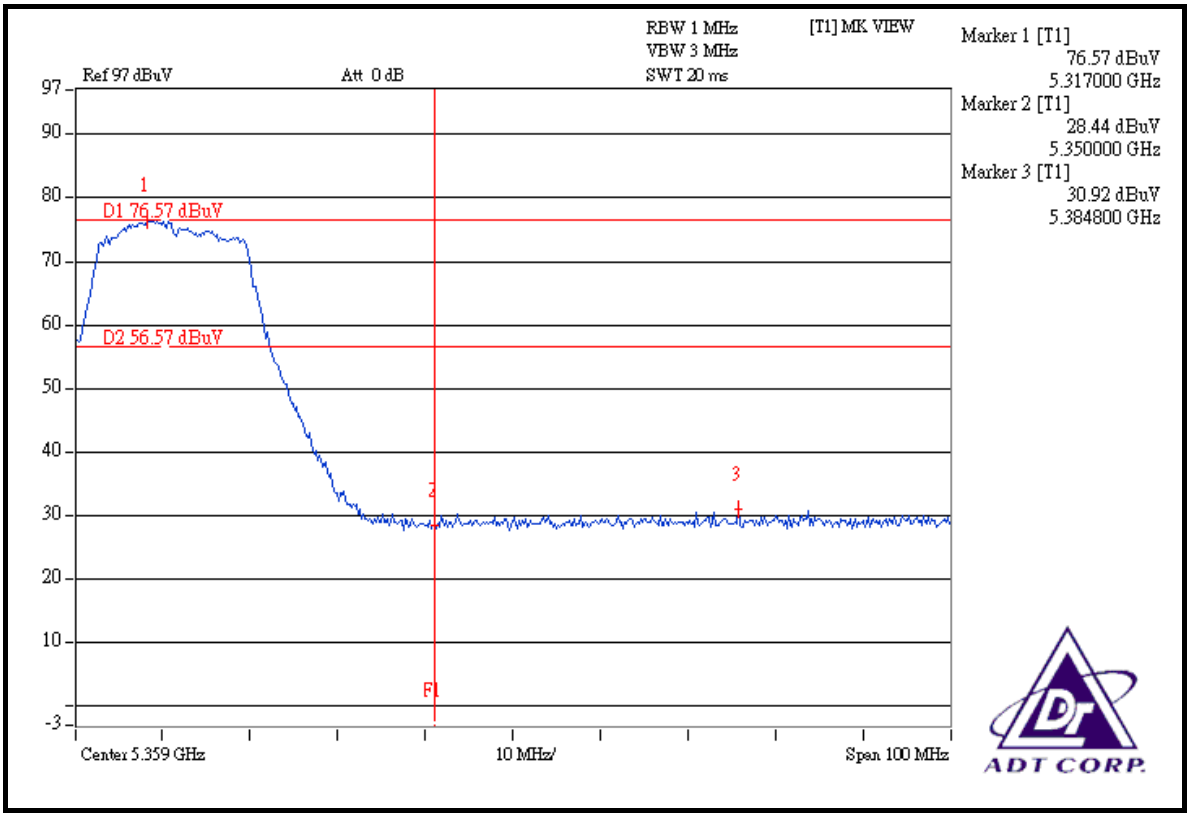

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
8.46 dBm
5.306040 GHz
Marker 2 [T1]
-26.89 dBm
33.684740 GHz
Marker 3 [T1]
-27.06 dBm
39.520360 GHz
Marker 4 [T1]
-27.32 dBm
39.840120 GHz
D1 9.02 dBm
D2 -10.98 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

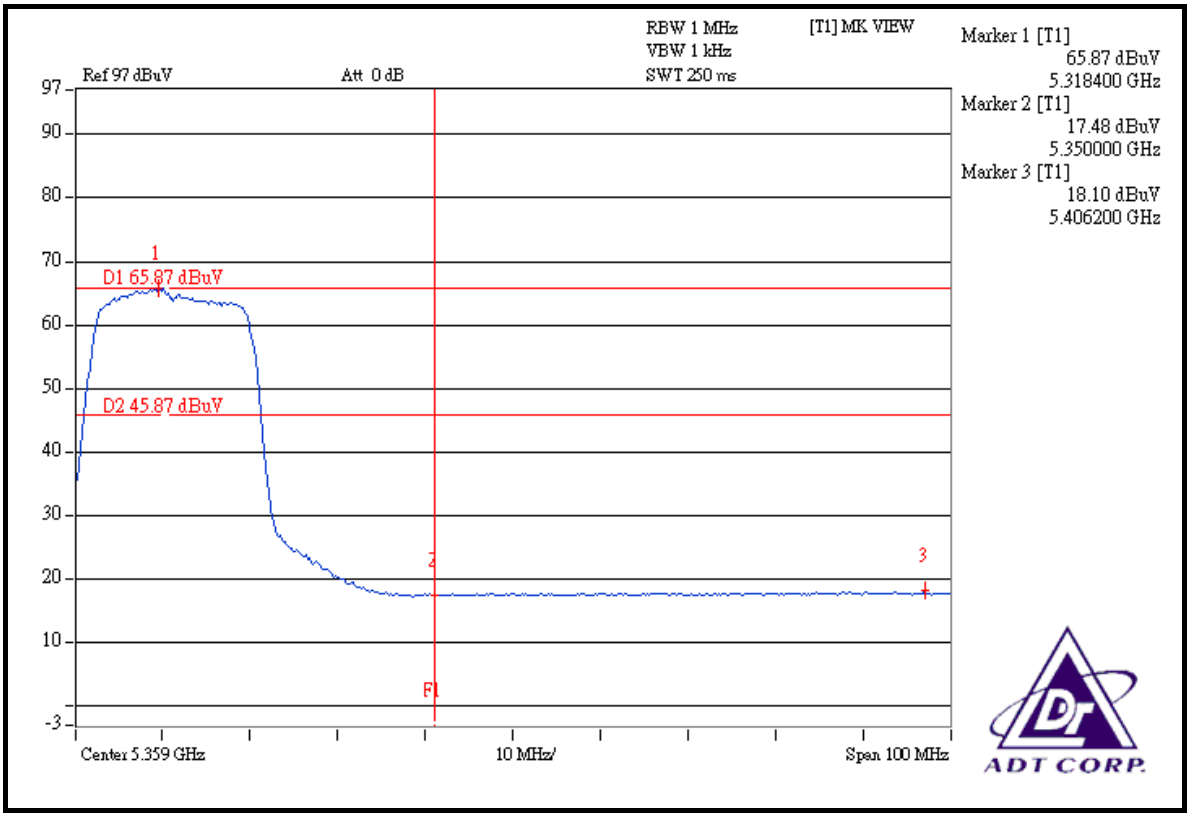
DRAFT 802.11n (20MHz) OFDM MODULATION:

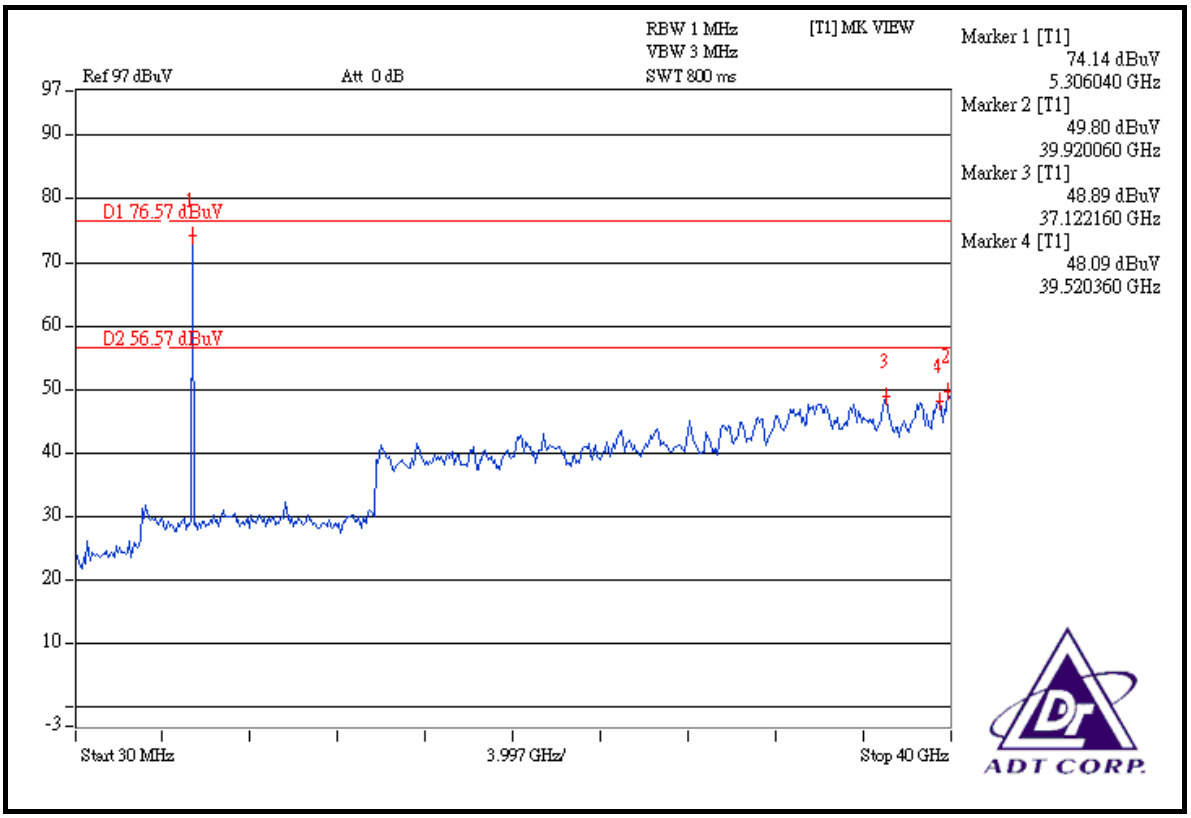
Channel 8 (5320MHz)

The band edge emission plot on the next second page shows 45.65dBc 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 105.28dBuV/m (Peak), so the maximum field strength in restrict band is 105.28 – 45.65 = 59.63dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 47.77dBc 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 95.12dBuV/m (Average), so the maximum field strength in restrict band is 95.12 – 47.77 = 47.35dBuV/m which is under 54dBuV/m limit.


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
76.57 dBuV
5.317000 GHz
Marker 2 [T1]
28.44 dBuV
5.350000 GHz
Marker 3 [T1]
30.92 dBuV
5.384800 GHz
D1 76.57 dBuV
D2 56.57 dBuV
Center 5.359 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
65.87 dBuV
5.318400 GHz
Marker 2 [T1]
17.48 dBuV
5.350000 GHz
Marker 3 [T1]
18.10 dBuV
5.406200 GHz
D1 65.87 dBuV
D2 45.87 dBuV
Center 5.359 GHz
10 MHz/
Span 100 MHz
ADT CORP.

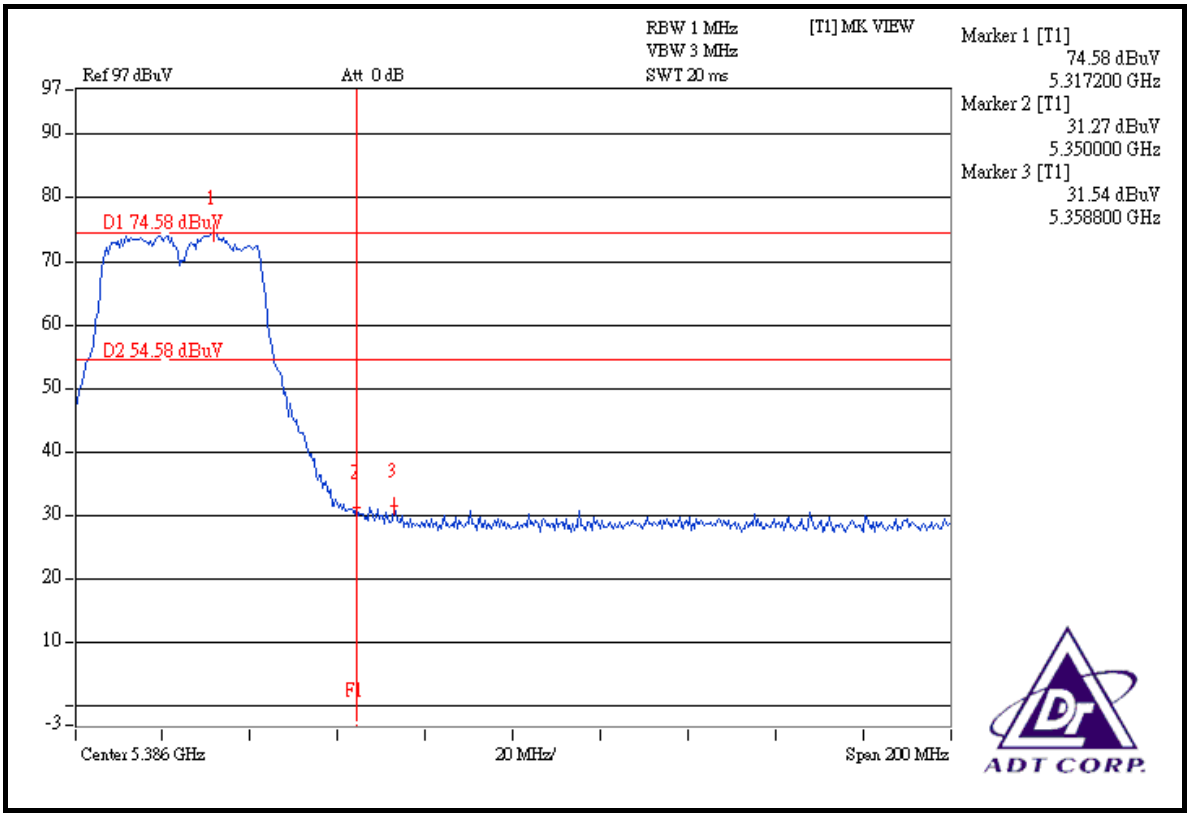

RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
74.14 dBuV
5.306040 GHz
Marker 2 [T1]
49.80 dBuV
39.920060 GHz
Marker 3 [T1]
48.89 dBuV
37.122160 GHz
Marker 4 [T1]
48.09 dBuV
39.520360 GHz
D1 76.57 dBuV
D2 56.57 dBuV
97
90
80
70
60
50
40
30
20
10
-3
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.

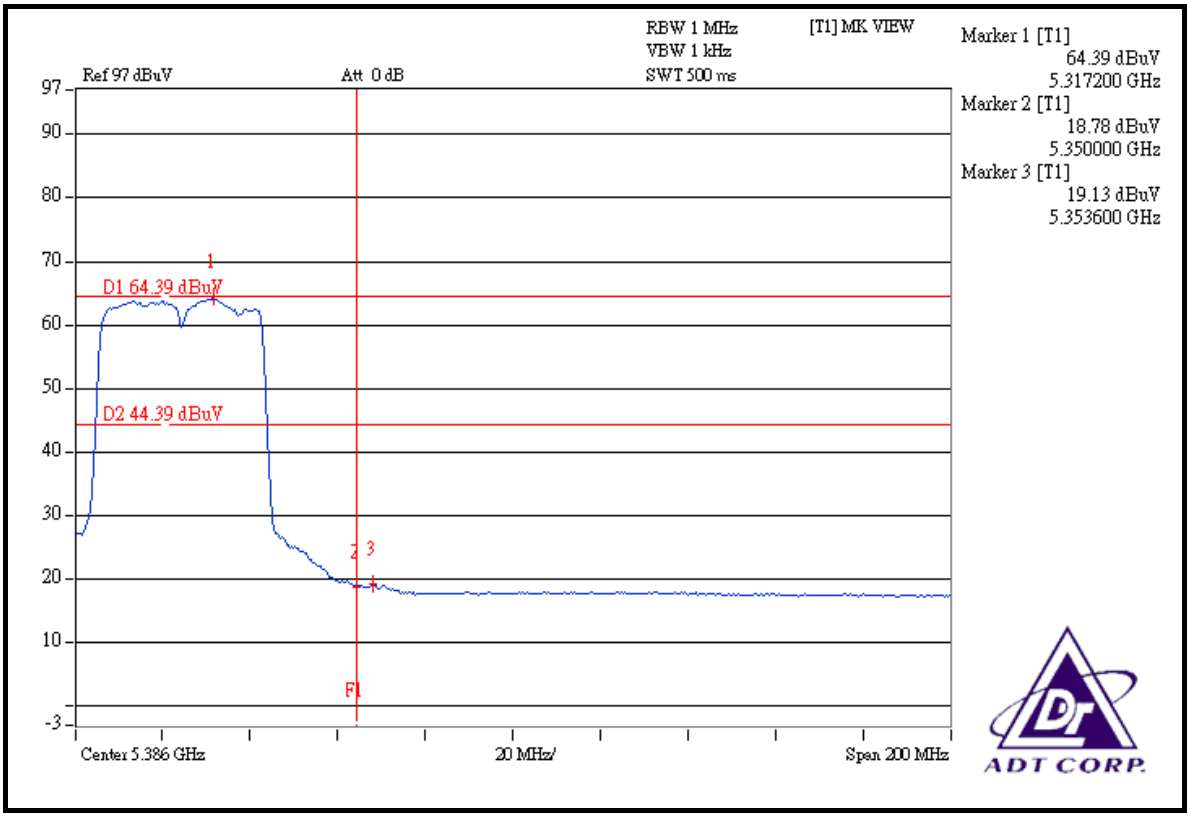
DRAFT 802.11n (40MHz) OFDM MODULATION:

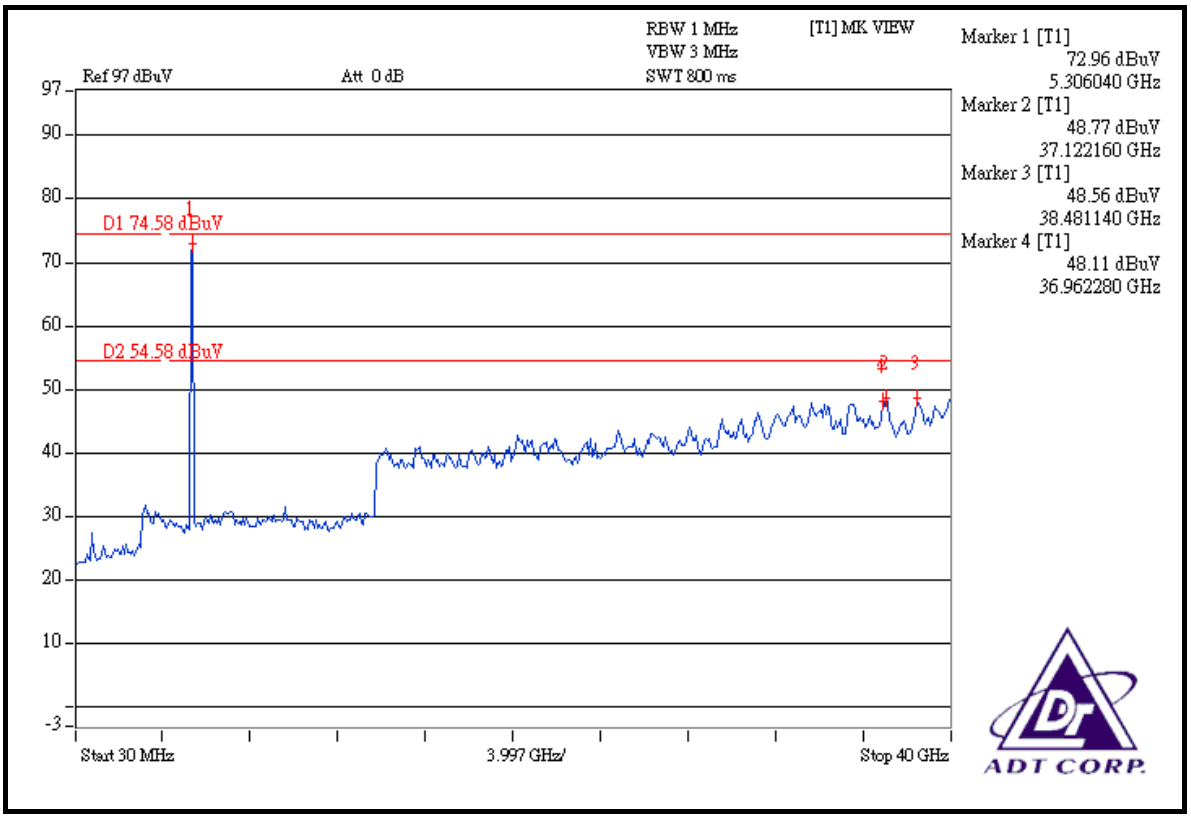
Channel 4 (5310MHz)

The band edge emission plot on the next second page shows 43.04dBc 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 103.20dBuV/m (Peak), so the maximum field strength in restrict band is 103.20 – 43.04 = 60.16dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 45.26dBc 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 93.30dBuV/m (Average), so the maximum field strength in restrict band is 93.30 – 45.26 = 48.04dBuV/m which is under 54dBuV/m limit.


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
74.58 dBuV
5.317200 GHz
Marker 2 [T1]
31.27 dBuV
5.350000 GHz
Marker 3 [T1]
31.54 dBuV
5.358800 GHz
Ref 97 dBuV
Att 0 dB
D1 74.58 dBuV
D2 54.58 dBuV
Center 5.386 GHz
20 MHz/
Span 200 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 500 ms
[T1] MK VIEW
Marker 1 [T1]
64.39 dBuV
5.317200 GHz
Marker 2 [T1]
18.78 dBuV
5.350000 GHz
Marker 3 [T1]
19.13 dBuV
5.353600 GHz
Ref 97 dBuV
Att 0 dB
D1 64.39 dBuV
D2 44.39 dBuV
Center 5.386 GHz
20 MHz/
Span 200 MHz
ADT CORP.


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
72.96 dBuV
5.306040 GHz
Marker 2 [T1]
48.77 dBuV
37.122160 GHz
Marker 3 [T1]
48.56 dBuV
38.481140 GHz
Marker 4 [T1]
48.11 dBuV
36.962280 GHz
D1 74.58 dBuV
D2 54.58 dBuV
97
90
80
70
60
50
40
30
20
10
-3
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.

FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

Channel 1 (5500MHz)

The band edge emission plot (5460MHz) on the next page shows 54.89dBc 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 104.47dBuV/m (Peak), so the maximum field strength in restrict band is 104.47 – 48.89 = 49.58dBuV/m which is under 74dBuV/m limit.

The band edge emission plot (5460MHz) on the next page shows 56.94dBc 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 94.08dBuV/m (Average), so the maximum field strength in restrict band is 94.08 – 56.94 = 37.14dBuV/m which is under 54dBuV/m limit.

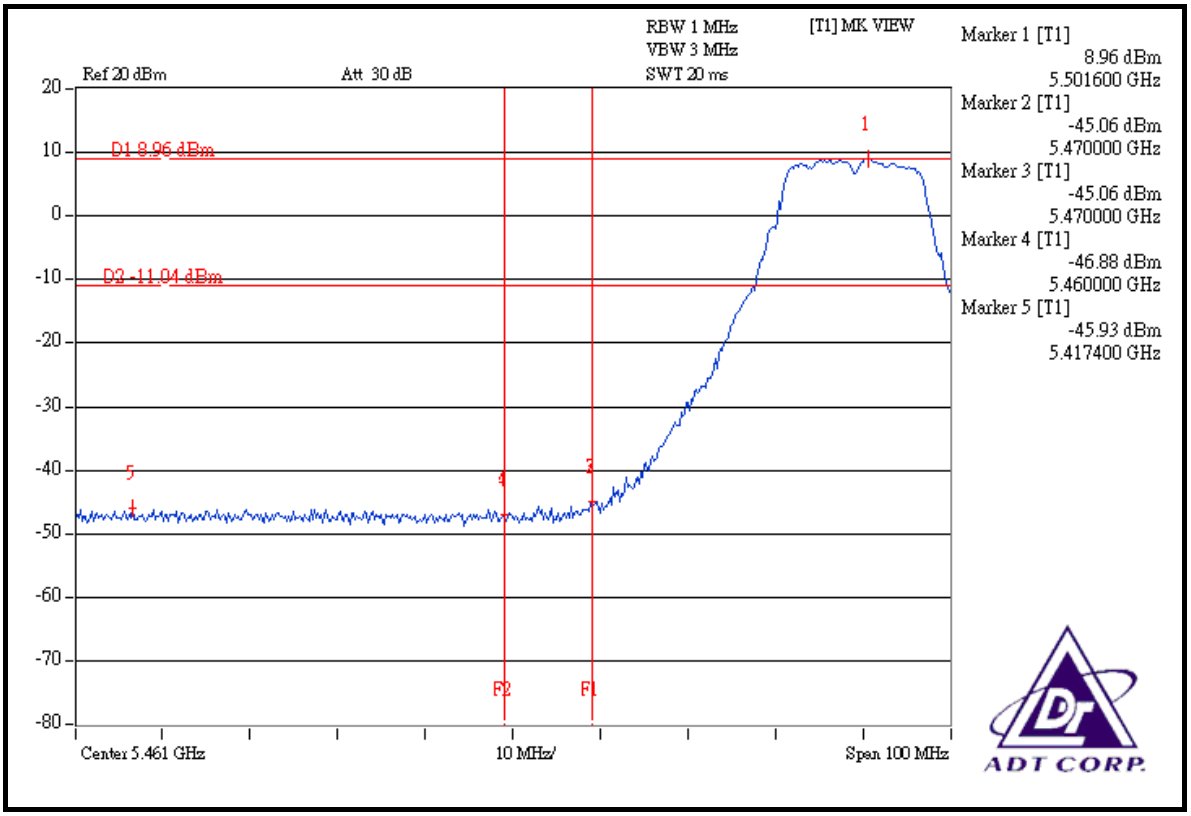
The band edge emission plot (5470MHz) on the next page shows 54.02dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 104.47dBuV/m (Peak), so the maximum field strength in restrict band is 104.47 – 54.02 = 50.45dBuV/m which is under 88.30dBuV/m limit.

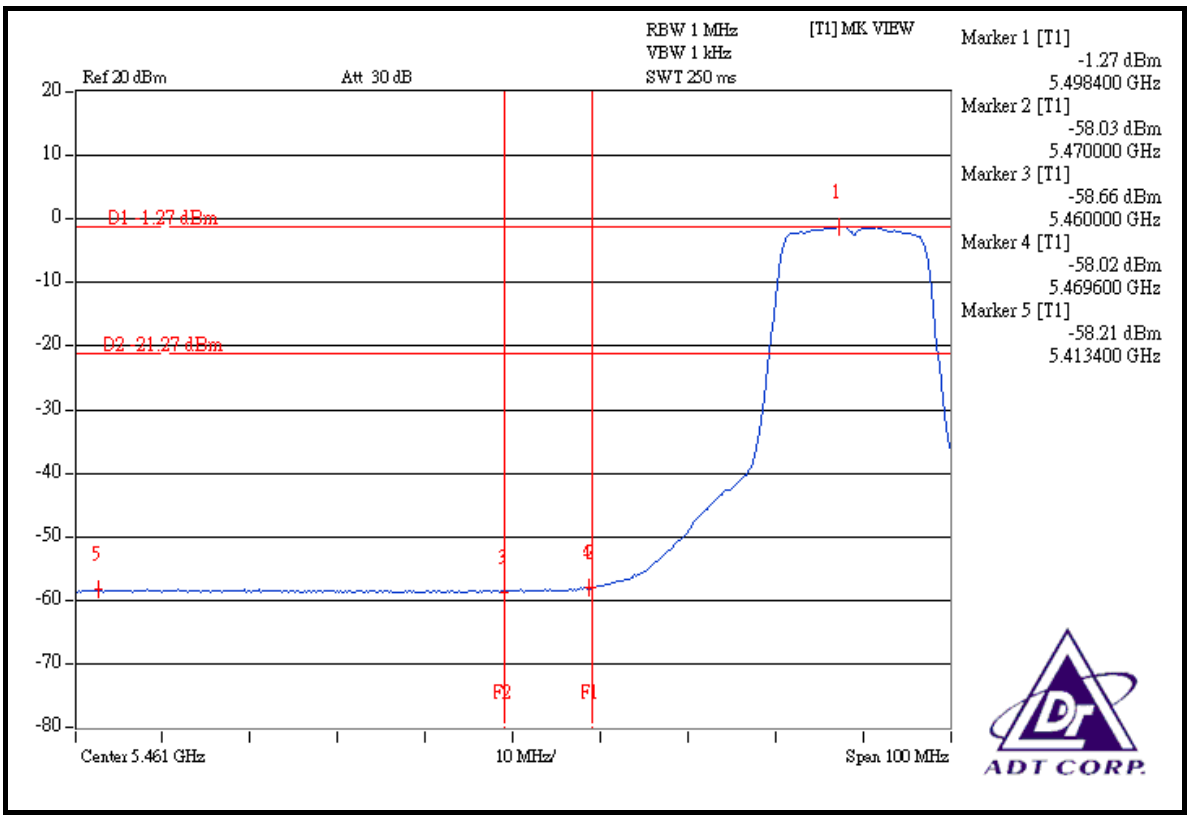
The band edge emission plot (5470MHz) on the next page shows 56.75dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 94.08dBuV/m (Average), so the maximum field strength in restrict band is 94.08 – 56.75 = 37.33dBuV/m which is under 68.30dBuV/m limit.

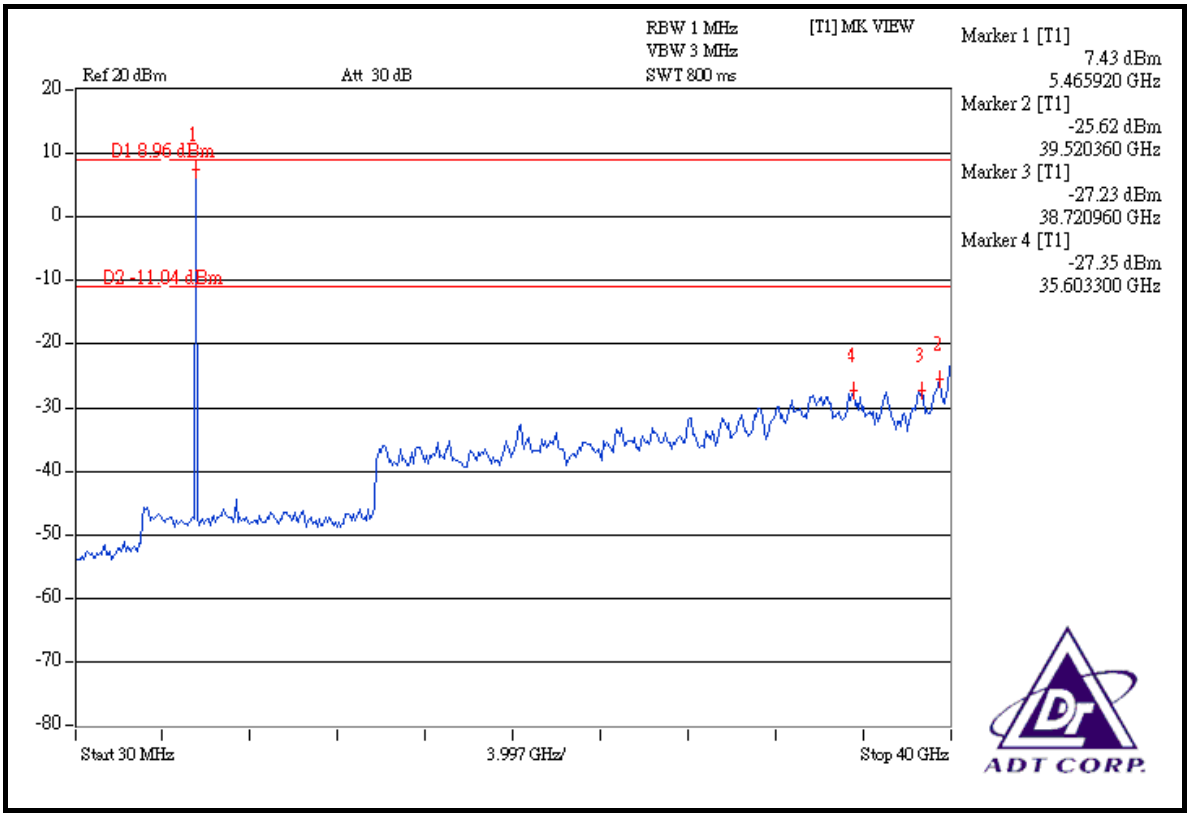
Channel 11 (5700MHz)

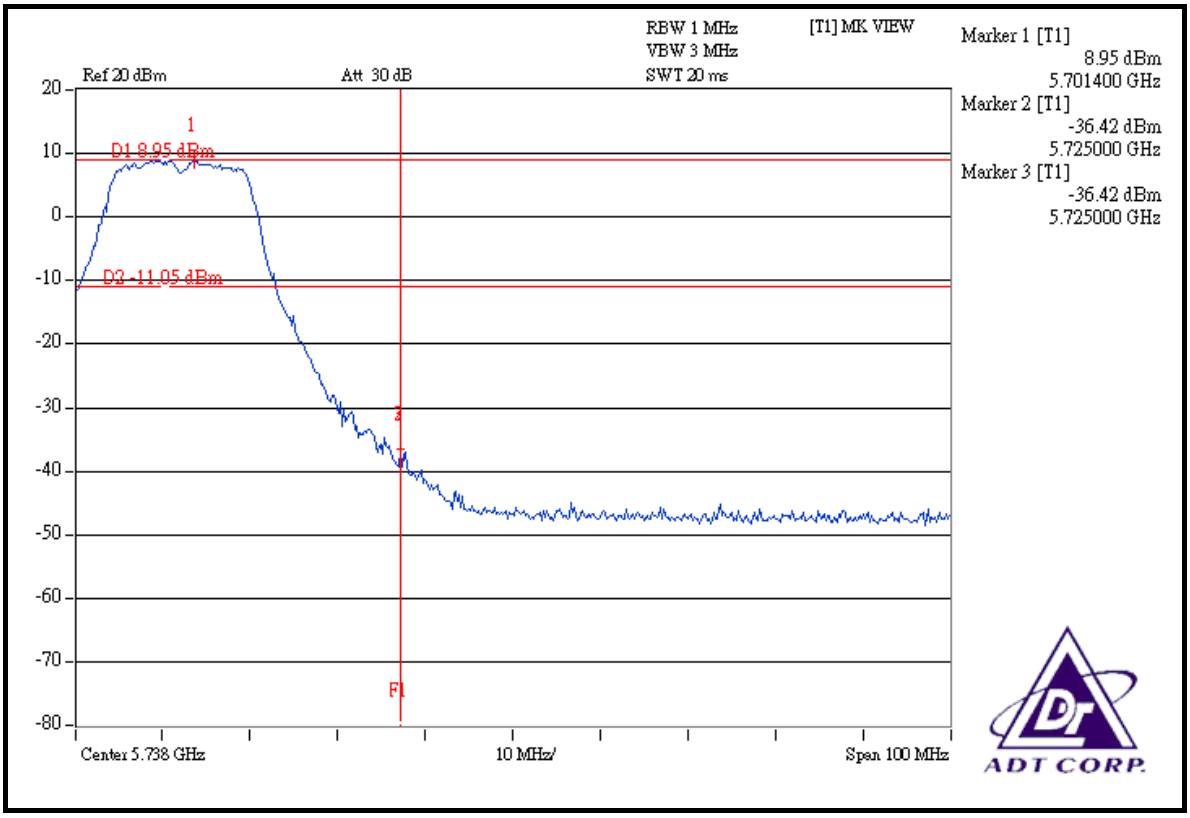
The band edge emission plot (5725MHz) on the next second page shows 45.37dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 11 is 104.43dBuV/m (Peak), so the maximum field strength in restrict band is 104.43 – 45.37 = 59.06dBuV/m which is under 88.3dBuV/m limit.

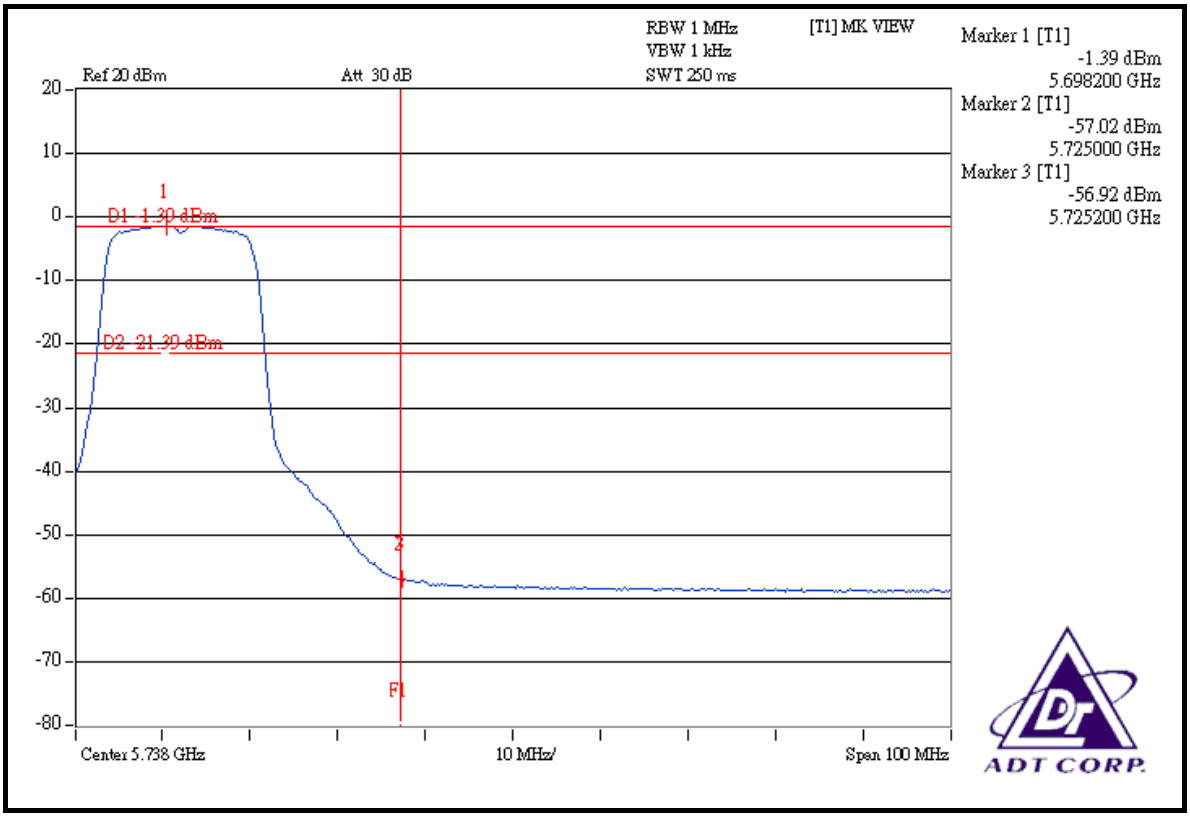
The band edge emission plot (5725MHz) on the next third page shows 55.53dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 11 is 94.37dBuV/m (Average), so the maximum field strength in restrict band is 94.37 – 55.53 = 38.84dBuV/m which is under 68.3dBuV/m limit.

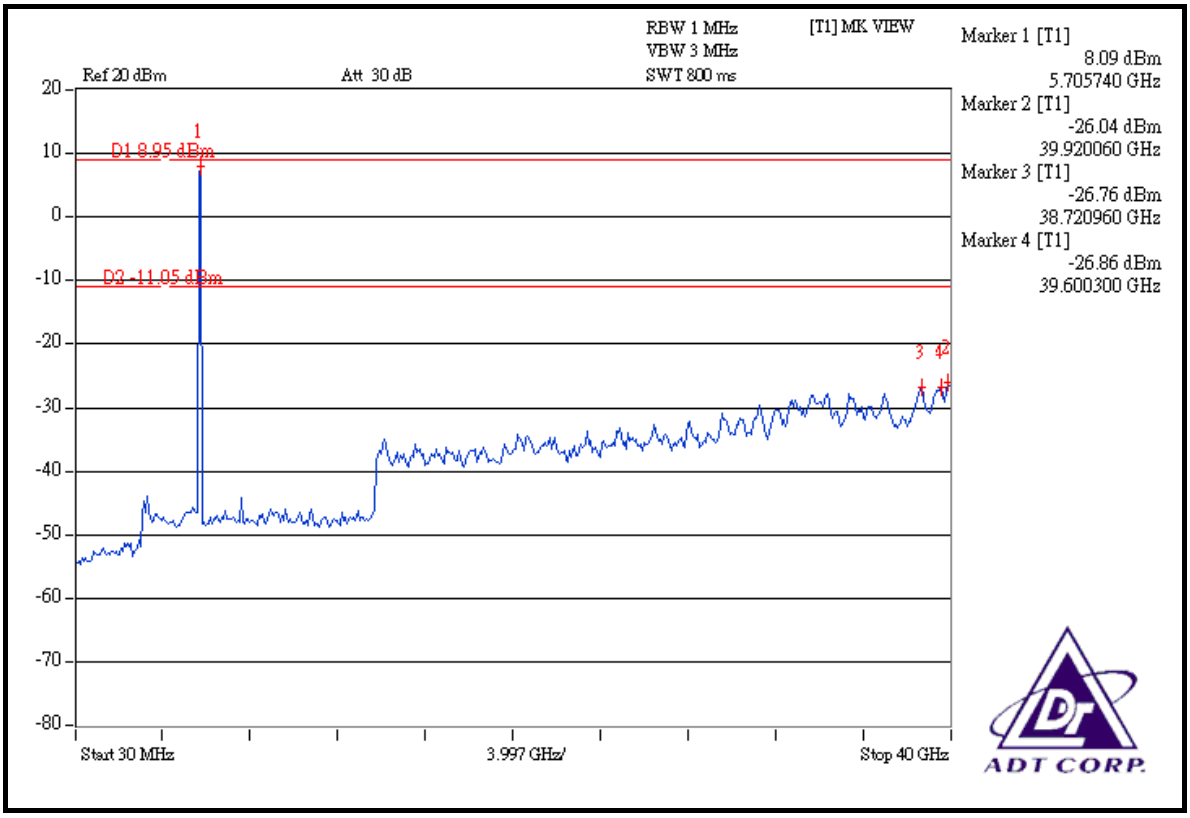

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 8.96 dBm
D2 -11.04 dBm
Marker 1 [T1]
8.96 dBm
5.501600 GHz
Marker 2 [T1]
-45.06 dBm
5.470000 GHz
Marker 3 [T1]
-45.06 dBm
5.470000 GHz
Marker 4 [T1]
-46.88 dBm
5.460000 GHz
Marker 5 [T1]
-45.93 dBm
5.417400 GHz
F2
F1
Center 5.461 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -1.27 dBm
D2 -21.27 dBm
Marker 1 [T1]
-1.27 dBm
5.498400 GHz
Marker 2 [T1]
-58.03 dBm
5.470000 GHz
Marker 3 [T1]
-58.66 dBm
5.460000 GHz
Marker 4 [T1]
-58.02 dBm
5.469600 GHz
Marker 5 [T1]
-58.21 dBm
5.413400 GHz
F2
F1
Center 5.461 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 8.96 dBm
D2 -11.04 dBm
Marker 1 [T1]
7.43 dBm
5.465920 GHz
Marker 2 [T1]
-25.62 dBm
39.520360 GHz
Marker 3 [T1]
-27.23 dBm
38.720960 GHz
Marker 4 [T1]
-27.35 dBm
35.603300 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 8.95 dBm
D2 -11.05 dBm
Marker 1 [T1]
8.95 dBm
5.701400 GHz
Marker 2 [T1]
-36.42 dBm
5.725000 GHz
Marker 3 [T1]
-36.42 dBm
5.725000 GHz
Center 5.738 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-1.39 dBm
5.698200 GHz
Marker 2 [T1]
-57.02 dBm
5.725000 GHz
Marker 3 [T1]
-56.92 dBm
5.725200 GHz
D1 -1.39 dBm
D2 -21.39 dBm
Center 5.738 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
8.09 dBm
5.705740 GHz
Marker 2 [T1]
-26.04 dBm
39.920060 GHz
Marker 3 [T1]
-26.76 dBm
38.720960 GHz
Marker 4 [T1]
-26.86 dBm
39.600300 GHz
D1 8.95 dBm
D2 -11.05 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.

DRAFT 802.11n (20MHz) OFDM MODULATION:

Channel 1 (5500MHz)

The band edge emission plot (5460MHz) on the next page shows 43.69dBc 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 104.87dBuV/m (Peak), so the maximum field strength in restrict band is 104.87 – 43.69 = 61.18dBuV/m which is under 74dBuV/m limit.

The band edge emission plot (5460MHz) on the next page shows 46.29dBc 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 94.64dBuV/m (Average), so the maximum field strength in restrict band is 94.64 – 46.29 = 48.35dBuV/m which is under 54dBuV/m limit.

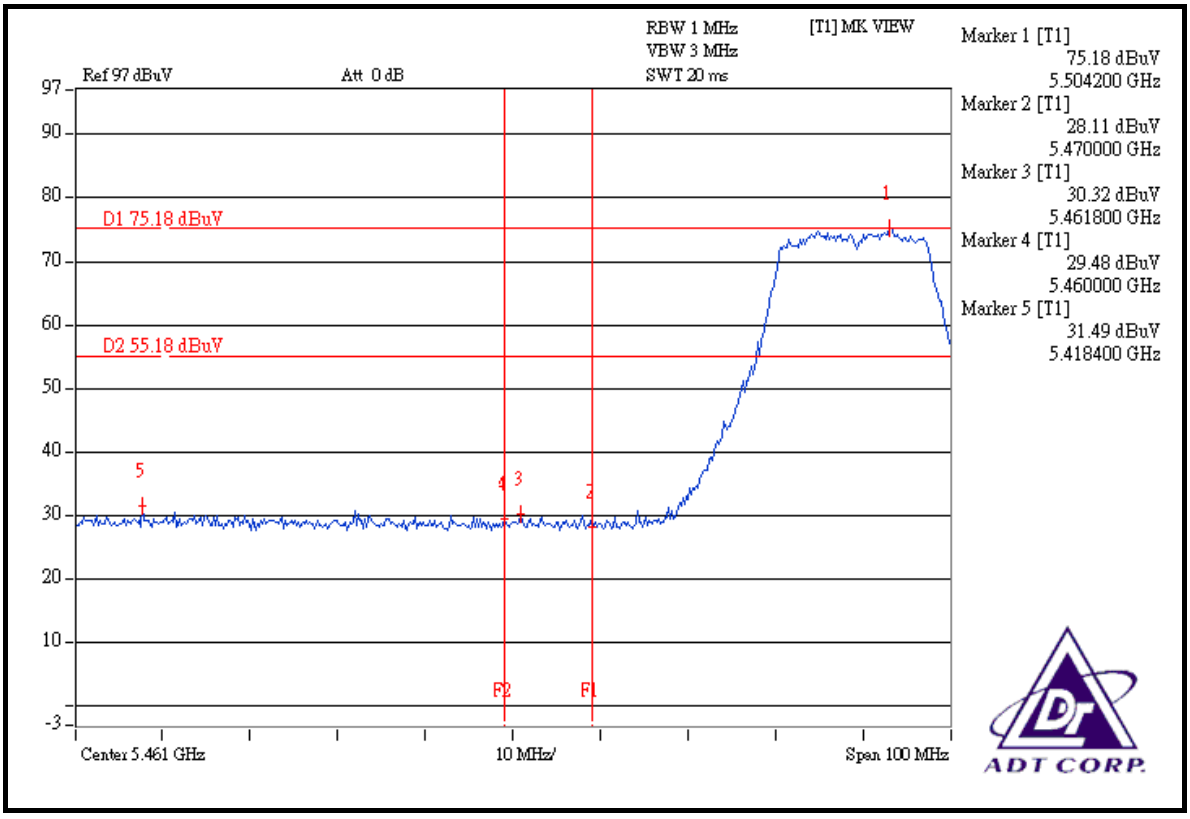
The band edge emission plot (5470MHz) on the next page shows 46.86dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 104.87dBuV/m (Peak), so the maximum field strength in restrict band is 104.87 – 44.86 = 60.01dBuV/m which is under 88.30dBuV/m limit.

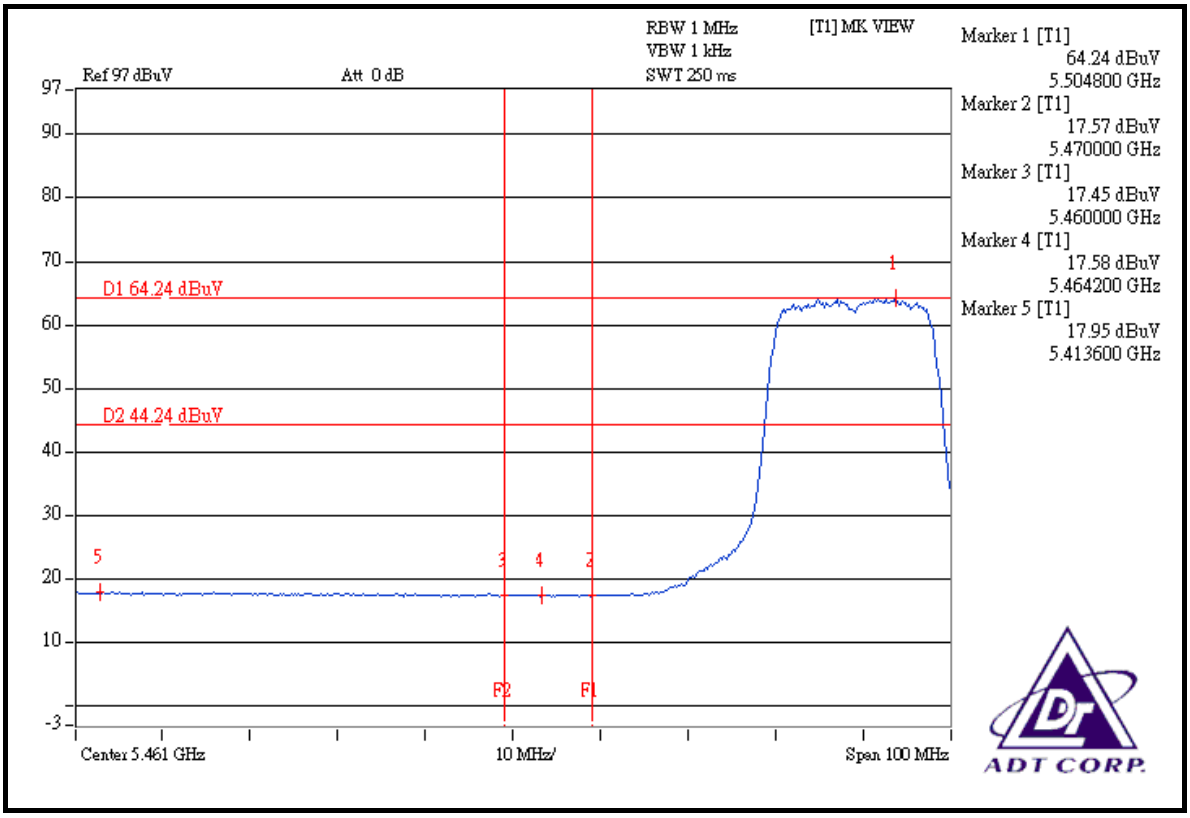
The band edge emission plot (5470MHz) on the next page shows 46.66dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 94.64dBuV/m (Average), so the maximum field strength in restrict band is 94.64 – 46.66 = 47.98dBuV/m which is under 68.30dBuV/m limit.

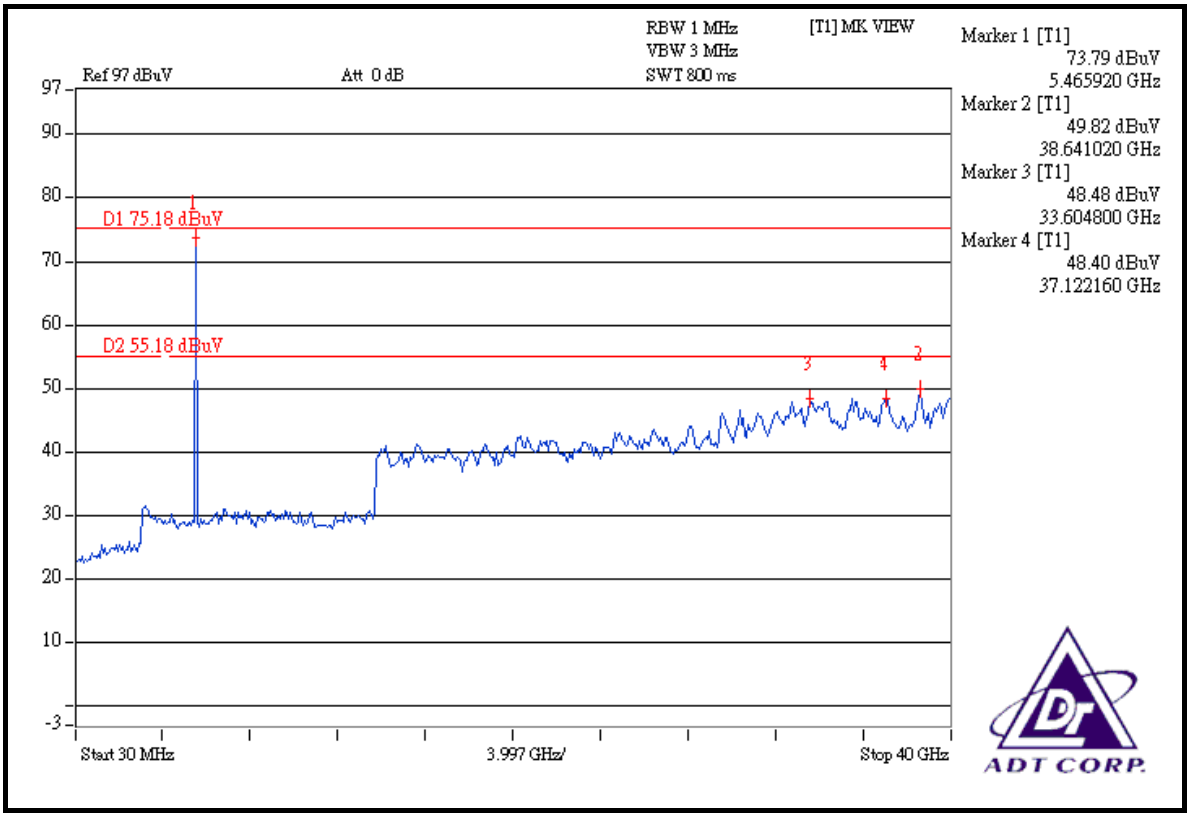
Channel 11 (5700MHz)

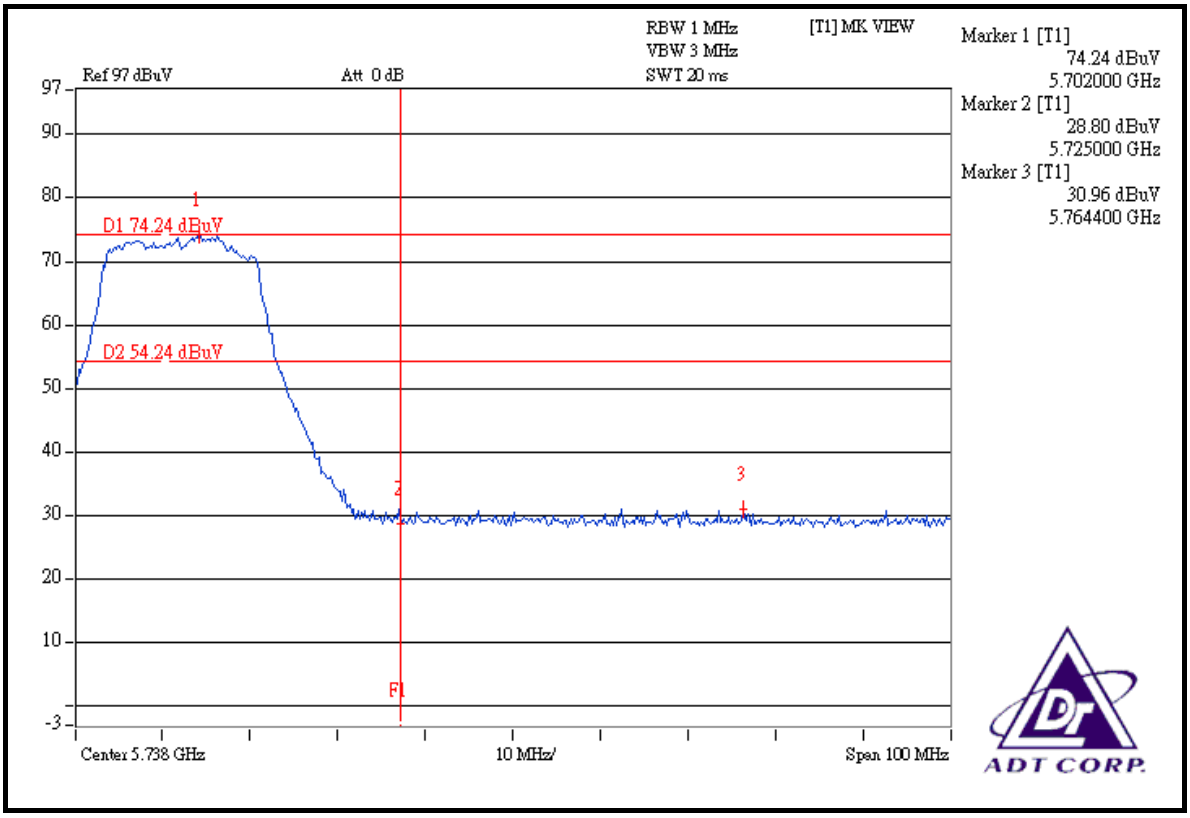
The band edge emission plot (5725MHz) on the next second page shows 43.28dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 11 is 104.66dBuV/m (Peak), so the maximum field strength in restrict band is 104.66 – 43.28 = 61.38dBuV/m which is under 88.3dBuV/m limit.

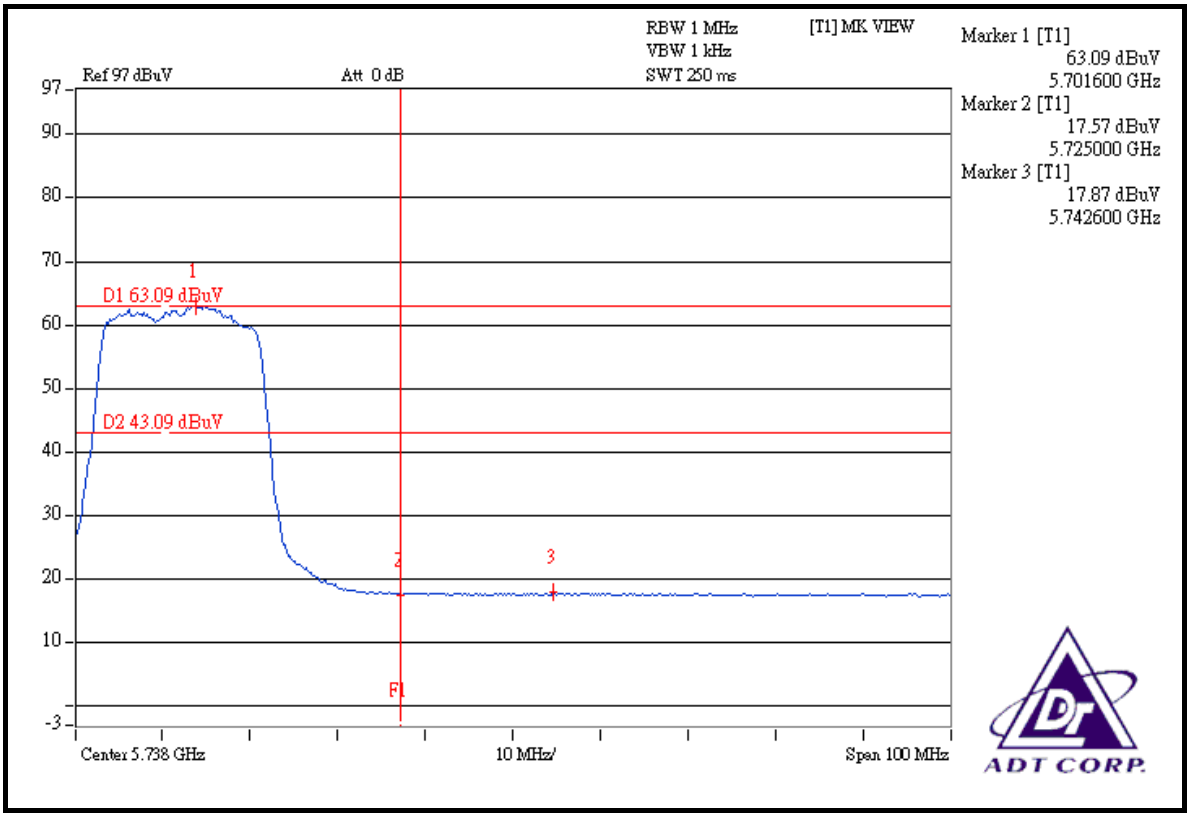
The band edge emission plot (5725MHz) on the next third page shows 45.22dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 11 is 94.30dBuV/m (Average), so the maximum field strength in restrict band is 94.30 – 45.22 = 49.08dBuV/m which is under 68.3dBuV/m limit.

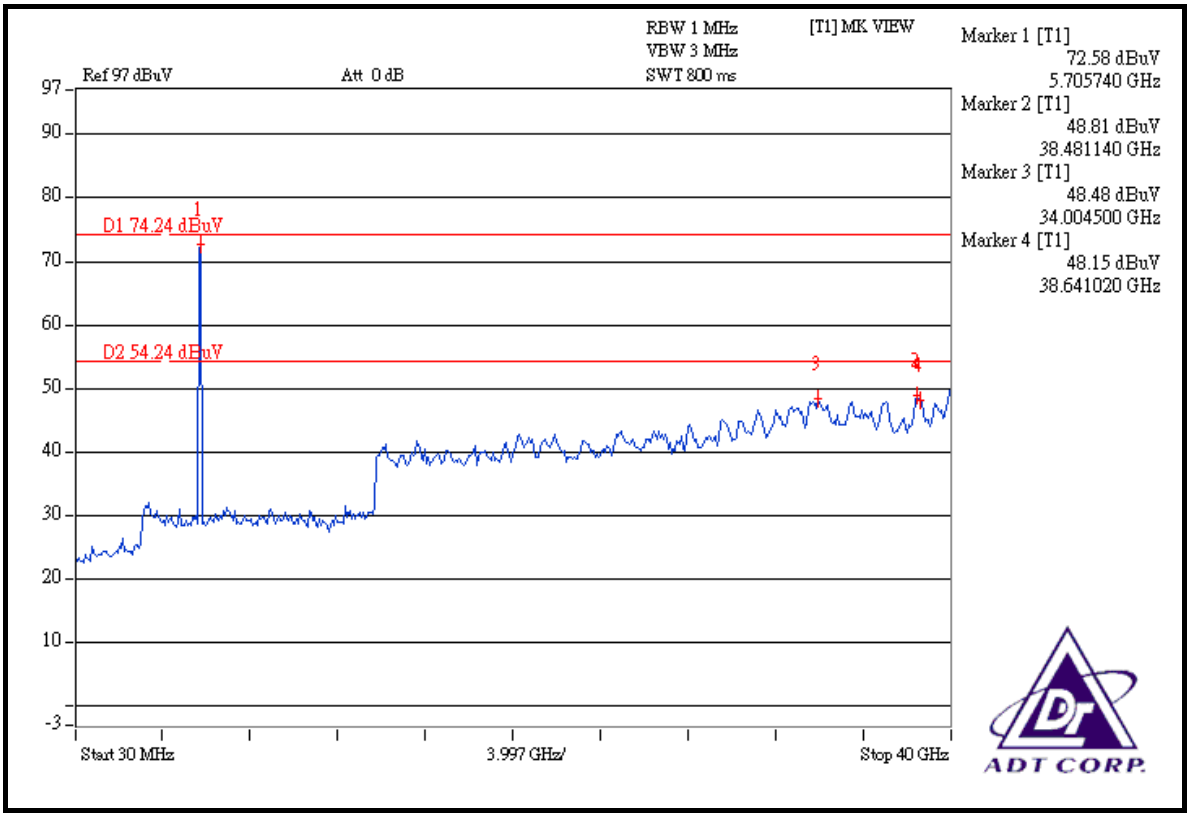

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 75.18 dBuV
D2 55.18 dBuV
Marker 1 [T1]
75.18 dBuV
5.504200 GHz
Marker 2 [T1]
28.11 dBuV
5.470000 GHz
Marker 3 [T1]
30.32 dBuV
5.461800 GHz
Marker 4 [T1]
29.48 dBuV
5.460000 GHz
Marker 5 [T1]
31.49 dBuV
5.418400 GHz
Center 5.461 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 64.24 dBuV
D2 44.24 dBuV
Marker 1 [T1]
64.24 dBuV
5.504800 GHz
Marker 2 [T1]
17.57 dBuV
5.470000 GHz
Marker 3 [T1]
17.45 dBuV
5.460000 GHz
Marker 4 [T1]
17.58 dBuV
5.464200 GHz
Marker 5 [T1]
17.95 dBuV
5.413600 GHz
Center 5.461 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 75.18 dBuV
D2 55.18 dBuV
Marker 1 [T1]
73.79 dBuV
5.465920 GHz
Marker 2 [T1]
49.82 dBuV
38.641020 GHz
Marker 3 [T1]
48.48 dBuV
33.604800 GHz
Marker 4 [T1]
48.40 dBuV
37.122160 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 74.24 dBuV
D2 54.24 dBuV
Marker 1 [T1]
74.24 dBuV
5.702000 GHz
Marker 2 [T1]
28.80 dBuV
5.725000 GHz
Marker 3 [T1]
30.96 dBuV
5.764400 GHz
Center 5.738 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 250 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
63.09 dBuV
5.701600 GHz
Marker 2 [T1]
17.57 dBuV
5.725000 GHz
Marker 3 [T1]
17.87 dBuV
5.742600 GHz
D1 63.09 dBuV
D2 43.09 dBuV
Center 5.738 GHz
10 MHz/
Span 100 MHz
ADT CORP.


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
72.58 dBuV
5.705740 GHz
Marker 2 [T1]
48.81 dBuV
38.481140 GHz
Marker 3 [T1]
48.48 dBuV
34.004500 GHz
Marker 4 [T1]
48.15 dBuV
38.641020 GHz
D1 74.24 dBuV
D2 54.24 dBuV
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.

DRAFT 802.11n (40MHz) OFDM MODULATION:

Channel 1 (5510MHz)

The band edge emission plot (5460MHz) on the next page shows 42.25dBc 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 102.62dBuV/m (Peak), so the maximum field strength in restrict band is 102.62 – 42.25 = 60.37dBuV/m which is under 74dBuV/m limit.

The band edge emission plot (5460MHz) on the next page shows 45.04dBc 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 92.54dBuV/m (Average), so the maximum field strength in restrict band is 92.54 – 45.04 = 47.50dBuV/m which is under 54dBuV/m limit.

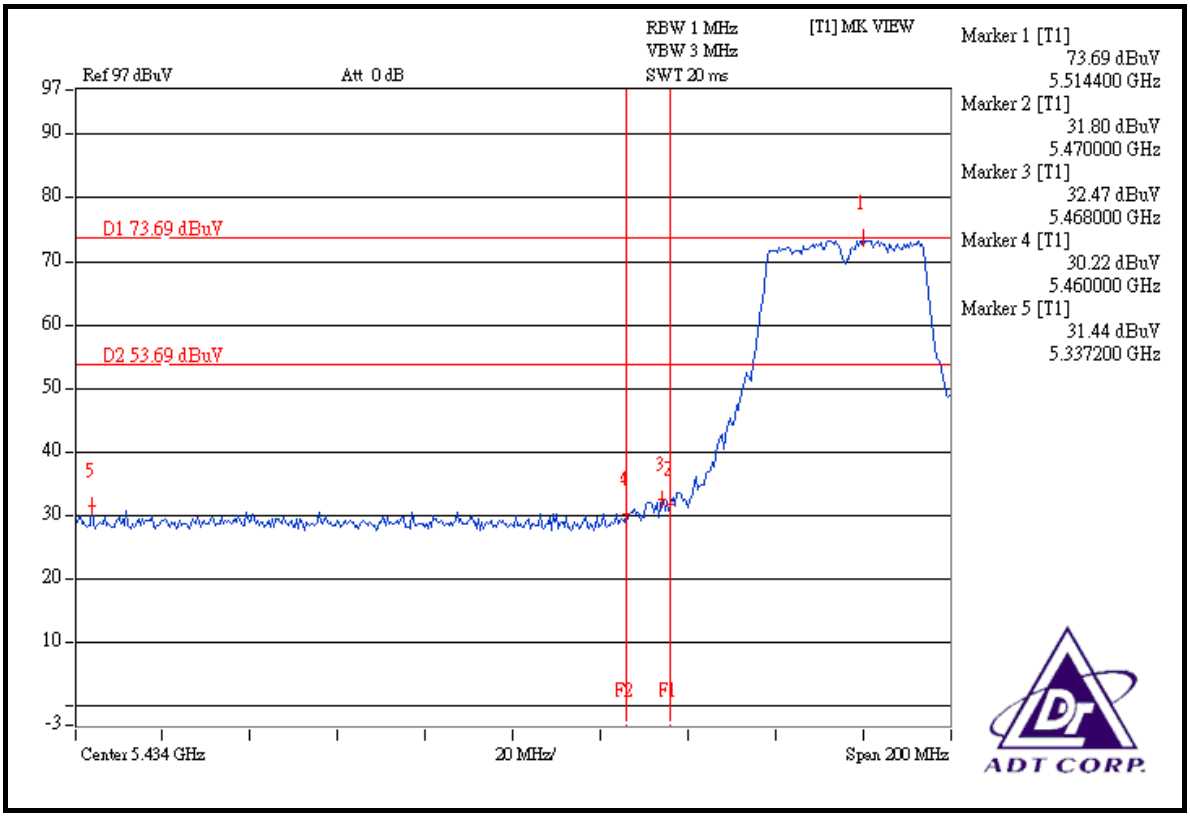
The band edge emission plot (5470MHz) on the next page shows 41.22dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 102.62dBuV/m (Peak), so the maximum field strength in restrict band is 102.62 – 41.22 = 61.40dBuV/m which is under 88.3dBuV/m limit.

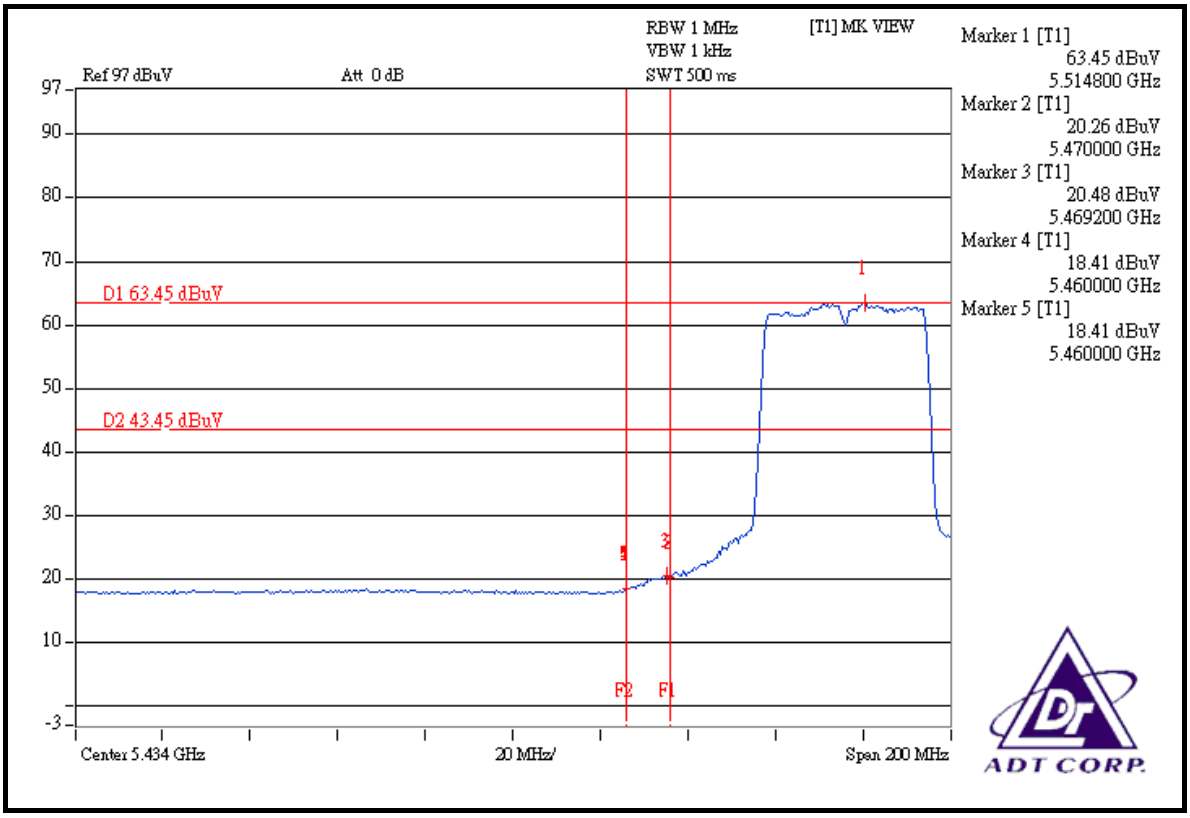
The band edge emission plot (5470MHz) on the next page shows 42.97dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 is 92.54dBuV/m (Average), so the maximum field strength in restrict band is 92.54 – 42.97 = 49.57dBuV/m which is under 68.30dBuV/m limit.

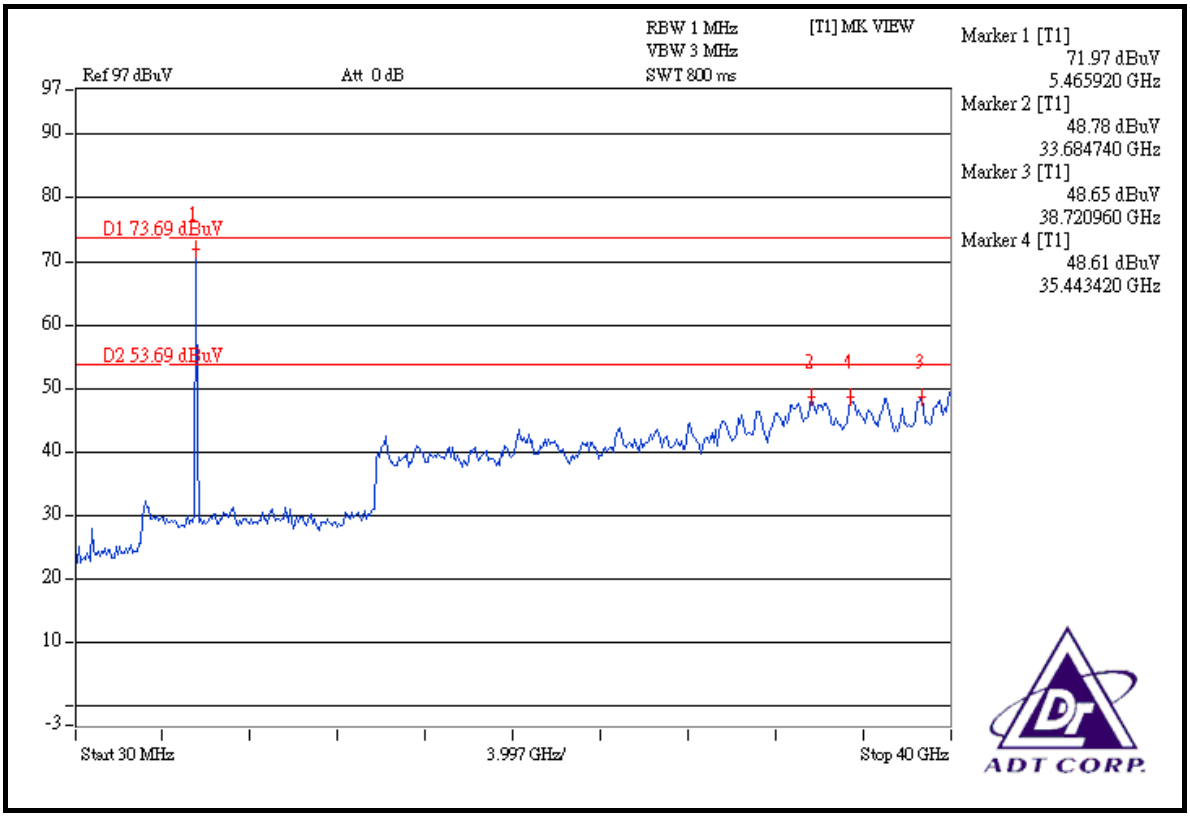
Channel 5 (5670MHz)

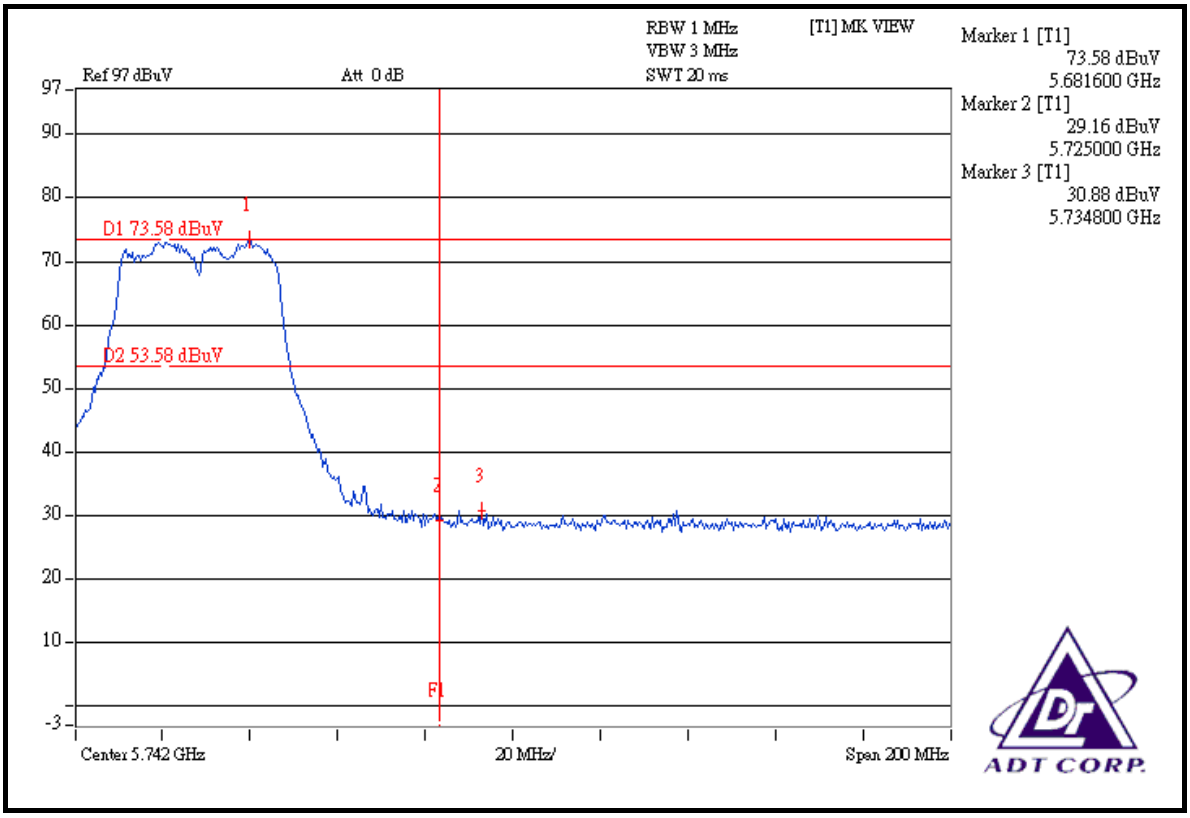
The band edge emission plot (5725MHz) on the next second page shows 42.70dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 5 is 102.74dBuV/m (Peak), so the maximum field strength in restrict band is 102.74 – 42.70 = 60.04dBuV/m which is under 88.3dBuV/m limit.

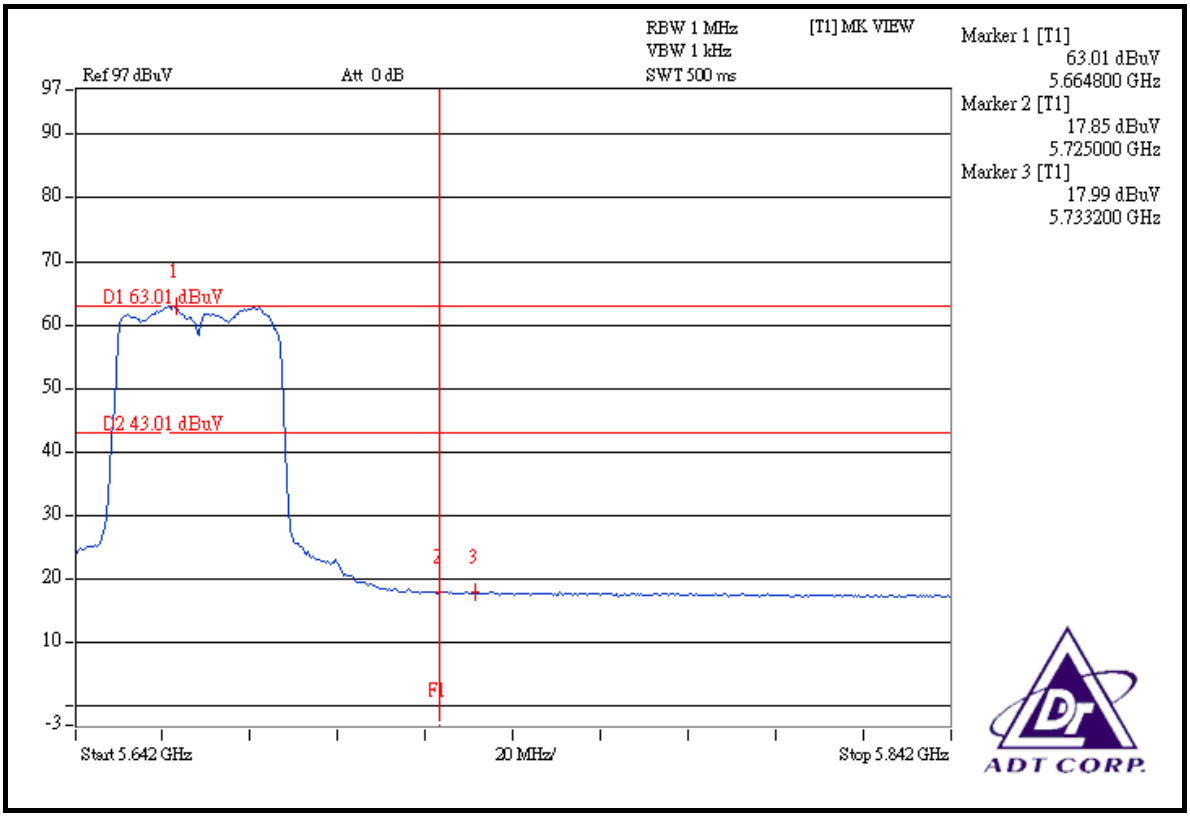
The band edge emission plot (5725MHz) on the next third page shows 45.02dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 5 is 92.27dBuV/m (Average), so the maximum field strength in restrict band is 92.27 – 45.02 = 47.25dBuV/m which is under 68.3dBuV/m limit.

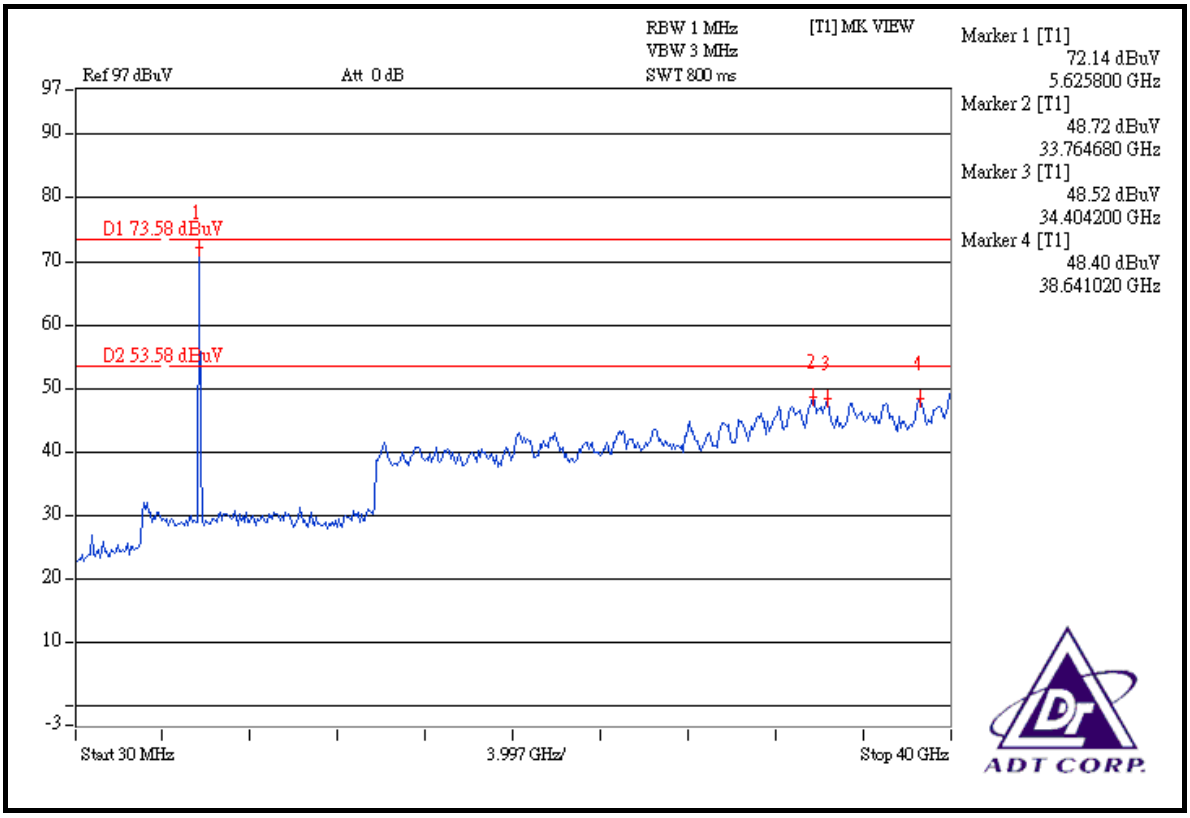

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 73.69 dBuV
D2 53.69 dBuV
Marker 1 [T1]
73.69 dBuV
5.514400 GHz
Marker 2 [T1]
31.80 dBuV
5.470000 GHz
Marker 3 [T1]
32.47 dBuV
5.468000 GHz
Marker 4 [T1]
30.22 dBuV
5.460000 GHz
Marker 5 [T1]
31.44 dBuV
5.337200 GHz
Center 5.434 GHz
20 MHz/
Span 200 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 500 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 63.45 dBuV
D2 43.45 dBuV
Marker 1 [T1]
63.45 dBuV
5.514800 GHz
Marker 2 [T1]
20.26 dBuV
5.470000 GHz
Marker 3 [T1]
20.48 dBuV
5.469200 GHz
Marker 4 [T1]
18.41 dBuV
5.460000 GHz
Marker 5 [T1]
18.41 dBuV
5.460000 GHz
Center 5.434 GHz
20 MHz/
Span 200 MHz
ADT CORP.


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 73.69 dBuV
D2 53.69 dBuV
Marker 1 [T1]
71.97 dBuV
5.465920 GHz
Marker 2 [T1]
48.78 dBuV
33.684740 GHz
Marker 3 [T1]
48.65 dBuV
38.720960 GHz
Marker 4 [T1]
48.61 dBuV
35.443420 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz
ADT CORP.


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 73.58 dBuV
D2 53.58 dBuV
Marker 1 [T1]
73.58 dBuV
5.681600 GHz
Marker 2 [T1]
29.16 dBuV
5.725000 GHz
Marker 3 [T1]
30.88 dBuV
5.734800 GHz
Center 5.742 GHz
20 MHz/
Span 200 MHz
ADT CORP.


RBW 1 MHz
VBW 1 kHz
SWT 500 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
63.01 dBuV
5.664800 GHz
Marker 2 [T1]
17.85 dBuV
5.725000 GHz
Marker 3 [T1]
17.99 dBuV
5.733200 GHz
D1 63.01 dBuV
D2 43.01 dBuV
Start 5.642 GHz
20 MHz/
Stop 5.842 GHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
72.14 dBuV
5.625800 GHz
Marker 2 [T1]
48.72 dBuV
33.764680 GHz
Marker 3 [T1]
48.52 dBuV
34.404200 GHz
Marker 4 [T1]
48.40 dBuV
38.641020 GHz
D1 73.58 dBuV
D2 53.58 dBuV
Start 30 MHz
3.997 GHz/
Stop 40 GHz

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 printed antenna without connector. The maximum Gain of the antenna is 4.99dBi.

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.