



FCC TEST REPORT (15.407)

REPORT NO.: RF980105L18-1

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

RECEIVED: Jan. 05, 2009

TESTED: Feb. 04 ~ May 27, 2009

ISSUED: Jun. 04, 2009

APPLICANT: AirMagent, Inc.

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

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1. CERTIFICATION

PRODUCT: AirMagnet SmartEdge Sensor

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

BRAND: AirMagnet

APPLICANT: AirMagent, Inc.

TEST SAMPLE: ENGINEERING SAMPLE

TESTED: Feb. 04 ~ May 27, 2009

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

ANSI C63.4-2003

The above equipment (Model: A5200, A5205) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Andrea Hsia , **DATE** : Jun. 04, 2009
Andrea Hsia / Specialist

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

APPROVED BY : Gary Chang , **DATE** : Jun. 04, 2009
Gary Chang / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART 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 -12.53dB at 0.814MHz.
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 -1.03dB at 5150.00MHz.
15.407(a)(1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 1000MHz	4.03 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	AirMagnet SmartEdge Sensor
MODEL NO.	A5200 (refer to note as below)
FCC ID	RD7-A520X
POWER SUPPLY	12Vdc from AC adapter 48Vdc from POE
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps Draft 802.11n: up to 300.0Mbps
OPERATING FREQUENCY	5180.0 ~ 5240.0MHz & 5260.0 ~ 5320.0MHz
NUMBER OF CHANNEL	8 for 802.11a, draft 802.11n (20MHz) 4 for draft 802.11n (40MHz)
OUTPUT POWER	48.244mW for 5180.0 ~ 5240.0 MHz 116.226mW for 5260.0 ~ 5320.0MHz
ANTENNA TYPE	Refer to note as below
I/O PORTS	RJ45, RS232
DATA CABLE	NA
ACCESSORY DEVICES	Adapter, POE

NOTE:

1. The following models are provided to this EUT.

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

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

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

3. The EUT was powered by the following adapter:

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

4. The EUT was powered by the following POE:

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

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

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

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

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

7. The following antennas are used in this EUT.

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

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

3.2 DESCRIPTION OF TEST MODES

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

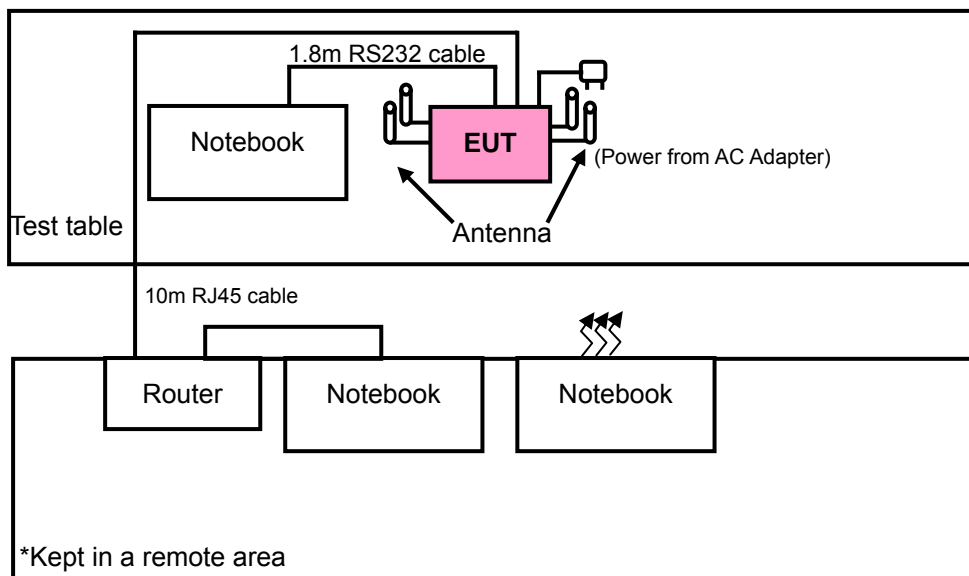
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180MHz	52	5260
40	5200MHz	56	5280
44	5220MHz	60	5300
48	5240MHz	64	5320

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

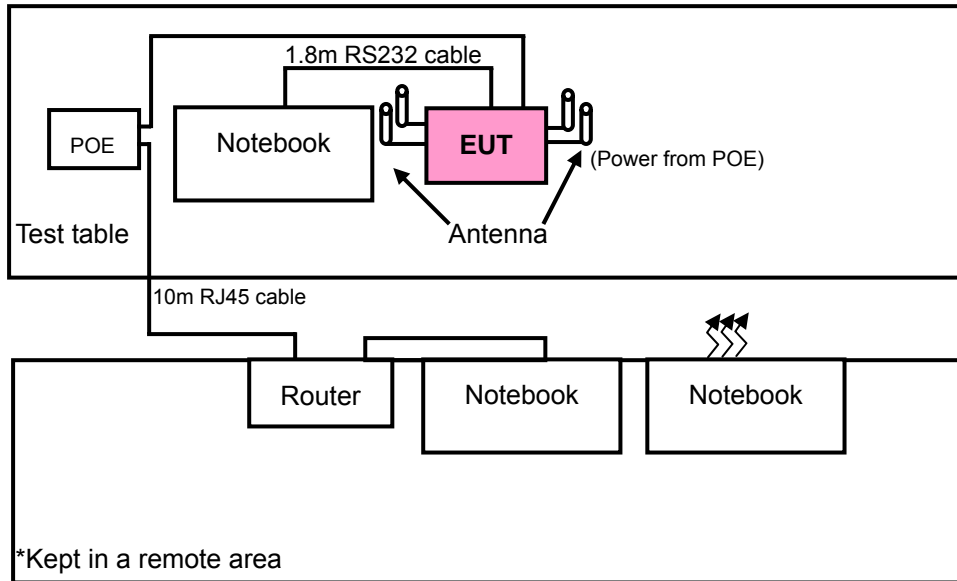
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190MHz	54	5270
46	5230MHz	62	5310

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

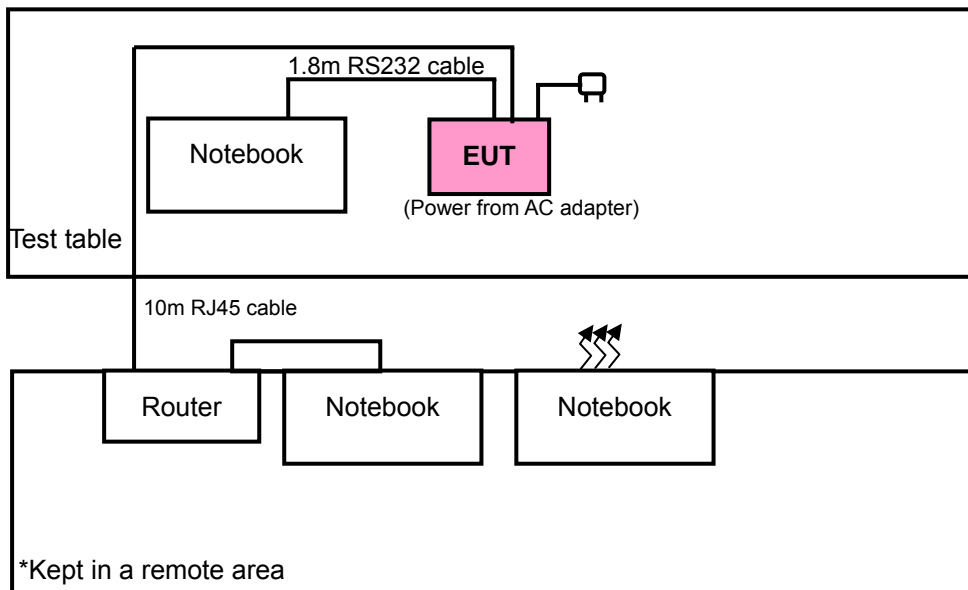
RADIATED EMISSION TEST BELOW 1GHz TEST MODE A (Model: A5200)



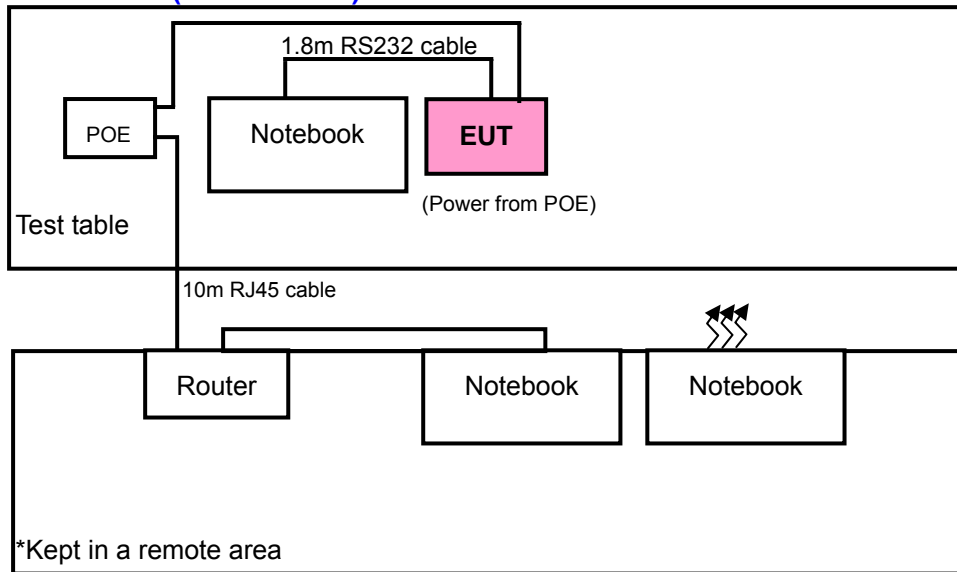
TEST MODE B (Model: A5200)



TEST MODE C (Model: A5205)

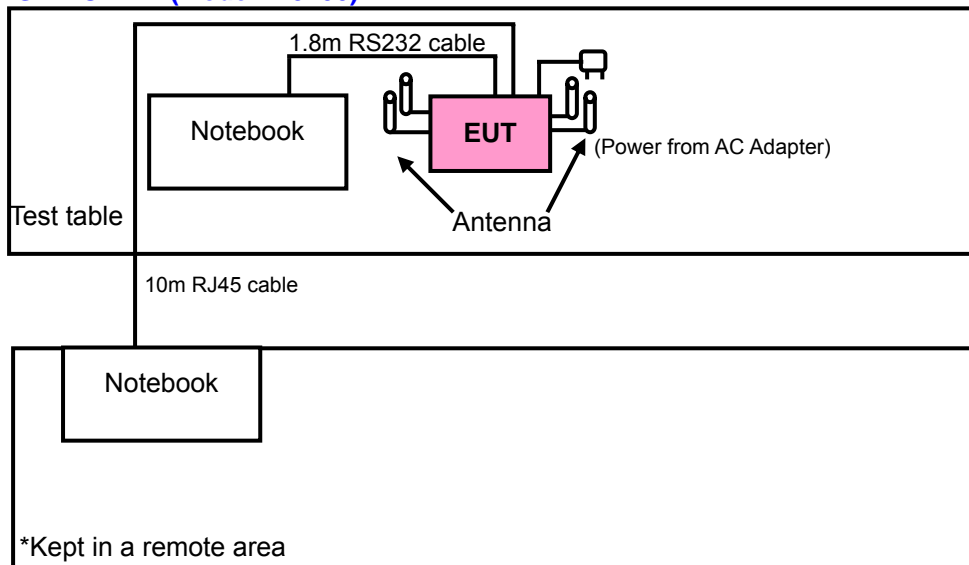


TEST MODE D (Model: A5205)

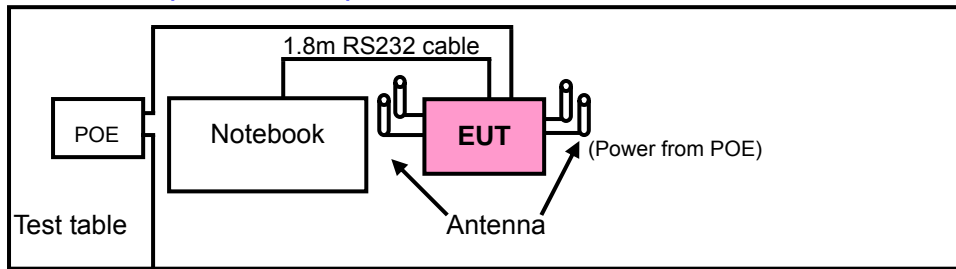


BESIDE RADIATED EMISSION TEST BELOW 1GHz

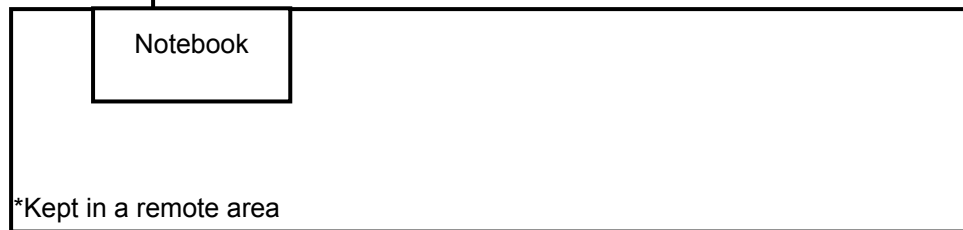
TEST MODE A (Model: A5200)



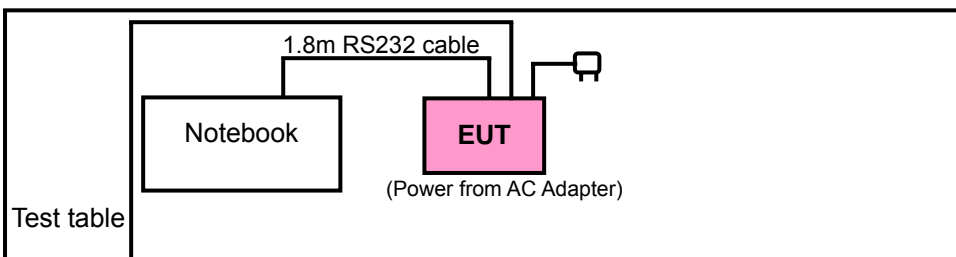
TEST MODE B (Model: A5200)



10m RJ45 cable



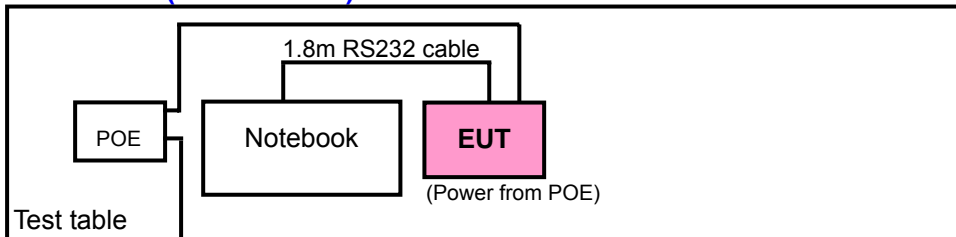
TEST MODE C (Model: A5205)



10m RJ45 cable



TEST MODE D (Model: A5205)



10m RJ45 cable





3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

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

NOTE: "-" means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11a	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0	X
C	802.11a	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0	Z
A	Draft 802.11n (20MHz)	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2	X
C	Draft 802.11n (20MHz)	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2	Z
A	Draft 802.11n (40MHz)	38 to 62	38, 46, 54, 62	OFDM	BPSK	15.0	X
C	Draft 802.11n (40MHz)	38 to 62	38, 46, 54, 62	OFDM	BPSK	15.0	Z

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	Draft 802.11n (20MHz)	36 to 64	60	OFDM	BPSK	7.2	X
B	Draft 802.11n (20MHz)	36 to 64	60	OFDM	BPSK	7.2	X
C	Draft 802.11n (20MHz)	36 to 64	60	OFDM	BPSK	7.2	Z
D	Draft 802.11n (20MHz)	36 to 64	60	OFDM	BPSK	7.2	Z

POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	Draft 802.11n (20MHz)	36 to 64	60	OFDM	BPSK	7.2
B	Draft 802.11n (20MHz)	36 to 64	60	OFDM	BPSK	7.2
C	Draft 802.11n (20MHz)	36 to 64	60	OFDM	BPSK	7.2
D	Draft 802.11n (20MHz)	36 to 64	60	OFDM	BPSK	7.2

BANDEDGE MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A & C	802.11a	36 to 64	36, 64	OFDM	BPSK	6.0
A & C	Draft 802.11n (20MHz)	36 to 64	36, 64	OFDM	BPSK	7.2
A & C	Draft 802.11n (40MHz)	38 to 62	38, 62	OFDM	BPSK	15.0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0
A	Draft 802.11n (20MHz)	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	7.2
A	Draft 802.11n (40MHz)	38 to 62	38, 46, 54, 62	OFDM	BPSK	15.0

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.

BESIDES RADIATED EMISSION TEST BELOW 1GHz

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

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

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

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

RADIATED EMISSION TEST BELOW 1GHz

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

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

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

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

NOTE 3: Item 4 was supplied from client

4. TEST TYPES AND RESULTS

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	PK
5150 ~ 5250	-27	68.3

NOTE: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

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

4.1.3 TEST INSTRUMENTS

Above 1GHz Test:

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

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 4.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 988962.
 5. The IC Site Registration No. is IC7450F-4.



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Below 1GHz Test:

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

- NOTE:**
1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in Open Site No. 5.
 3. The VCCI Site Registration No. R-1039.
 4. The Industry Canada Reference No. IC 7450E-5
 5. The FCC Site Registration No. 90422.

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 meters semi-anechoic chamber & 3 meters open side area. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 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:

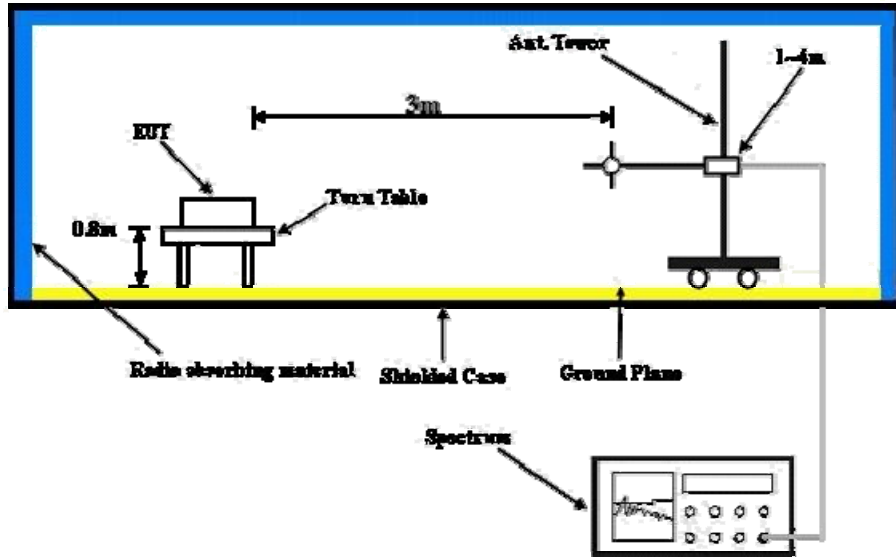
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency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

4.1.5 DEVIATION FROM TEST STANDARD

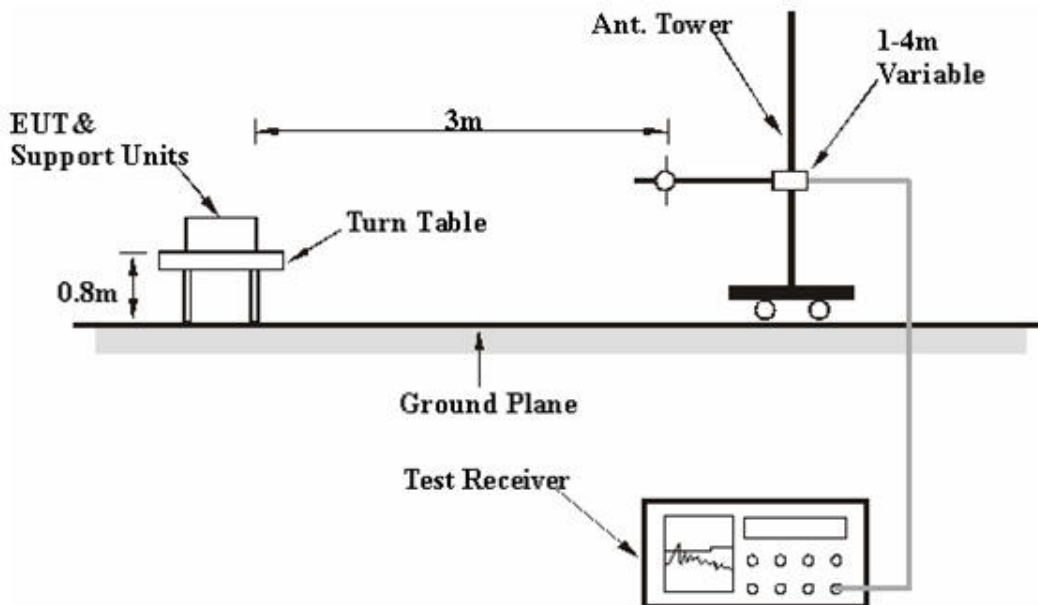
No deviation.

4.1.6 TEST SETUP

Above 1GHz Test:



Below 1GHz Test:



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

4.1.7 EUT OPERATING CONDITION

Above 1GHz Test:

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

Below 1GHz Test:

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

4.1.8 TEST RESULTS

802.11a OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.56 PK	74.00	-25.44	1.20 H	146	20.01	28.55
2	1200.00	43.72 AV	54.00	-10.28	1.20 H	146	15.17	28.55
3	5150.00	51.49 PK	74.00	-22.51	1.15 H	154	12.35	39.14
4	5150.00	38.15 AV	54.00	-15.85	1.15 H	154	-0.99	39.14
5	*5180.00	101.32 PK			1.19 H	160	62.14	39.18
6	*5180.00	91.01 AV			1.19 H	160	51.83	39.18
7	#10360.00	61.13 PK	68.30	-7.17	1.19 H	245	11.52	49.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.47 PK	74.00	-24.53	1.00 V	323	20.92	28.55
2	1200.00	45.90 AV	54.00	-8.10	1.00 V	323	17.35	28.55
3	5150.00	58.44 PK	74.00	-15.56	1.20 V	290	19.30	39.14
4	5150.00	40.72 AV	54.00	-13.28	1.20 V	290	1.58	39.14
5	*5180.00	111.40 PK			1.11 V	269	72.22	39.18
6	*5180.00	101.24 AV			1.11 V	269	62.06	39.18
7	#10360.00	60.39 PK	68.30	-7.91	1.31 V	15	10.78	49.61

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.63 PK	74.00	-25.37	1.24 H	156	20.08	28.55
2	1200.00	43.81 AV	54.00	-10.19	1.24 H	156	15.26	28.55
3	*5200.00	100.79 PK			1.06 H	207	61.59	39.20
4	*5200.00	90.72 AV			1.06 H	207	51.52	39.20
5	#10400.00	59.45 PK	68.30	-8.85	1.39 H	355	9.74	49.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.53 PK	74.00	-24.47	1.06 V	289	20.98	28.55
2	1200.00	45.94 AV	54.00	-8.06	1.06 V	289	17.39	28.55
3	*5200.00	111.27 PK			1.29 V	203	72.07	39.20
4	*5200.00	101.19 AV			1.29 V	203	61.99	39.20
5	#10400.00	59.44 PK	68.30	-8.86	1.06 V	115	9.73	49.71

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.66 PK	74.00	-25.34	1.22 H	141	20.11	28.55
2	1200.00	43.84 AV	54.00	-10.16	1.22 H	141	15.29	28.55
3	*5240.00	101.24 PK			1.09 H	211	61.99	39.25
4	*5240.00	91.34 AV			1.09 H	211	52.09	39.25
5	#10480.00	58.84 PK	68.30	-9.46	1.44 H	45	8.91	49.93
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.56 PK	74.00	-24.44	1.08 V	310	21.01	28.55
2	1200.00	45.95 AV	54.00	-8.05	1.08 V	310	17.40	28.55
3	*5240.00	111.64 PK			1.53 V	144	72.39	39.25
4	*5240.00	101.93 AV			1.53 V	144	62.68	39.25
5	#10480.00	59.96 PK	68.30	-8.34	1.22 V	72	10.03	49.93

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.51 PK	74.00	-25.49	1.22 H	151	19.96	28.55
2	1200.00	43.64 AV	54.00	-10.36	1.22 H	151	15.09	28.55
3	*5260.00	100.91 PK			1.08 H	210	61.63	39.28
4	*5260.00	90.88 AV			1.08 H	210	51.60	39.28
5	#10520.00	59.49 PK	68.30	-8.81	1.36 H	340	9.47	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	1200.00	49.37 PK	74.00	-24.63	1.14 V	287	20.82	28.55
2	1200.00	45.85 AV	54.00	-8.15	1.14 V	287	17.30	28.55
3	*5260.00	111.36 PK			1.44 V	87	72.08	39.28
4	*5260.00	101.68 AV			1.44 V	87	62.40	39.28
5	#10520.00	60.01 PK	68.30	-8.29	1.16 V	211	9.99	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.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	45.62 PK	74.00	-28.38	1.24 H	133	17.07	28.55
2	1200.00	43.76 AV	54.00	-10.24	1.24 H	133	15.21	28.55
3	*5300.00	100.97 PK			1.22 H	142	61.64	39.33
4	*5300.00	91.03 AV			1.22 H	142	51.70	39.33
5	10600.00	58.35 PK	74.00	-15.65	1.03 H	143	8.16	50.19
6	10600.00	45.20 AV	54.00	-8.80	1.03 H	143	-4.99	50.19
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.53 PK	74.00	-24.47	1.16 V	214	20.98	28.55
2	1200.00	45.96 AV	54.00	-8.04	1.16 V	214	17.41	28.55
3	*5300.00	111.76 PK			1.27 V	79	72.43	39.33
4	*5300.00	101.82 AV			1.27 V	79	62.49	39.33
5	10600.00	59.83 PK	74.00	-14.17	1.09 V	45	9.64	50.19
6	10600.00	46.70 AV	54.00	-7.30	1.09 V	45	-3.49	50.19

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.44 PK	74.00	-25.56	1.22 H	145	19.89	28.55
2	1200.00	43.67 AV	54.00	-10.33	1.22 H	145	15.12	28.55
3	*5320.00	101.39 PK			1.25 H	154	62.03	39.36
4	*5320.00	91.56 AV			1.25 H	154	52.20	39.36
5	5350.00	50.71 PK	74.00	-23.29	1.23 H	142	11.31	39.40
6	5350.00	37.45 AV	54.00	-16.55	1.23 H	142	-1.95	39.40
7	10640.00	61.69 PK	74.00	-12.31	1.13 H	75	11.41	50.27
8	10640.00	48.59 AV	54.00	-5.41	1.13 H	75	-1.69	50.27
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.55 PK	74.00	-24.45	1.03 V	311	21.00	28.55
2	1200.00	45.84 AV	54.00	-8.16	1.03 V	311	17.29	28.55
3	*5320.00	112.34 PK			1.22 V	72	72.98	39.36
4	*5320.00	102.06 AV			1.22 V	72	62.70	39.36
5	5350.00	66.69 PK	74.00	-7.31	1.26 V	84	27.29	39.40
6	5350.00	49.07 AV	54.00	-4.93	1.26 V	84	9.67	39.40
7	10640.00	62.55 PK	74.00	-11.45	1.19 V	310	12.27	50.27
8	10640.00	49.62 AV	54.00	-4.38	1.19 V	310	-0.66	50.27

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.43 PK	74.00	-26.57	1.11 H	43	17.67	29.76
2	1600.00	43.76 AV	54.00	-10.24	1.11 H	43	14.00	29.76
3	5150.00	51.52 PK	74.00	-22.48	1.05 H	143	12.38	39.14
4	5150.00	37.91 AV	54.00	-16.09	1.05 H	143	-1.23	39.14
5	*5180.00	104.49 PK			1.56 H	232	65.31	39.18
6	*5180.00	94.07 AV			1.56 H	232	54.89	39.18
7	#10360.00	59.95 PK	68.30	-8.35	1.13 H	97	10.34	49.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.53 PK	74.00	-22.47	1.03 V	27	21.77	29.76
2	1600.00	48.90 AV	54.00	-5.10	1.03 V	27	19.14	29.76
3	5150.00	60.70 PK	74.00	-13.30	1.43 V	208	21.56	39.14
4	5150.00	43.73 AV	54.00	-10.27	1.43 V	208	4.59	39.14
5	*5180.00	114.60 PK			1.41 V	150	75.42	39.18
6	*5180.00	104.31 AV			1.41 V	150	65.13	39.18
7	#10360.00	61.55 PK	68.30	-6.75	1.43 V	111	11.94	49.61

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.52 PK	74.00	-26.48	1.15 H	52	17.76	29.76
2	1600.00	43.84 AV	54.00	-10.16	1.15 H	52	14.08	29.76
3	*5200.00	103.83 PK			1.20 H	237	64.63	39.20
4	*5200.00	93.80 AV			1.20 H	237	54.60	39.20
5	#10400.00	58.68 PK	68.30	-9.62	1.05 H	93	8.97	49.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.63 PK	74.00	-22.37	1.08 V	33	21.87	29.76
2	1600.00	48.98 AV	54.00	-5.02	1.08 V	33	19.22	29.76
3	*5200.00	114.32 PK			1.20 V	190	75.12	39.20
4	*5200.00	104.33 AV			1.20 V	190	65.13	39.20
5	#10400.00	58.40 PK	68.30	-9.90	1.06 V	89	8.69	49.71

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.59 PK	74.00	-26.41	1.22 H	68	17.83	29.76
2	1600.00	43.88 AV	54.00	-10.12	1.22 H	68	14.12	29.76
3	*5240.00	104.35 PK			1.19 H	235	65.10	39.25
4	*5240.00	94.41 AV			1.19 H	235	55.16	39.25
5	#10480.00	58.84 PK	68.30	-9.46	1.08 H	142	8.91	49.93
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.56 PK	74.00	-22.44	1.08 V	37	21.80	29.76
2	1600.00	48.81 AV	54.00	-5.19	1.08 V	37	19.05	29.76
3	*5240.00	114.87 PK			1.20 V	190	75.62	39.25
4	*5240.00	105.00 AV			1.20 V	190	65.75	39.25
5	#10480.00	58.52 PK	68.30	-9.78	1.08 V	93	8.59	49.93

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.42 PK	74.00	-26.58	1.18 H	56	17.66	29.76
2	1600.00	43.71 AV	54.00	-10.29	1.18 H	56	13.95	29.76
3	*5260.00	103.92 PK			1.22 H	233	64.64	39.28
4	*5260.00	93.91 AV			1.22 H	233	54.63	39.28
5	#10520.00	58.72 PK	68.30	-9.58	1.09 H	99	8.70	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	1600.00	51.53 PK	74.00	-22.47	1.10 V	39	21.77	29.76
2	1600.00	48.85 AV	54.00	-5.15	1.10 V	39	19.09	29.76
3	*5260.00	114.48 PK			1.07 V	180	75.20	39.28
4	*5260.00	104.76 AV			1.07 V	180	65.48	39.28
5	#10520.00	58.56 PK	68.30	-9.74	1.12 V	93	8.54	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.



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.52 PK	74.00	-26.48	1.14 H	66	17.76	29.76
2	1600.00	43.81 AV	54.00	-10.19	1.14 H	66	14.05	29.76
3	*5300.00	103.98 PK			1.24 H	238	64.65	39.33
4	*5300.00	94.05 AV			1.24 H	238	54.72	39.33
5	10600.00	58.05 PK	74.00	-15.95	1.09 H	82	7.86	50.19
6	10600.00	45.32 AV	54.00	-8.68	1.09 H	82	-4.87	50.19
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.62 PK	74.00	-22.38	1.12 V	48	21.86	29.76
2	1600.00	48.92 AV	54.00	-5.08	1.12 V	48	19.16	29.76
3	*5300.00	114.80 PK			1.06 V	184	75.47	39.33
4	*5300.00	104.85 AV			1.06 V	184	65.52	39.33
5	10600.00	58.75 PK	74.00	-15.25	1.09 V	185	8.56	50.19
6	10600.00	45.37 AV	54.00	-8.63	1.09 V	185	-4.82	50.19

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.36 PK	74.00	-26.64	1.13 H	48	17.60	29.76
2	1600.00	43.68 AV	54.00	-10.32	1.13 H	48	13.92	29.76
3	*5320.00	104.44 PK			1.55 H	248	65.08	39.36
4	*5320.00	94.65 AV			1.55 H	248	55.29	39.36
5	5350.00	48.47 PK	74.00	-25.53	1.54 H	240	9.07	39.40
6	5350.00	36.15 AV	54.00	-17.85	1.54 H	240	-3.25	39.40
7	10640.00	60.83 PK	74.00	-13.17	1.09 H	214	10.55	50.27
8	10640.00	47.80 AV	54.00	-6.20	1.09 H	214	-2.48	50.27
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.48 PK	74.00	-22.52	1.06 V	21	21.72	29.76
2	1600.00	48.75 AV	54.00	-5.25	1.06 V	21	18.99	29.76
3	*5320.00	115.41 PK			1.16 V	190	76.05	39.36
4	*5320.00	105.10 AV			1.16 V	190	65.74	39.36
5	5350.00	66.23 PK	74.00	-7.77	1.02 V	224	26.83	39.40
6	5350.00	47.57 AV	54.00	-6.43	1.02 V	224	8.17	39.40
7	10640.00	63.50 PK	74.00	-10.50	1.09 V	14	13.22	50.27
8	10640.00	49.12 AV	54.00	-4.88	1.09 V	14	-1.16	50.27

- 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.



DRAFT 802.11n (20MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.35 PK	74.00	-25.65	1.13 H	140	19.80	28.55
2	1200.00	43.41 AV	54.00	-10.59	1.13 H	140	14.86	28.55
3	5150.00	51.21 PK	74.00	-22.79	1.07 H	250	12.07	39.14
4	5150.00	38.57 AV	54.00	-15.43	1.07 H	250	-0.57	39.14
5	*5180.00	96.23 PK			1.07 H	318	57.05	39.18
6	*5180.00	86.14 AV			1.07 H	318	46.96	39.18
7	#10360.00	61.30 PK	68.30	-7.00	1.06 H	336	11.69	49.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.51 PK	74.00	-24.49	1.13 V	290	20.96	28.55
2	1200.00	45.73 AV	54.00	-8.27	1.13 V	290	17.18	28.55
3	5150.00	53.52 PK	74.00	-20.48	1.32 V	259	14.38	39.14
4	5150.00	39.58 AV	54.00	-14.42	1.32 V	259	0.44	39.14
5	*5180.00	108.58 PK			1.35 V	266	69.40	39.18
6	*5180.00	98.31 AV			1.35 V	266	59.13	39.18
7	#10360.00	61.56 PK	68.30	-6.74	1.10 V	15	11.95	49.61

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.41 PK	74.00	-25.59	1.15 H	102	19.86	28.55
2	1200.00	43.50 AV	54.00	-10.50	1.15 H	102	14.95	28.55
3	*5200.00	97.82 PK			1.06 H	245	58.62	39.20
4	*5200.00	87.33 AV			1.06 H	245	48.13	39.20
5	#10400.00	60.12 PK	68.30	-8.18	1.03 H	288	10.41	49.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.56 PK	74.00	-24.44	1.08 V	210	21.01	28.55
2	1200.00	45.75 AV	54.00	-8.25	1.08 V	210	17.20	28.55
3	*5200.00	109.51 PK			1.31 V	114	70.31	39.20
4	*5200.00	99.27 AV			1.31 V	114	60.07	39.20
5	#10520.00	61.42 PK	68.30	-6.88	1.13 V	25	11.40	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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.24 PK	74.00	-25.76	1.12 H	143	19.69	28.55
2	1200.00	43.32 AV	54.00	-10.68	1.12 H	143	14.77	28.55
3	*5240.00	100.46 PK			1.28 H	133	61.21	39.25
4	*5240.00	90.18 AV			1.28 H	133	50.93	39.25
5	#10480.00	60.89 PK	68.30	-7.41	1.05 H	82	10.96	49.93
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.52 PK	74.00	-24.48	1.06 V	247	20.97	28.55
2	1200.00	45.70 AV	54.00	-8.30	1.06 V	247	17.15	28.55
3	*5240.00	112.77 PK			1.37 V	70	73.52	39.25
4	*5240.00	102.38 AV			1.37 V	70	63.13	39.25
5	#10480.00	61.12 PK	68.30	-7.18	1.14 V	177	11.19	49.93

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.31 PK	74.00	-25.69	1.19 H	145	19.76	28.55
2	1200.00	43.35 AV	54.00	-10.65	1.19 H	145	14.80	28.55
3	*5260.00	103.56 PK			1.28 H	131	64.28	39.28
4	*5260.00	93.24 AV			1.28 H	131	53.96	39.28
5	#10520.00	59.54 PK	68.30	-8.76	1.20 H	46	9.52	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	1200.00	49.65 PK	74.00	-24.35	1.12 V	290	21.10	28.55
2	1200.00	45.71 AV	54.00	-8.29	1.12 V	290	17.16	28.55
3	*5260.00	115.84 PK			1.38 V	142	76.56	39.28
4	*5260.00	105.81 AV			1.38 V	142	66.53	39.28
5	#10520.00	60.58 PK	68.30	-7.72	1.18 V	141	10.56	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.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.29 PK	74.00	-25.71	1.06 H	124	19.74	28.55
2	1200.00	43.34 AV	54.00	-10.66	1.06 H	124	14.79	28.55
3	*5300.00	103.12 PK			1.20 H	47	63.79	39.33
4	*5300.00	92.91 AV			1.20 H	47	53.58	39.33
5	10600.00	59.67 PK	74.00	-14.33	1.02 H	93	9.48	50.19
6	10600.00	46.69 AV	54.00	-7.31	1.02 H	93	-3.50	50.19
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.56 PK	74.00	-24.44	1.19 V	245	21.01	28.55
2	1200.00	45.74 AV	54.00	-8.26	1.19 V	245	17.19	28.55
3	*5300.00	115.75 PK			1.40 V	264	76.42	39.33
4	*5300.00	105.34 AV			1.40 V	264	66.01	39.33
5	10600.00	60.53 PK	74.00	-13.47	1.23 V	102	10.34	50.19
6	10600.00	47.80 AV	54.00	-6.20	1.23 V	102	-2.39	50.19

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.21 PK	74.00	-25.79	1.12 H	136	19.66	28.55
2	1200.00	43.27 AV	54.00	-10.73	1.12 H	136	14.72	28.55
3	*5320.00	97.35 PK			1.32 H	144	57.99	39.36
4	*5320.00	87.29 AV			1.32 H	144	47.93	39.36
5	5350.00	52.38 PK	74.00	-21.62	1.22 H	63	12.98	39.40
6	5350.00	38.55 AV	54.00	-15.45	1.22 H	63	-0.85	39.40
7	10640.00	60.80 PK	74.00	-13.20	1.13 H	77	10.52	50.27
8	10640.00	47.76 AV	54.00	-6.24	1.13 H	77	-2.52	50.27
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.48 PK	74.00	-24.52	1.15 V	293	20.93	28.55
2	1200.00	45.67 AV	54.00	-8.33	1.15 V	293	17.12	28.55
3	*5320.00	110.21 PK			1.34 V	316	70.85	39.36
4	*5320.00	100.09 AV			1.34 V	316	60.73	39.36
5	5350.00	59.67 PK	74.00	-14.33	1.30 V	298	20.27	39.40
6	5350.00	40.94 AV	54.00	-13.06	1.30 V	298	1.54	39.40
7	10640.00	61.04 PK	74.00	-12.96	1.12 V	187	10.76	50.27
8	10640.00	48.38 AV	54.00	-5.62	1.12 V	187	-1.90	50.27

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.12 PK	74.00	-26.88	1.24 H	48	17.36	29.76
2	1600.00	43.57 AV	54.00	-10.43	1.24 H	48	13.81	29.76
3	5150.00	50.04 PK	74.00	-23.96	1.37 H	55	10.90	39.14
4	5150.00	38.49 AV	54.00	-15.51	1.37 H	55	-0.65	39.14
5	*5180.00	99.21 PK			1.41 H	148	60.03	39.18
6	*5180.00	89.10 AV			1.41 H	148	49.92	39.18
7	#10360.00	56.94 PK	68.30	-11.36	1.09 H	64	7.33	49.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.33 PK	74.00	-22.67	1.22 V	58	21.57	29.76
2	1600.00	48.86 AV	54.00	-5.14	1.22 V	58	19.10	29.76
3	5150.00	51.88 PK	74.00	-22.12	1.39 V	122	12.74	39.14
4	5150.00	39.47 AV	54.00	-14.53	1.39 V	122	0.33	39.14
5	*5180.00	111.63 PK			1.42 V	198	72.45	39.18
6	*5180.00	101.25 AV			1.42 V	198	62.07	39.18
7	#10360.00	59.37 PK	68.30	-8.93	1.33 V	99	9.76	49.61

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



A D T

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.45 PK	74.00	-26.55	1.18 H	68	17.69	29.76
2	1600.00	43.74 AV	54.00	-10.26	1.18 H	68	13.98	29.76
3	*5200.00	100.59 PK			1.06 H	223	61.39	39.20
4	*5200.00	90.31 AV			1.06 H	223	51.11	39.20
5	#10400.00	58.93 PK	68.30	-9.37	1.03 H	87	9.22	49.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.42 PK	74.00	-22.58	1.15 V	17	21.66	29.76
2	1600.00	48.75 AV	54.00	-5.25	1.15 V	17	18.99	29.76
3	*5200.00	112.58 PK			1.20 V	186	73.38	39.20
4	*5200.00	102.33 AV			1.20 V	186	63.13	39.20
5	#10400.00	57.72 PK	68.30	-10.58	1.03 V	127	8.01	49.71

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.41 PK	74.00	-26.59	1.18 H	67	17.65	29.76
2	1600.00	43.75 AV	54.00	-10.25	1.18 H	67	13.99	29.76
3	*5240.00	103.58 PK			1.05 H	221	64.33	39.25
4	*5240.00	93.23 AV			1.05 H	221	53.98	39.25
5	#10480.00	58.23 PK	68.30	-10.07	1.03 H	58	8.30	49.93
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.53 PK	74.00	-22.47	1.08 V	33	21.77	29.76
2	1600.00	48.82 AV	54.00	-5.18	1.08 V	33	19.06	29.76
3	*5240.00	115.88 PK			1.07 V	189	76.63	39.25
4	*5240.00	105.46 AV			1.07 V	189	66.21	39.25
5	#10480.00	58.12 PK	68.30	-10.18	1.15 V	142	8.19	49.93

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.49 PK	74.00	-26.51	1.15 H	38	17.73	29.76
2	1600.00	43.81 AV	54.00	-10.19	1.15 H	38	14.05	29.76
3	*5260.00	106.61 PK			1.06 H	224	67.33	39.28
4	*5260.00	96.29 AV			1.06 H	224	57.01	39.28
5	#10520.00	58.14 PK	68.30	-10.16	1.06 H	66	8.12	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	1600.00	51.62 PK	74.00	-22.38	1.19 V	67	21.86	29.76
2	1600.00	48.90 AV	54.00	-5.10	1.19 V	67	19.14	29.76
3	*5260.00	118.97 PK			1.18 V	184	79.69	39.28
4	*5260.00	108.86 AV			1.18 V	184	69.58	39.28
5	#10520.00	57.98 PK	68.30	-10.32	1.12 V	132	7.96	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.



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.11 PK	74.00	-26.89	1.22 H	45	17.35	29.76
2	1600.00	43.52 AV	54.00	-10.48	1.22 H	45	13.76	29.76
3	*5300.00	106.20 PK			1.08 H	228	66.87	39.33
4	*5300.00	95.94 AV			1.08 H	228	56.61	39.33
5	10600.00	58.02 PK	74.00	-15.98	1.08 H	53	7.83	50.19
6	10600.00	45.37 AV	54.00	-8.63	1.08 H	53	-4.82	50.19
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.62 PK	74.00	-22.38	1.13 V	68	21.86	29.76
2	1600.00	48.94 AV	54.00	-5.06	1.13 V	68	19.18	29.76
3	*5300.00	118.82 PK			1.06 V	188	79.49	39.33
4	*5300.00	108.49 AV			1.06 V	188	69.16	39.33
5	10600.00	57.94 PK	74.00	-16.06	1.14 V	138	7.75	50.19
6	10600.00	44.86 AV	54.00	-9.14	1.14 V	138	-5.33	50.19

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.02 PK	74.00	-26.98	1.20 H	36	17.26	29.76
2	1600.00	43.41 AV	54.00	-10.59	1.20 H	36	13.65	29.76
3	*5320.00	100.46 PK			1.44 H	135	61.10	39.36
4	*5320.00	90.41 AV			1.44 H	135	51.05	39.36
5	5350.00	52.42 PK	74.00	-21.58	1.15 H	35	13.02	39.40
6	5350.00	38.56 AV	54.00	-15.44	1.15 H	35	-0.84	39.40
7	10640.00	60.80 PK	74.00	-13.20	1.08 H	201	10.53	50.27
8	10640.00	47.72 AV	54.00	-6.28	1.08 H	201	-2.55	50.27
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.28 PK	74.00	-22.72	1.21 V	61	21.52	29.76
2	1600.00	48.75 AV	54.00	-5.25	1.21 V	61	18.99	29.76
3	*5320.00	113.34 PK			1.28 V	255	73.98	39.36
4	*5320.00	103.27 AV			1.28 V	255	63.91	39.36
5	5350.00	57.05 PK	74.00	-16.95	1.28 V	162	17.65	39.40
6	5350.00	41.23 AV	54.00	-12.77	1.28 V	162	1.83	39.40
7	10640.00	63.42 PK	74.00	-10.58	1.39 V	94	13.15	50.27
8	10640.00	49.02 AV	54.00	-4.98	1.39 V	94	-1.25	50.27

- 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.

DRAFT 802.11n (40MHz) OFDM MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.25 PK	74.00	-25.75	1.18 H	136	19.70	28.55
2	1200.00	43.30 AV	54.00	-10.70	1.18 H	136	14.75	28.55
3	5150.00	55.56 PK	74.00	-18.44	1.07 H	180	16.42	39.14
4	5150.00	42.51 AV	54.00	-11.49	1.07 H	180	3.37	39.14
5	*5190.00	93.68 PK			1.08 H	187	54.49	39.19
6	*5190.00	83.24 AV			1.08 H	187	44.05	39.19
7	#10360.00	60.18 PK	68.30	-8.12	1.15 H	35	10.57	49.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.42 PK	74.00	-24.58	1.11 V	288	20.87	28.55
2	1200.00	45.51 AV	54.00	-8.49	1.11 V	288	16.96	28.55
3	5150.00	67.16 PK	74.00	-6.84	1.57 V	130	28.02	39.14
4	5150.00	52.37 AV	54.00	-1.63	1.57 V	130	13.23	39.14
5	*5190.00	106.55 PK			1.39 V	71	67.36	39.19
6	*5190.00	95.52 AV			1.39 V	71	56.33	39.19
7	#10360.00	61.46 PK	68.30	-6.84	1.23 V	125	11.85	49.61

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.32 PK	74.00	-25.68	1.22 H	140	19.77	28.55
2	1200.00	43.39 AV	54.00	-10.61	1.22 H	140	14.84	28.55
3	*5230.00	96.30 PK			1.10 H	181	57.06	39.24
4	*5230.00	86.32 AV			1.10 H	181	47.08	39.24
5	#10460.00	58.39 PK	68.30	-9.91	1.12 H	41	8.52	49.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	49.49 PK	74.00	-24.51	1.18 V	271	20.94	28.55
2	1200.00	45.58 AV	54.00	-8.42	1.18 V	271	17.03	28.55
3	*5230.00	109.03 PK			1.30 V	84	69.79	39.24
4	*5230.00	98.69 AV			1.30 V	84	59.45	39.24
5	#10460.00	60.29 PK	68.30	-8.01	1.25 V	114	10.42	49.87

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.32 PK	74.00	-25.68	1.09 H	125	19.77	28.55
2	1200.00	43.35 AV	54.00	-10.65	1.09 H	125	14.80	28.55
3	*5270.00	97.35 PK			1.06 H	194	58.06	39.29
4	*5270.00	87.39 AV			1.06 H	194	48.10	39.29
5	#10540.00	60.29 PK	68.30	-8.01	1.18 H	12	10.23	50.06
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	1000.00	49.49 PK	74.00	-24.51	1.13 V	284	21.60	27.89
2	1000.00	45.58 AV	54.00	-8.42	1.13 V	284	17.69	27.89
3	*5270.00	110.12 PK			1.30 V	101	70.83	39.29
4	*5270.00	100.08 AV			1.30 V	101	60.79	39.29
5	#10540.00	60.98 PK	68.30	-7.32	1.25 V	112	10.92	50.06

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	A
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1200.00	48.02 PK	74.00	-25.98	1.15 H	130	19.47	28.55
2	1200.00	43.25 AV	54.00	-10.75	1.15 H	130	14.70	28.55
3	*5310.00	94.36 PK			1.04 H	170	55.02	39.34
4	*5310.00	84.28 AV			1.04 H	170	44.94	39.34
5	5350.00	56.60 PK	74.00	-17.40	1.55 H	187	17.20	39.40
6	5350.00	41.90 AV	54.00	-12.10	1.55 H	187	2.50	39.40
7	10620.00	61.82 PK	74.00	-12.18	1.18 H	102	11.59	50.23
8	10620.00	48.53 AV	54.00	-5.47	1.18 H	102	-1.70	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	1200.00	49.13 PK	74.00	-24.87	1.09 V	271	20.58	28.55
2	1200.00	45.24 AV	54.00	-8.76	1.09 V	271	16.69	28.55
3	*5310.00	107.02 PK			1.06 V	152	67.68	39.34
4	*5310.00	97.11 AV			1.06 V	152	57.77	39.34
5	5350.00	68.36 PK	74.00	-5.64	1.16 V	132	28.96	39.40
6	5350.00	52.72 AV	54.00	-1.28	1.16 V	132	13.32	39.40
7	10620.00	61.71 PK	74.00	-12.29	1.12 V	251	11.48	50.23
8	10620.00	48.65 AV	54.00	-5.35	1.12 V	251	-1.58	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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.37 PK	74.00	-26.63	1.15 H	51	17.61	29.76
2	1600.00	43.61 AV	54.00	-10.39	1.15 H	51	13.85	29.76
3	5150.00	58.61 PK	74.00	-15.39	1.27 H	75	19.47	39.14
4	5150.00	45.96 AV	54.00	-8.04	1.27 H	75	6.82	39.14
5	*5190.00	96.78 PK			1.35 H	238	57.59	39.19
6	*5190.00	86.31 AV			1.35 H	238	47.12	39.19
7	#10380.00	60.62 PK	68.30	-7.68	1.18 H	91	10.96	49.66
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.59 PK	74.00	-22.41	1.21 V	33	21.83	29.76
2	1600.00	48.93 AV	54.00	-5.07	1.21 V	33	19.17	29.76
3	5150.00	68.57 PK	74.00	-5.43	1.19 V	206	29.43	39.14
4	5150.00	52.97 AV	54.00	-1.03	1.19 V	206	13.83	39.14
5	*5190.00	109.61 PK			1.30 V	195	70.42	39.19
6	*5190.00	98.79 AV			1.30 V	195	59.60	39.19
7	#10380.00	62.01 PK	68.30	-6.29	1.22 V	147	12.35	49.66

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.42 PK	74.00	-26.58	1.14 H	63	17.66	29.76
2	1600.00	43.51 AV	54.00	-10.49	1.14 H	63	13.75	29.76
3	*5230.00	99.41 PK			1.33 H	235	60.17	39.24
4	*5230.00	89.42 AV			1.33 H	235	50.18	39.24
5	#10460.00	59.01 PK	68.30	-9.29	1.06 H	18	9.14	49.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.42 PK	74.00	-22.58	1.14 V	48	21.66	29.76
2	1600.00	48.71 AV	54.00	-5.29	1.14 V	48	18.95	29.76
3	*5230.00	112.11 PK			1.19 V	191	72.87	39.24
4	*5230.00	101.60 AV			1.19 V	191	62.36	39.24
5	#10460.00	58.18 PK	68.30	-10.12	1.10 V	10	8.31	49.87

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.35 PK	74.00	-26.65	1.18 H	54	17.59	29.76
2	1600.00	43.47 AV	54.00	-10.53	1.18 H	54	13.71	29.76
3	*5270.00	100.45 PK			1.31 H	236	61.16	39.29
4	*5270.00	90.46 AV			1.31 H	236	51.17	39.29
5	#10540.00	59.17 PK	68.30	-9.13	1.05 H	32	9.11	50.06
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	51.48 PK	74.00	-22.52	1.16 V	51	21.72	29.76
2	1600.00	48.79 AV	54.00	-5.21	1.16 V	51	19.03	29.76
3	*5270.00	113.23 PK			1.19 V	185	73.94	39.29
4	*5270.00	103.13 AV			1.19 V	185	63.84	39.29
5	#10540.00	58.24 PK	68.30	-10.06	1.13 V	21	8.18	50.06

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TEST MODE	C
TESTED BY	Mark Liao		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1600.00	47.33 PK	74.00	-26.67	1.12 H	52	17.57	29.76
2	1600.00	43.42 AV	54.00	-10.58	1.12 H	52	13.66	29.76
3	*5310.00	97.42 PK			1.30 H	241	58.08	39.34
4	*5310.00	87.36 AV			1.30 H	241	48.02	39.34
5	5350.00	60.98 PK	74.00	-13.02	1.20 H	75	21.58	39.40
6	5350.00	47.48 AV	54.00	-6.52	1.20 H	75	8.08	39.40
7	10620.00	61.11 PK	74.00	-12.89	1.23 H	133	10.88	50.23
8	10620.00	48.09 AV	54.00	-5.91	1.23 H	133	-2.14	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	1600.00	51.57 PK	74.00	-22.43	1.18 V	30	21.81	29.76
2	1600.00	48.81 AV	54.00	-5.19	1.18 V	30	19.05	29.76
3	*5310.00	110.18 PK			1.28 V	185	70.84	39.34
4	*5310.00	100.16 AV			1.28 V	185	60.82	39.34
5	5350.00	67.74 PK	74.00	-6.26	1.14 V	214	28.34	39.40
6	5350.00	52.70 AV	54.00	-1.30	1.14 V	214	13.30	39.40
7	10620.00	61.15 PK	74.00	-12.85	1.33 V	128	10.92	50.23
8	10620.00	48.11 AV	54.00	-5.89	1.33 V	128	-2.12	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.



A D T

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	133.45	34.65 QP	43.50	-8.85	1.33 H	98	21.94	12.71
2	300.00	35.12 QP	46.00	-10.88	1.18 H	296	20.09	15.03
3	399.99	44.09 QP	46.00	-1.91	2.93 H	161	25.89	18.20
4	533.31	42.96 QP	46.00	-3.04	1.23 H	223	21.09	21.87
5	666.63	44.80 QP	46.00	-1.20	2.20 H	170	19.75	25.05
6	766.65	42.32 QP	46.00	-3.68	1.00 H	14	15.73	26.59
7	799.98	44.87 QP	46.00	-1.13	1.00 H	308	17.65	27.22
8	933.29	43.21 QP	46.00	-2.79	2.01 H	20	15.10	28.11
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	75.18	31.98 QP	40.00	-8.02	1.45 V	105	23.87	8.11
2	125.01	34.78 QP	43.50	-8.72	1.10 V	352	22.11	12.67
3	295.14	33.28 QP	46.00	-12.72	1.55 V	201	18.25	15.03
4	400.00	39.74 QP	46.00	-6.26	2.01 V	77	21.54	18.20
5	533.29	36.56 QP	46.00	-9.44	1.56 V	150	14.69	21.87
6	666.64	44.29 QP	46.00	-1.71	1.20 V	75	19.24	25.05
7	699.98	43.58 QP	46.00	-2.42	1.08 V	333	18.24	25.34
8	800.00	41.00 QP	46.00	-5.00	1.42 V	78	13.78	27.22
	933.29	44.09 QP	46.00	-1.91	1.12 V	198	15.98	28.11

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	85.18	38.15 QP	40.00	-1.85	1.00 H	72	28.89	9.26
2	111.08	40.15 QP	43.50	-3.35	1.00 H	177	28.48	11.67
3	166.57	30.54 QP	43.50	-12.96	1.00 H	15	18.51	12.03
4	224.31	34.99 QP	46.00	-11.01	1.33 H	180	22.56	12.43
5	233.33	43.11 QP	46.00	-2.89	1.20 H	201	29.79	13.32
6	250.01	40.32 QP	46.00	-5.68	1.44 H	350	25.35	14.97
7	399.91	44.68 QP	46.00	-1.32	2.31 H	175	26.48	18.20
8	500.01	37.02 QP	46.00	-8.98	2.30 H	208	16.36	20.66
9	666.64	43.31 QP	46.00	-2.69	1.49 H	222	18.26	25.05
10	699.96	44.19 QP	46.00	-1.81	2.90 H	60	18.85	25.34
11	799.98	35.99 QP	46.00	-10.01	1.00 H	258	8.77	27.22
12	933.27	42.02 QP	46.00	-3.98	2.14 H	250	13.91	28.11

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	83.22	37.15 QP	40.00	-2.85	1.00 V	318	28.11	9.04
2	125.01	34.41 QP	43.50	-9.09	1.00 V	215	21.74	12.67
3	233.43	33.98 QP	46.00	-12.02	1.24 V	20	20.65	13.33
4	366.78	34.21 QP	46.00	-11.79	1.71 V	96	17.06	17.15
5	400.15	44.91 QP	46.00	-1.09	2.17 V	266	26.71	18.20
6	533.29	37.23 QP	46.00	-8.77	1.43 V	163	15.36	21.87
7	666.64	43.89 QP	46.00	-2.11	1.39 V	32	18.84	25.05
8	699.97	42.32 QP	46.00	-3.68	1.20 V	9	16.98	25.34
9	799.95	40.35 QP	46.00	-5.65	1.00 V	21	13.13	27.22
10	933.28	44.65 QP	46.00	-1.35	1.60 V	112	16.54	28.11

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	133.50	30.75 QP	43.50	-12.75	1.36 H	150	18.04	12.71
2	233.33	42.50 QP	46.00	-3.50	1.30 H	20	29.18	13.32
3	266.89	39.34 QP	46.00	-6.66	1.10 H	187	24.31	15.03
4	399.99	38.41 QP	46.00	-7.59	2.01 H	226	20.21	18.20
5	500.00	39.21 QP	46.00	-6.79	1.15 H	128	18.55	20.66
6	666.64	39.54 QP	46.00	-6.46	1.41 H	120	14.49	25.05
7	699.97	43.60 QP	46.00	-2.40	1.74 H	63	18.26	25.34
8	799.98	41.30 QP	46.00	-4.70	2.20 H	21	14.08	27.22
9	933.28	40.03 QP	46.00	-5.97	2.34 H	320	11.92	28.11
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	124.85	34.26 QP	43.50	-9.24	1.20 V	336	21.59	12.67
2	366.80	34.84 QP	46.00	-11.16	2.03 V	24	17.69	17.15
3	399.98	37.04 QP	46.00	-8.96	1.67 V	330	18.84	18.20
4	533.32	37.89 QP	46.00	-8.11	1.12 V	130	16.02	21.87
5	666.63	42.89 QP	46.00	-3.11	1.40 V	16	17.84	25.05
6	699.98	42.60 QP	46.00	-3.40	1.46 V	2	17.26	25.34
7	899.97	34.32 QP	46.00	-11.68	1.30 V	107	6.85	27.47
8	933.28	44.91 QP	46.00	-1.09	1.03 V	201	16.80	28.11

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



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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	125.15	27.84 QP	43.50	-15.66	1.00 H	80	15.17	12.67
2	166.67	38.32 QP	43.50	-5.18	1.36 H	255	26.30	12.02
3	233.87	42.18 QP	46.00	-3.82	1.36 H	155	28.80	13.38
4	250.01	41.36 QP	46.00	-4.64	1.16 H	111	26.39	14.97
5	366.80	33.73 QP	46.00	-12.27	1.53 H	178	16.58	17.15
6	400.00	43.56 QP	46.00	-2.44	1.00 H	28	25.36	18.20
7	501.50	36.11 QP	46.00	-9.89	1.59 H	108	15.40	20.71
8	533.32	41.46 QP	46.00	-4.54	1.23 H	297	19.59	21.87
9	566.97	43.63 QP	46.00	-2.37	2.04 H	162	20.55	23.08
10	633.30	40.67 QP	46.00	-5.33	1.02 H	190	15.99	24.68
11	666.64	43.70 QP	46.00	-2.30	1.00 H	163	18.65	25.05
12	766.63	40.72 QP	46.00	-5.28	1.10 H	281	14.13	26.59
13	799.96	41.90 QP	46.00	-4.10	1.22 H	113	14.68	27.22
14	933.29	42.54 QP	46.00	-3.46	1.20 H	201	14.43	28.11

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



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

ANTENNA POLARITY & TEST DISTANCE: 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	166.65	35.01 QP	43.50	-8.49	1.00 V	211	22.99	12.02
2	225.11	31.15 QP	46.00	-14.85	1.00 V	90	18.64	12.51
3	250.30	40.94 QP	46.00	-5.06	1.00 V	300	25.97	14.97
4	366.80	33.82 QP	46.00	-12.18	1.00 V	174	16.67	17.15
5	400.00	43.35 QP	46.00	-2.65	1.14 V	90	25.15	18.20
6	533.32	37.36 QP	46.00	-8.64	1.14 V	307	15.49	21.87
7	633.30	37.59 QP	46.00	-8.41	1.38 V	99	12.91	24.68
8	666.64	41.22 QP	46.00	-4.78	1.34 V	181	16.17	25.05
9	699.97	44.49 QP	46.00	-1.51	1.51 V	182	19.15	25.34
10	766.63	40.28 QP	46.00	-5.72	1.33 V	89	13.69	26.59
11	799.96	40.57 QP	46.00	-5.43	2.16 V	242	13.35	27.22
12	833.29	40.64 QP	46.00	-5.36	2.06 V	200	13.28	27.36
13	899.95	37.03 QP	46.00	-8.97	1.00 V	282	9.56	27.47
14	933.28	44.59 QP	46.00	-1.41	1.00 V	39	16.49	28.11

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

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 19, 2008	Nov. 18, 2009
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 31, 2008	Dec. 30, 2009
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jun. 13, 2008	Jun. 12, 2009
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Dec. 04, 2008	Dec. 03, 2009
Software ADT	ADT_Cond_ V7.3.7	NA	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 1.
 3. The VCCI Site Registration No. is C-2040.

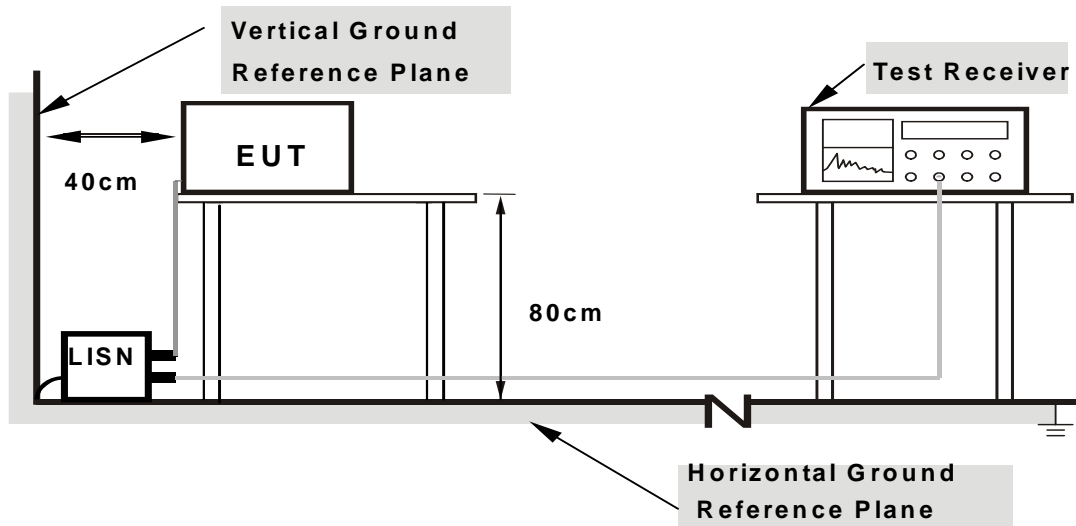
4.2.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

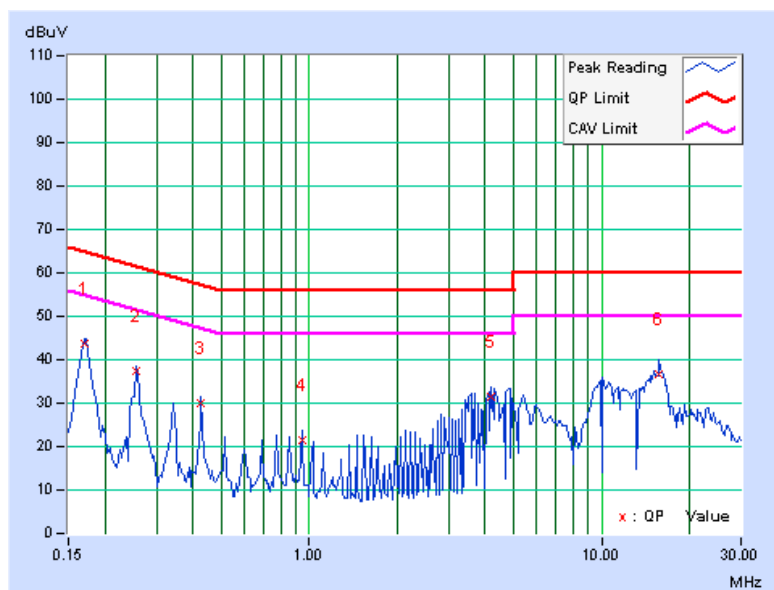
4.2.7 TEST RESULTS

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	7.2Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	A
TESTED BY	Lori Chiu		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.13	43.50	-	43.63	-	64.98	54.98	-21.35	-
2	0.255	0.13	37.15	-	37.28	-	61.58	51.58	-24.29	-
3	0.427	0.14	29.90	-	30.04	-	57.30	47.30	-27.26	-
4	0.943	0.17	21.20	-	21.37	-	56.00	46.00	-34.63	-
5	4.195	0.28	31.13	-	31.41	-	56.00	46.00	-24.59	-
6	15.762	0.57	36.10	-	36.67	-	60.00	50.00	-23.33	-

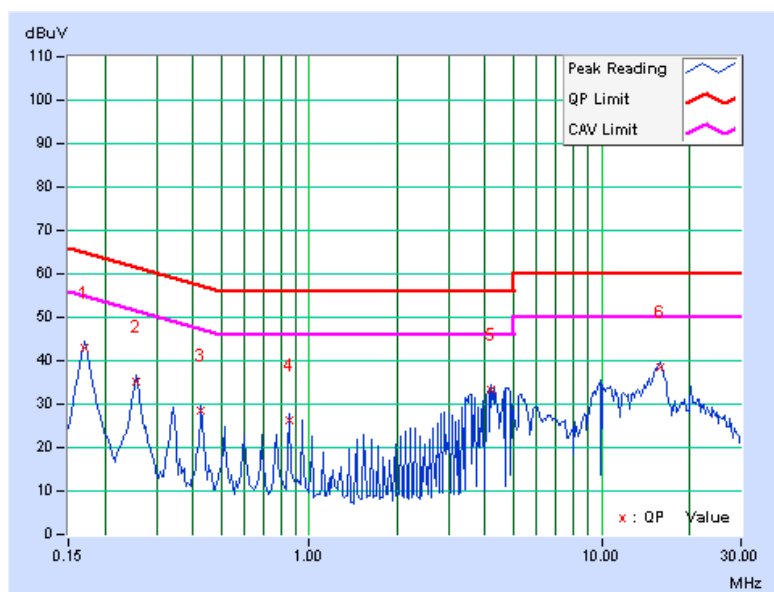
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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 60	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	7.2Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	A
TESTED BY	Lori Chiu		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.13	42.70	-	42.83	-	64.98	54.98	-22.15	-
2	0.255	0.14	34.99	-	35.13	-	61.58	51.58	-26.45	-
3	0.427	0.15	28.44	-	28.59	-	57.30	47.30	-28.71	-
4	0.857	0.17	26.21	-	26.38	-	56.00	46.00	-29.62	-
5	4.195	0.31	33.16	-	33.47	-	56.00	46.00	-22.53	-
6	15.844	0.69	37.95	-	38.64	-	60.00	50.00	-21.36	-

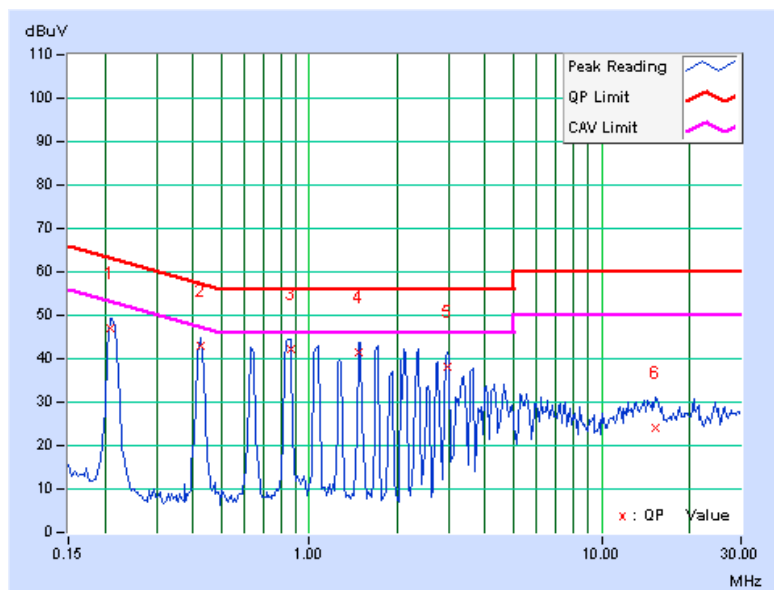
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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 60	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	7.2Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	B
TESTED BY	Lori Chiu		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.209	0.13	46.95	-	47.08	-	63.26	53.26	-16.18	-
2	0.427	0.14	42.71	-	42.85	-	57.30	47.30	-14.45	-
3	0.861	0.16	42.02	-	42.18	-	56.00	46.00	-13.82	-
4	1.480	0.18	41.38	-	41.56	-	56.00	46.00	-14.44	-
5	2.988	0.23	37.76	-	37.99	-	56.00	46.00	-18.01	-
6	15.297	0.56	23.47	-	24.03	-	60.00	50.00	-35.97	-

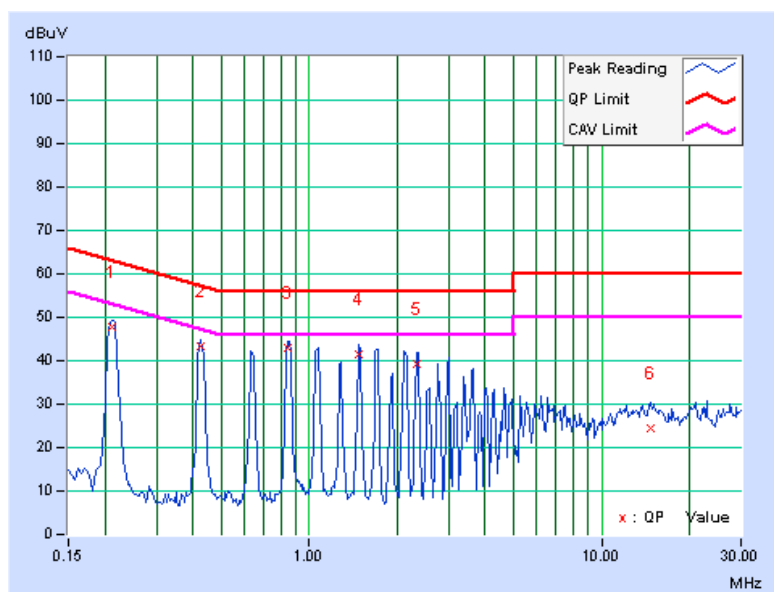
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	7.2Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	B
TESTED BY	Lori Chiu		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.213	0.13	47.53	-	47.66	-	63.11	53.11	-15.45	-
2	0.427	0.15	43.24	-	43.39	-	57.30	47.30	-13.91	-
3	0.845	0.16	42.86	-	43.02	-	56.00	46.00	-12.98	-
4	1.477	0.18	41.37	-	41.55	-	56.00	46.00	-14.45	-
5	2.340	0.22	39.04	-	39.26	-	56.00	46.00	-16.74	-
6	14.805	0.66	23.87	-	24.53	-	60.00	50.00	-35.47	-

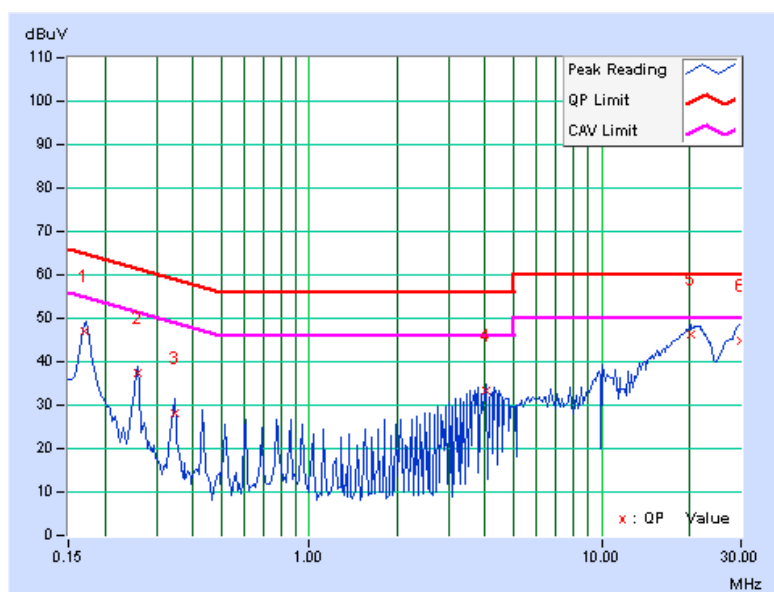
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	7.2Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	C
TESTED BY	Lori Chiu		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.13	47.04	-	47.17	-	64.98	54.98	-17.81	-
2	0.259	0.13	37.15	-	37.28	-	61.45	51.45	-24.17	-
3	0.345	0.14	28.11	-	28.25	-	59.07	49.07	-30.83	-
4	4.046	0.28	33.09	-	33.37	-	56.00	46.00	-22.63	-
5	20.133	0.67	45.61	-	46.28	-	60.00	50.00	-13.72	-
6	29.992	0.62	44.22	-	44.84	-	60.00	50.00	-15.16	-

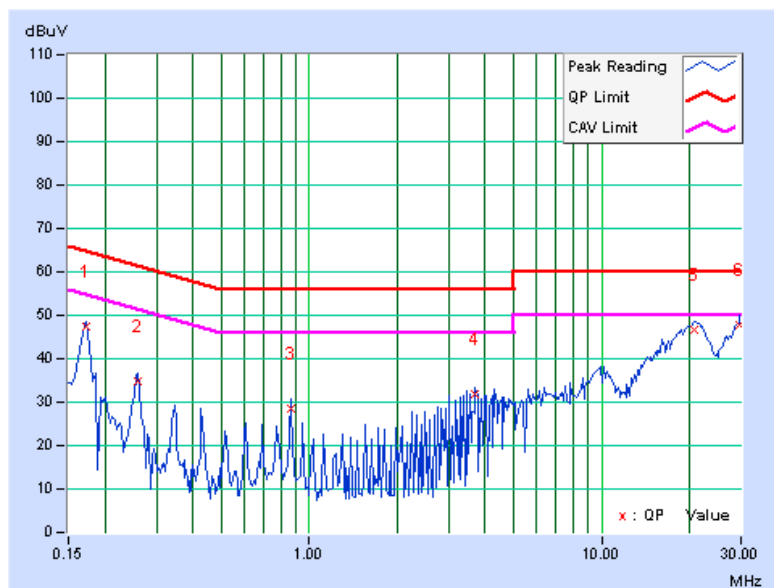
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	7.2Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	C
TESTED BY	Lori Chiu		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.173	0.13	47.30	-	47.43	-	64.79
2	0.259	0.14	34.79	-	34.93	-	61.45	51.45	-26.53	-
3	0.861	0.17	28.50	-	28.67	-	56.00	46.00	-27.33	-
4	3.708	0.29	31.58	-	31.87	-	56.00	46.00	-24.13	-
5	20.809	0.81	46.02	-	46.83	-	60.00	50.00	-13.17	-
6	29.754	0.76	46.97	-	47.73	-	60.00	50.00	-12.27	-

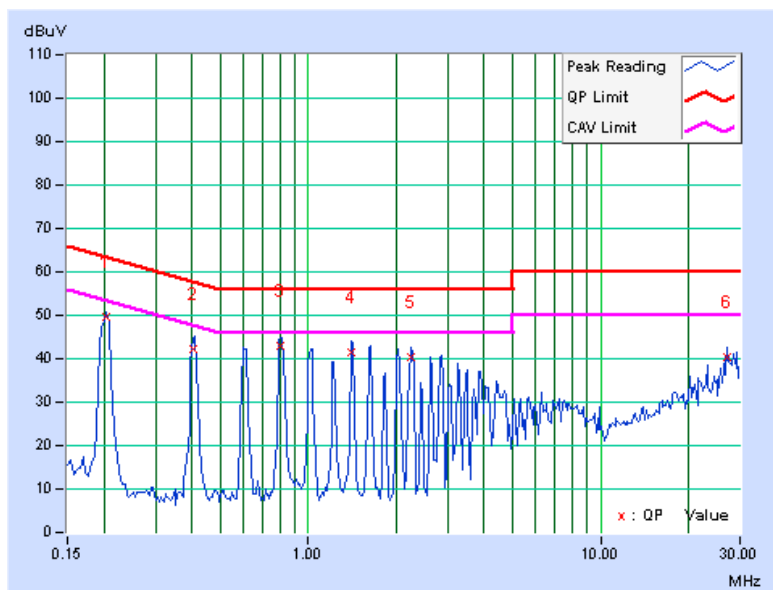
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	7.2Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	D
TESTED BY	Lori Chiu		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.205	0.13	49.50	-	49.63	-	63.42	53.42	-13.79	-
2	0.404	0.14	42.14	-	42.28	-	57.77	47.77	-15.49	-
3	0.806	0.16	42.96	-	43.12	-	56.00	46.00	-12.88	-
4	1.410	0.18	41.15	-	41.33	-	56.00	46.00	-14.67	-
5	2.250	0.20	40.12	-	40.32	-	56.00	46.00	-15.68	-
6	27.160	0.63	39.72	-	40.35	-	60.00	50.00	-19.65	-

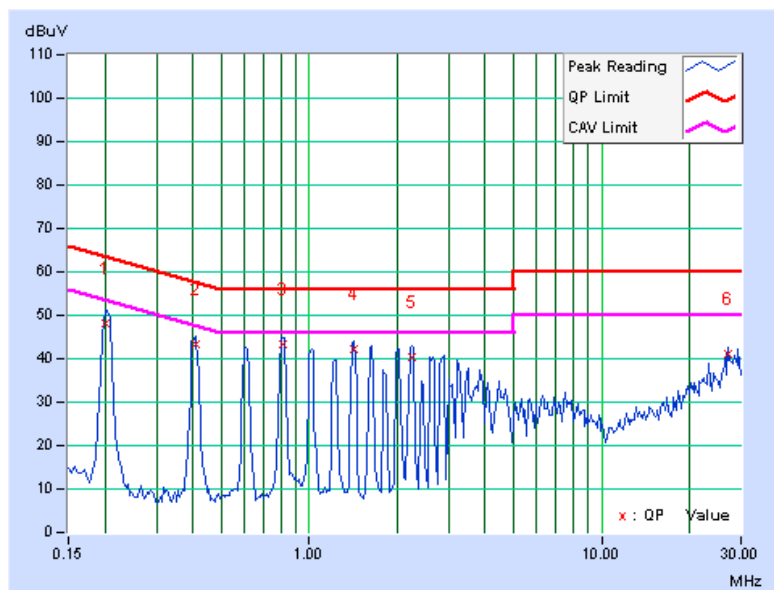
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = 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 60	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	7.2Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 1021hPa	TEST MODE	D
TESTED BY	Lori Chiu		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.201	0.13	48.13	-	48.26	-	63.58	53.58	-15.32	-
2	0.408	0.15	43.02	-	43.17	-	57.69	47.69	-14.52	-
3	0.814	0.16	43.31	-	43.47	-	56.00	46.00	-12.53	-
4	1.422	0.18	42.12	-	42.30	-	56.00	46.00	-13.70	-
5	2.238	0.21	40.17	-	40.38	-	56.00	46.00	-15.62	-
6	27.160	0.77	40.32	-	41.09	-	60.00	50.00	-18.91	-

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



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

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

4.3.2 TEST INSTRUMENTS

FOR POWER OUTPUT MEASUREMENT

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

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. Measurement Bandwidth of ML2495A is 65MHz greater than 6dB bandwidth of emission.

FOR 26dB OCCUPIED BANDWIDTH

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

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

4.3.3 TEST PROCEDURE

FOR POWER OUTPUT MEASUREMENT

A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

FOR 26dB OCCUPIED BANDWIDTH

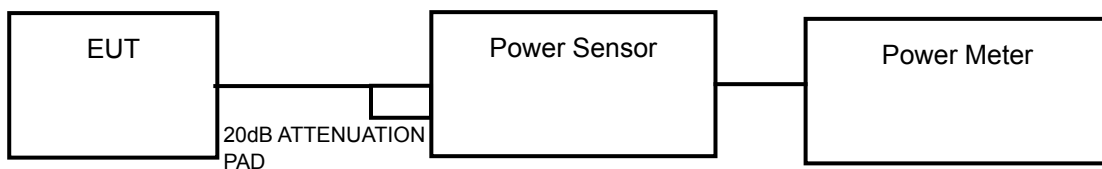
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 300kHz RBW and 1MHz VBW. The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

4.3.4 DEVIATION FROM TEST STANDARD

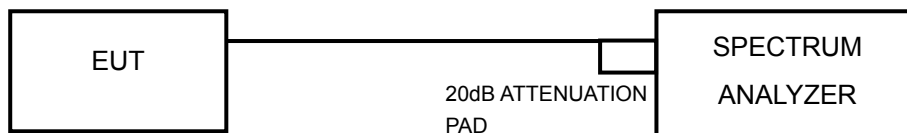
No deviation.

4.3.5 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 26dB OCCUPIED BANDWIDTH



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

PEAK POWER OUTPUT: 802.11a OFDM MODULATION

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

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
36	5180	11.02	12.06	11.03	41.393	16.17	17	PASS
40	5200	11.05	12.03	11.04	41.400	16.17	17	PASS
48	5240	11.06	12.09	11.08	41.768	16.21	17	PASS
52	5260	11.08	12.11	11.02	41.726	16.20	24	PASS
60	5300	11.09	12.07	11.04	41.665	16.20	24	PASS
64	5320	12.08	13.02	12.07	52.295	17.18	24	PASS



DRAFT 802.11n (20MHz) OFDM MODULATION

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

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
36	5180	8.02	8.03	8.09	19.134	12.82	17	PASS
40	5200	10.51	8.53	10.55	29.725	14.73	17	PASS
48	5240	11.03	11.06	13.58	48.244	16.83	17	PASS
52	5260	14.50	15.04	17.03	110.565	20.44	24	PASS
60	5300	15.53	15.53	16.51	116.226	20.65	24	PASS
64	5320	11.08	9.08	10.04	31.007	14.91	24	PASS

DRAFT 802.11n (40MHz) OFDM MODULATION

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

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)			TOTAL PEAK POWER (mW)	TOTAL PEAK POWER (dBm)	PEAK POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
38	5190	9.02	9.53	9.02	24.934	13.97	17	PASS
46	5230	12.03	12.02	12.01	47.766	16.79	17	PASS
54	5270	13.51	13.51	14.02	70.112	18.46	24	PASS
62	5310	11.06	9.56	10.03	31.870	15.03	24	PASS



A D T

26dB OCCUPIED BANDWIDTH: 802.11a OFDM MODULATION

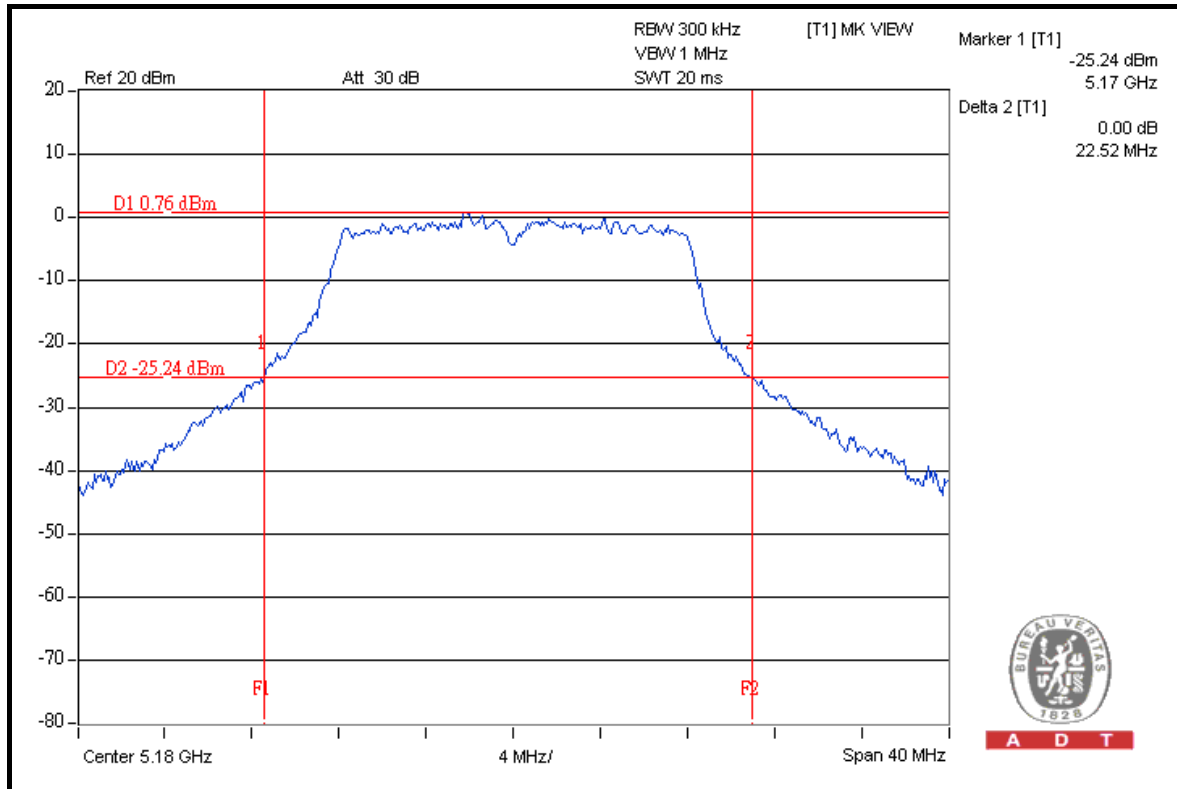
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
36	5180	22.52	23.36	23.25	PASS
40	5200	22.86	23.31	23.55	PASS
48	5240	22.72	22.78	22.78	PASS
52	5260	23.15	22.78	22.13	PASS
60	5300	24.04	22.40	22.86	PASS
64	5320	23.08	23.09	22.31	PASS

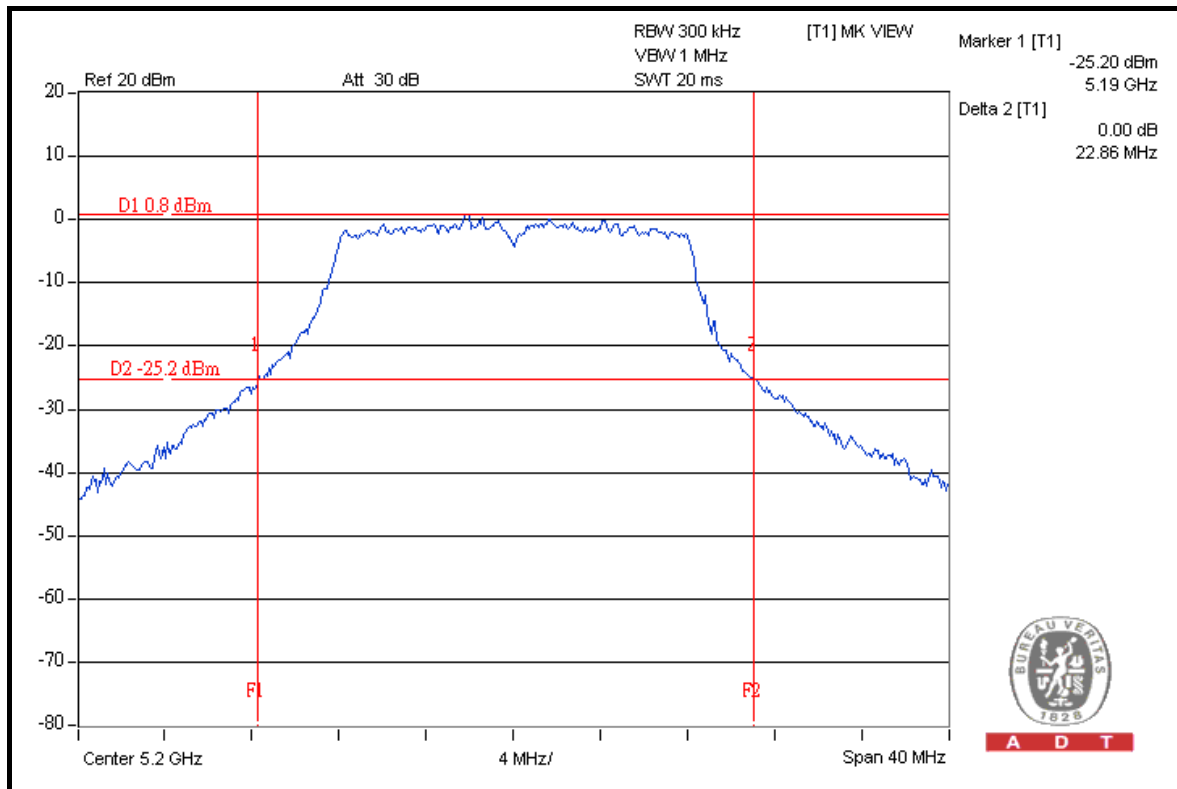


A D T

FOR CHAIN 0: CH 36



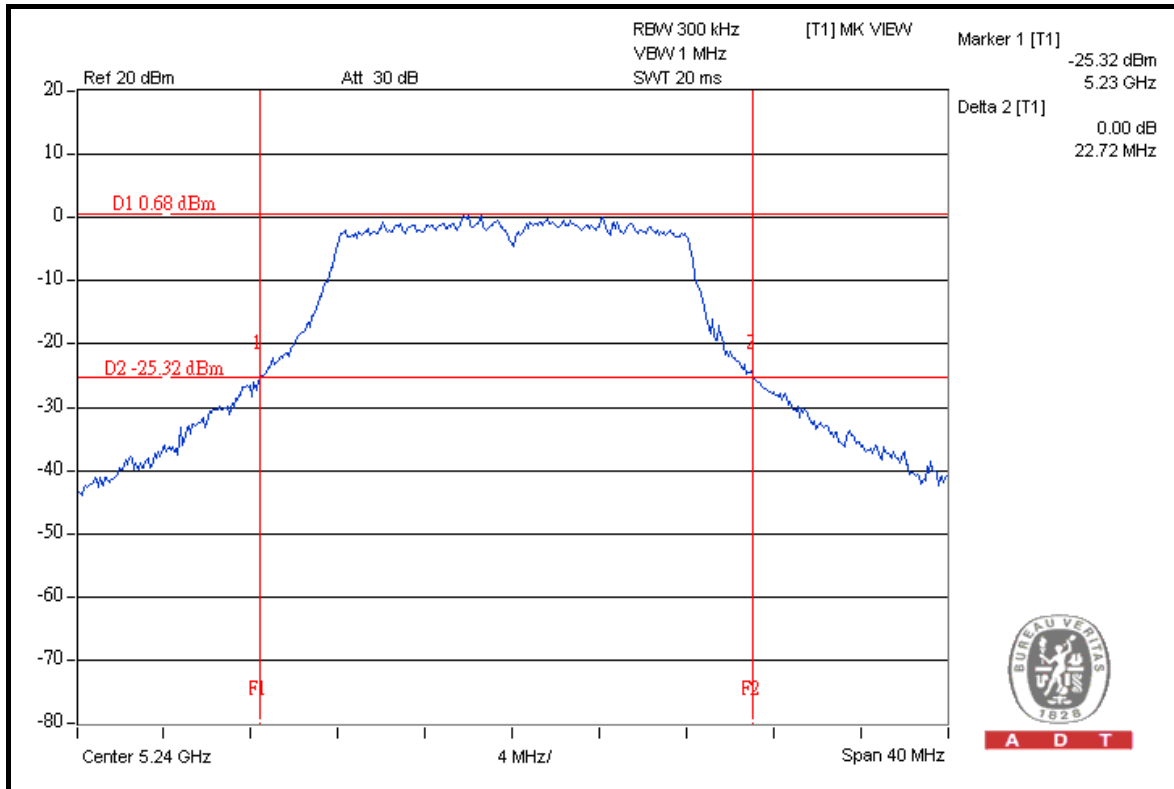
CH 40



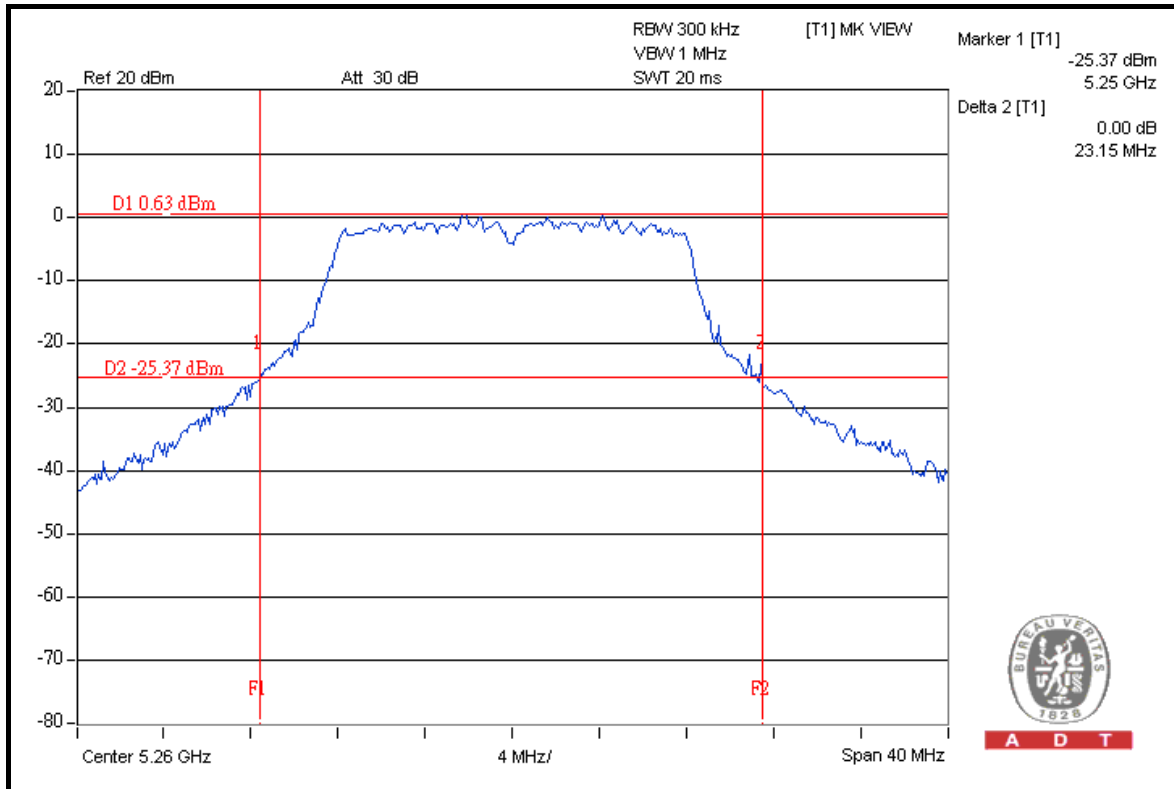


A D T

CH 48



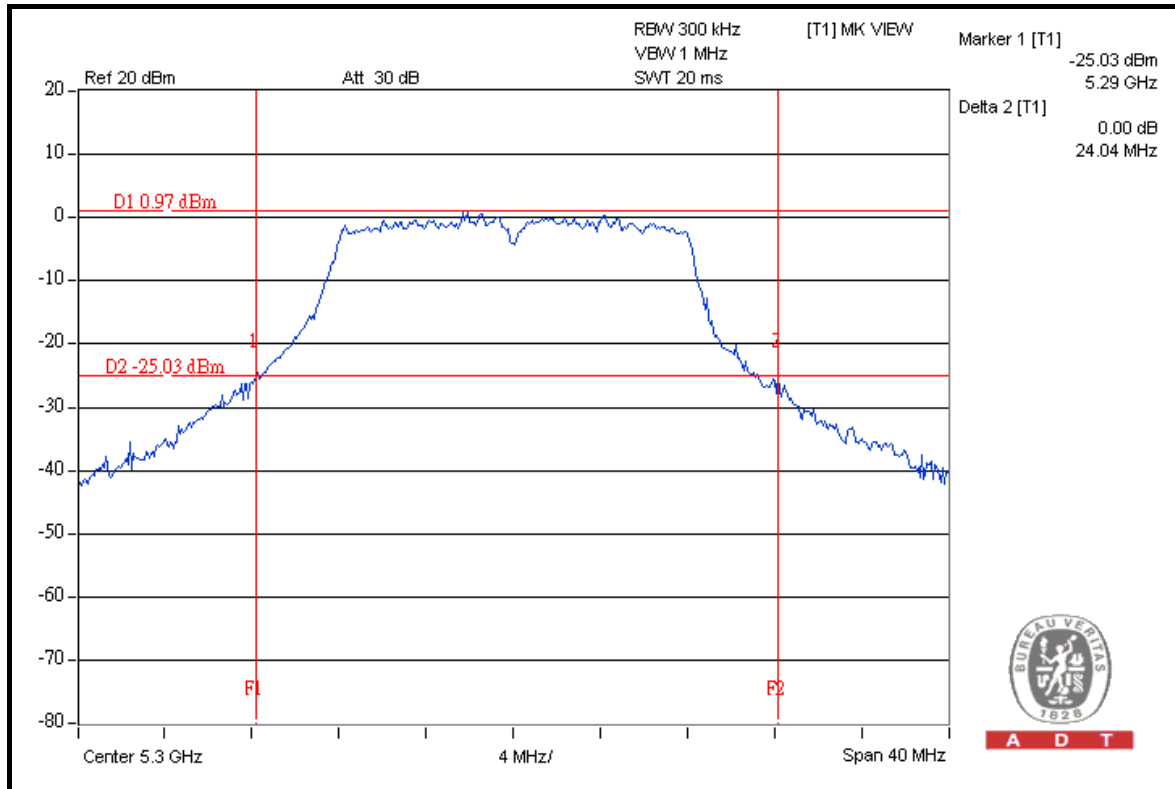
CH 52



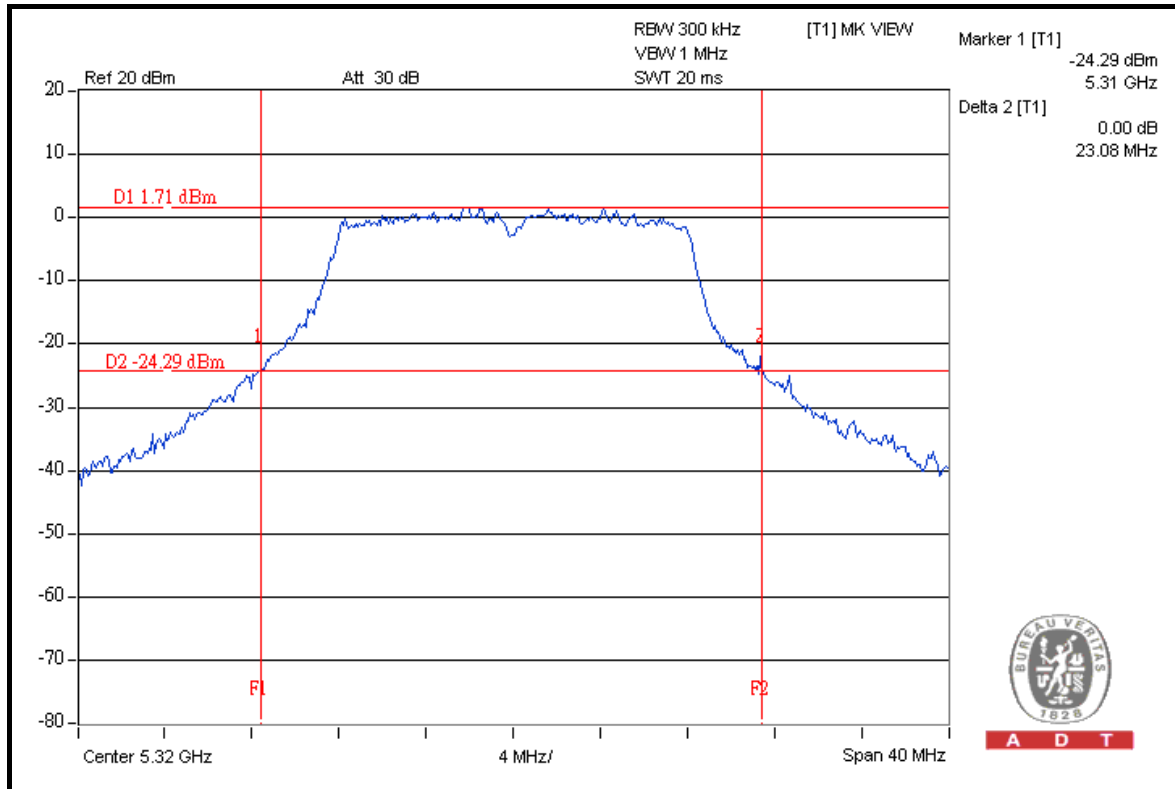


A D T

CH 60



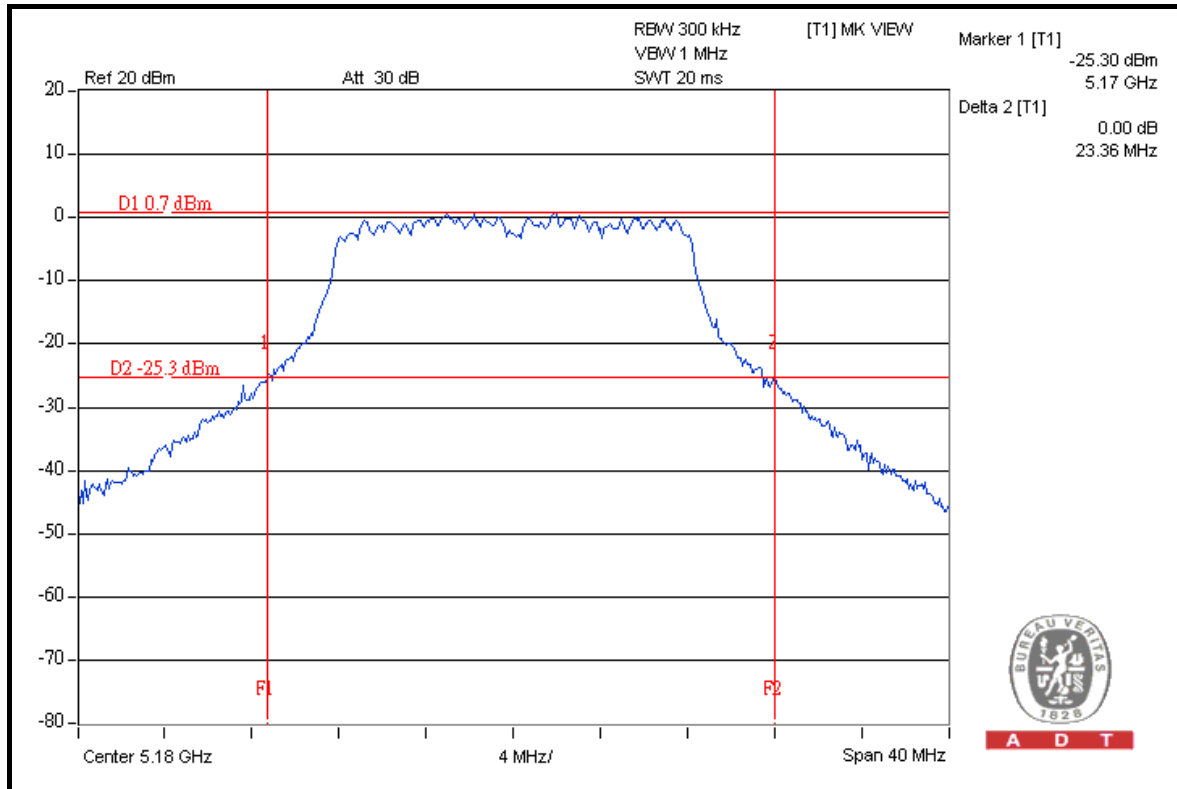
CH 64



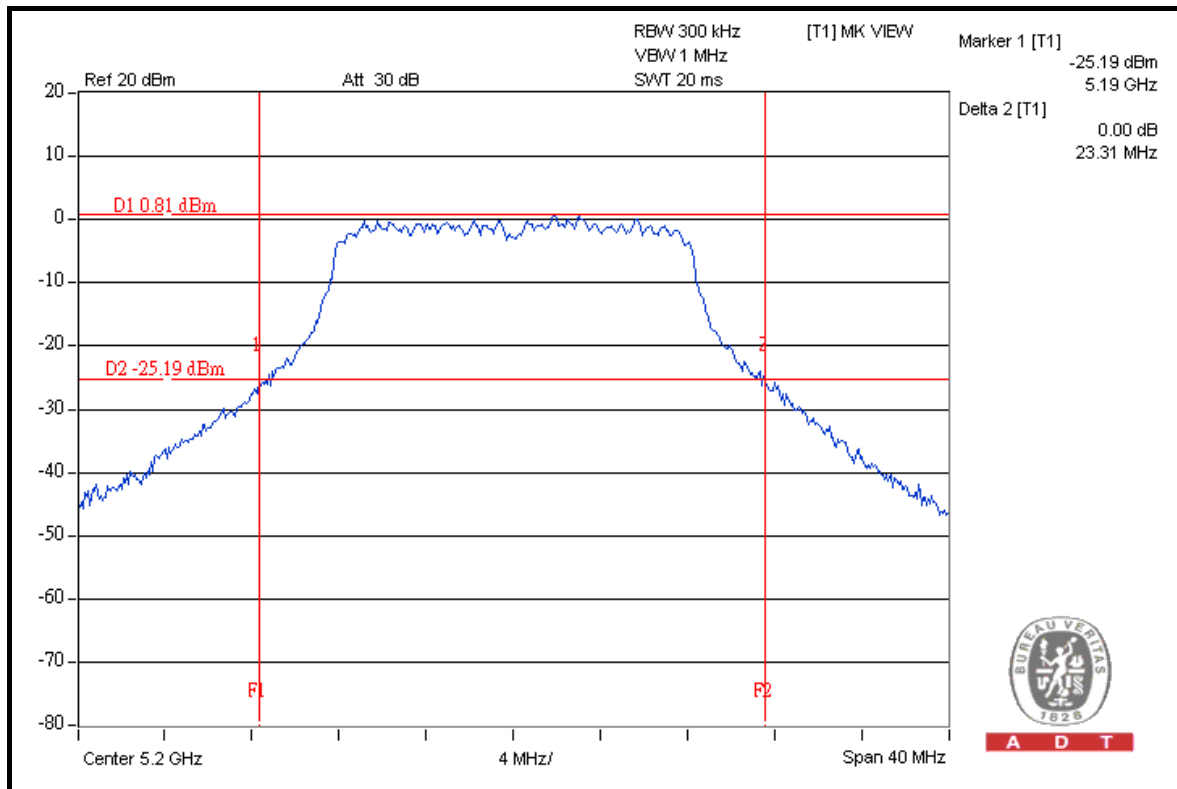


A D T

FOR CHAIN 1: CH 36



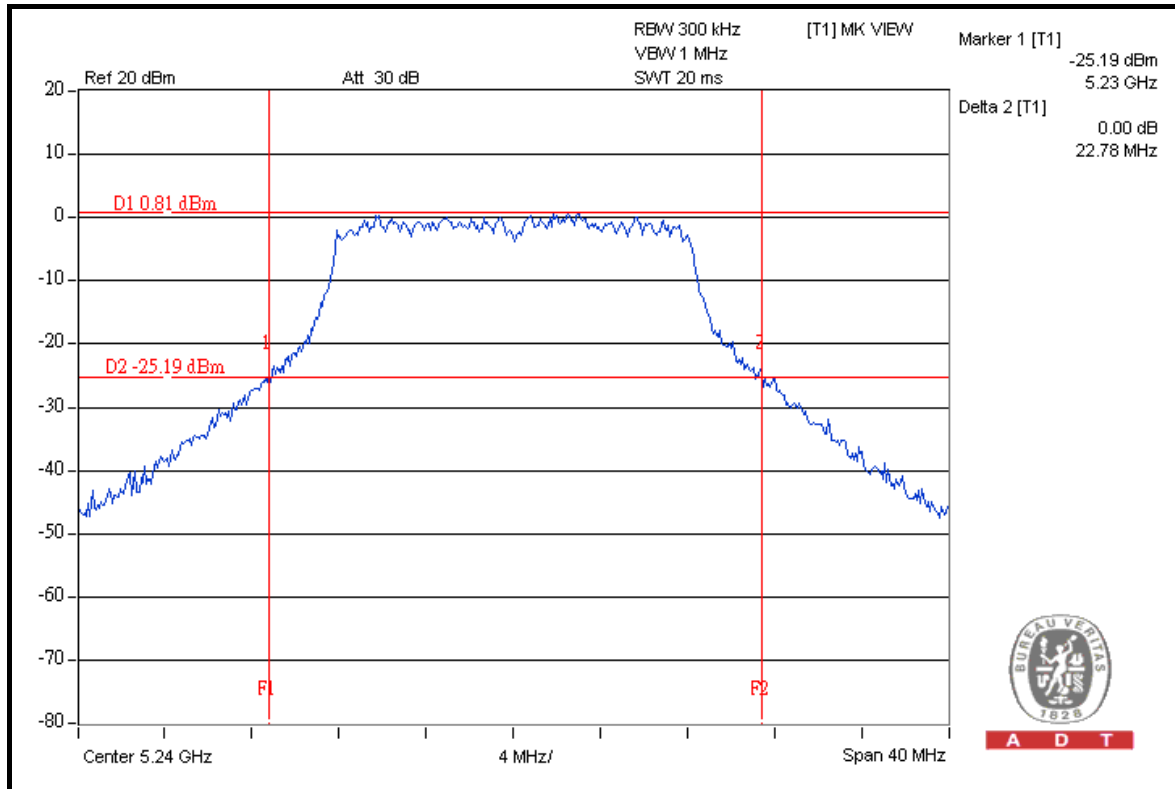
CH 40





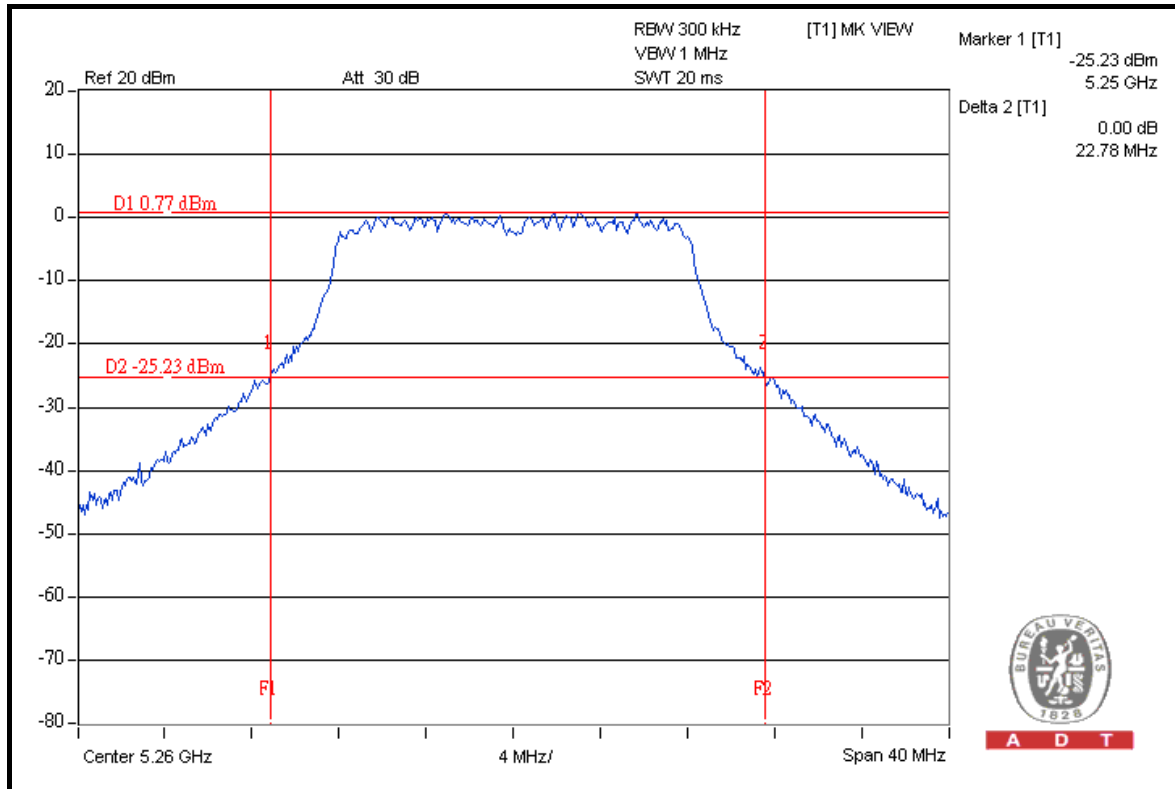
A D T

CH 48



A D T

CH 52

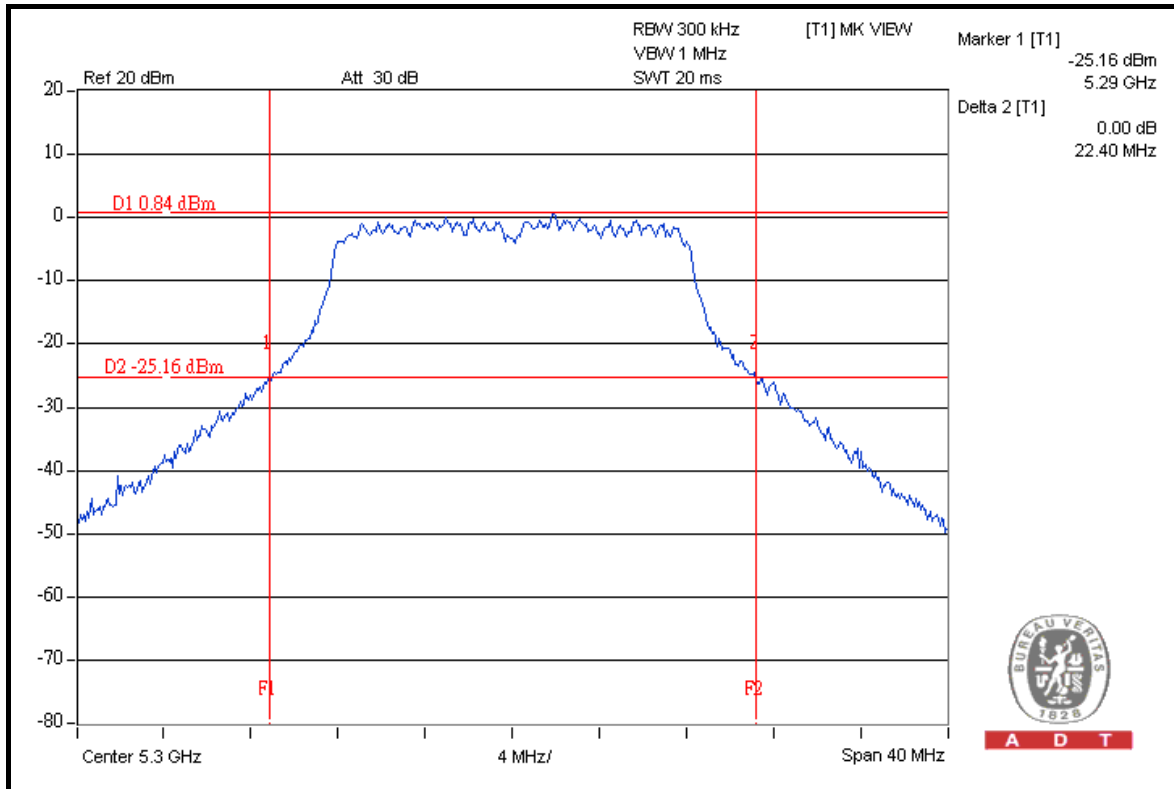


A D T

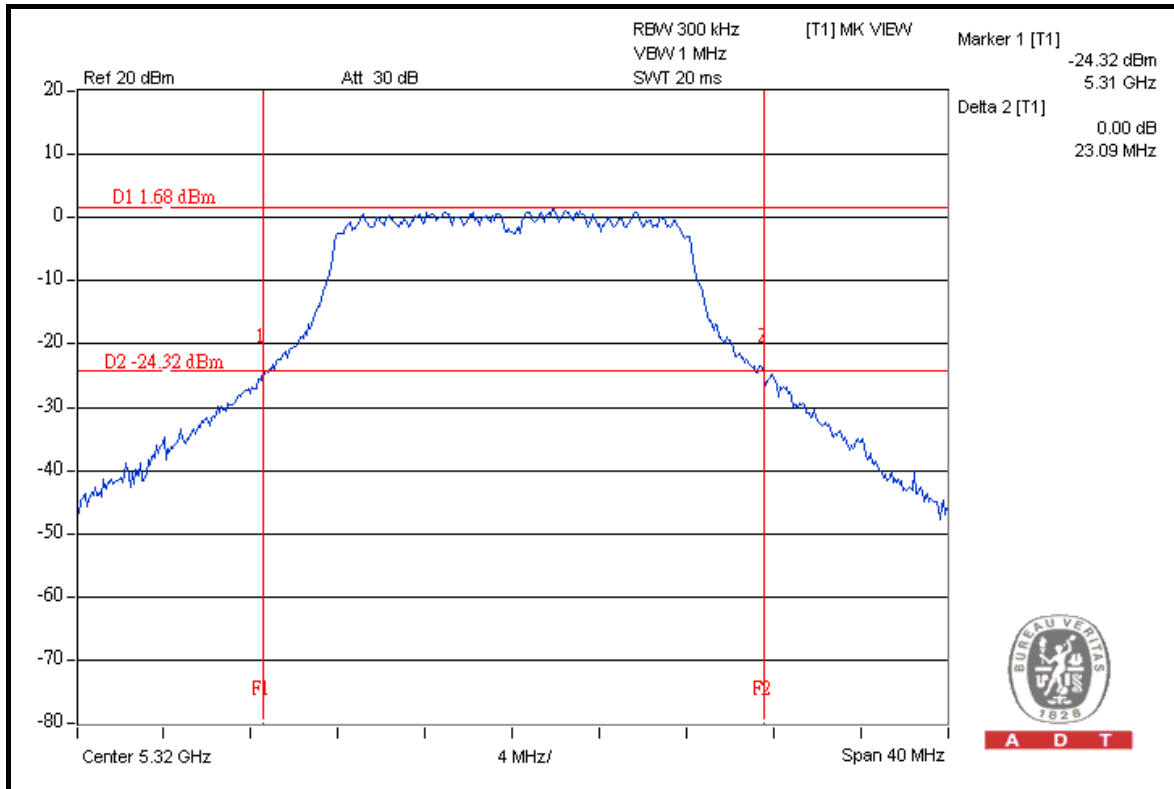


A D T

CH 60



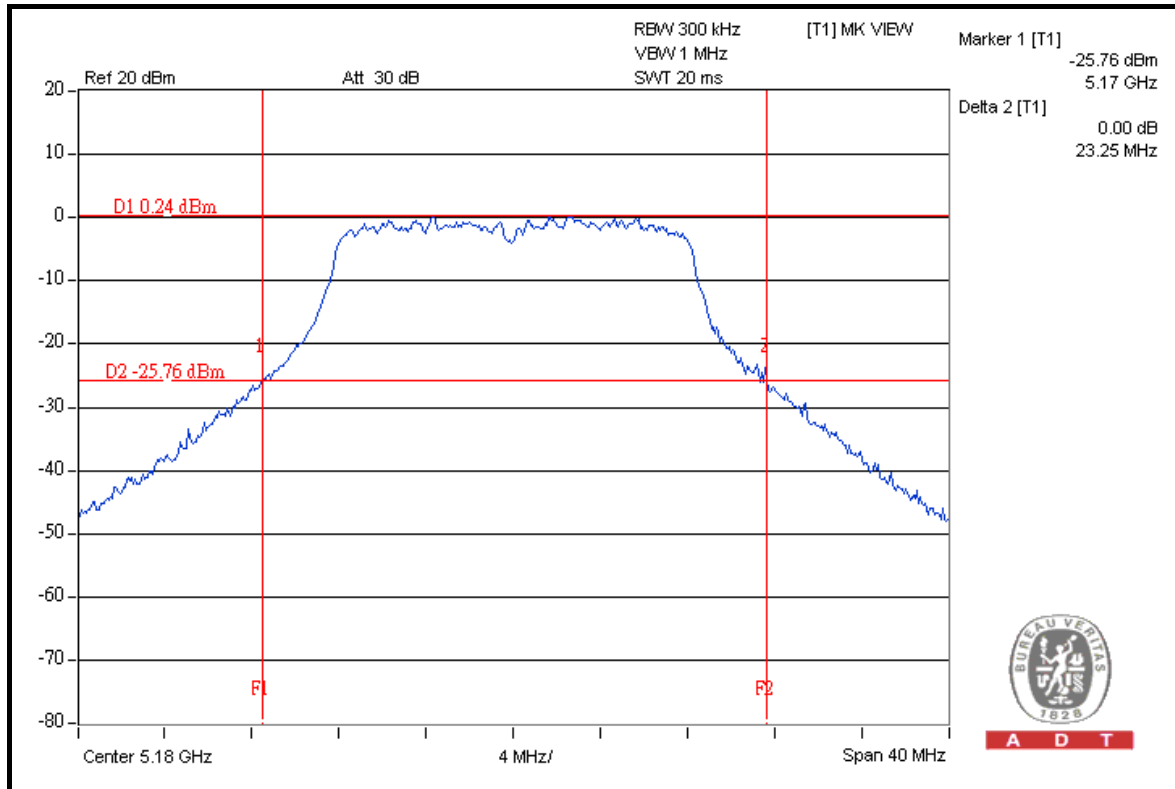
CH 64



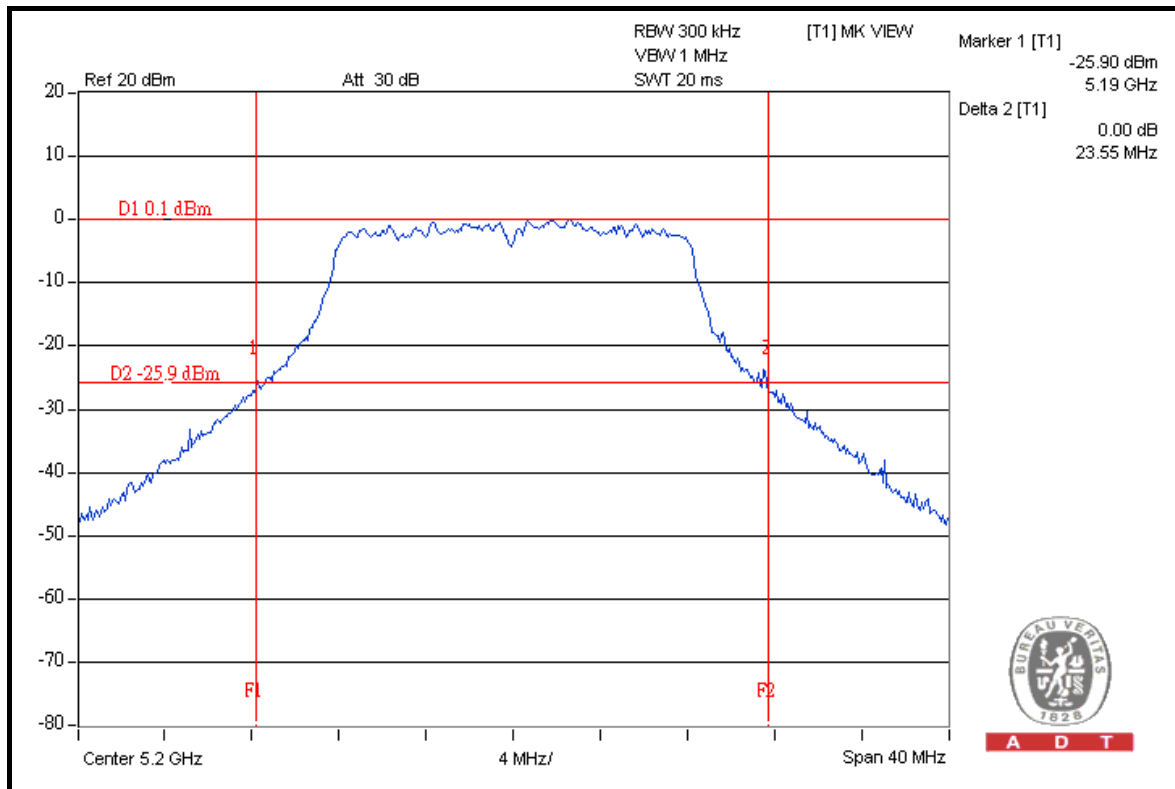


A D T

FOR CHAIN 2: CH 36



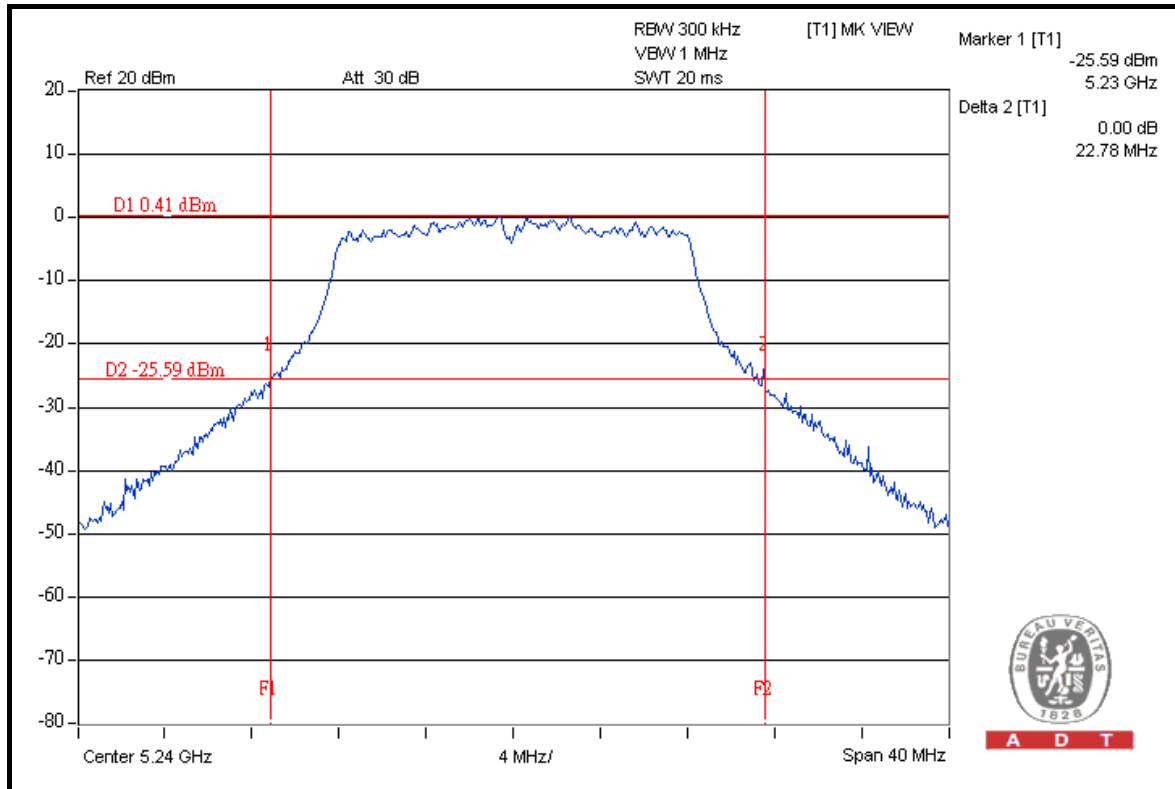
CH 40



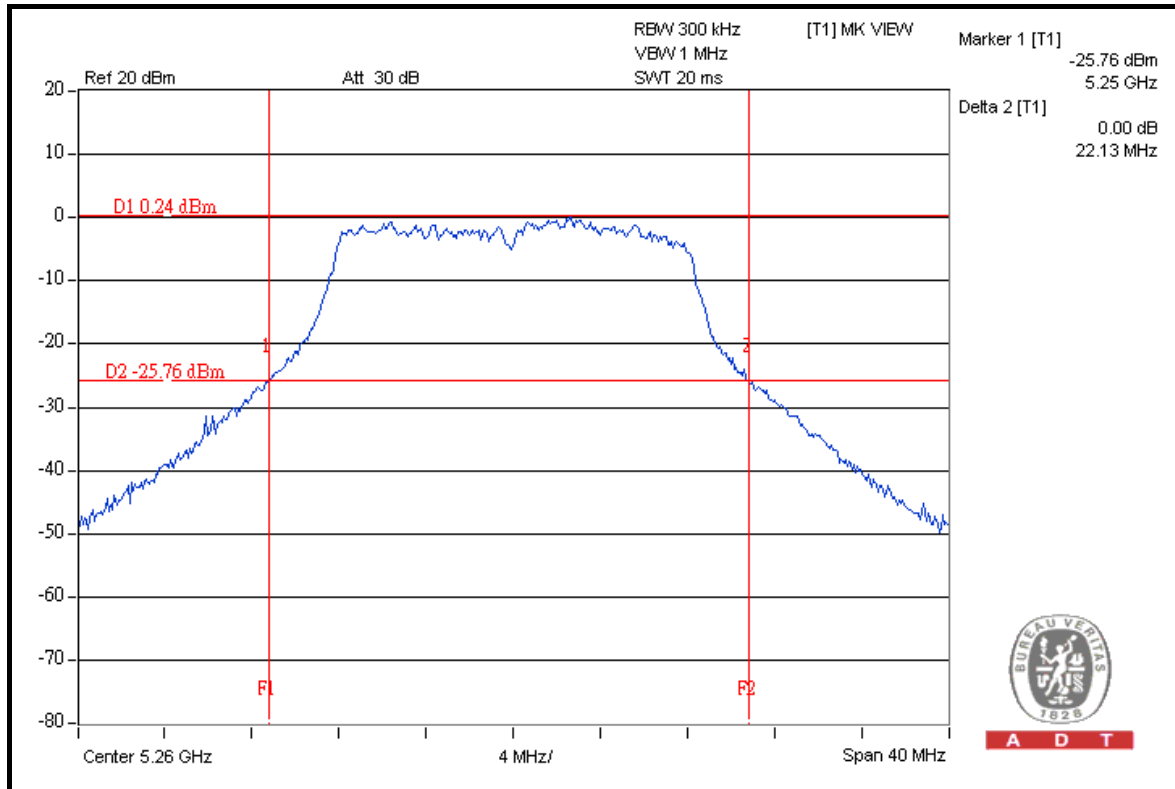


A D T

CH 48



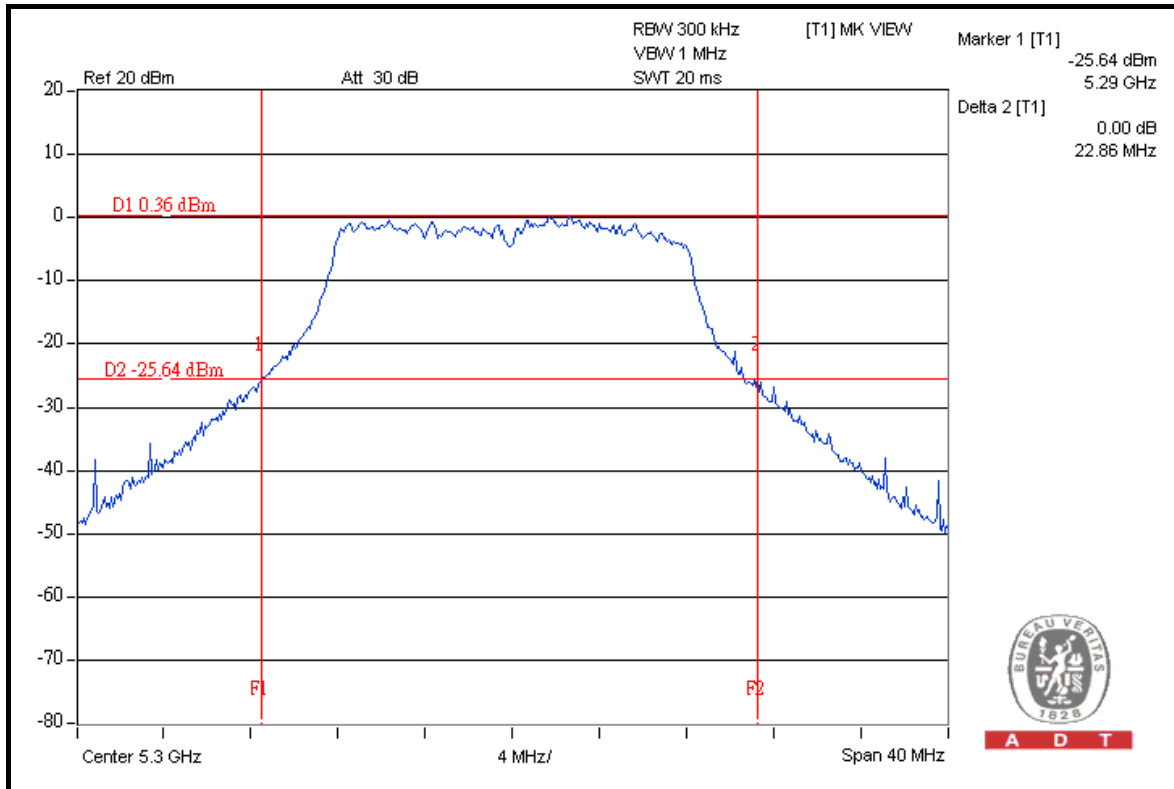
CH 52



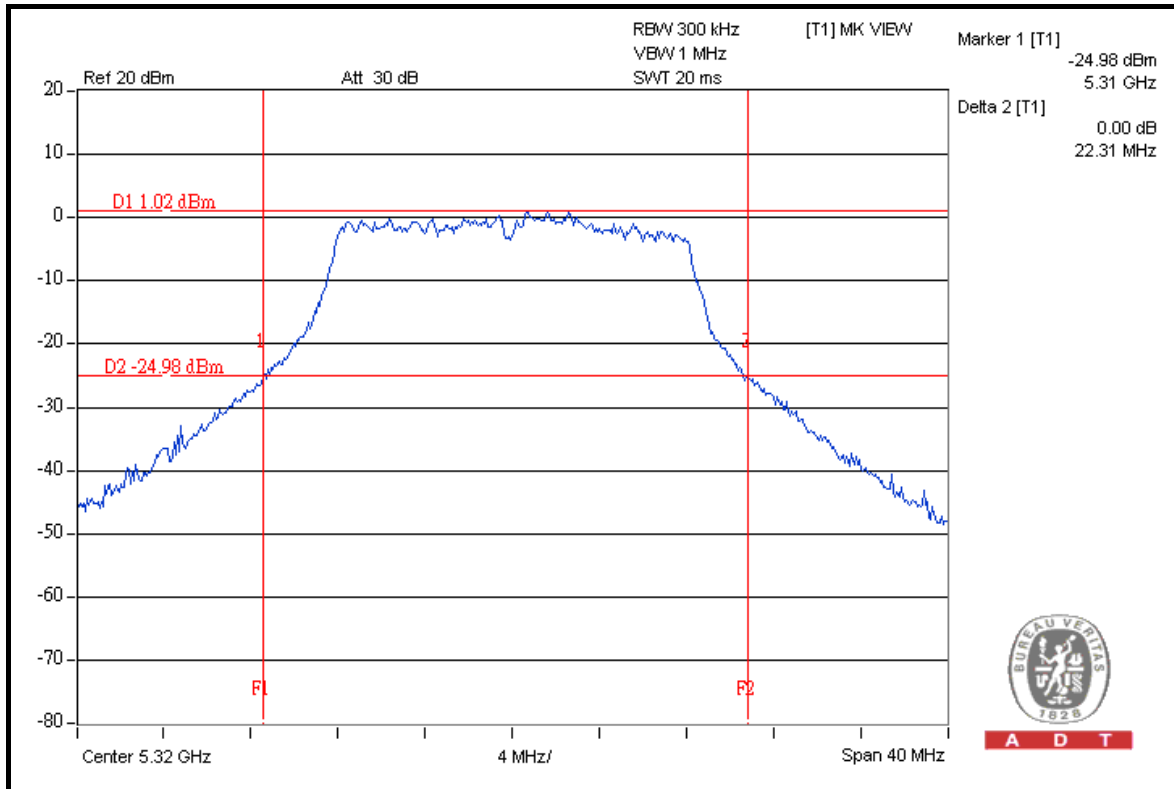


A D T

CH 60



CH 64





A D T

DRAFT 802.11n (20MHz) OFDM MODULATION

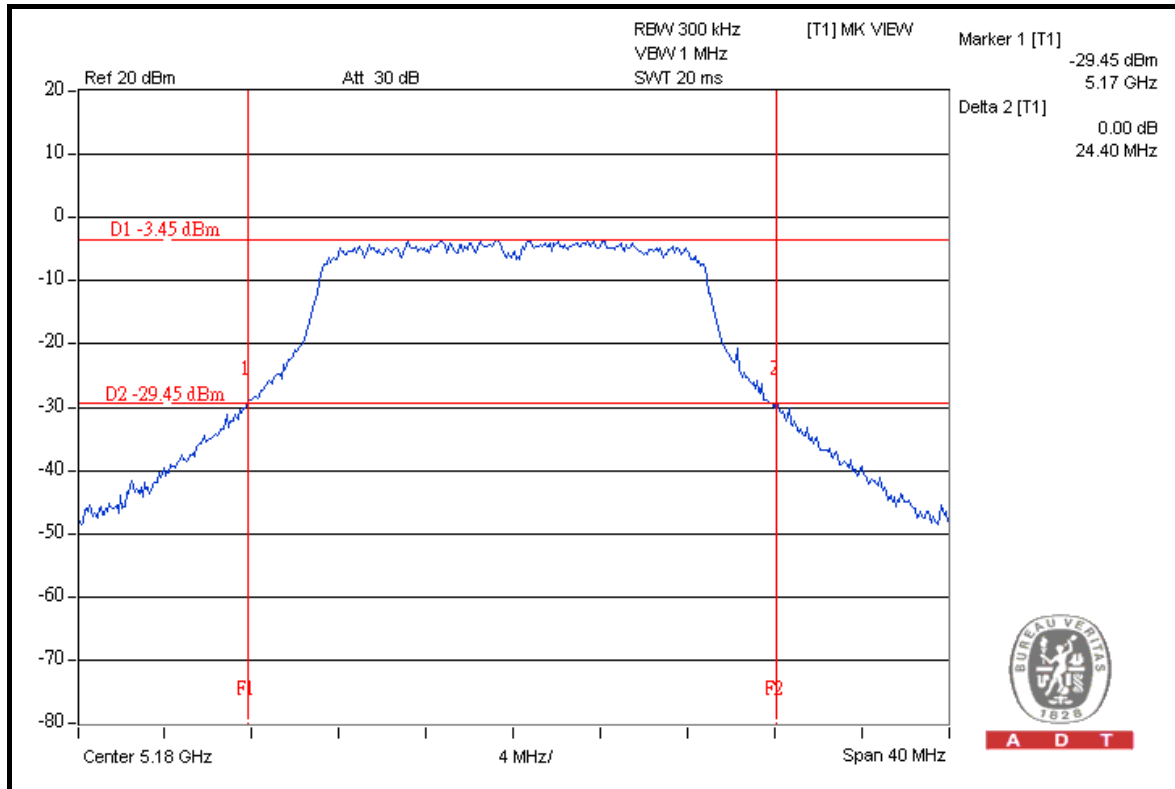
MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
36	5180	24.40	23.87	23.83	PASS
40	5200	24.12	24.28	24.44	PASS
48	5240	24.17	24.04	24.14	PASS
52	5260	24.07	24.45	24.15	PASS
60	5300	25.03	24.64	25.12	PASS
64	5320	25.48	24.01	24.32	PASS

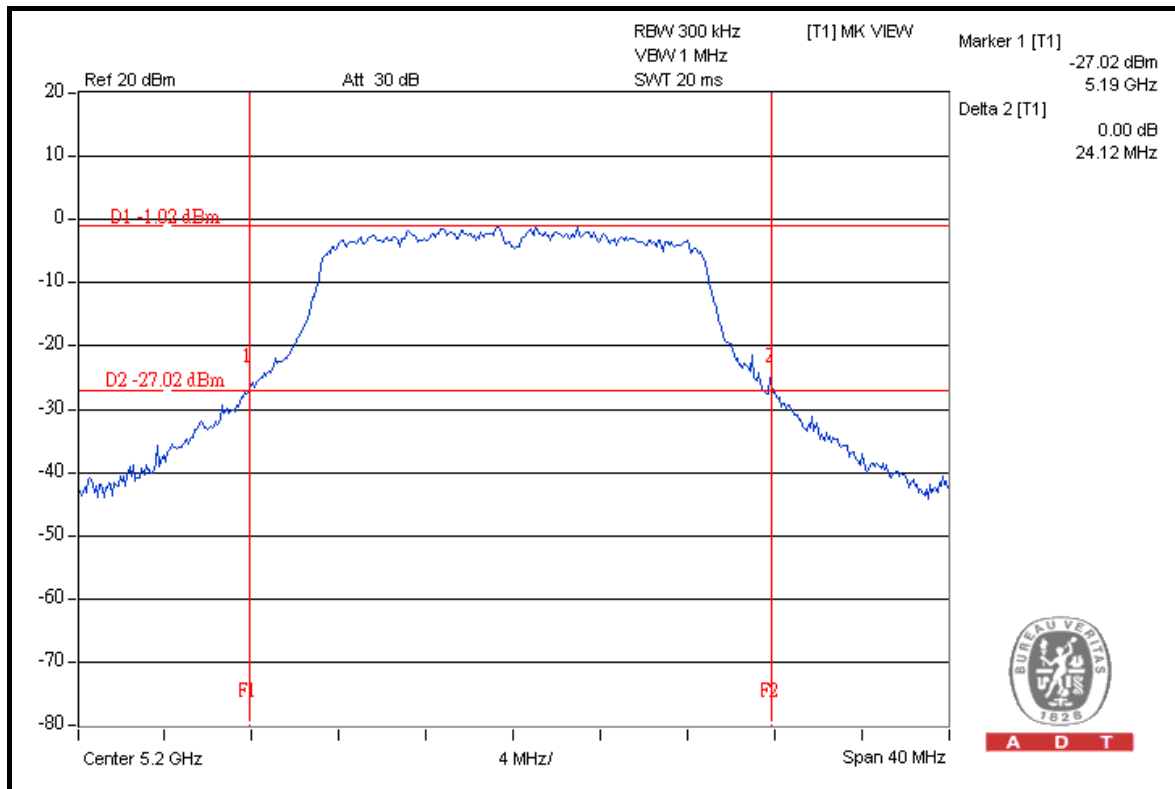


A D T

FOR CHAIN 0: CH 36



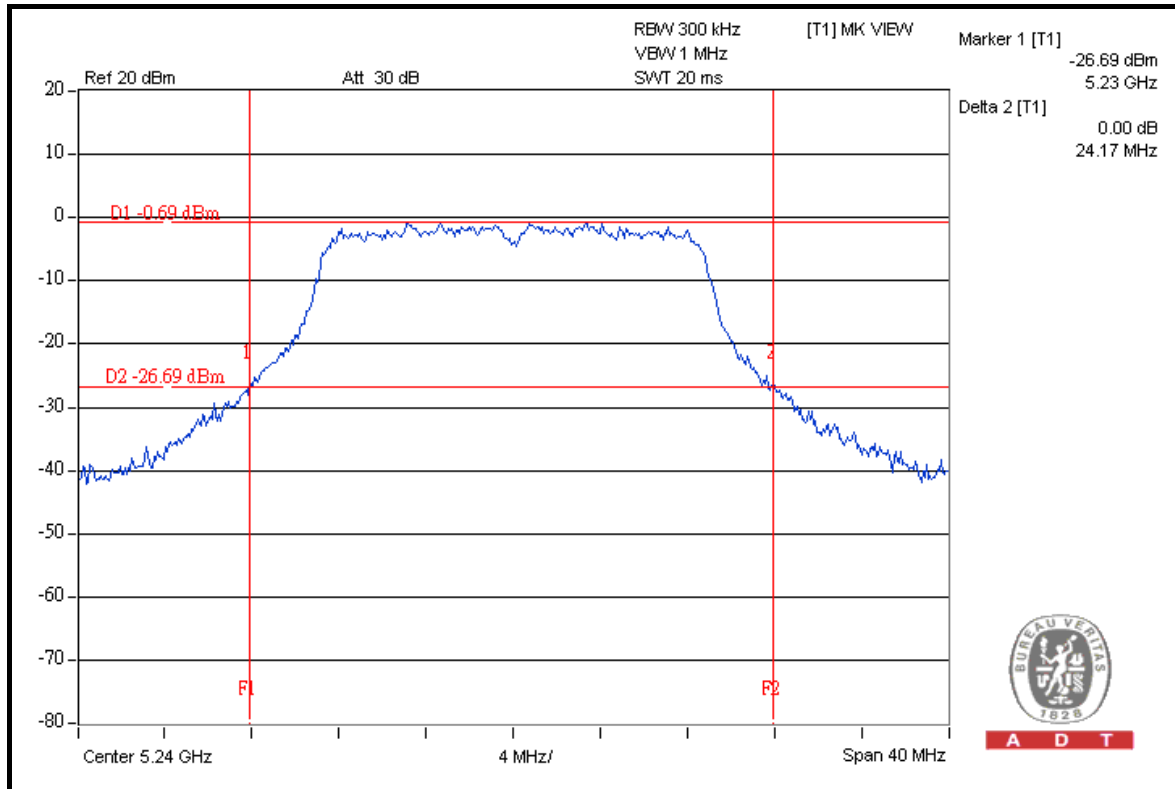
CH 40



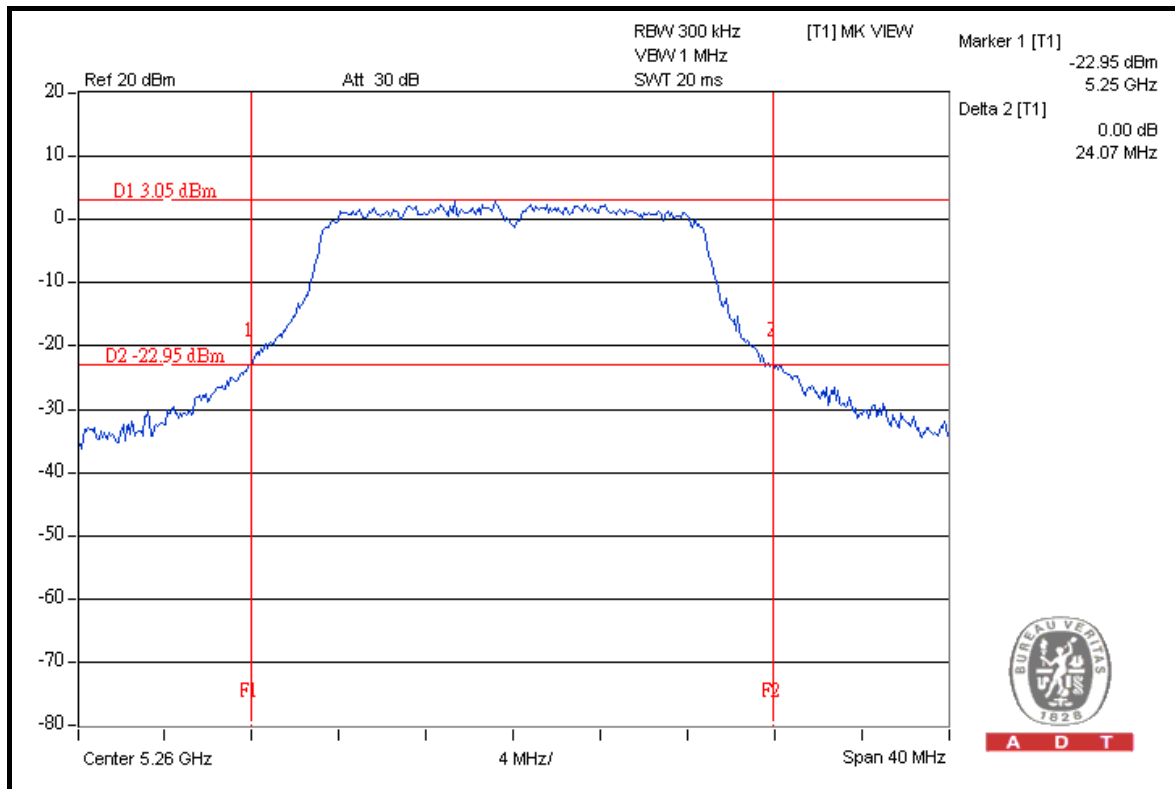


A D T

CH 48



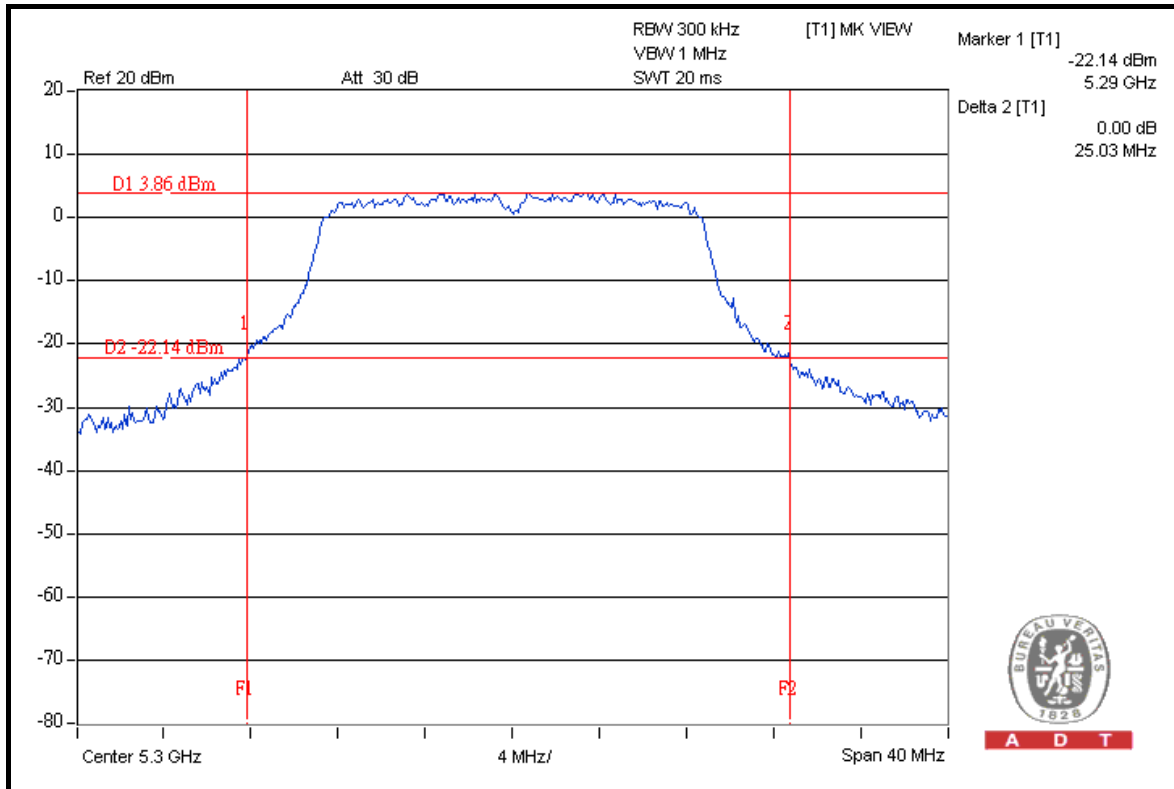
CH 52



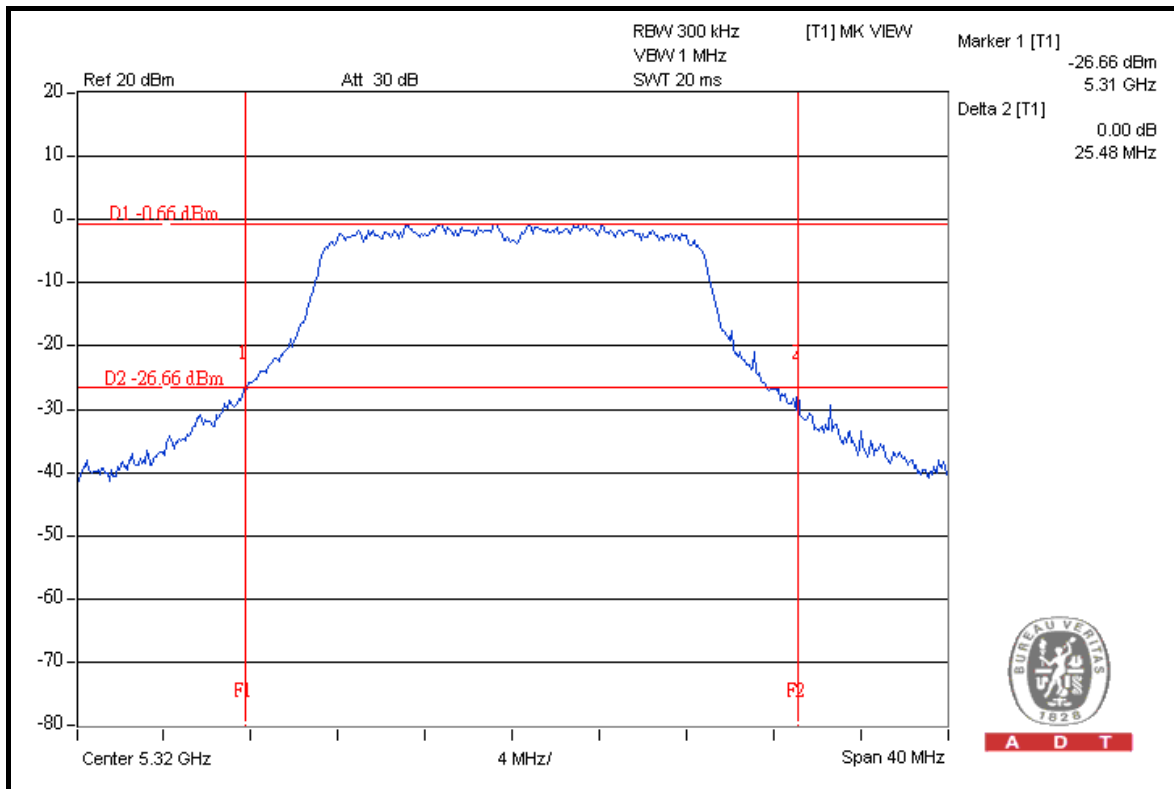


A D T

CH 60



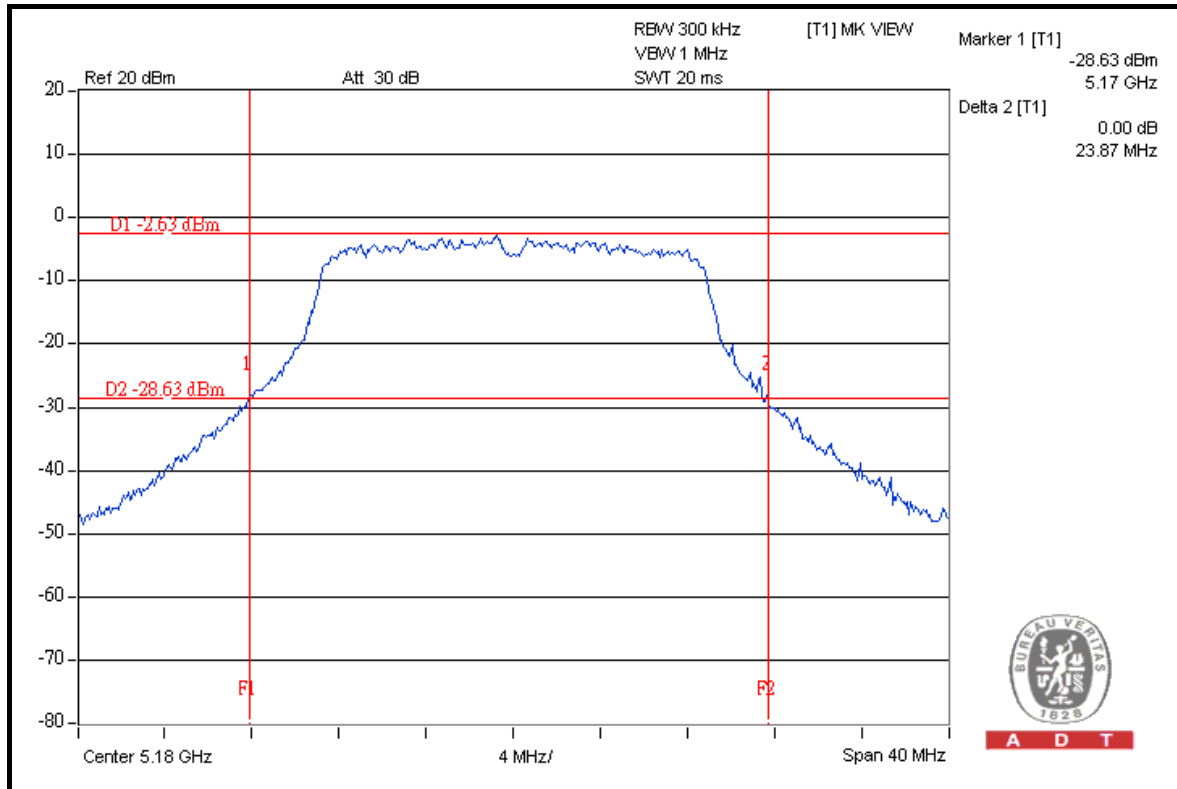
CH 64



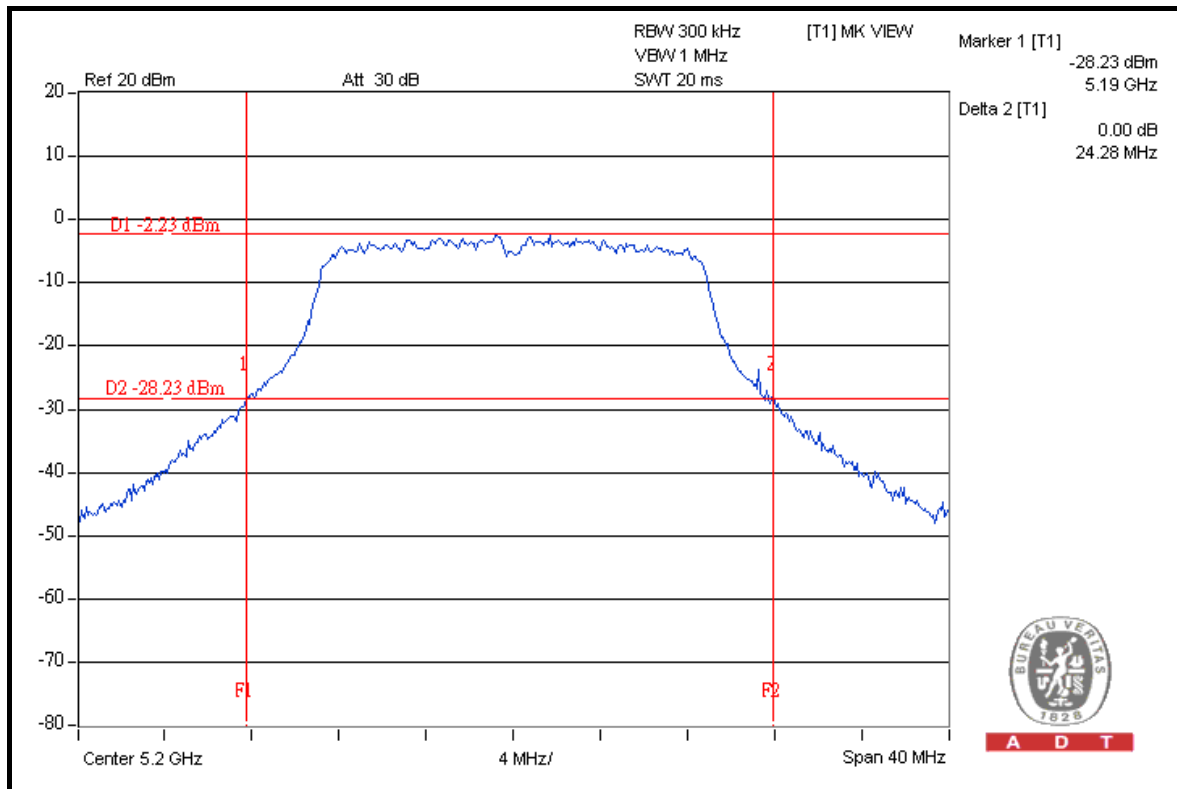


A D T

FOR CHAIN 1: CH 36



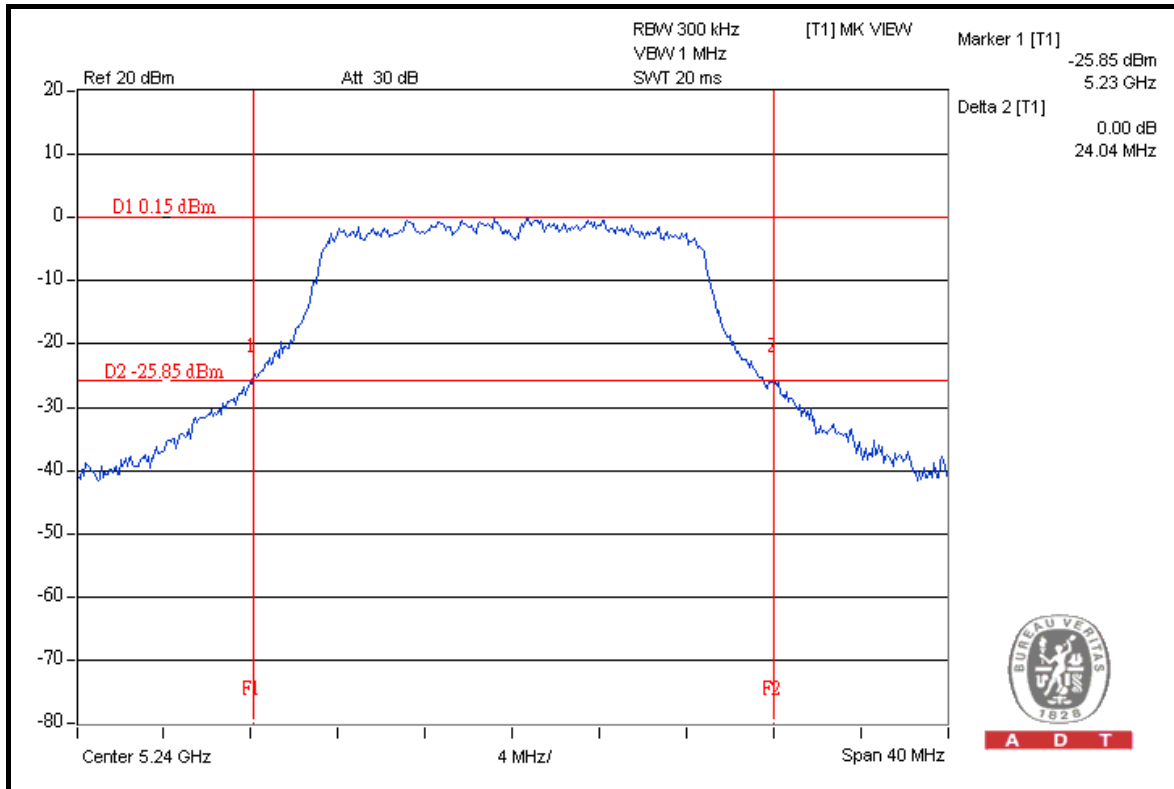
CH 40



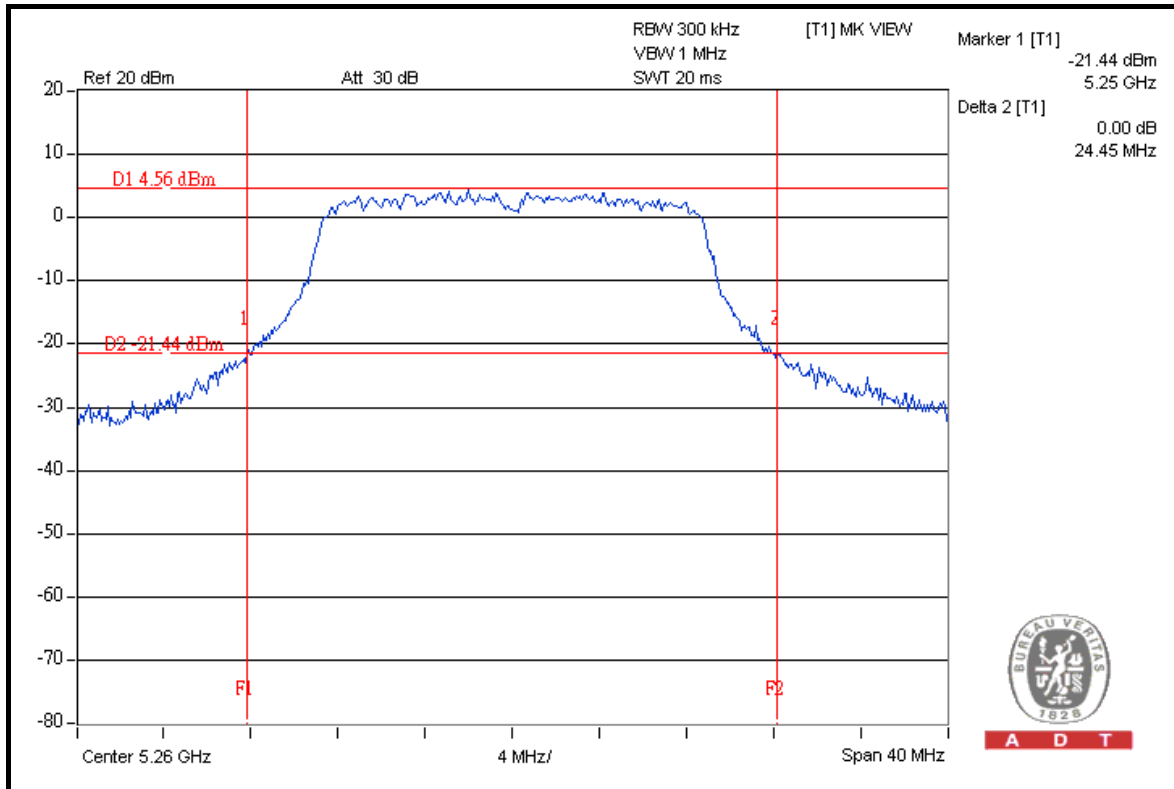


A D T

CH 48



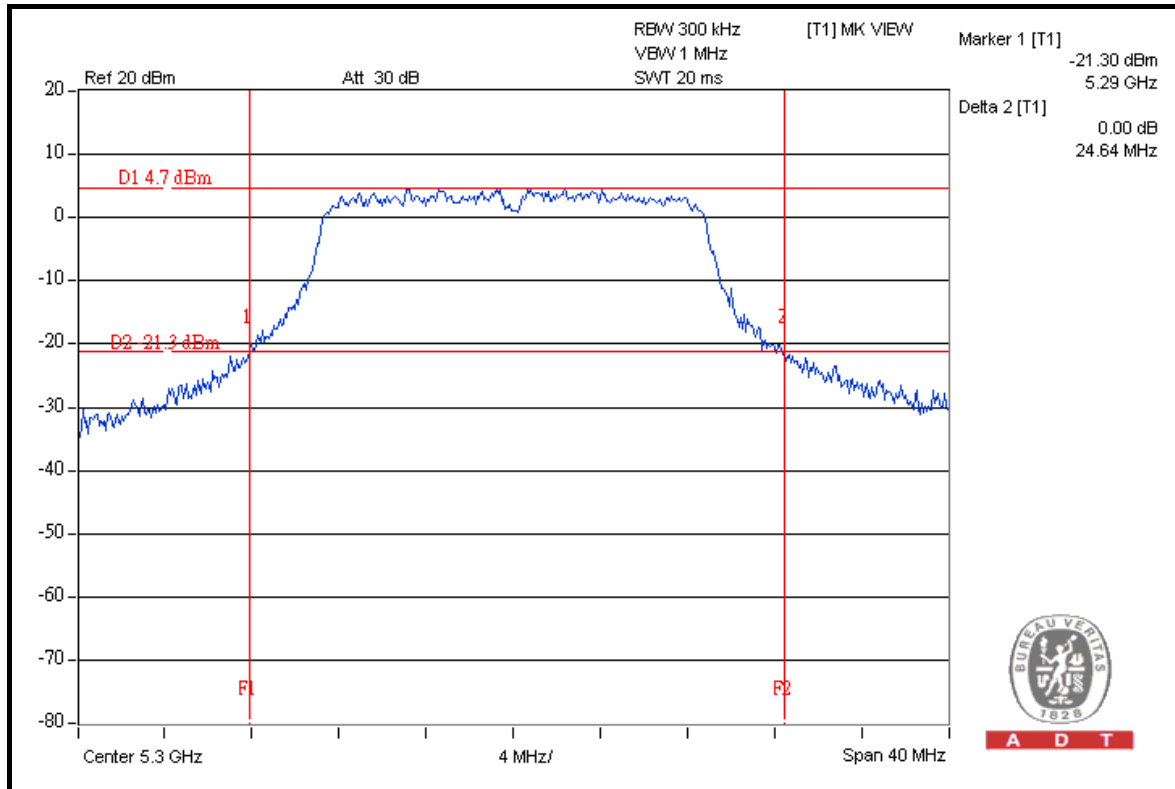
CH 52



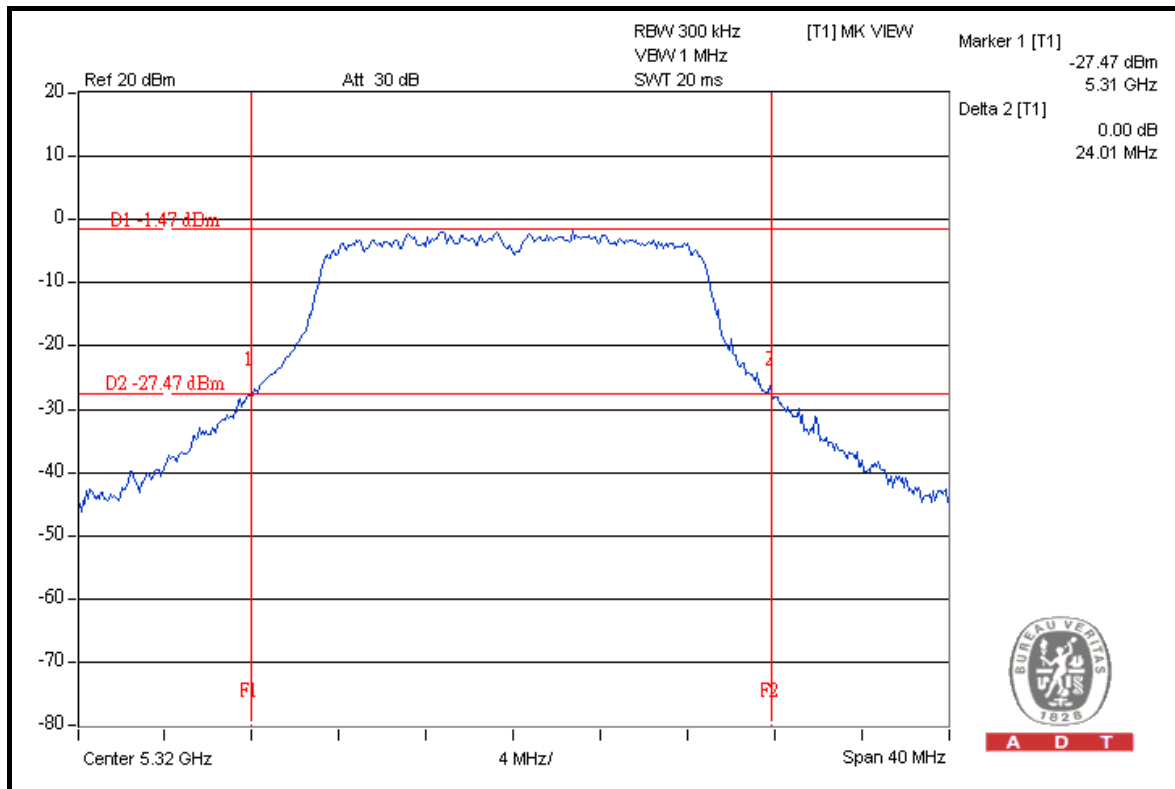


A D T

CH 60



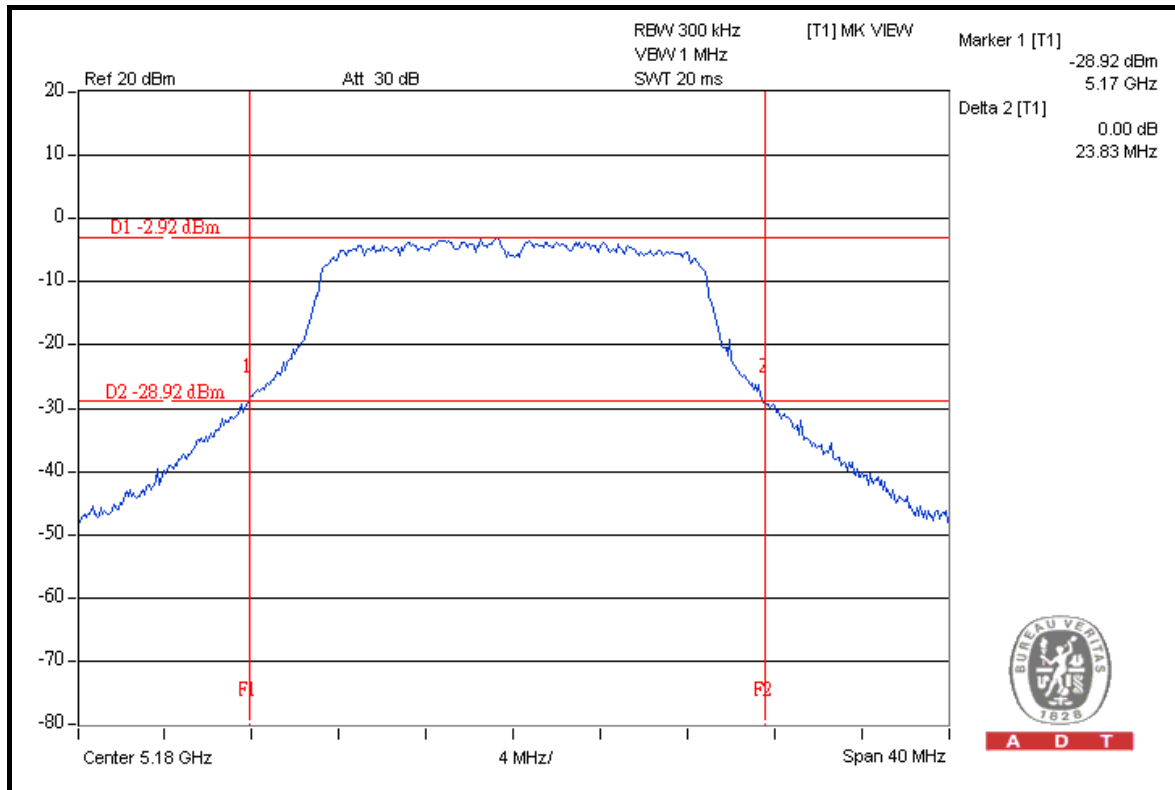
CH 64



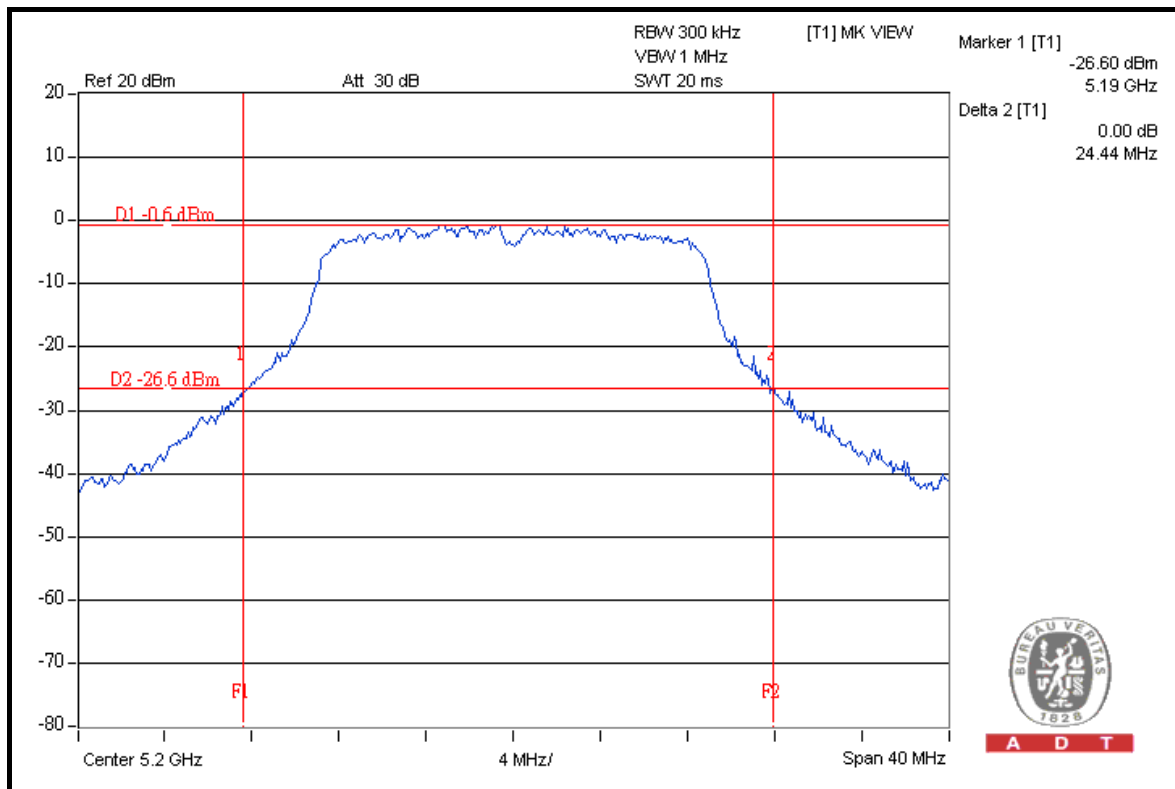


A D T

FOR CHAIN 2: CH 36



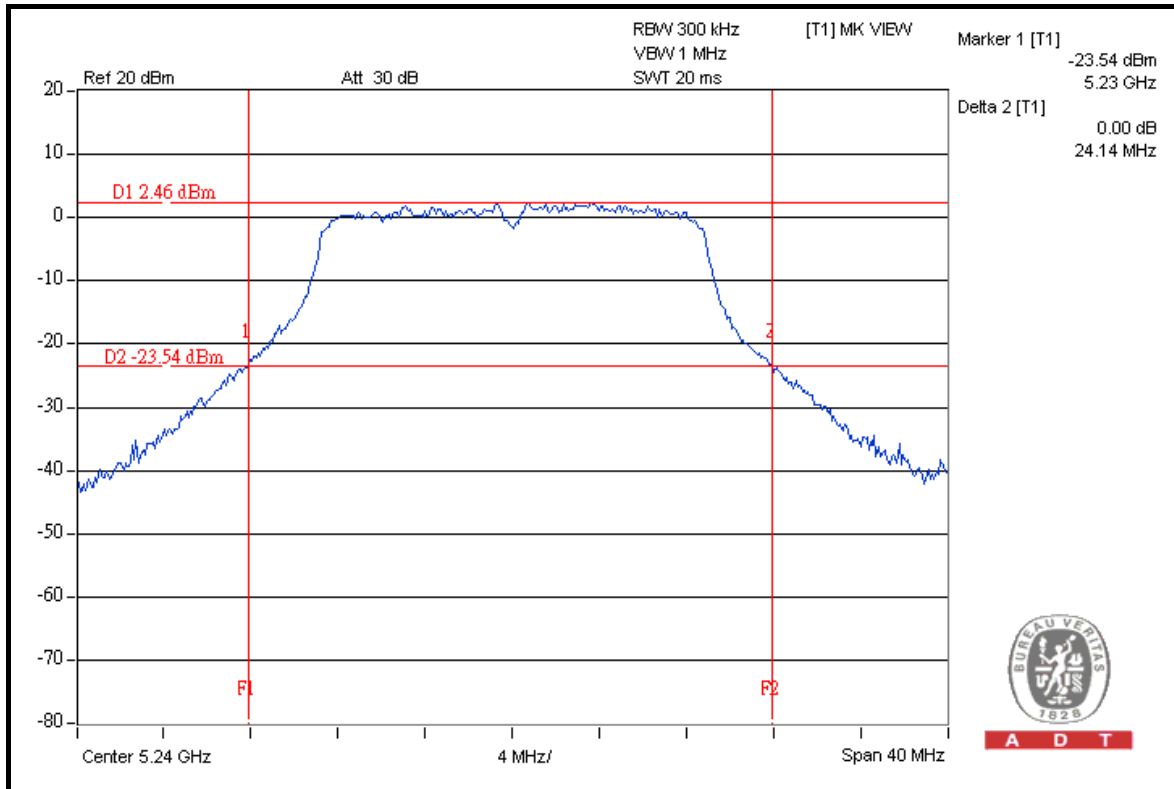
CH 40



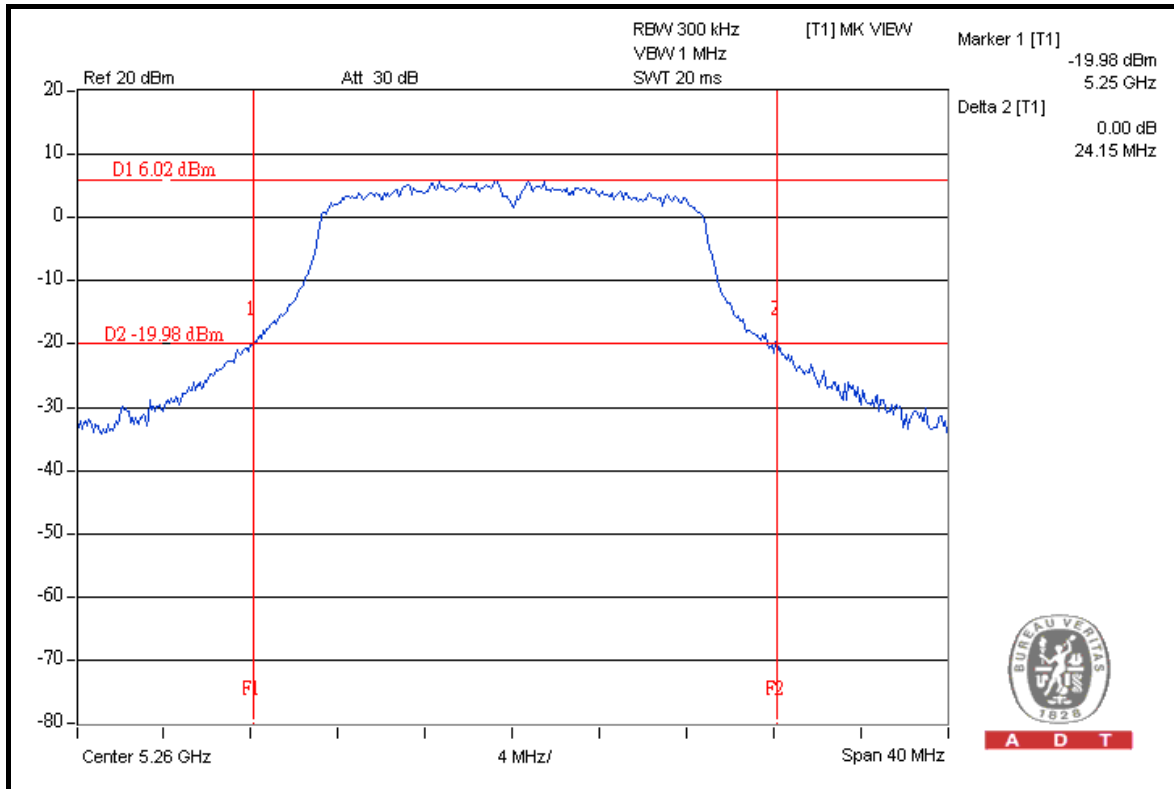


A D T

CH 48



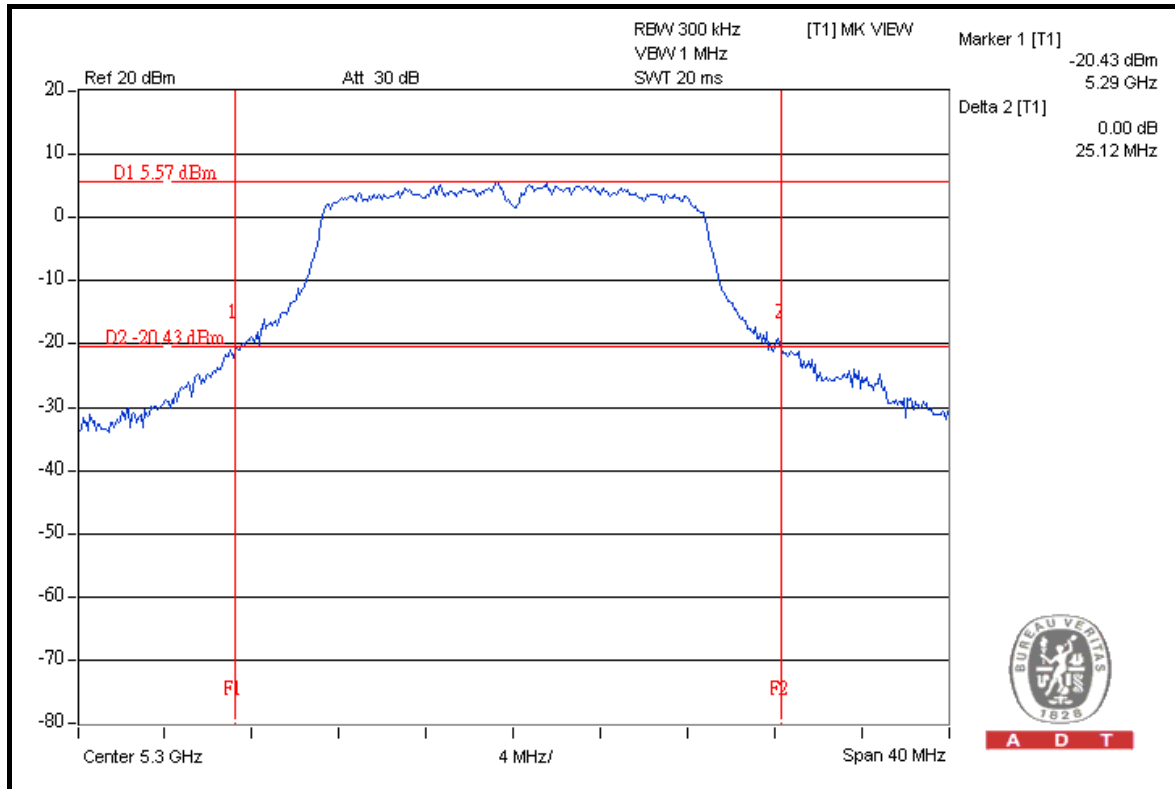
CH 52



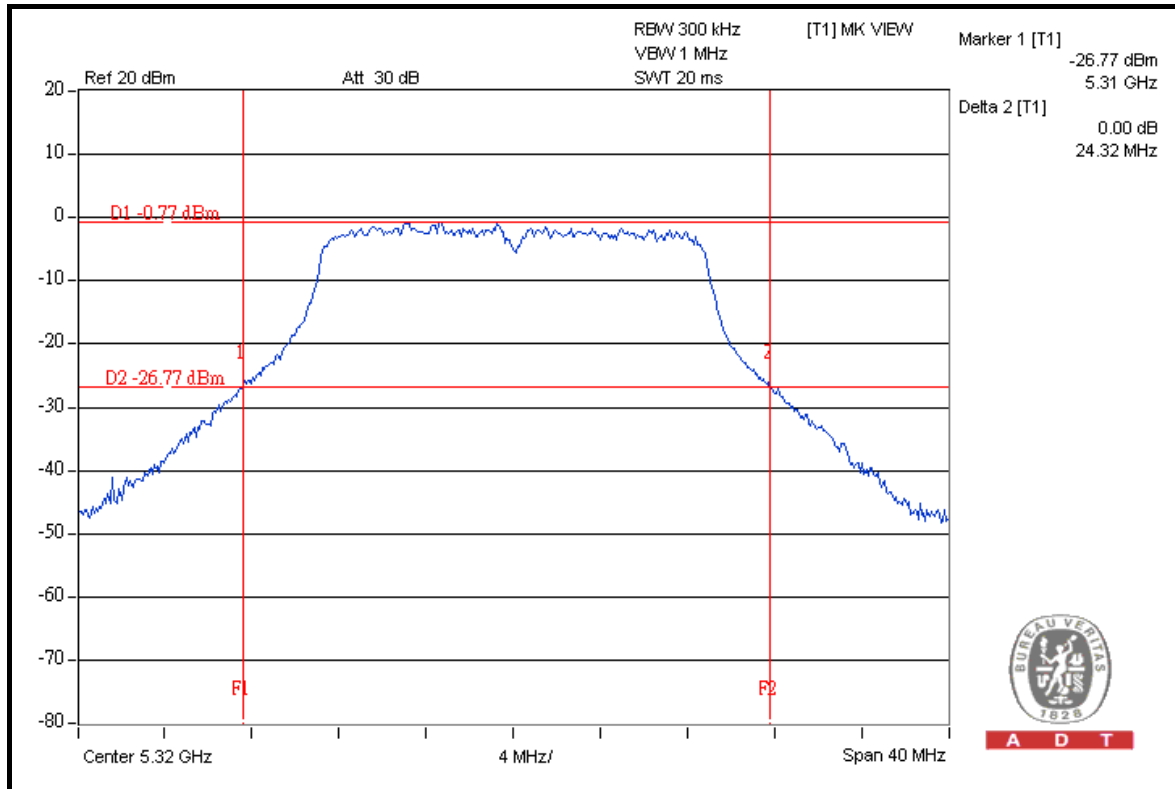


A D T

CH 60



CH 64





DRAFT 802.11n (40MHz) OFDM MODULATION

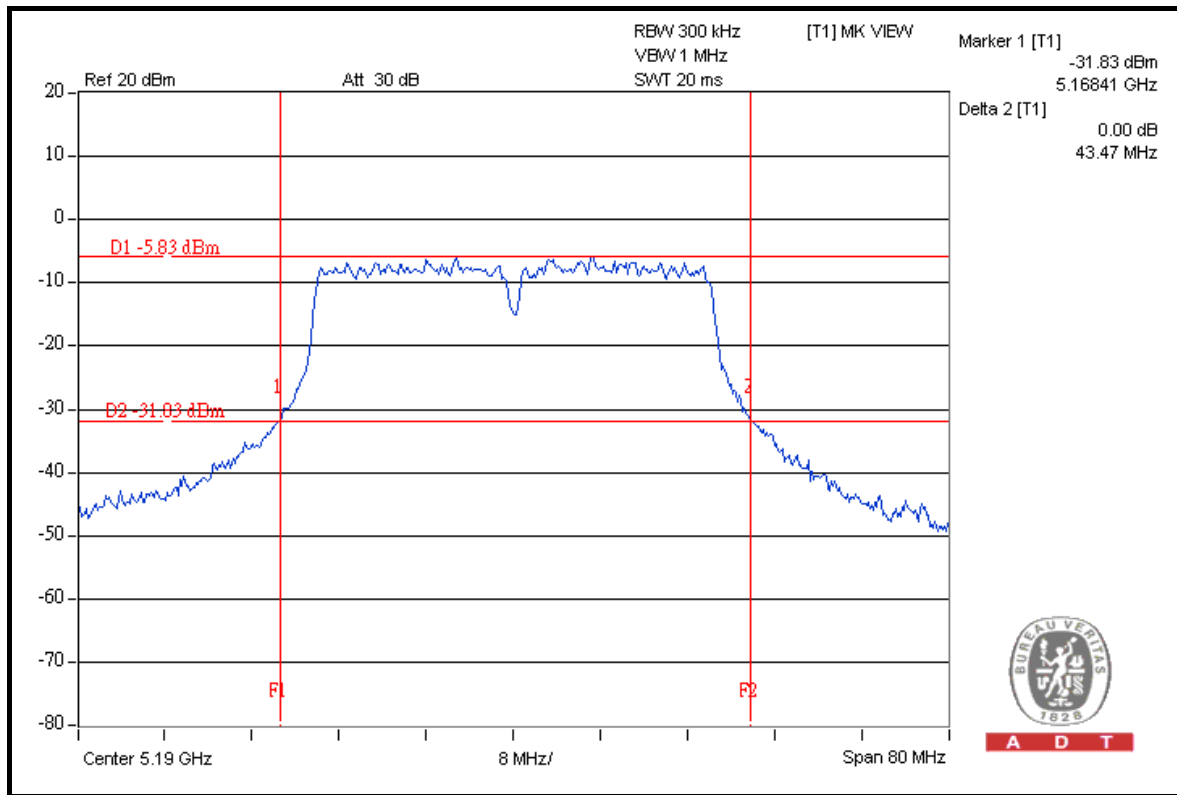
MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)			PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2	
38	5190	43.47	43.41	43.51	PASS
46	5230	44.26	43.67	44.31	PASS
54	5270	43.60	44.66	45.30	PASS
62	5310	44.46	43.38	43.45	PASS

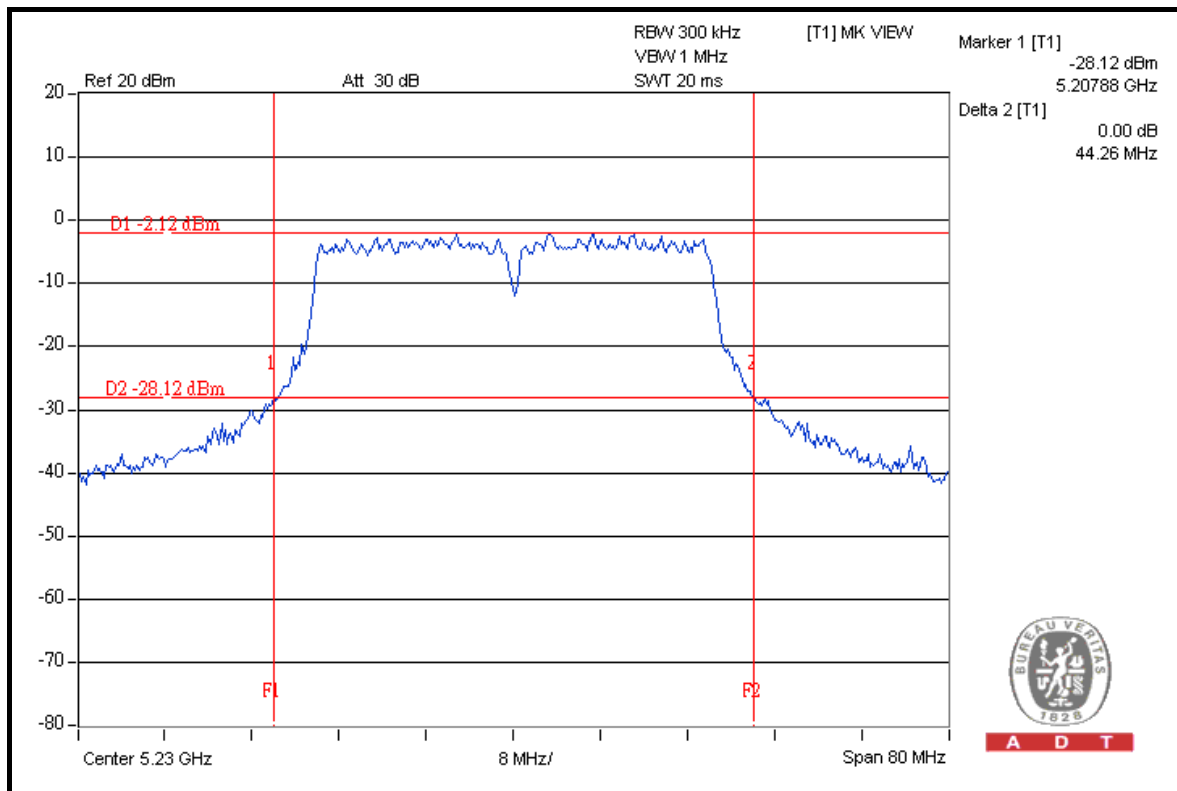


A D T

FOR CHAIN 0: CH 38



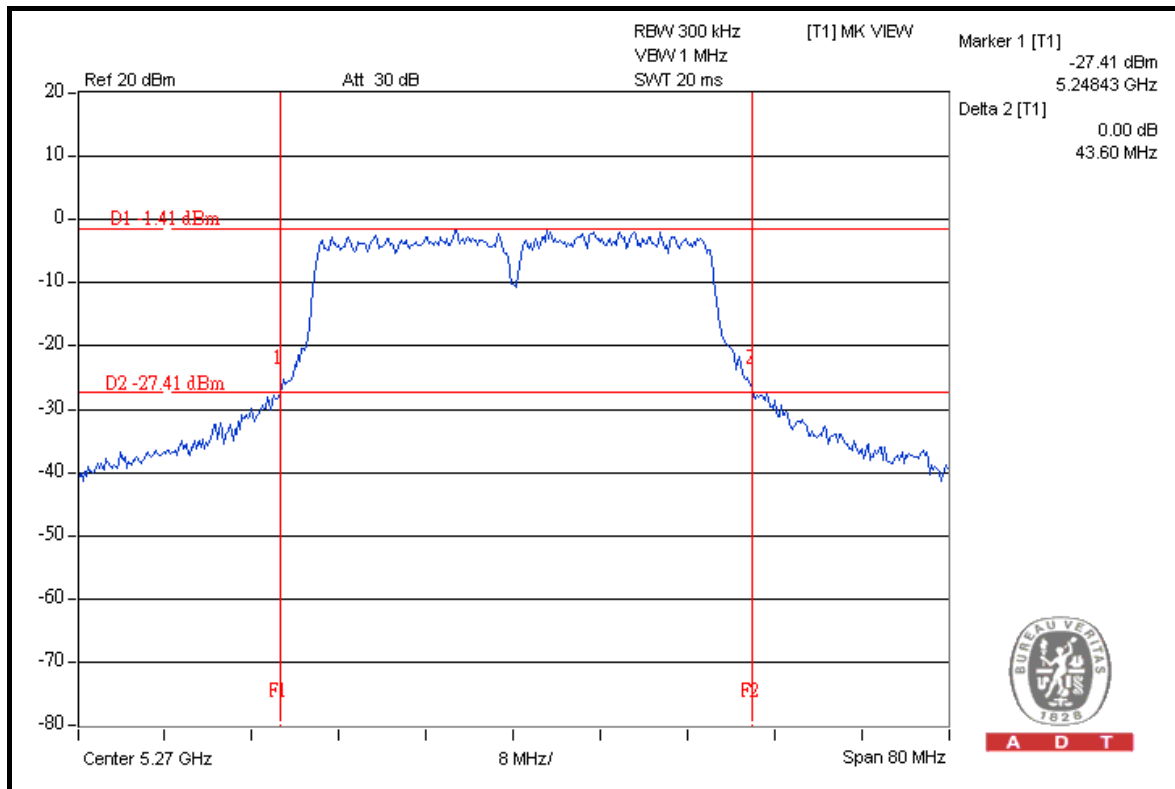
CH 46



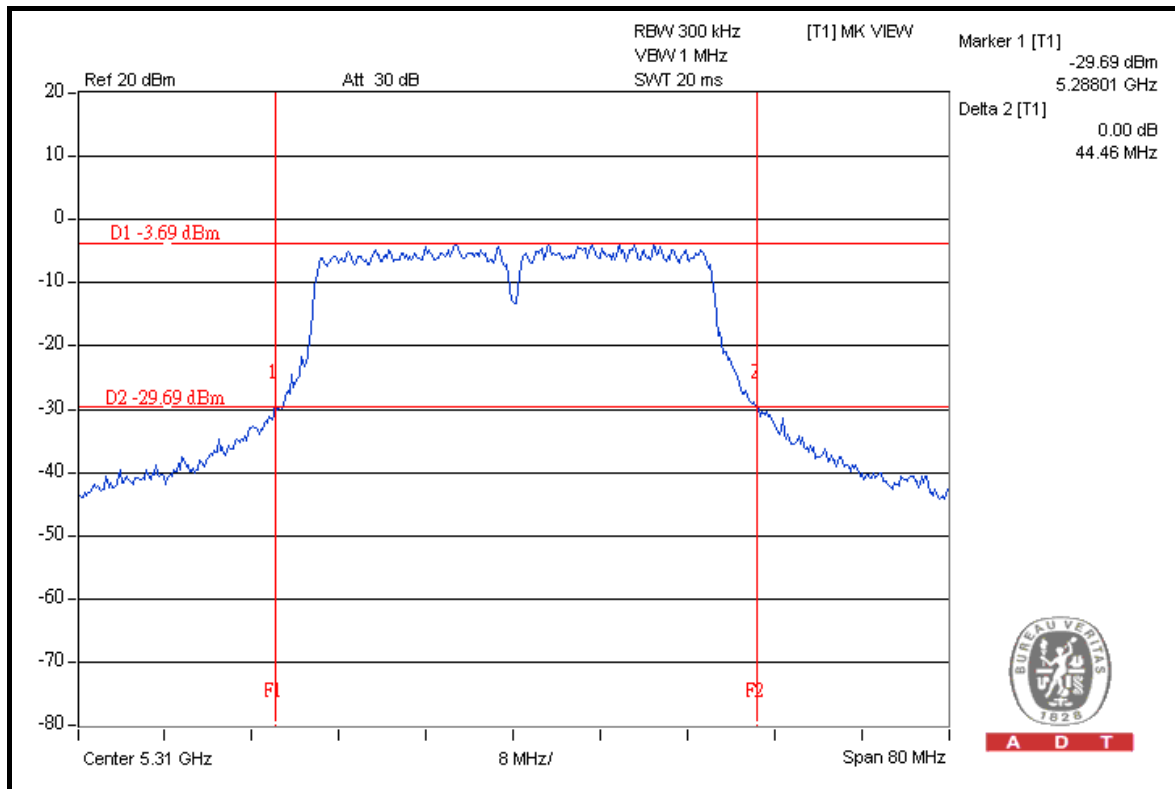


A D T

CH 54



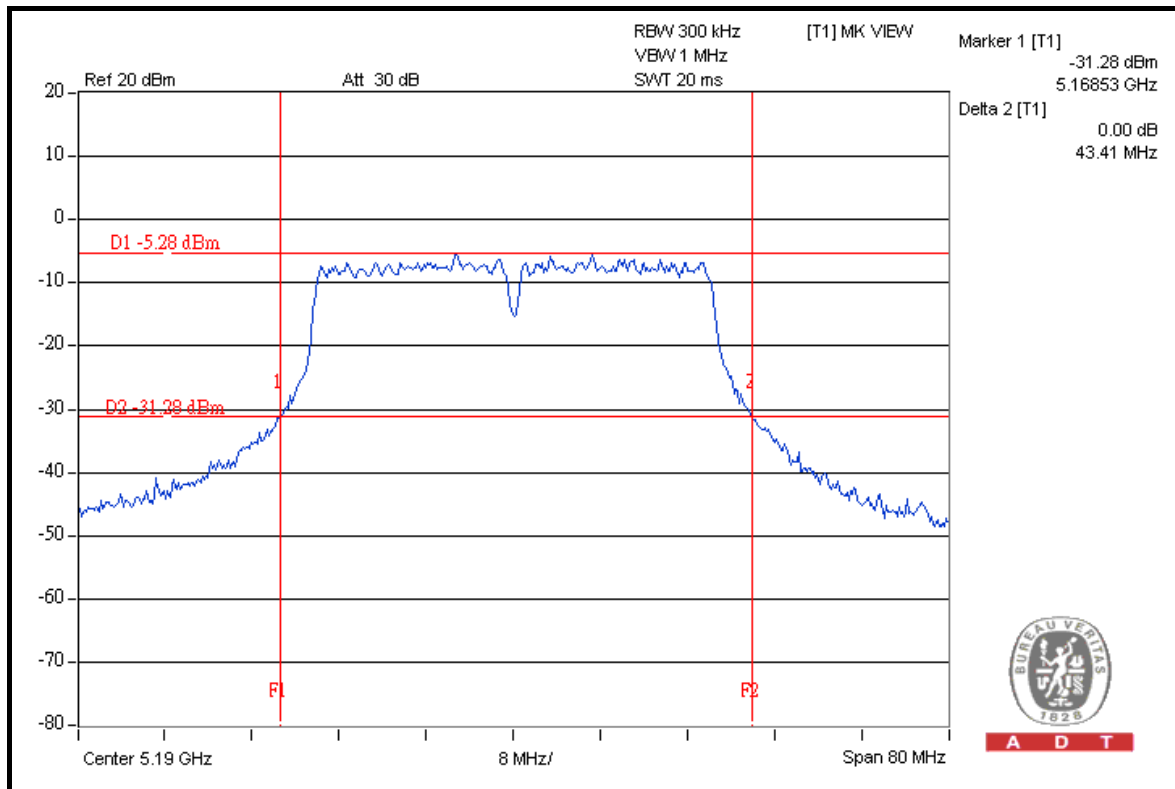
CH 62



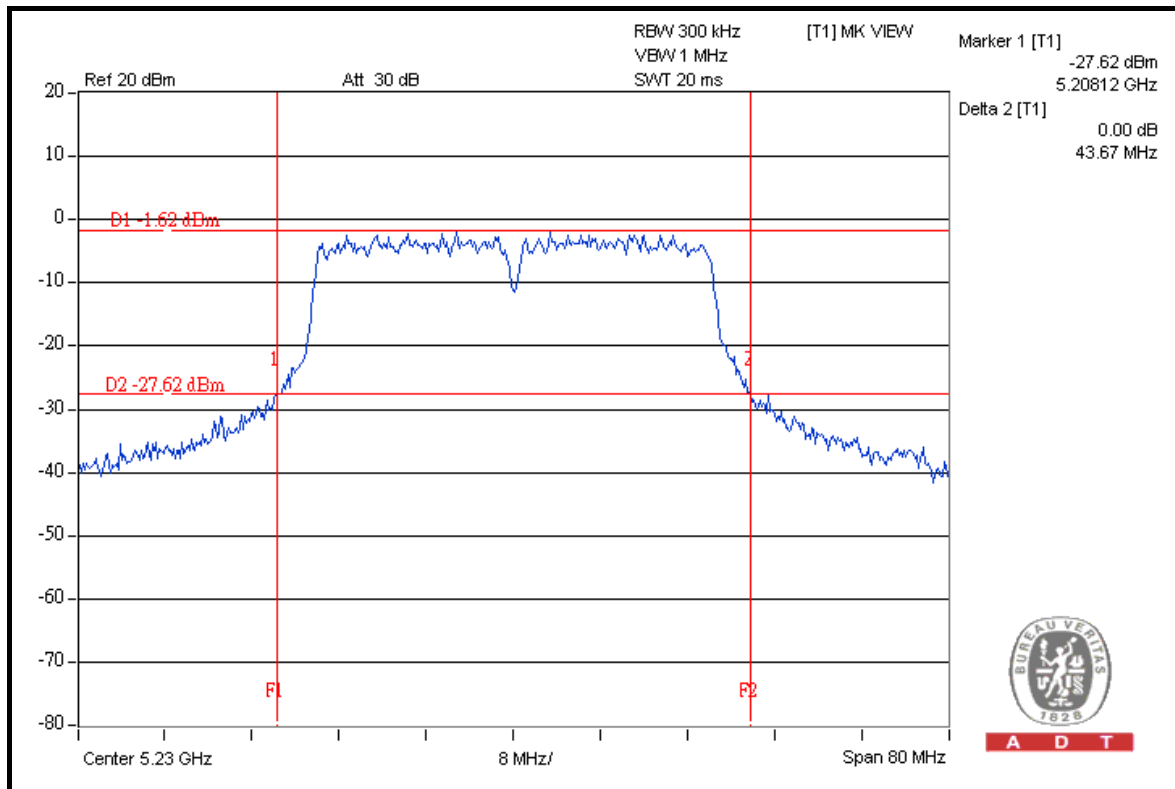


A D T

FOR CHAIN 1: CH 38



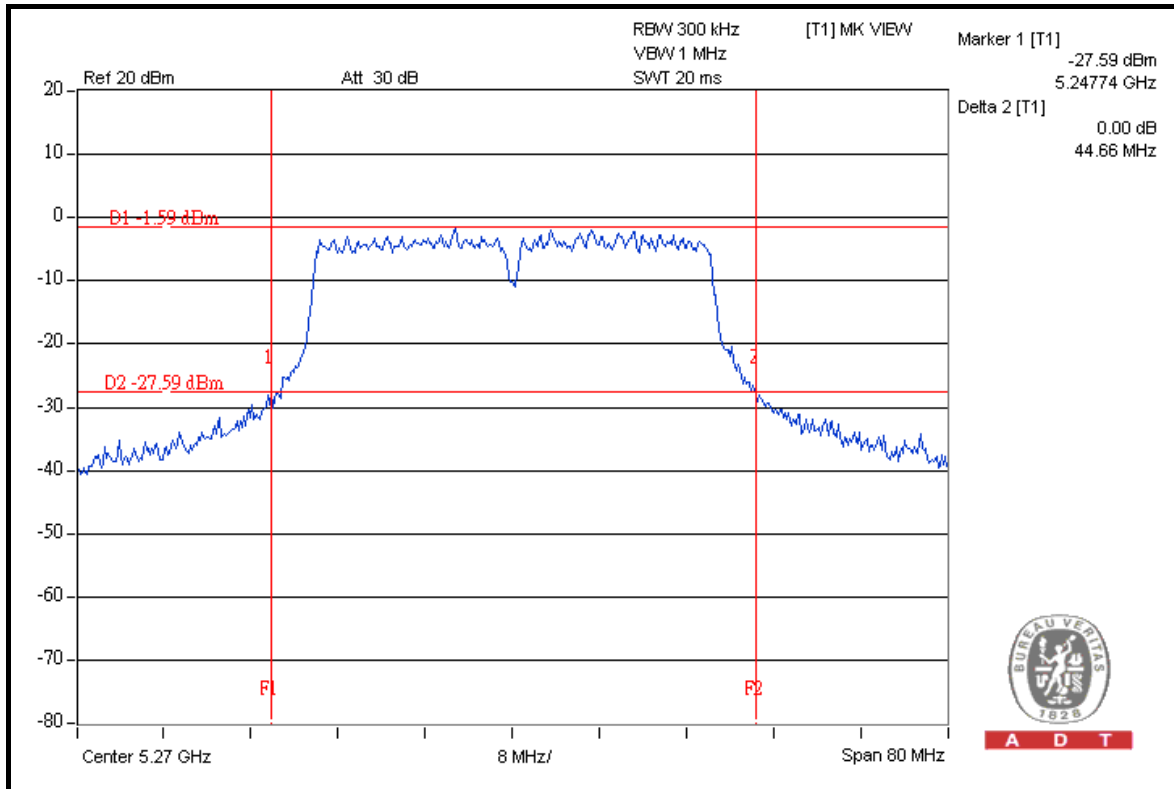
CH 46



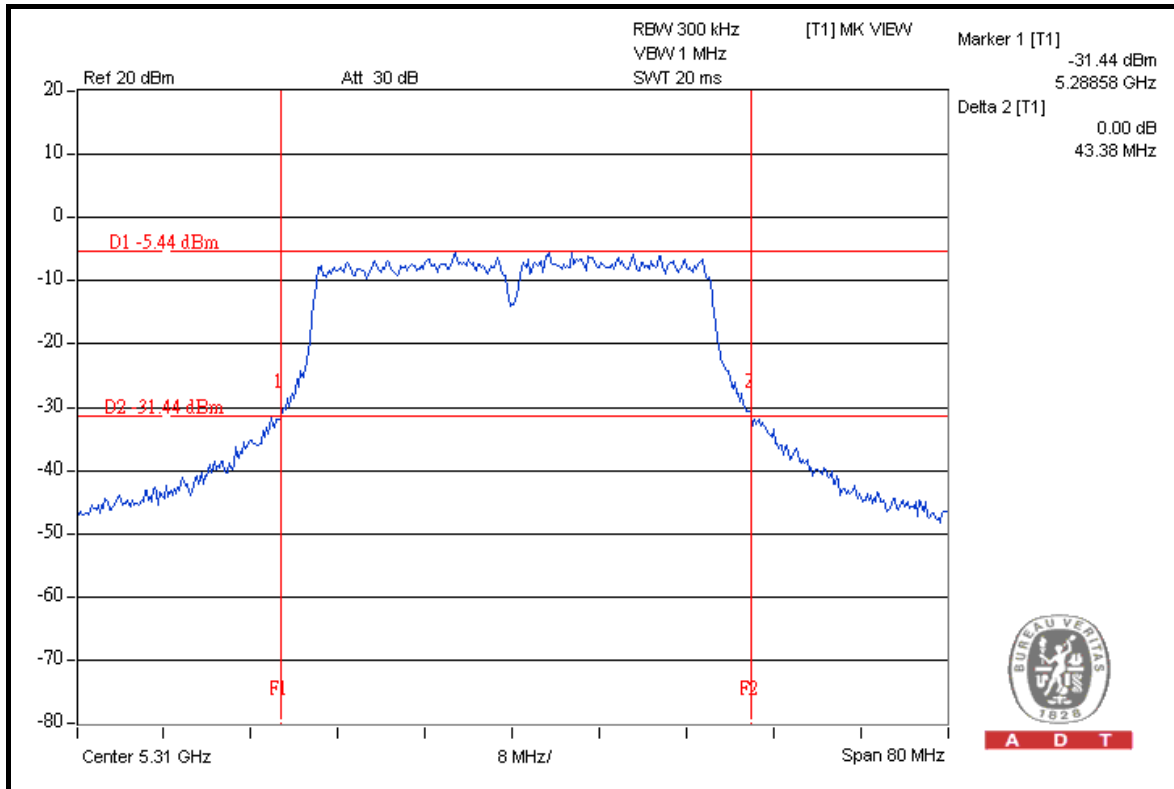


A D T

CH 54



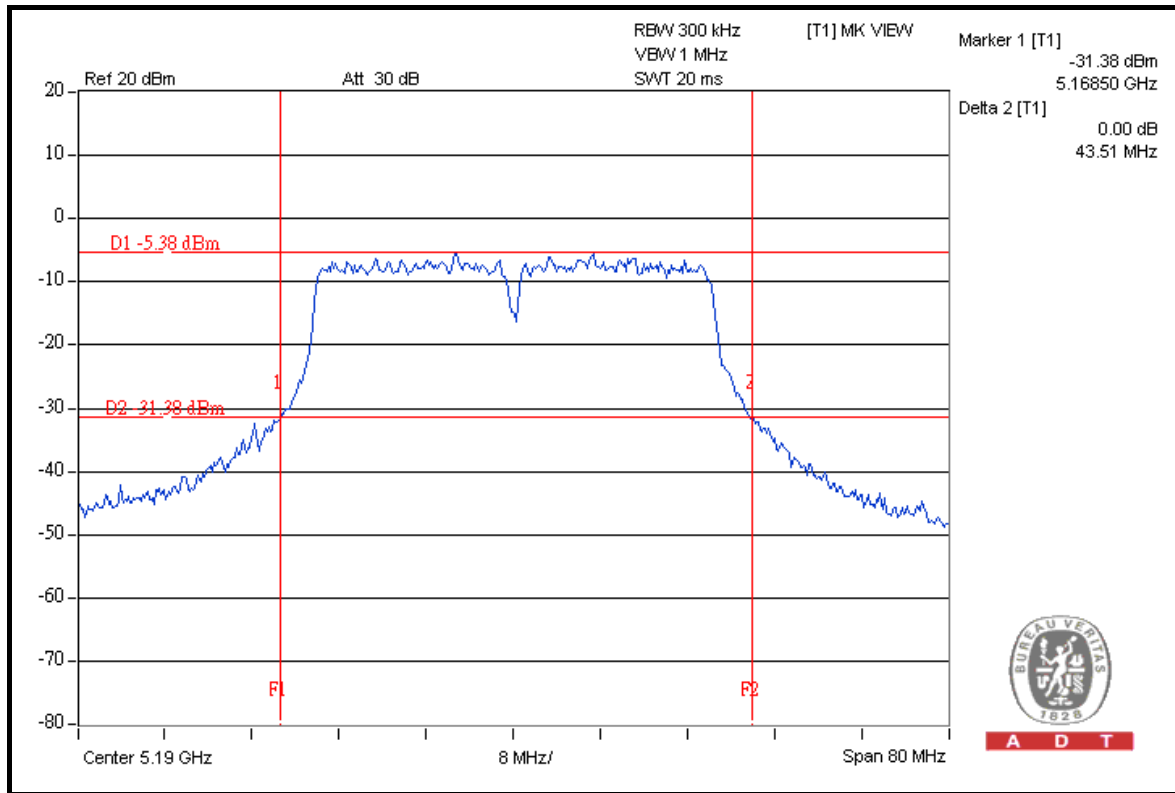
CH 62



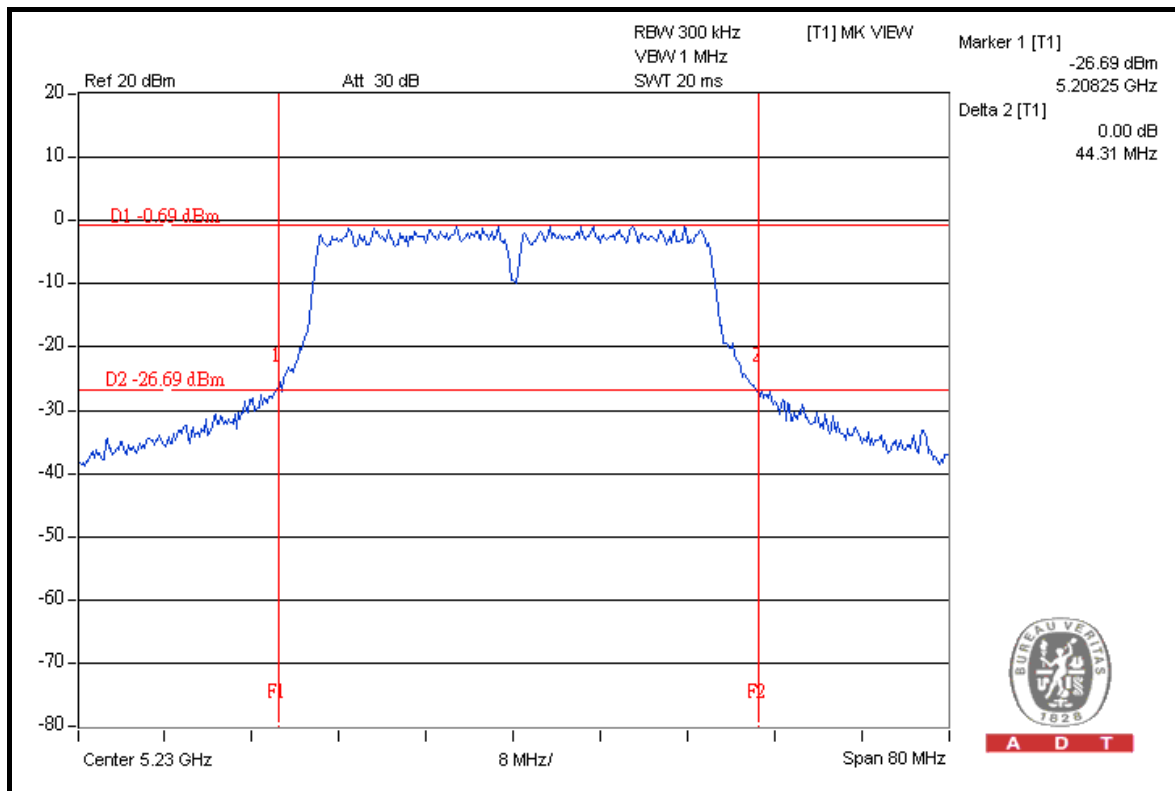


A D T

FOR CHAIN 2: CH 38



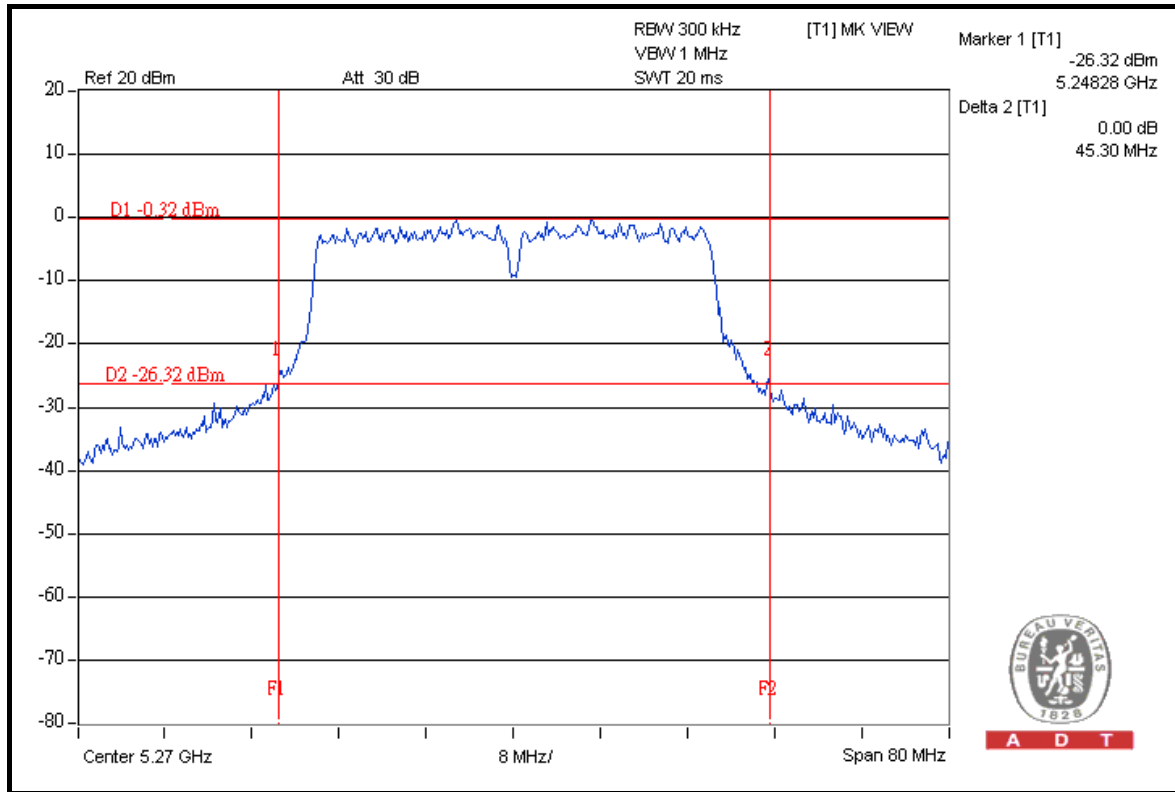
CH 46





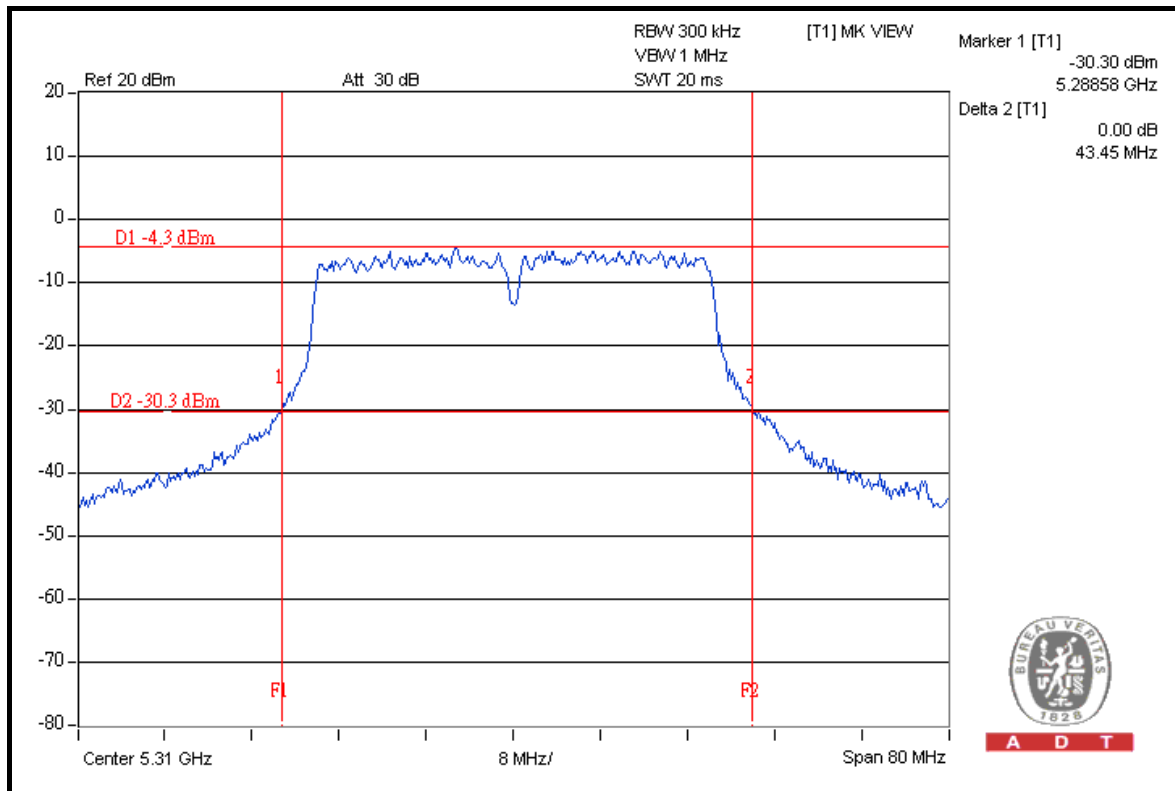
A D T

CH 54



A D T

CH 62



A D T

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

4.4.2 TEST INSTRUMENTS

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

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

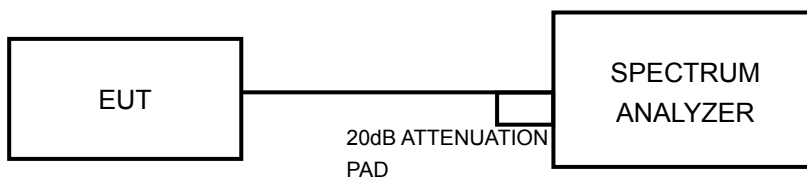
4.4.3 TEST PROCEDURE

- a. The transmitter output was connected to the spectrum analyzer.
- b. Set the spectrum bandwidth span to view the entire spectrum.
- c. Using peak detector and Max-hold function for Trace 1 (RB = 1MHz, VB = 3MHz) and 2 (RB = 1MHz, VB = 300kHz).
- d. The differences between Trace1 and Trace 2 in any 1MHz band at f1 to f2 range were recorded and showed to another trace.

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

802.11a OFDM MODULATION

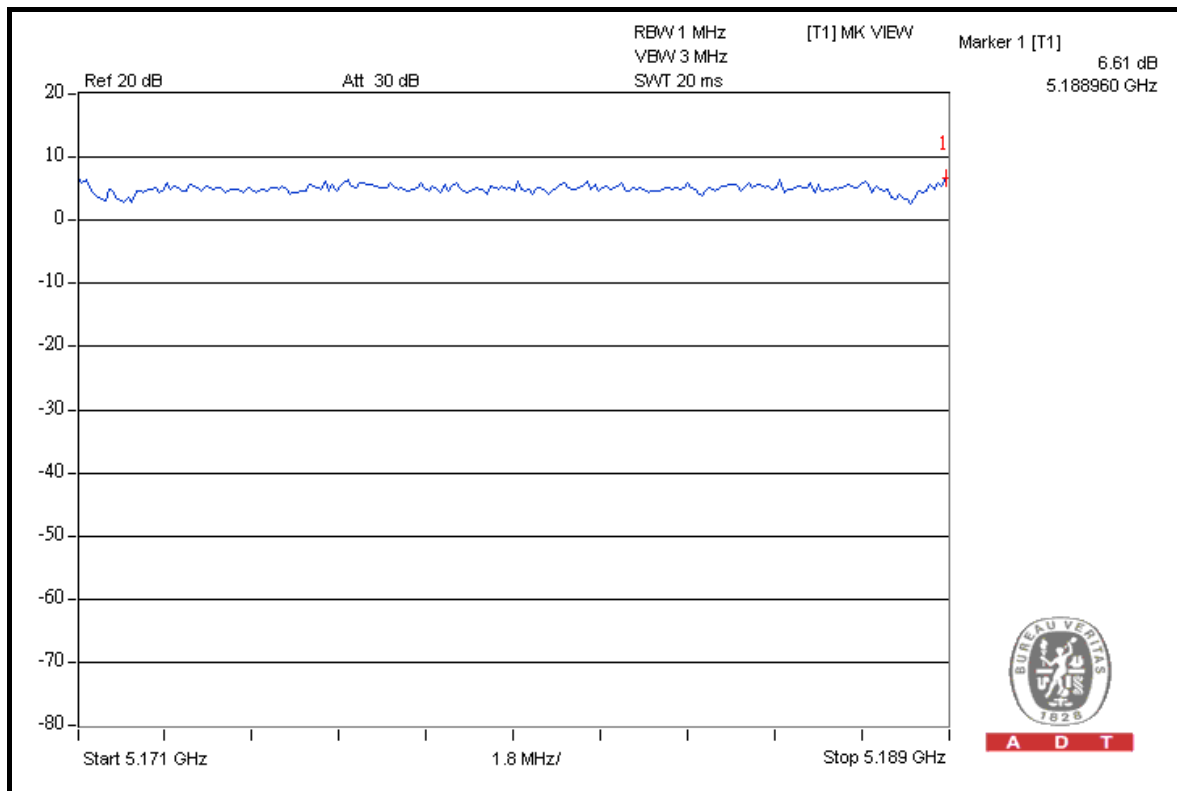
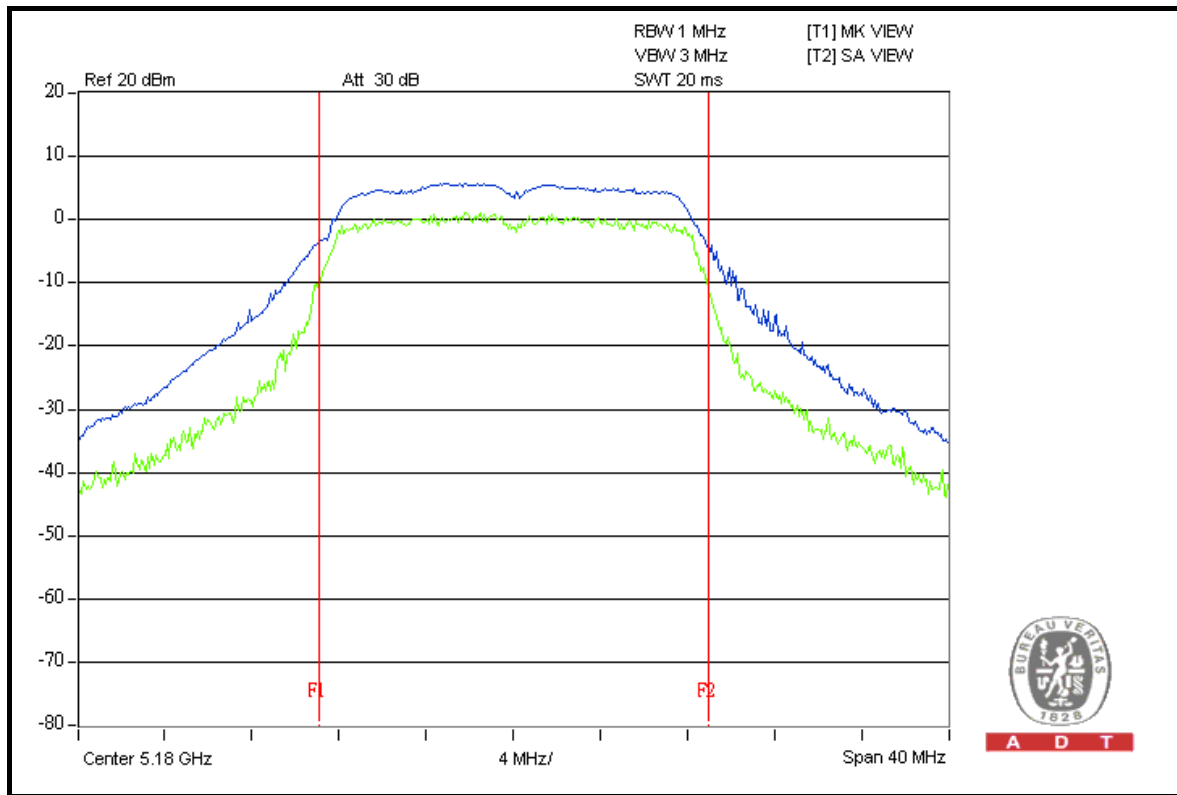
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)			PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
36	5180	6.61	7.31	7.72	13	PASS
40	5200	8.46	6.97	7.40	13	PASS
48	5240	6.83	7.52	8.00	13	PASS
52	5260	7.25	6.57	7.22	13	PASS
60	5300	7.57	6.59	7.12	13	PASS
64	5320	7.22	6.94	7.84	13	PASS



A D T

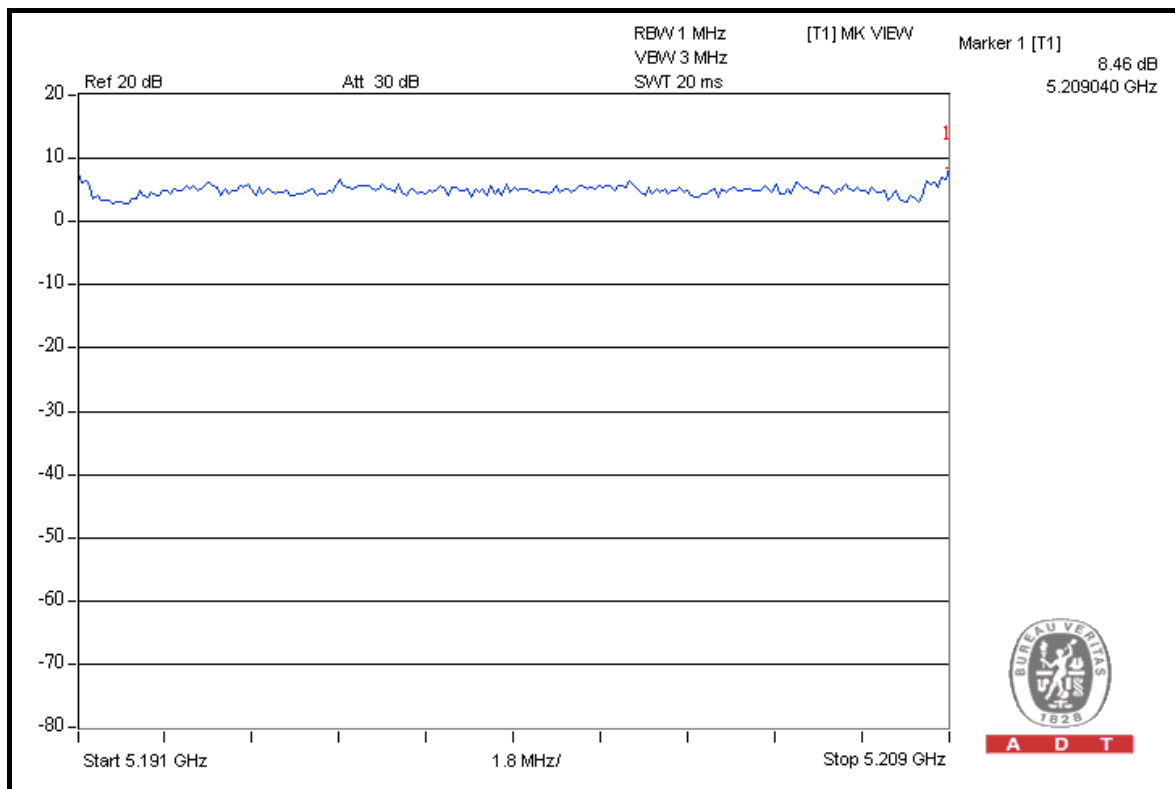
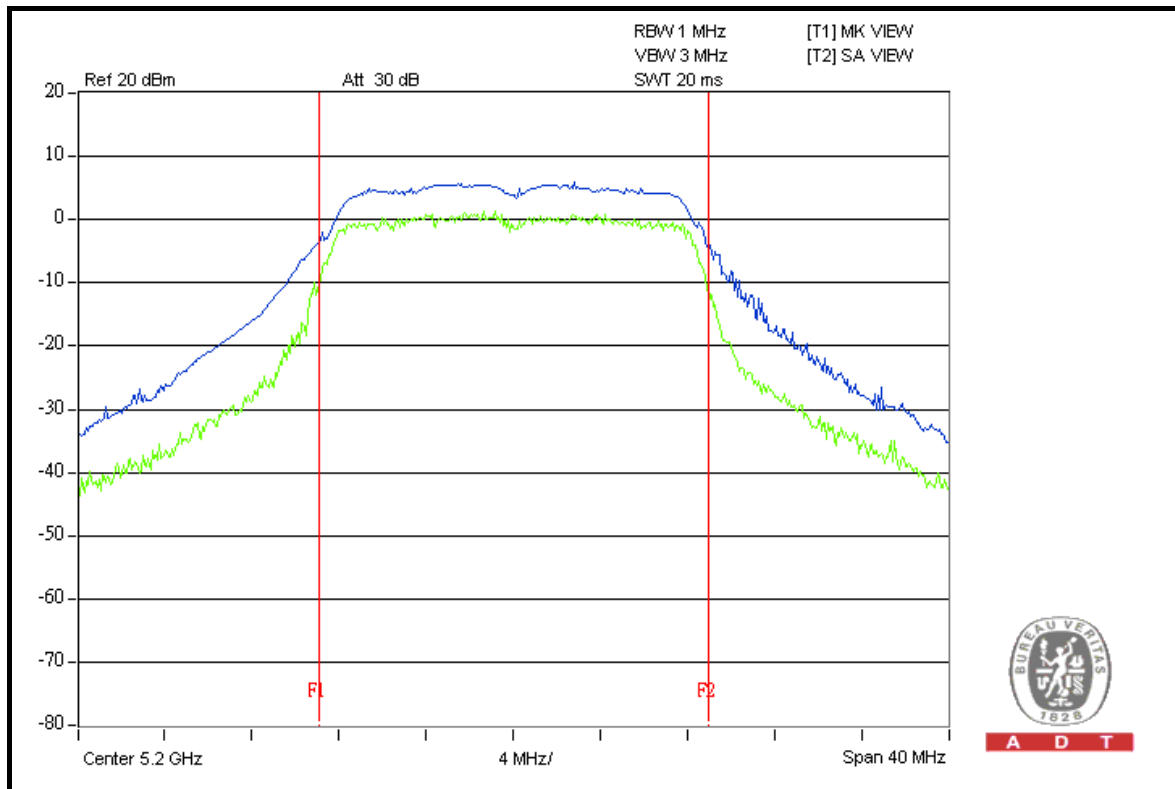
FOR CHAIN 0: CH 36





A D T

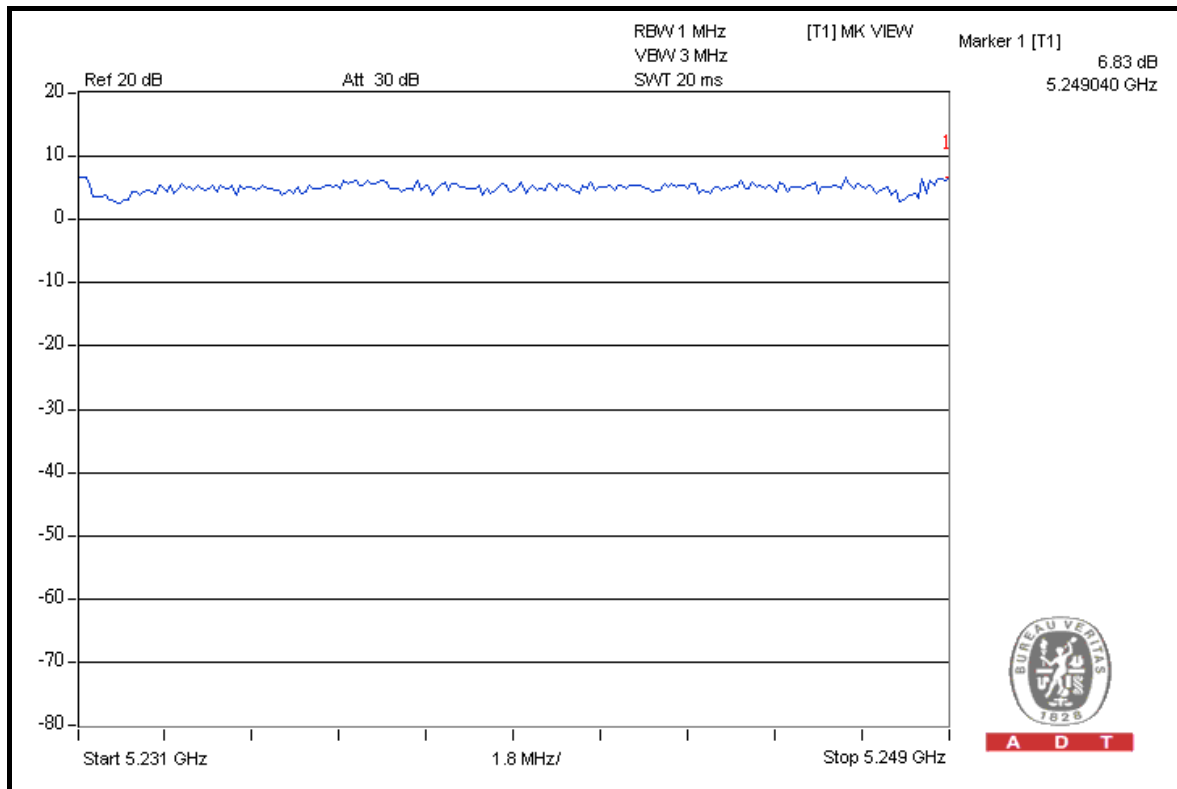
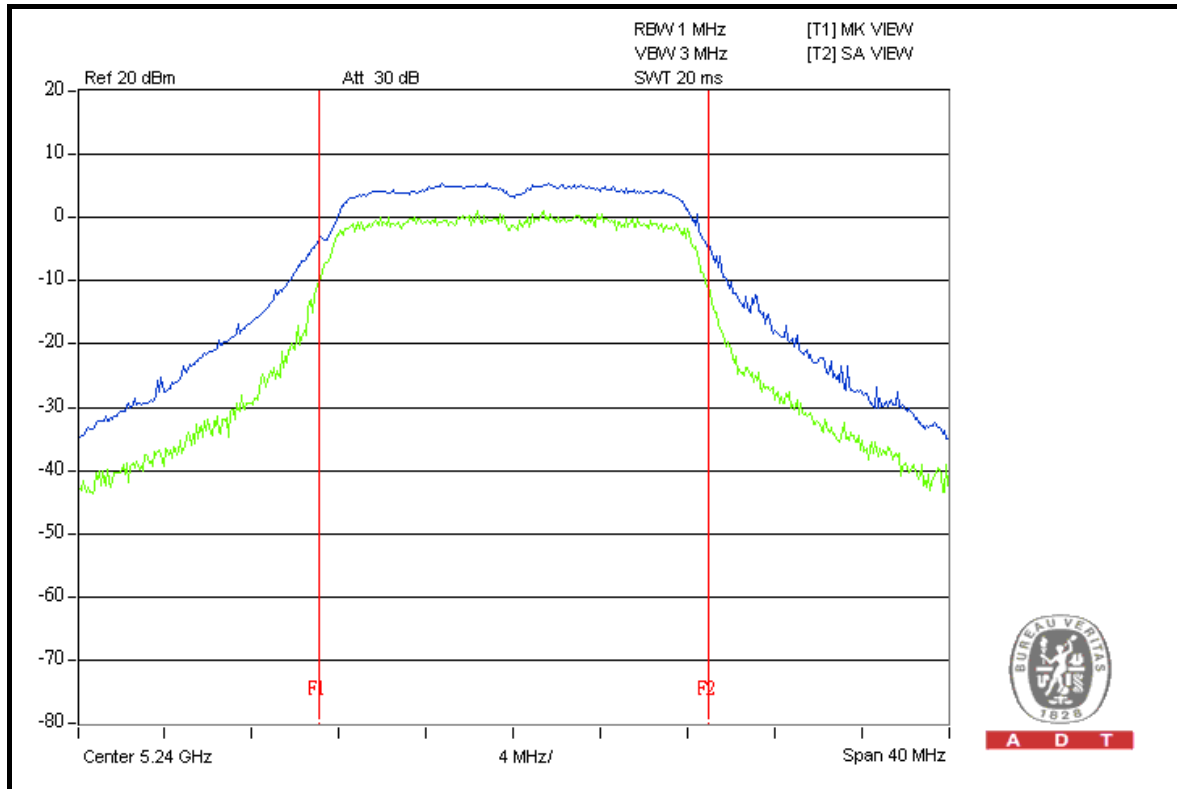
CH 40





A D T

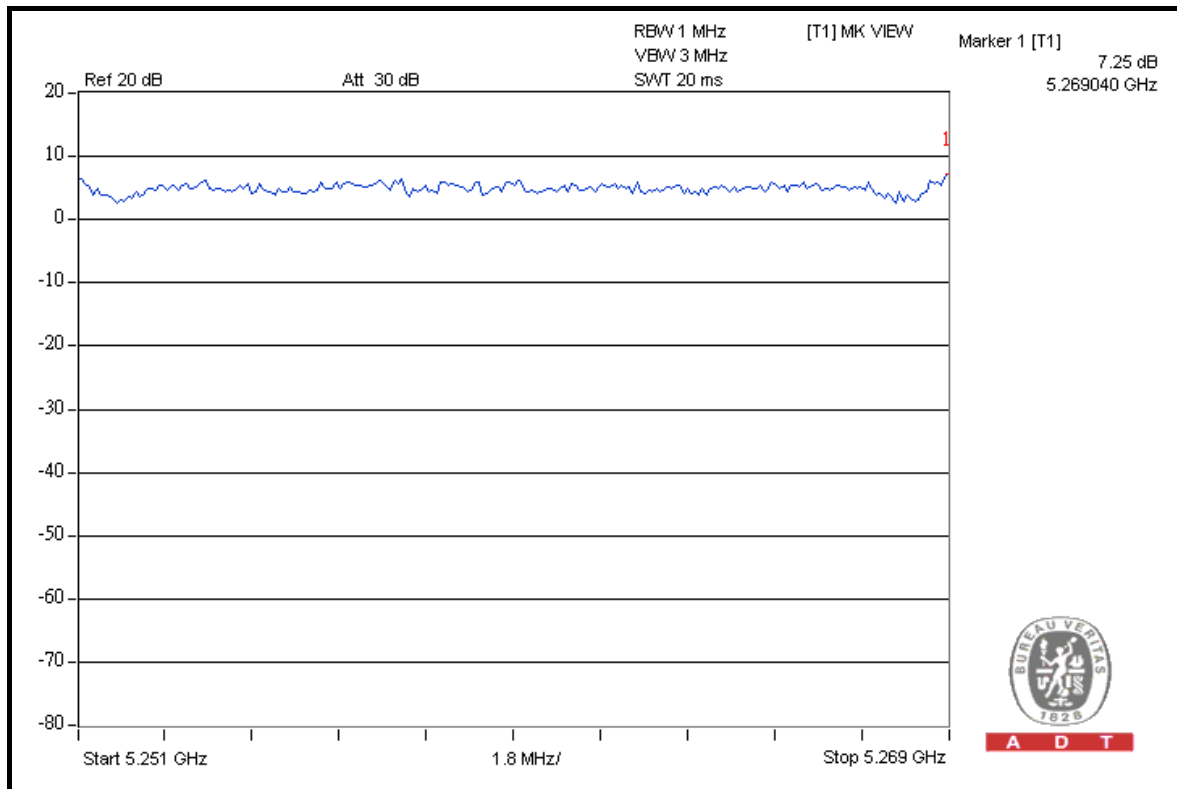
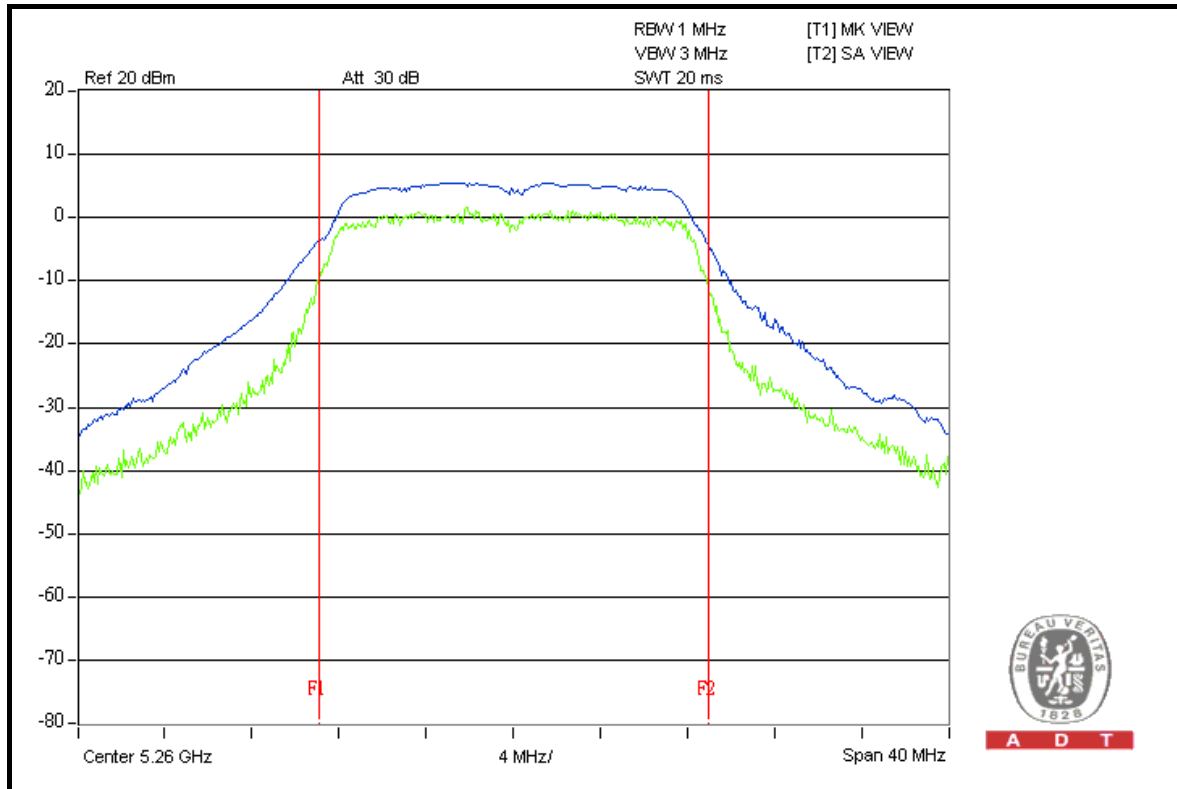
CH 48





A D T

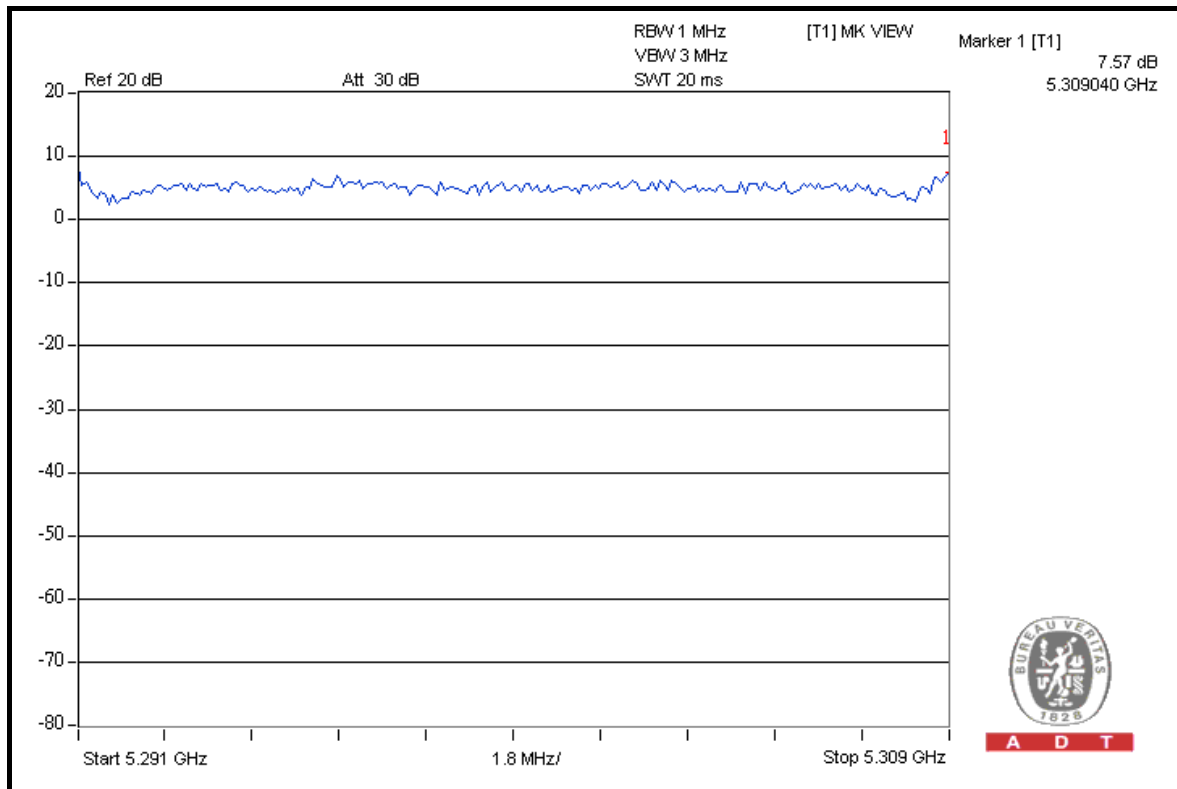
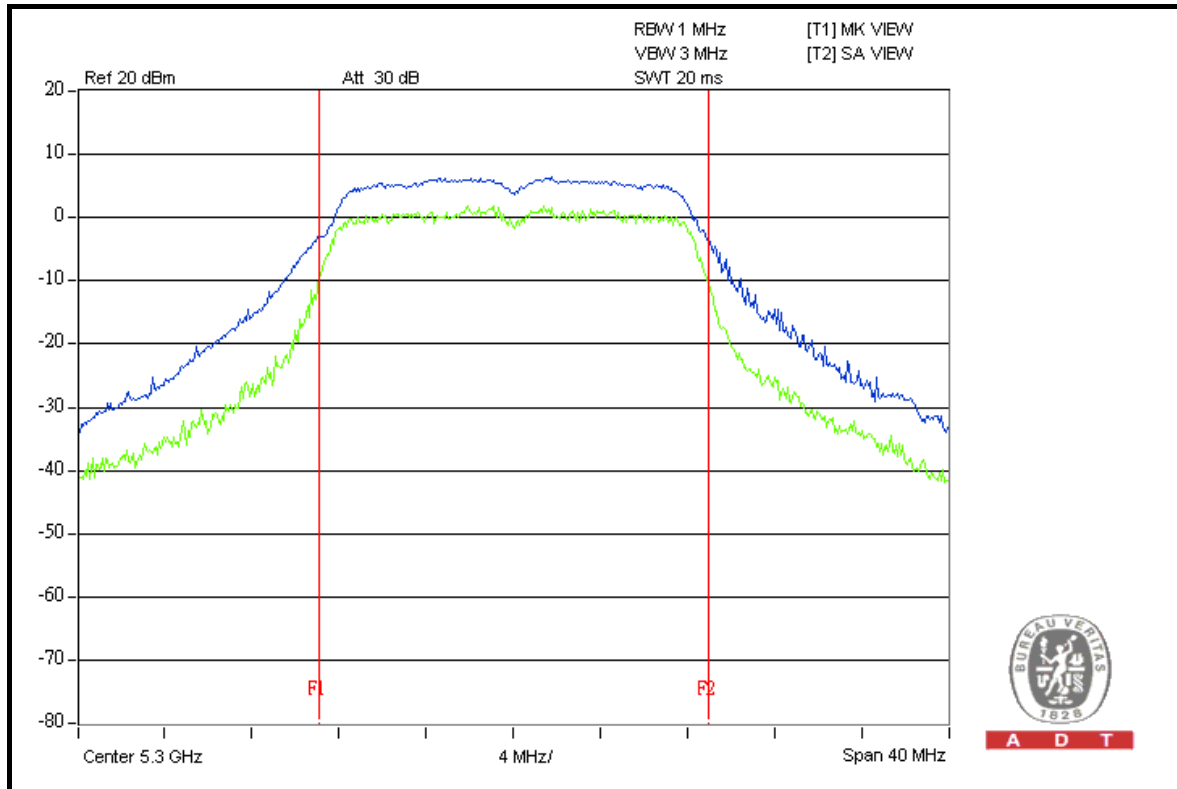
CH 52





A D T

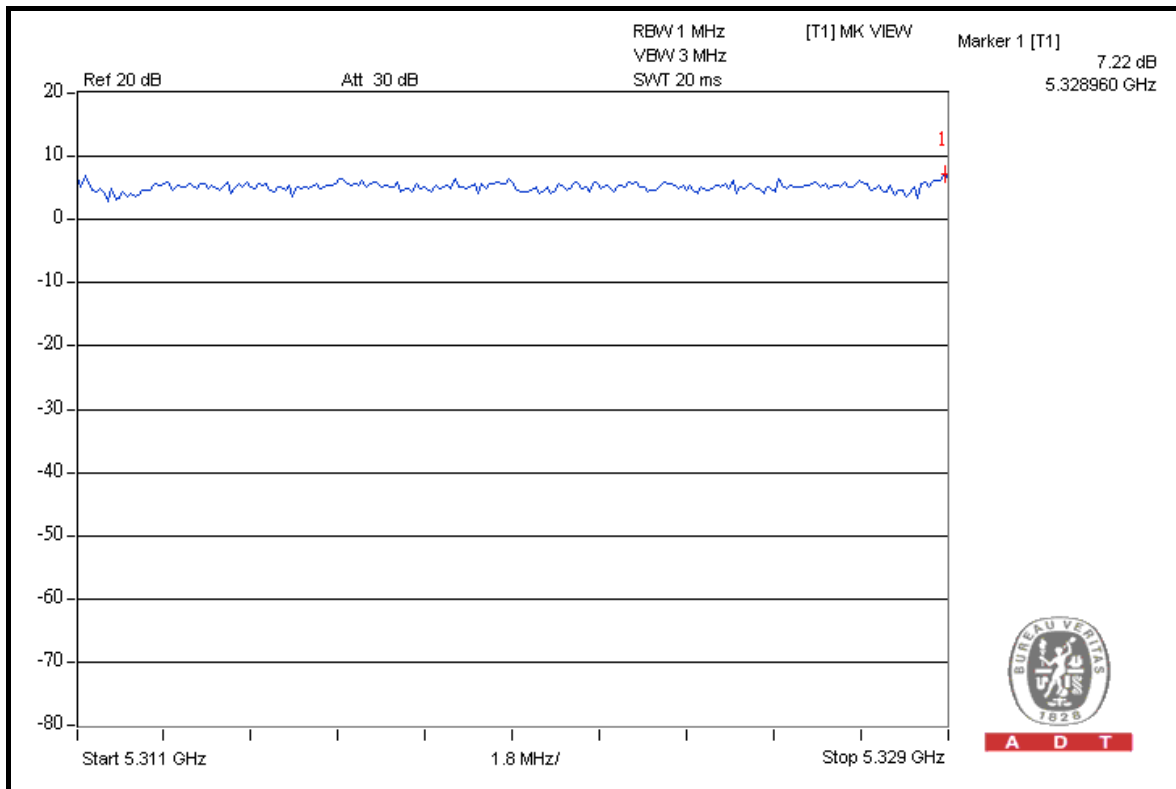
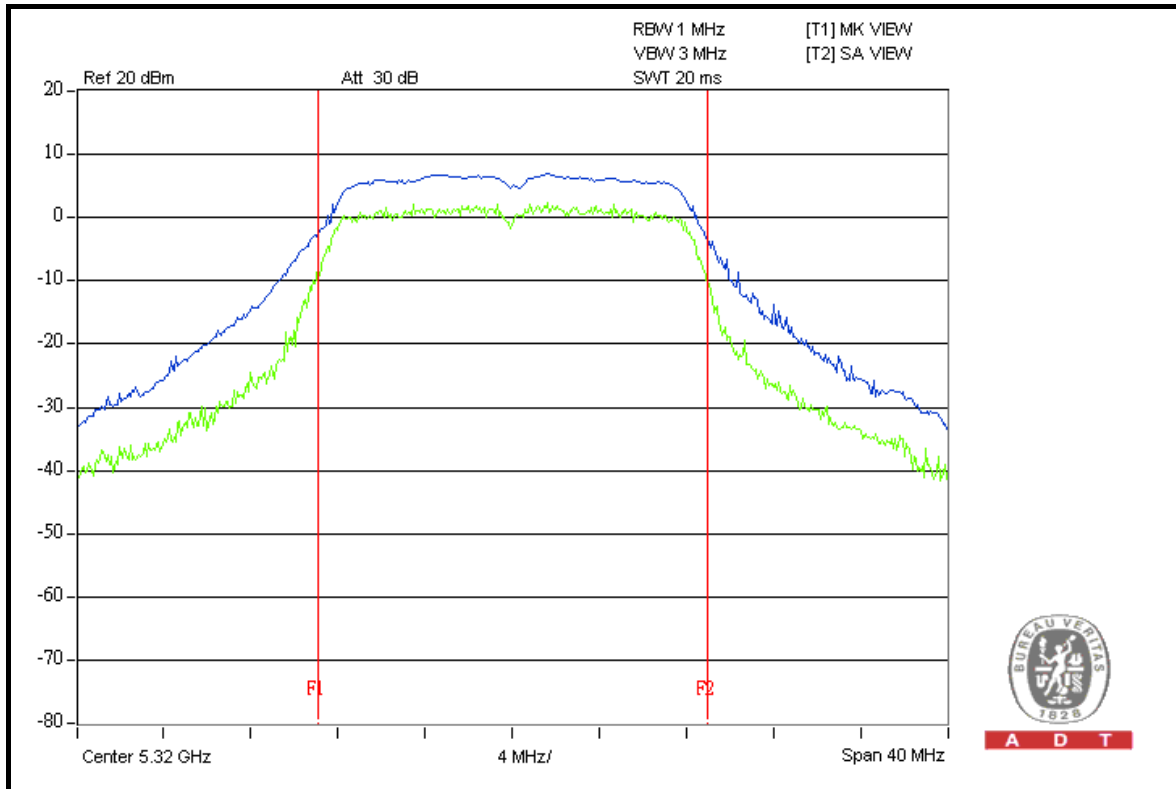
CH 60





A D T

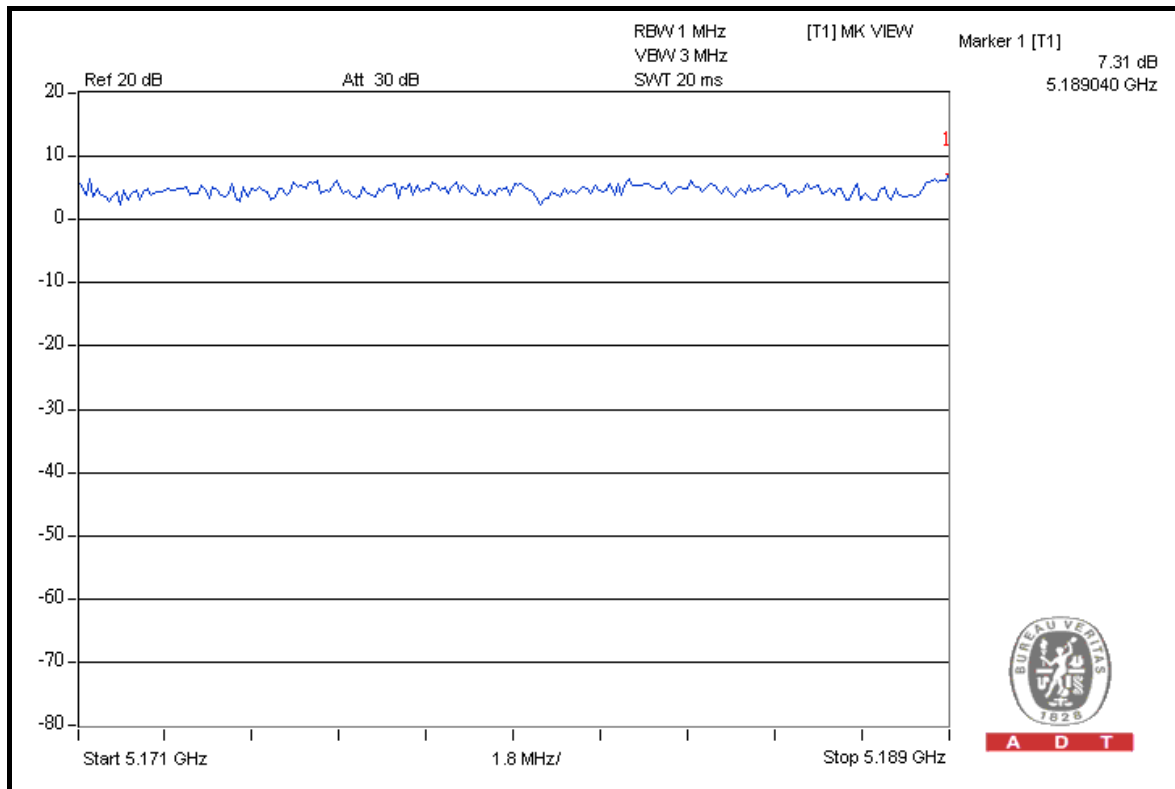
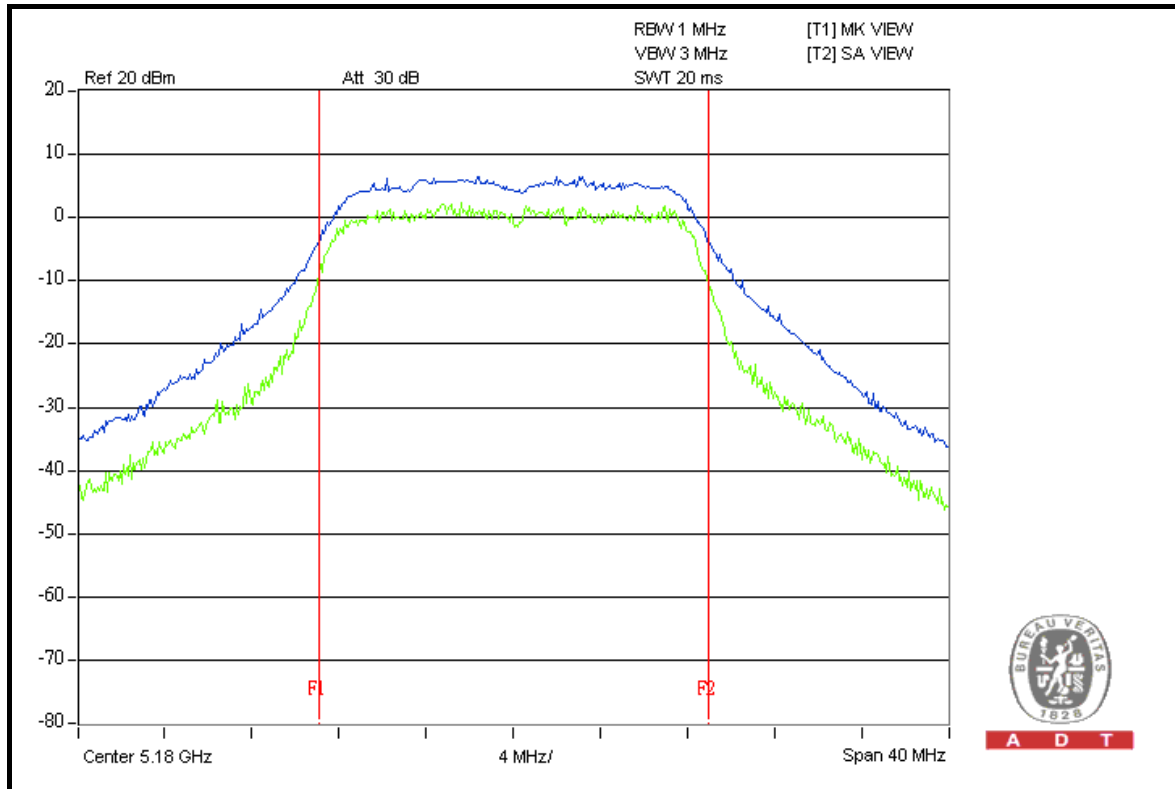
CH 64





A D T

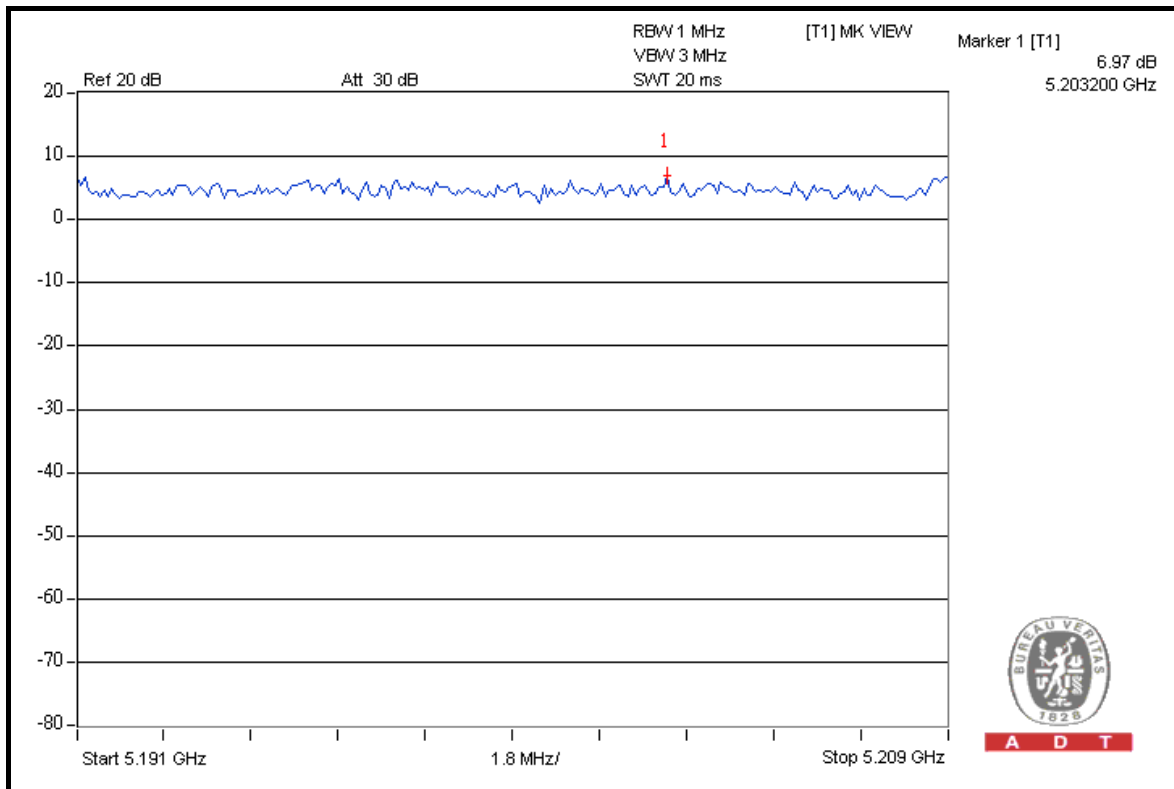
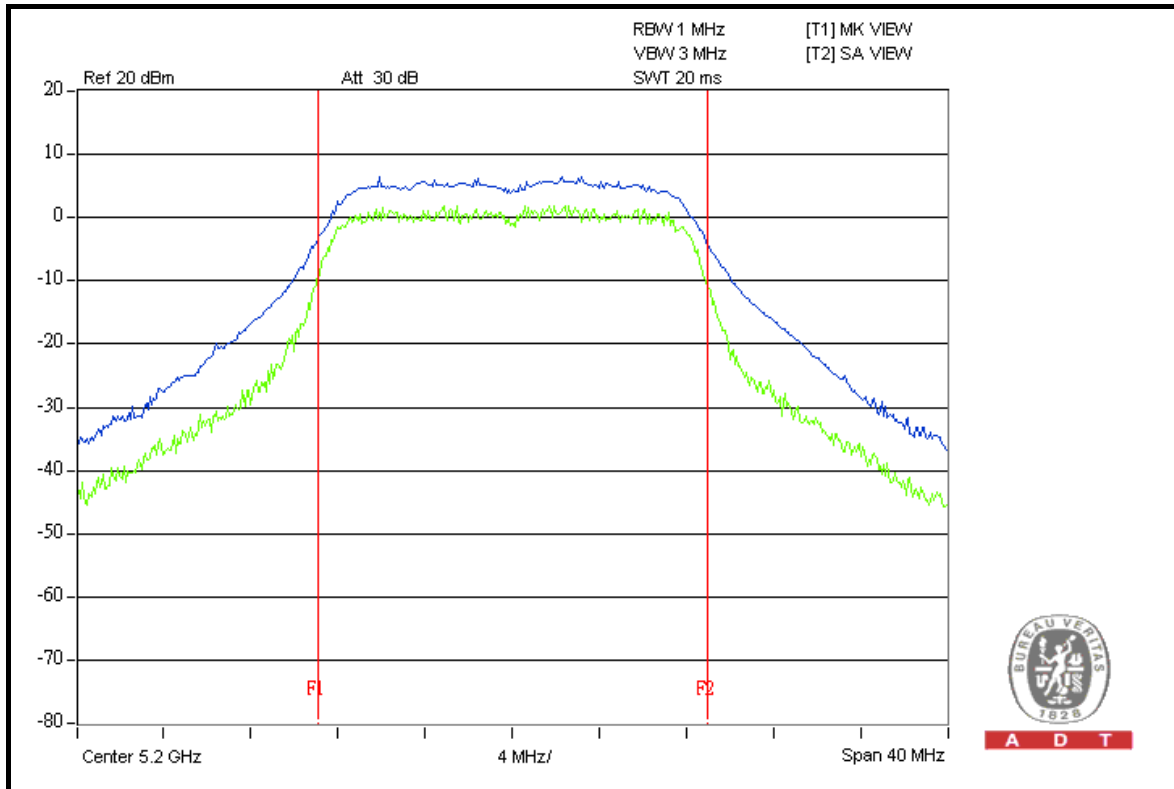
FOR CHAIN 1: CH 36





A D T

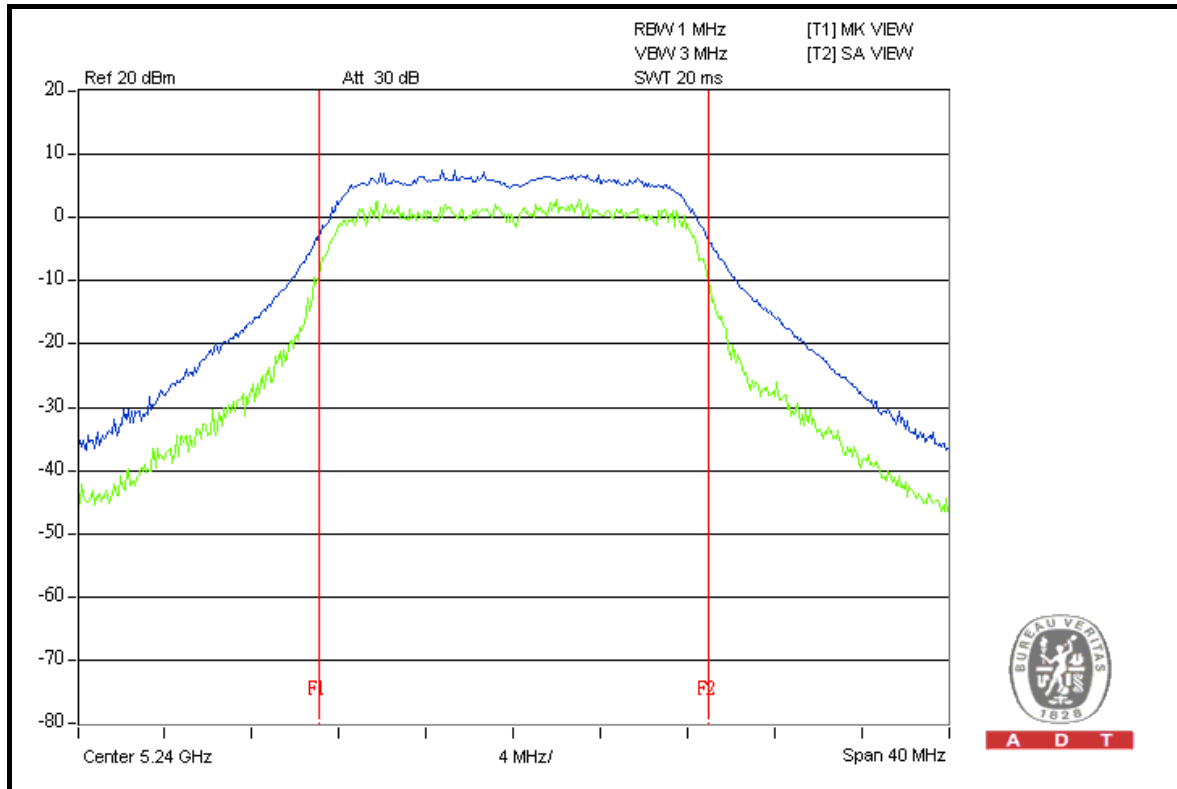
CH 40



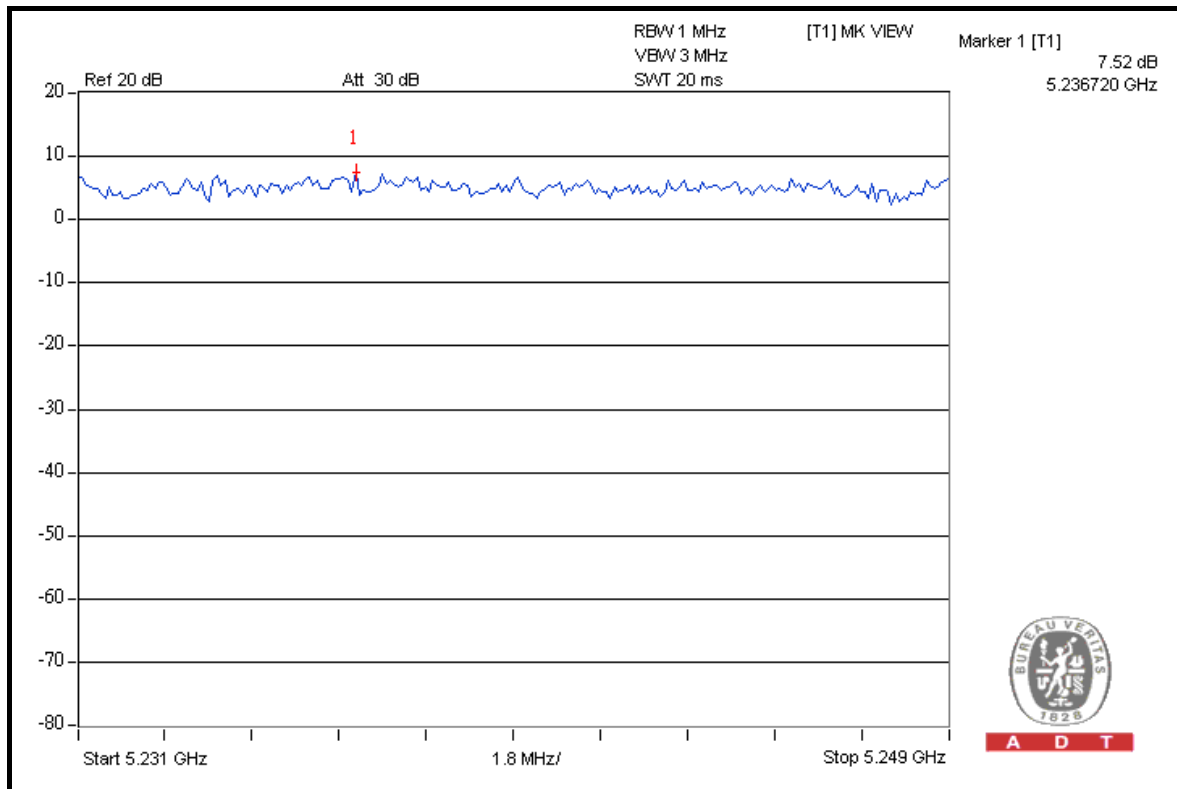


A D T

CH 48



A D T

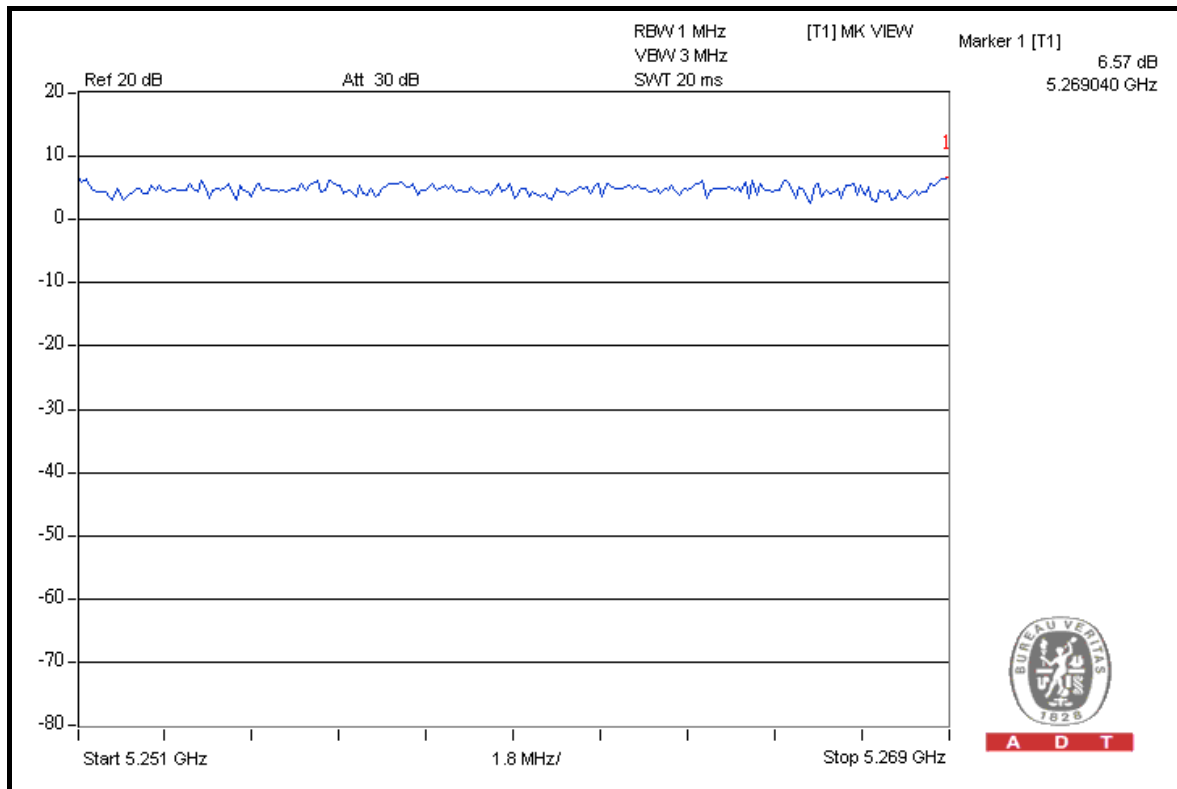
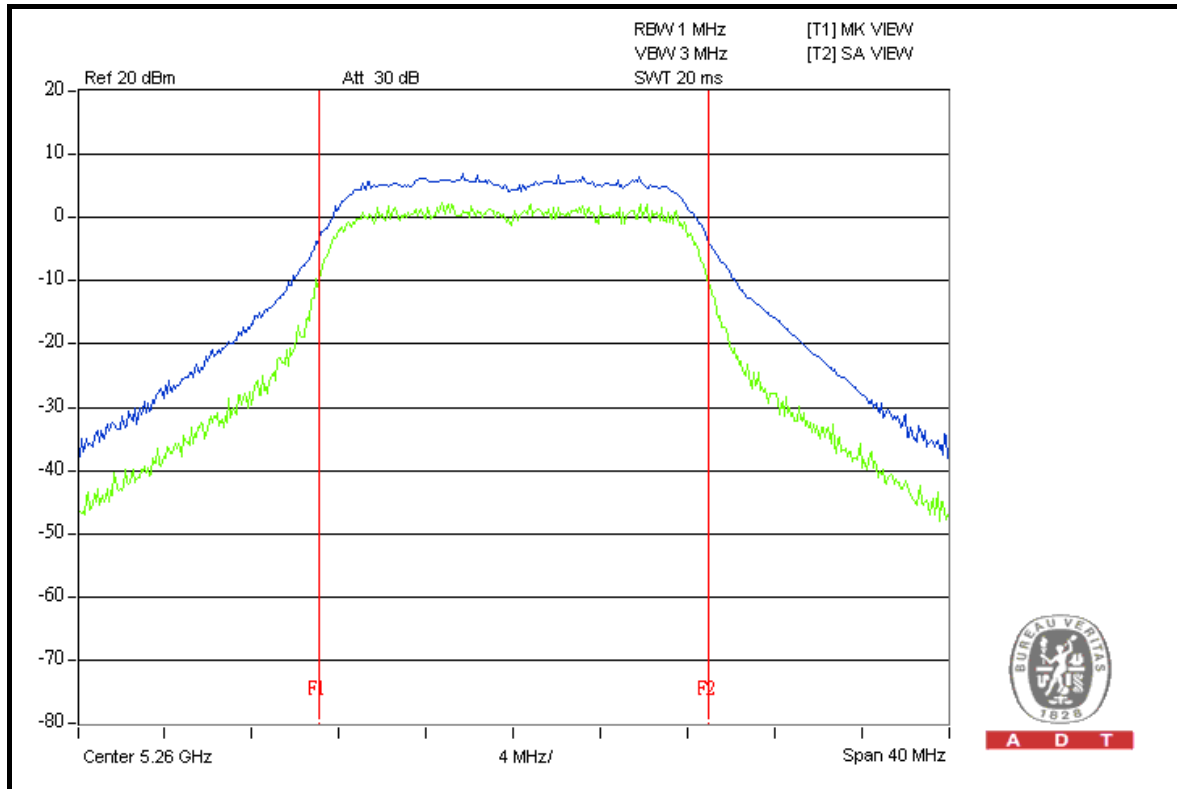


A D T



A D T

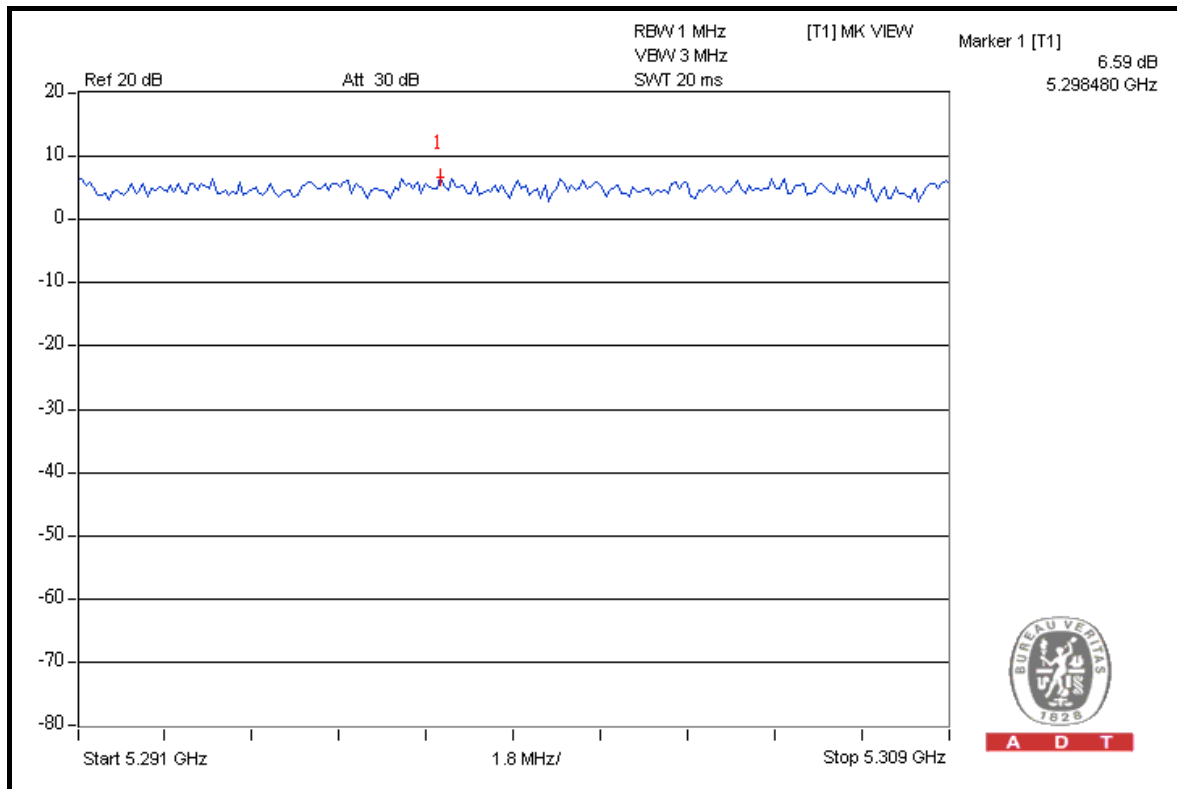
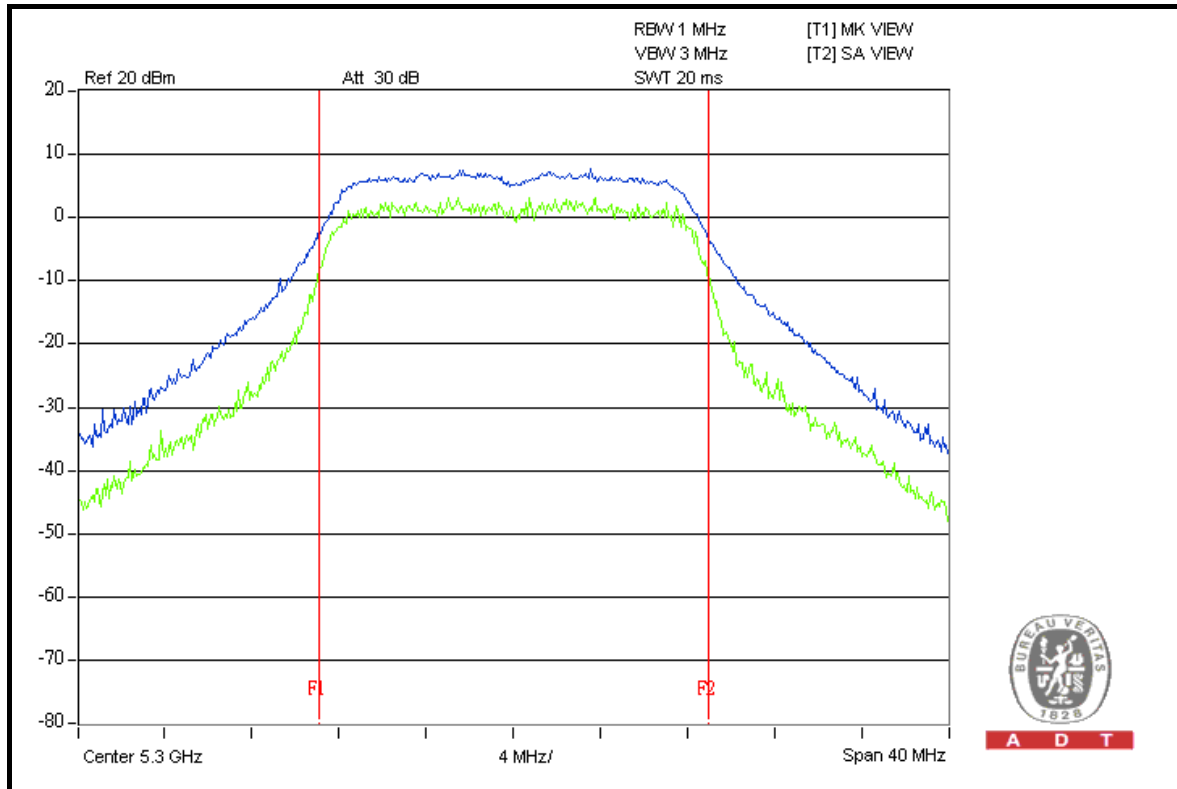
CH 52





A D T

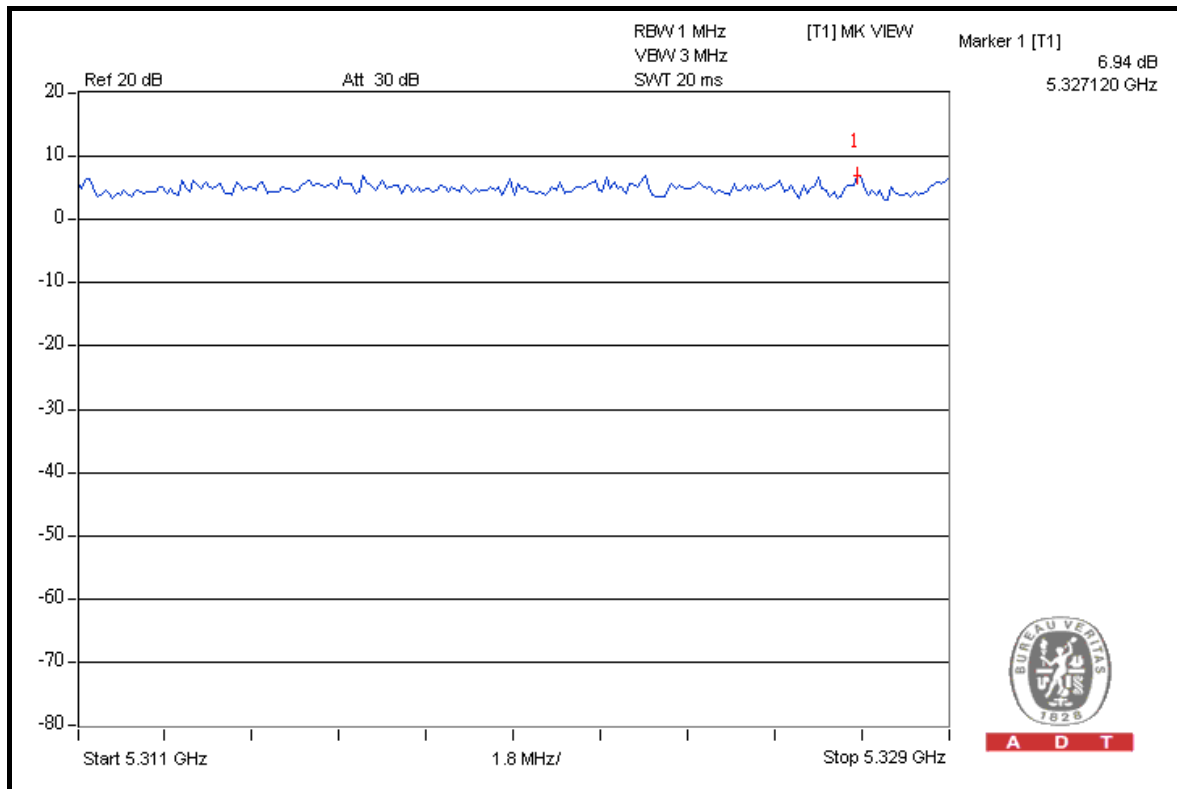
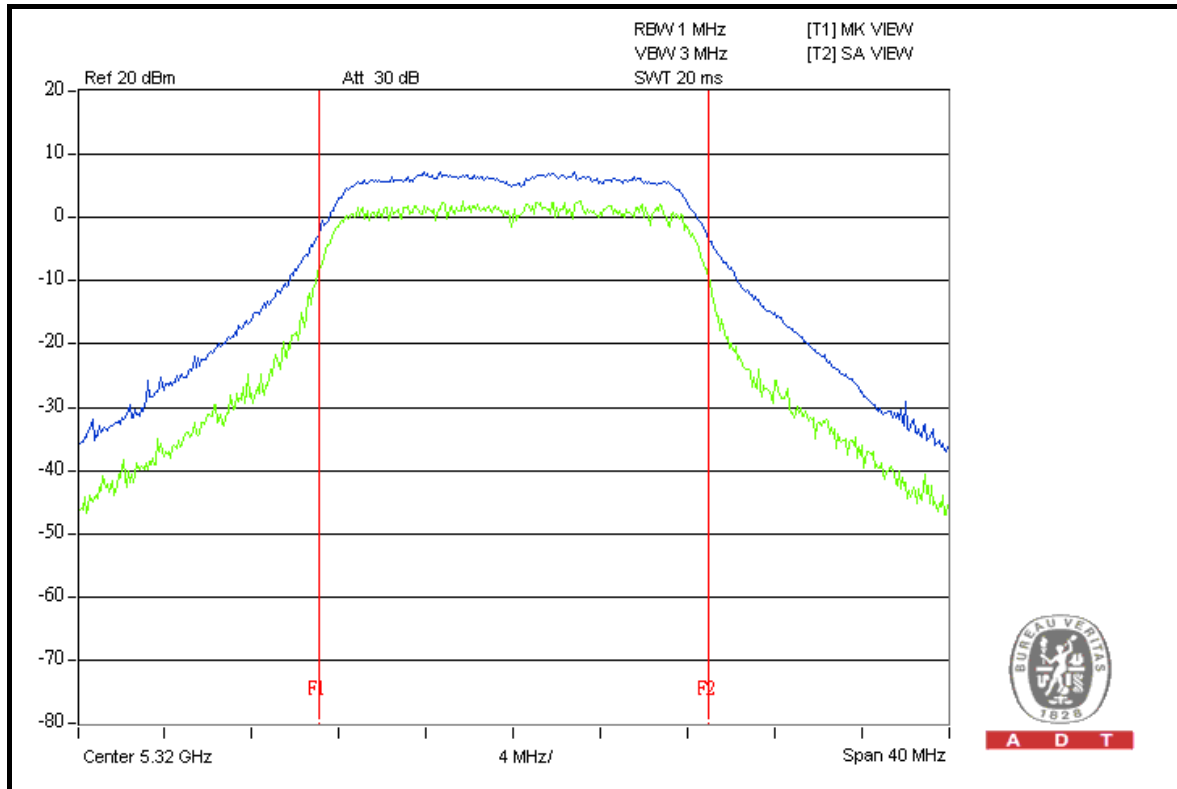
CH 60





A D T

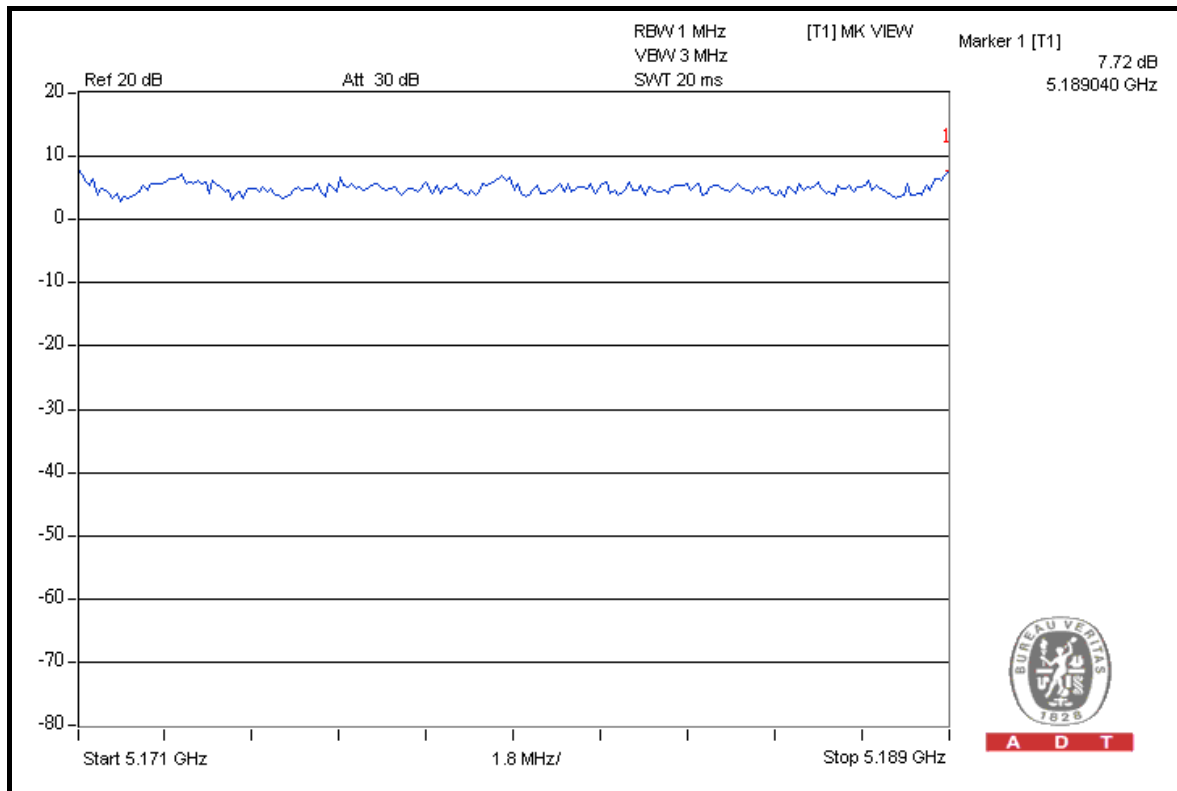
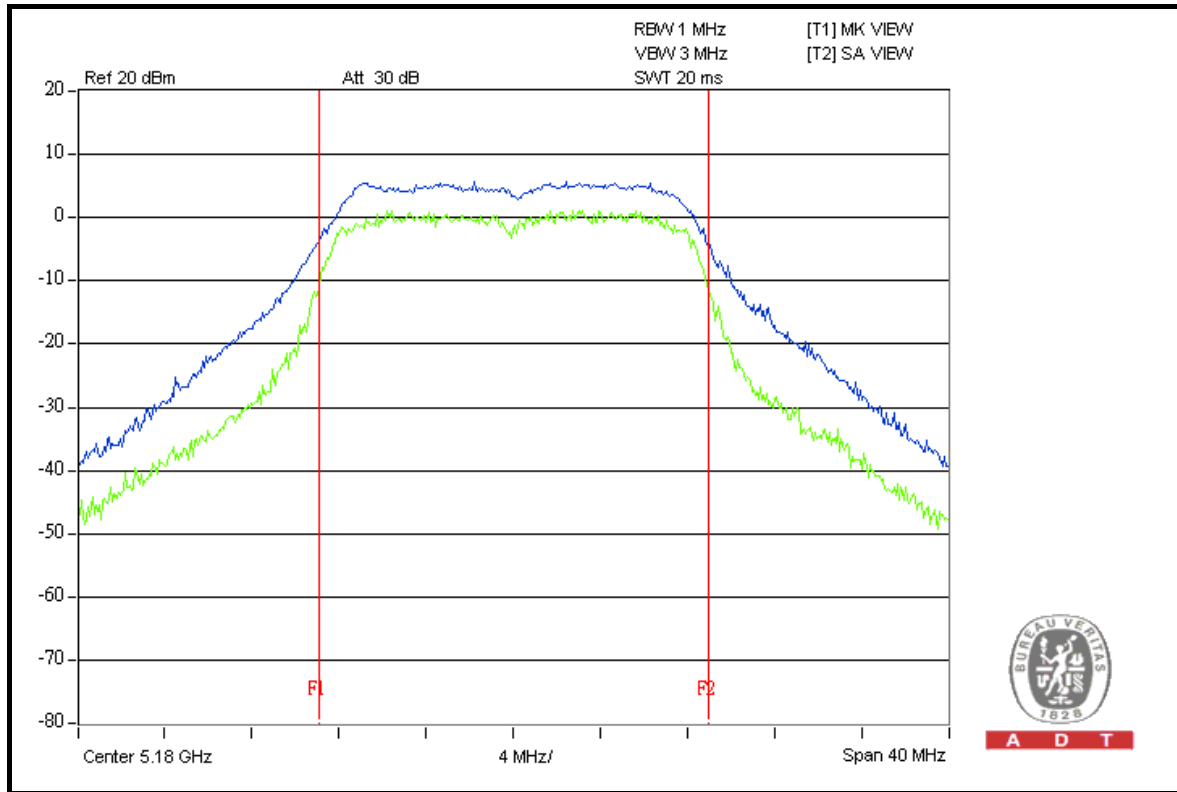
CH 64





A D T

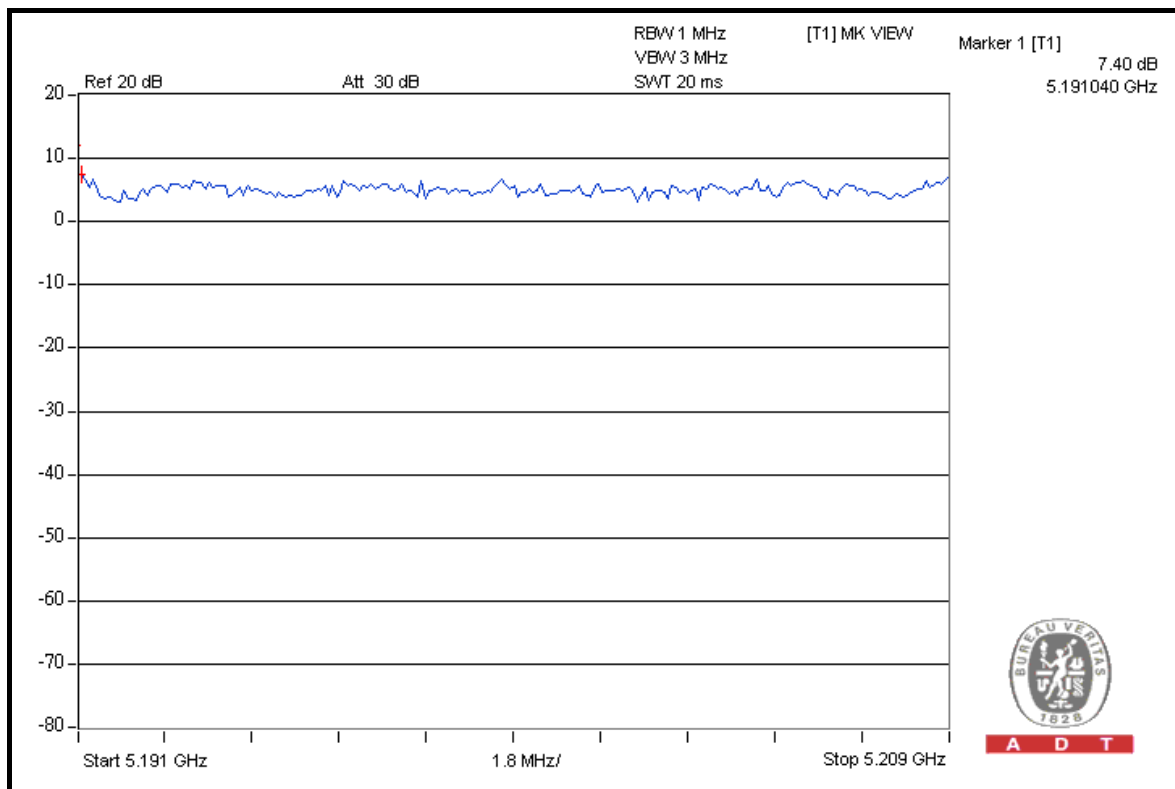
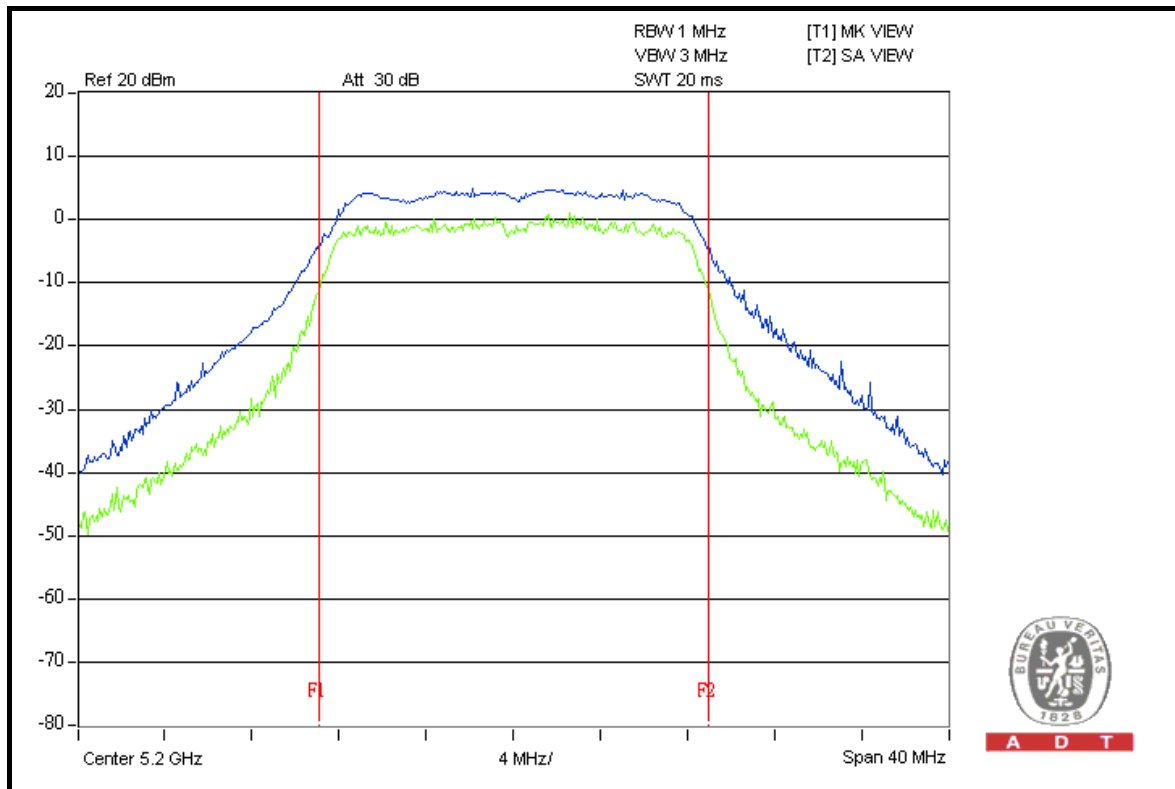
FOR CHAIN 2: CH 36





A D T

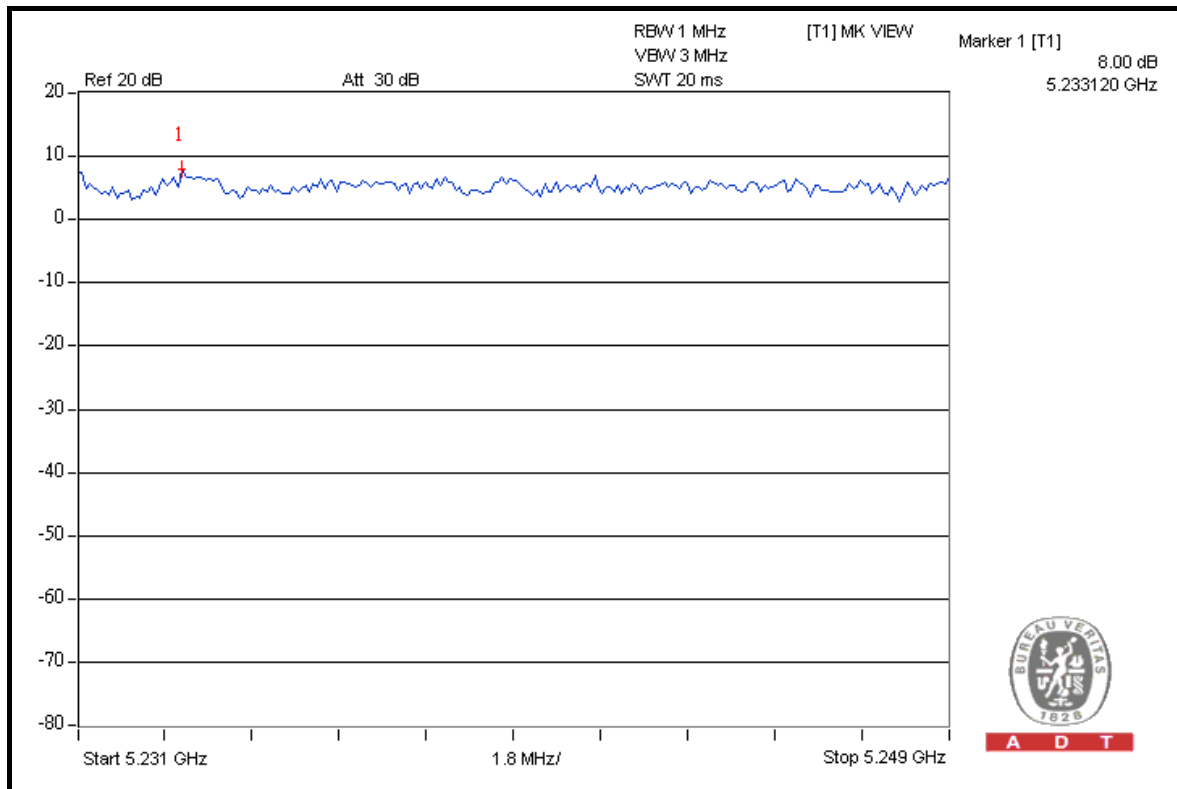
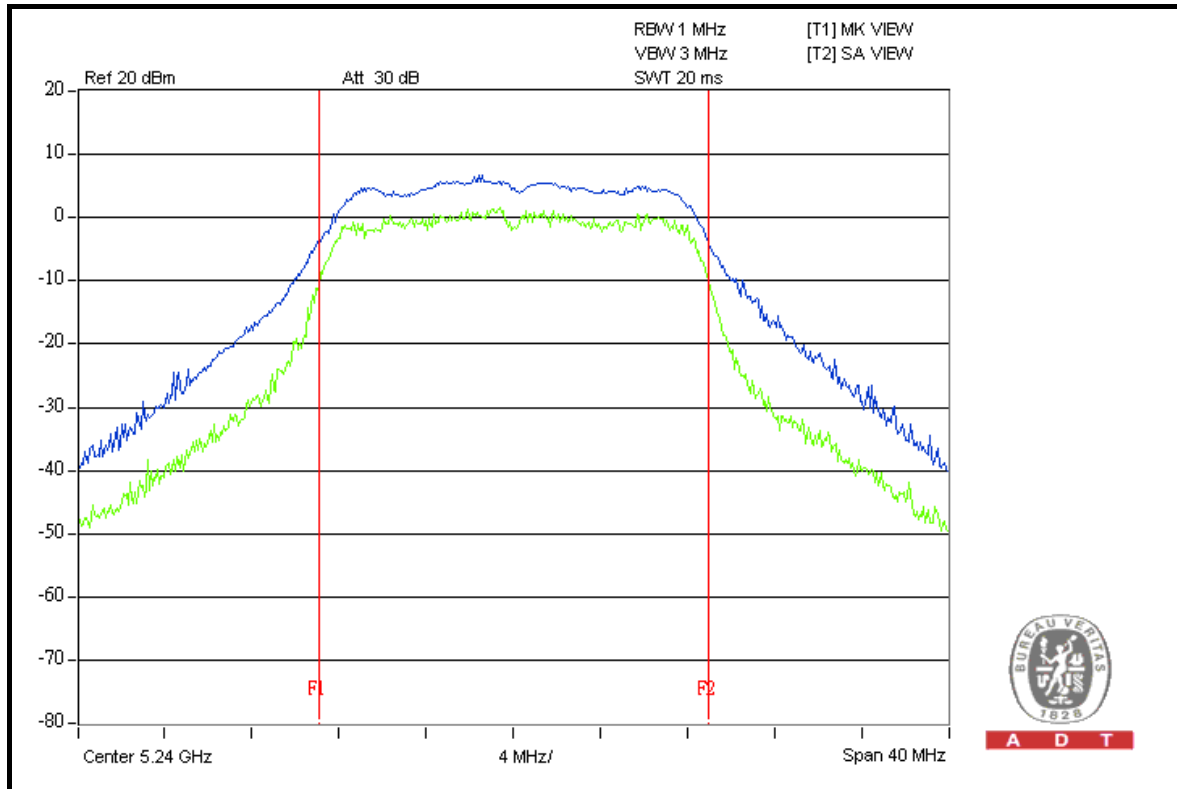
CH 40





A D T

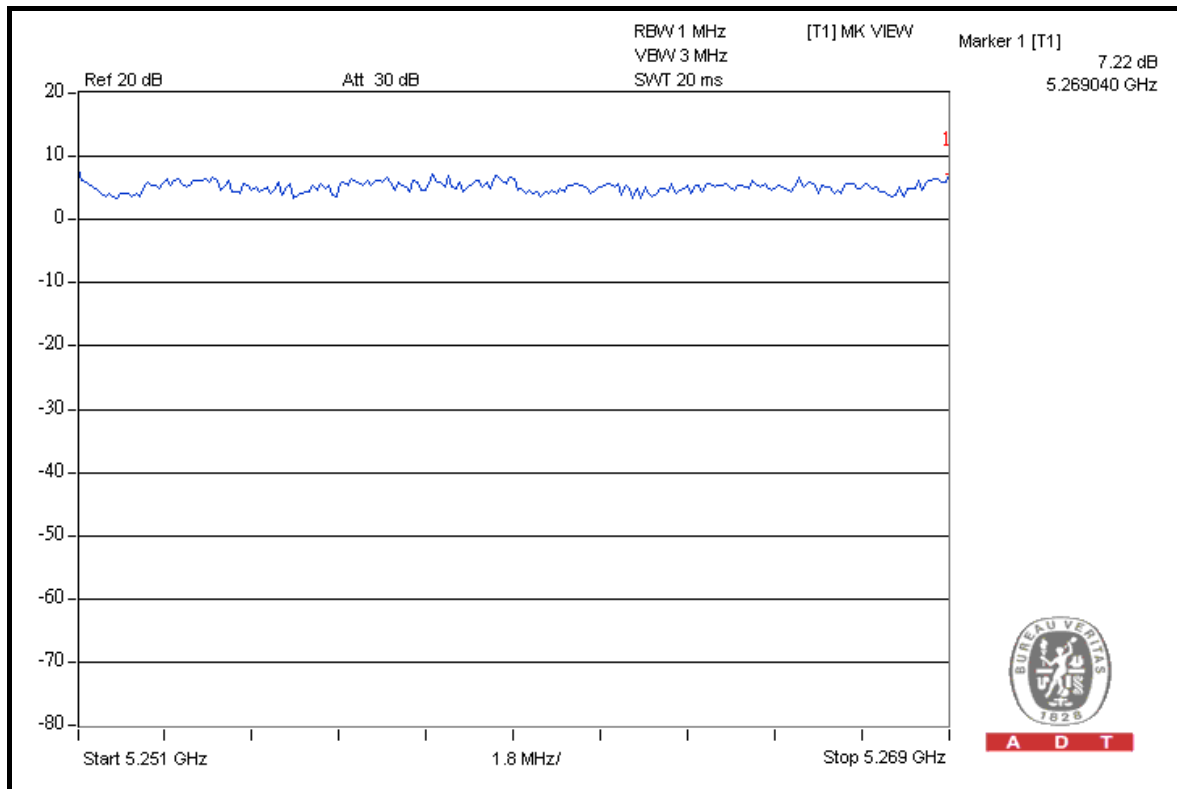
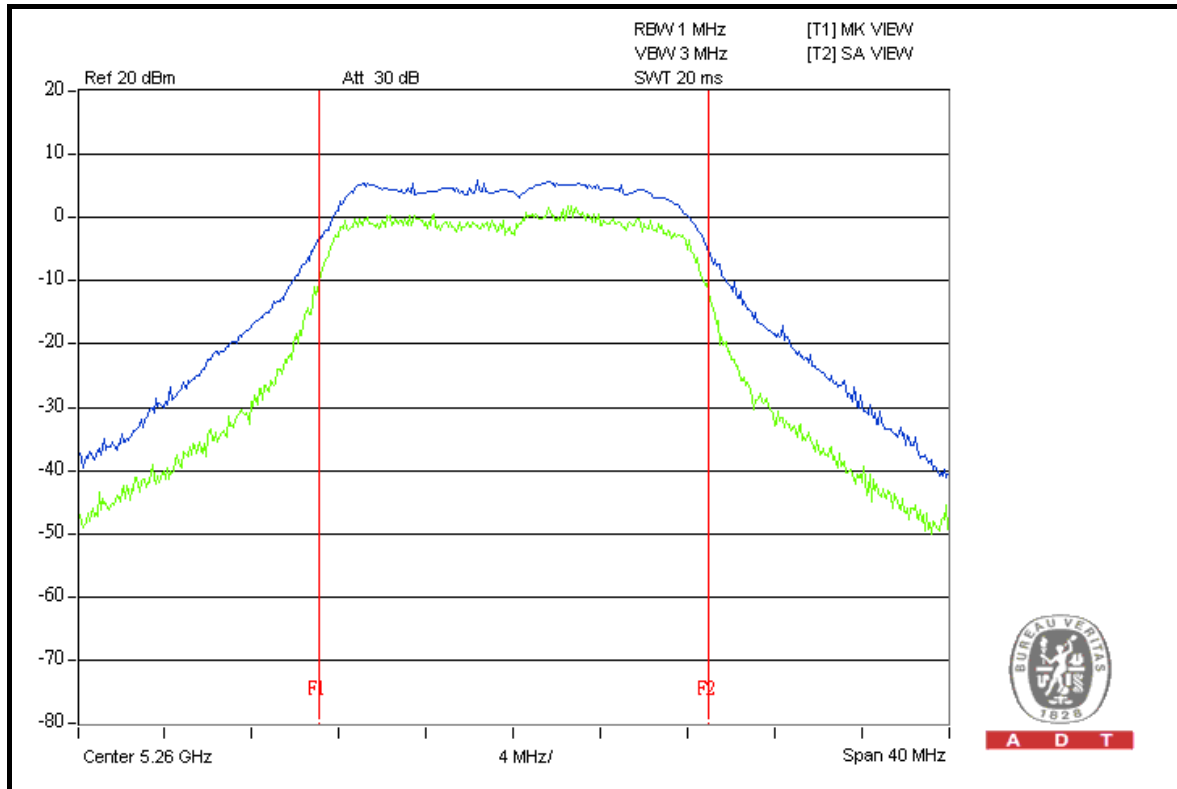
CH 48





A D T

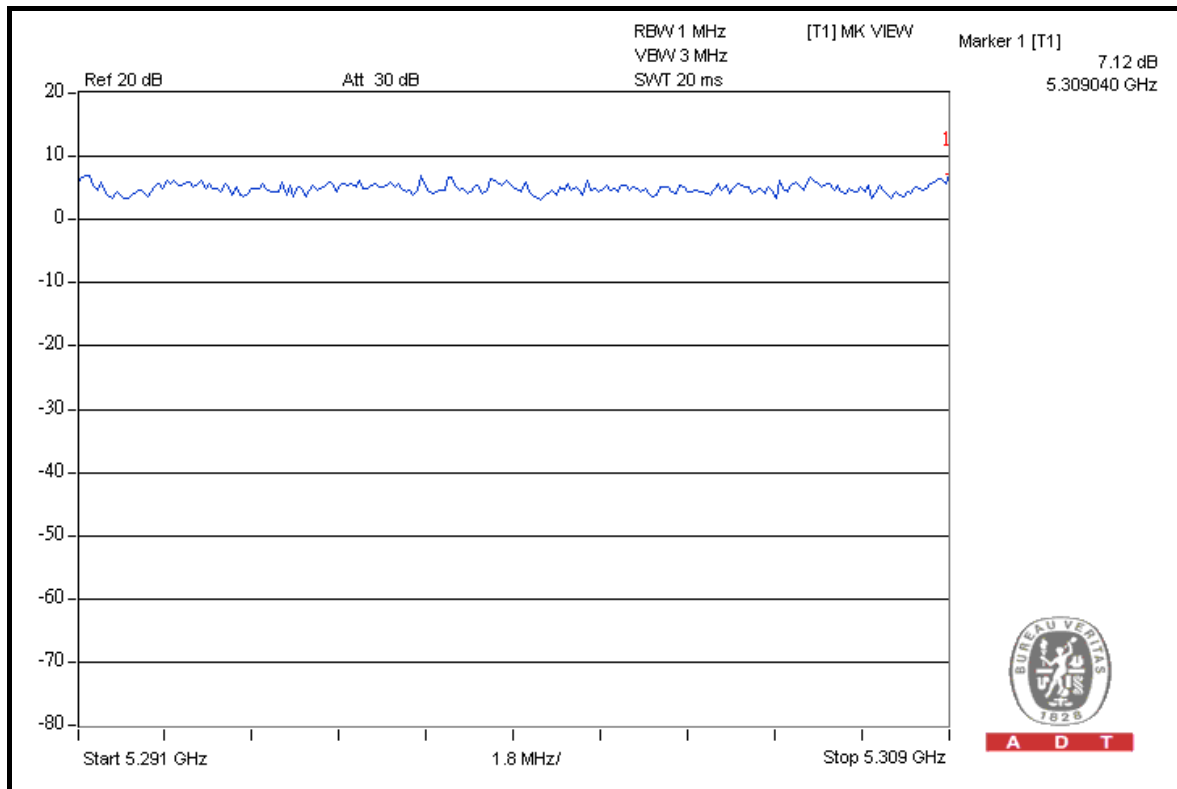
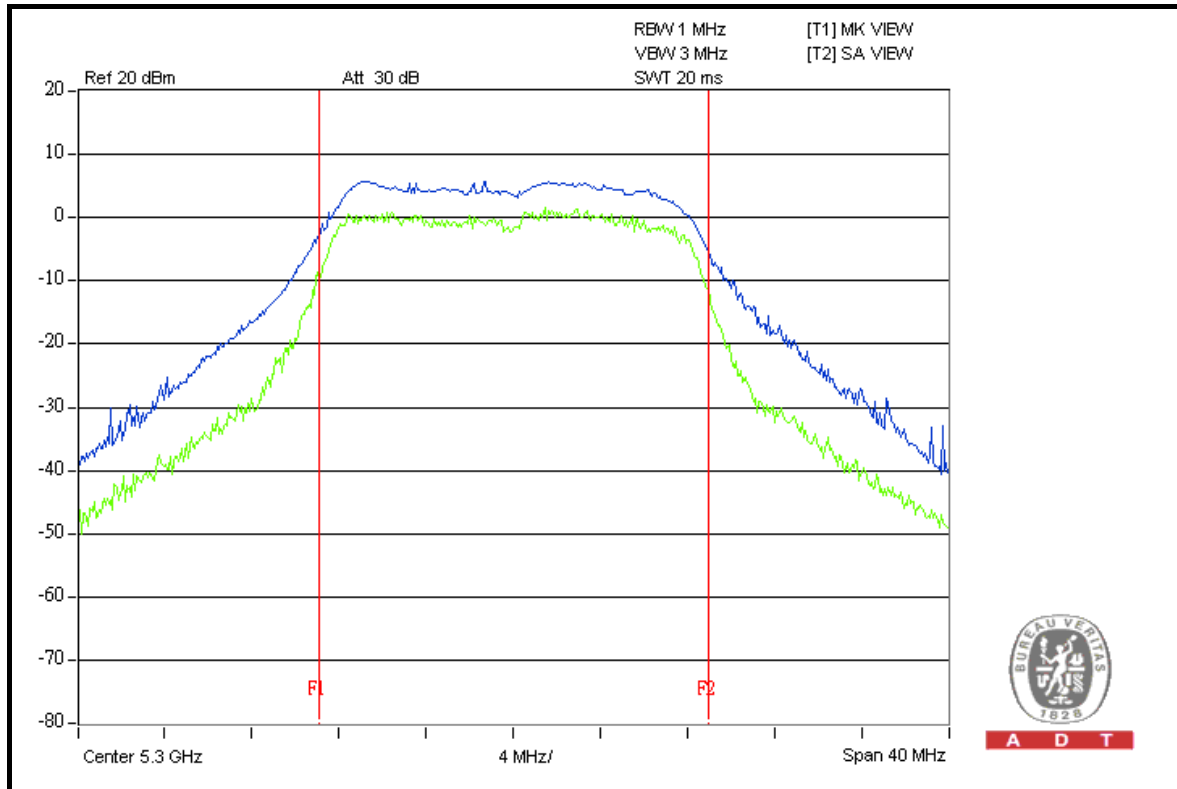
CH 52





A D T

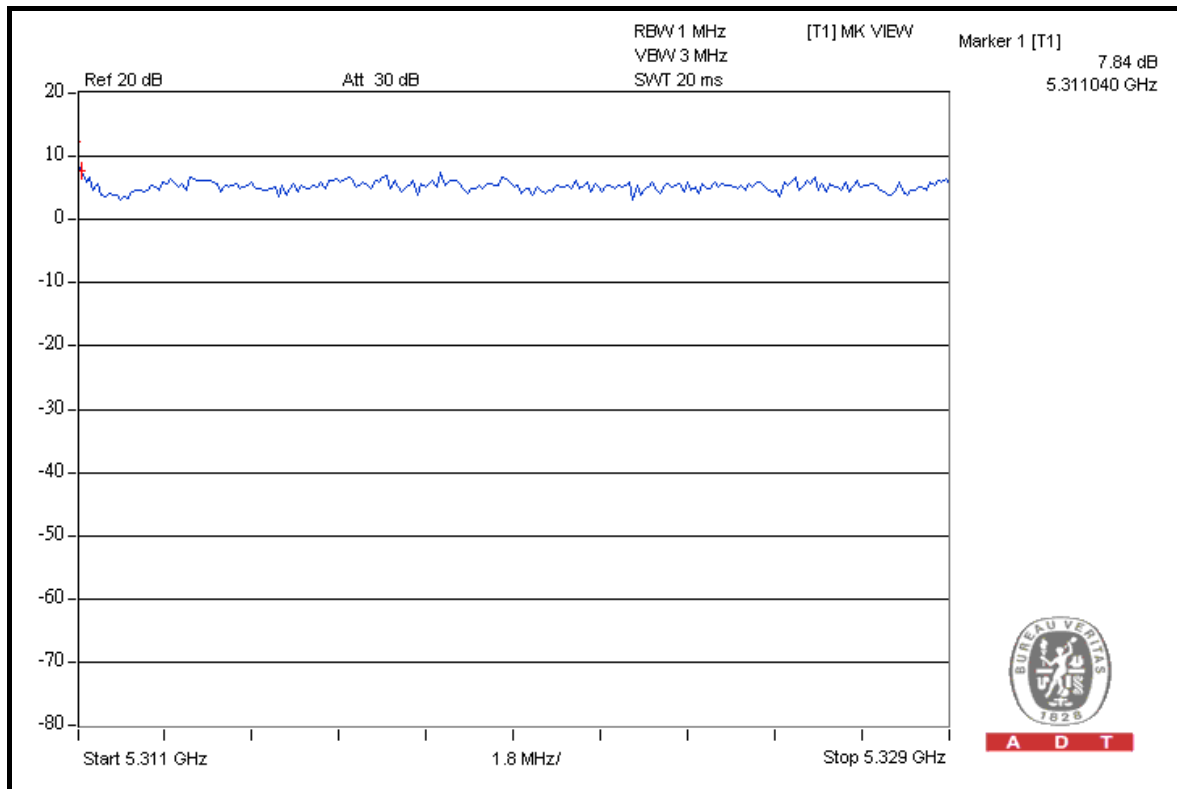
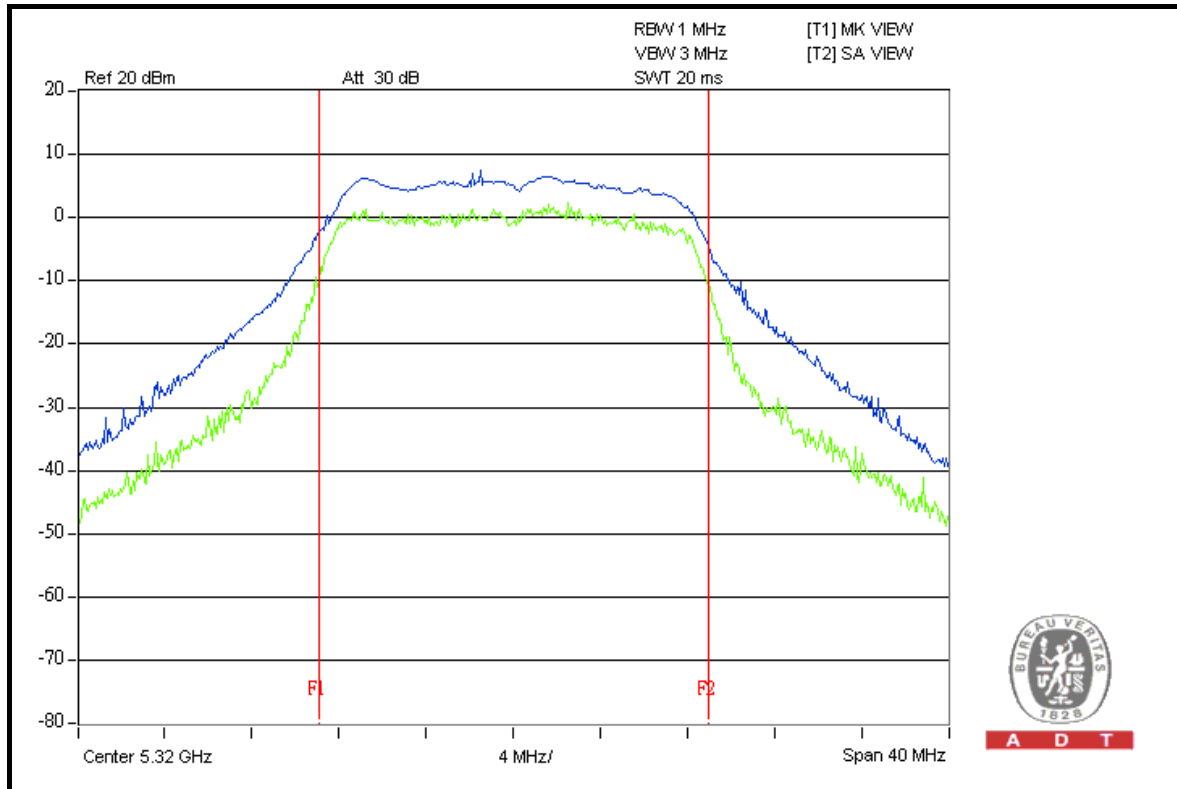
CH 60





A D T

CH 64





A D T

DRAFT 802.11n (20MHz) OFDM MODULATION

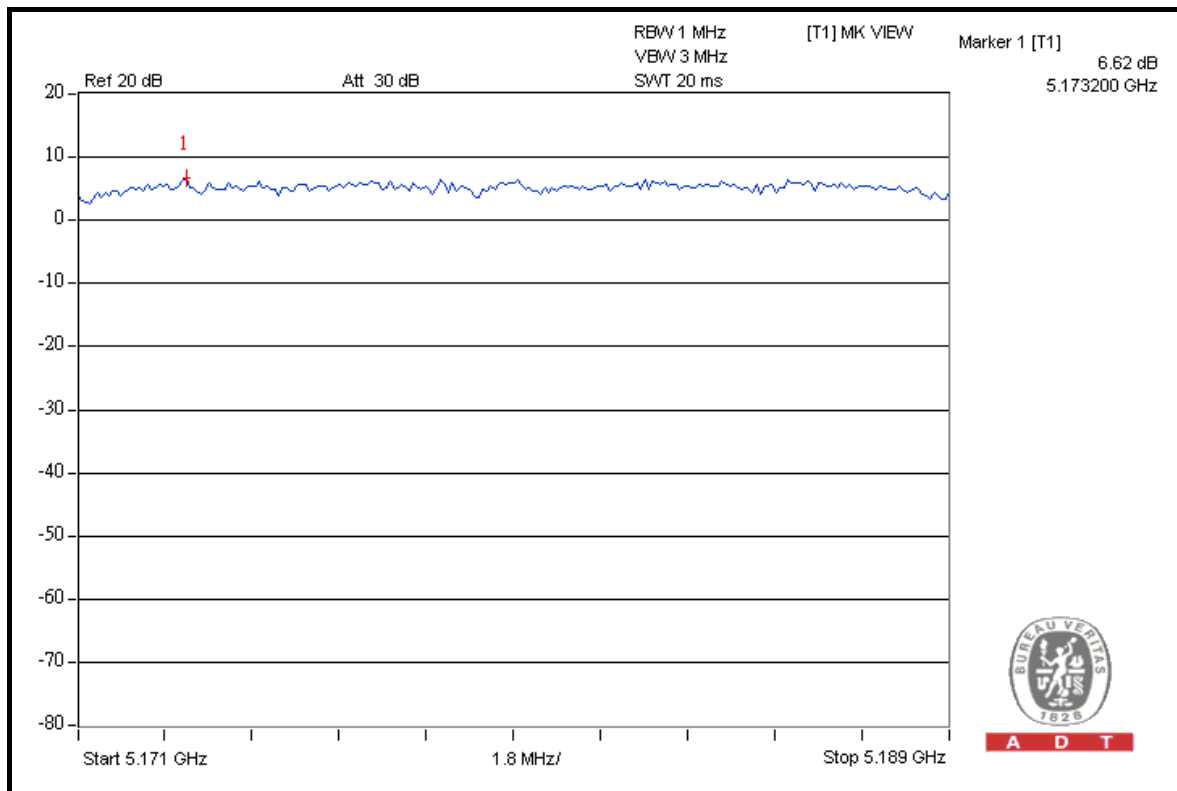
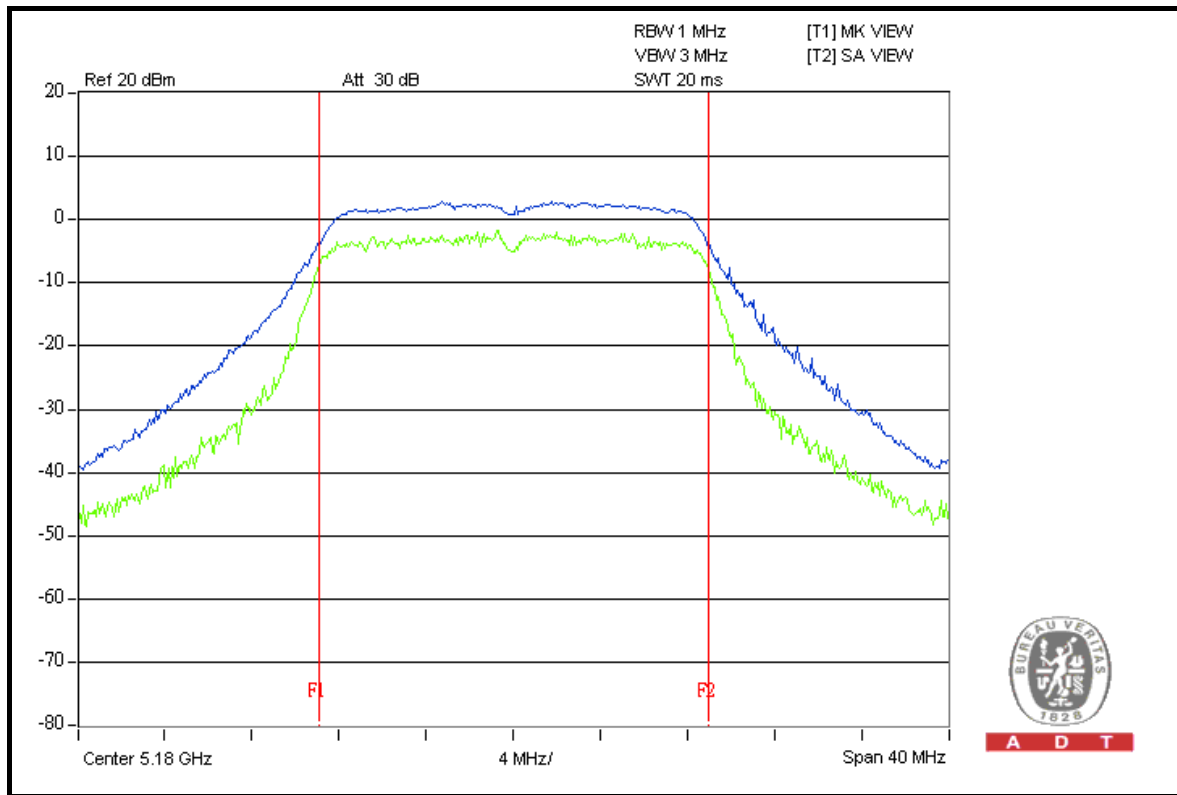
MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)			PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
36	5180	6.62	7.79	6.59	13	PASS
40	5200	6.10	6.89	6.53	13	PASS
48	5240	7.14	7.26	6.90	13	PASS
52	5260	6.09	7.08	6.66	13	PASS
60	5300	7.02	6.91	6.25	13	PASS
64	5320	8.14	6.76	6.88	13	PASS



A D T

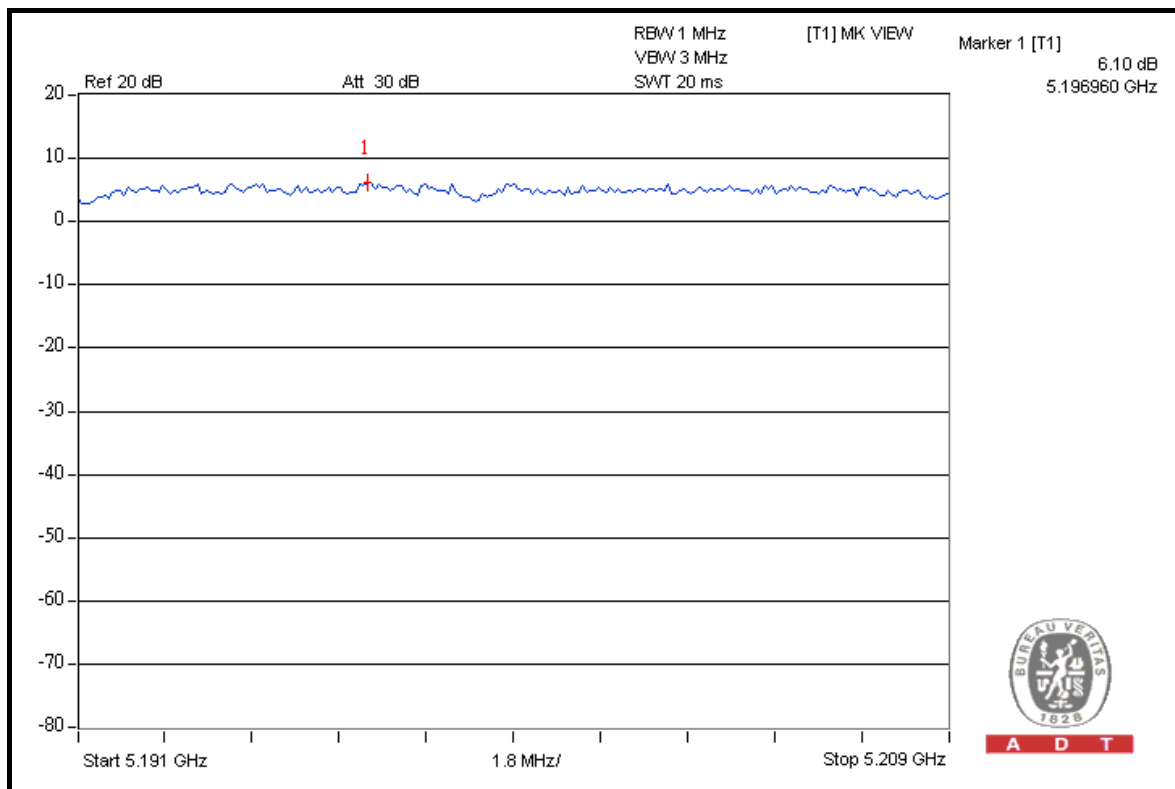
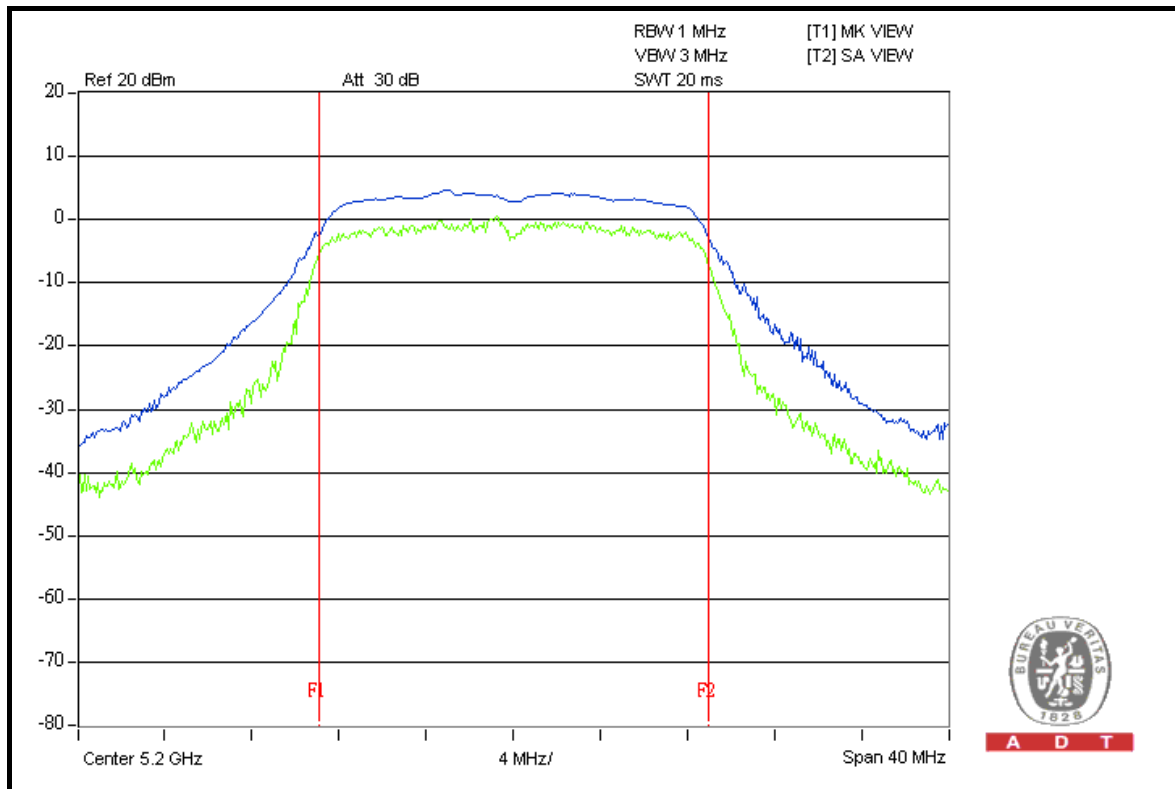
FOR CHAIN 0: CH 36





A D T

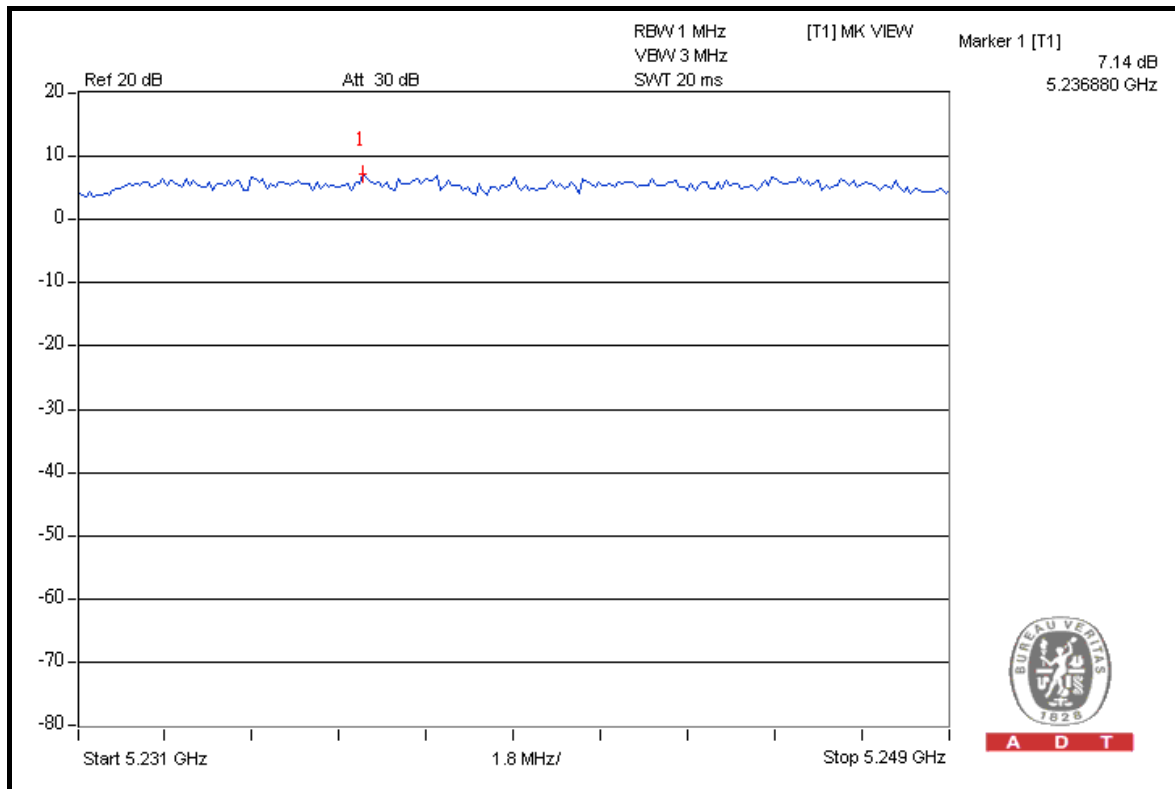
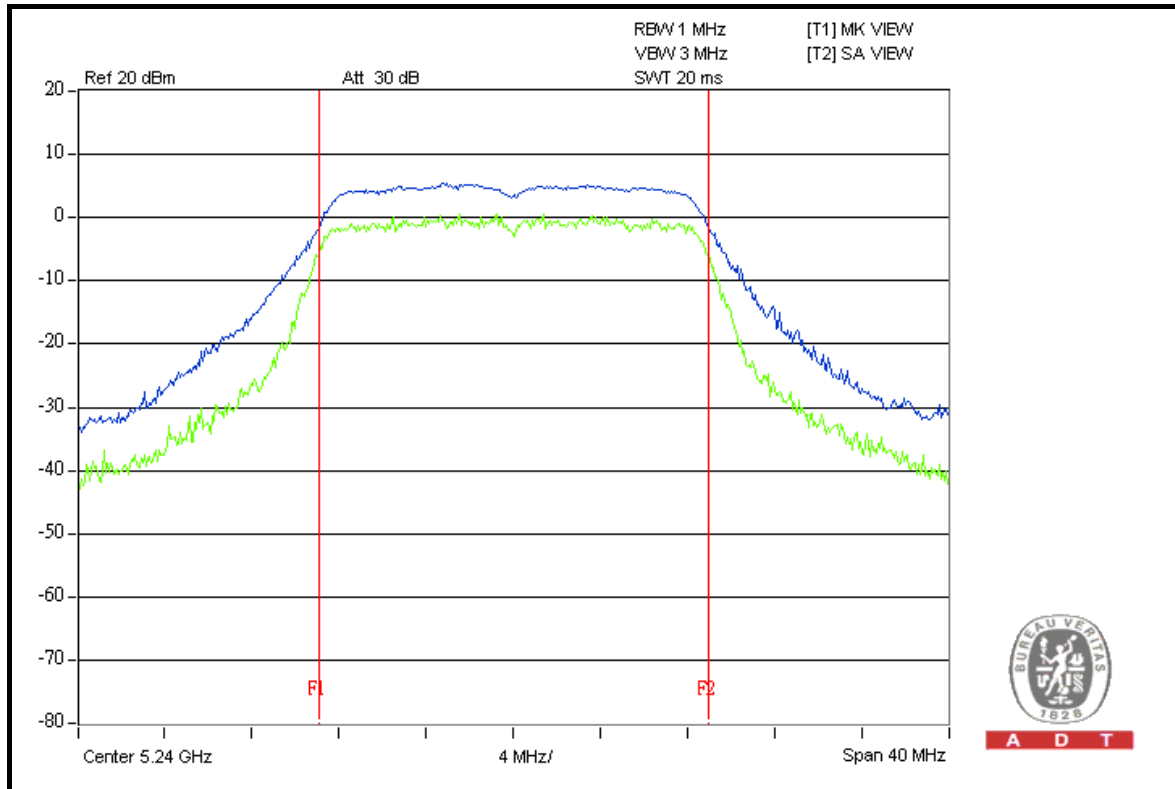
CH 40





A D T

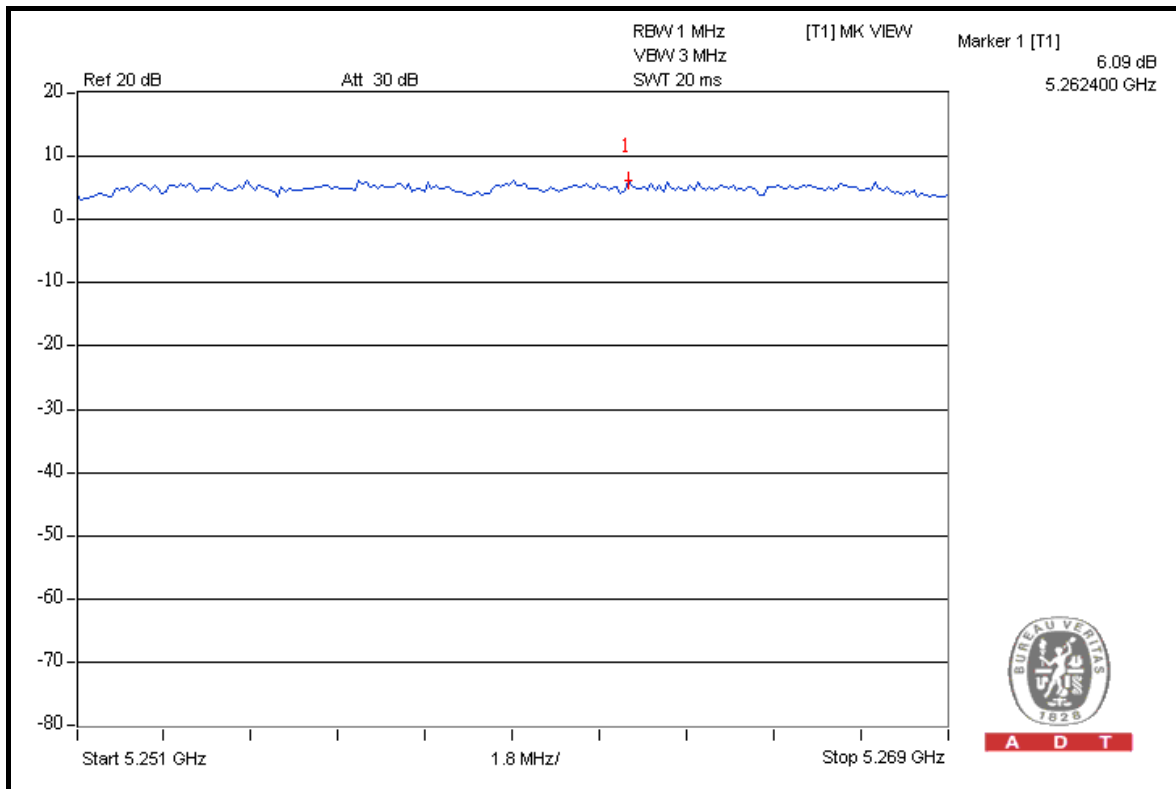
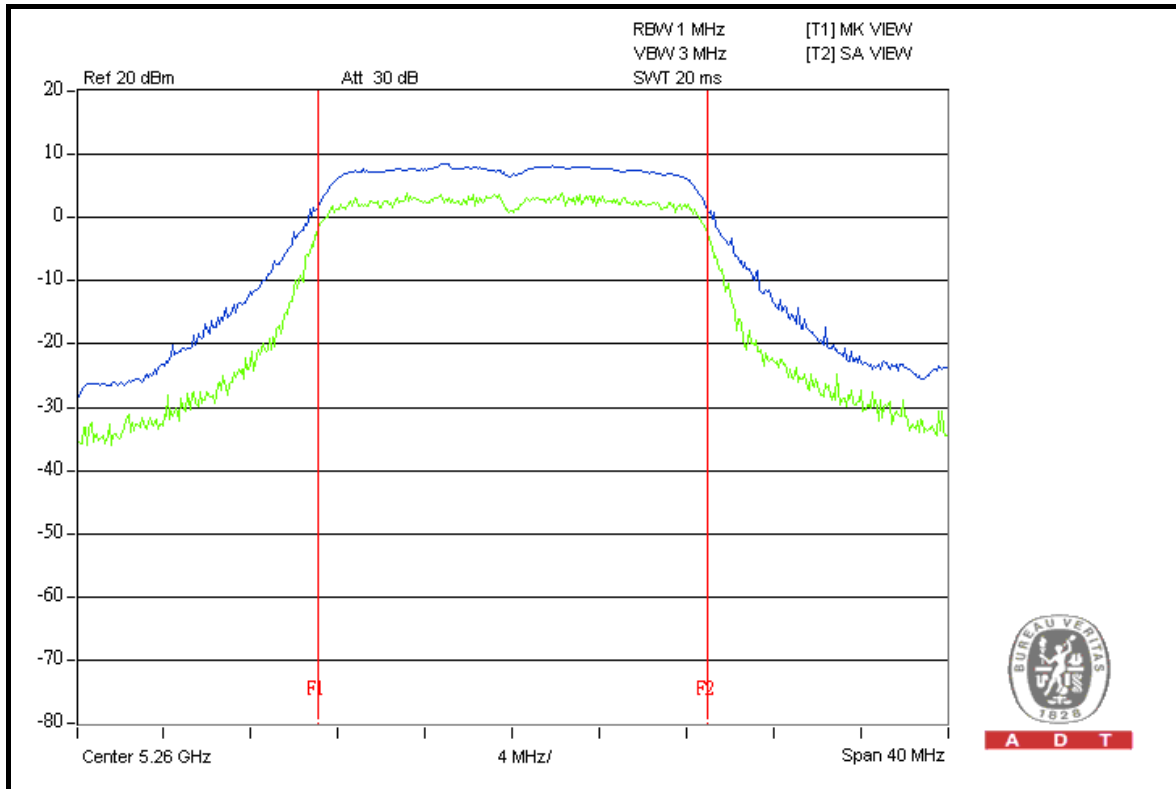
CH 48





A D T

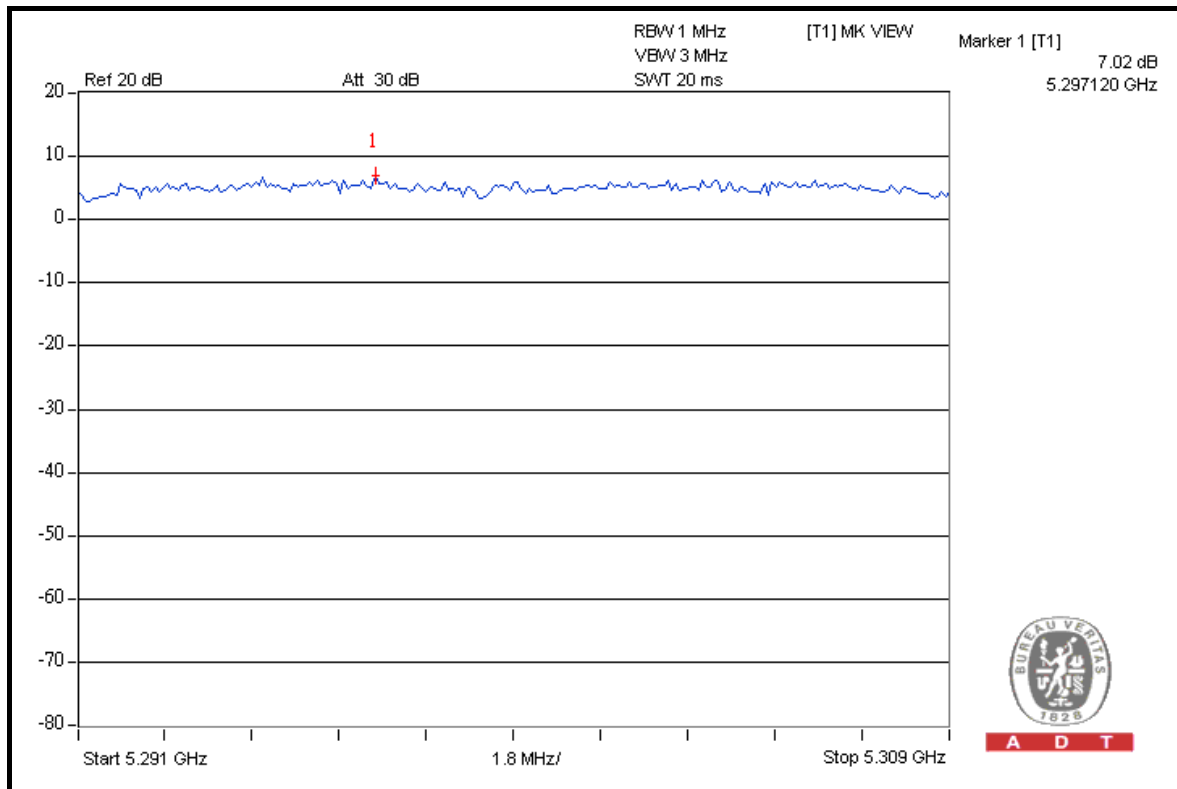
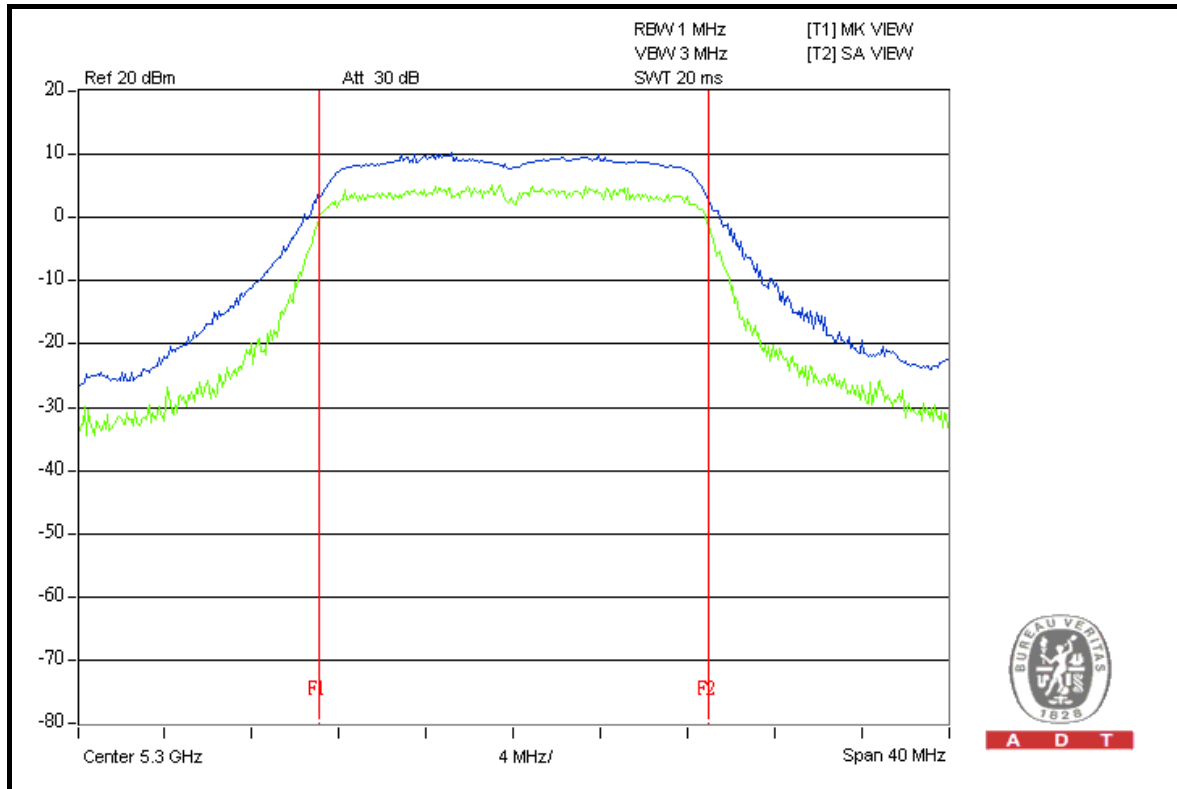
CH 52





A D T

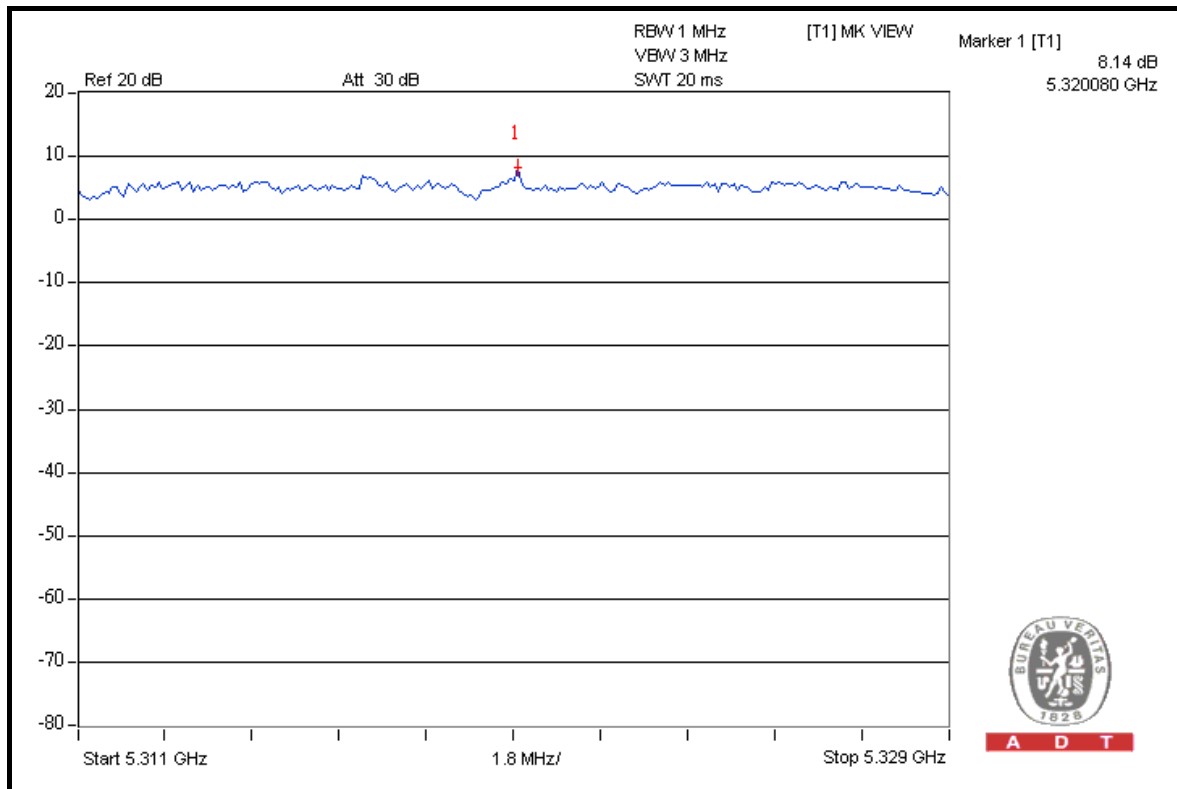
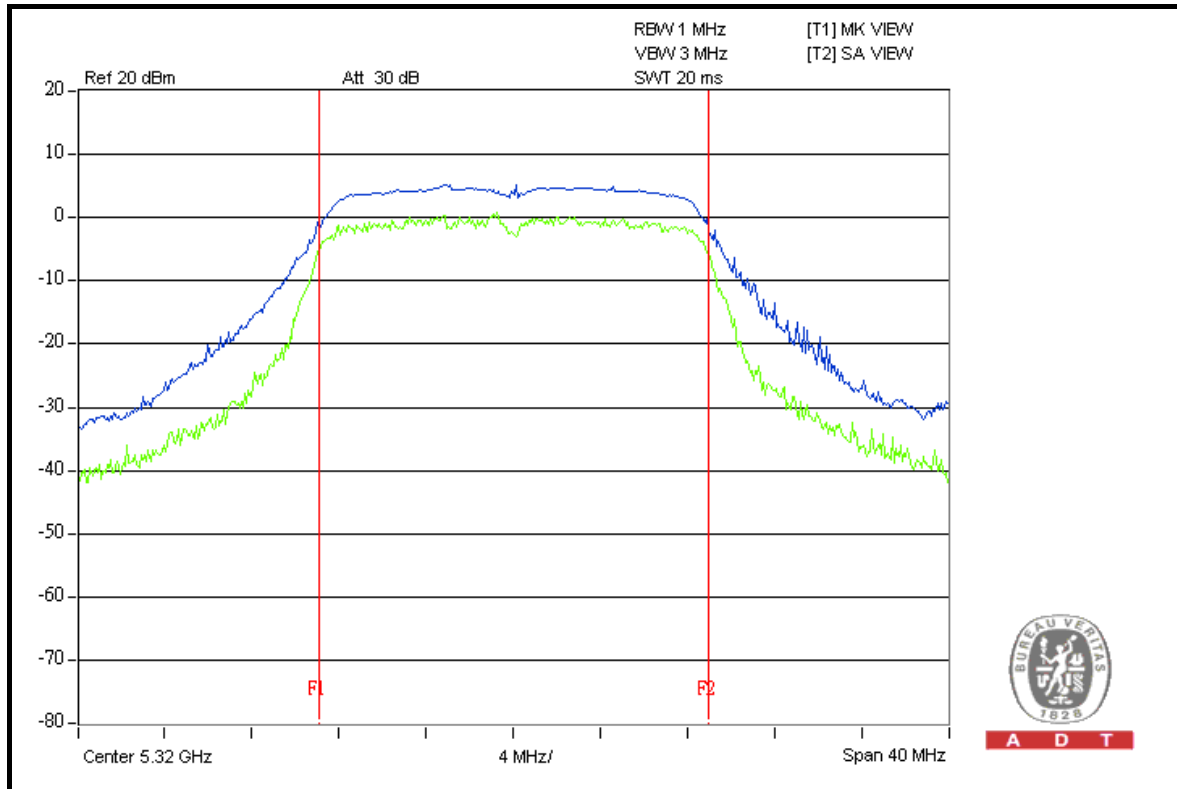
CH 60





A D T

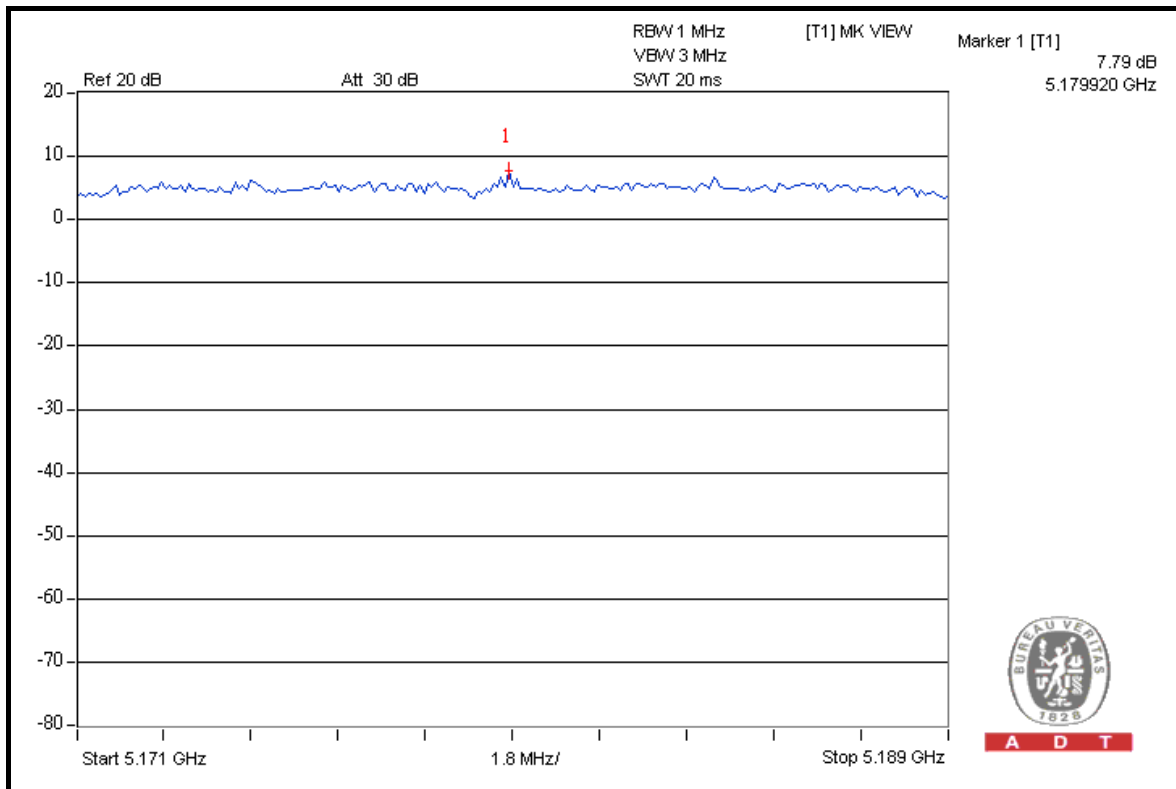
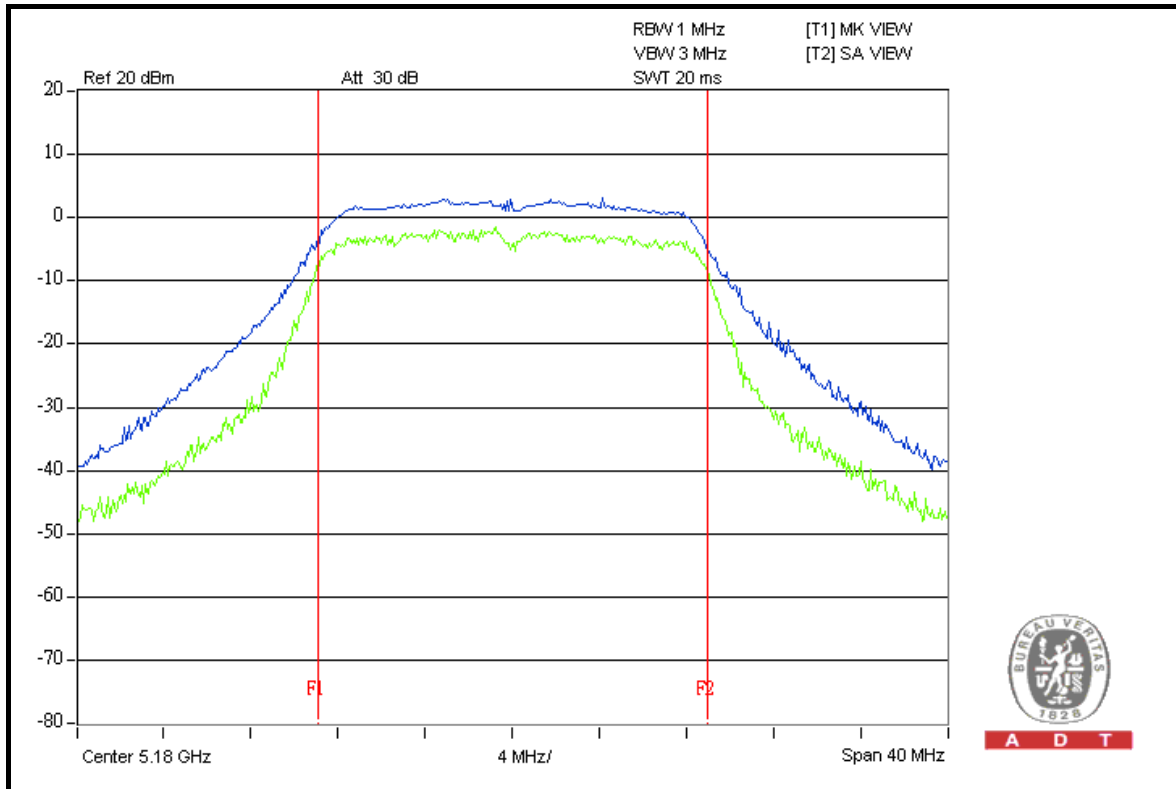
CH 64





A D T

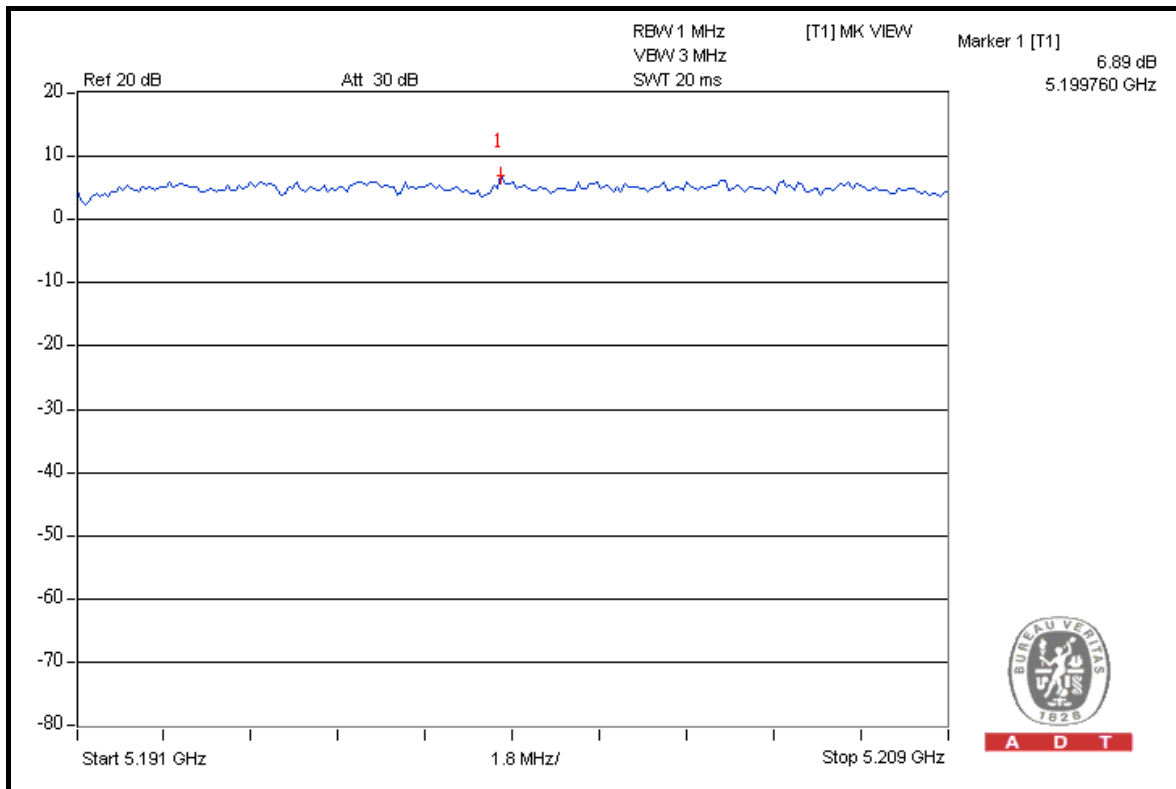
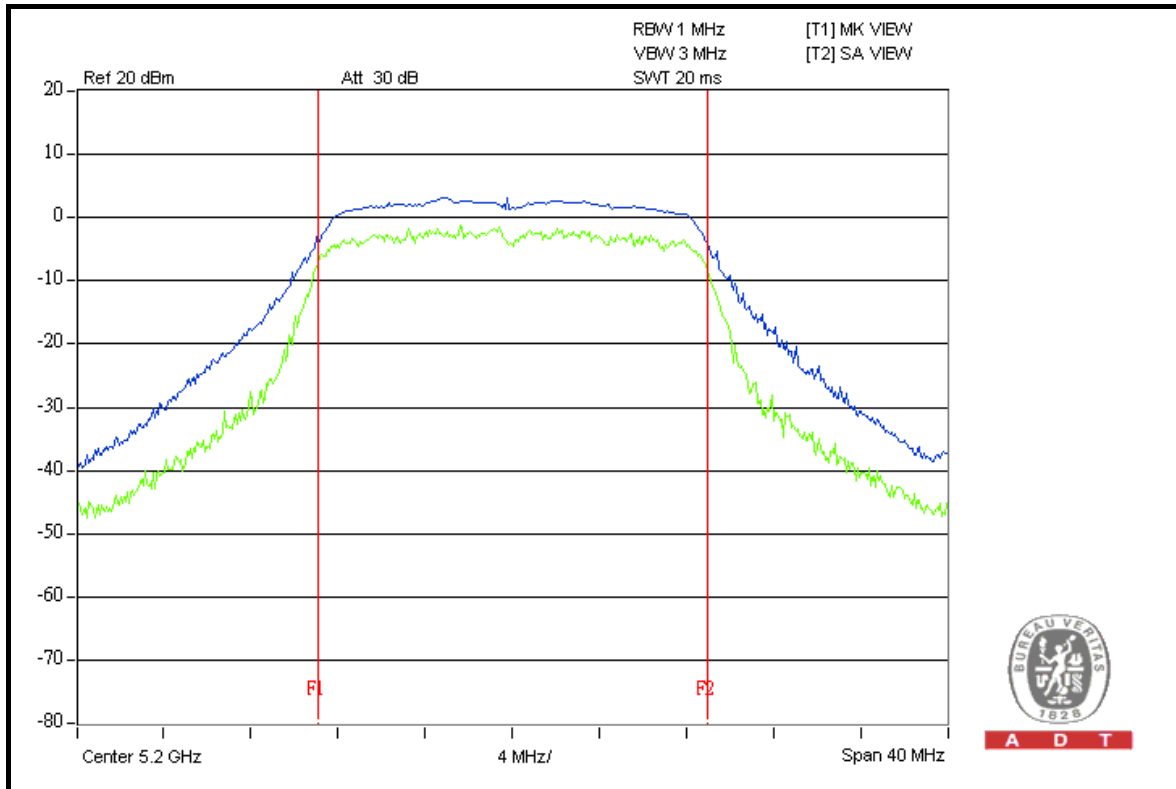
FOR CHAIN 1: CH 36





A D T

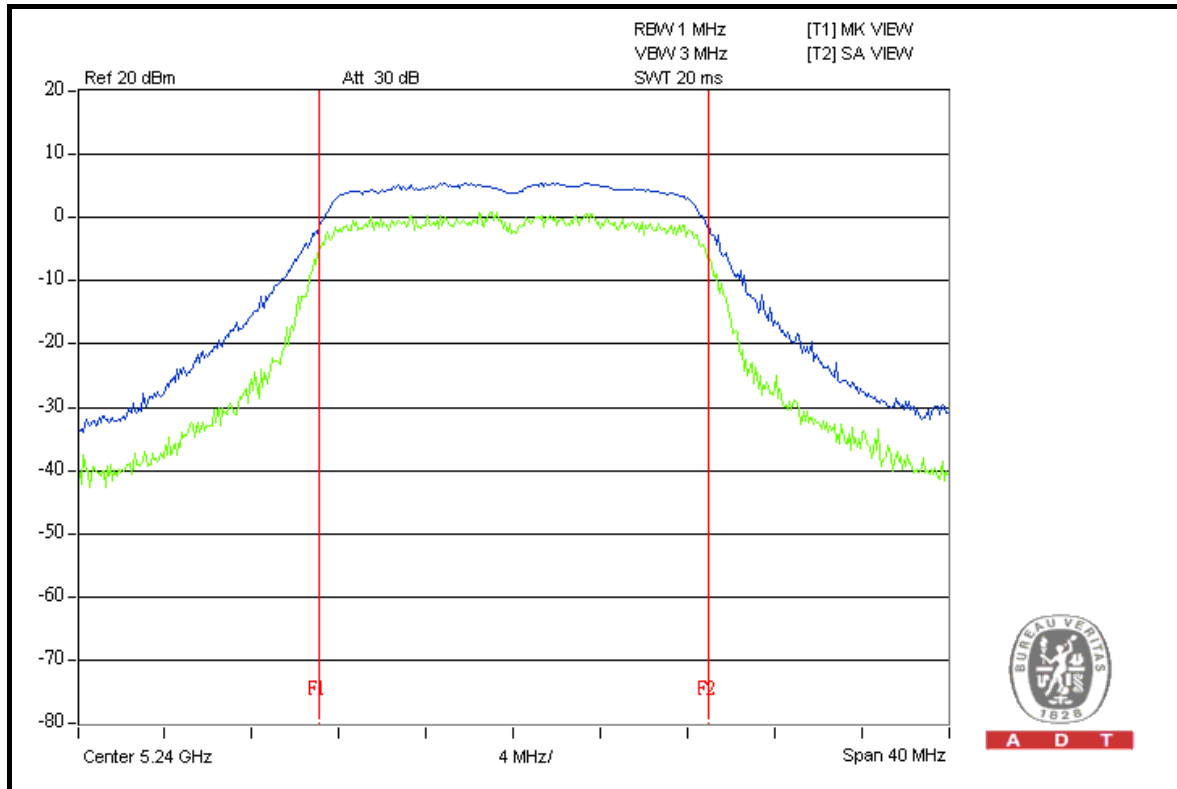
CH 40



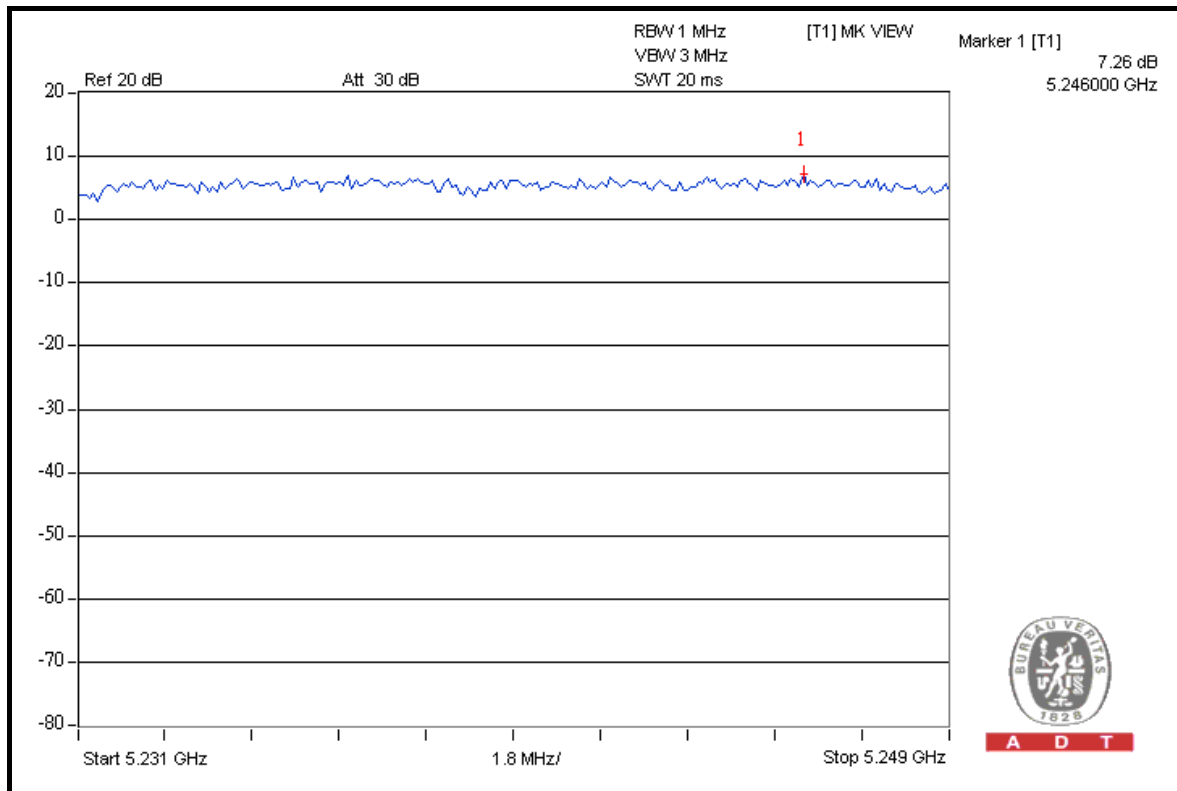


A D T

CH 48



A D T

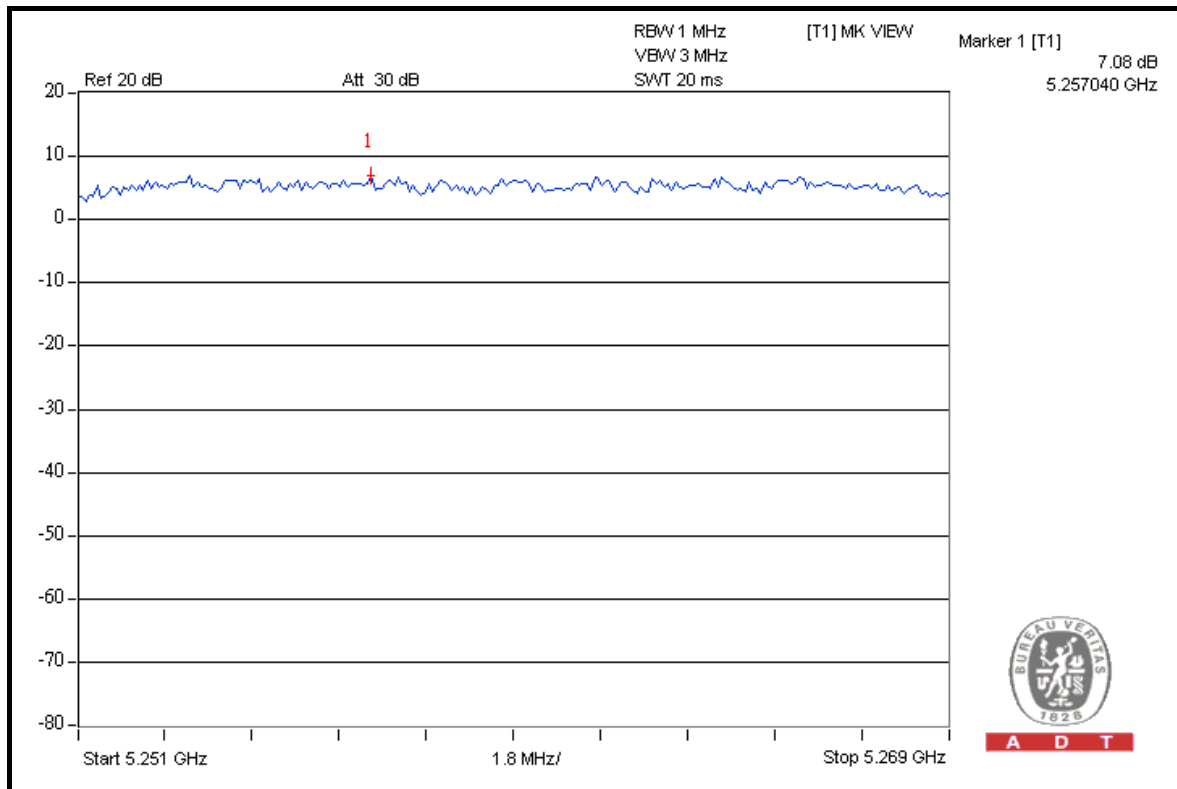
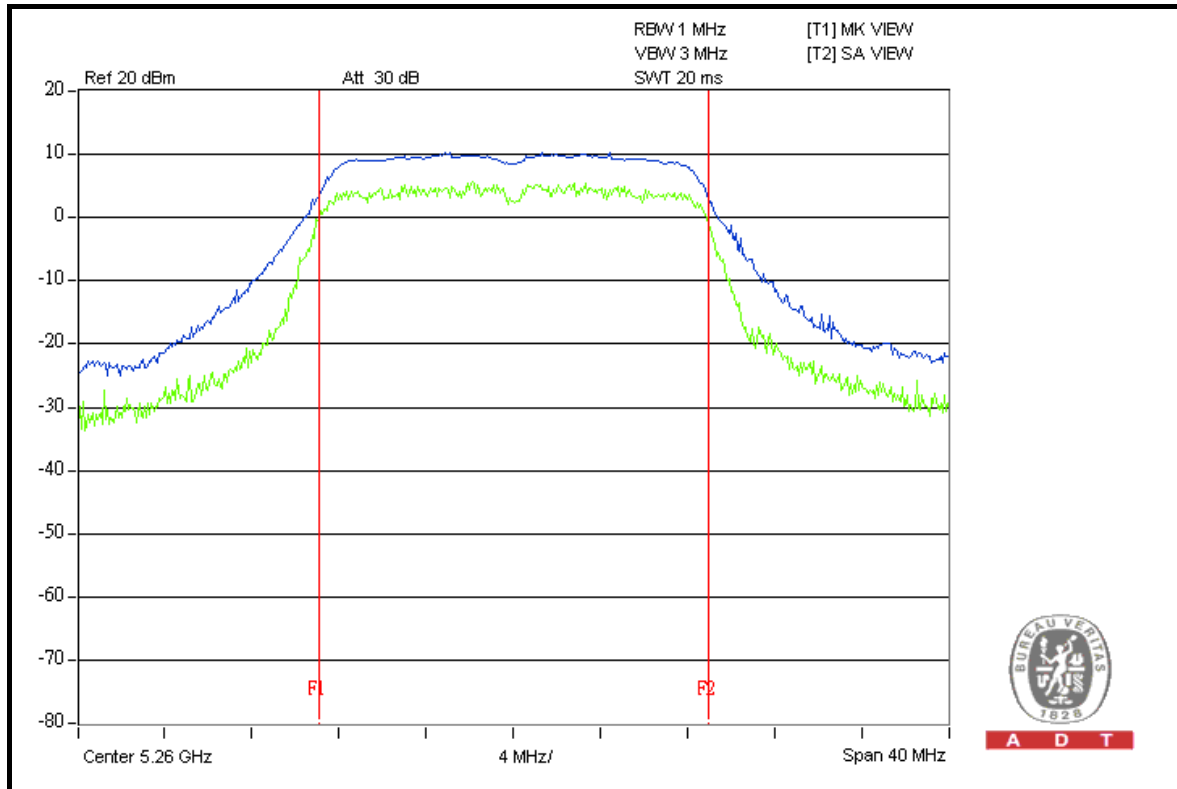


A D T



A D T

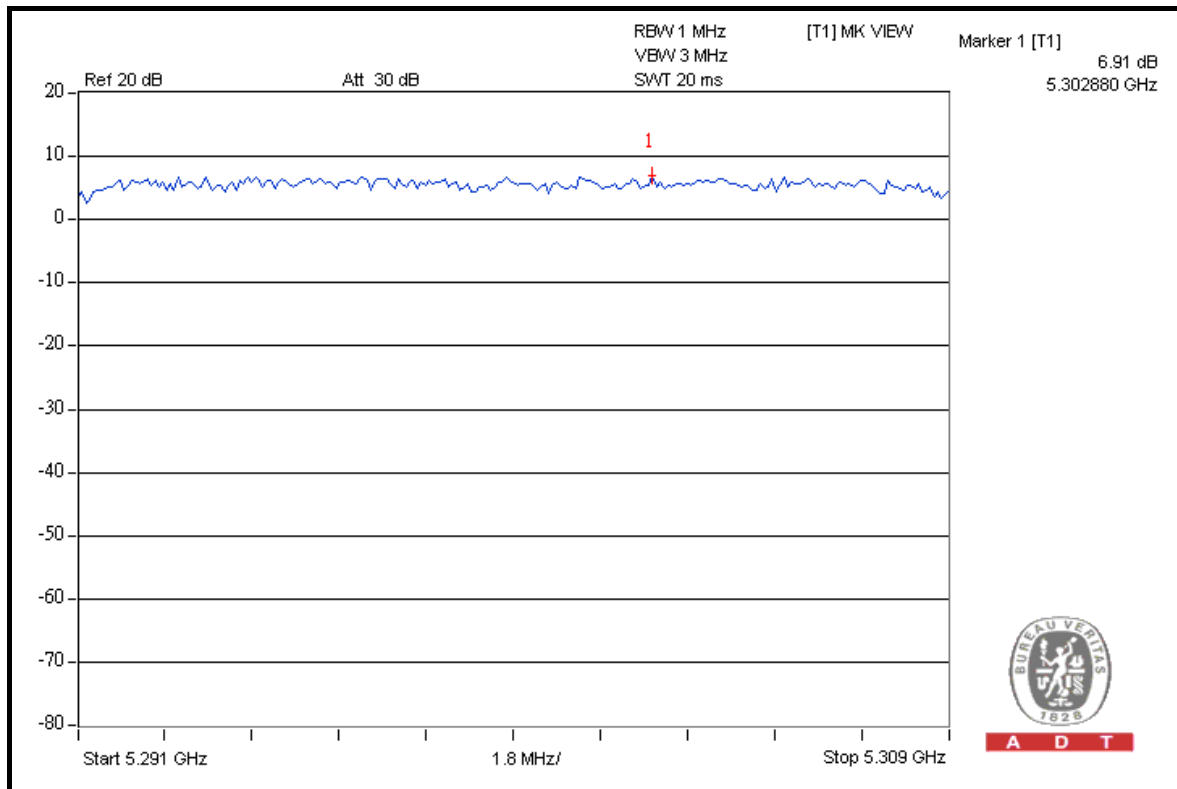
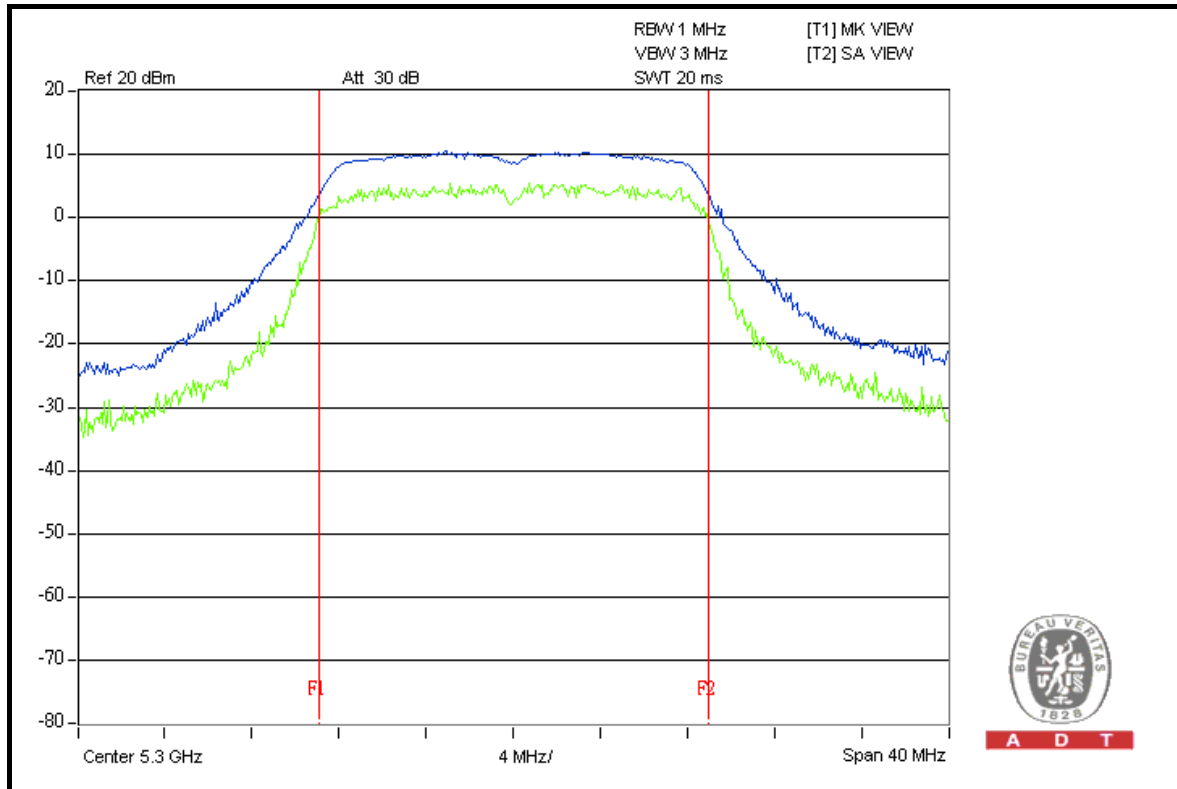
CH 52





A D T

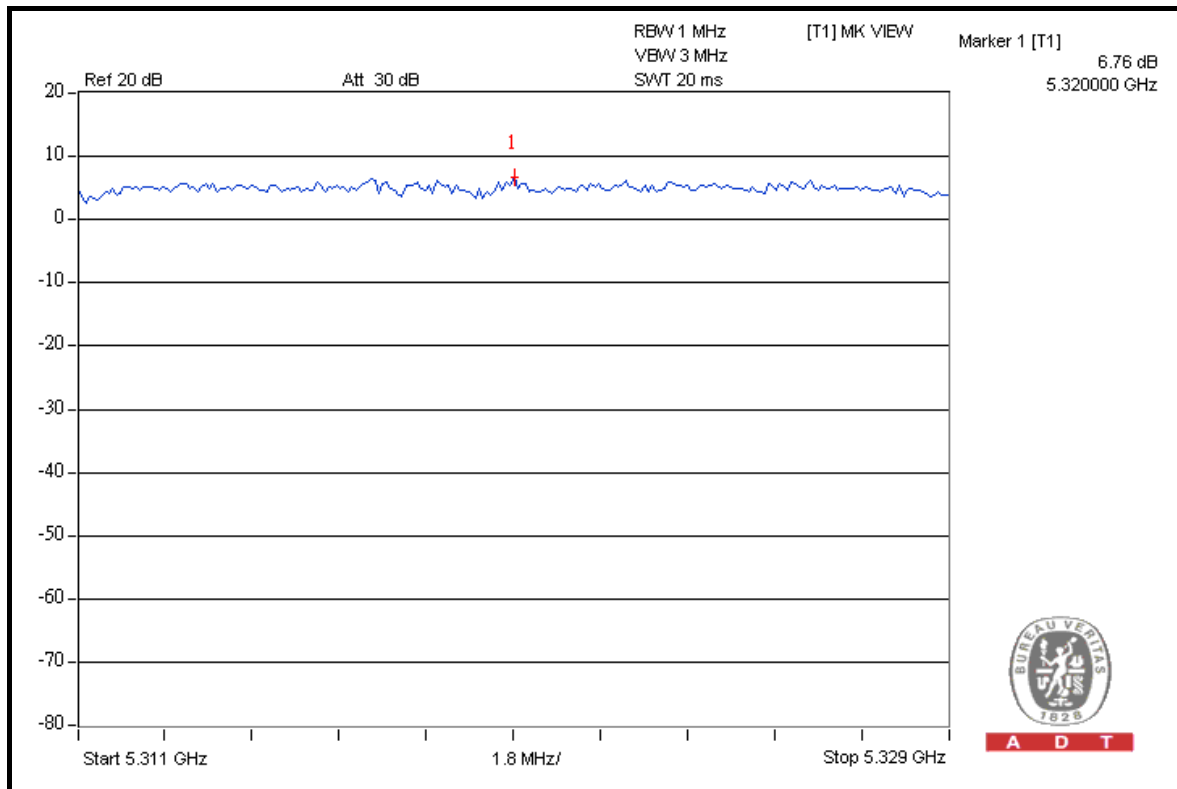
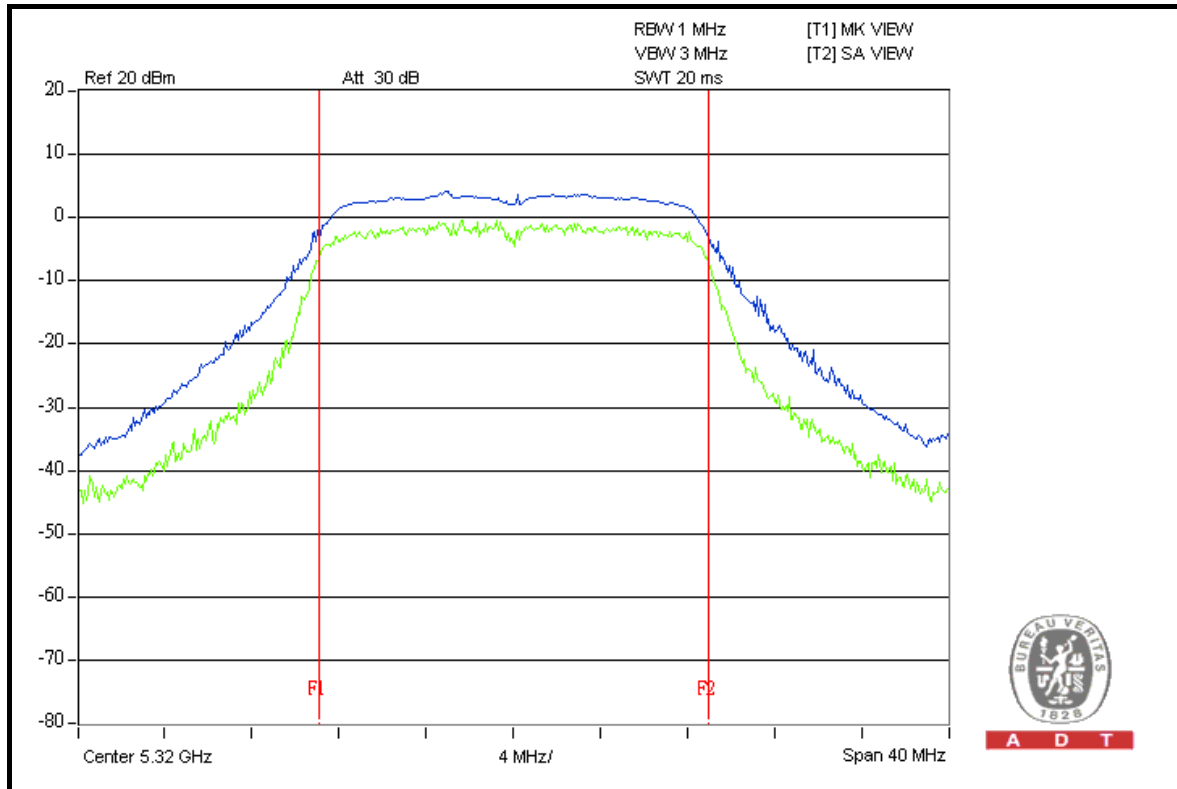
CH 60





A D T

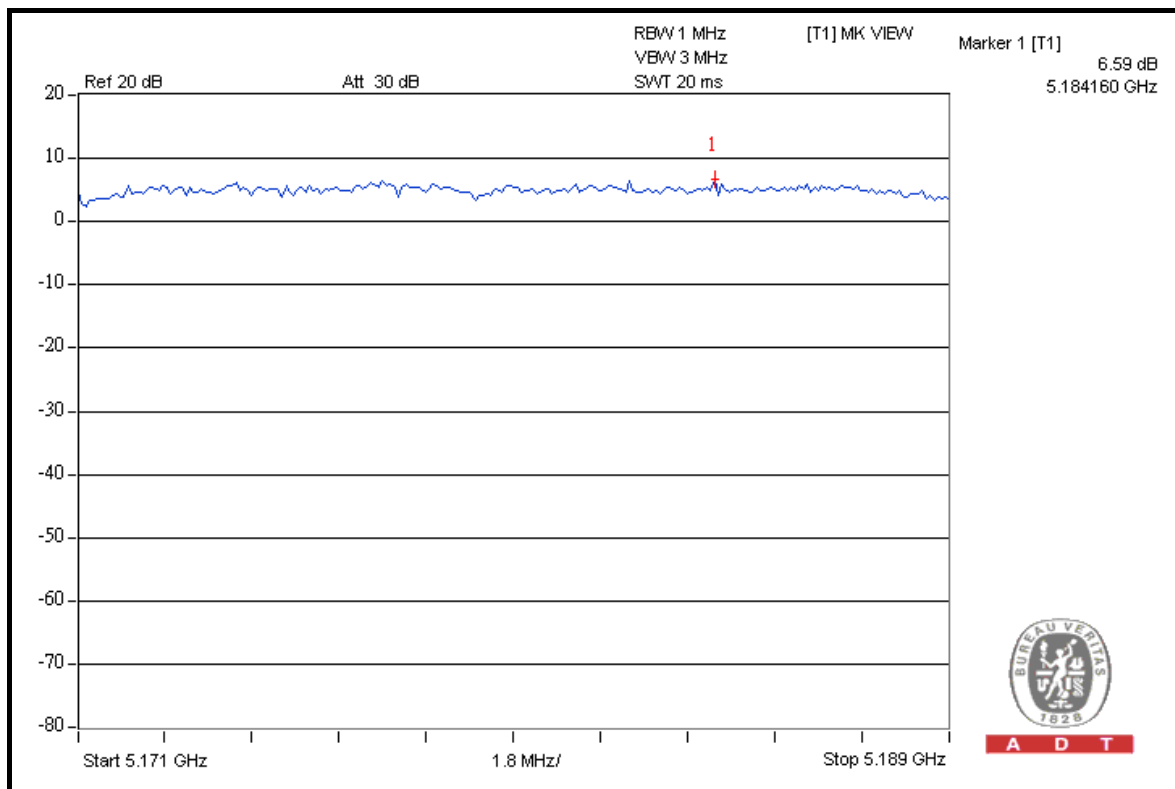
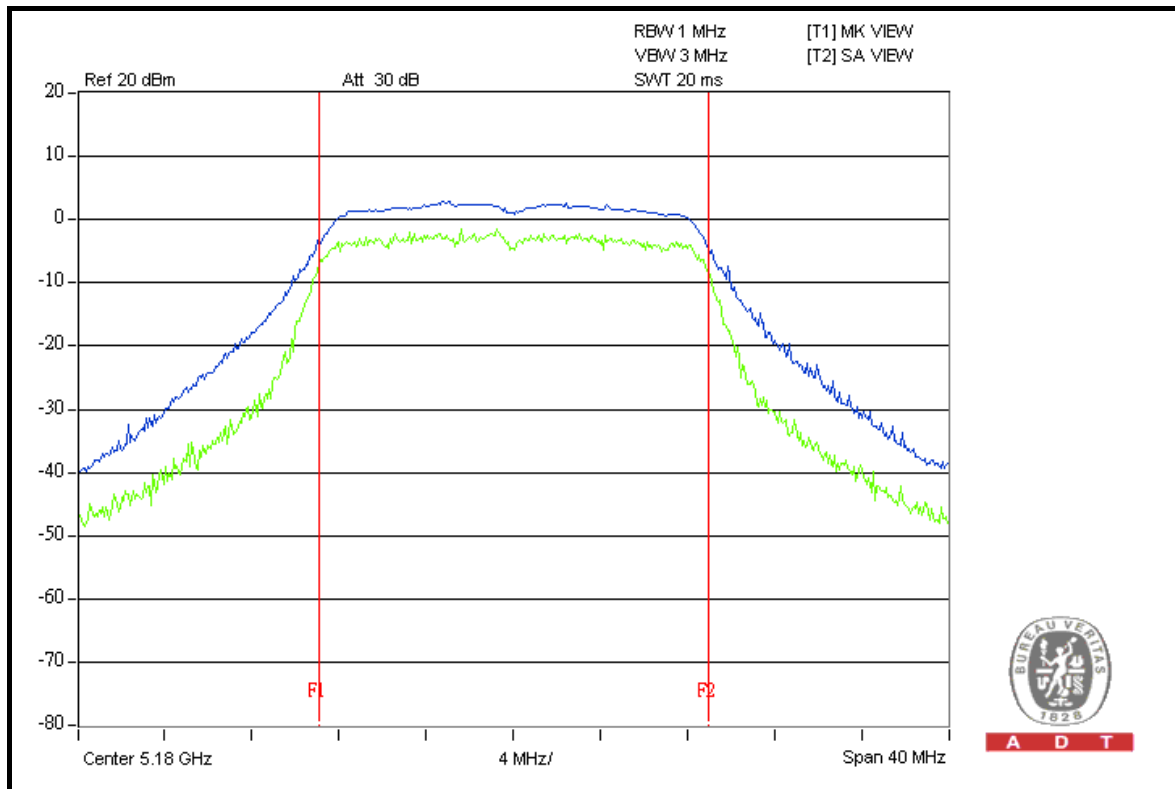
CH 64





A D T

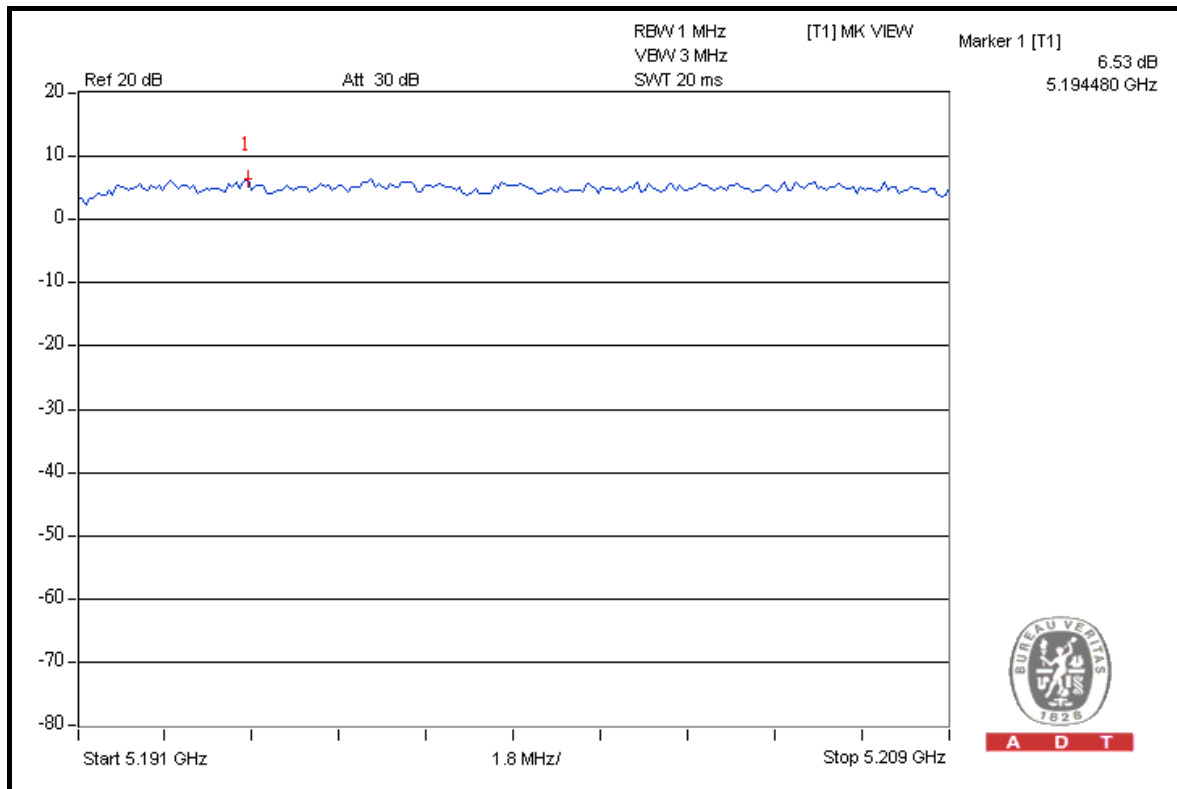
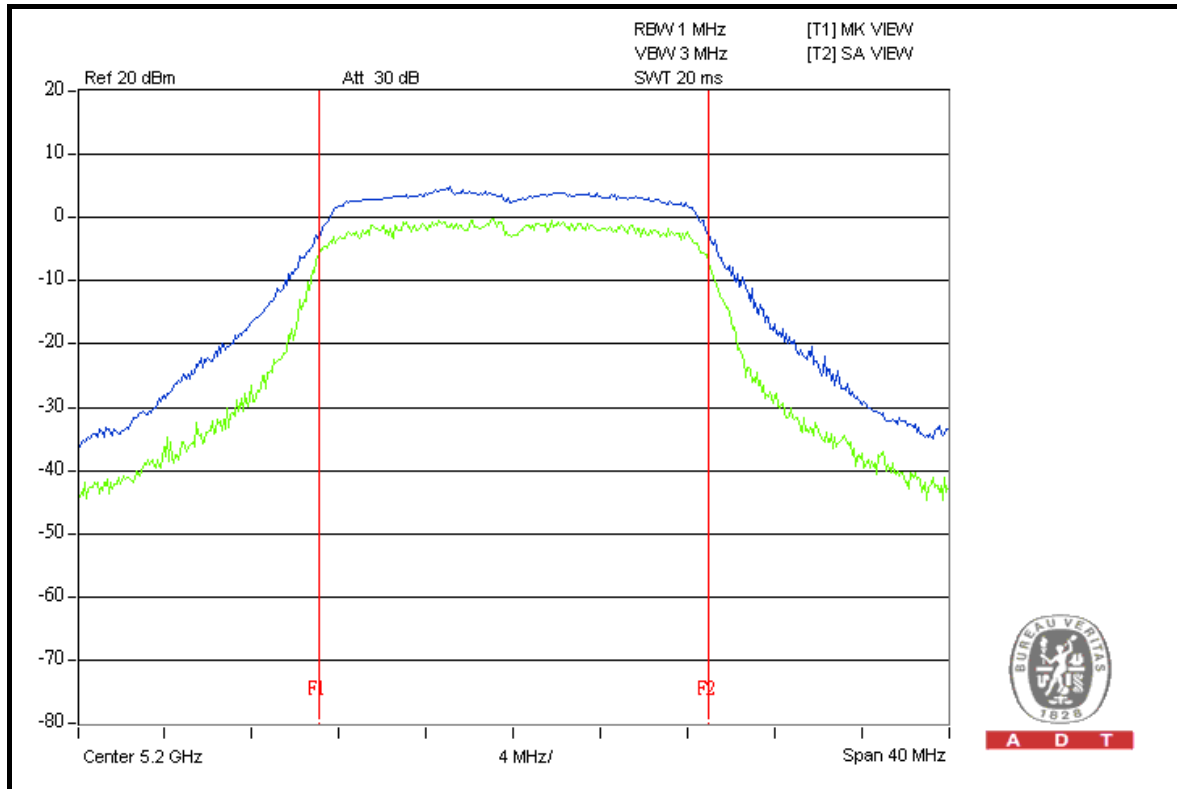
FOR CHAIN 2: CH 36





A D T

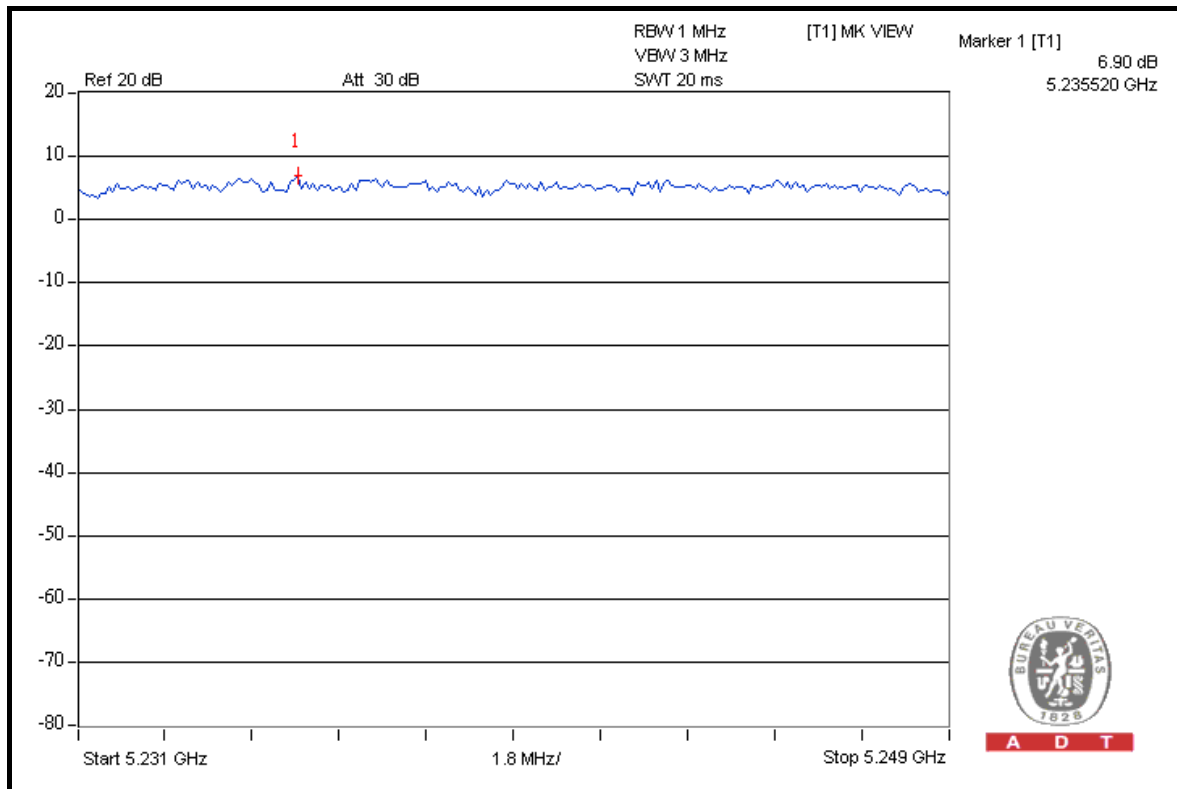
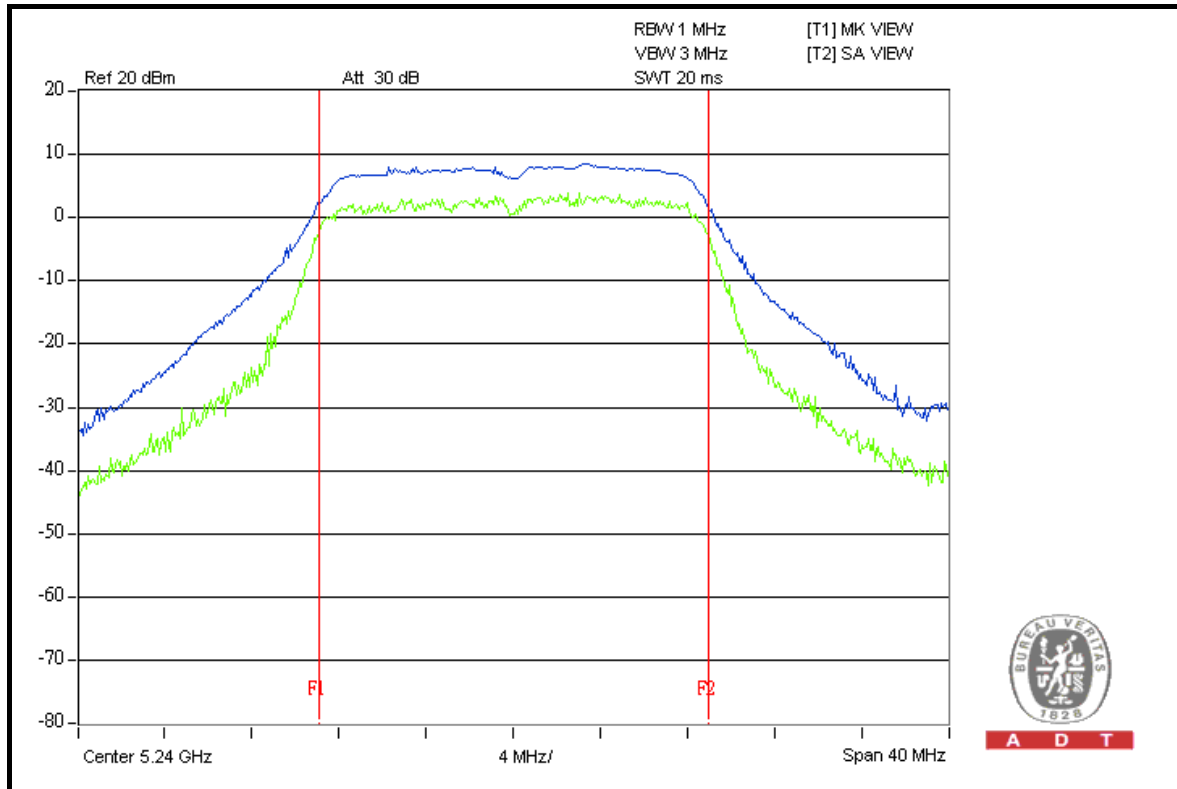
CH 40





A D T

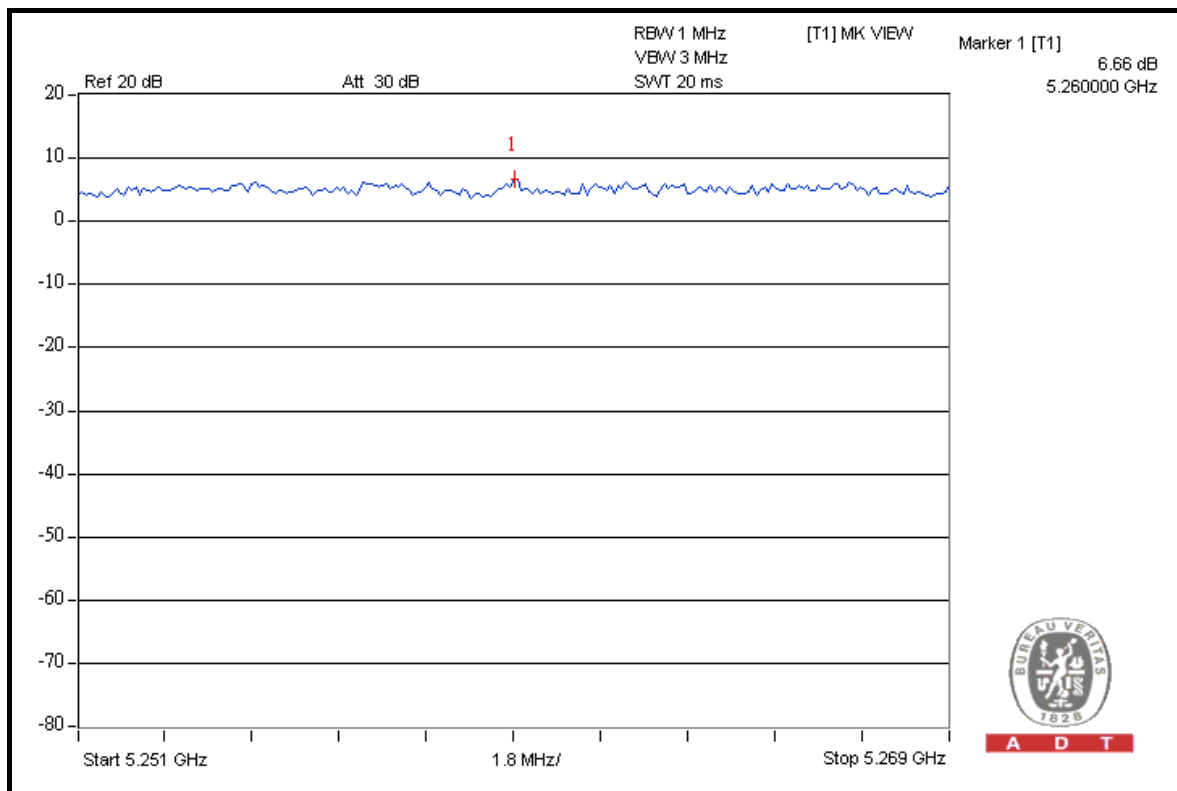
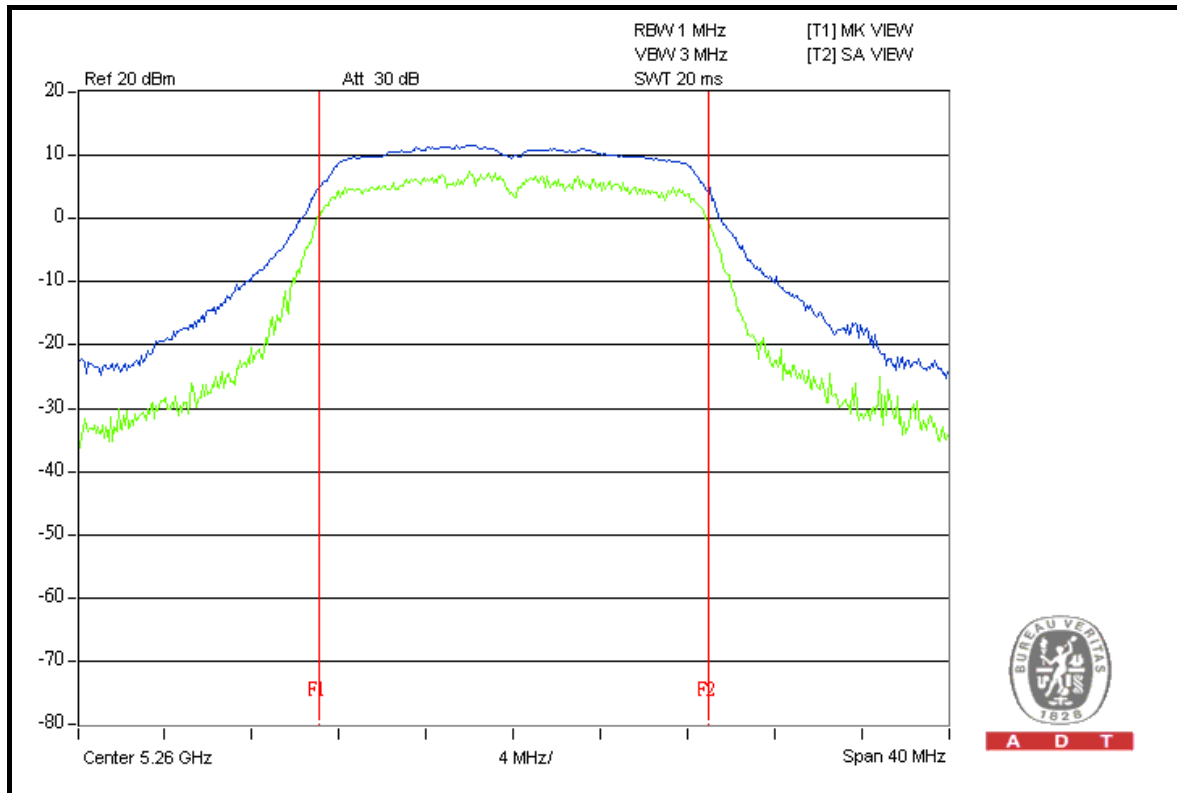
CH 48





A D T

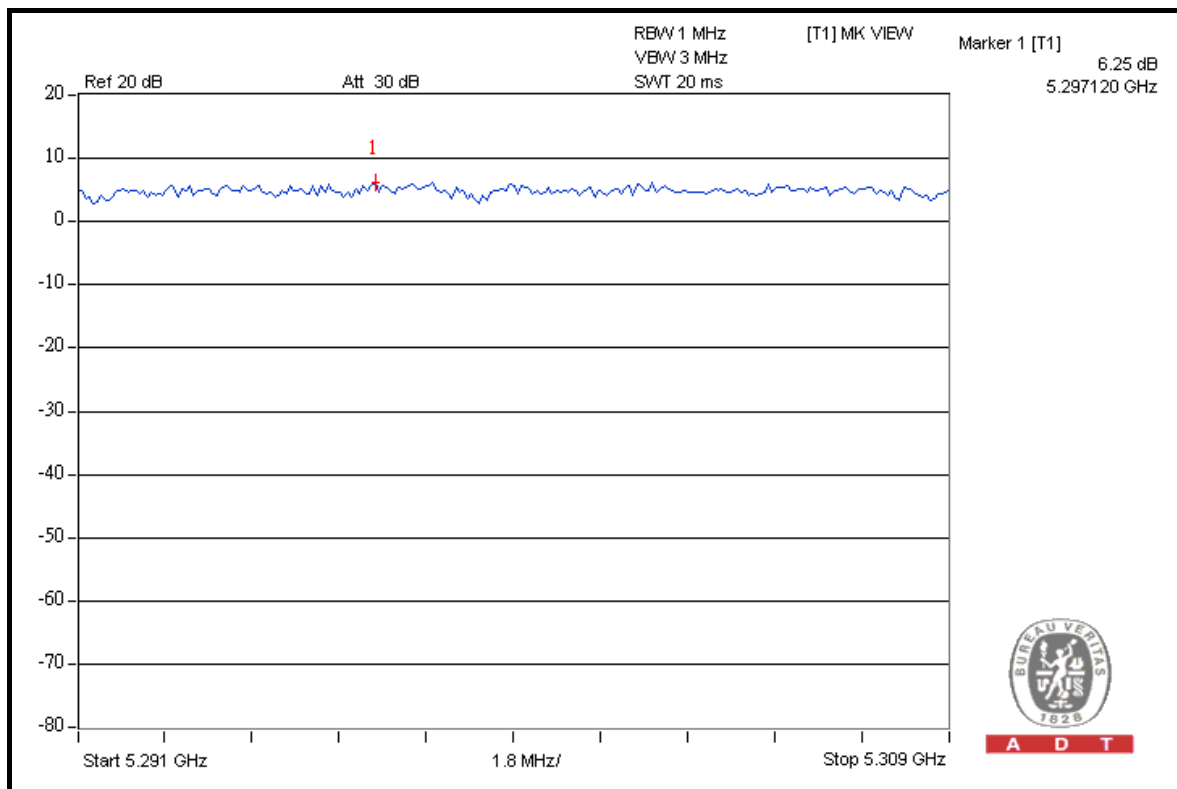
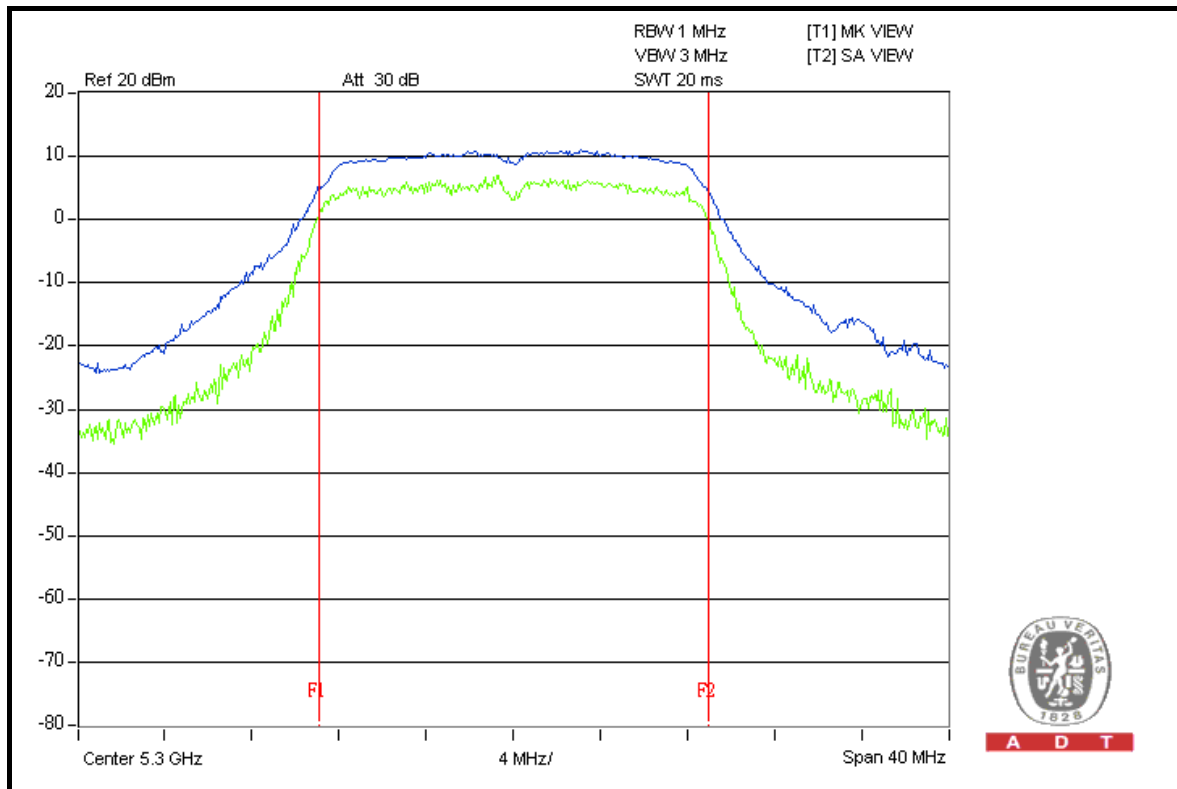
CH 52





A D T

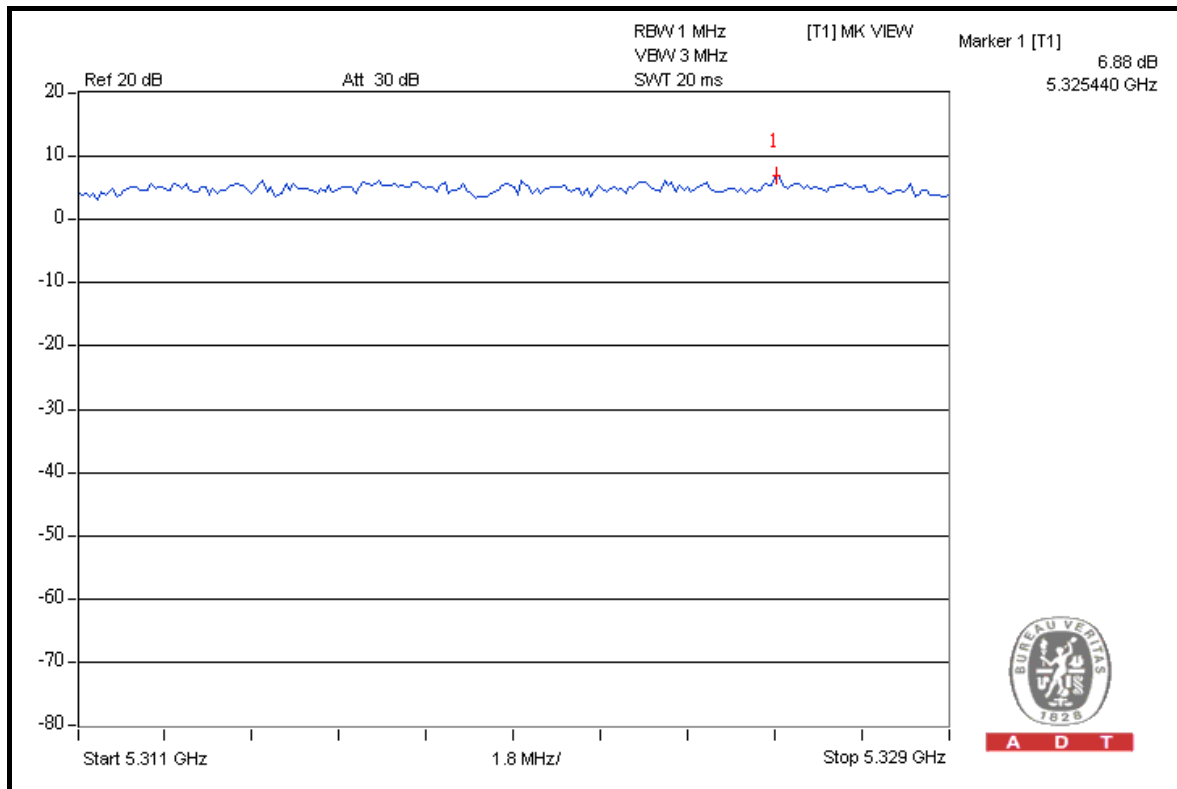
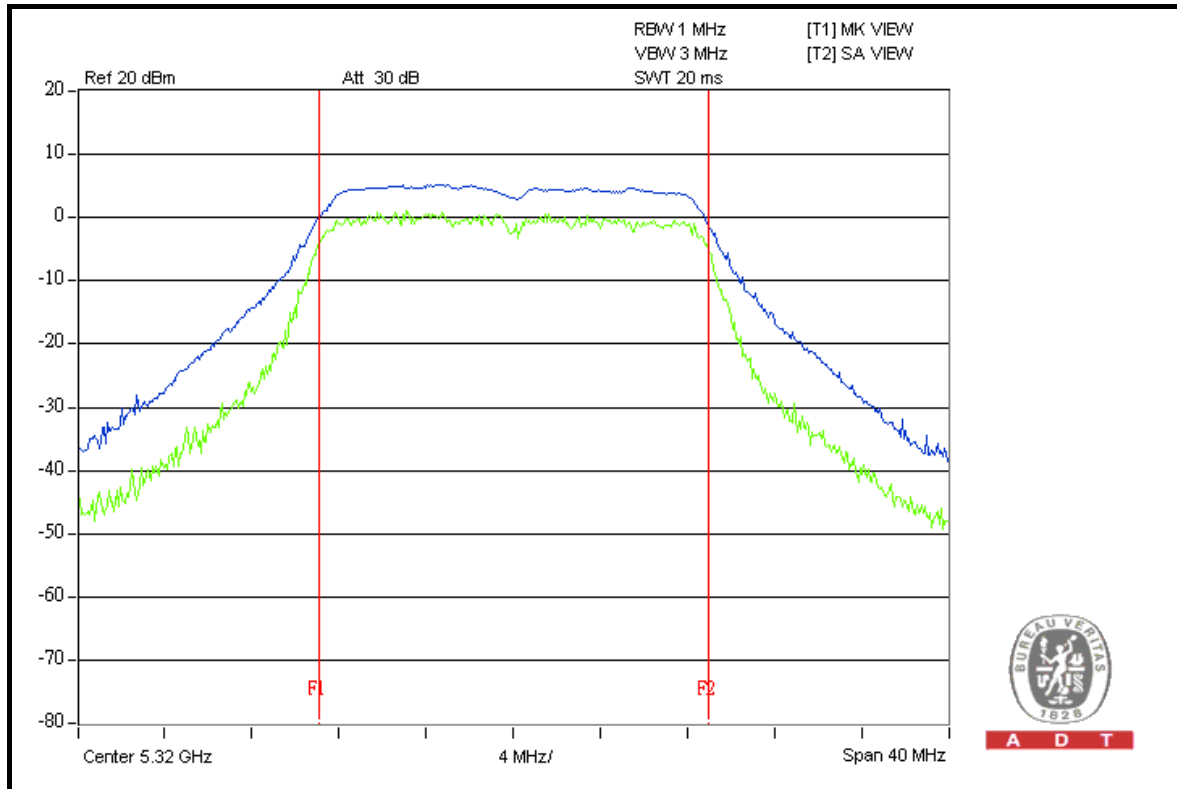
CH 60





A D T

CH 64





A D T

DRAFT 802.11n (40MHz) OFDM MODULATION

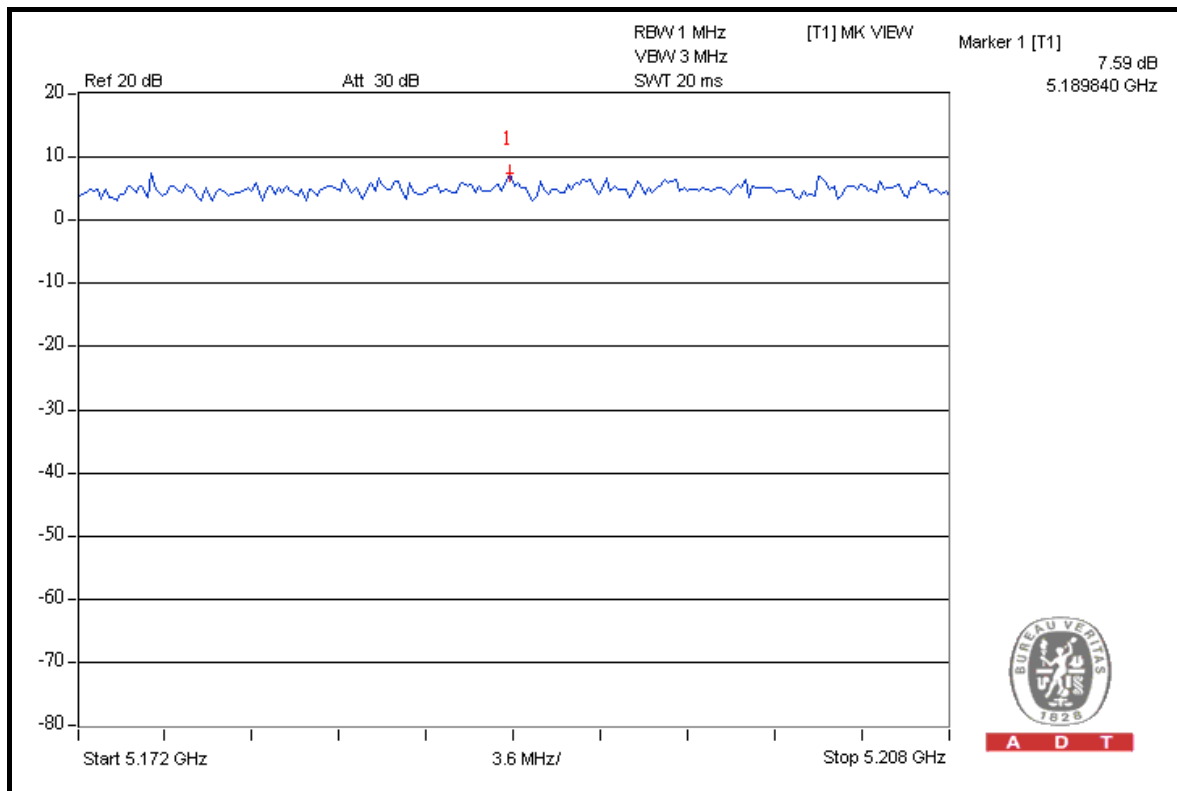
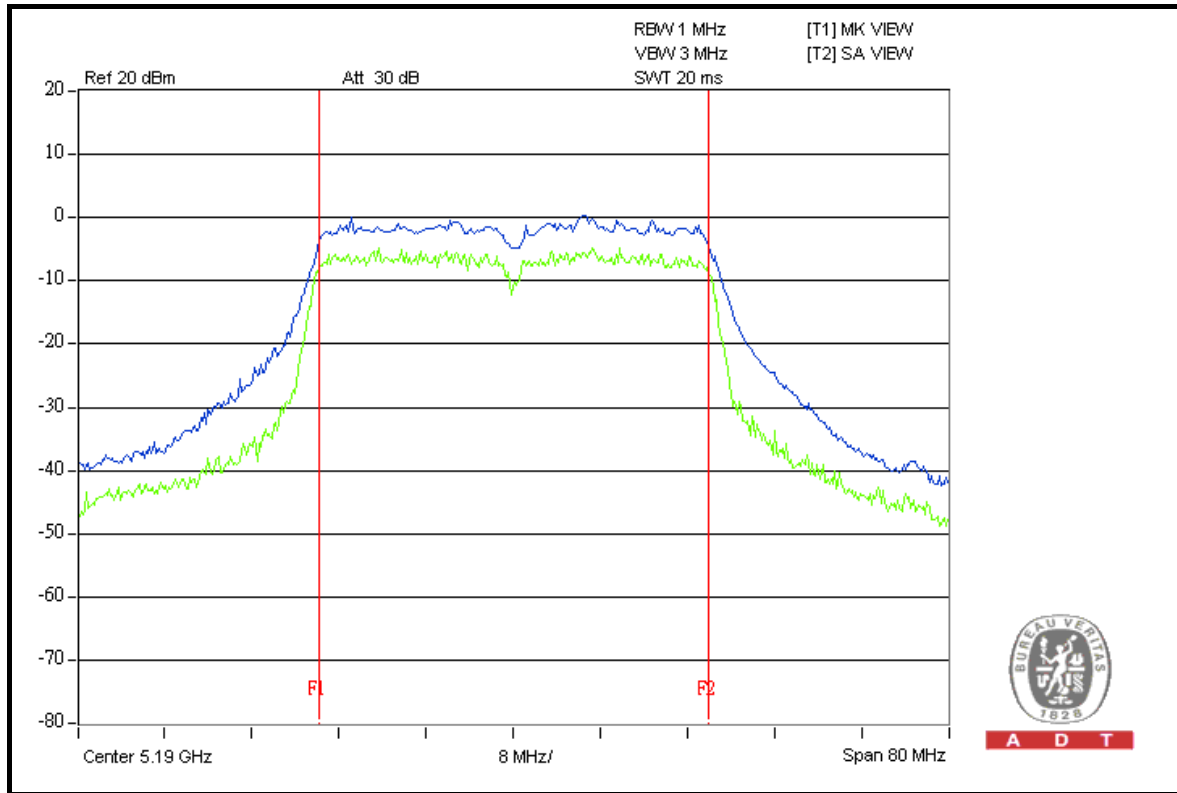
MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)			PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
38	5190	7.59	8.64	9.30	13	PASS
46	5230	8.78	8.42	8.50	13	PASS
54	5270	7.20	8.03	7.55	13	PASS
62	5310	6.98	7.84	7.99	13	PASS



A D T

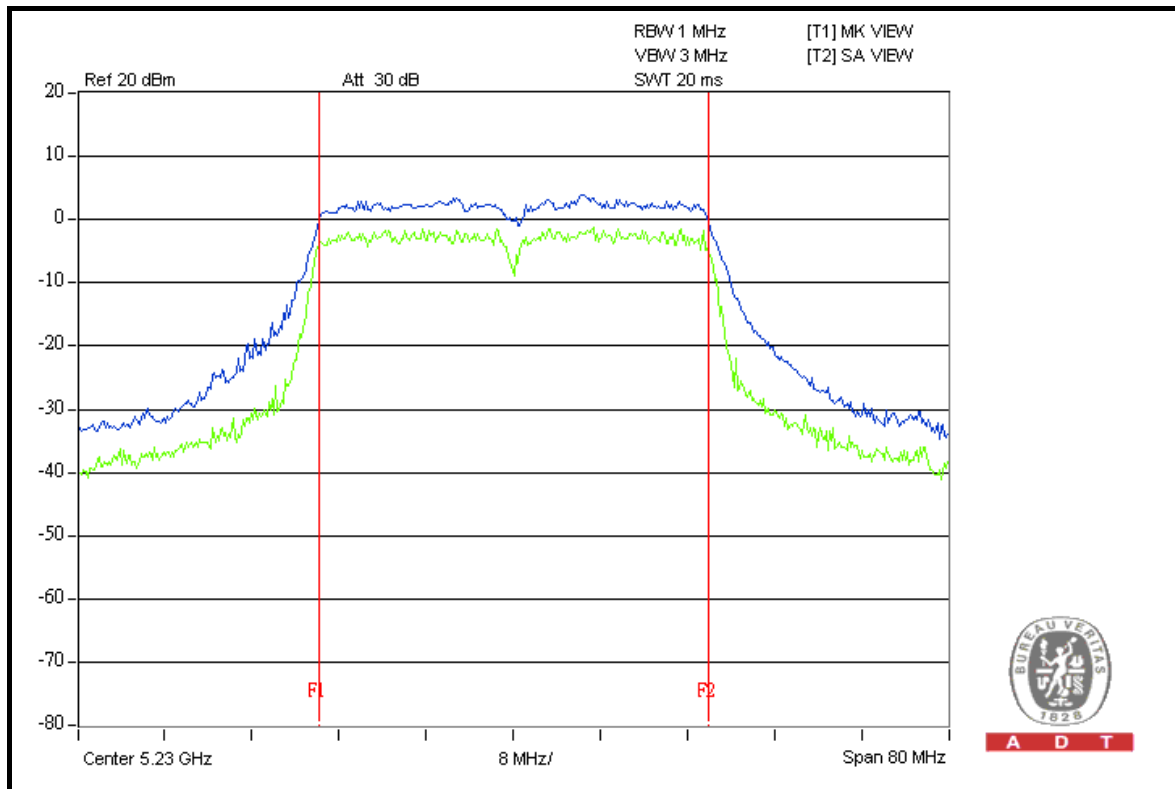
FOR CHAIN 0: CH 38



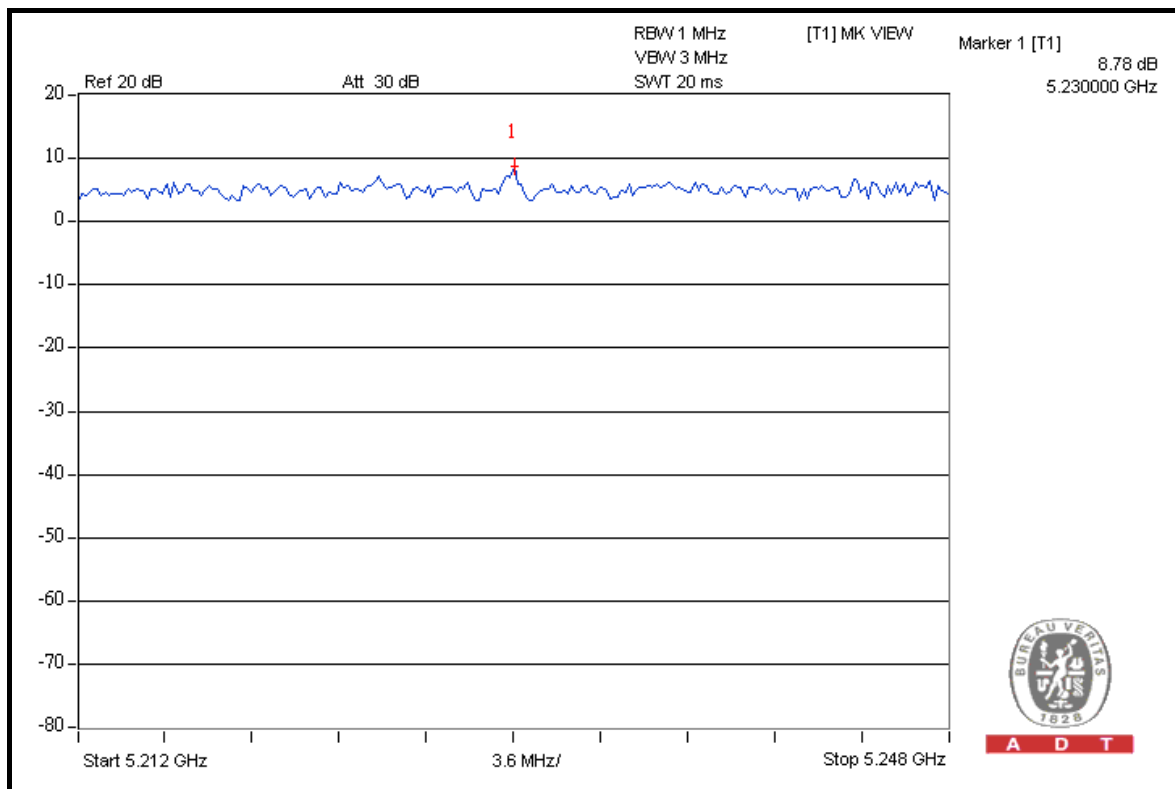


A D T

CH 46



A D T

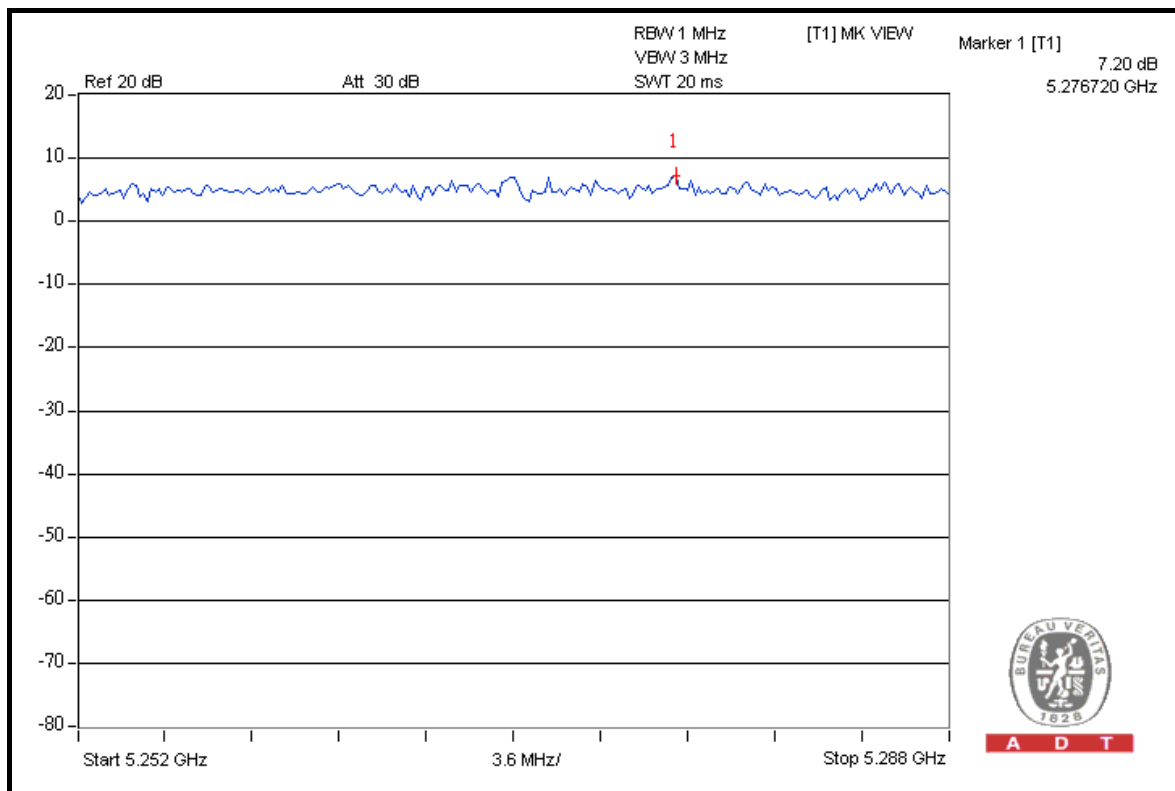
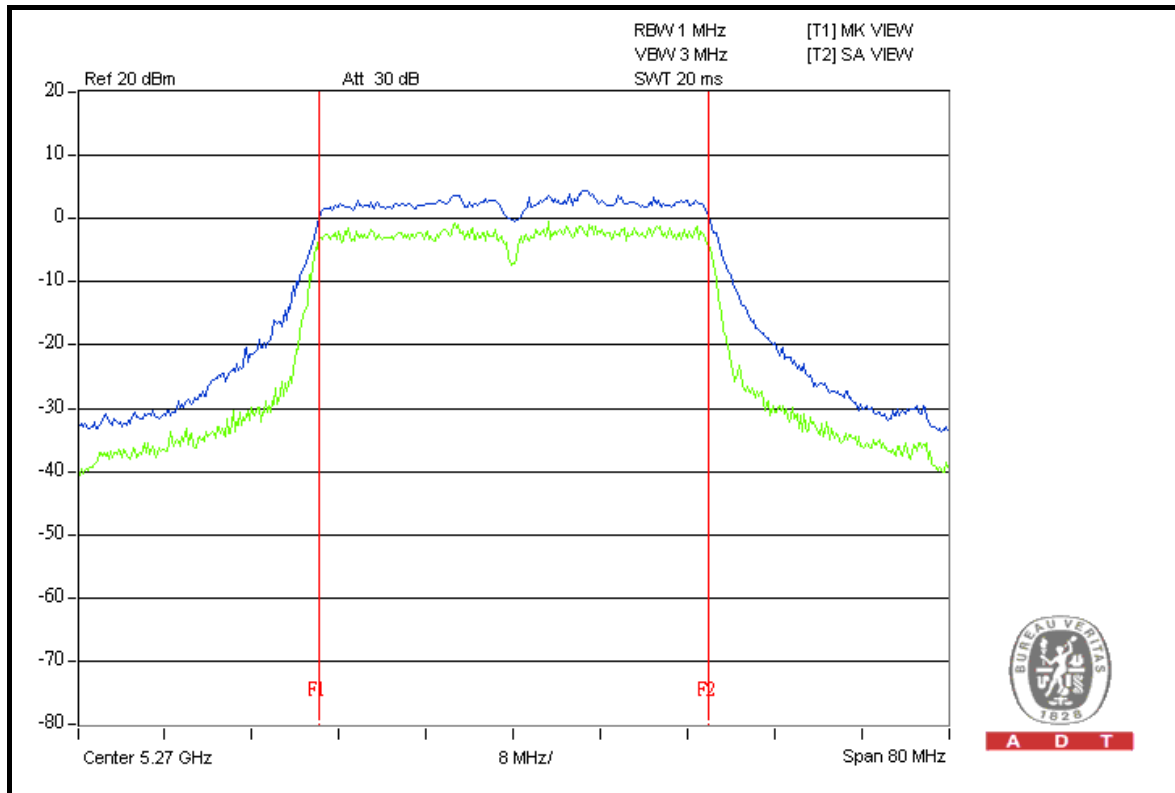


A D T



A D T

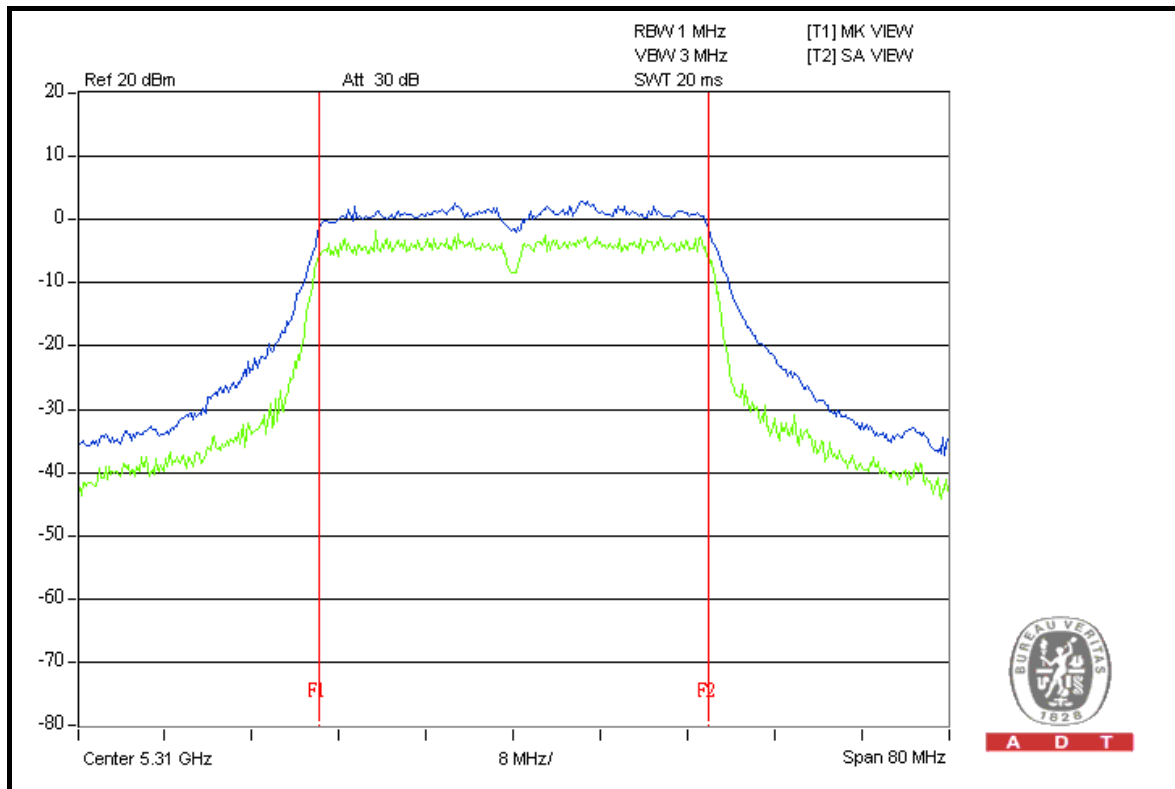
CH 54



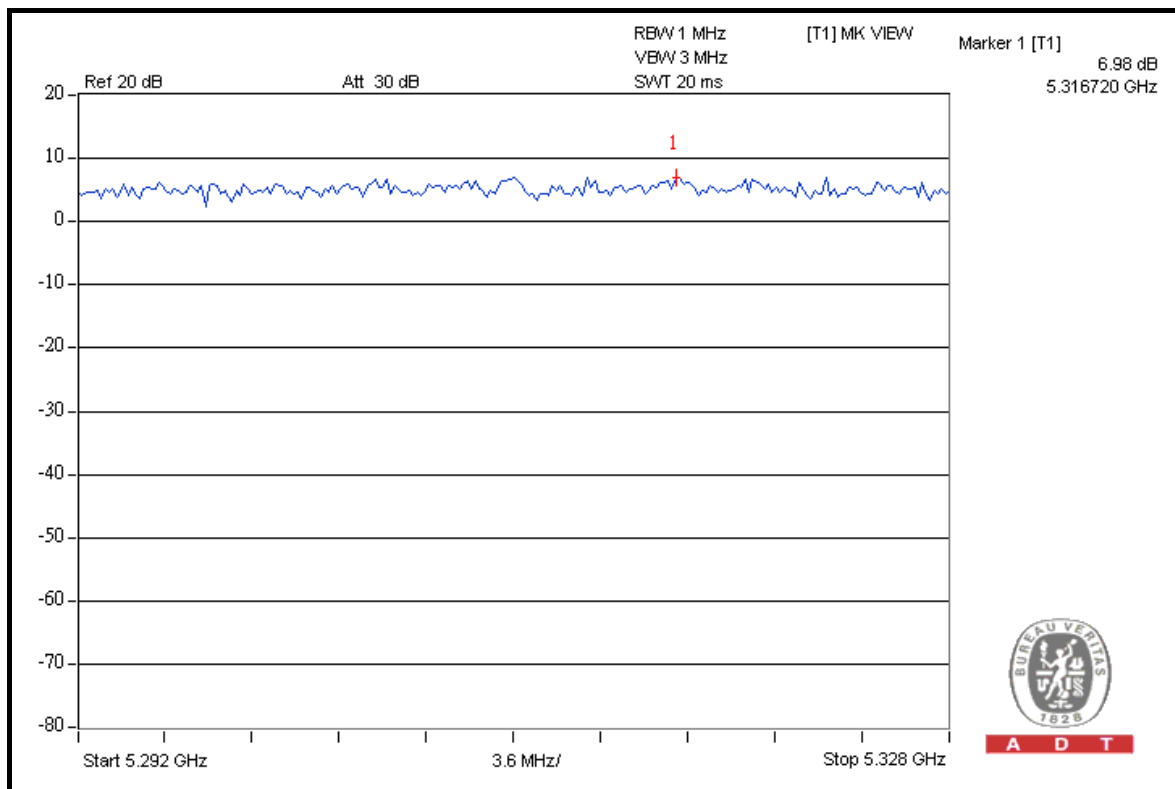


A D T

CH 62



A D T

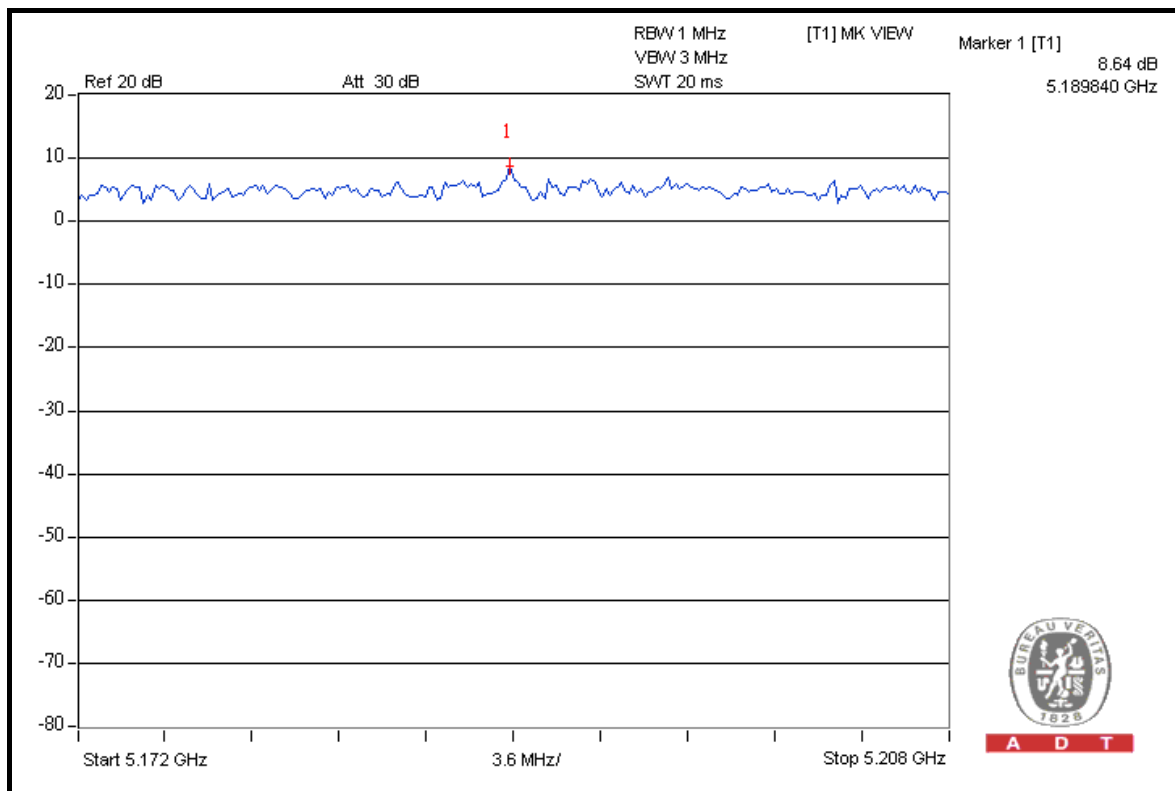
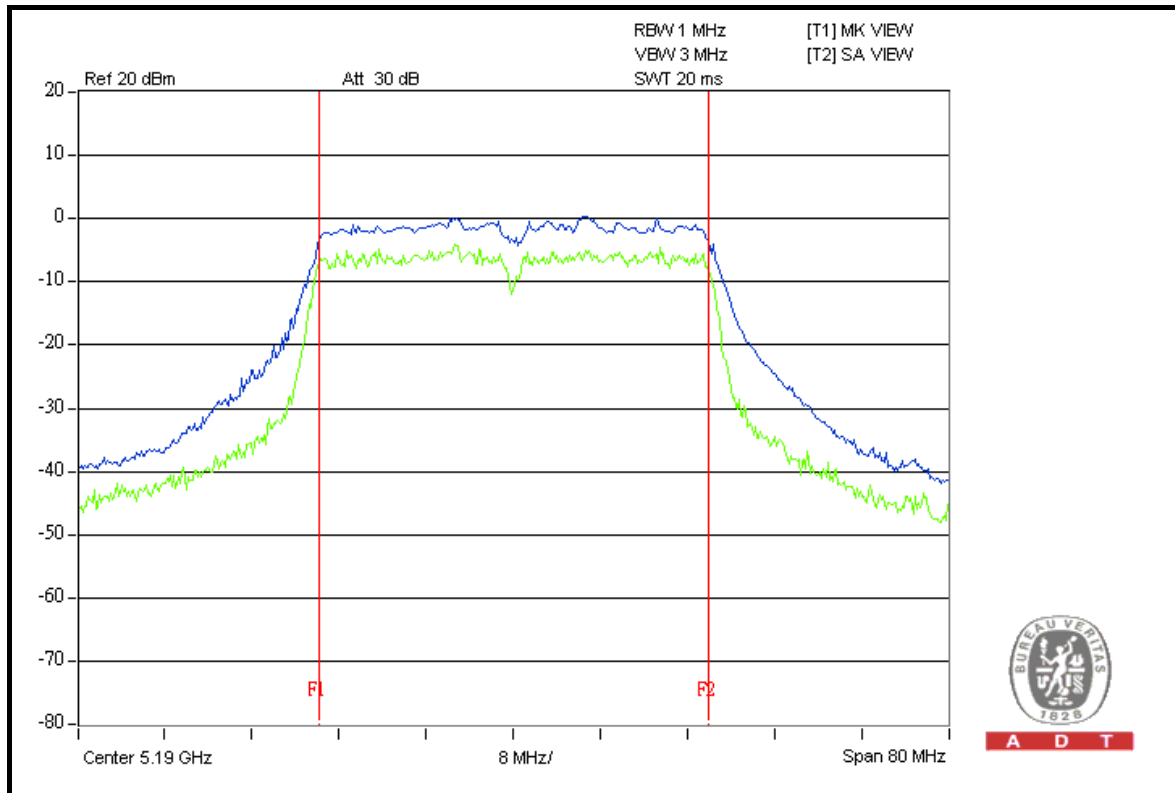


A D T



A D T

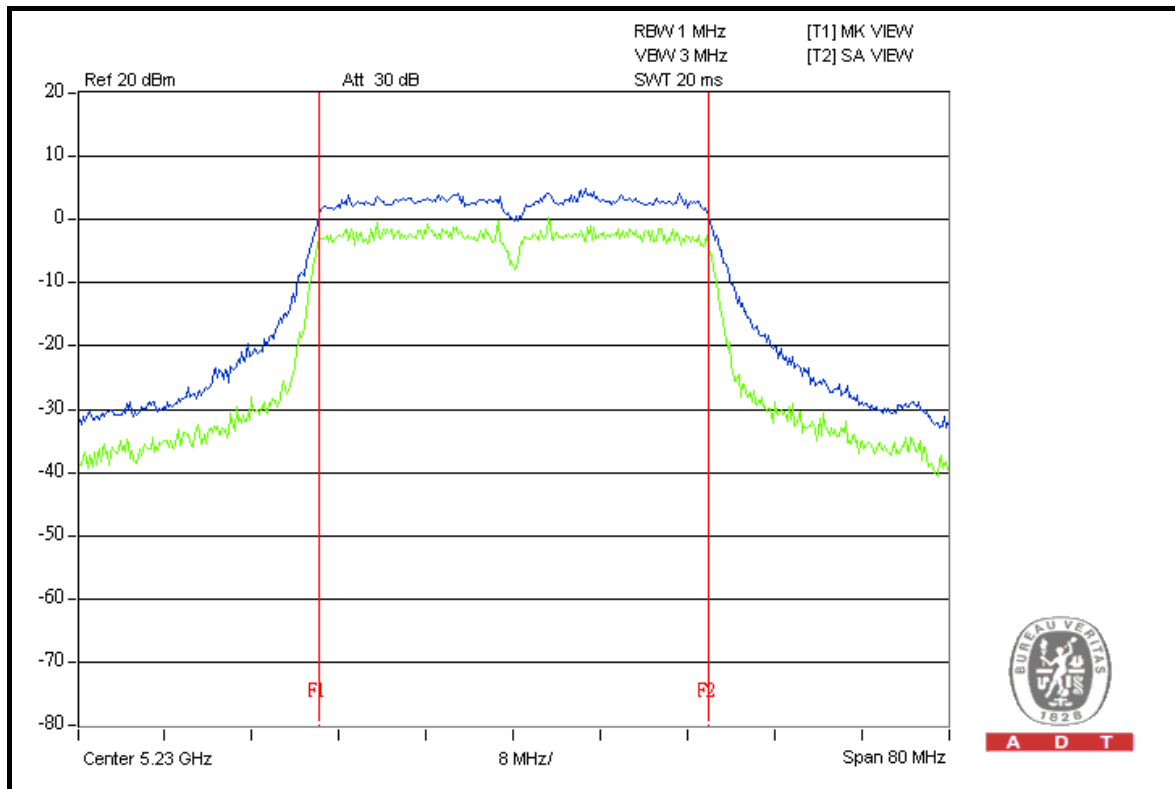
FOR CHAIN 1: CH 38



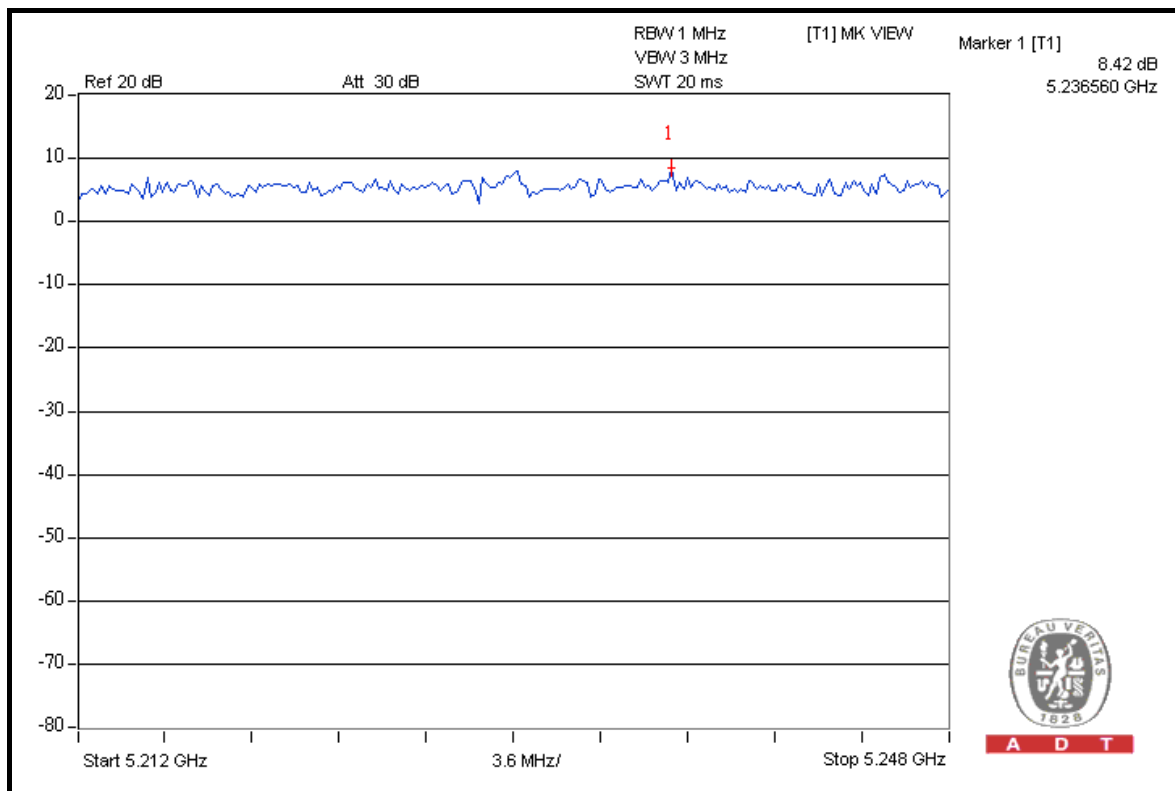


A D T

CH 46



A D T

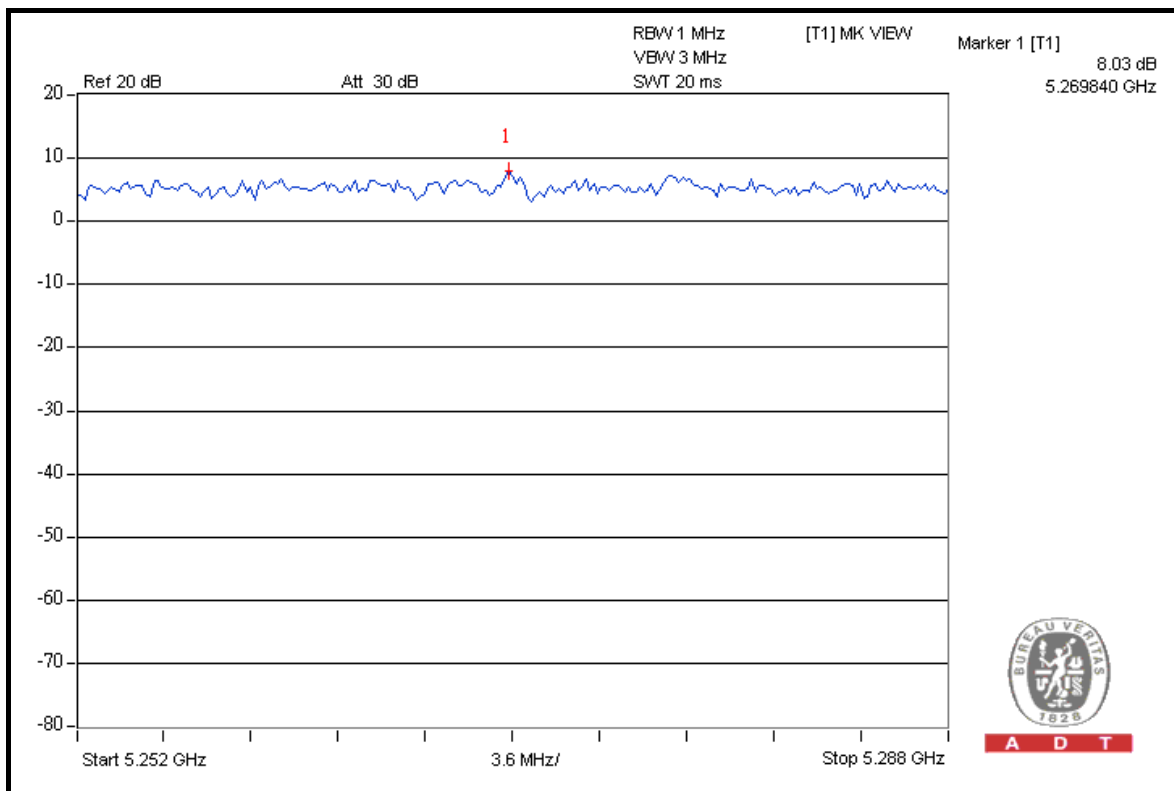
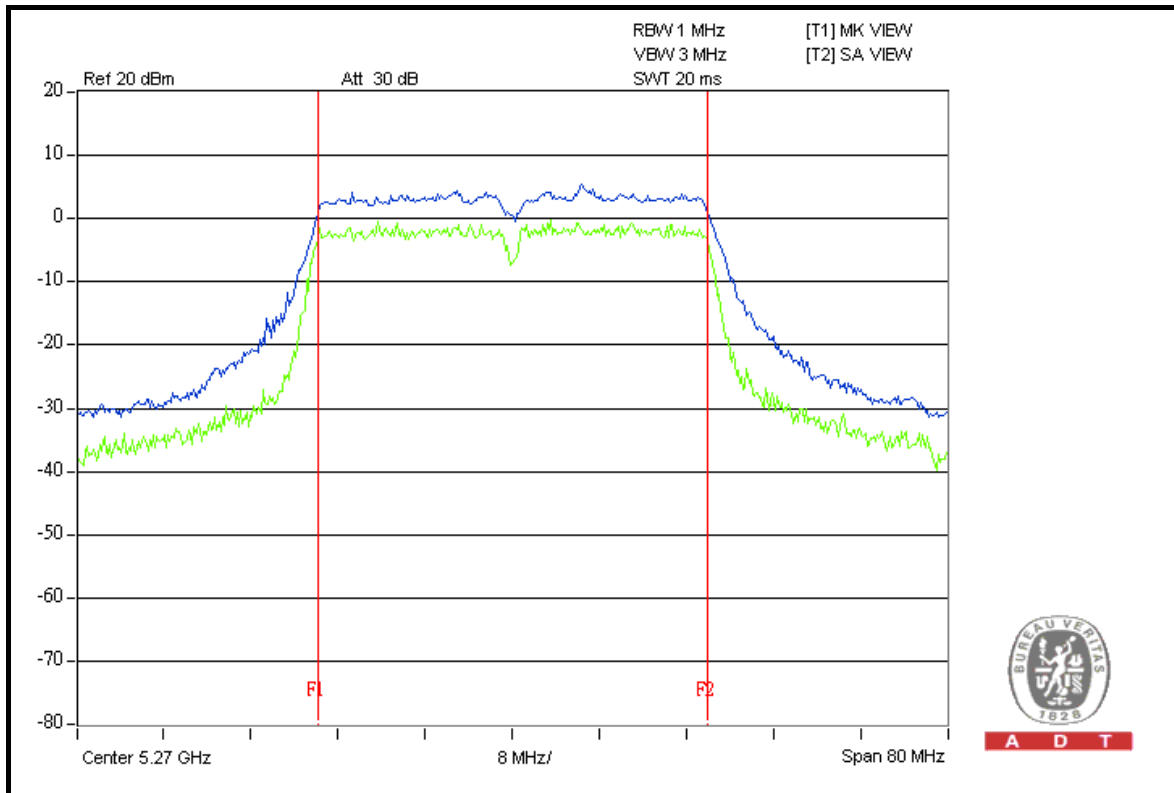


A D T



A D T

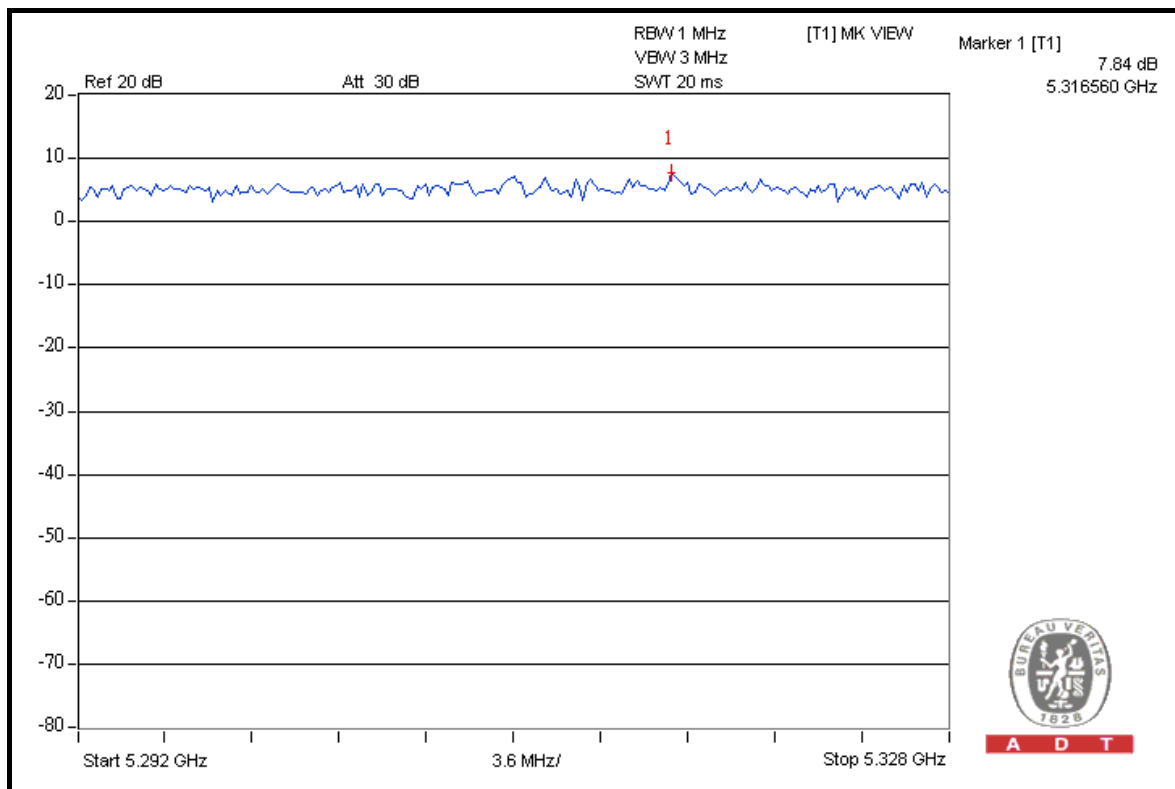
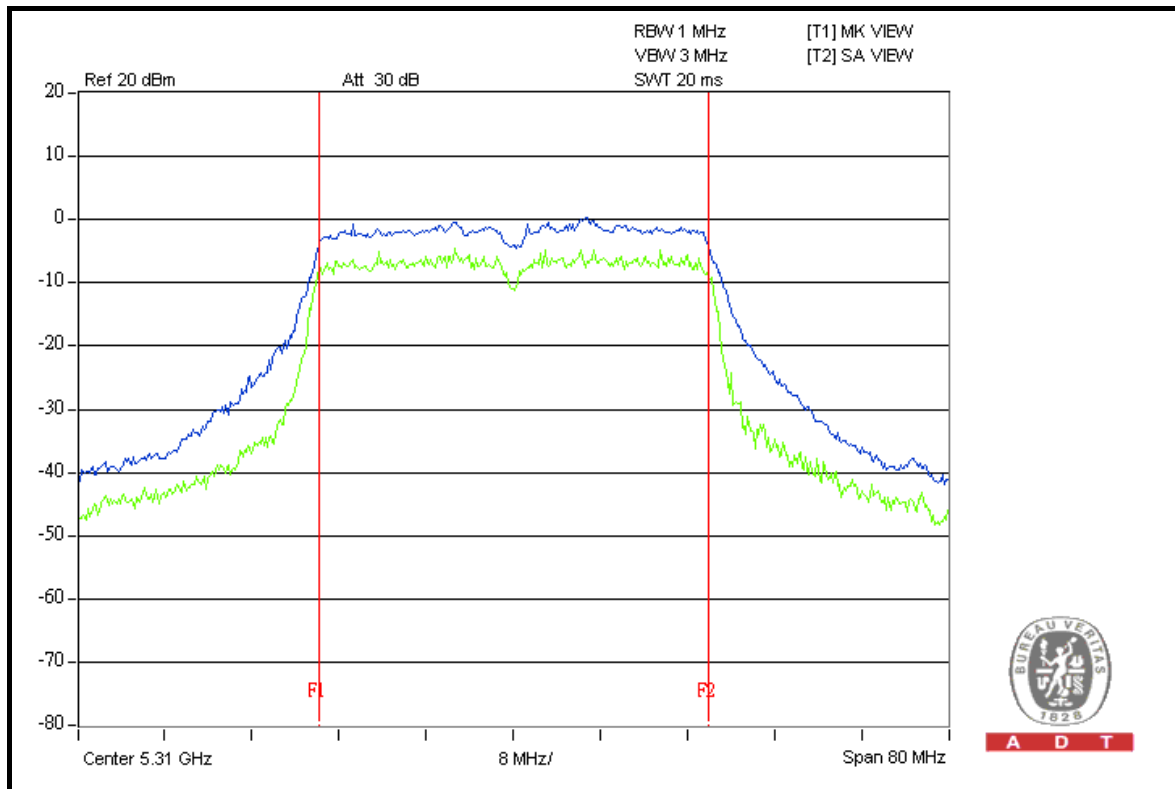
CH 54





A D T

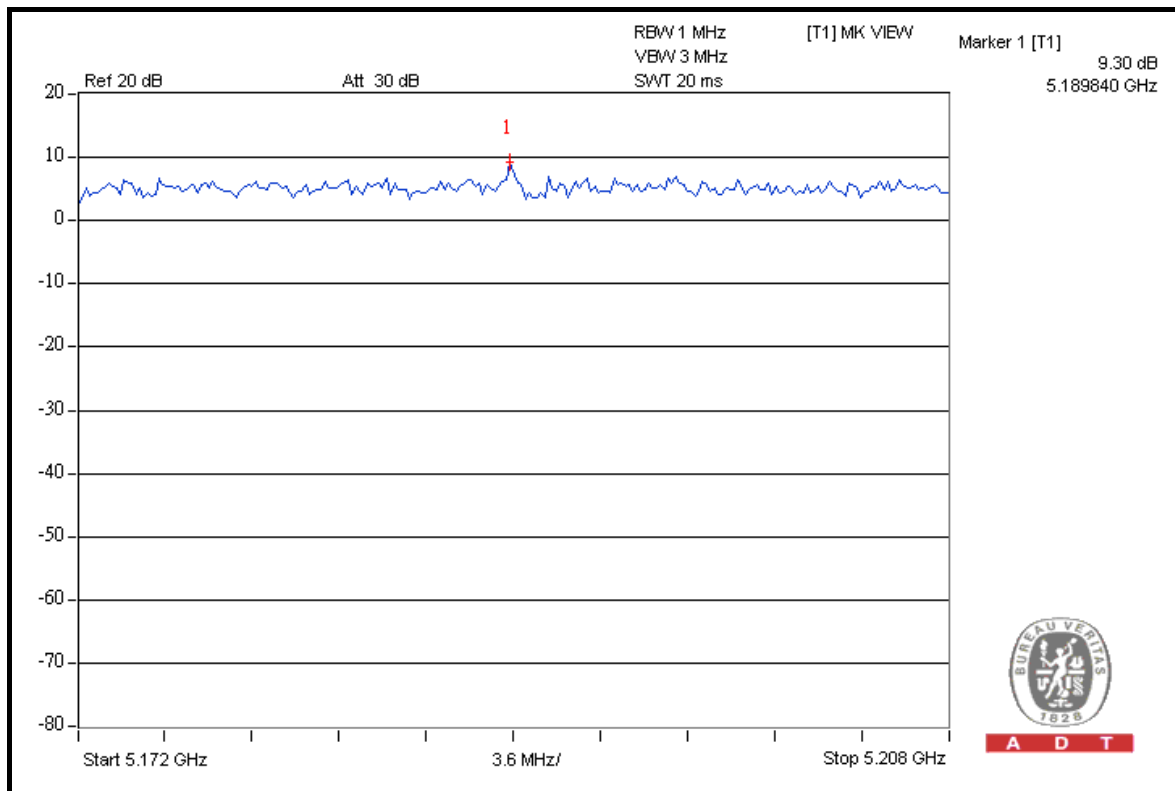
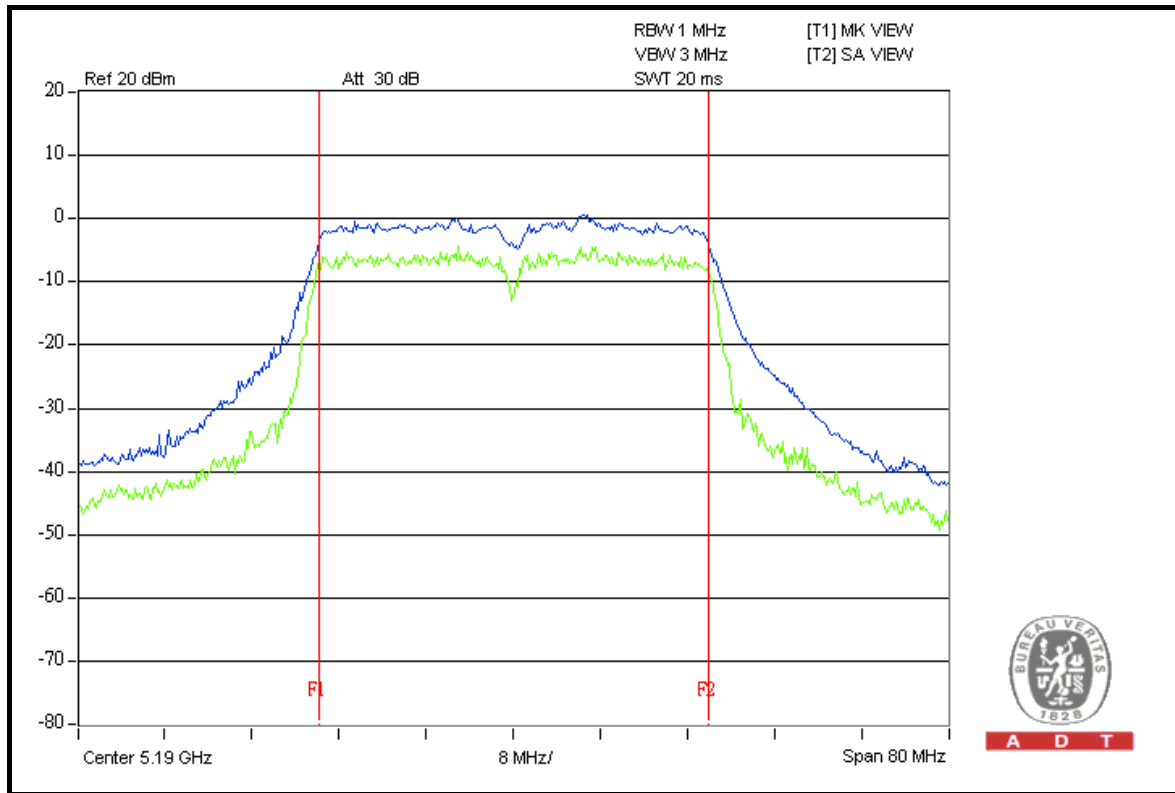
CH 62





A D T

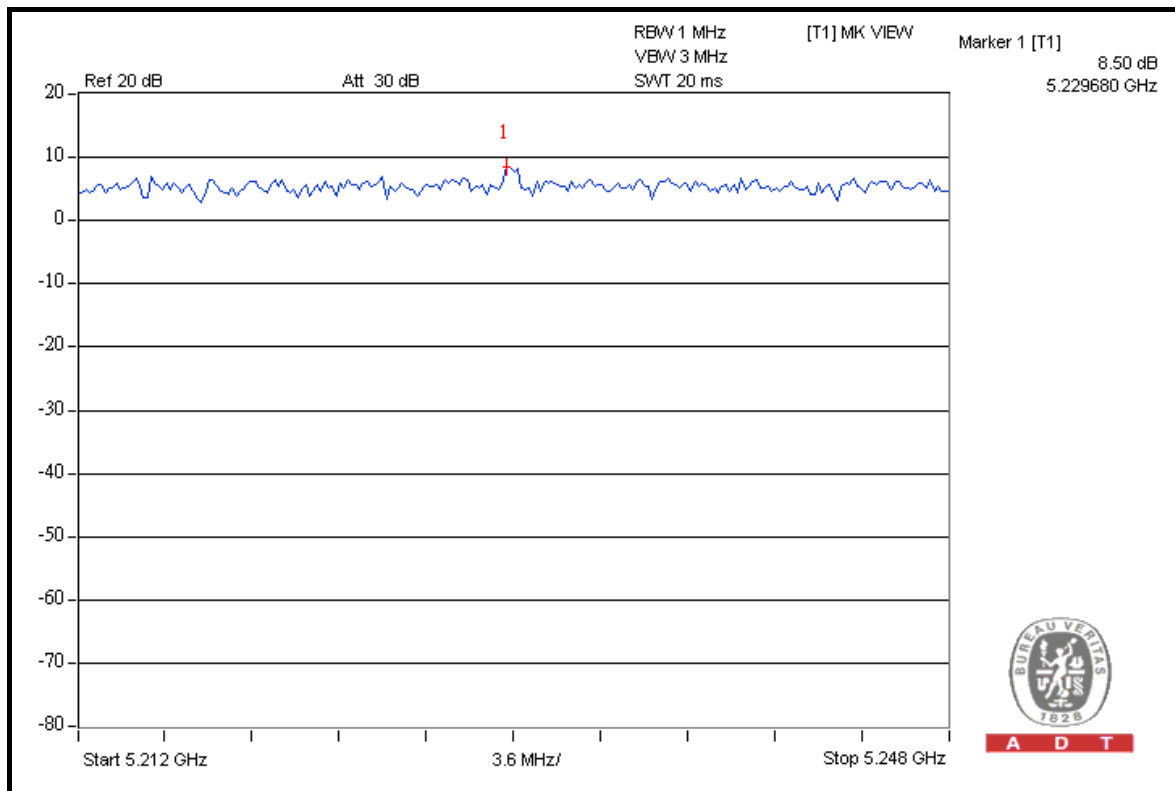
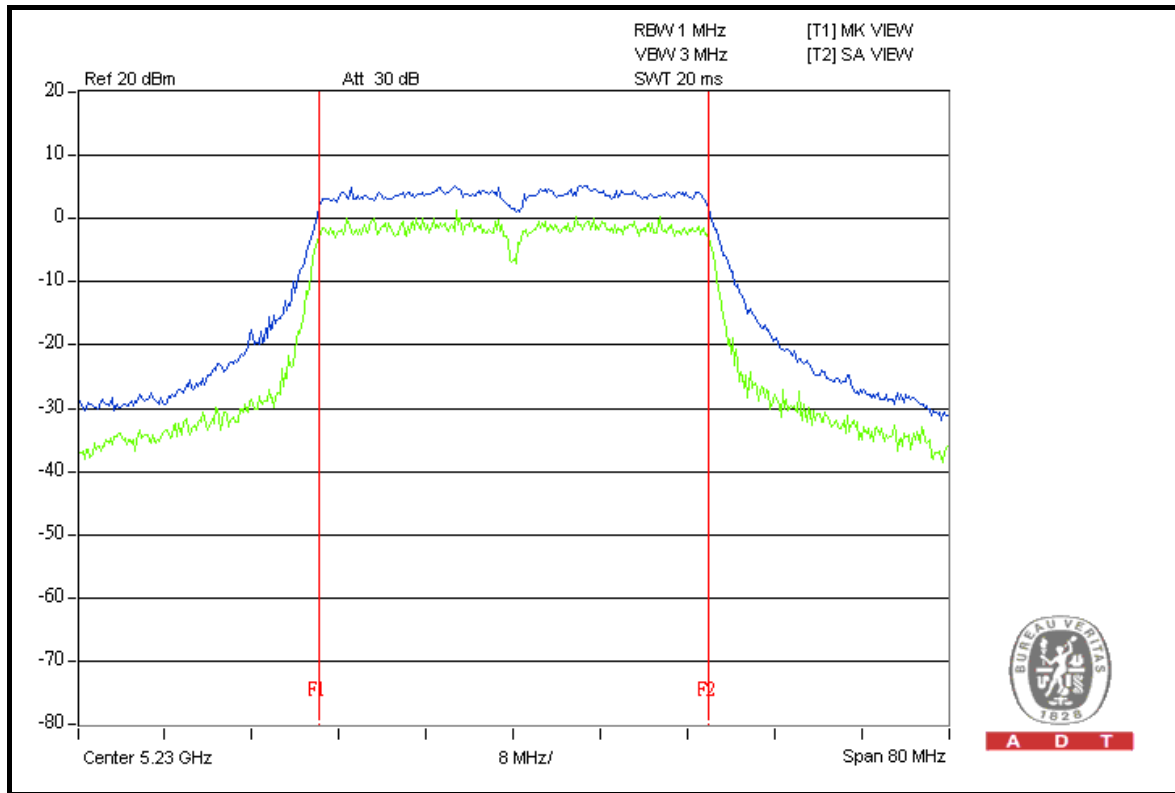
FOR CHAIN 2: CH 38





A D T

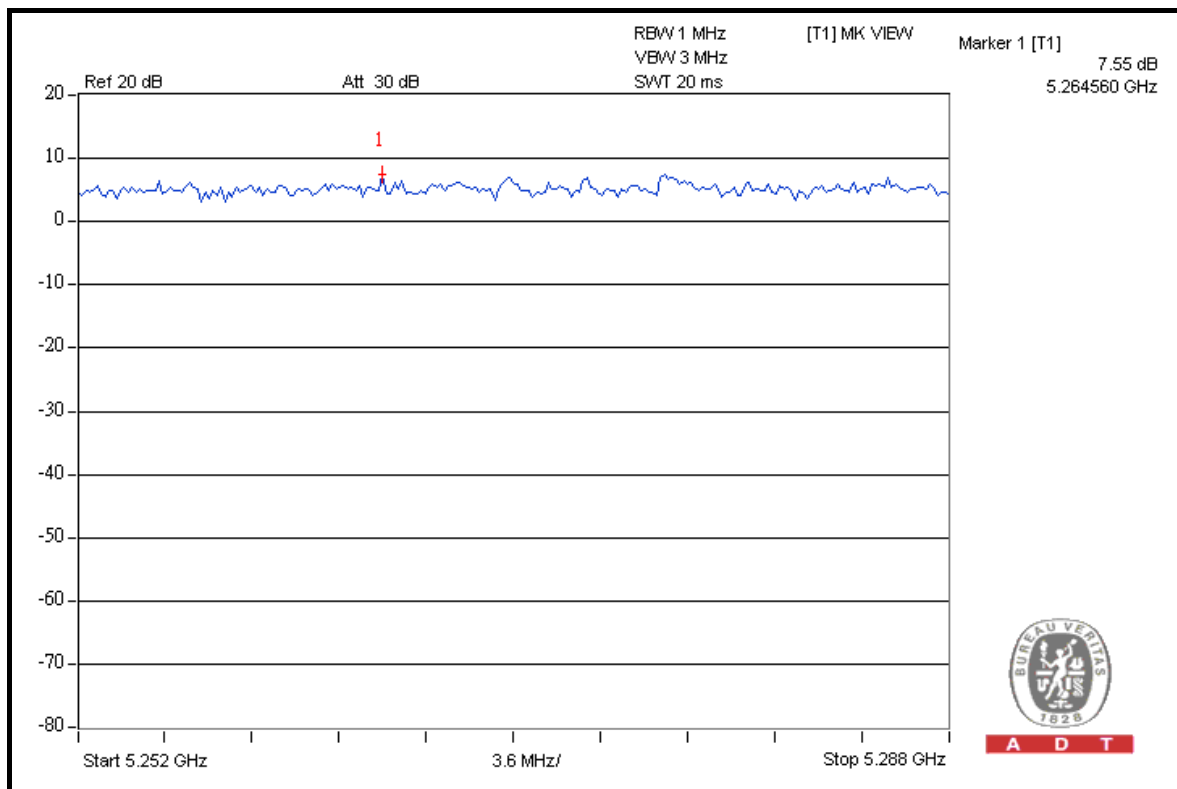
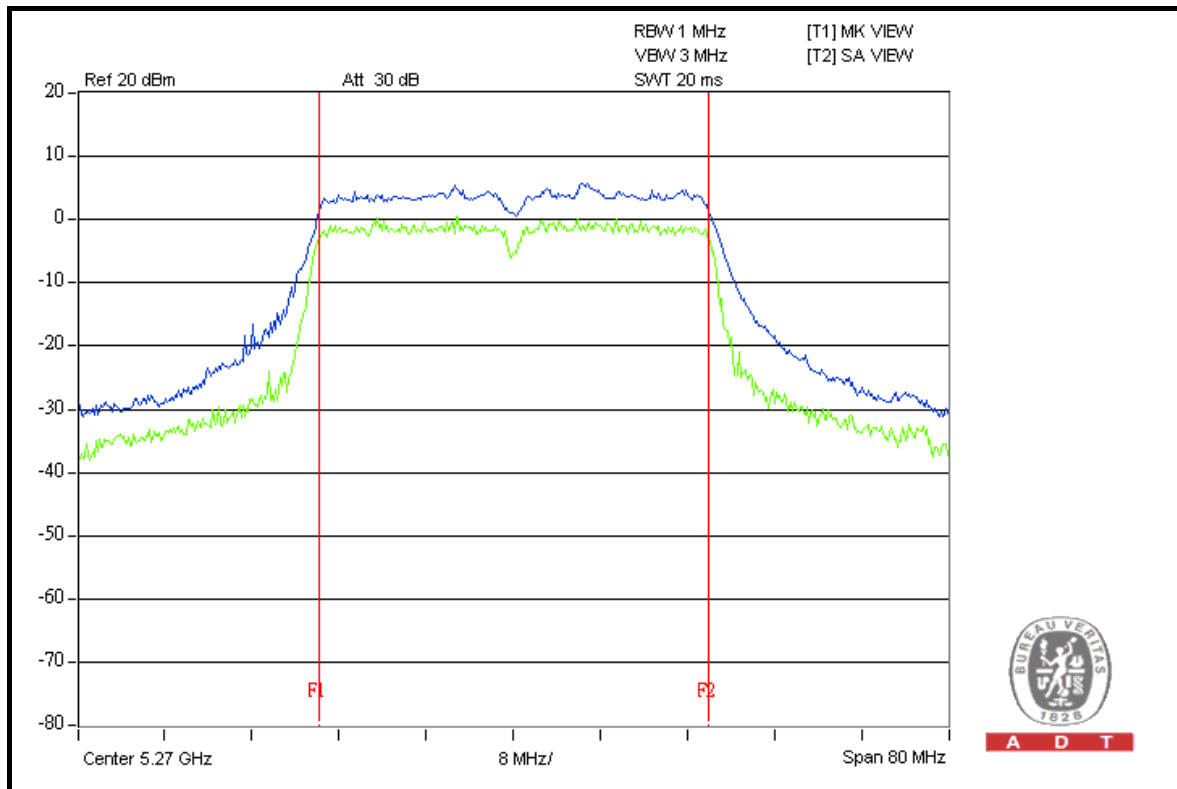
CH 46





A D T

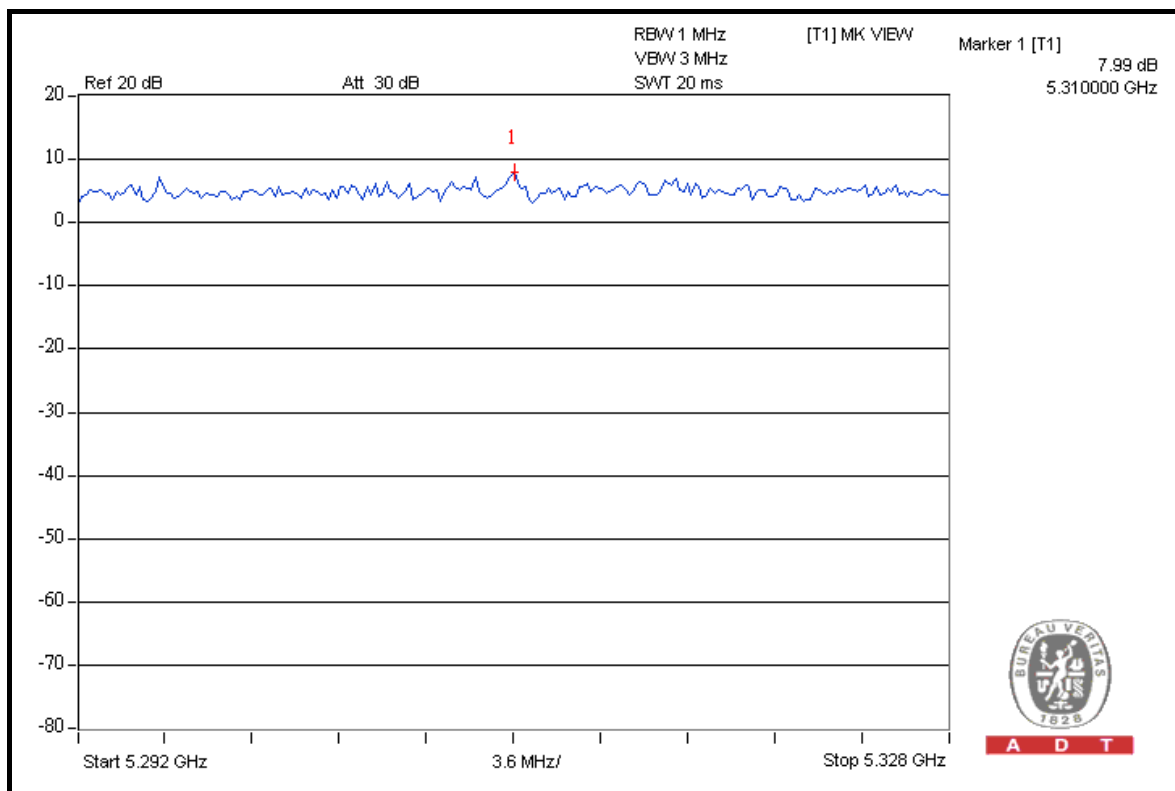
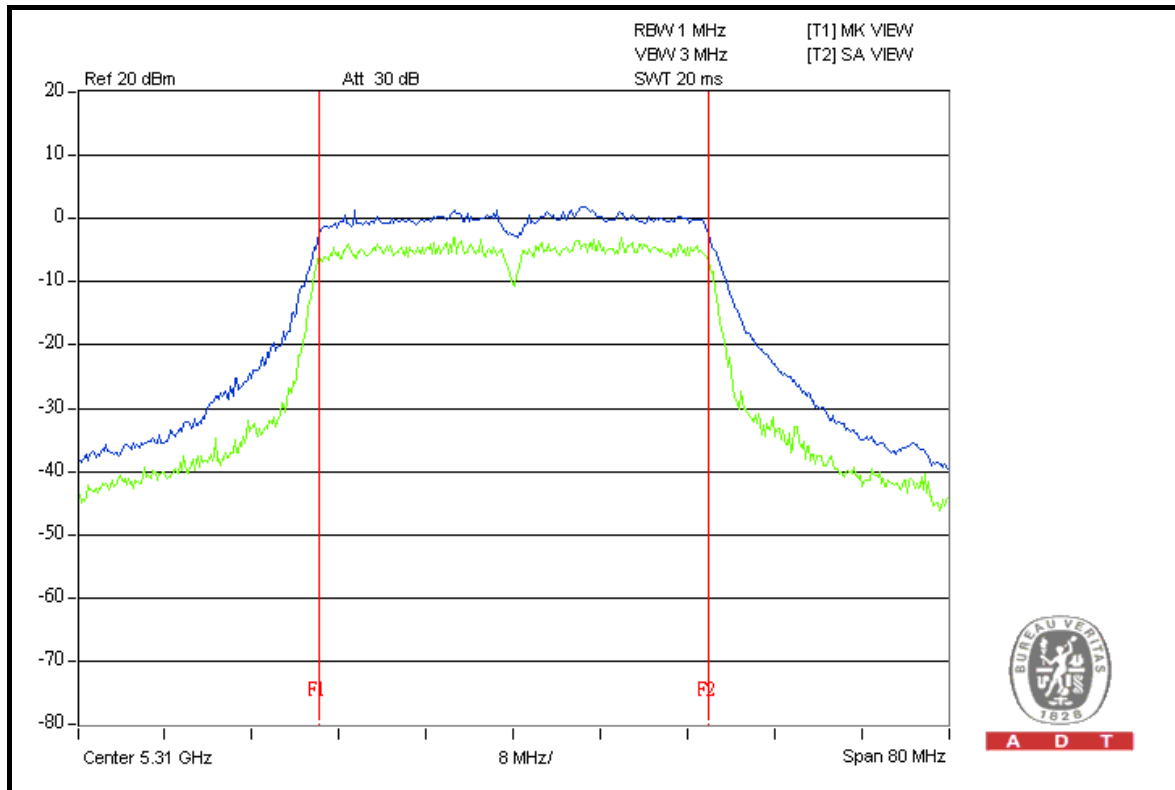
CH 54





A D T

CH 62



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

4.5.2 TEST INSTRUMENTS

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

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

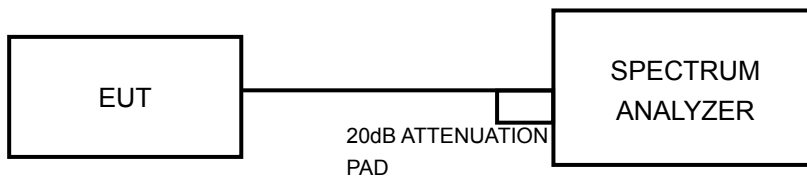
4.5.3 TEST PROCEDURES

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

4.5.4 DEVIATION FROM TEST STANDARD

No deviation.

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6.

4.5.7 TEST RESULTS

802.11a OFDM MODULATION

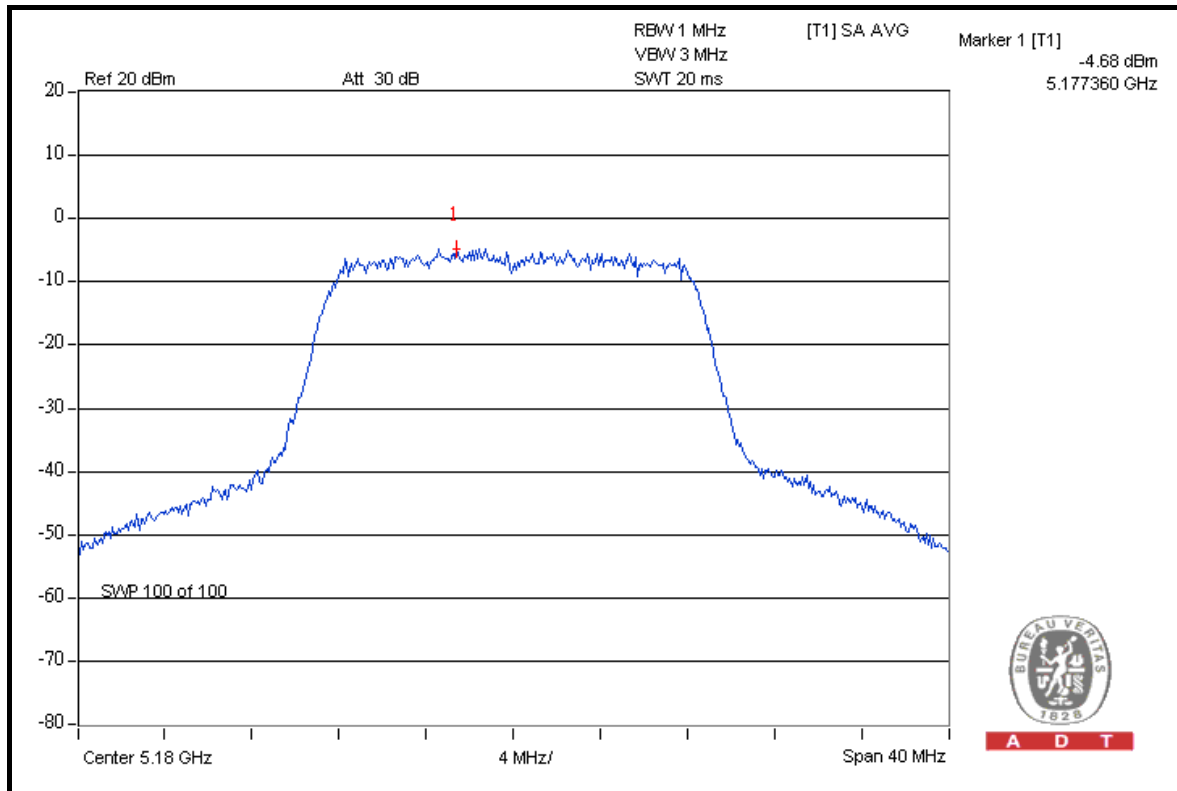
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
36	5180	-4.68	-4.44	-5.10	1.009	0.04	4	PASS
40	5200	-4.65	-4.67	-5.22	0.985	-0.07	4	PASS
48	5240	-4.82	-4.38	-4.97	1.013	0.06	4	PASS
52	5260	-4.90	-4.25	-5.20	1.001	0.01	11	PASS
60	5300	-4.62	-4.22	-4.90	1.047	0.20	11	PASS
64	5320	-3.49	-3.27	-4.17	1.302	1.14	11	PASS

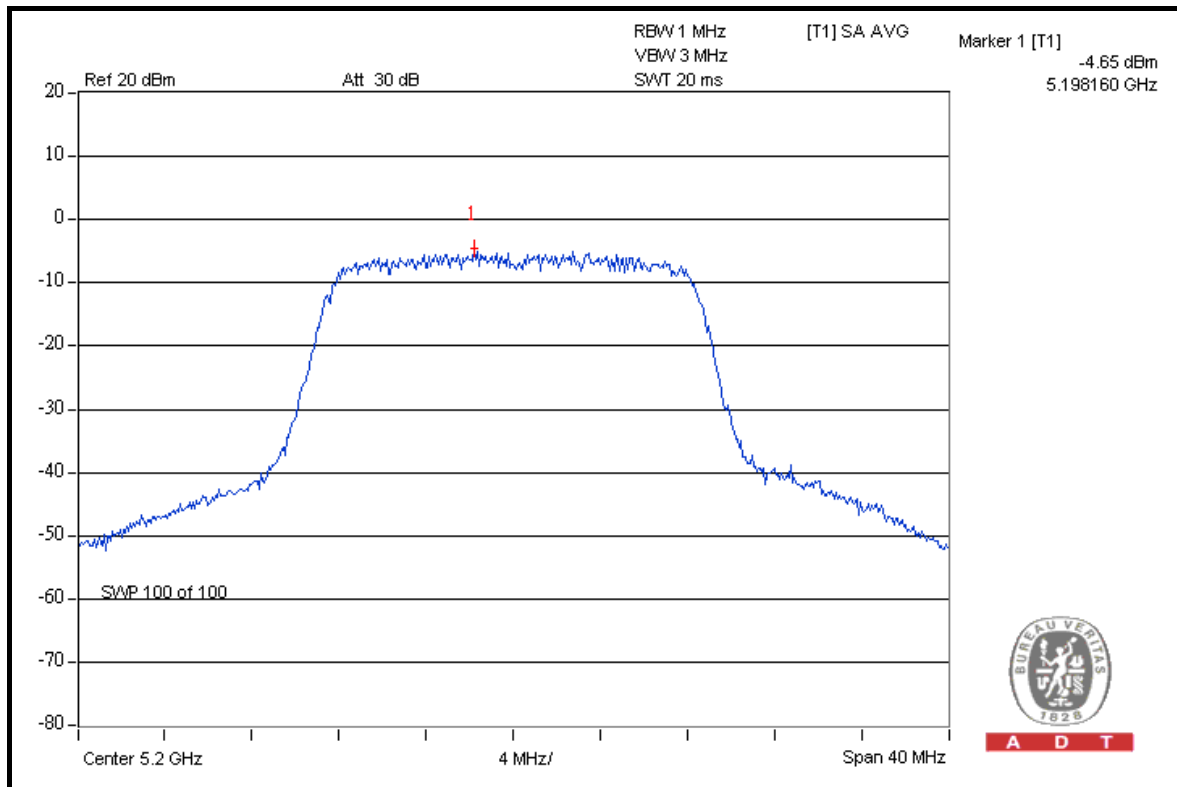


A D T

FOR CHAIN 0: CH 36



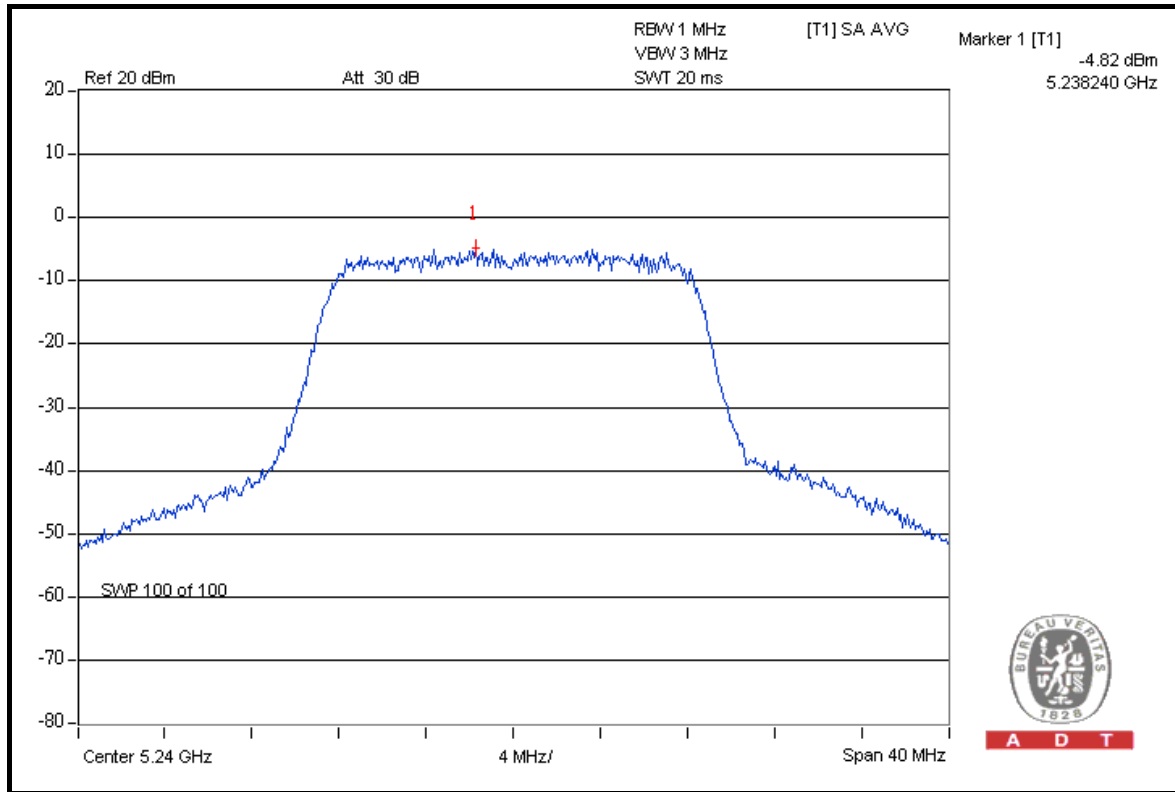
CH 40



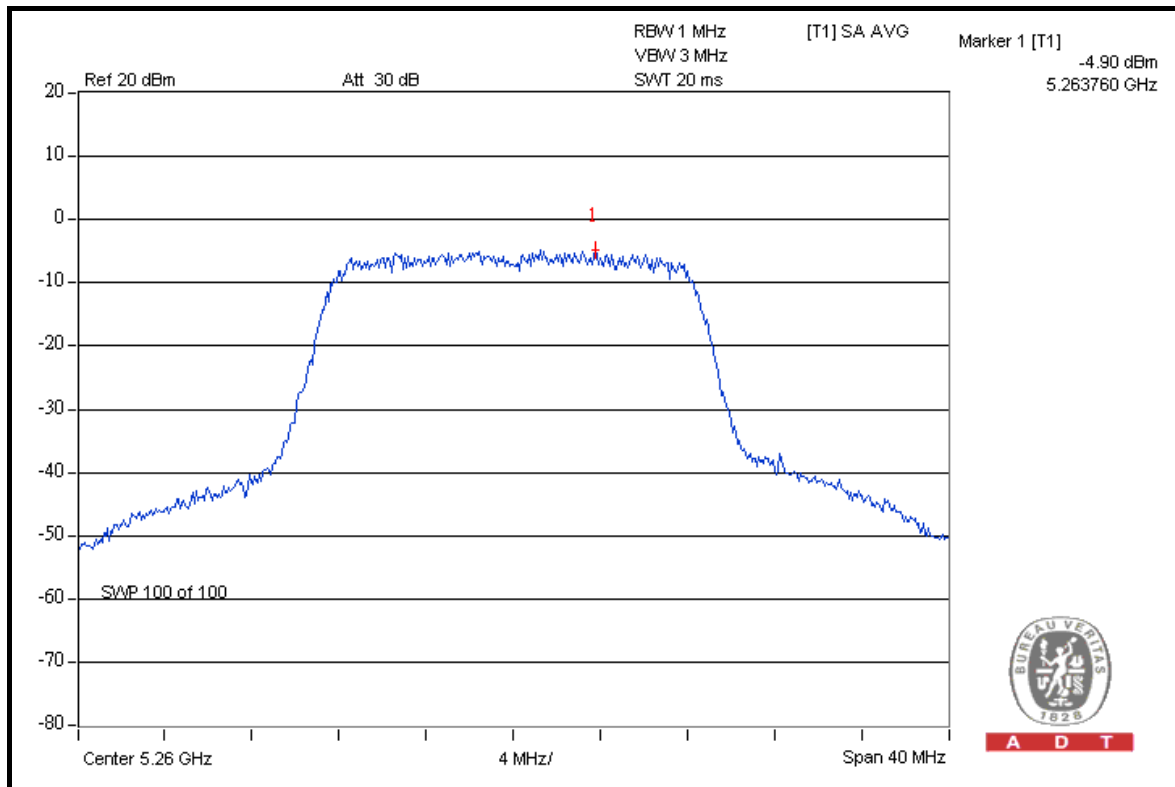


A D T

CH 48



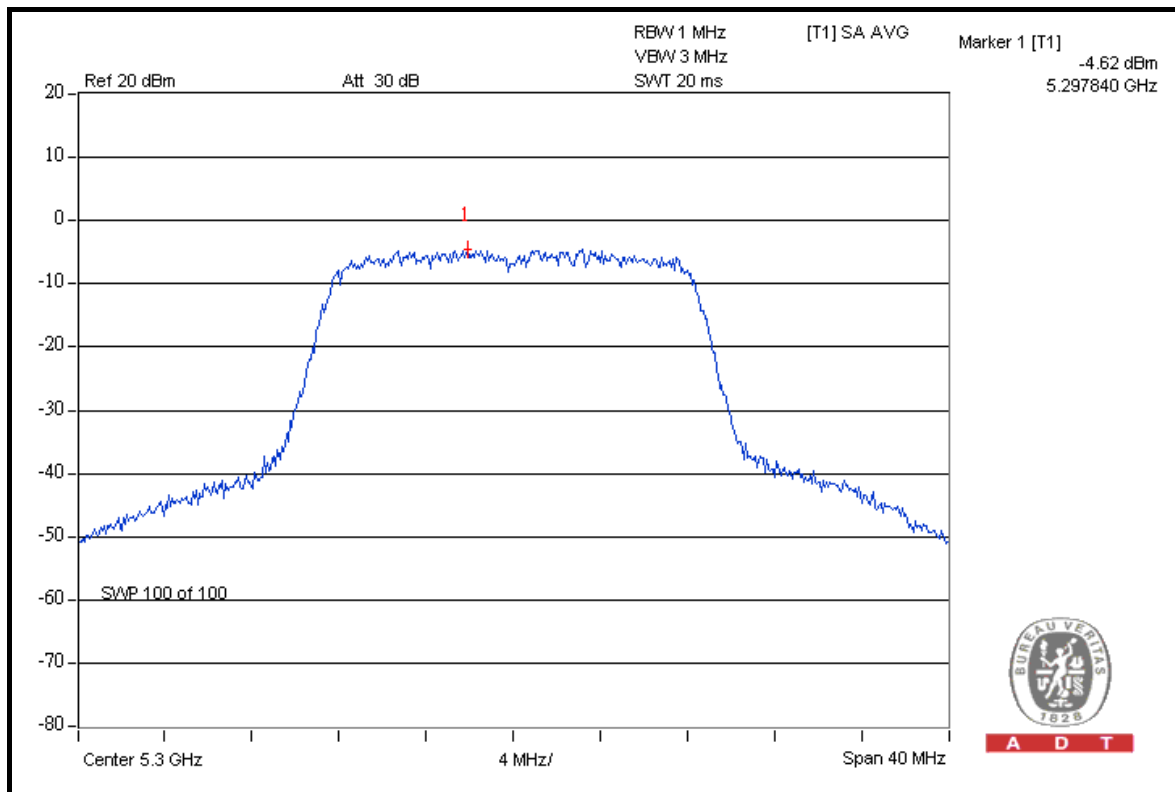
CH 52



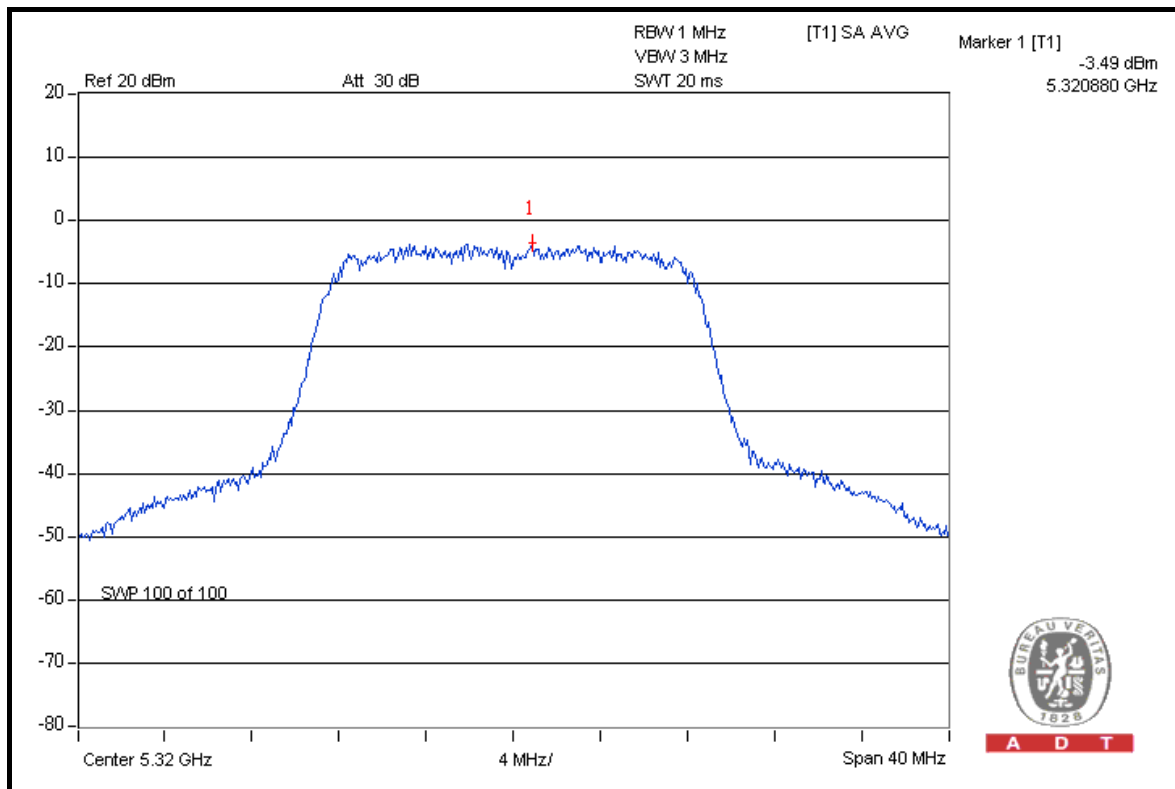


A D T

CH 60



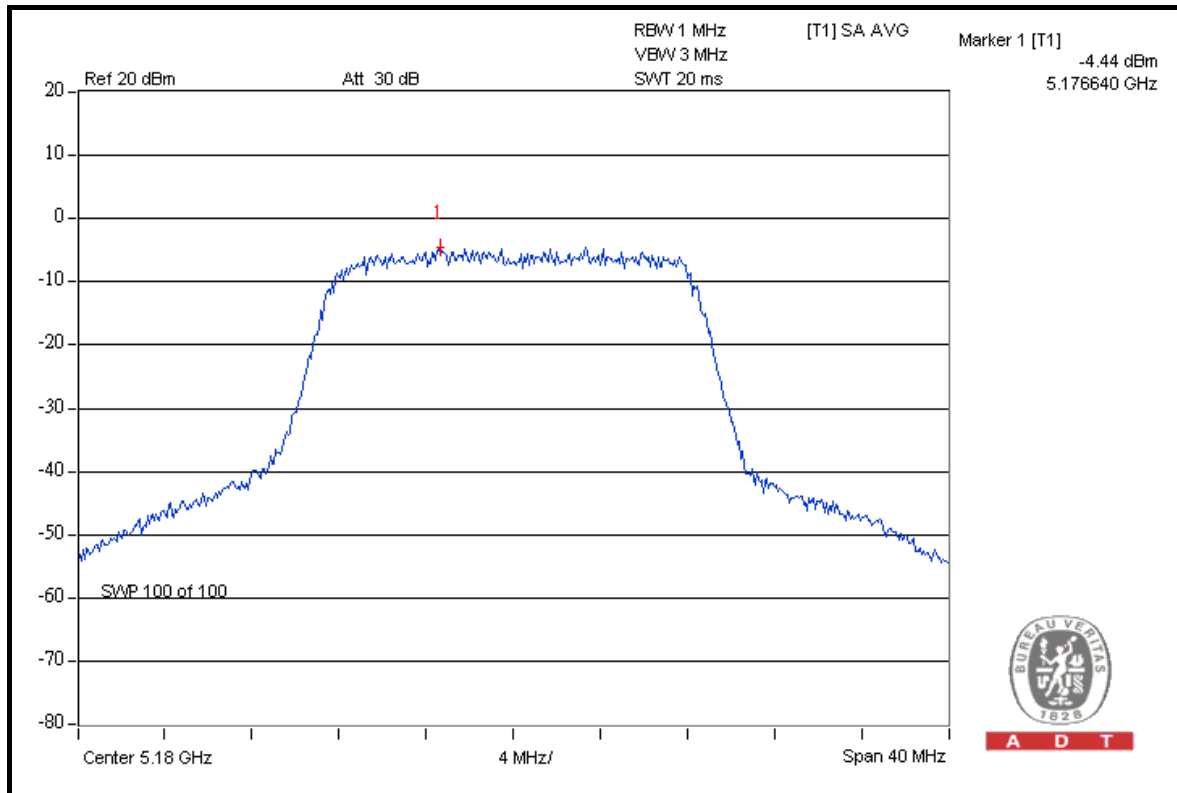
CH 64



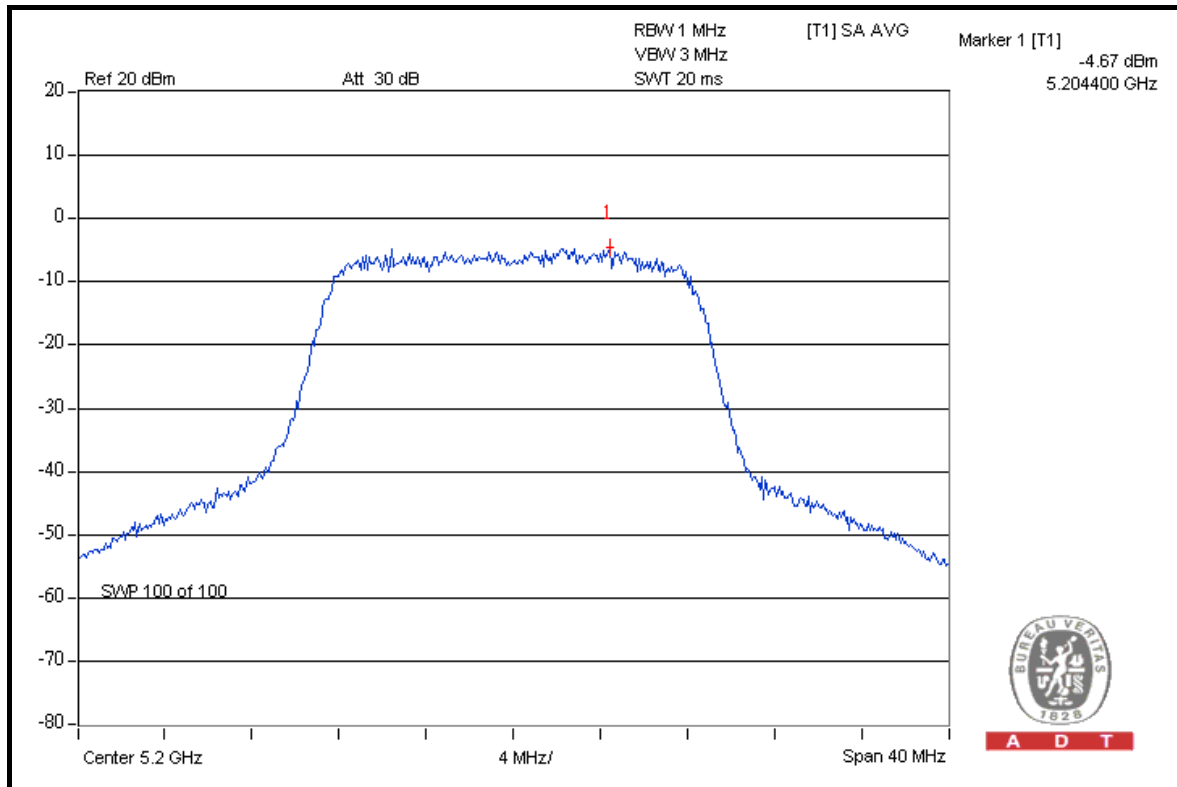


A D T

FOR CHAIN 1: CH 36



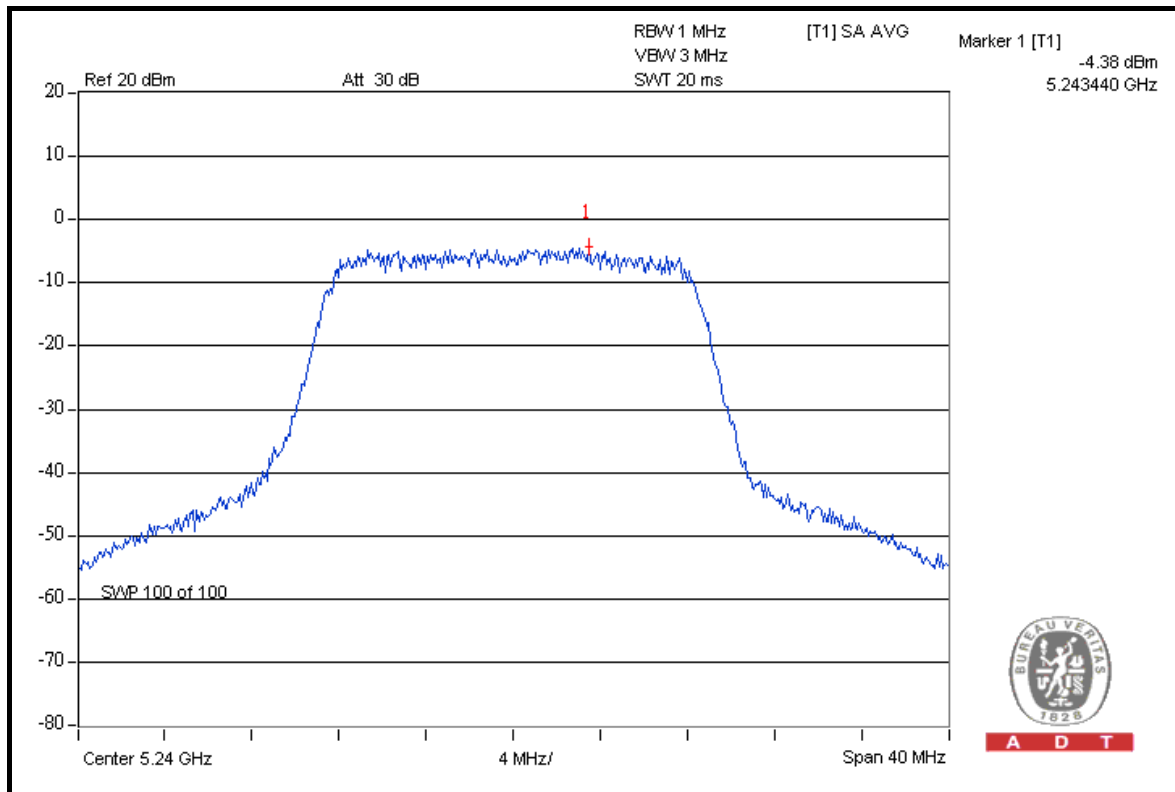
CH 40





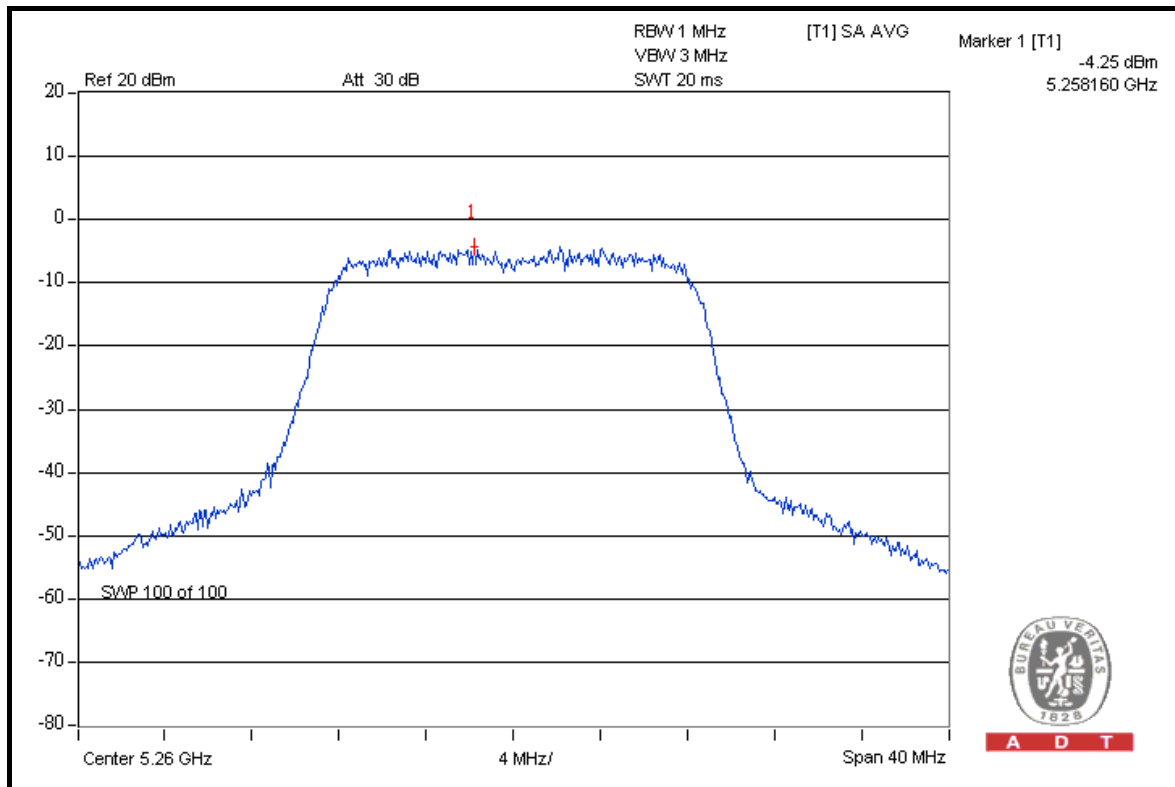
A D T

CH 48



A D T

CH 52

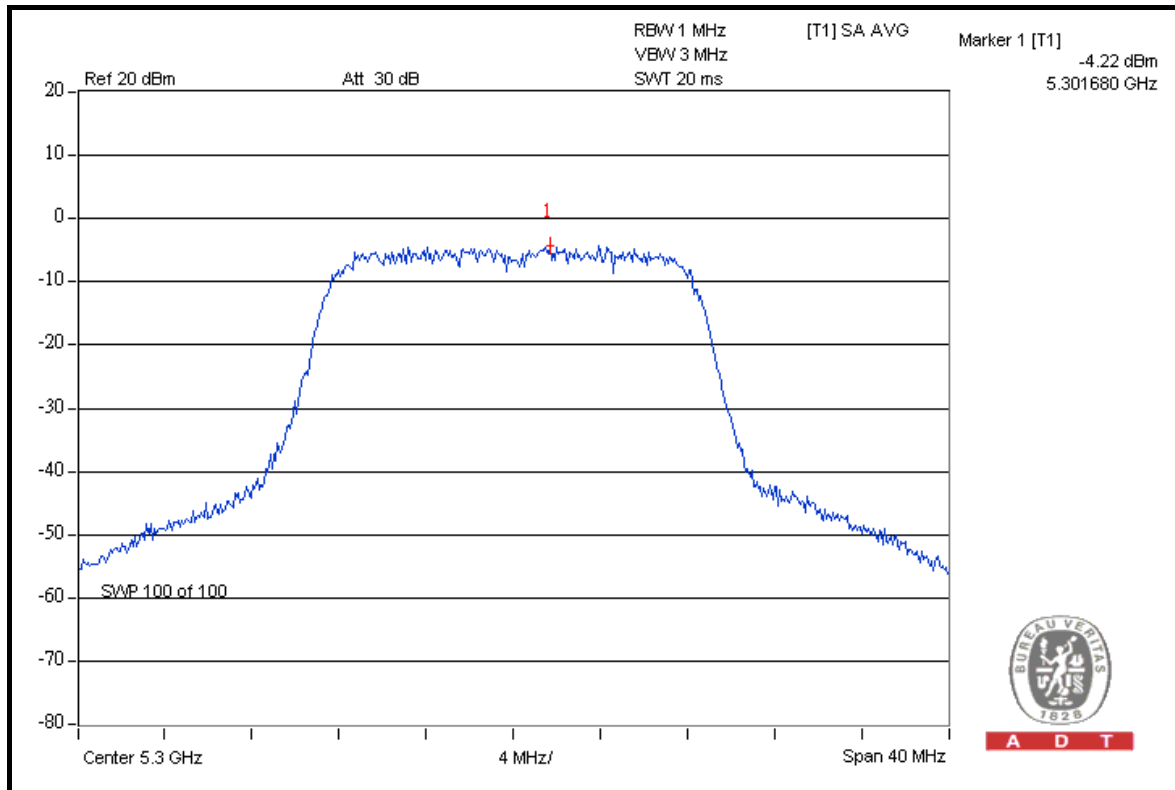


A D T

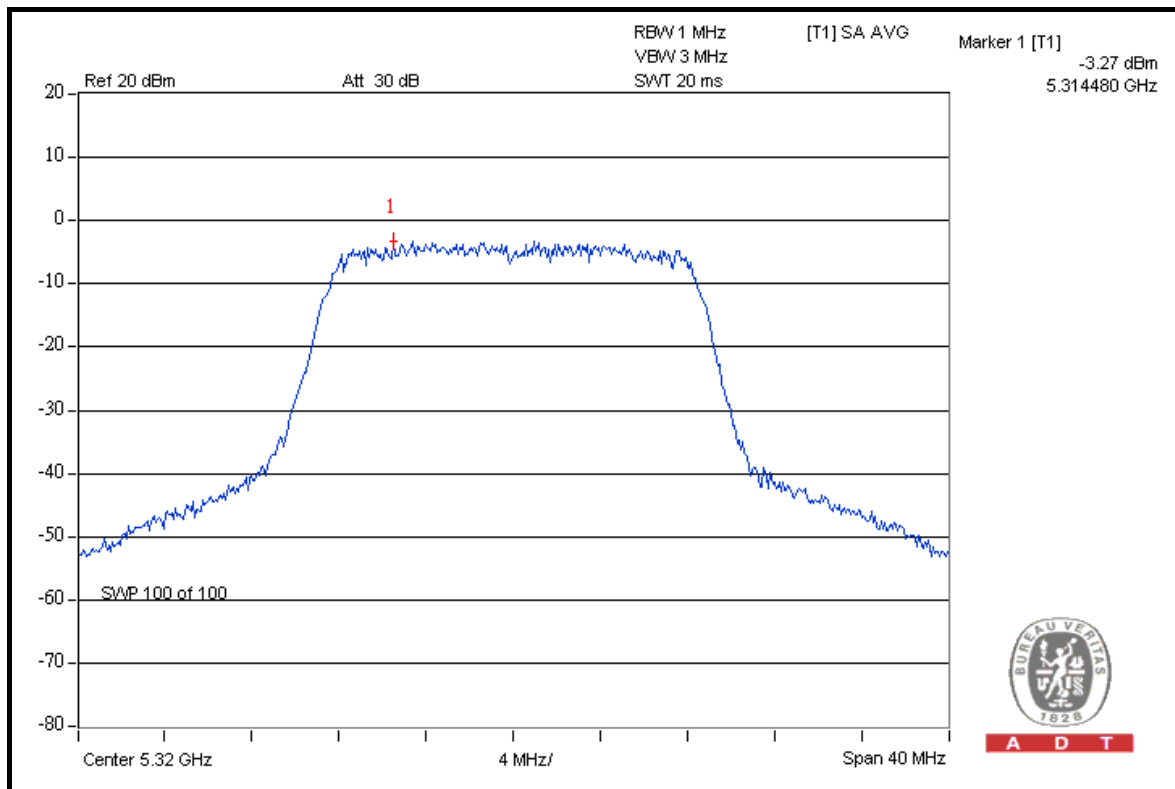


A D T

CH 60



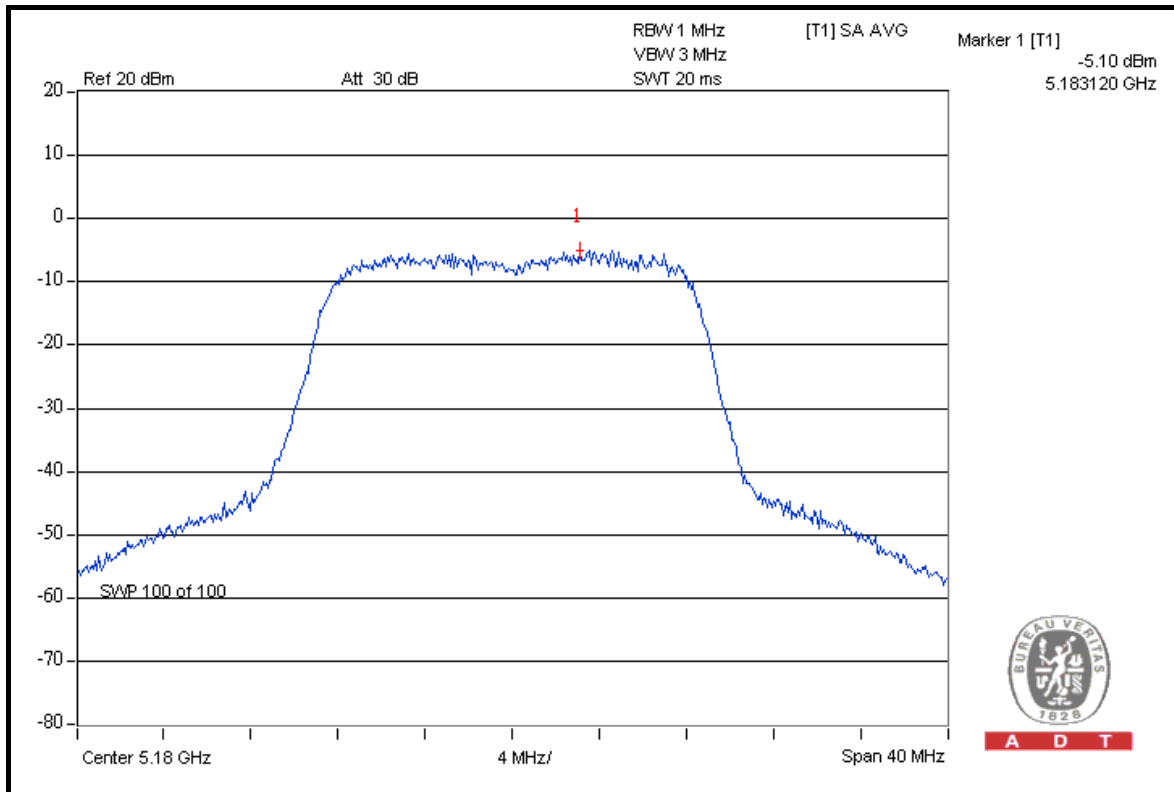
CH 64



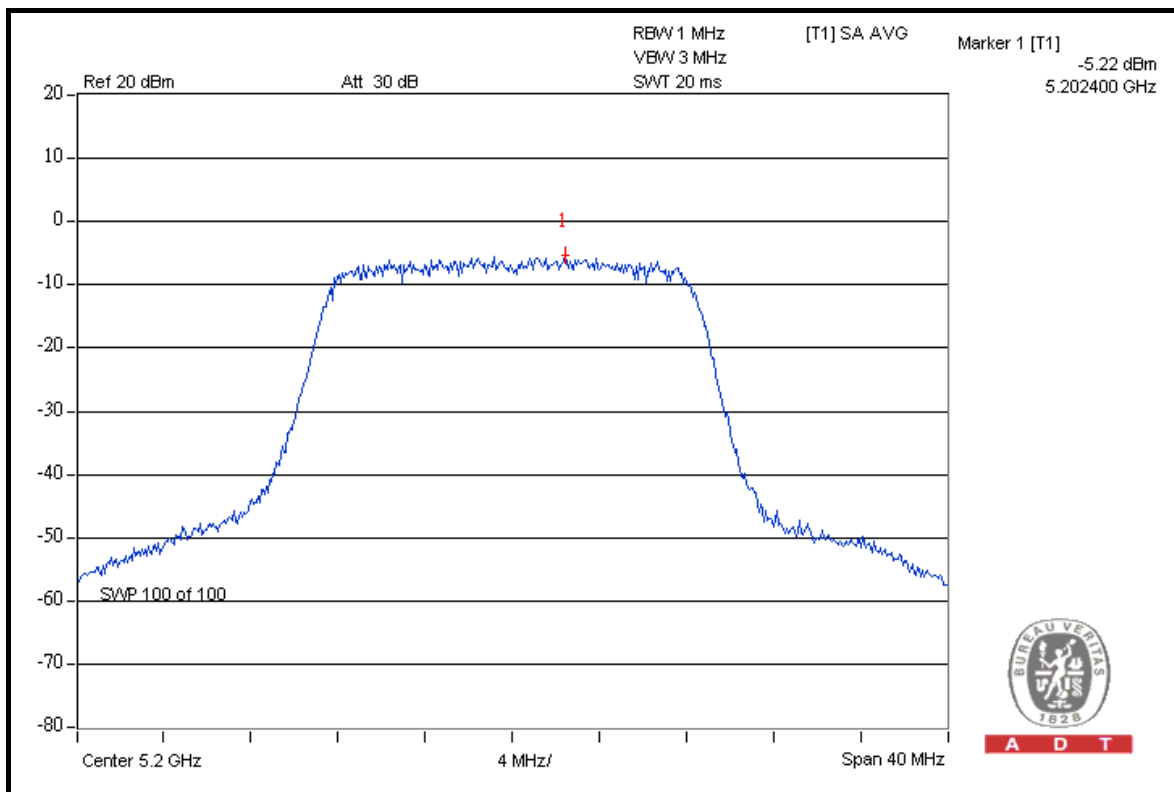


A D T

FOR CHAIN 2: CH 36



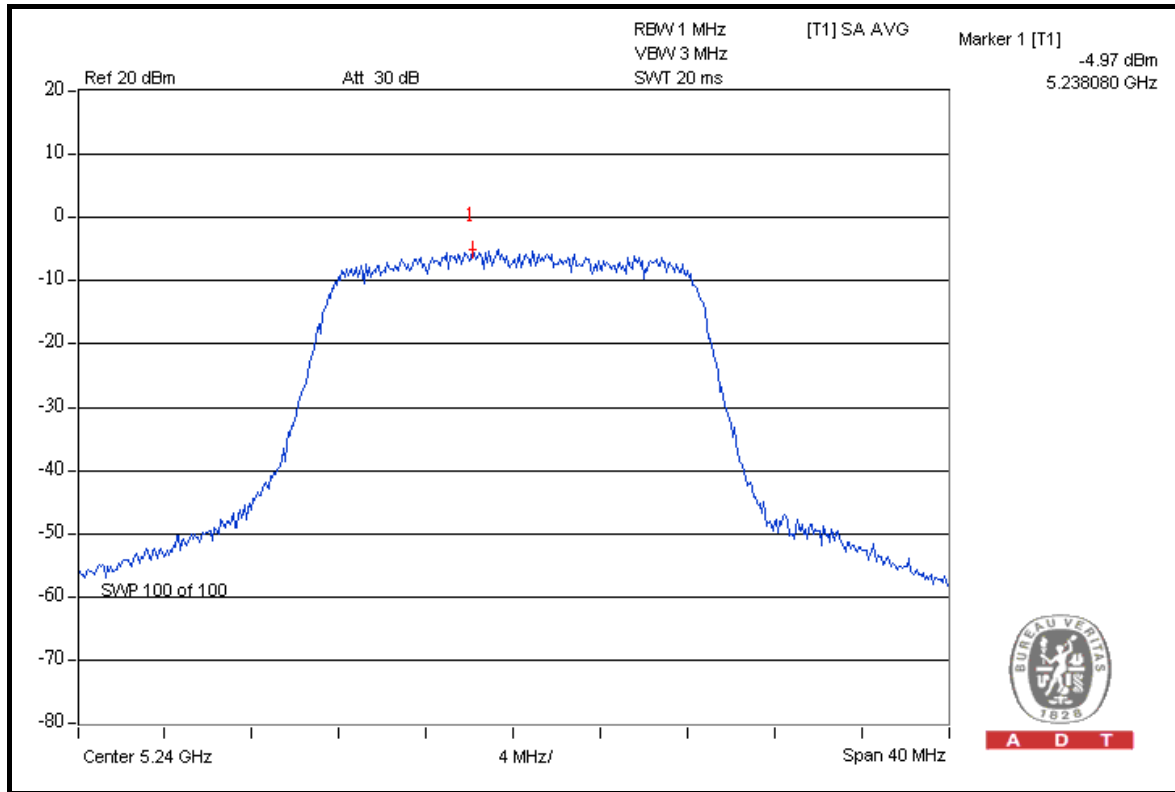
CH 40





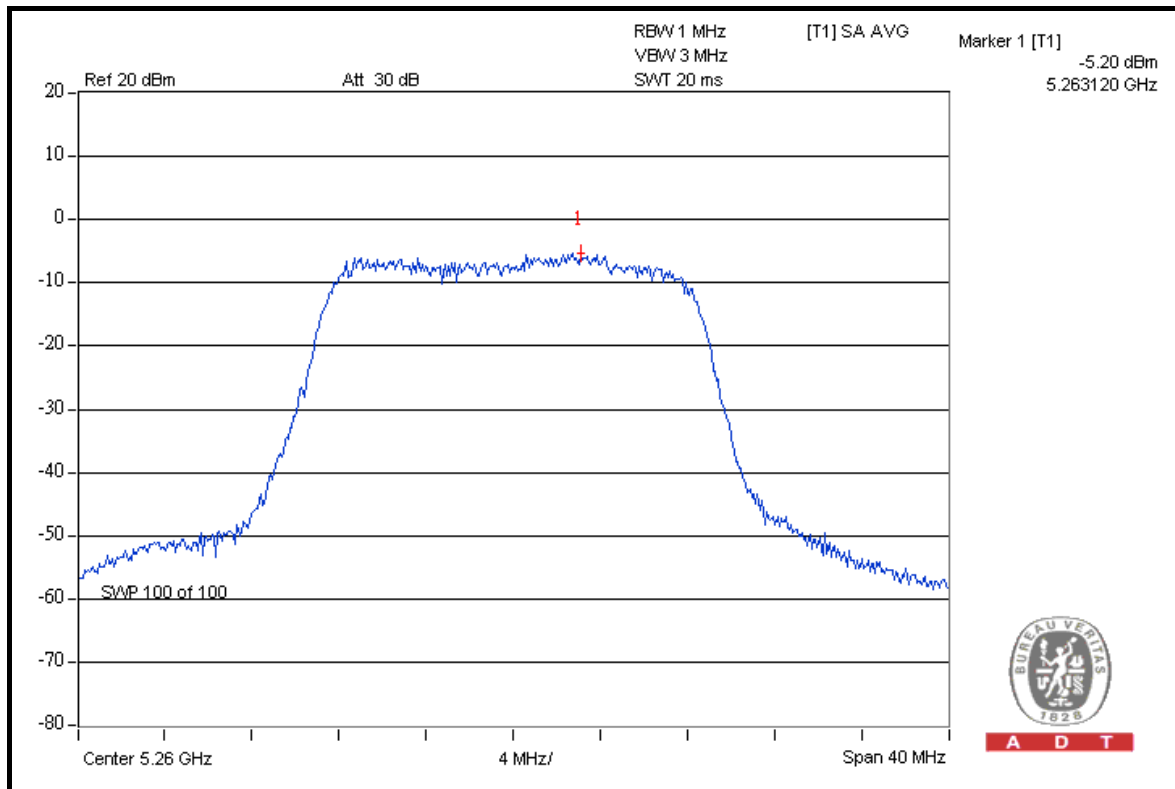
A D T

CH 48



A D T

CH 52

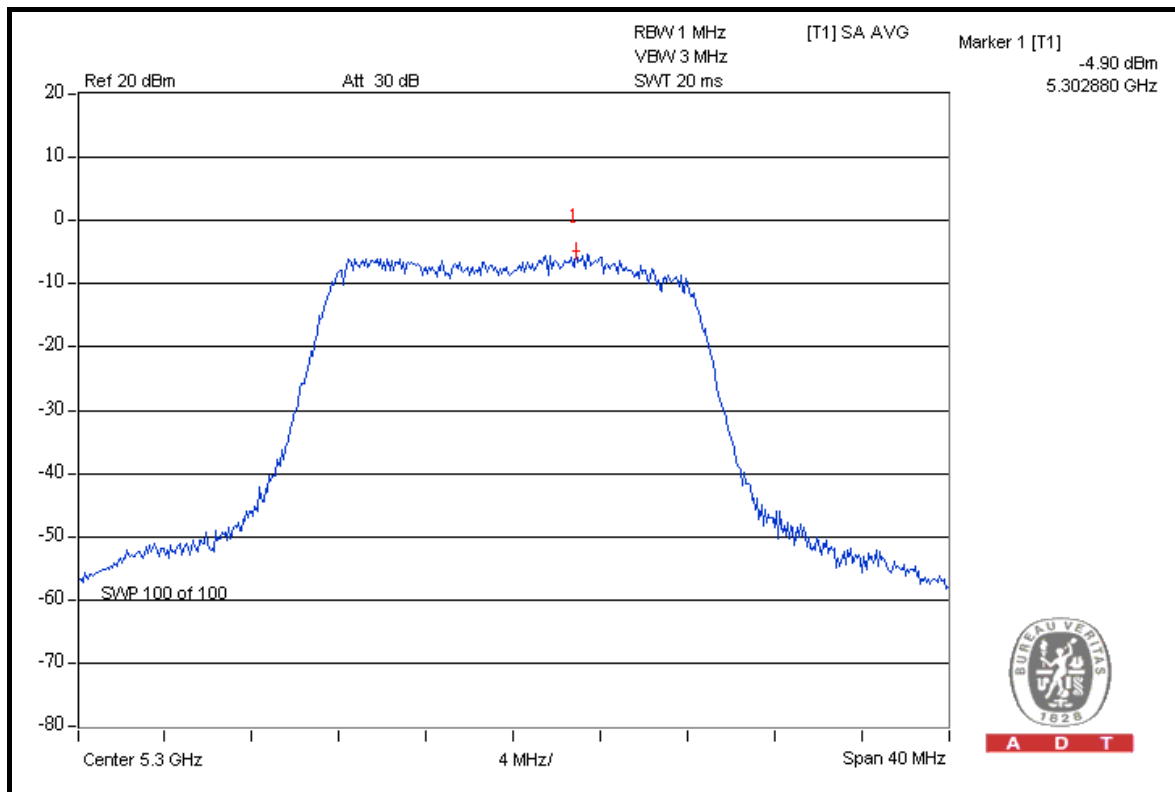


A D T

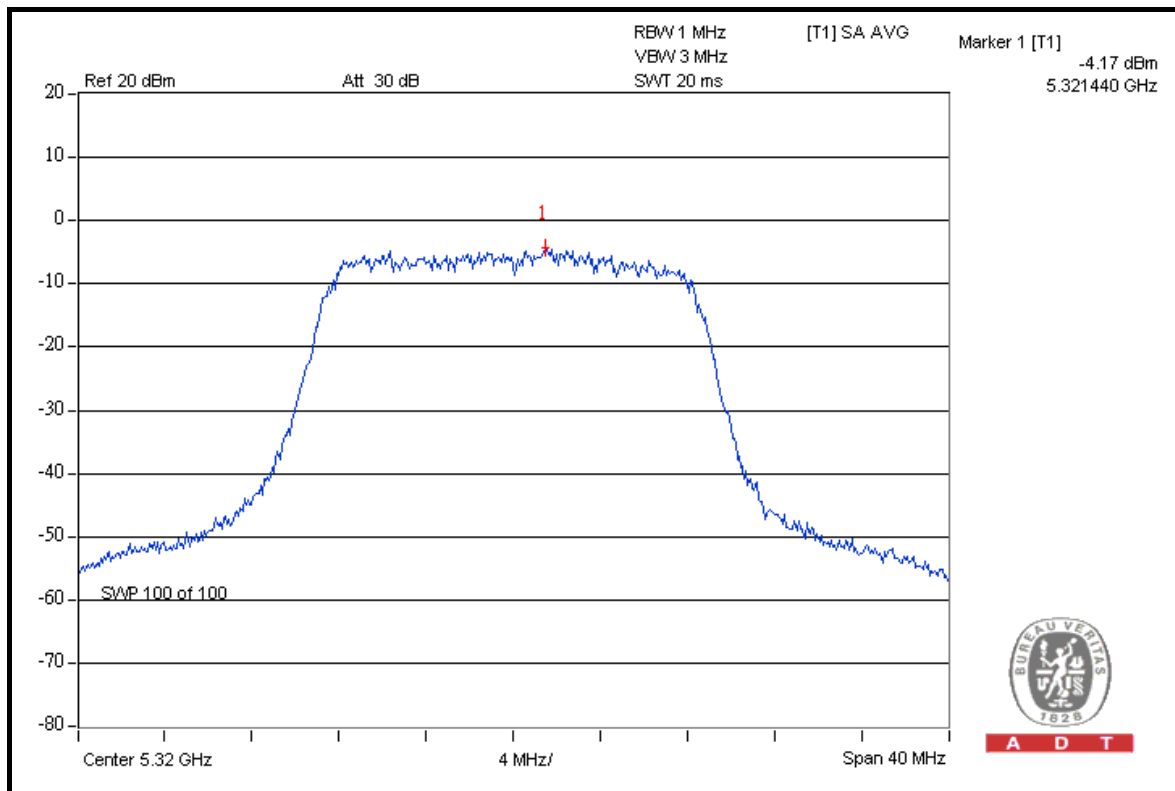


A D T

CH 60



CH 64





A D T

DRAFT 802.11n (20MHz) OFDM MODULATION

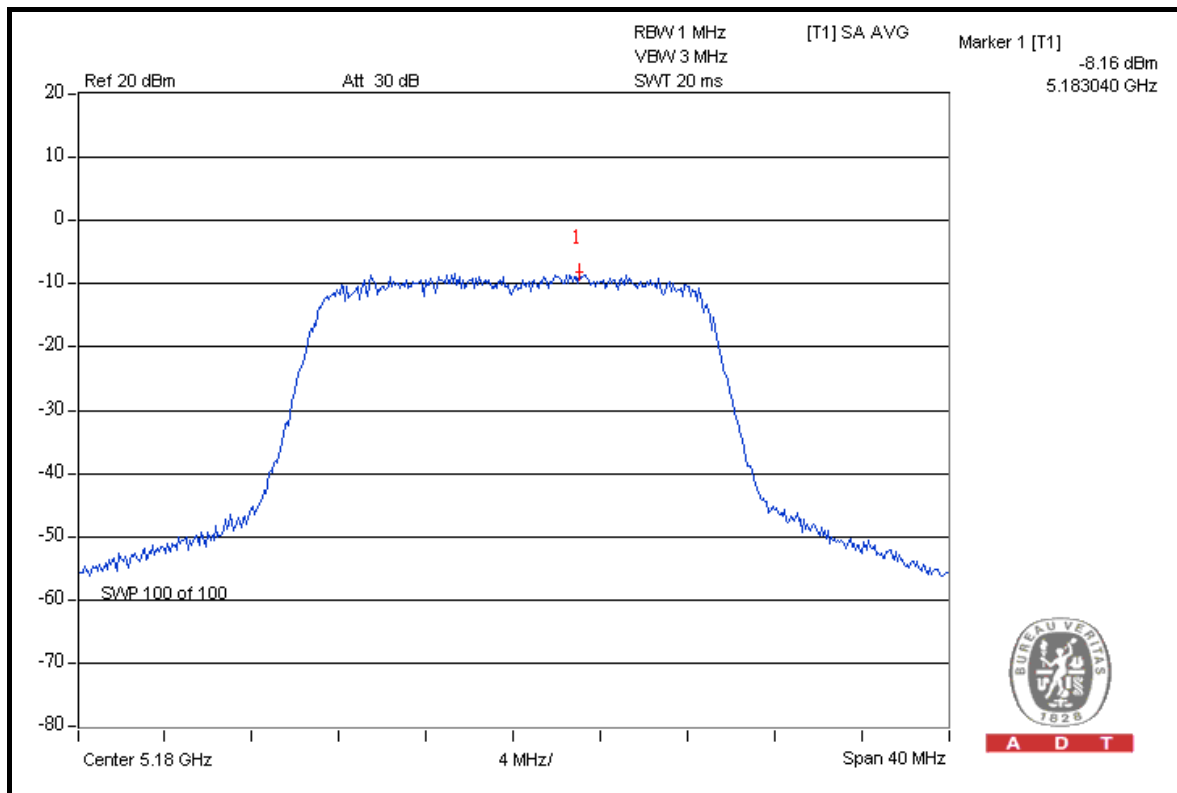
MODULATION TYPE	BPSK	TRANSFER RATE	7.2Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
36	5180	-8.16	-7.91	-8.16	0.467	-3.30	4	PASS
40	5200	-5.90	-7.33	-5.85	0.702	-1.54	4	PASS
48	5240	-5.39	-5.03	-2.57	1.156	0.63	4	PASS
52	5260	-1.59	-1.08	0.68	2.643	4.22	11	PASS
60	5300	-0.70	-0.53	0.44	2.843	4.54	11	PASS
64	5320	-5.40	-6.90	-6.02	0.743	-1.29	11	PASS

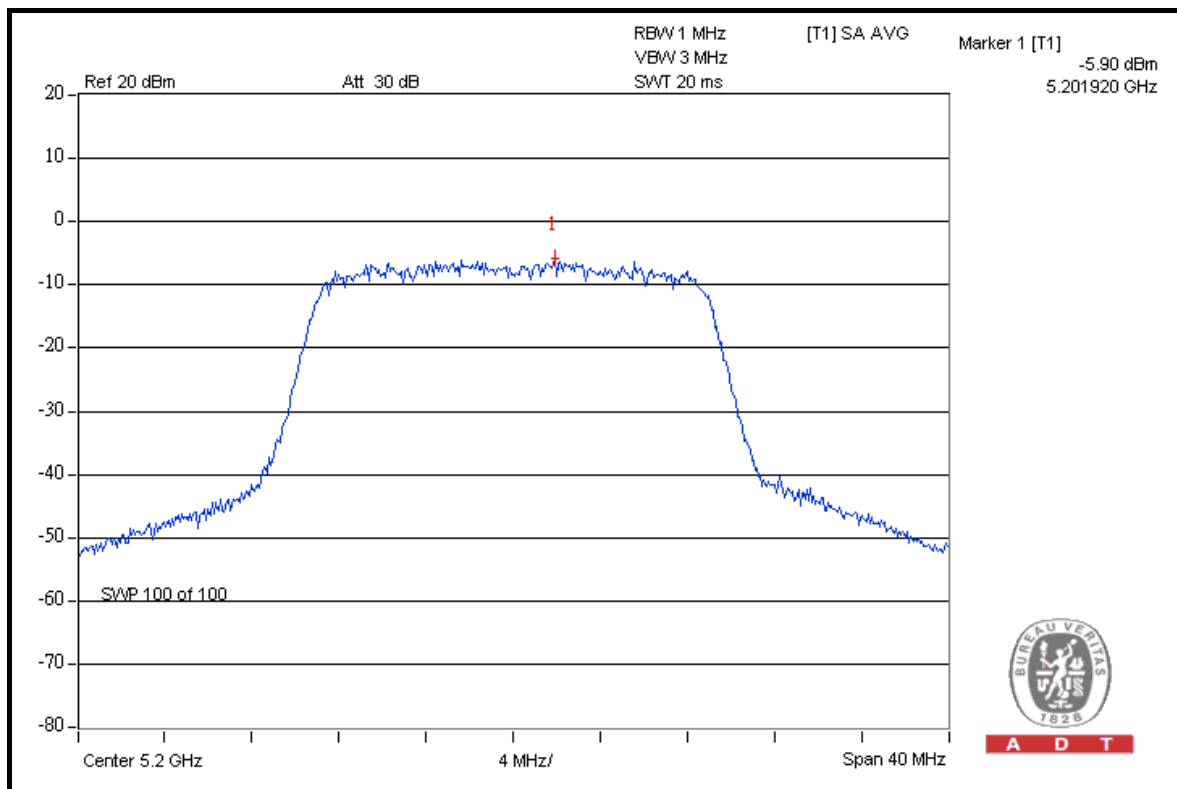


A D T

FOR CHAIN 0: CH 36



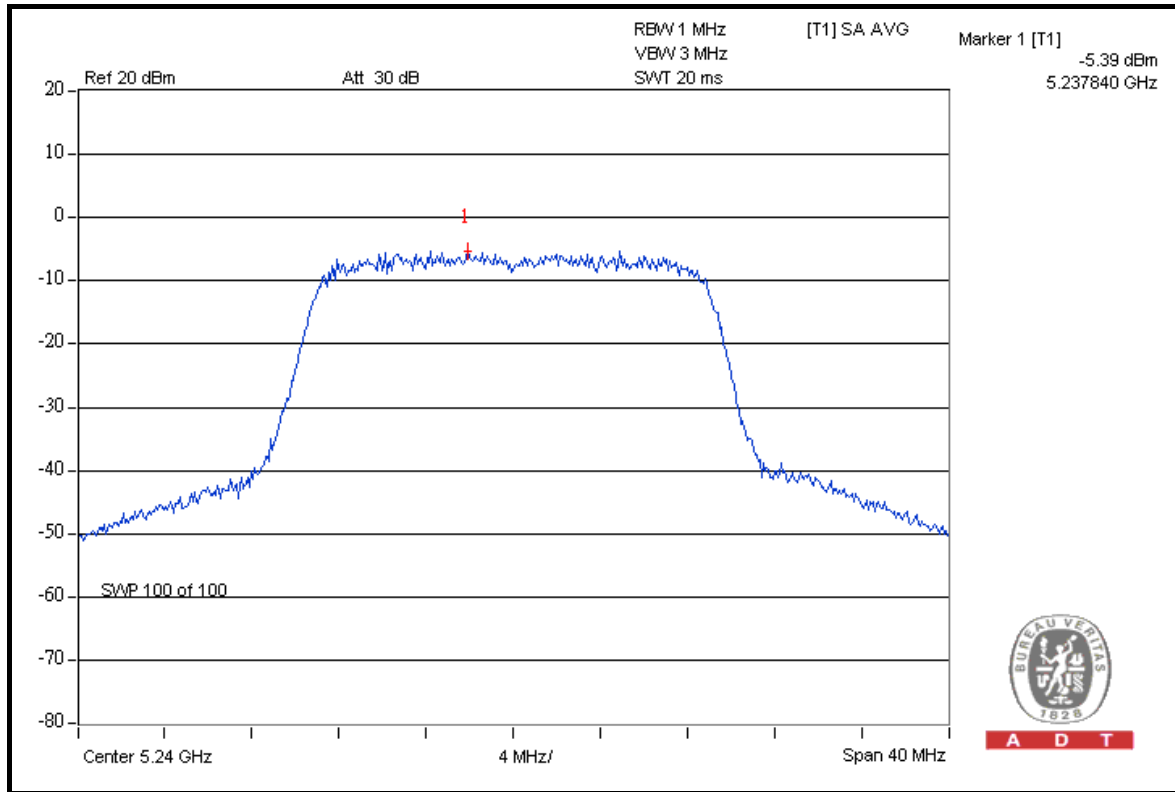
CH 40



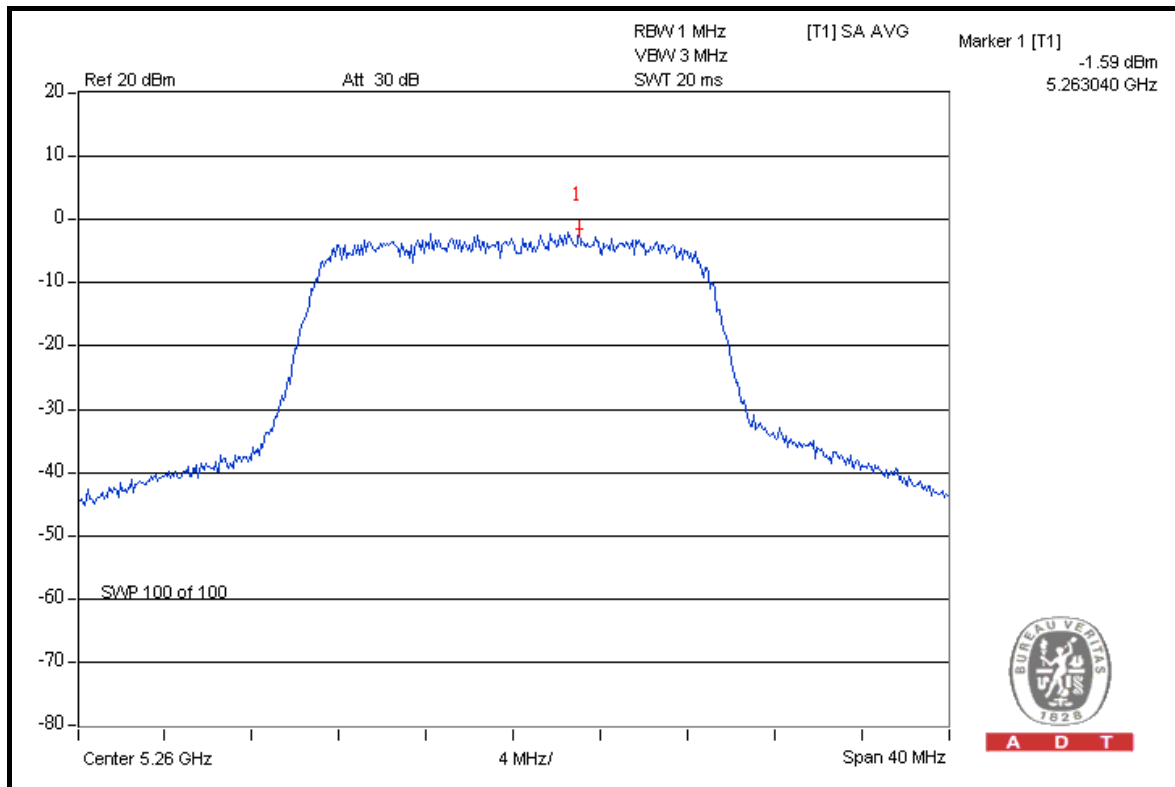


A D T

CH 48



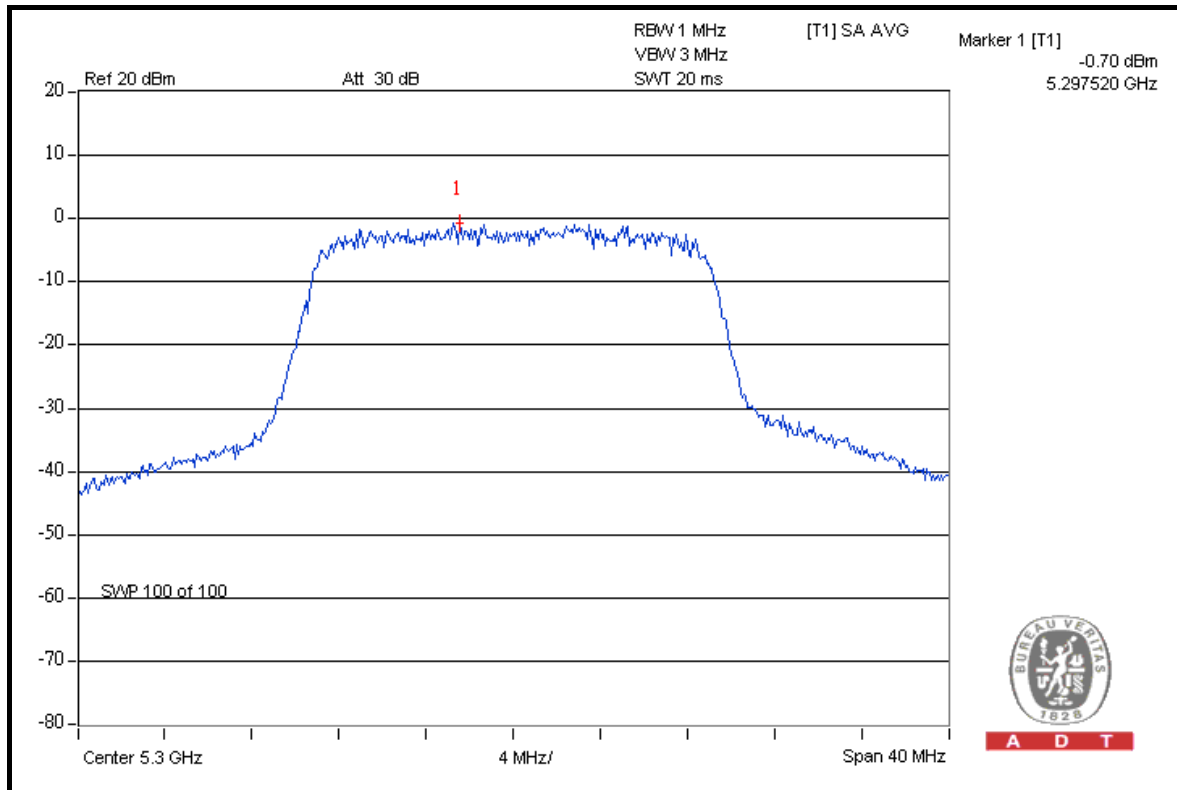
CH 52



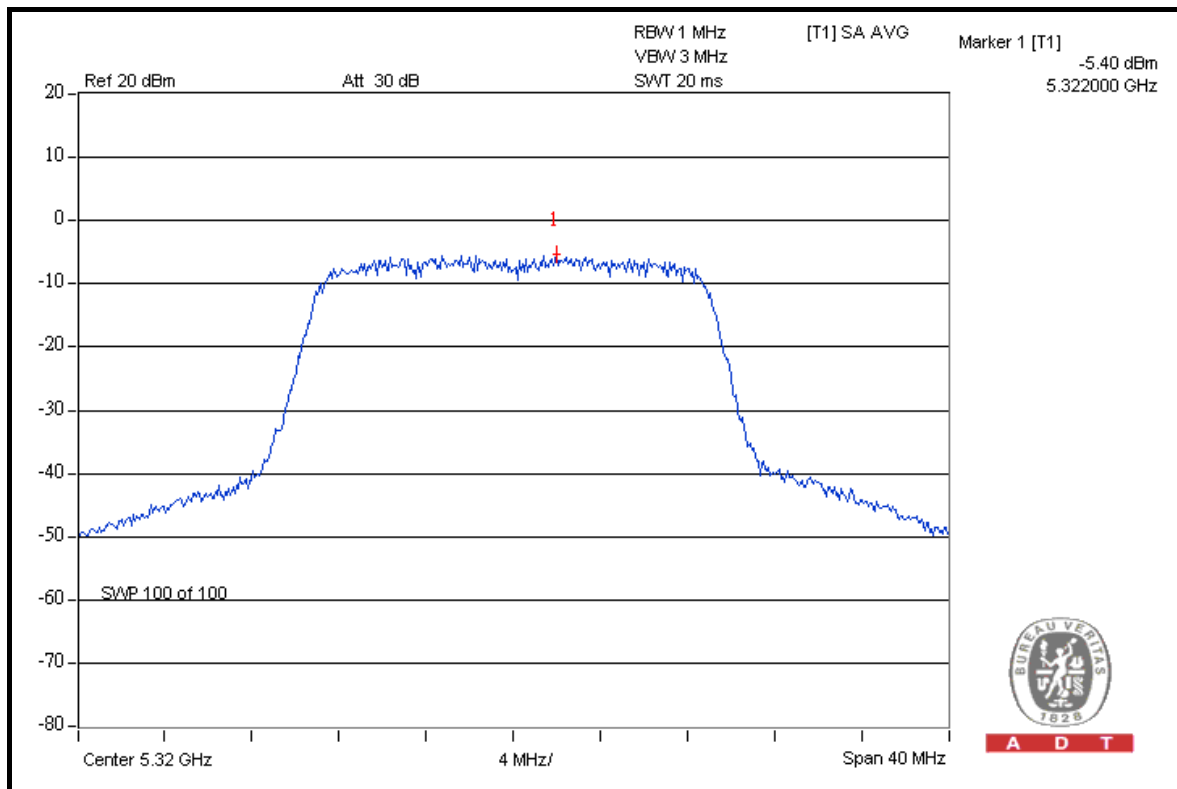


A D T

CH 60



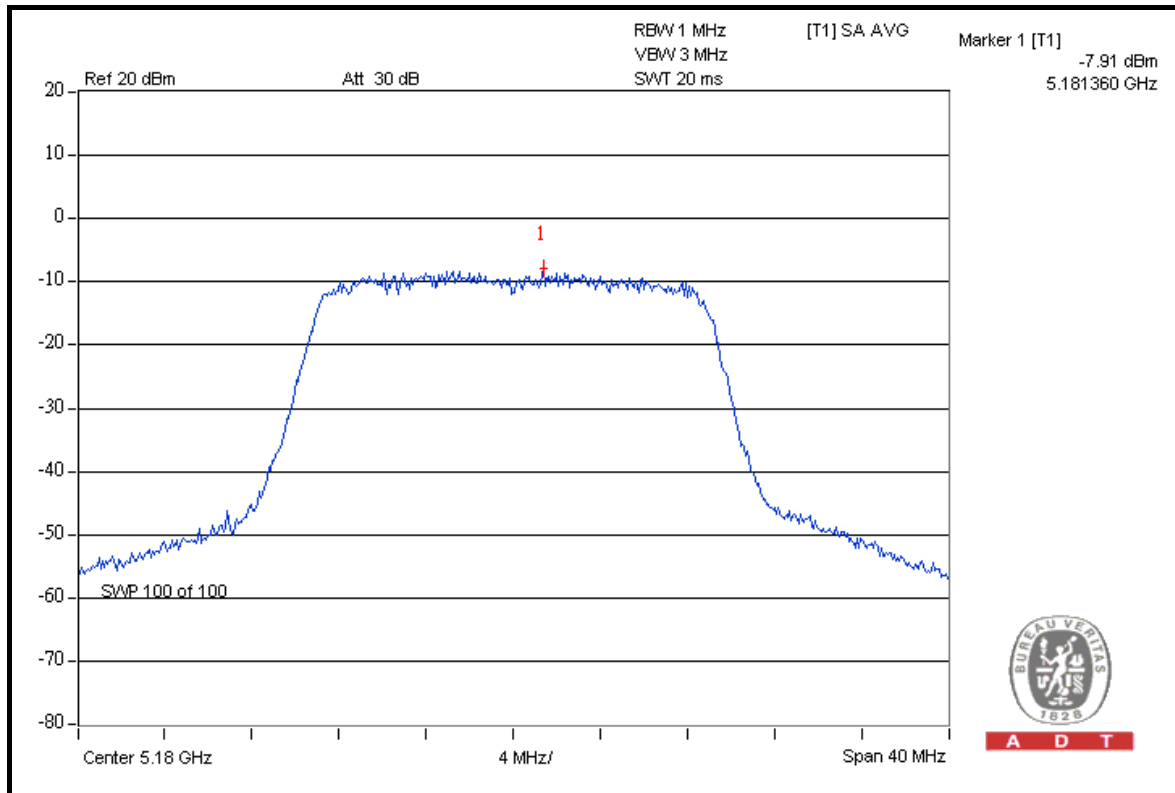
CH 64



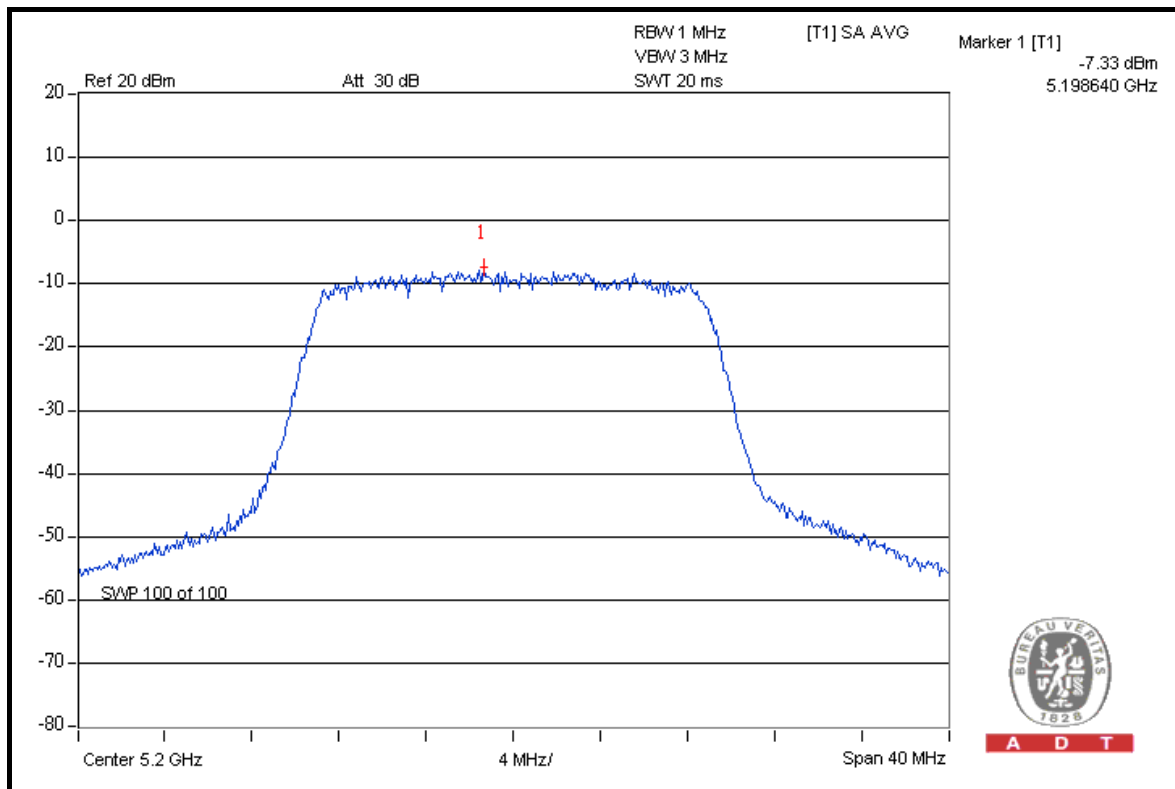


A D T

FOR CHAIN 1: CH 36



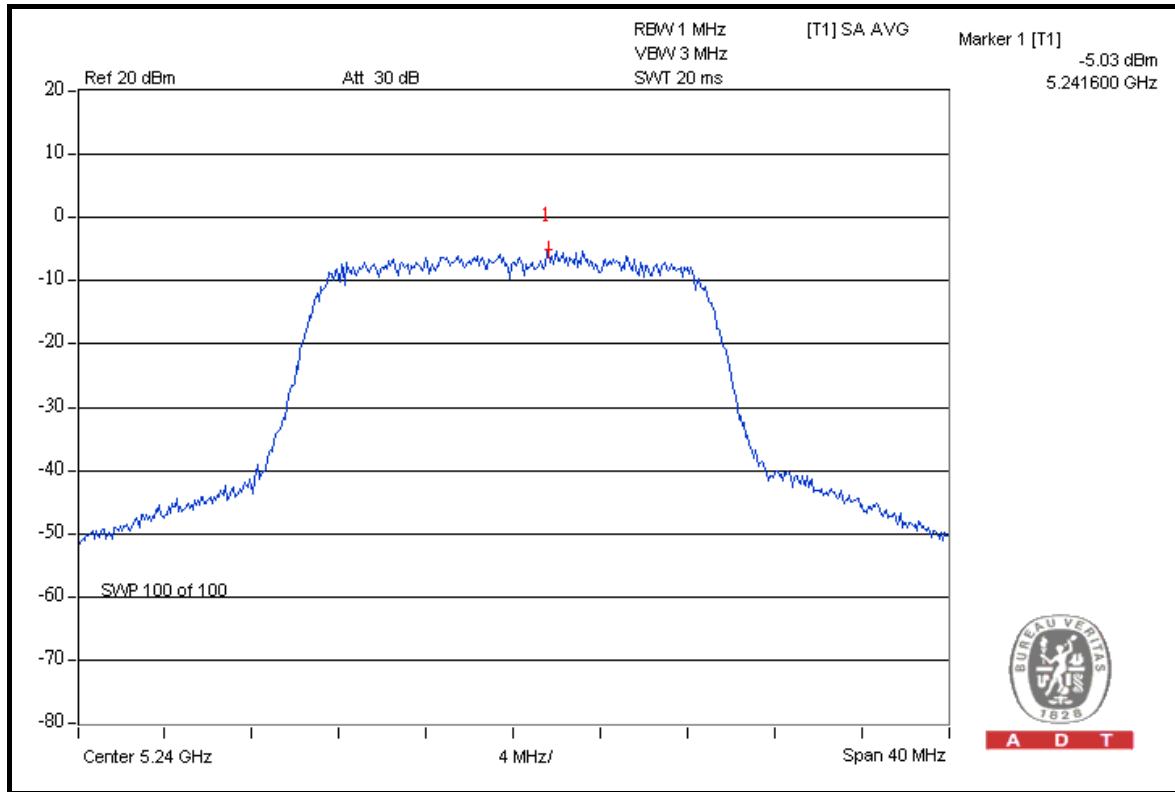
CH 40



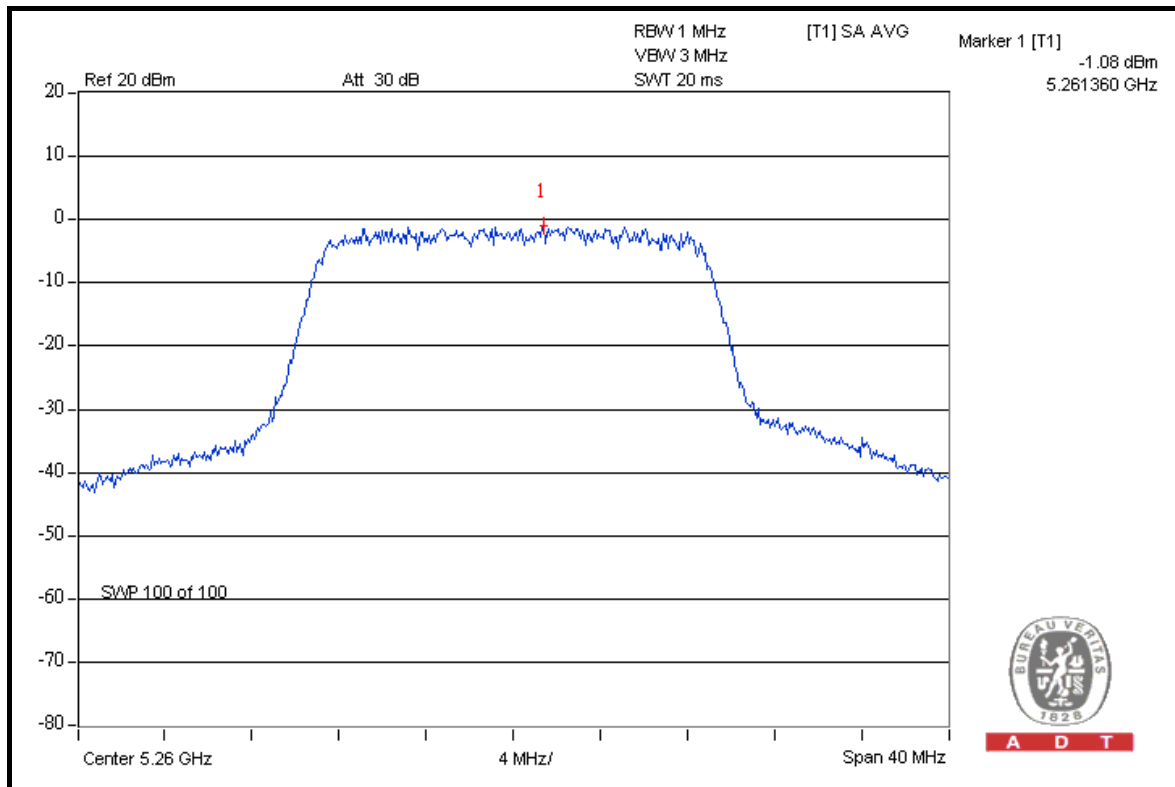


A D T

CH 48



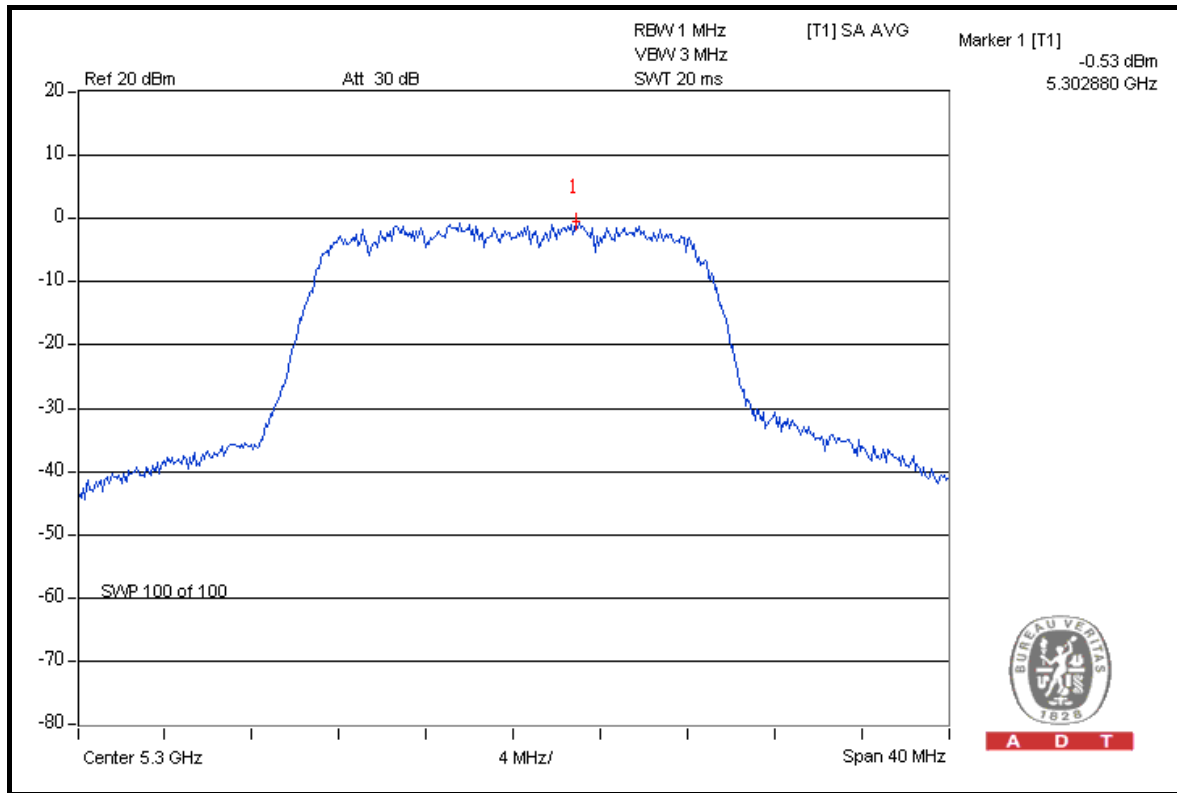
CH 52





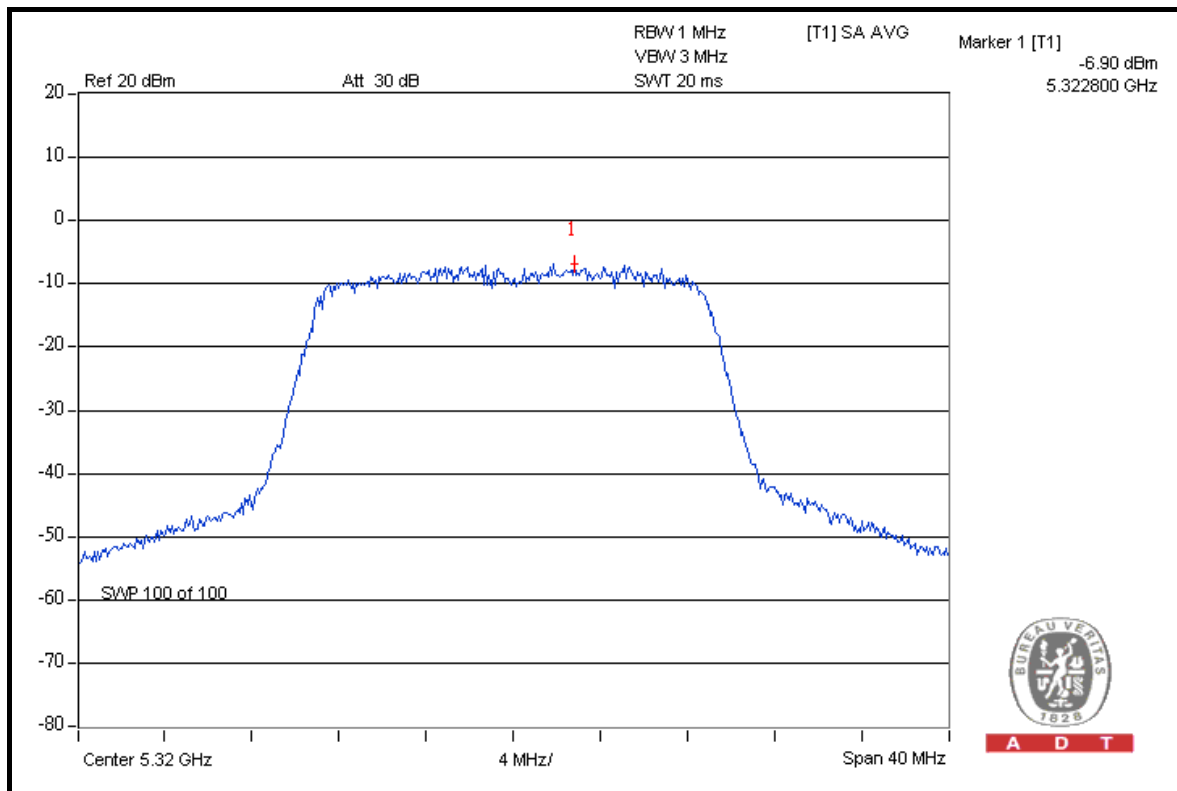
A D T

CH 60



A D T

CH 64

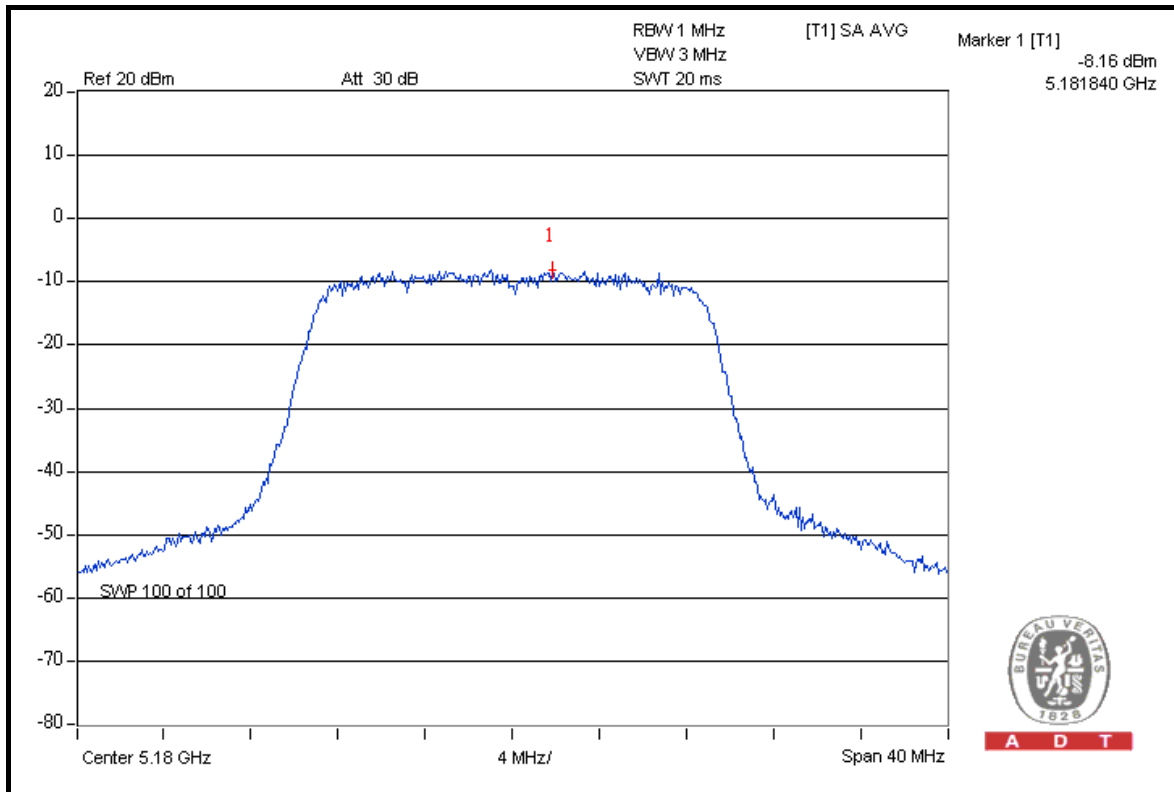


A D T

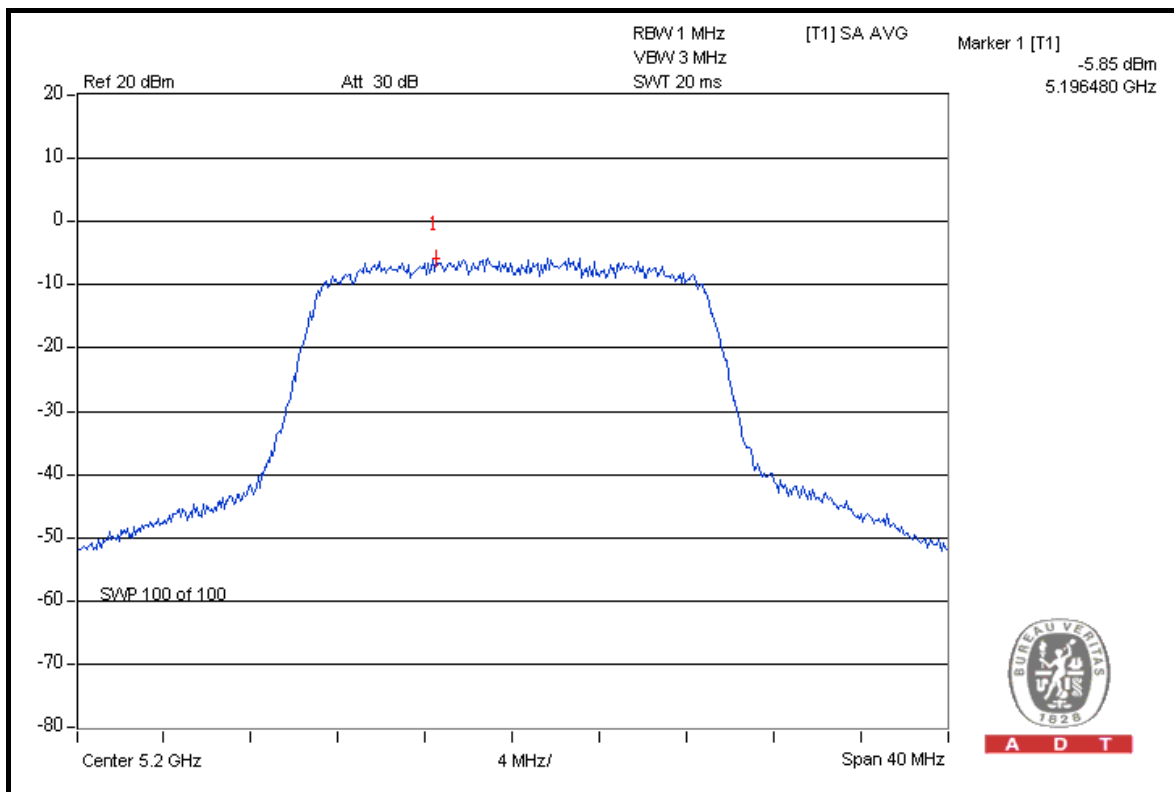


A D T

FOR CHAIN 2: CH 36



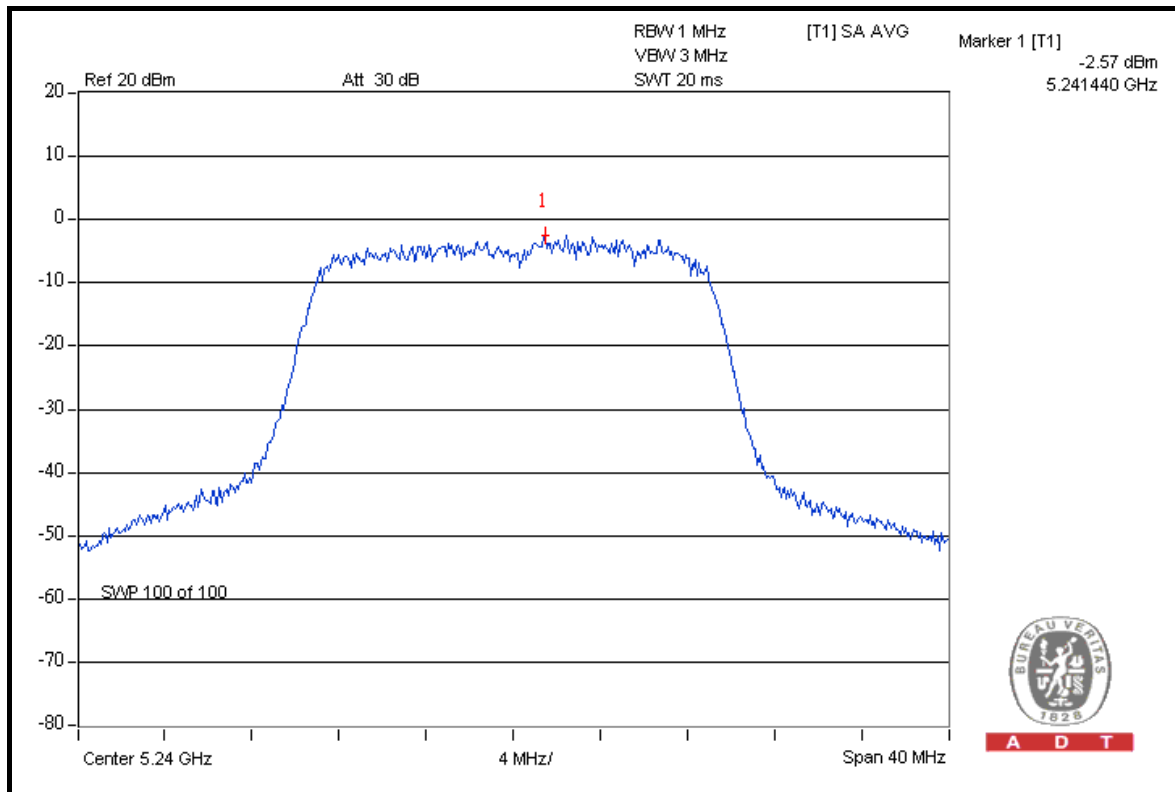
CH 40



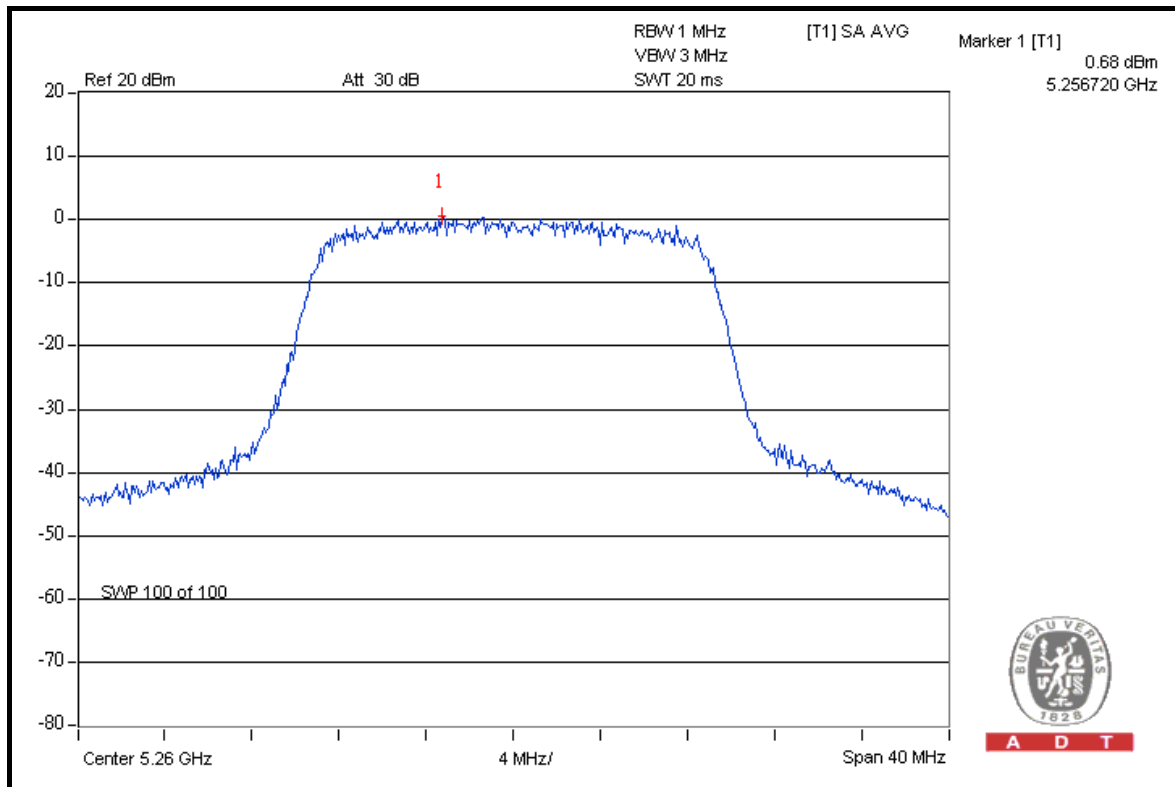


A D T

CH 48



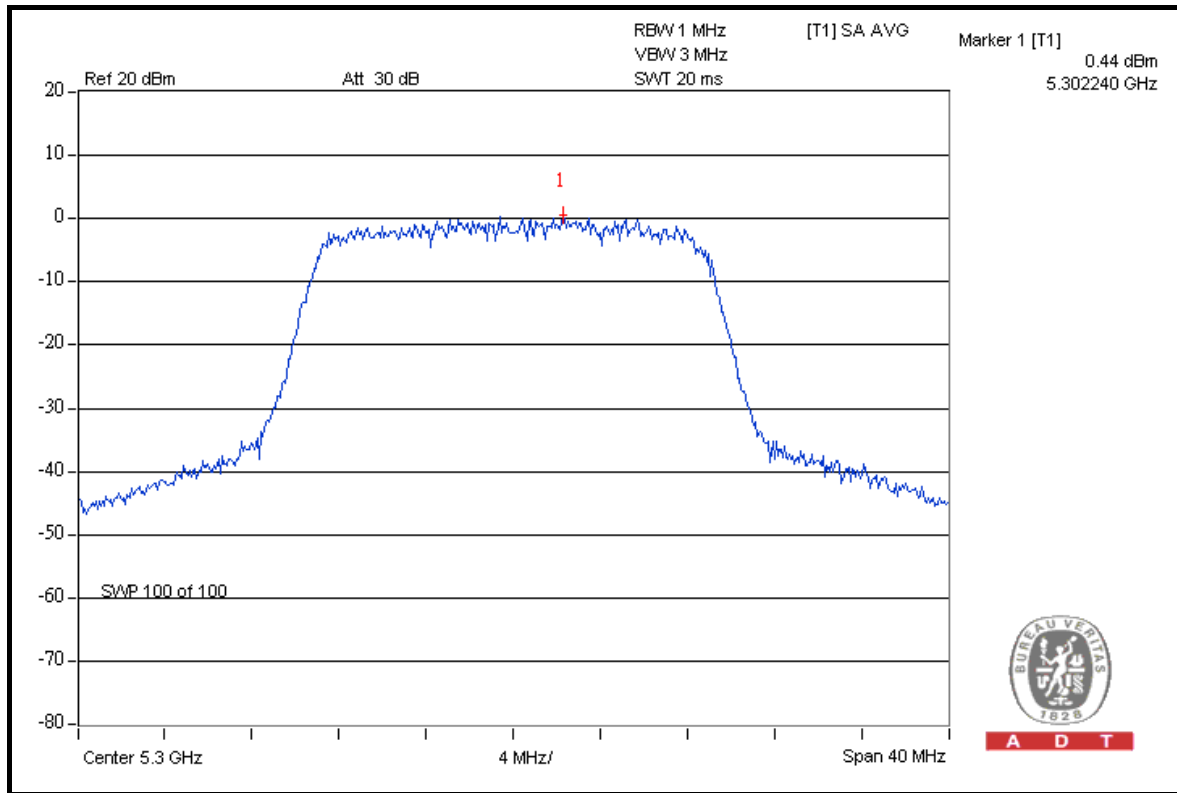
CH 52



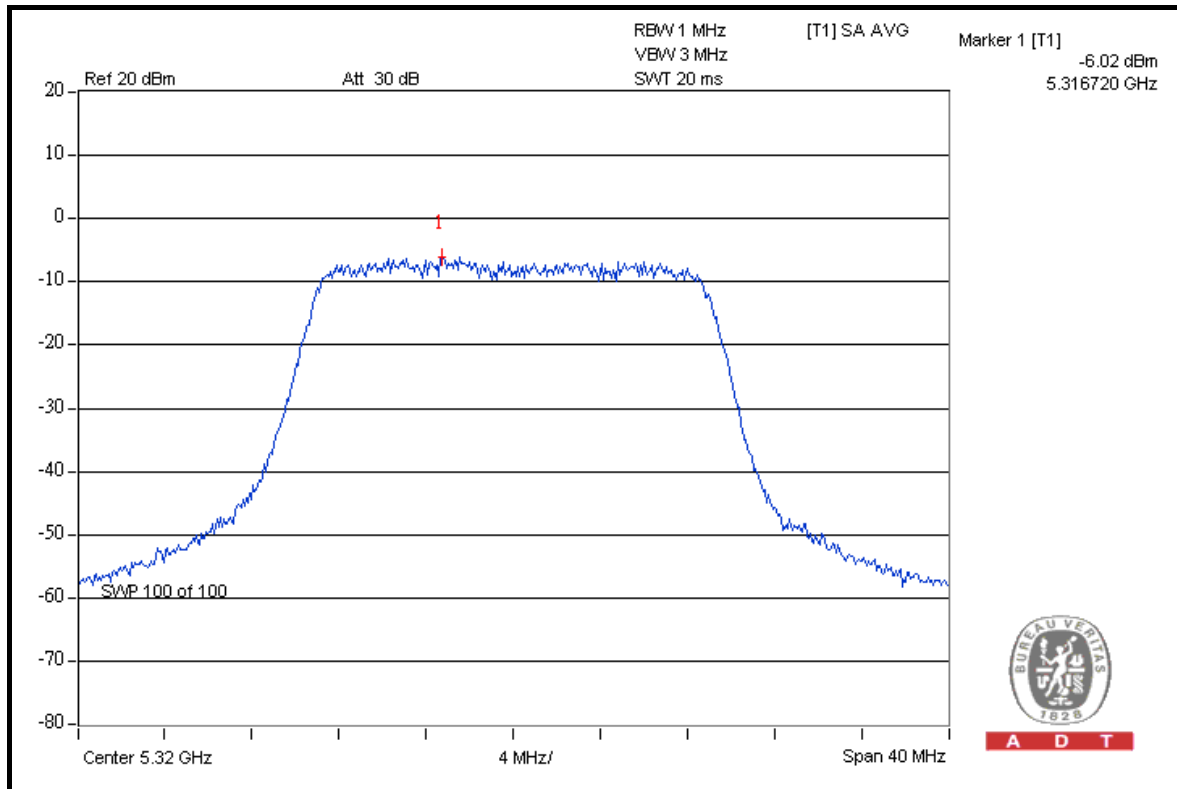


A D T

CH 60



CH 64





A D T

DRAFT 802.11n (40MHz) OFDM MODULATION

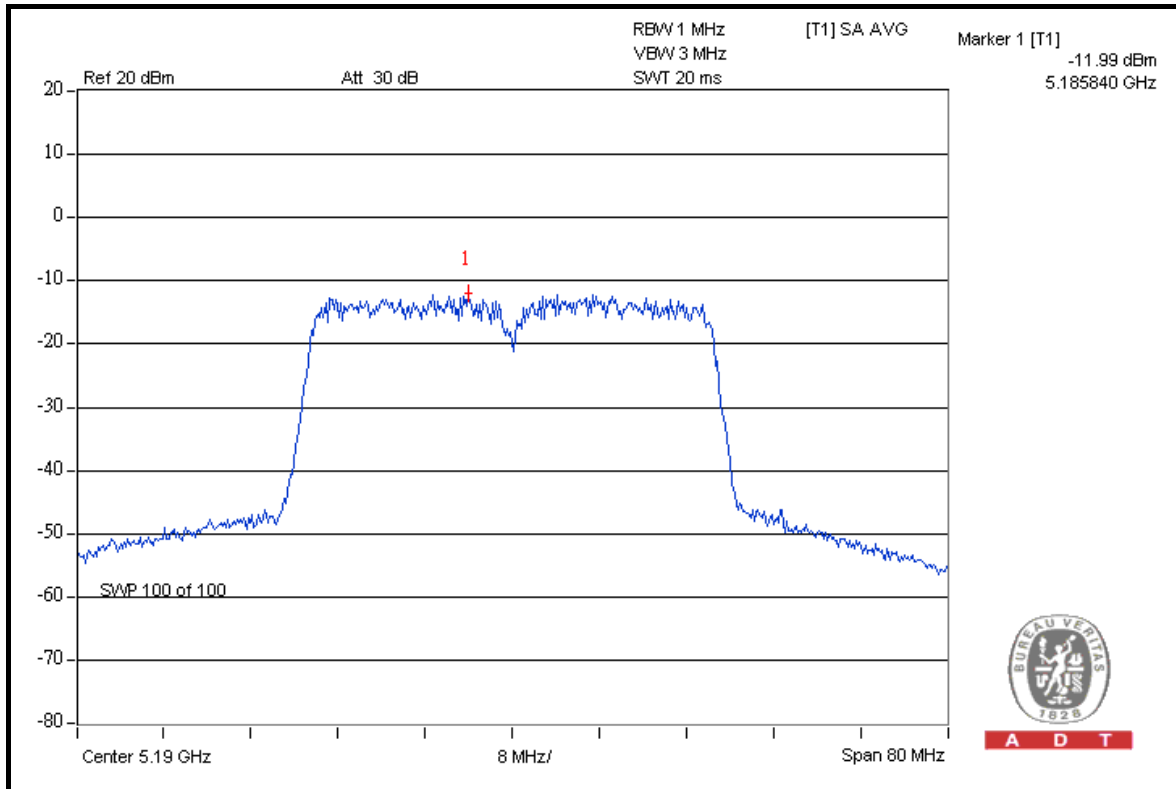
MODULATION TYPE	BPSK	TRANSFER RATE	15.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25 deg.C, 65 %RH, 1021hPa
TESTED BY	Mark Liao		

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)			TOTAL POWER DENSITY (mW)	TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
38	5190	-11.99	-12.24	-11.20	0.199	-7.02	4	PASS
46	5230	-8.87	-9.69	-8.37	0.383	-4.17	4	PASS
54	5270	-7.72	-8.53	-6.04	0.558	-2.53	11	PASS
62	5310	-9.89	-12.22	-9.96	0.263	-5.79	11	PASS

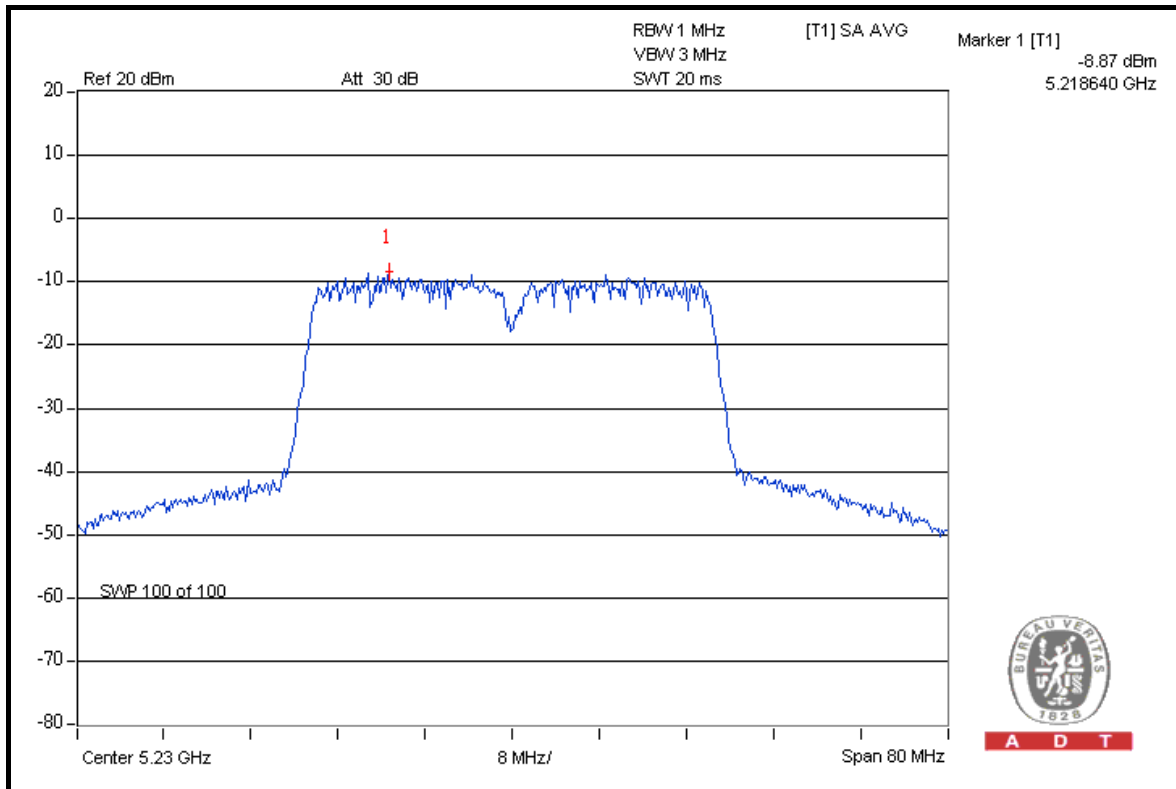


A D T

FOR CHAIN 0: CH 38



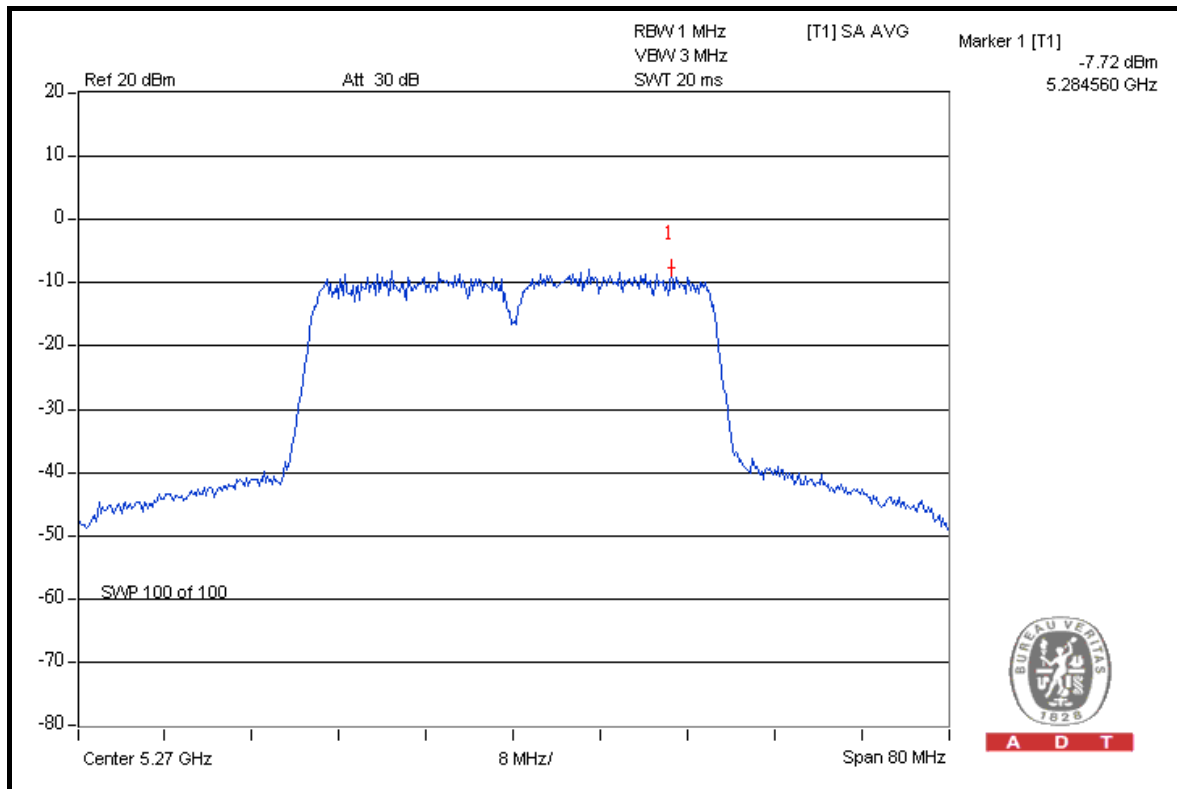
CH 46



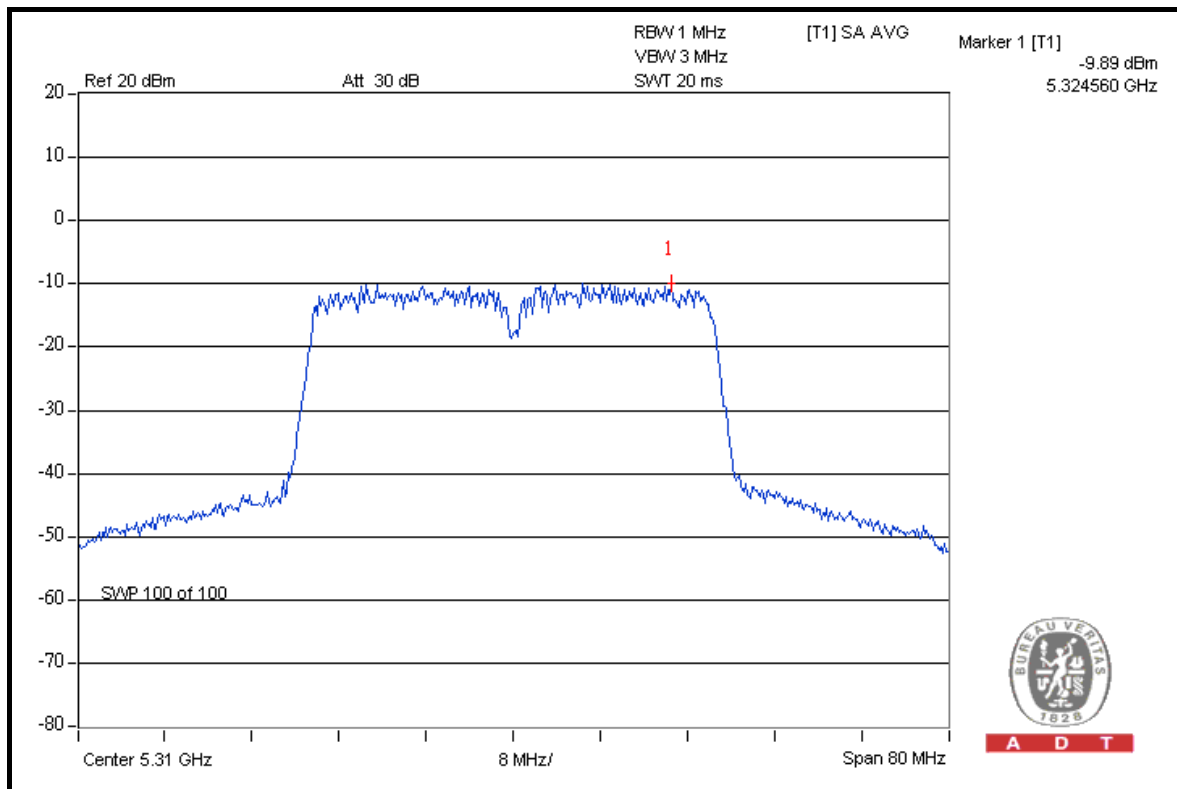


A D T

CH 54



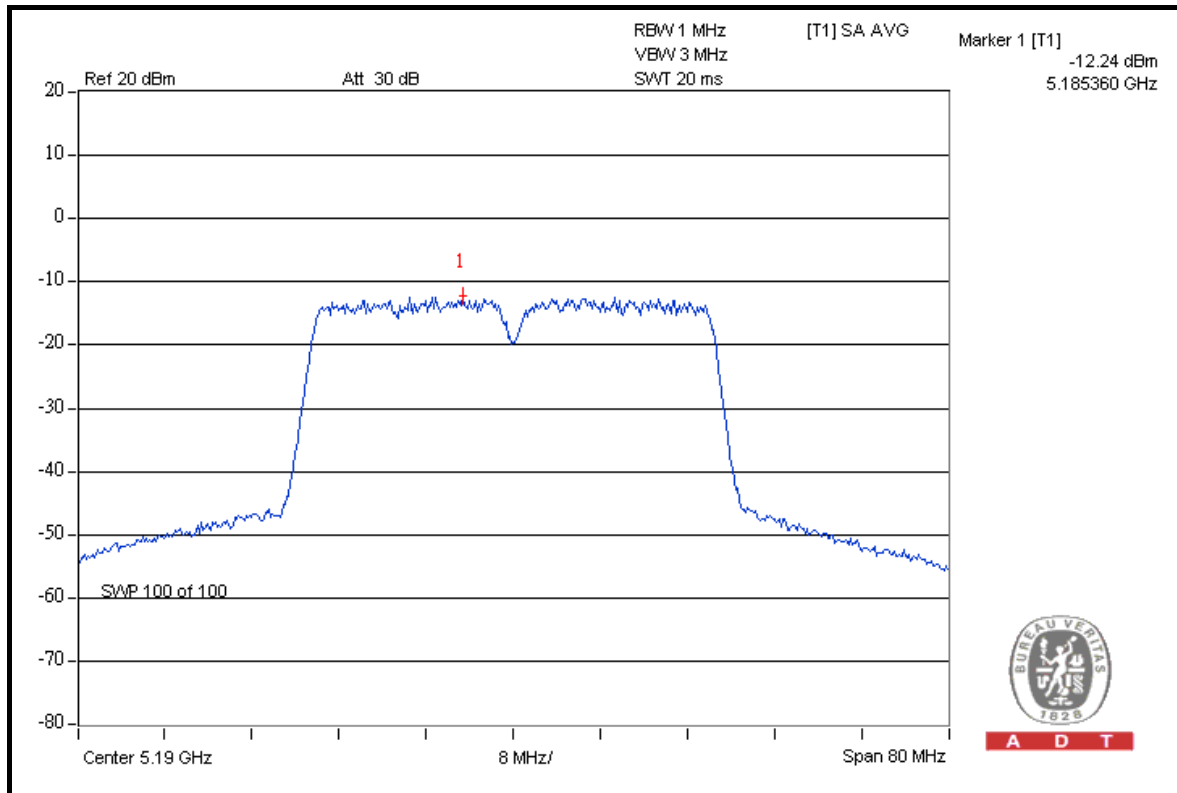
CH 62



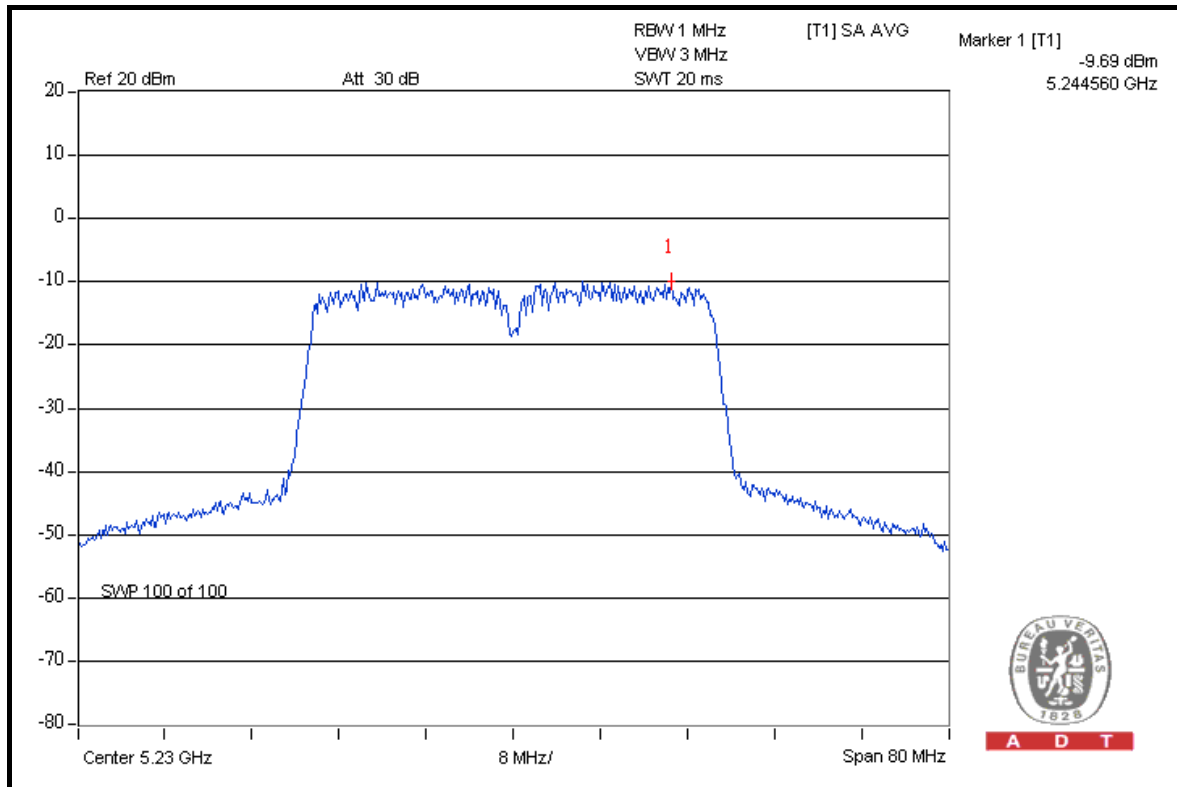


A D T

FOR CHAIN 1: CH 38



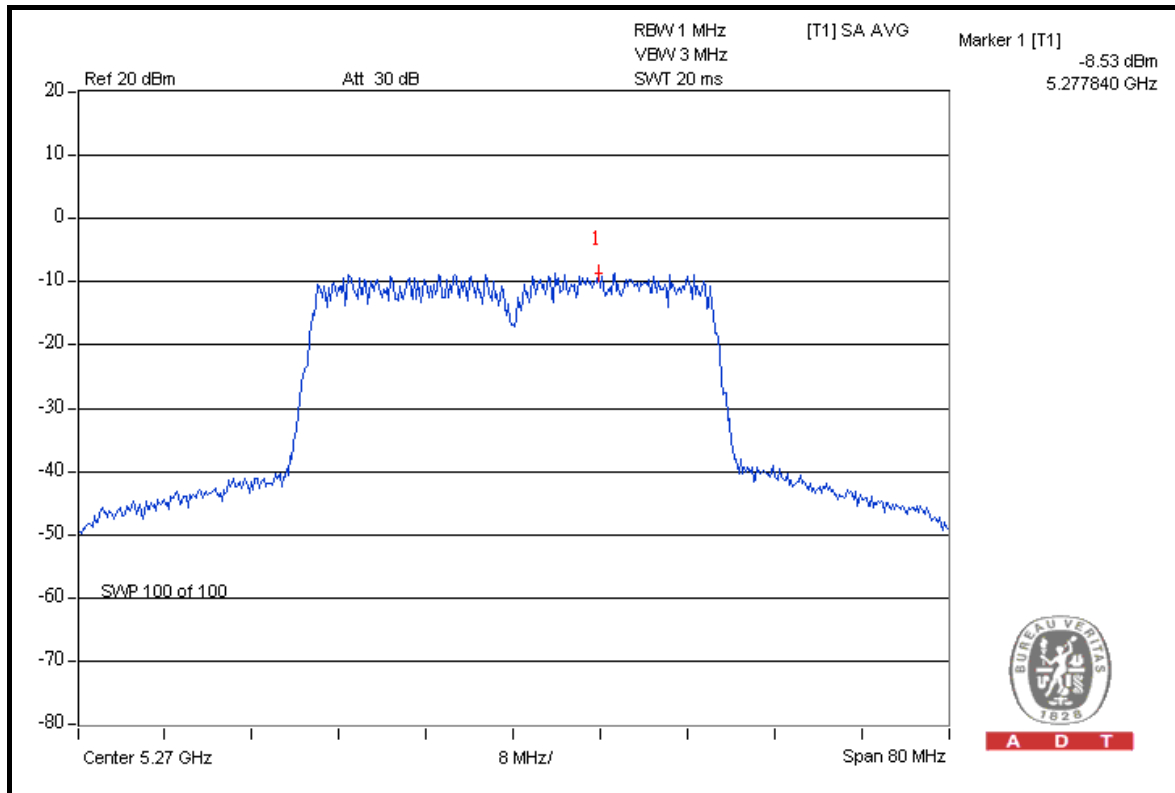
CH 46



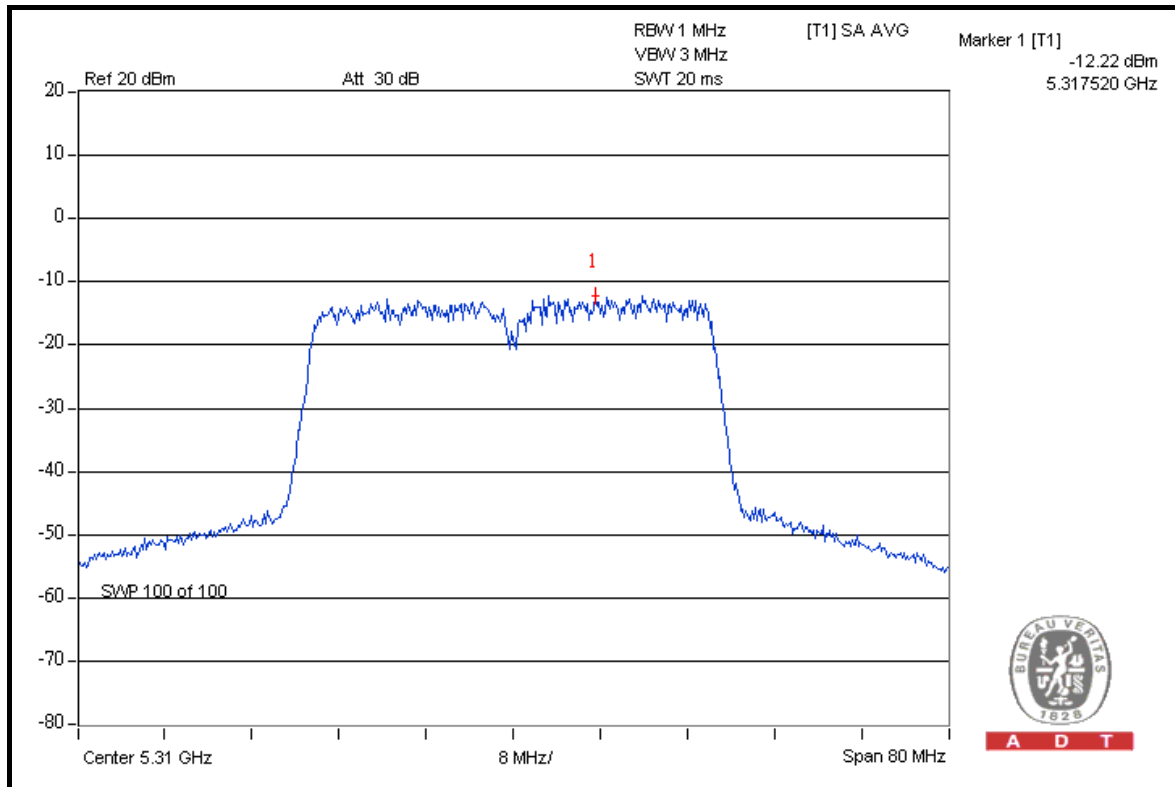


A D T

CH 54



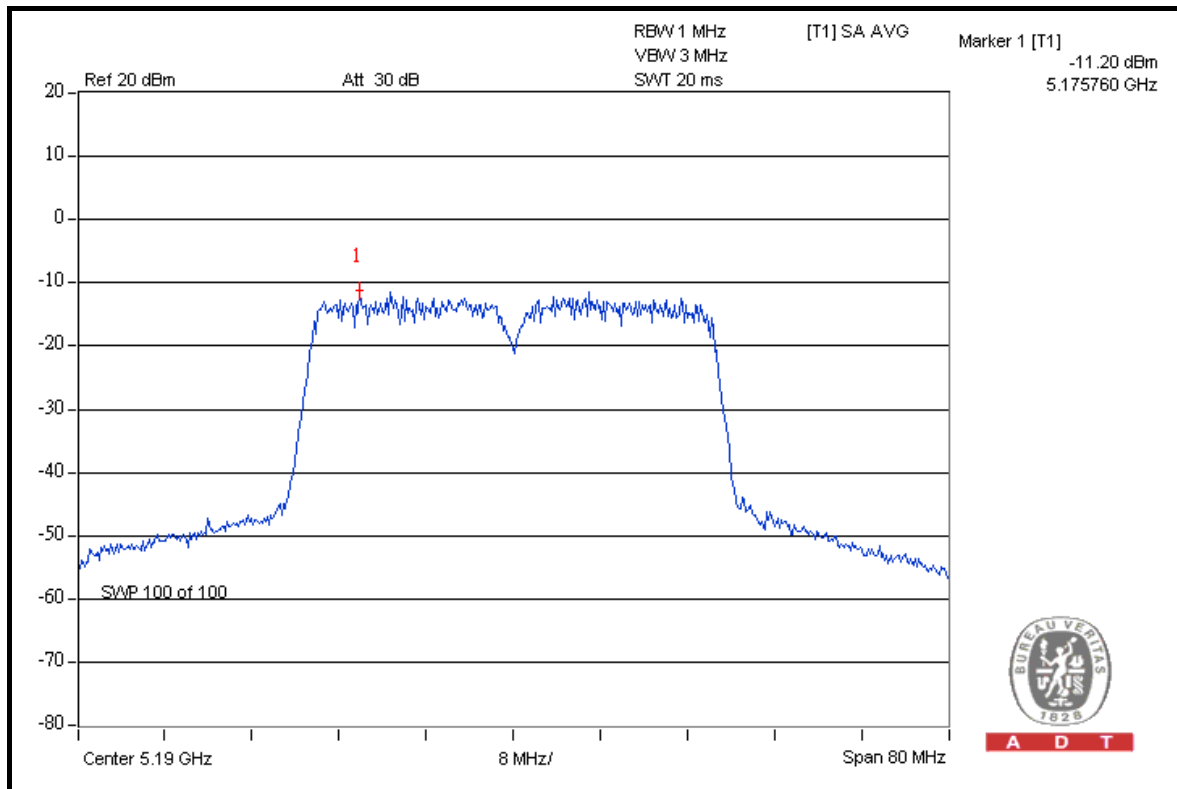
CH 62



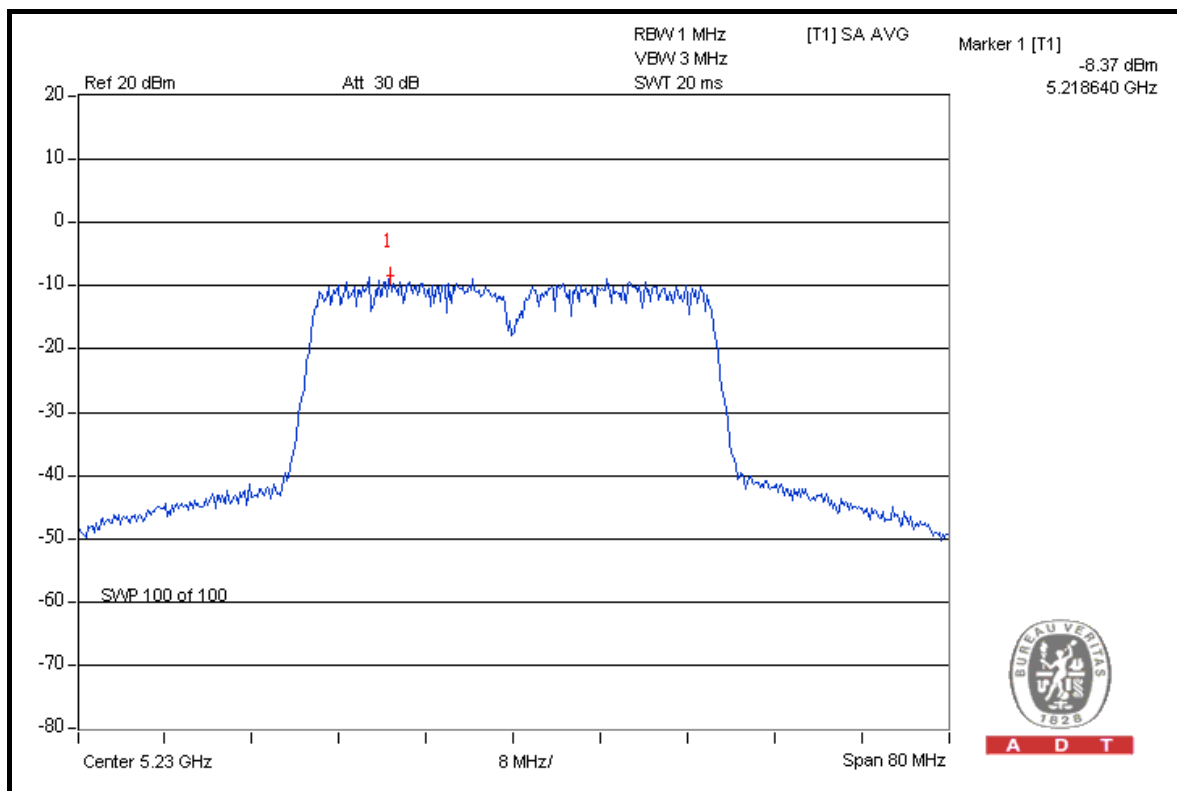


A D T

FOR CHAIN 2: CH 38



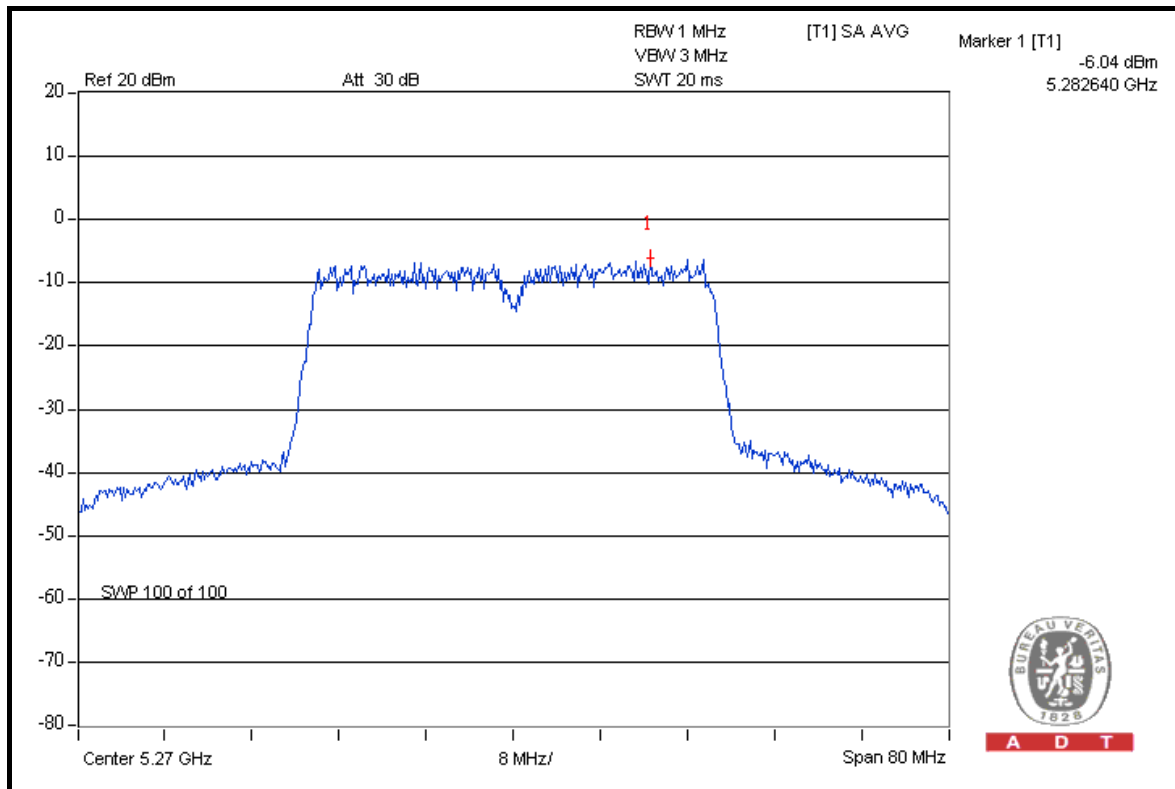
CH 46



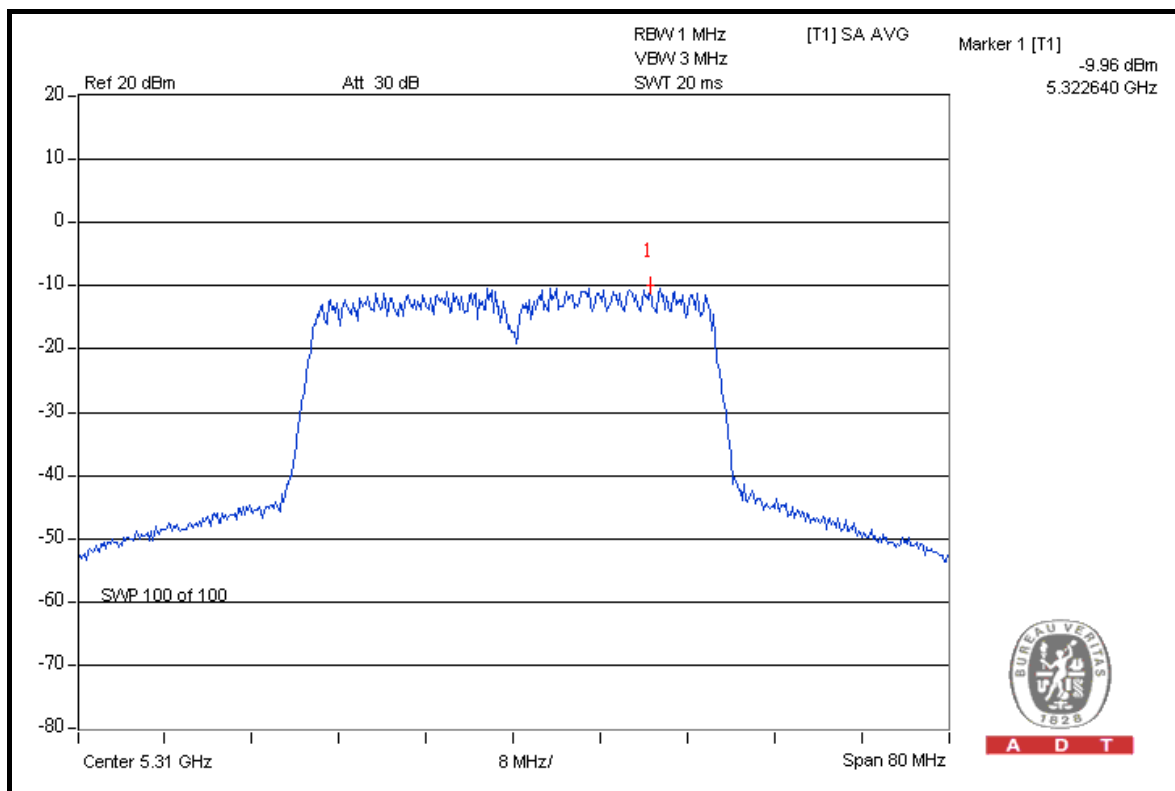


A D T

CH 54



CH 62



4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within the band of operation 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	CALIBRATED UNTIL
ANRITSU SPECTRUM ANALYZER	FSP40	100041	May 13, 2009	May 12, 2010
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W981030	Jun. 28, 2008	Jun. 27, 2009

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

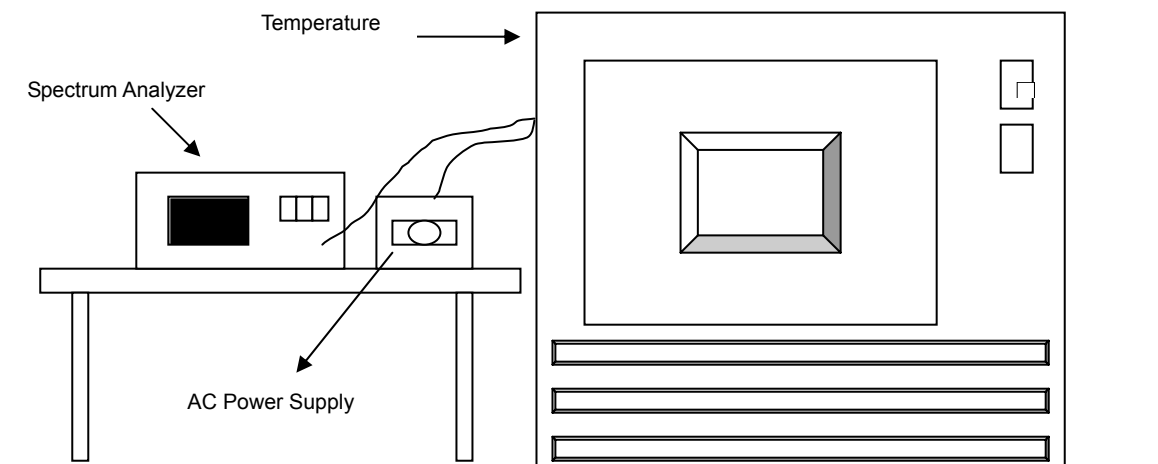
4.6.3 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. 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.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. 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

TEST MODE A

OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.999383	-0.0000116	5319.999226	-0.0000145	5319.999378	-0.0000117	5319.999331	-0.0000126
	110.0	5319.983504	-0.0003101	5319.983855	-0.0003035	5319.983473	-0.0003107	5319.983314	-0.0003137
	93.5	5319.987072	-0.0002430	5319.986893	-0.0002464	5319.986809	-0.0002479	5319.986865	-0.0002469
40	126.5	5319.979050	-0.0003938	5319.978889	-0.0003968	5319.979018	-0.0003944	5319.979023	-0.0003943
	110.0	5319.985119	-0.0002797	5319.985340	-0.0002756	5319.985159	-0.0002790	5319.985291	-0.0002765
	93.5	5319.996968	-0.0000570	5319.996813	-0.0000599	5319.996814	-0.0000599	5319.997056	-0.0000553
30	126.5	5319.980219	-0.0003718	5319.979921	-0.0003774	5319.979955	-0.0003768	5319.980315	-0.0003700
	110.0	5319.986071	-0.0002618	5319.986408	-0.0002555	5319.986175	-0.0002599	5319.986053	-0.0002622
	93.5	5320.004036	0.0000759	5320.004136	0.0000777	5320.004159	0.0000782	5320.003987	0.0000749
20	126.5	5319.986830	-0.0002476	5319.986809	-0.0002480	5319.986818	-0.0002478	5319.986787	-0.0002484
	110.0	5319.987272	-0.0002393	5319.987267	-0.0002393	5319.987056	-0.0002433	5319.987097	-0.0002425
	93.5	5320.011654	0.0002191	5320.011186	0.0002103	5320.011326	0.0002129	5320.011625	0.0002185
10	126.5	5319.995031	-0.0000934	5319.994874	-0.0000963	5319.994923	-0.0000954	5319.994719	-0.0000993
	110.0	5320.002674	0.0000503	5320.002688	0.0000505	5320.002688	0.0000505	5320.002349	0.0000442
	93.5	5320.017978	0.0003379	5320.018128	0.0003408	5320.017996	0.0003383	5320.017635	0.0003315
0	126.5	5319.997533	-0.0000464	5319.997497	-0.0000470	5319.997468	-0.0000476	5319.997587	-0.0000454
	110.0	5320.009651	0.0001814	5320.009618	0.0001808	5320.009500	0.0001786	5320.009546	0.0001794
	93.5	5320.024125	0.0004535	5320.024302	0.0004568	5320.024204	0.0004550	5320.024240	0.0004556
-10	126.5	5320.009836	0.0001849	5320.009708	0.0001825	5320.009542	0.0001794	5320.009754	0.0001833
	110.0	5320.016072	0.0003021	5320.015987	0.0003005	5320.016131	0.0003032	5320.015813	0.0002972
	93.5	5320.030570	0.0005746	5320.030612	0.0005754	5320.030628	0.0005757	5320.030781	0.0005786
-20	126.5	5320.015337	0.0002883	5320.015470	0.0002908	5320.015315	0.0002879	5320.015375	0.0002890
	110.0	5320.020460	0.0003846	5320.020270	0.0003810	5320.020389	0.0003833	5320.020229	0.0003802
	93.5	5320.035725	0.0006715	5320.035507	0.0006674	5320.035553	0.0006683	5320.035749	0.0006720
-30	126.5	5320.021026	0.0003952	5320.020875	0.0003924	5320.020664	0.0003884	5320.020716	0.0003894
	110.0	5320.035036	0.0006586	5320.035205	0.0006618	5320.034655	0.0006514	5320.034749	0.0006532
	93.5	5320.037096	0.0006973	5320.037330	0.0007017	5320.037236	0.0006999	5320.037070	0.0006968



TEST MODE C

OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.999341	-0.0000124	5319.999520	-0.0000090	5319.999220	-0.0000147	5319.998904	-0.0000206
	110.0	5319.983555	-0.0003091	5319.983523	-0.0003097	5319.983355	-0.0003129	5319.983391	-0.0003122
	93.5	5319.986857	-0.0002470	5319.986723	-0.0002496	5319.986584	-0.0002522	5319.986691	-0.0002502
40	126.5	5319.978917	-0.0003963	5319.978970	-0.0003953	5319.978927	-0.0003961	5319.978643	-0.0004014
	110.0	5319.985366	-0.0002751	5319.984910	-0.0002837	5319.985037	-0.0002813	5319.985303	-0.0002763
	93.5	5319.996674	-0.0000625	5319.997032	-0.0000558	5319.996915	-0.0000580	5319.996915	-0.0000580
30	126.5	5319.979666	-0.0003822	5319.979980	-0.0003763	5319.979712	-0.0003814	5319.979649	-0.0003825
	110.0	5319.986079	-0.0002617	5319.986295	-0.0002576	5319.985975	-0.0002636	5319.986094	-0.0002614
	93.5	5320.004112	0.0000773	5320.004109	0.0000772	5320.004142	0.0000779	5320.004172	0.0000784
20	126.5	5319.987128	-0.0002420	5319.986577	-0.0002523	5319.987005	-0.0002443	5319.986979	-0.0002448
	110.0	5319.987044	-0.0002435	5319.987137	-0.0002418	5319.986874	-0.0002467	5319.986663	-0.0002507
	93.5	5320.011218	0.0002109	5320.011443	0.0002151	5320.011350	0.0002133	5320.011287	0.0002122
10	126.5	5319.994841	-0.0000970	5319.994935	-0.0000952	5319.994985	-0.0000943	5319.995096	-0.0000922
	110.0	5320.002707	0.0000509	5320.002645	0.0000497	5320.002711	0.0000510	5320.002633	0.0000495
	93.5	5320.018092	0.0003401	5320.018145	0.0003411	5320.017793	0.0003345	5320.017760	0.0003338
0	126.5	5319.997602	-0.0000451	5319.997339	-0.0000500	5319.997396	-0.0000489	5319.997389	-0.0000491
	110.0	5320.009680	0.0001819	5320.009661	0.0001816	5320.009338	0.0001755	5320.009176	0.0001725
	93.5	5320.023956	0.0004503	5320.024357	0.0004578	5320.024330	0.0004573	5320.024484	0.0004602
-10	126.5	5320.009580	0.0001801	5320.009535	0.0001792	5320.009410	0.0001769	5320.009289	0.0001746
	110.0	5320.015900	0.0002989	5320.015989	0.0003005	5320.016201	0.0003045	5320.016059	0.0003019
	93.5	5320.030677	0.0005766	5320.030477	0.0005729	5320.030358	0.0005706	5320.030488	0.0005731
-20	126.5	5320.015353	0.0002886	5320.015562	0.0002925	5320.015455	0.0002905	5320.015437	0.0002902
	110.0	5320.020516	0.0003856	5320.020483	0.0003850	5320.020370	0.0003829	5320.020444	0.0003843
	93.5	5320.035496	0.0006672	5320.035390	0.0006652	5320.035636	0.0006698	5320.035645	0.0006700
-30	126.5	5320.020900	0.0003929	5320.020886	0.0003926	5320.020626	0.0003877	5320.020731	0.0003897
	110.0	5320.034633	0.0006510	5320.034806	0.0006543	5320.034802	0.0006542	5320.034735	0.0006529
	93.5	5320.037243	0.0007001	5320.036960	0.0006947	5320.037361	0.0007023	5320.037086	0.0006971

4.7 BAND EDGES MEASUREMENT

4.7.1 TEST INSTRUMENTS

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

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

4.7.2 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. Set both RBW and VBW of spectrum analyzer to 1MHz and 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 5.18 to 5.32GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

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

802.11a OFDM MODULATION

TEST MODE A

Channel 36 (5180MHz)

The band edge emission plot on the next page shows 52.42dBc 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 111.40dBuV/m (Peak), so the maximum field strength in restrict band is $111.40 - 52.42 = 58.98$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 54.79dBc 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 101.24dBuV/m (Average), so the maximum field strength in restrict band is $101.24 - 54.79 = 46.45$ dBuV/m which is under 54dBuV/m limit.

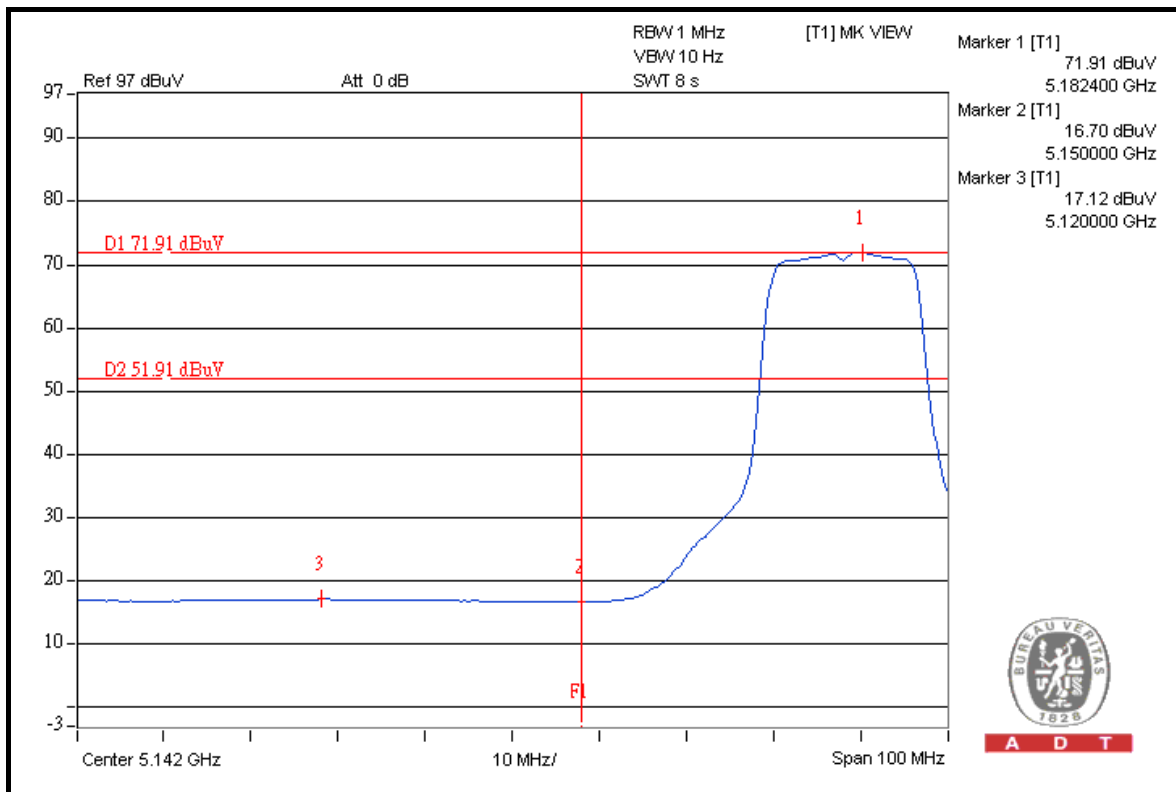
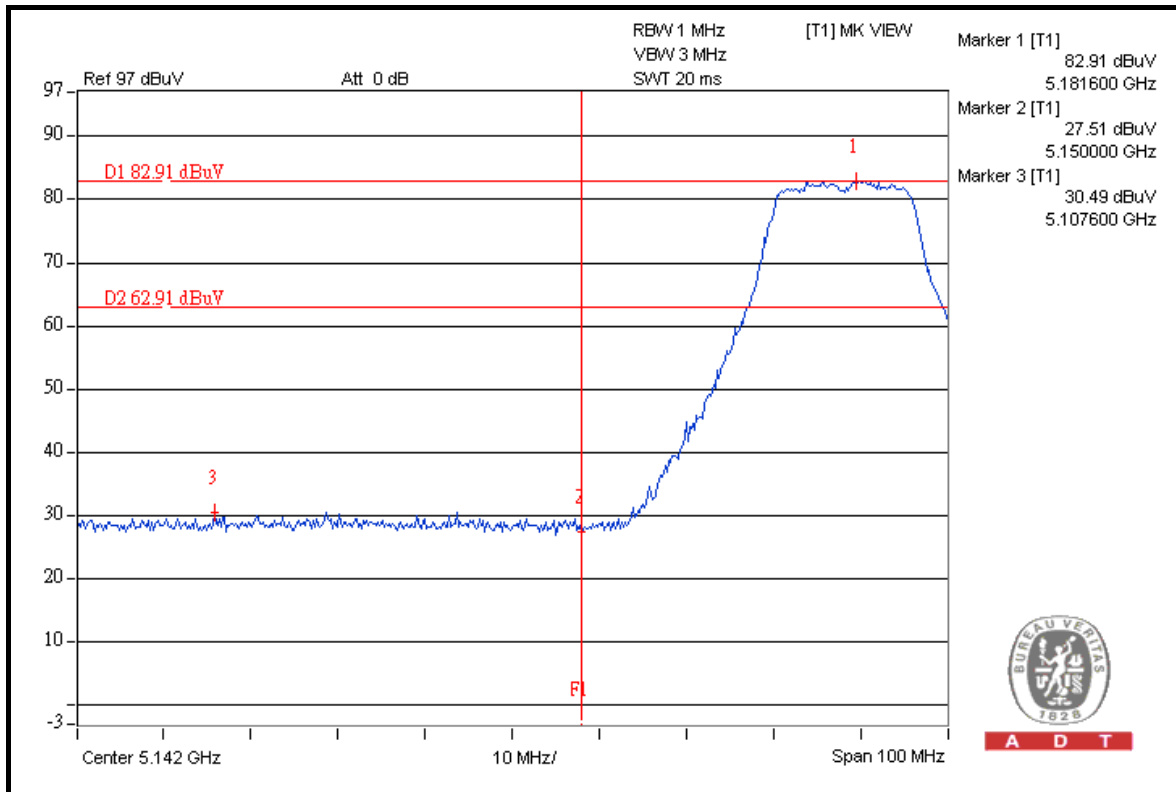
Channel 48 (5240MHz)

The band edge emission plot on the next second page shows 52.66dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 48 is 112.34dBuV/m (Peak), so the maximum field strength in restrict band is $112.34 - 52.66 = 59.68$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 54.09dBc 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 102.06dBuV/m (Average), so the maximum field strength in restrict band is $102.06 - 54.09 = 47.97$ dBuV/m which is under 54dBuV/m limit.

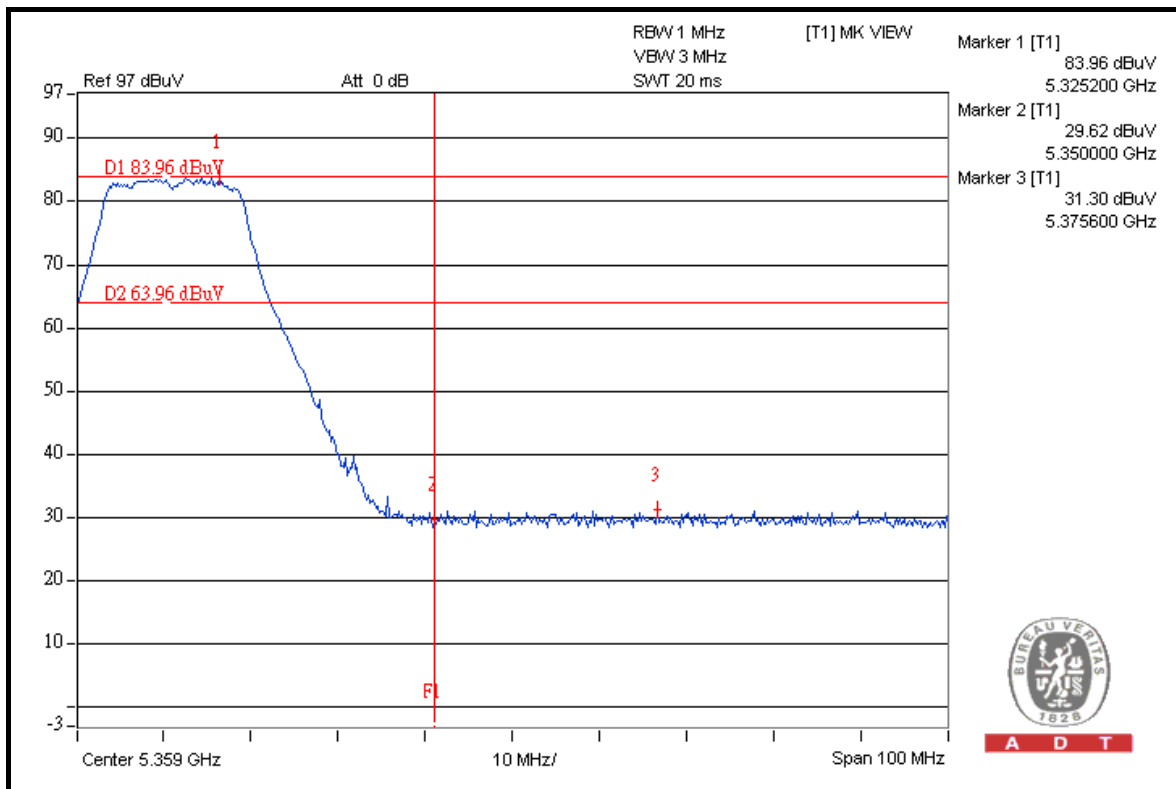
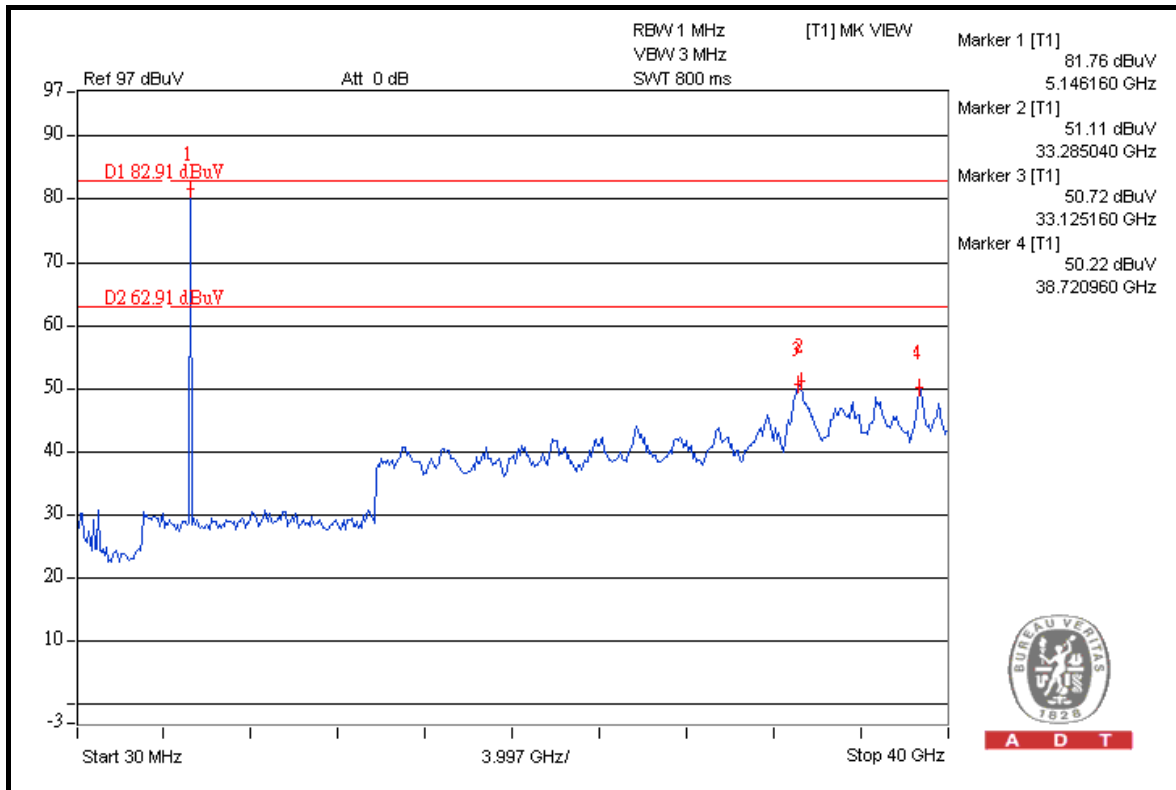


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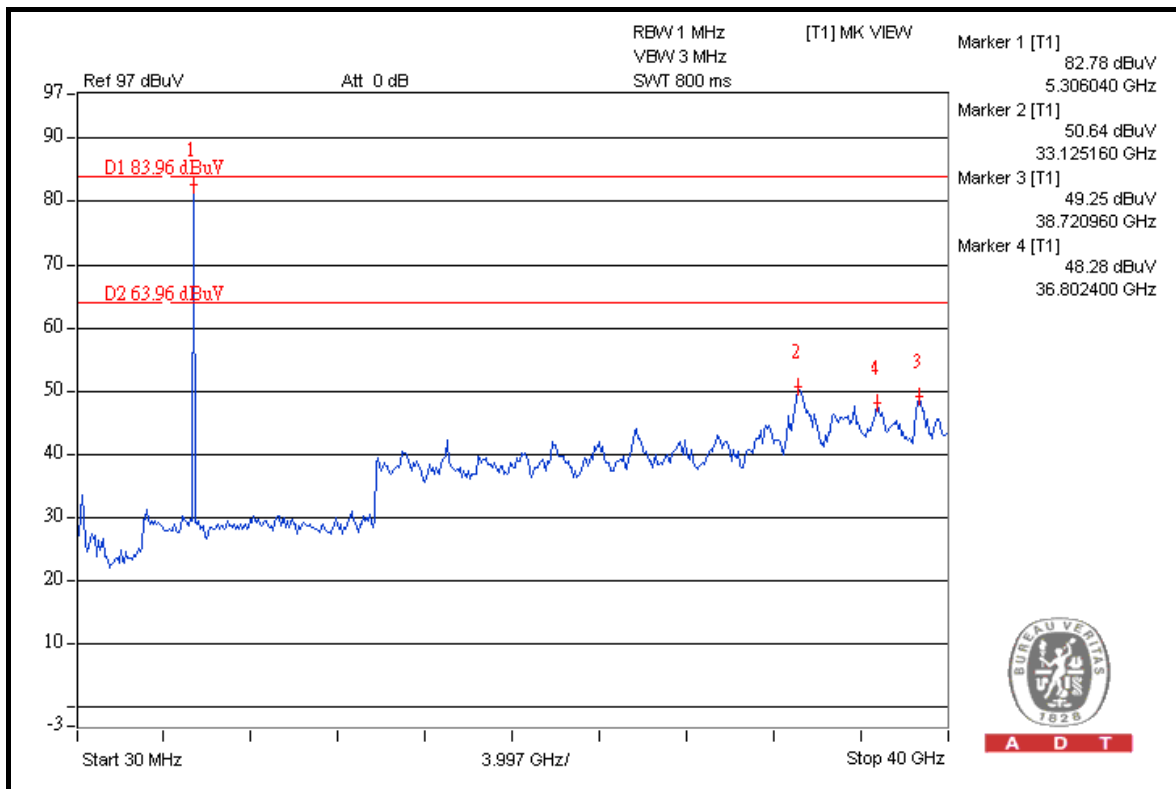
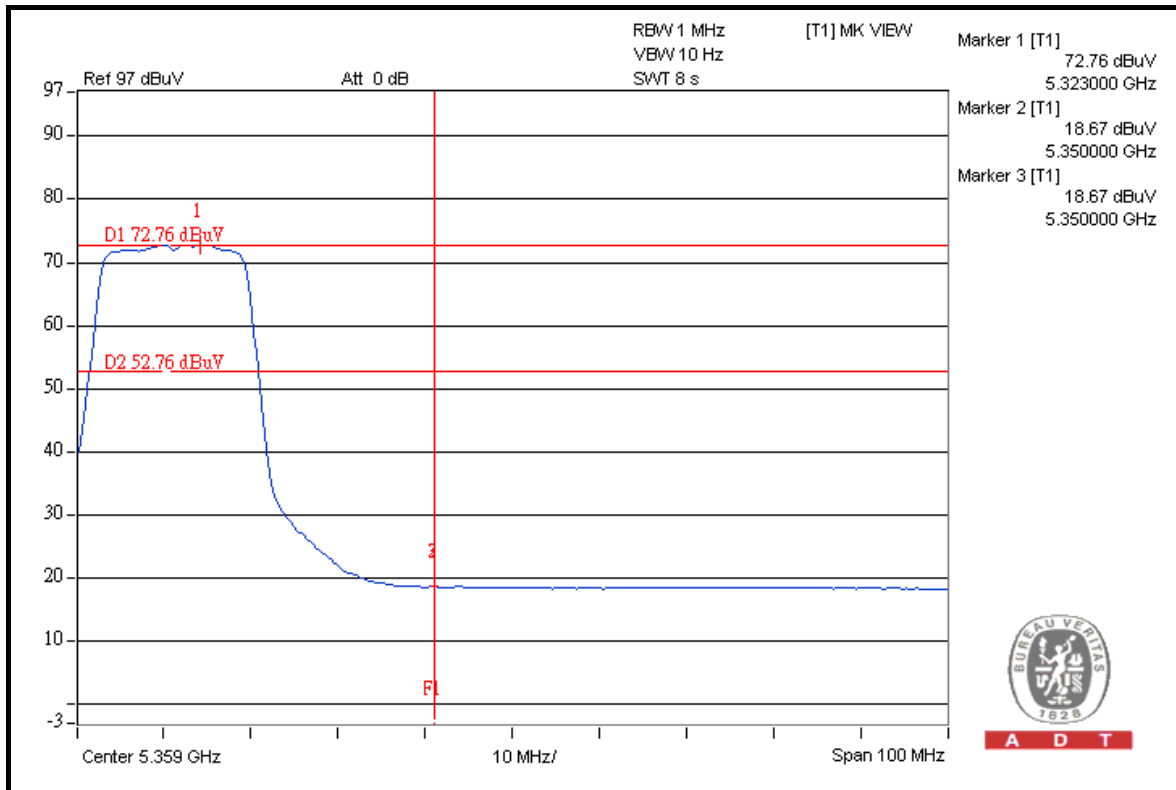


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TEST MODE C

Channel 36 (5180MHz)

The band edge emission plot on the next page shows 55.90dBc 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 114.60dBuV/m (Peak), so the maximum field strength in restrict band is $114.60 - 55.90 = 58.70$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 57.42dBc 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 104.31dBuV/m (Average), so the maximum field strength in restrict band is $104.31 - 57.42 = 46.89$ dBuV/m which is under 54dBuV/m limit.

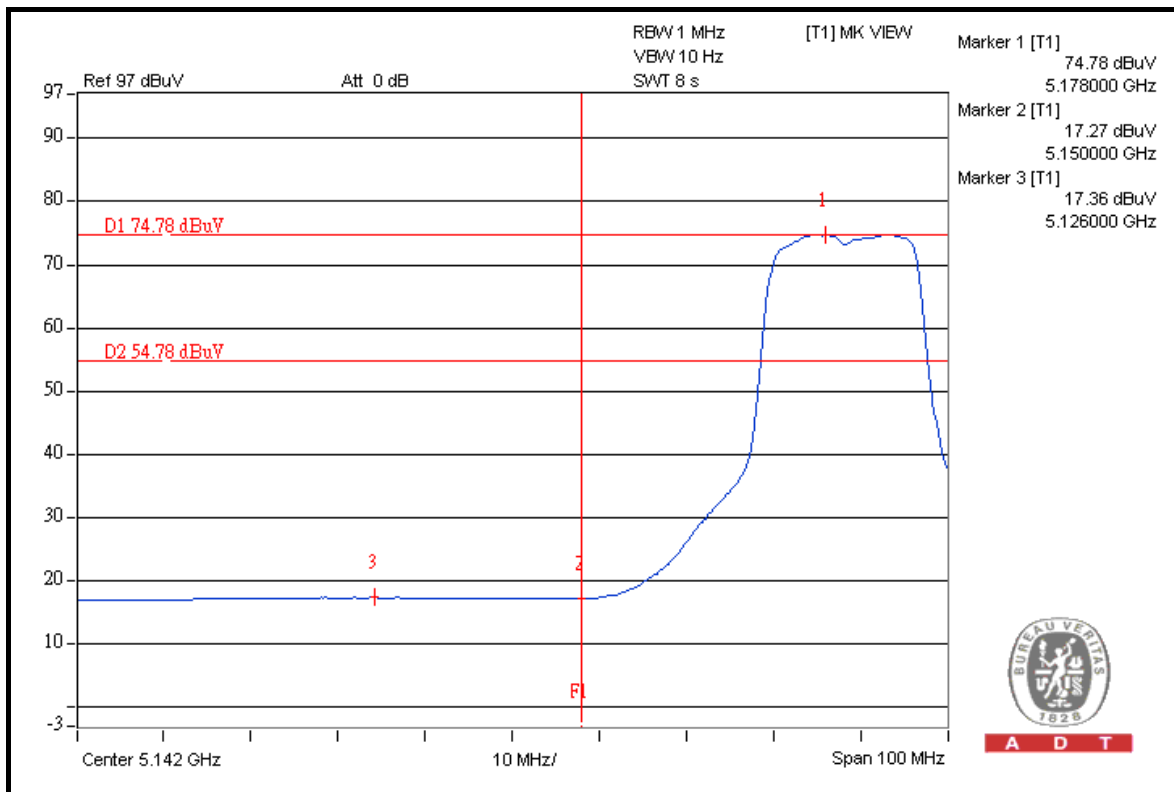
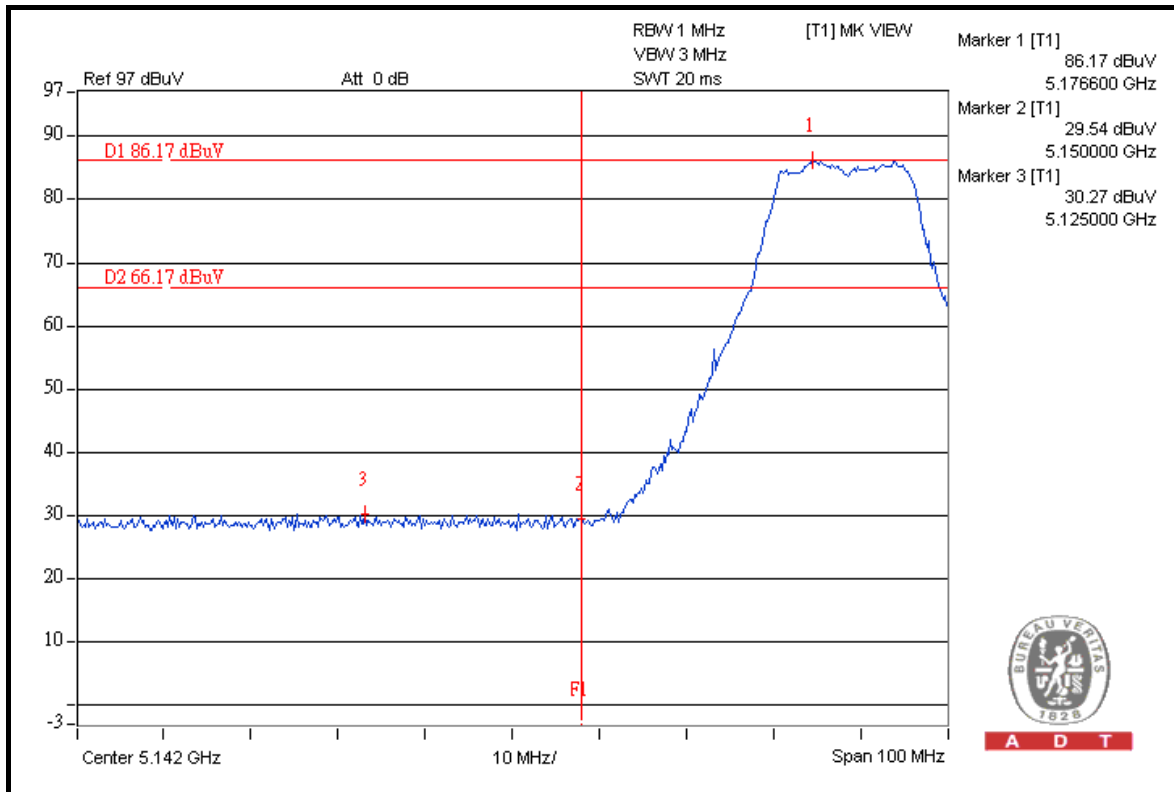
Channel 48 (5240MHz)

The band edge emission plot on the next second page shows 55.54dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 48 is 115.41dBuV/m (Peak), so the maximum field strength in restrict band is $115.41 - 55.54 = 59.87$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 57.33dBc 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 105.10dBuV/m (Average), so the maximum field strength in restrict band is $105.10 - 57.33 = 47.77$ dBuV/m which is under 54dBuV/m limit.

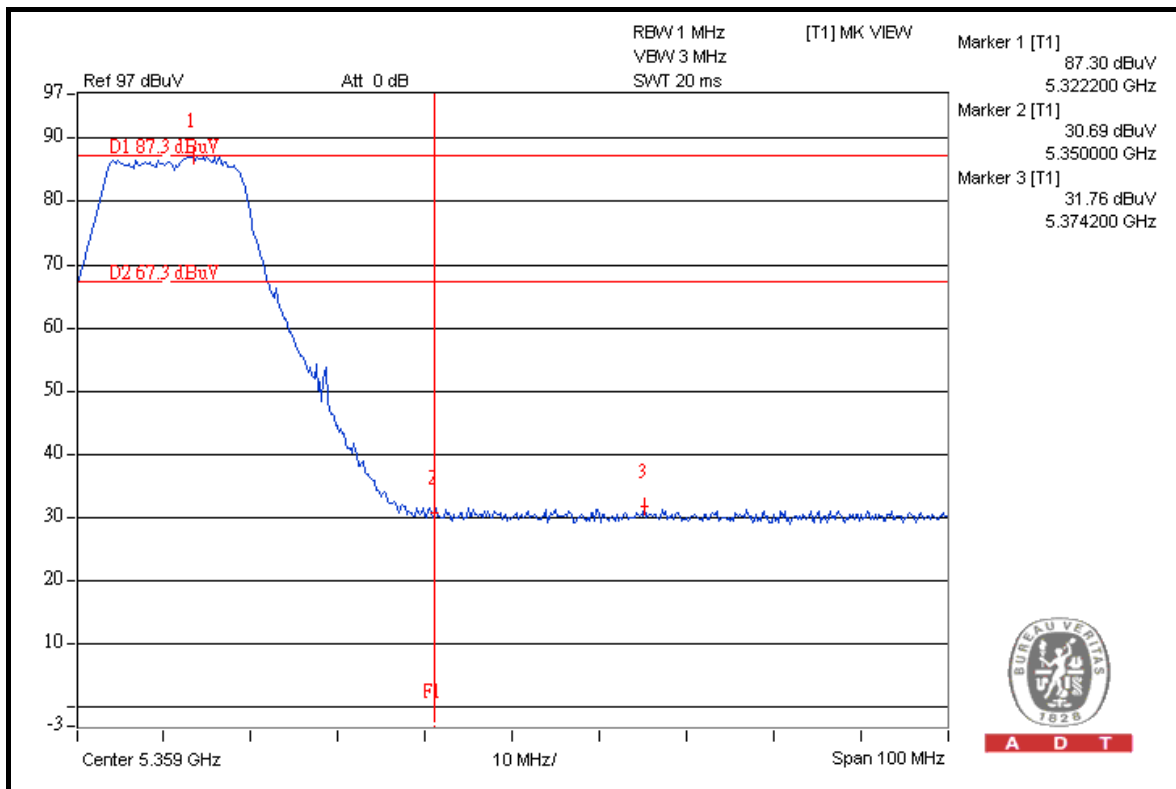
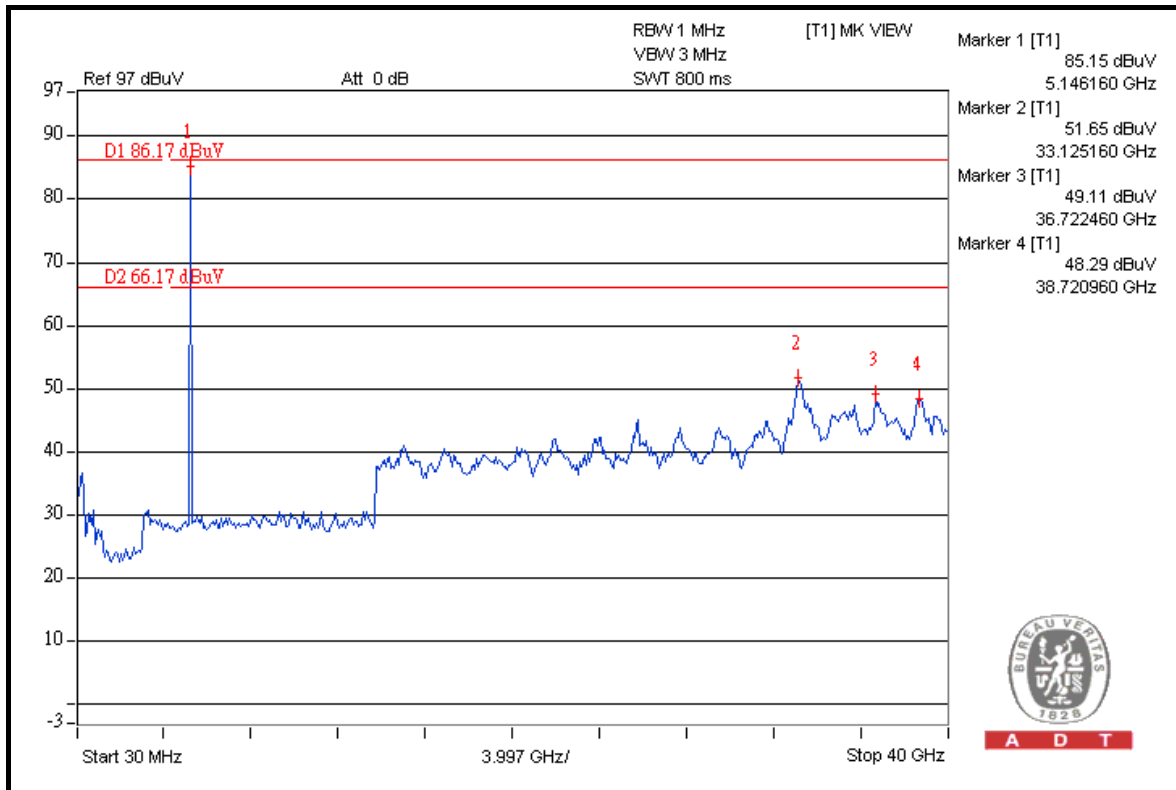


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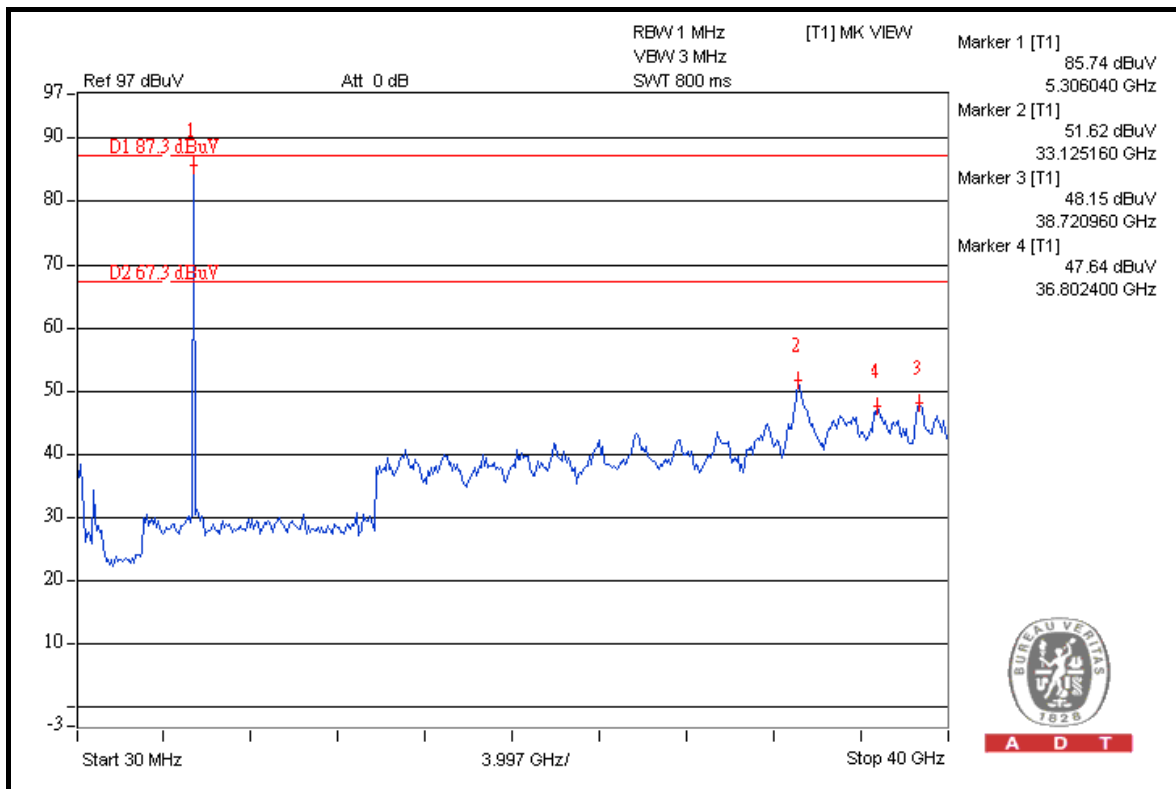
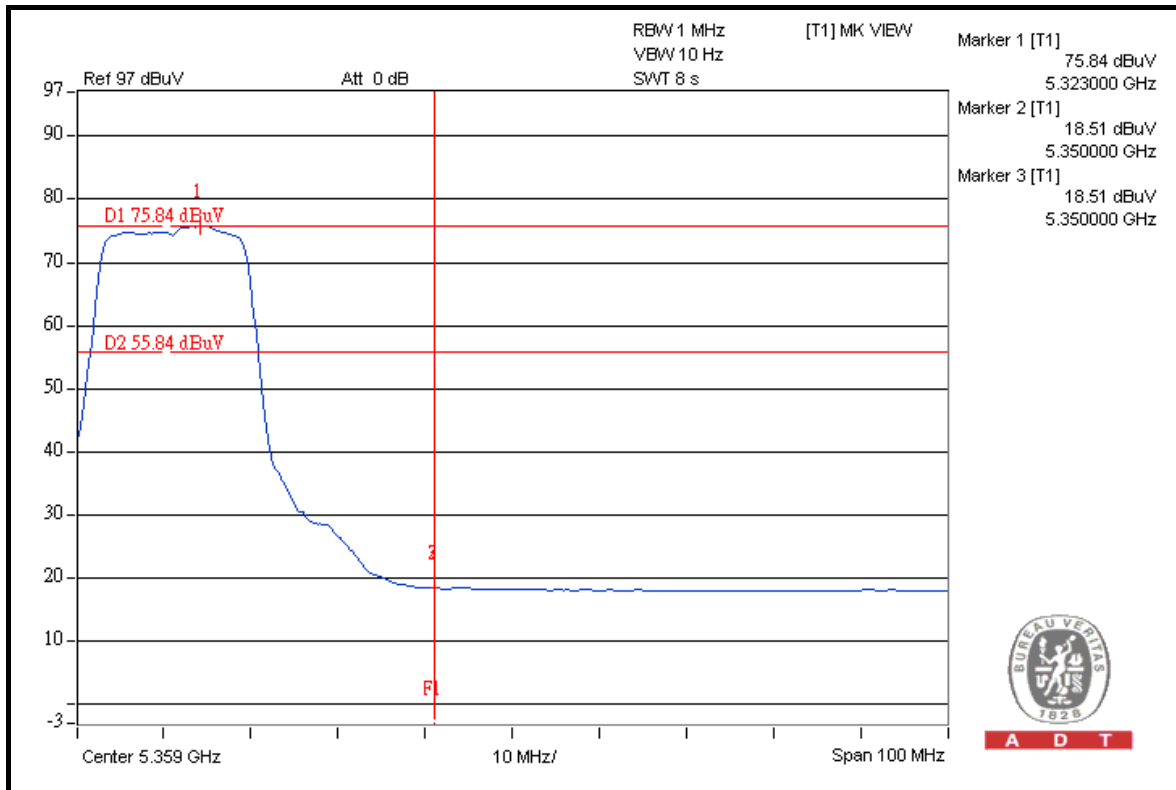


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DRAFT 802.11n (20MHz) OFDM MODULATION

TEST MODE A

Channel 36 (5180MHz)

The band edge emission plot on the next page shows 50.78dBc 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 108.58dBuV/m (Peak), so the maximum field strength in restrict band is $108.58 - 50.78 = 57.80$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 52.10dBc 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 98.31dBuV/m (Average), so the maximum field strength in restrict band is $98.31 - 52.10 = 46.21$ dBuV/m which is under 54dBuV/m limit.

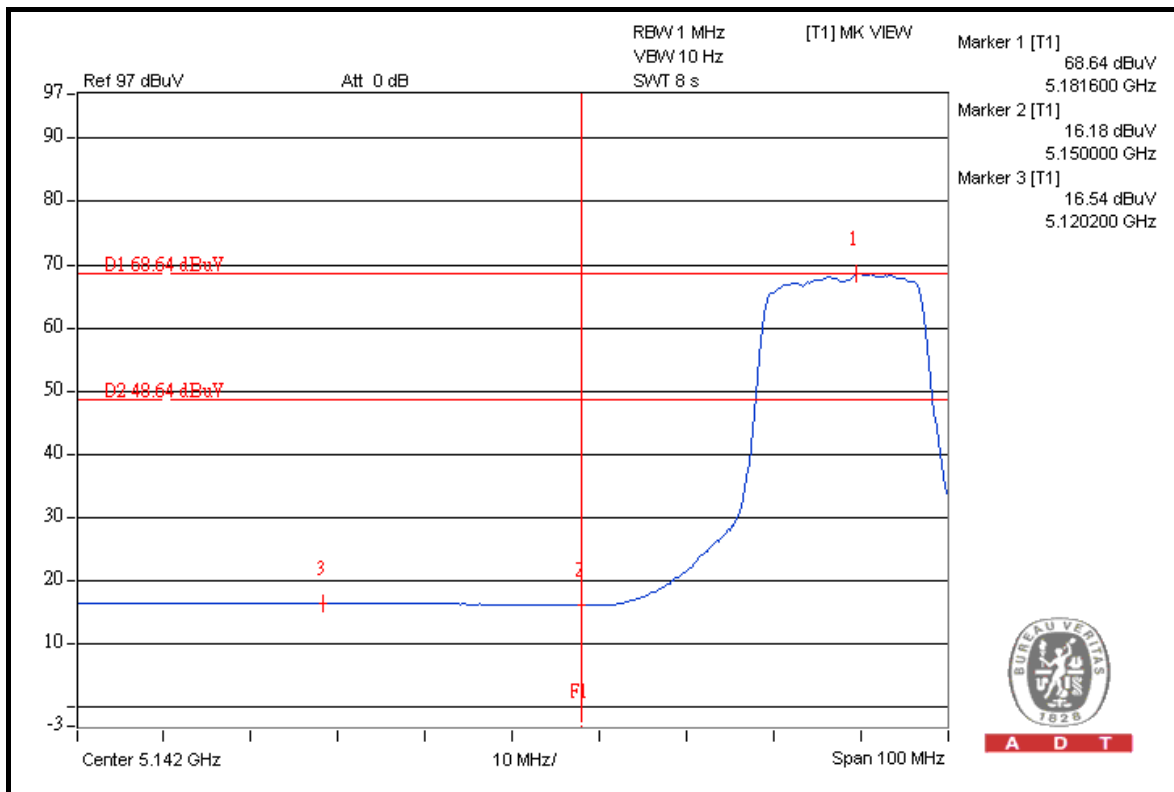
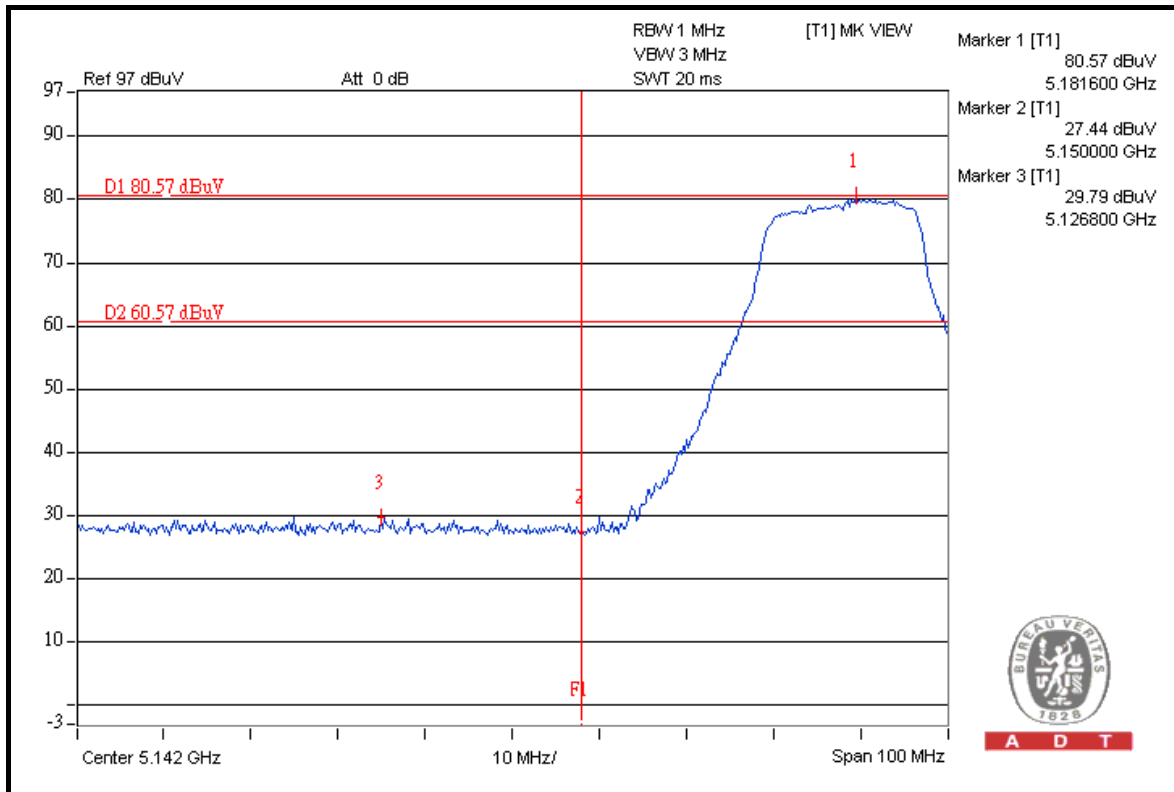
Channel 48 (5240MHz)

The band edge emission plot on the next second page shows 51.37dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 48 is 110.21dBuV/m (Peak), so the maximum field strength in restrict band is $110.21 - 51.37 = 58.84$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 52.47dBc 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 100.09dBuV/m (Average), so the maximum field strength in restrict band is $100.09 - 52.47 = 47.62$ dBuV/m which is under 54dBuV/m limit.

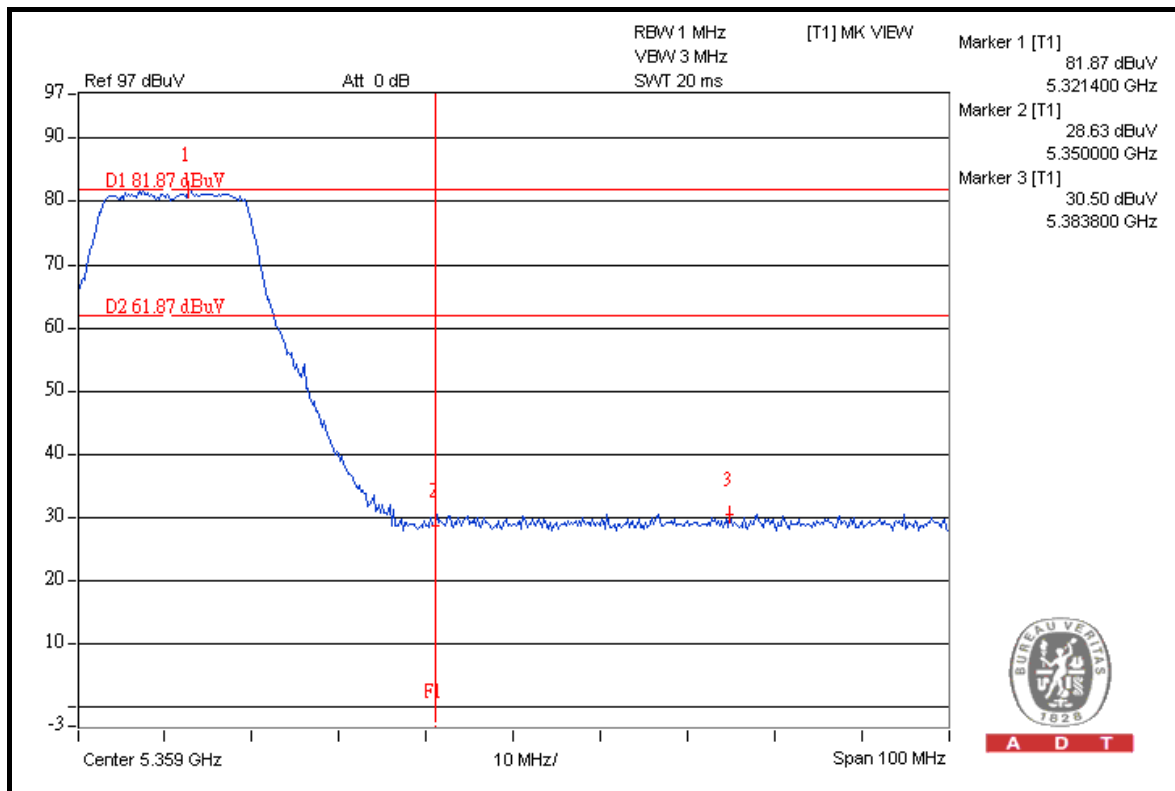
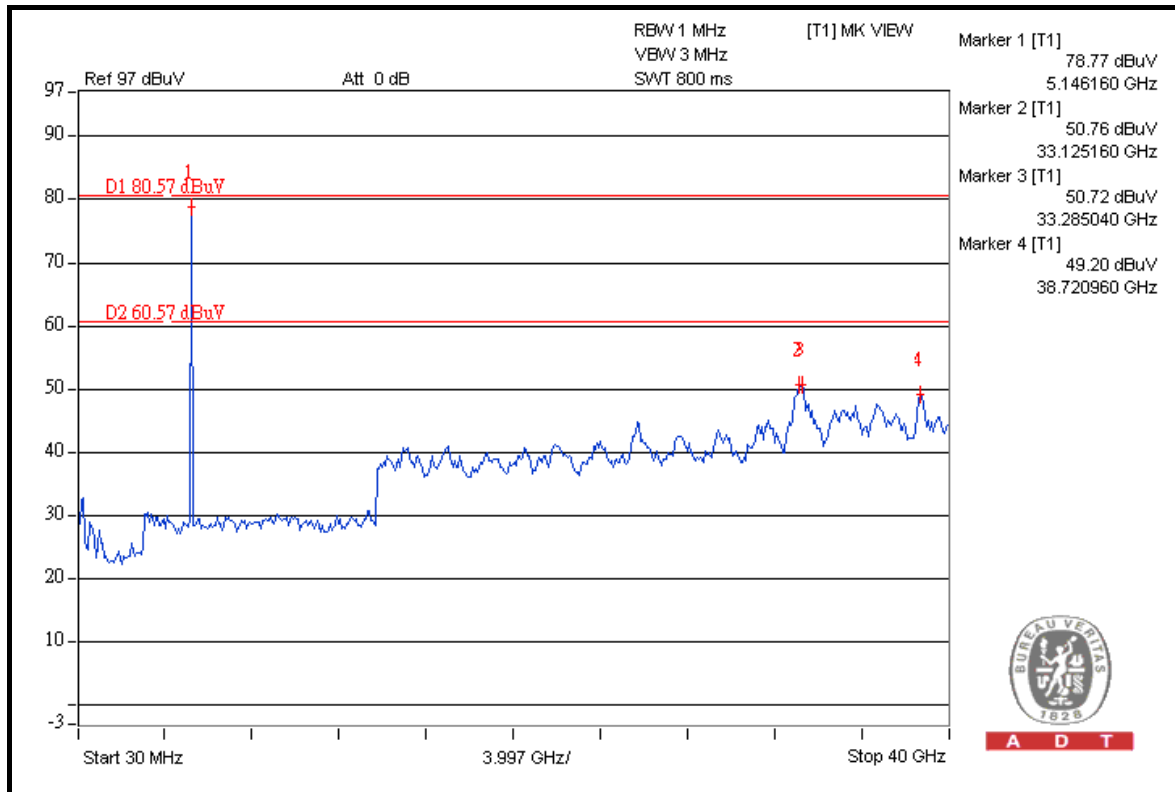


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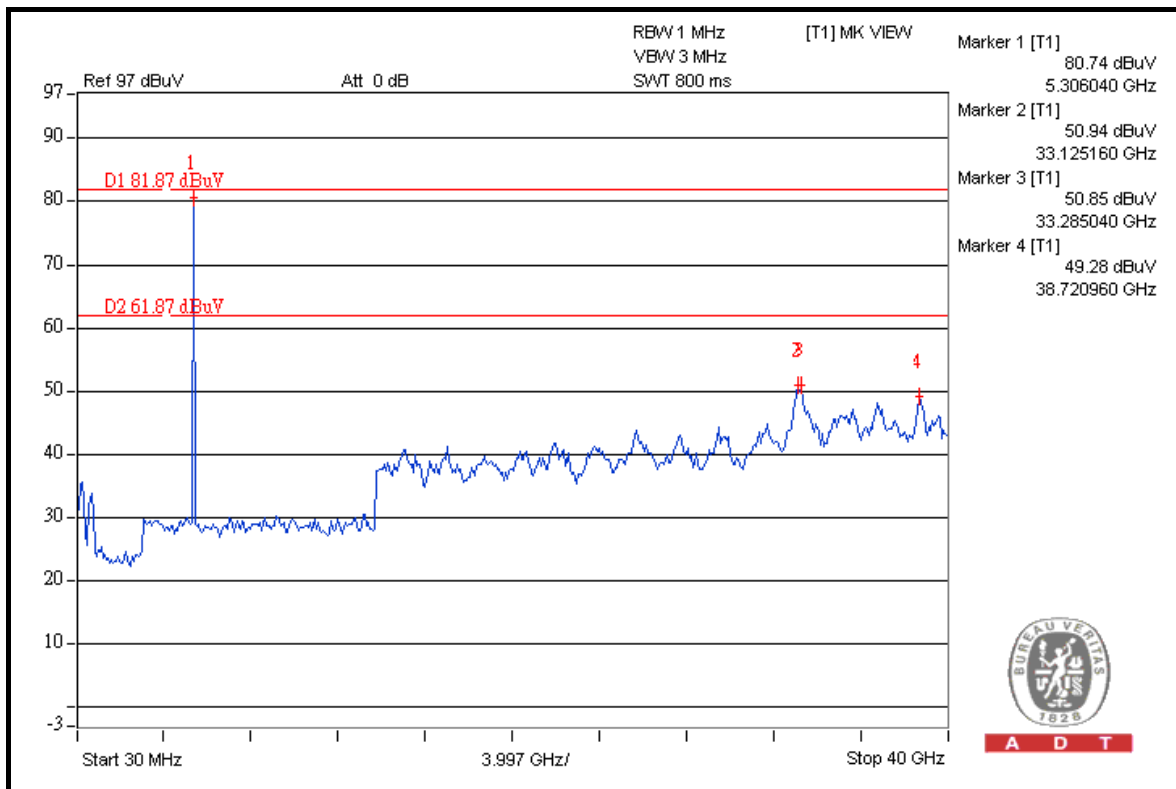
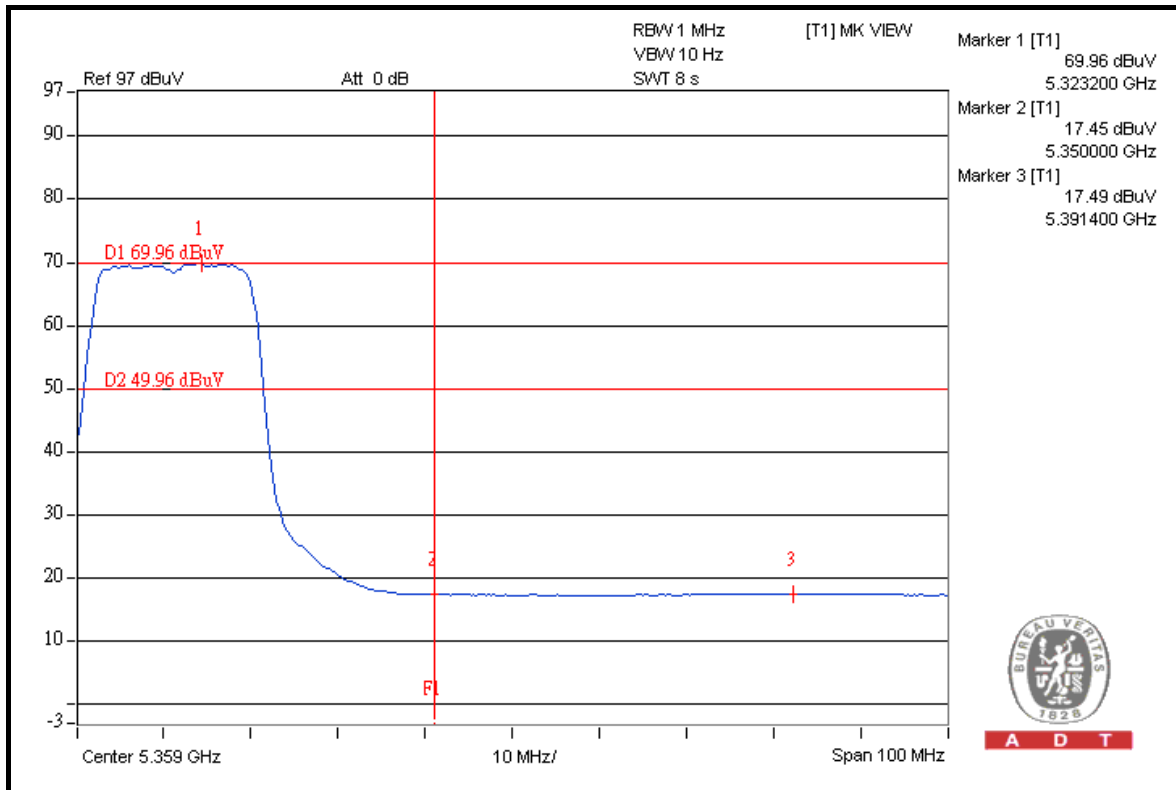


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TEST MODE C

Channel 36 (5180MHz)

The band edge emission plot on the next page shows 53.09dBc 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 111.63dBuV/m (Peak), so the maximum field strength in restrict band is $111.63 - 53.09 = 58.54$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 54.57dBc 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 101.25dBuV/m (Average), so the maximum field strength in restrict band is $101.25 - 54.57 = 46.68$ dBuV/m which is under 54dBuV/m limit.

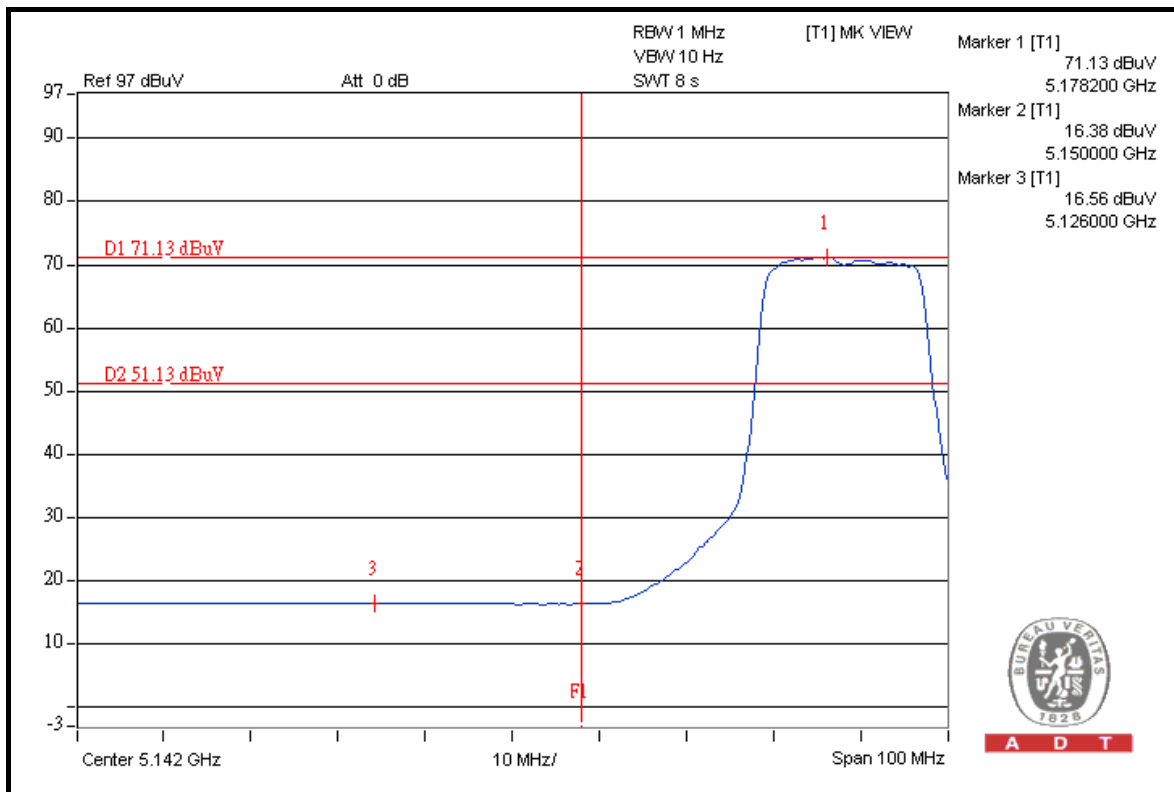
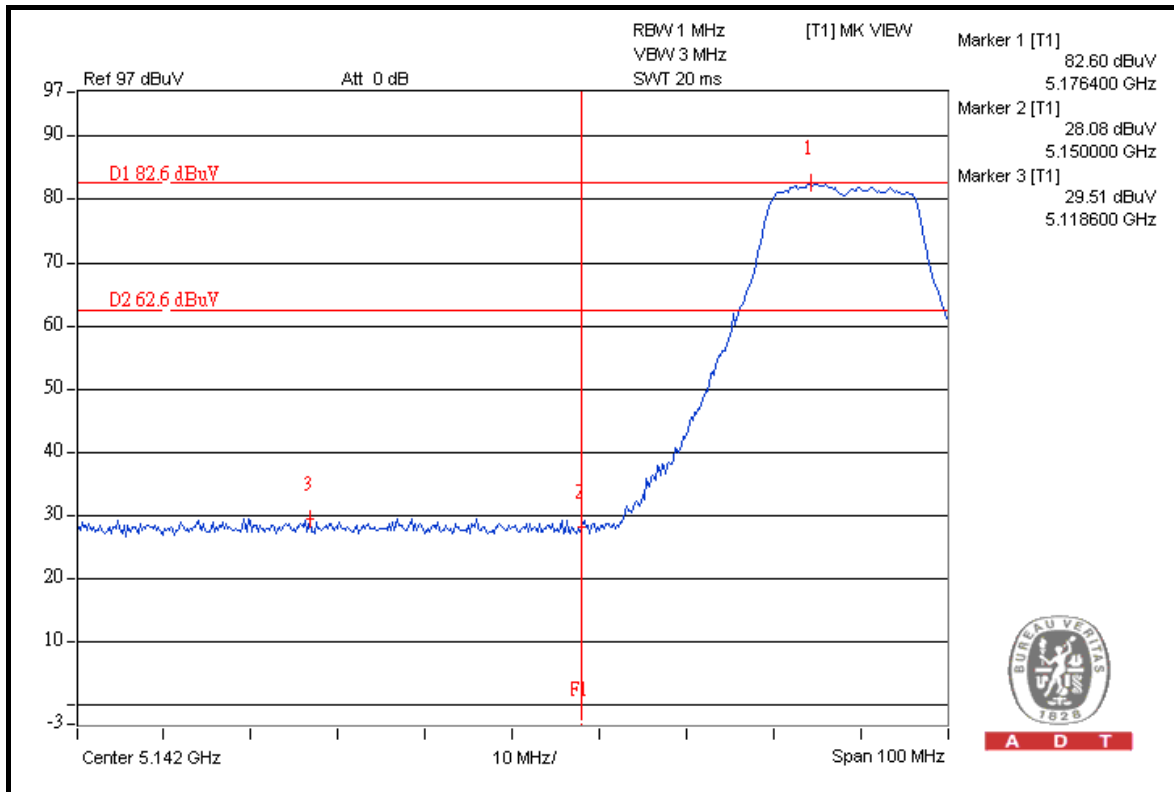
Channel 48 (5240MHz)

The band edge emission plot on the next second page shows 53.23dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 48 is 113.34dBuV/m (Peak), so the maximum field strength in restrict band is $113.34 - 53.23 = 60.11$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 55.12dBc 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 103.27dBuV/m (Average), so the maximum field strength in restrict band is $103.27 - 55.12 = 48.15$ dBuV/m which is under 54dBuV/m limit.

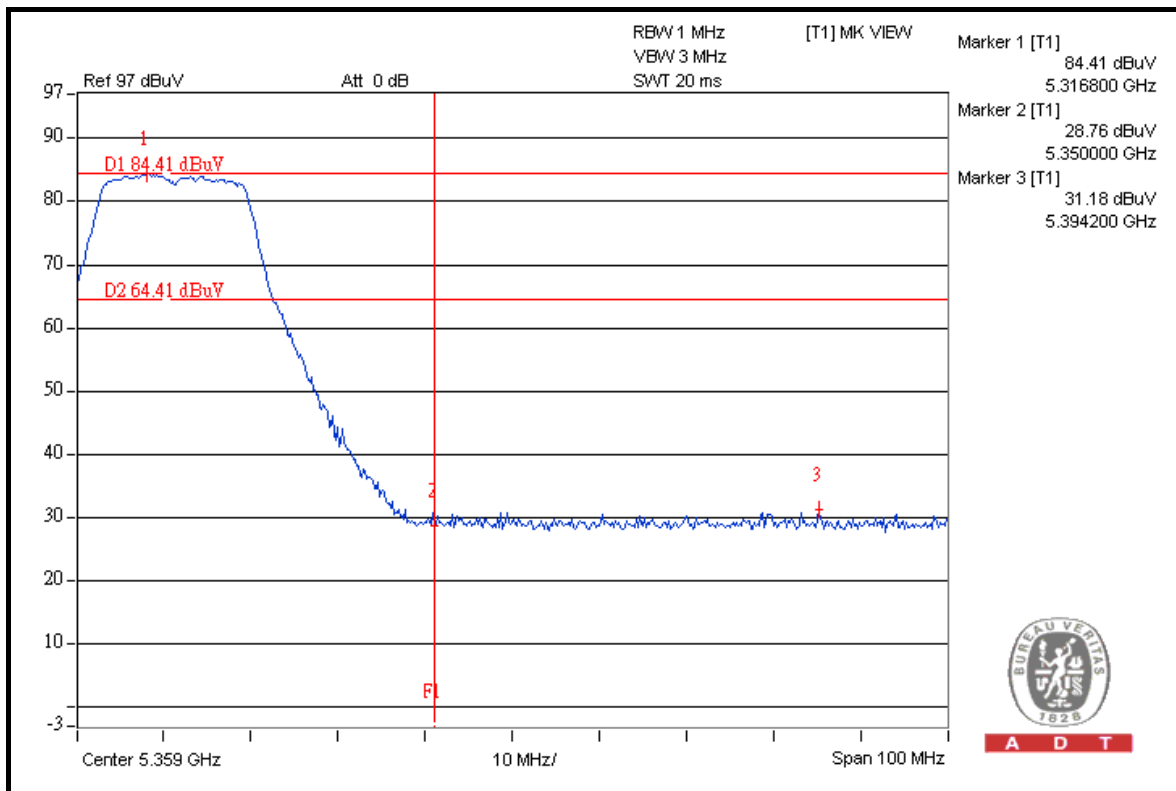
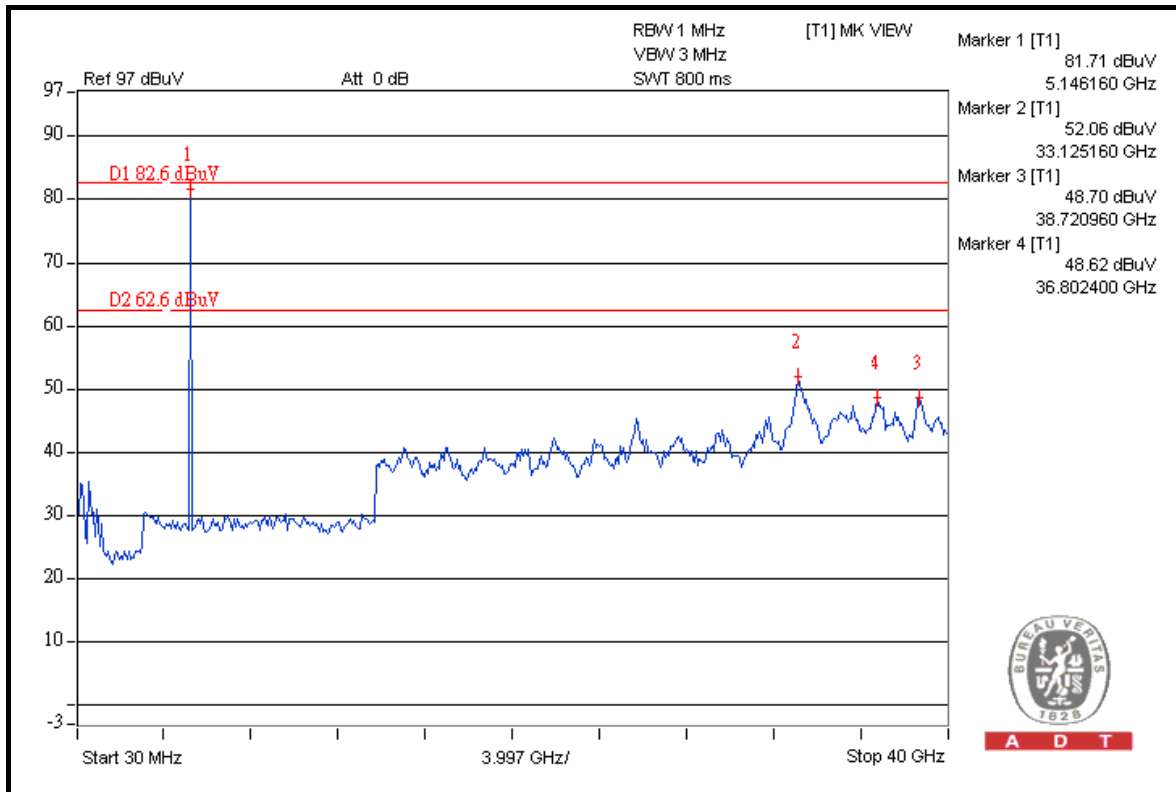


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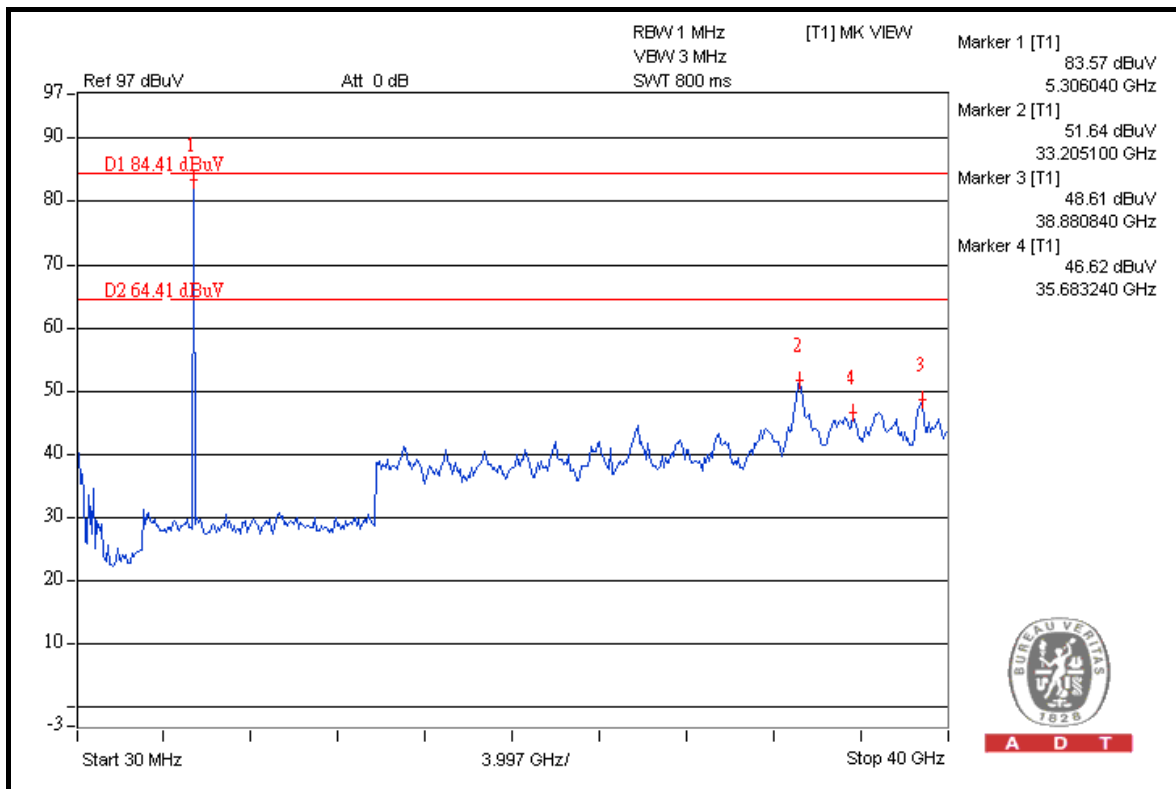
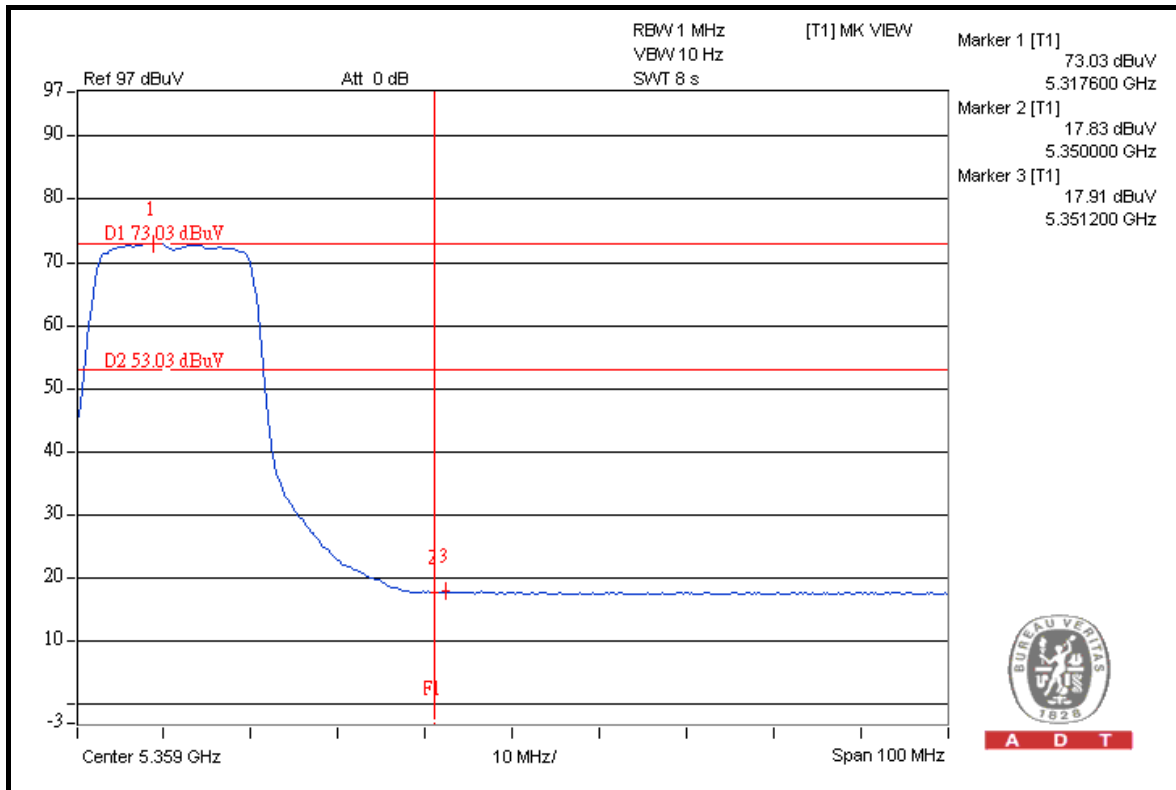


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DRAFT 802.11n (40MHz) OFDM MODULATION

TEST MODE A

Channel 38 (5190MHz)

The band edge emission plot on the next page shows 44.58dBc 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 106.55dBuV/m (Peak), so the maximum field strength in restrict band is $106.55 - 44.58 = 61.97$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 46.30dBc 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 95.52dBuV/m (Average), so the maximum field strength in restrict band is $95.52 - 46.30 = 49.22$ dBuV/m which is under 54dBuV/m limit.

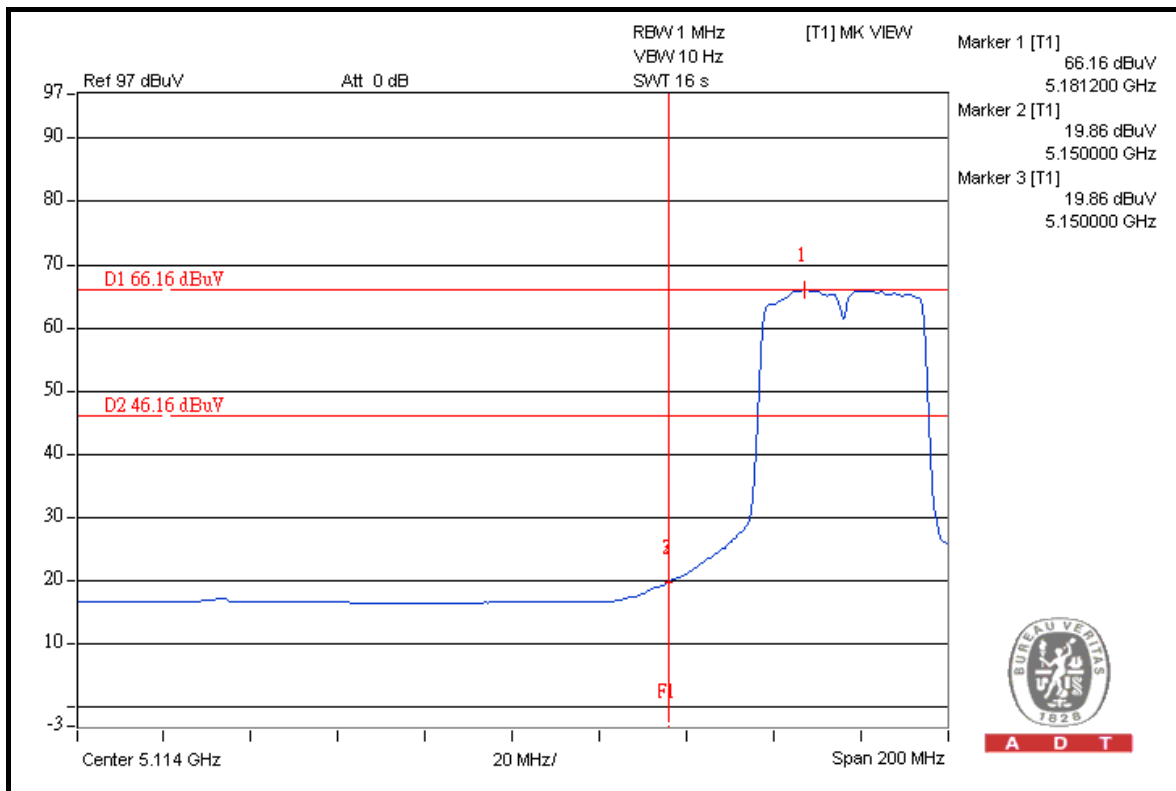
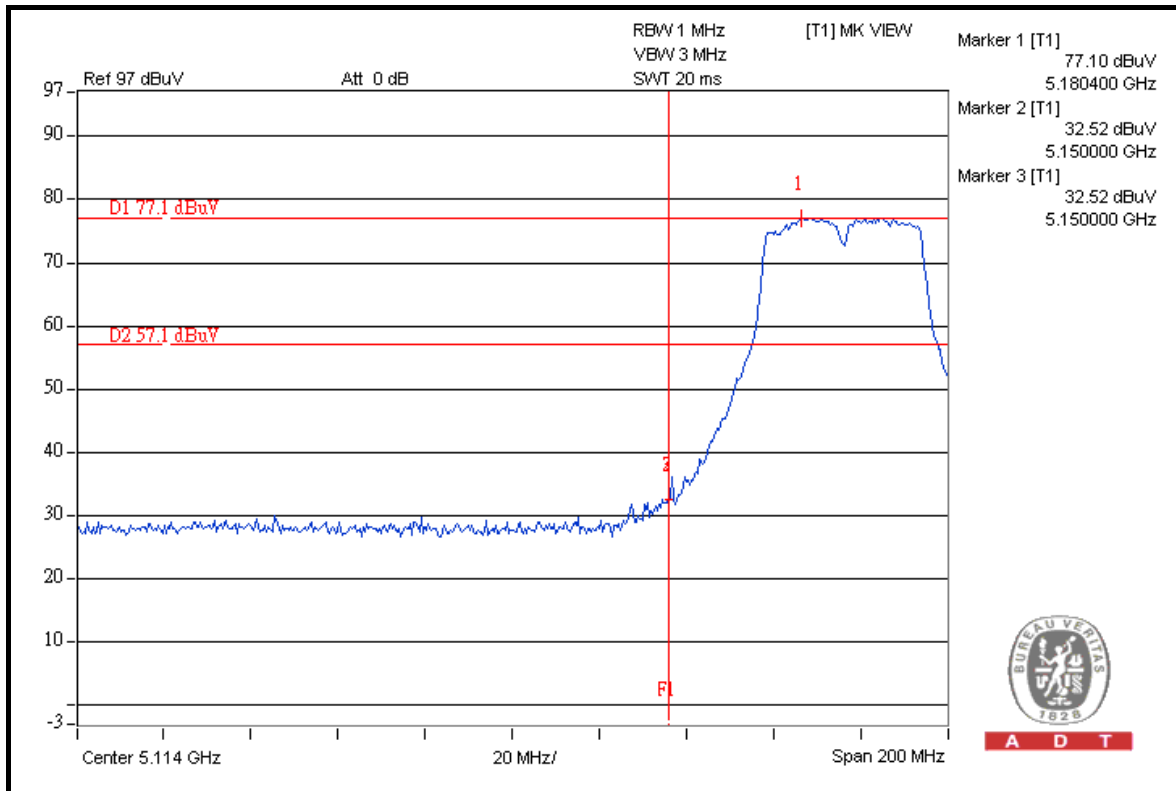
Channel 46 (5230MHz)

The band edge emission plot on the next second page shows 46.64dBc 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 107.02dBuV/m (Peak), so the maximum field strength in restrict band is $107.02 - 46.64 = 60.38$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 48.24dBc 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 97.11dBuV/m (Average), so the maximum field strength in restrict band is $97.11 - 48.24 = 48.87$ dBuV/m which is under 54dBuV/m limit.

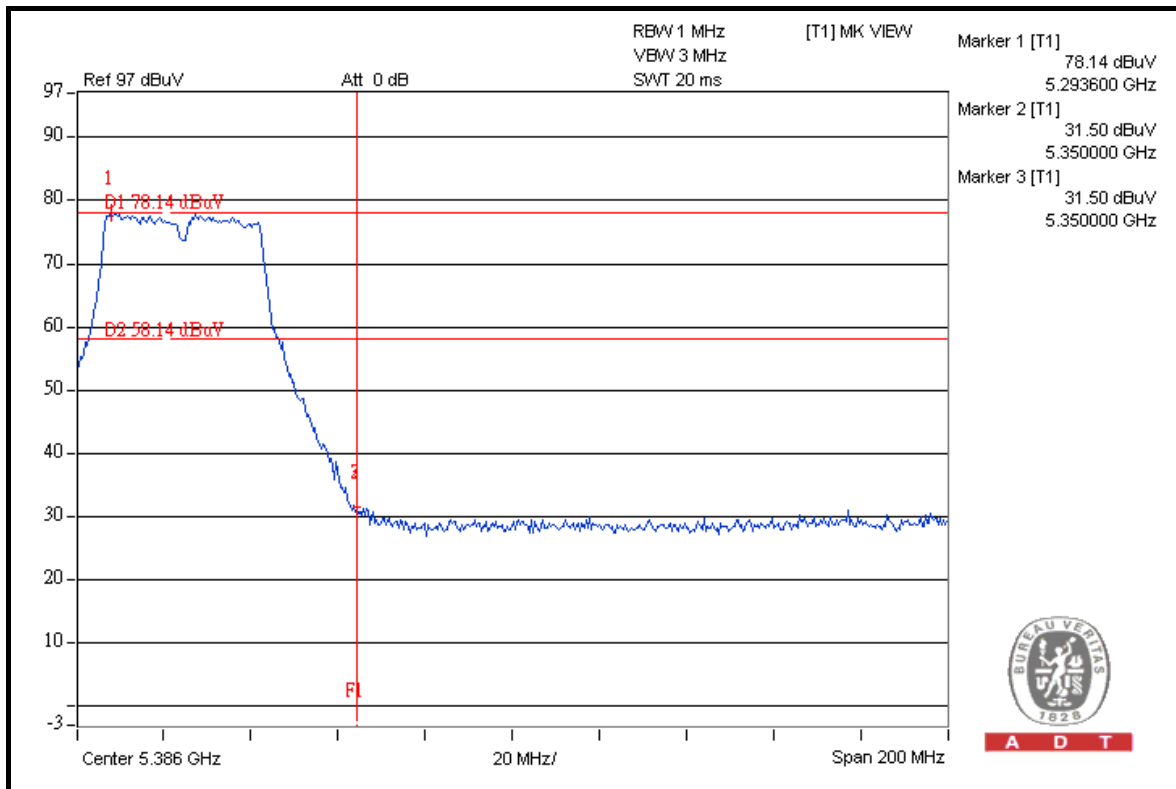
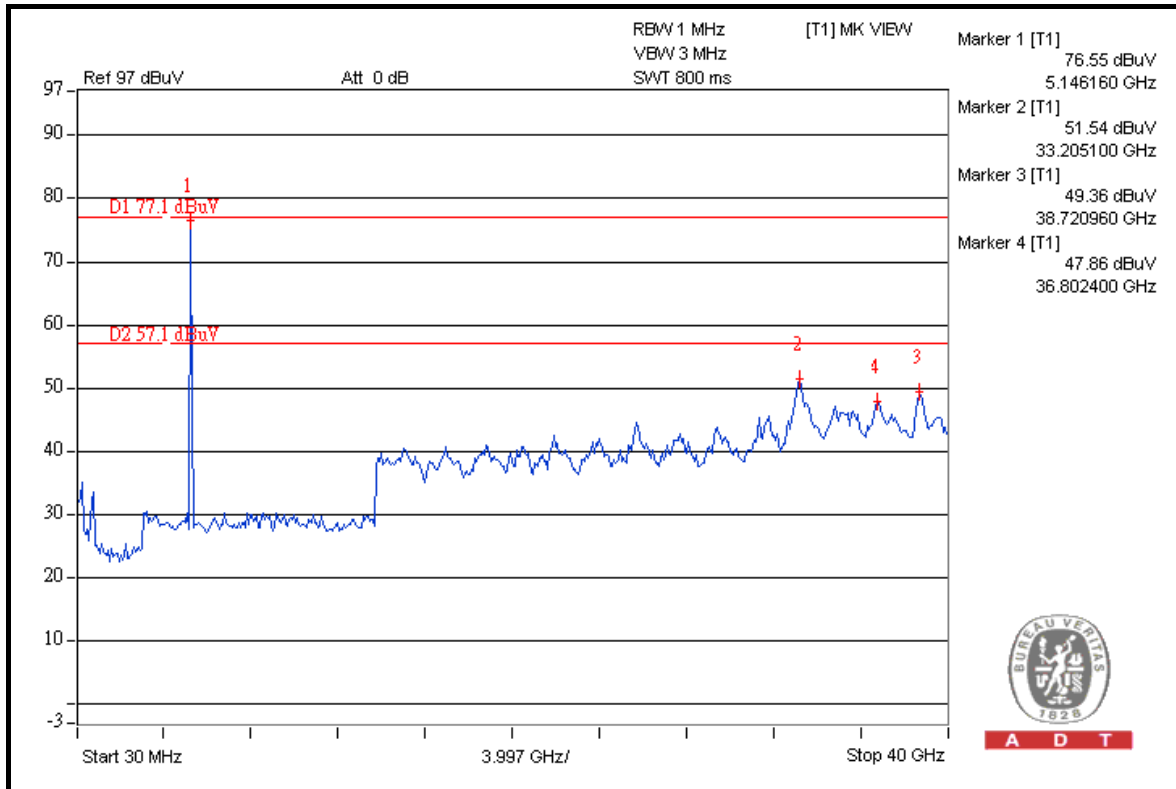


A D T



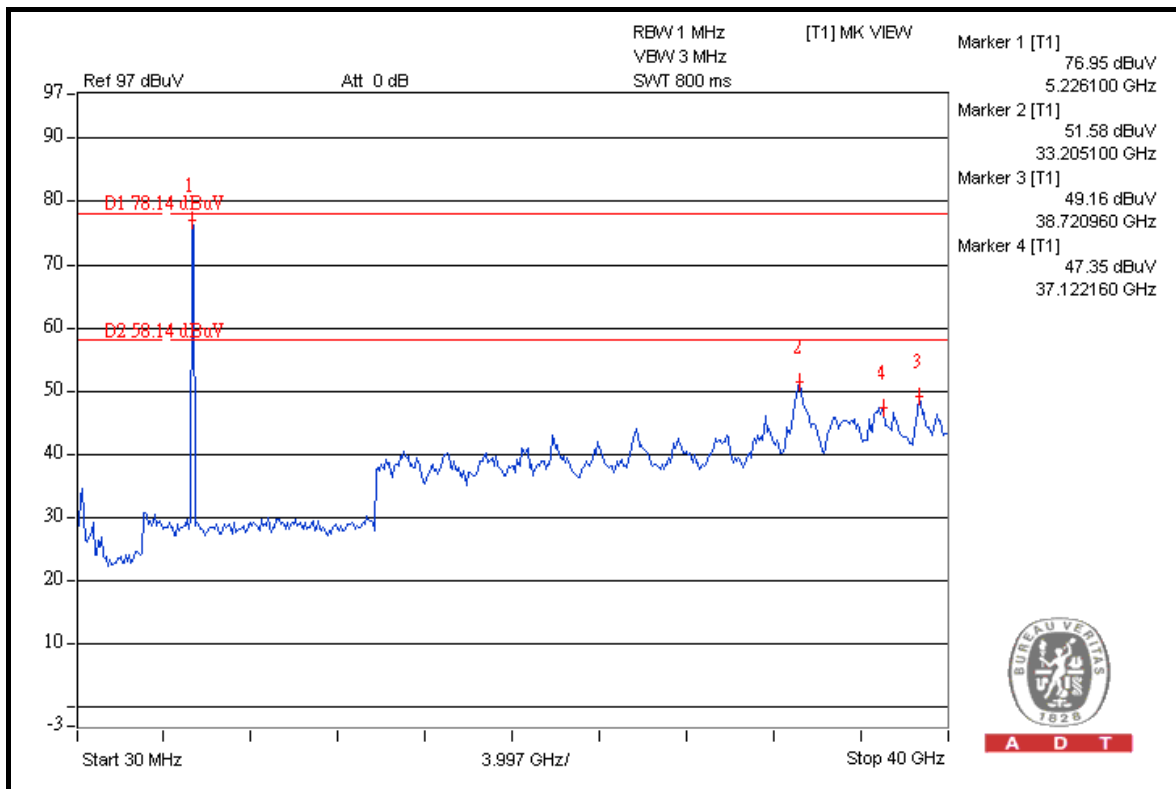
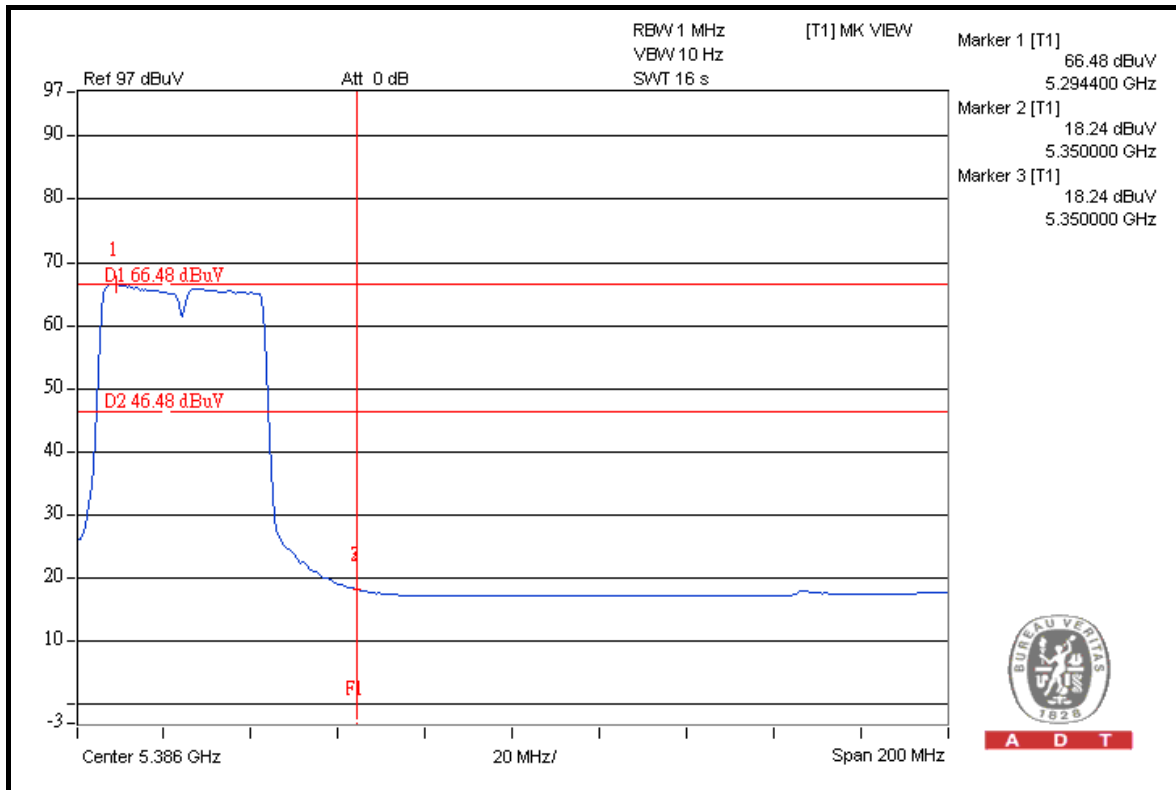


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TEST MODE C

Channel 38 (5190MHz)

The band edge emission plot on the next page shows 44.80dBc 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 109.61dBuV/m (Peak), so the maximum field strength in restrict band is $109.61 - 44.80 = 64.81$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next page shows 46.76dBc 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 98.79dBuV/m (Average), so the maximum field strength in restrict band is $98.79 - 46.76 = 52.03$ dBuV/m which is under 54dBuV/m limit.

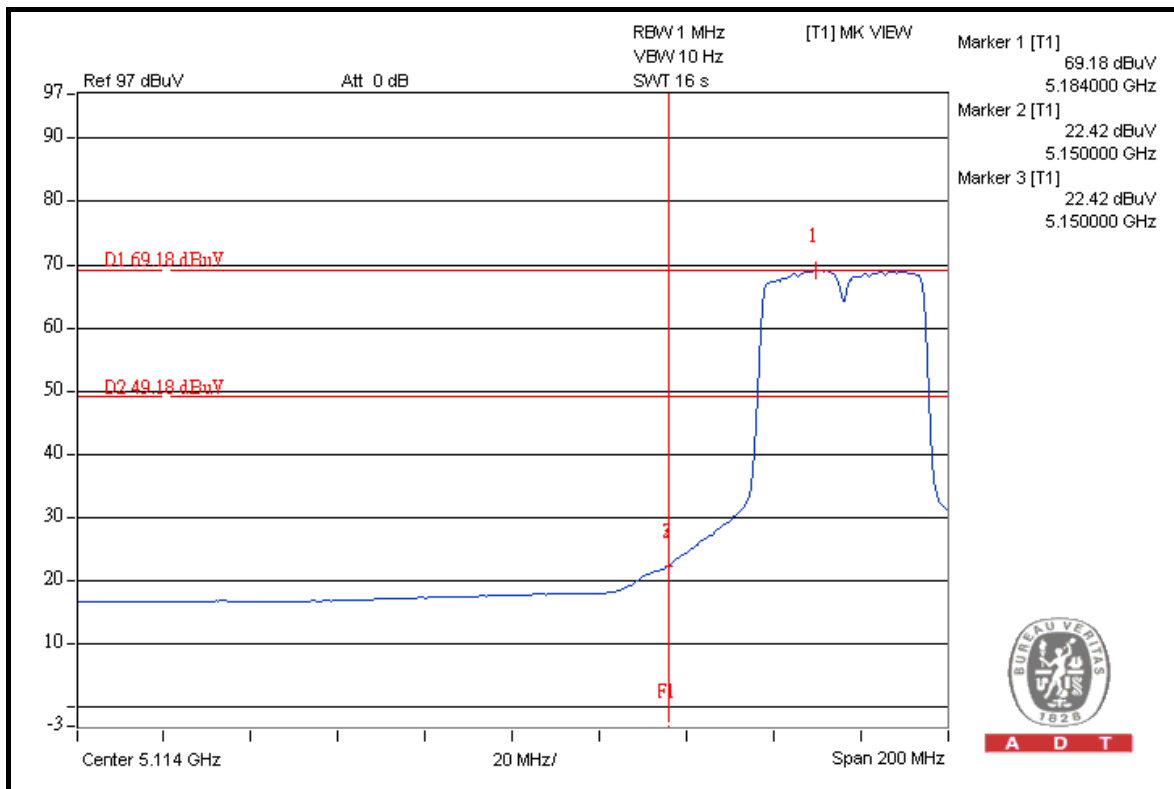
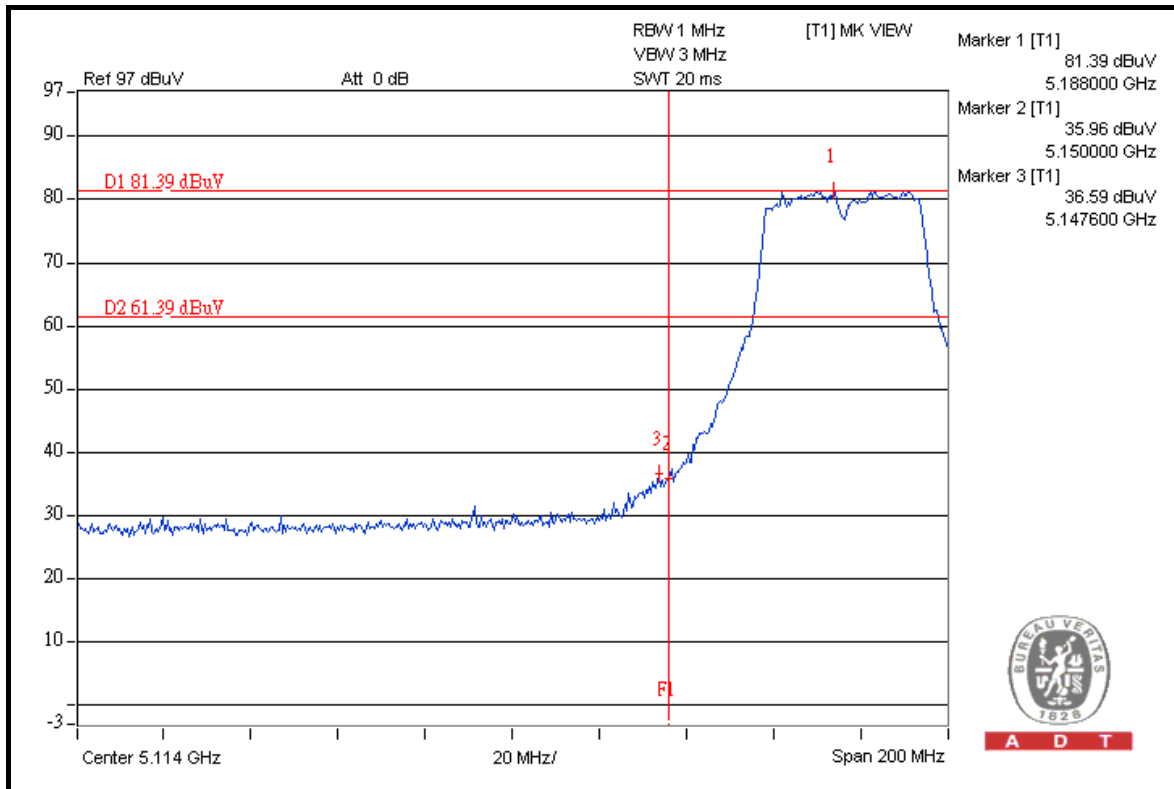
Channel 46 (5230MHz)

The band edge emission plot on the next second page shows 47.66dBc 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 110.18dBuV/m (Peak), so the maximum field strength in restrict band is $110.18 - 47.66 = 62.52$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot on the next third page shows 50.05dBc 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 100.16dBuV/m (Average), so the maximum field strength in restrict band is $100.16 - 50.05 = 50.11$ dBuV/m which is under 54dBuV/m limit.

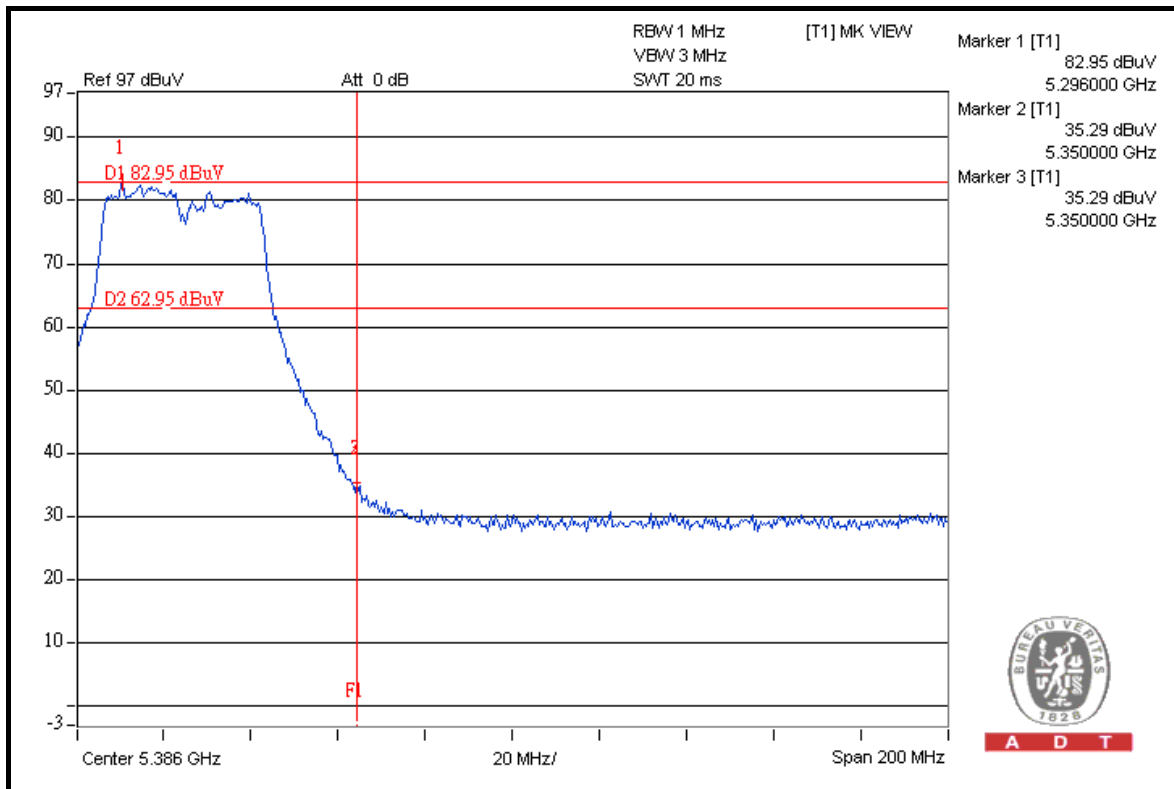
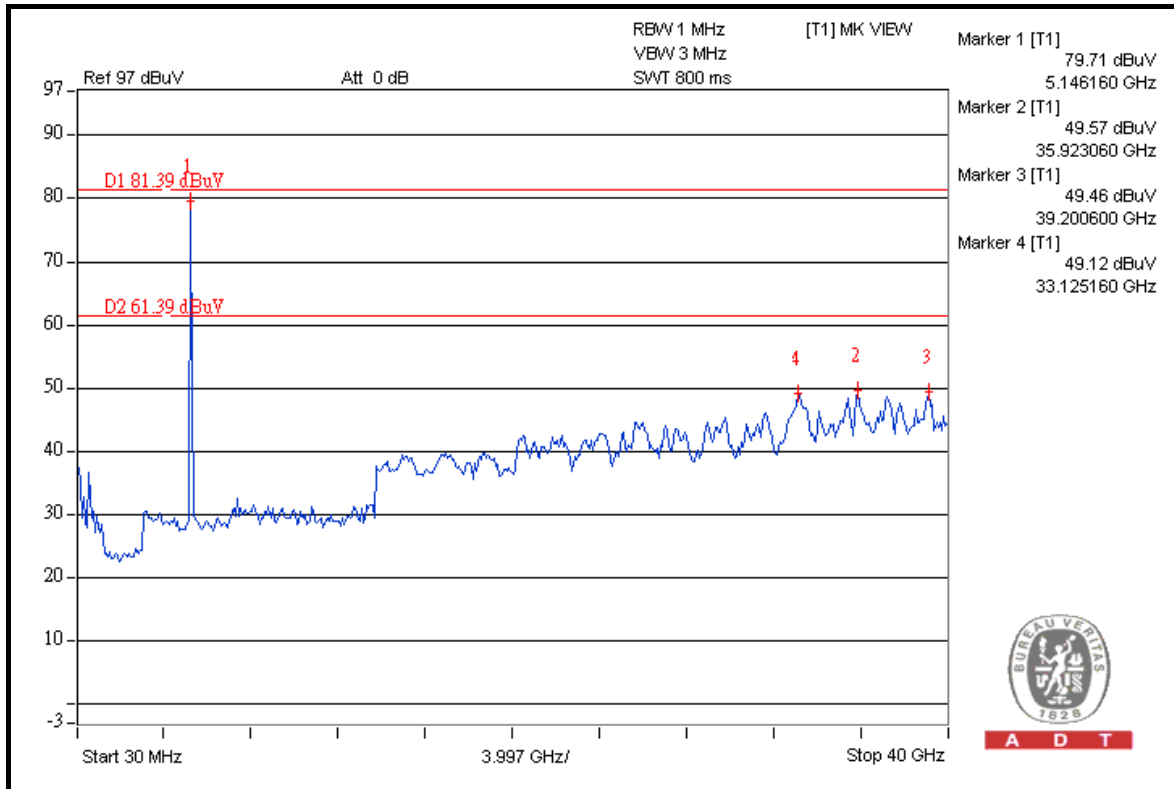


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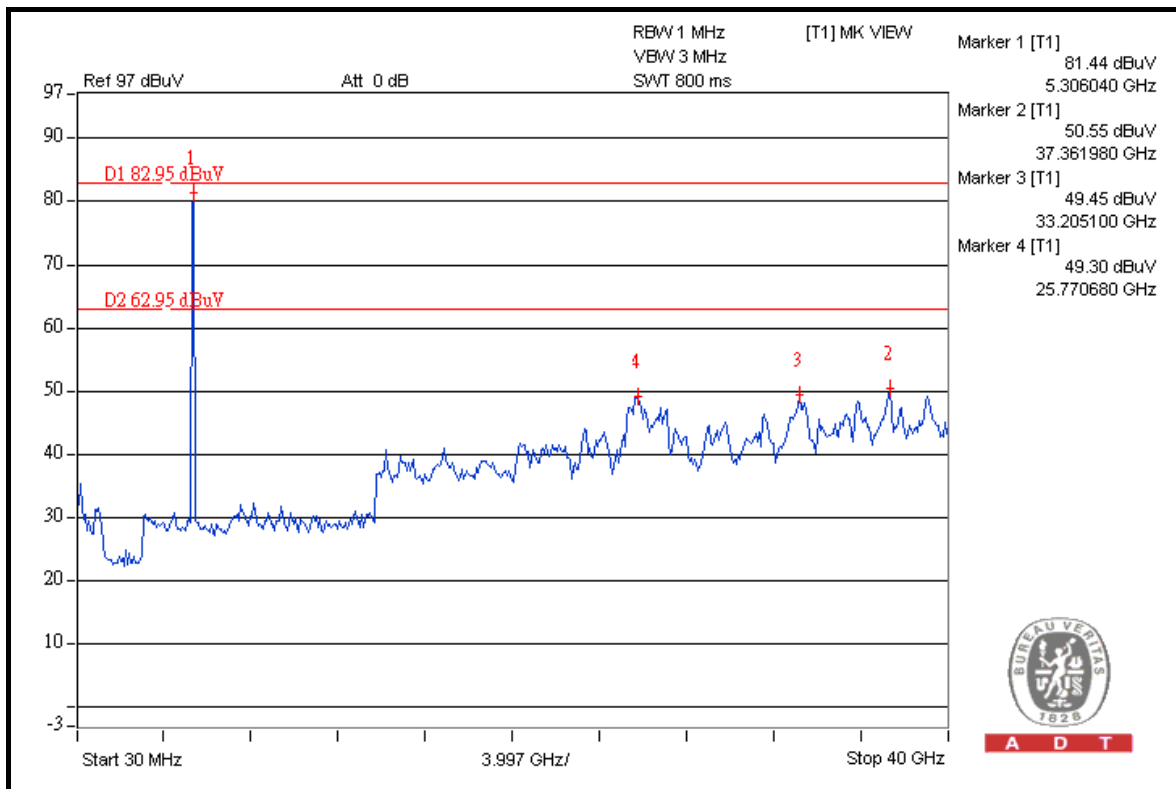
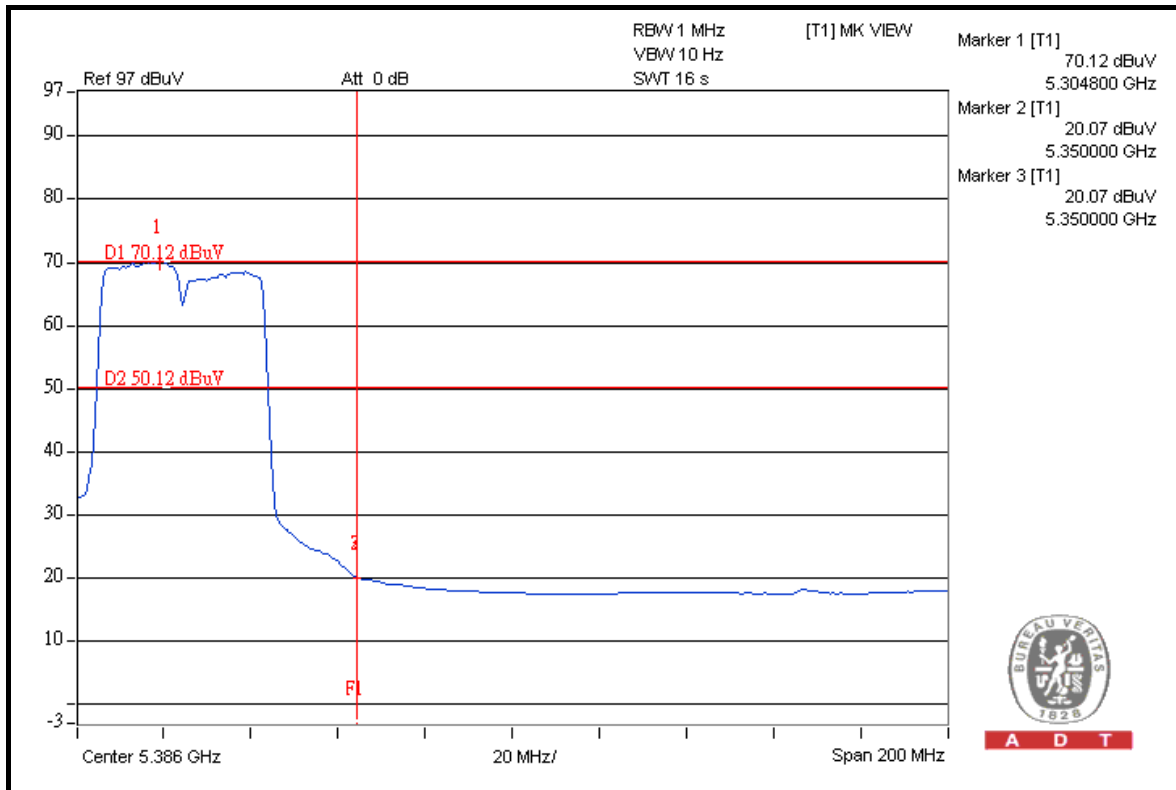


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4.8 ANTENNA REQUIREMENT

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

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.

---END---