FCC TEST REPORT (15.407)

REPORT NO.: RF960808L14-1

MODEL NO.: WLI-TX4-AG300N

RECEIVED: Aug. 08, 2007

TESTED: Oct. 15 ~ Dec. 25, 2007

ISSUED: Dec. 30, 2008

APPLICANT: Buffalo Inc.

ADDRESS: 15, Shibata Hondori 4-chome, Minami-ku, Nagoya 457-8520, Japan

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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

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

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1. CERTIFICATION

PRODUCT: AirStation Wireless-N NFINITI Ethernet Converter
MODEL: WLI-TX4-AG300N
BRAND: Buffalo
APPLICANT: Buffalo Inc.
TEST SAMPLE: ENGINEERING SAMPLE
TESTED: Oct. 15 ~ Dec. 25, 2007
STANDARDS: **FCC Part 15, Subpart E (Section 15.407)**
ANSI C63.4-2003

The above equipment (Model: WLI-TX4-AG300N) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY	: Peggy Chen / Specialist	, **DATE:**	Dec. 30, 2008
TECHNICAL ACCEPTANCE Responsible for RF	: Long Chen / Senior Engineer	, **DATE:**	Dec. 30, 2008
APPROVED BY	: Gary Chang / Assistant Manager	, **DATE:**	Dec. 30, 2008

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 -10.45dB at 0.185MHz.
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 -1.02dB at 10480.00MHz.
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.19 dB
	200MHz ~1000MHz	3.21 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	AirStation Wireless-N NFINITI Ethernet Converter
MODEL NO.	WLI-TX4-AG300N
FCC ID	FDI-09102074-0
POWER SUPPLY	12Vdc from AC Adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps Draft 802.11n: up to 300Mbps
FREQUENCY RANGE	2.4GHz: 2400.0 ~ 2483.5MHz 5.0GHz: 5150.0 ~ 5350.0MHz, 5470.0 ~ 5725.0MHz
NUMBER OF CHANNEL	**2.4GHz:** 11 for 802.11b, 802.11g, draft 802.11n (20MHz) 7 for draft 802.11n (40MHz) **5.0GHz:** 5150 ~ 5350MHz: 8 for 802.11a, draft 802.11n (20MHz) 4 for draft 802.11n (40MHz) 5470 ~ 5725MHz: 11 for 802.11a, draft 802.11n (20MHz) 5 for draft 802.11n (40MHz)
OUTPUT POWER	121.192mW for 2400 ~ 2483.5MHz 63.392mW for 5150 ~ 5350MHz 51.409mW for 5470 ~ 5425MHz
ANTENNA TYPE	**2.4GHz:** Monopole antenna with 4.66dBi gain (for 2.4GHz) **5.0GHz:** Monopole antenna with 4.01dBi gain (for 5150 ~ 5350MHz) Monopole antenna with 4.32dBi gain (for 5470 ~ 5725MHz)
DATA CABLE	NA
I/O PORTS	RJ45
ACCESSORY DEVICES	Adapter

NOTE:

1. The EUT is other data processing machines. The functions of EUT listed as below:

	TEST STANDARD	REFERENCE REPORT
WLAN 802.11b/g	FCC Part 15, Subpart C (Section 15.247)	RF960808L14
WLAN 802.11a (5150~5350MHz, 5470~5725MHz)	FCC Part 15, Subpart E (Section 15.407)	RF960808L14-1

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

Frequency Band (MHz)	2400~2483.5	5150~5350	5470~5725
802.11b	√	-	-
802.11g	√	-	-
802.11a	-	√	√
Draft 802.11n (20MHz)	√	√	√
Draft 802.11n (40MHz)	√	√	√

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

MODULATION MODE	TX FUNCTION
802.11b	1TX
802.11g	1TX
802.11a	1TX
Draft 802.11n (20MHz)	2TX
Draft 802.11n (40MHz)	2TX

4. The EUT was operated with following adapter.

BRAND:	BUFFALO
MODEL:	UI315-12
INPUT:	100-240Vac, 50-60Hz, 0.4A
OUTPUT:	12Vdc, 1.25A
POWER LINE:	DC: 1.8m non-shielded cable with one core AC: 0.5m non-shielded cable without core

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

3.2 DESCRIPTION OF TEST MODES

Operated in 5150 ~ 5350MHz

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

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

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

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

Operated in 5470 ~ 5725MHz

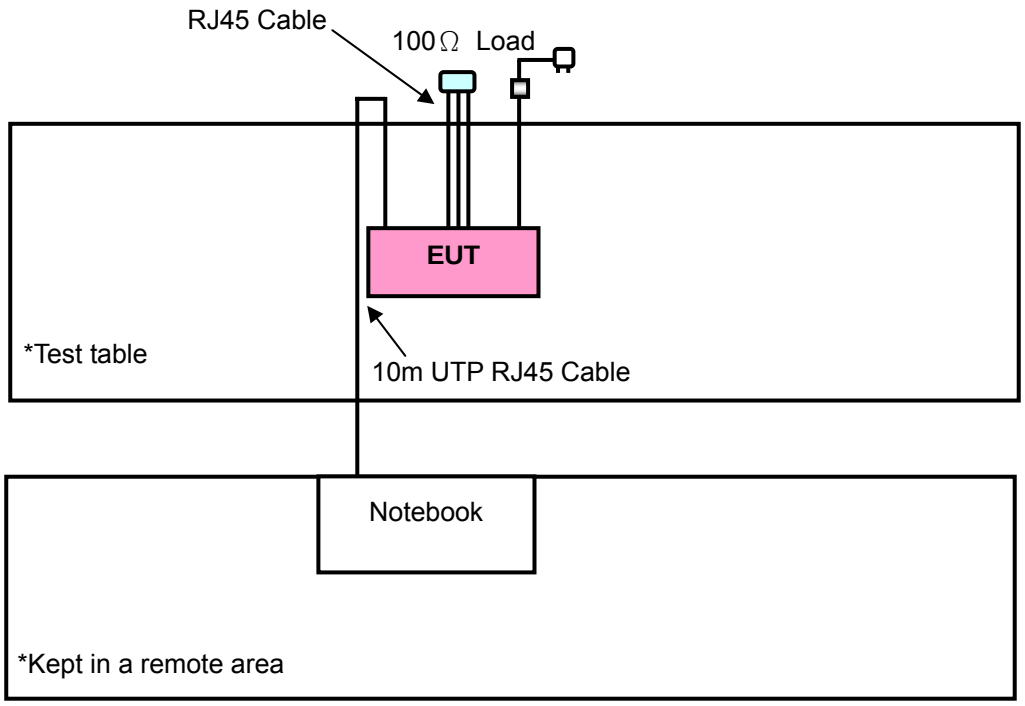
11 channels are provided for 802.11a, draft 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

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

RADIATED EMISSION TEST (ABOVE 1GHz):

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

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

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	(5.15~5.35GHz)	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6
Draft 802.11n (20MHz)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2
Draft 802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	15
802.11a	(5.47~5.725GHz)	100 to 140	100, 120, 140	OFDM	BPSK	6
Draft 802.11n (20MHz)		100 to 140	100, 120, 140	OFDM	BPSK	7.2
Draft 802.11n (40MHz)		102 to 134	102, 118, 134	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.

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
Draft 802.11n (20MHz)	(5.15~5.35GHz)	36 to 64	52	OFDM	BPSK	7.2
Draft 802.11n (40MHz)	(5.47~5.725GHz)	102 to 134	118	OFDM	BPSK	15

POWER LINE CONDUCTED EMISSION TEST:

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

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

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
Draft 802.11n (20MHz)	(5.15~5.35GHz)	36 to 64	52	OFDM	BPSK	7.2
Draft 802.11n (40MHz)	(5.47~5.725GHz)	102 to 134	118	OFDM	BPSK	15

BANDEDGE MEASUREMENT:

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

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

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	(5.15~5.35GHz)	36 to 64	36, 64	OFDM	BPSK	6
Draft 802.11n (20MHz)		36 to 64	36, 64	OFDM	BPSK	7.2
Draft 802.11n (40MHz)		38 to 62	38, 62	OFDM	BPSK	15
802.11a	(5.47~5.725GHz)	100 to 140	100, 140	OFDM	BPSK	6
Draft 802.11n (20MHz)		100 to 140	100, 140	OFDM	BPSK	7.2
Draft 802.11n (40MHz)		102 to 134	102, 134	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.

MODE	FREQUENCY	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	(5.15~5.35GHz)	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6
Draft 802.11n (20MHz)		36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2
Draft 802.11n (40MHz)		38 to 62	38, 46, 54, 62	OFDM	BPSK	15
802.11a	(5.47~5.725GHz)	100 to 140	100, 120, 140	OFDM	BPSK	6
Draft 802.11n (20MHz)		100 to 140	100, 120, 140	OFDM	BPSK	7.2
Draft 802.11n (40MHz)		102 to 134	102, 118, 134	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 COMPUTER	DELL	PP05L	12130898320	E2K24CLNS

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

NOTE 1: All power cords of the above support units are non shielded (1.8m).
NOTE 2: Item 1 acted as communication partners to transfer data.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

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

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength: $E = \frac{1000000\sqrt{30P}}{3}$ μV/m, where P is the eirp (Watts).

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 26, 2007	Dec. 25, 2008
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 03, 2007	Dec. 02, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Jan. 05, 2007	Jan. 04, 2008
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-405	Dec. 18, 2007	Dec. 17, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 17, 2007	Jan. 16, 2008
Preamplifier Agilent	8449B	3008A01910	Sep. 20, 2007	Sep. 19, 2008
Preamplifier Agilent	8447D	2944A10634	Dec. 13, 2007	Dec. 12, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274397/4	Nov. 08, 2007	Nov. 07, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283401/4	Nov. 08, 2007	Nov. 07, 2008
Software ADT.	ADT_Radiated_V7.6	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 4.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 988962.

5. The IC Site Registration No. is IC7450F-4.

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.

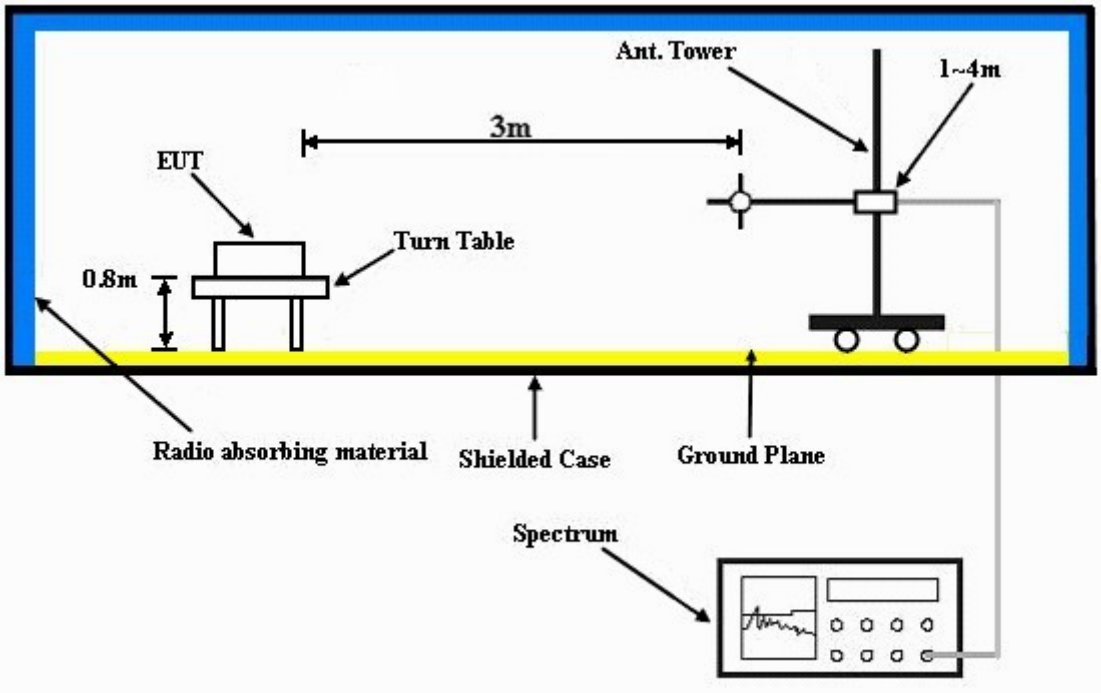
NOTE:

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

4.1.5 DEVIATION FROM TEST STANDARD

No deviation

4.1.6 TEST SETUP



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

4.1.7 EUT OPERATING CONDITION

a. Placed the EUT on a testing table.

b. Prepared a notebook computer and placed it outside of testing area to act as communication partner for EUT.

c. The EUT ran a test program (provided by manufacturer) to enable all functions under transmission condition continuously at specific channel frequency.

d. The necessary accessories enable the EUT in full functions.

4.1.8 TEST RESULTS

FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

ABOVE 1GHz DATA: 802.11a OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	**FREQUENCY RANGE**	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	**TESTED BY**	Kevin Liang

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	4144.00	58.95 PK	74.00	-15.05	1.17 H	11	22.23	36.72
2	4144.00	47.01 AV	54.00	-6.99	1.17 H	11	10.29	36.72
3	5150.00	57.23 PK	74.00	-16.77	1.25 H	42	18.08	39.15
4	5150.00	44.34 AV	54.00	-9.66	1.25 H	42	5.20	39.15
5	*5180.00	106.25 PK			1.25 H	42	67.05	39.20
6	*5180.00	95.94 AV			1.25 H	42	56.74	39.20
7	#6216.00	66.64 PK	68.30	-1.66	1.34 H	77	25.00	41.64
8	#10360.00	65.18 PK	68.30	-3.12	1.24 H	67	15.49	49.69

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	4144.00	57.30 PK	74.00	-16.70	1.10 V	0	20.58	36.72
2	4144.00	42.68 AV	54.00	-11.32	1.10 V	0	5.96	36.72
3	5150.00	56.78 PK	74.00	-17.22	1.20 V	33	17.63	39.15
4	5150.00	44.64 AV	54.00	-9.36	1.20 V	33	5.49	39.15
5	*5180.00	108.09 PK			1.20 V	33	68.89	39.20
6	*5180.00	98.18 AV			1.20 V	33	58.98	39.20
7	#6216.00	66.74 PK	68.30	-1.56	1.34 V	14	25.10	41.64
8	#10360.00	66.45 PK	68.30	-1.85	1.13 V	173	16.76	49.69

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 61%RH 998hPa	TESTED BY	Kevin Liang

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	4160.00	54.96 PK	74.00	-19.04	1.15 H	177	19.21	35.74
2	4160.00	44.62 AV	54.00	-9.38	1.15 H	177	8.87	35.74
3	*5200.00	106.19 PK			1.28 H	257	67.96	38.23
4	*5200.00	96.03 AV			1.28 H	257	57.80	38.23
5	#6240.00	67.25 PK	68.30	-1.05	1.42 H	257	26.69	40.56
6	#10400.00	65.28 PK	68.30	-3.02	1.37 H	238	16.45	48.83
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	4160.00	55.25 PK	74.00	-18.75	1.39 V	163	19.50	35.74
2	4160.00	45.26 AV	54.00	-8.74	1.39 V	163	9.51	35.74
3	*5200.00	108.20 PK			1.00 V	203	69.97	38.23
4	*5200.00	98.07 AV			1.00 V	203	59.84	38.23
5	#6240.00	67.09 PK	68.30	-1.21	1.21 V	190	26.53	40.56
6	#10400.00	67.16 PK	68.30	-1.14	1.39 V	10	18.33	48.83

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

6. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Kevin Liang

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	4192.00	53.01 PK	74.00	-20.99	1.47 H	39	16.22	36.79
2	4192.00	44.12 AV	54.00	-9.88	1.47 H	39	7.33	36.79
3	*5240.00	106.85 PK			1.30 H	217	67.52	39.33
4	*5240.00	96.22 AV			1.30 H	217	56.89	39.33
5	#6288.00	66.82 PK	68.30	-1.48	1.52 H	243	24.85	41.97
6	#10480.00	65.06 PK	68.30	-3.24	1.37 H	138	15.04	50.02
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	4192.00	54.33 PK	74.00	-19.67	1.29 V	3	17.54	36.79
2	4192.00	46.69 AV	54.00	-7.31	1.29 V	3	9.90	36.79
3	*5240.00	108.54 PK			1.45 V	134	69.21	39.33
4	*5240.00	97.99 AV			1.45 V	134	58.66	39.33
5	#6290.00	67.14 PK	68.30	-1.16	1.22 V	339	25.16	41.98
6	**#10480.00**	**67.28 PK**	**68.30**	**-1.02**	**1.15 V**	**24**	**17.26**	**50.02**

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

6. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Kevin Liang

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	4208.00	51.74 PK	74.00	-22.26	1.53 H	226	14.92	36.82
2	4208.00	43.72 AV	54.00	-10.28	1.53 H	226	6.90	36.82
3	*5260.00	106.51 PK			1.16 H	217	67.14	39.37
4	*5260.00	96.29 AV			1.16 H	217	56.92	39.37
5	#6312.00	64.90 PK	68.30	-3.40	1.53 H	240	22.83	42.07
6	#10520.00	66.91 PK	68.30	-1.39	1.62 H	4	16.83	50.08
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	4208.00	53.19 PK	74.00	-20.81	1.01 V	0	16.37	36.82
2	4208.00	45.53 AV	54.00	-8.47	1.01 V	0	8.71	36.82
3	*5260.00	108.24 PK			1.45 V	69	68.87	39.37
4	*5260.00	97.57 AV			1.45 V	69	58.20	39.37
5	#6312.00	67.24 PK	68.30	-1.06	1.45 V	3	25.17	42.07
6	#10520.00	66.97 PK	68.30	-1.33	1.08 V	29	16.89	50.08

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 61%RH 998hPa	TESTED BY	Kevin Liang

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	4240.00	50.47 PK	74.00	-23.53	1.30 H	224	14.48	35.99
2	4240.00	45.47 AV	54.00	-8.53	1.30 H	224	9.48	35.99
3	*5300.00	103.15 PK			1.00 H	109	64.85	38.30
4	*5300.00	93.30 AV			1.00 H	109	55.00	38.30
5	#6360.00	57.64 PK	68.30	-10.66	1.31 H	225	16.56	41.08
6	10600.00	64.02 PK	74.00	-9.98	1.22 H	200	14.78	49.24
7	10600.00	50.38 AV	54.00	-3.62	1.22 H	200	1.14	49.24
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	4240.00	53.27 PK	74.00	-20.73	1.39 V	166	17.28	35.99
2	4240.00	49.36 AV	54.00	-4.64	1.39 V	166	13.37	35.99
3	*5300.00	107.52 PK			1.00 V	207	69.22	38.30
4	*5300.00	97.49 AV			1.00 V	207	59.19	38.30
5	#6360.00	59.62 PK	68.30	-8.68	1.30 V	186	18.54	41.08
6	10600.00	66.93 PK	74.00	-7.07	1.36 V	349	17.69	49.24
7	10600.00	52.89 AV	54.00	-1.11	1.36 V	349	3.65	49.24

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

6. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Kevin Liang

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	4256.00	50.54 PK	74.00	-23.46	1.28 H	234	13.57	36.97
2	4256.00	41.78 AV	54.00	-12.22	1.28 H	234	4.81	36.97
3	*5320.00	104.52 PK			1.29 H	205	65.08	39.44
4	*5320.00	93.74 AV			1.29 H	205	54.30	39.44
5	5350.00	59.00 PK	74.00	-15.00	1.29 H	205	19.59	39.41
6	5350.00	44.31 AV	54.00	-9.69	1.29 H	205	4.90	39.41
7	#6384.00	56.41 PK	68.30	-11.89	1.19 H	47	14.07	42.33
8	10640.00	66.06 PK	74.00	-7.94	1.47 H	4	15.78	50.28
9	10640.00	52.15 AV	54.00	-1.85	1.47 H	4	1.87	50.28
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	4256.00	51.27 PK	74.00	-22.73	1.12 V	356	14.30	36.97
2	4256.00	44.59 AV	54.00	-9.41	1.12 V	356	7.62	36.97
3	*5320.00	106.35 PK			1.61 V	227	66.91	39.44
4	*5320.00	96.47 AV			1.61 V	227	57.03	39.44
5	5350.00	61.23 PK	74.00	-12.77	1.61 V	227	21.82	39.41
6	5350.00	47.04 AV	54.00	-6.96	1.61 V	227	7.63	39.41
7	#6384.00	59.33 PK	68.30	-8.97	1.11 V	7	16.99	42.33
8	10640.00	66.03 PK	74.00	-7.97	1.43 V	356	15.75	50.28
9	10640.00	52.68 AV	54.00	-1.32	1.43 V	356	2.40	50.28

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

DRAFT 802.11n (20MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Morgan Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4144.00	49.56 PK	74.00	-24.44	1.63 H	57	12.84	36.72
2	4144.00	42.82 AV	54.00	-11.18	1.63 H	57	6.10	36.72
3	5150.00	53.98 PK	74.00	-20.02	1.64 H	63	14.83	39.15
4	5150.00	45.56 AV	54.00	-8.44	1.64 H	63	6.41	39.15
5	*5180.00	107.60 PK			1.23 H	20	68.40	39.20
6	*5180.00	97.37 AV			1.23 H	20	58.17	39.20
7	#6216.00	66.85 PK	68.30	-1.45	1.38 H	86	25.21	41.64
8	#10360.00	61.89 PK	68.30	-6.41	1.18 H	25	12.20	49.69
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	4144.00	49.76 PK	74.00	-24.24	1.16 V	189	13.04	36.72
2	4144.00	42.08 AV	54.00	-11.92	1.16 V	189	5.36	36.72
3	5150.00	59.41 PK	74.00	-14.59	1.21 V	327	20.26	39.15
4	5150.00	47.31 AV	54.00	-6.69	1.21 V	327	8.16	39.15
5	*5180.00	109.24 PK			1.21 V	327	70.04	39.20
6	*5180.00	98.66 AV			1.21 V	327	59.46	39.20
7	#6216.00	66.52 PK	68.30	-1.78	1.48 V	32	24.88	41.64
8	#10360.00	66.68 PK	68.30	-1.62	1.08 V	176	16.99	49.69

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 61%RH 998hPa	TESTED BY	Kevin Liang

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	4160.00	55.43 PK	74.00	-18.57	1.31 H	184	19.68	35.74
2	4160.00	46.66 AV	54.00	-7.34	1.31 H	184	10.91	35.74
3	*5200.00	104.90 PK			1.36 H	305	66.67	38.23
4	*5200.00	94.59 AV			1.36 H	305	56.36	38.23
5	#6240.00	66.86 PK	68.30	-1.44	1.37 H	259	26.30	40.56
6	#10400.00	63.89 PK	68.30	-4.41	1.18 H	229	15.06	48.83
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	4160.00	53.80 PK	74.00	-20.20	1.08 V	205	18.05	35.74
2	4160.00	47.03 AV	54.00	-6.97	1.08 V	205	11.28	35.74
3	*5200.00	109.41 PK			1.09 V	233	71.18	38.23
4	*5200.00	99.35 AV			1.09 V	233	61.12	38.23
5	#6240.00	66.72 PK	68.30	-1.58	1.41 V	233	26.16	40.56
6	#10400.00	66.69 PK	68.30	-1.61	1.26 V	350	17.86	48.83

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Morgan Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4192.00	50.75 PK	74.00	-23.25	1.38 H	18	13.96	36.79
2	4192.00	42.56 AV	54.00	-11.44	1.38 H	18	5.77	36.79
3	*5240.00	107.48 PK			1.40 H	222	68.15	39.33
4	*5240.00	97.39 AV			1.40 H	222	58.06	39.33
5	#6288.00	65.35 PK	68.30	-2.95	1.35 H	35	23.38	41.97
6	#10480.00	64.25 PK	68.30	-4.05	1.45 H	163	14.23	50.02
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	4192.00	51.11 PK	74.00	-22.89	1.33 V	8	14.32	36.79
2	4192.00	43.46 AV	54.00	-10.54	1.33 V	8	6.67	36.79
3	*5240.00	109.69 PK			1.45 V	99	70.36	39.33
4	*5240.00	99.02 AV			1.45 V	99	59.69	39.33
5	#6290.00	67.05 PK	68.30	-1.25	1.33 V	325	25.07	41.98
6	#10480.00	66.98 PK	68.30	-1.32	1.18 V	165	16.96	50.02

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Morgan Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4208.00	50.56 PK	74.00	-23.44	1.49 H	223	13.74	36.82
2	4208.00	42.81 AV	54.00	-11.19	1.49 H	223	5.99	36.82
3	*5260.00	107.35 PK			1.30 H	222	67.98	39.37
4	*5260.00	97.09 AV			1.30 H	222	57.72	39.37
5	#6312.00	63.25 PK	68.30	-5.05	1.60 H	325	21.18	42.07
6	#10520.00	67.12 PK	68.30	-1.18	1.70 H	9	17.04	50.08
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	4208.00	51.38 PK	74.00	-22.62	1.05 V	8	14.56	36.82
2	4208.00	43.66 AV	54.00	-10.34	1.05 V	8	6.84	36.82
3	*5260.00	109.25 PK			1.49 V	58	69.88	39.37
4	*5260.00	98.79 AV			1.49 V	58	59.42	39.37
5	#6312.00	66.08 PK	68.30	-2.22	1.48 V	56	24.01	42.07
6	#10520.00	66.12 PK	68.30	-2.18	1.11 V	45	16.04	50.08

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 61%RH 998hPa	TESTED BY	Kevin Liang

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	4240.00	55.31 PK	74.00	-18.69	1.30 H	175	19.32	35.99
2	4240.00	46.52 AV	54.00	-7.48	1.30 H	175	10.53	35.99
3	*5300.00	103.65 PK			1.35 H	306	65.35	38.30
4	*5300.00	93.26 AV			1.35 H	306	54.96	38.30
5	#6360.00	66.72 PK	68.30	-1.58	1.35 H	262	25.64	41.08
6	10600.00	63.72 PK	74.00	-10.28	1.09 H	234	14.48	49.24
7	10600.00	49.61 AV	54.00	-4.39	1.09 H	234	0.37	49.24
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	4240.00	53.94 PK	74.00	-20.06	1.10 V	208	17.95	35.99
2	4240.00	47.16 AV	54.00	-6.84	1.10 V	208	11.17	35.99
3	*5300.00	107.82 PK			1.10 V	235	69.52	38.30
4	*5300.00	97.76 AV			1.10 V	235	59.46	38.30
5	#6360.00	66.85 PK	68.30	-1.45	1.22 V	245	25.77	41.08
6	10600.00	68.25 PK	74.00	-5.75	1.21 V	345	19.01	49.24
7	10600.00	52.89 AV	54.00	-1.11	1.21 V	345	3.65	49.24

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

6. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Kevin Liang

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	4256.00	50.75 PK	74.00	-23.25	1.19 H	335	13.78	36.97
2	4256.00	41.89 AV	54.00	-12.11	1.19 H	335	4.92	36.97
3	*5320.00	104.65 PK			1.30 H	211	65.21	39.44
4	*5320.00	94.31 AV			1.30 H	211	54.87	39.44
5	5350.00	59.55 PK	74.00	-14.45	1.30 H	211	20.14	39.41
6	5350.00	45.75 AV	54.00	-8.25	1.30 H	211	6.34	39.41
7	#6384.00	56.98 PK	68.30	-11.32	1.25 H	58	14.65	42.33
8	10640.00	66.25 PK	74.00	-7.75	1.25 H	355	15.97	50.28
9	10640.00	52.65 AV	54.00	-1.35	1.25 H	355	2.37	50.28
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	4256.00	51.35 PK	74.00	-22.65	1.18 V	345	14.38	36.97
2	4256.00	44.75 AV	54.00	-9.25	1.18 V	345	7.78	36.97
3	*5320.00	107.37 PK			1.58 V	229	67.93	39.44
4	*5320.00	97.23 AV			1.58 V	229	57.79	39.44
5	5350.00	64.85 PK	74.00	-9.15	1.58 V	229	25.44	39.41
6	5350.00	50.32 AV	54.00	-3.68	1.58 V	229	10.91	39.41
7	#6384.00	59.79 PK	68.30	-8.51	1.24 V	129	17.46	42.33
8	10640.00	65.75 PK	74.00	-8.25	1.53 V	344	15.47	50.28
9	10640.00	52.15 AV	54.00	-1.85	1.53 V	344	1.87	50.28

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

DRAFT 802.11n (40MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Dean Wang

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	4152.00	49.30 PK	74.00	-24.70	1.45 H	41	12.57	36.73
2	4152.00	40.58 AV	54.00	-13.42	1.45 H	41	3.85	36.73
3	5150.00	72.48 PK	74.00	-1.52	1.33 H	210	33.34	39.15
4	5150.00	52.93 AV	54.00	-1.07	1.33 H	210	13.78	39.15
5	*5190.00	106.83 PK			1.47 H	211	67.61	39.22
6	*5190.00	96.61 AV			1.47 H	211	57.39	39.22
7	#6228.00	62.81 PK	68.30	-5.49	1.49 H	244	21.11	41.70
8	#10380.00	61.87 PK	68.30	-6.43	1.09 H	241	12.10	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	4152.00	53.87 PK	74.00	-20.13	1.25 V	341	17.14	36.73
2	4152.00	47.29 AV	54.00	-6.71	1.25 V	341	10.56	36.73
3	5150.00	69.25 PK	74.00	-4.75	1.29 V	63	30.10	39.15
4	5150.00	52.69 AV	54.00	-1.31	1.29 V	63	13.54	39.15
5	*5190.00	105.93 PK			1.28 V	65	66.71	39.22
6	*5190.00	94.51 AV			1.28 V	65	55.29	39.22
7	#6228.00	67.13 PK	68.30	-1.17	1.22 V	20	25.43	41.70
8	#10380.00	62.91 PK	68.30	-5.39	1.47 V	26	13.14	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 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Dean Wang

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	4184.00	51.32 PK	74.00	-22.68	1.21 H	215	14.54	36.78
2	4184.00	43.59 AV	54.00	-10.41	1.21 H	215	6.81	36.78
3	*5230.00	106.70 PK			1.45 H	205	67.39	39.31
4	*5230.00	95.58 AV			1.45 H	205	56.27	39.31
5	#6276.00	63.71 PK	68.30	-4.59	1.59 H	242	21.79	41.92
6	#10460.00	63.36 PK	68.30	-4.94	1.32 H	145	13.38	49.98
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	4184.00	50.81 PK	74.00	-23.19	1.13 V	3	14.03	36.78
2	4184.00	42.98 AV	54.00	-11.02	1.13 V	3	6.20	36.78
3	*5230.00	105.66 PK			1.35 V	223	66.35	39.31
4	*5230.00	94.48 AV			1.35 V	223	55.17	39.31
5	#6276.00	67.14 PK	68.30	-1.16	1.01 V	8	25.22	41.92
6	#10460.00	65.21 PK	68.30	-3.09	1.47 V	26	15.23	49.98

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Dean Wang

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	4216.00	51.47 PK	74.00	-22.53	1.26 H	339	14.63	36.85
2	4216.00	44.01 AV	54.00	-9.99	1.26 H	339	7.17	36.85
3	*5270.00	106.42 PK			1.00 H	212	67.03	39.39
4	*5270.00	96.01 AV			1.00 H	212	56.62	39.39
5	#6324.00	61.09 PK	68.30	-7.21	1.69 H	243	18.98	42.12
6	#10540.00	65.98 PK	68.30	-2.32	1.52 H	7	15.88	50.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4216.00	50.66 PK	74.00	-23.34	1.13 V	3	13.82	36.85
2	4216.00	43.59 AV	54.00	-10.41	1.13 V	3	6.75	36.85
3	*5270.00	105.74 PK			1.78 V	218	66.35	39.39
4	*5270.00	95.10 AV			1.78 V	218	55.71	39.39
5	#6324.00	61.54 PK	68.30	-6.76	1.74 V	128	19.43	42.12
6	#10540.00	66.77 PK	68.30	-1.53	1.61 V	166	16.67	50.10

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

6. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Dean Wang

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	4248.00	52.42 PK	74.00	-21.58	1.28 H	287	15.48	36.94
2	4248.00	46.05 AV	54.00	-7.95	1.28 H	287	9.11	36.94
3	*5310.00	105.48 PK			1.05 H	190	66.03	39.45
4	*5310.00	95.05 AV			1.05 H	190	55.60	39.45
5	5350.00	65.73 PK	74.00	-8.27	1.06 H	189	26.32	39.41
6	5350.00	50.50 AV	54.00	-3.50	1.06 H	189	11.09	39.41
7	#6372.00	62.70 PK	68.30	-5.60	1.13 H	315	20.42	42.29
8	10620.00	64.15 PK	74.00	-9.85	1.50 H	20	13.93	50.23
9	10620.00	50.83 AV	54.00	-3.17	1.50 H	20	0.61	50.23
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	4248.00	51.96 PK	74.00	-22.04	1.13 V	357	15.02	36.94
2	4248.00	45.56 AV	54.00	-8.44	1.13 V	357	8.62	36.94
3	*5310.00	104.73 PK			1.00 V	211	65.28	39.45
4	*5310.00	93.71 AV			1.00 V	211	54.26	39.45
5	5350.00	67.25 PK	74.00	-6.75	1.00 V	211	27.84	39.41
6	5350.00	51.01 AV	54.00	-2.99	1.00 V	211	11.60	39.41
7	#6372.00	56.97 PK	68.30	-11.33	1.80 V	343	14.69	42.29
8	10620.00	66.38 PK	74.00	-7.62	1.69 V	22	16.15	50.23
9	10620.00	52.66 AV	54.00	-1.34	1.69 V	22	2.43	50.23

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

6. "#":The radiated frequency is out the restricted band.

BELOW 1GHz WORST-CASE DATA: DRAFT 802.11n (20MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH 1020hPa	TESTED BY	Match Tsui

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	96.01	32.09 QP	43.50	-11.41	2.00 H	145	22.55	9.54
2	132.95	31.43 QP	43.50	-12.07	2.00 H	199	18.43	13.00
3	183.50	32.37 QP	43.50	-11.13	2.00 H	10	19.89	12.47
4	216.55	40.13 QP	46.00	-5.87	1.00 H	355	28.01	12.12
5	274.88	36.70 QP	46.00	-9.30	1.00 H	235	22.49	14.22
6	300.16	35.01 QP	46.00	-10.99	1.00 H	223	20.27	14.74
7	399.31	36.51 QP	46.00	-9.49	1.00 H	253	19.19	17.31
8	533.47	36.12 QP	46.00	-9.88	1.50 H	178	14.74	21.39
9	667.63	38.91 QP	46.00	-7.09	1.00 H	334	14.29	24.61
10	799.84	39.29 QP	46.00	-6.71	1.00 H	172	12.86	26.43
11	933.99	36.84 QP	46.00	-9.16	1.00 H	10	8.51	28.34

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	47.40	33.28 QP	40.00	-6.72	1.00 V	103	19.64	13.64
2	66.84	31.18 QP	40.00	-8.82	1.50 V	52	18.49	12.69
3	96.01	32.69 QP	43.50	-10.81	1.00 V	73	23.15	9.54
4	667.63	37.67 QP	46.00	-8.33	1.00 V	280	13.06	24.61
5	799.84	34.51 QP	46.00	-11.49	1.50 V	301	8.08	26.43
6	933.99	36.37 QP	46.00	-9.63	2.00 V	301	8.04	28.34

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.

FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

ABOVE 1GHz DATA: 802.11a OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	**FREQUENCY RANGE**	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	**TESTED BY**	Dean Wang

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	4400.00	52.35 PK	74.00	-21.65	1.27 H	233	14.96	37.39
2	4400.00	46.30 AV	54.00	-7.70	1.27 H	233	8.91	37.39
3	5460.00	58.23 PK	74.00	-15.77	1.02 H	189	18.76	39.47
4	5460.00	45.35 AV	54.00	-8.65	1.02 H	189	5.88	39.47
5	#5470.00	60.38 PK	68.30	-7.92	1.03 H	188	20.89	39.49
6	*5500.00	104.12 PK			1.02 H	189	64.57	39.55
7	*5500.00	93.03 AV			1.02 H	189	53.48	39.55
8	11000.00	67.16 PK	74.00	-6.84	1.66 H	17	16.17	50.99
9	11000.00	52.79 AV	54.00	-1.21	1.66 H	17	1.80	50.99
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	4400.00	51.91 PK	74.00	-22.09	1.19 V	3	14.52	37.39
2	4400.00	46.05 AV	54.00	-7.95	1.19 V	3	8.66	37.39
3	5460.00	60.57 PK	74.00	-13.43	1.17 V	221	21.10	39.47
4	5460.00	47.13 AV	54.00	-6.87	1.17 V	221	7.66	39.47
5	#5470.00	62.57 PK	68.30	-5.73	1.17 V	220	23.08	39.49
6	*5500.00	106.34 PK			1.55 V	219	66.79	39.55
7	*5500.00	95.97 AV			1.55 V	219	56.42	39.55
8	11000.00	68.01 PK	74.00	-5.99	2.17 V	153	17.02	50.99
9	11000.00	52.95 AV	54.00	-1.05	2.17 V	153	1.96	50.99

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 120	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Dean Wang

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	#4480.00	52.07 PK	68.30	-16.23	1.57 H	208	14.44	37.63
2	*5600.00	104.03 PK			1.11 H	206	64.26	39.77
3	*5600.00	94.10 AV			1.11 H	206	54.33	39.77
4	11200.00	66.85 PK	74.00	-7.15	1.69 H	17	15.83	51.02
5	11200.00	52.90 AV	54.00	-1.10	1.69 H	17	1.88	51.02
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	#4480.00	52.32 PK	68.30	-15.98	1.63 V	352	14.69	37.63
2	*5600.00	106.76 PK			1.62 V	217	66.99	39.77
3	*5600.00	96.64 AV			1.62 V	217	56.87	39.77
4	11200.00	66.07 PK	74.00	-7.93	1.86 V	113	15.05	51.02
5	11200.00	52.62 AV	54.00	-1.38	1.86 V	113	1.60	51.02

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	**FREQUENCY RANGE**	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	**TESTED BY**	Dean Wang

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	4560.00	52.83 PK	74.00	-21.17	1.65 H	228	15.04	37.79
2	4560.00	48.00 AV	54.00	-6.00	1.65 H	228	10.21	37.79
3	*5700.00	105.71 PK			1.58 H	211	65.76	39.95
4	*5700.00	95.04 AV			1.58 H	211	55.09	39.95
5	#5725.00	65.95 PK	68.30	-2.35	1.80 H	212	25.97	39.98
6	11400.00	67.40 PK	74.00	-6.60	1.59 H	360	16.22	51.18
7	11400.00	52.73 AV	54.00	-1.27	1.59 H	360	1.55	51.18
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	4560.00	51.67 PK	74.00	-22.33	1.30 V	348	13.88	37.79
2	4560.00	45.65 AV	54.00	-8.35	1.30 V	348	7.86	37.79
3	*5700.00	107.74 PK			1.87 V	217	67.79	39.95
4	*5700.00	96.06 AV			1.87 V	217	56.11	39.95
5	#5725.00	67.12 PK	68.30	-1.18	1.24 V	216	27.13	39.98
6	11400.00	66.61 PK	74.00	-7.39	1.60 V	277	15.43	51.18
7	11400.00	52.14 AV	54.00	-1.86	1.60 V	277	0.96	51.18

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).

3. The other emission levels were very low against the limit.

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

6. "#":The radiated frequency is out the restricted band.

DRAFT 802.11n (20MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Morgan Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4400.00	54.29 PK	74.00	-19.71	1.20 H	220	16.90	37.39
2	4400.00	49.72 AV	54.00	-4.28	1.20 H	220	12.33	37.39
3	5460.00	59.89 PK	74.00	-14.11	1.15 H	188	20.42	39.47
4	5460.00	47.47 AV	54.00	-6.53	1.15 H	188	8.00	39.47
5	#5470.00	59.67 PK	68.30	-8.63	1.15 H	189	20.18	39.49
6	*5500.00	107.60 PK			1.17 H	190	68.05	39.55
7	*5500.00	97.34 AV			1.17 H	190	57.79	39.55
8	11000.00	68.65 PK	74.00	-5.35	1.16 H	211	17.66	50.99
9	11000.00	52.82 AV	54.00	-1.18	1.16 H	211	1.83	50.99
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	4400.00	53.82 PK	74.00	-20.18	1.42 V	267	16.43	37.39
2	4400.00	48.59 AV	54.00	-5.41	1.42 V	267	11.20	37.39
3	5460.00	60.92 PK	74.00	-13.08	1.40 V	201	21.45	39.47
4	5460.00	48.69 AV	54.00	-5.31	1.40 V	201	9.22	39.47
5	#5470.00	60.79 PK	68.30	-7.51	1.40 V	201	21.30	39.49
6	*5500.00	110.25 PK			1.25 V	213	70.70	39.55
7	*5500.00	100.18 AV			1.25 V	213	60.63	39.55
8	11000.00	68.62 PK	74.00	-5.38	1.25 V	51	17.63	50.99
9	11000.00	52.85 AV	54.00	-1.15	1.25 V	51	1.86	50.99

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 120	**FREQUENCY RANGE**	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	**TESTED BY**	Morgan Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4480.00	53.73 PK	68.30	-14.57	1.06 H	209	16.10	37.63
2	*5600.00	107.10 PK			1.24 H	194	67.33	39.77
3	*5600.00	96.83 AV			1.24 H	194	57.06	39.77
4	11200.00	68.47 PK	74.00	-5.53	1.14 H	290	17.45	51.02
5	11200.00	52.52 AV	54.00	-1.48	1.14 H	290	1.50	51.02
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	#4480.00	57.56 PK	68.30	-10.74	1.46 V	153	19.93	37.63
2	*5600.00	110.52 PK			1.11 V	211	70.75	39.77
3	*5600.00	99.95 AV			1.11 V	211	60.18	39.77
4	11200.00	68.17 PK	74.00	-5.83	1.49 V	255	17.15	51.02
5	11200.00	52.43 AV	54.00	-1.57	1.49 V	255	1.41	51.02

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Morgan Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4560.00	52.06 PK	74.00	-21.94	1.13 H	235	14.27	37.79
2	4560.00	47.22 AV	54.00	-6.78	1.13 H	235	9.43	37.79
3	*5700.00	106.16 PK			1.22 H	199	66.21	39.95
4	*5700.00	95.89 AV			1.22 H	199	55.94	39.95
5	#5725.00	63.94 PK	68.30	-4.36	1.22 H	199	23.95	39.98
6	9120.00	57.36 PK	74.00	-16.64	1.25 H	99	10.36	46.99
7	9120.00	44.81 AV	54.00	-9.19	1.25 H	99	-2.19	46.99
8	11400.00	68.02 PK	74.00	-5.98	1.30 H	95	16.84	51.18
9	11400.00	52.68 AV	54.00	-1.32	1.30 H	95	1.50	51.18
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	4560.00	57.51 PK	74.00	-16.49	1.44 V	165	19.72	37.79
2	4560.00	52.91 AV	54.00	-1.09	1.44 V	165	15.12	37.79
3	*5700.00	109.98 PK			1.21 V	214	70.03	39.95
4	*5700.00	99.66 AV			1.21 V	214	59.71	39.95
5	#5725.00	63.34 PK	68.30	-4.95	1.21 V	214	23.36	39.98
6	11400.00	66.26 PK	74.00	-7.74	1.59 V	303	15.08	51.18
7	11400.00	51.44 AV	54.00	-2.56	1.59 V	303	0.26	51.18

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

DRAFT 802.11n (40MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Dean Wang

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	#4408.00	51.88 PK	68.30	-16.42	1.00 H	211	14.46	37.41
2	5460.00	55.46 PK	74.00	-18.54	1.22 H	223	15.99	39.47
3	5460.00	42.46 AV	54.00	-11.54	1.22 H	223	2.99	39.47
4	#5470.00	58.47 PK	68.30	-9.83	1.22 H	223	18.98	39.49
5	*5510.00	101.20 PK			1.21 H	224	61.63	39.57
6	*5510.00	90.57 AV			1.21 H	224	51.00	39.57
7	11020.00	67.03 PK	74.00	-6.97	1.61 H	20	16.04	50.99
8	11020.00	52.93 AV	54.00	-1.07	1.61 H	20	1.94	50.99
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	#4408.00	52.55 PK	68.30	-15.75	1.06 V	344	15.13	37.41
2	5460.00	57.17 PK	74.00	-16.83	1.16 V	2	17.70	39.47
3	5460.00	43.42 AV	54.00	-10.58	1.16 V	2	3.95	39.47
4	#5470.00	63.98 PK	68.30	-4.32	1.16 V	2	24.49	39.49
5	*5510.00	103.90 PK			1.05 V	8	64.33	39.57
6	*5510.00	93.55 AV			1.05 V	8	53.98	39.57
7	11020.00	64.21 PK	74.00	-9.79	1.75 V	54	13.22	50.99
8	11020.00	51.28 AV	54.00	-2.72	1.75 V	54	0.29	50.99

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 118	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Kevin Liang

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	#4472.00	52.80 PK	68.30	-15.50	1.66 H	21	15.20	37.61
2	*5590.00	102.52 PK			1.20 H	26	62.77	39.75
3	*5590.00	92.30 AV			1.20 H	26	52.55	39.75
4	11180.00	65.72 PK	74.00	-8.28	1.51 H	11	14.71	51.02
5	11180.00	52.84 AV	54.00	-1.16	1.51 H	11	1.83	51.02
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	#4472.00	55.71 PK	68.30	-12.59	1.63 V	0	18.11	37.61
2	*5590.00	104.61 PK			1.43 V	34	64.86	39.75
3	*5590.00	94.35 AV			1.43 V	34	54.60	39.75
4	11180.00	65.66 PK	74.00	-8.34	1.44 V	158	14.65	51.02
5	11180.00	52.53 AV	54.00	-1.47	1.44 V	158	1.52	51.02

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH 998hPa	TESTED BY	Morgan Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	44.16 PK	74.00	-29.84	1.41 H	67	15.44	28.72
2	1066.00	38.81 AV	54.00	-15.19	1.41 H	67	10.09	28.72
3	4536.00	53.67 PK	74.00	-20.33	1.81 H	47	15.92	37.75
4	4536.00	49.28 AV	54.00	-4.72	1.81 H	47	11.53	37.75
5	*5670.00	101.18 PK			1.34 H	268	61.28	39.90
6	*5670.00	90.86 AV			1.34 H	268	50.96	39.90
7	#5725.00	62.73 PK	68.30	-5.56	1.34 H	268	22.75	39.98
8	11340.00	66.57 PK	74.00	-7.43	1.60 H	18	15.43	51.14
9	11340.00	52.85 AV	54.00	-1.15	1.60 H	18	1.71	51.14
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1066.00	45.20 PK	74.00	-28.80	1.06 V	25	16.48	28.72
2	1066.00	38.49 AV	54.00	-15.51	1.06 V	25	9.77	28.72
3	4536.00	52.36 PK	74.00	-21.64	1.01 V	169	14.61	37.75
4	4536.00	47.27 AV	54.00	-6.73	1.01 V	169	9.52	37.75
5	*5670.00	103.65 PK			1.00 V	175	63.75	39.90
6	*5670.00	93.14 AV			1.00 V	175	53.24	39.90
7	#5725.00	67.02 PK	68.30	-1.28	1.00 V	175	27.03	39.98
8	11340.00	66.05 PK	74.00	-7.95	1.50 V	278	14.91	51.14
9	11340.00	52.61 AV	54.00	-1.39	1.50 V	278	1.47	51.14

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

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

BELOW 1GHz WORST-CASE DATA：DRAFT 802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 118	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH 1020hPa	TESTED BY	Match Tsui

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	119.34	32.29 QP	43.50	-11.21	1.50 H	160	20.14	12.15
2	132.95	31.40 QP	43.50	-12.10	2.00 H	193	18.40	13.00
3	185.44	33.87 QP	43.50	-9.63	2.00 H	10	21.53	12.34
4	224.33	37.63 QP	46.00	-8.37	1.00 H	10	25.14	12.49
5	274.88	36.75 QP	46.00	-9.25	1.00 H	226	22.53	14.22
6	300.16	35.23 QP	46.00	-10.77	1.00 H	232	20.49	14.74
7	399.31	36.46 QP	46.00	-9.54	1.00 H	247	19.14	17.31
8	533.47	36.16 QP	46.00	-9.84	1.50 H	184	14.78	21.39
9	667.63	34.28 QP	46.00	-11.72	1.50 H	178	9.66	24.61
10	799.84	40.64 QP	46.00	-5.36	1.00 H	301	14.21	26.43
11	933.99	34.46 QP	46.00	-11.54	1.50 H	241	6.12	28.34
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	47.40	33.32 QP	40.00	-6.68	1.00 V	100	19.67	13.64
2	66.84	32.01 QP	40.00	-7.99	1.00 V	61	19.32	12.69
3	96.01	32.78 QP	43.50	-10.72	1.00 V	55	23.24	9.54
4	667.63	36.52 QP	46.00	-9.48	1.00 V	265	11.91	24.61
5	799.84	35.54 QP	46.00	-10.46	1.50 V	145	9.11	26.43
6	933.99	36.10 QP	46.00	-9.90	1.50 V	274	7.76	28.34

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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Sep. 22, 2007	Sep. 21, 2008
RF signal cable Woken	5D-FB	Cable-HYCO3-01	Jan. 07, 2007	Jan. 06, 2008
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 09, 2007	Jan. 08, 2008
LISN ROHDE & SCHWARZ	ESH3-Z5	100311	Jan. 17, 2007	Jan. 16, 2008
Software ADT	ADT_Cond_V3	NA	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Shielded Room 2.

3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

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

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

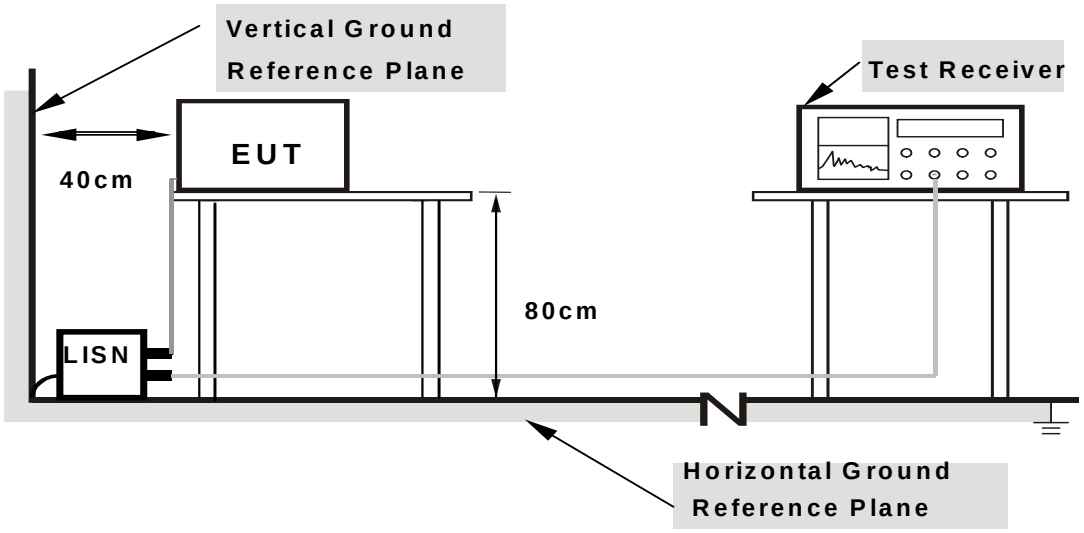
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.7

4.2.7 TEST RESULTS

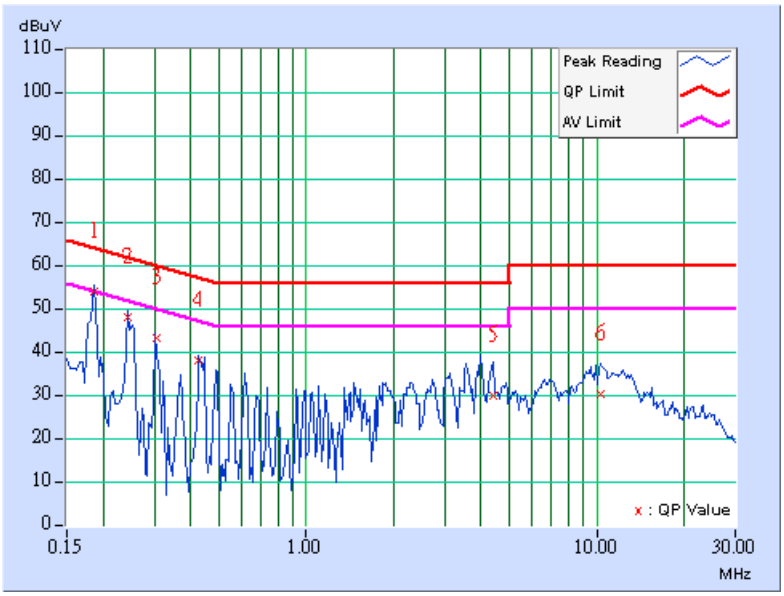
FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

CONDUCTED WORST-CASE DATA: DRAFT 802.11n (20MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	PHASE	Line 1
INPUT POWER	120Vac, 60Hz	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.185**	**0.10**	**53.70**	**-**	**53.80**	**-**	**64.25**	**54.25**	**-10.45**	**-**
2	0.244	0.10	47.74	-	47.84	-	61.97	51.97	-14.13	-
3	0.307	0.10	42.81	-	42.91	-	60.04	50.04	-17.13	-
4	0.427	0.10	37.98	-	38.08	-	57.30	47.30	-19.22	-
5	4.418	0.28	29.64	-	29.92	-	56.00	46.00	-26.08	-
6	10.352	0.34	30.03	-	30.37	-	60.00	50.00	-29.63	-

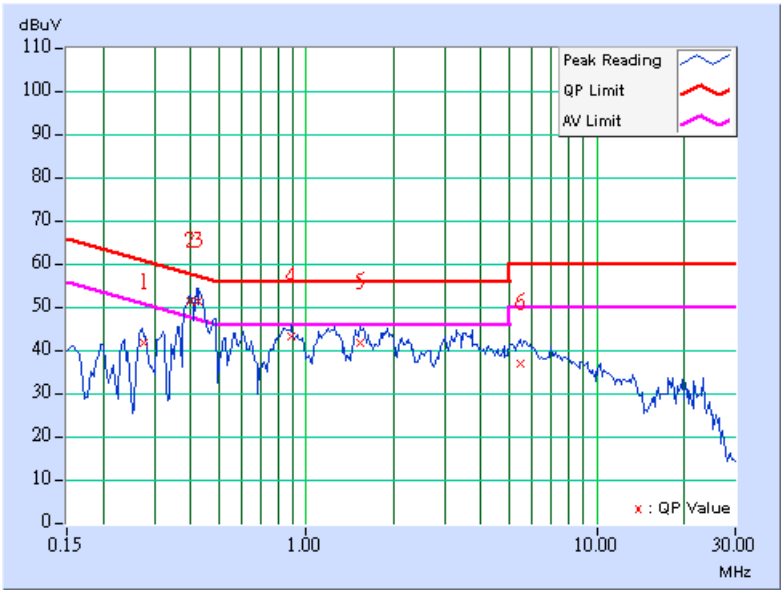
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	PHASE	Line 2
INPUT POWER	120Vac, 60Hz	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.10	53.54	-	53.64	-	64.25	54.25	-10.61	-
2	0.248	0.10	46.63	-	46.73	-	61.84	51.84	-15.11	-
3	0.306	0.10	42.97	-	43.07	-	60.07	50.07	-17.00	-
4	0.435	0.11	35.37	-	35.48	-	57.15	47.15	-21.68	-
5	3.938	0.28	34.65	-	34.93	-	56.00	46.00	-21.07	-
6	10.352	0.43	33.26	-	33.69	-	60.00	50.00	-26.31	-

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



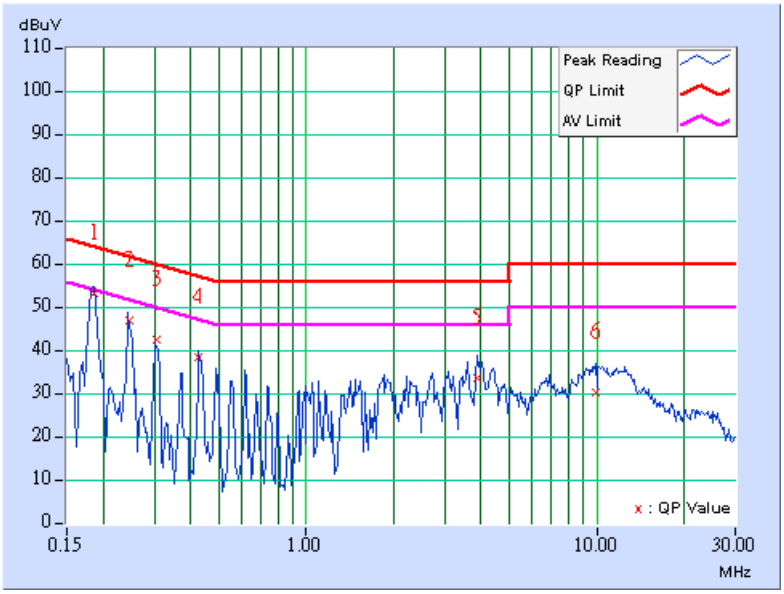
FOR FREQUENCY BAND: 5.470 ~ 5.725GHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 118	PHASE	Line 1
INPUT POWER	120Vac, 60Hz	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.10	52.96	-	53.06	-	64.25	54.25	-11.19	-
2	0.248	0.10	46.65	-	46.75	-	61.84	51.84	-15.09	-
3	0.307	0.10	42.32	-	42.42	-	60.04	50.04	-17.62	-
4	0.427	0.10	38.04	-	38.14	-	57.30	47.30	-19.16	-
5	3.883	0.28	33.42	-	33.70	-	56.00	46.00	-22.30	-
6	9.887	0.33	30.03	-	30.36	-	60.00	50.00	-29.64	-

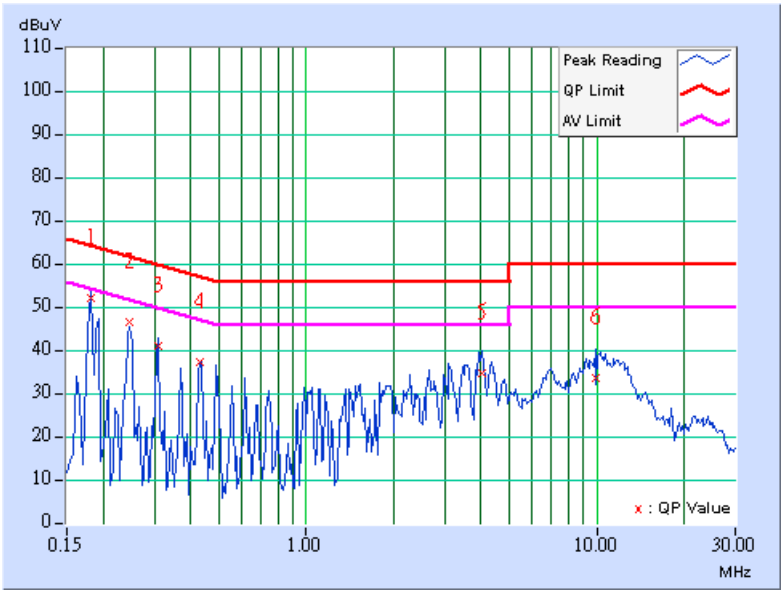
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 118	PHASE	Line 2
INPUT POWER	120Vac, 60Hz	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	20deg. C, 60%RH, 991hPa	TESTED BY	Match Tsui

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.181	0.10	51.91	-	52.01	-	64.43	54.43	-12.42	-
2	0.248	0.10	46.16	-	46.26	-	61.84	51.84	-15.58	-
3	0.310	0.10	40.68	-	40.78	-	59.97	49.97	-19.19	-
4	0.431	0.11	37.11	-	37.22	-	57.23	47.23	-20.01	-
5	4.008	0.28	34.55	-	34.83	-	56.00	46.00	-21.17	-
6	9.965	0.43	33.17	-	33.60	-	60.00	50.00	-26.40	-

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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 29, 2007	Jun. 28, 2008

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

4.3.3 TEST PROCEDURE

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

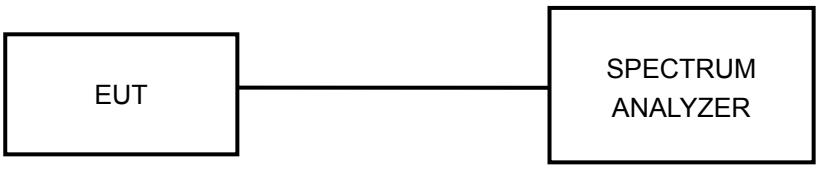
NOTE: The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

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

4.3.7 TEST RESULTS

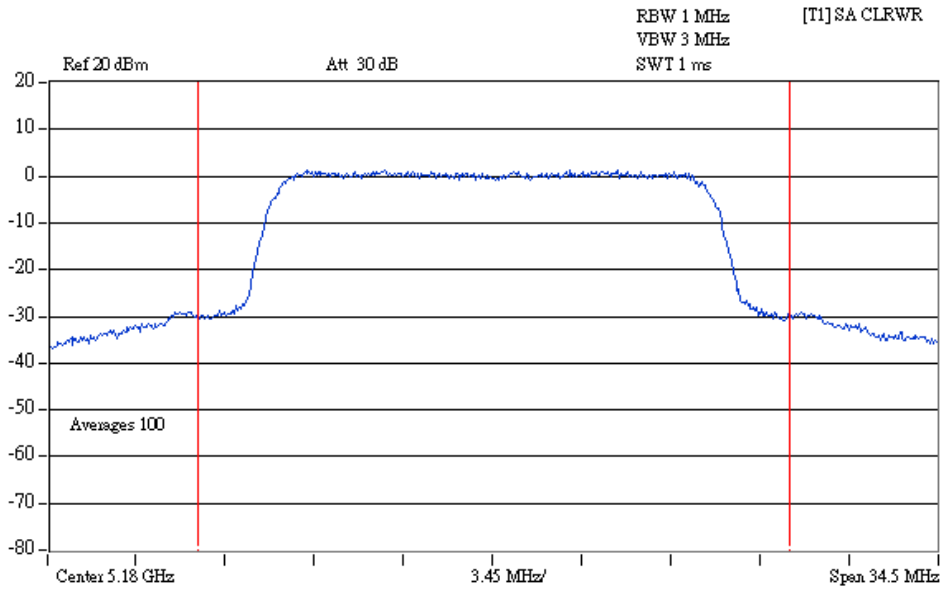
FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

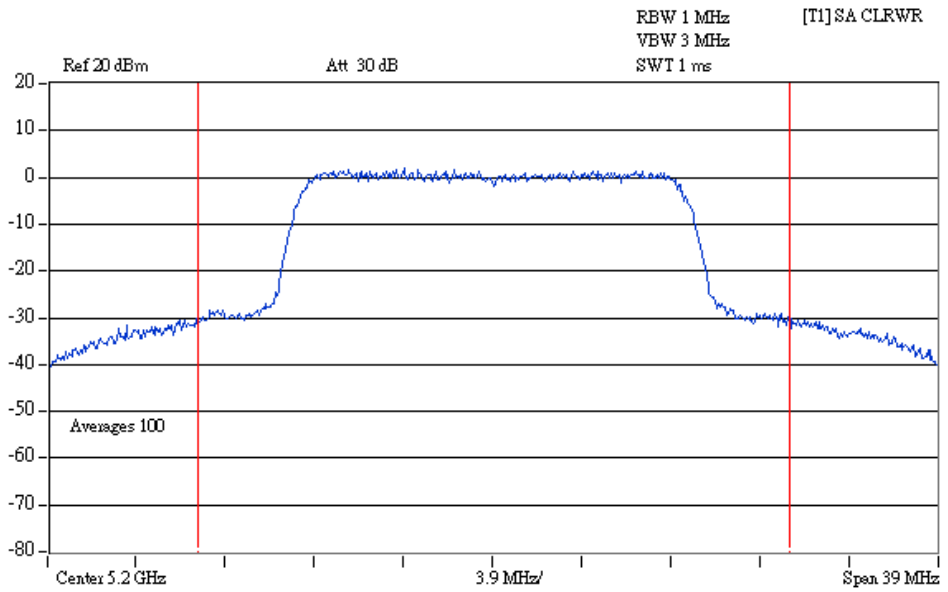
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
36	5180	28.379	14.53	17.00	PASS
40	5200	28.445	14.54	17.00	PASS
48	5240	28.379	14.53	17.00	PASS
52	5260	28.973	14.62	24.00	PASS
60	5300	16.069	12.06	24.00	PASS
64	5320	16.368	12.14	24.00	PASS

CH 36



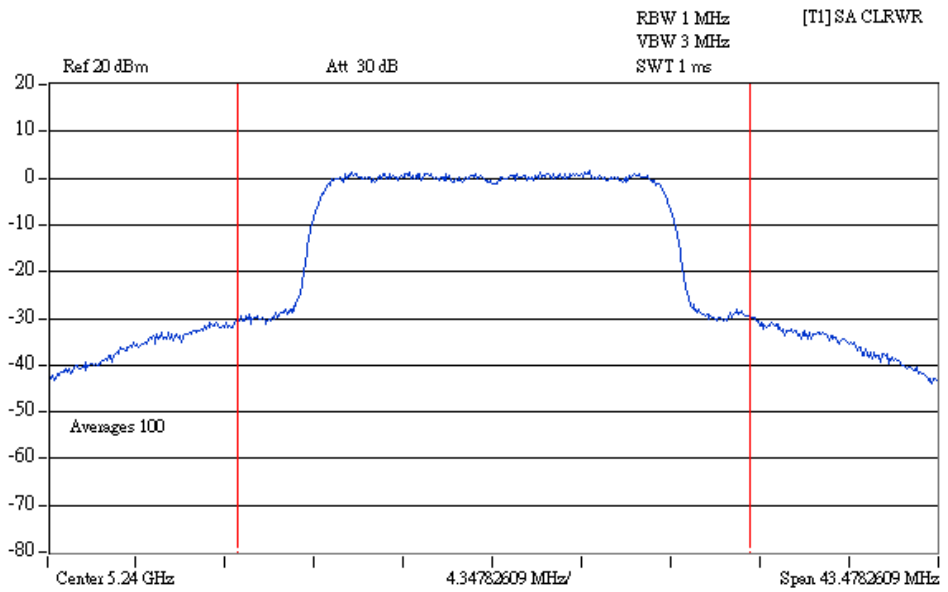
TX Channel Bandwidth 23 MHz Power 14.53 dBm

CH 40



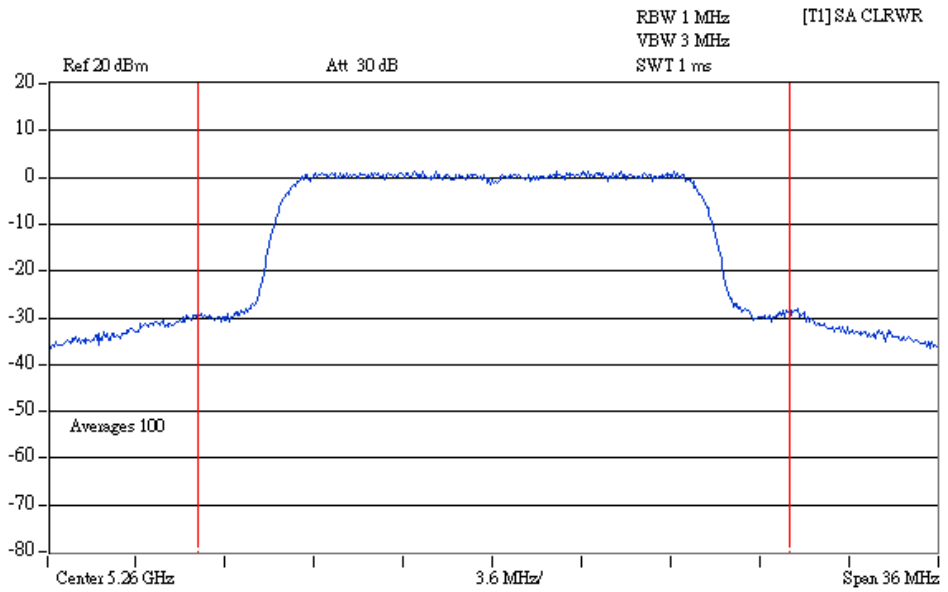
TX Channel Bandwidth 26 MHz Power 14.54 dBm

CH 48



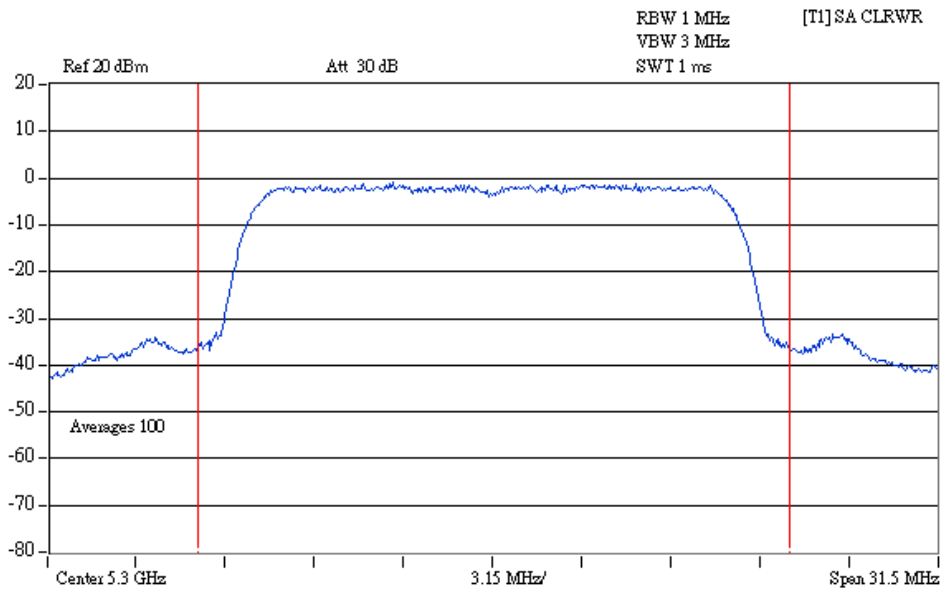
TX Channel Bandwidth 25 MHz Power 14.53 dBm

CH 52



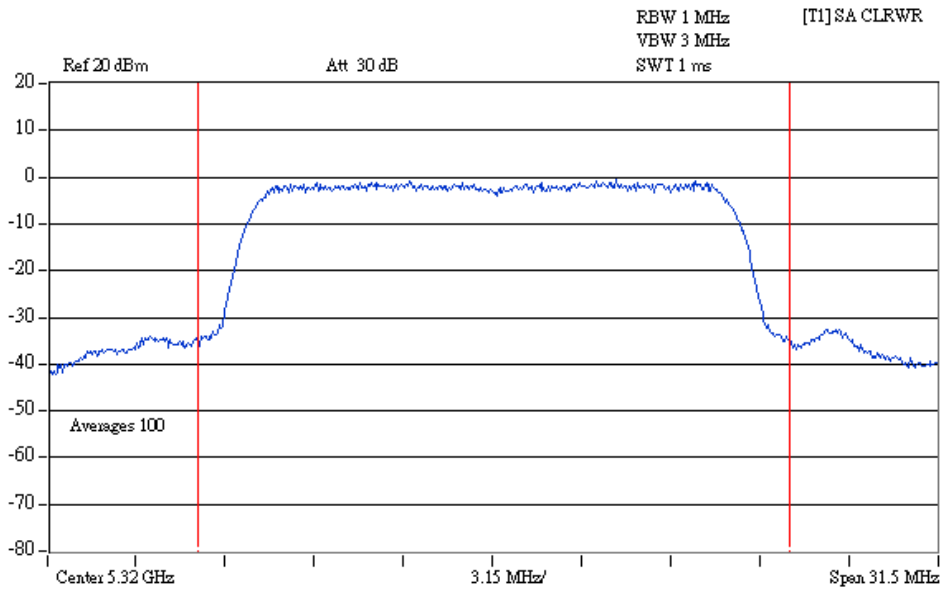
TX Channel Bandwidth 24 MHz Power 14.62 dBm

CH 60



TX Channel Bandwidth 21 MHz Power 12.06 dBm

CH 64



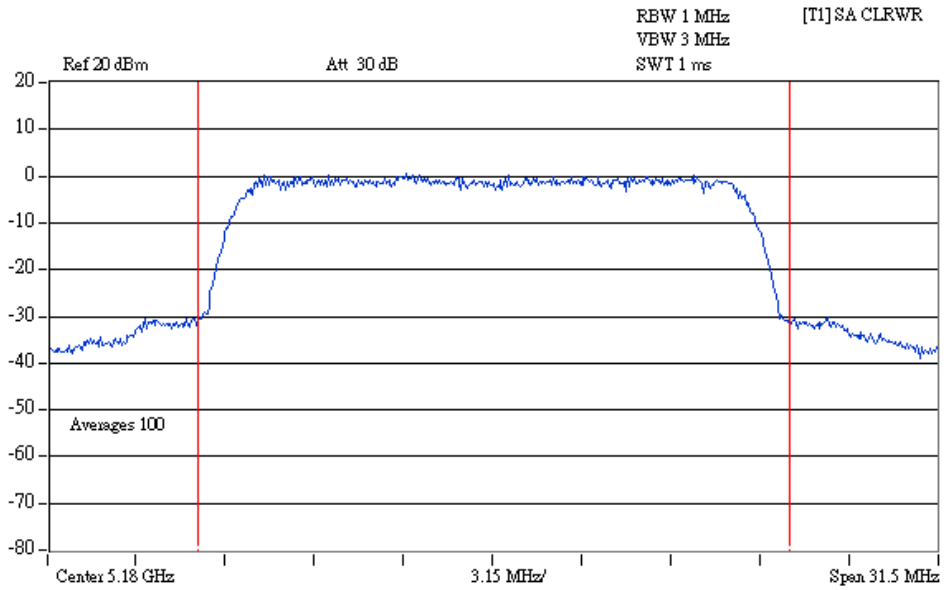
TX Channel Bandwidth 21 MHz Power 12.14 dBm

DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

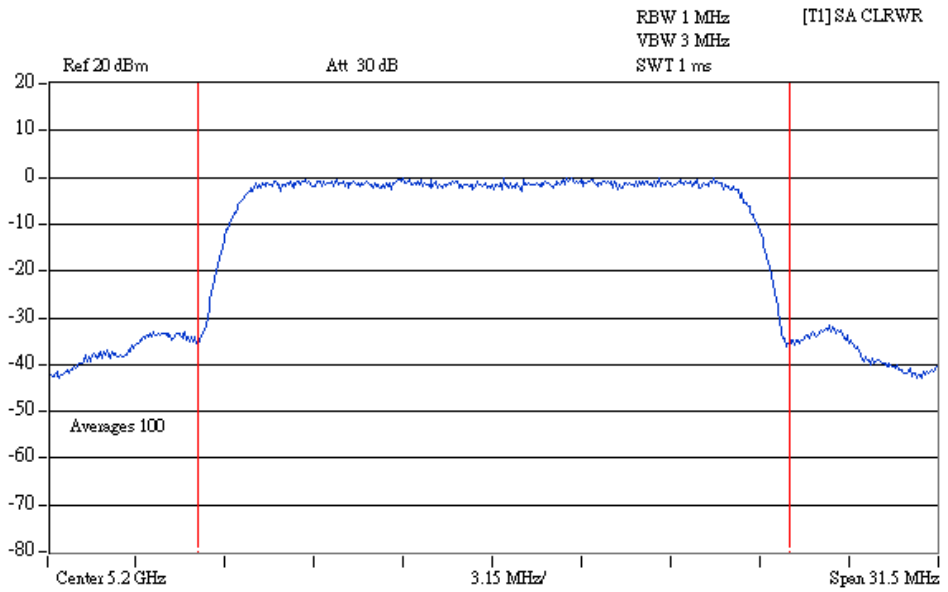
CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
36	5180	22.542	22.491	13.53	13.52	45.033	16.54	17.00	PASS
40	5200	22.439	22.542	13.51	13.53	44.981	16.53	17.00	PASS
48	5240	22.491	25.410	13.52	14.05	47.900	16.80	17.00	PASS
52	5260	23.121	40.272	13.64	16.05	63.392	18.02	24.00	PASS
60	5300	18.197	18.030	12.60	12.56	36.227	15.59	24.00	PASS
64	5320	14.488	28.642	11.61	14.57	43.129	16.35	24.00	PASS

FOR CHAIN 0: CH 36



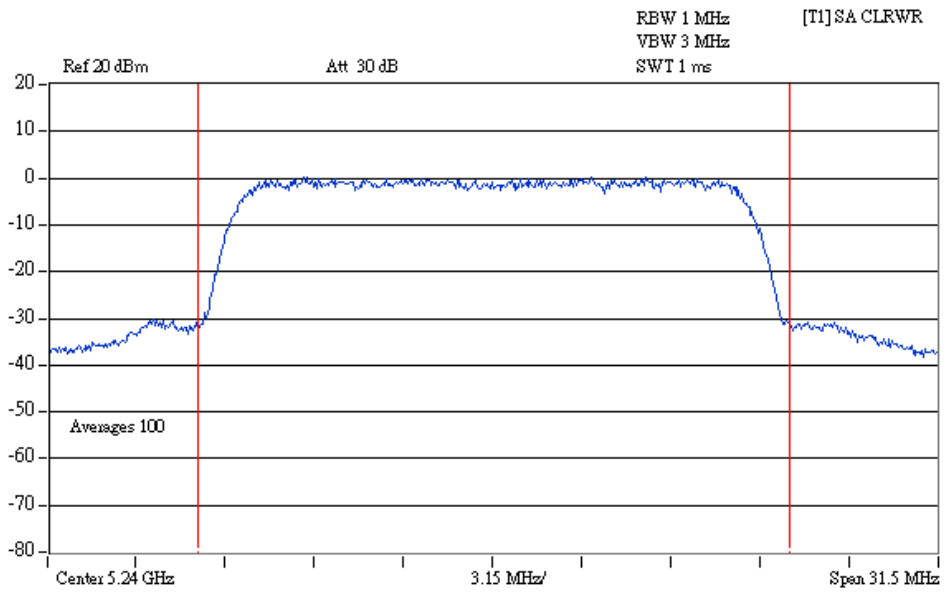
TX Channel Bandwidth 21 MHz Power 13.53 dBm

CH 40



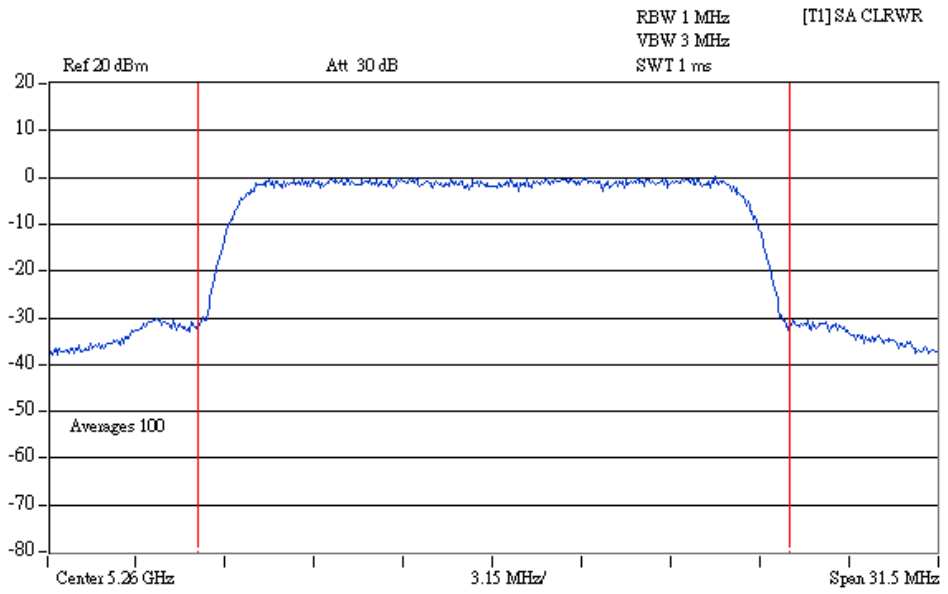
TX Channel Bandwidth 21 MHz Power 13.51 dBm

CH 48



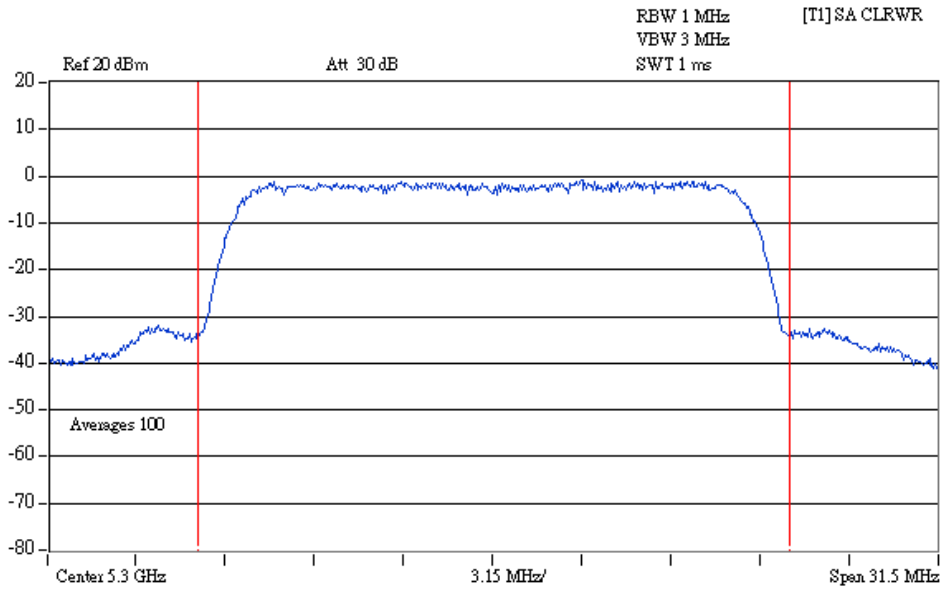
TX Channel Bandwidth 21 MHz Power 13.52 dBm

CH 52



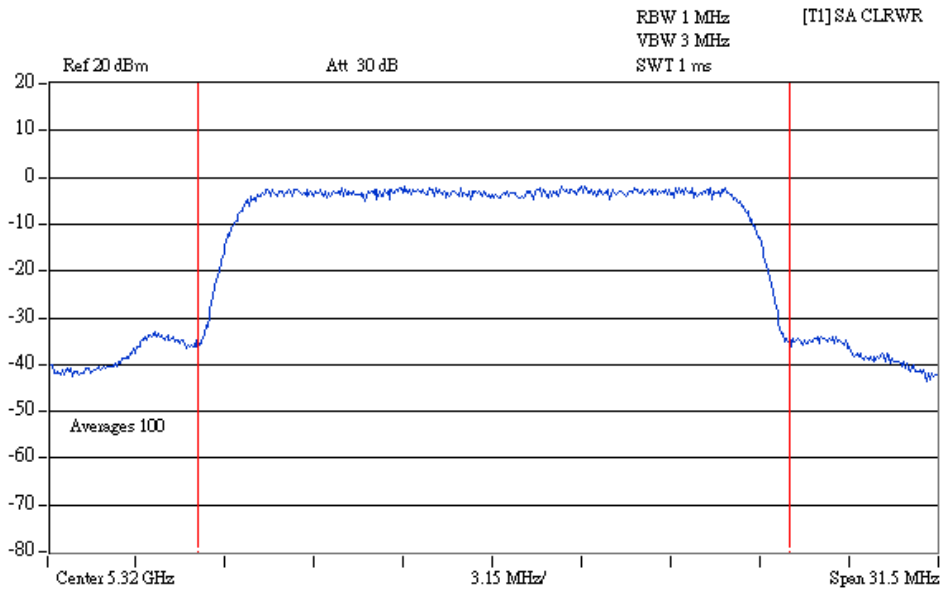
TX Channel Bandwidth 21 MHz Power 13.64 dBm

CH 60



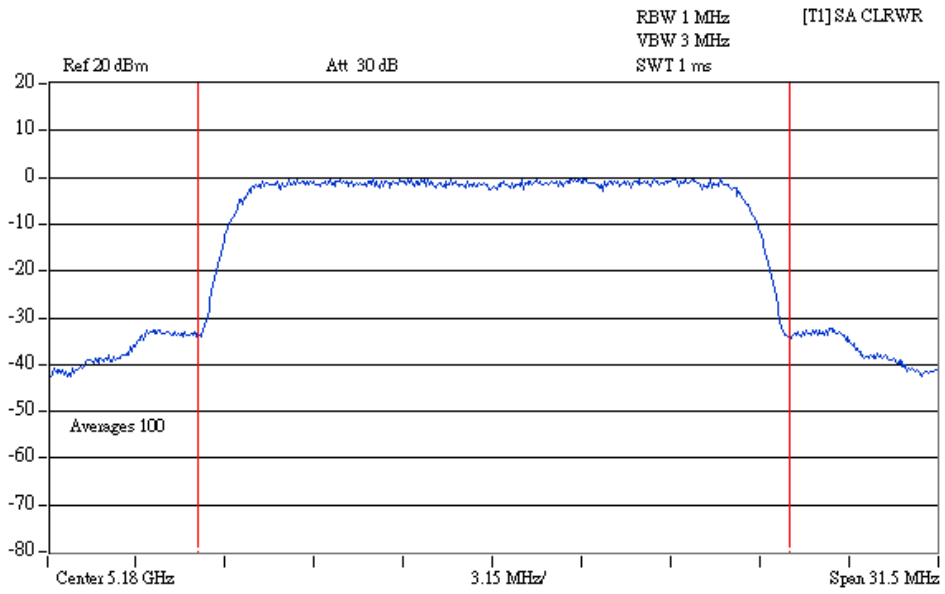
TX Channel Bandwidth 21 MHz Power 12.6 dBm

CH 64



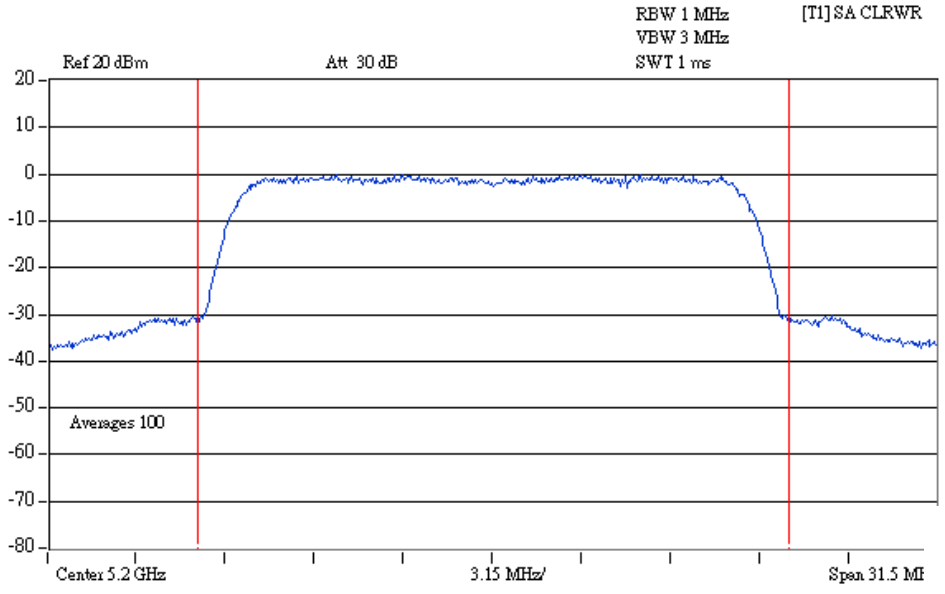
TX Channel Bandwidth 21 MHz Power 11.61 dBm

FOR CHAIN 1: CH 36



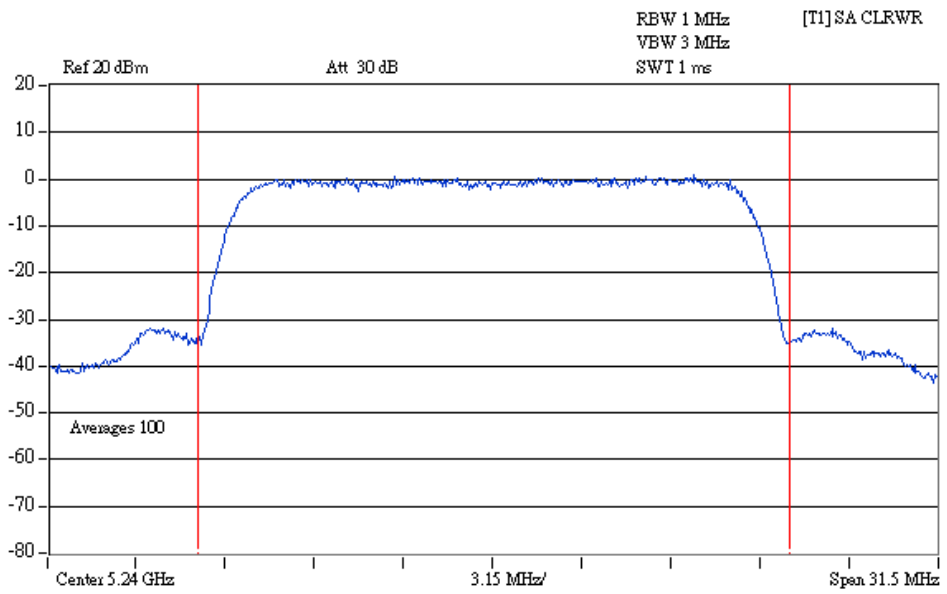
TX Channel Bandwidth 21 MHz Power 13.52 dBm

CH 40



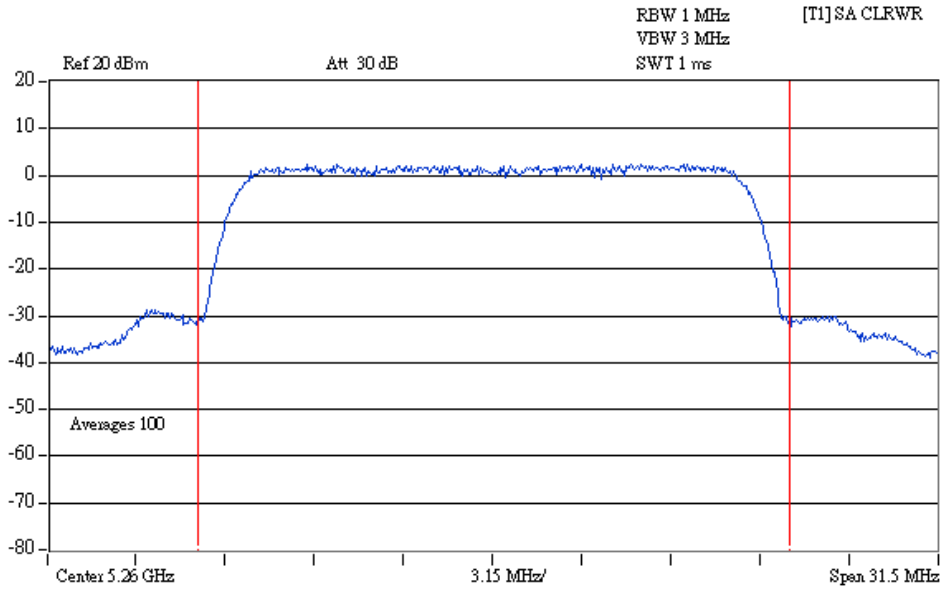
TX Channel Bandwidth 21 MHz Power 13.53 dBm

CH 48



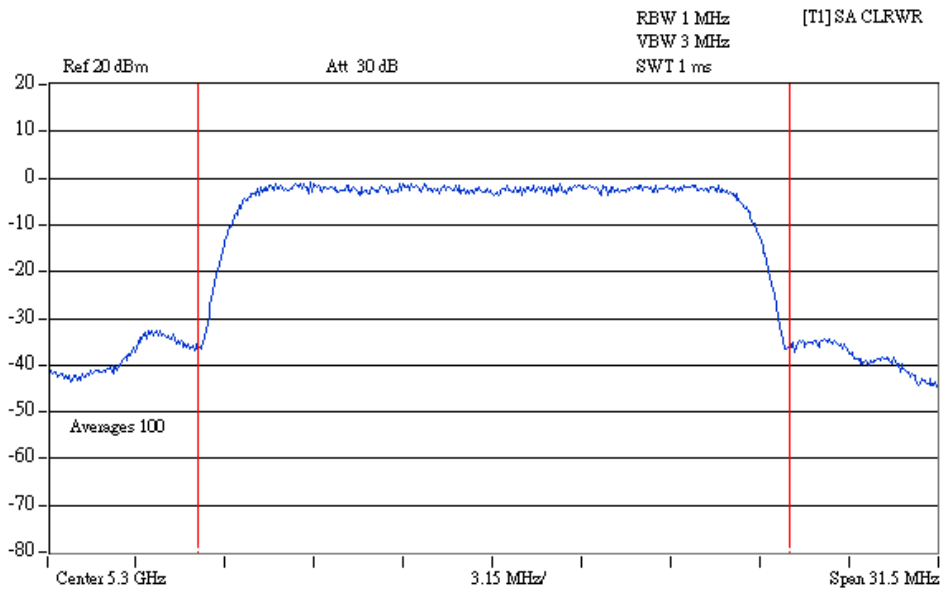
TX Channel Bandwidth 21 MHz Power 14.05 dBm

CH 52



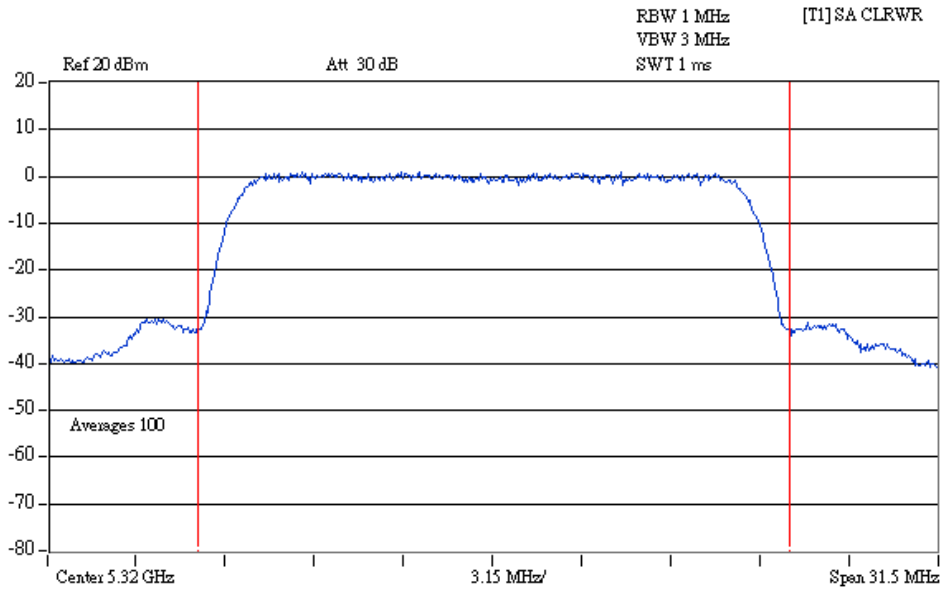
TX Channel Bandwidth 21 MHz Power 16.05 dBm

CH 60



TX Channel Bandwidth 21 MHz Power 12.56 dBm

CH 64



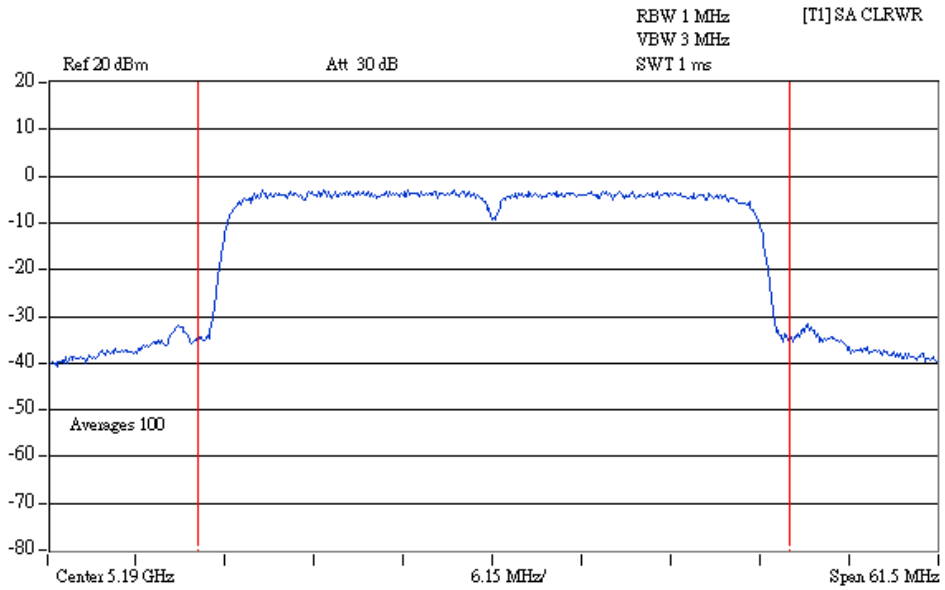
TX Channel Bandwidth 21 MHz Power 14.57 dBm

DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

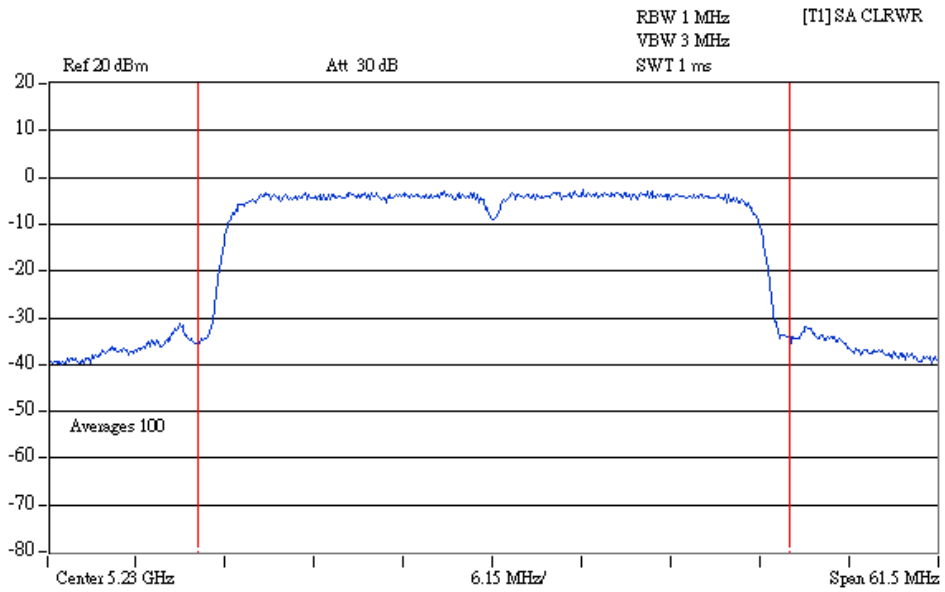
CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
38	5190	22.491	22.594	13.52	13.54	45.085	16.54	17.00	PASS
46	5230	22.542	22.856	13.53	13.59	45.398	16.57	17.00	PASS
54	5270	22.699	22.594	13.56	13.54	45.293	16.56	24.00	PASS
62	5310	14.355	41.115	11.57	16.14	55.470	17.44	24.00	PASS

FOR CHAIN 0: CH 38



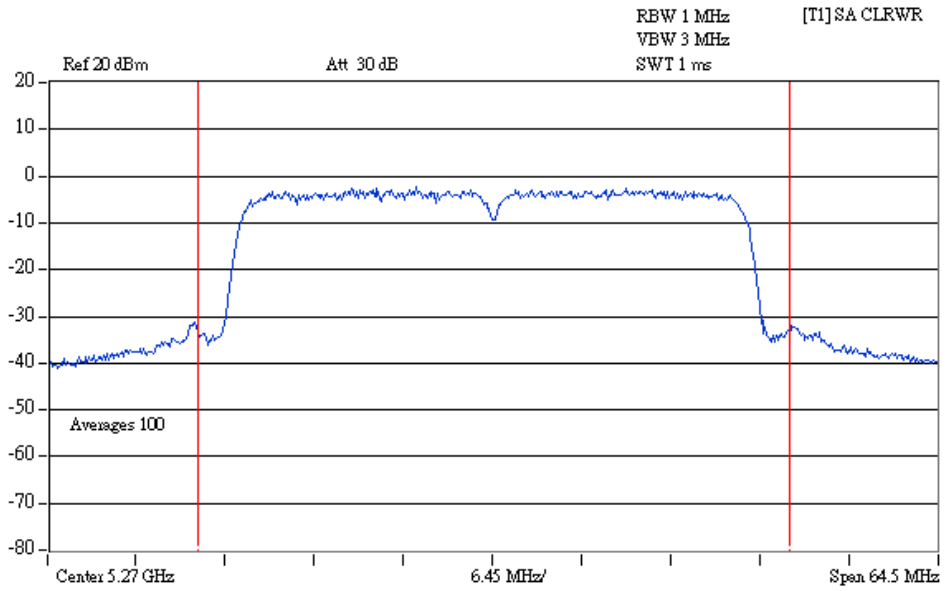
TX Channel Bandwidth 41 MHz Power 13.52 dBm

CH 46



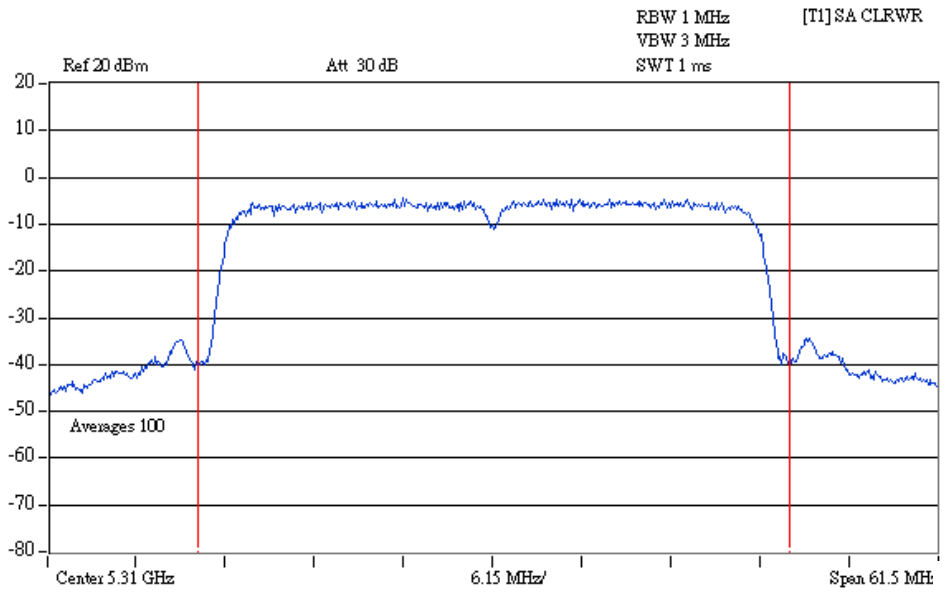
TX Channel Bandwidth 41 MHz Power 13.53 dBm

CH 54



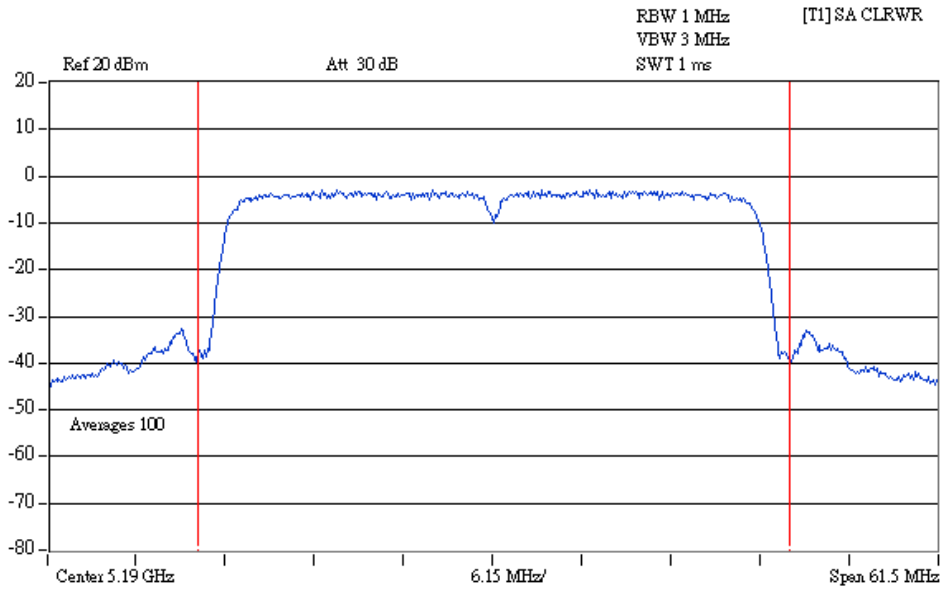
TX Channel Bandwidth 43 MHz Power 13.56 dBm

CH 62



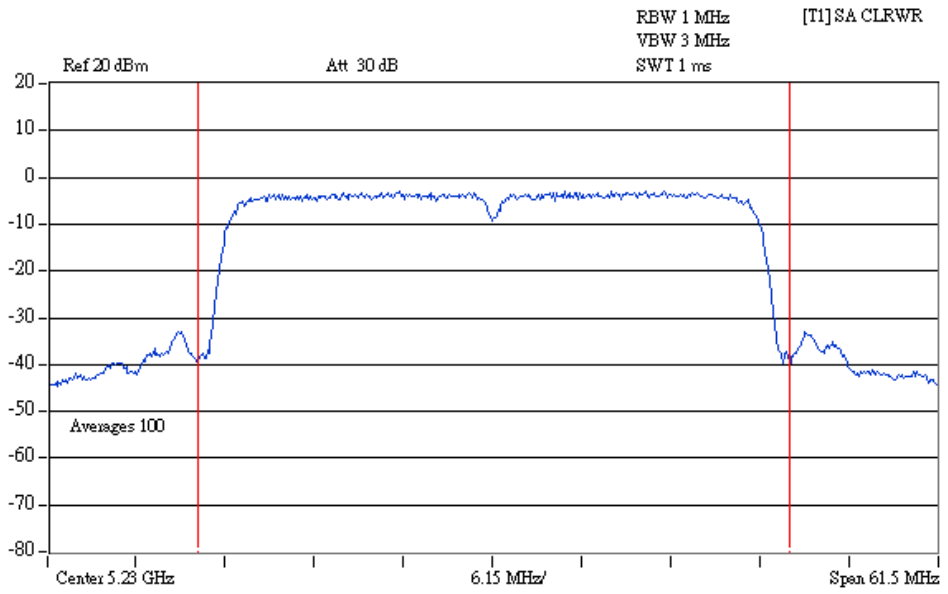
TX Channel Bandwidth 41 MHz Power 11.57 dBm

FOR CHAIN 1: CH 38



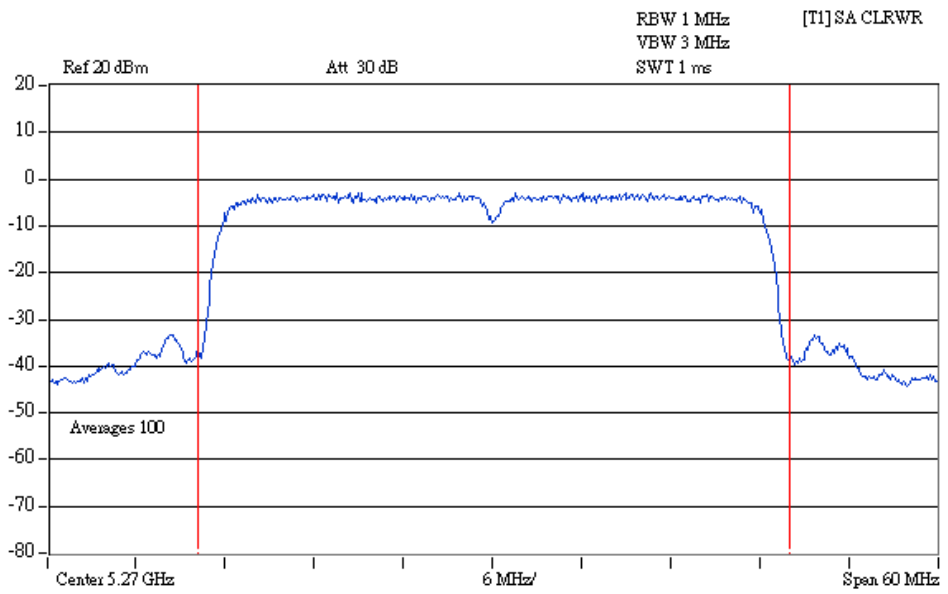
TX Channel Bandwidth 41 MHz Power 13.54 dBm

CH 46



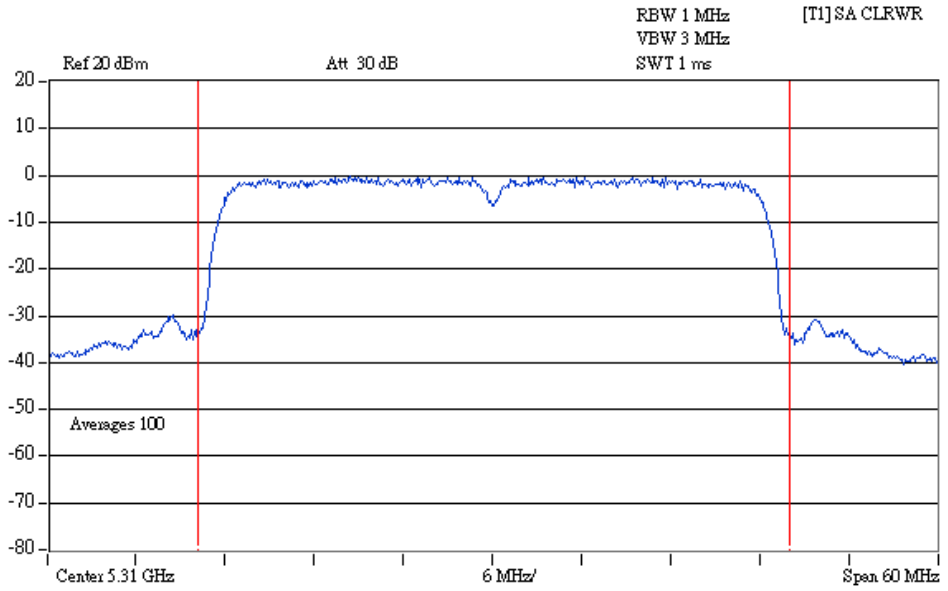
TX Channel Bandwidth 41 MHz Power 13.59 dBm

CH 54



TX Channel Bandwidth 40 MHz Power 13.54 dBm

CH 62



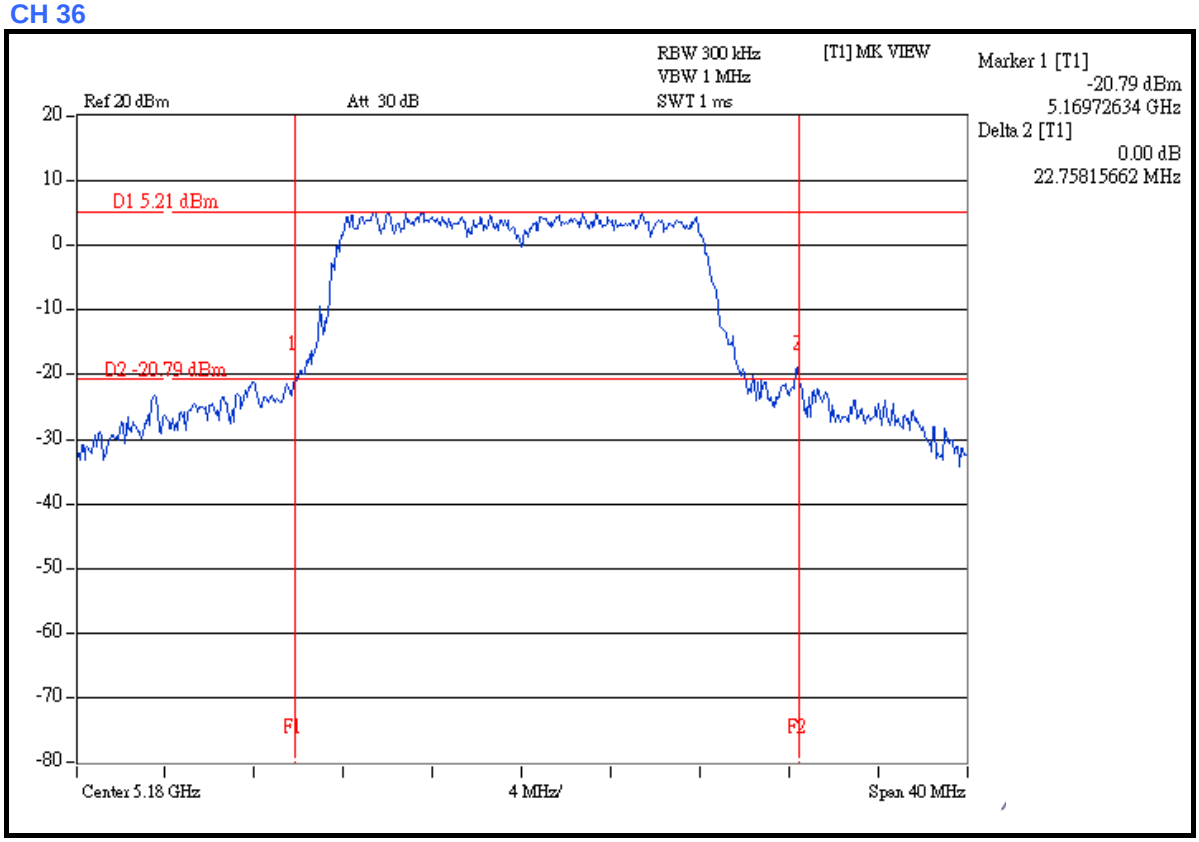
TX Channel Bandwidth 40 MHz Power 16.14 dBm

26dB OCCUPIED BANDWIDTH: 802.11a OFDM MODULATION:

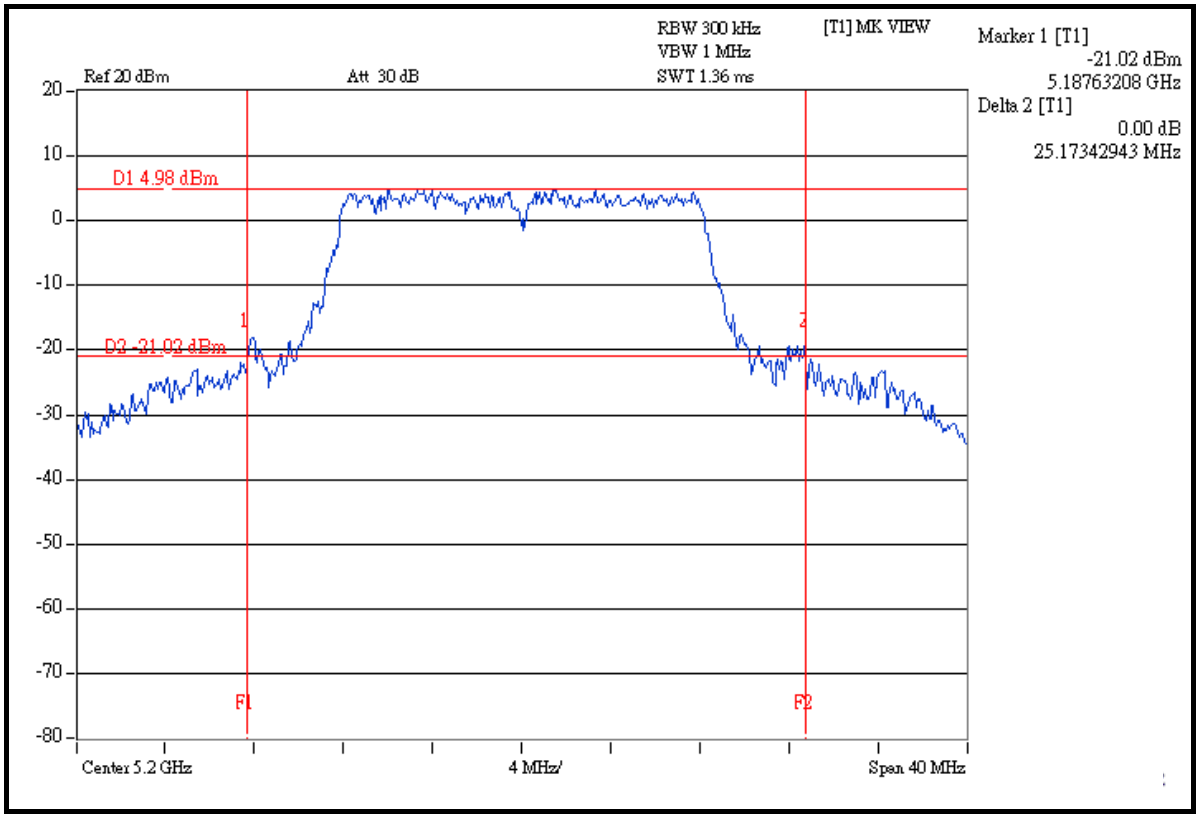
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	26deg.C, 67%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
36	5180	22.76	PASS
40	5200	25.17	PASS
48	5240	24.87	PASS
52	5260	23.04	PASS
60	5300	20.41	PASS
64	5320	20.10	PASS

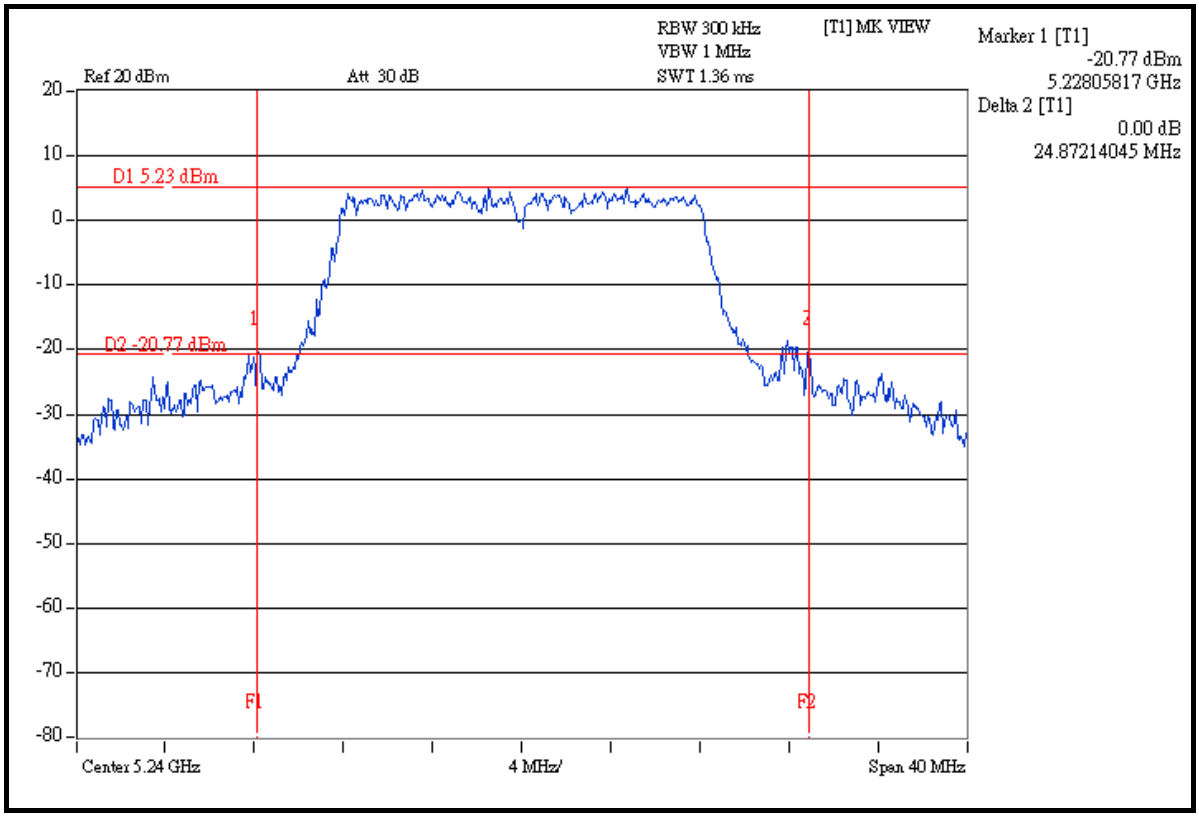
CH 36


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-20.79 dBm
5.16972634 GHz
Delta 2 [T1]
0.00 dB
22.75815662 MHz
Ref 20 dBm
Att 30 dB
D1 5.21 dBm
D2 -20.79 dBm
Center 5.18 GHz
4 MHz/
Span 40 MHz

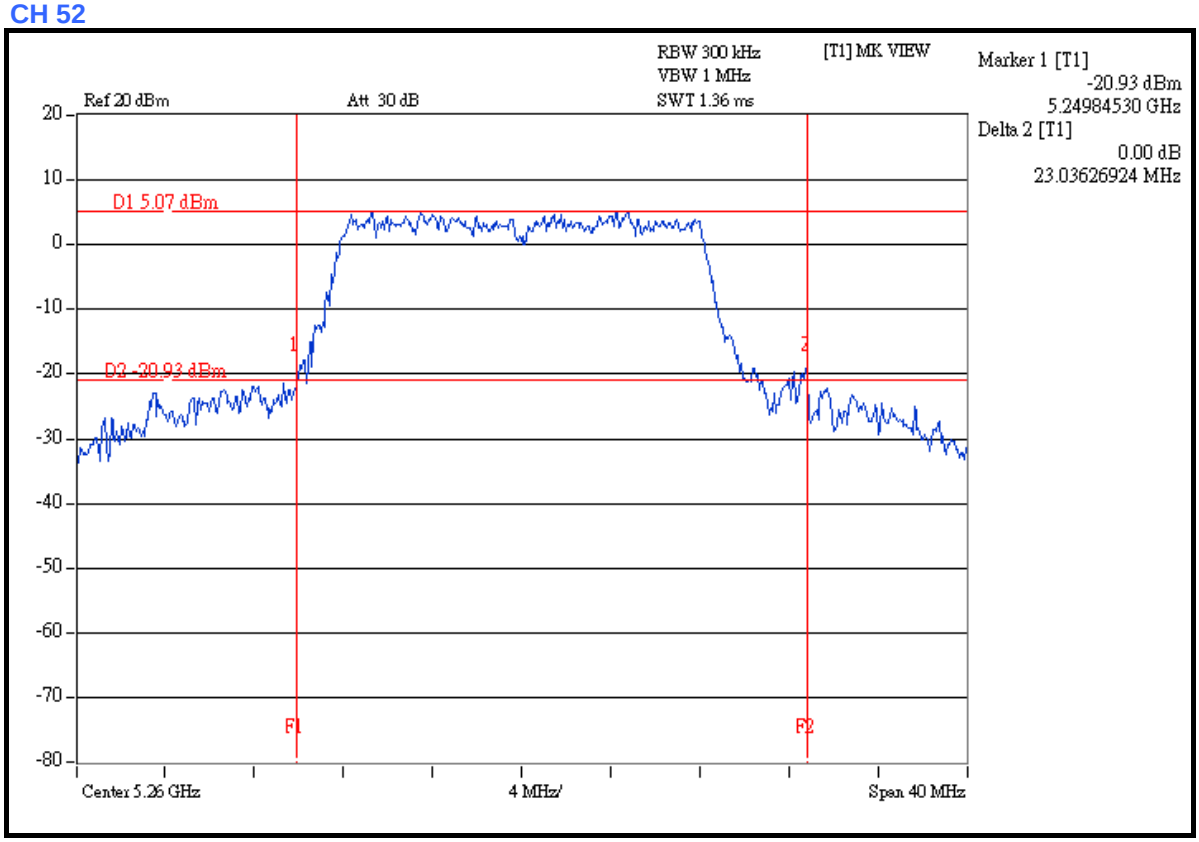
CH 40


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-21.02 dBm
5.18763208 GHz
Delta 2 [T1]
0.00 dB
25.17342943 MHz
Ref 20 dBm
Att 30 dB
D1 4.98 dBm
D2 -21.02 dBm
Center 5.2 GHz
4 MHz/
Span 40 MHz

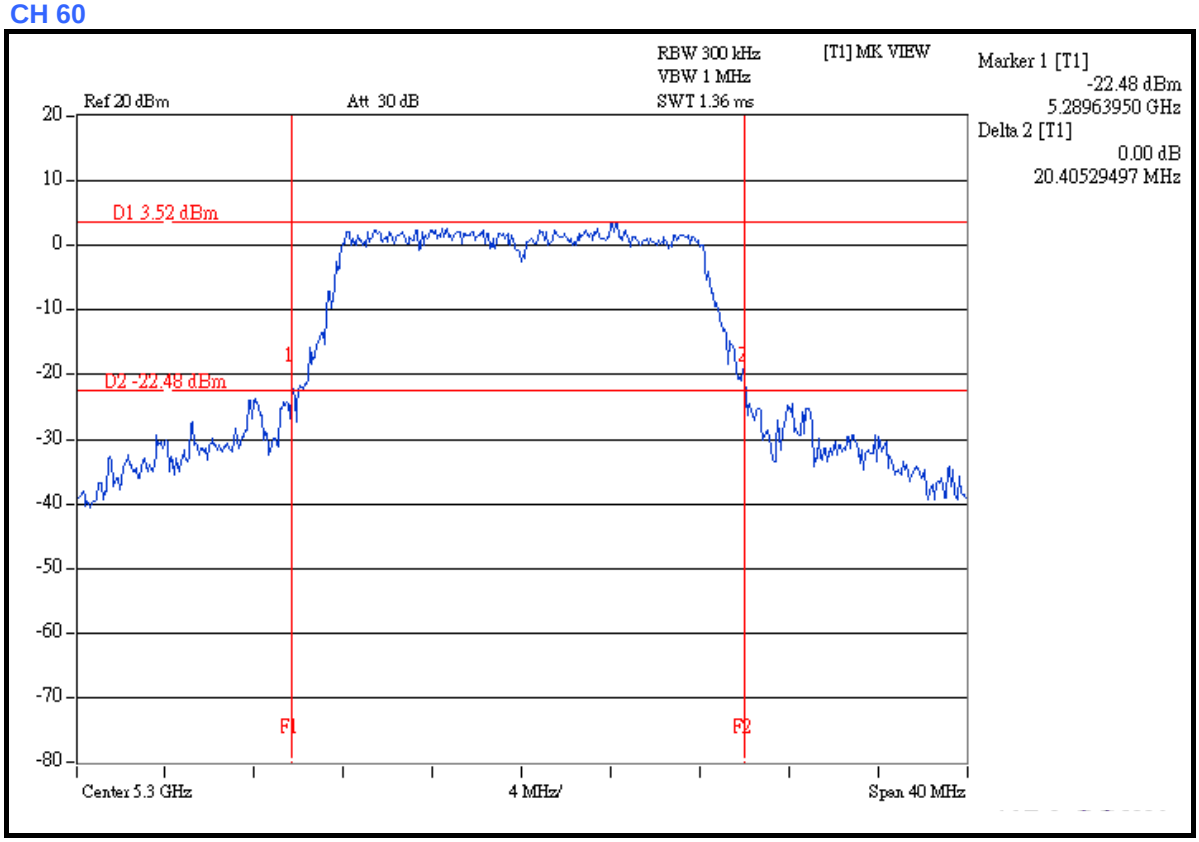
CH 48


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-20.77 dBm
5.22805817 GHz
Delta 2 [T1]
0.00 dB
24.87214045 MHz
Ref 20 dBm
Att 30 dB
D1 5.23 dBm
D2 -20.77 dBm
Center 5.24 GHz
4 MHz/
Span 40 MHz

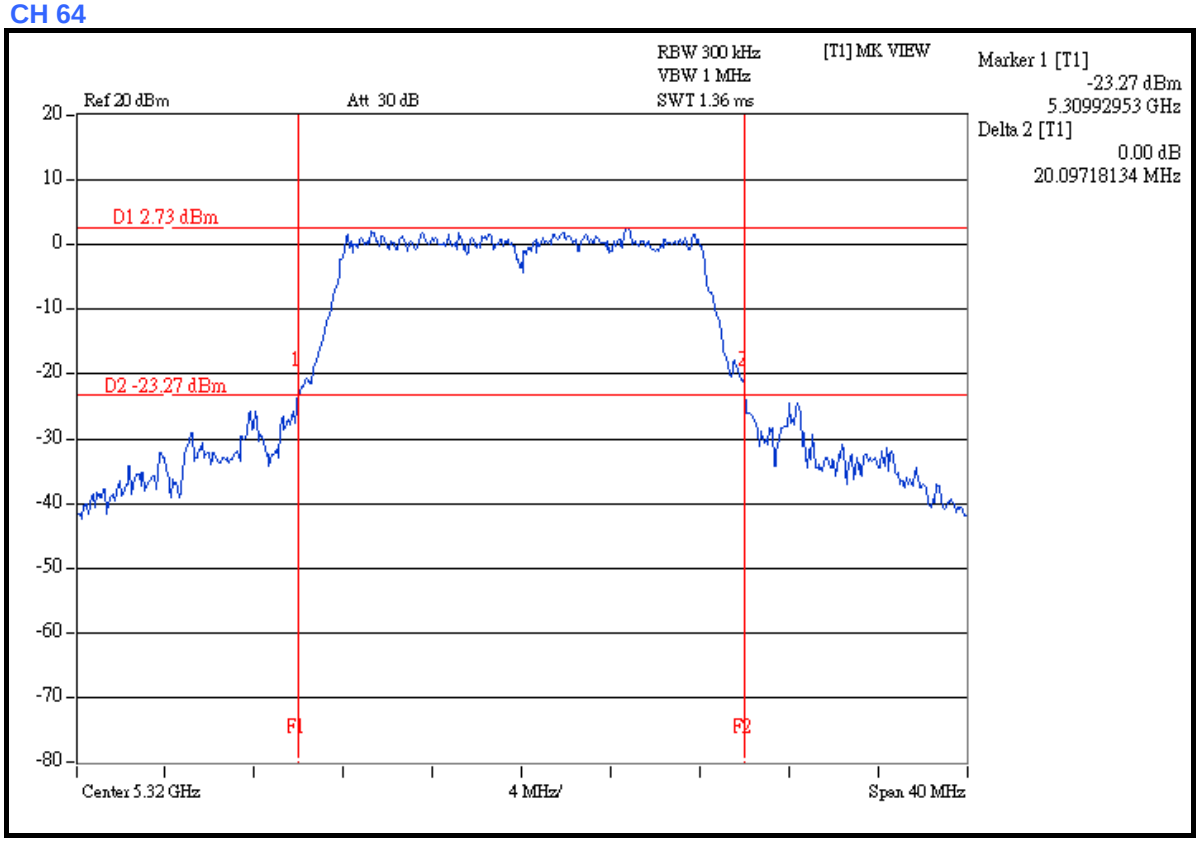
CH 52


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-20.93 dBm
5.24984530 GHz
Delta 2 [T1]
0.00 dB
23.03626924 MHz
Ref 20 dBm
Att 30 dB
D1 5.07 dBm
D2 -20.93 dBm
Center 5.26 GHz
4 MHz/
Span 40 MHz

CH 60


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-22.48 dBm
5.28963950 GHz
Delta 2 [T1]
0.00 dB
20.40529497 MHz
Ref 20 dBm
Att 30 dB
D1 3.52 dBm
D2 -22.48 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.3 GHz
4 MHz/
Span 40 MHz

CH 64

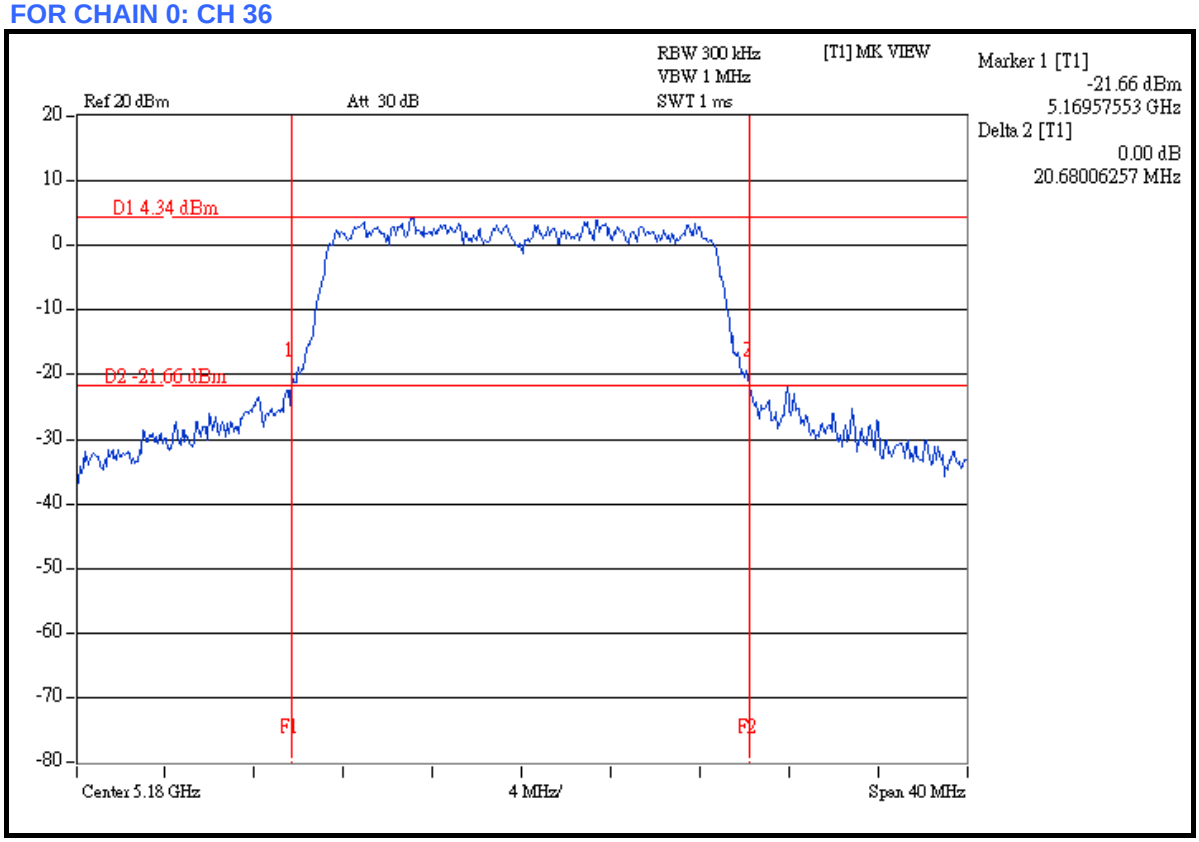

RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-23.27 dBm
5.30992953 GHz
Delta 2 [T1]
0.00 dB
20.09718134 MHz
Ref 20 dBm
Att 30 dB
D1 2.73 dBm
D2 -23.27 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.32 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

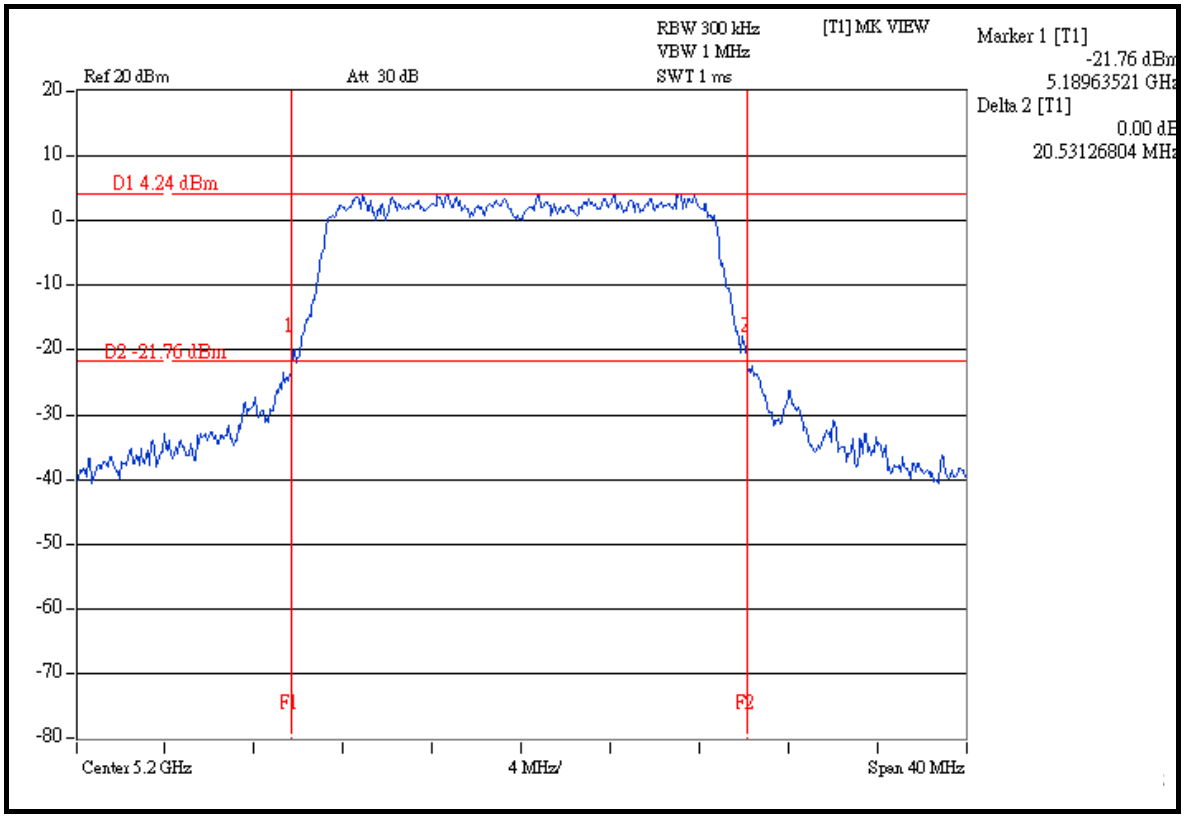
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
36	5180	20.68	20.40	PASS
40	5200	20.53	20.91	PASS
48	5240	20.72	20.59	PASS
52	5260	20.72	20.54	PASS
60	5300	20.52	20.41	PASS
64	5320	20.66	20.33	PASS

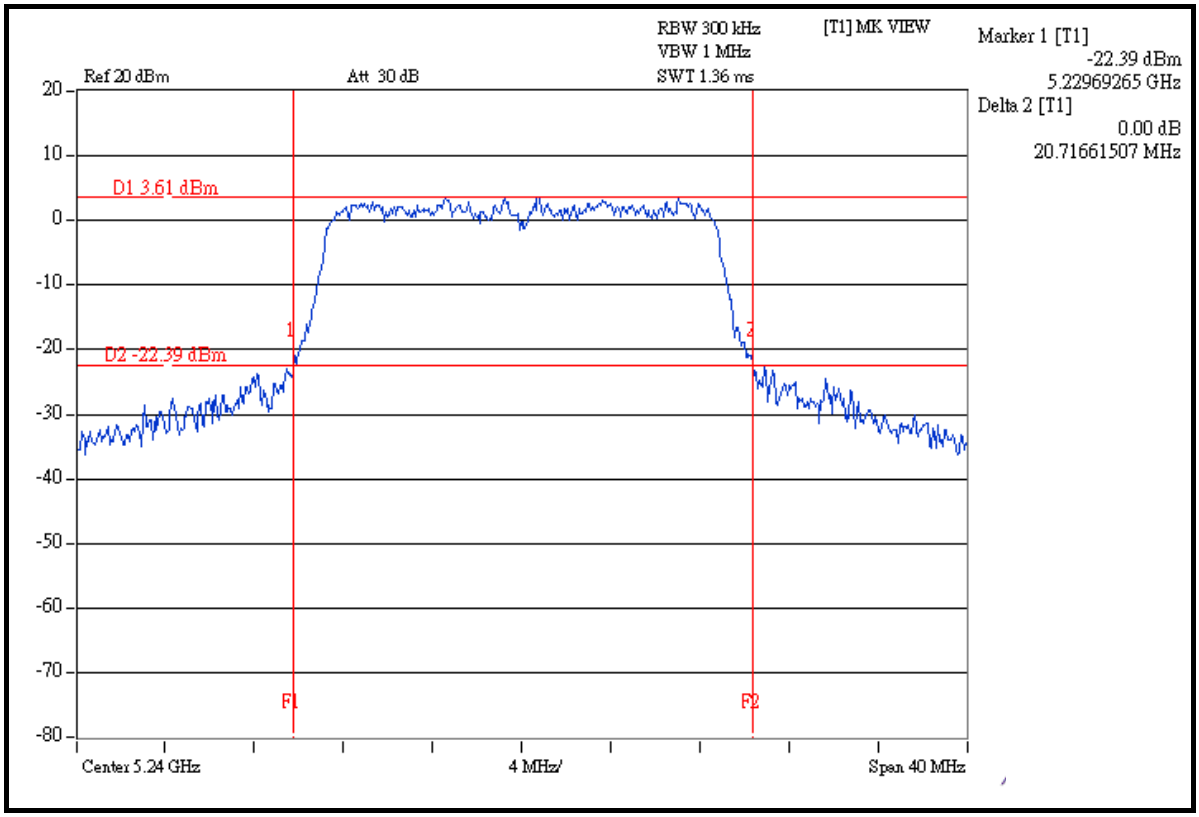
FOR CHAIN 0: CH 36



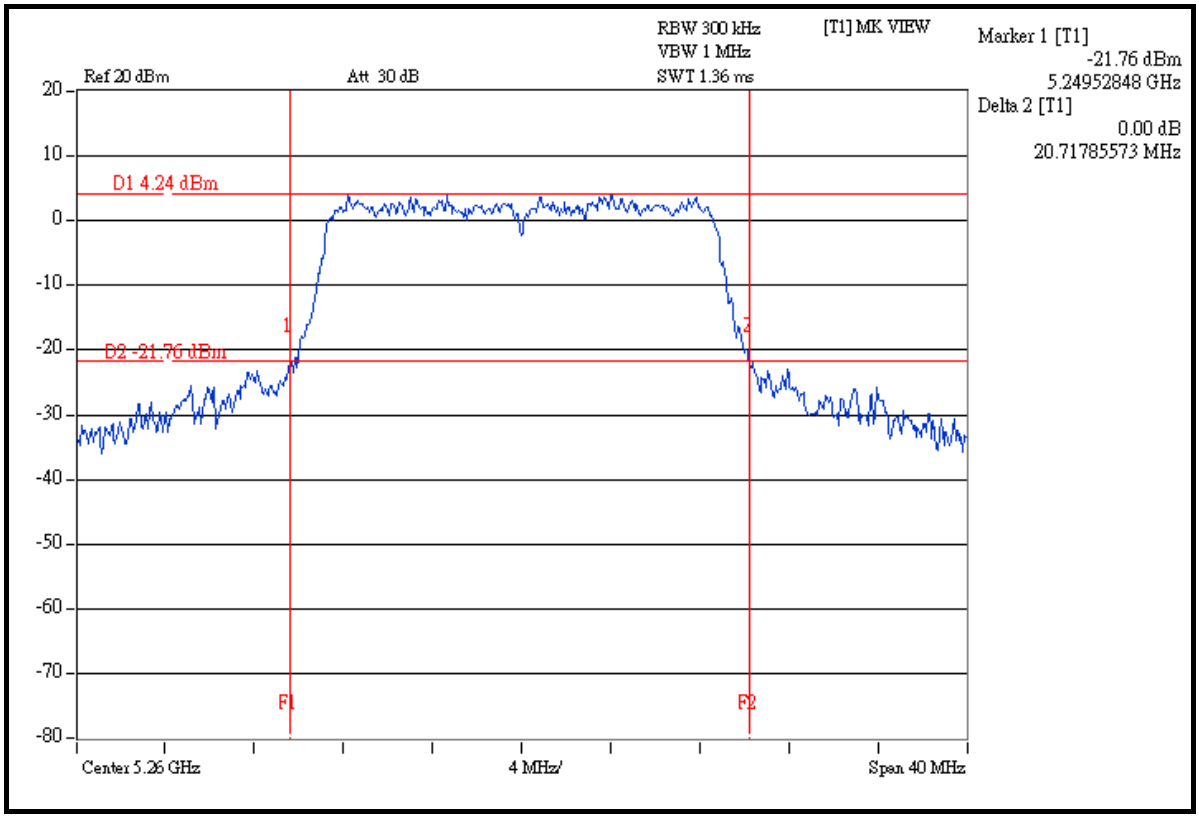
CH 40



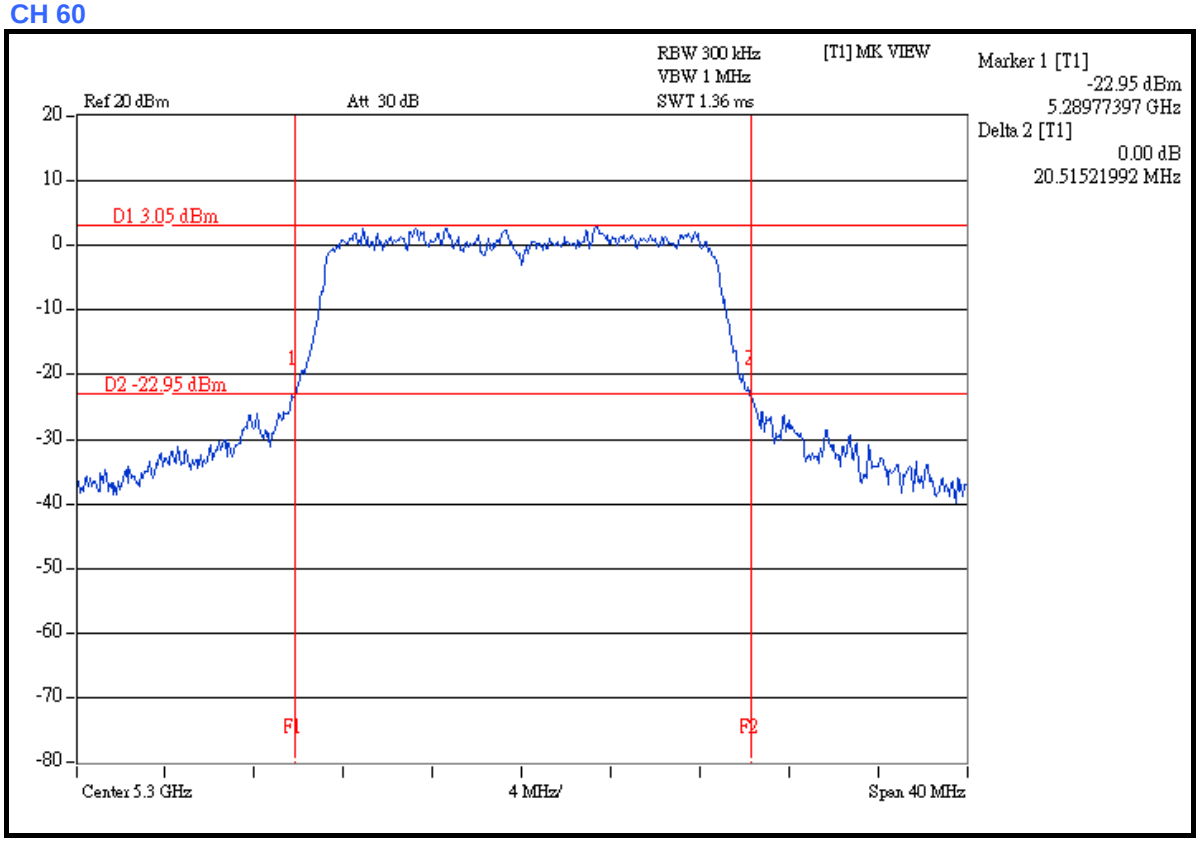
CH 48


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-22.39 dBm
5.22969265 GHz
Delta 2 [T1]
0.00 dB
20.71661507 MHz
Ref 20 dBm
Att 30 dB
D1 3.61 dBm
D2 -22.39 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.24 GHz
4 MHz/
Span 40 MHz

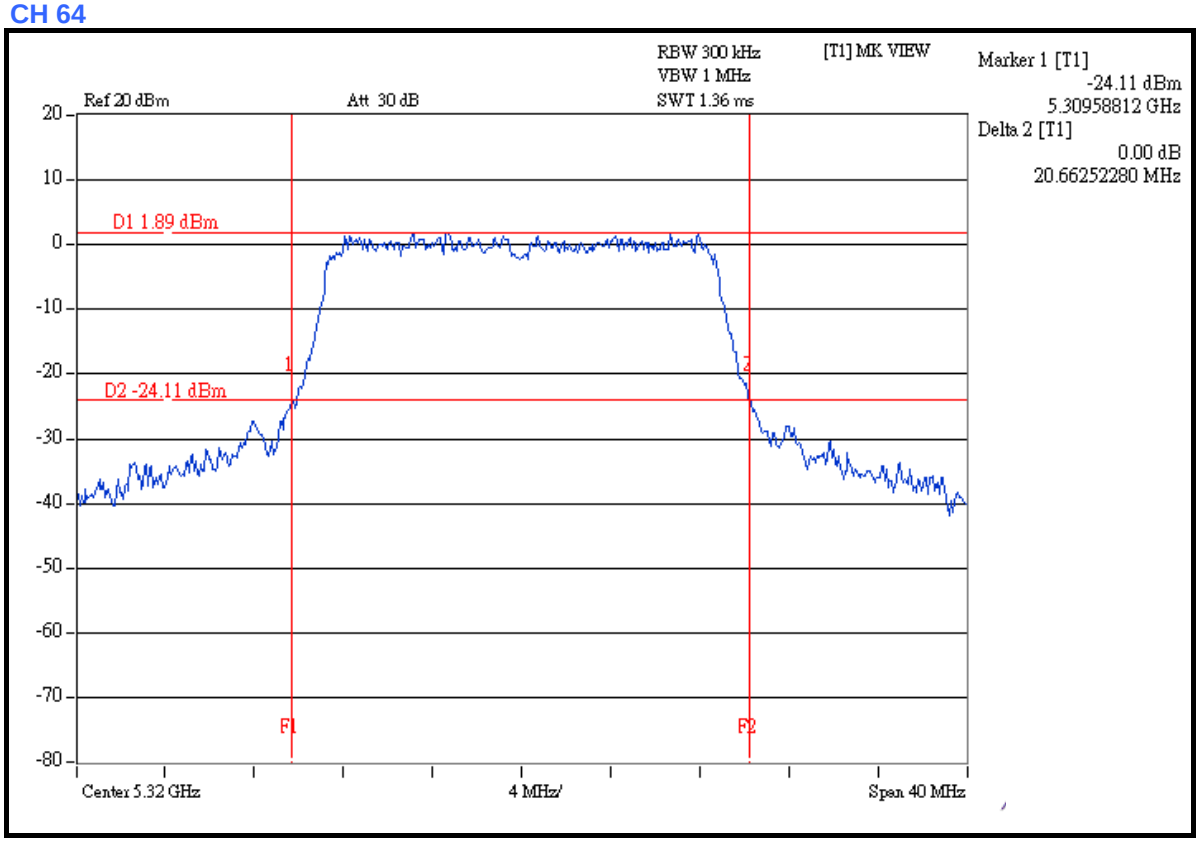
CH 52


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-21.76 dBm
5.24952848 GHz
Delta 2 [T1]
0.00 dB
20.71785573 MHz
Ref 20 dBm
Att 30 dB
D1 4.24 dBm
D2 -21.76 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.26 GHz
4 MHz/
Span 40 MHz

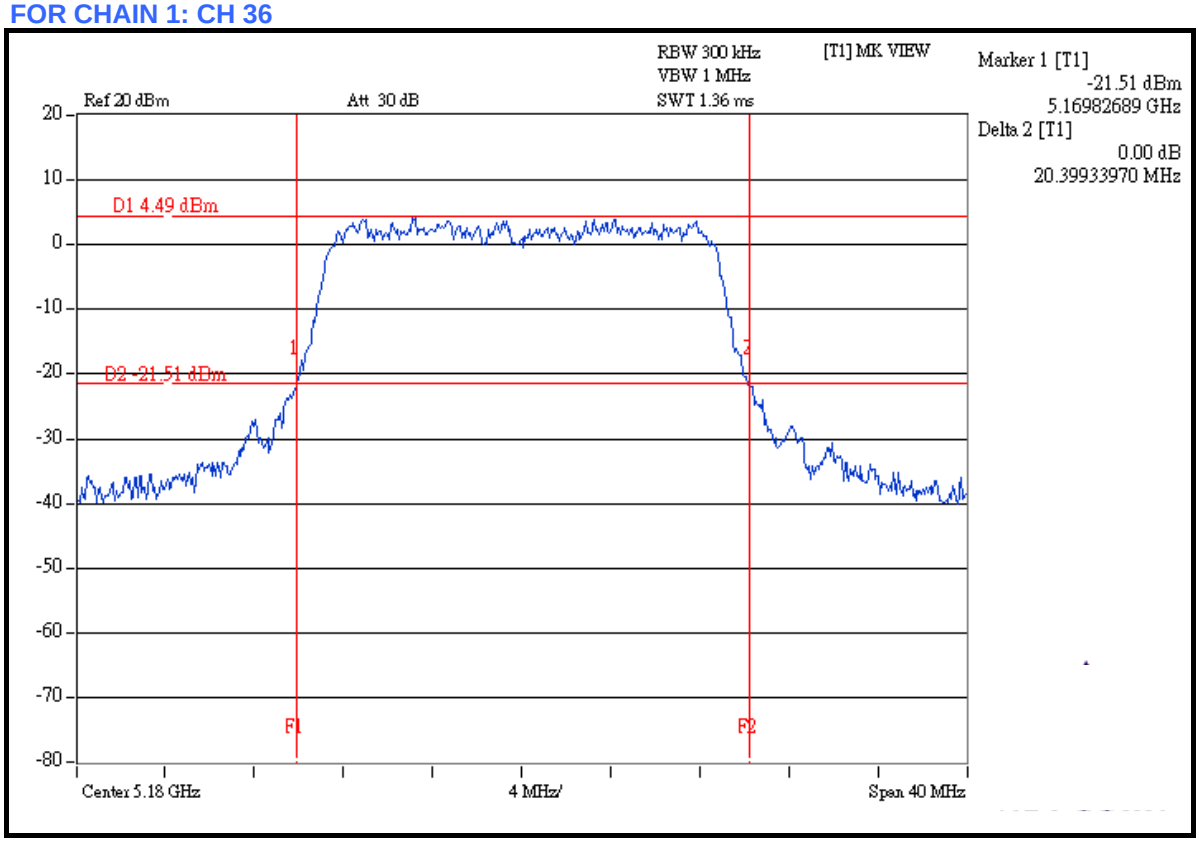
CH 60


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-22.95 dBm
5.28977397 GHz
Delta 2 [T1]
0.00 dB
20.51521992 MHz
Ref 20 dBm
Att 30 dB
D1 3.05 dBm
D2 -22.95 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.3 GHz
4 MHz/
Span 40 MHz

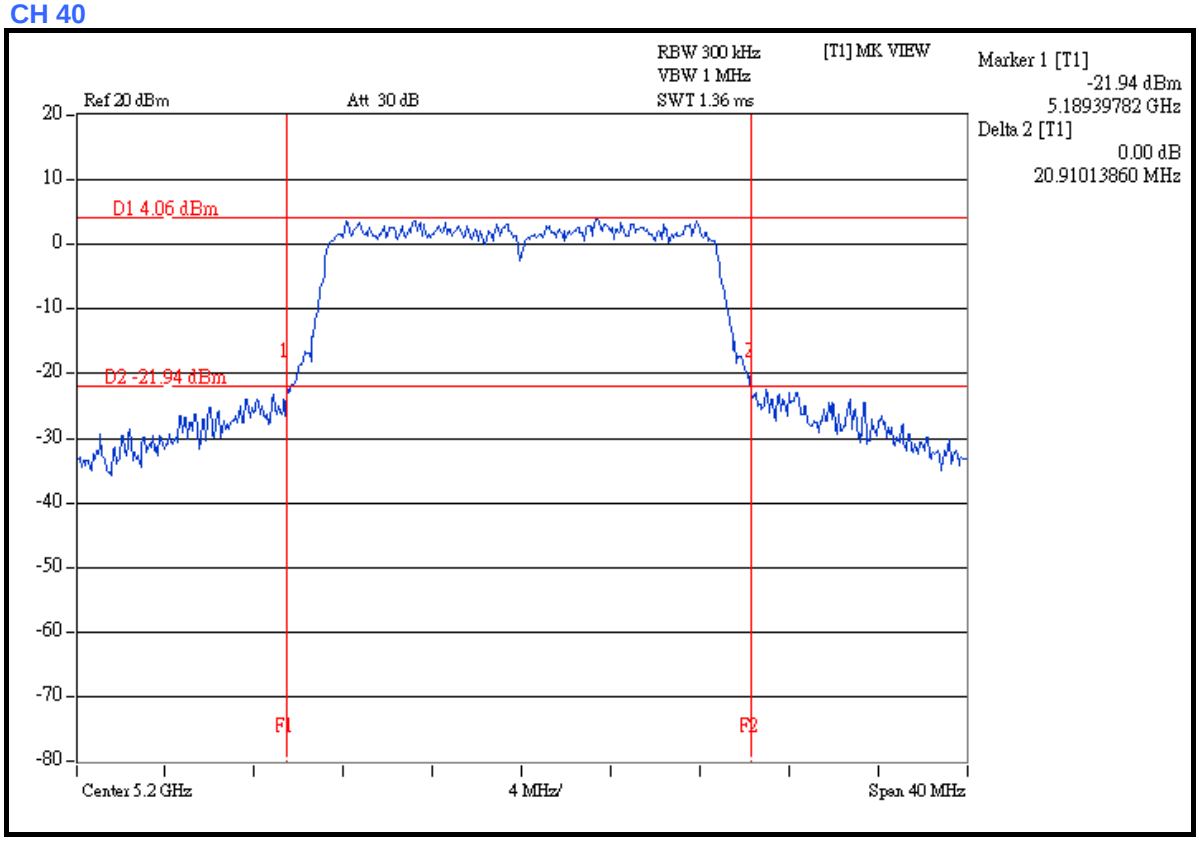
CH 64


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-24.11 dBm
5.30958812 GHz
Delta 2 [T1]
0.00 dB
20.66252280 MHz
Ref 20 dBm
Att 30 dB
D1 1.89 dBm
D2 -24.11 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.32 GHz
4 MHz/
Span 40 MHz

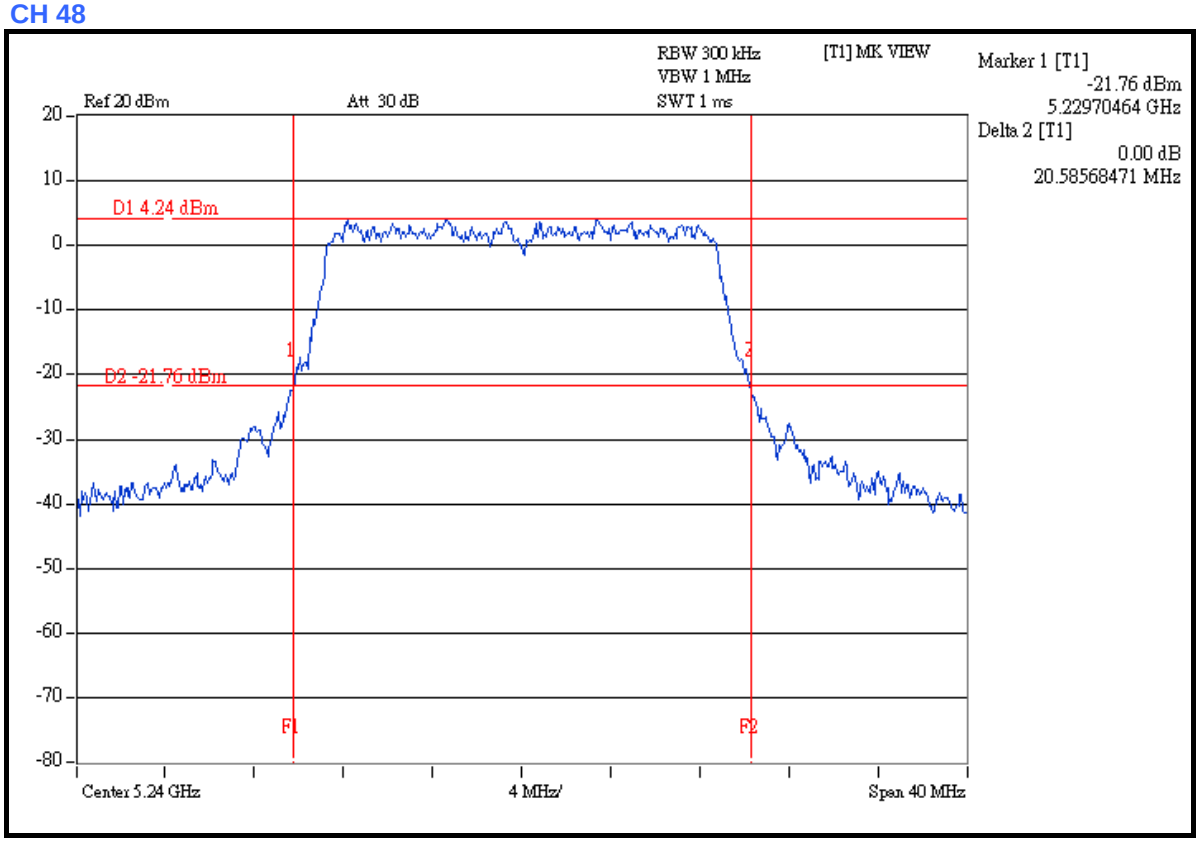
FOR CHAIN 1: CH 36



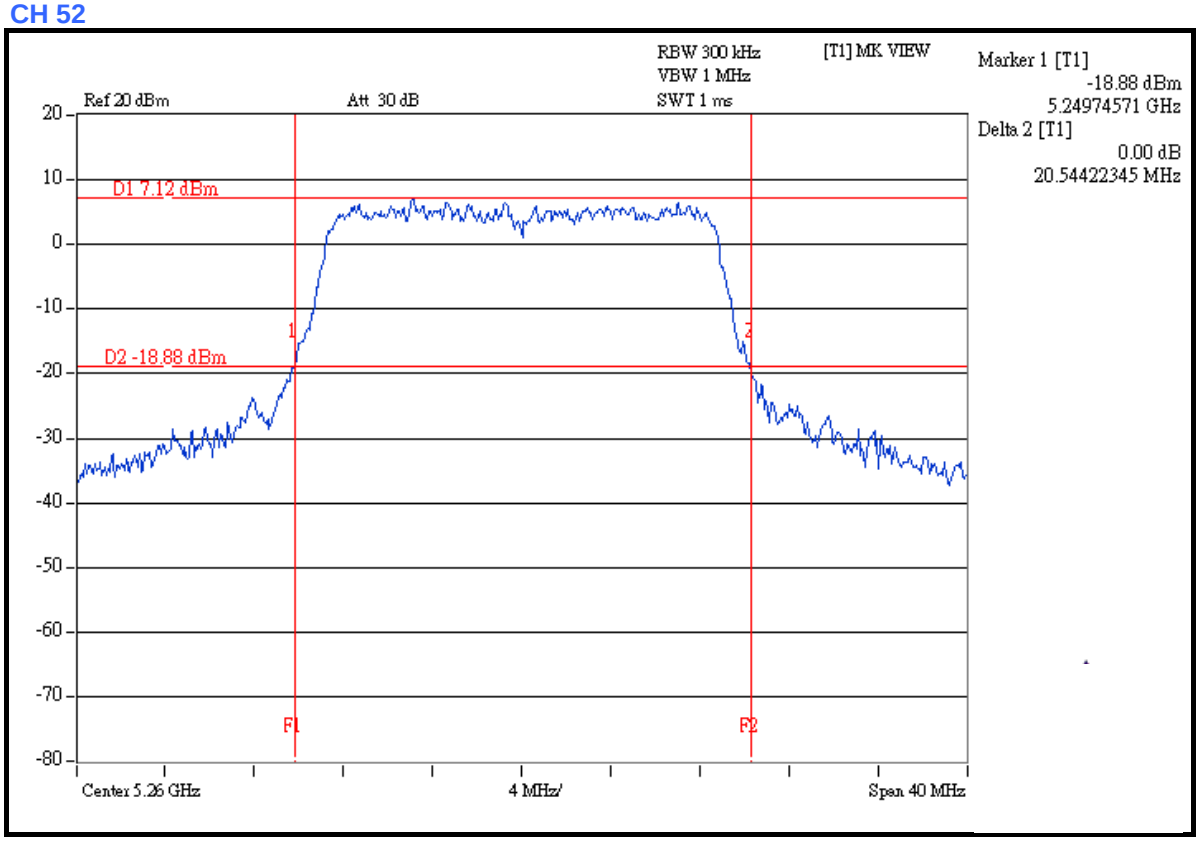
CH 40



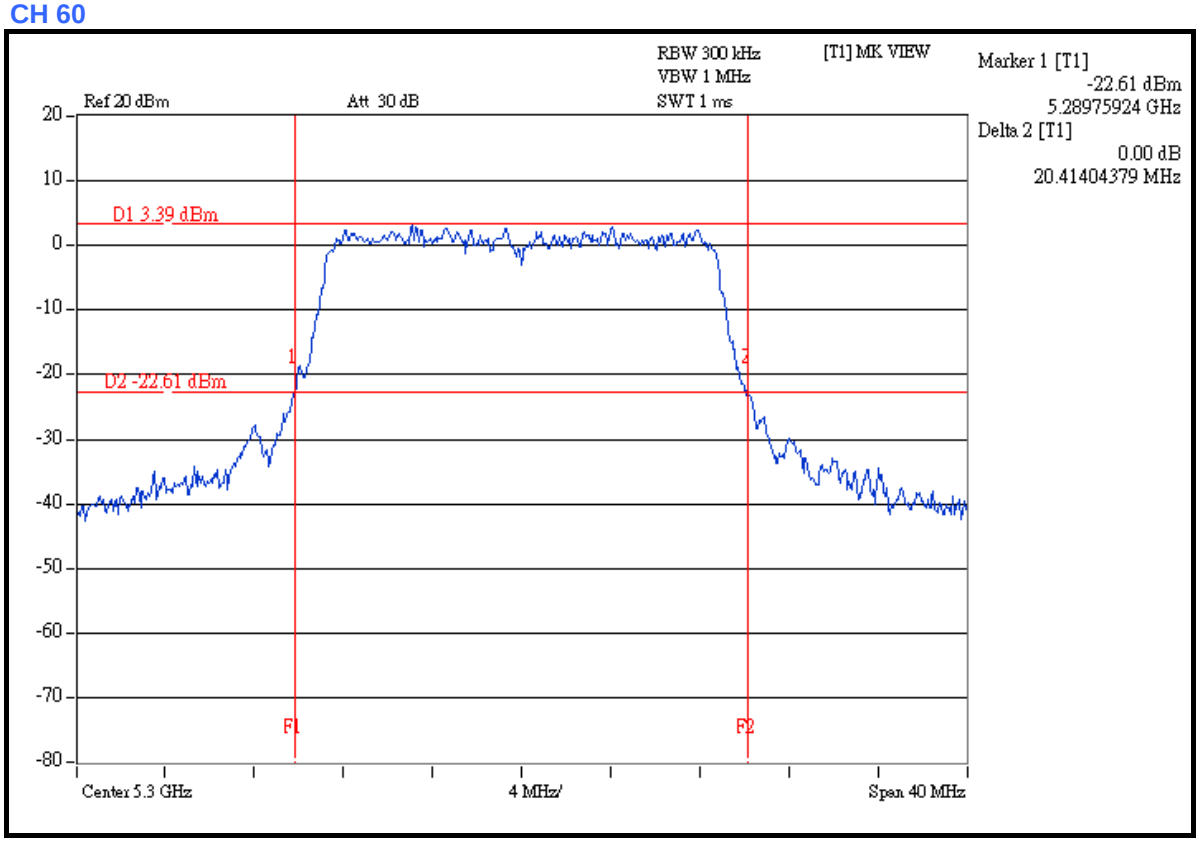
CH 48


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-21.76 dBm
5.22970464 GHz
Delta 2 [T1]
0.00 dB
20.58568471 MHz
Ref 20 dBm
Att 30 dB
D1 4.24 dBm
D2 -21.76 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.24 GHz
4 MHz/
Span 40 MHz

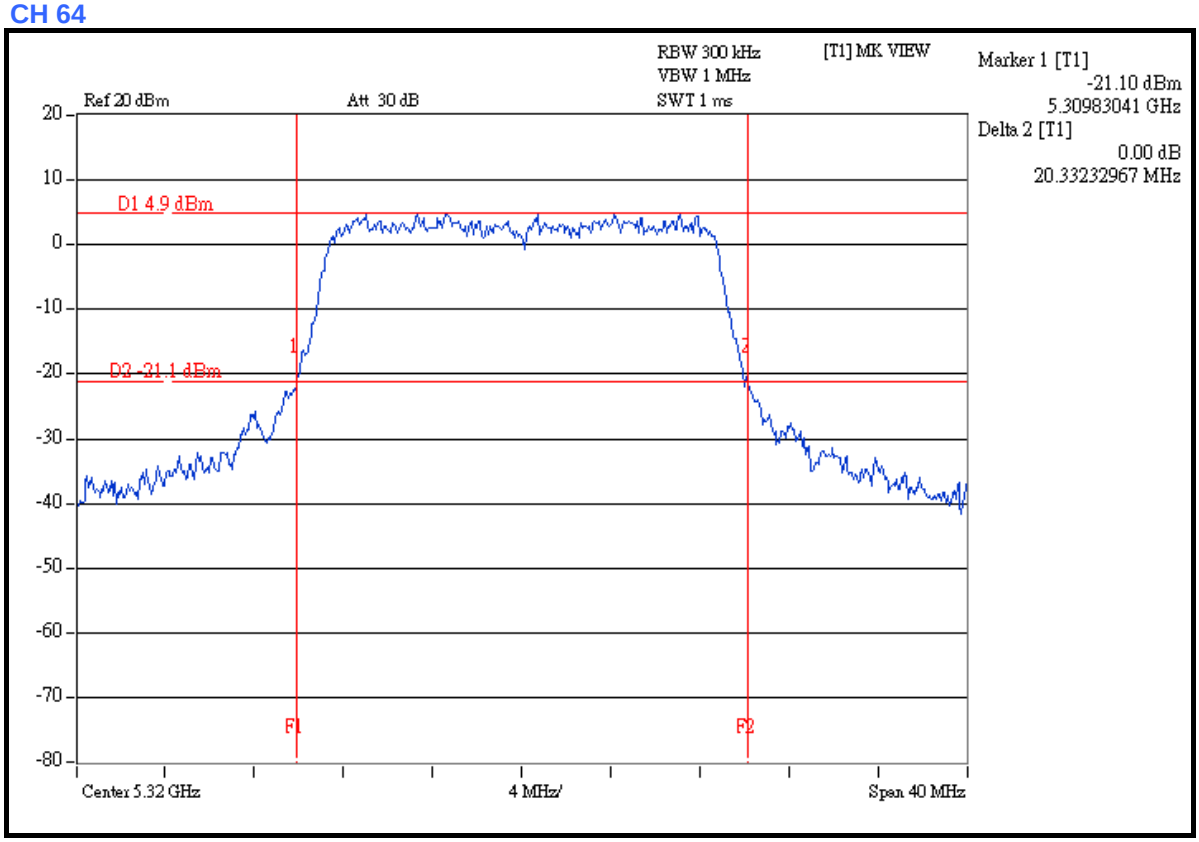
CH 52


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-18.88 dBm
5.24974571 GHz
Delta 2 [T1]
0.00 dB
20.54422345 MHz
Ref 20 dBm
Att 30 dB
D1 7.12 dBm
D2 -18.88 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.26 GHz
4 MHz/
Span 40 MHz

CH 60


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-22.61 dBm
5.28975924 GHz
Delta 2 [T1]
0.00 dB
20.41404379 MHz
Ref 20 dBm
Att 30 dB
D1 3.39 dBm
D2 -22.61 dBm
F1
F2
Center 5.3 GHz
4 MHz/
Span 40 MHz

CH 64

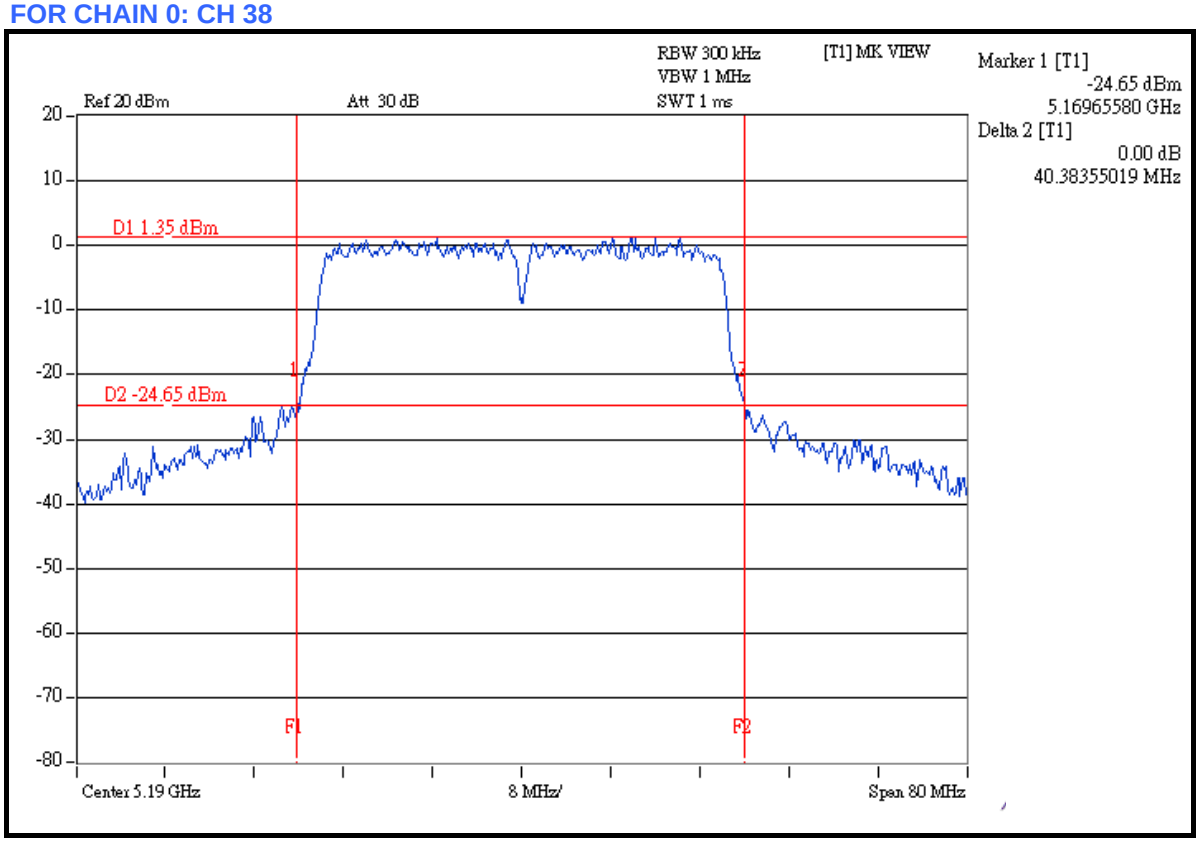

RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-21.10 dBm
5.30983041 GHz
Delta 2 [T1]
0.00 dB
20.33232967 MHz
Ref 20 dBm
Att 30 dB
D1 4.9 dBm
D2 -21.1 dBm
F1
F2
Center 5.32 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

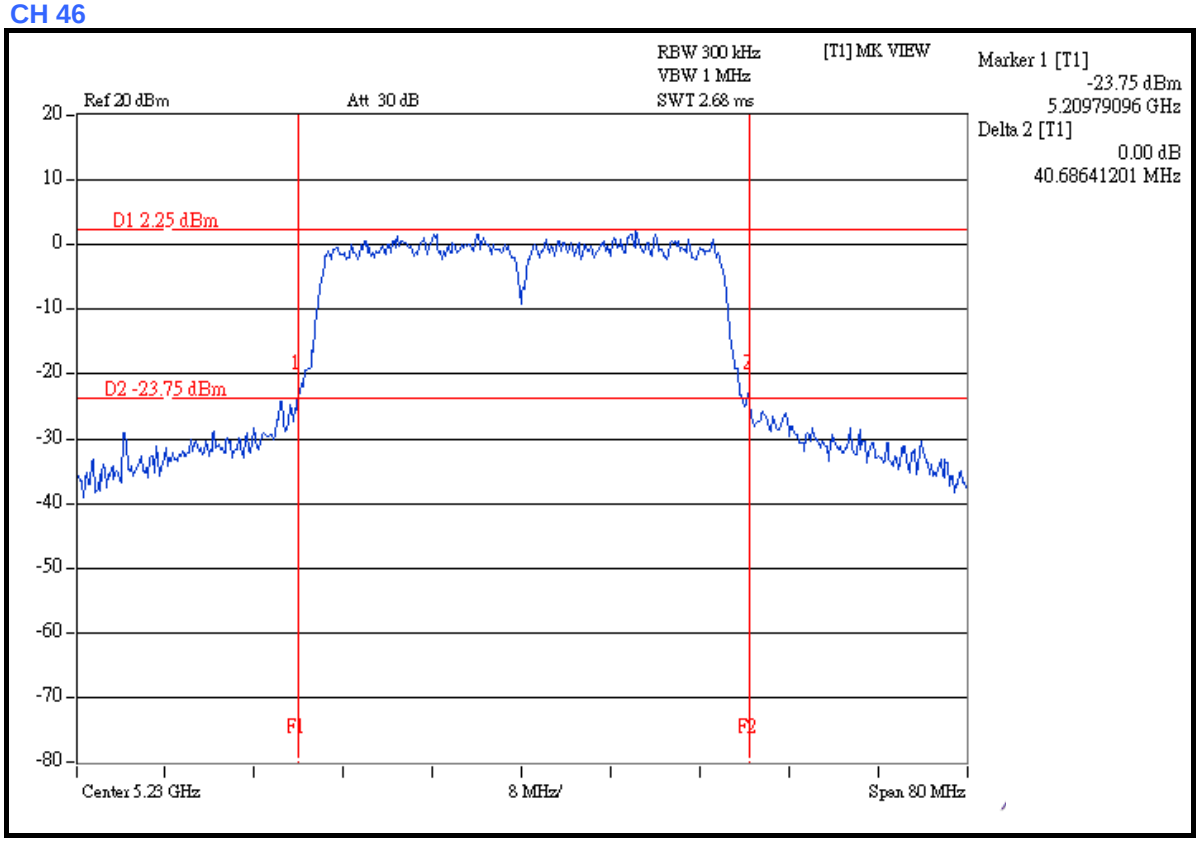
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
38	5190	40.38	40.29	PASS
46	5230	40.69	40.21	PASS
54	5270	42.24	39.85	PASS
62	5310	40.17	39.66	PASS

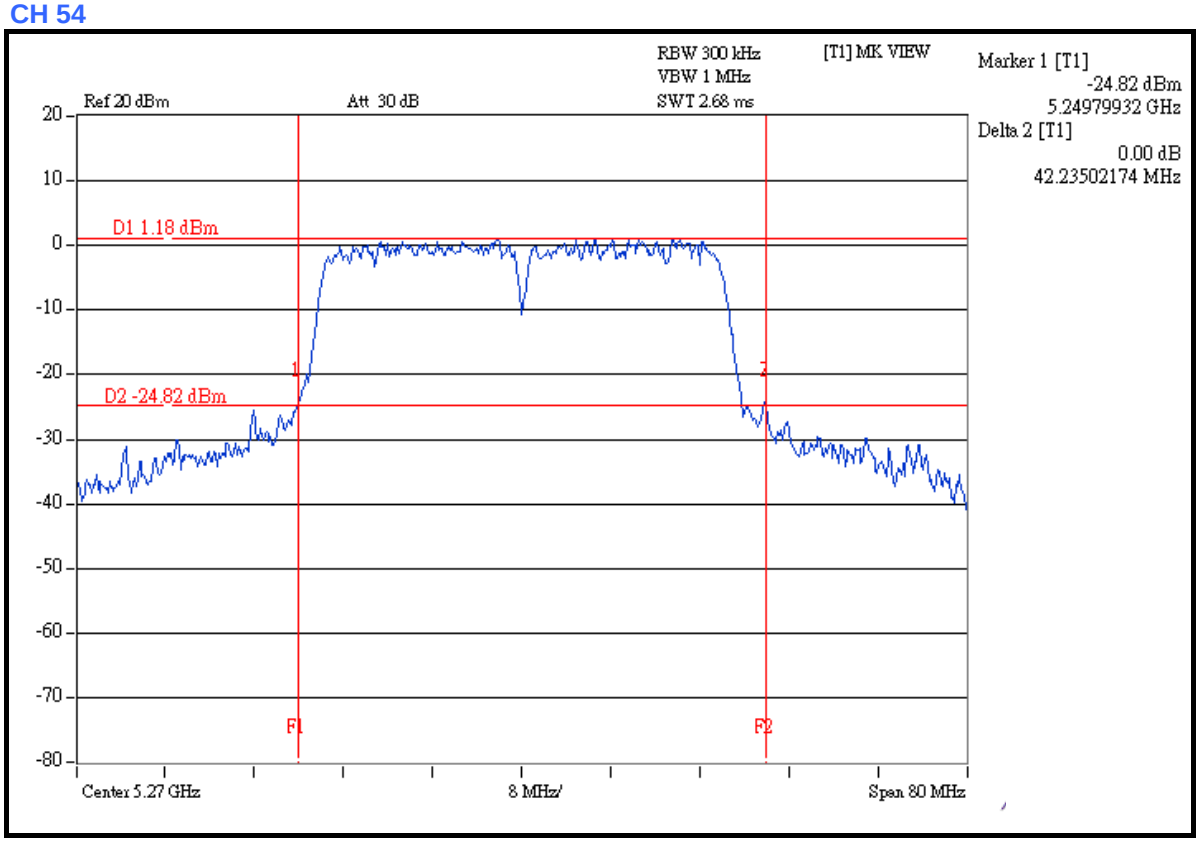
FOR CHAIN 0: CH 38



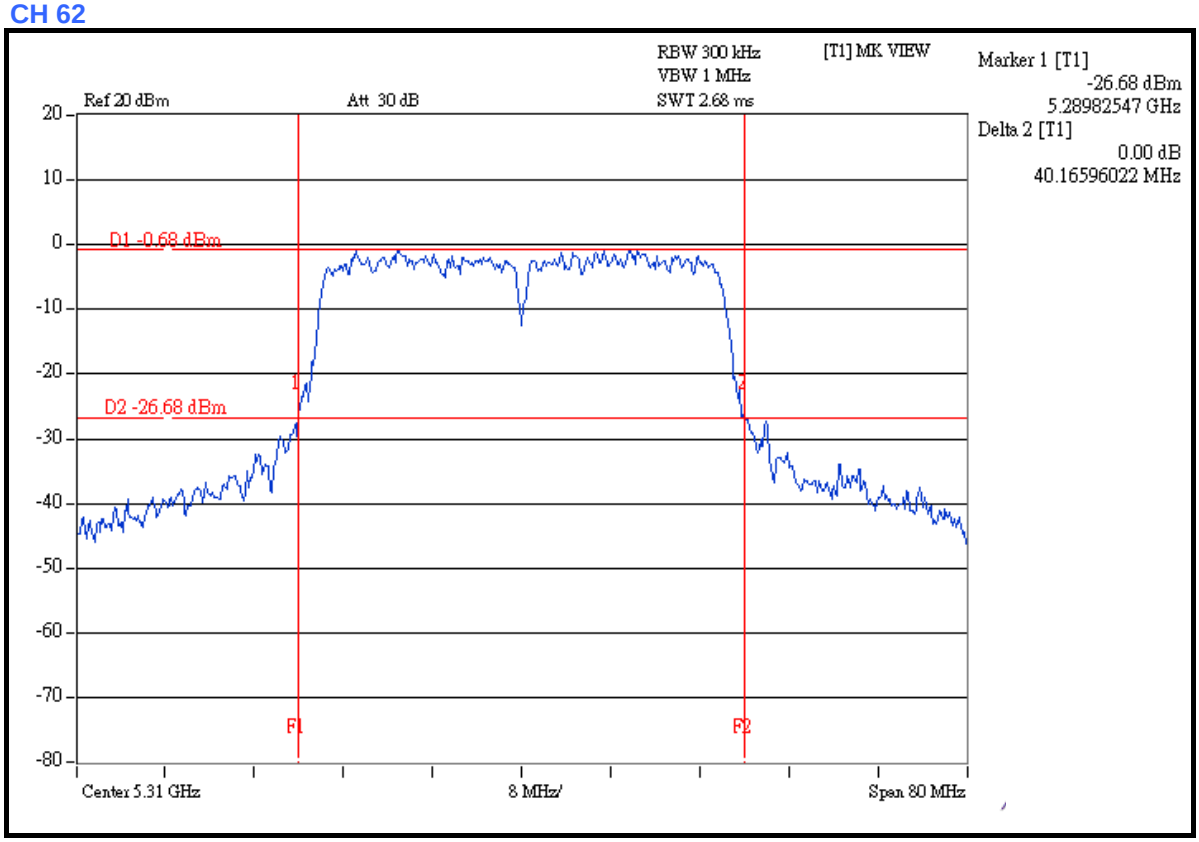
CH 46



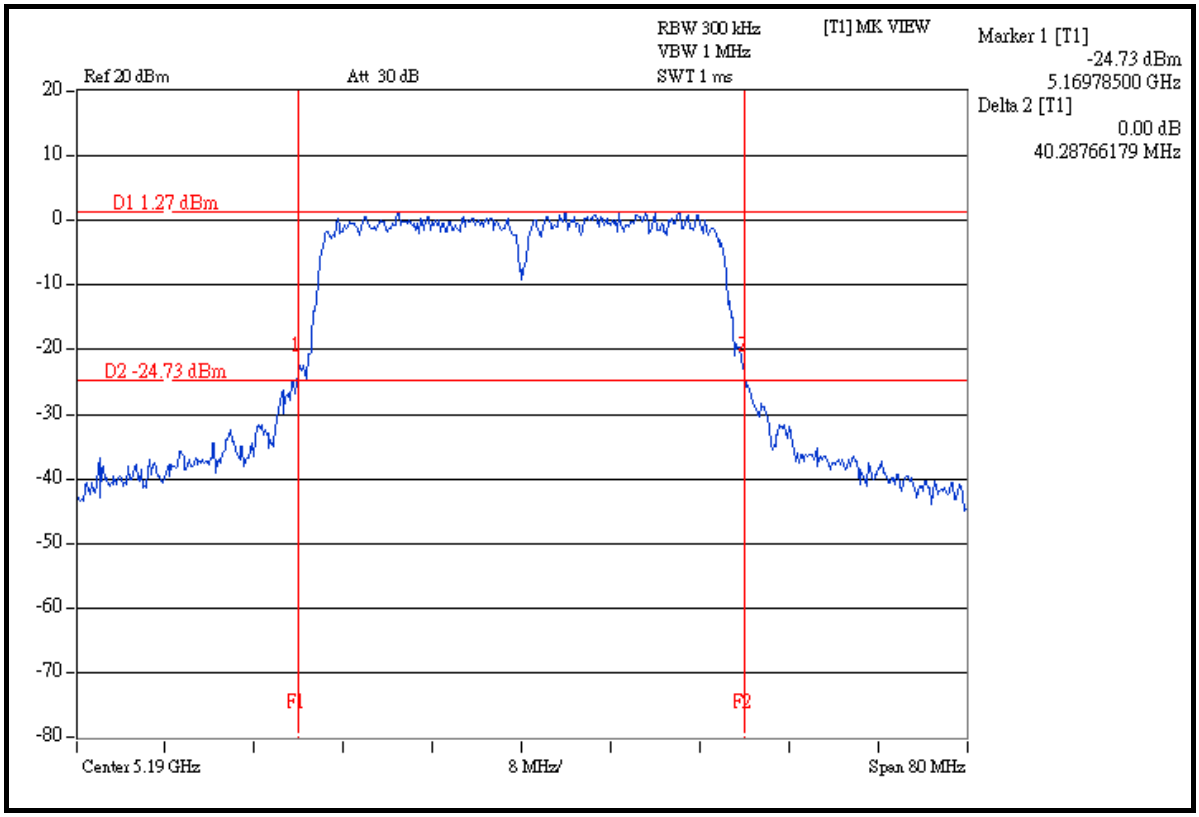
CH 54


RBW 300 kHz
VBW 1 MHz
SWT 2.68 ms
[T1] MK VIEW
Marker 1 [T1]
-24.82 dBm
5.24979932 GHz
Delta 2 [T1]
0.00 dB
42.23502174 MHz
Ref 20 dBm
Att 30 dB
D1 1.18 dBm
D2 -24.82 dBm
F1
F2
Center 5.27 GHz
8 MHz/
Span 80 MHz

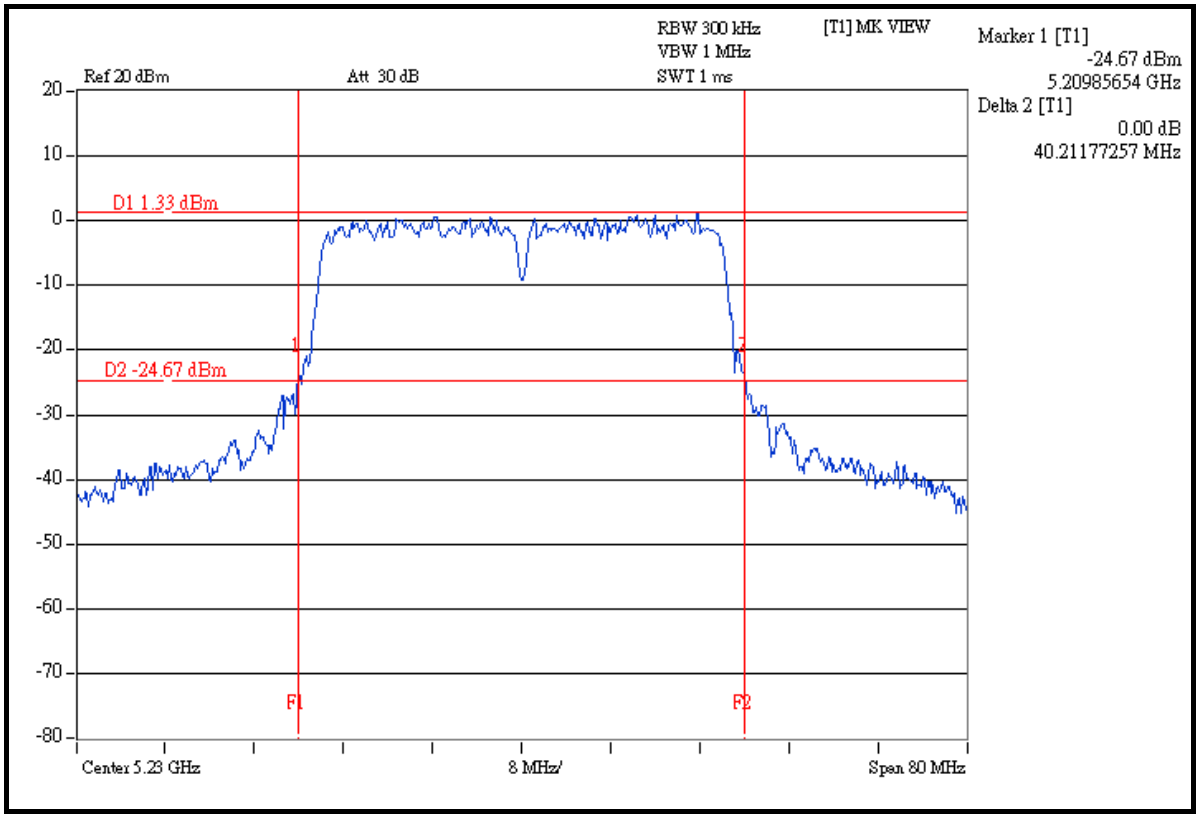
CH 62


RBW 300 kHz
VBW 1 MHz
SWT 2.68 ms
[T1] MK VIEW
Marker 1 [T1]
-26.68 dBm
5.28982547 GHz
Delta 2 [T1]
0.00 dB
40.16596022 MHz
Ref 20 dBm
Att 30 dB
D1 -0.68 dBm
D2 -26.68 dBm
F1
F2
Center 5.31 GHz
8 MHz/
Span 80 MHz

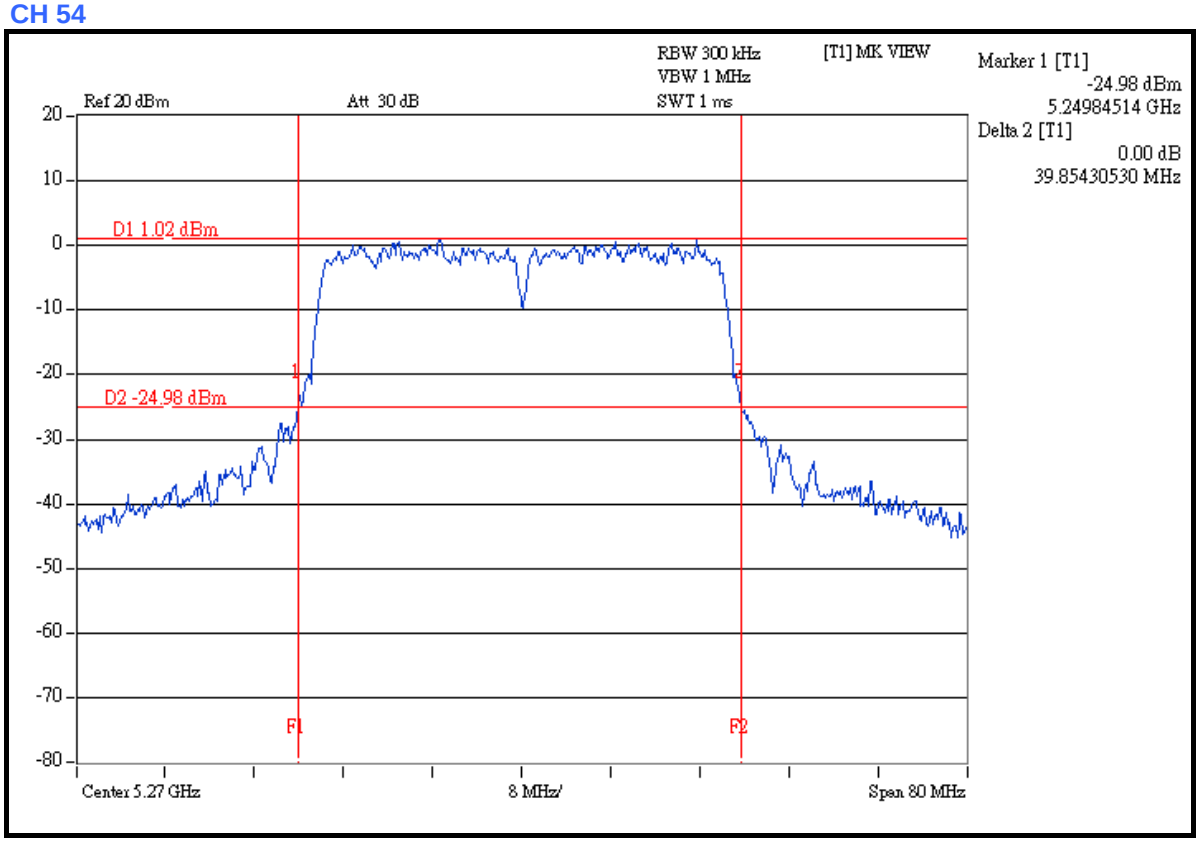
FOR CHAIN 1: CH 38



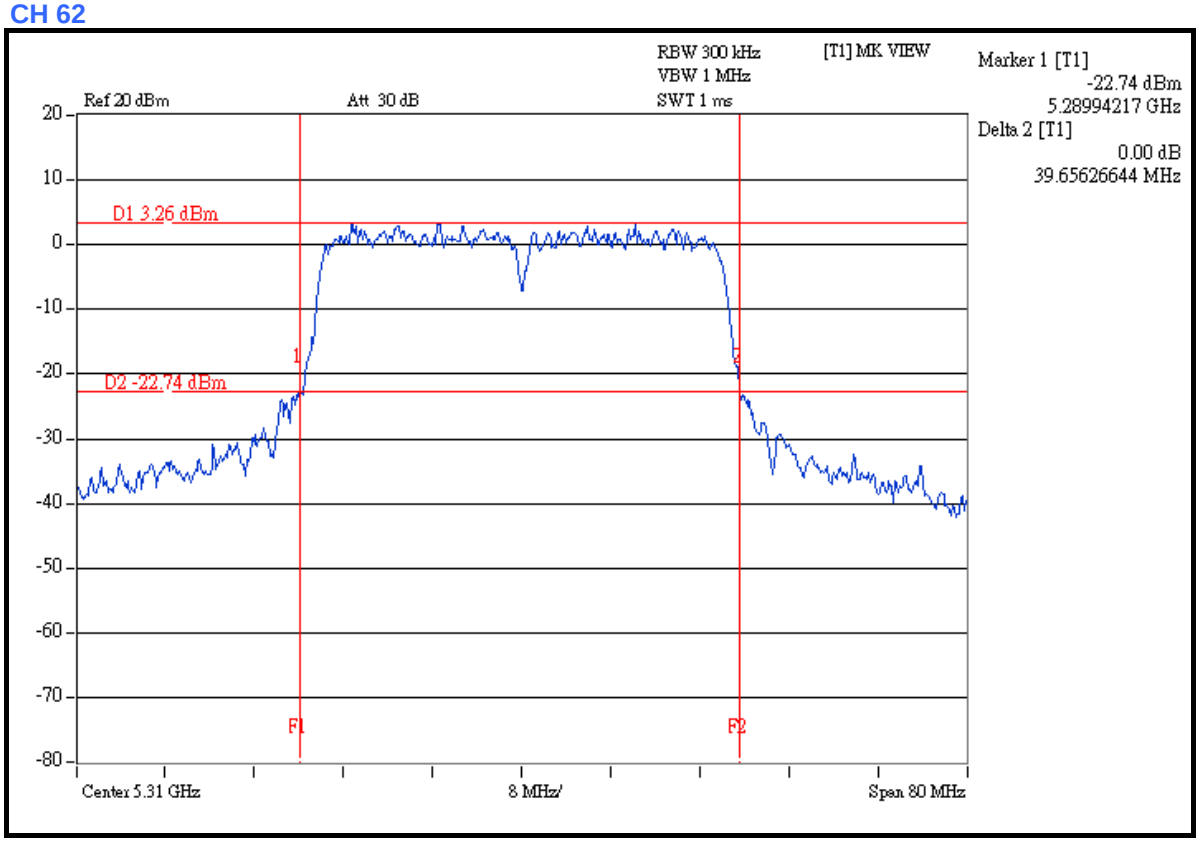
CH 46



CH 54


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-24.98 dBm
5.24984514 GHz
Delta 2 [T1]
0.00 dB
39.85430530 MHz
Ref 20 dBm
Att 30 dB
D1 1.02 dBm
D2 -24.98 dBm
F1
F2
Center 5.27 GHz
8 MHz/
Span 80 MHz

CH 62


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-22.74 dBm
5.28994217 GHz
Delta 2 [T1]
0.00 dB
39.65626644 MHz
Ref 20 dBm
Att 30 dB
D1 3.26 dBm
D2 -22.74 dBm
F1
F2
Center 5.31 GHz
8 MHz/
Span 80 MHz

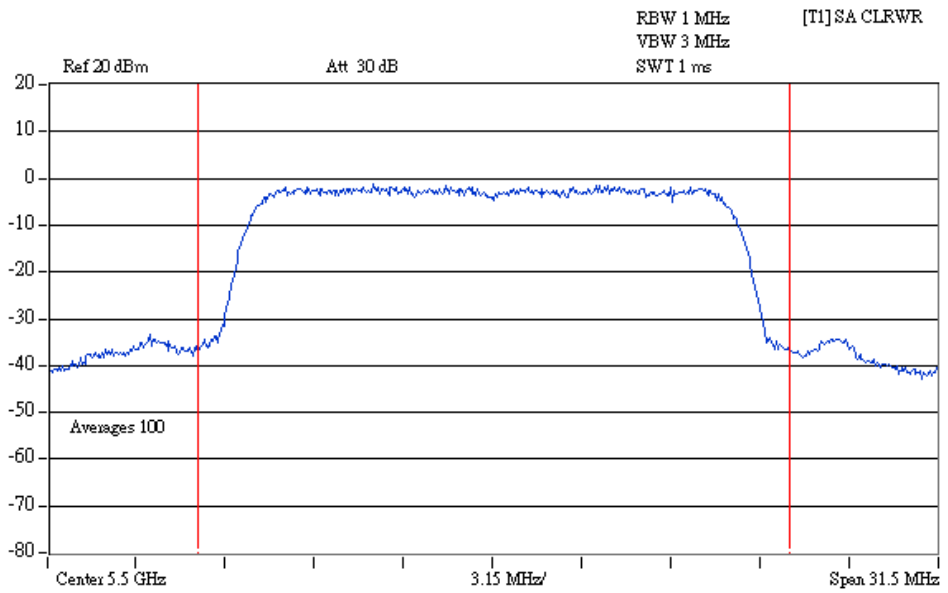
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

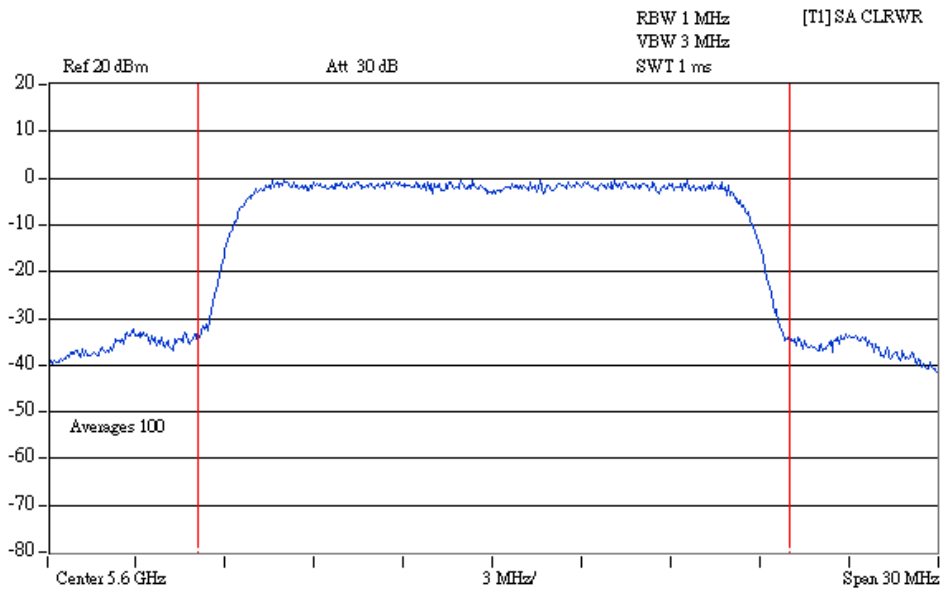
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
100	5500	14.223	11.53	24.00	PASS
120	5600	17.865	12.52	24.00	PASS
140	5700	20.091	13.03	24.00	PASS

CH 100



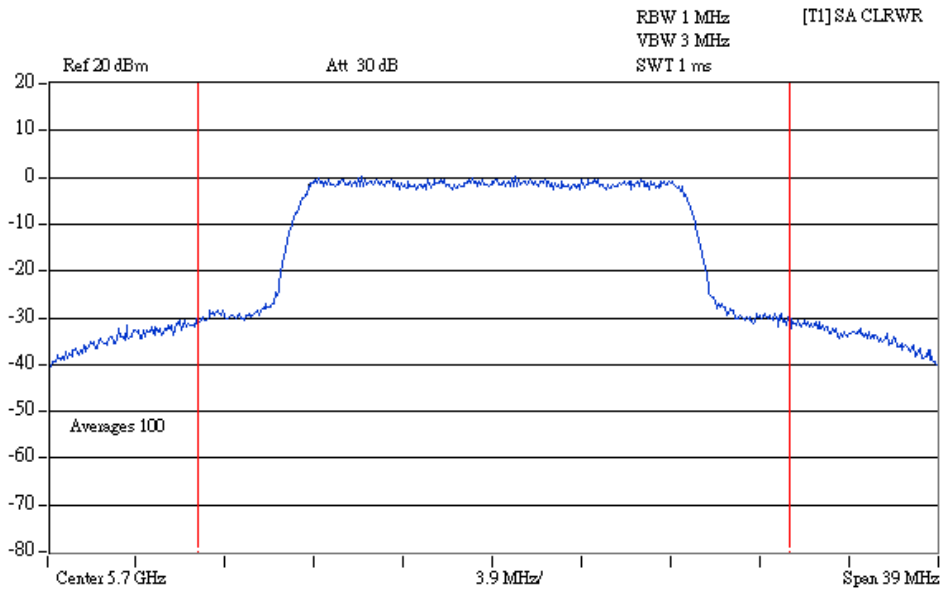
TX Channel Bandwidth 21 MHz Power 11.53 dBm

CH 120



TX Channel Bandwidth 20 MHz Power 12.52 dBm

CH 140



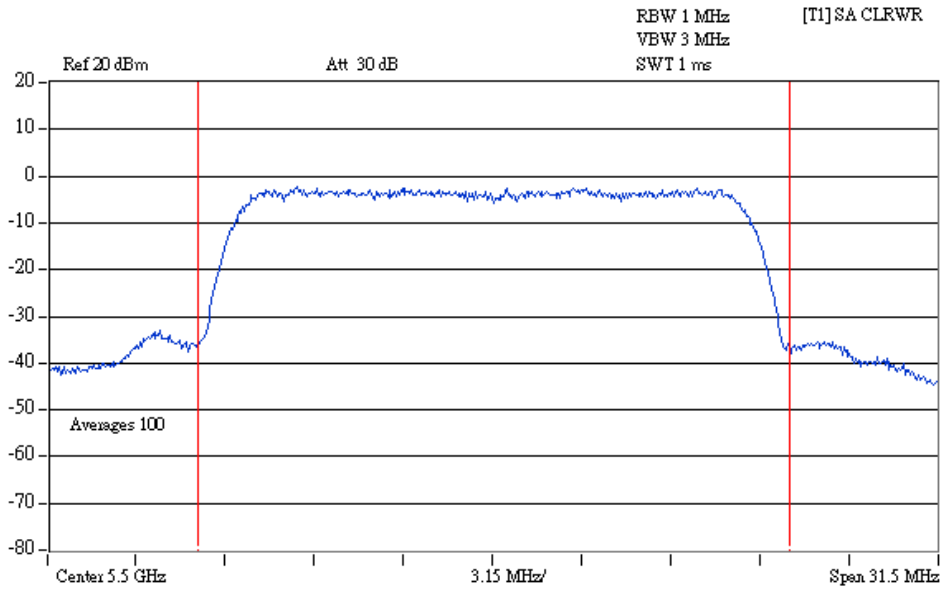
TX Channel Bandwidth 26 MHz Power 13.03 dBm

DRAFT 802.11n (20MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

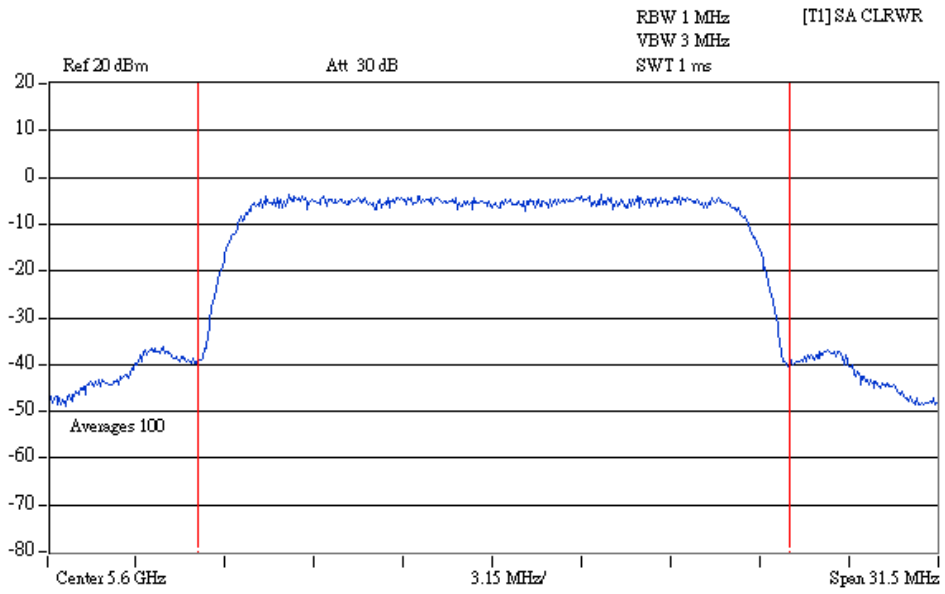
CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
100	5500	12.735	23.014	11.05	13.62	35.749	15.53	24.00	PASS
120	5600	9.183	17.947	9.63	12.54	27.131	14.33	24.00	PASS
140	5700	10.280	16.368	10.12	12.14	26.648	14.26	24.00	PASS

FOR CHAIN 0: CH 100



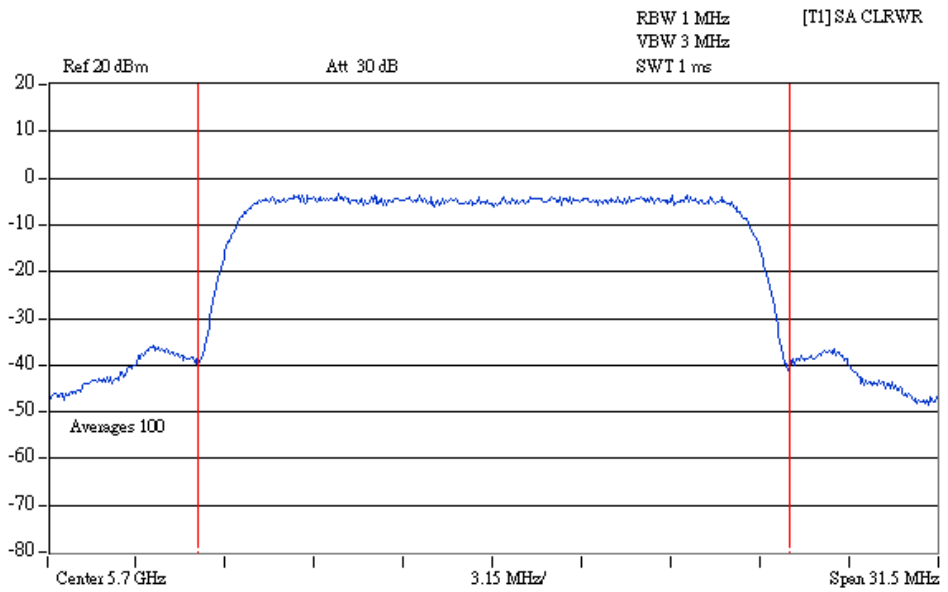
TX Channel Bandwidth 21 MHz Power 11.05 dBm

CH 120



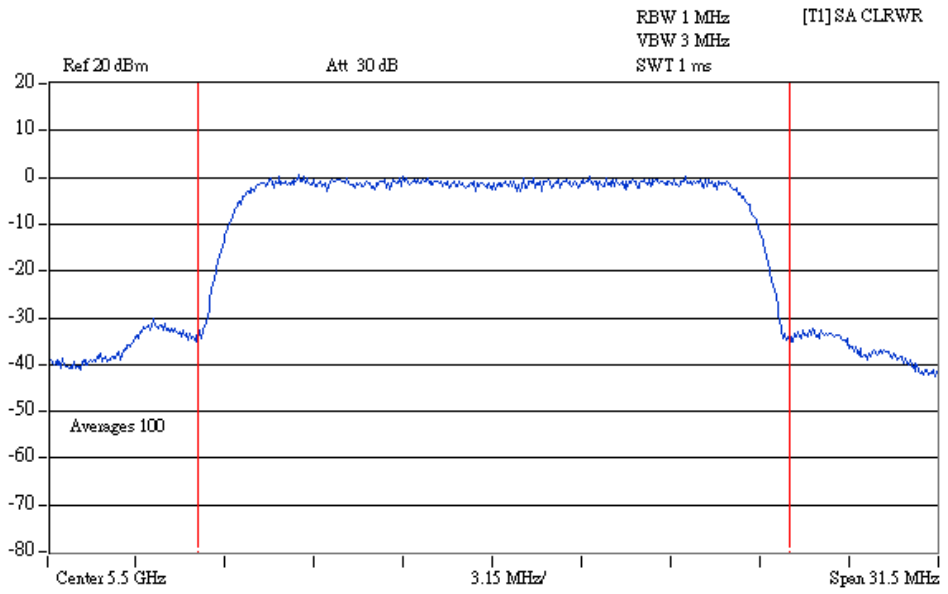
TX Channel Bandwidth 21 MHz Power 9.63 dBm

CH 140



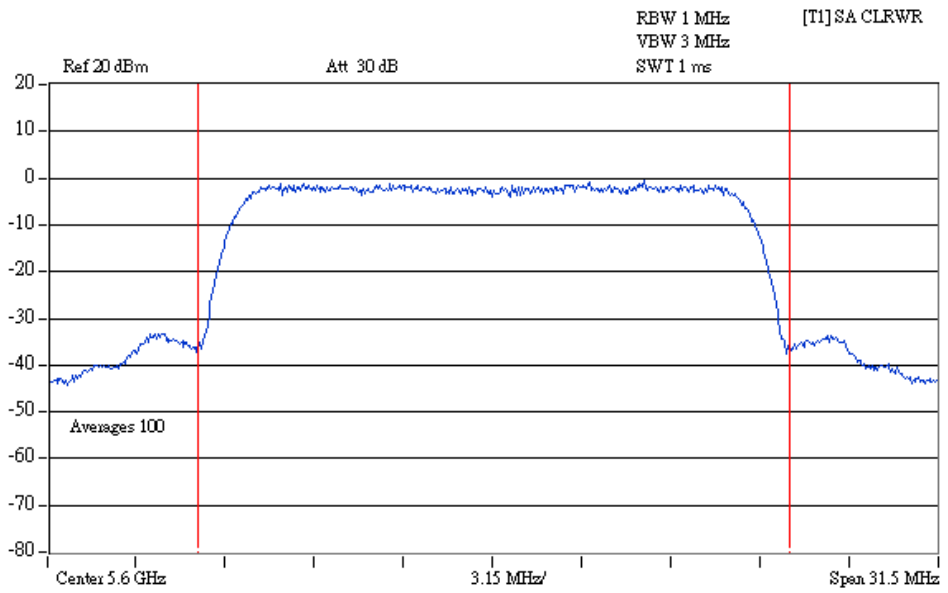
TX Channel Bandwidth 21 MHz Power 10.12 dBm

FOR CHAIN 1: CH 100



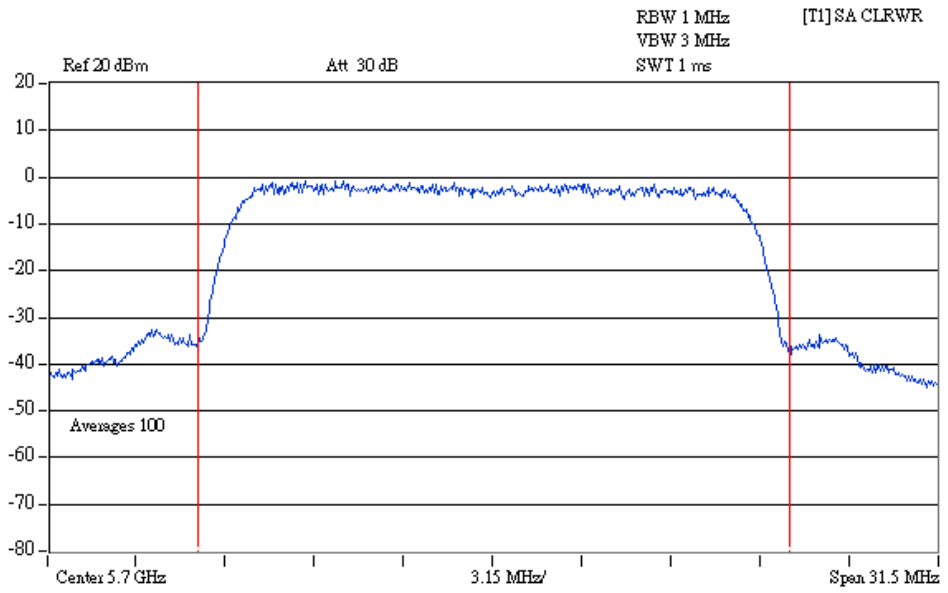
TX Channel Bandwidth 21 MHz Power 13.62 dBm

CH 120



TX Channel Bandwidth 21 MHz Power 12.54 dBm

CH 140



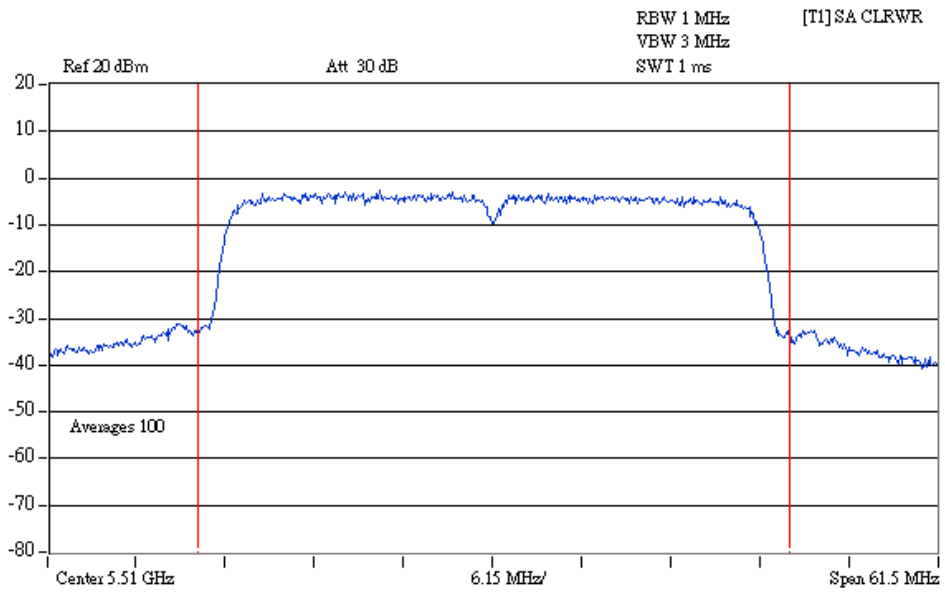
TX Channel Bandwidth 21 MHz Power 12.14 dBm

DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

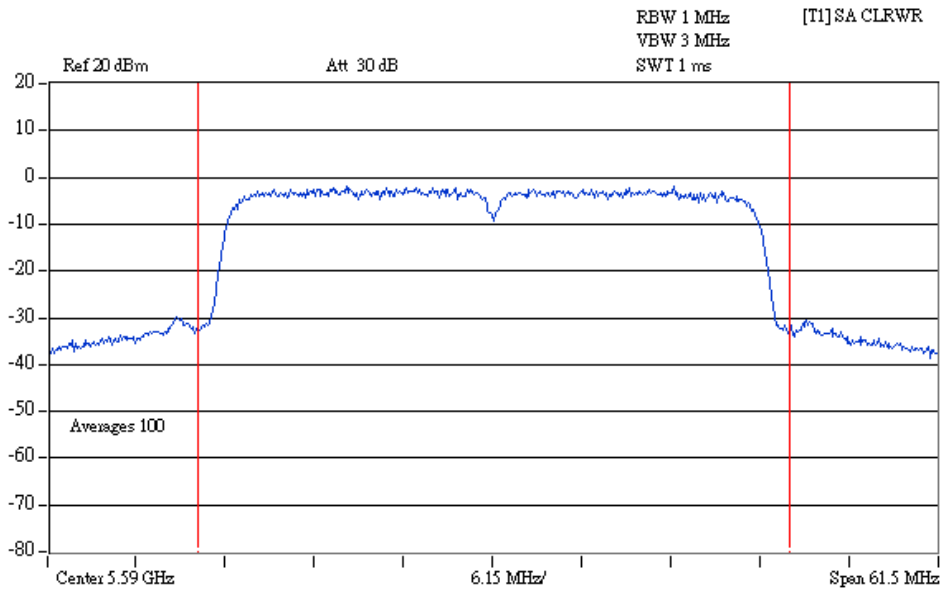
CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)		PEAK POWER OUTPUT (dBm)		TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
102	5510	20.324	25.586	13.08	14.08	45.909	16.62	24.00	PASS
118	5590	25.527	25.882	14.07	14.13	51.409	17.11	24.00	PASS
134	5670	20.230	25.410	13.06	14.05	45.640	16.59	24.00	PASS

FOR CHAIN 0: CH 102



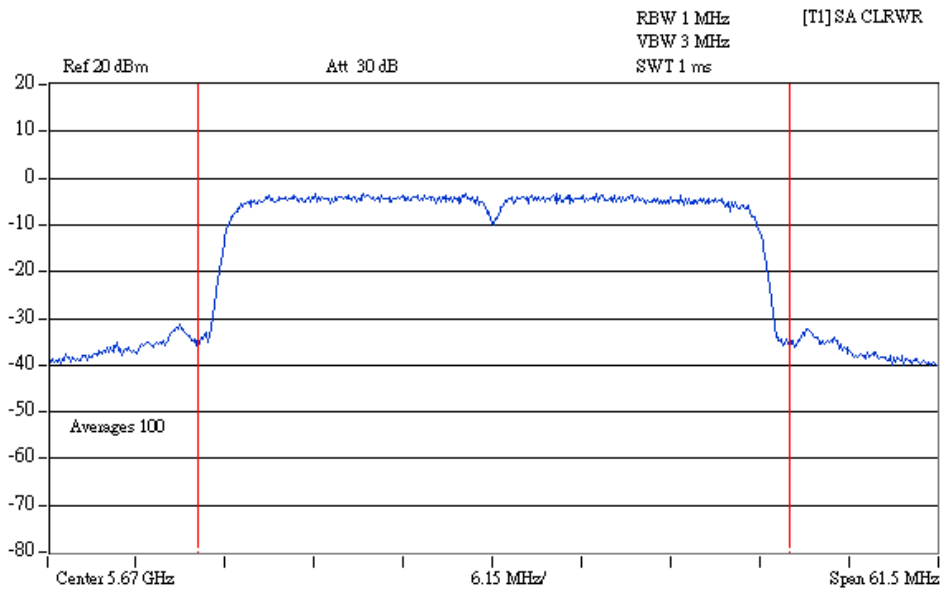
TX Channel Bandwidth 41 MHz Power 13.08 dBm

CH 118



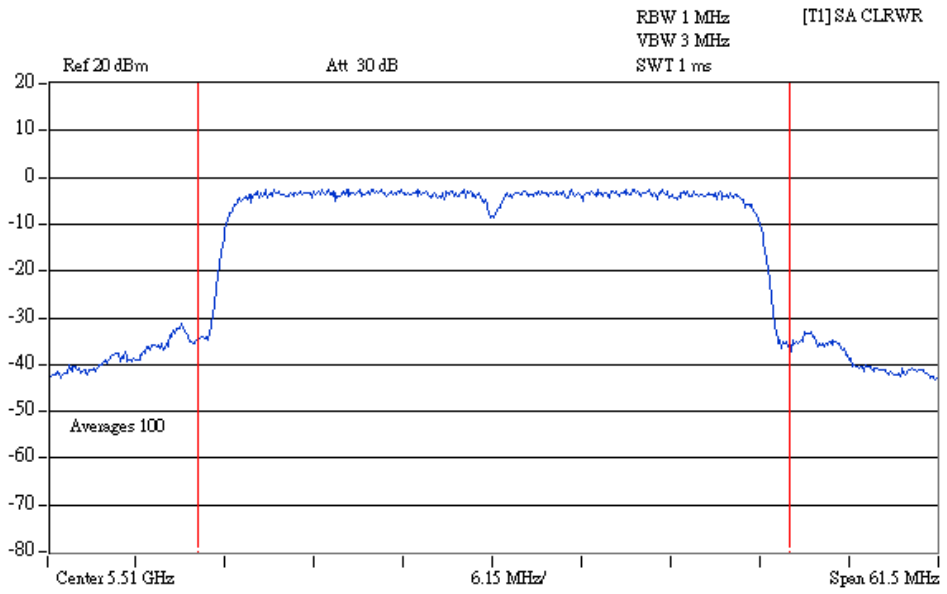
TX Channel Bandwidth 41 MHz Power 14.07 dBm

CH 134



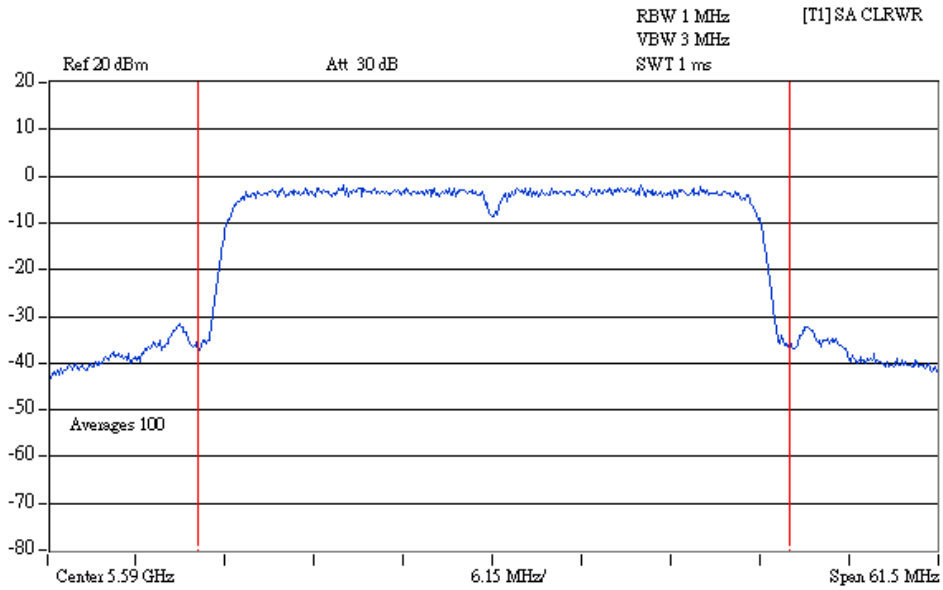
TX Channel Bandwidth 41 MHz Power 13.06 dBm

FOR CHAIN 1: CH 102



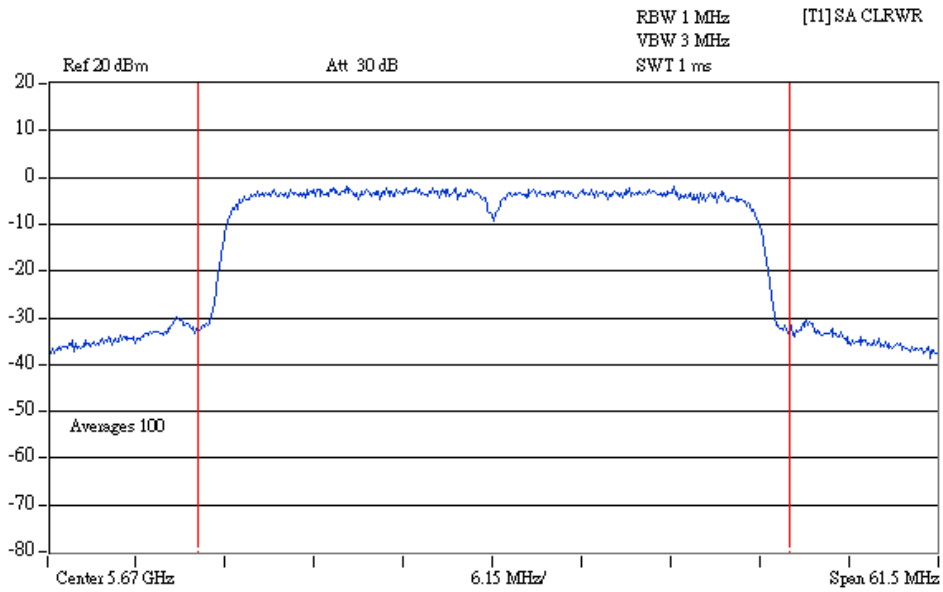
TX Channel Bandwidth 41 MHz Power 14.08 dBm

CH 118



TX Channel Bandwidth 41 MHz Power 14.13 dBm

CH 134



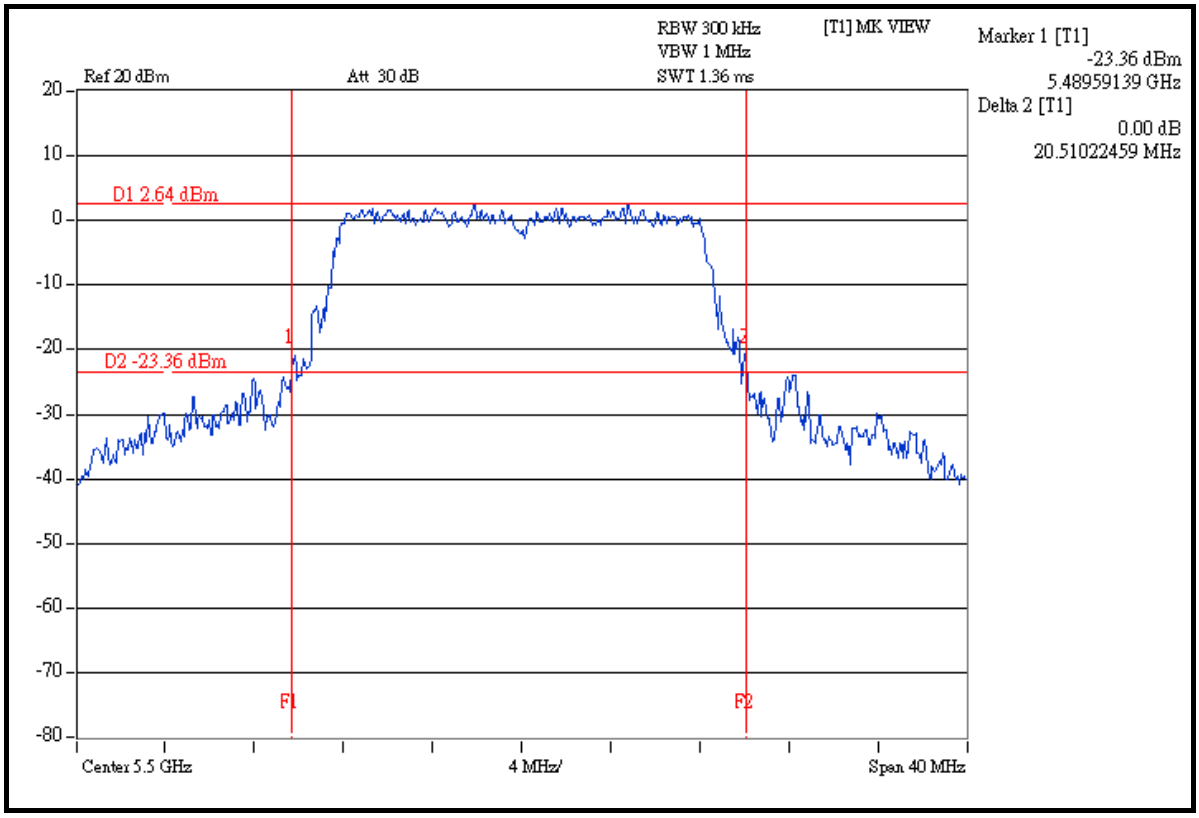
TX Channel Bandwidth 41 MHz Power 14.05 dBm

26dB OCCUPIED BANDWIDTH: 802.11a OFDM MODULATION:

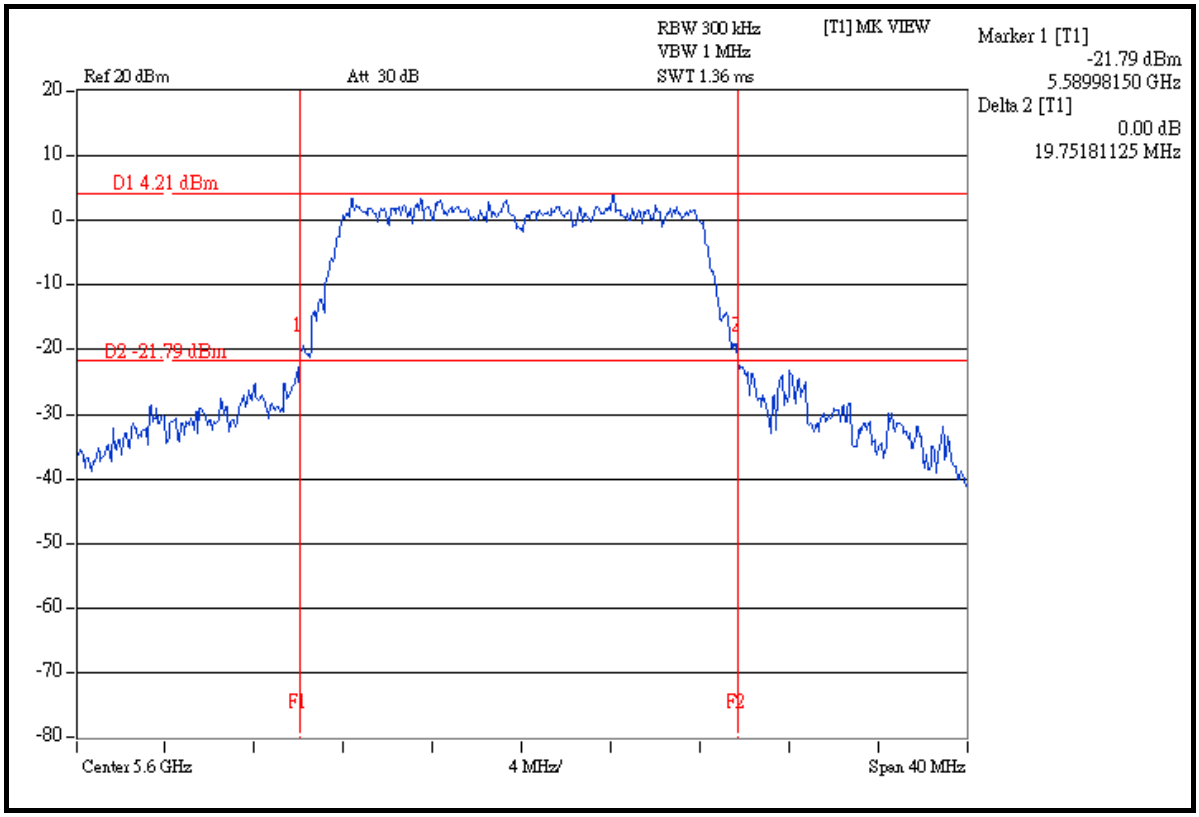
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
100	5500	20.51	PASS
120	5600	19.75	PASS
140	5700	25.23	PASS

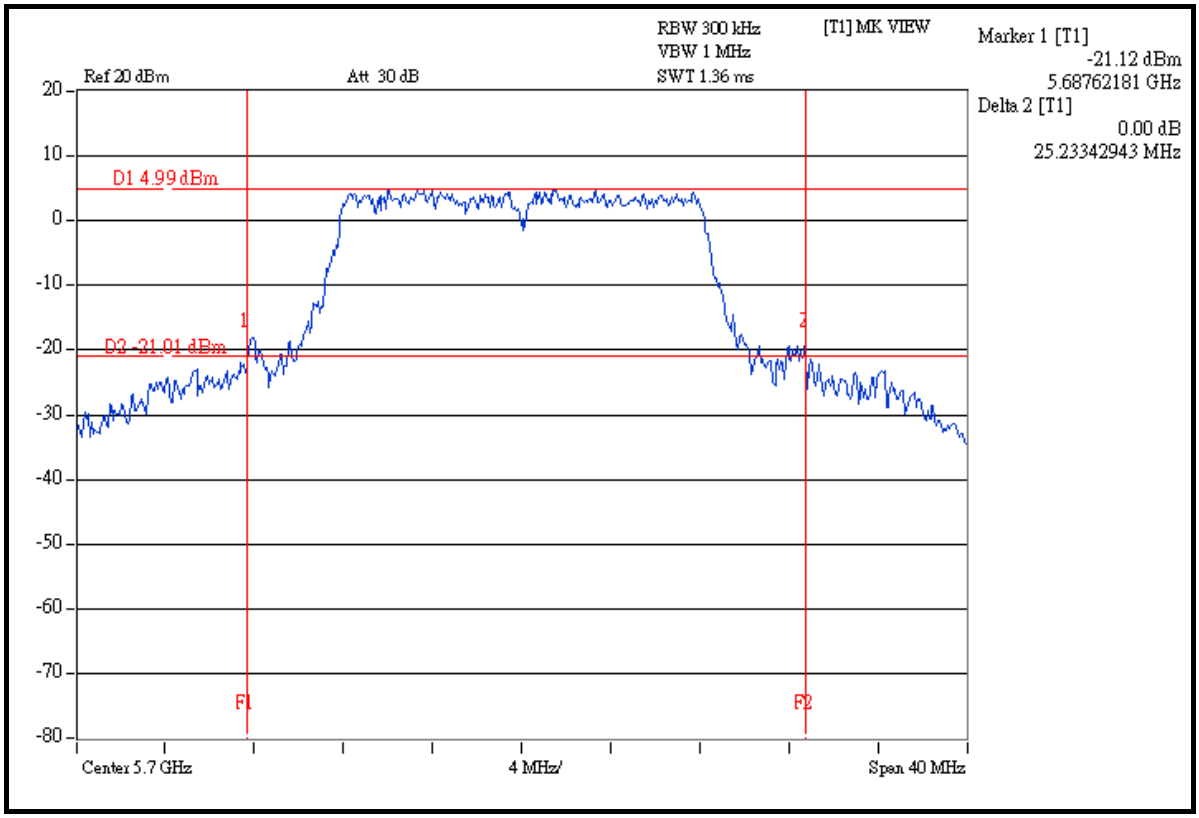
CH 100



CH 120


RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-21.79 dBm
5.58998150 GHz
Delta 2 [T1]
0.00 dB
19.75181125 MHz
Ref 20 dBm
Att 30 dB
D1 4.21 dBm
D2 -21.79 dBm
Center 5.6 GHz
4 MHz/
Span 40 MHz

CH 140

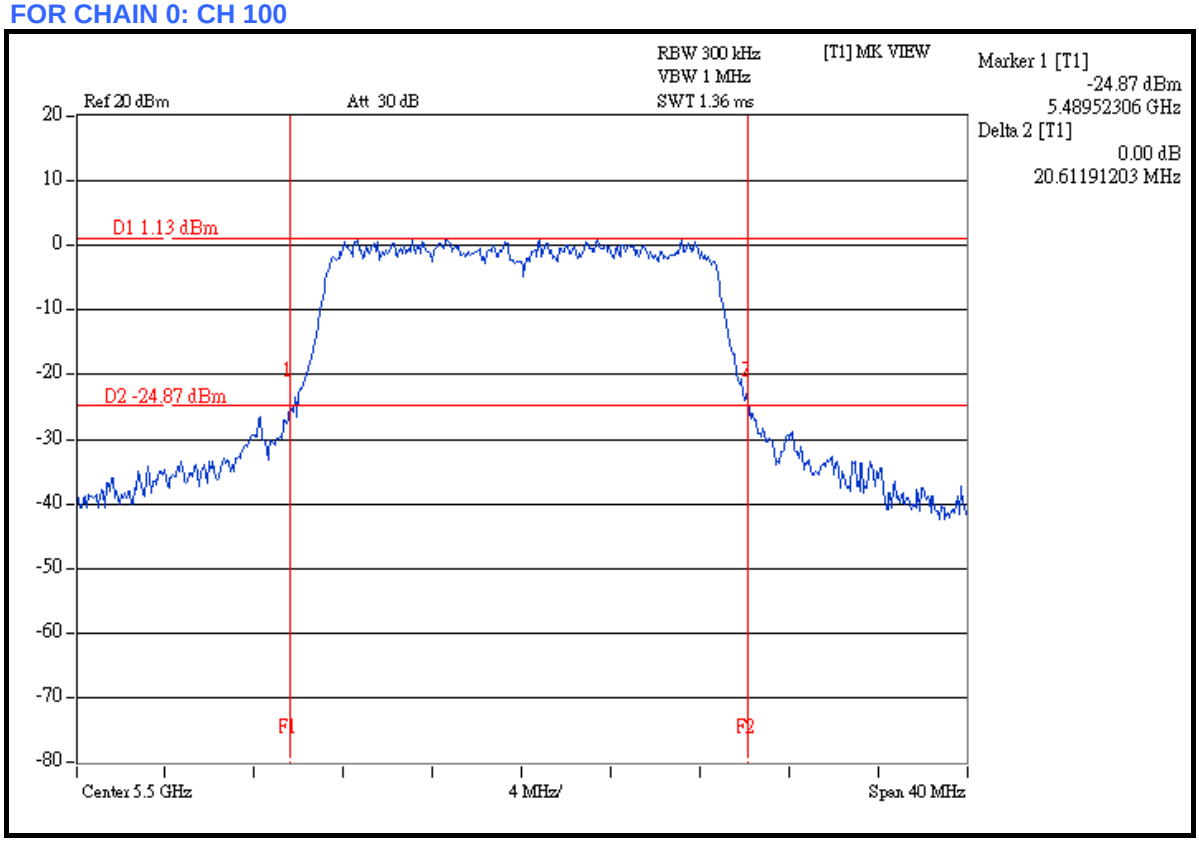

RBW 300 kHz
VBW 1 MHz
SWT 1.36 ms
[T1] MK VIEW
Marker 1 [T1]
-21.12 dBm
5.68762181 GHz
Delta 2 [T1]
0.00 dB
25.23342943 MHz
Ref 20 dBm
Att 30 dB
D1 4.99 dBm
D2 -21.01 dBm
Center 5.7 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

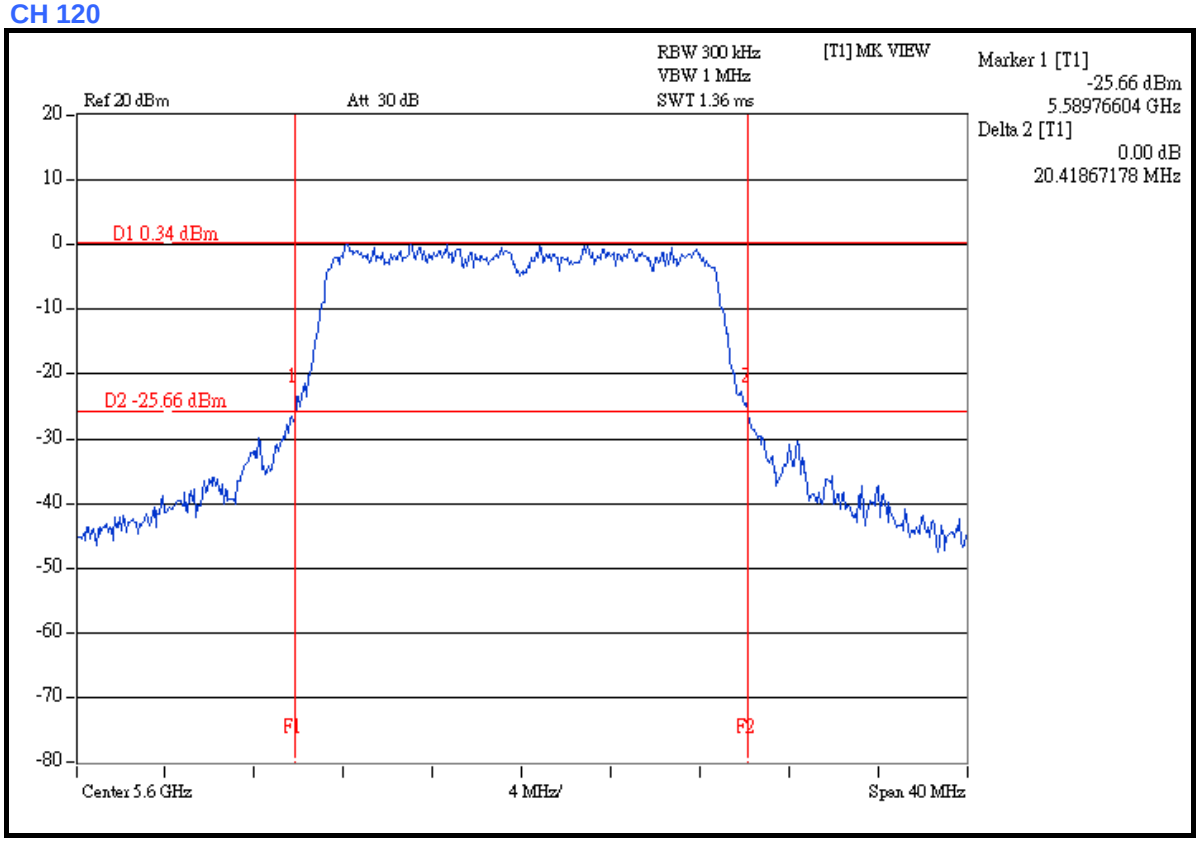
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
100	5500	20.61	20.55	PASS
120	5600	20.42	20.49	PASS
140	5700	20.48	20.71	PASS

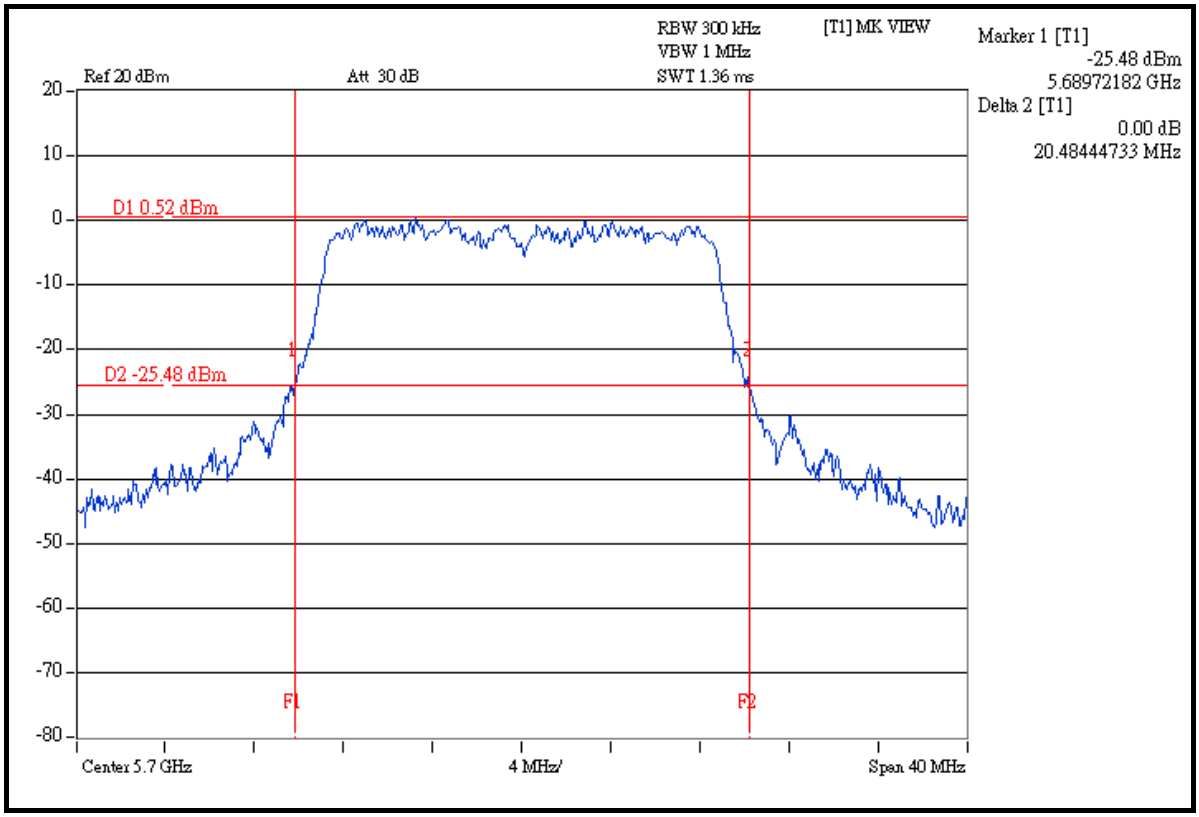
FOR CHAIN 0: CH 100



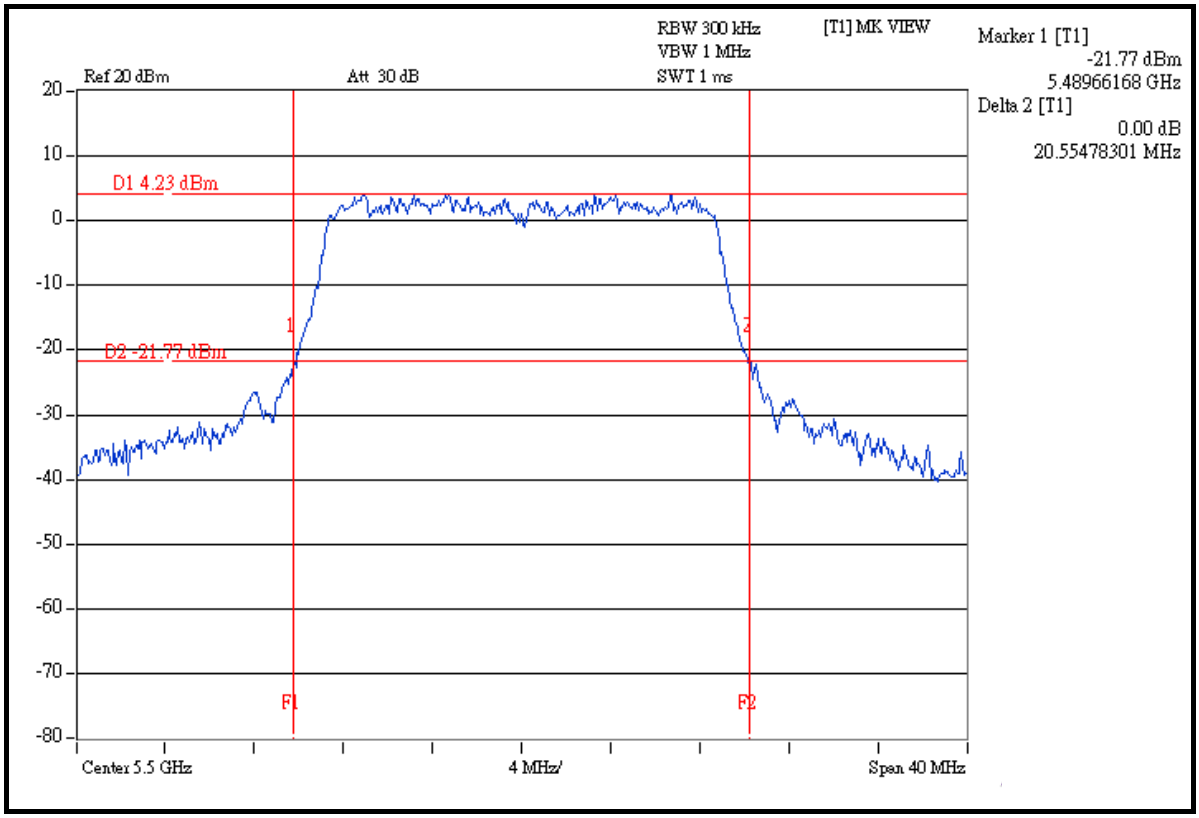
CH 120



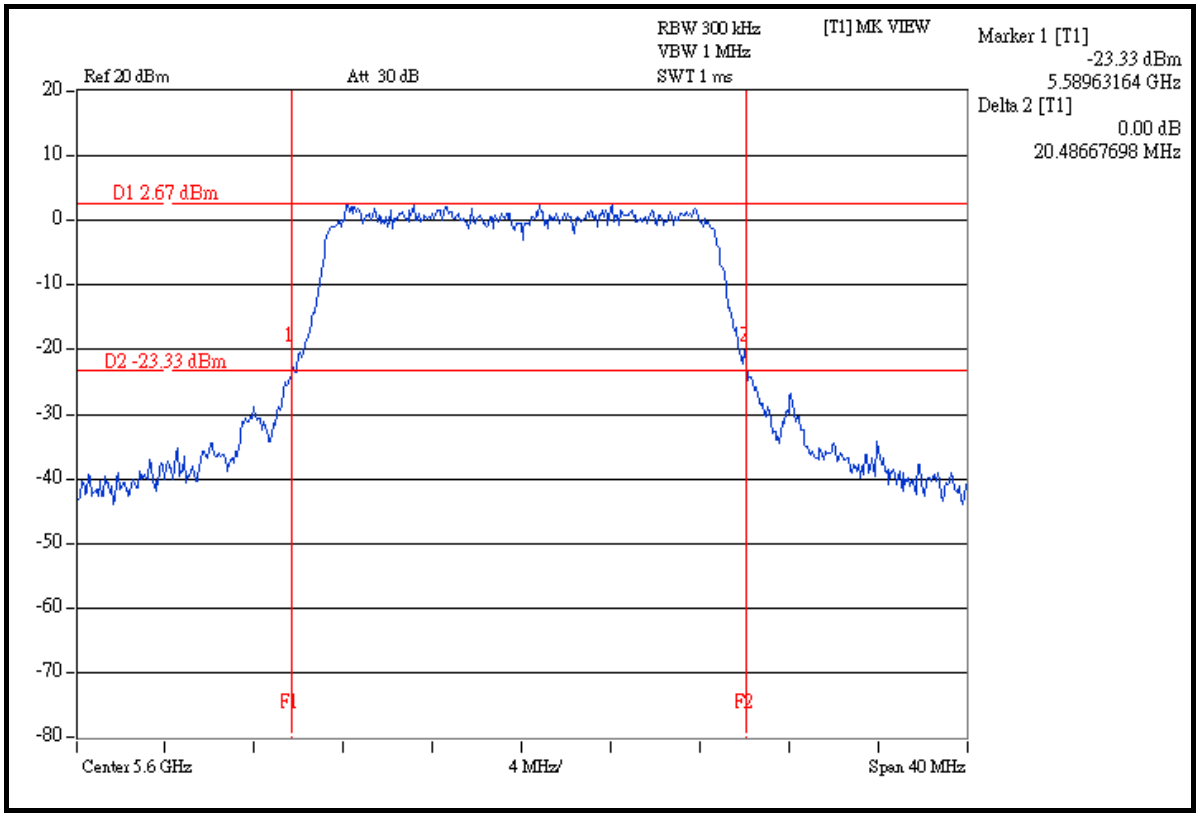
CH 140



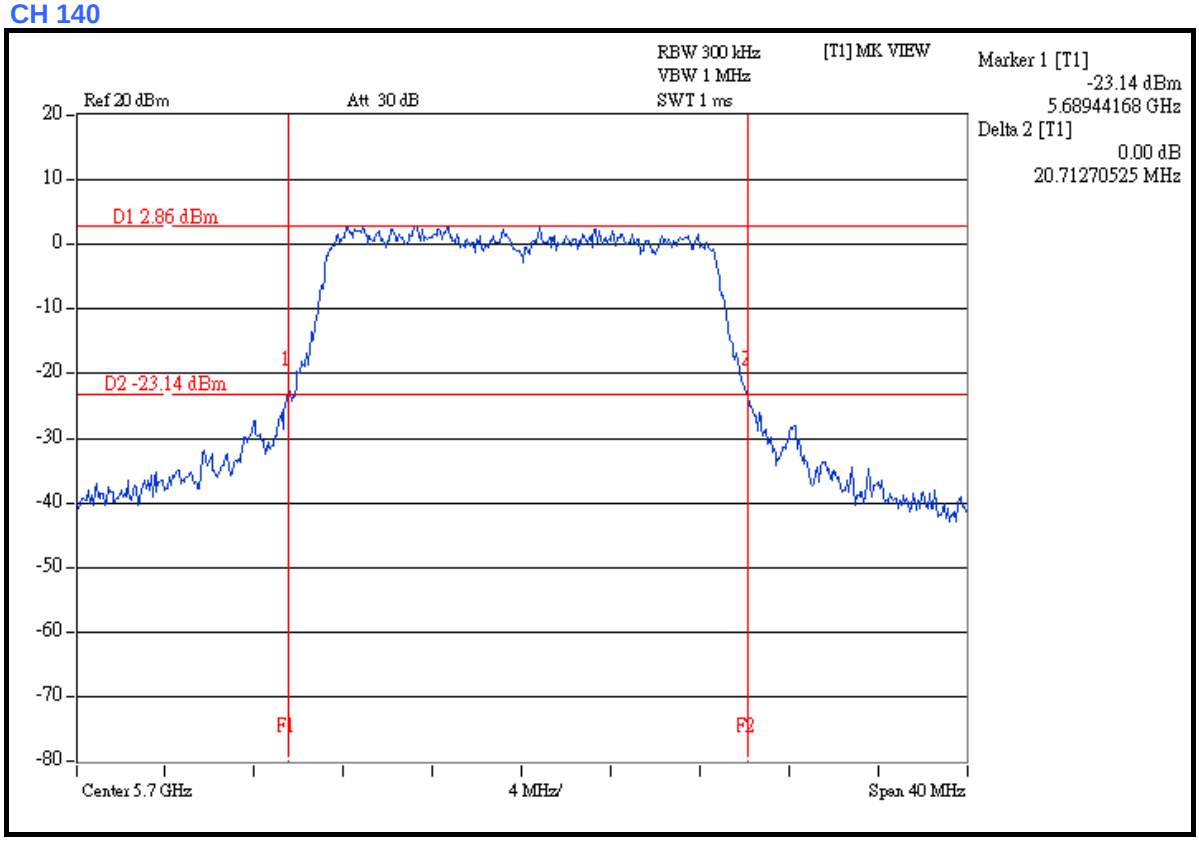
FOR CHAIN 1: CH 100



CH 120


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-23.33 dBm
5.58963164 GHz
Delta 2 [T1]
0.00 dB
20.48667698 MHz
Ref 20 dBm
Att 30 dB
D1 2.67 dBm
D2 -23.33 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.6 GHz
4 MHz/
Span 40 MHz

CH 140

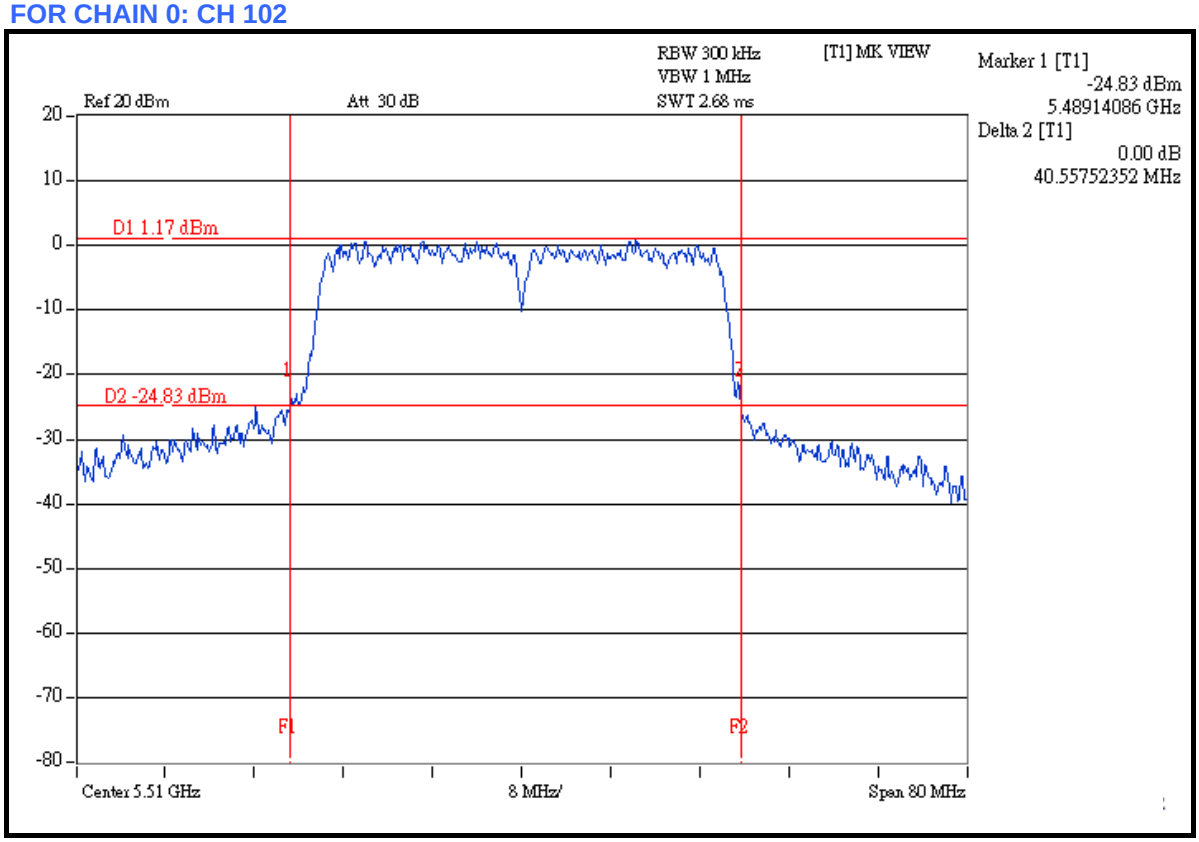

RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-23.14 dBm
5.68944168 GHz
Delta 2 [T1]
0.00 dB
20.71270525 MHz
Ref 20 dBm
Att 30 dB
D1 2.86 dBm
D2 -23.14 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.7 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

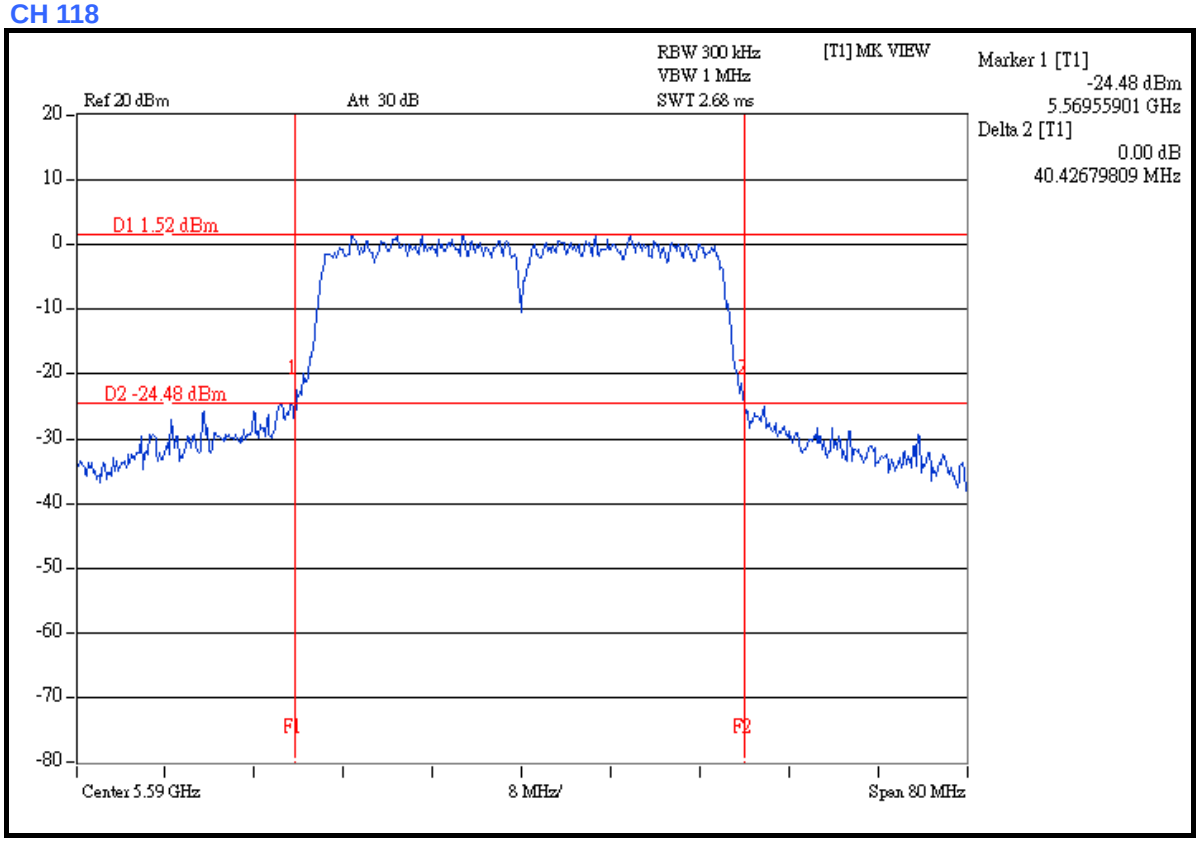
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	26deg.C, 67%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
102	5510	40.56	40.43	PASS
118	5590	40.43	40.58	PASS
134	5670	40.47	40.43	PASS

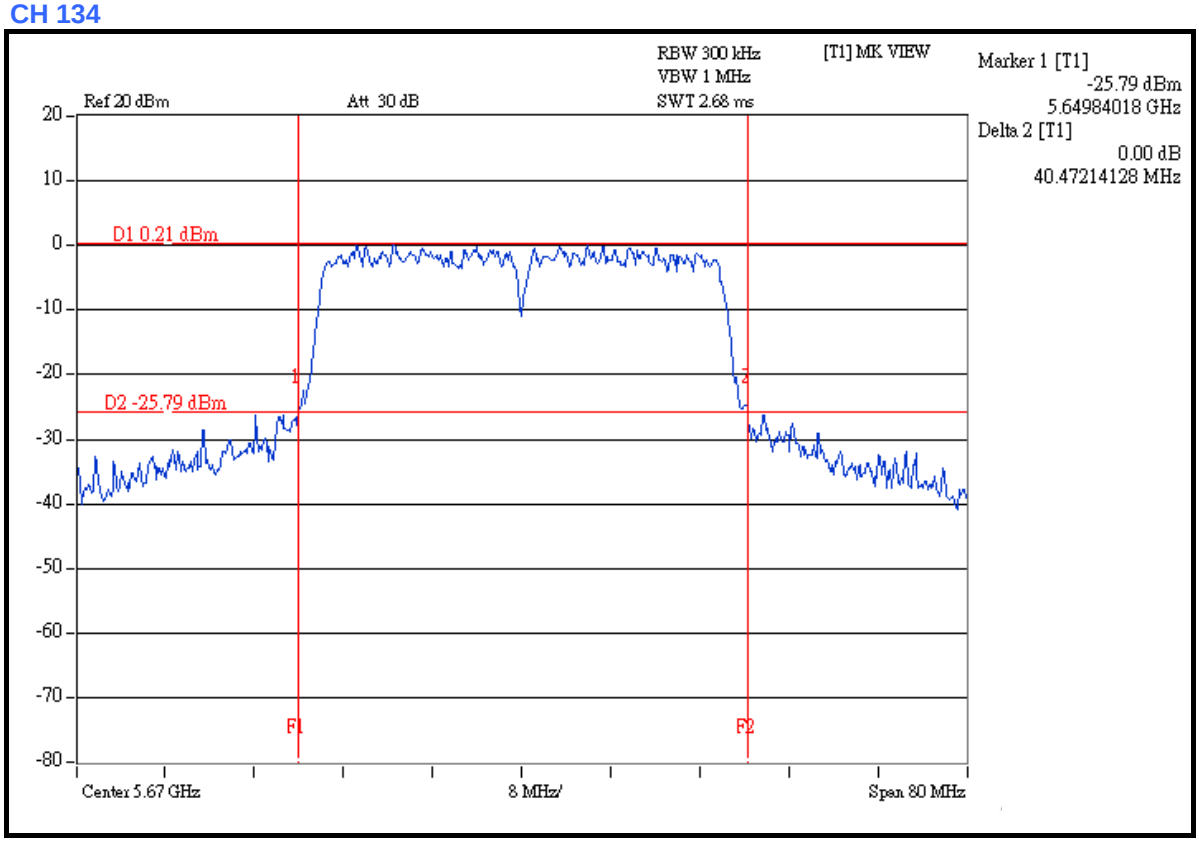
FOR CHAIN 0: CH 102



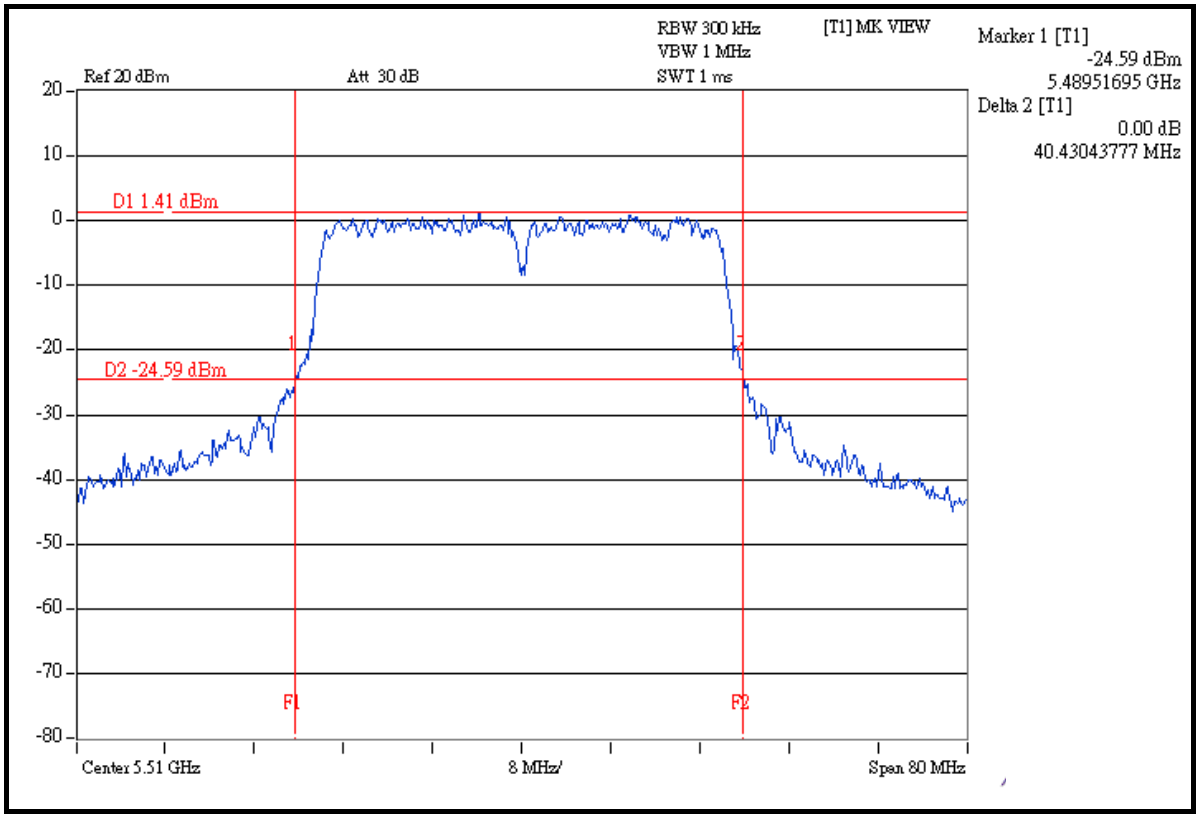
CH 118



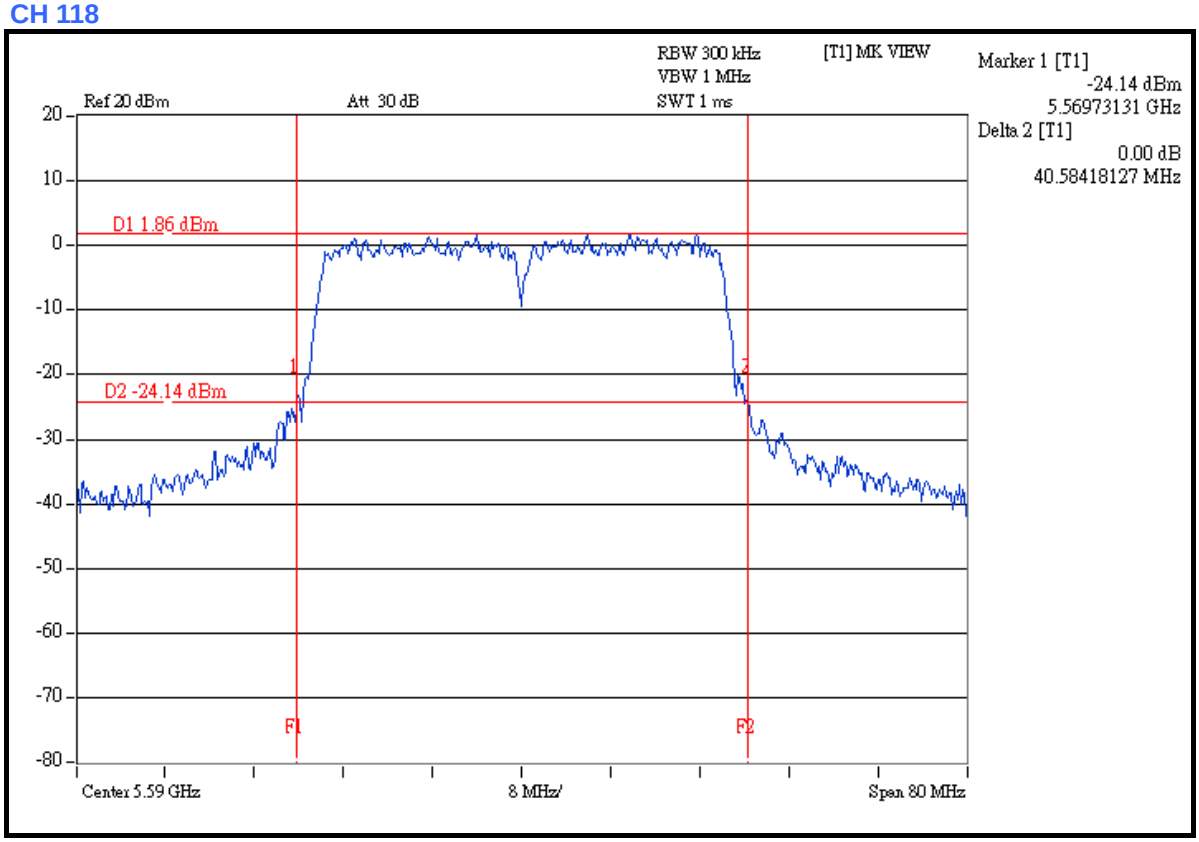
CH 134



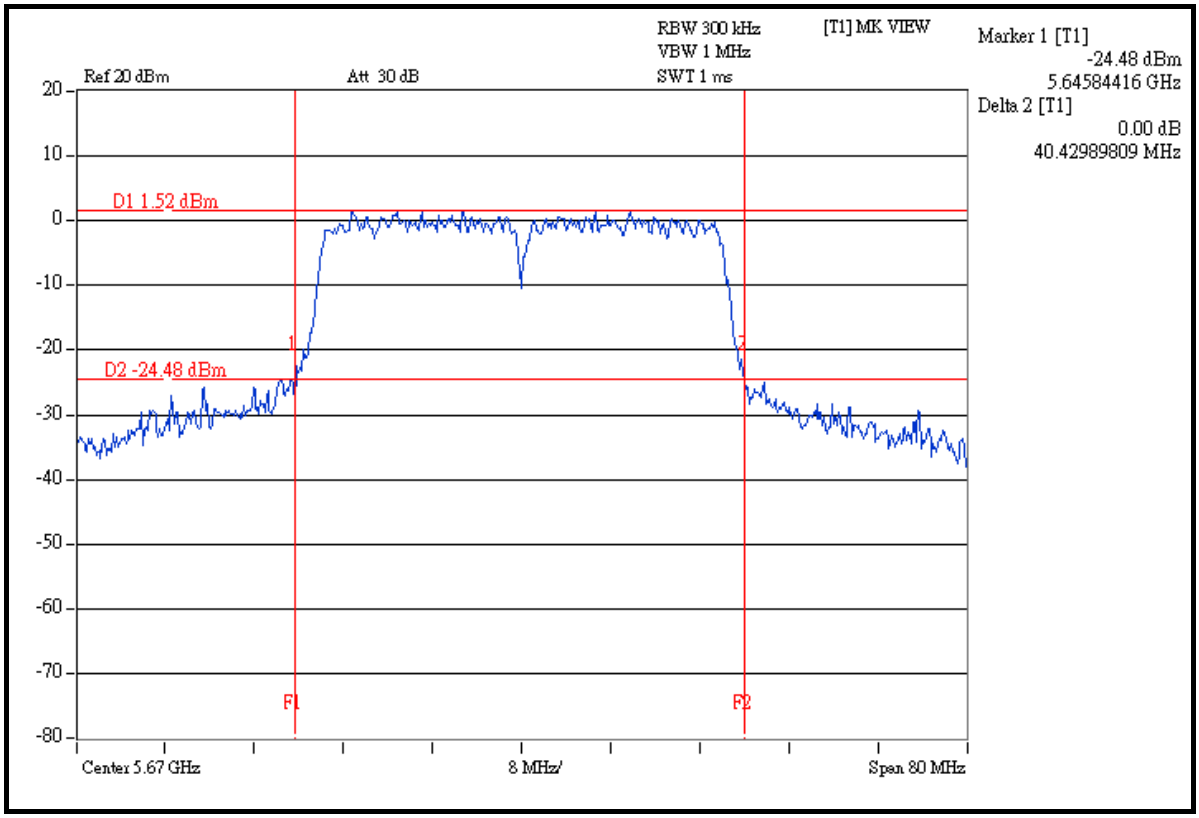
FOR CHAIN 1: CH 102



CH 118


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-24.14 dBm
5.56973131 GHz
Delta 2 [T1]
0.00 dB
40.58418127 MHz
Ref 20 dBm
Att 30 dB
D1 1.86 dBm
D2 -24.14 dBm
F1
F2
Center 5.59 GHz
8 MHz/
Span 80 MHz

CH 134


RBW 300 kHz
VBW 1 MHz
SWT 1 ms
[T1] MK VIEW
Marker 1 [T1]
-24.48 dBm
5.64584416 GHz
Delta 2 [T1]
0.00 dB
40.42989809 MHz
Ref 20 dBm
Att 30 dB
D1 1.52 dBm
D2 -24.48 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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 29, 2007	Jun. 28, 2008

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

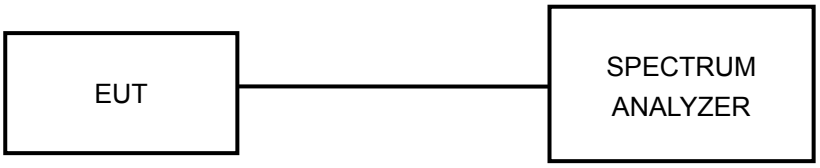
4.4.3 TEST PROCEDURE

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

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

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

4.4.7 TEST RESULTS

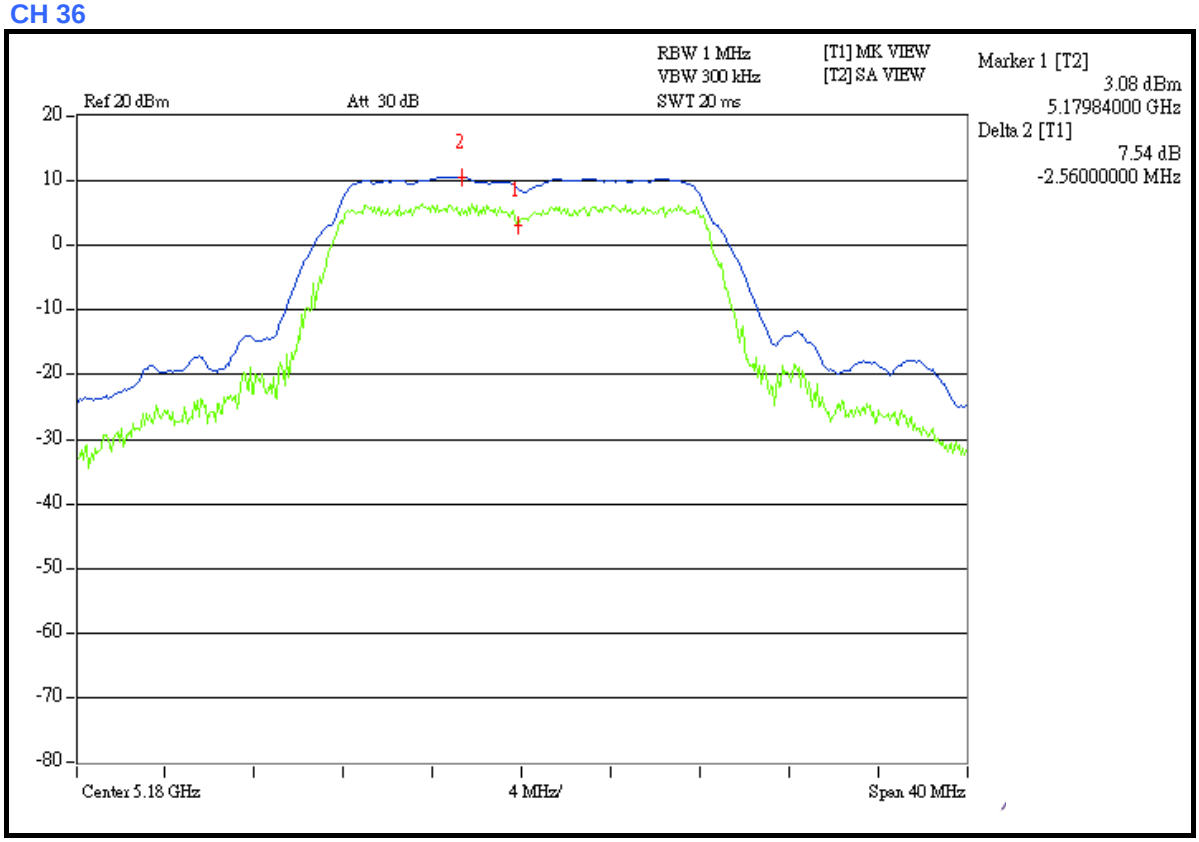
FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

802.11a OFDM MODULATION:

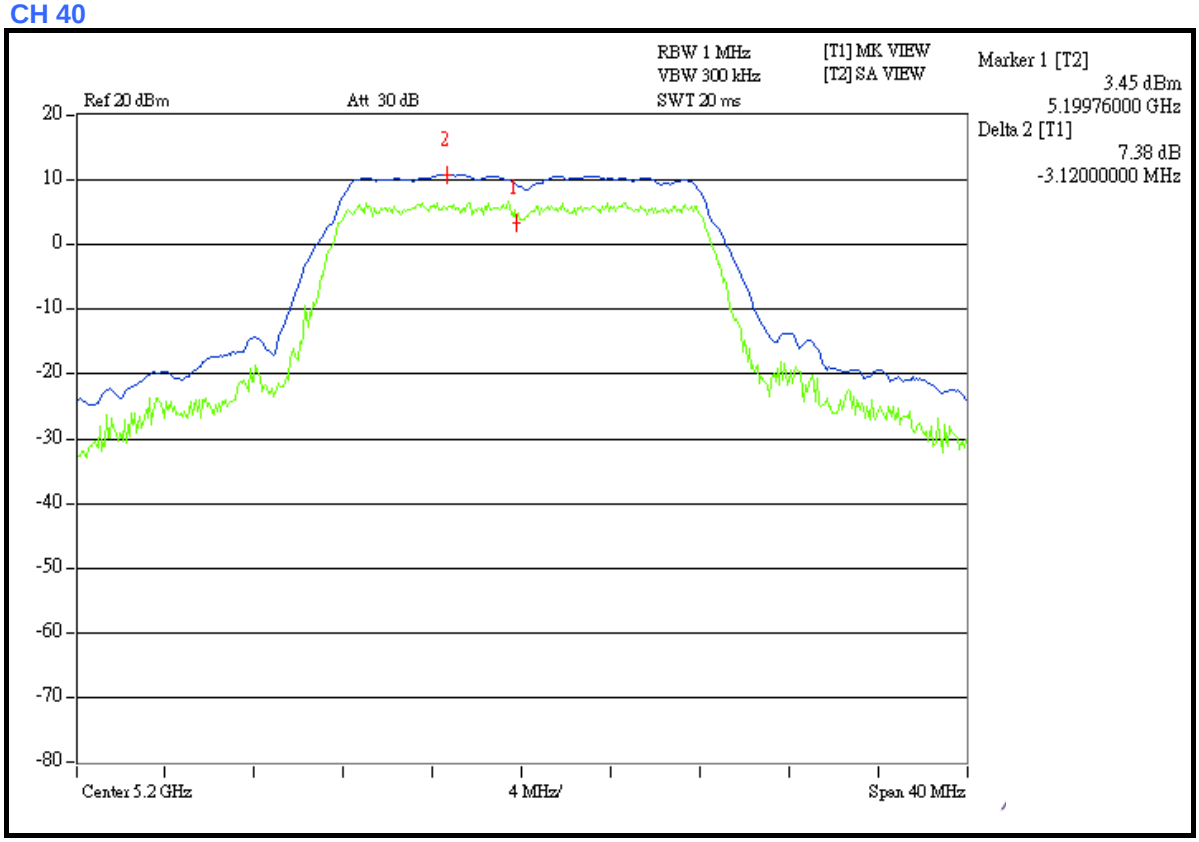
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS / FAIL
36	5180	7.54	13	PASS
40	5200	7.38	13	PASS
48	5240	7.62	13	PASS
52	5260	7.23	13	PASS
60	5300	7.89	13	PASS
64	5320	7.22	13	PASS

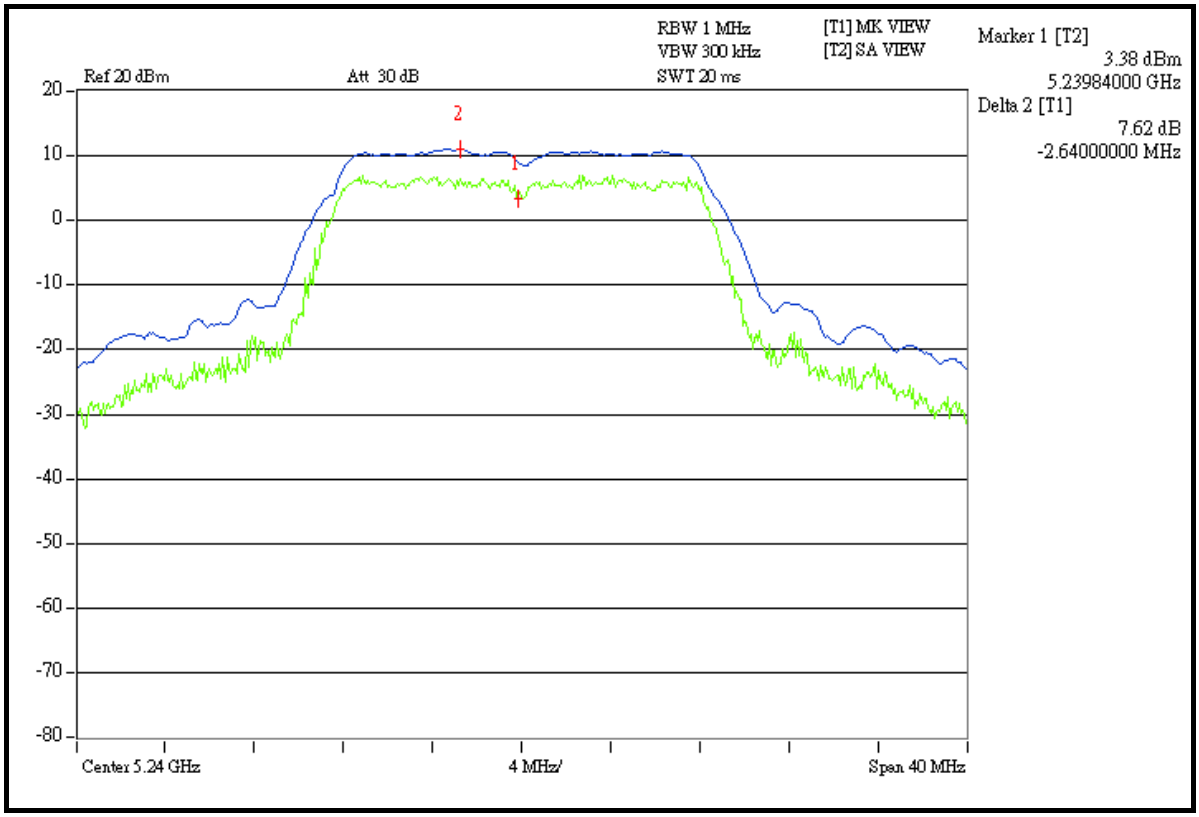
CH 36


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
3.08 dBm
5.17984000 GHz
Delta 2 [T1]
7.54 dB
-2.56000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.18 GHz
4 MHz/
Span 40 MHz

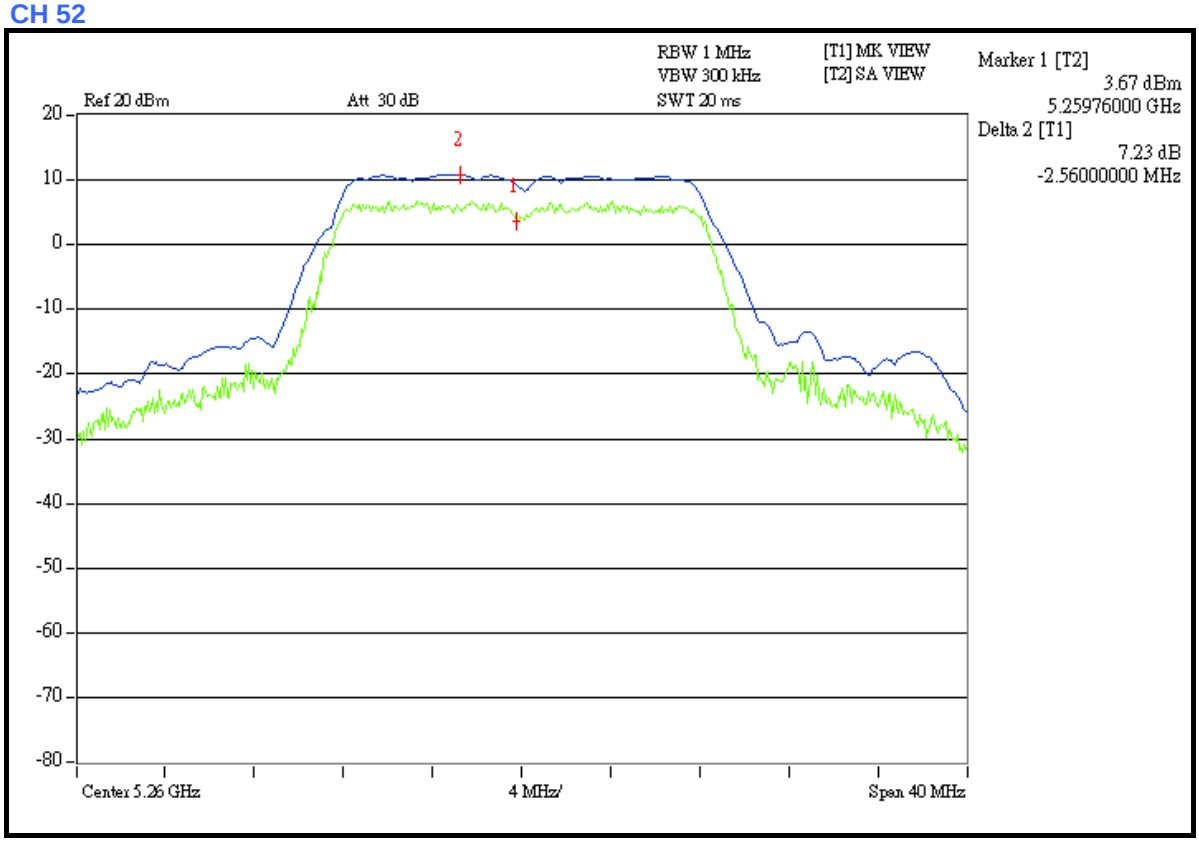
CH 40


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
3.45 dBm
5.19976000 GHz
Delta 2 [T1]
7.38 dB
-3.12000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.2 GHz
4 MHz/
Span 40 MHz

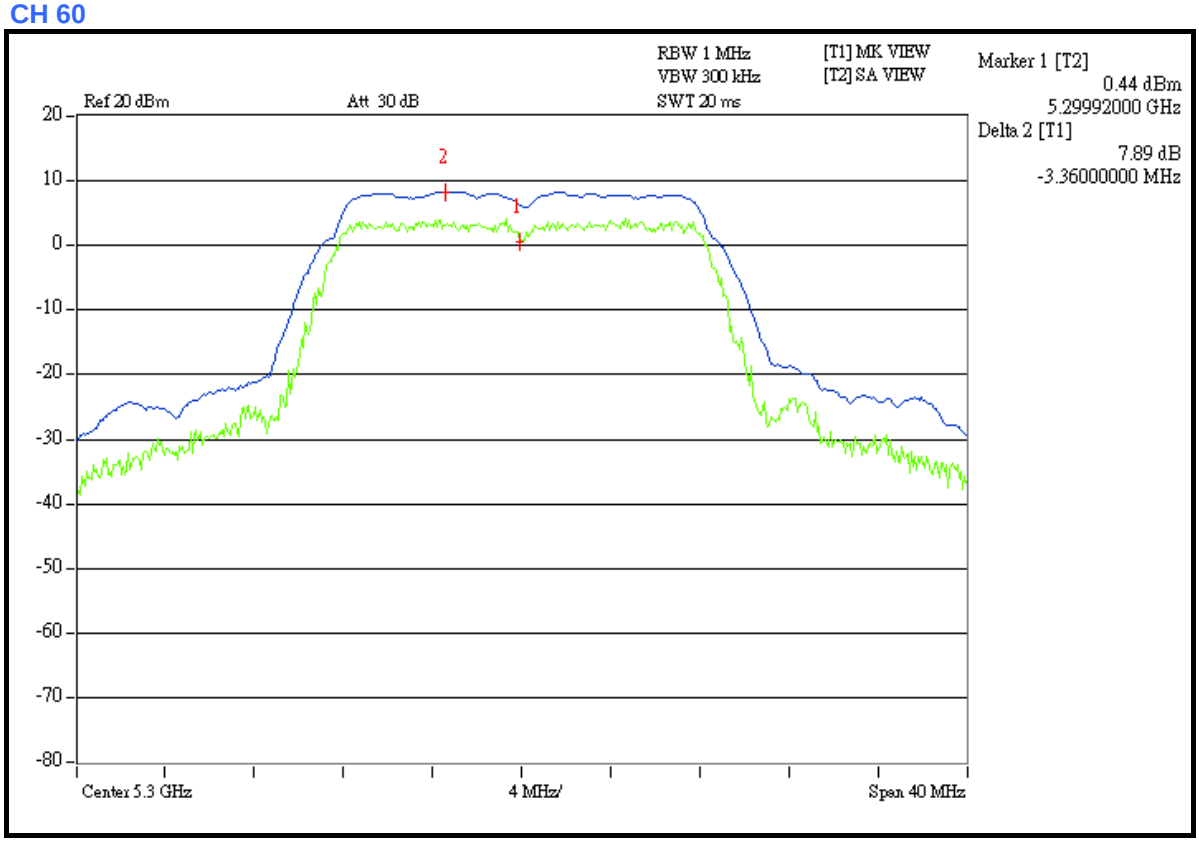
CH 48


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
3.38 dBm
5.23984000 GHz
Delta 2 [T1]
7.62 dB
-2.64000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.24 GHz
4 MHz/
Span 40 MHz

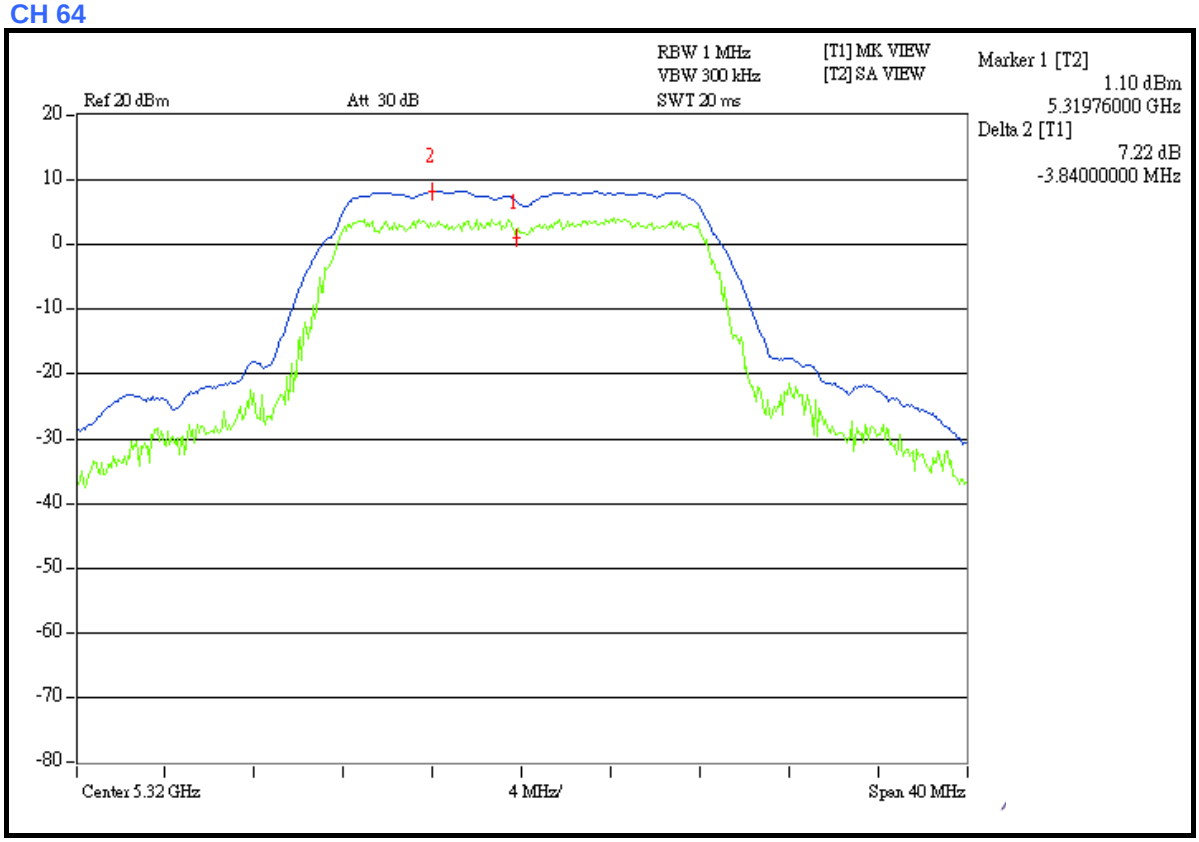
CH 52


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
3.67 dBm
5.25976000 GHz
Delta 2 [T1]
7.23 dB
-2.56000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.26 GHz
4 MHz/
Span 40 MHz

CH 60


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
0.44 dBm
5.29992000 GHz
Delta 2 [T1]
7.89 dB
-3.36000000 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

CH 64

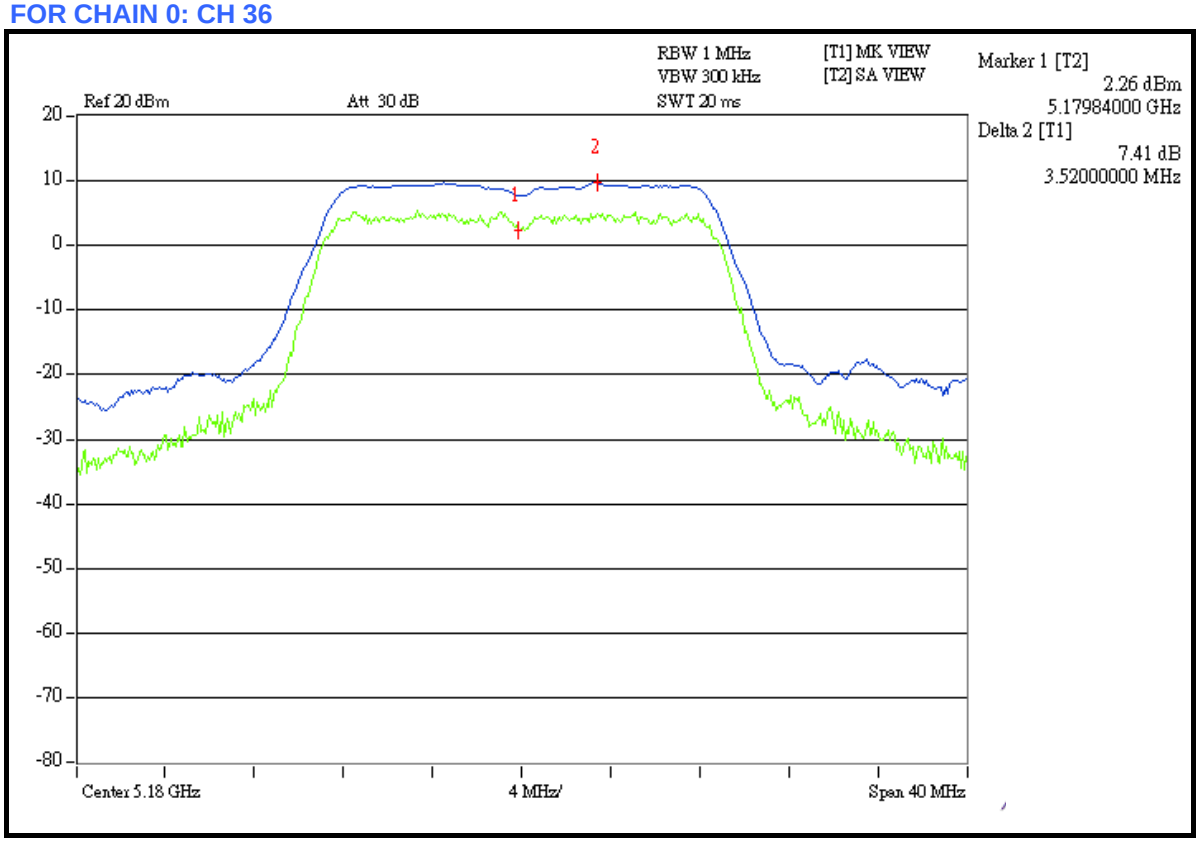

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
1.10 dBm
5.31976000 GHz
Delta 2 [T1]
7.22 dB
-3.84000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.32 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

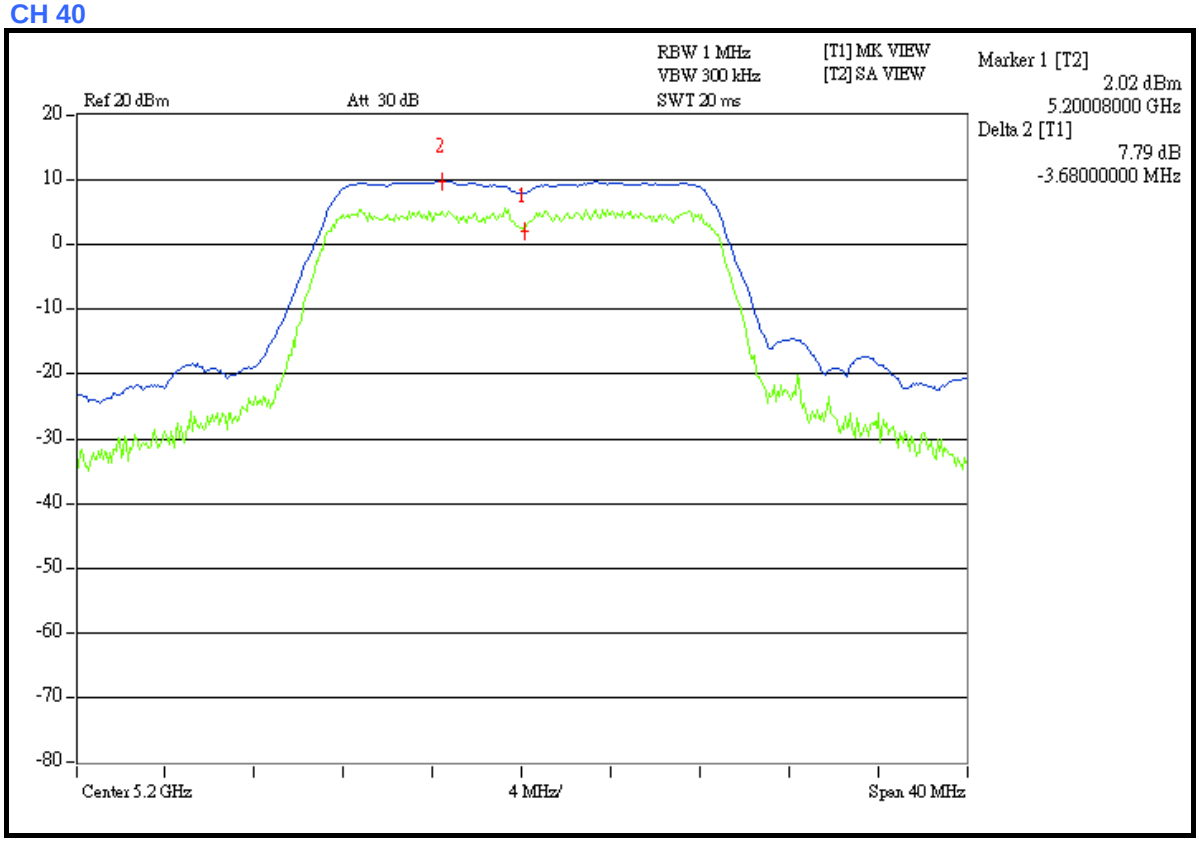
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
36	5180	7.41	7.94	13	PASS
40	5200	7.79	7.17	13	PASS
48	5240	7.65	7.84	13	PASS
52	5260	7.65	7.60	13	PASS
60	5300	7.85	8.09	13	PASS
64	5320	7.59	7.54	13	PASS

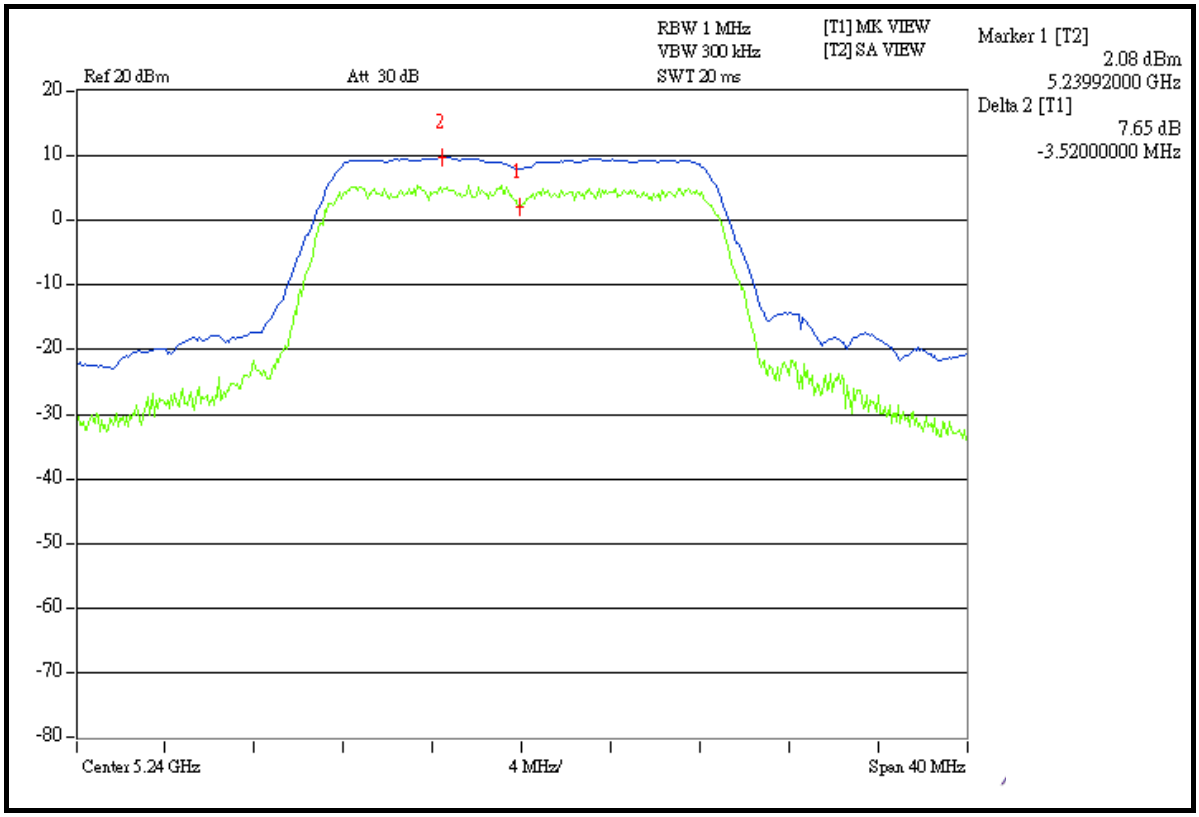
FOR CHAIN 0: CH 36



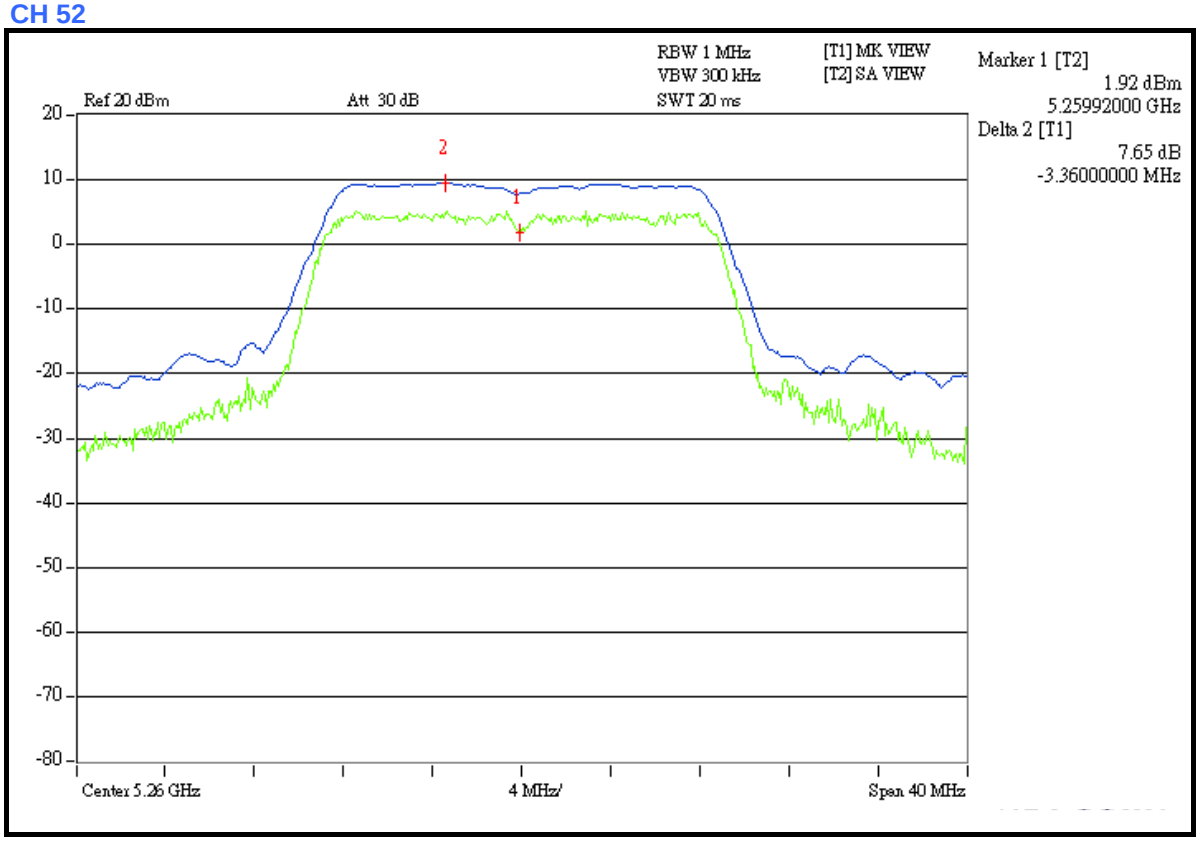
CH 40



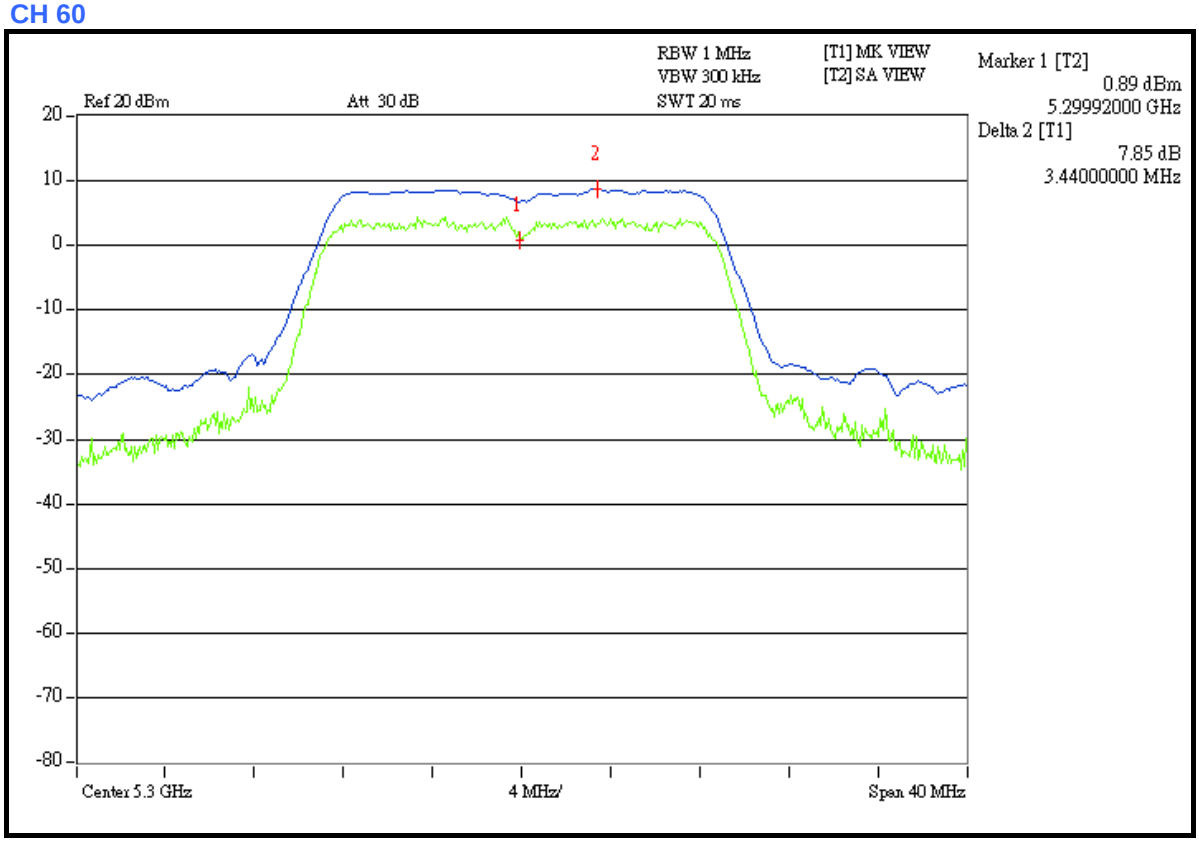
CH 48


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
2.08 dBm
5.23992000 GHz
Delta 2 [T1]
7.65 dB
-3.52000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.24 GHz
4 MHz/
Span 40 MHz

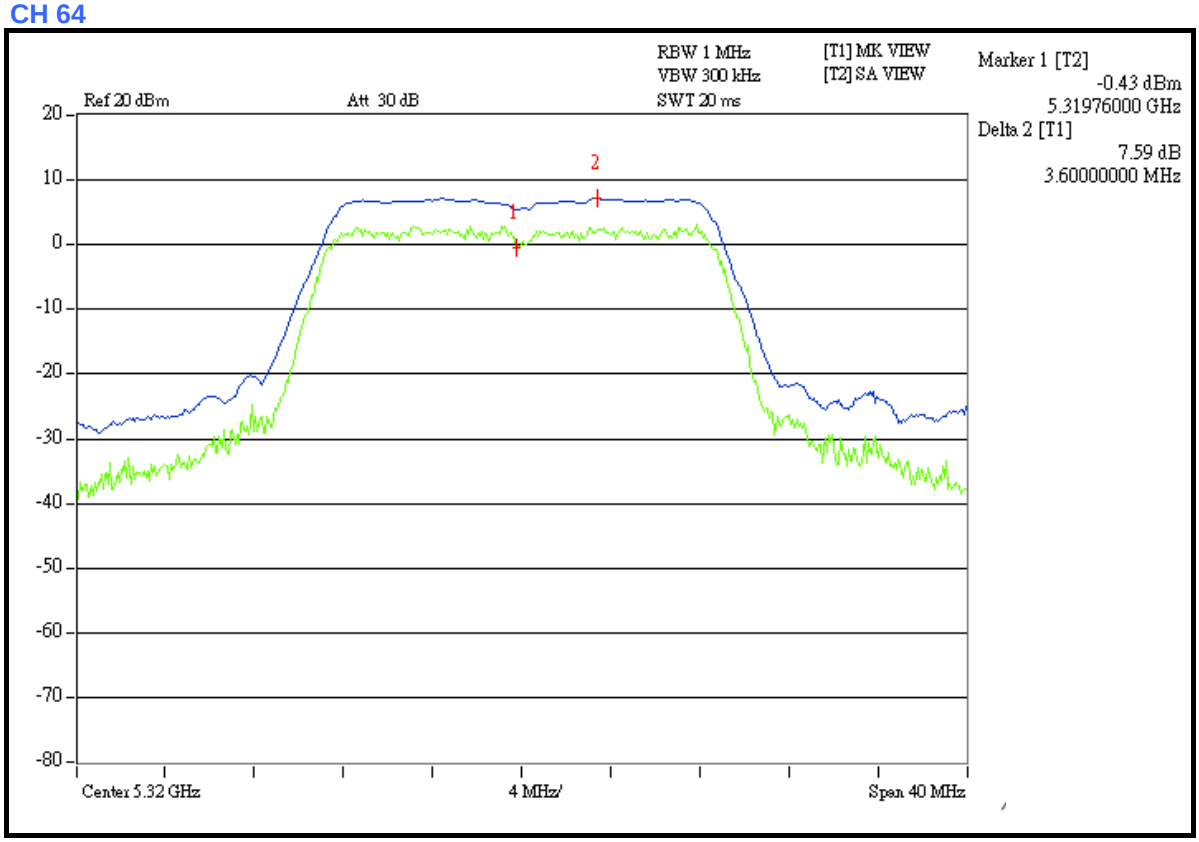
CH 52


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
1.92 dBm
5.25992000 GHz
Delta 2 [T1]
7.65 dB
-3.36000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.26 GHz
4 MHz/
Span 40 MHz

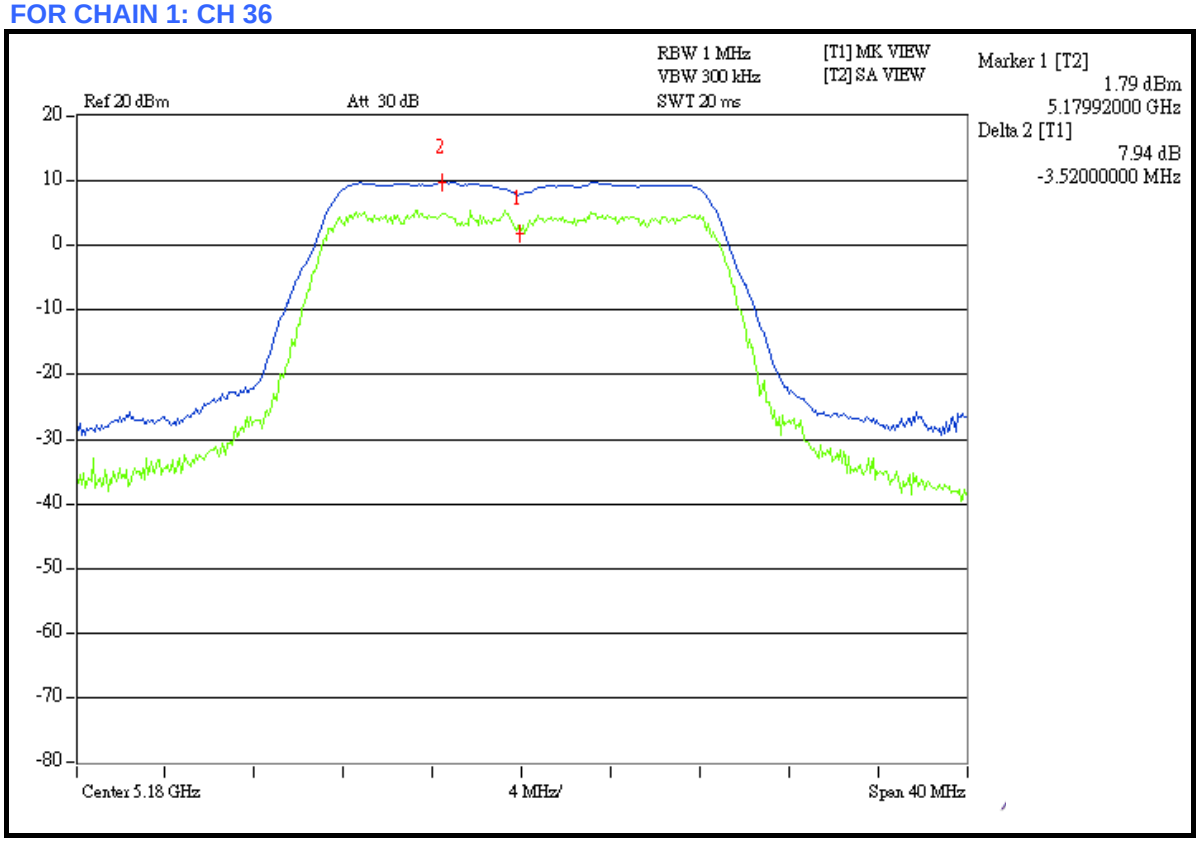
CH 60


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
0.89 dBm
5.29992000 GHz
Delta 2 [T1]
7.85 dB
3.44000000 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

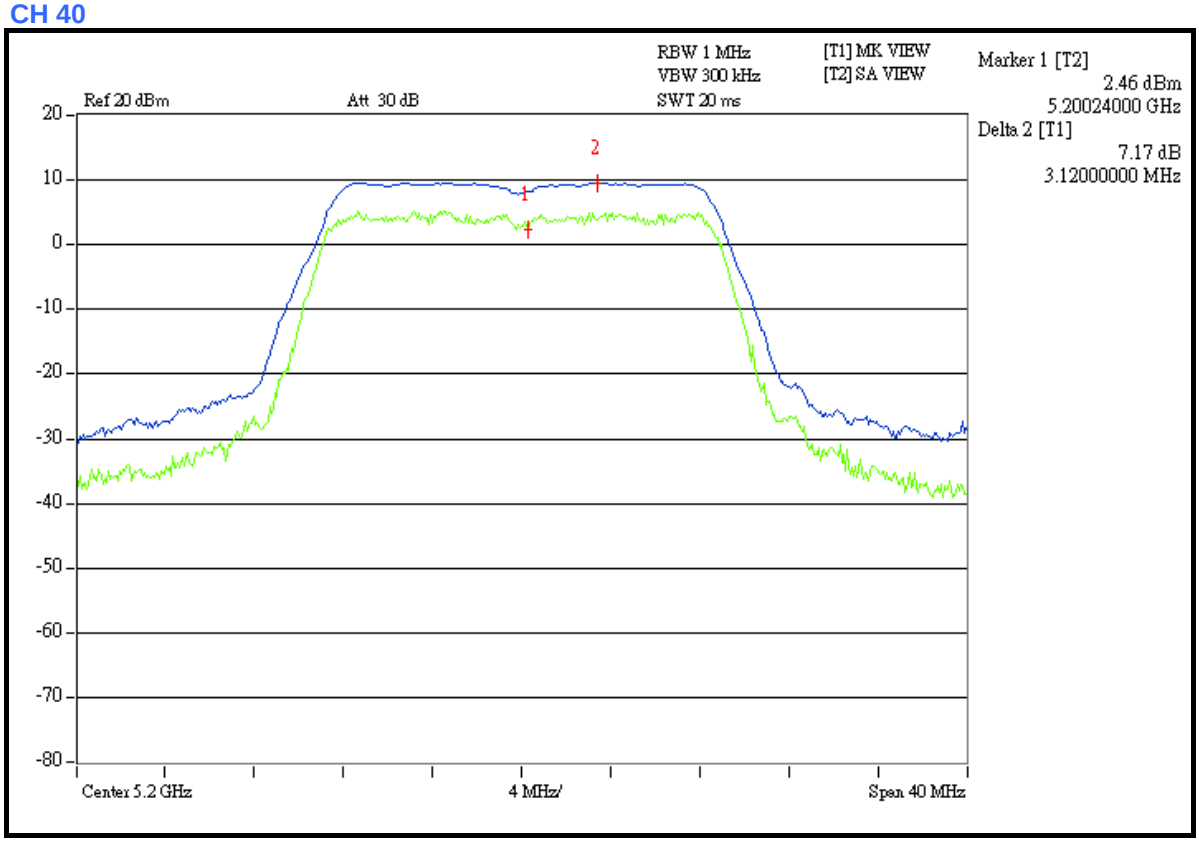
CH 64


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-0.43 dBm
5.31976000 GHz
Delta 2 [T1]
7.59 dB
3.60000000 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

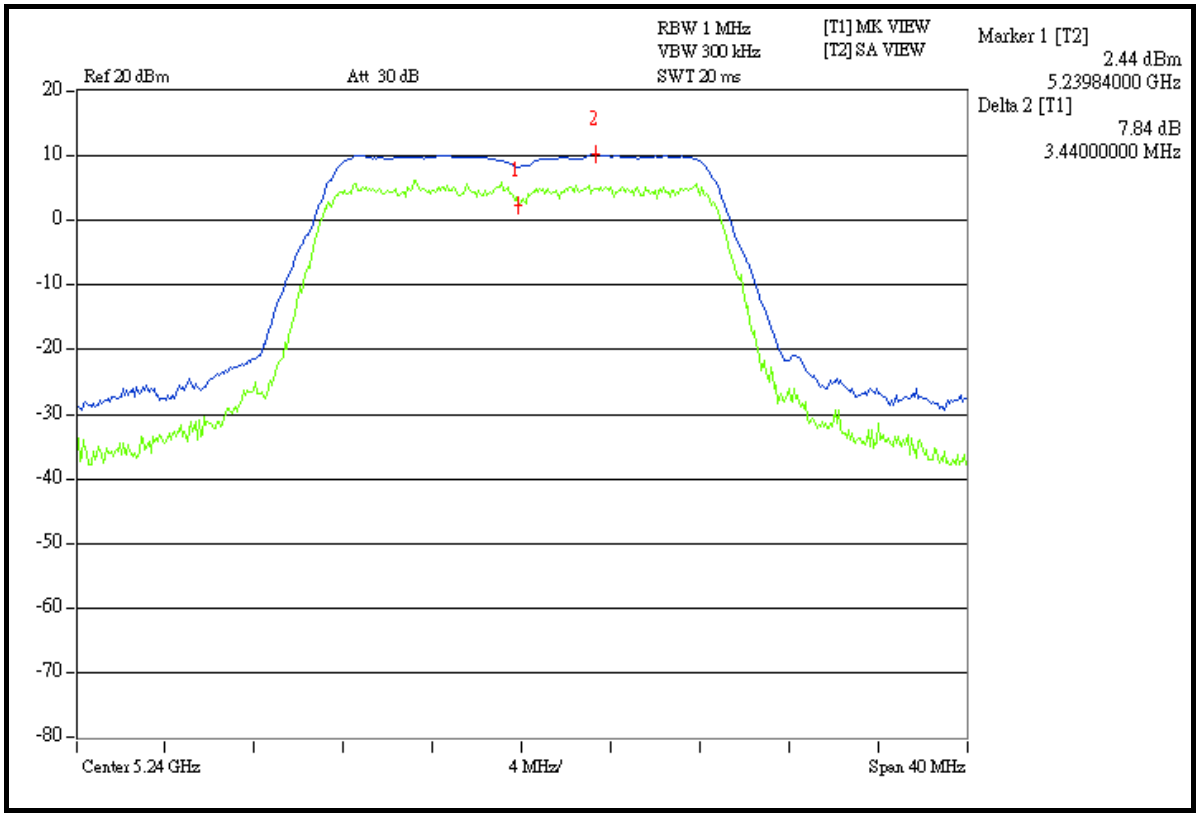
FOR CHAIN 1: CH 36



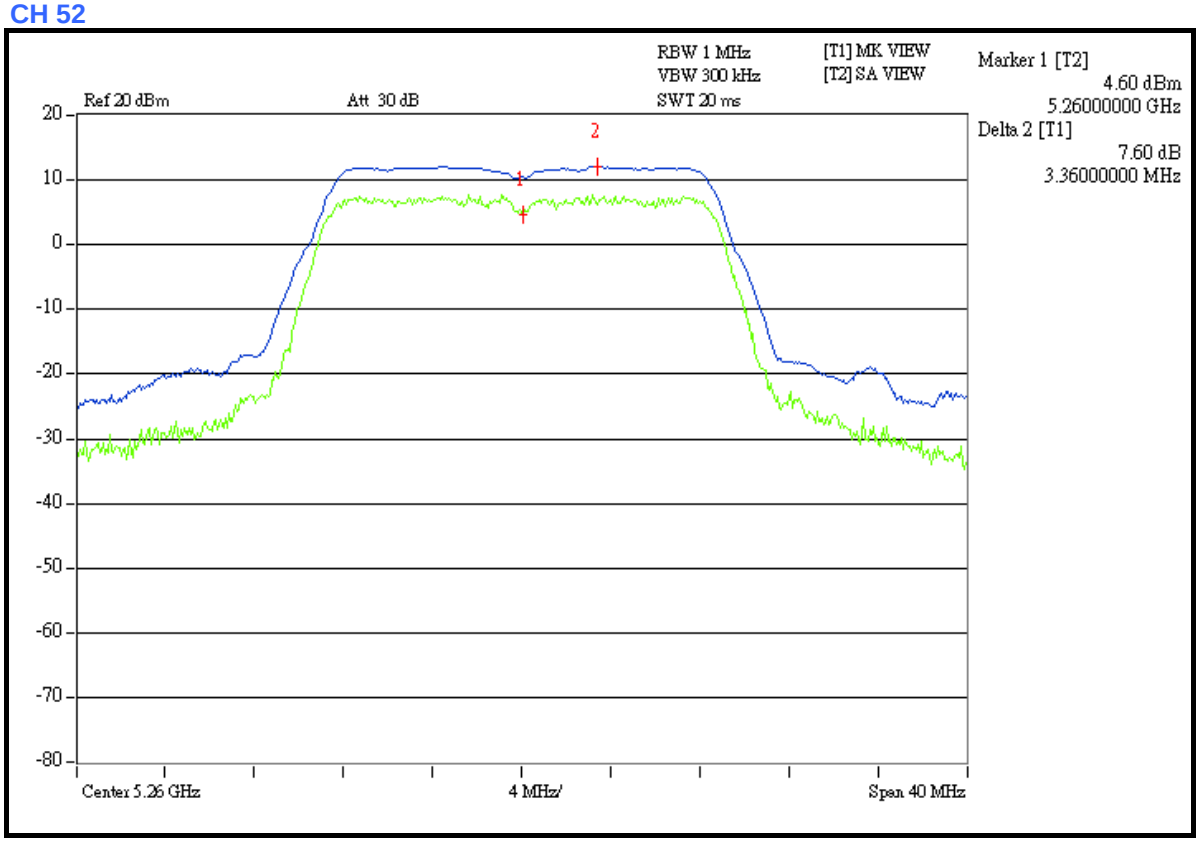
CH 40



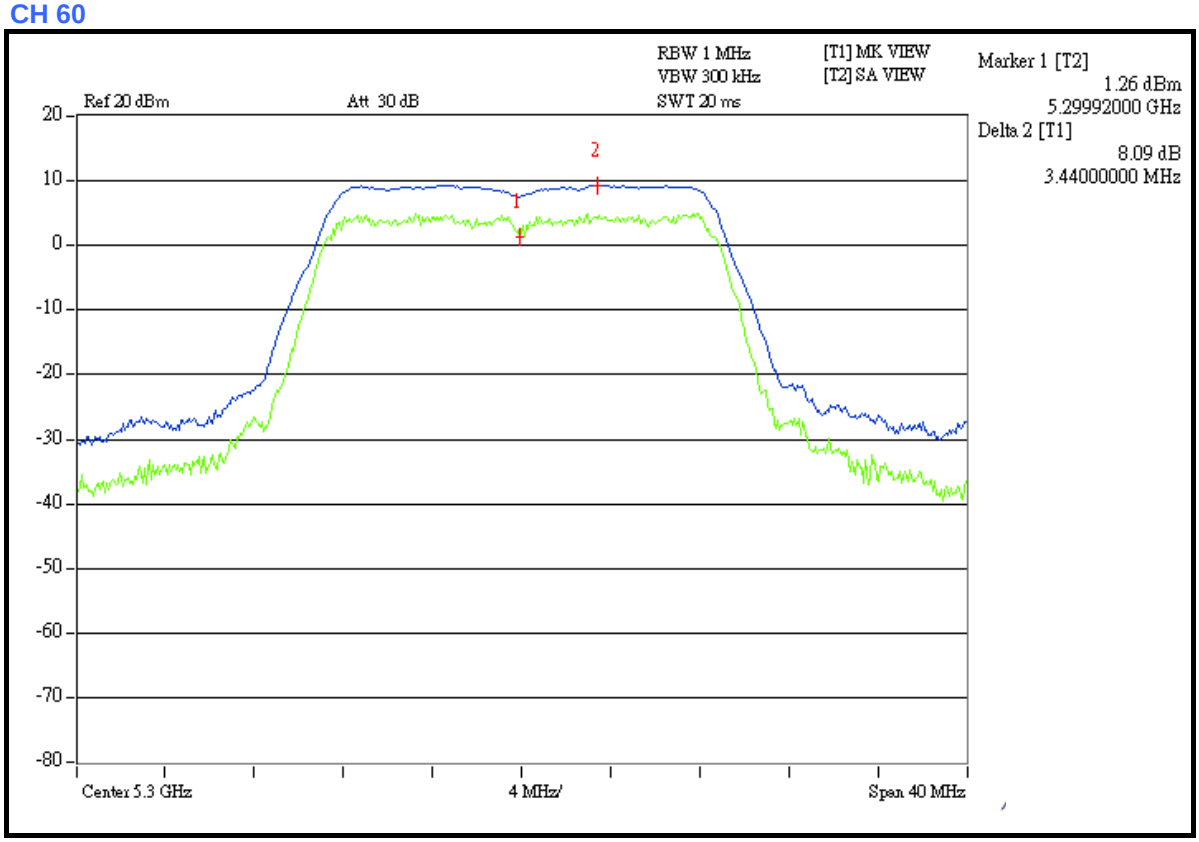
CH 48


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T2]
2.44 dBm
5.23984000 GHz
Delta 2 [T1]
7.84 dB
3.44000000 MHz
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.24 GHz
4 MHz/
Span 40 MHz

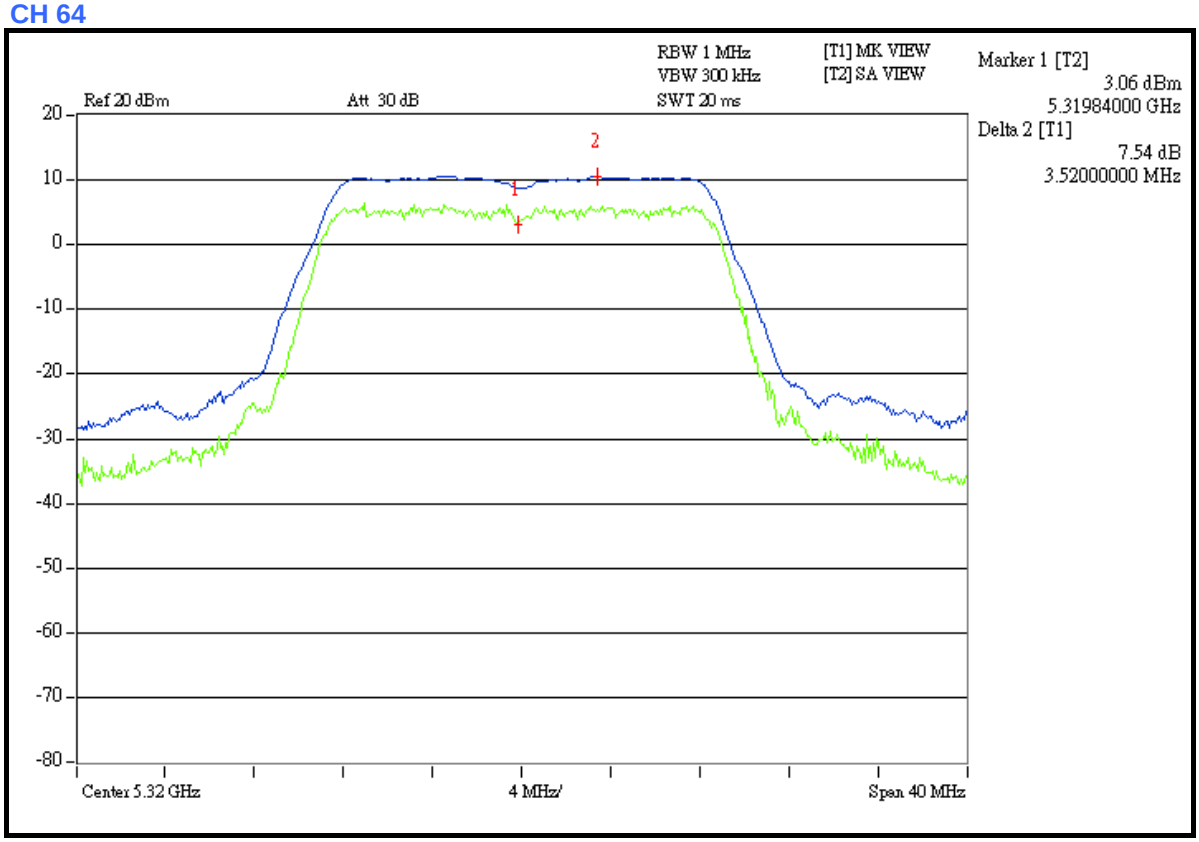
CH 52


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T2]
4.60 dBm
5.26000000 GHz
Delta 2 [T1]
7.60 dB
3.36000000 MHz
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.26 GHz
4 MHz/
Span 40 MHz

CH 60


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
1.26 dBm
5.29992000 GHz
Delta 2 [T1]
8.09 dB
3.44000000 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

CH 64

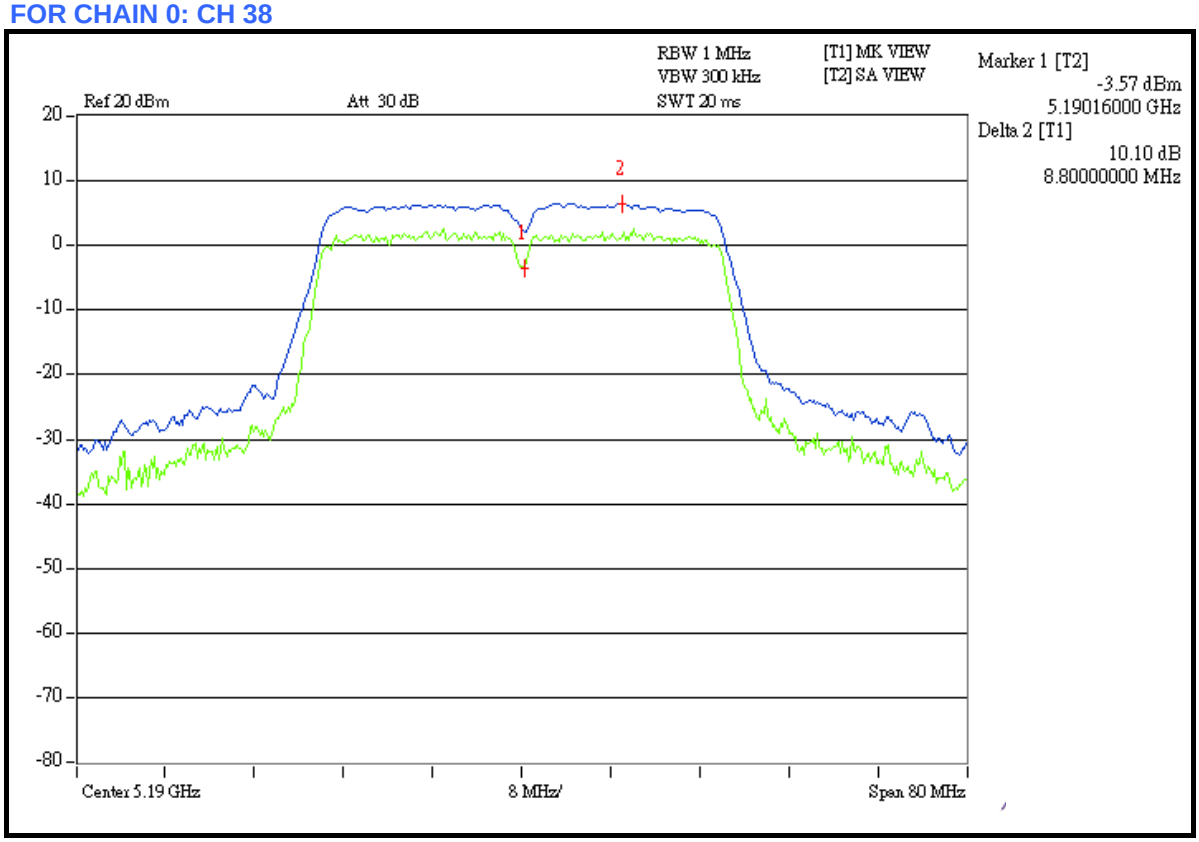

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
3.06 dBm
5.31984000 GHz
Delta 2 [T1]
7.54 dB
3.52000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.32 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

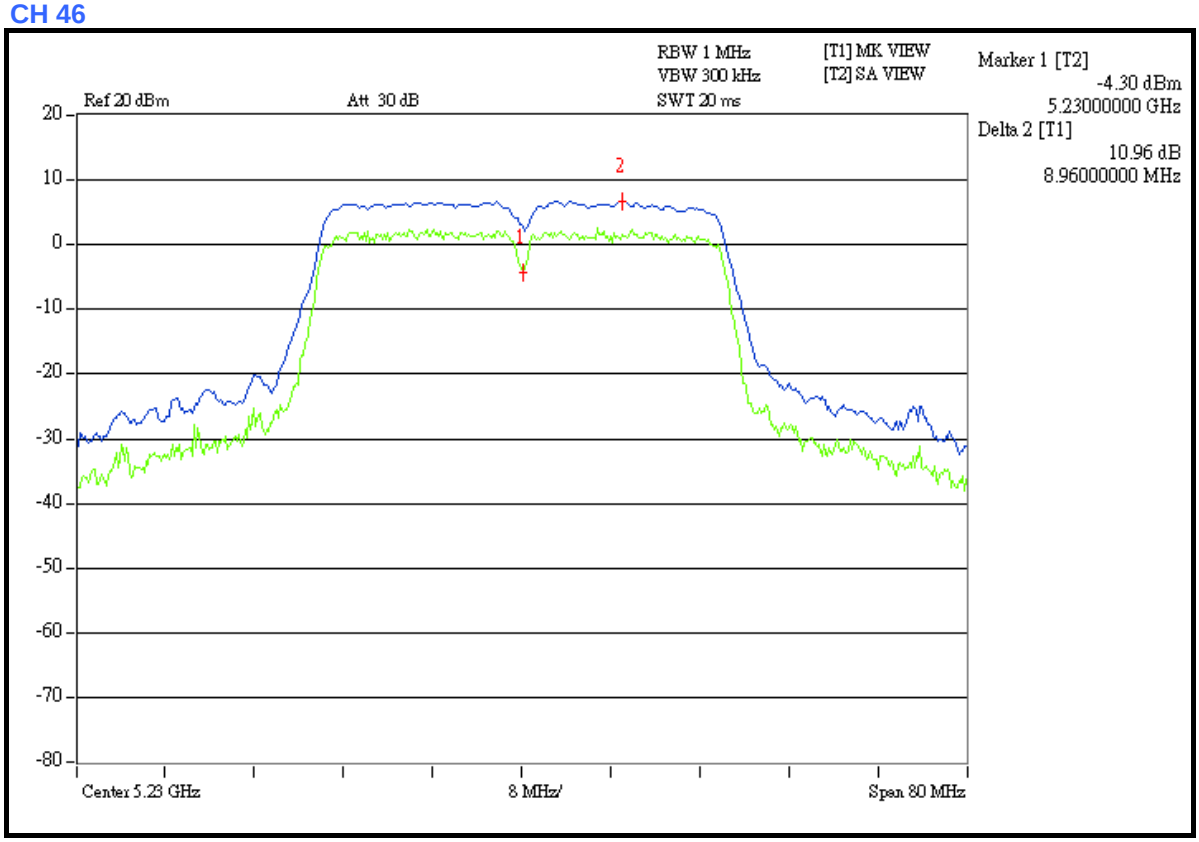
MODULATION TYPE	BPSK	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	TESTED BY	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
38	5190	10.10	9.29	13	PASS
46	5230	10.96	10.07	13	PASS
54	5270	9.42	9.75	13	PASS
62	5310	10.51	9.69	13	PASS

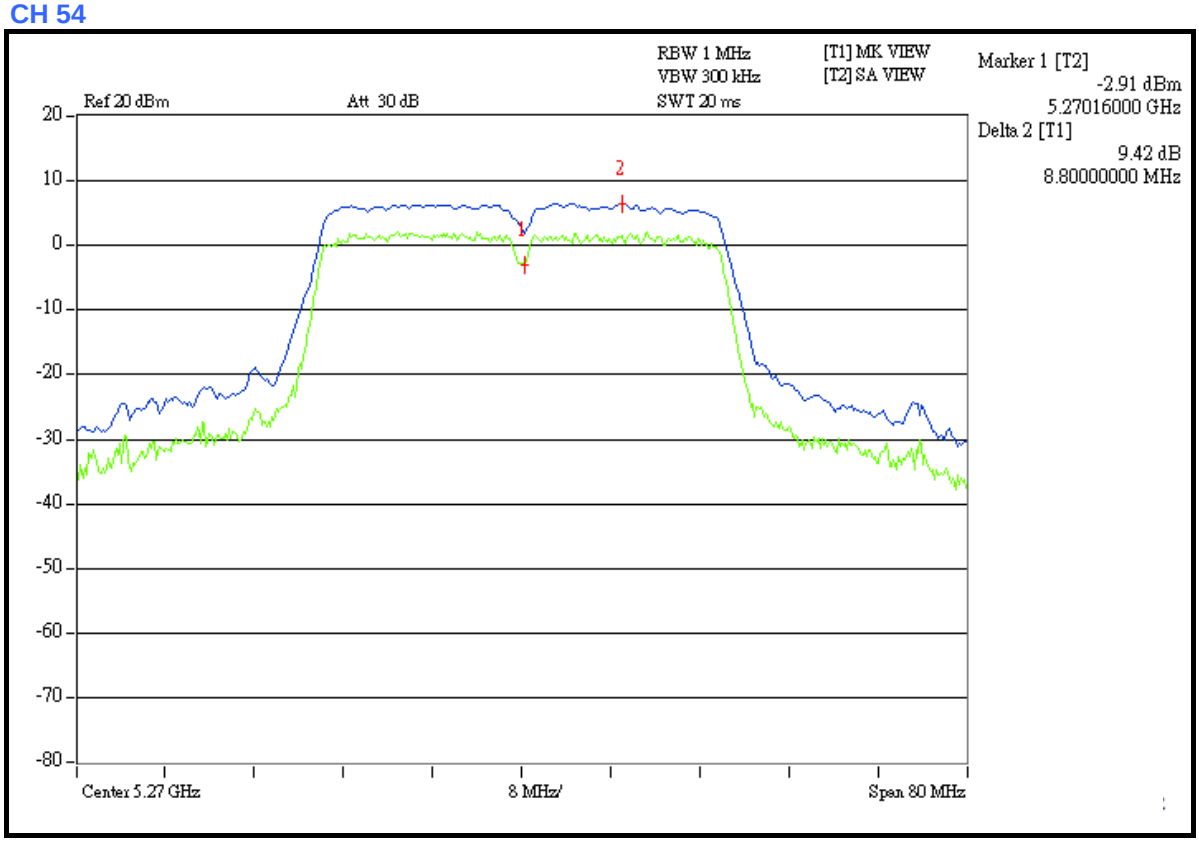
FOR CHAIN 0: CH 38



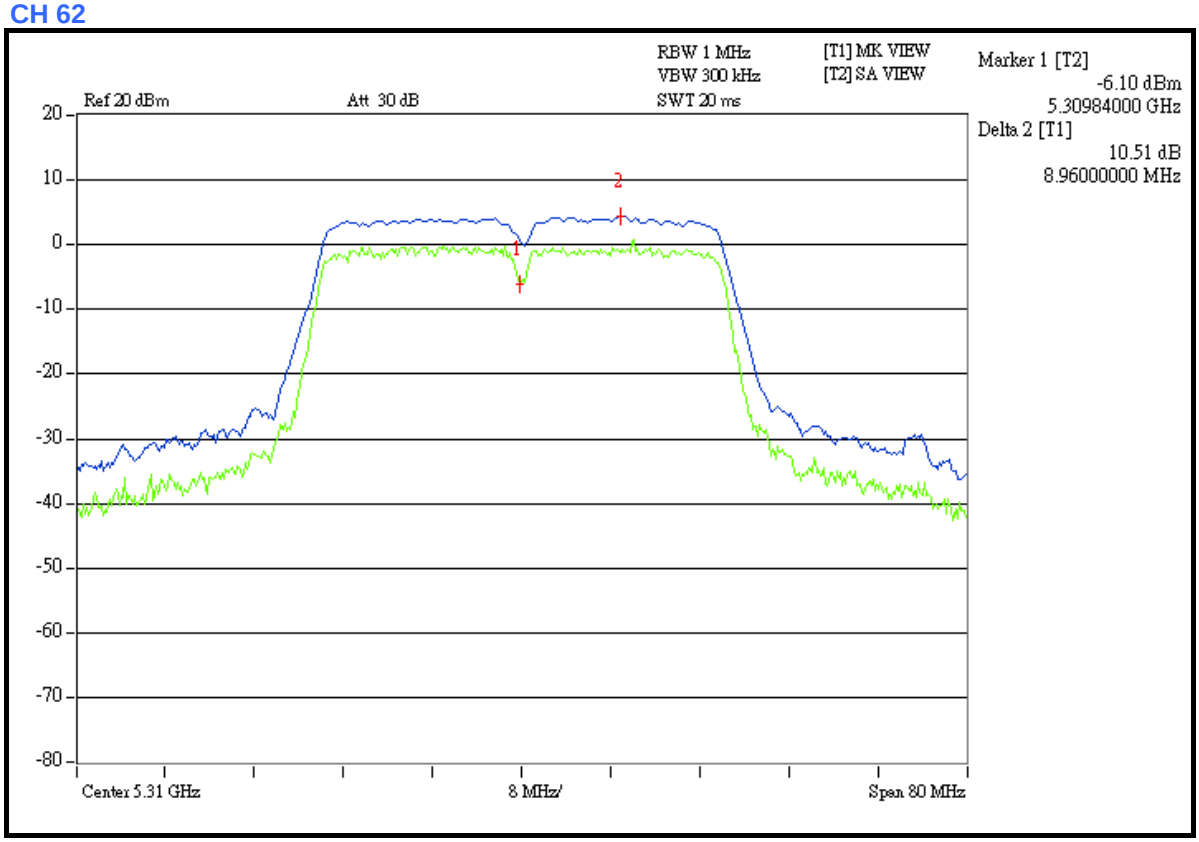
CH 46



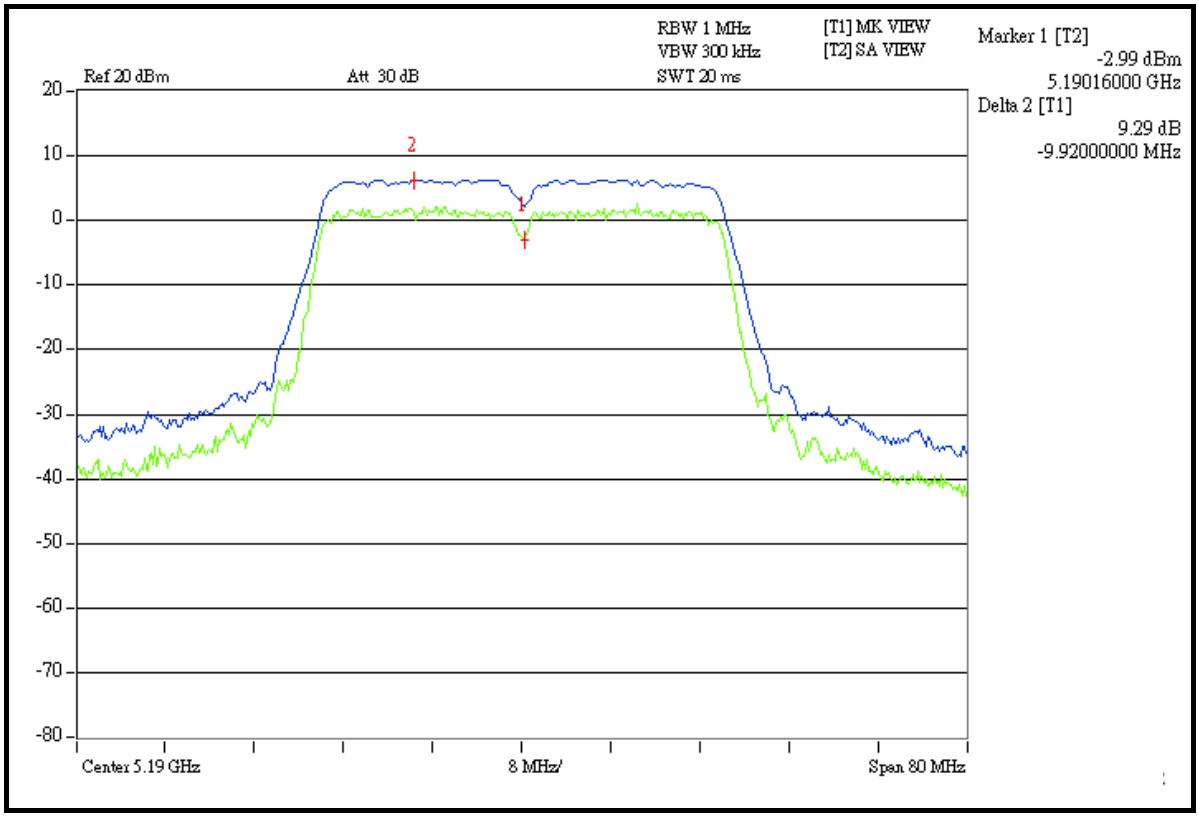
CH 54


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-2.91 dBm
5.27016000 GHz
Delta 2 [T1]
9.42 dB
8.80000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.27 GHz
8 MHz/
Span 80 MHz

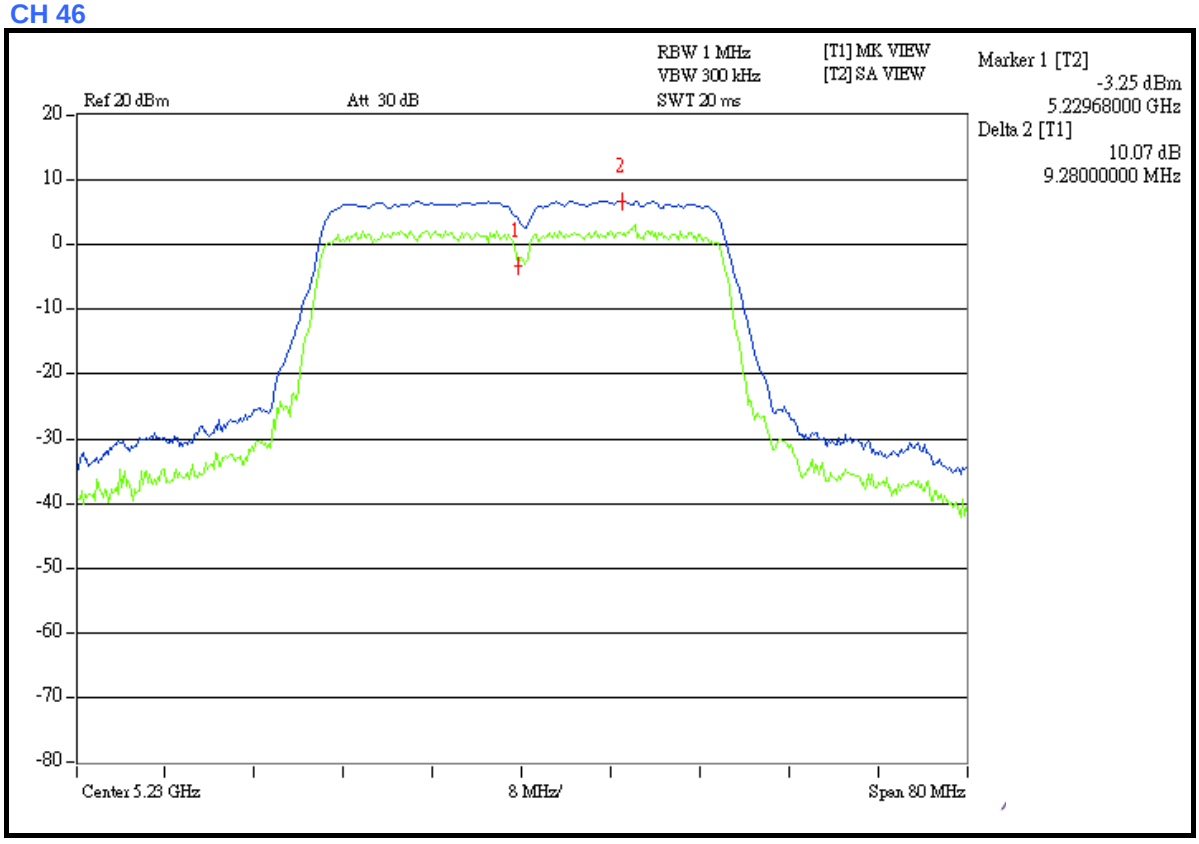
CH 62


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-6.10 dBm
5.30984000 GHz
Delta 2 [T1]
10.51 dB
8.96000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.31 GHz
8 MHz/
Span 80 MHz

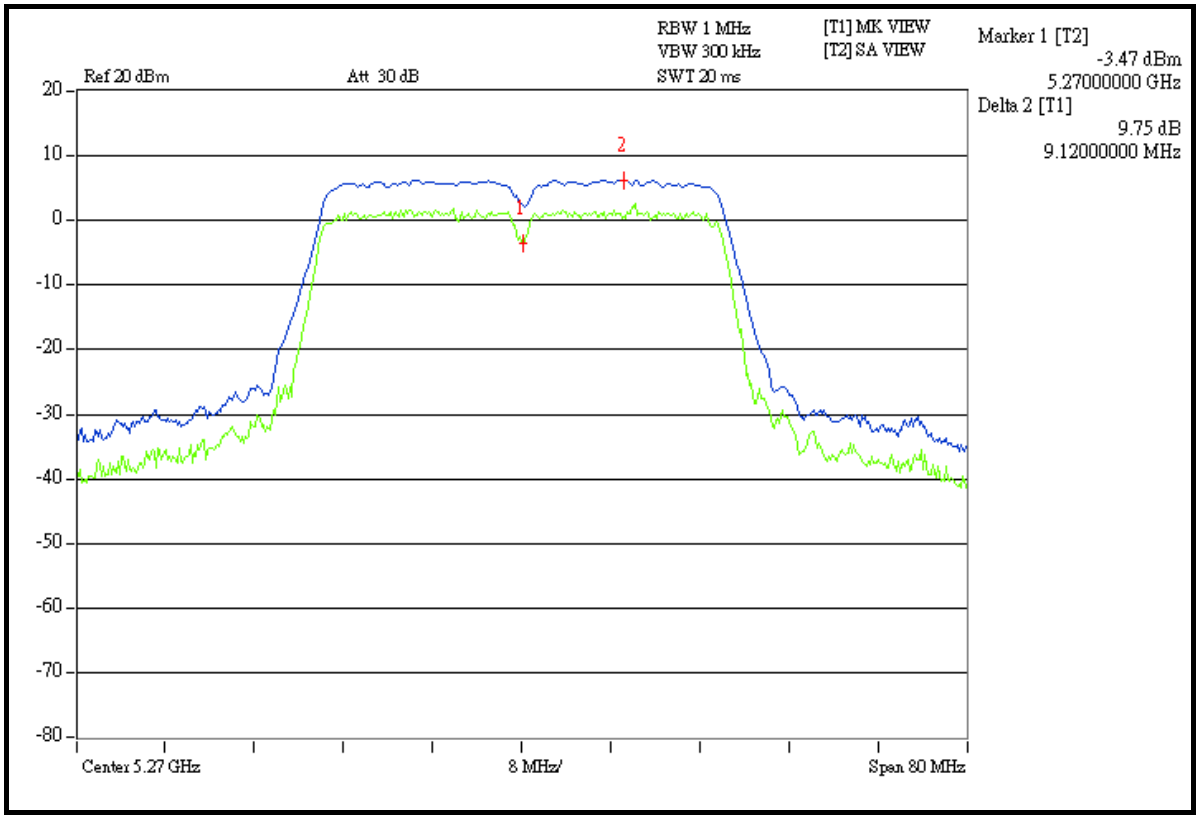
FOR CHAIN 1: CH 38



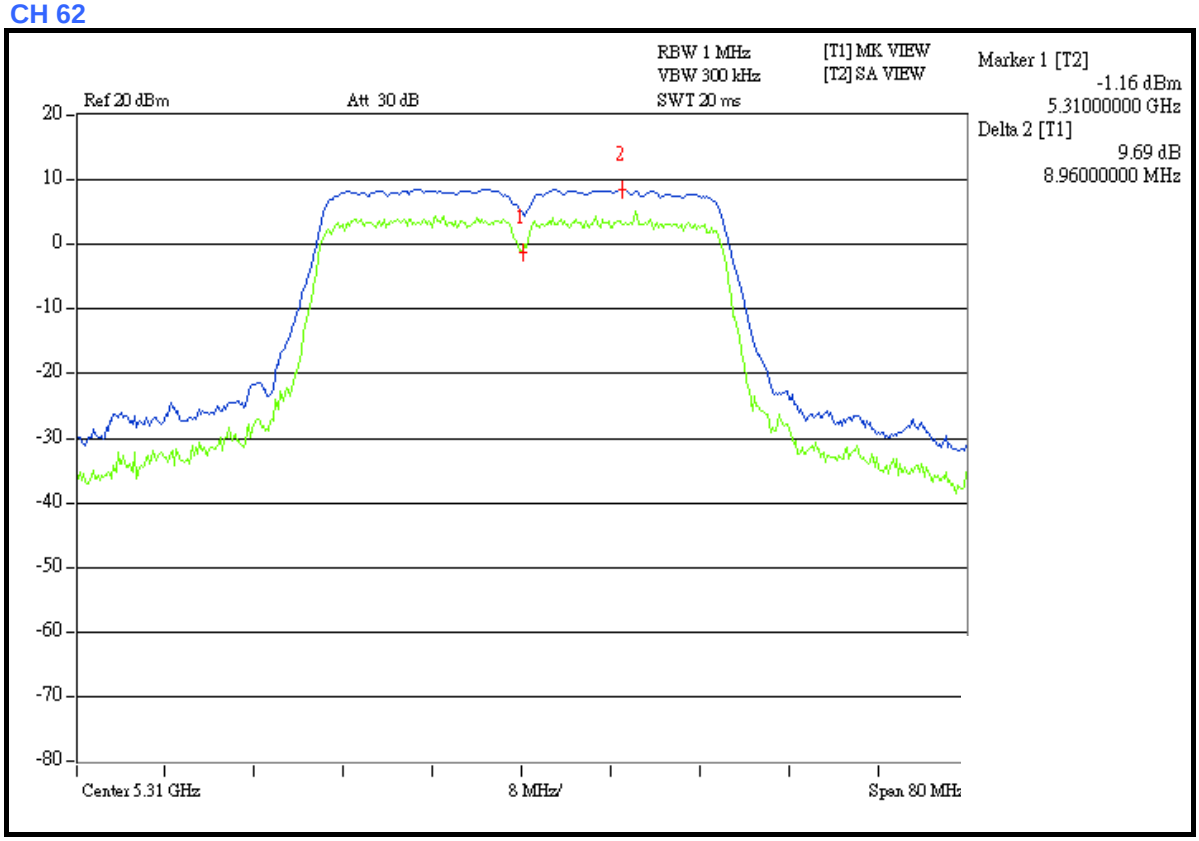
CH 46



CH 54


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-3.47 dBm
5.27000000 GHz
Delta 2 [T1]
9.75 dB
9.12000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.27 GHz
8 MHz/
Span 80 MHz

CH 62


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-1.16 dBm
5.31000000 GHz
Delta 2 [T1]
9.69 dB
8.96000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.31 GHz
8 MHz/
Span 80 MHz

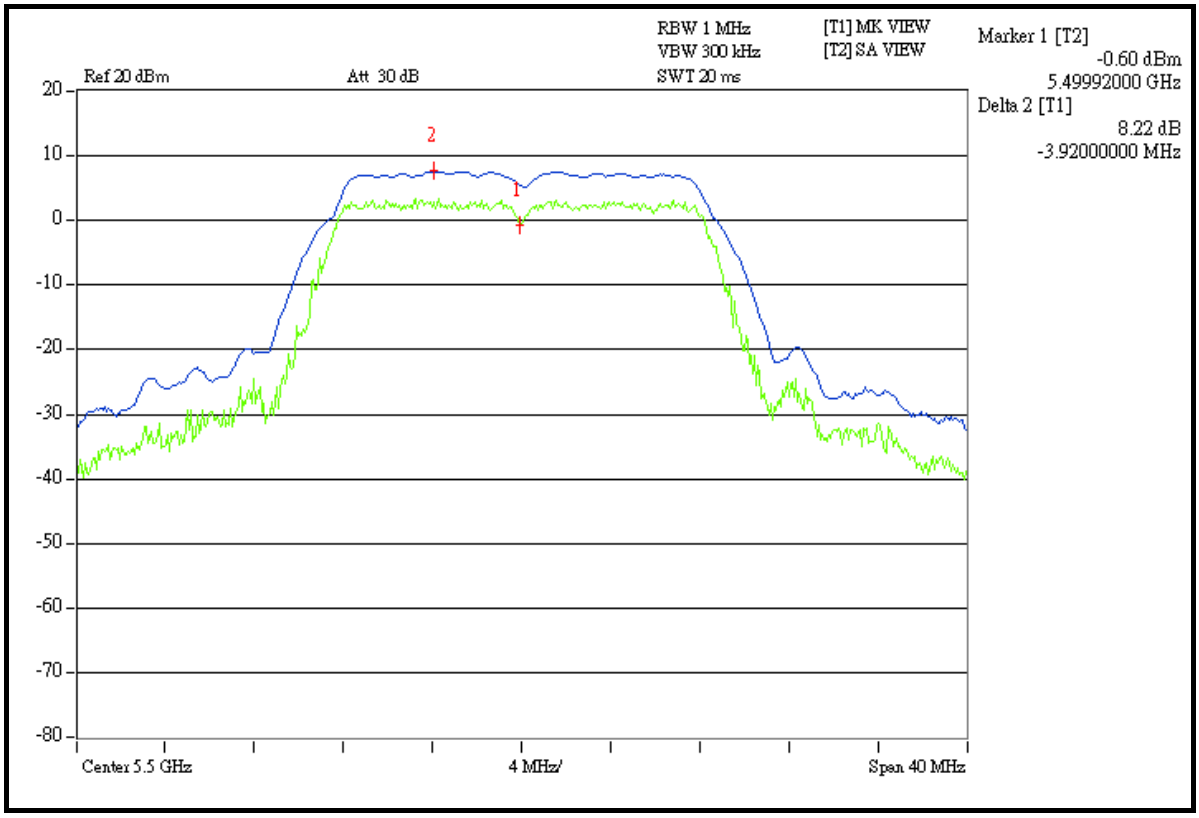
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

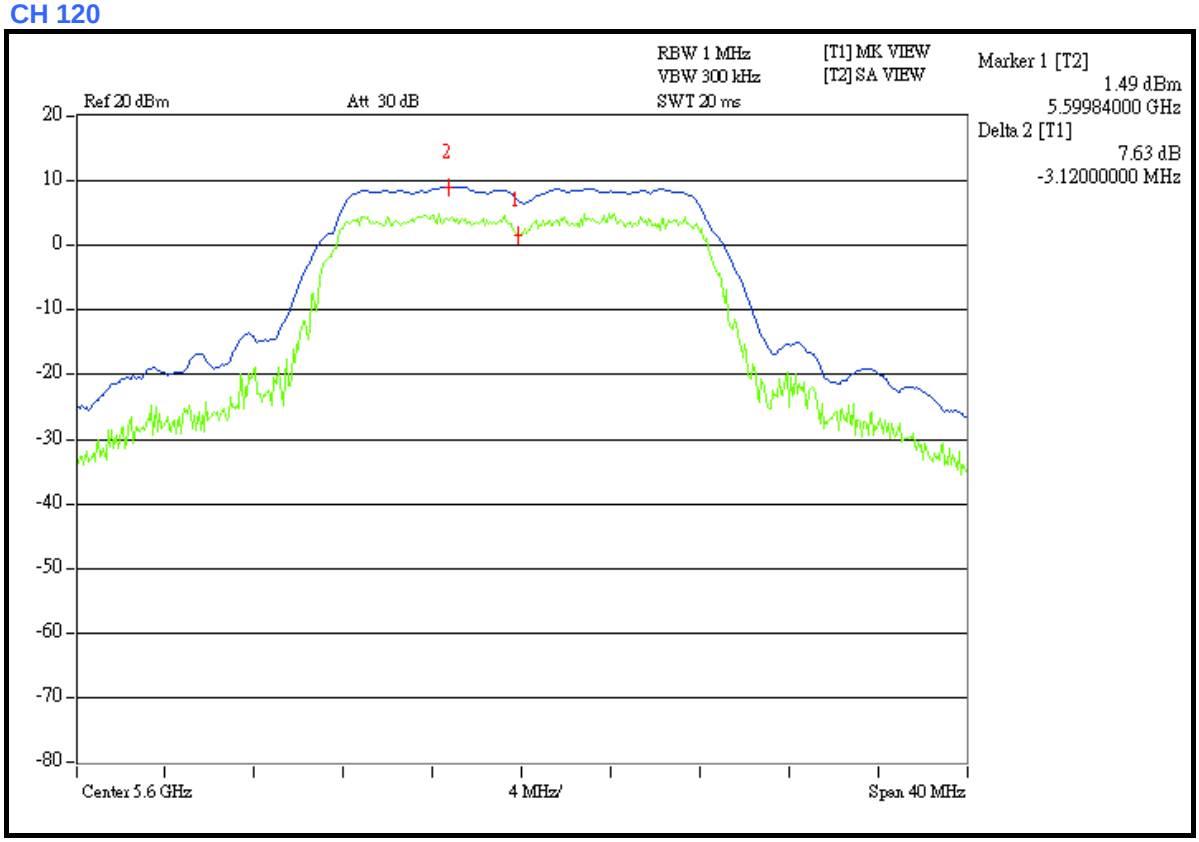
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS / FAIL
100	5500	8.22	13	PASS
120	5600	7.63	13	PASS
140	5700	7.33	13	PASS

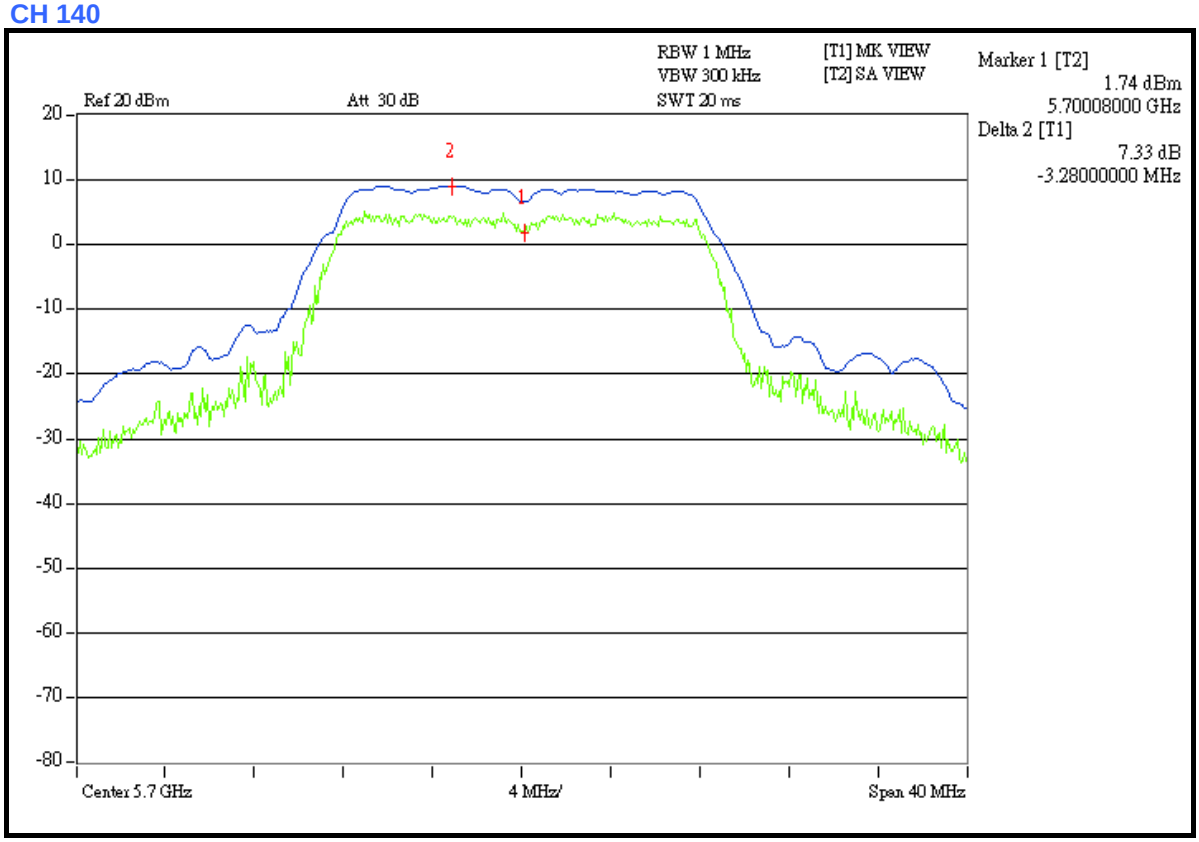
CH 100



CH 120


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
1.49 dBm
5.59984000 GHz
Delta 2 [T1]
7.63 dB
-3.12000000 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

CH 140

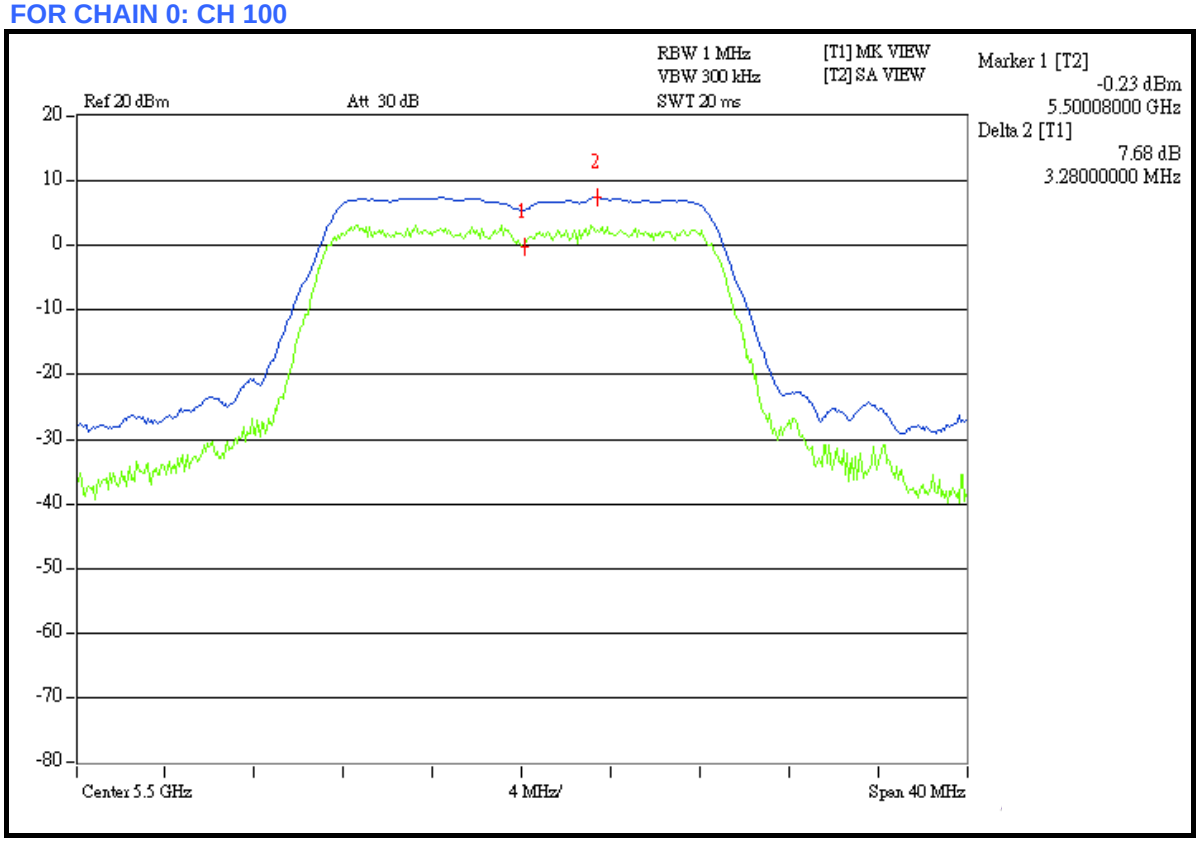

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
1.74 dBm
5.70008000 GHz
Delta 2 [T1]
7.33 dB
-3.28000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.7 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

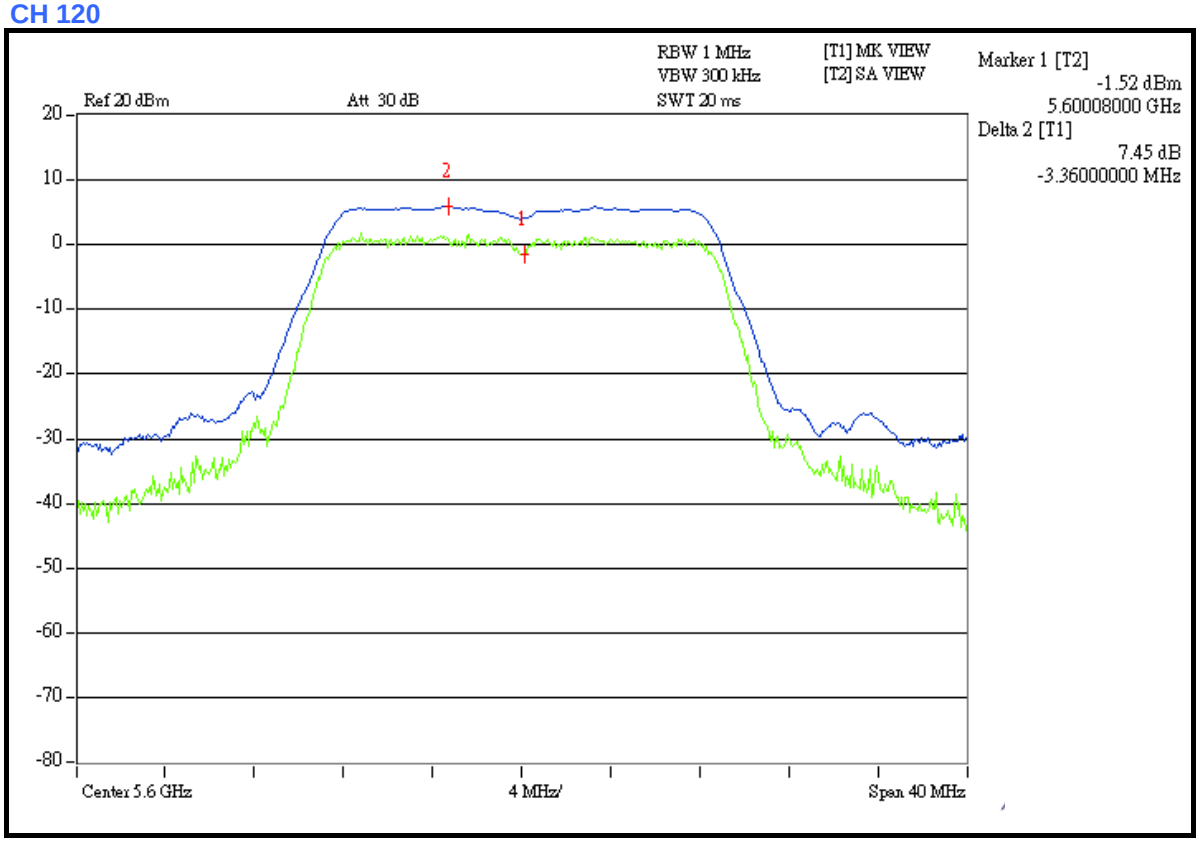
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
100	5500	7.68	7.57	13	PASS
120	5600	7.45	7.61	13	PASS
140	5700	8.12	7.82	13	PASS

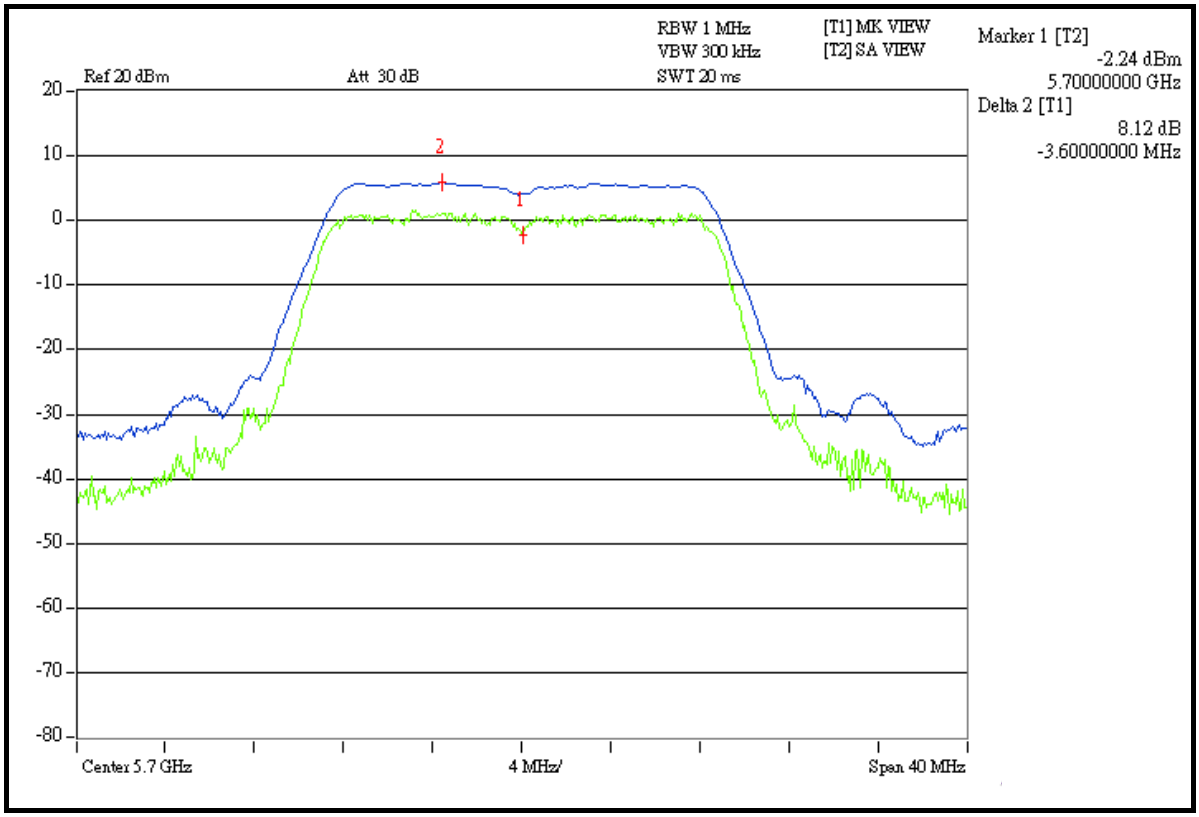
FOR CHAIN 0: CH 100



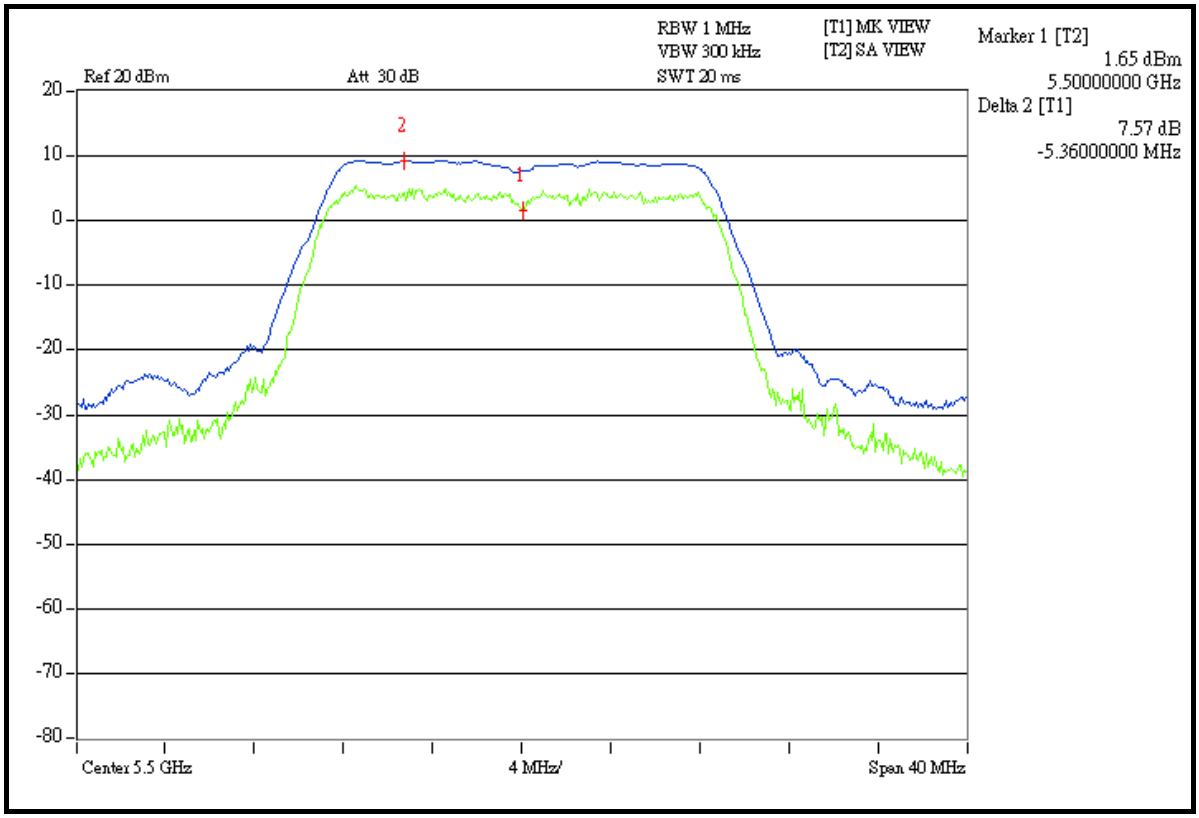
CH 120



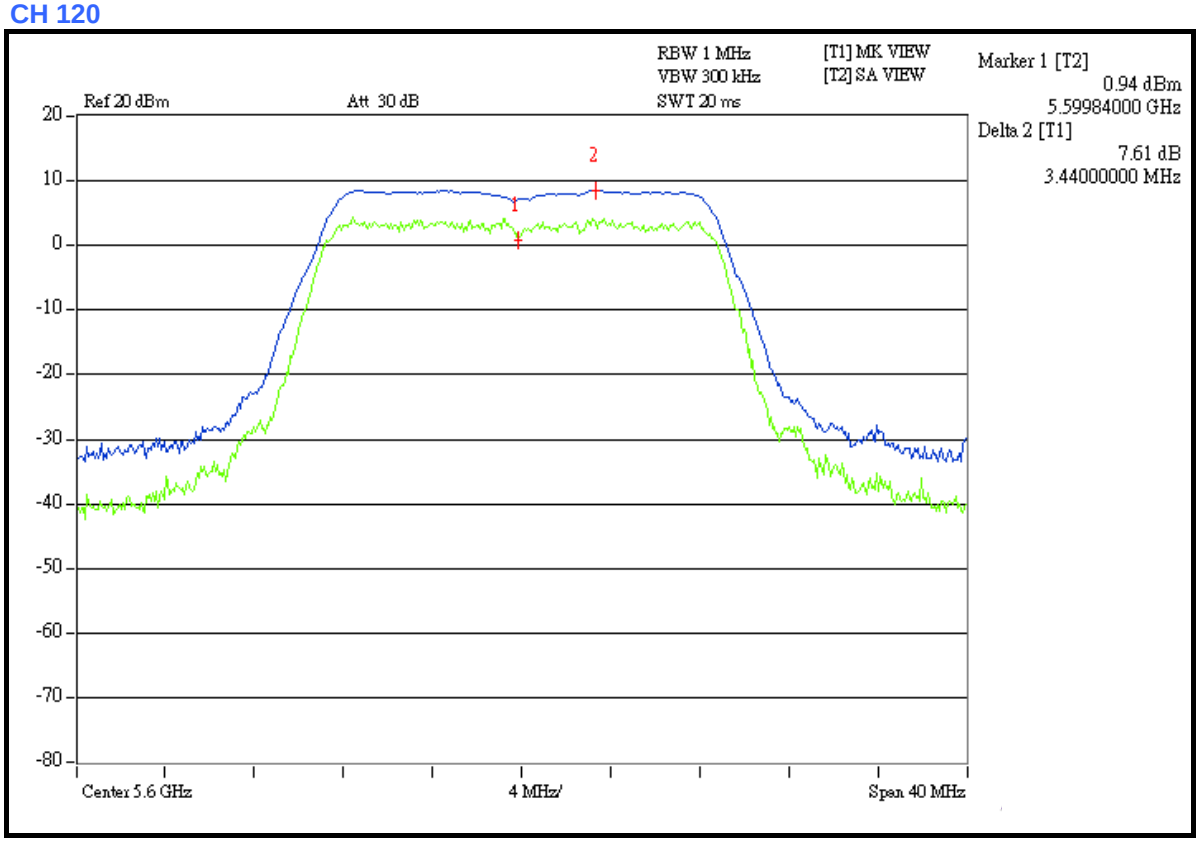
CH 140



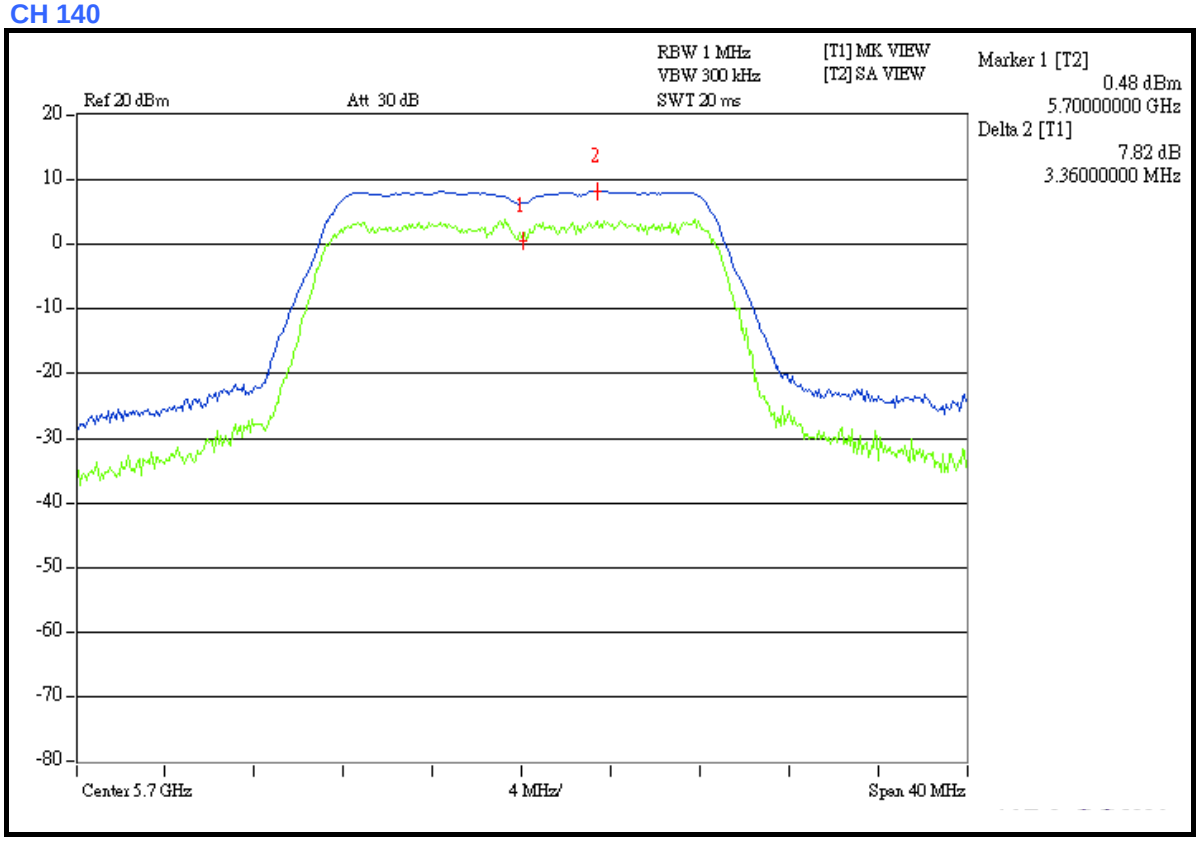
FOR CHAIN 1: CH 100



CH 120


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
0.94 dBm
5.59984000 GHz
Delta 2 [T1]
7.61 dB
3.44000000 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

CH 140

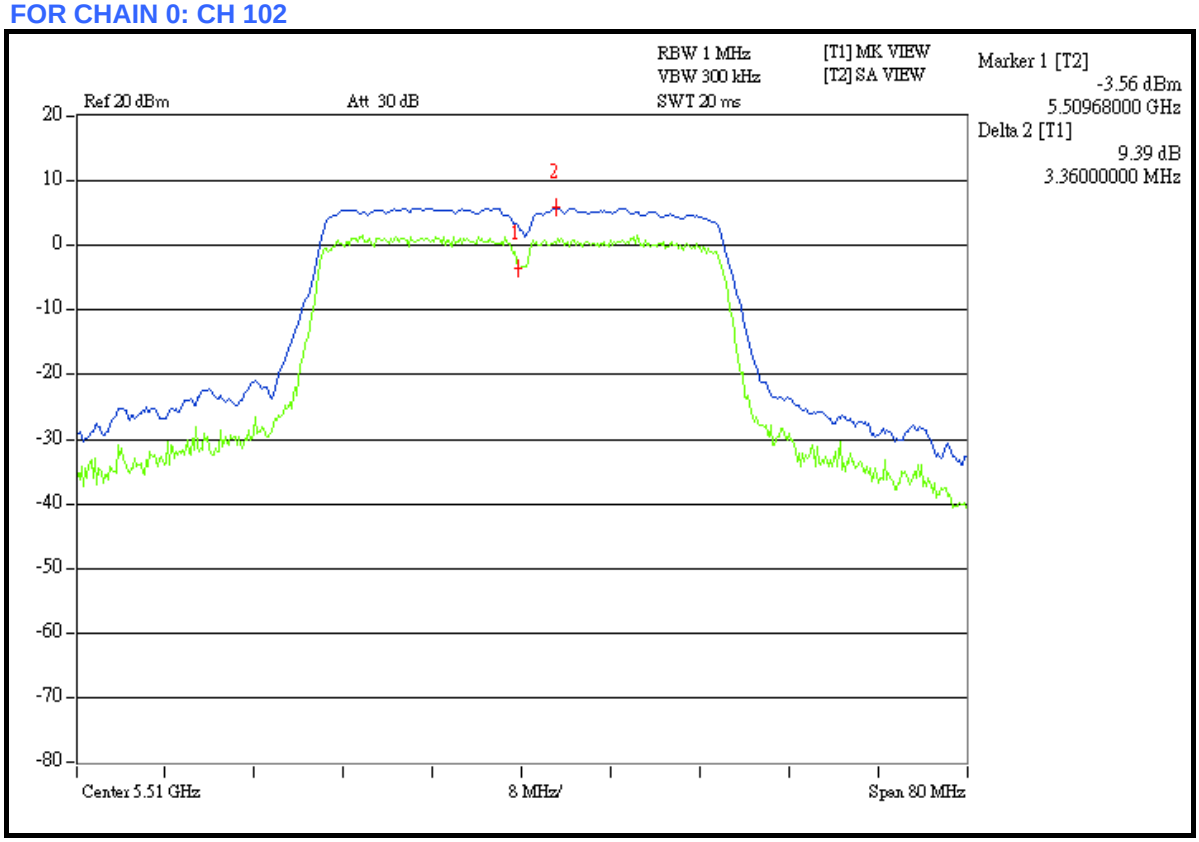

RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
0.48 dBm
5.70000000 GHz
Delta 2 [T1]
7.82 dB
3.36000000 MHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 5.7 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

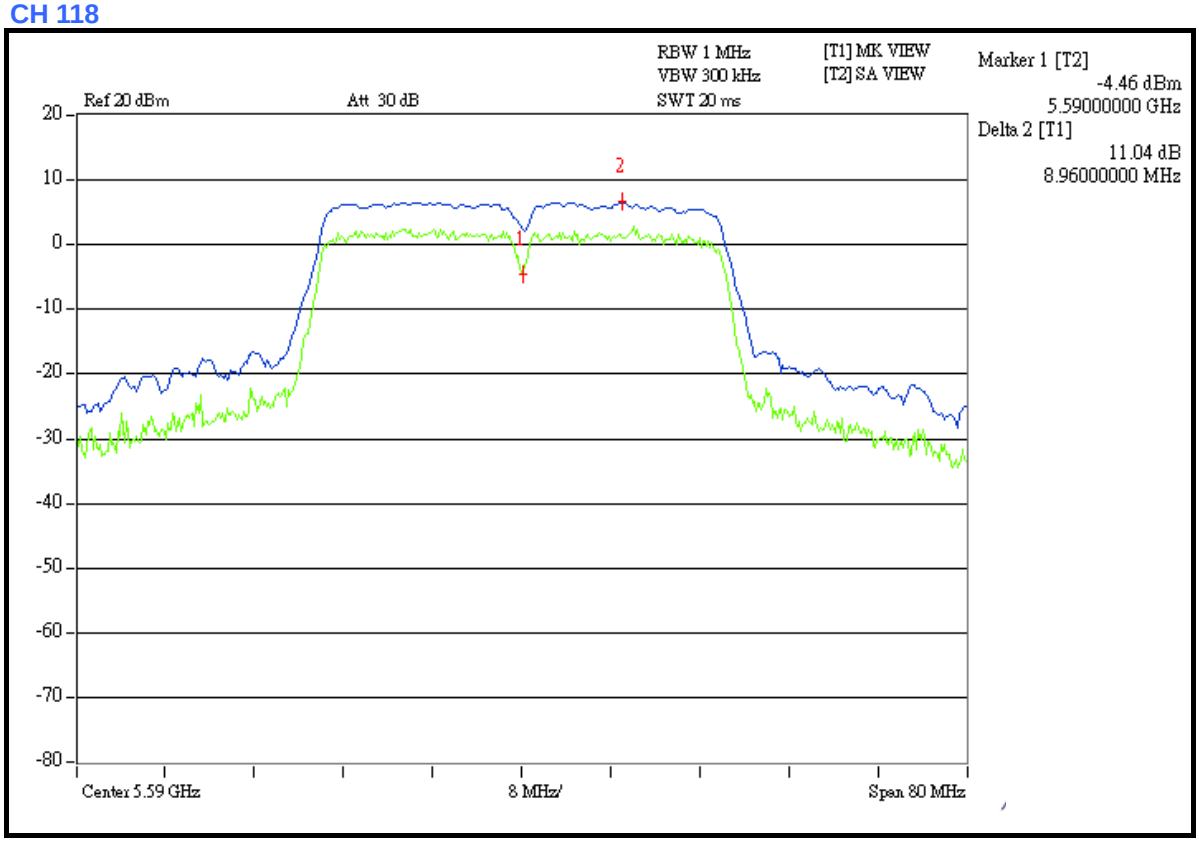
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1		
102	5510	9.39	10.02	13	PASS
118	5590	11.04	10.69	13	PASS
134	5670	10.01	10.05	13	PASS

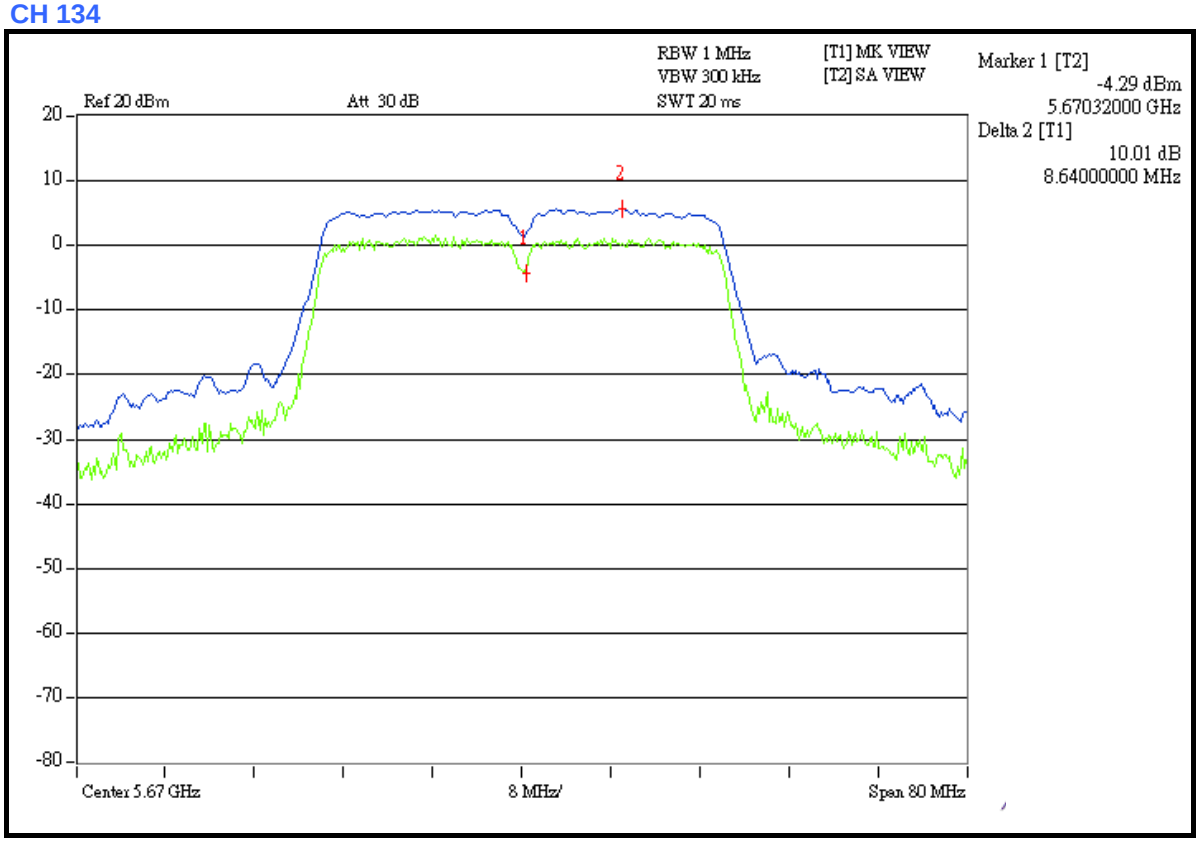
FOR CHAIN 0: CH 102



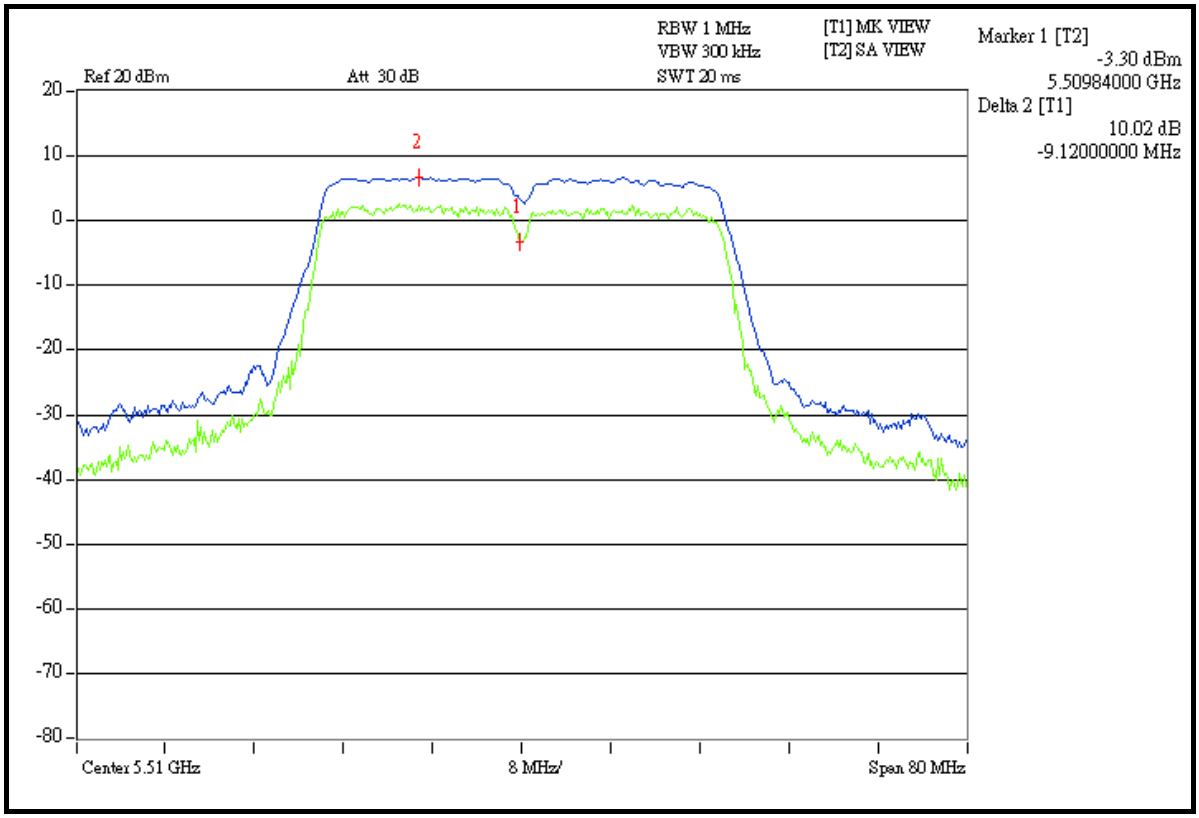
CH 118



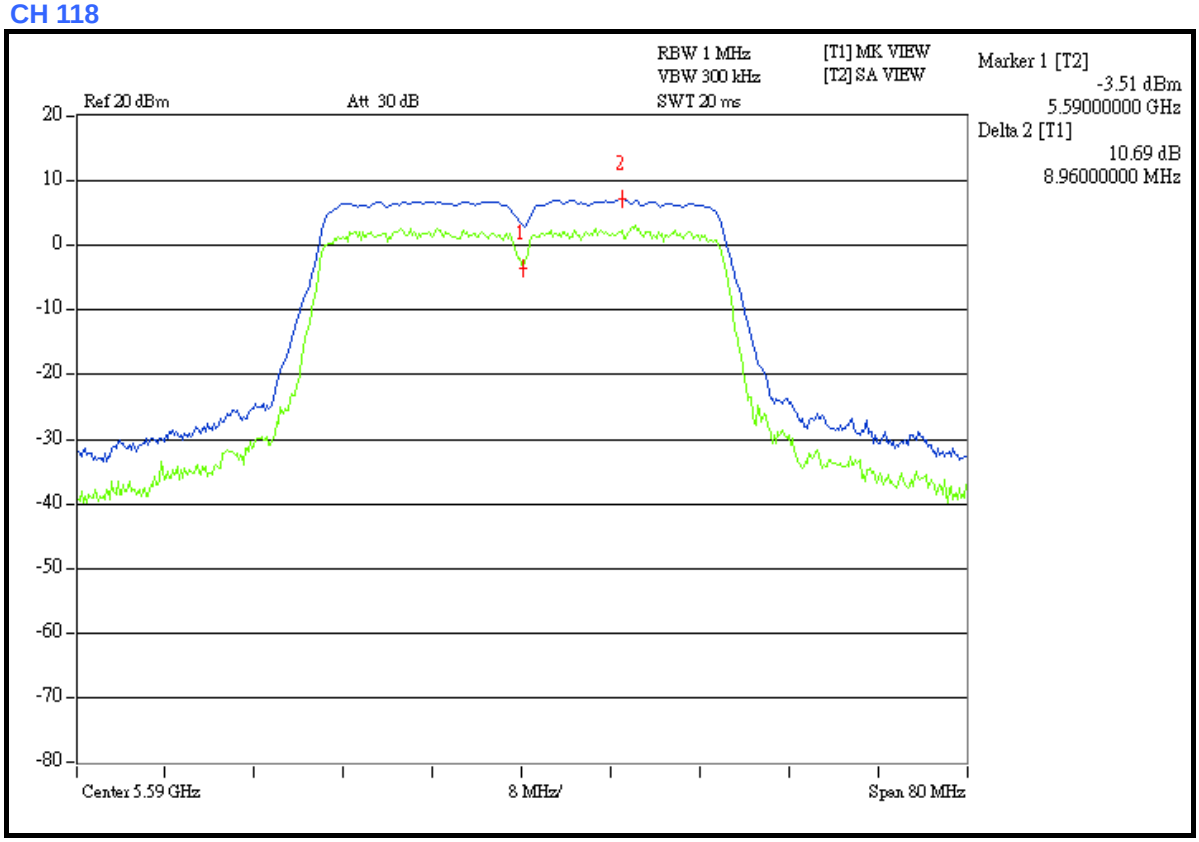
CH 134



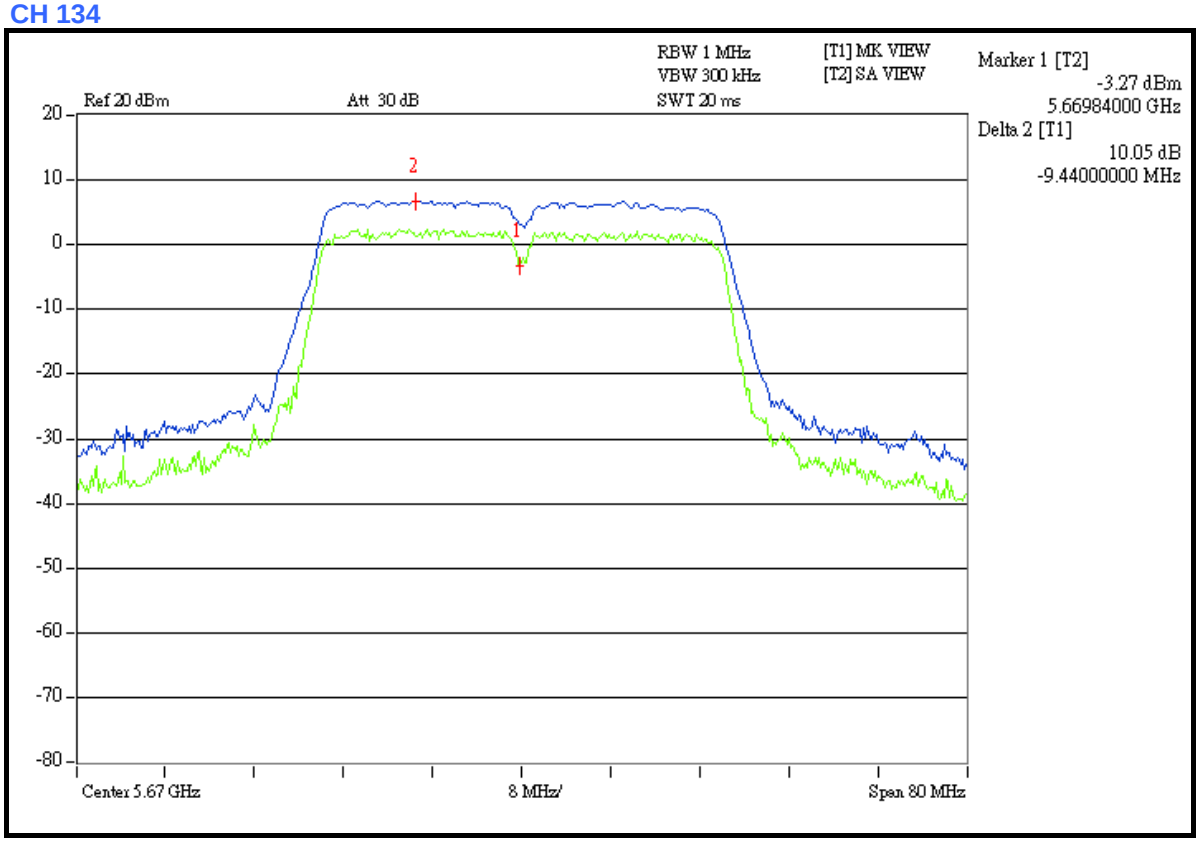
FOR CHAIN 1: CH 102



CH 118


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-3.51 dBm
5.59000000 GHz
Delta 2 [T1]
10.69 dB
8.96000000 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

CH 134


RBW 1 MHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Marker 1 [T2]
-3.27 dBm
5.66984000 GHz
Delta 2 [T1]
10.05 dB
-9.44000000 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

4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 29, 2007	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

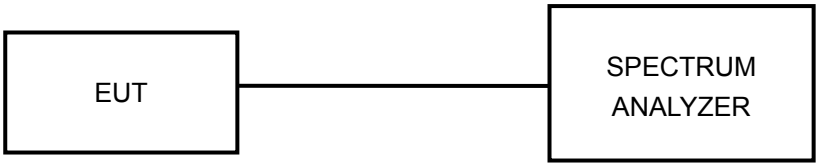
a. The transmitter output was connected to the spectrum analyzer.

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 4.3.6

4.5.7 TEST RESULTS

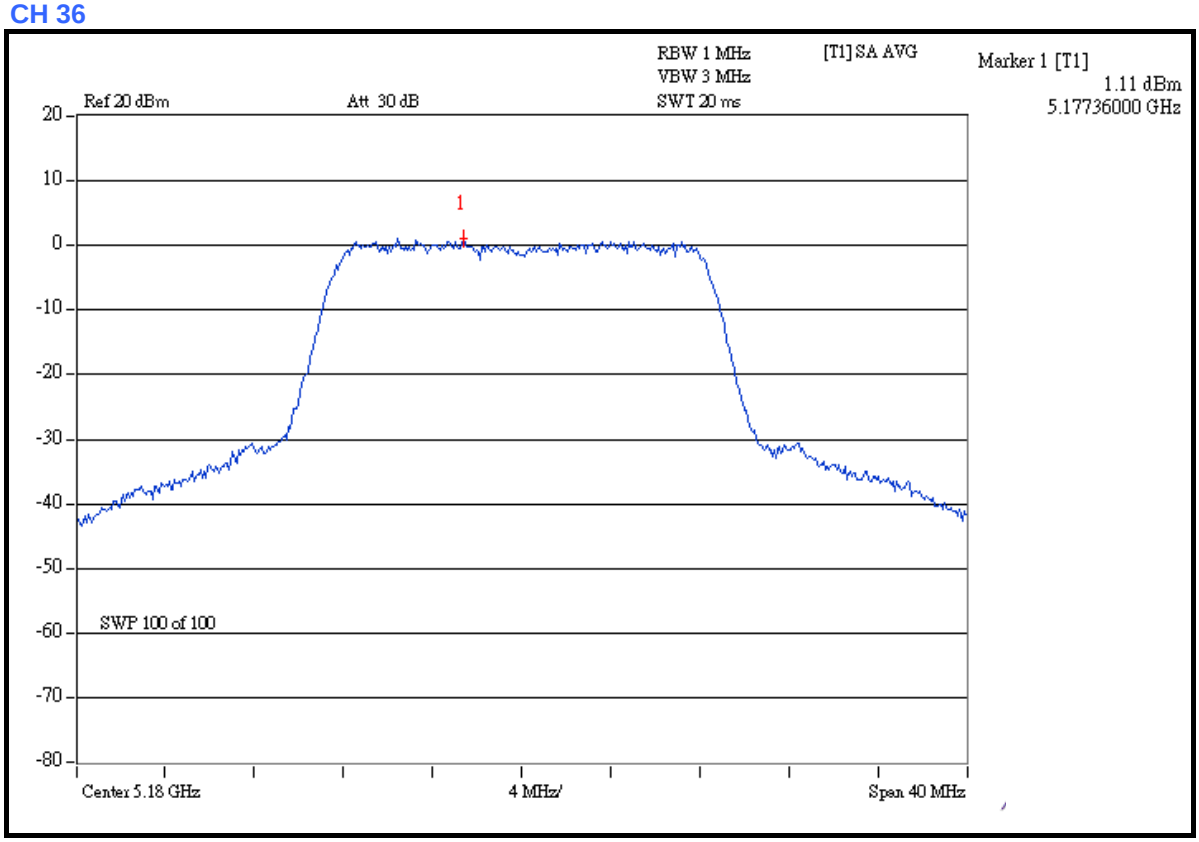
FOR FREQUENCY BAND: 5.15 ~ 5.35GHz

802.11a OFDM MODULATION:

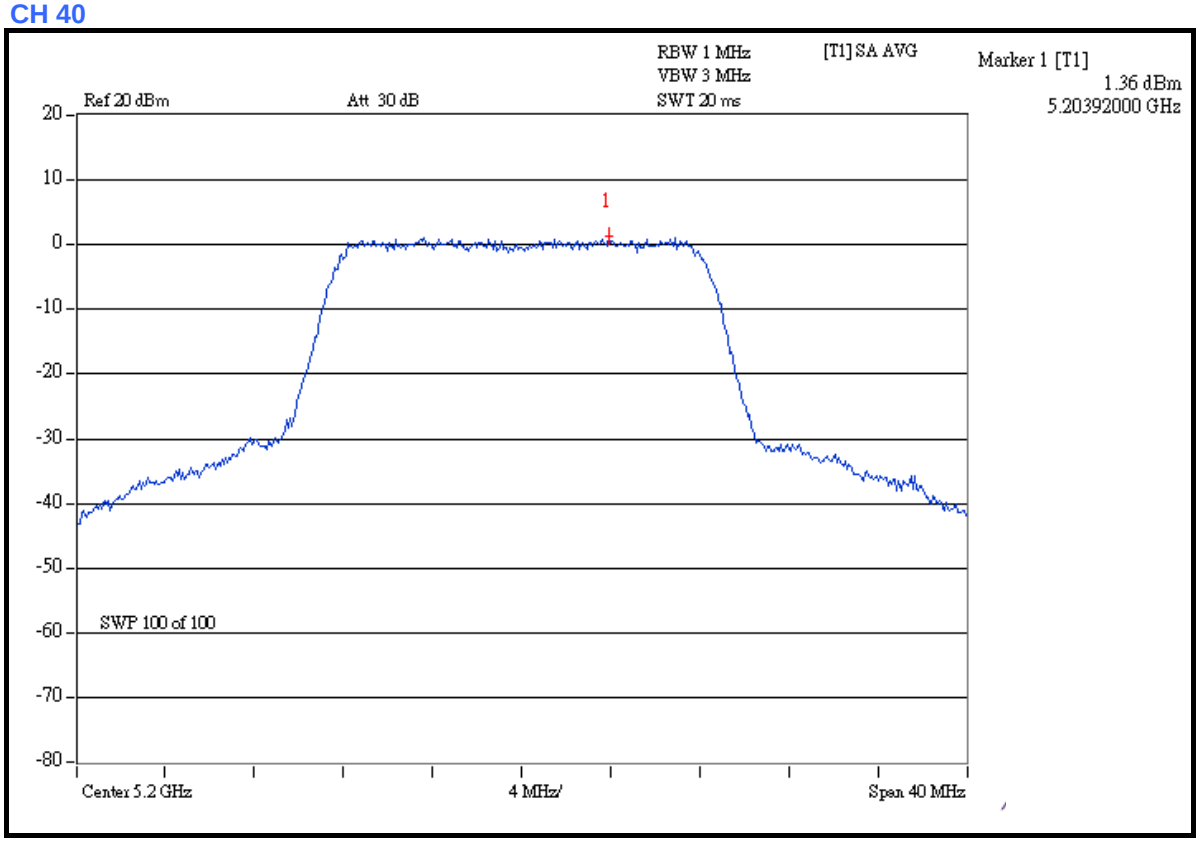
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
36	5180	1.11	4	PASS
40	5200	1.36	4	PASS
48	5240	1.21	4	PASS
52	5260	1.27	11	PASS
60	5300	-1.31	11	PASS
64	5320	-1.33	11	PASS

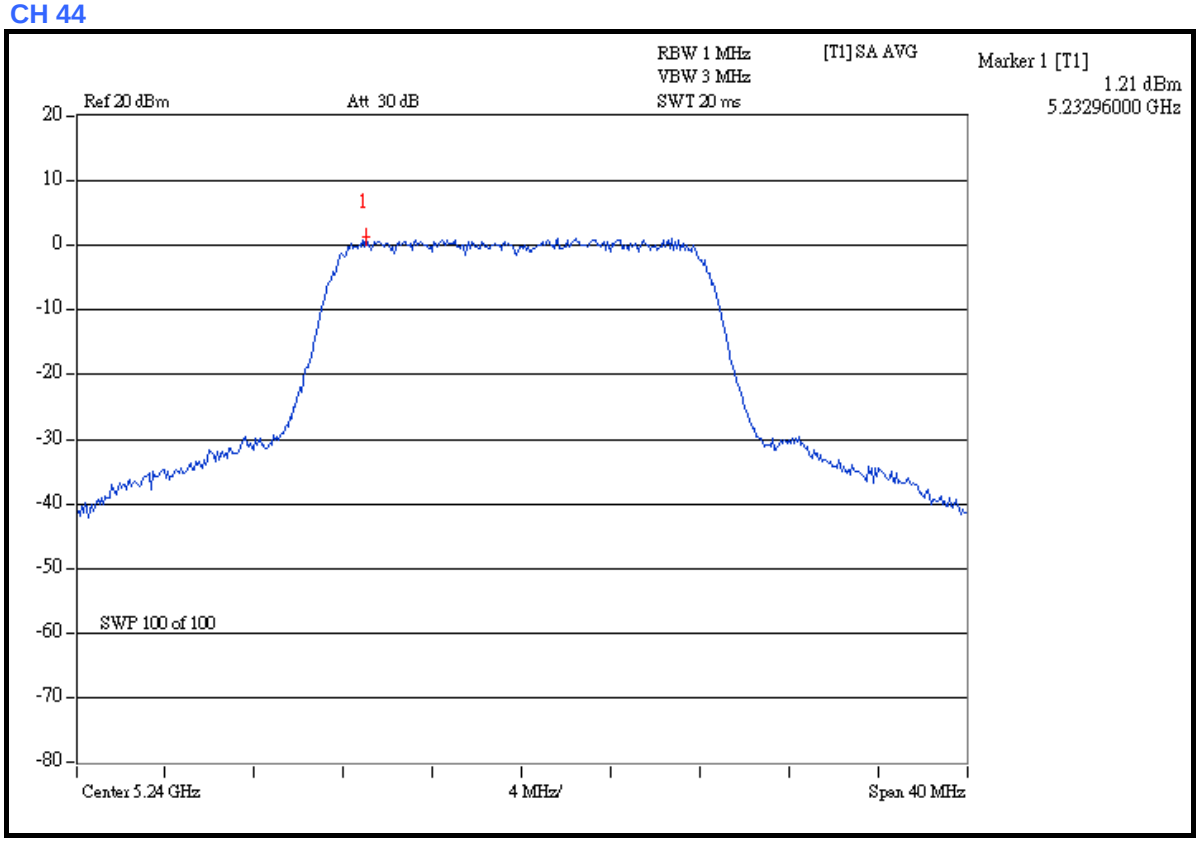
CH 36


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.11 dBm
5.17736000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.18 GHz
4 MHz/
Span 40 MHz

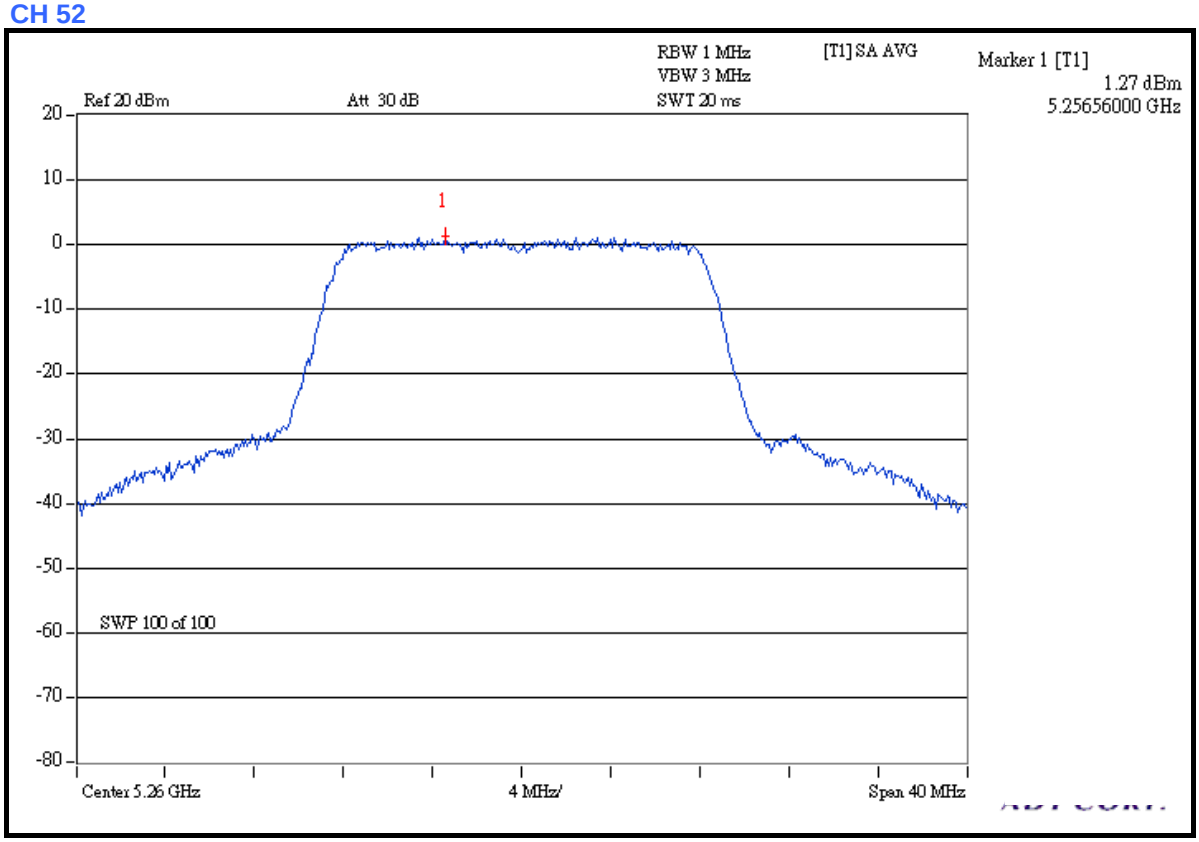
CH 40


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.36 dBm
5.20392000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.2 GHz
4 MHz/
Span 40 MHz

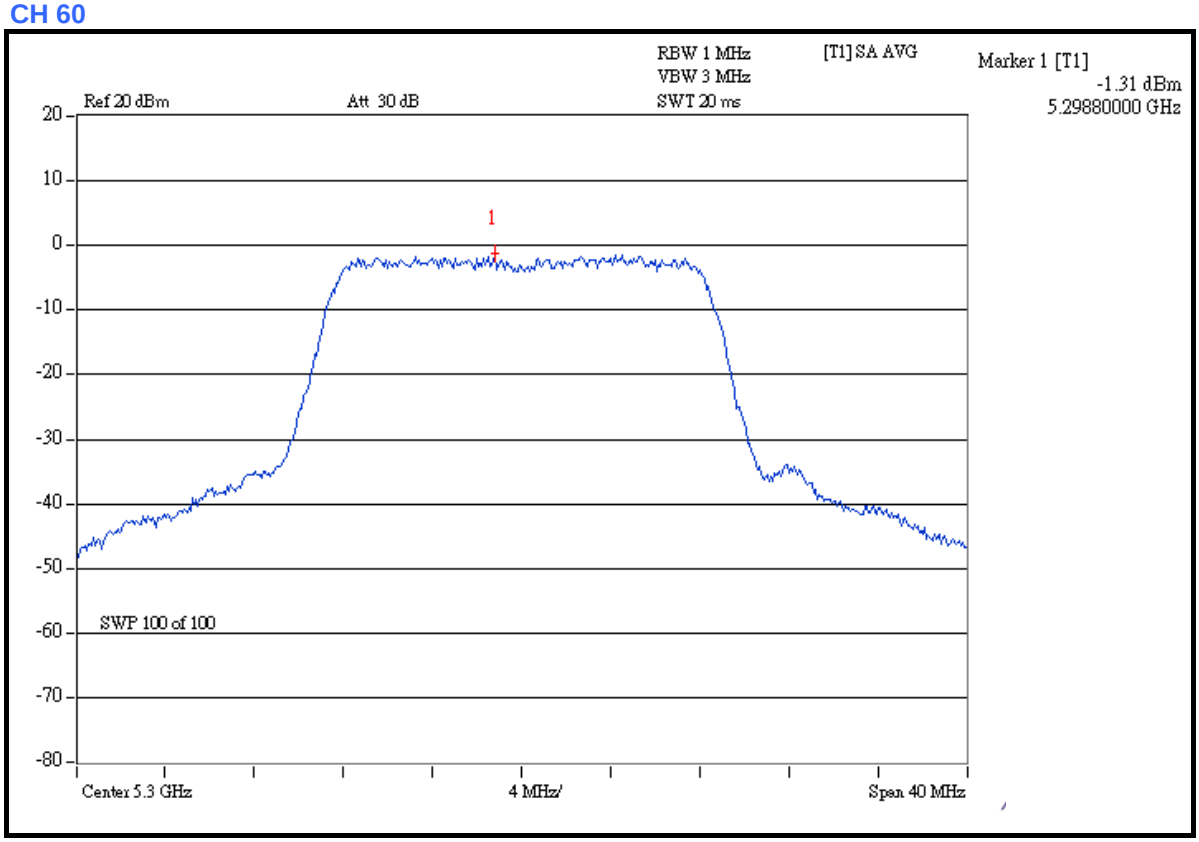
CH 44


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.21 dBm
5.23296000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.24 GHz
4 MHz/
Span 40 MHz

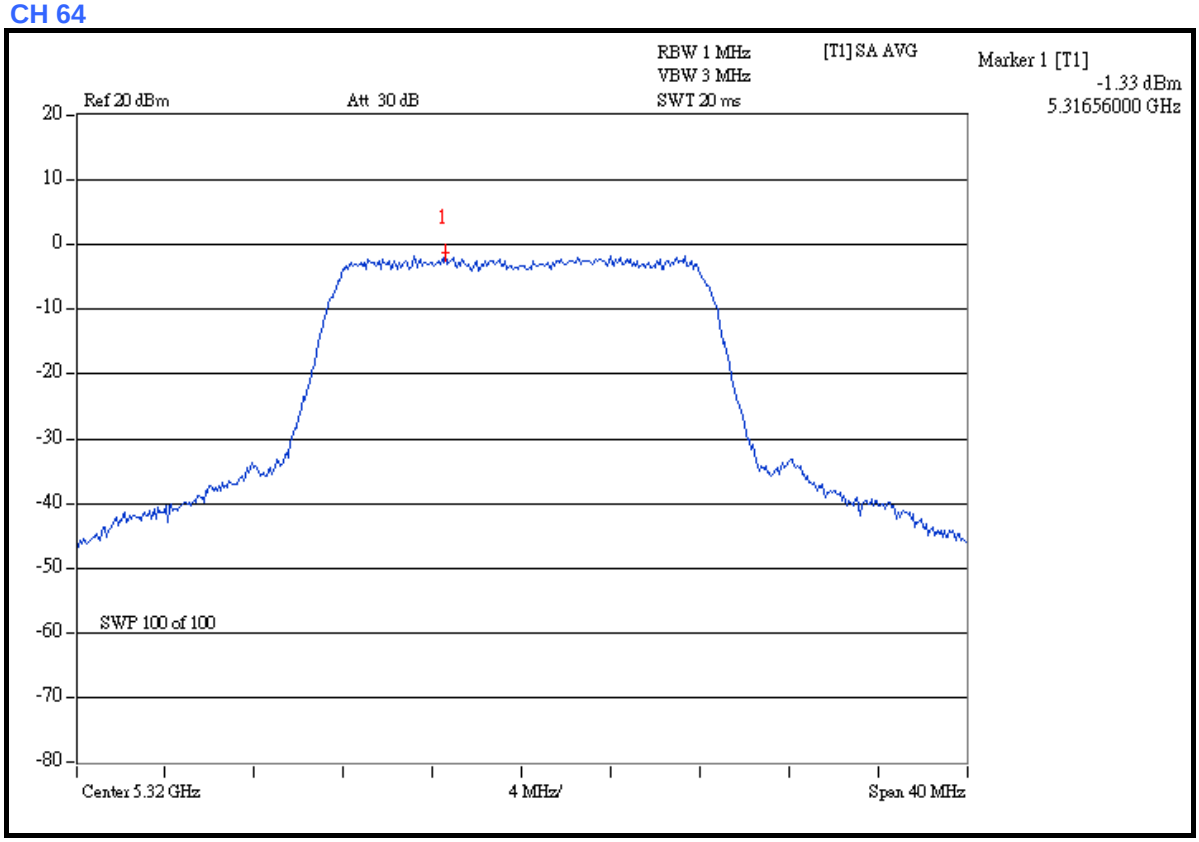
CH 52


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.27 dBm
5.25656000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.26 GHz
4 MHz/
Span 40 MHz

CH 60


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.31 dBm
5.29880000 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

CH 64

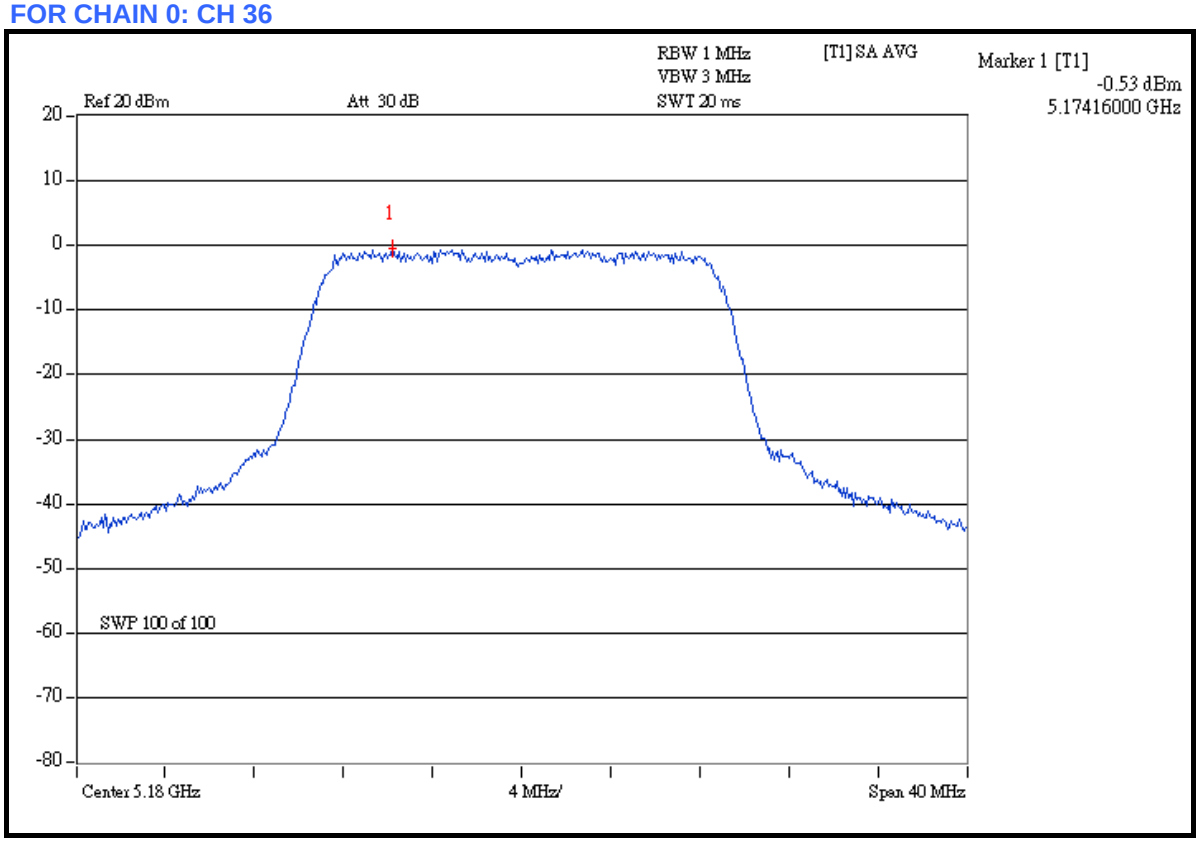

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.33 dBm
5.31656000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.32 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

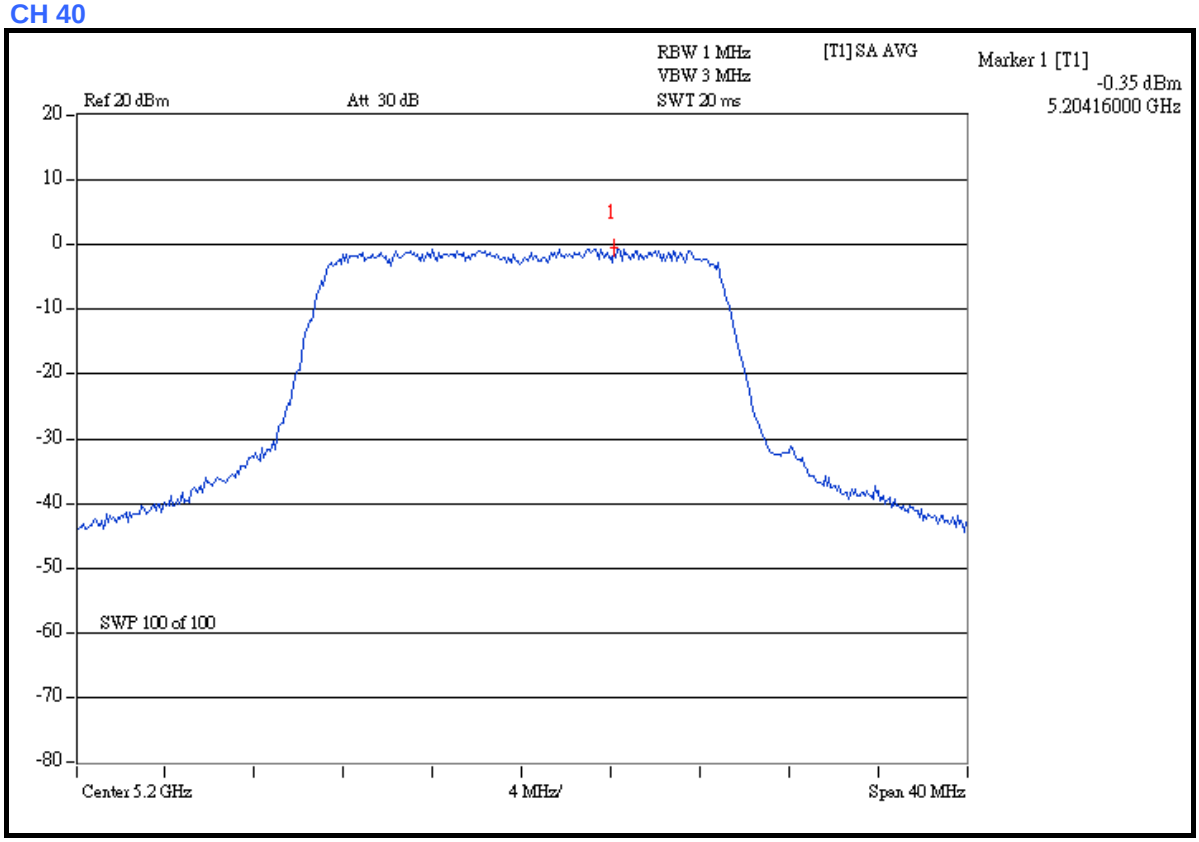
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1kHz BW (mW)		RF POWER LEVEL IN 1kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
36	5180	0.885	0.818	-0.53	-0.87	1.703	2.31	4	PASS
40	5200	0.923	0.847	-0.35	-0.72	1.770	2.48	4	PASS
48	5240	0.869	0.925	-0.61	-0.34	1.794	2.54	4	PASS
52	5260	0.912	1.500	-0.40	1.76	2.412	3.82	11	PASS
60	5300	0.729	0.647	-1.37	-1.89	1.376	1.39	11	PASS
64	5320	0.550	1.089	-2.60	0.37	1.639	2.15	11	PASS

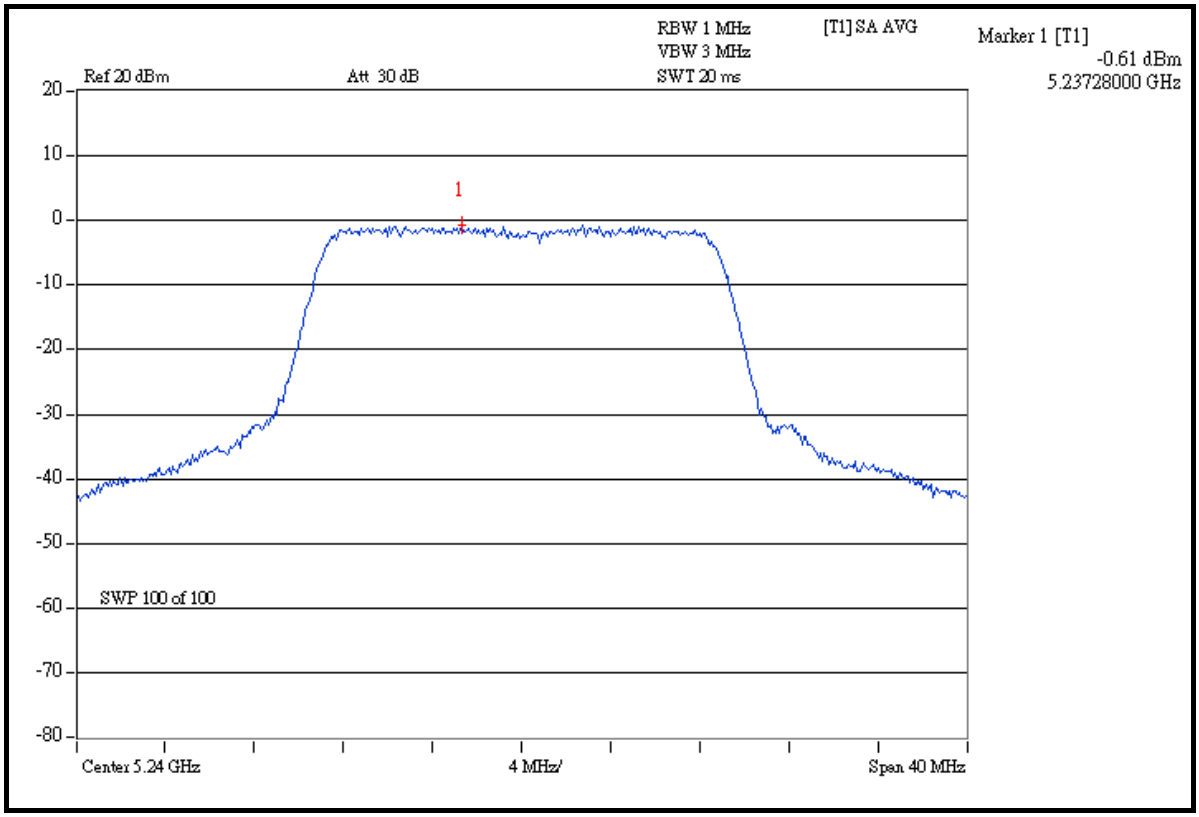
FOR CHAIN 0: CH 36



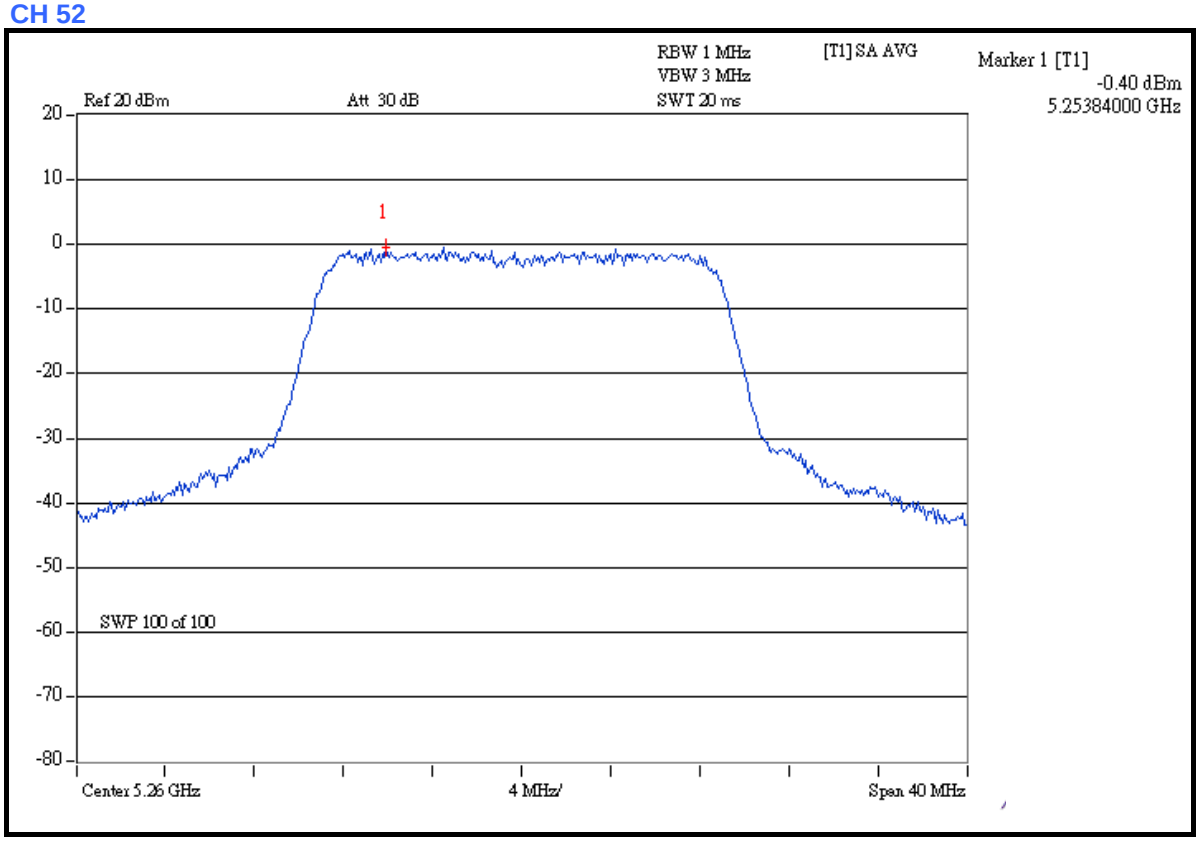
CH 40



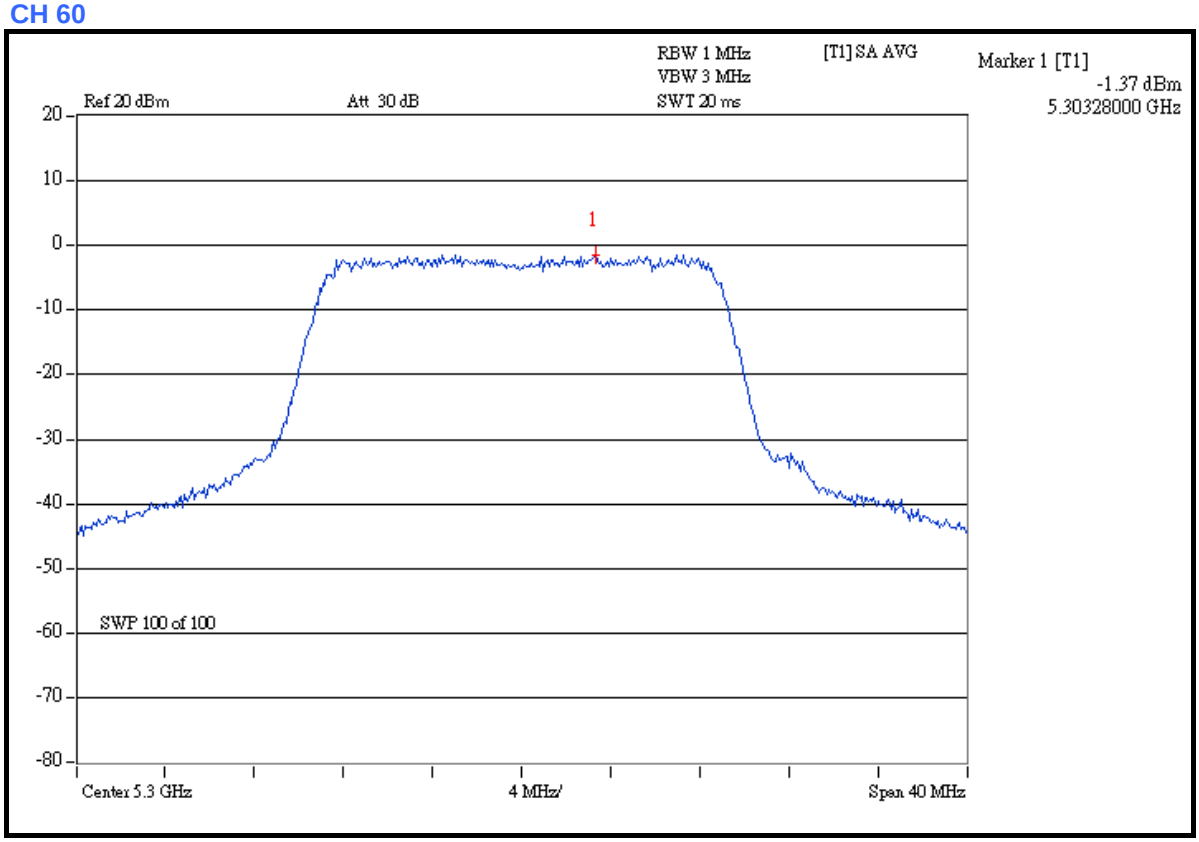
CH 48


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-0.61 dBm
5.23728000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.24 GHz
4 MHz/
Span 40 MHz

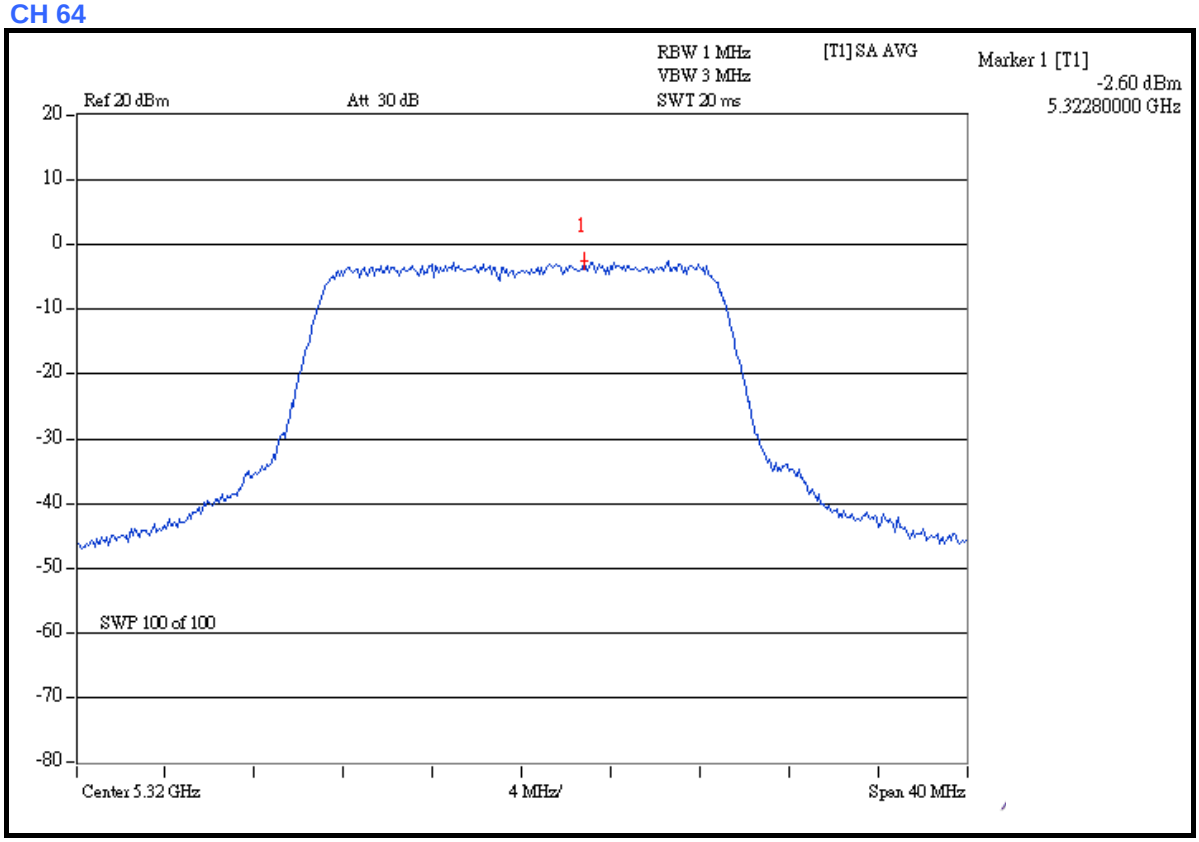
CH 52


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-0.40 dBm
5.25384000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.26 GHz
4 MHz/
Span 40 MHz

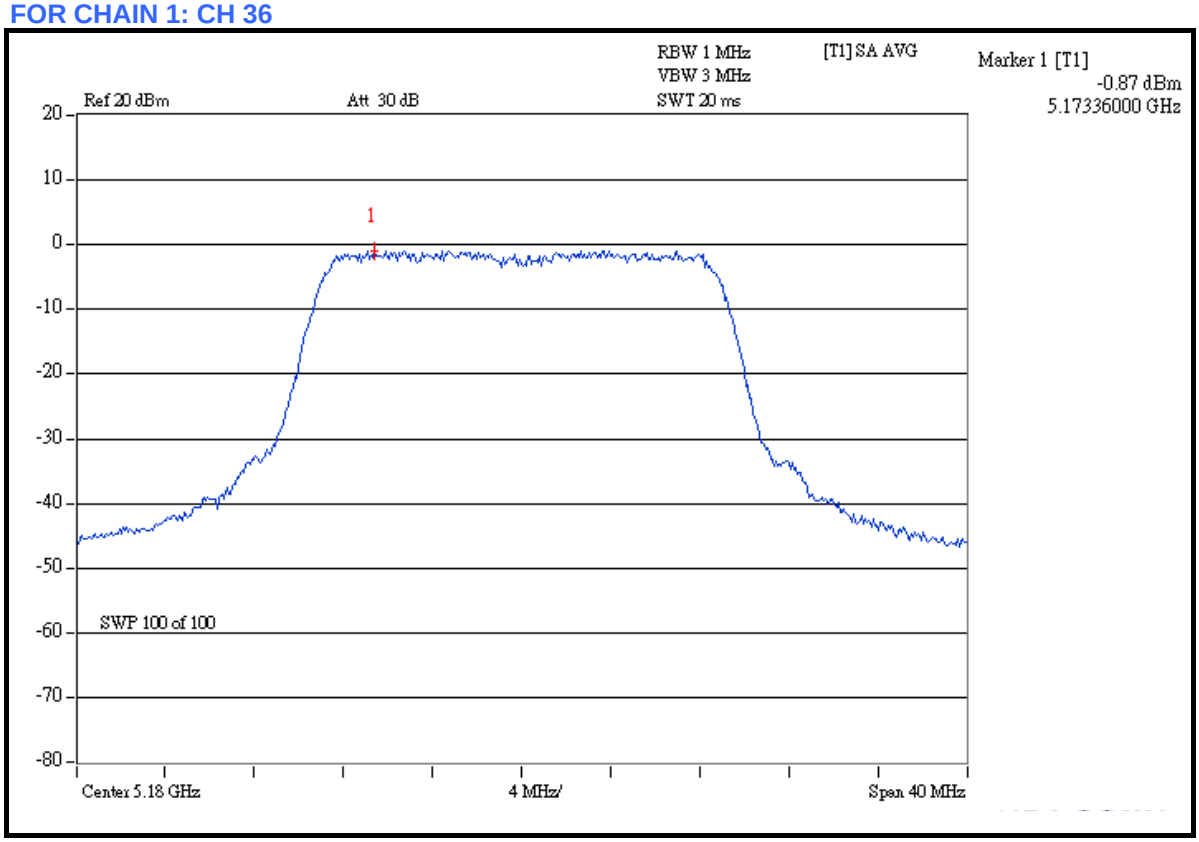
CH 60


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.37 dBm
5.30328000 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

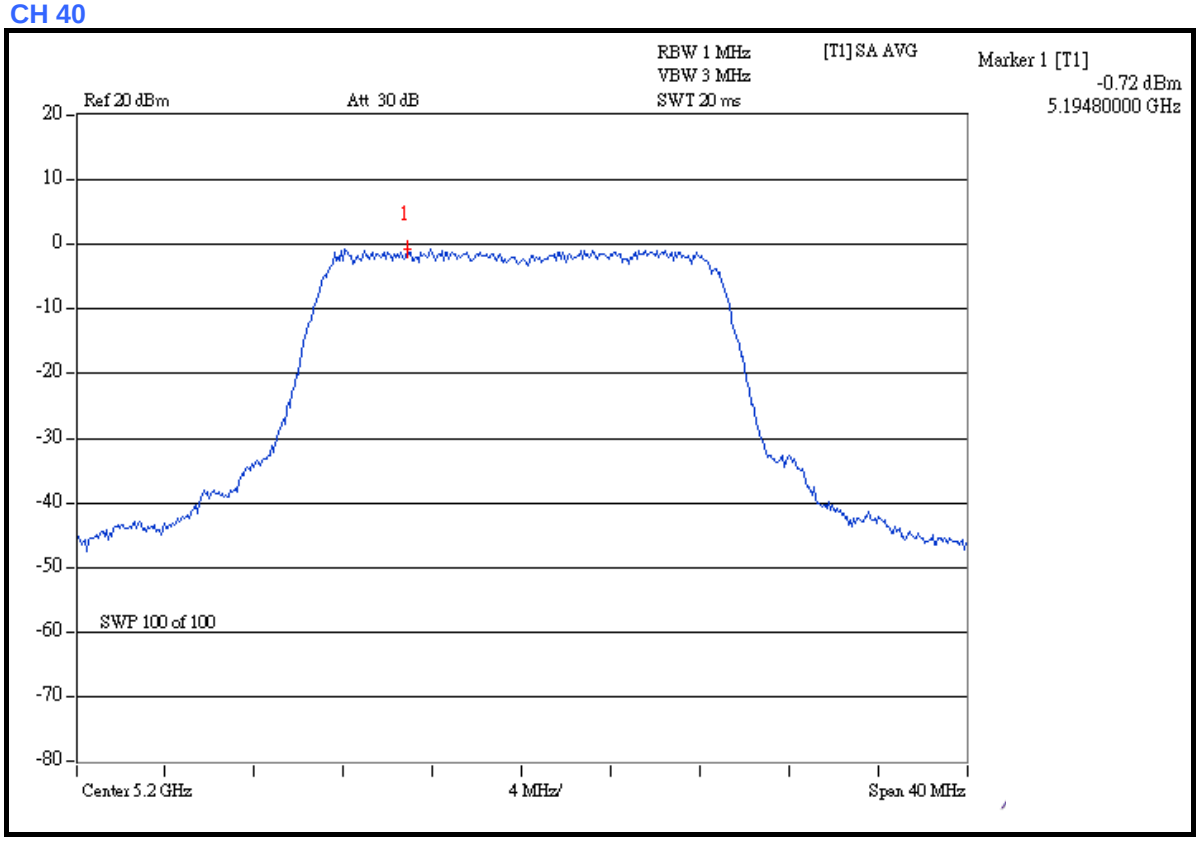
CH 64


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-2.60 dBm
5.32280000 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

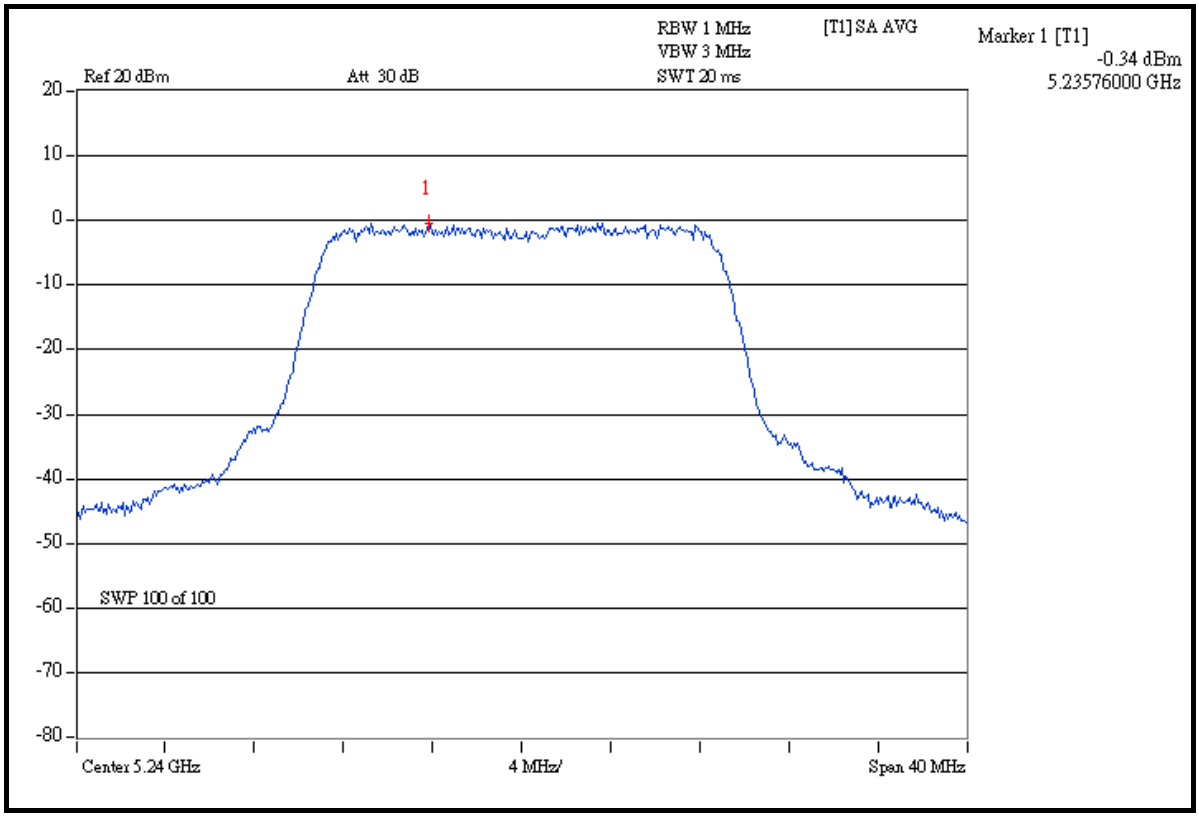
FOR CHAIN 1: CH 36



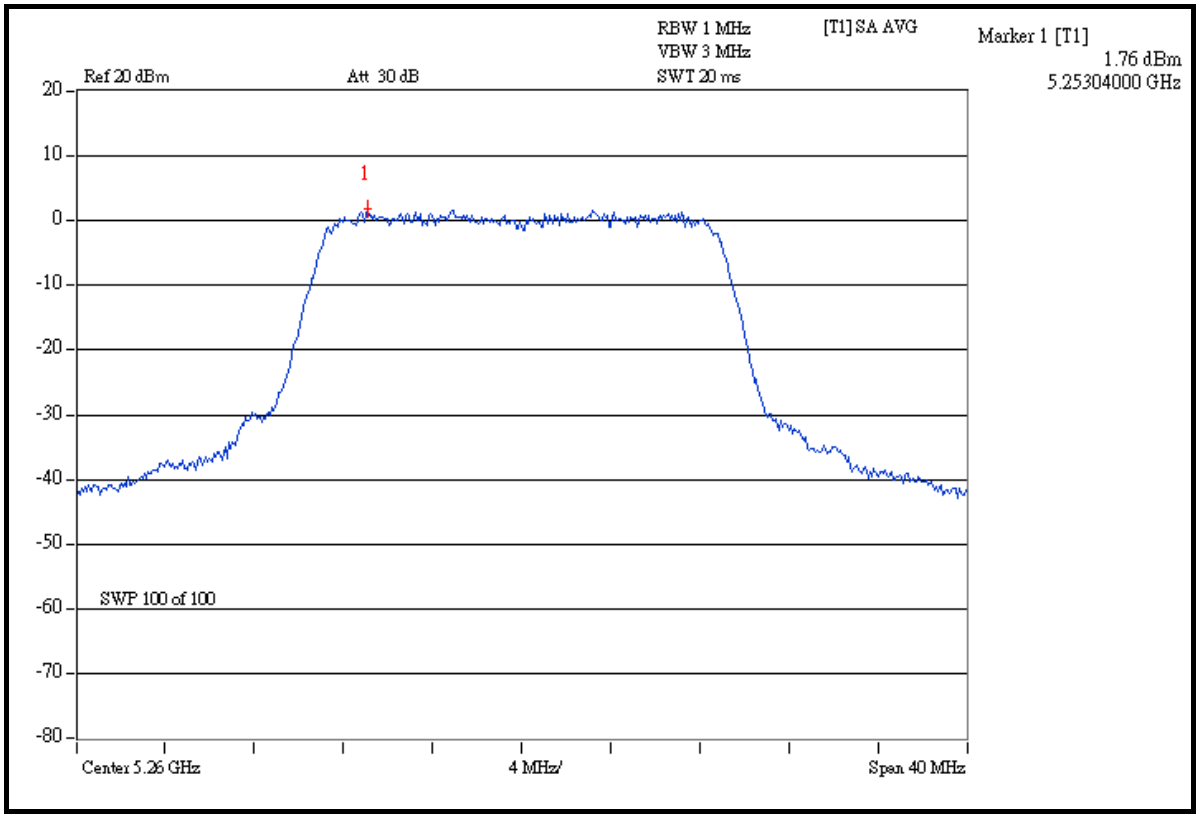
CH 40



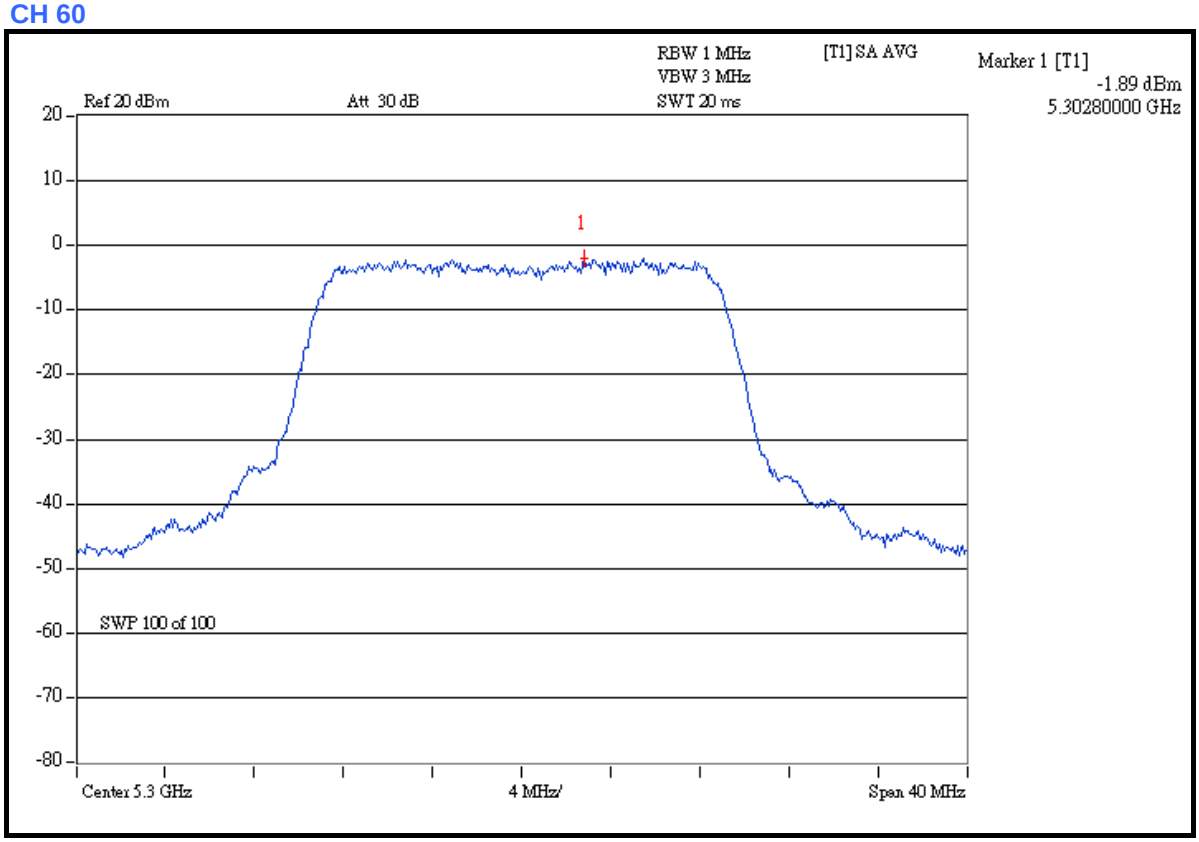
CH 48


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-0.34 dBm
5.23576000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.24 GHz
4 MHz/
Span 40 MHz

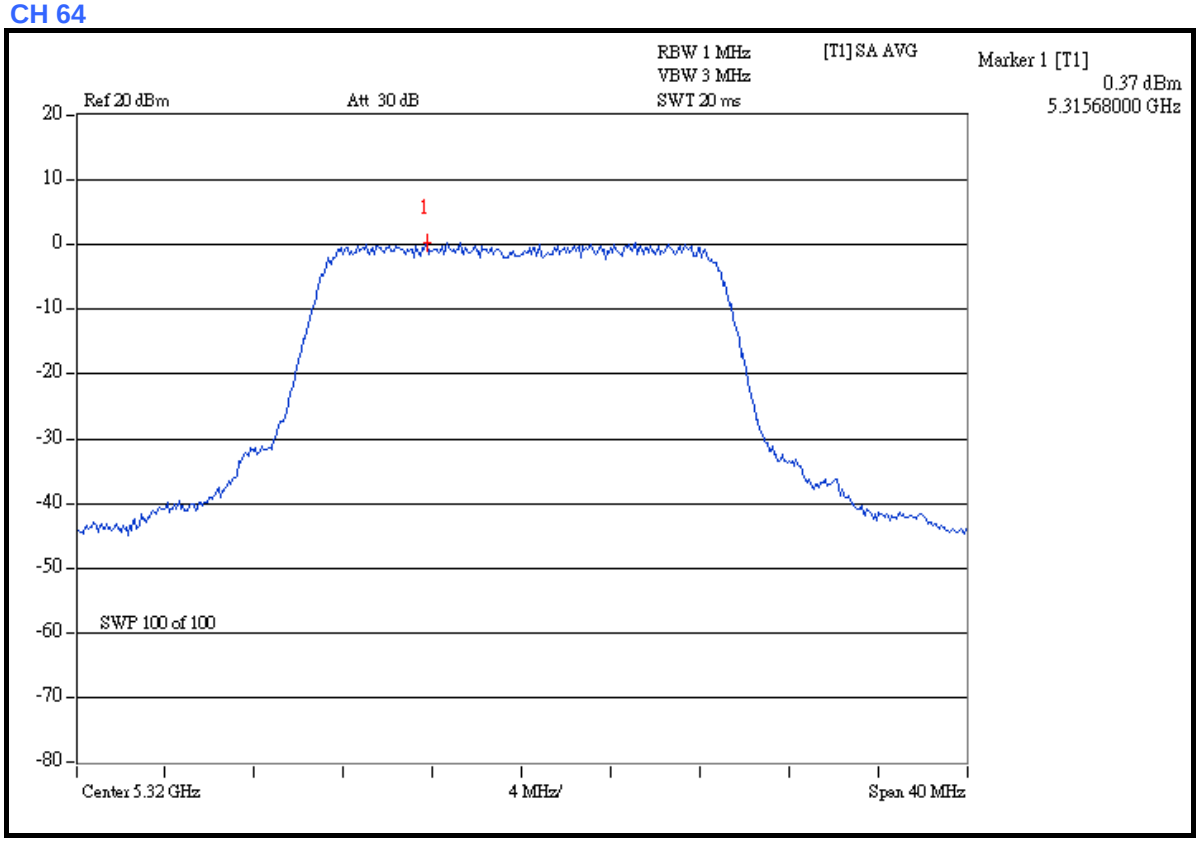
CH 52


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.76 dBm
5.25304000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.26 GHz
4 MHz/
Span 40 MHz

CH 60


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.89 dBm
5.30280000 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

CH 64

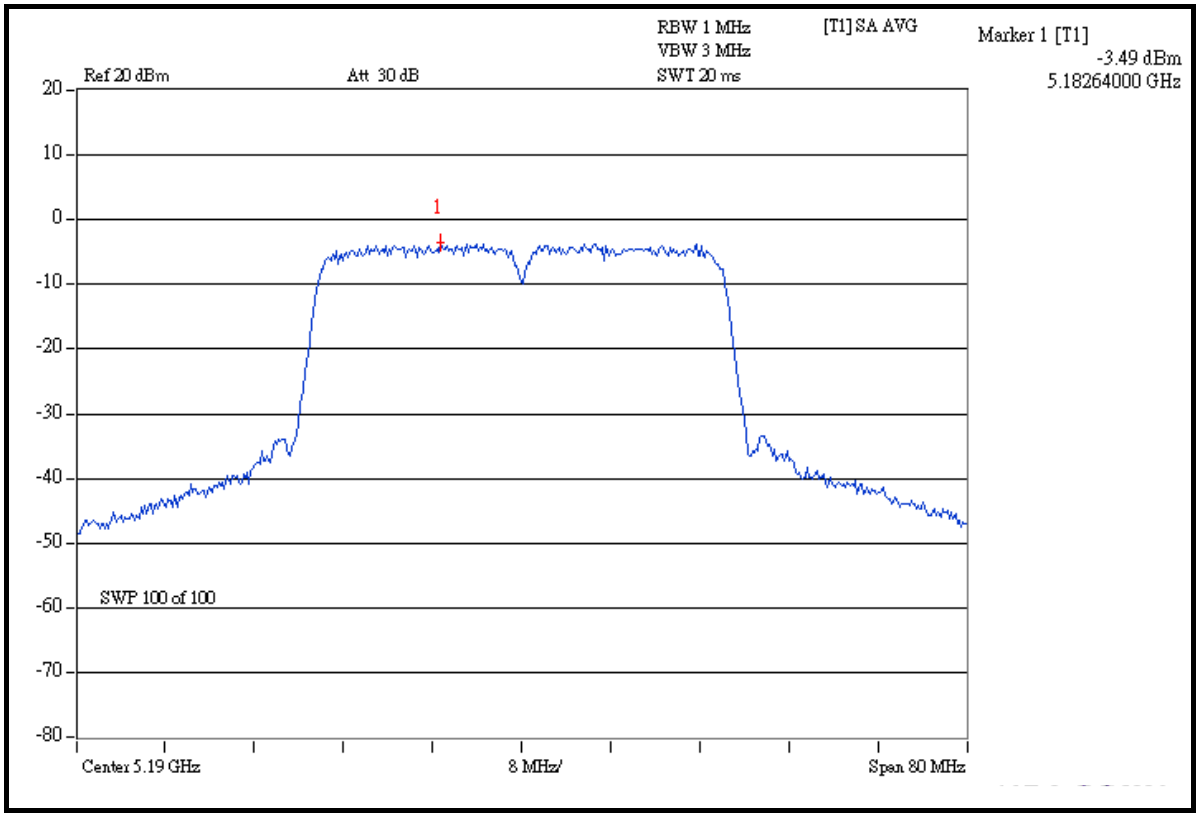

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
0.37 dBm
5.31568000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.32 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

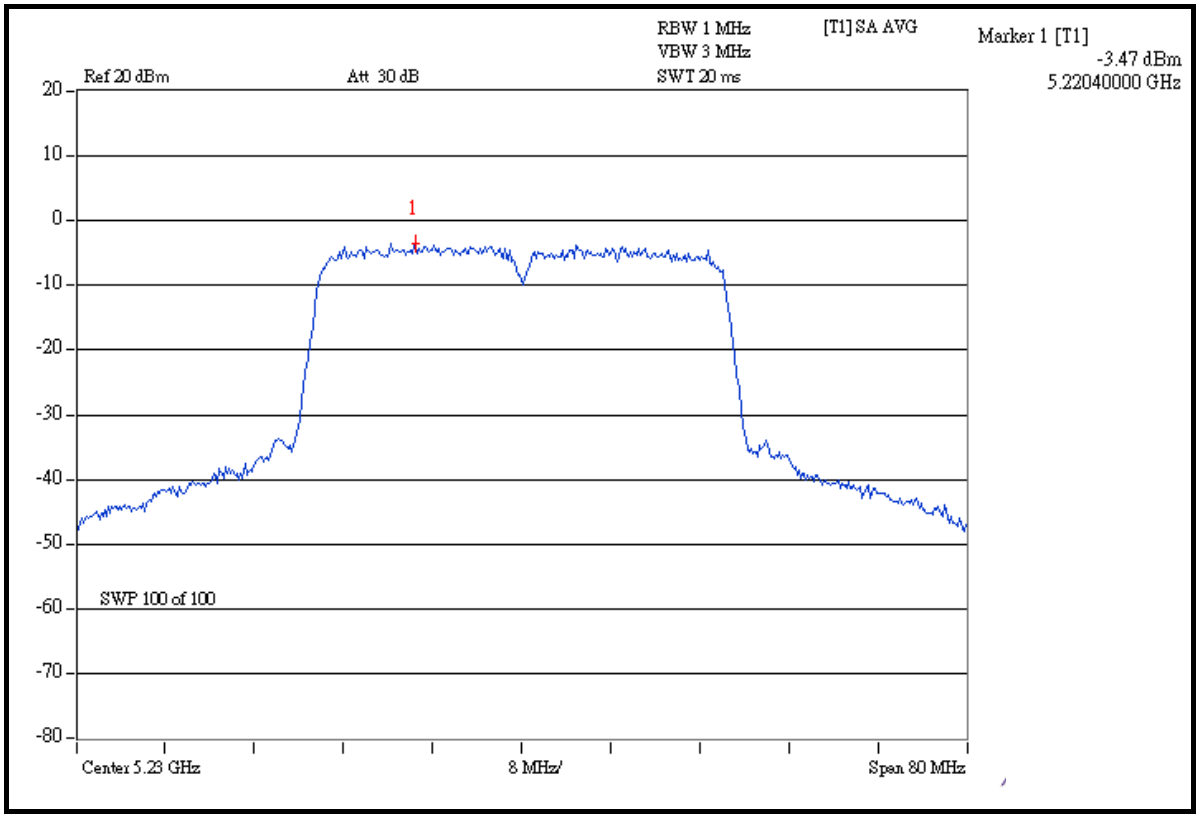
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (mW)		RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
38	5190	0.448	0.426	-3.49	-3.71	0.873	-0.59	4	PASS
46	5230	0.450	0.446	-3.47	-3.51	0.895	-0.48	4	PASS
54	5270	0.458	0.432	-3.39	-3.65	0.890	-0.51	11	PASS
62	5310	0.267	0.728	-5.73	-1.38	0.995	-0.02	11	PASS

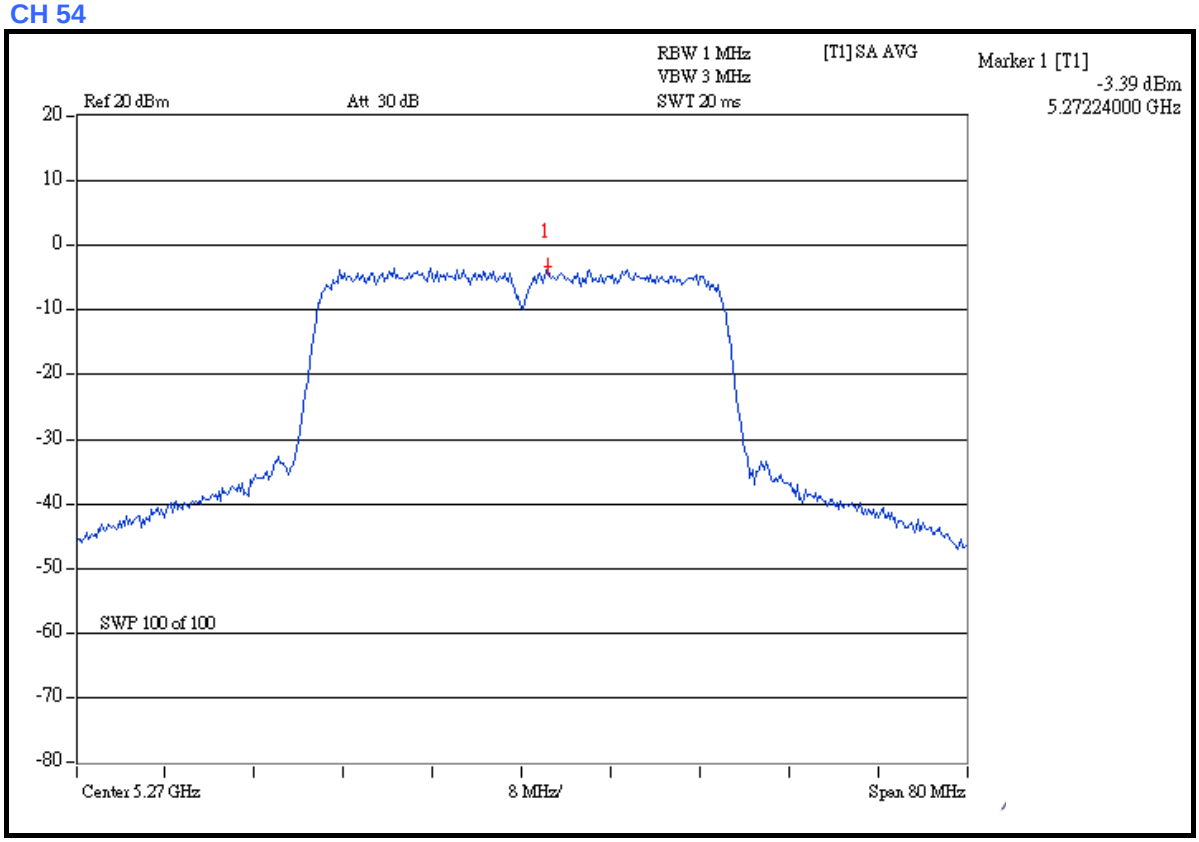
FOR CHAIN 0: CH 38



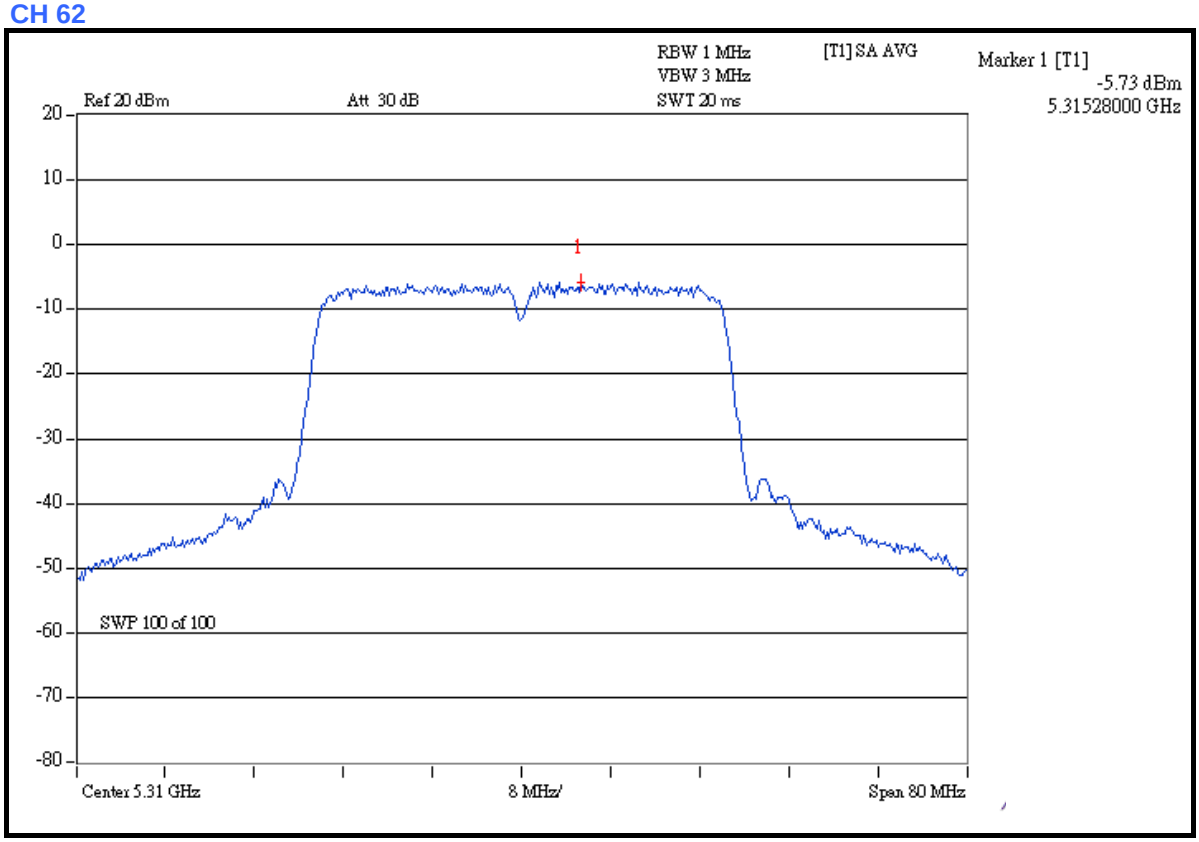
CH 46



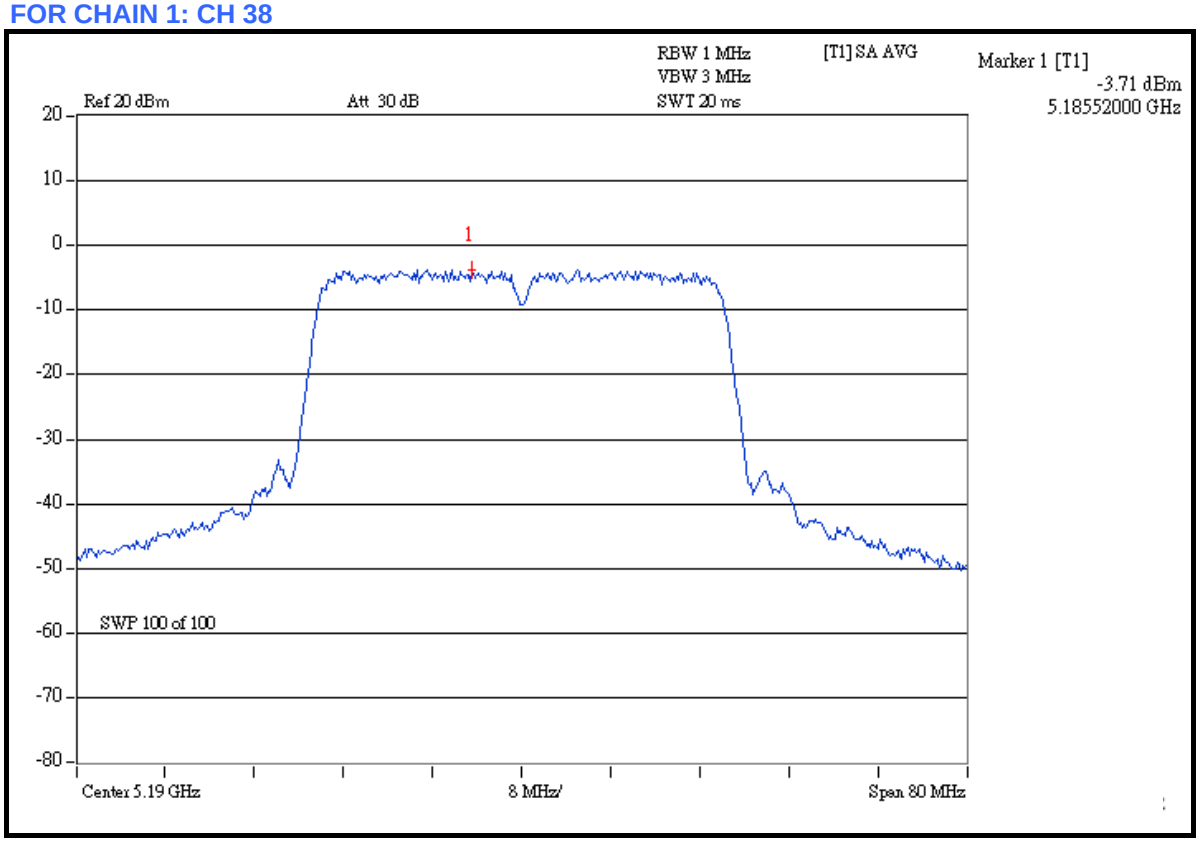
CH 54


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-3.39 dBm
5.27224000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.27 GHz
8 MHz/
Span 80 MHz

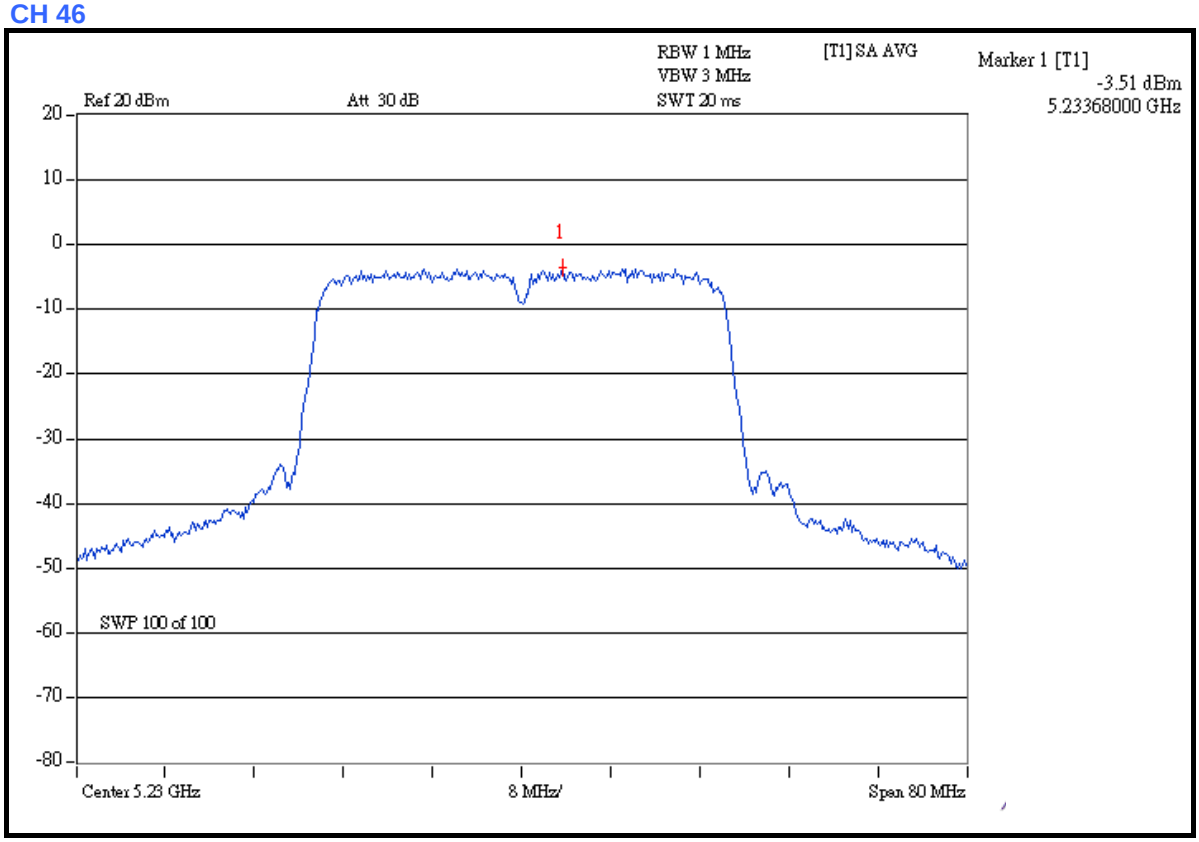
CH 62


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-5.73 dBm
5.31528000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.31 GHz
8 MHz/
Span 80 MHz

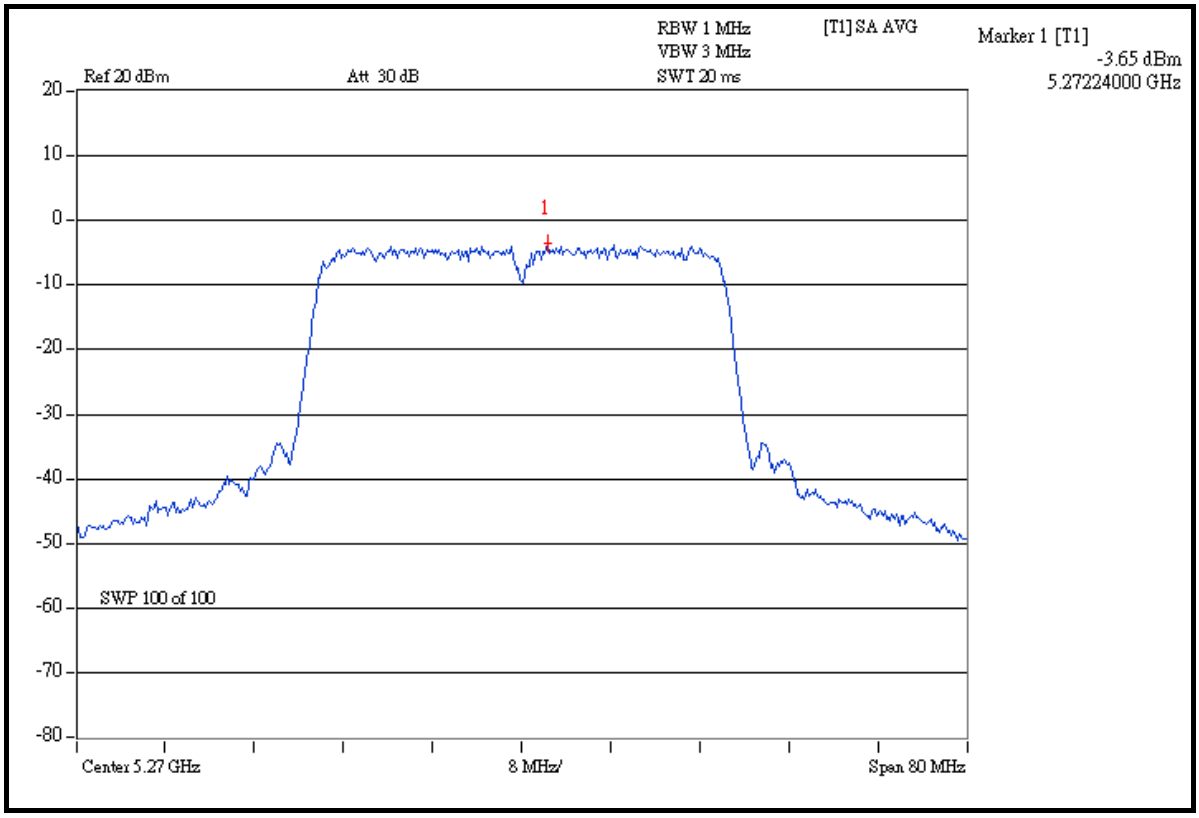
FOR CHAIN 1: CH 38



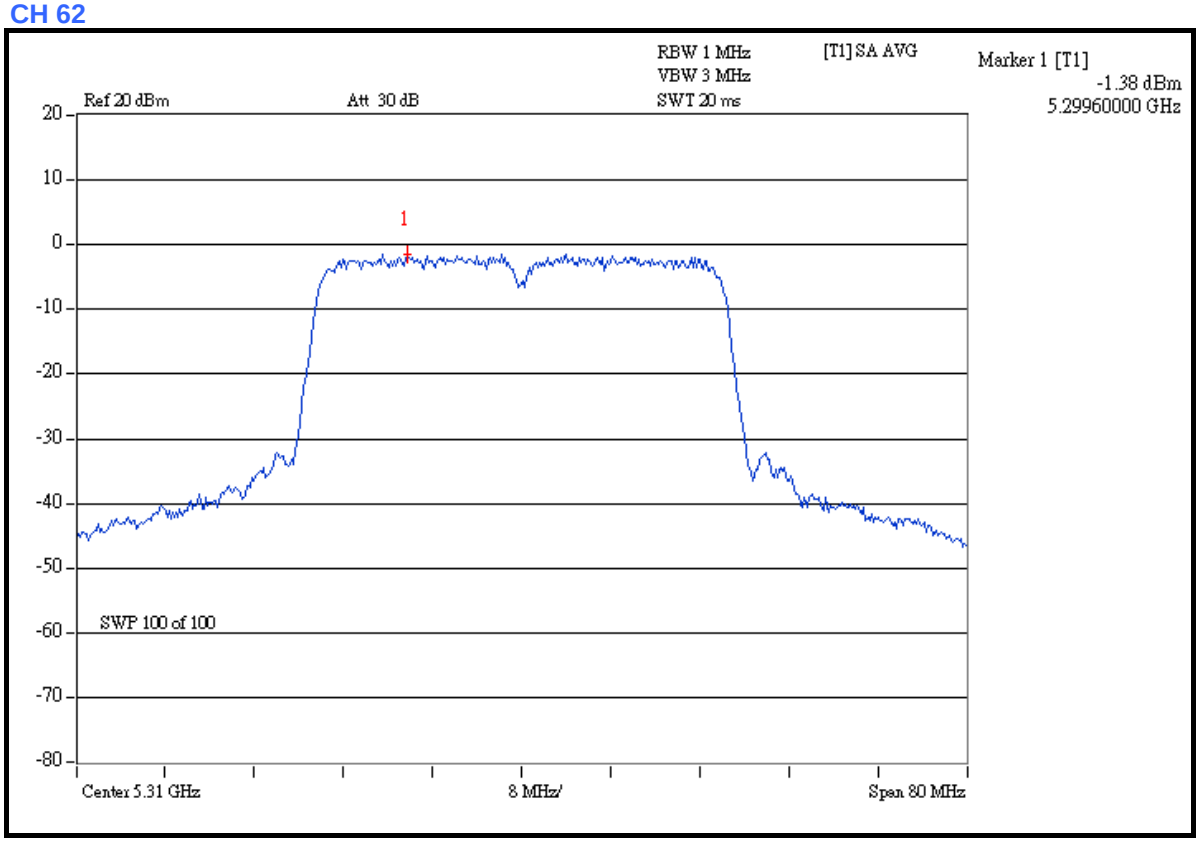
CH 46



CH 54


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-3.65 dBm
5.27224000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.27 GHz
8 MHz/
Span 80 MHz

CH 62


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.38 dBm
5.29960000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.31 GHz
8 MHz/
Span 80 MHz

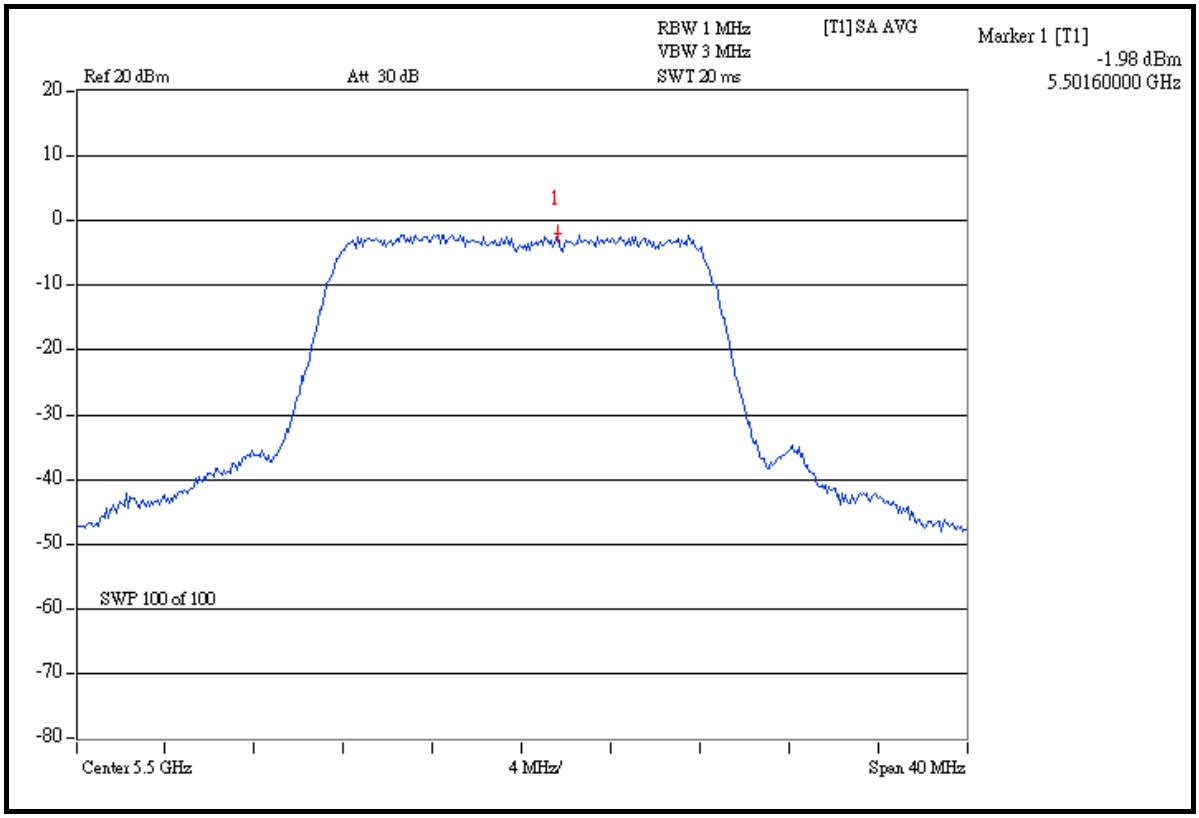
FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

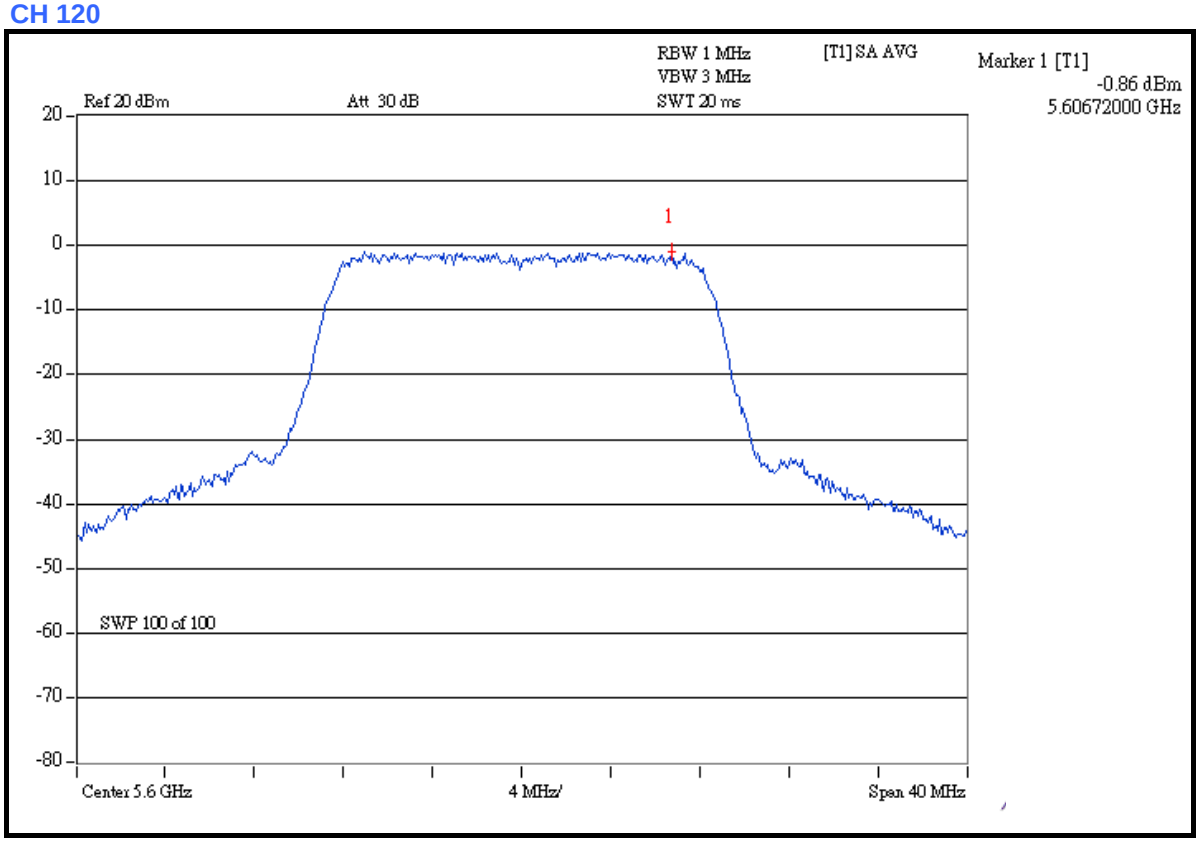
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
100	5500	-1.98	11	PASS
120	5600	-0.86	11	PASS
140	5700	-0.42	11	PASS

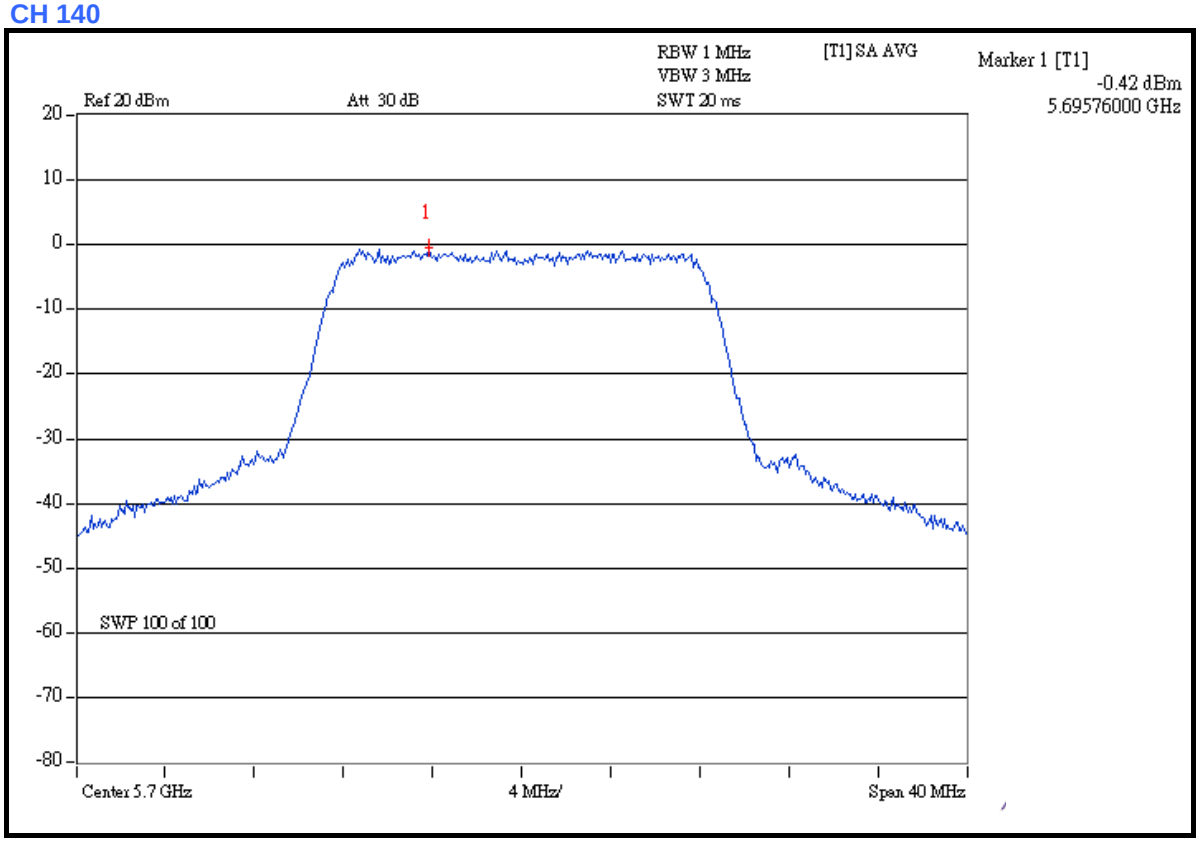
CH 100



CH 120


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-0.86 dBm
5.60672000 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

CH 140

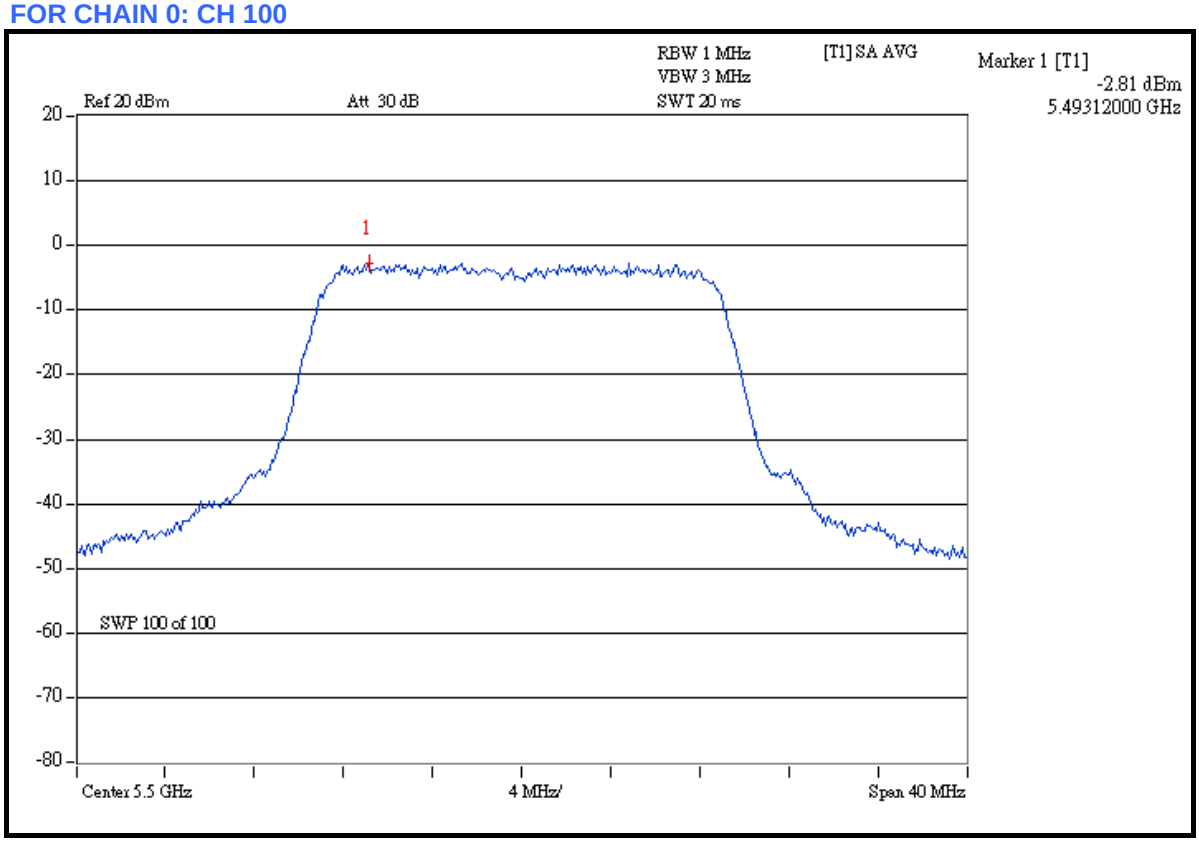

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-0.42 dBm
5.69576000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.7 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

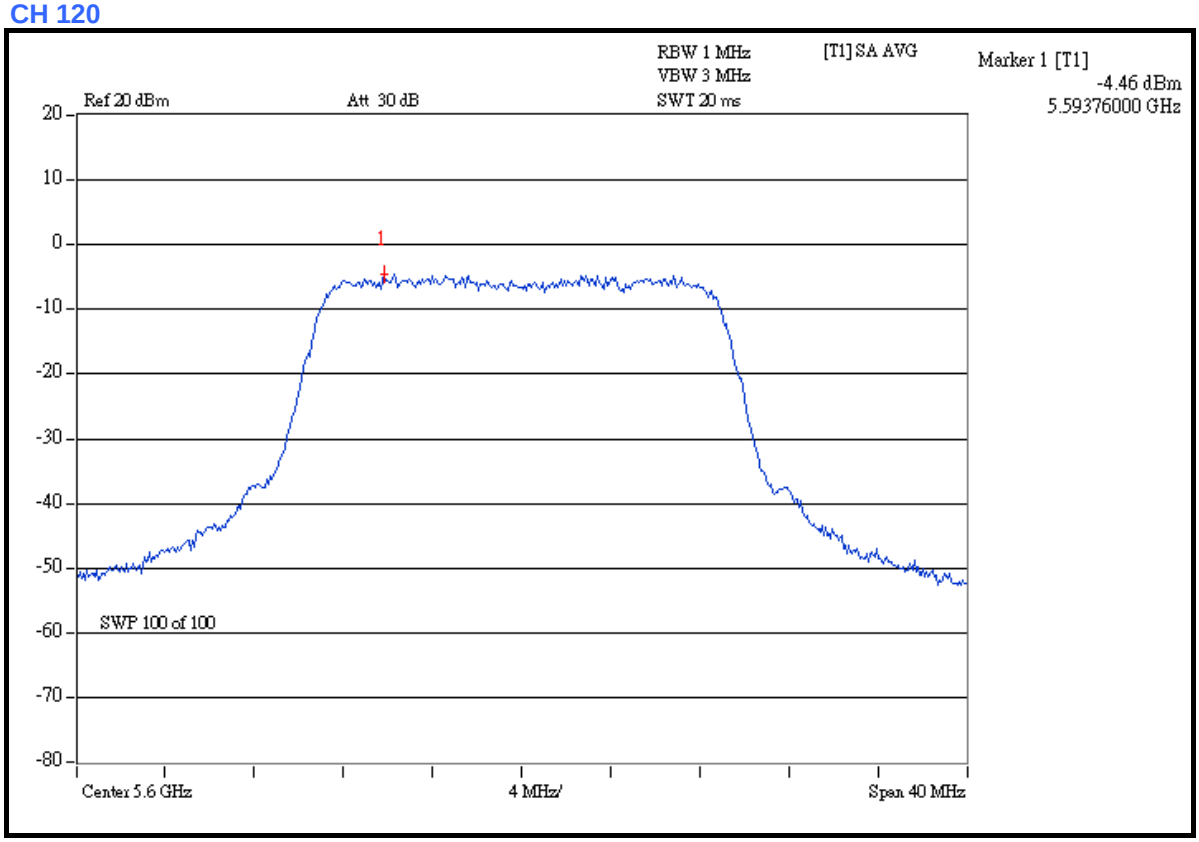
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1kHz BW (mW)		RF POWER LEVEL IN 1kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
100	5500	0.524	0.830	-2.81	-0.81	1.353	1.31	11	PASS
120	5600	0.358	0.634	-4.46	-1.98	0.992	-0.04	11	PASS
140	5700	0.388	0.596	-4.11	-2.25	0.984	-0.07	11	PASS

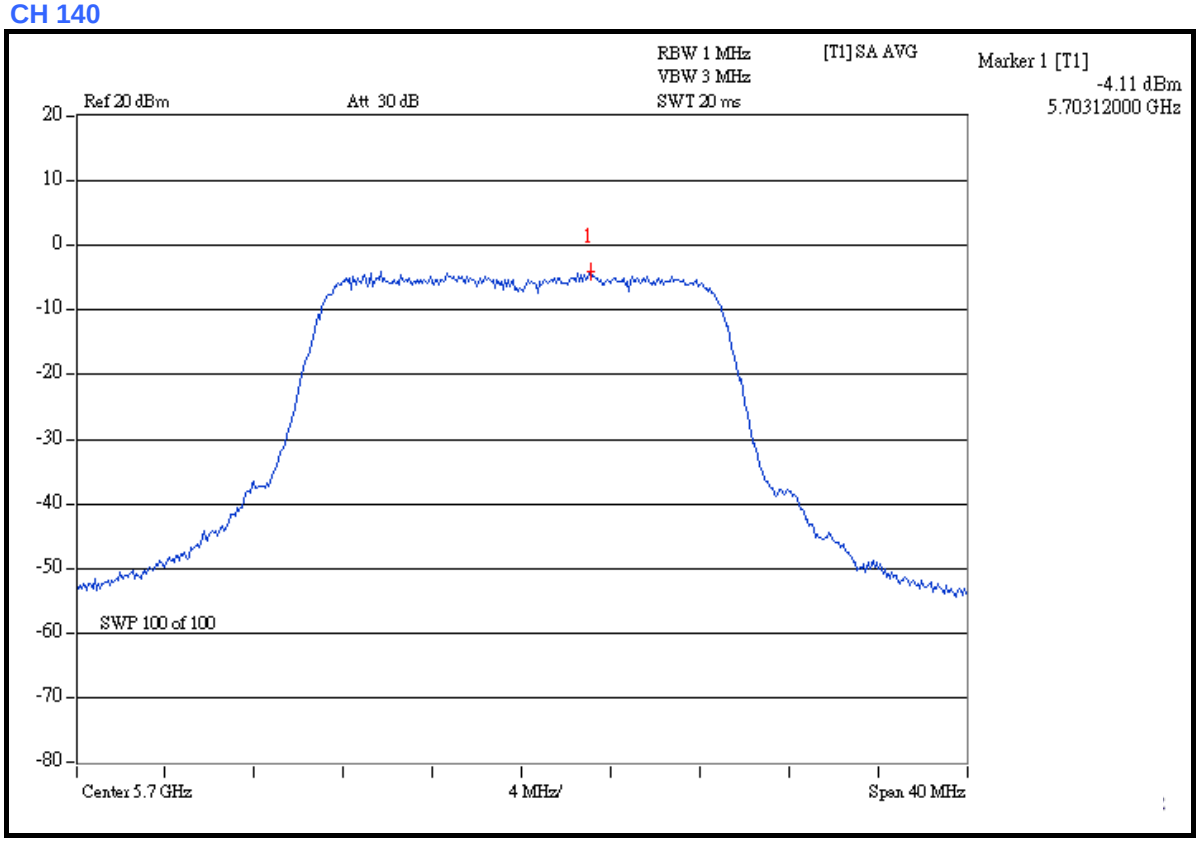
FOR CHAIN 0: CH 100



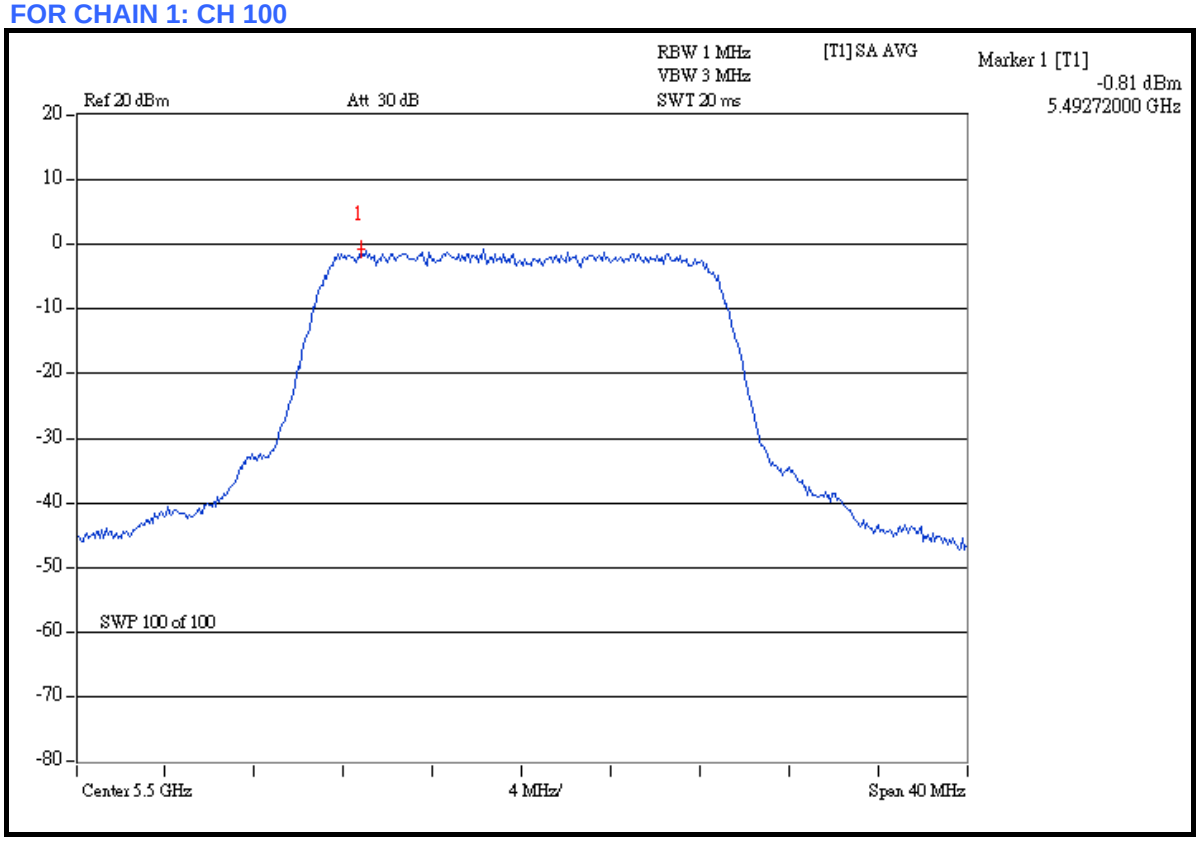
CH 120



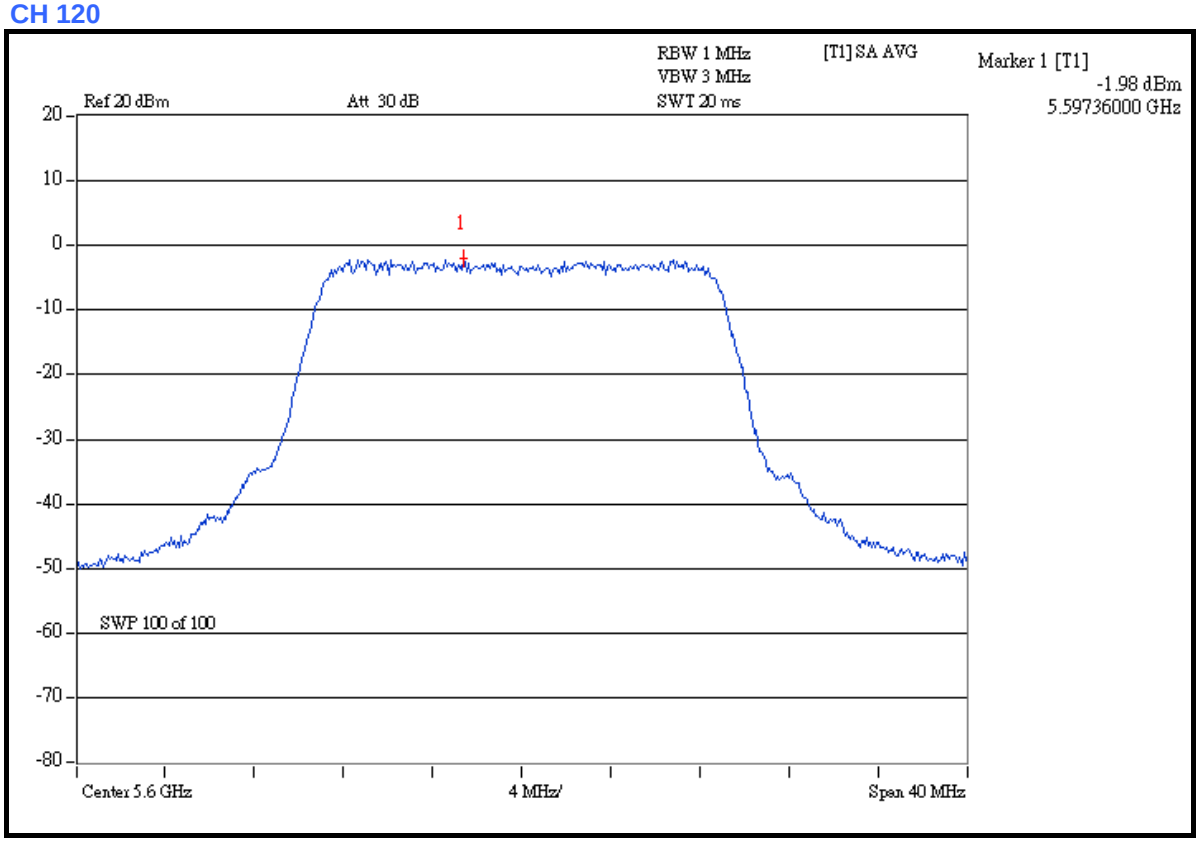
CH 140



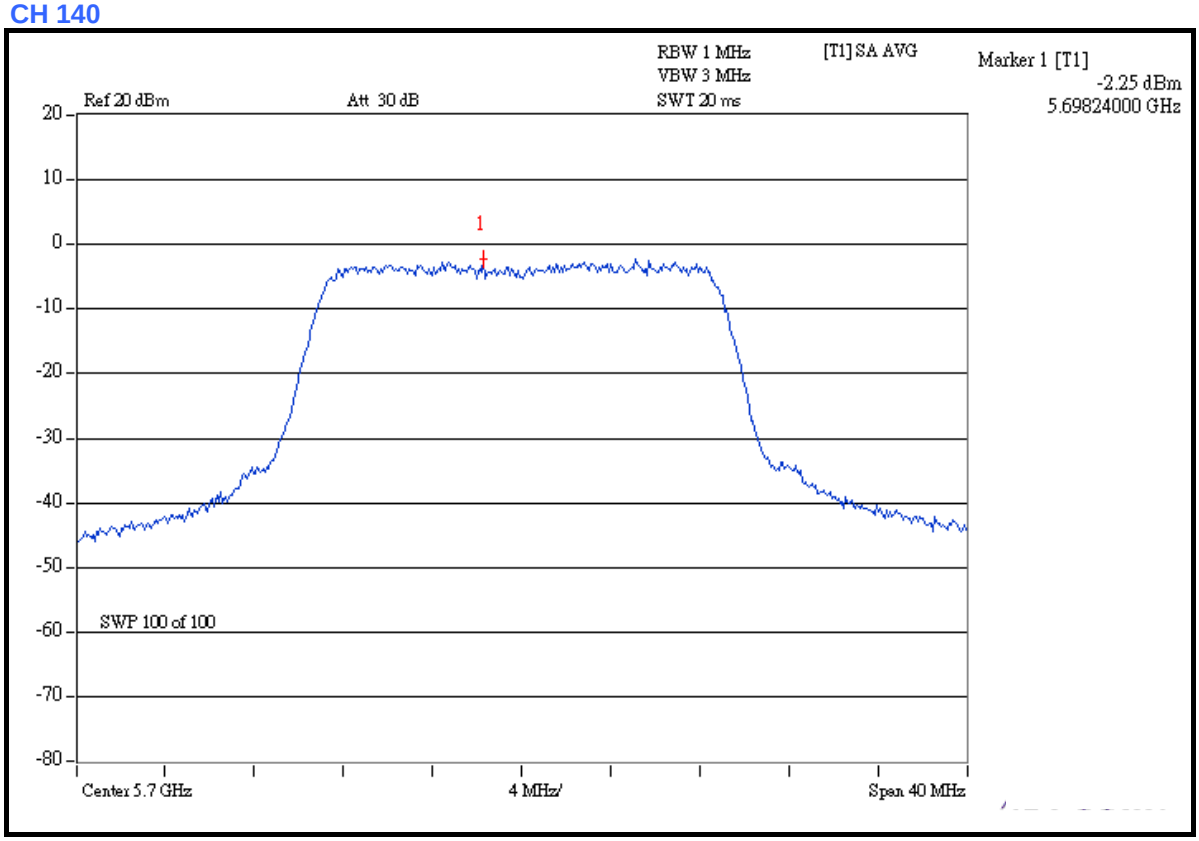
FOR CHAIN 1: CH 100



CH 120


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-1.98 dBm
5.59736000 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

CH 140

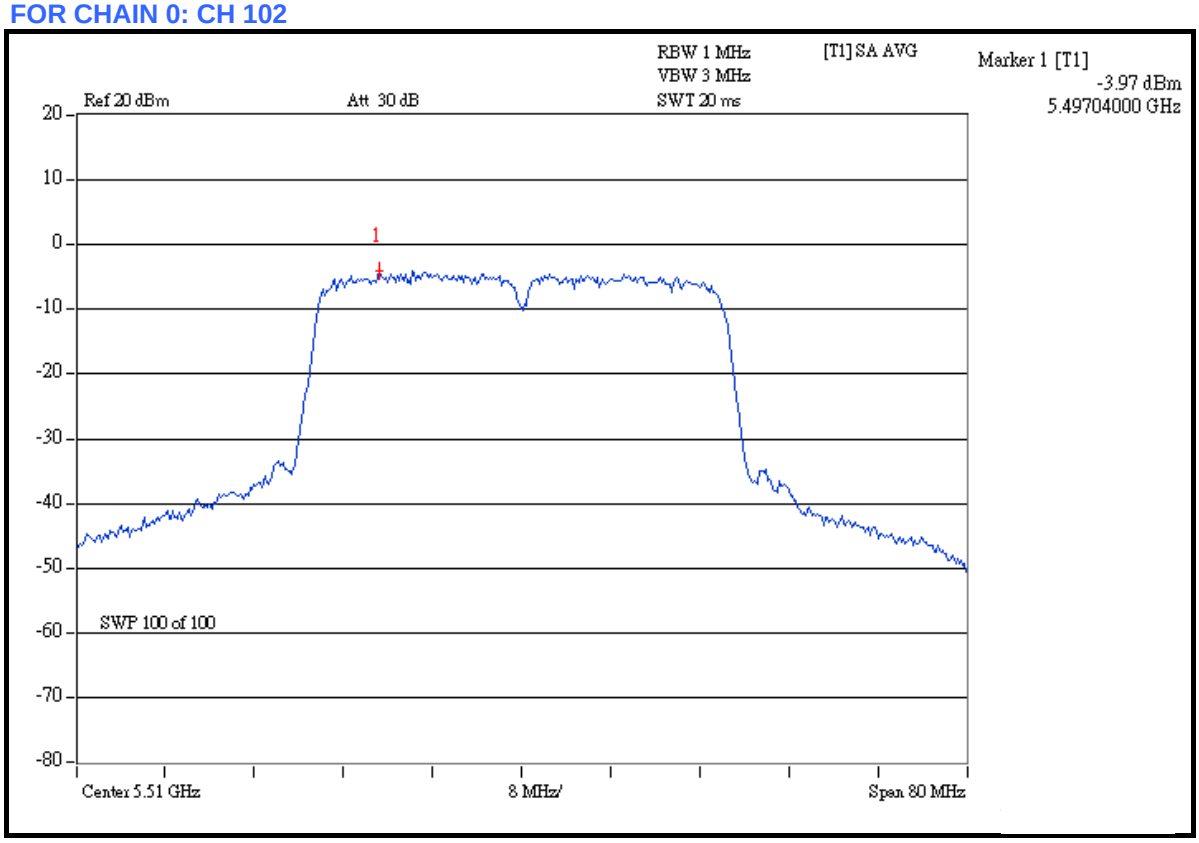

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-2.25 dBm
5.69824000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.7 GHz
4 MHz/
Span 40 MHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

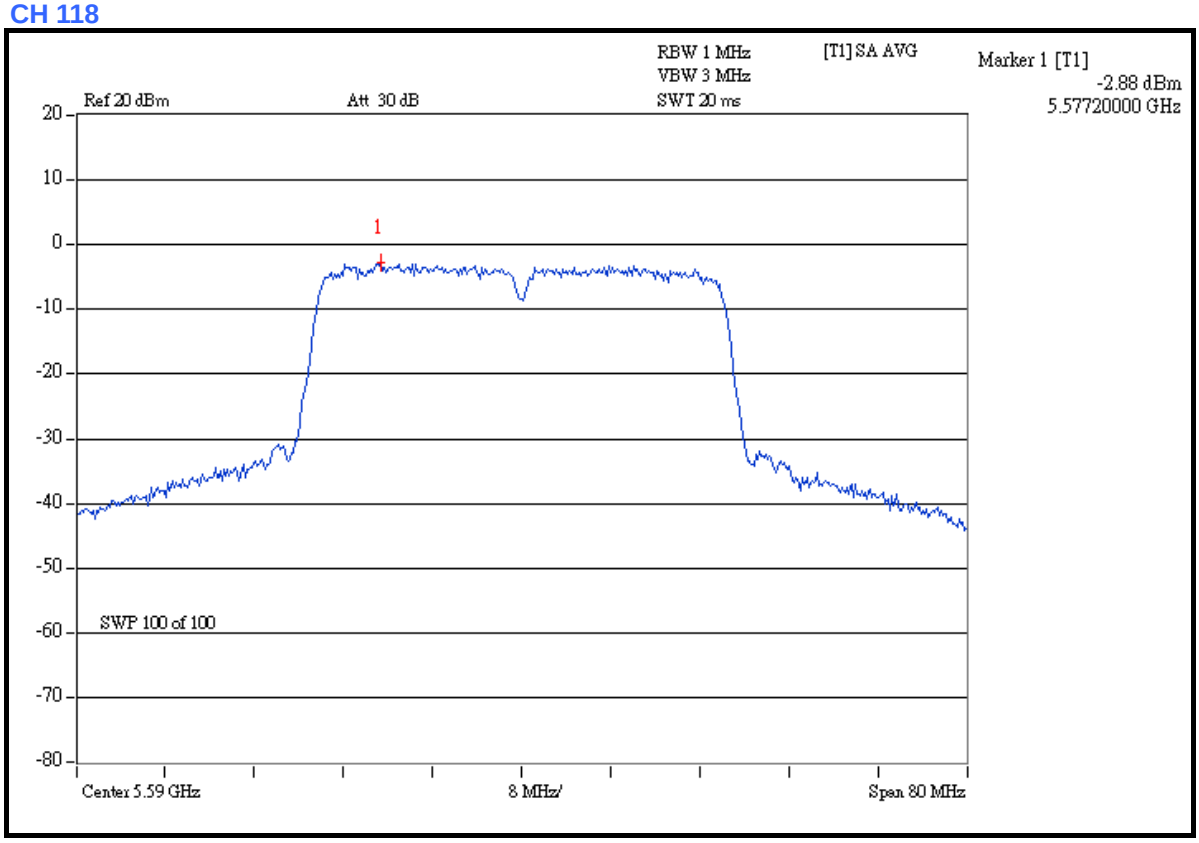
MODULATION TYPE	BPSK	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
INPUT POWER	120Vac, 60Hz	**TESTED BY**	Long Chen

CHAN.	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1kHz BW (mW)		RF POWER LEVEL IN 1kHz BW (dBm)		TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
102	5510	0.401	0.485	-3.97	-3.14	0.886	-0.52	11	PASS
118	5590	0.515	0.483	-2.88	-3.16	0.998	-0.01	11	PASS
134	5670	0.420	0.492	-3.77	-3.08	0.912	-0.40	11	PASS

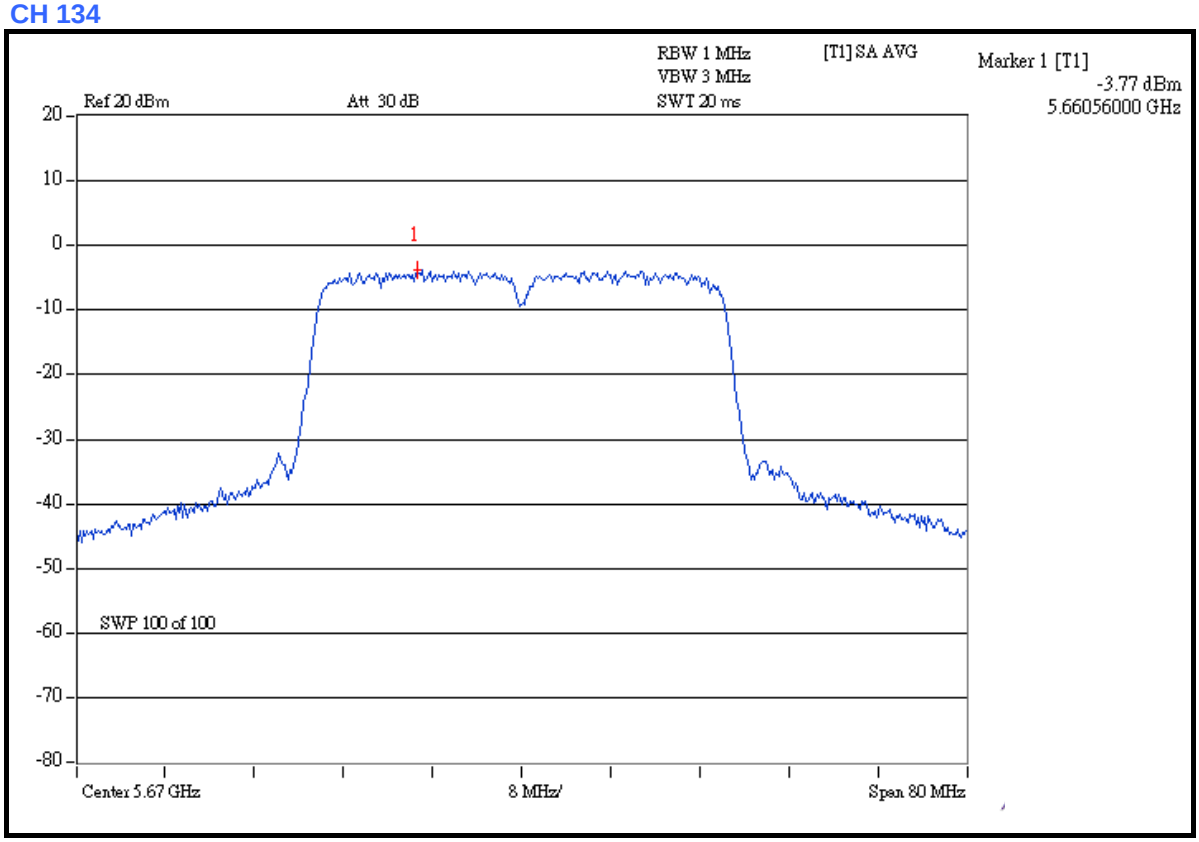
FOR CHAIN 0: CH 102



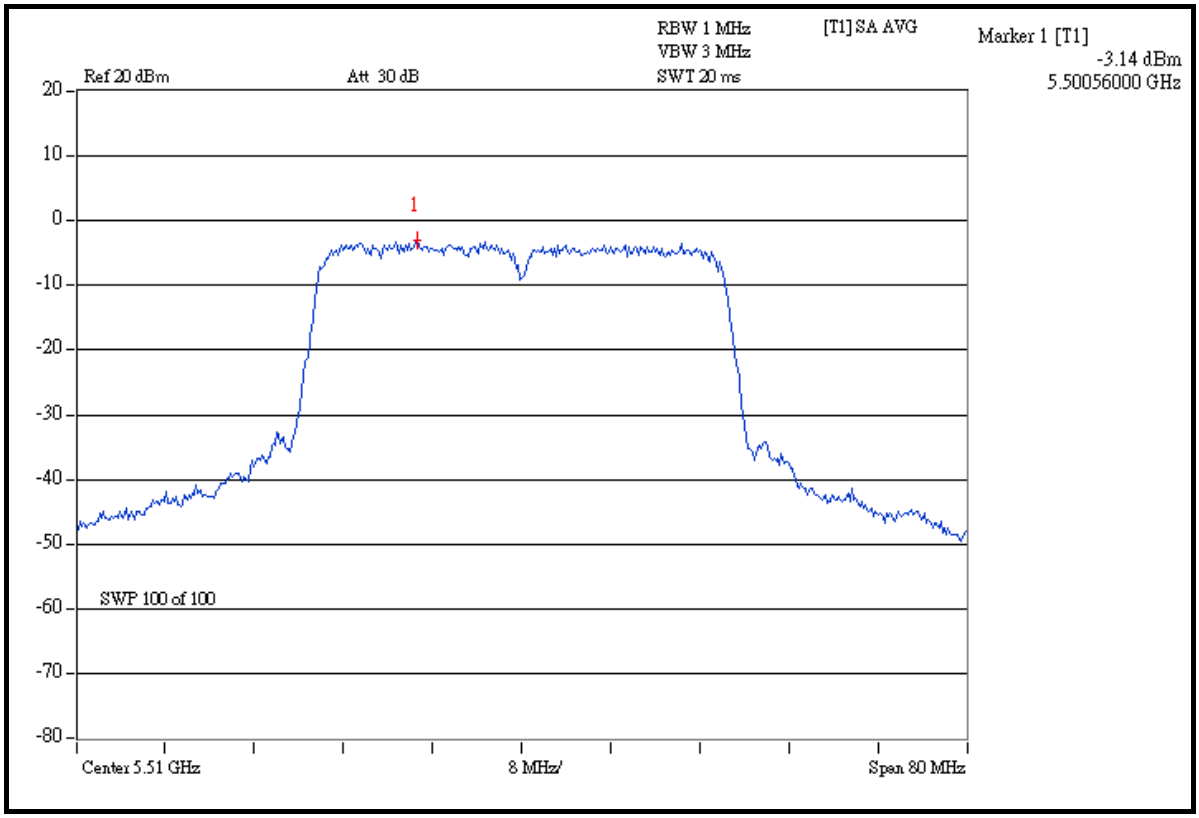
CH 118



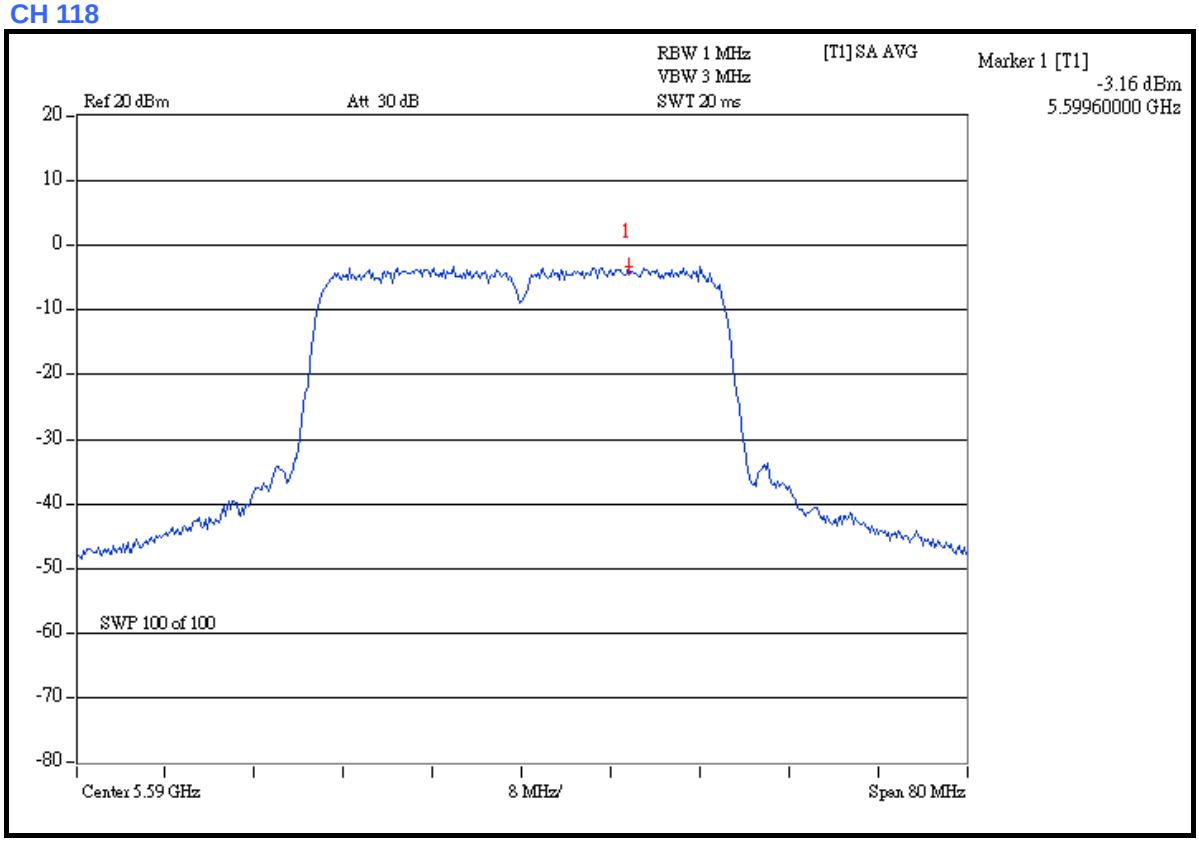
CH 134



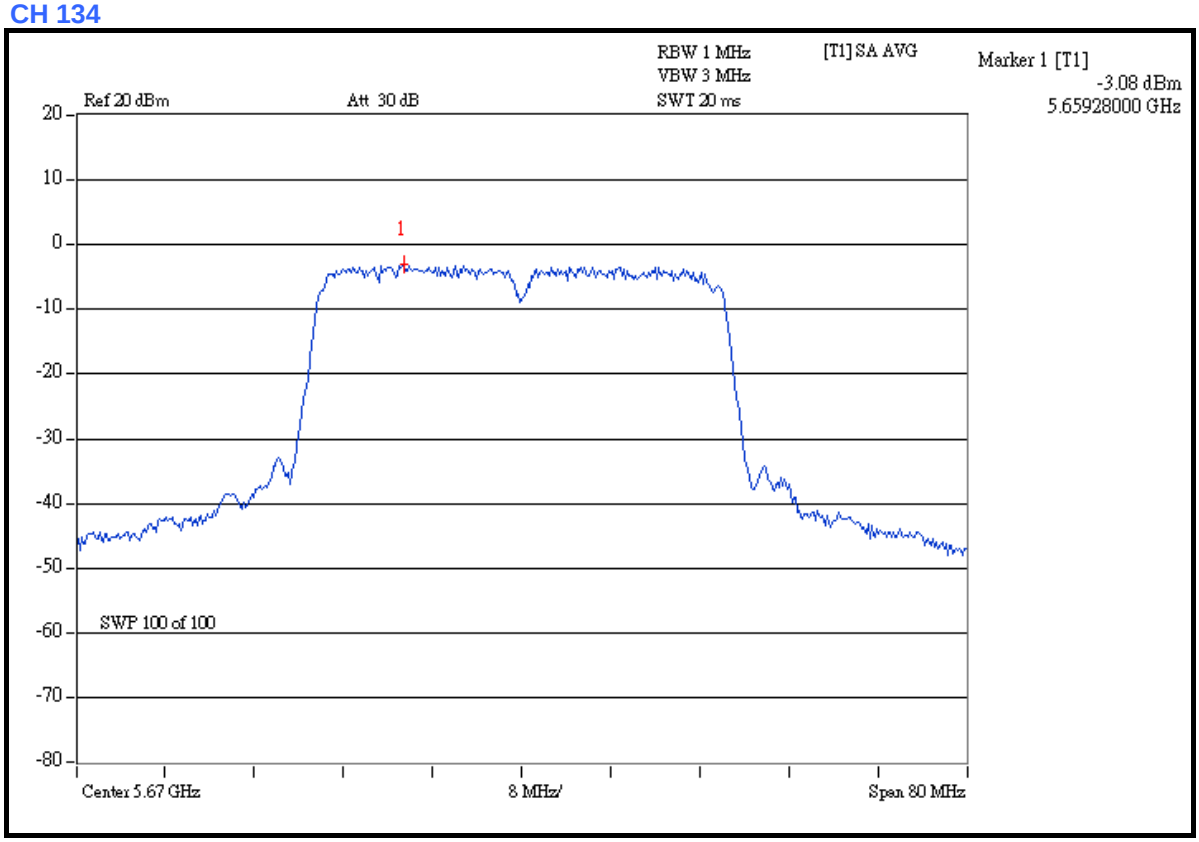
FOR CHAIN 1: CH 102



CH 118


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-3.16 dBm
5.59960000 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

CH 134


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
-3.08 dBm
5.65928000 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

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.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
ANRITSU SPECTRUM ANALYZER	MS2667C	M10281	Mar. 08, 2007	Mar. 07, 2008
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W981030	Jun. 29, 2007	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.

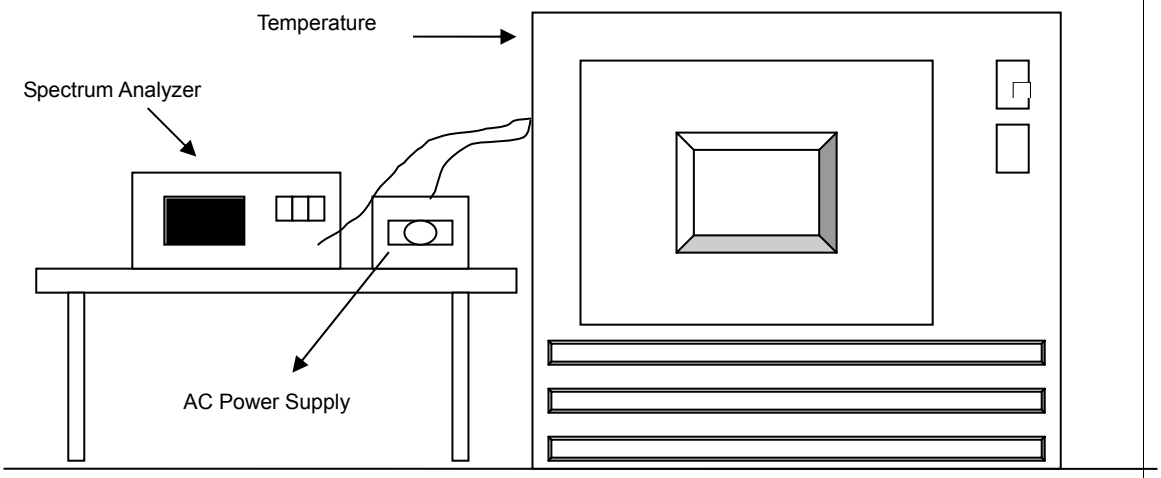
4.6.3 TEST PROCEDURE

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	5319.929708	-0.0013213	5319.930357	-0.0013091	5319.930008	-0.0013156	5319.932503	-0.0012687
	110.0	5319.930744	-0.0013018	5319.927873	-0.0013558	5319.927045	-0.0013713	5319.924933	-0.0014110
	93.5	5319.933051	-0.0012584	5319.932062	-0.0012770	5319.932128	-0.0012758	5319.933123	-0.0012571
40	126.5	5319.938855	-0.0011493	5319.936251	-0.0011983	5319.934429	-0.0012325	5319.932417	-0.0012704
	110.0	5319.939587	-0.0011356	5319.937698	-0.0011711	5319.937397	-0.0011768	5319.935133	-0.0012193
	93.5	5319.940167	-0.0011247	5319.936090	-0.0012013	5319.934704	-0.0012274	5319.935225	-0.0012176
30	126.5	5319.947126	-0.0009939	5319.944612	-0.0010411	5319.945129	-0.0010314	5319.947032	-0.0009956
	110.0	5319.948034	-0.0009768	5319.943796	-0.0010565	5319.942497	-0.0010809	5319.945488	-0.0010247
	93.5	5319.947237	-0.0009918	5319.947563	-0.0009857	5319.946947	-0.0009972	5319.946496	-0.0010057
20	126.5	5319.961710	-0.0007197	5319.958479	-0.0007805	5319.954875	-0.0008482	5319.955751	-0.0008317
	110.0	5319.962434	-0.0007061	5319.962407	-0.0007066	5319.962559	-0.0007038	5319.962164	-0.0007112
	93.5	5319.965235	-0.0006535	5319.965481	-0.0006489	5319.965672	-0.0006453	5319.963837	-0.0006798
10	126.5	5319.966706	-0.0006258	5319.967587	-0.0006093	5319.969755	-0.0005685	5319.968663	-0.0005891
	110.0	5319.968955	-0.0005835	5319.970448	-0.0005555	5319.966016	-0.0006388	5319.967354	-0.0006136
	93.5	5319.968120	-0.0005992	5319.961955	-0.0007151	5319.961359	-0.0007263	5319.961145	-0.0007304
0	126.5	5319.990981	-0.0001695	5319.985352	-0.0002753	5319.983616	-0.0003080	5319.986582	-0.0002522
	110.0	5319.988389	-0.0002182	5319.987020	-0.0002440	5319.986461	-0.0002545	5319.988831	-0.0002099
	93.5	5319.992087	-0.0001487	5319.987180	-0.0002410	5319.988383	-0.0002184	5319.991346	-0.0001627
-10	126.5	5320.002495	0.0000469	5320.001552	0.0000292	5320.000780	0.0000147	5320.003235	0.0000608
	110.0	5320.001342	0.0000252	5319.997594	-0.0000452	5319.998284	-0.0000323	5319.995239	-0.0000895
	93.5	5320.003641	0.0000684	5320.002051	0.0000386	5320.001455	0.0000274	5320.000695	0.0000131
-20	126.5	5320.015836	0.0002977	5320.013091	0.0002461	5320.014307	0.0002689	5320.016454	0.0003093
	110.0	5320.019704	0.0003704	5320.018289	0.0003438	5320.017714	0.0003330	5320.016013	0.0003010
	93.5	5320.023889	0.0004490	5320.019380	0.0003643	5320.016757	0.0003150	5320.013411	0.0002521
-30	126.5	5320.017102	0.0003215	5320.017486	0.0003287	5320.015152	0.0002848	5320.016572	0.0003115
	110.0	5320.019332	0.0003634	5320.013710	0.0002577	5320.012610	0.0002370	5320.011825	0.0002223
	93.5	5320.020414	0.0003837	5320.019383	0.0003643	5320.022575	0.0004243	5320.023625	0.0004441

4.7 BAND EDGES MEASUREMENT

4.7.1 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
802.11a:				
R&S SPECTRUM ANALYZER	FSP40	100040	Jun. 29, 2007	Jun. 28, 2008
DRAFT 802.11n (20MHz), DRAFT 802.11n (40MHz):				
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 26, 2007	Dec. 25, 2008
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Jan. 05, 2007	Jan. 04, 2008
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-405	Dec. 18, 2007	Dec. 17, 2008
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170242	Jan. 17, 2007	Jan. 16, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274397/4	Nov. 08, 2007	Nov. 07, 2008
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283401/4	Nov. 08, 2007	Nov. 07, 2008
Software ADT.	ADT_Radiated_V7.6	NA	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	019303	NA	NA
Turn Table ADT.	TT100.	TT93021704	NA	NA
Turn Table Controller ADT.	SC100.	SC93021704	NA	NA

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

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: 5.15 ~ 5.35GHz

802.11a OFDM MODULATION:

Channel 36 (5180MHz)

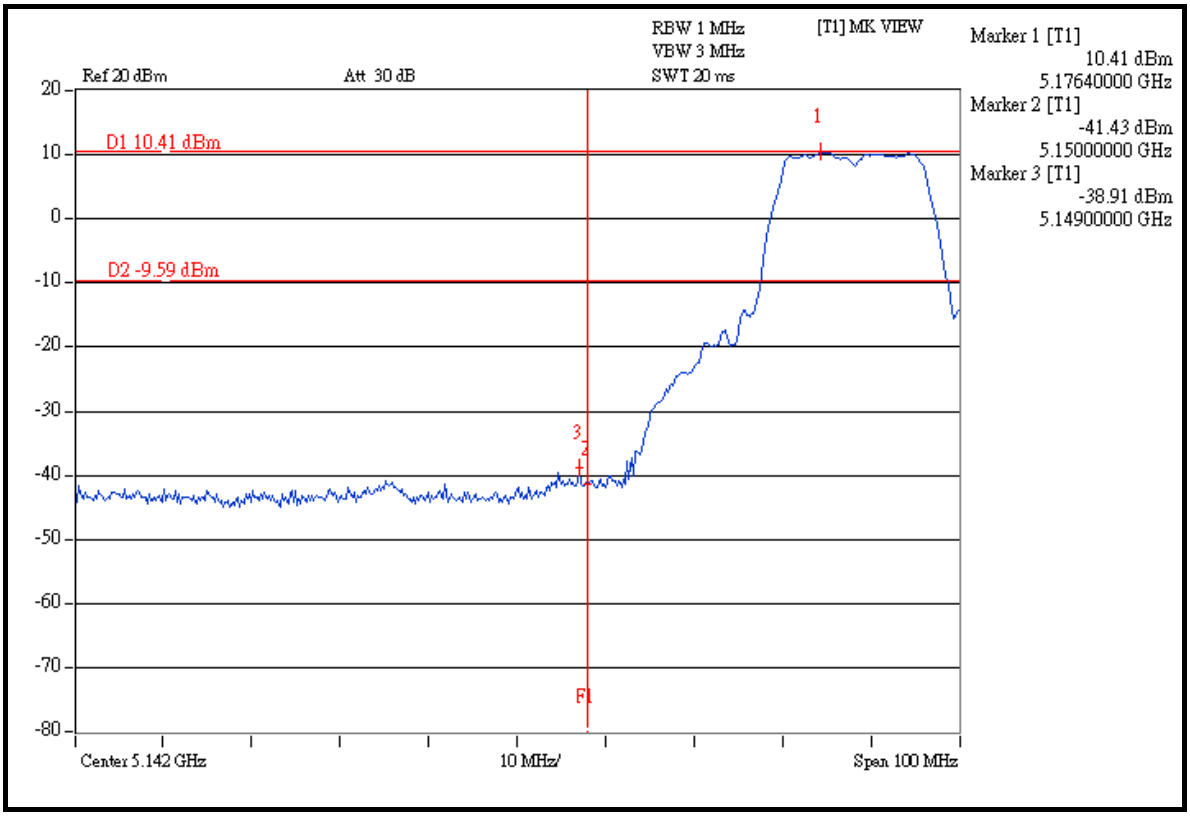
The band edge emission plot on the next page shows 49.32dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 36 is 108.09dBuV/m (Peak), so the maximum field strength in restrict band is 108.09 – 49.32 = 58.77dBuV/m which is under 74dBuV/m limit.

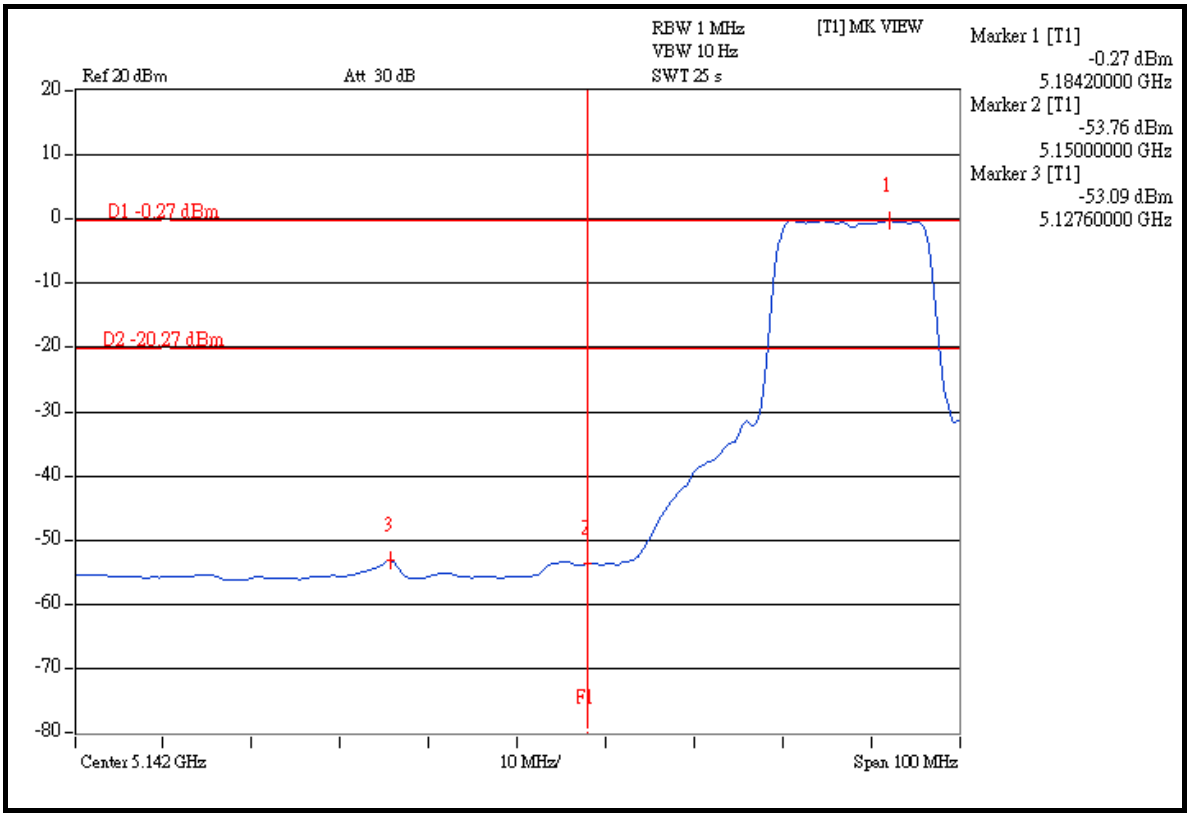
The band edge emission plot on the next page shows 52.82dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 36 is 98.18dBuV/m (Average), so the maximum field strength in restrict band is 98.18 – 52.82 = 45.36dBuV/m which is under 54dBuV/m limit.

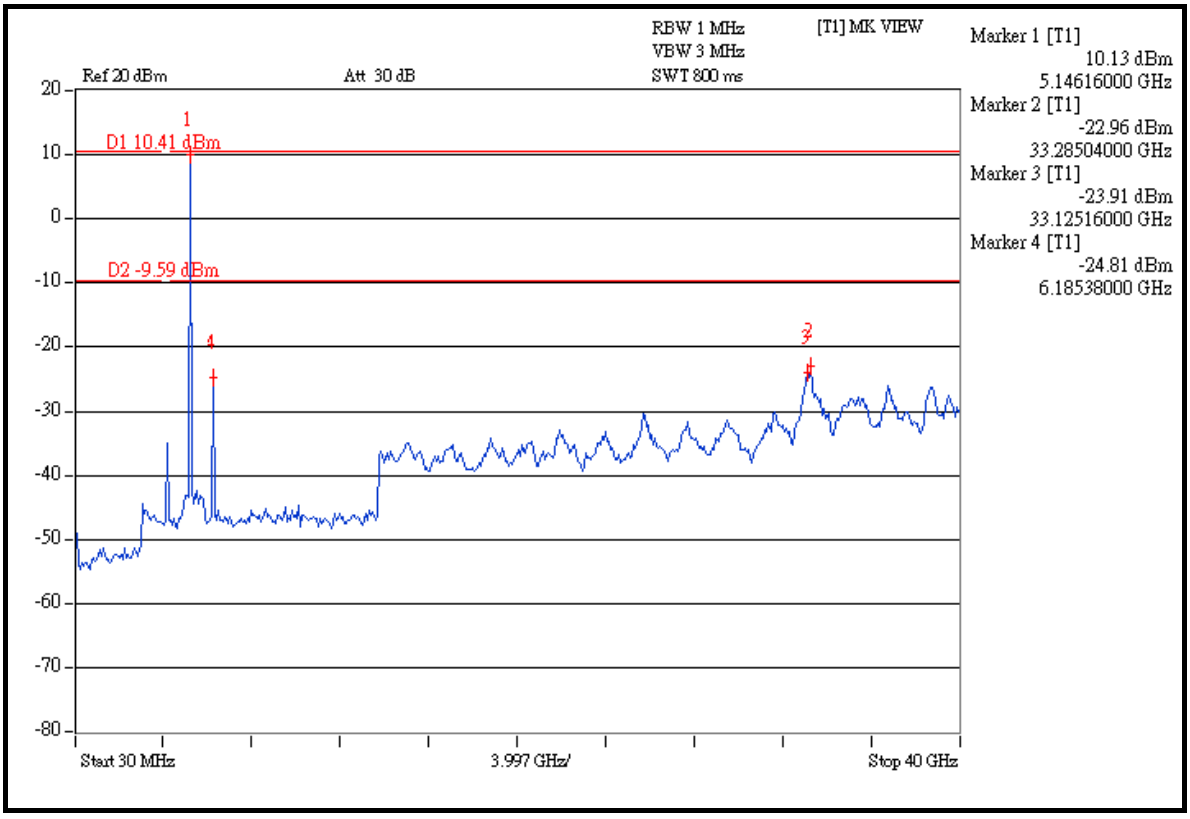
Channel 64 (5320MHz)

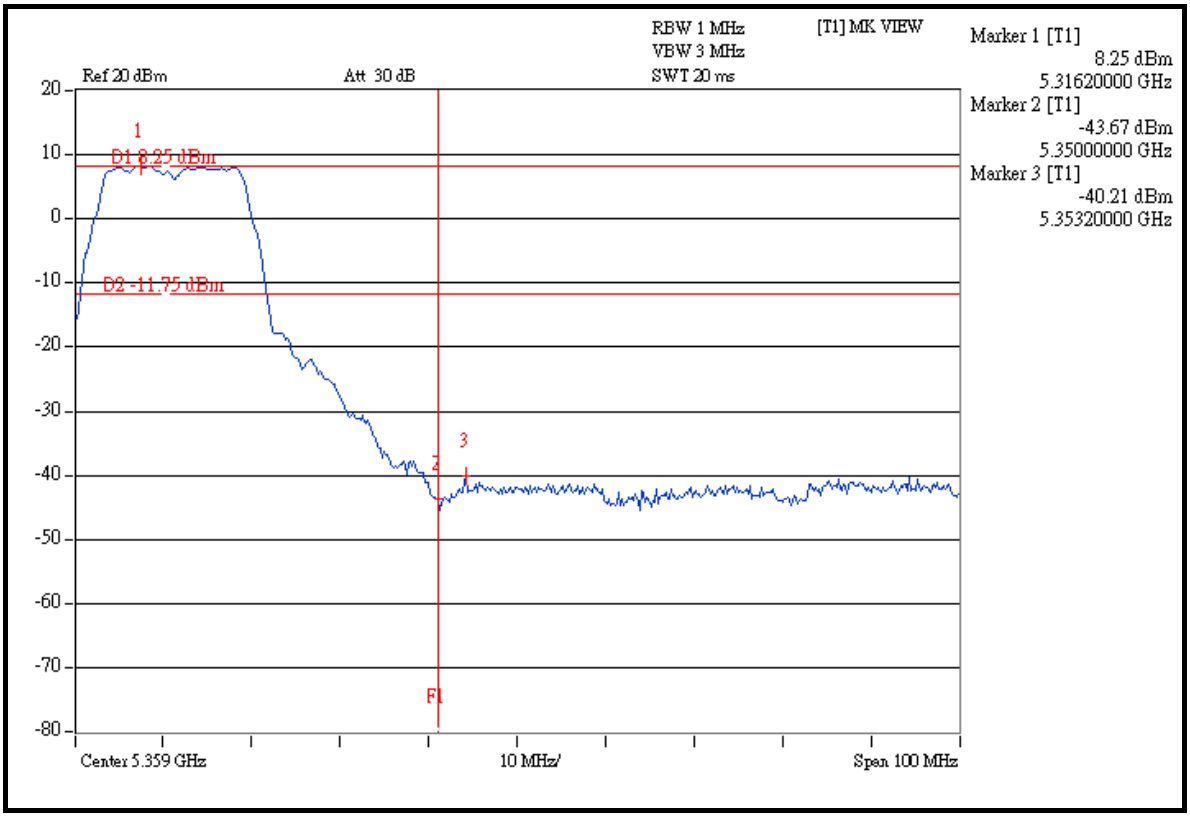
The band edge emission plot on the next second page shows 48.46dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 64 is 106.350dBuV/m (Peak), so the maximum field strength in restrict band is 106.35 – 48.46 = 57.89dBuV/m which is under 74dBuV/m limit.

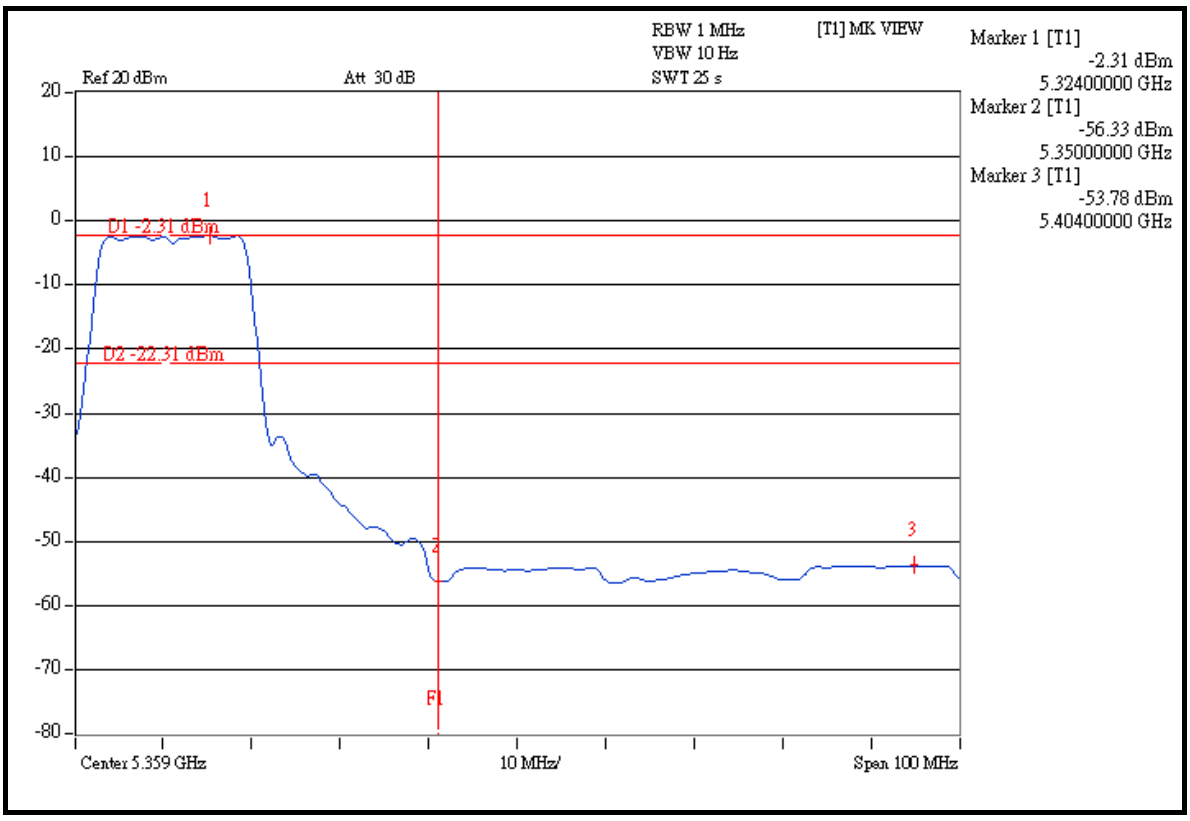
The band edge emission plot on the next third page shows 51.47dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 64 is 96.47dBuV/m (Average), so the maximum field strength in restrict band is 96.47 – 51.47 = 45.00dBuV/m which is under 54dBuV/m limit.

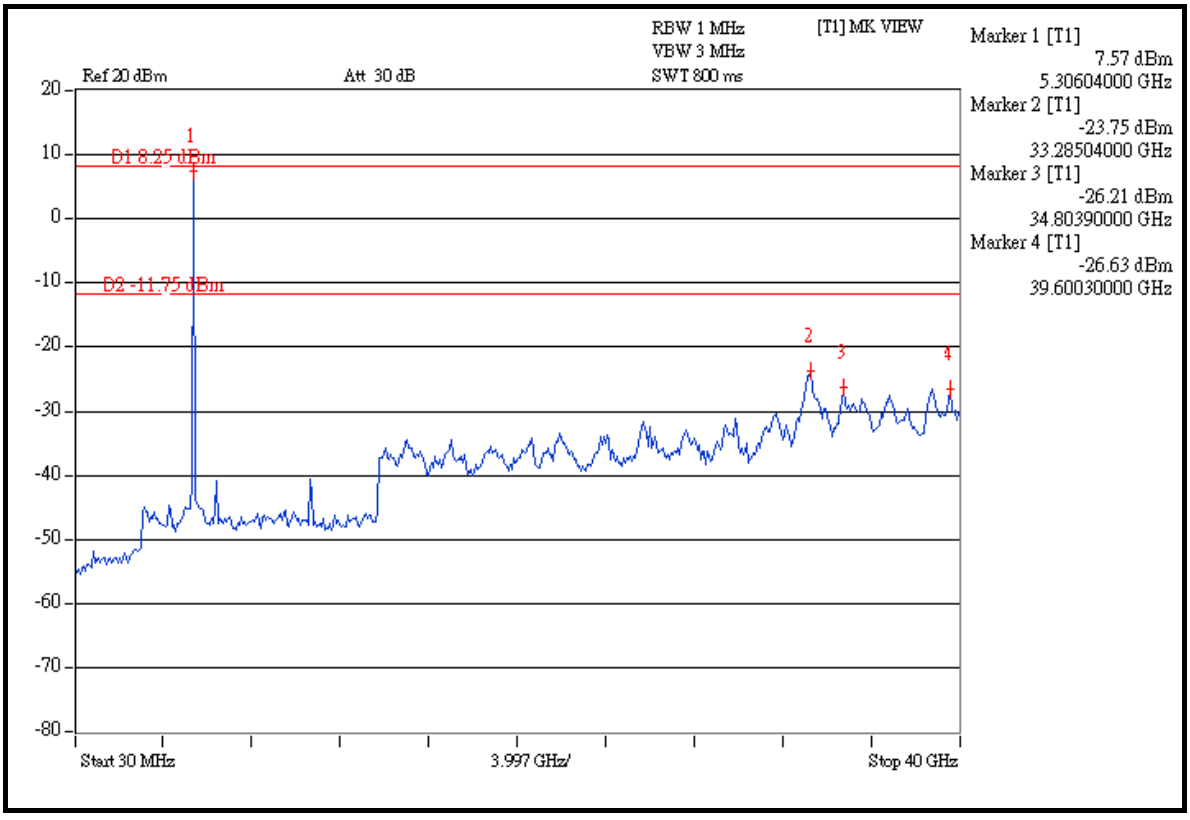

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 10.41 dBm
D2 -9.59 dBm
Marker 1 [T1]
10.41 dBm
5.17640000 GHz
Marker 2 [T1]
-41.43 dBm
5.15000000 GHz
Marker 3 [T1]
-38.91 dBm
5.14900000 GHz
Center 5.142 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -0.27 dBm
D2 -20.27 dBm
Marker 1 [T1]
-0.27 dBm
5.18420000 GHz
Marker 2 [T1]
-53.76 dBm
5.15000000 GHz
Marker 3 [T1]
-53.09 dBm
5.12760000 GHz
Center 5.142 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 10.41 dBm
D2 -9.59 dBm
Marker 1 [T1]
10.13 dBm
5.14616000 GHz
Marker 2 [T1]
-22.96 dBm
33.28504000 GHz
Marker 3 [T1]
-23.91 dBm
33.12516000 GHz
Marker 4 [T1]
-24.81 dBm
6.18538000 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 8.25 dBm
D2 -11.75 dBm
Marker 1 [T1]
8.25 dBm
5.31620000 GHz
Marker 2 [T1]
-43.67 dBm
5.35000000 GHz
Marker 3 [T1]
-40.21 dBm
5.35320000 GHz
Center 5.359 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-2.31 dBm
5.32400000 GHz
Marker 2 [T1]
-56.33 dBm
5.35000000 GHz
Marker 3 [T1]
-53.78 dBm
5.40400000 GHz
D1 -2.31 dBm
D2 -22.31 dBm
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]
7.57 dBm
5.30604000 GHz
Marker 2 [T1]
-23.75 dBm
33.28504000 GHz
Marker 3 [T1]
-26.21 dBm
34.80390000 GHz
Marker 4 [T1]
-26.63 dBm
39.60030000 GHz
D1 8.25 dBm
D2 -11.75 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

Channel 36 (5180MHz)

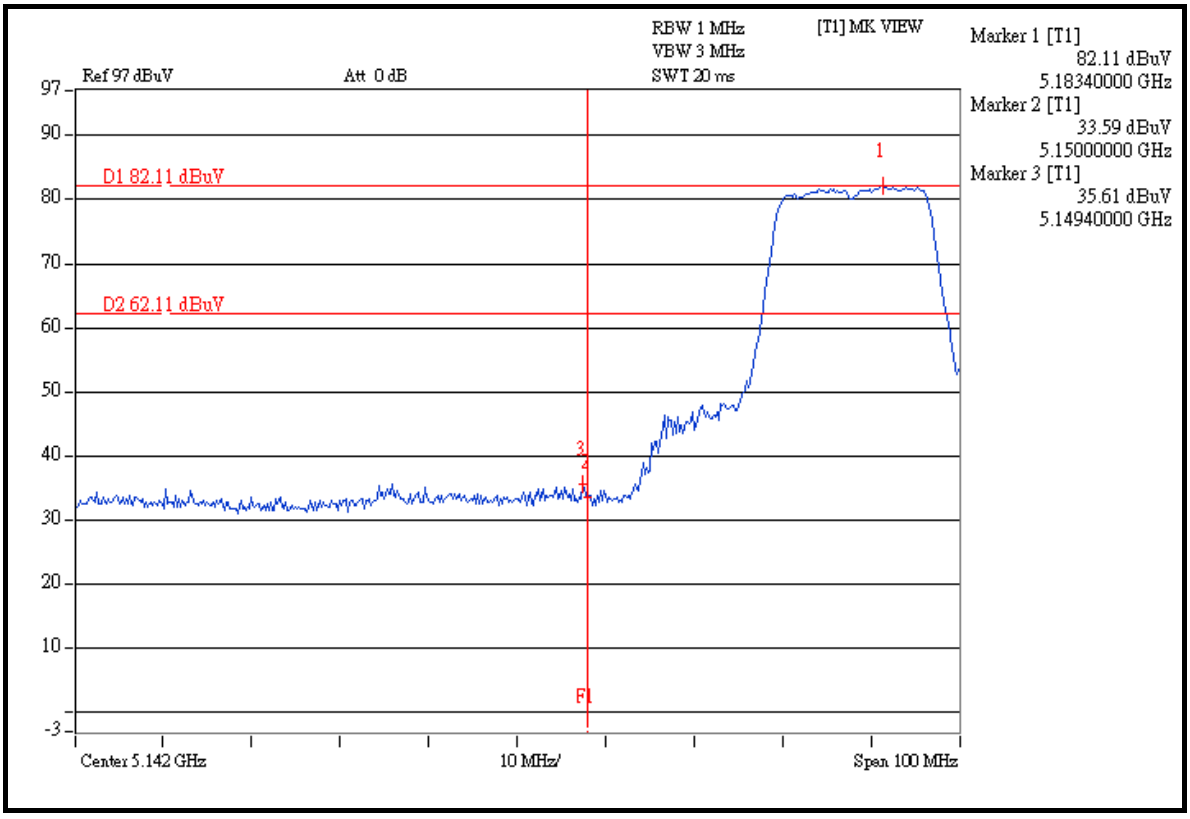
The band edge emission plot on the next page shows 46.50dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 36 is 109.24dBuV/m (Peak), so the maximum field strength in restrict band is 109.24 – 46.50 = 62.74dBuV/m which is under 74dBuV/m limit.

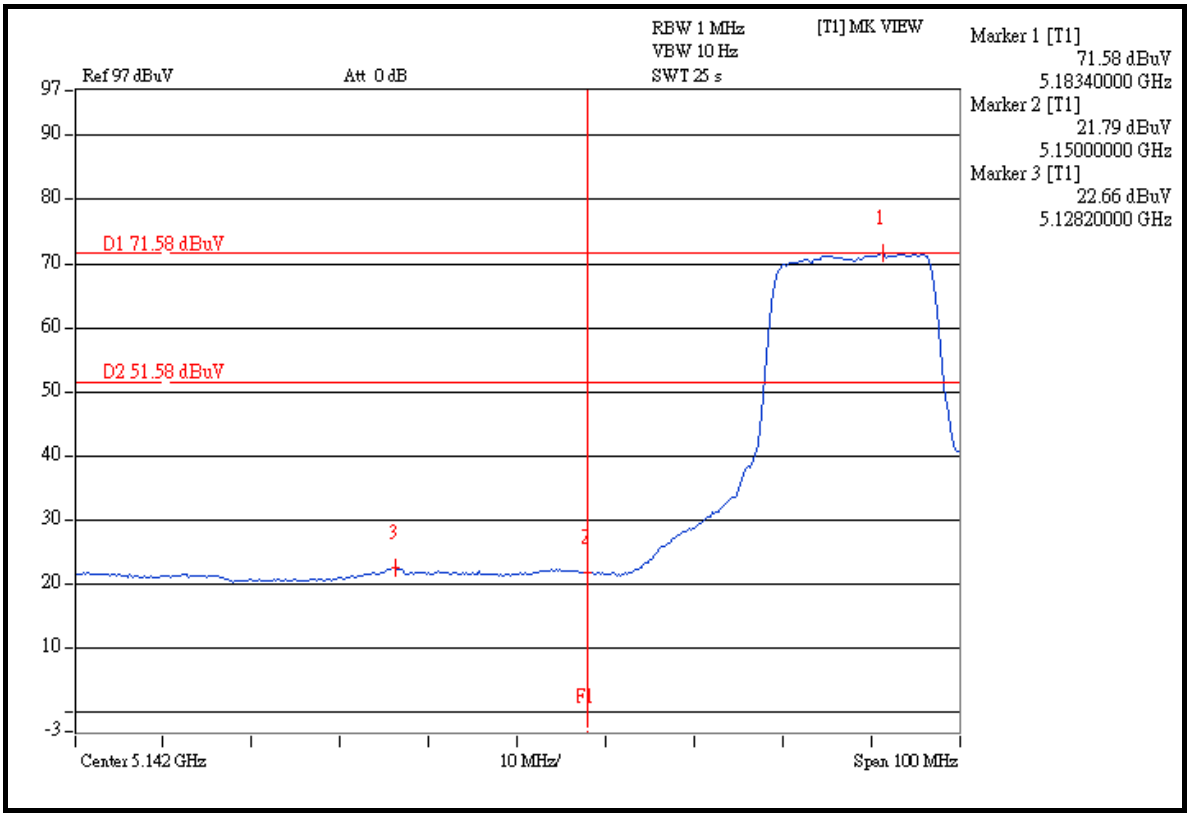
The band edge emission plot on the next page shows 48.92dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 36 is 98.66dBuV/m (Average), so the maximum field strength in restrict band is 98.66 – 48.92 = 49.74dBuV/m which is under 54dBuV/m limit.

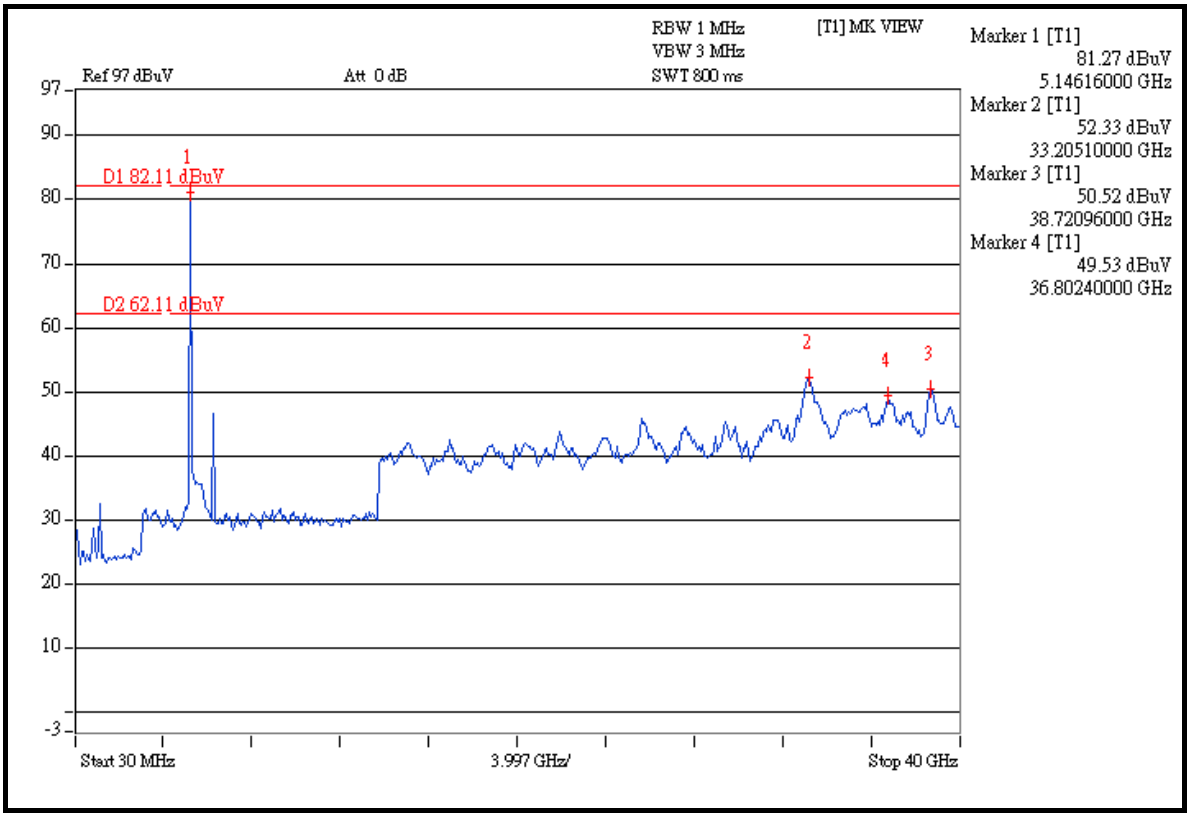
Channel 64 (5320MHz)

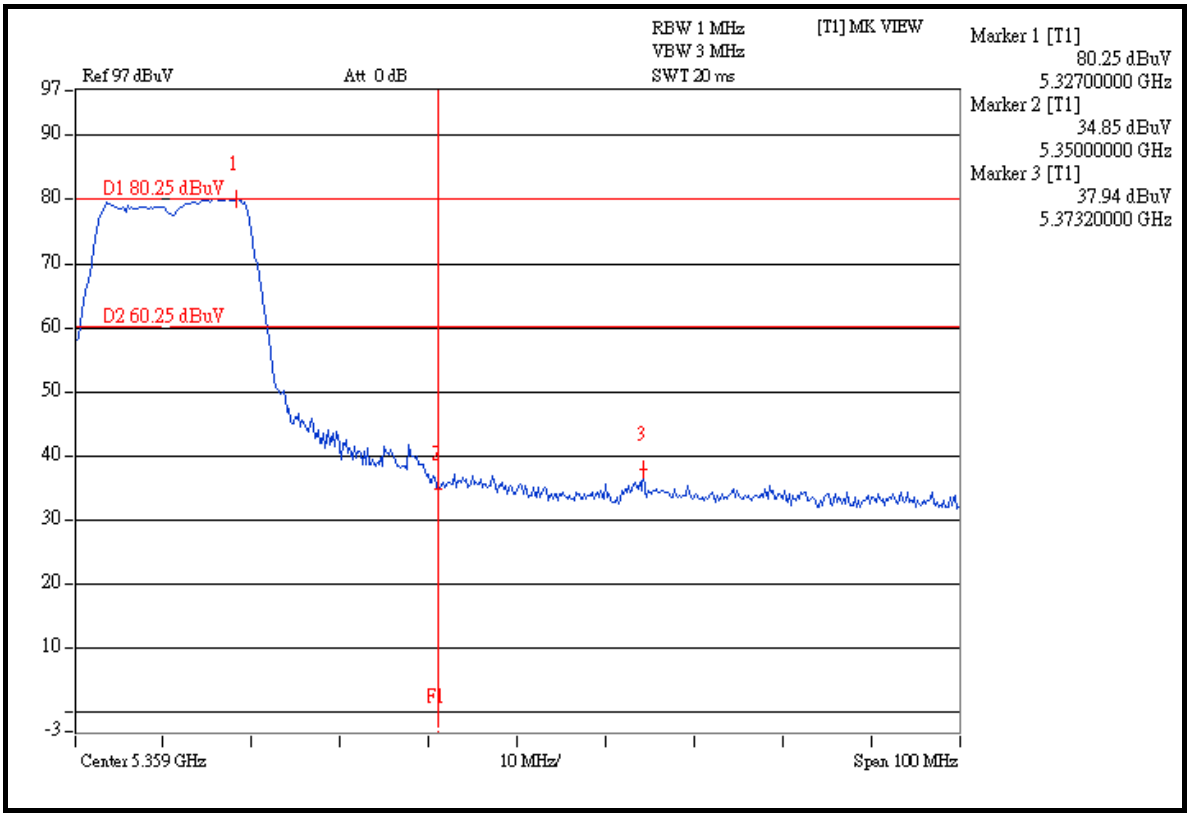
The band edge emission plot on the next second page shows 42.31dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 64 is 107.37dBuV/m (Peak), so the maximum field strength in restrict band is 107.37 – 42.31 = 65.06dBuV/m which is under 74dBuV/m limit.

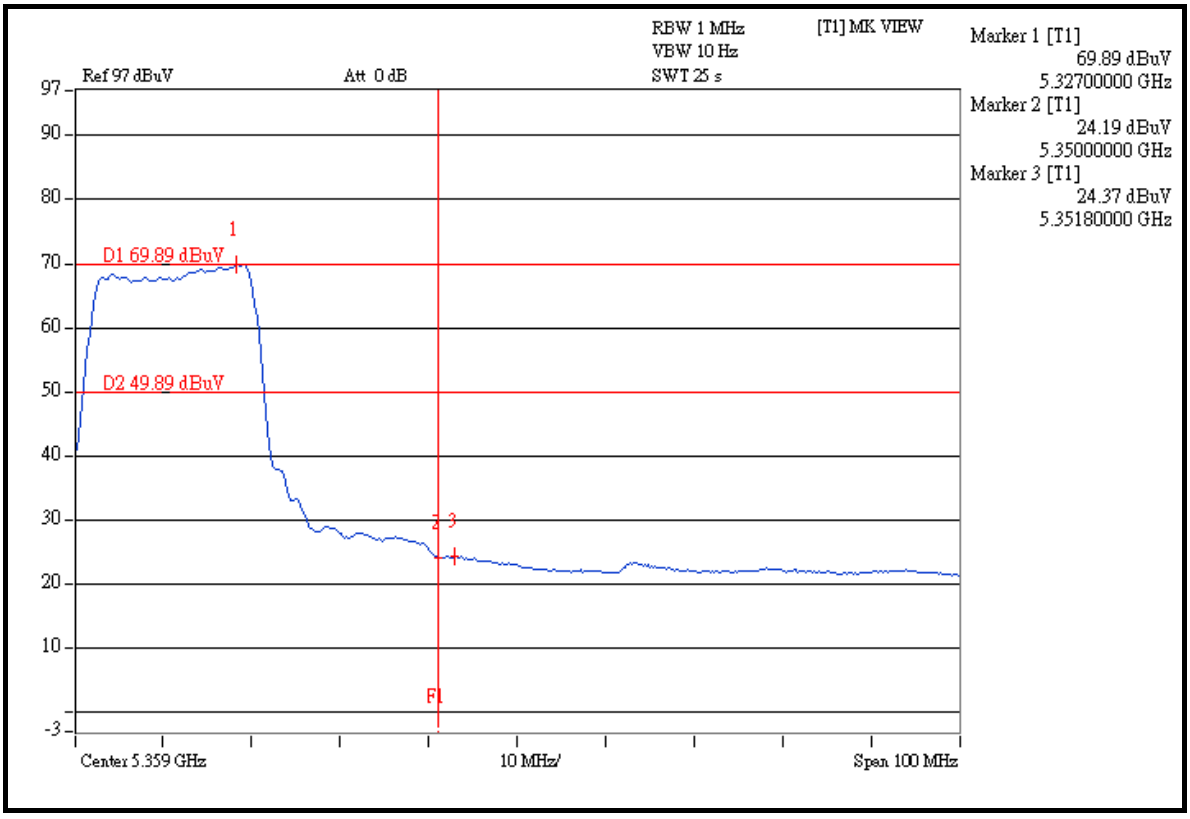
The band edge emission plot on the next third page shows 45.52dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 64 is 97.23dBuV/m (Average), so the maximum field strength in restrict band is 97.23 – 45.52 = 51.71dBuV/m which is under 54dBuV/m limit.

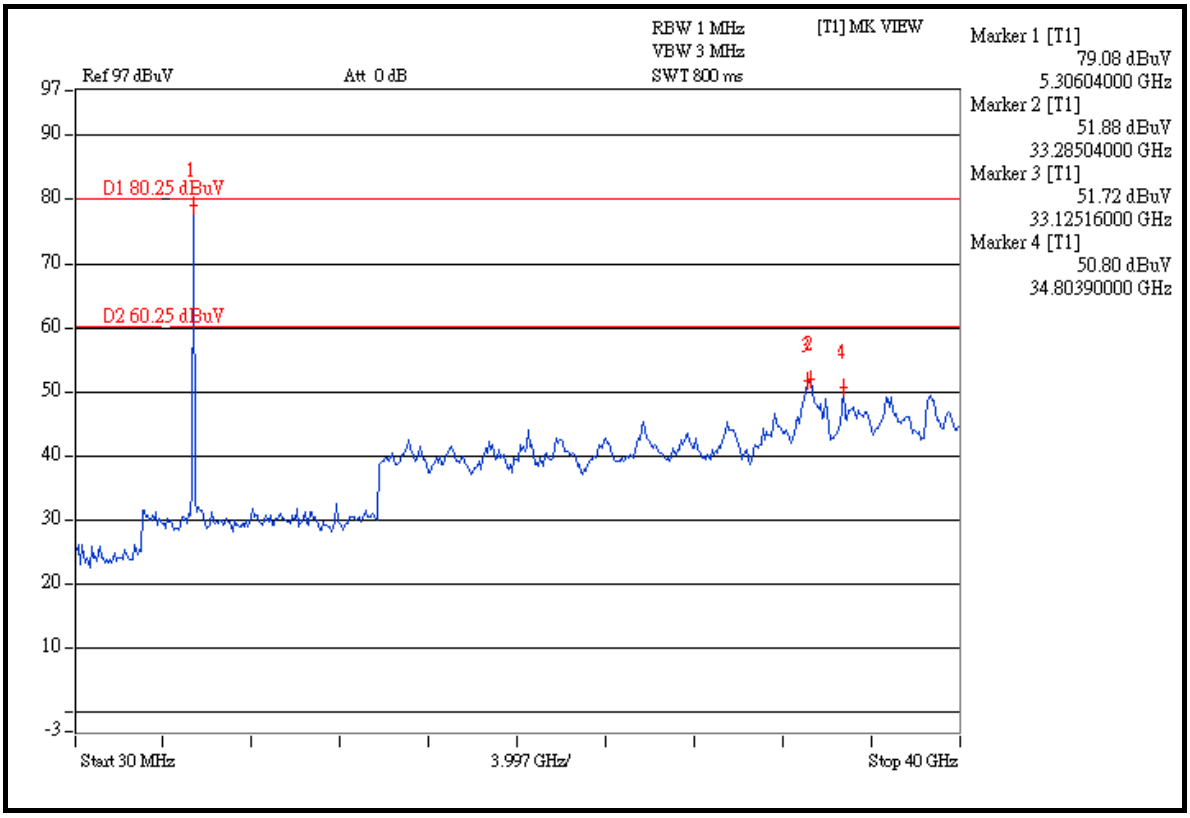

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
82.11 dBuV
5.18340000 GHz
Marker 2 [T1]
33.59 dBuV
5.15000000 GHz
Marker 3 [T1]
35.61 dBuV
5.14940000 GHz
D1 82.11 dBuV
D2 62.11 dBuV
97
90
80
70
60
50
40
30
20
10
-3
Center 5.142 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
71.58 dBuV
5.18340000 GHz
Marker 2 [T1]
21.79 dBuV
5.15000000 GHz
Marker 3 [T1]
22.66 dBuV
5.12820000 GHz
D1 71.58 dBuV
D2 51.58 dBuV
97
90
80
70
60
50
40
30
20
10
-3
Center 5.142 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 82.11 dBuV
D2 62.11 dBuV
Marker 1 [T1]
81.27 dBuV
5.14616000 GHz
Marker 2 [T1]
52.33 dBuV
33.20510000 GHz
Marker 3 [T1]
50.52 dBuV
38.72096000 GHz
Marker 4 [T1]
49.53 dBuV
36.80240000 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 80.25 dBuV
D2 60.25 dBuV
Marker 1 [T1]
80.25 dBuV
5.32700000 GHz
Marker 2 [T1]
34.85 dBuV
5.35000000 GHz
Marker 3 [T1]
37.94 dBuV
5.37320000 GHz
Center 5.359 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
69.89 dBuV
5.32700000 GHz
Marker 2 [T1]
24.19 dBuV
5.35000000 GHz
Marker 3 [T1]
24.37 dBuV
5.35180000 GHz
D1 69.89 dBuV
D2 49.89 dBuV
Center 5.359 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
79.08 dBuV
5.30604000 GHz
Marker 2 [T1]
51.88 dBuV
33.28504000 GHz
Marker 3 [T1]
51.72 dBuV
33.12516000 GHz
Marker 4 [T1]
50.80 dBuV
34.80390000 GHz
D1 80.25 dBuV
D2 60.25 dBuV
Start 30 MHz
3.997 GHz/
Stop 40 GHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

Channel 38 (5190MHz)

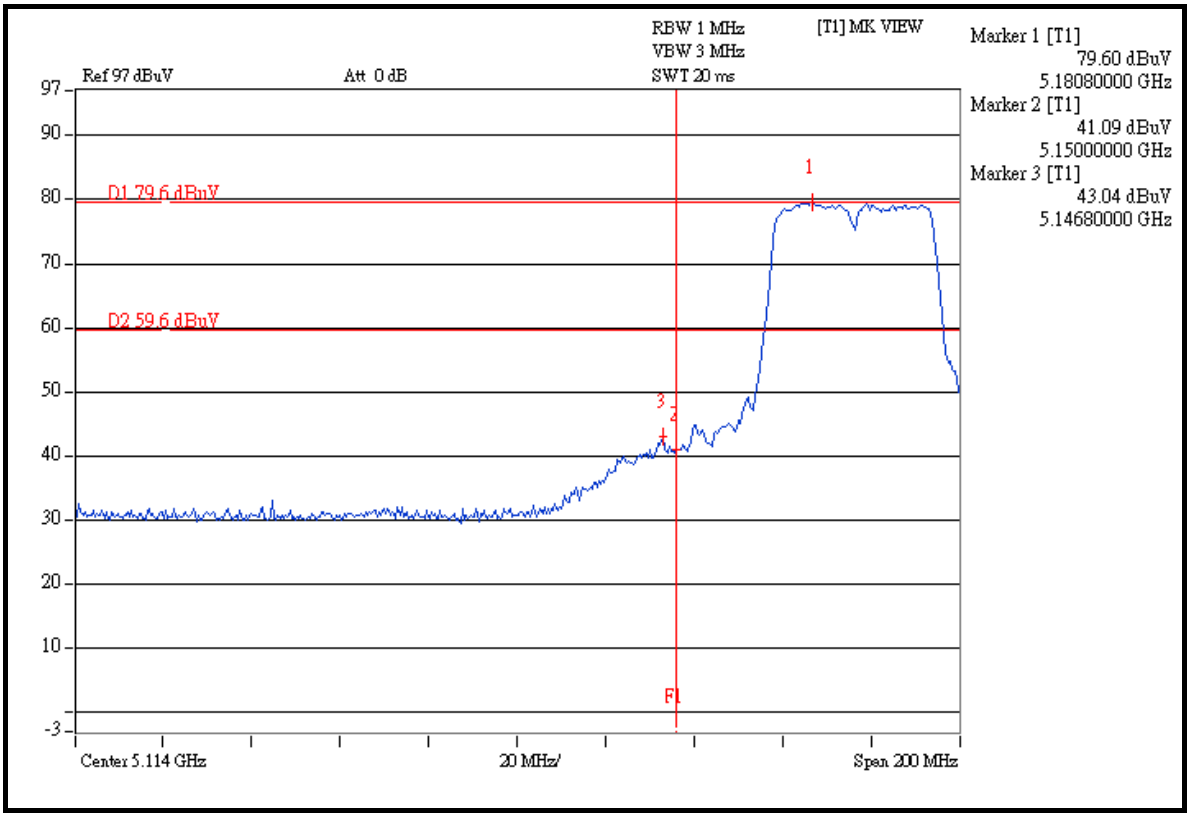
The band edge emission plot on the next page shows 36.56dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 38 is 106.83dBuV/m (Peak), so the maximum field strength in restrict band is 106.83 – 36.56 = 70.27dBuV/m which is under 74dBuV/m limit.

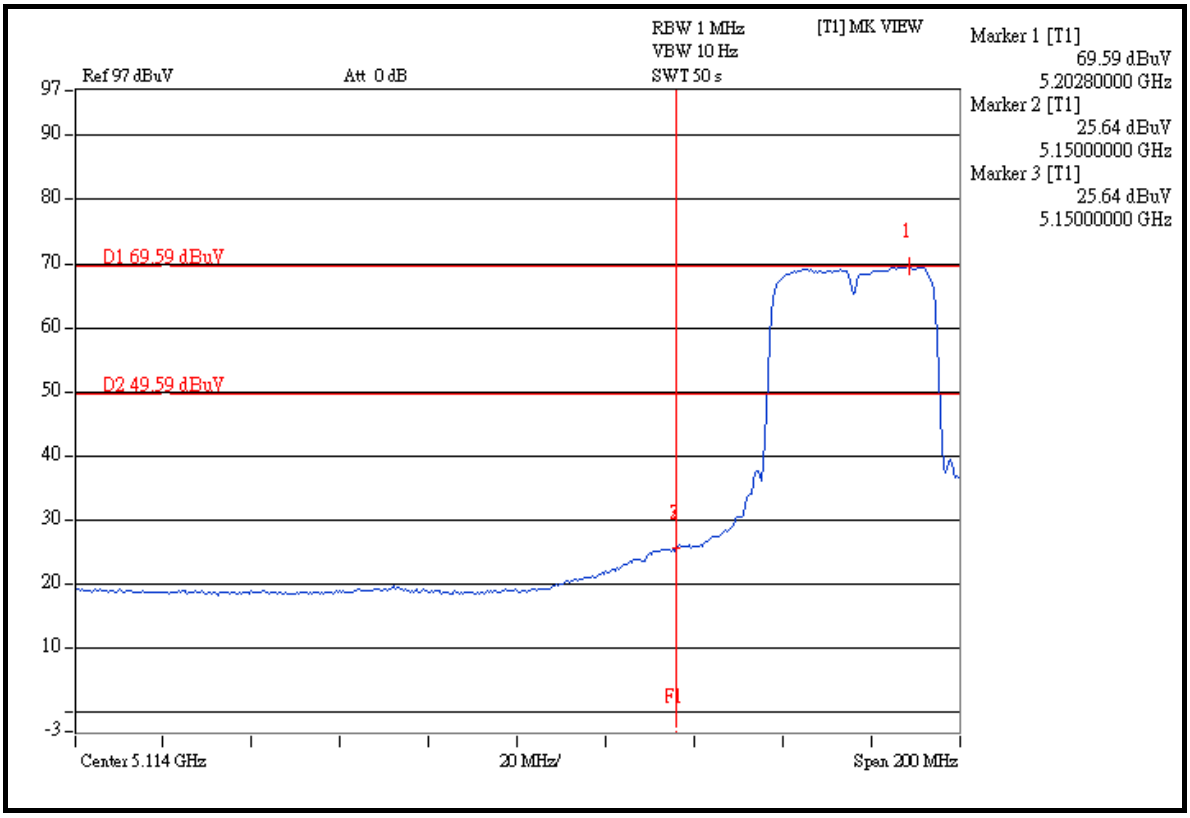
The band edge emission plot on the next page shows 43.95dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 38 is 96.61dBuV/m (Average), so the maximum field strength in restrict band is 96.61 – 43.95 = 52.66dBuV/m which is under 54dBuV/m limit.

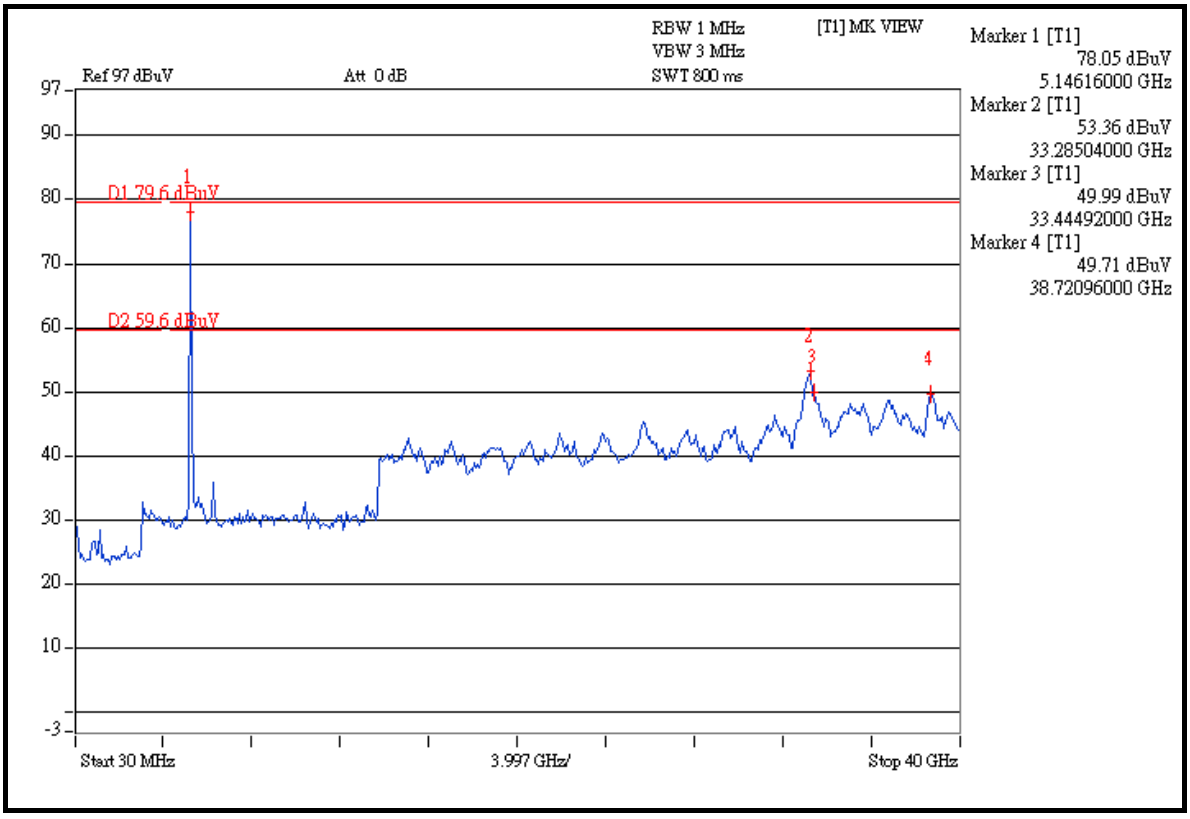
Channel 62 (5310MHz)

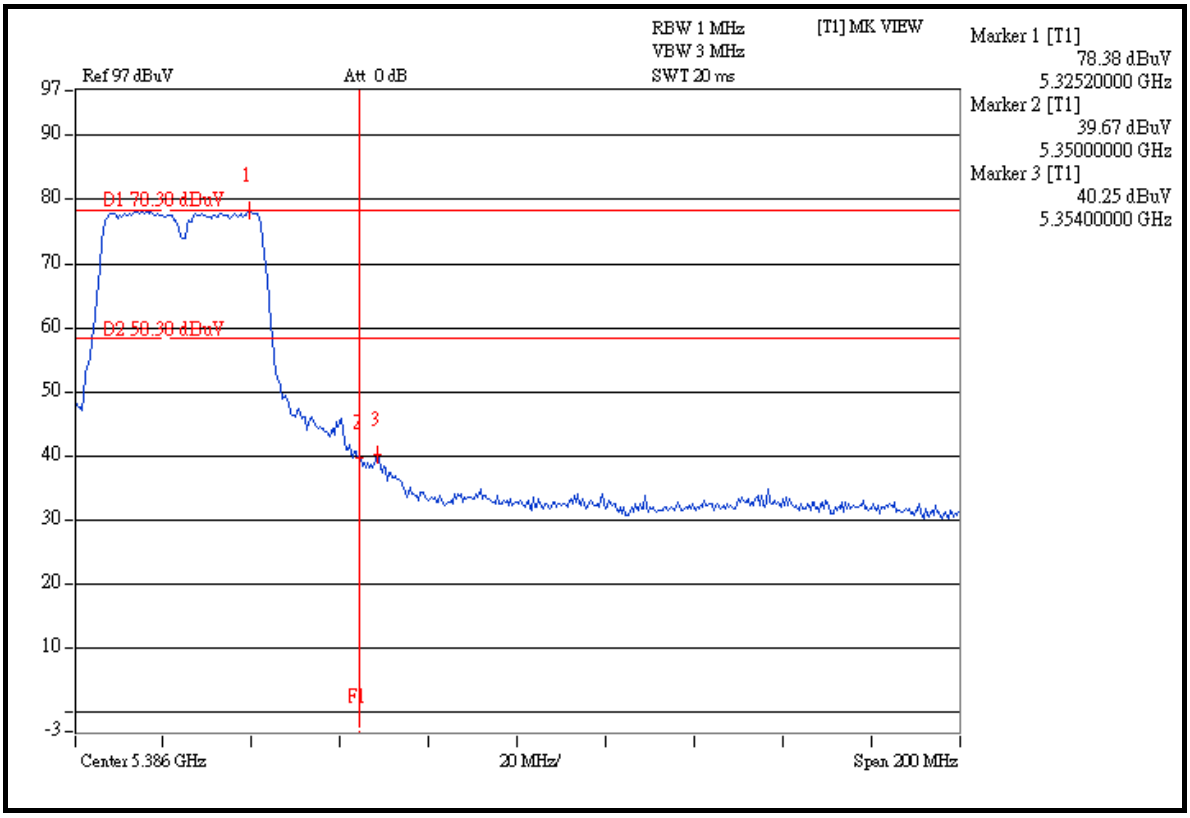
The band edge emission plot on the next second page shows 38.13dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 62 is 105.48dBuV/m (Peak), so the maximum field strength in restrict band is 105.48 – 38.13 = 67.35dBuV/m which is under 74dBuV/m limit.

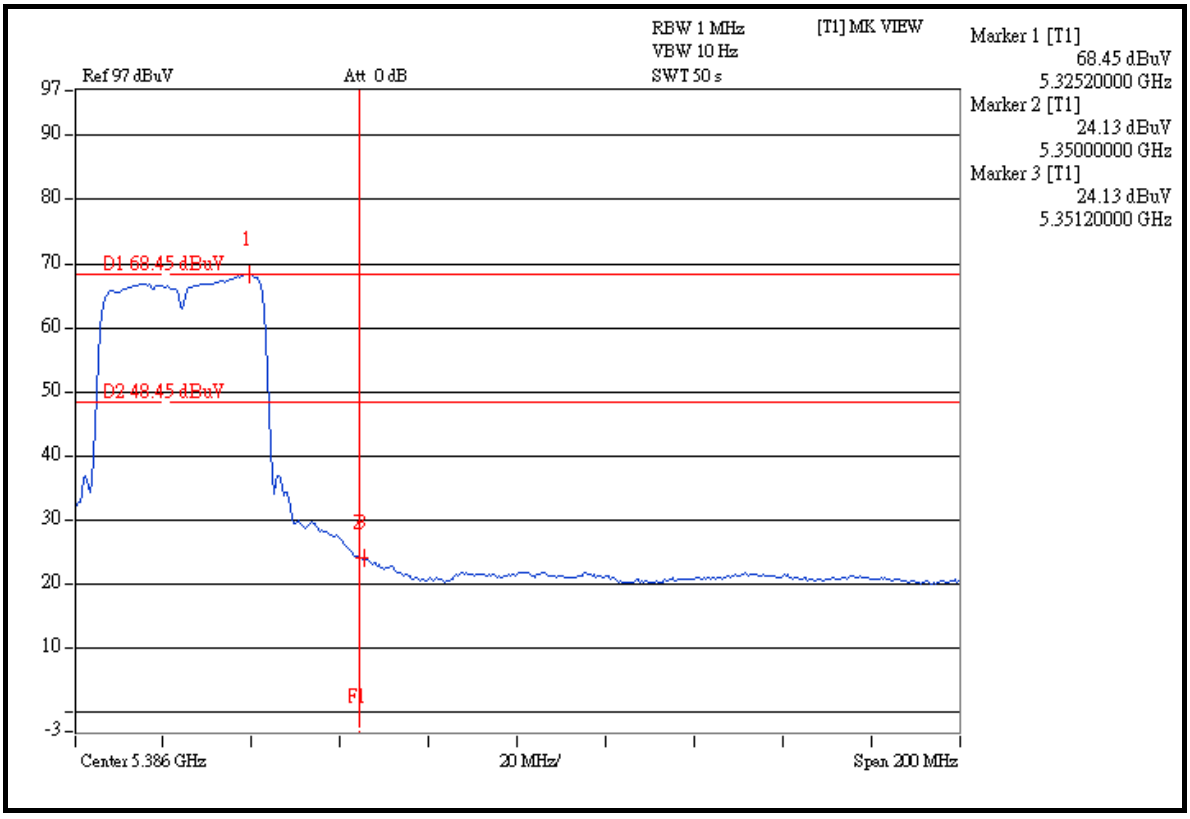
The band edge emission plot on the next third page shows 44.32dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 62 is 95.05dBuV/m (Average), so the maximum field strength in restrict band is 95.05 – 44.32 = 50.73dBuV/m which is under 54dBuV/m limit.

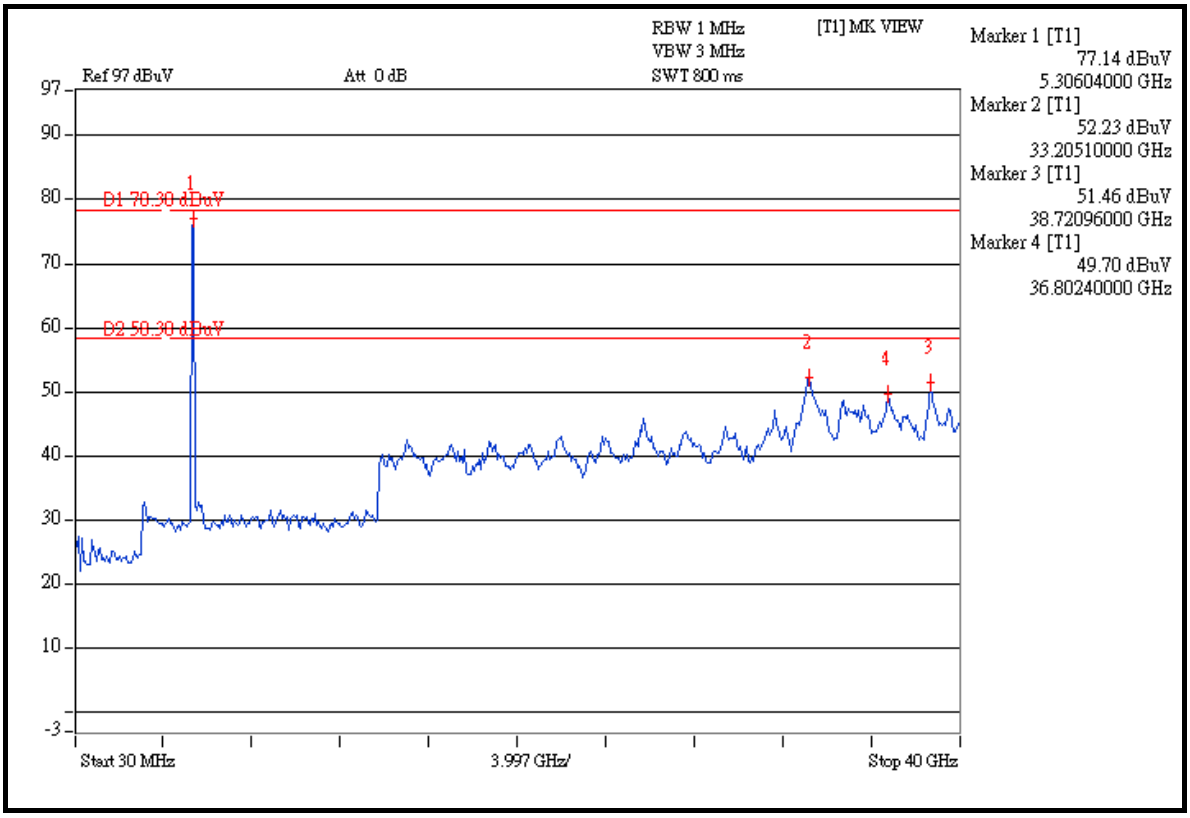

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
79.60 dBuV
5.18080000 GHz
Marker 2 [T1]
41.09 dBuV
5.15000000 GHz
Marker 3 [T1]
43.04 dBuV
5.14680000 GHz
D1 79.6 dBuV
D2 59.6 dBuV
Center 5.114 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
69.59 dBuV
5.20280000 GHz
Marker 2 [T1]
25.64 dBuV
5.15000000 GHz
Marker 3 [T1]
25.64 dBuV
5.15000000 GHz
D1 69.59 dBuV
D2 49.59 dBuV
Center 5.114 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 79.6 dBuV
D2 59.6 dBuV
Marker 1 [T1]
78.05 dBuV
5.14616000 GHz
Marker 2 [T1]
53.36 dBuV
33.28504000 GHz
Marker 3 [T1]
49.99 dBuV
33.44492000 GHz
Marker 4 [T1]
49.71 dBuV
38.72096000 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 70.30 dBuV
D2 50.30 dBuV
Marker 1 [T1]
78.38 dBuV
5.32520000 GHz
Marker 2 [T1]
39.67 dBuV
5.35000000 GHz
Marker 3 [T1]
40.25 dBuV
5.35400000 GHz
F1
Center 5.386 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
68.45 dBuV
5.32520000 GHz
Marker 2 [T1]
24.13 dBuV
5.35000000 GHz
Marker 3 [T1]
24.13 dBuV
5.35120000 GHz
D1 68.45 dBuV
D2 48.45 dBuV
Center 5.386 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
77.14 dBuV
5.30604000 GHz
Marker 2 [T1]
52.23 dBuV
33.20510000 GHz
Marker 3 [T1]
51.46 dBuV
38.72096000 GHz
Marker 4 [T1]
49.70 dBuV
36.80240000 GHz
D1 70.30 dBuV
D2 50.30 dBuV
Start 30 MHz
3.997 GHz/
Stop 40 GHz

FOR FREQUENCY BAND: 5.47 ~ 5.725GHz

802.11a OFDM MODULATION:

Channel 100 (5500MHz)

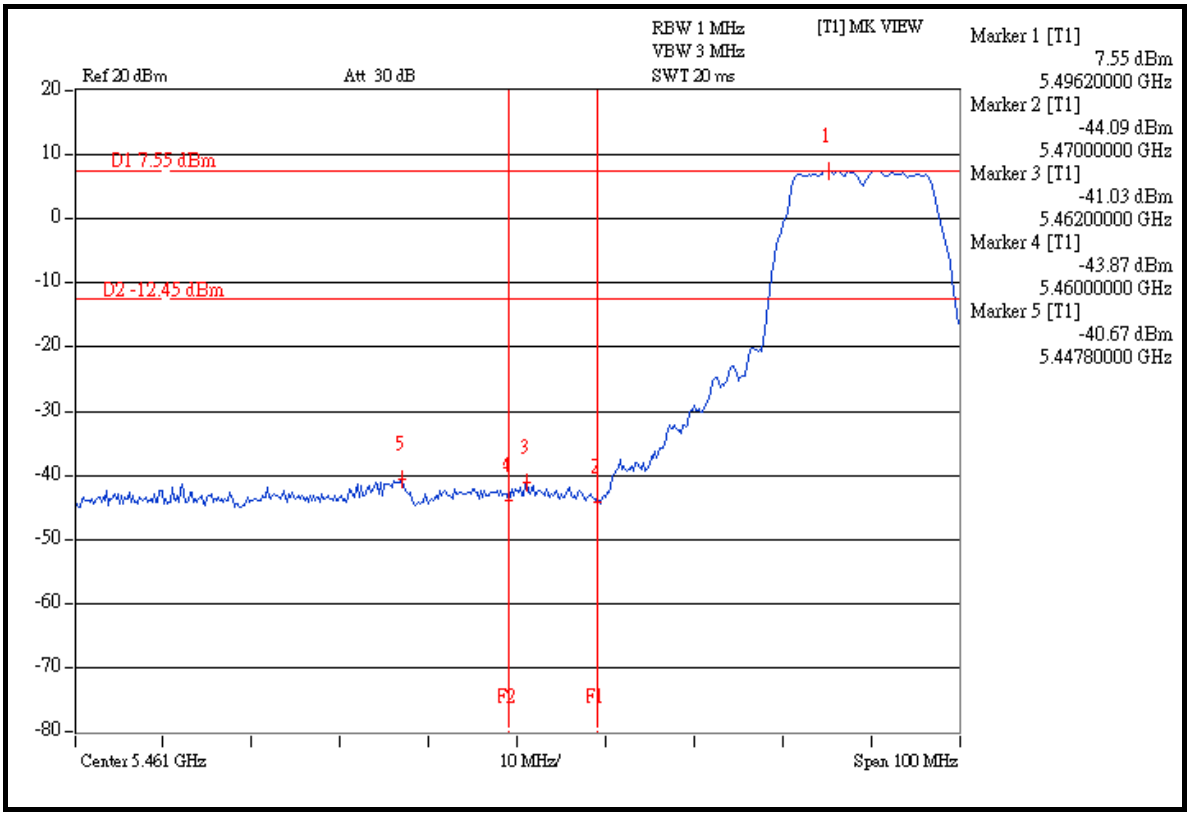
The band edge emission plot (5470MHz) on the next page shows 48.58dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 100 is 106.34dBuV/m (Peak), so the maximum field strength in restrict band is 106.34 – 48.58 = 57.76dBuV/m which is under 68.30dBuV/m limit.

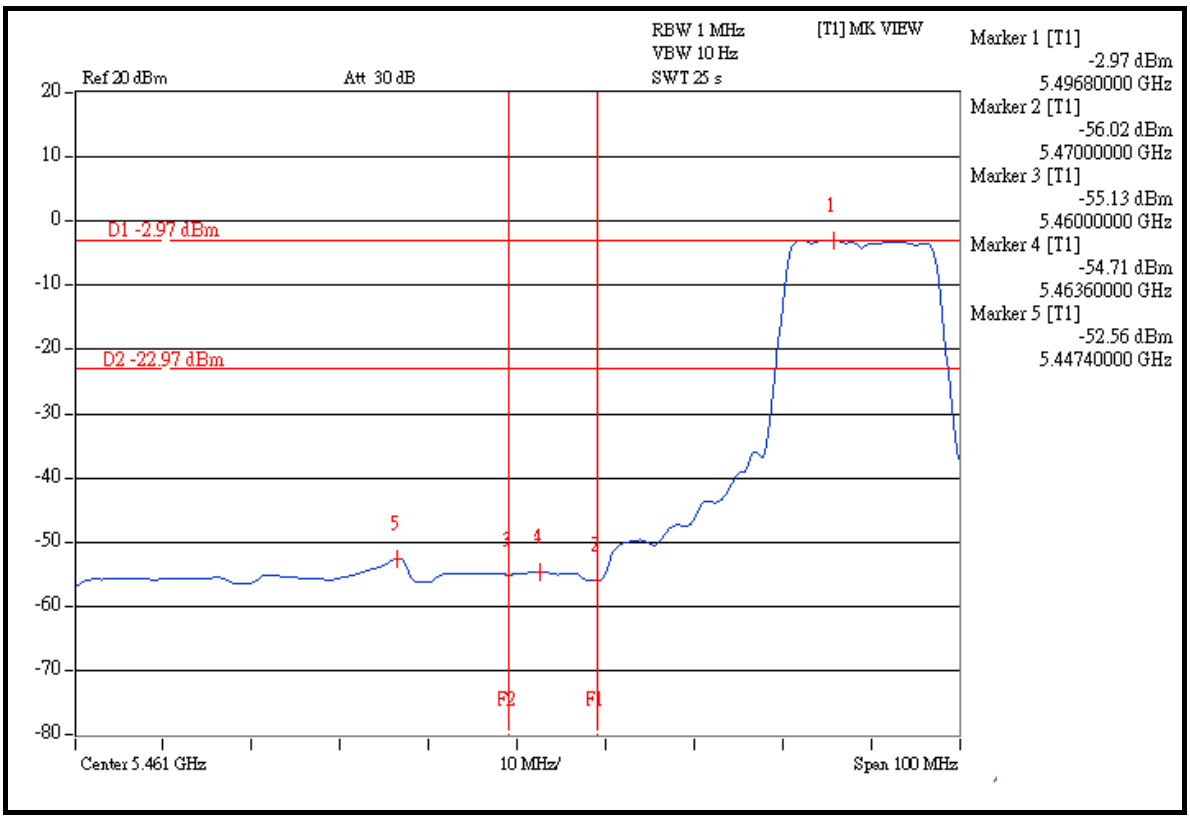
The band edge emission plot (5460MHz) on the next page shows 48.22dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 100 is 106.34dBuV/m (Peak), so the maximum field strength in restrict band is 106.34 – 48.22 = 58.12dBuV/m which is under 74dBuV/m limit.

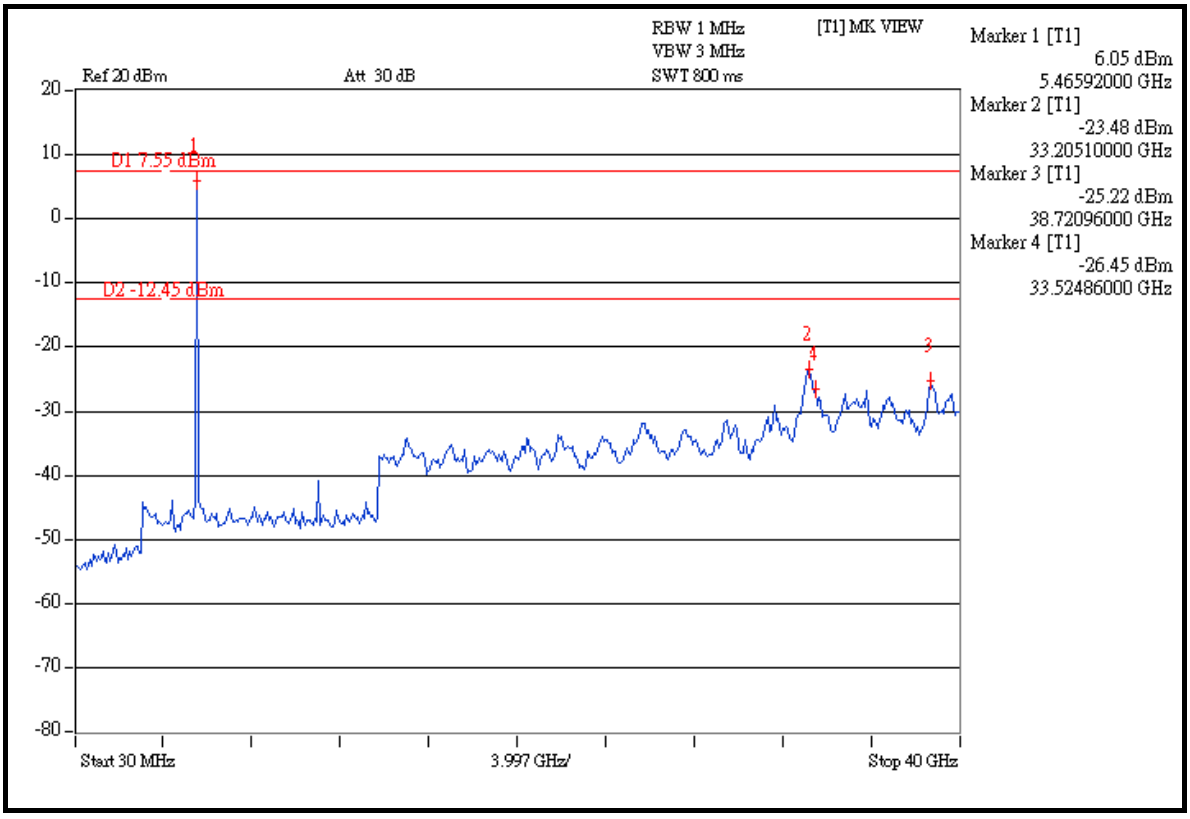
The band edge emission plot (5460MHz) on the next page shows 49.59dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 100 is 95.97dBuV/m (Average), so the maximum field strength in restrict band is 95.97 – 49.59 = 46.38dBuV/m which is under 54dBuV/m limit.

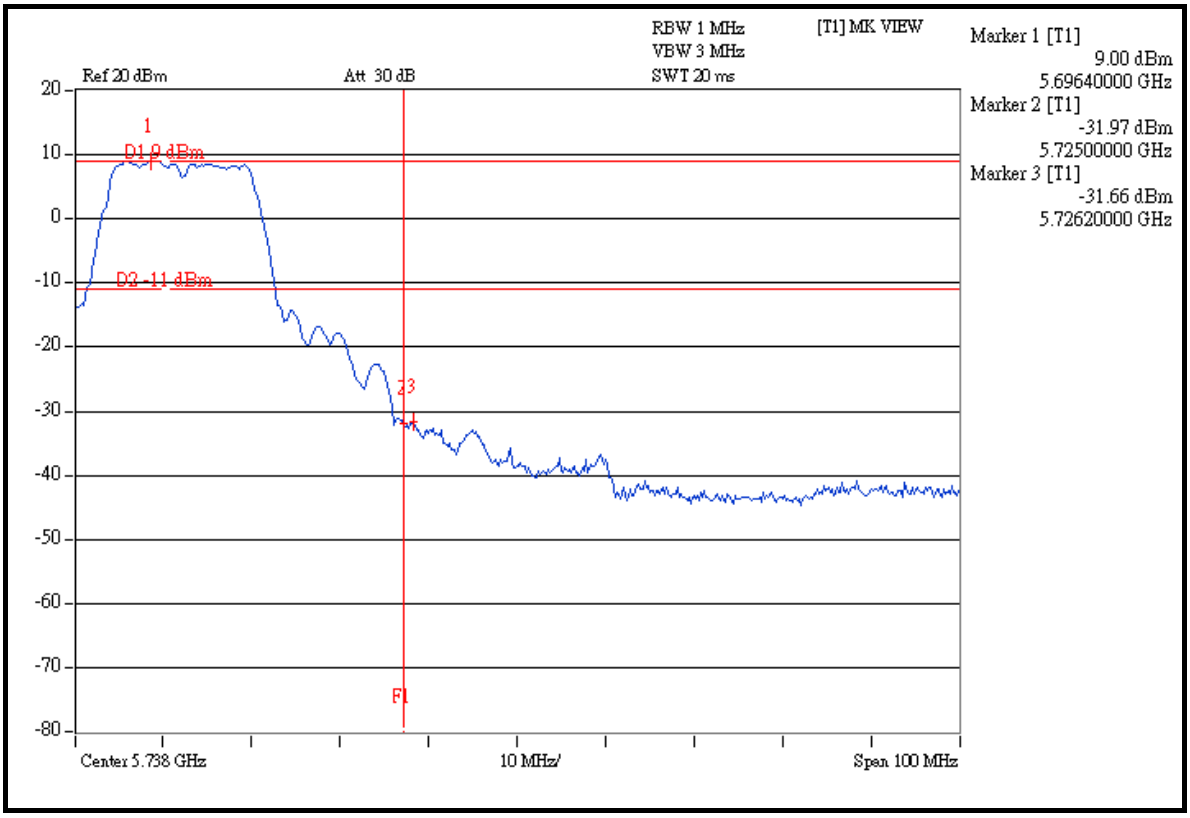
Channel 140 (5700MHz)

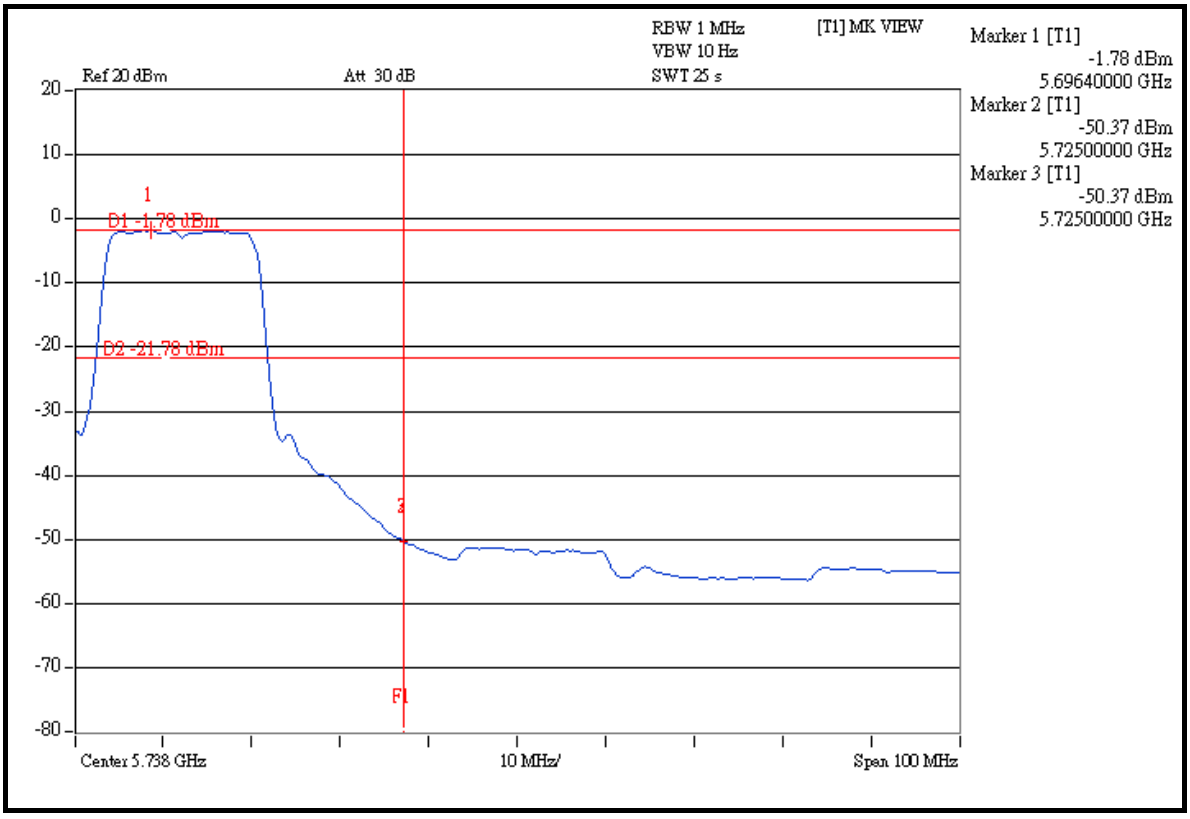
The band edge emission plot (5725MHz) on the next second page shows 40.66dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 140 is 107.74dBuV/m (Peak), so the maximum field strength in restrict band is 107.74 – 40.66 = 67.08dBuV/m which is under 68.3dBuV/m limit.

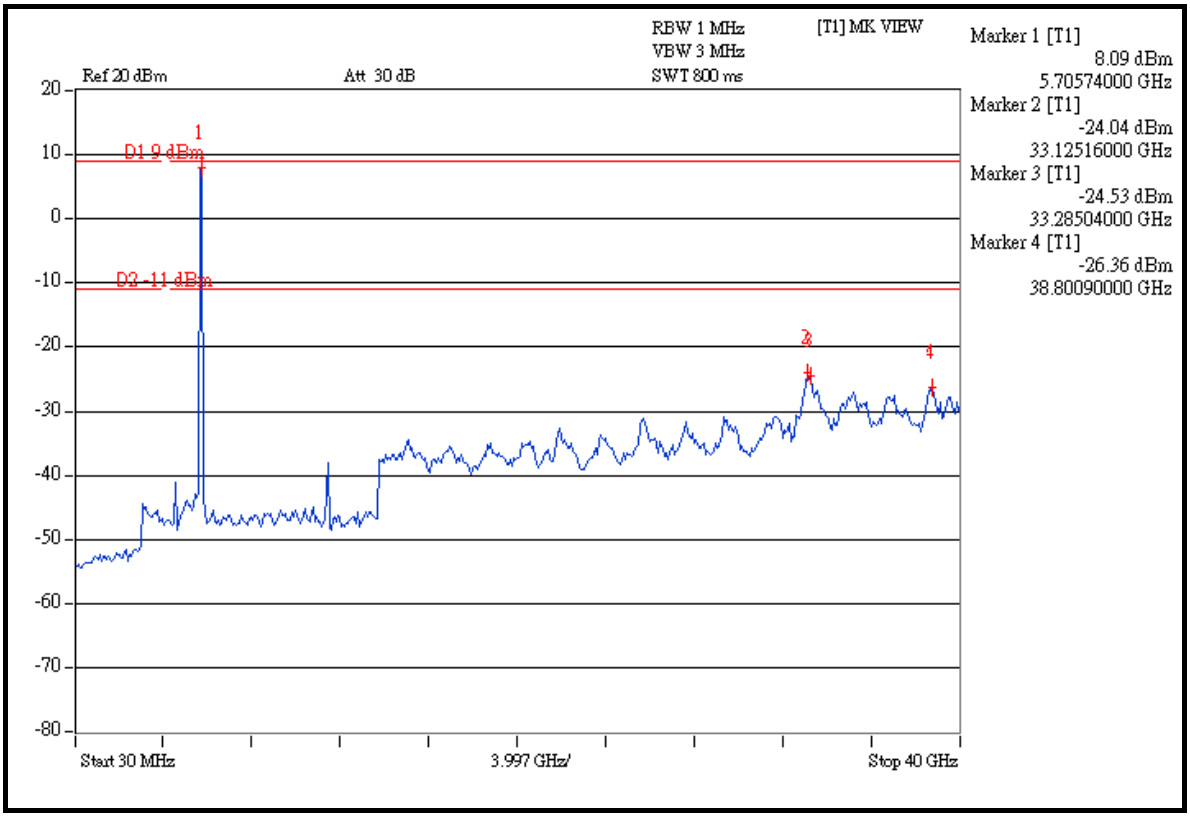

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 7.55 dBm
D2 -12.45 dBm
Marker 1 [T1]
7.55 dBm
5.49620000 GHz
Marker 2 [T1]
-44.09 dBm
5.47000000 GHz
Marker 3 [T1]
-41.03 dBm
5.46200000 GHz
Marker 4 [T1]
-43.87 dBm
5.46000000 GHz
Marker 5 [T1]
-40.67 dBm
5.44780000 GHz
Center 5.461 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -2.97 dBm
D2 -22.97 dBm
Marker 1 [T1]
-2.97 dBm
5.49680000 GHz
Marker 2 [T1]
-56.02 dBm
5.47000000 GHz
Marker 3 [T1]
-55.13 dBm
5.46000000 GHz
Marker 4 [T1]
-54.71 dBm
5.46360000 GHz
Marker 5 [T1]
-52.56 dBm
5.44740000 GHz
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 7.55 dBm
D2 -12.45 dBm
Marker 1 [T1]
6.05 dBm
5.46592000 GHz
Marker 2 [T1]
-23.48 dBm
33.20510000 GHz
Marker 3 [T1]
-25.22 dBm
38.72096000 GHz
Marker 4 [T1]
-26.45 dBm
33.52486000 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 9 dBm
D2 -11 dBm
Marker 1 [T1]
9.00 dBm
5.69640000 GHz
Marker 2 [T1]
-31.97 dBm
5.72500000 GHz
Marker 3 [T1]
-31.66 dBm
5.72620000 GHz
Center 5.738 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -1.78 dBm
D2 -21.78 dBm
Marker 1 [T1]
-1.78 dBm
5.69640000 GHz
Marker 2 [T1]
-50.37 dBm
5.72500000 GHz
Marker 3 [T1]
-50.37 dBm
5.72500000 GHz
Center 5.738 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 9 dBm
D2 -11 dBm
Marker 1 [T1]
8.09 dBm
5.70574000 GHz
Marker 2 [T1]
-24.04 dBm
33.12516000 GHz
Marker 3 [T1]
-24.53 dBm
33.28504000 GHz
Marker 4 [T1]
-26.36 dBm
38.80090000 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

DRAFT 802.11n (20MHz) OFDM MODULATION:

Channel 100 (5500MHz)

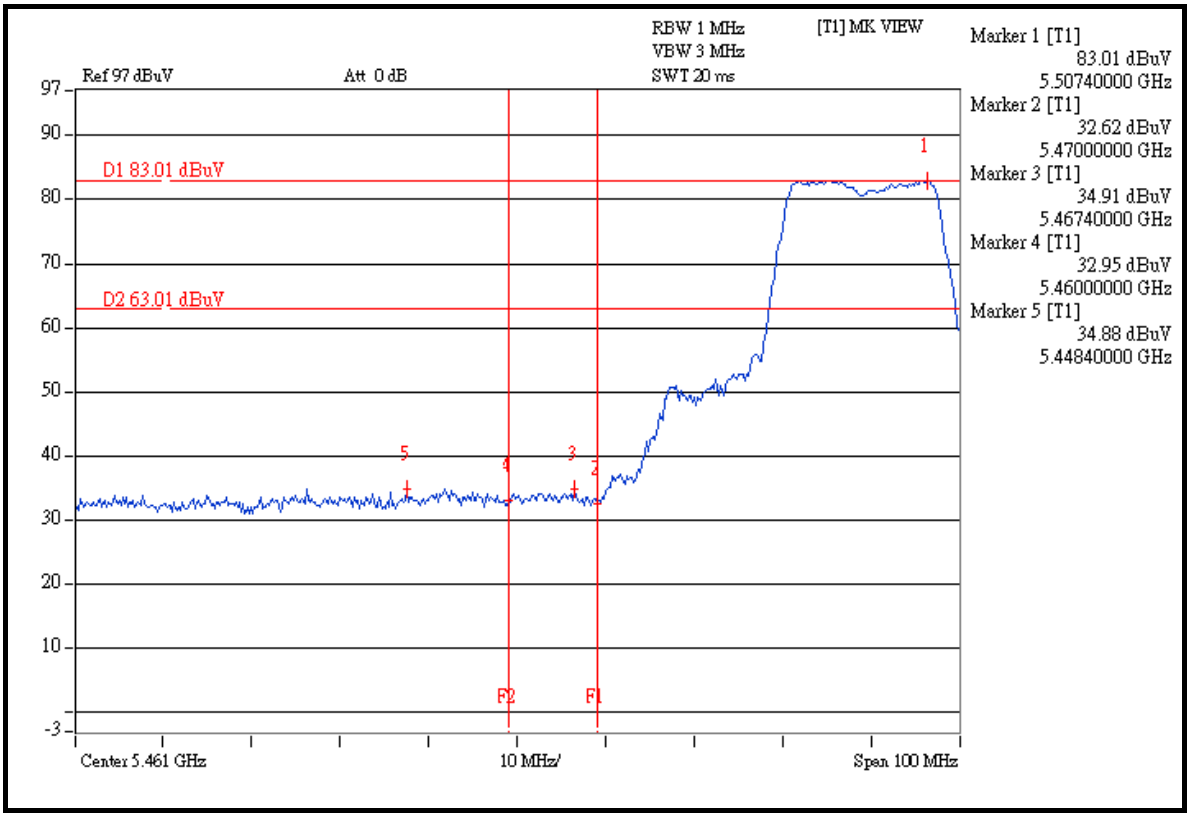
The band edge emission plot (5470MHz) on the next page shows 48.10dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 100 is 110.25dBuV/m (Peak), so the maximum field strength in restrict band is 110.25 – 48.10 = 62.15dBuV/m which is under 68.30dBuV/m limit.

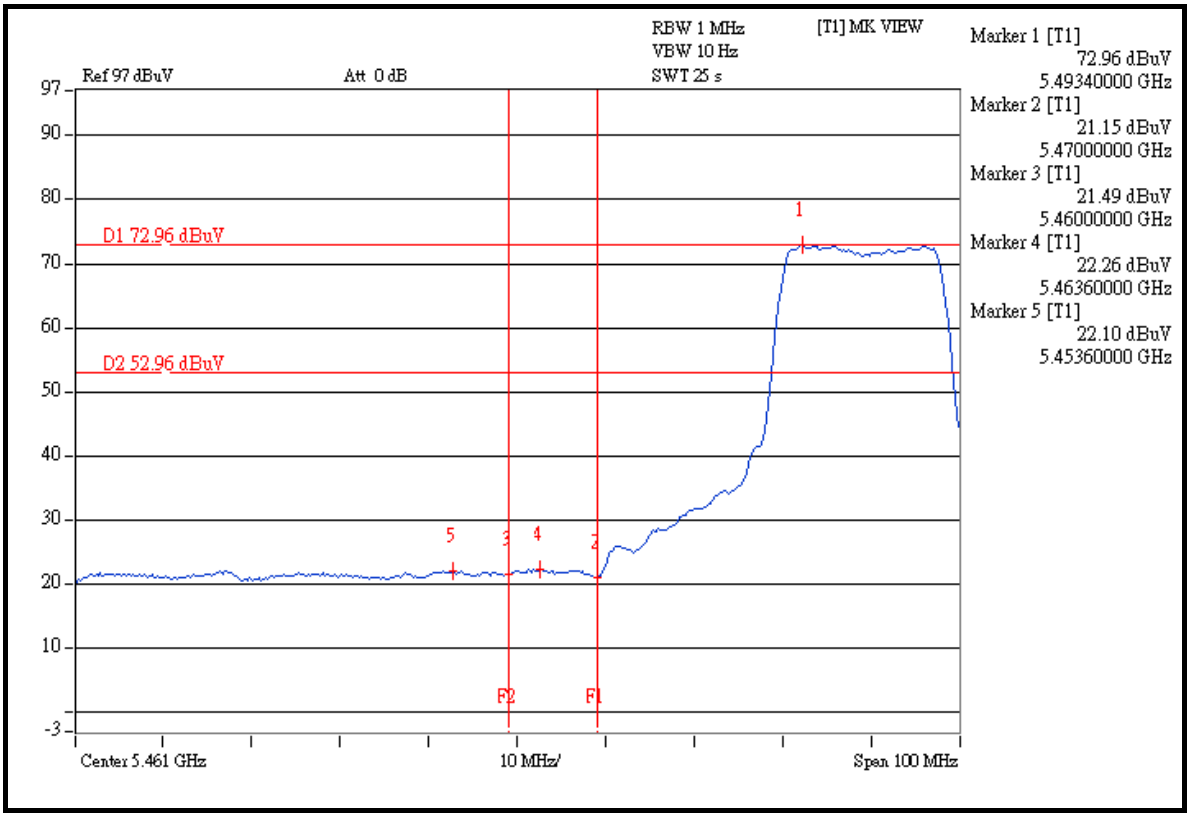
The band edge emission plot (5460MHz) on the next page shows 48.13dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 100 is 110.25dBuV/m (Peak), so the maximum field strength in restrict band is 110.25 – 48.13 = 62.12dBuV/m which is under 74dBuV/m limit.

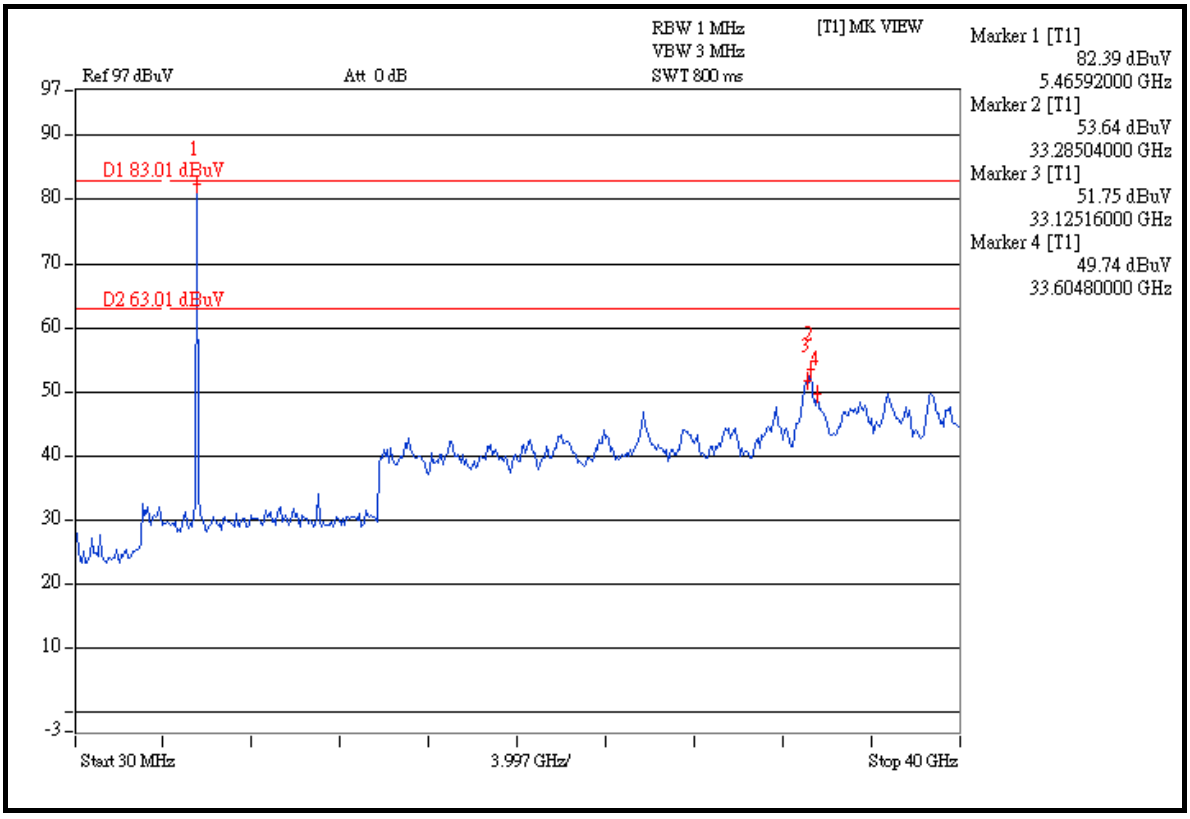
The band edge emission plot (5460MHz) on the next page shows 50.86dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 100 is 100.18dBuV/m (Average), so the maximum field strength in restrict band is 100.18 – 50.86 = 49.32dBuV/m which is under 54dBuV/m limit.

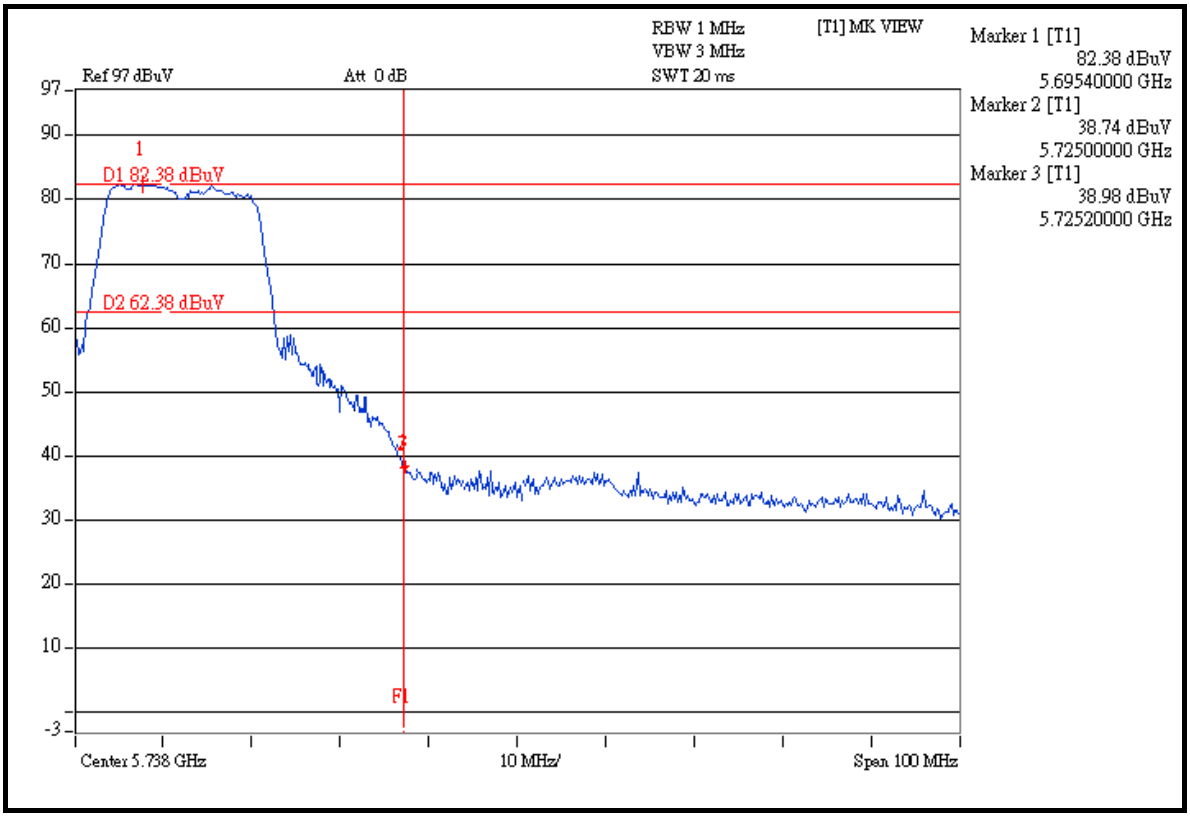
Channel 140 (5700MHz)

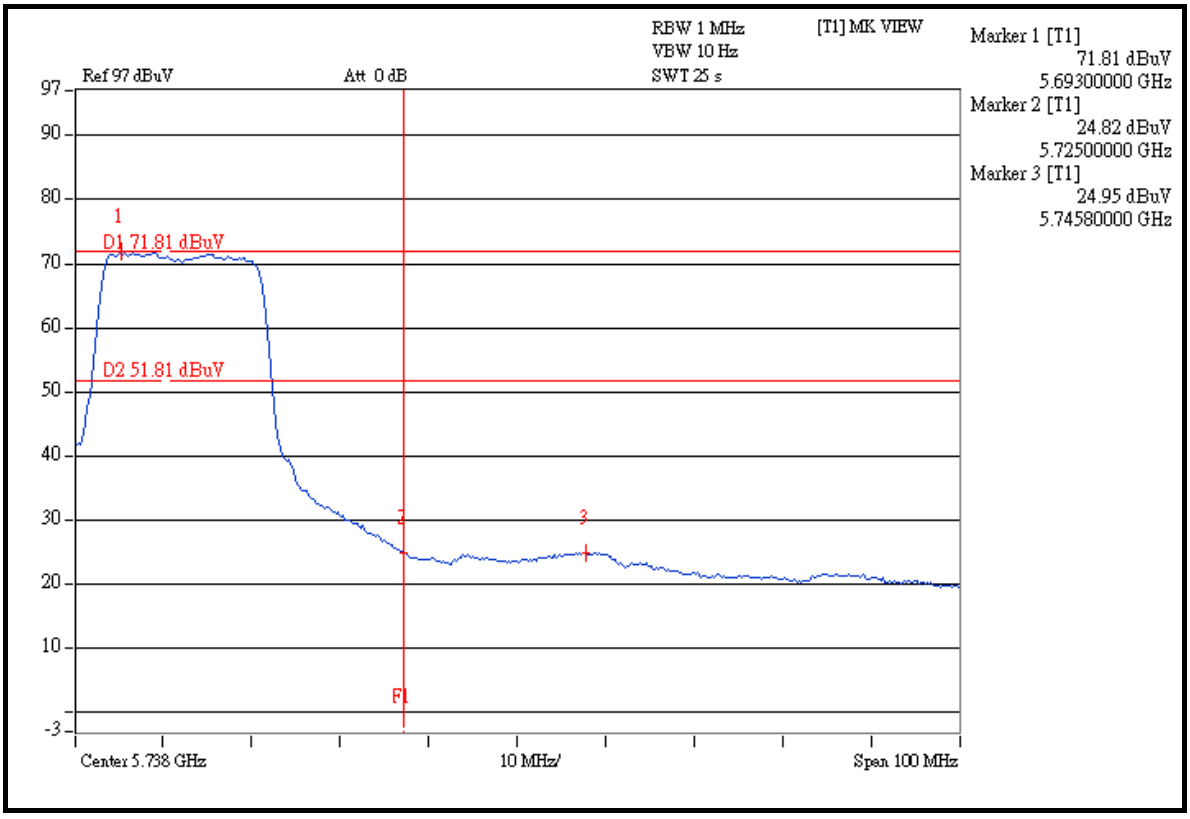
The band edge emission plot (5725MHz) on the next second page shows 43.4dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 140 is 109.98dBuV/m (Peak), so the maximum field strength in restrict band is 109.98 – 43.4 = 66.58dBuV/m which is under 68.3dBuV/m limit.

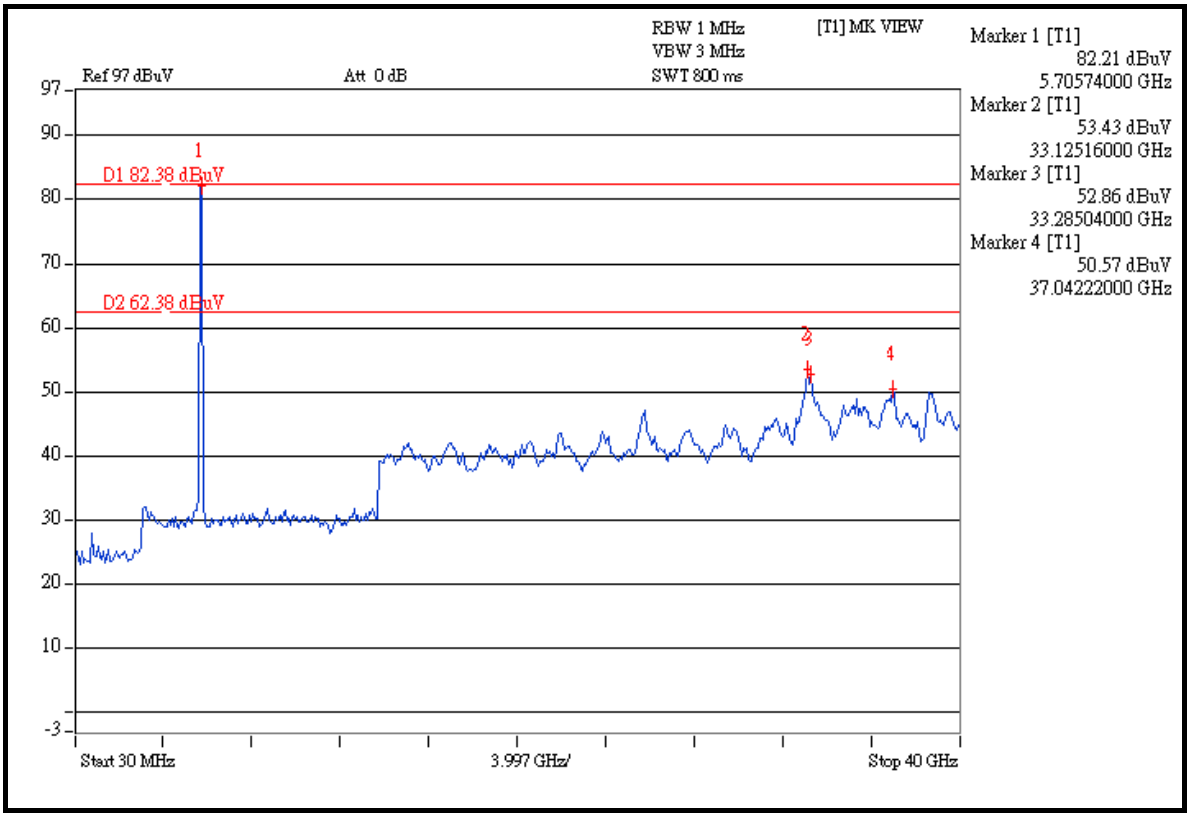

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 83.01 dBuV
D2 63.01 dBuV
Marker 1 [T1]
83.01 dBuV
5.50740000 GHz
Marker 2 [T1]
32.62 dBuV
5.47000000 GHz
Marker 3 [T1]
34.91 dBuV
5.46740000 GHz
Marker 4 [T1]
32.95 dBuV
5.46000000 GHz
Marker 5 [T1]
34.88 dBuV
5.44840000 GHz
Center 5.461 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 72.96 dBuV
D2 52.96 dBuV
Marker 1 [T1]
72.96 dBuV
5.49340000 GHz
Marker 2 [T1]
21.15 dBuV
5.47000000 GHz
Marker 3 [T1]
21.49 dBuV
5.46000000 GHz
Marker 4 [T1]
22.26 dBuV
5.46360000 GHz
Marker 5 [T1]
22.10 dBuV
5.45360000 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 83.01 dBuV
D2 63.01 dBuV
Marker 1 [T1]
82.39 dBuV
5.46592000 GHz
Marker 2 [T1]
53.64 dBuV
33.28504000 GHz
Marker 3 [T1]
51.75 dBuV
33.12516000 GHz
Marker 4 [T1]
49.74 dBuV
33.60480000 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 82.38 dBuV
D2 62.38 dBuV
Marker 1 [T1]
82.38 dBuV
5.69540000 GHz
Marker 2 [T1]
38.74 dBuV
5.72500000 GHz
Marker 3 [T1]
38.98 dBuV
5.72520000 GHz
Center 5.738 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
71.81 dBuV
5.69300000 GHz
Marker 2 [T1]
24.82 dBuV
5.72500000 GHz
Marker 3 [T1]
24.95 dBuV
5.74580000 GHz
D1 71.81 dBuV
D2 51.81 dBuV
Center 5.738 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
82.21 dBuV
5.70574000 GHz
Marker 2 [T1]
53.43 dBuV
33.12516000 GHz
Marker 3 [T1]
52.86 dBuV
33.28504000 GHz
Marker 4 [T1]
50.57 dBuV
37.04222000 GHz
D1 82.38 dBuV
D2 62.38 dBuV
Start 30 MHz
3.997 GHz/
Stop 40 GHz

DRAFT 802.11n (40MHz) OFDM MODULATION:

Channel 102 (5510MHz)

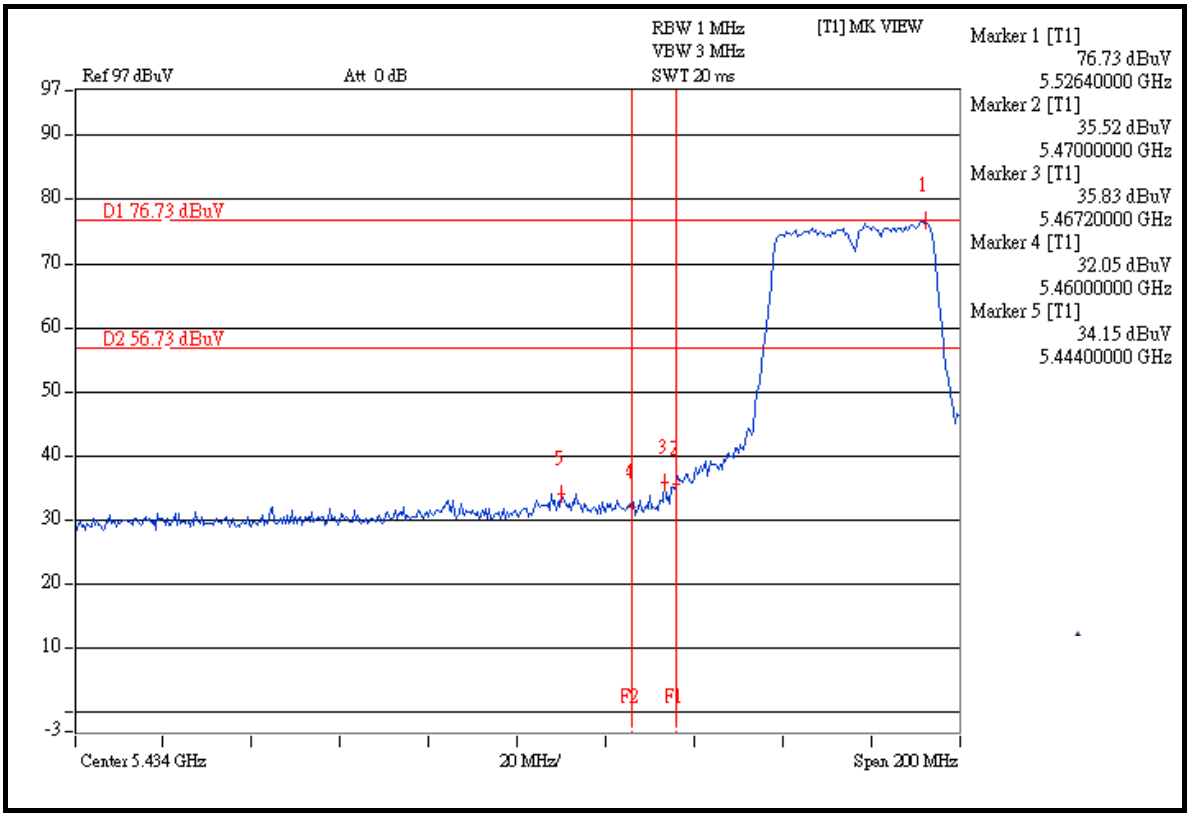
The band edge emission plot (5470MHz) on the next page shows 40.90dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 102 is 103.90dBuV/m (Peak), so the maximum field strength in restrict band is 103.90 – 40.90 = 63.00dBuV/m which is under 68.3dBuV/m limit.

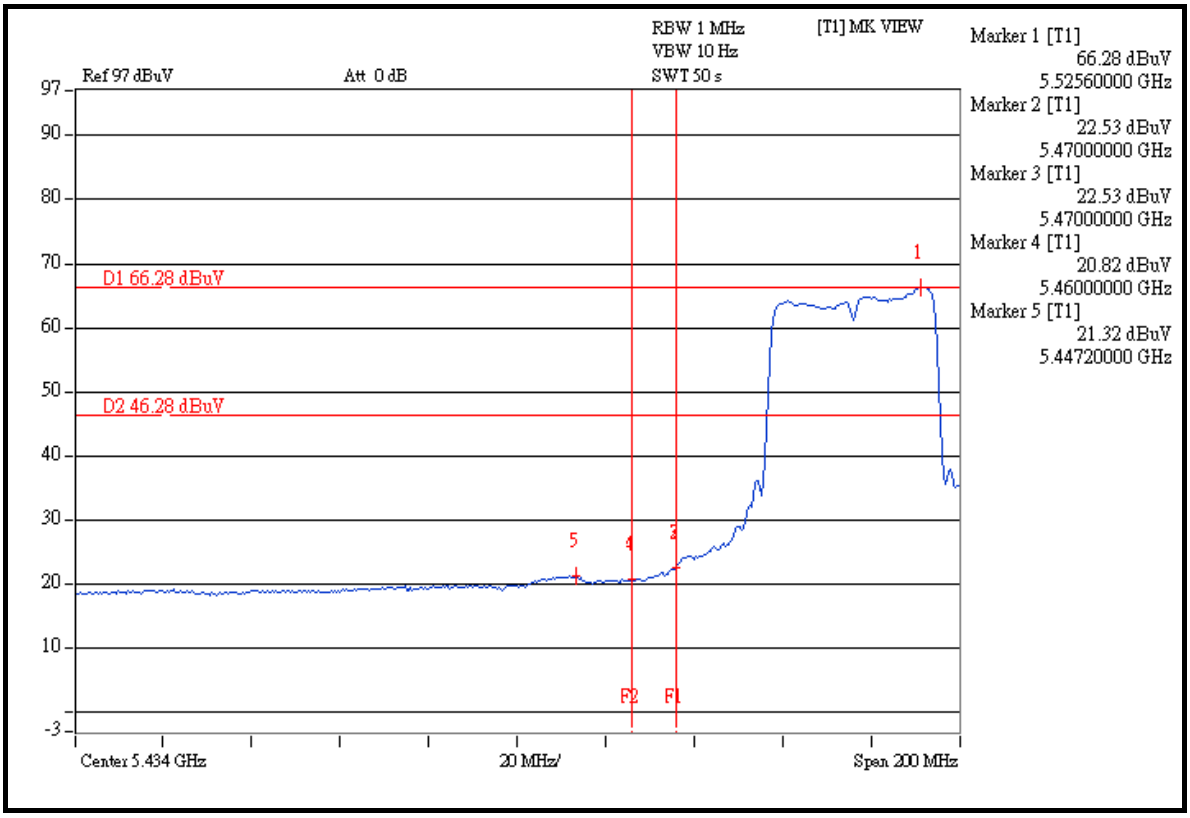
The band edge emission plot (5460MHz) on the next page shows 42.58dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 102 is 103.90dBuV/m (Peak), so the maximum field strength in restrict band is 103.90 – 42.58 = 61.32dBuV/m which is under 74dBuV/m limit.

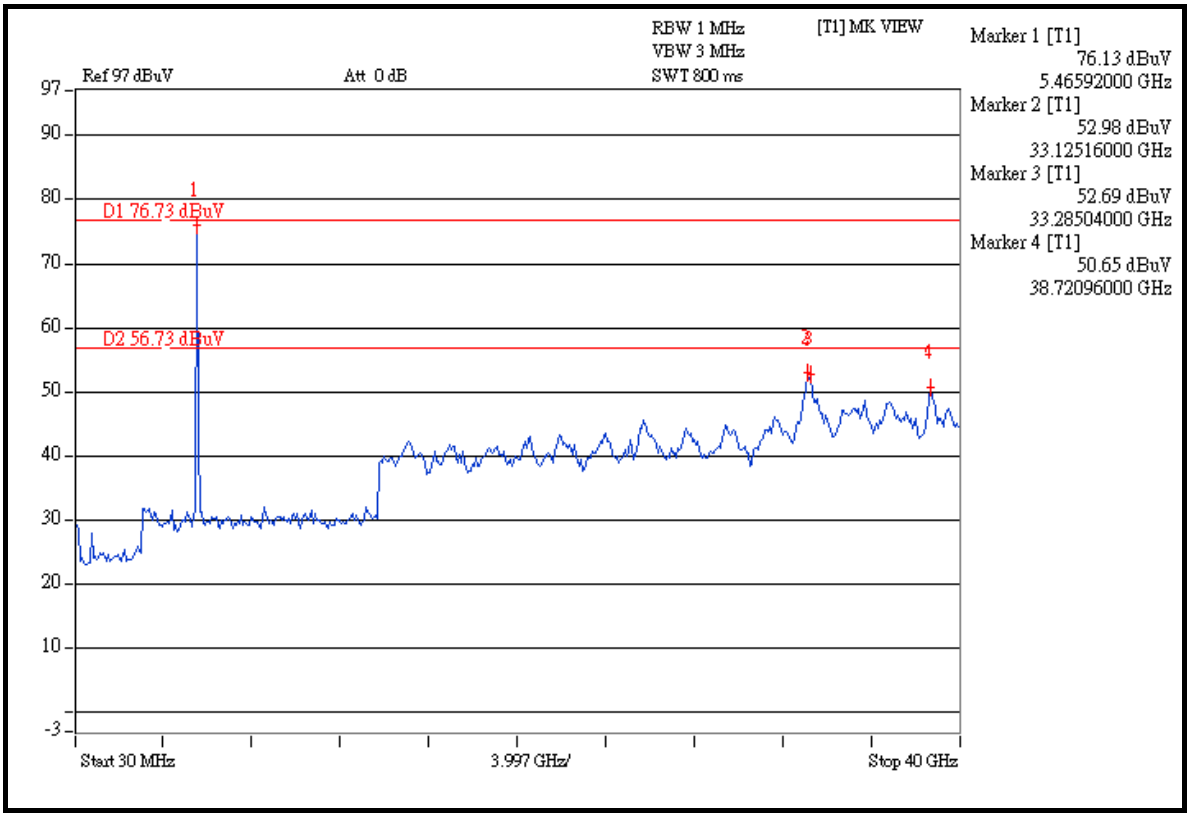
The band edge emission plot (5460MHz) on the next page shows 44.96dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 102 is 93.55dBuV/m (Average), so the maximum field strength in restrict band is 93.55 – 44.96 = 48.59dBuV/m which is under 54dBuV/m limit.

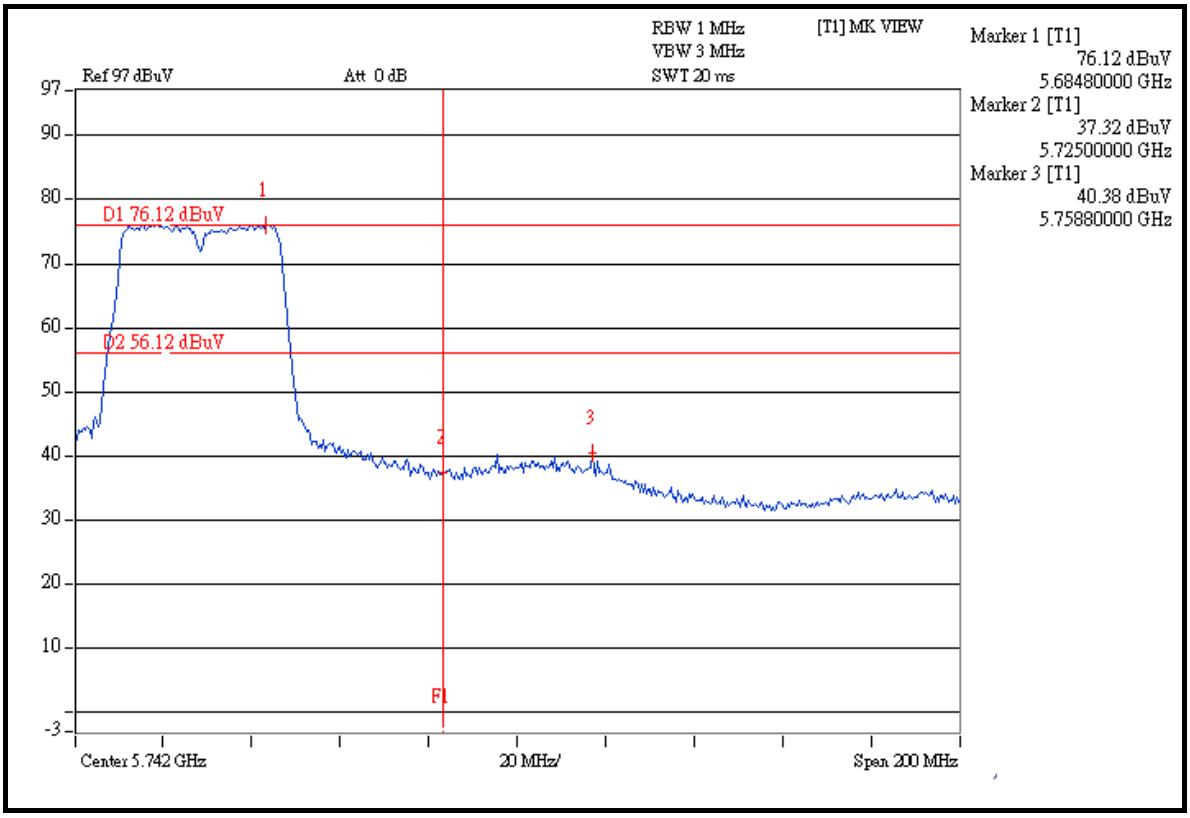
Channel 134 (5670MHz)

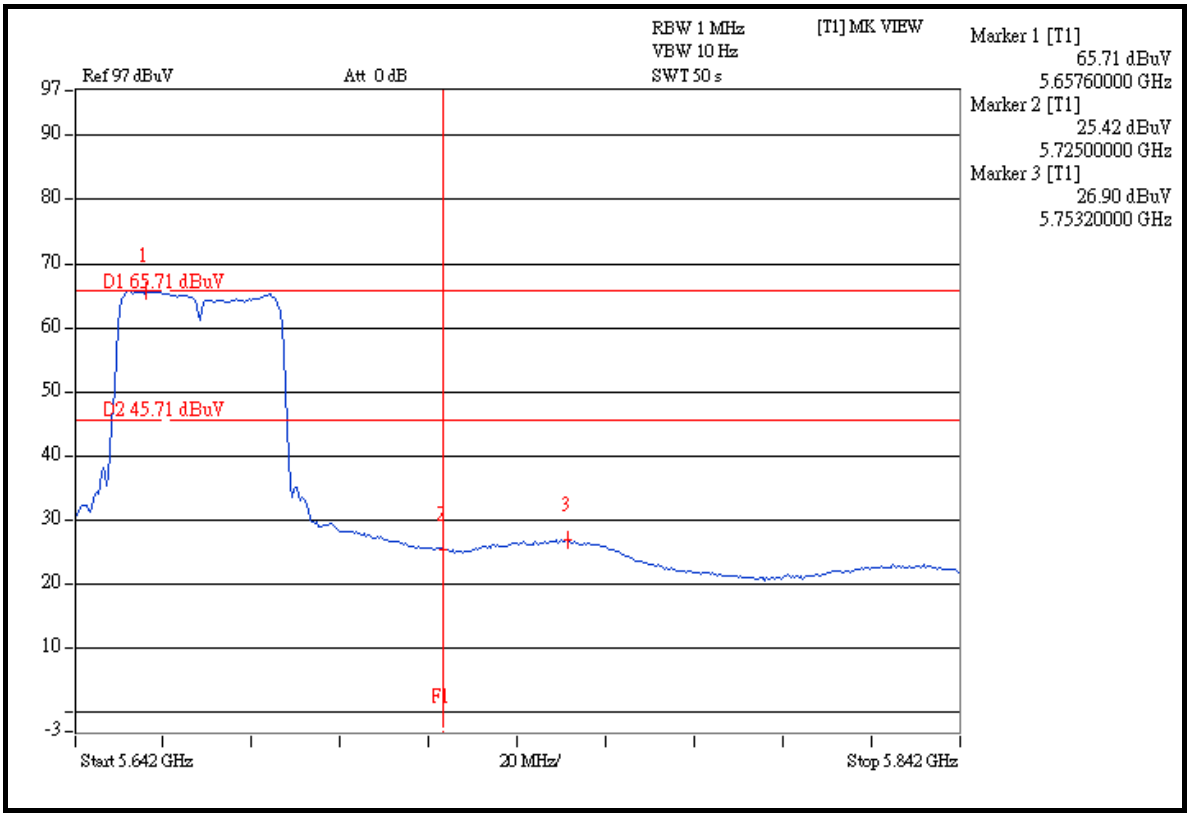
The band edge emission plot (5725MHz) on the next second page shows 35.74dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 134 is 103.65dBuV/m (Peak), so the maximum field strength in restrict band is 103.65 – 35.74 = 67.91dBuV/m which is under 68.3dBuV/m limit.

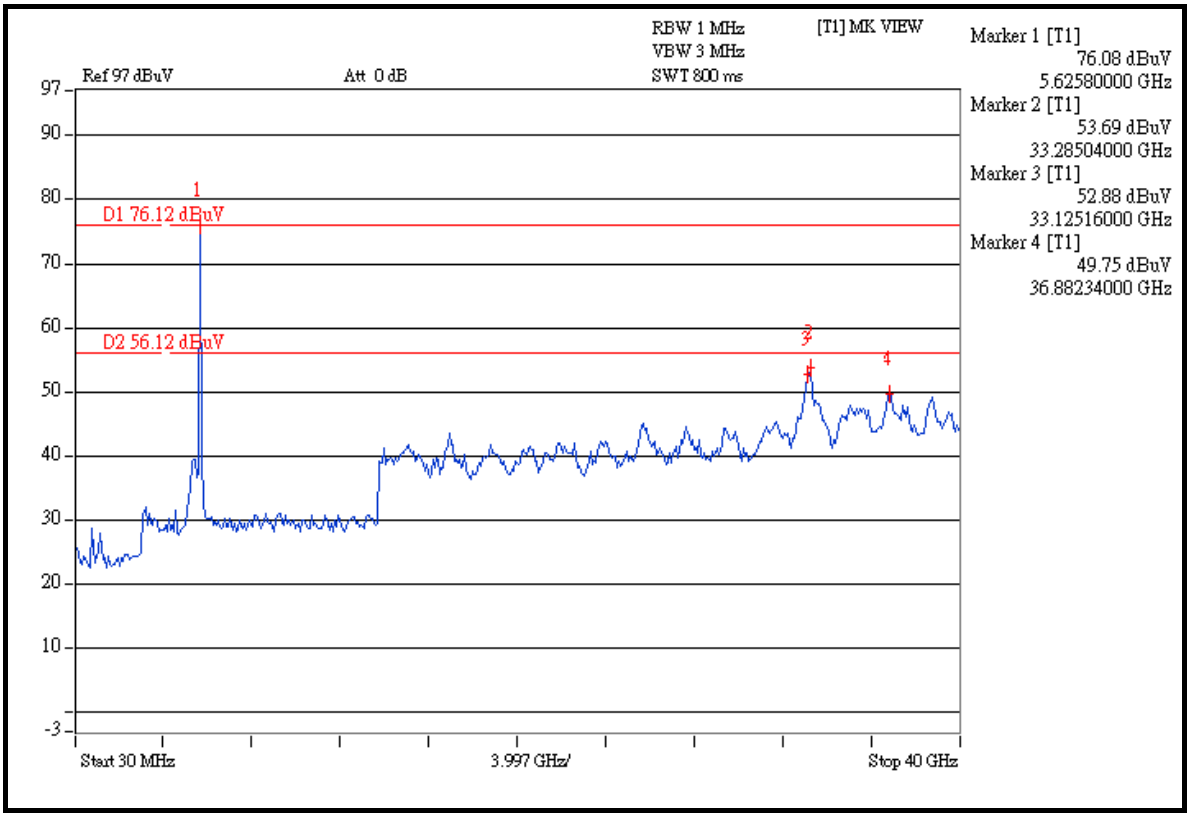

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 76.73 dBuV
D2 56.73 dBuV
Marker 1 [T1]
76.73 dBuV
5.52640000 GHz
Marker 2 [T1]
35.52 dBuV
5.47000000 GHz
Marker 3 [T1]
35.83 dBuV
5.46720000 GHz
Marker 4 [T1]
32.05 dBuV
5.46000000 GHz
Marker 5 [T1]
34.15 dBuV
5.44400000 GHz
Center 5.434 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 66.28 dBuV
D2 46.28 dBuV
Marker 1 [T1]
66.28 dBuV
5.52560000 GHz
Marker 2 [T1]
22.53 dBuV
5.47000000 GHz
Marker 3 [T1]
22.53 dBuV
5.47000000 GHz
Marker 4 [T1]
20.82 dBuV
5.46000000 GHz
Marker 5 [T1]
21.32 dBuV
5.44720000 GHz
Center 5.434 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 76.73 dBuV
D2 56.73 dBuV
Marker 1 [T1]
76.13 dBuV
5.46592000 GHz
Marker 2 [T1]
52.98 dBuV
33.12516000 GHz
Marker 3 [T1]
52.69 dBuV
33.28504000 GHz
Marker 4 [T1]
50.65 dBuV
38.72096000 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 76.12 dBuV
D2 56.12 dBuV
Marker 1 [T1]
76.12 dBuV
5.68480000 GHz
Marker 2 [T1]
37.32 dBuV
5.72500000 GHz
Marker 3 [T1]
40.38 dBuV
5.75880000 GHz
Center 5.742 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
65.71 dBuV
5.65760000 GHz
Marker 2 [T1]
25.42 dBuV
5.72500000 GHz
Marker 3 [T1]
26.90 dBuV
5.75320000 GHz
D1 65.71 dBuV
D2 45.71 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]
76.08 dBuV
5.62580000 GHz
Marker 2 [T1]
53.69 dBuV
33.28504000 GHz
Marker 3 [T1]
52.88 dBuV
33.12516000 GHz
Marker 4 [T1]
49.75 dBuV
36.88234000 GHz
D1 76.12 dBuV
D2 56.12 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 monopole type antenna without connector. The maximum gain of the antenna is 4.32dBi.

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

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

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

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Web Site: www.adt.com.tw

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

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.