FCC TEST REPORT (15.407)

REPORT NO.:	RF980320L04-1
MODEL NO.:	AT-TQ2403
RECEIVED:	Mar. 19, 2009
TESTED:	Apr. 06 ~ Apr. 16, 2009
ISSUED:	May 07, 2009

APPLICANT:	Delta Networks, Inc.
ADDRESS:	252, Shang Ying Road, Kuei San, Taoyuan Shien 333, Taiwan, R.O.C.

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien 244, Taiwan, R.O.C.
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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1. CERTIFICATION

PRODUCT:	Enterprise Wlan AP
MODEL NO.:	AT-TQ2403
BRAND:	ATI
APPLICANT:	Delta Networks, Inc.
TEST SAMPLE:	ENGINEERING SAMPLE
TESTED:	Apr. 06 ~ Apr. 16, 2009
STANDARDS:	**FCC Part 15, Subpart E (Section 15.407)** ANSI C63.4-2003

The above equipment (Model: AT-TQ2403) 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	: Polly Chien Polly Chien / Specialist	**, DATE :**	May 07, 2009
TECHNICAL ACCEPTANCE Responsible for RF	: Long Chen Long Chen / Senior Engineer	**, DATE :**	May 07, 2009
APPROVED BY	: Gary Chang Gary Chang / Assistant Manager	**, DATE :**	May 07, 2009

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 -22.97dB at 0.150MHz.
15.407(b/1/2/3) (b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is -1.02dB at 11400.00MHz.
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 ~ 200MHz	3.19 dB
	200MHz ~1000MHz	3.21 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Enterprise Wlan AP
MODEL NO.	AT-TQ2403
FCC ID	PD5TQ2403
POWER SUPPLY	5 Vdc from adapter 56 Vdc from POE
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps (*Turbo mode: up to 108Mbps)
FREQUENCY RANGE	5180 ~ 5320MHz & 5500 ~ 5700MHz
NUMBER OF CHANNEL	5180 ~ 5320MHz: 8 for 802.11a 5500 ~ 5700MHz: 11 for 802.11a 802.11a: 1 for turbo mode
OUTPUT POWER	44.978mW for 5180 ~ 5320MHz 40.365mW for 5500 ~ 5700MHz
ANTENNA TYPE	Dipole Antenna with 2.26dBi gain for 5.0GHz band
DATA CABLE	NA
I/O PORTS	RJ45
ACCESSORY DEVICES	Adapter

NOTE:

1. The EUT was powered by the following adapter.

BRAND:	LEADER ELECTRONICS INC.
MODEL:	MU18-2050280-A1
INPUT:	100-240Vac, 50/60Hz, 0.6A
OUTPUT:	5Vdc, 2.8A
POWER LINE:	1.5 m non-shielded cable without core

2. The EUT is an Enterprise Wlan AP. The functions of EUT listed as below:

	TEST STANDARD	REFERENCE REPORT
WLAN 802.11b/g	FCC Part 15, Subpart C (Section 15.247)	RF980320L04
WLAN 802.11a (5745~5825 MHz)		
WLAN 802.11a (5180 ~ 5320MHz, 5500 ~ 5700MHz)	FCC Part 15, Subpart E (Section 15.407)	RF980320L04-1
WLAN 802.11a (For DFS report) (5260 ~ 5320MHz, 5500 ~ 5700MHz)	FCC Part 15, Subpart E (Section 15.407)	RF980320L04-2

3. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.
4. The EUT operates in the 2.4GHz/5GHz frequency spectrum with throughput of up to 54Mbps.
5. This EUT is capable of providing data rates of up to 108Mbps in Turbo Mode depending upon reception quality.
6. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 DESCRIPTION OF TEST MODES

Operated in 5180 ~ 5320MHz

8 channels are provided for 802.11a

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

For 802.11a: One channel is provided to this EUT for turbo mode:

CHANNEL	FREQUENCY
42	5210 MHz

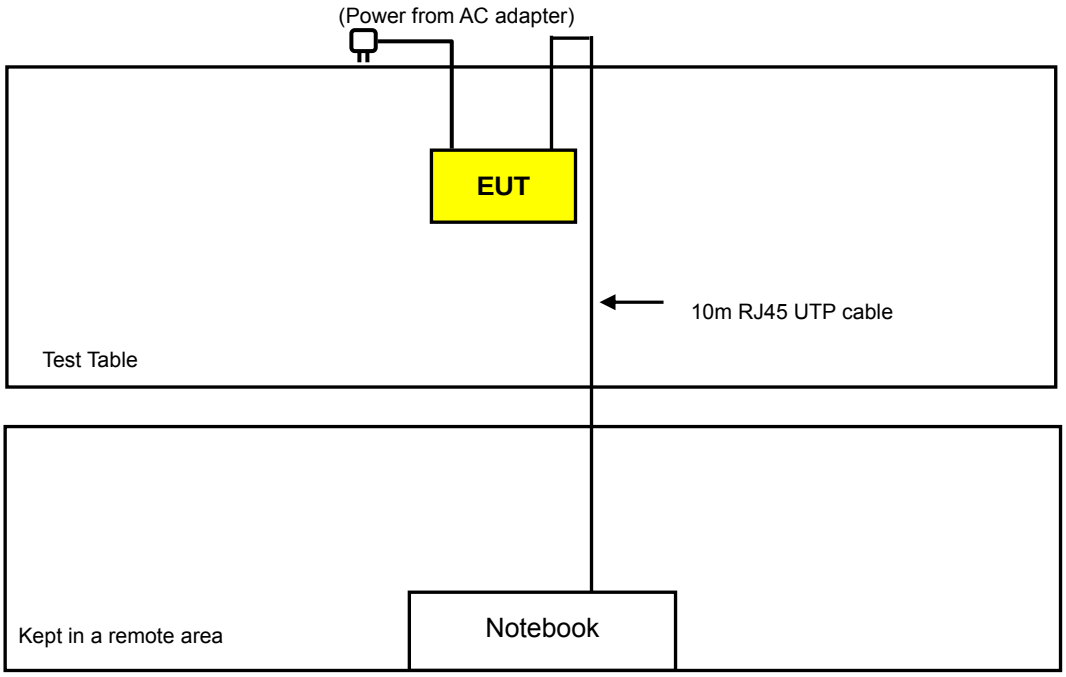
Operated in 5500 ~ 5700MHz

11 channels are provided for 802.11a

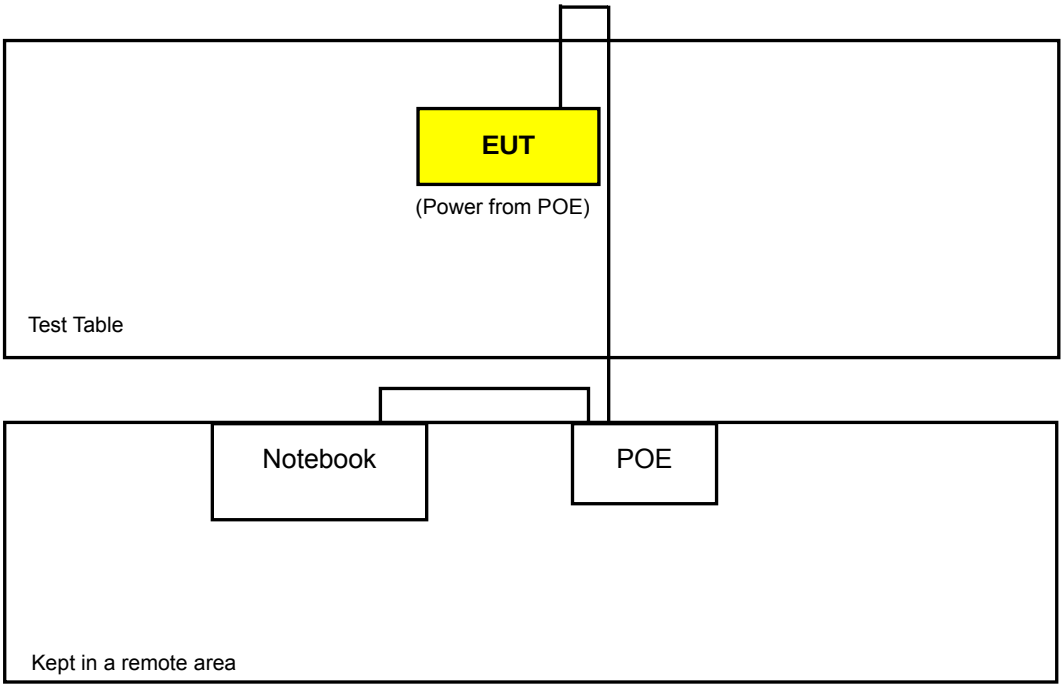
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Test Mode A



Test Mode B



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Power from AC Adapter
B	-	√	√	-	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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0	X
A	802.11a	5500-5700	100 to 140	100, 120, 140	OFDM	BPSK	6.0	X
A	802.11a Turbo	5180-5320	42	42	OFDM	QPSK	12.0	X

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A	802.11a	5180-5320	36 to 64	64	OFDM	BPSK	6.0	X
A	802.11a	5500-5700	100 to 140	100	OFDM	BPSK	6.0	X
A	802.11a Turbo	5180-5320	42	42	OFDM	QPSK	12.0	X

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B	802.11a	5180-5320	36 to 64	64	OFDM	BPSK	6.0
A, B	802.11a	5500-5700	100 to 140	100	OFDM	BPSK	6.0
A, B	802.11a Turbo	5180-5320	42	42	OFDM	QPSK	12.0

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5320	36 to 64	36, 64	OFDM	BPSK	6.0
A	802.11a	5500-5700	100 to 140	100, 140	OFDM	BPSK	6.0
A	802.11a Turbo	5180-5320	42	42	OFDM	QPSK	12.0

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	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5320	36 to 64	36, 40, 48, 52, 60, 64	OFDM	BPSK	6.0
A	802.11a	5500-5700	100 to 140	100, 120, 140	OFDM	BPSK	6.0
A	802.11a Turbo	5180-5320	42	42	OFDM	QPSK	12.0

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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP05L	25191592336	E2K24CLNS
2	POE	Cisco	DPSN-35FB A	NA	NA

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

NOTE:

1. All power cords of the above support units are non shielded (1.8m).
2. Item 2 was provided by client.
3. Item 1, 2 acted as communication partners to transfer data.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

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

NOTE:

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

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

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 29, 2008	Dec. 28, 2009
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Dec. 08, 2008	Dec. 07, 2009
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 30, 2008	Apr. 29, 2009
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.

4.1.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

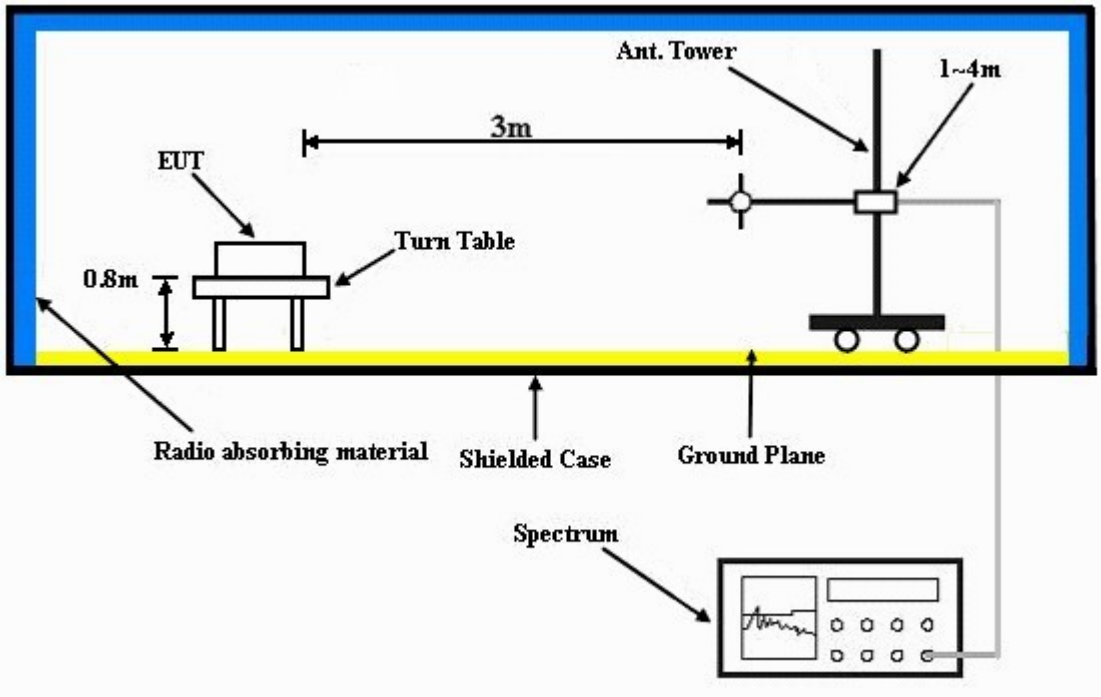
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 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



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

4.1.7 EUT OPERATING CONDITION

a. Placed the EUT on the testing table.
b. Prepared a notebook system to act as a communication partner and placed them outside of testing area.
c. The communication partner connected with EUT via a RJ45 cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The necessary accessories enable the system in full functions.

4.1.8 TEST RESULTS

ABOVE 1GHz DATA: 802.11a OFDM MODULATION (NORMAL MODE)

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	TESTED BY	Mark Liao
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.61 PK	74.00	-10.39	1.50 H	118	24.47	39.14
2	5150.00	47.33 AV	54.00	-6.67	1.50 H	118	8.19	39.14
3	*5180.00	100.02 PK			1.51 H	231	60.84	39.18
4	*5180.00	88.76 AV			1.51 H	231	49.58	39.18
5	#10360.00	61.84 PK	68.30	-6.46	1.06 H	98	12.23	49.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	72.34 PK	74.00	-1.66	1.27 V	165	33.20	39.14
2	5150.00	52.91 AV	54.00	-1.09	1.27 V	165	13.77	39.14
3	*5180.00	110.45 PK			1.39 V	262	71.27	39.18
4	*5180.00	98.48 AV			1.39 V	262	59.30	39.18
5	#10360.00	66.98 PK	68.30	-1.32	1.38 V	357	17.37	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.

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	TESTED BY	Mark Liao
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.87 PK			1.45 H	220	61.67	39.20
2	*5200.00	89.42 AV			1.45 H	220	50.22	39.20
3	#10400.00	59.27 PK	68.30	-9.03	1.00 H	344	9.56	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	*5200.00	110.96 PK			1.45 V	18	71.76	39.20
2	*5200.00	99.15 AV			1.45 V	18	59.95	39.20
3	#10400.00	66.69 PK	68.30	-1.61	1.00 V	183	16.98	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.

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	TESTED BY	Mark Liao
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	101.54 PK			1.52 H	212	62.29	39.25
2	*5240.00	90.12 AV			1.52 H	212	50.87	39.25
3	#10480.00	60.03 PK	68.30	-8.27	1.05 H	210	10.10	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	*5240.00	111.54 PK			1.36 V	155	72.29	39.25
2	*5240.00	99.98 AV			1.36 V	155	60.73	39.25
3	#10480.00	66.83 PK	68.30	-1.47	1.81 V	19	16.90	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.

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	TESTED BY	Mark Liao
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	100.75 PK			1.41 H	310	61.47	39.28
2	*5260.00	89.03 AV			1.41 H	310	49.75	39.28
3	#10520.00	58.45 PK	68.30	-9.85	1.08 H	75	8.43	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	*5260.00	110.07 PK			1.35 V	322	70.79	39.28
2	*5260.00	98.87 AV			1.35 V	322	59.59	39.28
3	#10520.00	64.88 PK	68.30	-3.42	1.09 V	179	14.86	50.02

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

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	100.51 PK			1.45 H	330	61.18	39.33
2	*5300.00	88.82 AV			1.45 H	330	49.49	39.33
3	10600.00	59.00 PK	74.00	-15.00	1.10 H	189	8.81	50.19
4	10600.00	46.28 AV	54.00	-7.72	1.10 H	189	-3.91	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	*5300.00	110.64 PK			1.36 V	267	71.31	39.33
2	*5300.00	98.44 AV			1.36 V	267	59.11	39.33
3	10600.00	65.10 PK	74.00	-8.90	1.66 V	162	14.91	50.19
4	10600.00	52.67 AV	54.00	-1.33	1.66 V	162	2.48	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.

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	TESTED BY	Mark Liao
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	100.54 PK			1.50 H	115	61.18	39.36
2	*5320.00	88.76 AV			1.50 H	115	49.40	39.36
3	5350.00	55.34 PK	74.00	-18.66	1.44 H	321	15.94	39.40
4	5350.00	39.36 AV	54.00	-14.64	1.44 H	321	-0.04	39.40
5	10640.00	60.62 PK	74.00	-13.38	1.40 H	62	10.34	50.27
6	10640.00	48.07 AV	54.00	-5.93	1.40 H	62	-2.21	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	*5320.00	110.24 PK			1.34 V	21	70.88	39.36
2	*5320.00	98.72 AV			1.34 V	21	59.36	39.36
3	5350.00	64.87 PK	74.00	-9.13	1.44 V	353	25.47	39.40
4	5350.00	47.03 AV	54.00	-6.97	1.44 V	353	7.63	39.40
5	10640.00	65.99 PK	74.00	-8.01	1.40 V	341	15.71	50.27
6	10640.00	52.78 AV	54.00	-1.22	1.40 V	341	2.51	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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TESTED BY	Mark Liao
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	51.36 PK	74.00	-22.64	1.55 H	321	11.83	39.53
2	5460.00	37.19 AV	54.00	-16.81	1.55 H	321	-2.34	39.53
3	#5470.00	55.56 PK	68.30	-12.74	1.55 H	321	16.02	39.54
4	*5500.00	101.27 PK			1.68 H	124	61.69	39.58
5	*5500.00	89.86 AV			1.68 H	124	50.28	39.58
6	11000.00	58.81 PK	74.00	-15.19	1.05 H	96	7.75	51.06
7	11000.00	46.26 AV	54.00	-7.74	1.05 H	96	-4.80	51.06
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	5460.00	58.51 PK	74.00	-15.49	1.42 V	324	18.98	39.53
2	5460.00	43.07 AV	54.00	-10.93	1.42 V	324	3.54	39.53
3	#5470.00	67.18 PK	68.30	-1.12	1.42 V	324	27.64	39.54
4	*5500.00	110.23 PK			1.28 V	119	70.65	39.58
5	*5500.00	99.02 AV			1.28 V	119	59.44	39.58
6	11000.00	62.82 PK	74.00	-11.18	1.48 V	209	11.76	51.06
7	11000.00	49.50 AV	54.00	-4.50	1.48 V	209	-1.56	51.06

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5600.00	102.12 PK			1.58 H	121	62.34	39.78
2	*5600.00	90.88 AV			1.58 H	121	51.10	39.78
3	11200.00	62.06 PK	74.00	-11.94	1.20 H	117	10.99	51.07
4	11200.00	48.84 AV	54.00	-5.16	1.20 H	117	-2.23	51.07
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5600.00	110.94 PK			1.37 V	119	71.16	39.78
2	*5600.00	99.11 AV			1.37 V	119	59.33	39.78
3	11200.00	65.58 PK	74.00	-8.42	1.39 V	332	14.51	51.07
4	11200.00	52.20 AV	54.00	-1.80	1.39 V	332	1.13	51.07

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TESTED BY	Mark Liao
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	101.04 PK			1.50 H	226	61.06	39.98
2	*5700.00	90.13 AV			1.50 H	226	50.15	39.98
3	#5725.00	55.03 PK	68.30	-13.27	1.44 H	273	15.00	40.03
4	11400.00	64.42 PK	74.00	-9.58	1.50 H	118	13.30	51.12
5	11400.00	50.85 AV	54.00	-3.15	1.50 H	118	-0.27	51.12
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	110.14 PK			1.24 V	288	70.16	39.98
2	*5700.00	98.92 AV			1.24 V	288	58.94	39.98
3	#5725.00	64.23 PK	68.30	-4.07	1.14 V	1	24.20	40.03
4	11400.00	67.02 PK	74.00	-6.98	1.50 V	113	15.90	51.12
5	**11400.00**	**52.98 AV**	**54.00**	**-1.02**	**1.50 V**	**113**	**1.86**	**51.12**

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

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

802.11a OFDM MODULATION (TURBO MODE)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1000hPa	TESTED BY	Mark Liao
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.11 PK	74.00	-14.89	1.67 H	186	19.97	39.14
2	5150.00	42.82 AV	54.00	-11.18	1.67 H	186	3.68	39.14
3	*5210.00	98.32 PK			1.66 H	319	59.11	39.21
4	*5210.00	87.26 AV			1.66 H	319	48.05	39.21
5	5350.00	47.02 PK	74.00	-26.98	1.58 H	213	7.62	39.40
6	5350.00	33.33 AV	54.00	-20.67	1.58 H	213	-6.07	39.40
7	#10420.00	58.48 PK	68.30	-9.82	1.51 H	341	8.72	49.76
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	69.80 PK	74.00	-4.20	1.11 V	20	30.66	39.14
2	5150.00	52.79 AV	54.00	-1.21	1.11 V	20	13.65	39.14
3	*5210.00	107.11 PK			1.00 V	332	67.90	39.21
4	*5210.00	96.47 AV			1.00 V	332	57.26	39.21
5	5350.00	47.00 PK	74.00	-27.00	1.19 V	168	7.60	39.40
6	5350.00	33.55 AV	54.00	-20.45	1.19 V	168	-5.85	39.40
7	#10420.00	63.27 PK	68.30	-5.03	1.11 V	187	13.51	49.76

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

BELOW 1GHz WORST-CASE DATA：802.11a OFDM MODULATION (NORMAL MODE)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 67%RH 999hPa	TESTED BY	Antony Lee
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	109.62	35.63 QP	43.50	-7.87	1.25 H	214	24.16	11.47
2	249.60	43.21 QP	46.00	-2.79	1.00 H	100	29.40	13.80
3	440.14	38.84 QP	46.00	-7.16	1.75 H	328	19.78	19.06
4	500.42	41.12 QP	46.00	-4.88	1.50 H	202	20.68	20.44
5	659.85	39.61 QP	46.00	-6.39	1.00 H	181	15.57	24.04
6	770.67	42.78 QP	46.00	-3.22	1.50 H	10	17.07	25.71
7	881.50	44.74 QP	46.00	-1.26	1.25 H	175	17.20	27.54
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	47.40	34.16 QP	40.00	-5.84	1.25 V	10	20.42	13.74
2	109.62	37.56 QP	43.50	-5.94	1.00 V	106	26.10	11.47
3	132.95	37.60 QP	43.50	-5.90	1.25 V	358	25.25	12.36
4	249.60	39.72 QP	46.00	-6.28	1.75 V	133	25.92	13.80
5	500.42	44.32 QP	46.00	-1.68	1.25 V	10	23.88	20.44
6	550.97	38.02 QP	46.00	-7.98	1.00 V	268	16.53	21.49
7	770.67	43.04 QP	46.00	-2.96	1.25 V	313	17.32	25.71
8	881.50	40.44 QP	46.00	-5.56	1.00 V	157	12.90	27.54

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 67%RH 999hPa	TESTED BY	Antony Lee
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	109.62	31.89 QP	43.50	-11.61	1.25 H	280	20.42	11.47
2	249.60	35.69 QP	46.00	-10.31	1.00 H	256	21.88	13.80
3	440.14	41.59 QP	46.00	-4.41	1.50 H	13	22.53	19.06
4	500.42	41.10 QP	46.00	-4.90	1.25 H	247	20.67	20.44
5	770.67	40.57 QP	46.00	-5.43	1.50 H	169	14.86	25.71
6	881.50	44.54 QP	46.00	-1.46	1.25 H	193	17.00	27.54
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	41.57	34.51 QP	40.00	-5.49	1.00 V	25	19.64	14.87
2	109.62	38.42 QP	43.50	-5.08	1.00 V	91	26.95	11.47
3	132.95	37.76 QP	43.50	-5.74	1.50 V	328	25.40	12.36
4	500.42	42.61 QP	46.00	-3.39	1.25 V	22	22.18	20.44
5	770.67	39.81 QP	46.00	-6.19	1.00 V	172	14.10	25.71
6	881.50	40.62 QP	46.00	-5.38	1.00 V	148	13.07	27.54

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

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

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

4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 67%RH 999hPa	TESTED BY	Antony Lee
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	109.62	34.92 QP	43.50	-8.58	1.50 H	196	23.45	11.47
2	249.60	42.96 QP	46.00	-3.04	1.00 H	106	29.16	13.80
3	440.14	40.05 QP	46.00	-5.95	1.75 H	337	21.00	19.06
4	500.42	40.36 QP	46.00	-5.64	1.50 H	217	19.92	20.44
5	659.85	39.40 QP	46.00	-6.60	1.00 H	187	15.36	24.04
6	770.67	41.16 QP	46.00	-4.84	1.00 H	10	15.45	25.71
7	881.50	44.33 QP	46.00	-1.67	1.25 H	175	16.79	27.54
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	47.40	33.45 QP	40.00	-6.55	1.25 V	10	19.71	13.74
2	109.62	37.99 QP	43.50	-5.51	1.00 V	82	26.52	11.47
3	132.95	36.56 QP	43.50	-6.94	1.25 V	238	24.21	12.36
4	249.60	39.98 QP	46.00	-6.02	1.50 V	142	26.17	13.80
5	500.42	44.24 QP	46.00	-1.76	1.00 V	10	23.81	20.44
6	770.67	44.56 QP	46.00	-1.44	1.00 V	127	18.85	25.71
7	881.50	39.27 QP	46.00	-6.73	1.00 V	10	11.72	27.54

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 67%RH 999hPa	TESTED BY	Antony Lee
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	97.95	31.68 QP	43.50	-11.82	1.75 H	262	20.84	10.84
2	329.32	37.70 QP	46.00	-8.30	1.25 H	13	22.68	15.03
3	440.14	42.01 QP	46.00	-3.99	1.75 H	325	22.96	19.06
4	500.42	41.41 QP	46.00	-4.59	1.25 H	142	20.98	20.44
5	770.67	41.27 QP	46.00	-4.73	1.75 H	313	15.55	25.71
6	881.50	44.59 QP	46.00	-1.41	1.25 H	181	17.05	27.54
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	43.51	33.58 QP	40.00	-6.42	1.25 V	340	19.07	14.51
2	109.62	38.72 QP	43.50	-4.78	1.00 V	100	27.25	11.47
3	132.95	36.39 QP	43.50	-7.11	1.00 V	310	24.03	12.36
4	500.42	40.81 QP	46.00	-5.19	1.25 V	355	20.38	20.44
5	751.23	39.23 QP	46.00	-6.77	1.25 V	25	13.72	25.51
6	770.67	42.23 QP	46.00	-3.77	1.25 V	151	16.52	25.71
	881.50	41.30 QP	46.00	-4.70	1.00 V	181	13.75	27.54

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

802.11a OFDM MODULATION (TURBO MODE)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 67%RH 999hPa	TESTED BY	Antony Lee
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	249.60	43.99 QP	46.00	-2.01	1.00 H	88	30.19	13.80
2	440.14	38.86 QP	46.00	-7.14	1.75 H	343	19.80	19.06
3	500.42	40.30 QP	46.00	-5.70	1.50 H	217	19.86	20.44
4	659.85	39.35 QP	46.00	-6.65	1.00 H	190	15.31	24.04
5	770.67	42.32 QP	46.00	-3.68	1.00 H	172	16.60	25.71
6	881.50	44.45 QP	46.00	-1.55	1.25 H	178	16.91	27.54
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	47.40	34.32 QP	40.00	-5.68	1.00 V	10	20.58	13.74
2	109.62	38.99 QP	43.50	-4.51	1.00 V	58	27.52	11.47
3	132.95	37.77 QP	43.50	-5.73	1.00 V	226	25.41	12.36
4	249.60	39.30 QP	46.00	-6.70	1.50 V	154	25.50	13.80
5	500.42	43.64 QP	46.00	-2.36	1.00 V	10	23.21	20.44
6	770.67	41.39 QP	46.00	-4.61	1.25 V	139	15.67	25.71
7	881.50	40.46 QP	46.00	-5.54	1.00 V	37	12.91	27.54

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	22deg. C, 67%RH 999hPa	TESTED BY	Antony Lee
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	329.32	37.11 QP	46.00	-8.89	1.00 H	358	22.08	15.03
2	440.14	40.67 QP	46.00	-5.33	1.75 H	352	21.62	19.06
3	500.42	41.10 QP	46.00	-4.90	1.25 H	157	20.67	20.44
4	550.97	36.69 QP	46.00	-9.31	1.25 H	205	15.20	21.49
5	659.85	37.69 QP	46.00	-8.31	1.00 H	175	13.65	24.04
6	770.67	40.10 QP	46.00	-5.90	1.75 H	241	14.39	25.71
7	881.50	44.80 QP	46.00	-1.20	1.25 H	115	17.25	27.54
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	43.51	33.96 QP	40.00	-6.04	1.00 V	28	19.45	14.51
2	109.62	37.86 QP	43.50	-5.64	1.00 V	124	26.39	11.47
3	132.95	37.23 QP	43.50	-6.27	1.00 V	70	24.87	12.36
4	440.14	37.32 QP	46.00	-8.68	1.00 V	49	18.26	19.06
5	500.42	40.64 QP	46.00	-5.36	1.25 V	13	20.20	20.44
6	550.97	37.55 QP	46.00	-8.45	1.00 V	307	16.06	21.49
7	751.23	39.38 QP	46.00	-6.62	1.25 V	79	13.87	25.51
8	770.67	41.29 QP	46.00	-4.71	1.00 V	241	15.58	25.71
9	881.50	39.58 QP	46.00	-6.42	1.00 V	157	12.03	27.54

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

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	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.

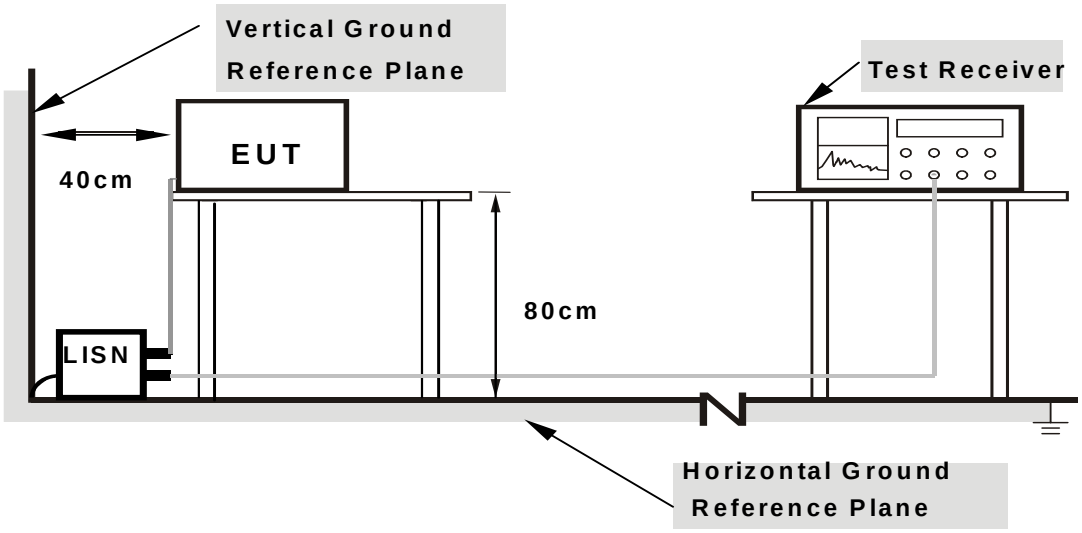
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

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 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.

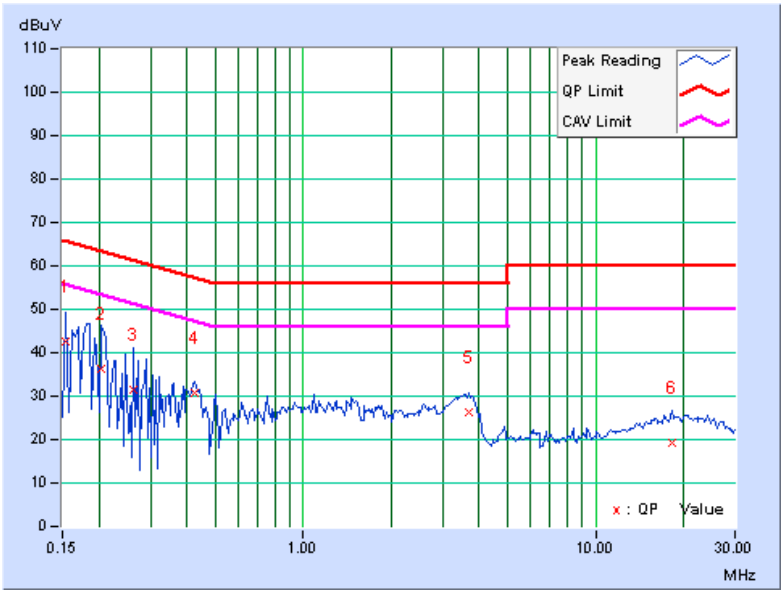
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA：802.11a OFDM MODULATION (NORMAL MODE)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	A
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.13	42.31	-	42.44	-	65.79	55.79	-23.35	-
2	0.205	0.13	36.16	-	36.29	-	63.42	53.42	-27.13	-
3	0.263	0.13	31.43	-	31.56	-	61.33	51.33	-29.76	-
4	0.423	0.14	30.62	-	30.76	-	57.38	47.38	-26.62	-
5	3.699	0.35	25.89	-	26.24	-	56.00	46.00	-29.76	-
6	18.348	1.07	18.03	-	19.10	-	60.00	50.00	-40.90	-

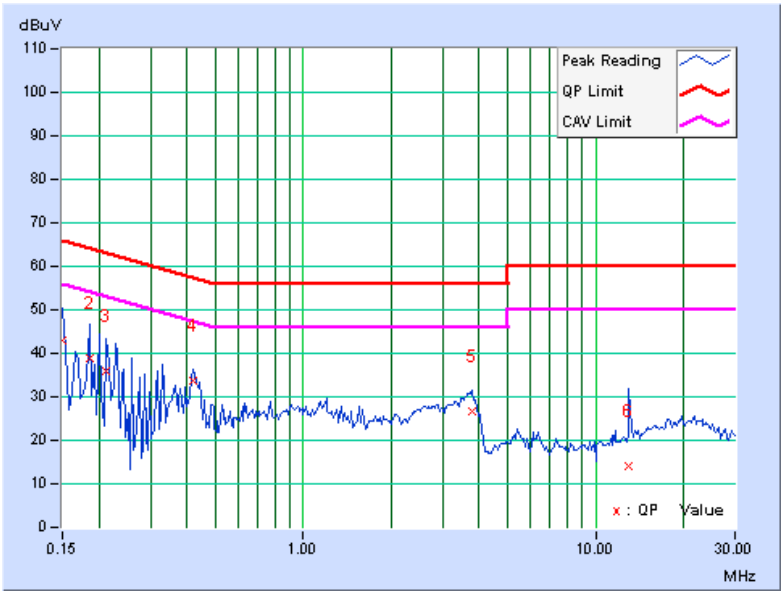
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	A
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.150**	**0.14**	**42.89**	**-**	**43.03**	**-**	**66.00**	**56.00**	**-22.97**	**-**
2	0.185	0.15	38.57	-	38.72	-	64.25	54.25	-25.53	-
3	0.213	0.15	35.85	-	36.00	-	63.11	53.11	-27.11	-
4	0.420	0.16	33.59	-	33.75	-	57.46	47.46	-23.71	-
5	3.789	0.38	26.42	-	26.80	-	56.00	46.00	-29.20	-
6	13.031	0.76	13.47	-	14.23	-	60.00	50.00	-45.77	-

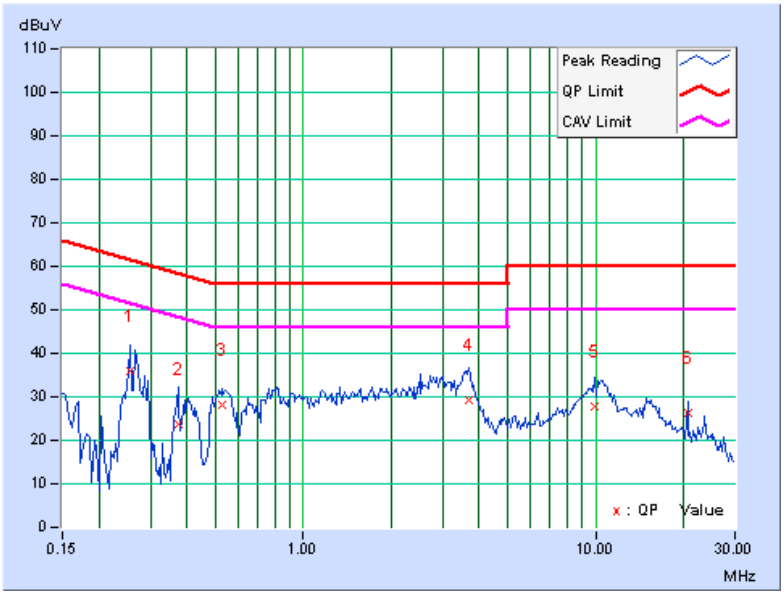
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	B
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.255	0.13	35.84	-	35.97	-	61.58	51.58	-25.60	-
2	0.373	0.14	23.67	-	23.81	-	58.44	48.44	-34.63	-
3	0.529	0.15	27.85	-	28.00	-	56.00	46.00	-28.00	-
4	3.680	0.35	28.73	-	29.08	-	56.00	46.00	-26.92	-
5	9.941	0.66	27.30	-	27.96	-	60.00	50.00	-32.04	-
6	20.629	1.16	25.04	-	26.20	-	60.00	50.00	-33.80	-

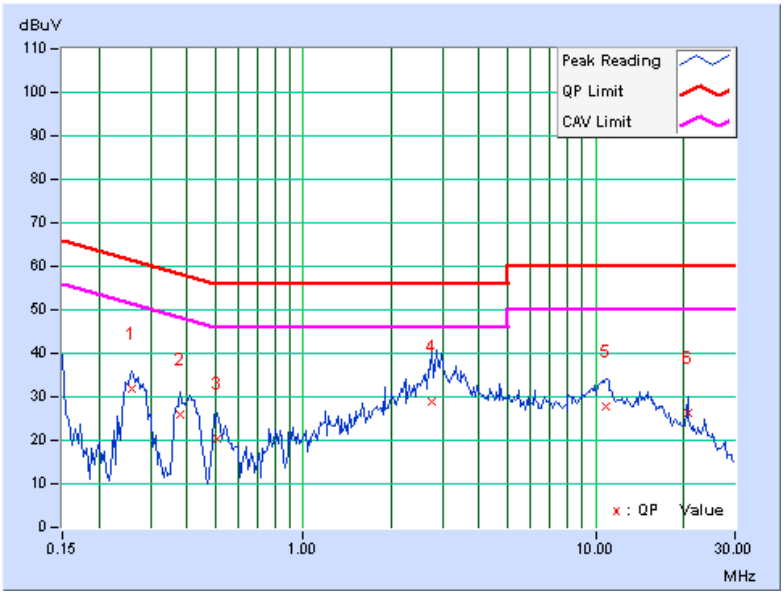
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	B
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.259	0.15	31.76	-	31.91	-	61.45	51.45	-29.54	-
2	0.380	0.16	25.73	-	25.89	-	58.27	48.27	-32.38	-
3	0.505	0.17	20.11	-	20.28	-	56.00	46.00	-35.72	-
4	2.758	0.30	28.69	-	28.99	-	56.00	46.00	-27.01	-
5	10.859	0.69	27.02	-	27.71	-	60.00	50.00	-32.29	-
6	20.629	0.97	25.22	-	26.19	-	60.00	50.00	-33.81	-

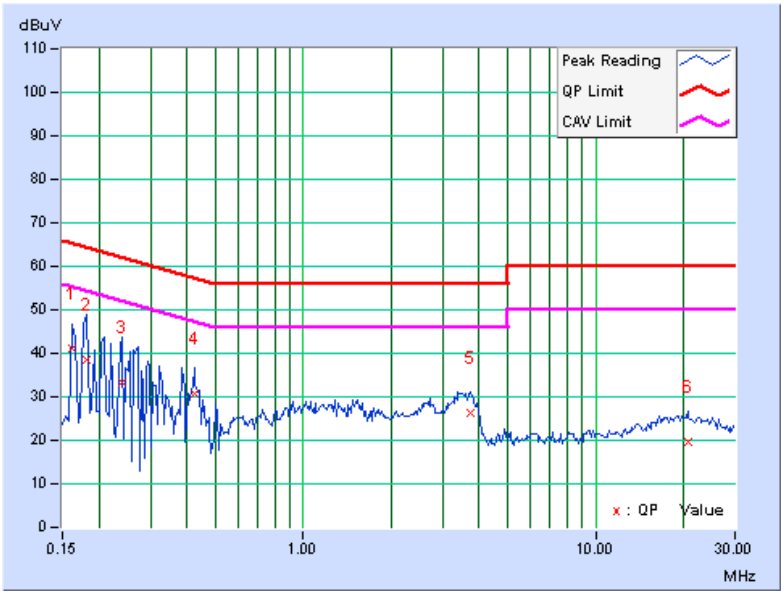
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	A
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.13	40.96	-	41.09	-	65.38	55.38	-24.29	-
2	0.181	0.13	38.39	-	38.52	-	64.43	54.43	-25.91	-
3	0.240	0.13	33.18	-	33.31	-	62.10	52.10	-28.79	-
4	0.423	0.14	30.50	-	30.64	-	57.38	47.38	-26.74	-
5	3.742	0.35	25.92	-	26.27	-	56.00	46.00	-29.73	-
6	20.676	1.16	18.44	-	19.60	-	60.00	50.00	-40.40	-

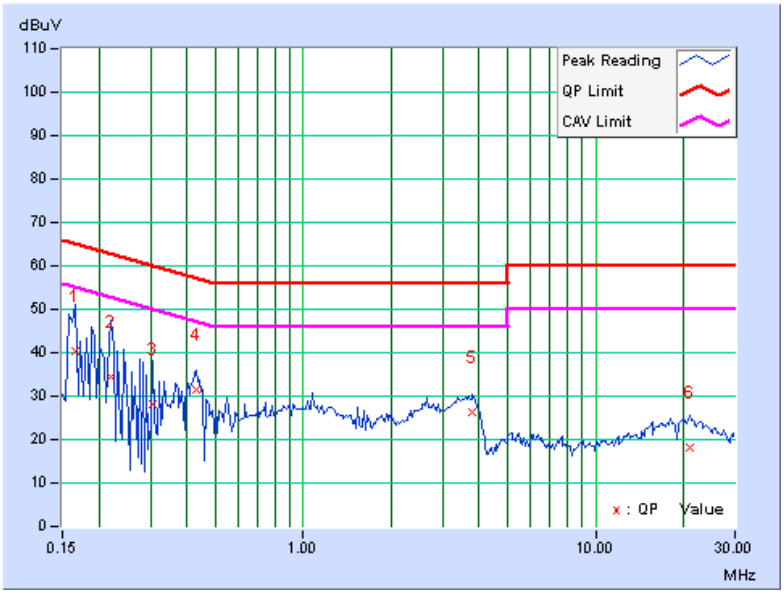
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	A
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.14	40.19	-	40.33	-	65.18	55.18	-24.84	-
2	0.220	0.15	34.29	-	34.44	-	62.81	52.81	-28.37	-
3	0.306	0.16	27.85	-	28.01	-	60.07	50.07	-32.07	-
4	0.431	0.16	31.43	-	31.59	-	57.23	47.23	-25.64	-
5	3.805	0.38	25.91	-	26.29	-	56.00	46.00	-29.71	-
6	21.059	0.96	17.25	-	18.21	-	60.00	50.00	-41.79	-

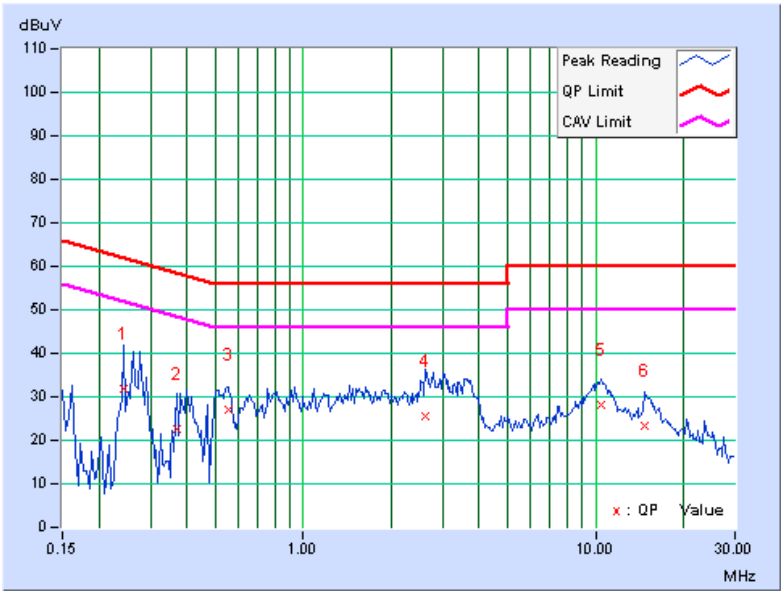
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	PHASE	Line 1
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	B
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.244	0.13	31.89	-	32.02	-	61.97	51.97	-29.95	-
2	0.369	0.14	22.61	-	22.75	-	58.53	48.53	-35.78	-
3	0.556	0.15	27.04	-	27.19	-	56.00	46.00	-28.81	-
4	2.625	0.27	25.32	-	25.59	-	56.00	46.00	-30.41	-
5	10.457	0.68	27.55	-	28.23	-	60.00	50.00	-31.77	-
6	14.801	0.90	22.33	-	23.23	-	60.00	50.00	-36.77	-

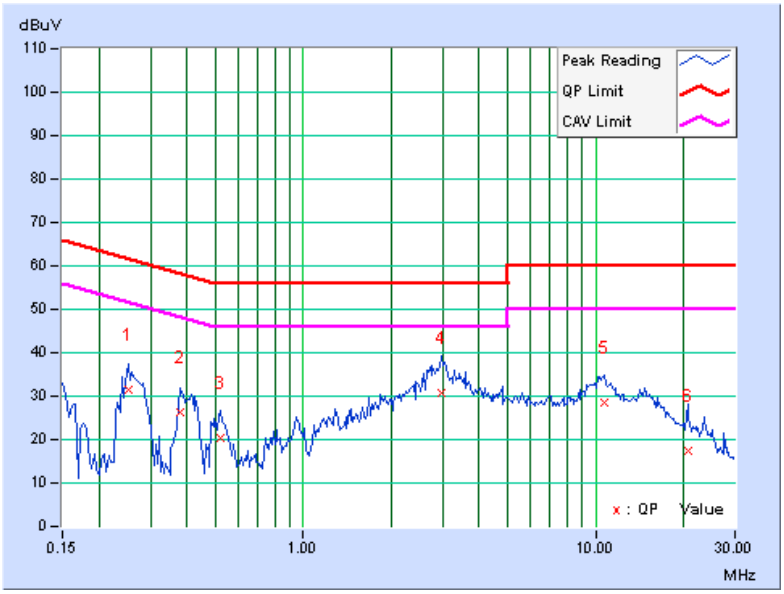
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	PHASE	Line 2
MODULATION TYPE	BPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	6.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	B
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.252	0.15	31.41	-	31.56	-	61.71	51.71	-30.14	-
2	0.380	0.16	26.05	-	26.21	-	58.27	48.27	-32.06	-
3	0.521	0.17	20.05	-	20.22	-	56.00	46.00	-35.78	-
4	2.965	0.32	30.48	-	30.80	-	56.00	46.00	-25.20	-
5	10.742	0.68	27.67	-	28.35	-	60.00	50.00	-31.65	-
6	20.629	0.97	16.33	-	17.30	-	60.00	50.00	-42.70	-

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.

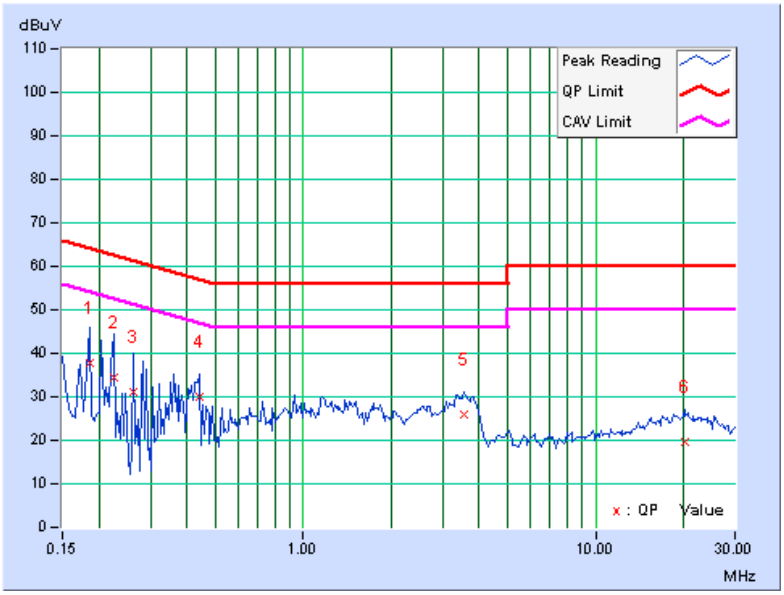


802.11a OFDM MODULATION (TURBO MODE)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	PHASE	Line 1
MODULATION TYPE	QPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	12.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	A
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.13	37.76	-	37.89	-	64.25	54.25	-26.36	-
2	0.224	0.13	34.19	-	34.32	-	62.66	52.66	-28.34	-
3	0.263	0.13	30.89	-	31.02	-	61.33	51.33	-30.30	-
4	0.439	0.14	29.82	-	29.96	-	57.08	47.08	-27.12	-
5	3.547	0.34	25.65	-	25.99	-	56.00	46.00	-30.01	-
6	20.125	1.15	18.40	-	19.55	-	60.00	50.00	-40.45	-

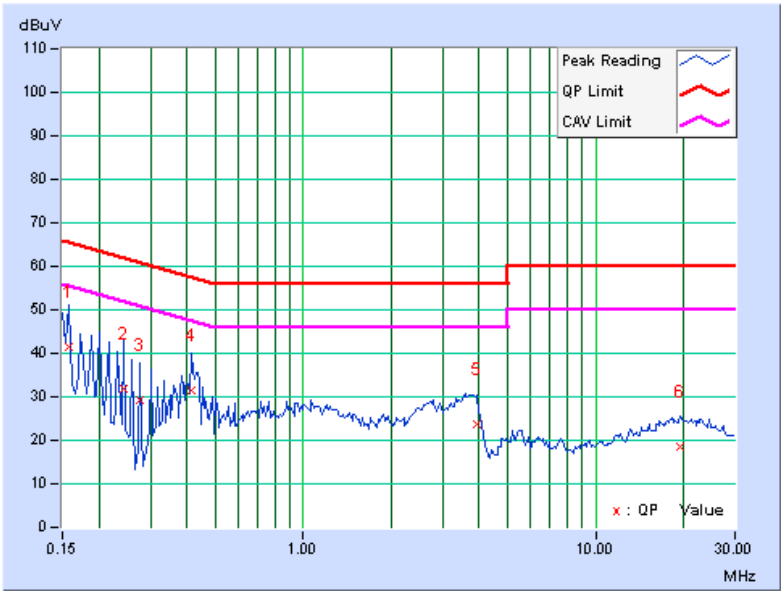
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	PHASE	Line 2
MODULATION TYPE	QPSK	INPUT POWER	120Vac, 60Hz
TRANSFER RATE	12.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	A
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.14	41.32	-	41.46	-	65.58	55.58	-24.12	-
2	0.244	0.15	31.83	-	31.98	-	61.97	51.97	-29.99	-
3	0.275	0.15	28.95	-	29.10	-	60.97	50.97	-31.86	-
4	0.416	0.16	31.34	-	31.50	-	57.54	47.54	-26.03	-
5	3.949	0.39	23.46	-	23.85	-	56.00	46.00	-32.15	-
6	19.559	0.97	17.63	-	18.60	-	60.00	50.00	-41.40	-

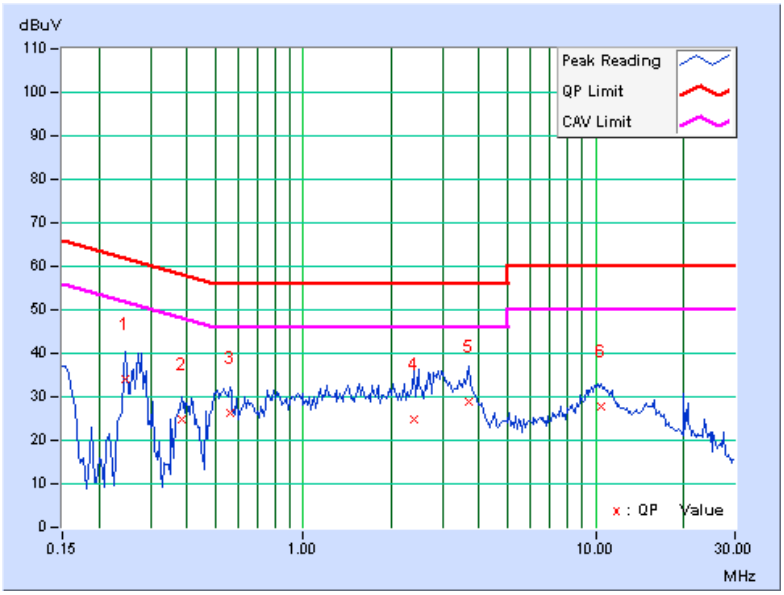
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	PHASE	Line 1
MODULATION TYPE	QPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	12.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	B
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.248	0.13	34.09	-	34.22	-	61.84	51.84	-27.61	-
2	0.384	0.14	24.83	-	24.97	-	58.18	48.18	-33.22	-
3	0.564	0.15	26.30	-	26.45	-	56.00	46.00	-29.55	-
4	2.398	0.26	24.40	-	24.66	-	56.00	46.00	-31.34	-
5	3.672	0.35	28.56	-	28.91	-	56.00	46.00	-27.09	-
6	10.469	0.68	27.26	-	27.94	-	60.00	50.00	-32.06	-

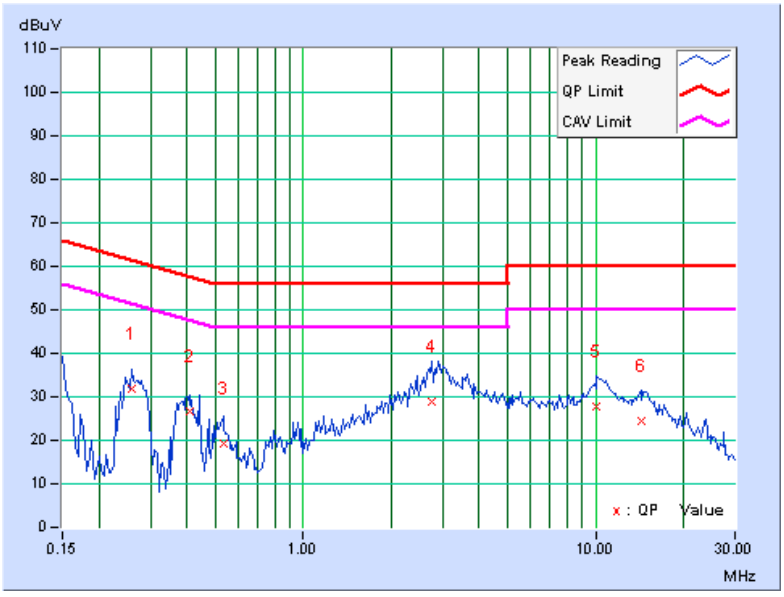
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	PHASE	Line 2
MODULATION TYPE	QPSK	INPUT POWER (SYSTEM)	120Vac, 60Hz
TRANSFER RATE	12.0Mbps	6dB BANDWIDTH	9kHz
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH, 982hPa	TEST MODE	B
TESTED BY	Lori Chiu		

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.259	0.15	31.84	-	31.99	-	61.45	51.45	-29.46	-
2	0.412	0.16	26.65	-	26.81	-	57.61	47.61	-30.80	-
3	0.533	0.17	18.98	-	19.15	-	56.00	46.00	-36.85	-
4	2.754	0.30	28.71	-	29.01	-	56.00	46.00	-26.99	-
5	10.059	0.66	27.28	-	27.94	-	60.00	50.00	-32.06	-
6	14.281	0.80	23.71	-	24.51	-	60.00	50.00	-35.49	-

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 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

4.3.1 LIMITS OF MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

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

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

4.3.2 TEST INSTRUMENTS

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 26dB 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	100040	Jul. 04, 2008	Jul. 03, 2009

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

4.3.3 TEST PROCEDURES

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

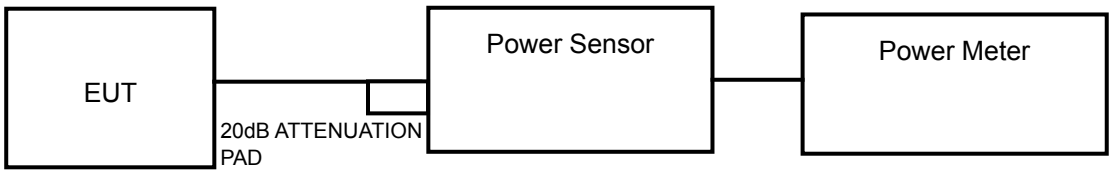
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 300kHz RBW and 1MHz VBW. The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.

4.3.4 DEVIATION FROM TEST STANDARD

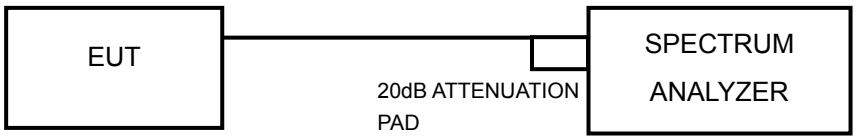
No deviation.

4.3.5 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 26dB OCCUPIED BANDWIDTH



4.3.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.3.7 TEST RESULTS

POWER OUTPUT: 802.11a OFDM MODULATION (NORMAL MODE):

MODULATION TYPE	BPSK	**TRANSFER RATE**	6.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
36	5180	35.645	15.52	17	PASS
40	5200	40.551	16.08	17	PASS
48	5240	40.179	16.04	17	PASS
52	5260	40.272	16.05	24	PASS
60	5300	40.644	16.09	24	PASS
64	5320	44.978	16.53	24	PASS
100	5500	40.365	16.06	24	PASS
120	5600	40.087	16.03	24	PASS
140	5700	40.179	16.04	24	PASS

POWER OUTPUT: 802.11a OFDM MODULATION (TURBO MODE):

MODULATION TYPE	QPSK	**TRANSFER RATE**	12.0Mbps
INPUT POWER (SYSTEM)	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu		

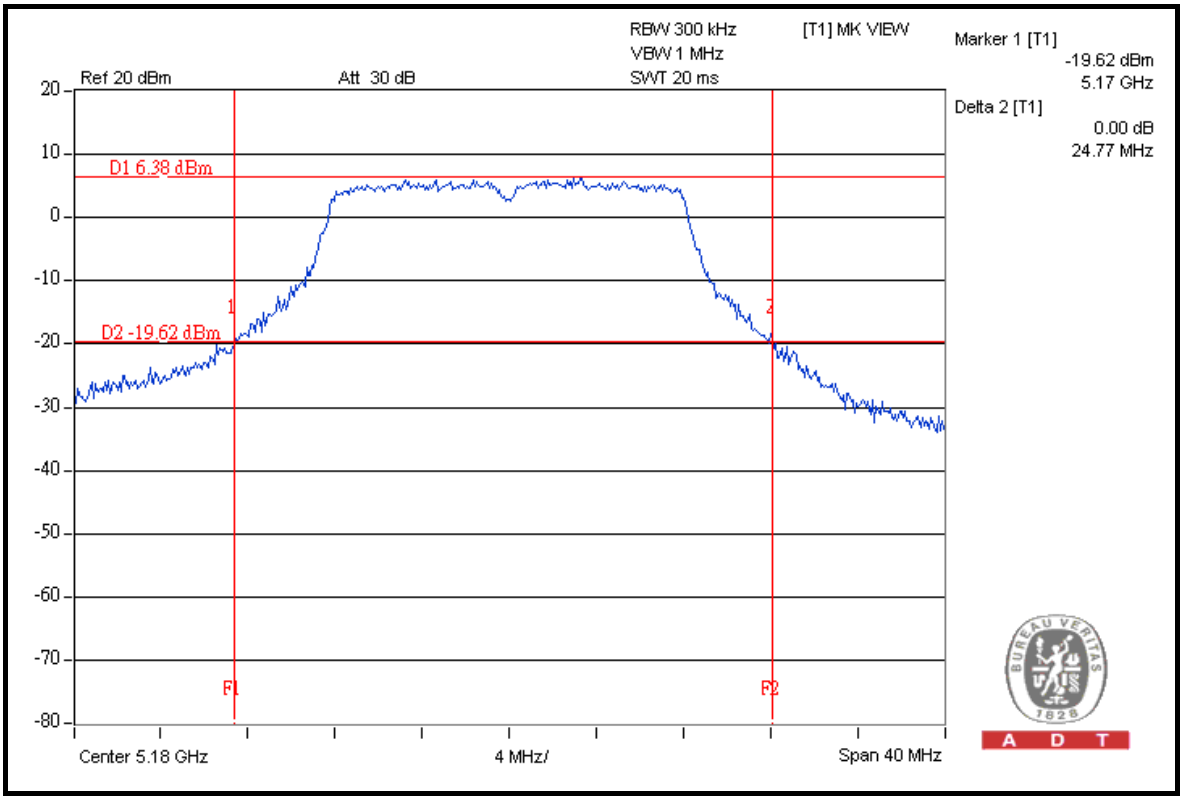
CHANNEL	CHANNEL FREQUENCY (MHz)	OUTPUT POWER (mW)	OUTPUT POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
42	5210	40.179	16.04	17	PASS

26dB OCCUPIED BANDWIDTH: 802.11a OFDM MODULATION (NORMAL MODE)

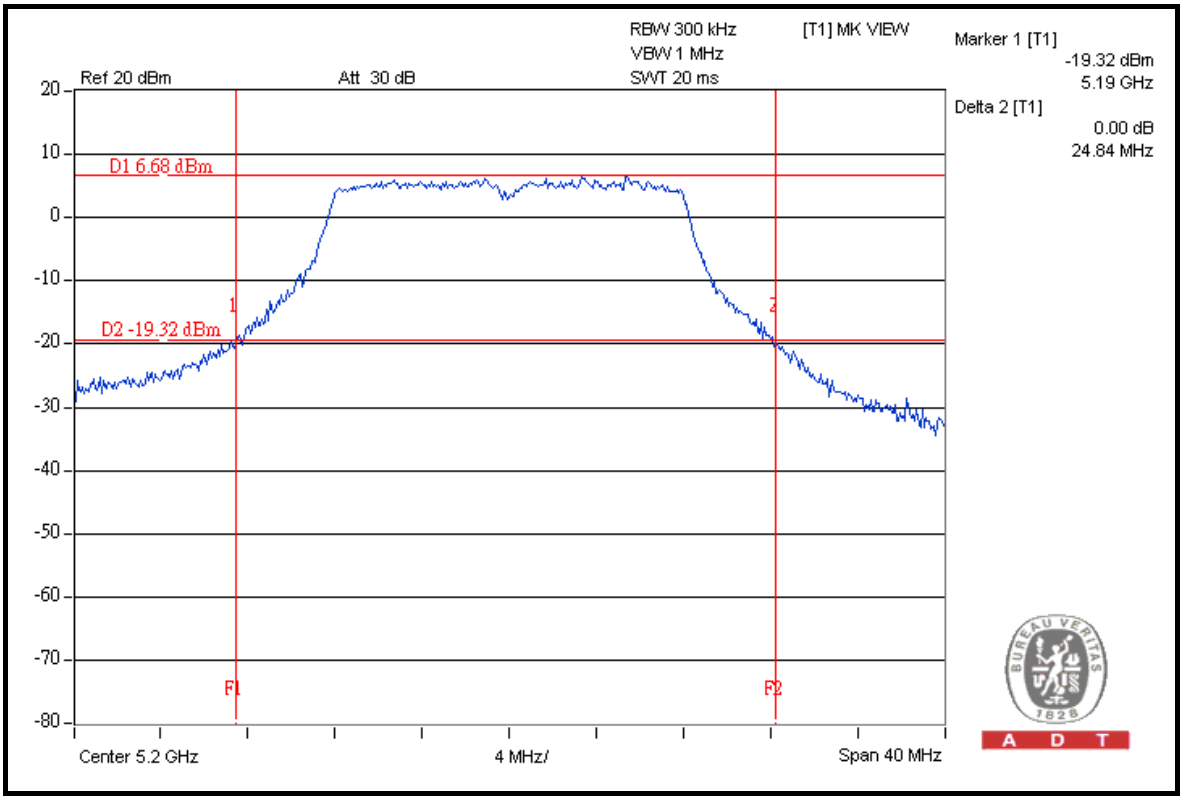
MODULATION TYPE	BPSK	**TRANSFER RATE**	6.0Mbps
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
36	5180	24.77	PASS
40	5200	24.84	PASS
48	5240	24.65	PASS
52	5260	24.72	PASS
60	5300	24.59	PASS
64	5320	24.53	PASS
100	5500	24.63	PASS
120	5600	24.37	PASS
140	5700	24.77	PASS

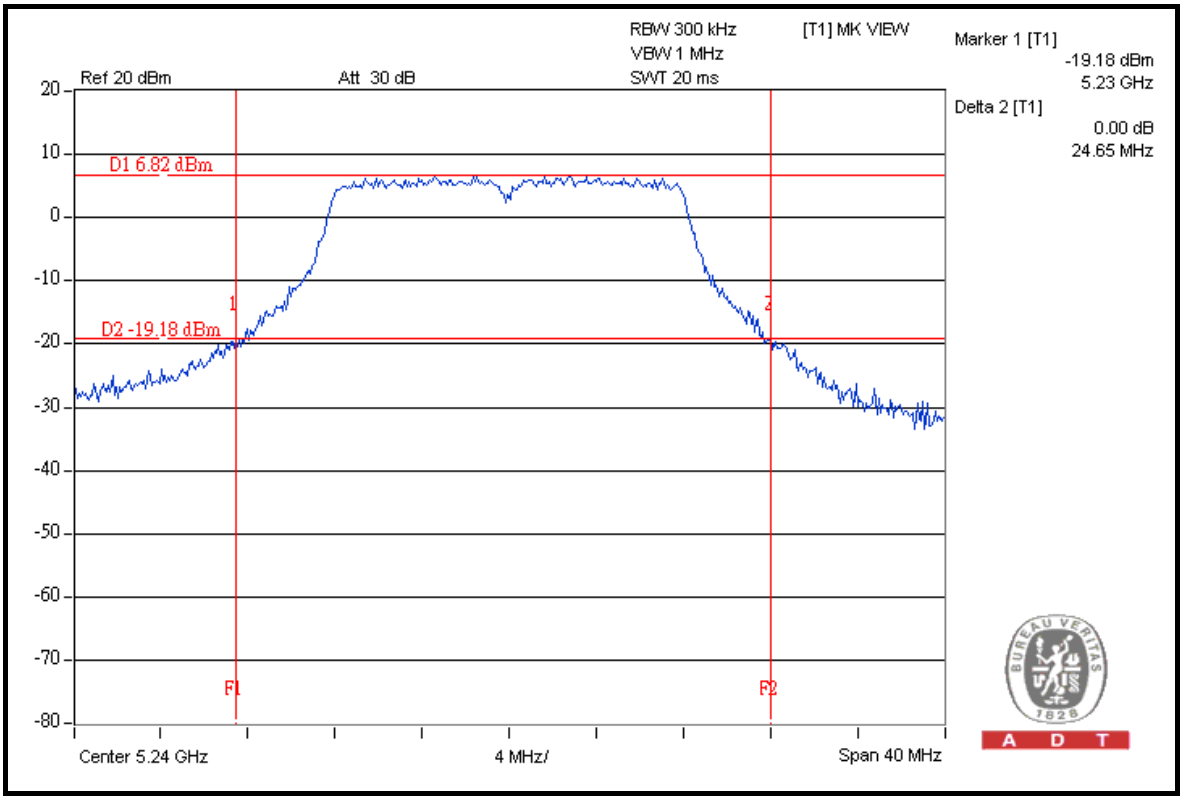
CH 36



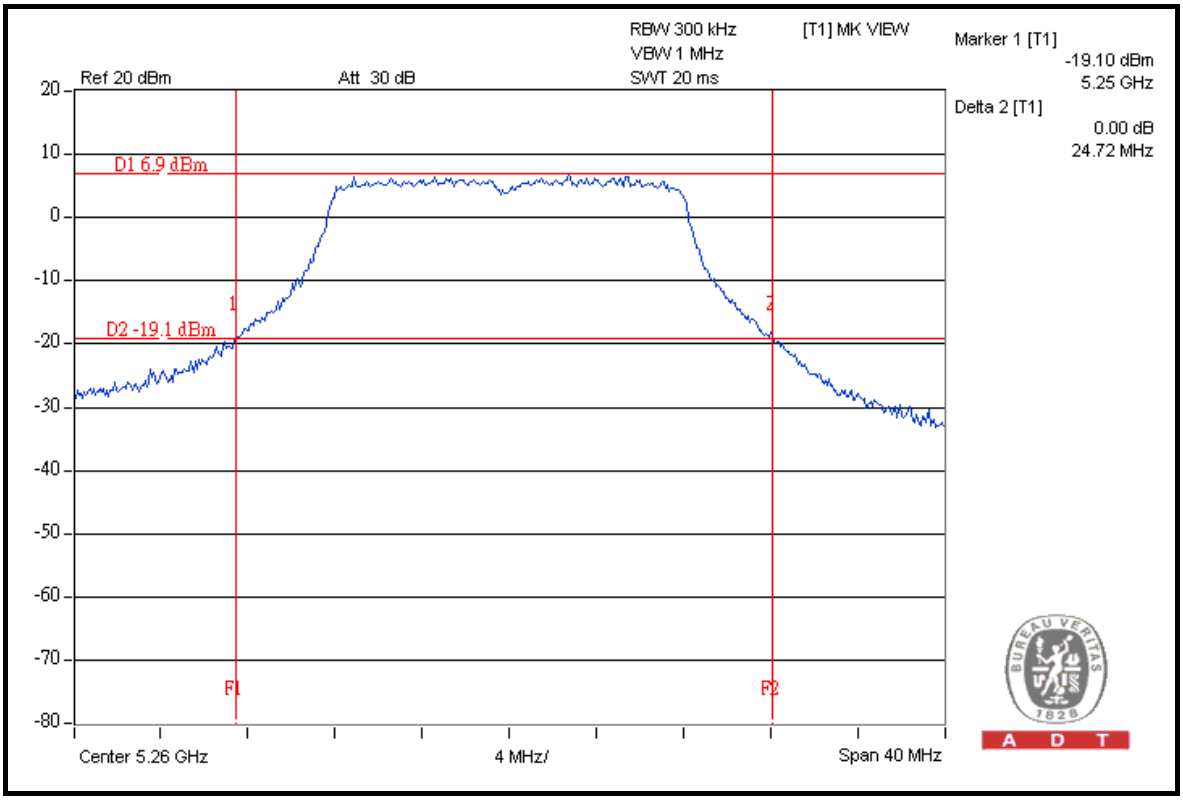
CH 40


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-19.32 dBm
5.19 GHz
Delta 2 [T1]
0.00 dB
24.84 MHz
Ref 20 dBm
Att 30 dB
D1 6.68 dBm
D2 -19.32 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.2 GHz
4 MHz/
Span 40 MHz

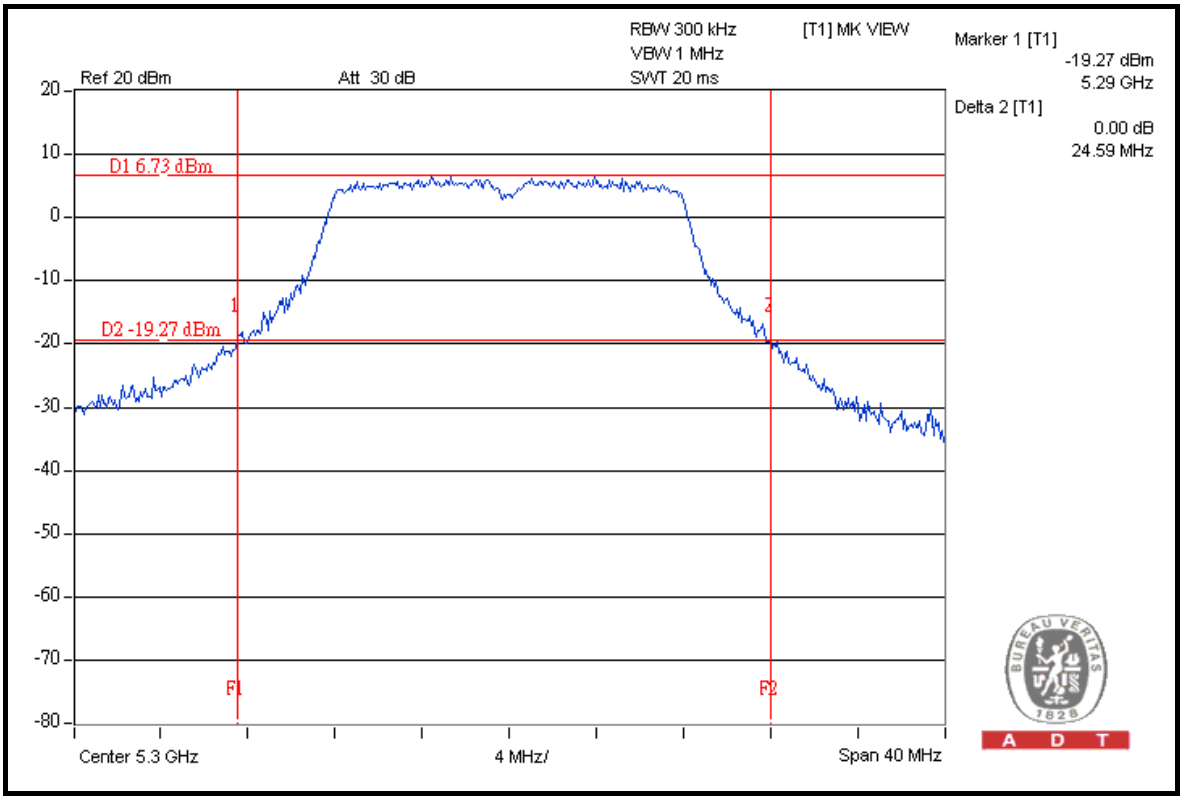
CH 48


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-19.18 dBm
5.23 GHz
Delta 2 [T1]
0.00 dB
24.65 MHz
Ref 20 dBm
Att 30 dB
D1 6.82 dBm
D2 -19.18 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.24 GHz
4 MHz/
Span 40 MHz

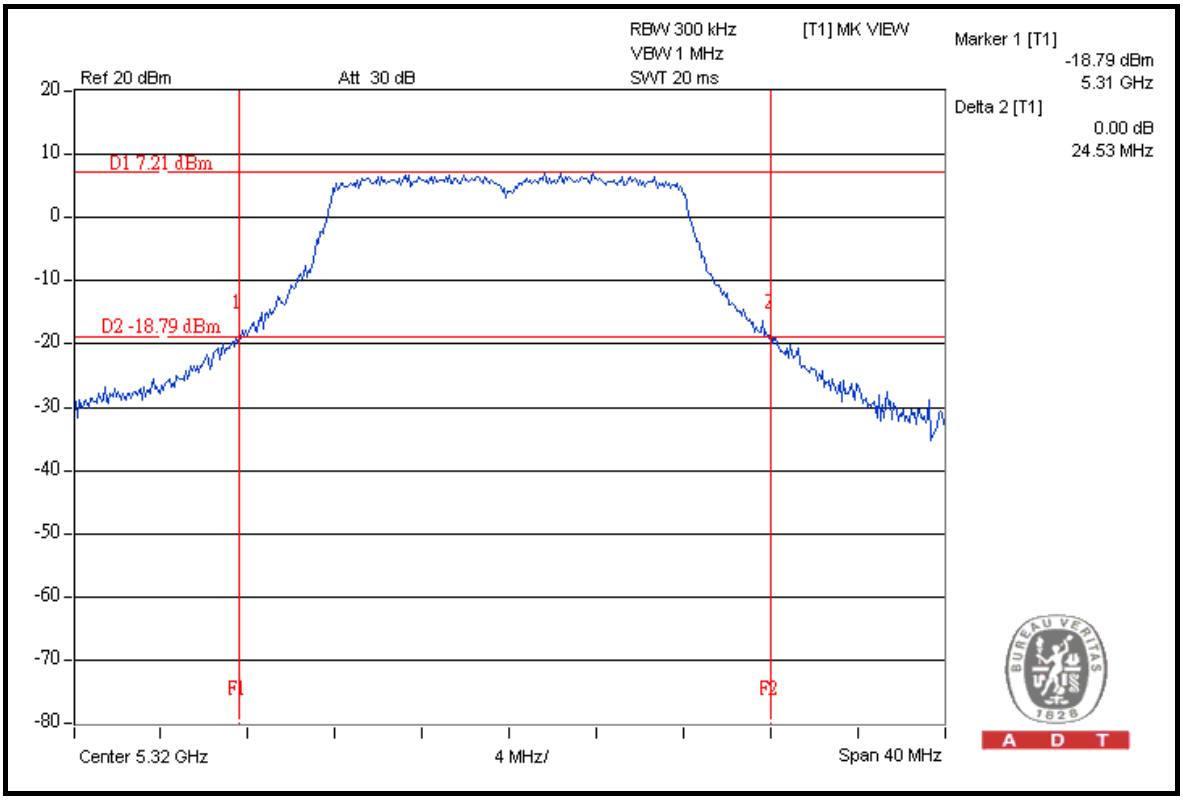
CH 52


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-19.10 dBm
5.25 GHz
Delta 2 [T1]
0.00 dB
24.72 MHz
Ref 20 dBm
Att 30 dB
D1 6.9 dBm
D2 -19.1 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.26 GHz
4 MHz/
Span 40 MHz

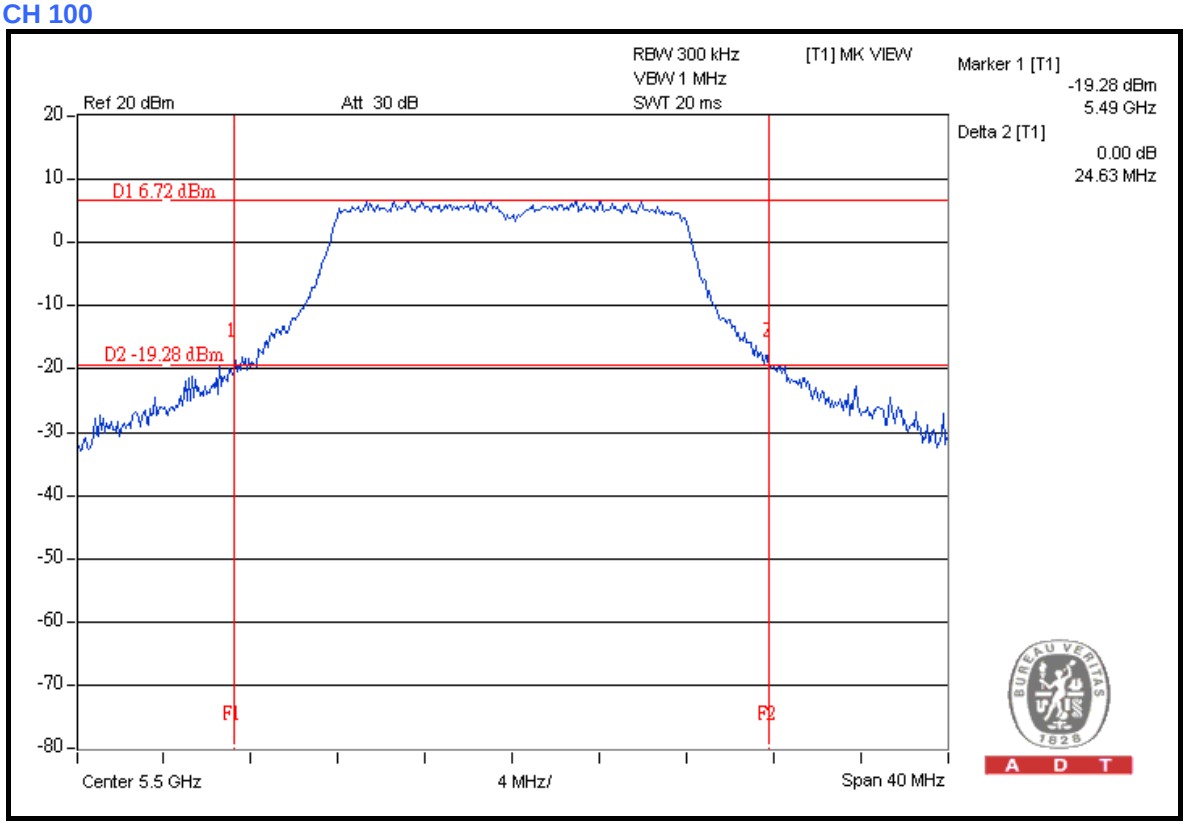
CH 60


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-19.27 dBm
5.29 GHz
Delta 2 [T1]
0.00 dB
24.59 MHz
Ref 20 dBm
Att 30 dB
D1 6.73 dBm
D2 -19.27 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.3 GHz
4 MHz/
Span 40 MHz

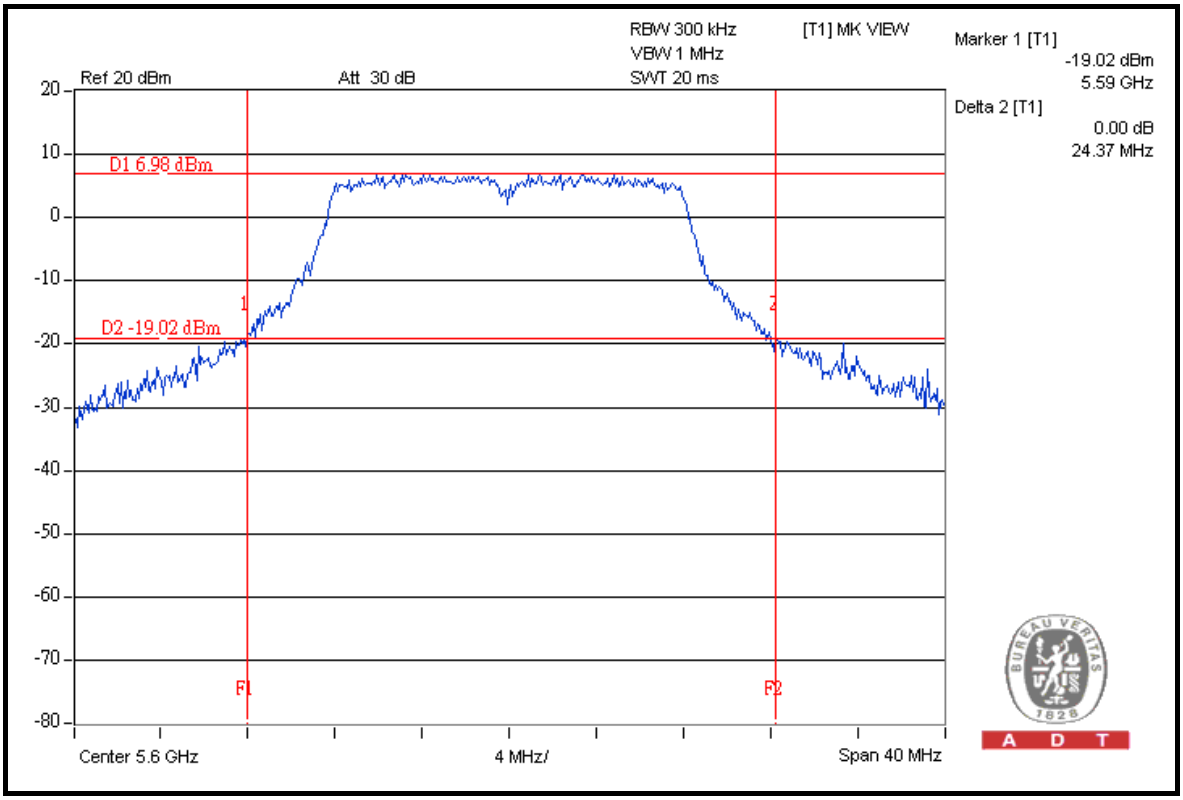
CH 64


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-18.79 dBm
5.31 GHz
Delta 2 [T1]
0.00 dB
24.53 MHz
Ref 20 dBm
Att 30 dB
D1 7.21 dBm
D2 -18.79 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.32 GHz
4 MHz/
Span 40 MHz

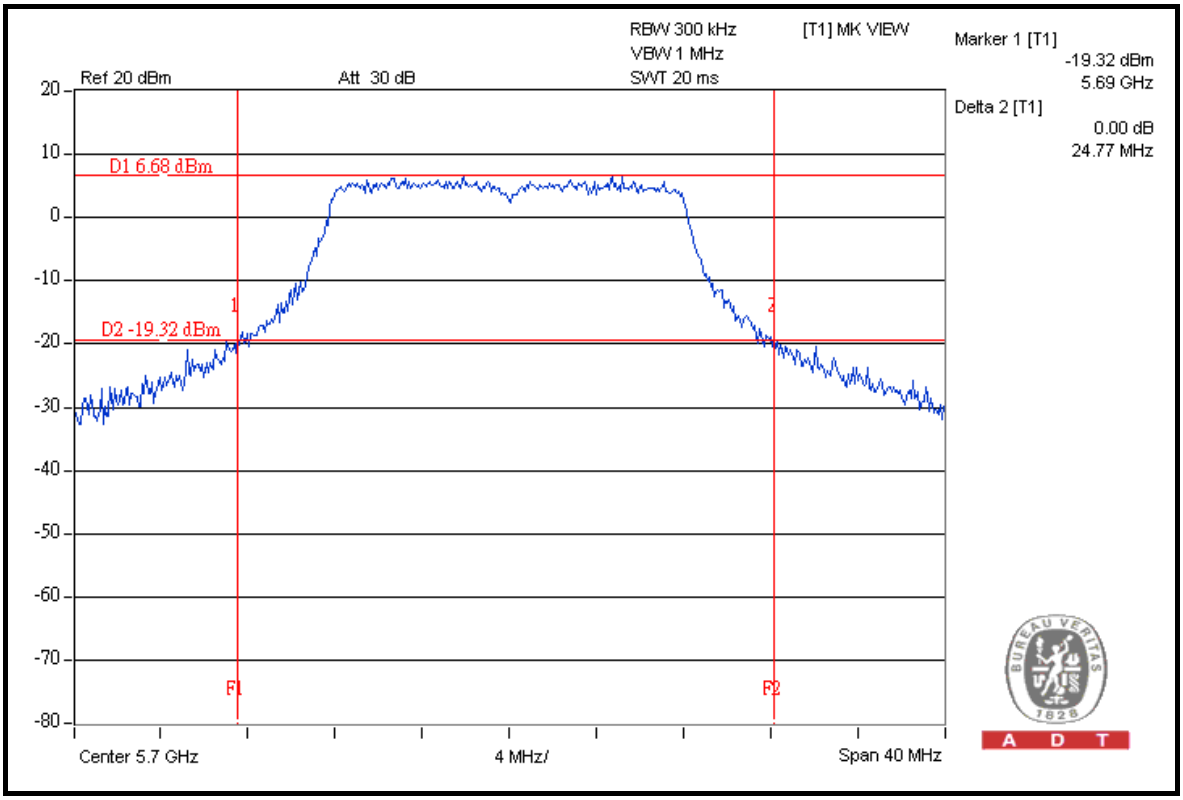
CH 100


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-19.28 dBm
5.49 GHz
Delta 2 [T1]
0.00 dB
24.63 MHz
Ref 20 dBm
Att 30 dB
D1 6.72 dBm
D2 -19.28 dBm
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.5 GHz
4 MHz/
Span 40 MHz

CH 120


RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-19.02 dBm
5.59 GHz
Delta 2 [T1]
0.00 dB
24.37 MHz
Ref 20 dBm
Att 30 dB
D1 6.98 dBm
D2 -19.02 dBm
F1
F2
Center 5.6 GHz
4 MHz/
Span 40 MHz

CH 140

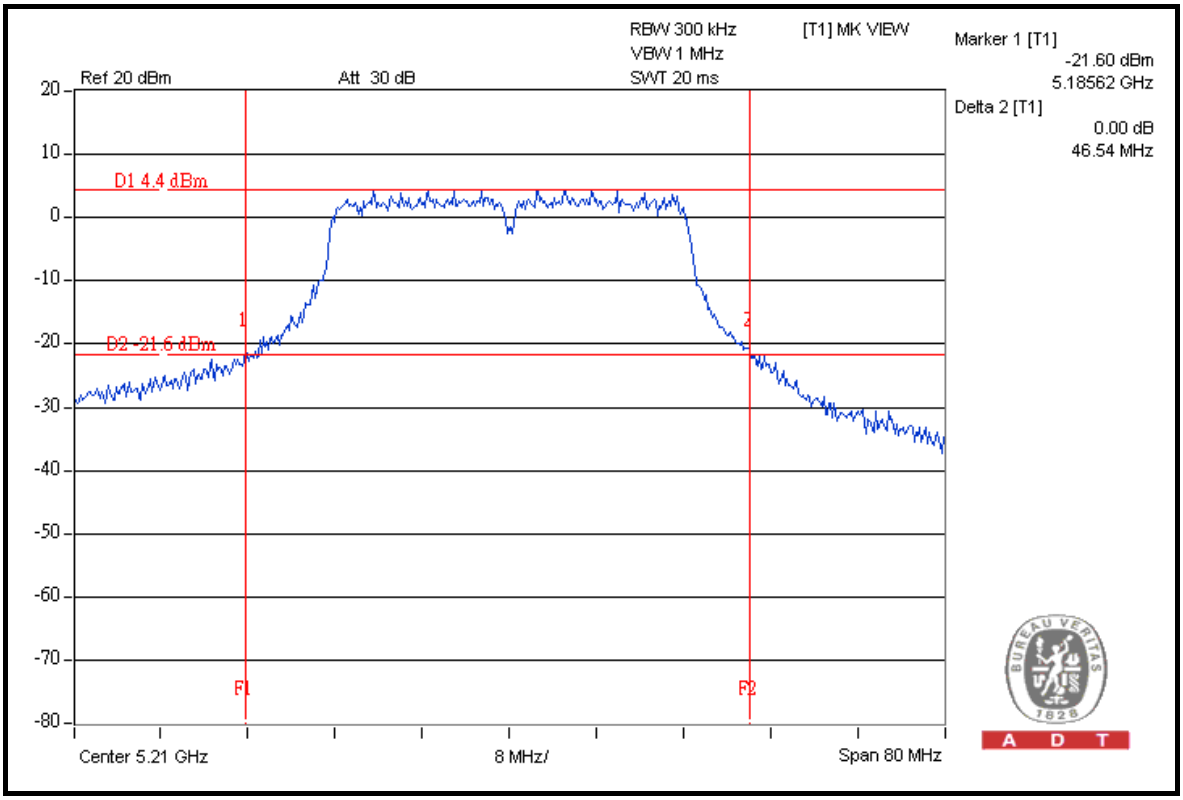

RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-19.32 dBm
5.69 GHz
Delta 2 [T1]
0.00 dB
24.77 MHz
Ref 20 dBm
Att 30 dB
D1 6.68 dBm
D2 -19.32 dBm
F1
F2
Center 5.7 GHz
4 MHz/
Span 40 MHz

802.11a OFDM MODULATION (TURBO MODE)

MODULATION TYPE	QPSK	**TRANSFER RATE**	12.0Mbps
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc OCCUPIED BANDWIDTH (MHz)	PASS / FAIL
42	5210	46.54	PASS

CH 42



4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

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

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009

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

4.4.3 TEST PROCEDURE

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

b. Set the spectrum bandwidth span to view the entire spectrum.

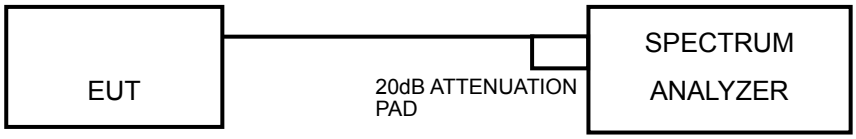
c. Using peak detector and Max-hold function for Trace 1 (RB = 1MHz, VB = 3MHz) and 2 (RB = 1MHz, VB = 300 kHz).

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.

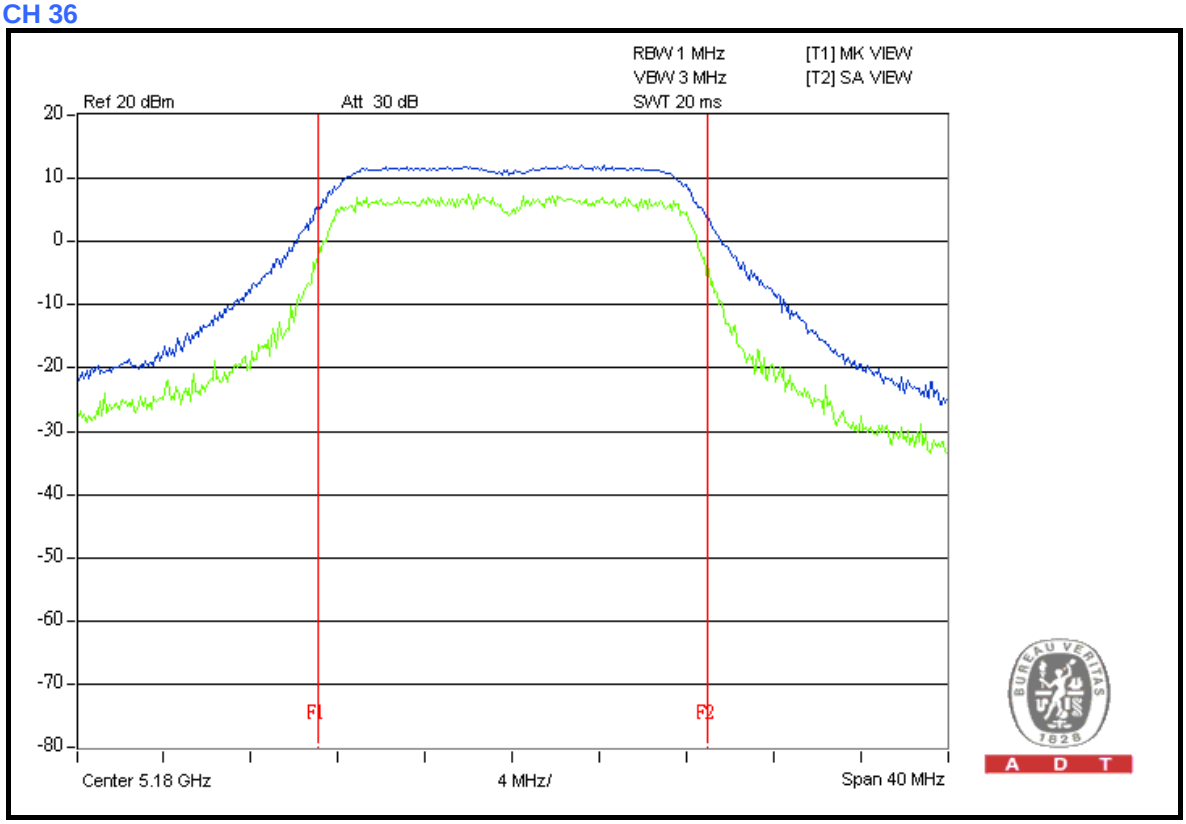
4.4.7 TEST RESULTS

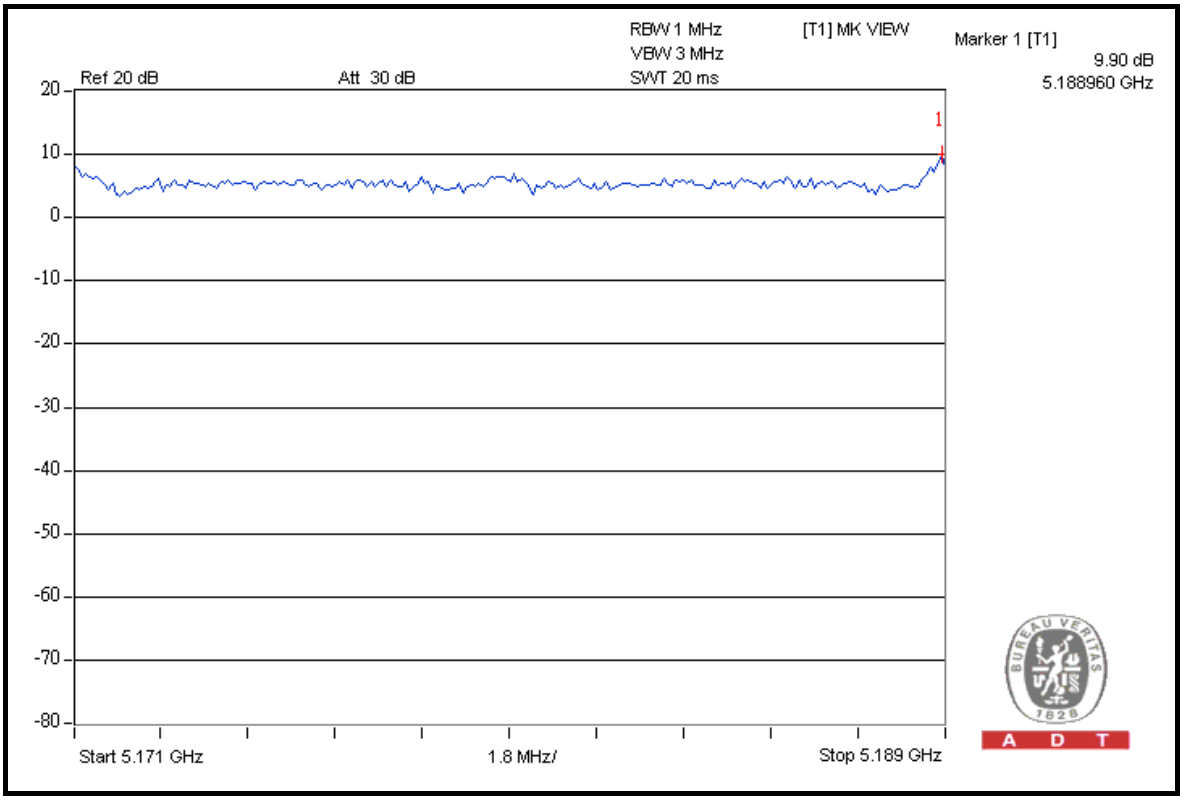
802.11a OFDM MODULATION (NORMAL MODE)

MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu		

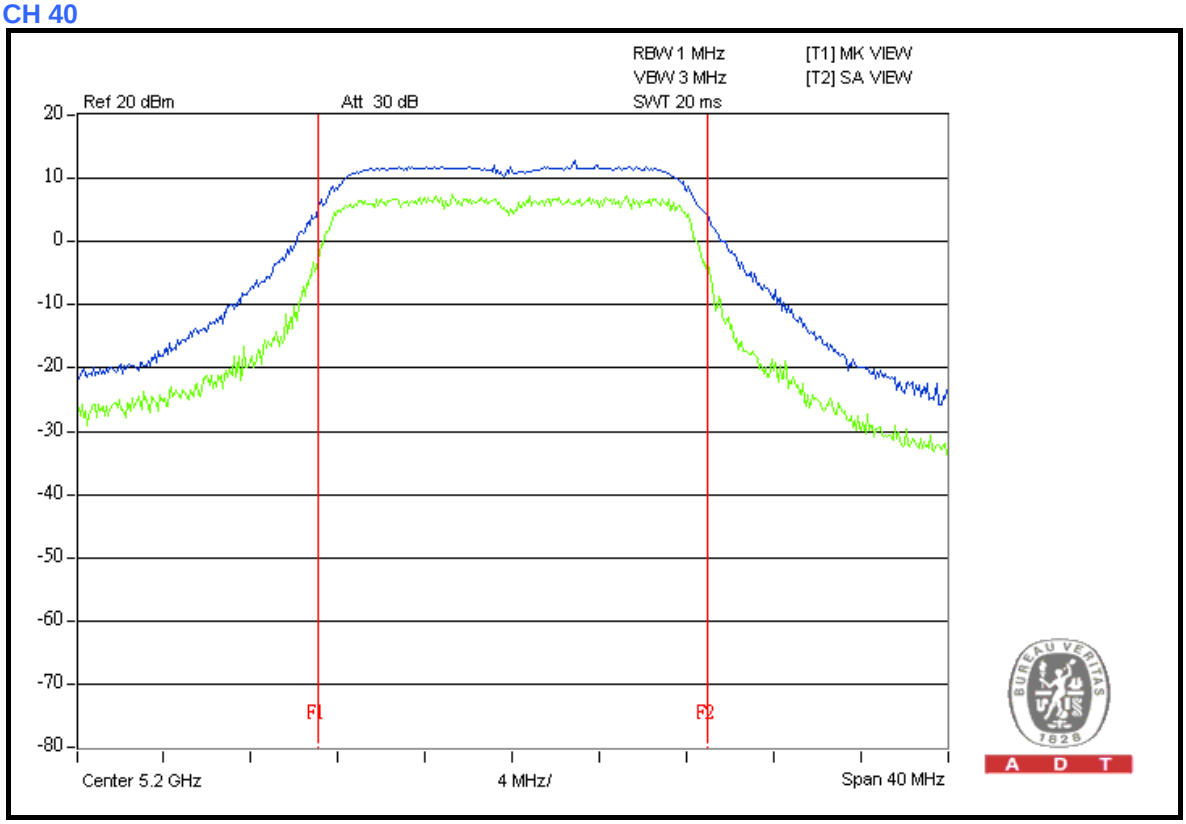
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	9.90	13	PASS
40	5200	8.79	13	PASS
48	5240	8.96	13	PASS
52	5260	8.62	13	PASS
60	5300	8.69	13	PASS
64	5320	8.88	13	PASS
100	5500	9.38	13	PASS
120	5600	7.90	13	PASS
140	5700	9.44	13	PASS

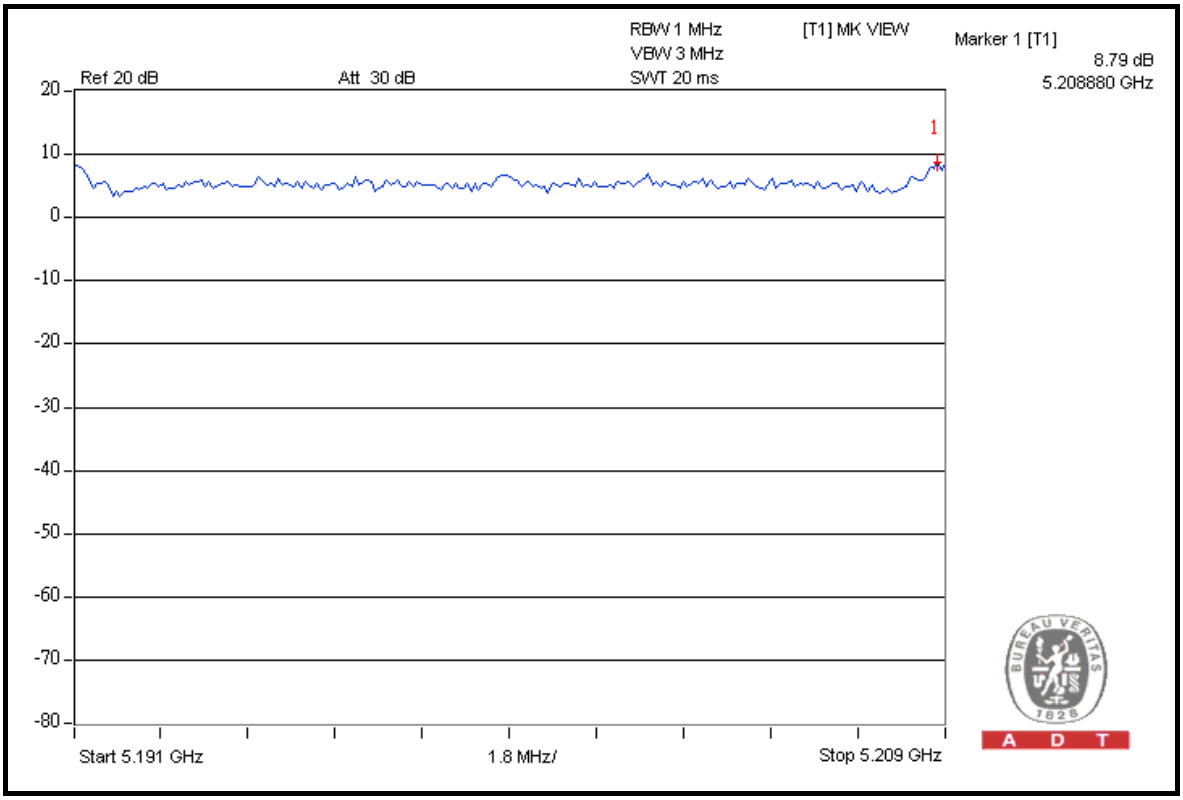
CH 36


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.18 GHz
4 MHz/
Span 40 MHz

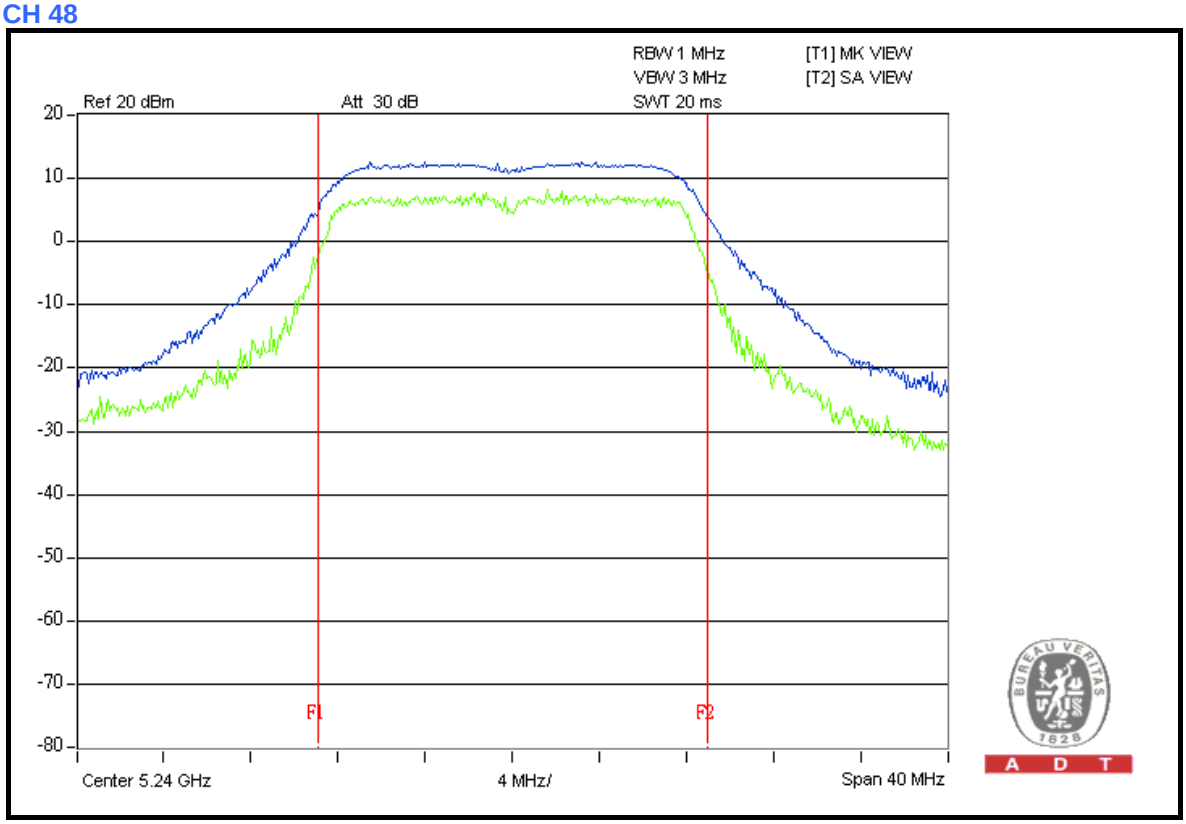

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
9.90 dB
5.188960 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.171 GHz
1.8 MHz/
Stop 5.189 GHz

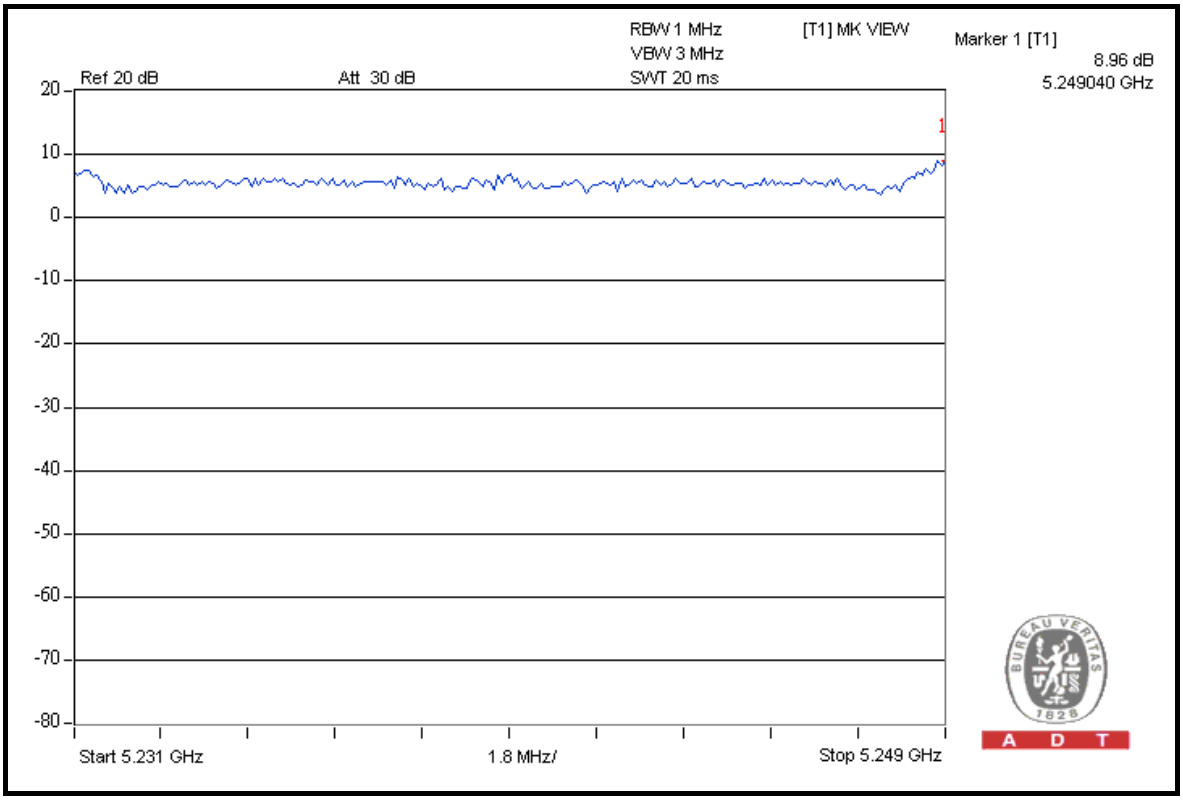
CH 40


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.2 GHz
4 MHz/
Span 40 MHz

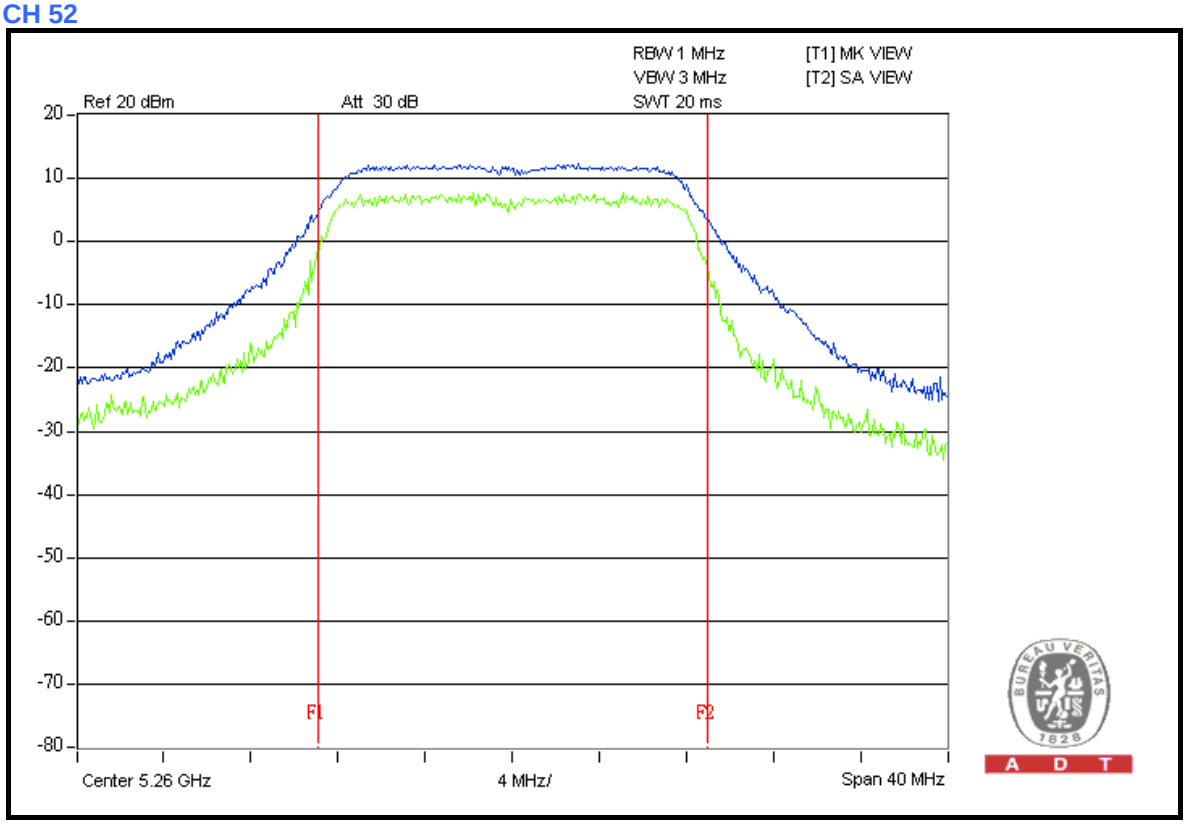

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
8.79 dB
5.208880 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.191 GHz
1.8 MHz/
Stop 5.209 GHz

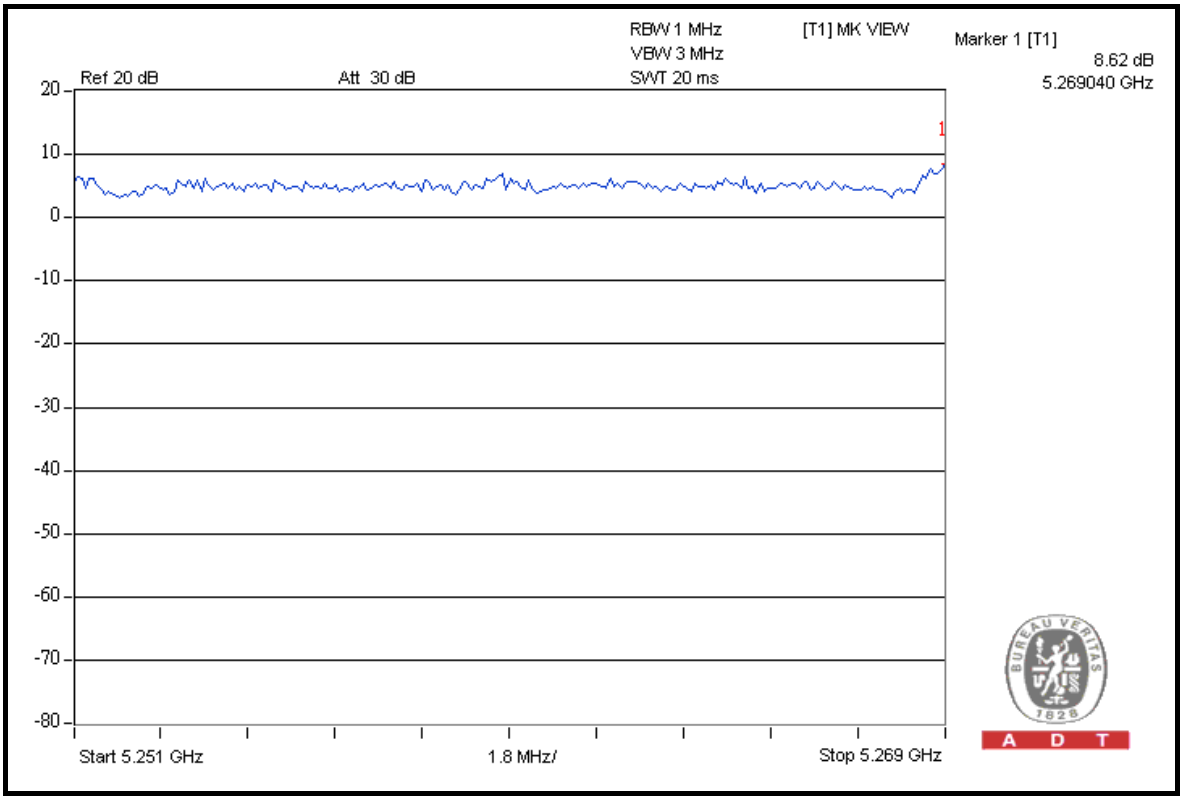
CH 48


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.24 GHz
4 MHz/
Span 40 MHz

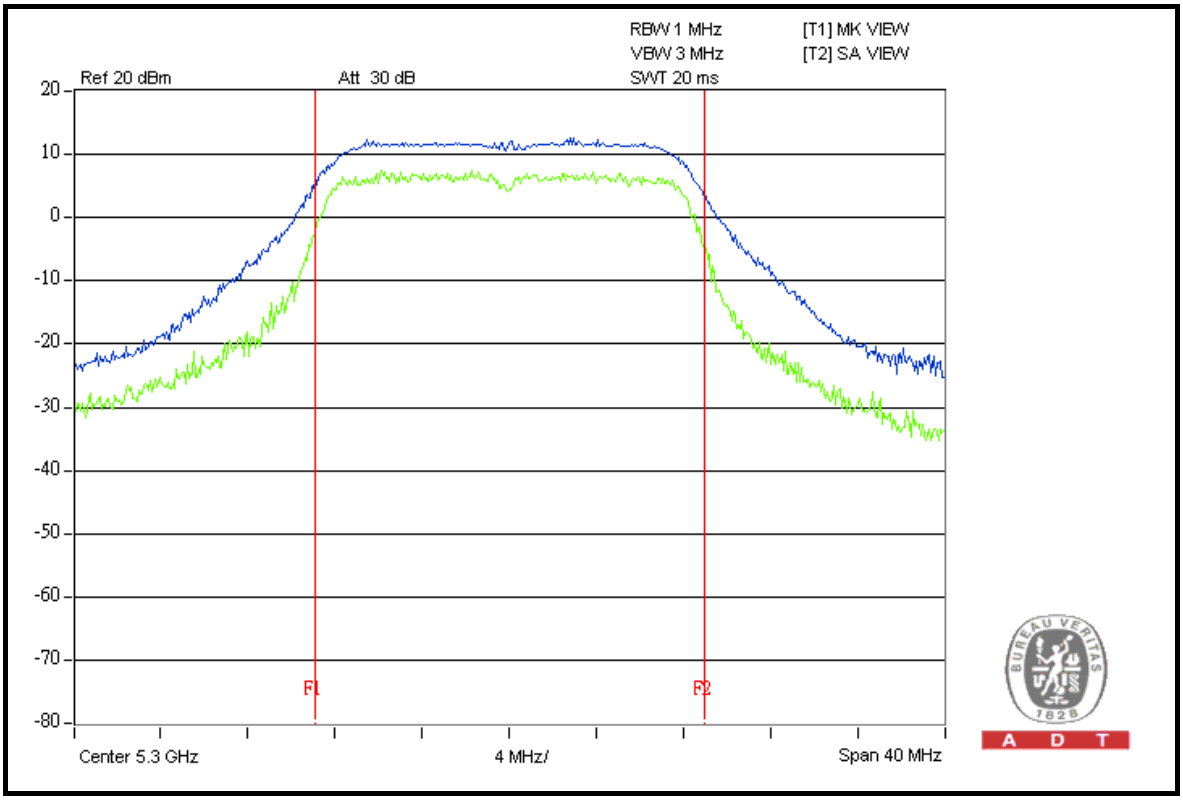

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
8.96 dB
5.249040 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.231 GHz
1.8 MHz/
Stop 5.249 GHz

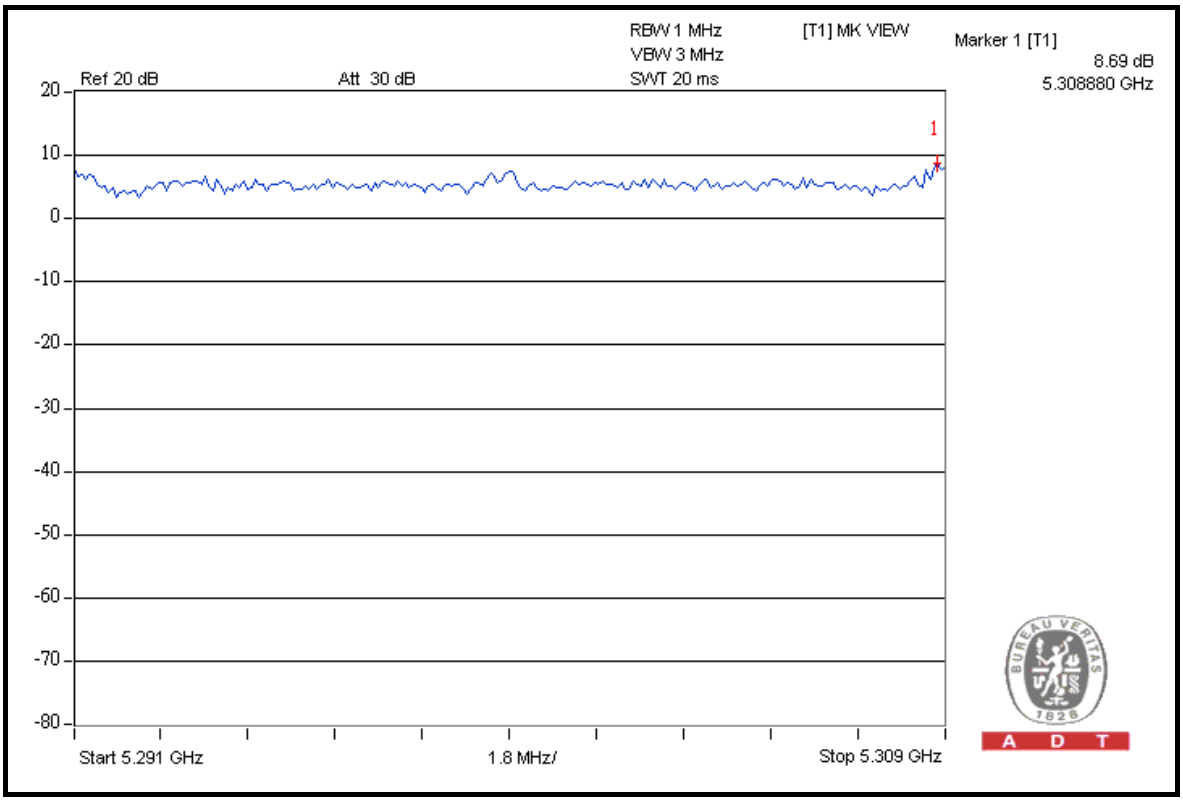
CH 52


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.26 GHz
4 MHz/
Span 40 MHz

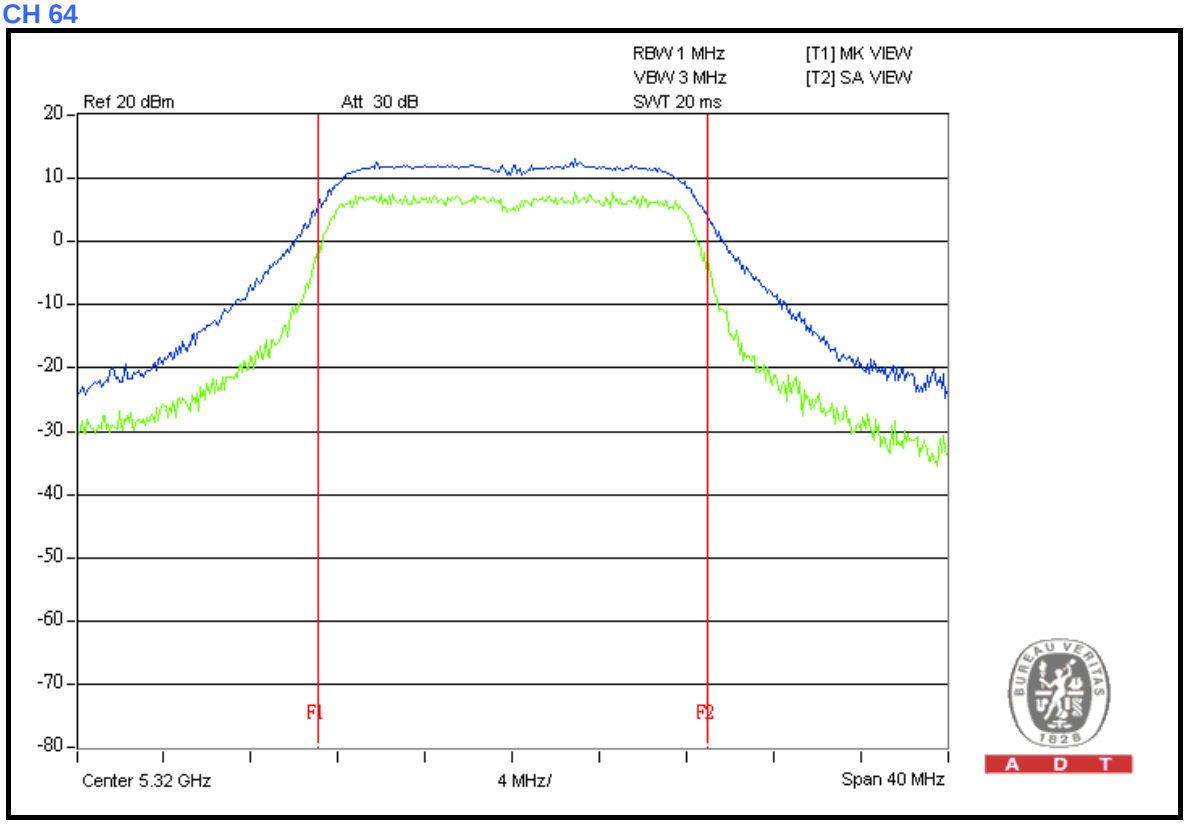

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
8.62 dB
5.269040 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.251 GHz
1.8 MHz/
Stop 5.269 GHz

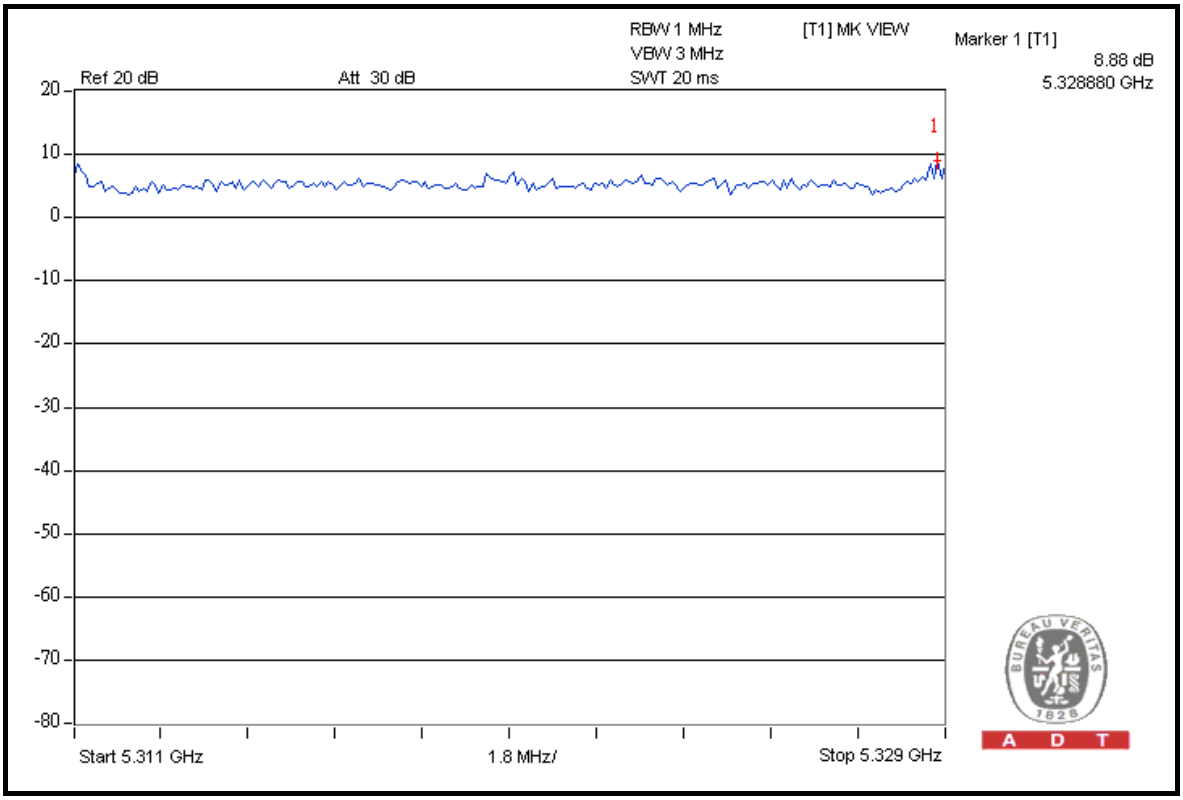
CH 60


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.3 GHz
4 MHz/
Span 40 MHz

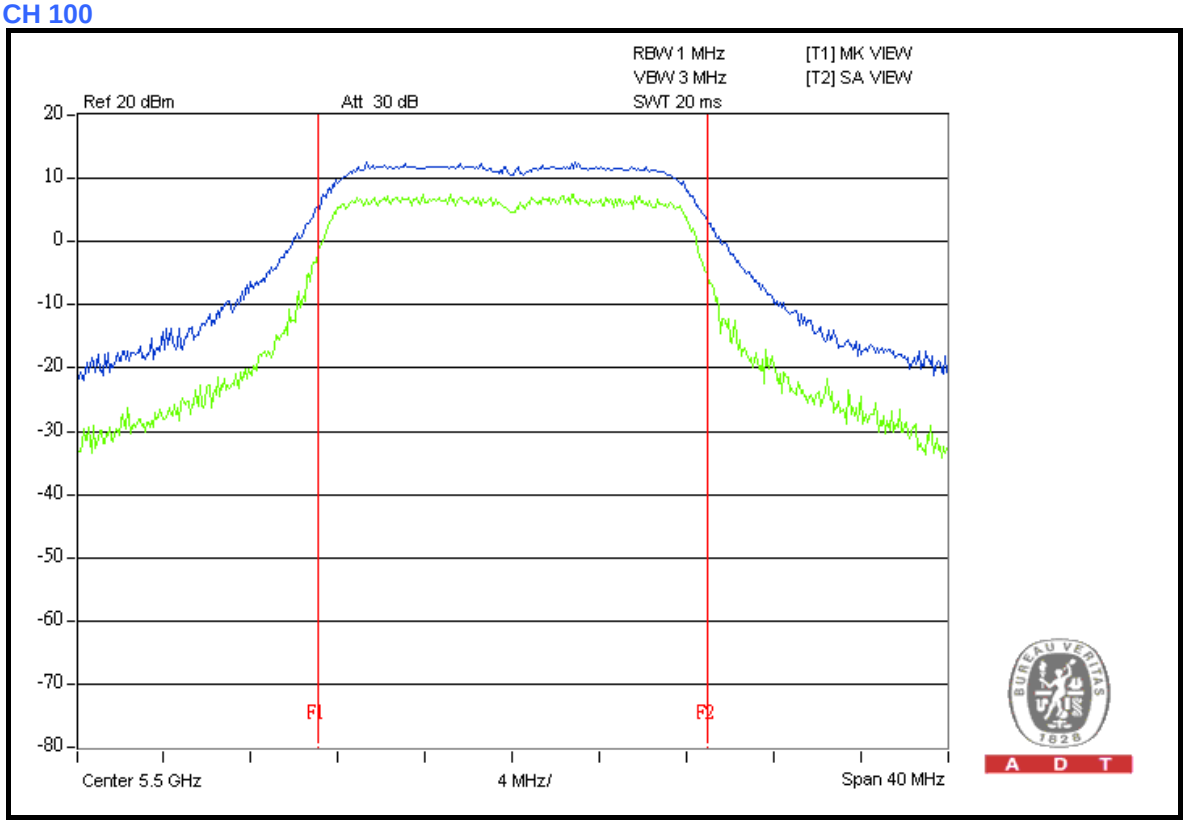

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
8.69 dB
5.308880 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.291 GHz
1.8 MHz/
Stop 5.309 GHz

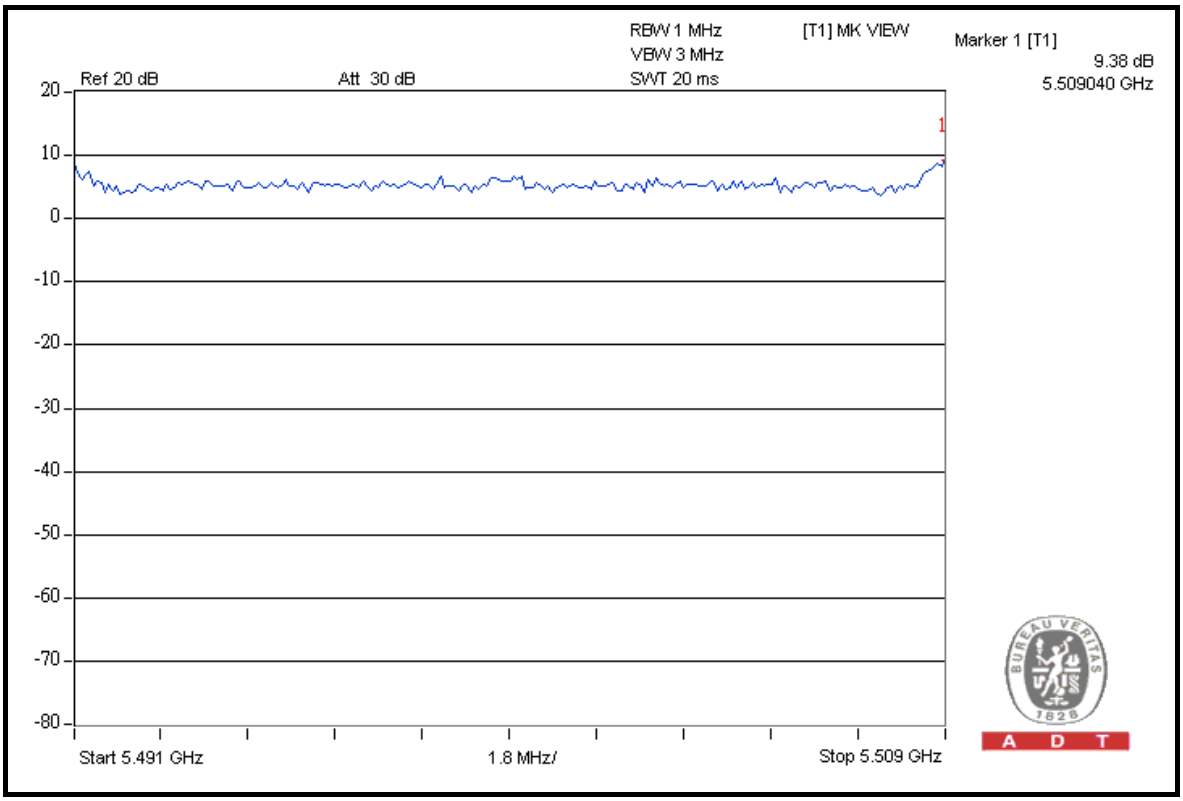
CH 64


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.32 GHz
4 MHz/
Span 40 MHz

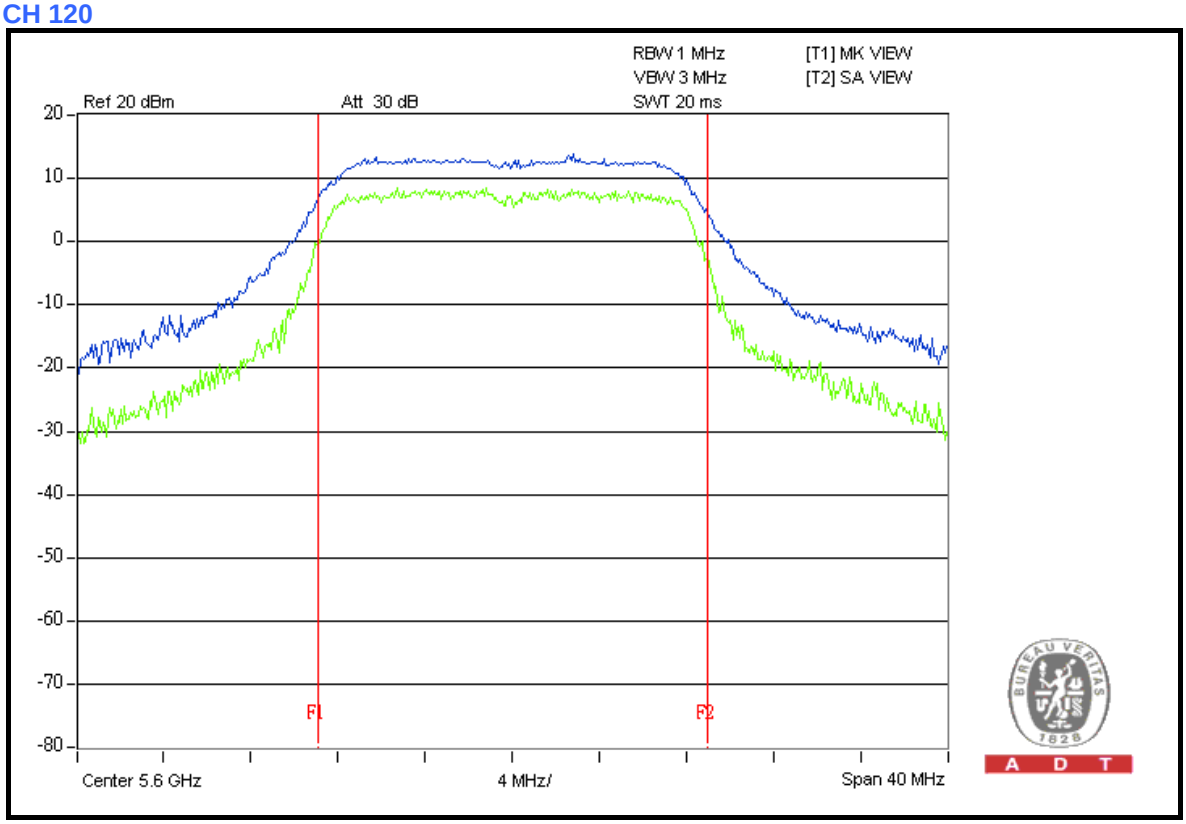

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
8.88 dB
5.328880 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.311 GHz
1.8 MHz/
Stop 5.329 GHz

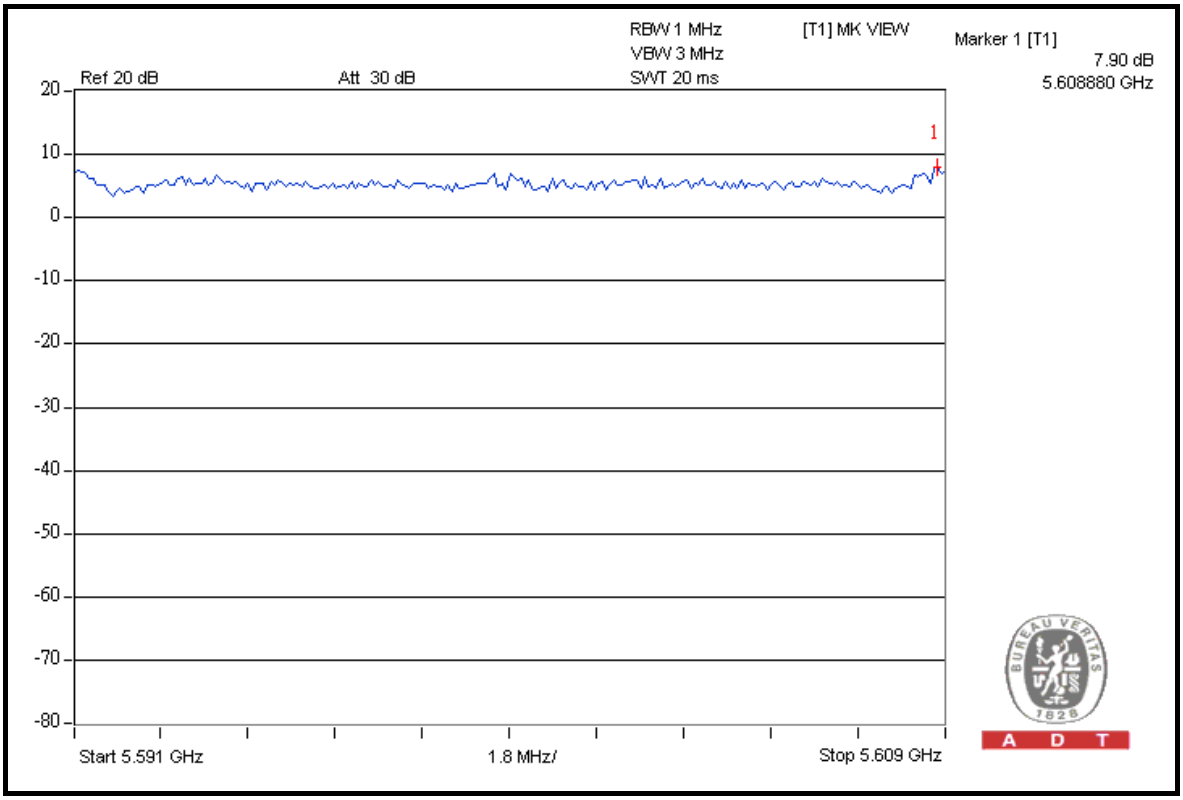
CH 100


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.5 GHz
4 MHz/
Span 40 MHz

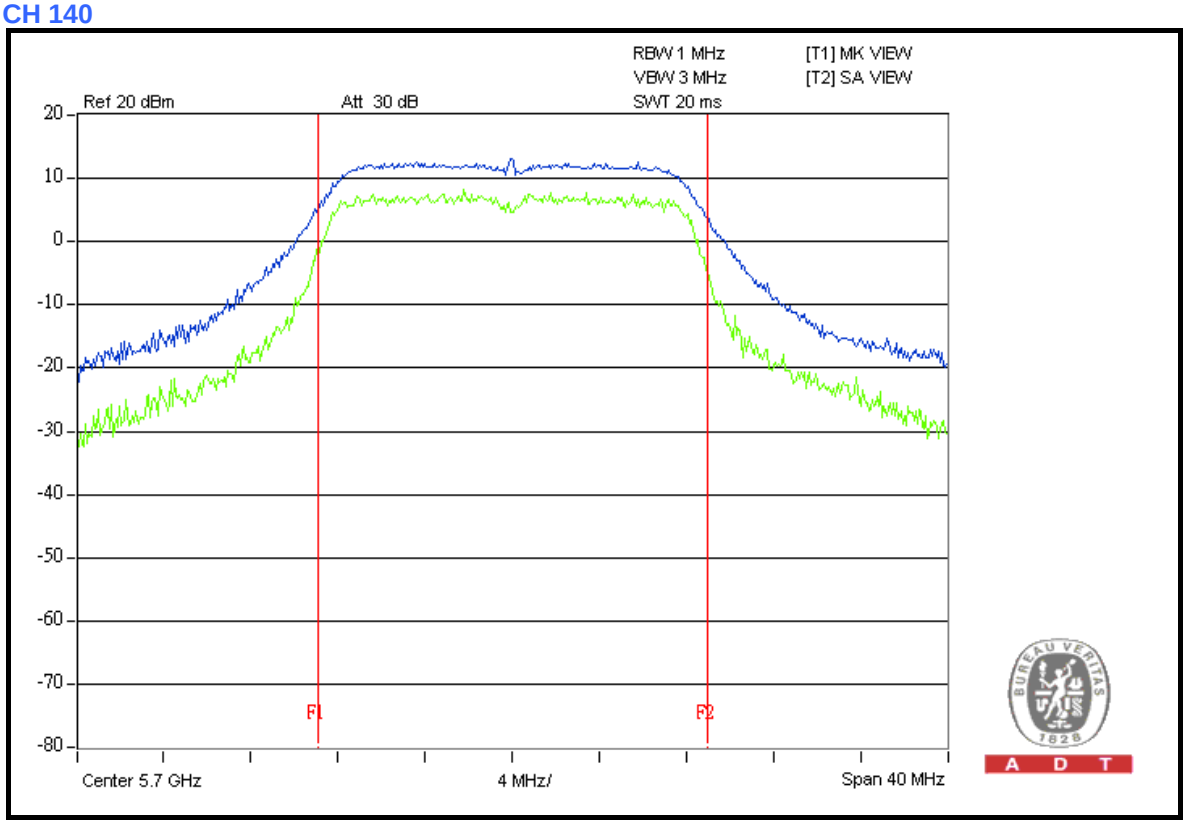

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
9.38 dB
5.509040 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.491 GHz
1.8 MHz/
Stop 5.509 GHz

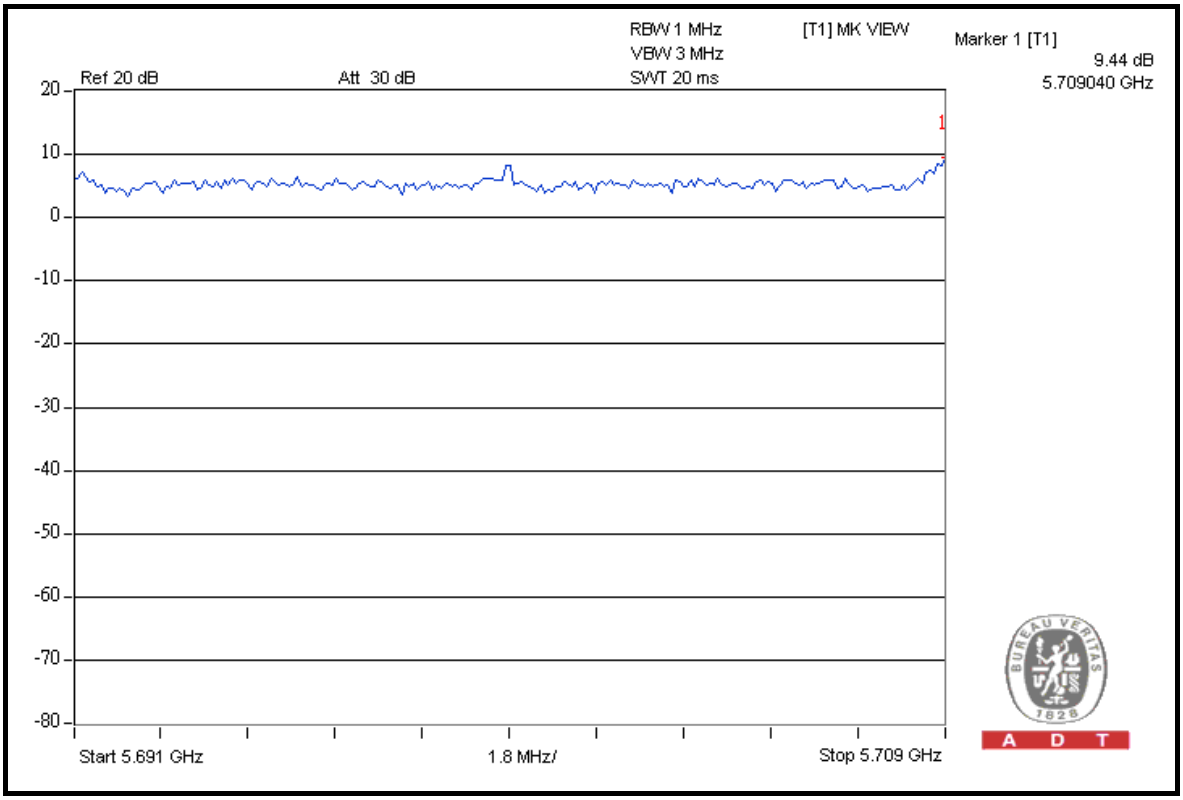
CH 120


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.6 GHz
4 MHz/
Span 40 MHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
7.90 dB
5.608880 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.591 GHz
1.8 MHz/
Stop 5.609 GHz

CH 140


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.7 GHz
4 MHz/
Span 40 MHz

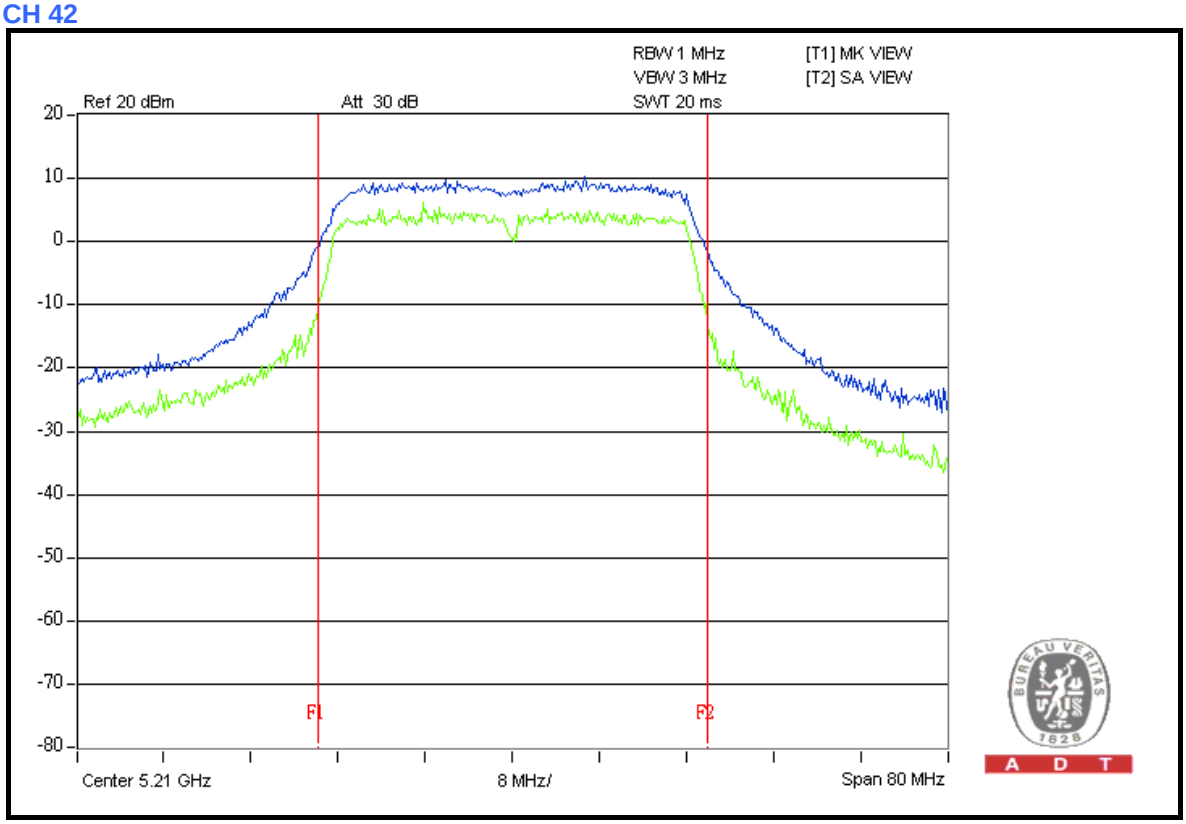

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
9.44 dB
5.709040 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.691 GHz
1.8 MHz/
Stop 5.709 GHz

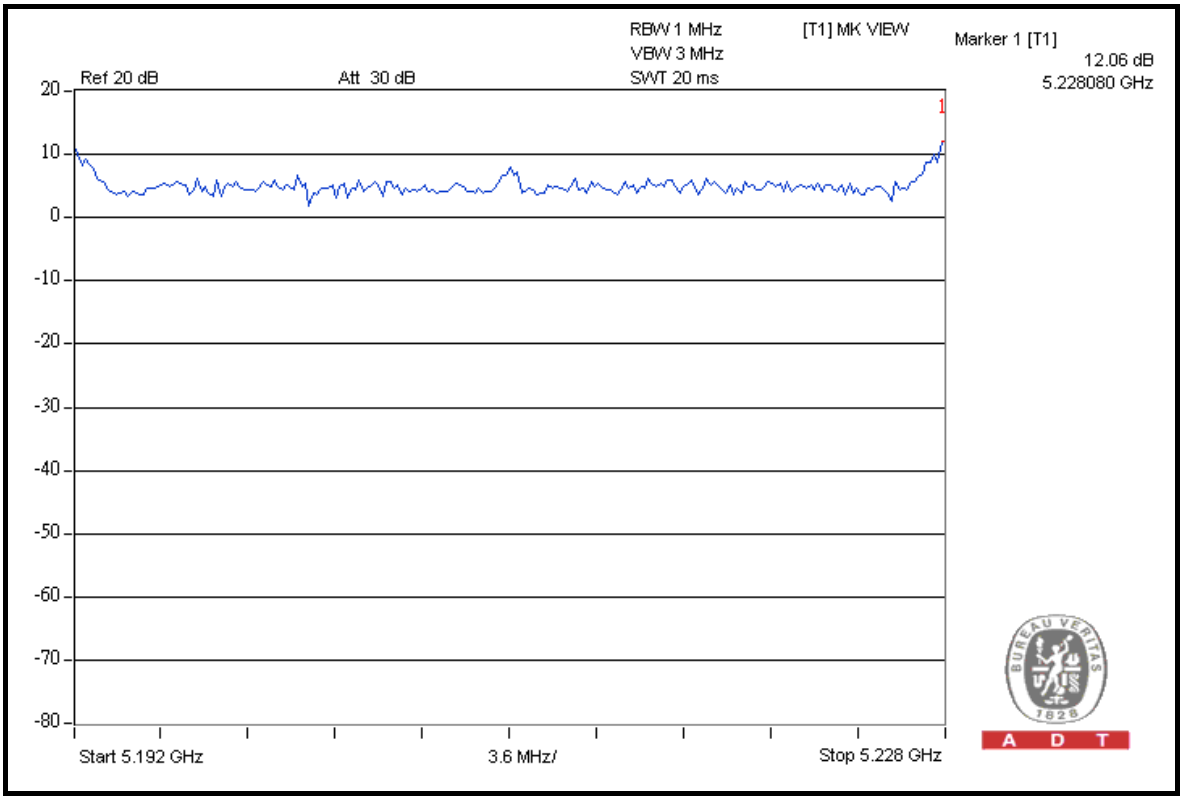
802.11a OFDM MODULATION (TURBO MODE)

MODULATION TYPE	QPSK	**TRANSFER RATE**	12.0Mbps
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
42	5210	12.06	13	PASS

CH 42


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
[T2] SA VIEW
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
F1
F2
Center 5.21 GHz
8 MHz/
Span 80 MHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
12.06 dB
5.228080 GHz
Ref 20 dB
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Start 5.192 GHz
3.6 MHz/
Stop 5.228 GHz

4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009

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

4.5.3 TEST PROCEDURES

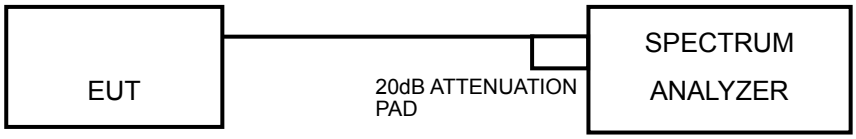
a. The transmitter output was connected to the spectrum analyzer.

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.

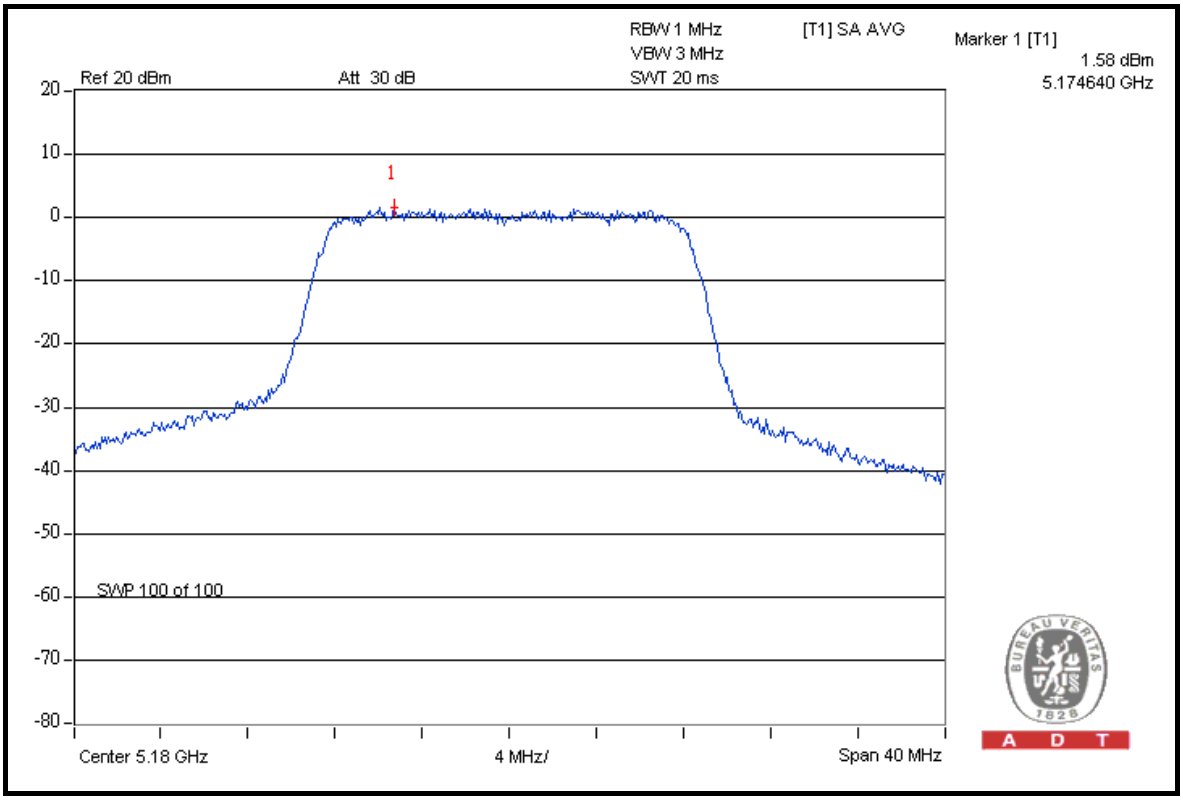
4.5.7 TEST RESULTS

802.11a OFDM MODULATION (NORMAL MODE)

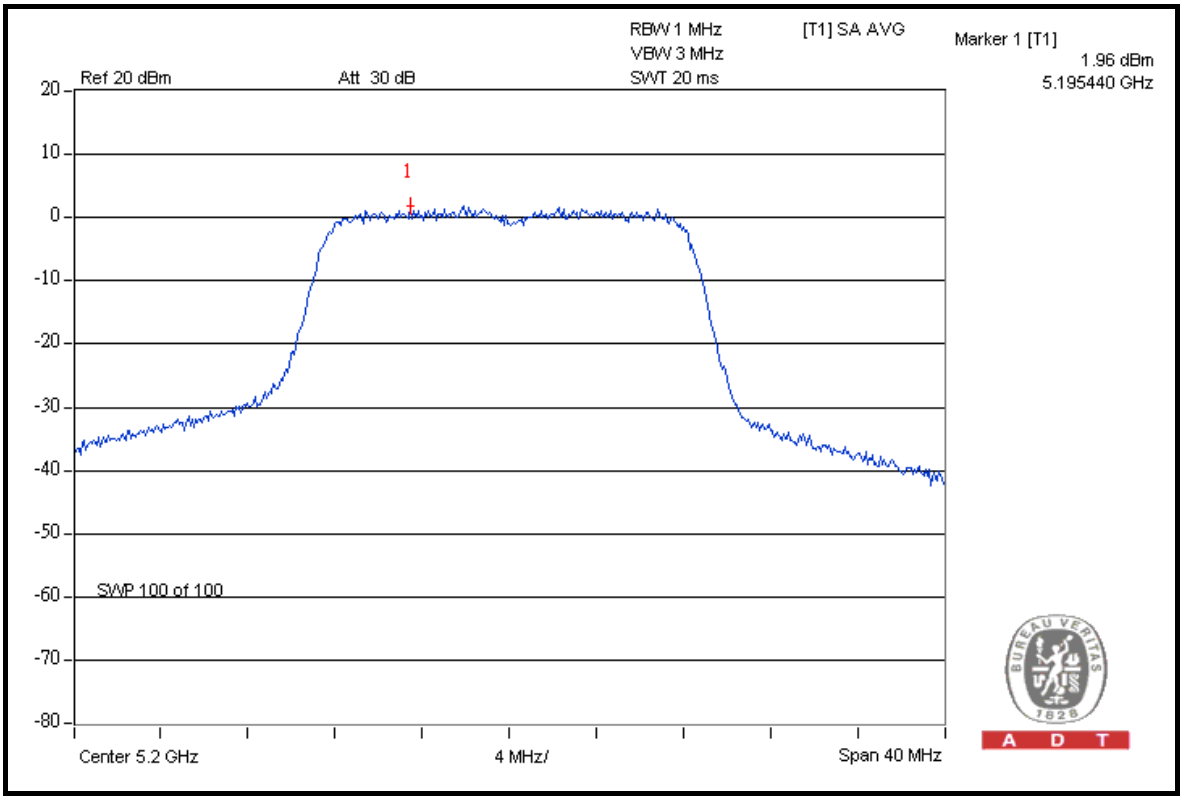
MODULATION TYPE	BPSK	TRANSFER RATE	6.0Mbps
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
36	5180	1.58	4	PASS
40	5200	1.96	4	PASS
48	5240	1.95	4	PASS
52	5260	2.00	11	PASS
60	5300	1.89	11	PASS
64	5320	2.52	11	PASS
100	5500	1.99	11	PASS
120	5600	1.94	11	PASS
140	5700	1.99	11	PASS

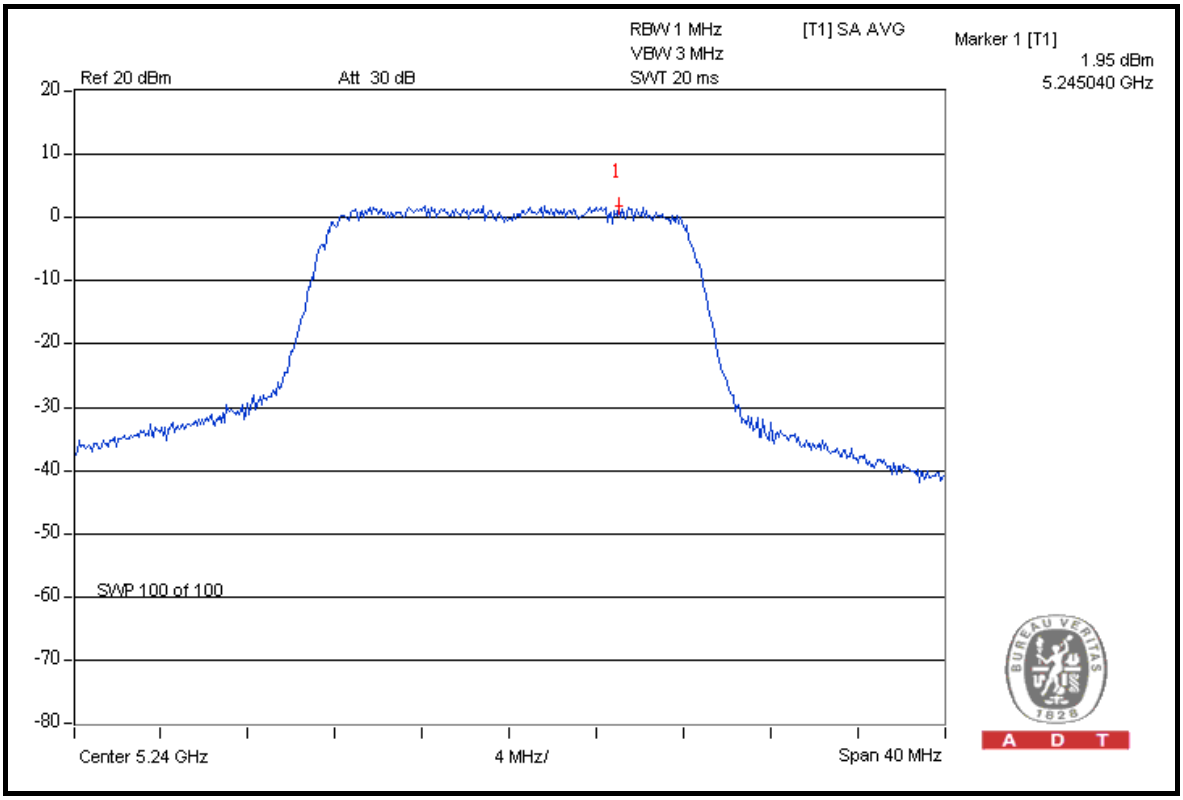
CH 36



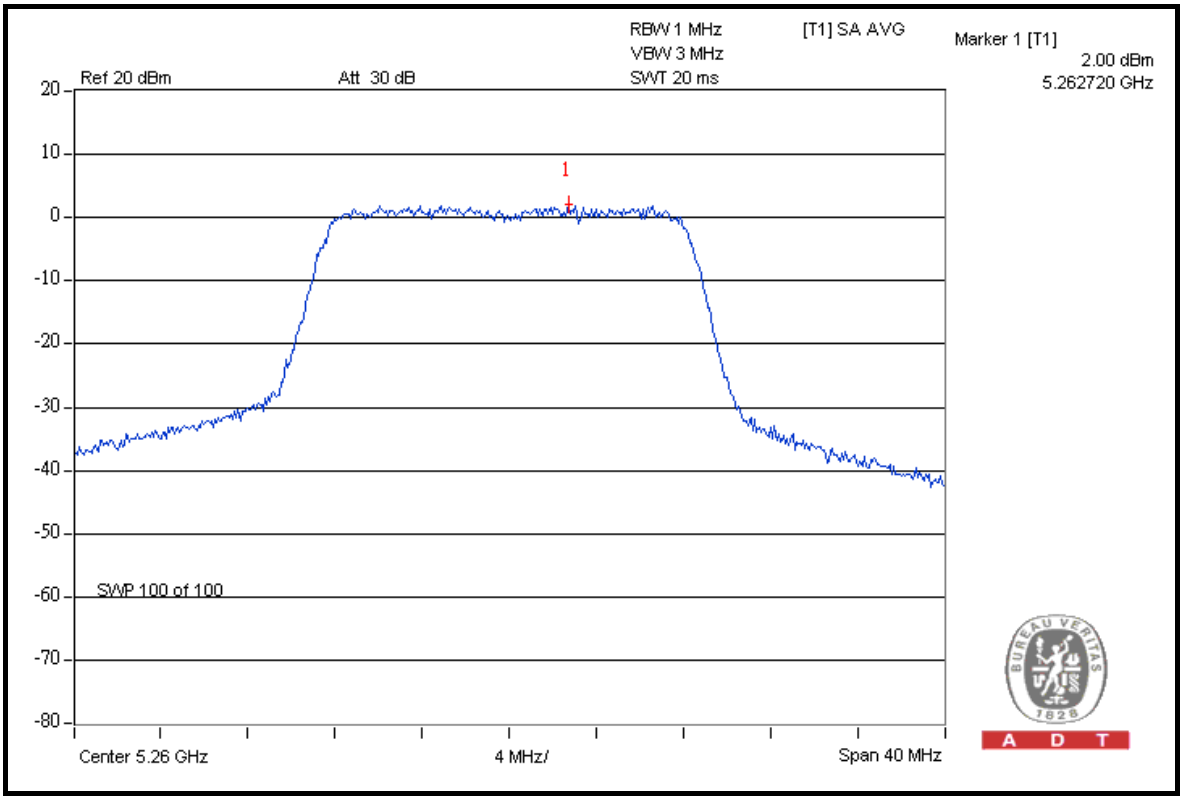
CH 40


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.96 dBm
5.195440 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.2 GHz
4 MHz/
Span 40 MHz

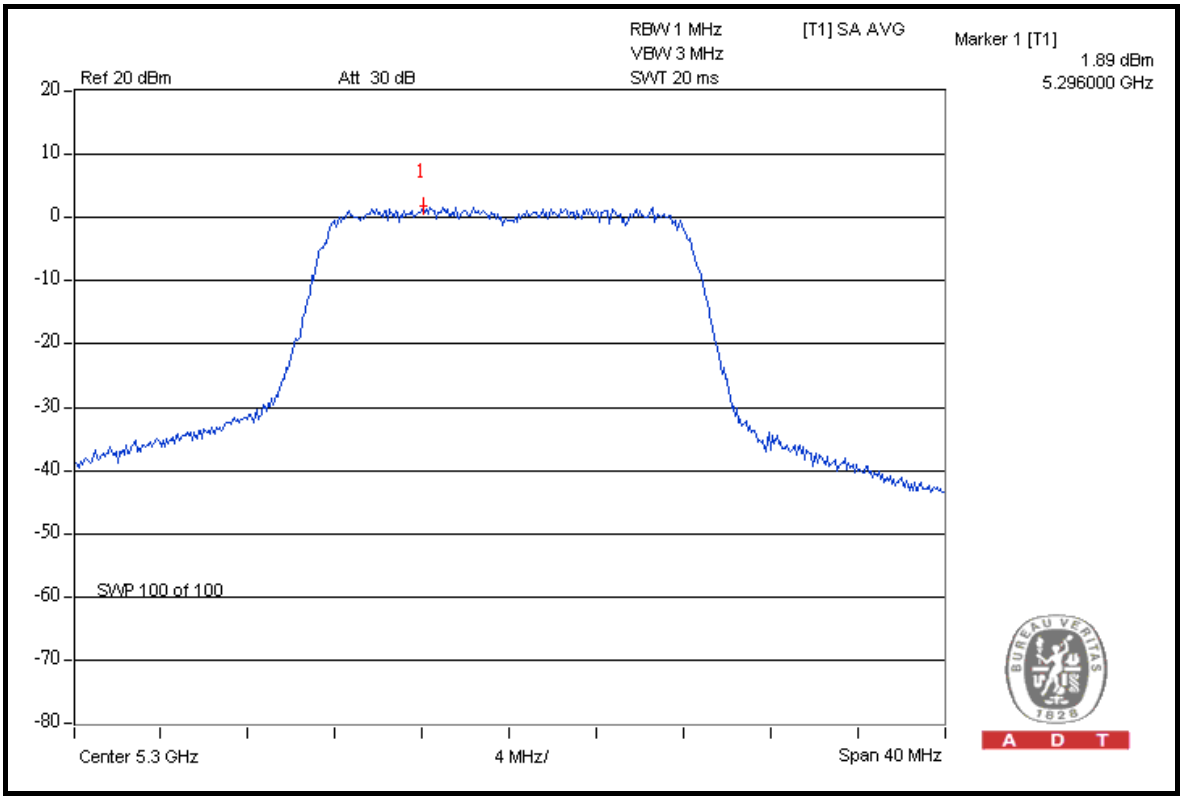
CH 48


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.95 dBm
5.245040 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.24 GHz
4 MHz/
Span 40 MHz

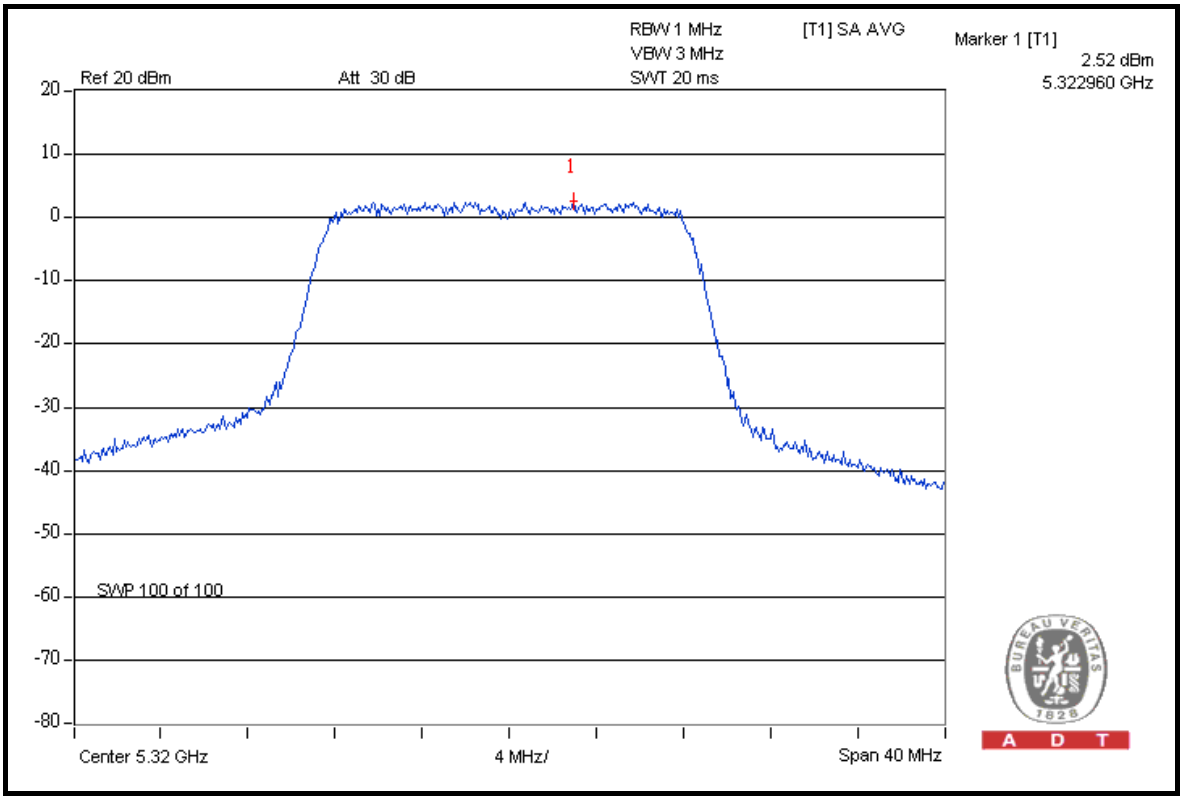
CH 52


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
2.00 dBm
5.262720 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.26 GHz
4 MHz/
Span 40 MHz

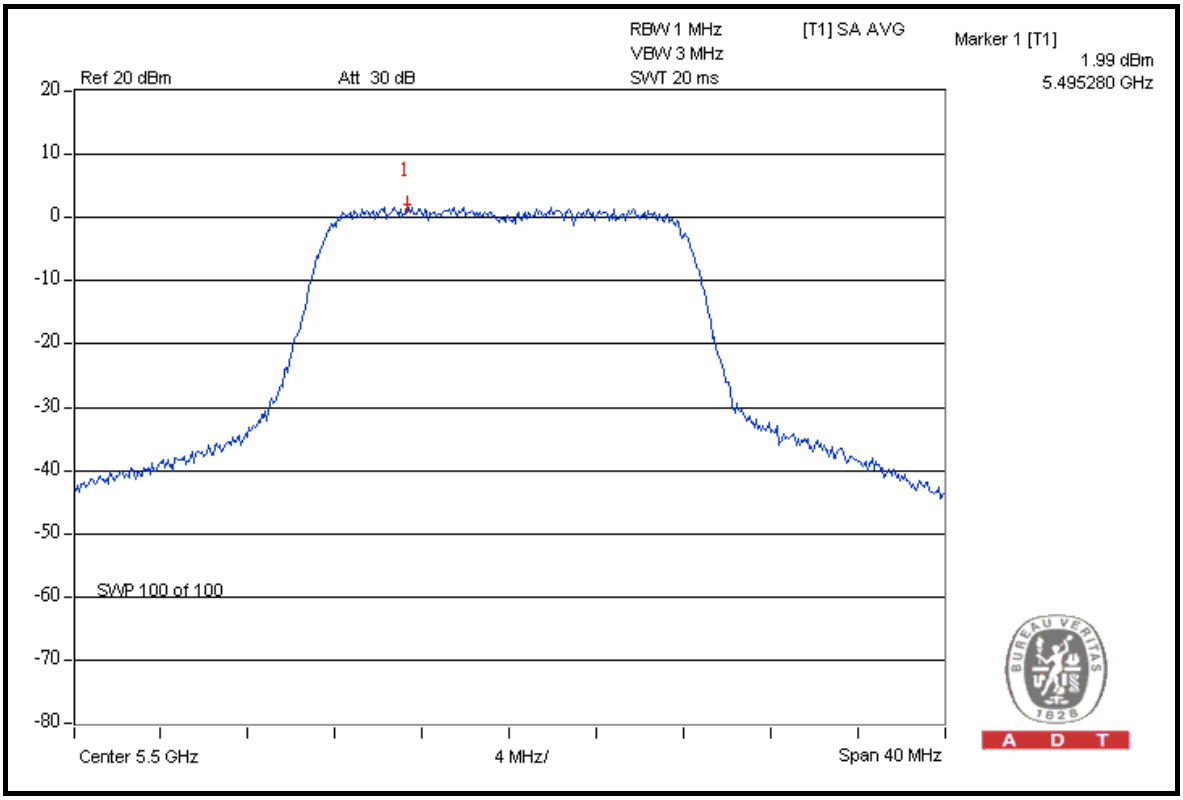
CH 60


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.89 dBm
5.296000 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.3 GHz
4 MHz/
Span 40 MHz

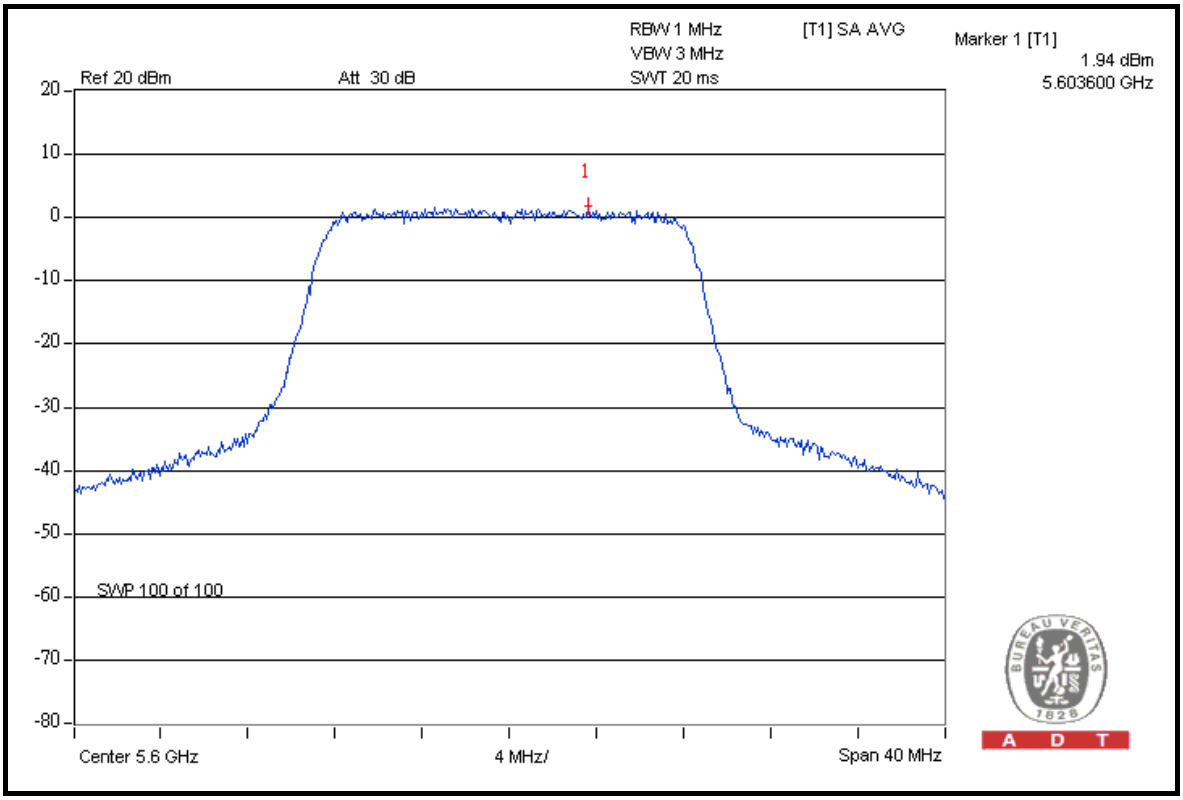
CH 64


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
2.52 dBm
5.322960 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.32 GHz
4 MHz/
Span 40 MHz

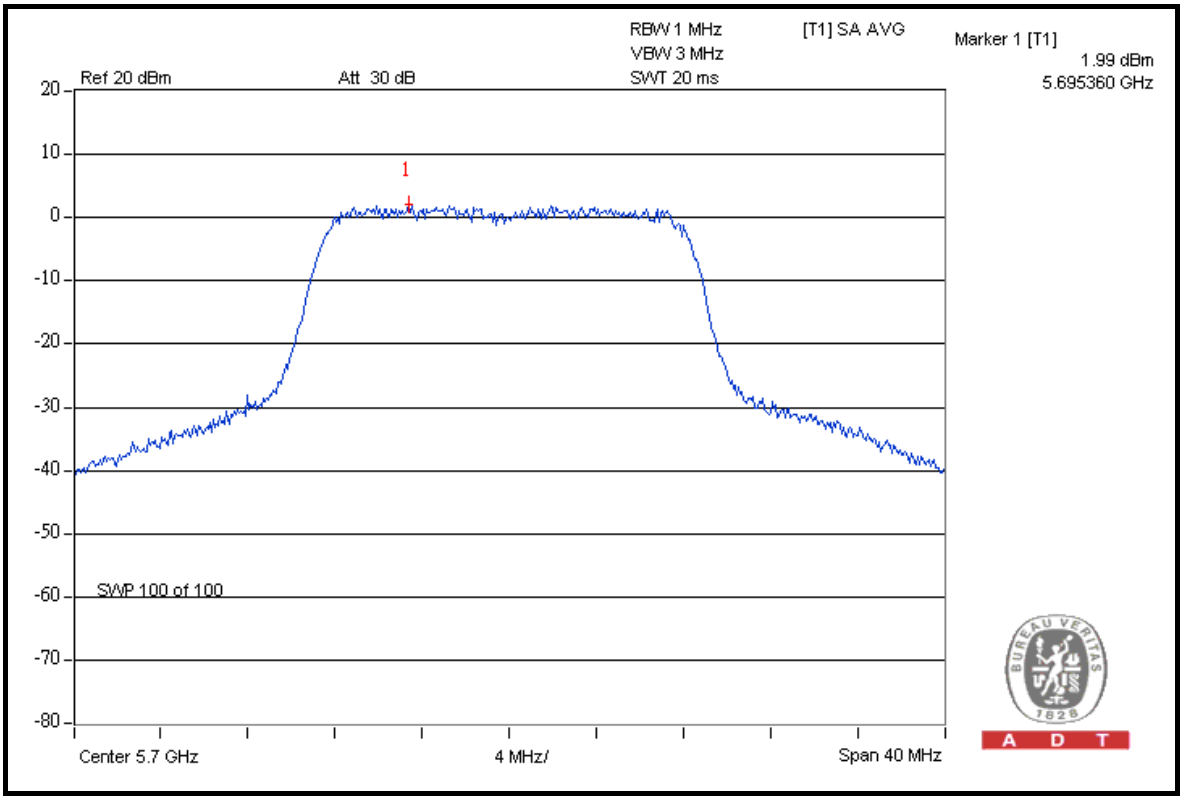
CH 100


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.99 dBm
5.495280 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
SWP 100 of 100
Center 5.5 GHz
4 MHz/
Span 40 MHz

CH 120


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.94 dBm
5.603600 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.6 GHz
4 MHz/
Span 40 MHz

CH 140

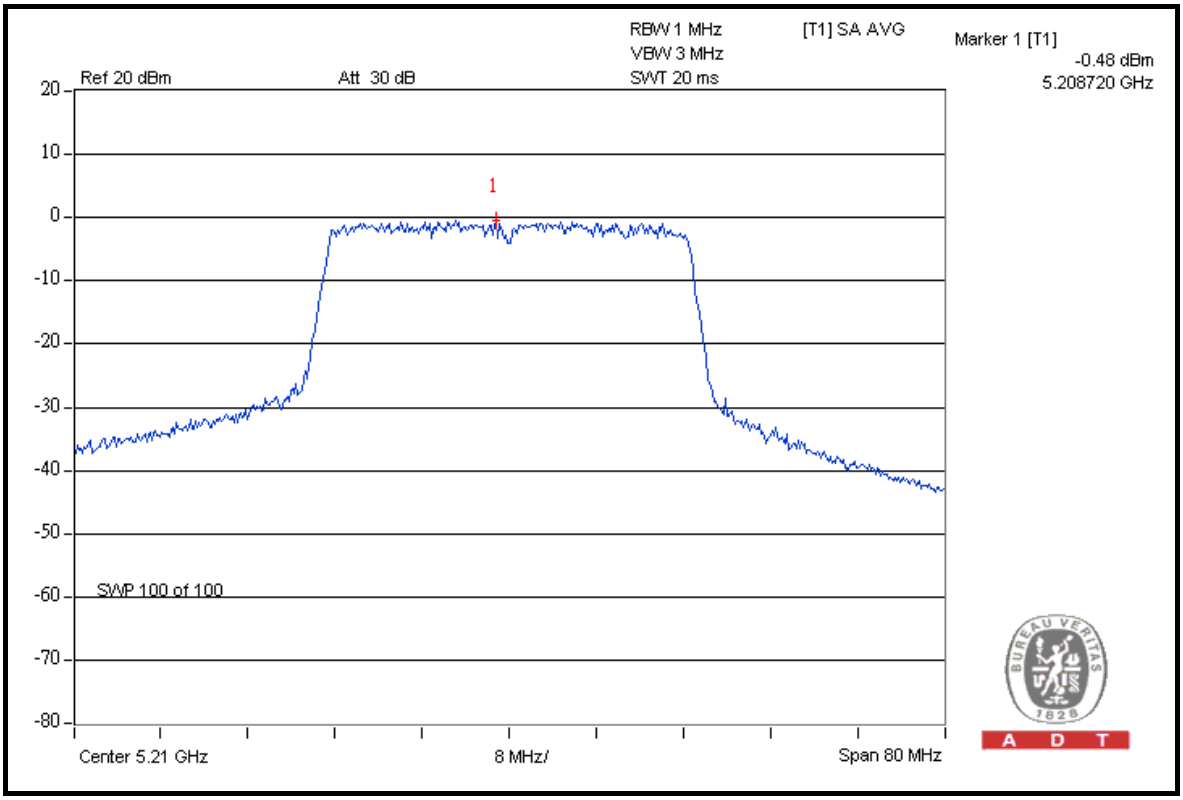

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] SA AVG
Marker 1 [T1]
1.99 dBm
5.695360 GHz
Ref 20 dBm
Att 30 dB
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
SWP 100 of 100
Center 5.7 GHz
4 MHz/
Span 40 MHz

802.11a OFDM MODULATION (TURBO MODE)

MODULATION TYPE	QPSK	**TRANSFER RATE**	12.0Mbps
INPUT POWER	120Vac, 60Hz	**ENVIRONMENTAL CONDITIONS**	25deg.C, 65%RH, 991hPa
TESTED BY	Brad Wu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS / FAIL
42	5210	-0.48	4	PASS

CH 42



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
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 2009
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.

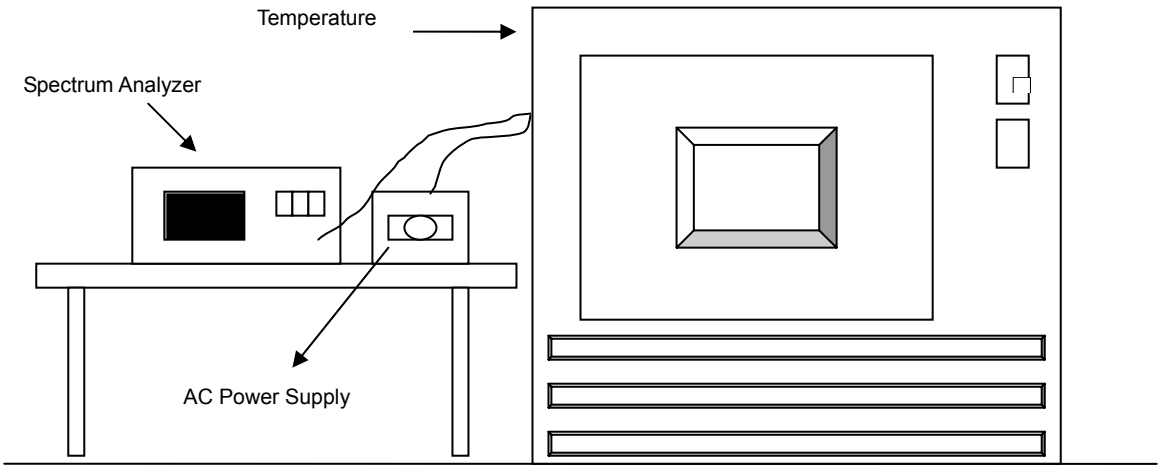
e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.

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 4.1.7.

4.6.7 TEST RESULTS

OPERATING FREQUENCY: 5320MHz									
TEMP. (℃)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.999169	-0.0000156	5319.999085	-0.0000172	5319.999268	-0.0000138	5319.999053	-0.0000178
	110.0	5319.983340	-0.0003132	5319.983525	-0.0003097	5319.983484	-0.0003104	5319.983615	-0.0003080
	93.5	5319.987008	-0.0002442	5319.986815	-0.0002478	5319.986747	-0.0002491	5319.986631	-0.0002513
40	126.5	5319.979067	-0.0003935	5319.978894	-0.0003967	5319.978992	-0.0003949	5319.979034	-0.0003941
	110.0	5319.985095	-0.0002802	5319.985130	-0.0002795	5319.985354	-0.0002753	5319.985173	-0.0002787
	93.5	5319.997081	-0.0000549	5319.997040	-0.0000556	5319.997096	-0.0000546	5319.996831	-0.0000596
30	126.5	5319.980212	-0.0003720	5319.980228	-0.0003717	5319.980151	-0.0003731	5319.980087	-0.0003743
	110.0	5319.985876	-0.0002655	5319.986207	-0.0002593	5319.986215	-0.0002591	5319.986334	-0.0002569
	93.5	5320.004082	0.0000767	5320.004101	0.0000771	5320.003939	0.0000740	5320.004115	0.0000773
20	126.5	5319.986763	-0.0002488	5319.986732	-0.0002494	5319.986617	-0.0002516	5319.986472	-0.0002543
	110.0	5319.987363	-0.0002375	5319.987207	-0.0002405	5319.987125	-0.0002420	5319.987002	-0.0002443
	93.5	5320.011703	0.0002200	5320.011593	0.0002179	5320.011556	0.0002172	5320.011457	0.0002154
10	126.5	5319.994629	-0.0001010	5319.994910	-0.0000957	5319.994719	-0.0000993	5319.994740	-0.0000989
	110.0	5320.002520	0.0000474	5320.002884	0.0000542	5320.002694	0.0000506	5320.002894	0.0000544
	93.5	5320.017914	0.0003367	5320.017943	0.0003373	5320.017973	0.0003378	5320.018190	0.0003419
0	126.5	5319.997630	-0.0000446	5319.997786	-0.0000416	5319.99764	-0.0000444	5319.997628	-0.0000446
	110.0	5320.009615	0.0001807	5320.009814	0.0001845	5320.009719	0.0001827	5320.010026	0.0001885
	93.5	5320.024186	0.0004546	5320.024221	0.0004553	5320.024200	0.0004549	5320.024012	0.0004514
-10	126.5	5320.009566	0.0001798	5320.009799	0.0001842	5320.009969	0.0001874	5320.010061	0.0001891
	110.0	5320.015916	0.0002992	5320.016085	0.0003024	5320.016130	0.0003032	5320.016279	0.0003060
	93.5	5320.030644	0.0005760	5320.030516	0.0005736	5320.030505	0.0005734	5320.030516	0.0005736
-20	126.5	5320.015517	0.0002917	5320.015327	0.0002881	5320.015471	0.0002908	5320.015355	0.0002886
	110.0	5320.020600	0.0003872	5320.020222	0.0003801	5320.020423	0.0003839	5320.020286	0.0003813
	93.5	5320.035685	0.0006708	5320.035350	0.0006645	5320.035427	0.0006659	5320.035414	0.0006657
-30	126.5	5320.020904	0.0003929	5320.020697	0.0003890	5320.020863	0.0003922	5320.021029	0.0003953
	110.0	5320.034857	0.0006552	5320.035217	0.0006620	5320.034830	0.0006547	5320.034687	0.0006520
	93.5	5320.037227	0.0006998	5320.037448	0.0007039	5320.037133	0.0006980	5320.037157	0.0006984

4.7 BAND EDGES MEASUREMENT

4.7.1 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100040	Jul. 04, 2008	Jul. 03, 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

The transmitter output was connected to the spectrum analyzer via a low lose cable. 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.

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 and 5.50 to 5.70GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak filed strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

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

FOR 5180-5320MHz BAND: 802.11a OFDM MODULATION (NORMAL MODE)

Channel 36 (5180MHz)

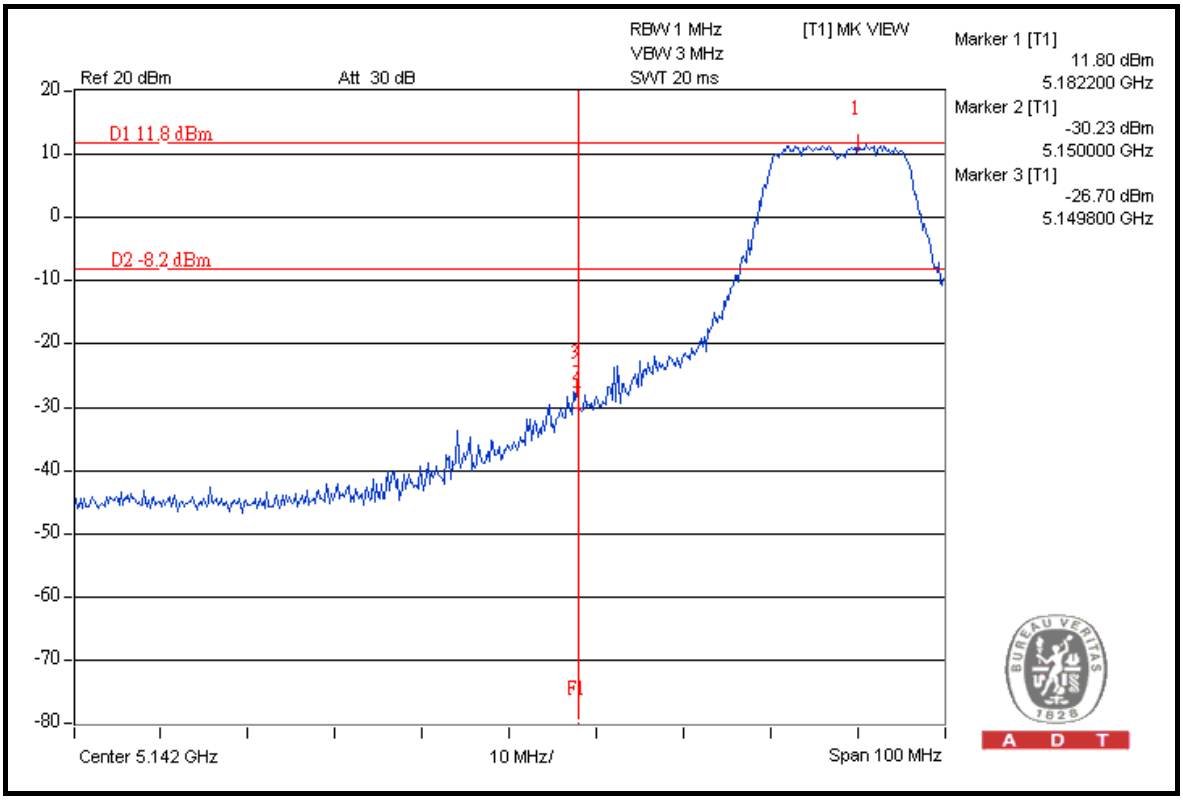
The band edge emission plot on the next page shows 38.50dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 36 is 110.45dBuV/m (Peak), so the maximum field strength in restrict band is 110.45 – 38.50 = 71.95dBuV/m which is under 74dBuV/m limit.

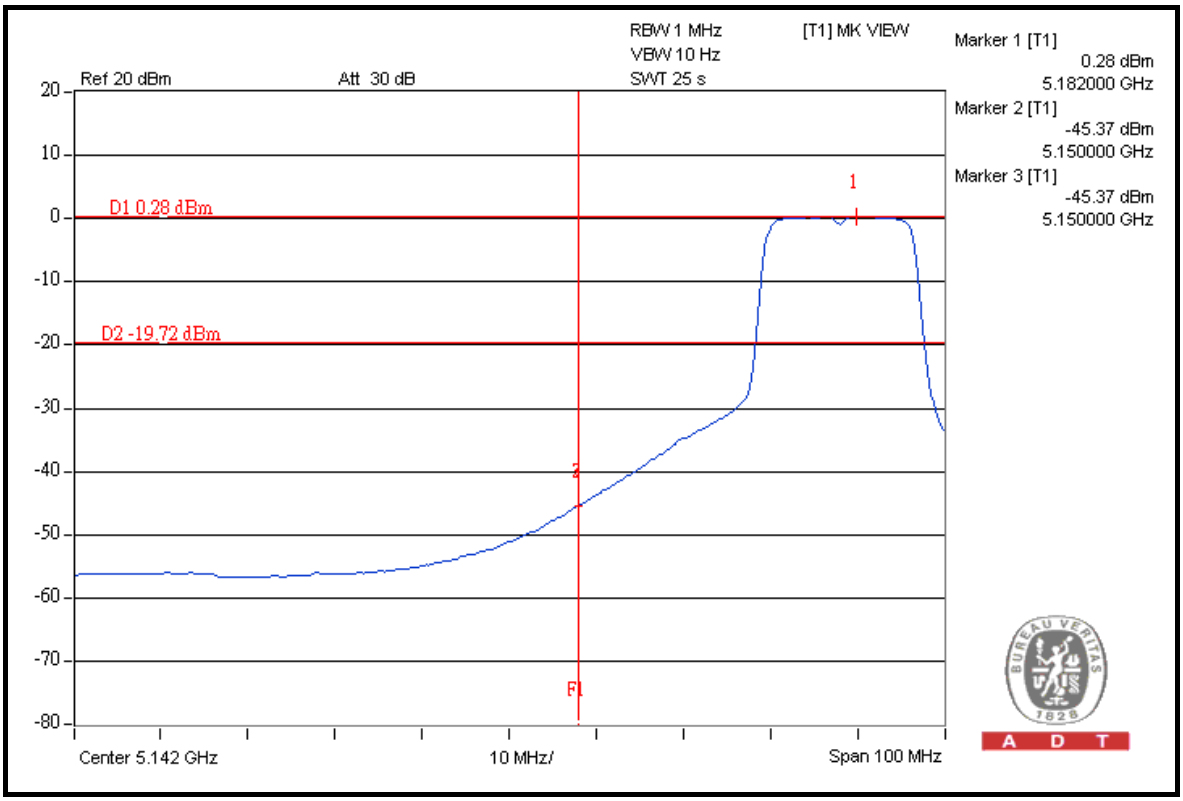
The band edge emission plot on the next page shows 45.65dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 36 is 98.48dBuV/m (Average), so the maximum field strength in restrict band is 98.48 – 45.65 = 52.83dBuV/m which is under 54dBuV/m limit.

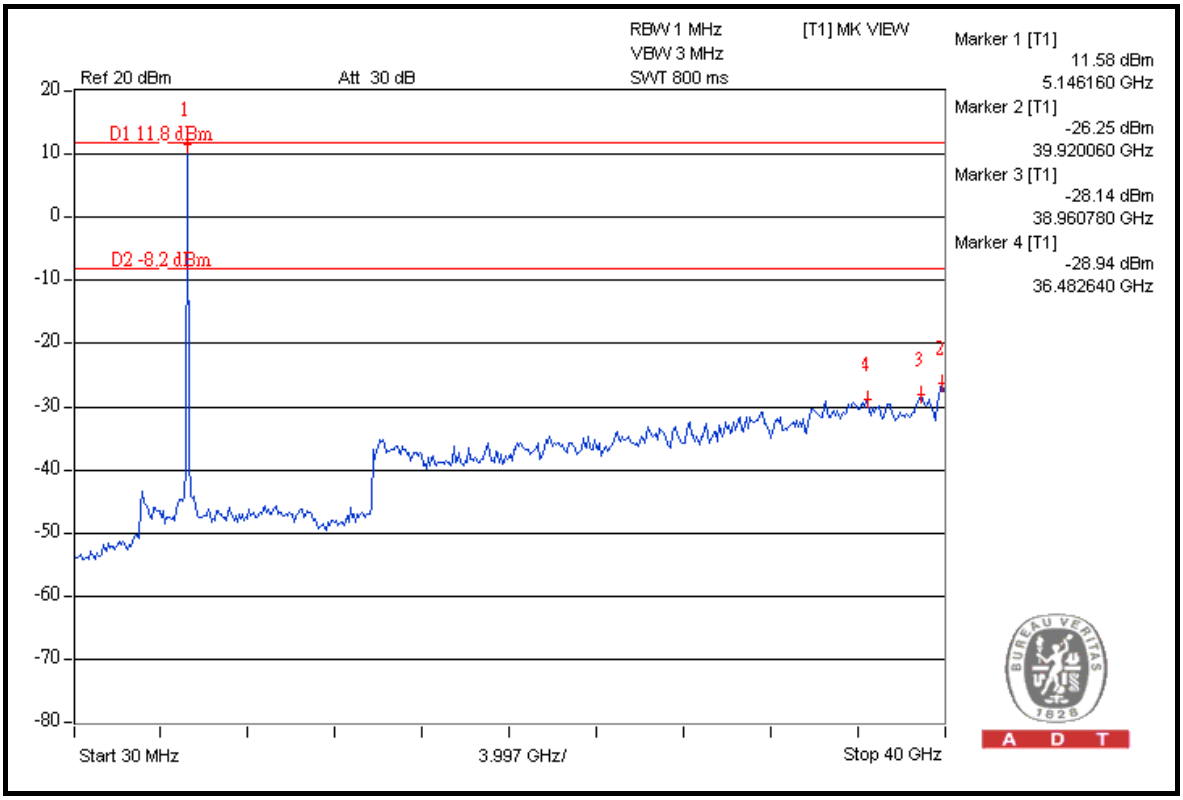
Channel 64 (5320MHz)

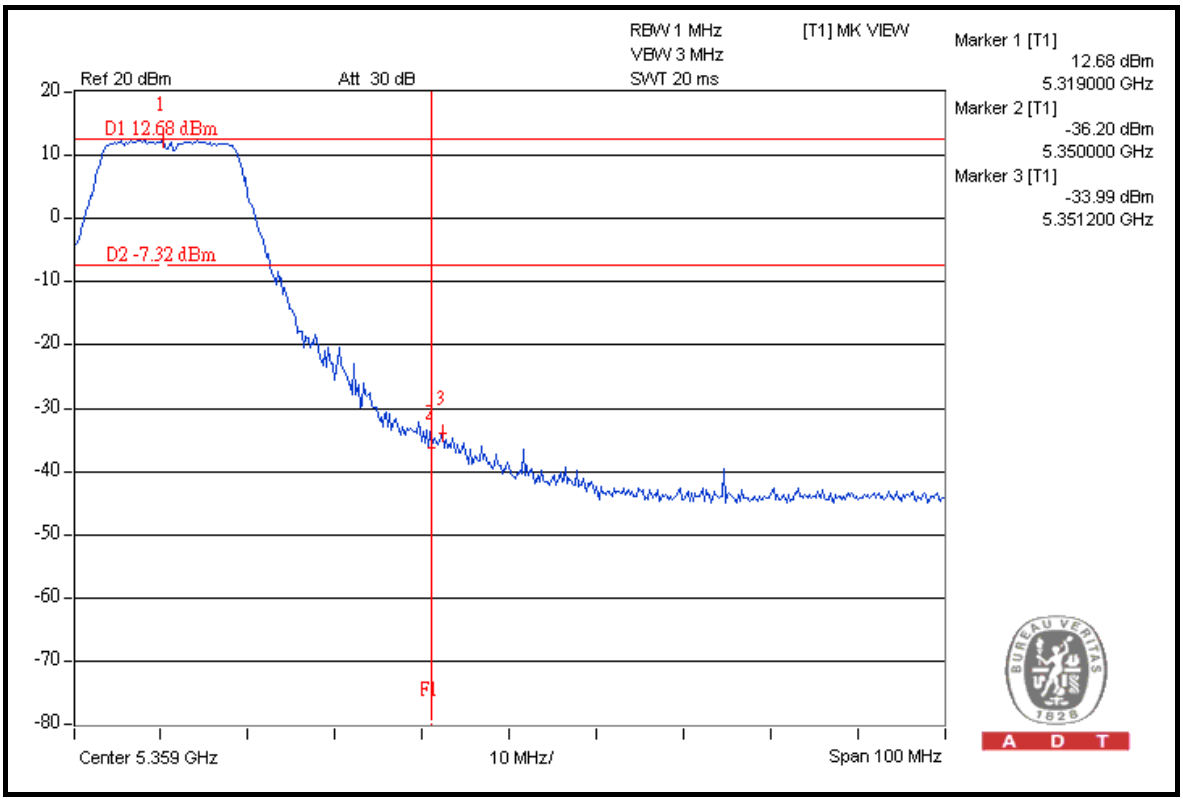
The band edge emission plot on the next second page shows 46.67dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 64 is 110.24dBuV/m (Peak), so the maximum field strength in restrict band is 110.24 – 46.67 = 63.57dBuV/m which is under 74dBuV/m limit.

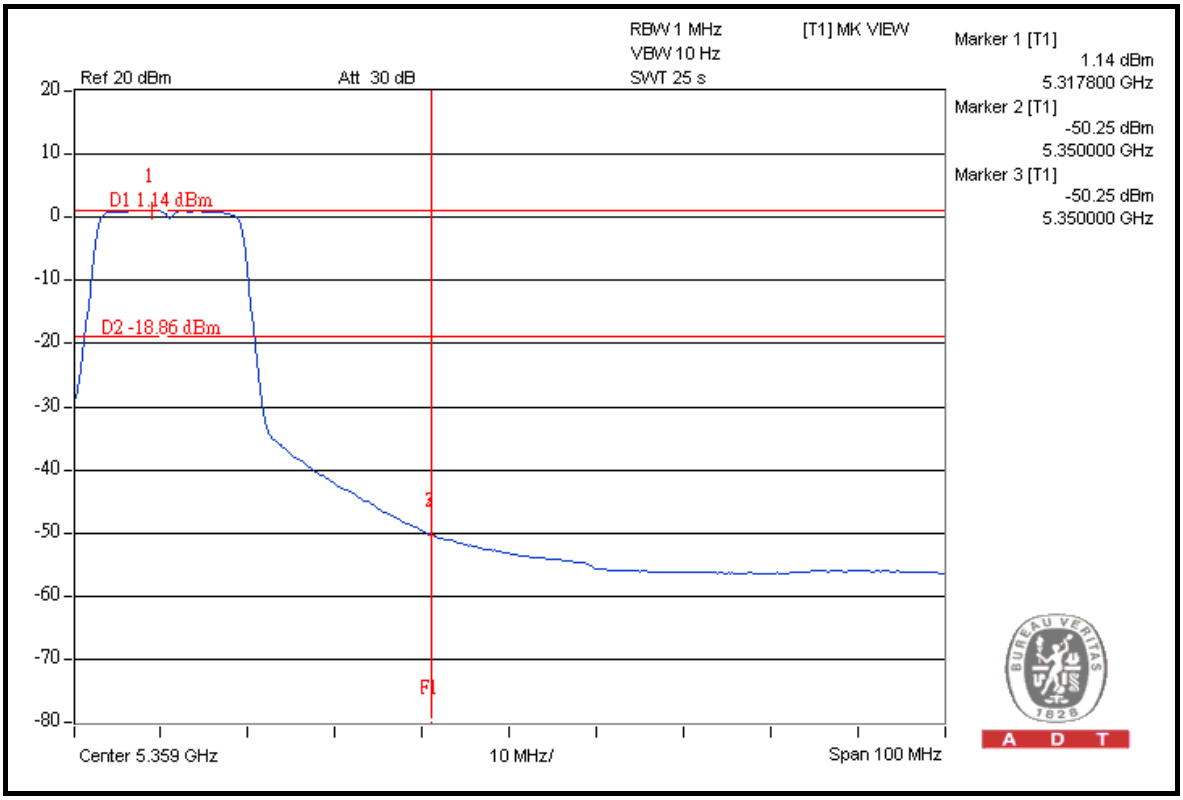
The band edge emission plot on the next third page shows 51.39dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 64 is 98.72dBuV/m (Average), so the maximum field strength in restrict band is 98.72 – 51.39 = 47.33dBuV/m which is under 54dBuV/m limit.

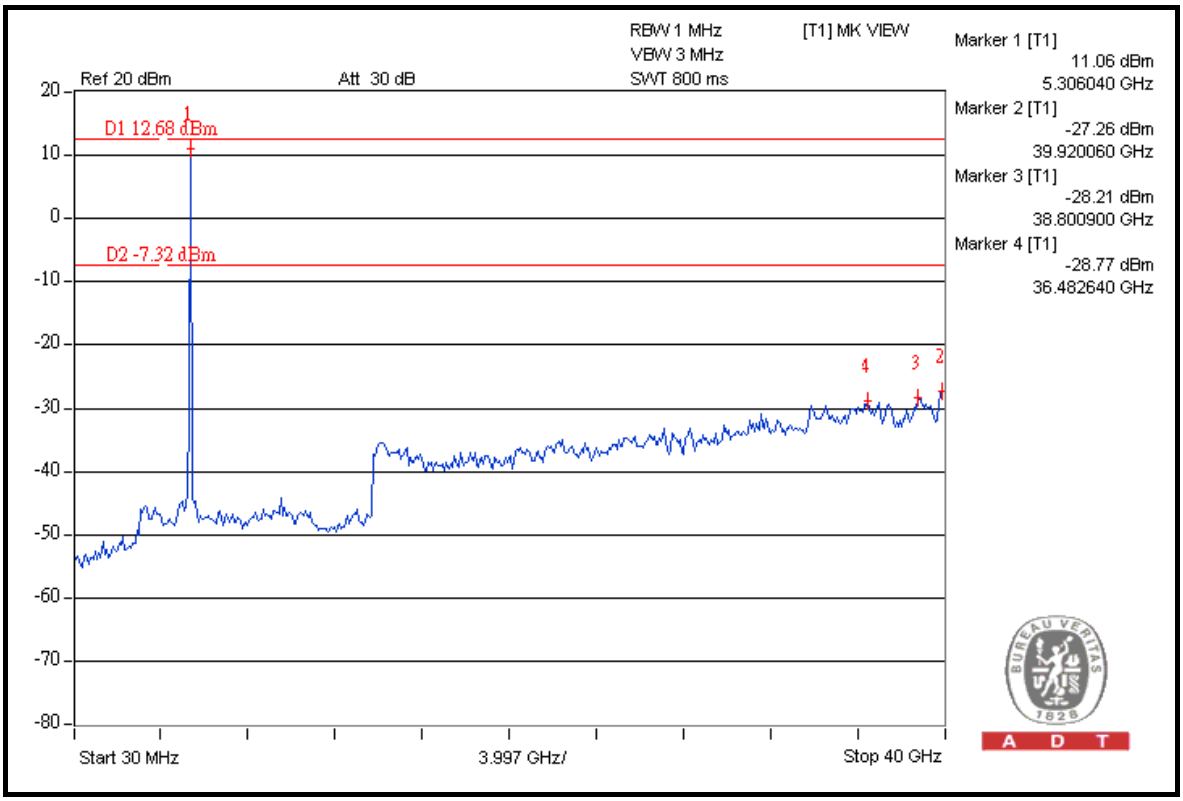

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 11.8 dBm
D2 -8.2 dBm
Marker 1 [T1]
11.80 dBm
5.182200 GHz
Marker 2 [T1]
-30.23 dBm
5.150000 GHz
Marker 3 [T1]
-26.70 dBm
5.149800 GHz
Center 5.142 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.28 dBm
D2 -19.72 dBm
Marker 1 [T1]
0.28 dBm
5.182000 GHz
Marker 2 [T1]
-45.37 dBm
5.150000 GHz
Marker 3 [T1]
-45.37 dBm
5.150000 GHz
Center 5.142 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 11.8 dBm
D2 -8.2 dBm
Marker 1 [T1]
11.58 dBm
5.146160 GHz
Marker 2 [T1]
-26.25 dBm
39.920060 GHz
Marker 3 [T1]
-28.14 dBm
38.960780 GHz
Marker 4 [T1]
-28.94 dBm
36.482640 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 12.68 dBm
D2 -7.32 dBm
Marker 1 [T1]
12.68 dBm
5.319000 GHz
Marker 2 [T1]
-36.20 dBm
5.350000 GHz
Marker 3 [T1]
-33.99 dBm
5.351200 GHz
Center 5.359 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Marker 1 [T1]
1.14 dBm
5.317800 GHz
Marker 2 [T1]
-50.25 dBm
5.350000 GHz
Marker 3 [T1]
-50.25 dBm
5.350000 GHz
Ref 20 dBm
Att 30 dB
D1 1.14 dBm
D2 -18.86 dBm
Center 5.359 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Marker 1 [T1]
11.06 dBm
5.306040 GHz
Marker 2 [T1]
-27.26 dBm
39.920060 GHz
Marker 3 [T1]
-28.21 dBm
38.800900 GHz
Marker 4 [T1]
-28.77 dBm
36.482640 GHz
Ref 20 dBm
Att 30 dB
D1 12.68 dBm
D2 -7.32 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

FOR 5500-5700MHz BAND: 802.11a OFDM MODULATION (NORMAL MODE)

Channel 100 (5500MHz)

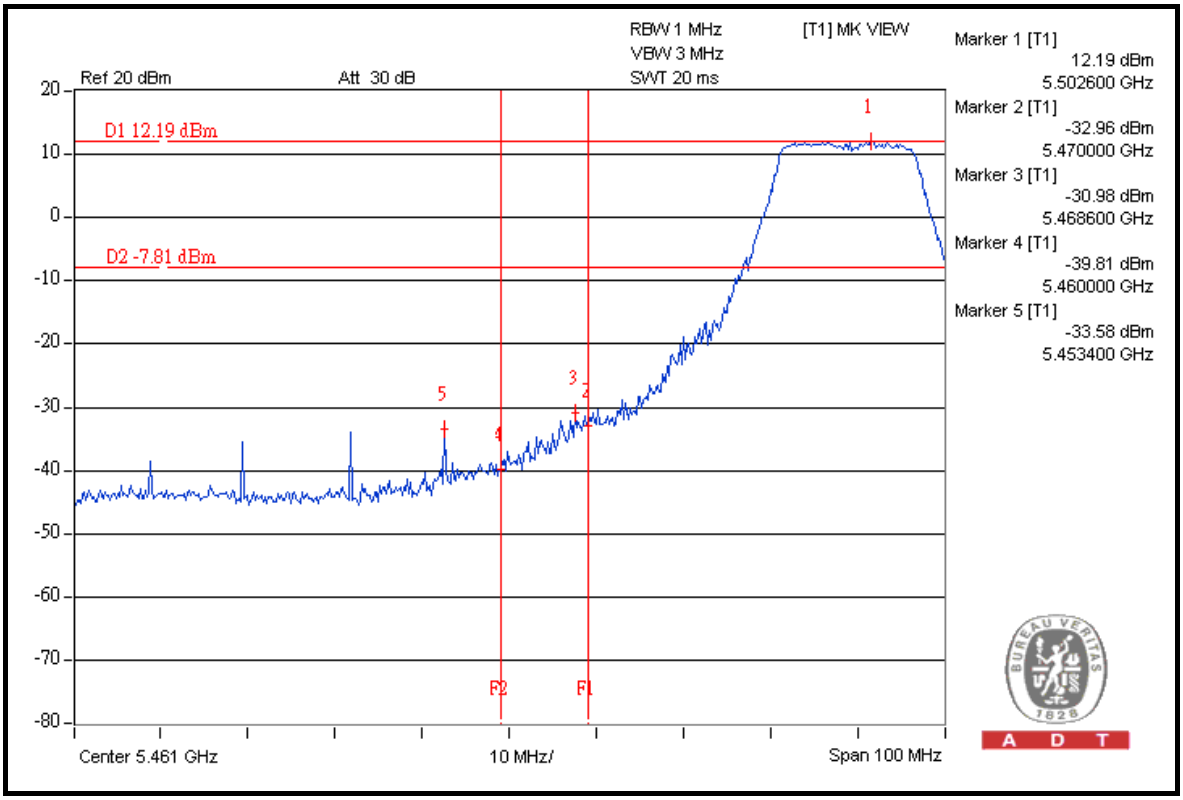
The band edge emission plot (5.460GHz) on the next page shows 45.77dBc between carrier maximum power and local maximum emission out of band emission. The emission of carrier strength list in the test result of channel 100 is 110.23dBuV/m (Peak), so the maximum field strength out of band emission is 110.23 – 45.77 = 64.46dBuV/m which is under 74dBuV/m limit.

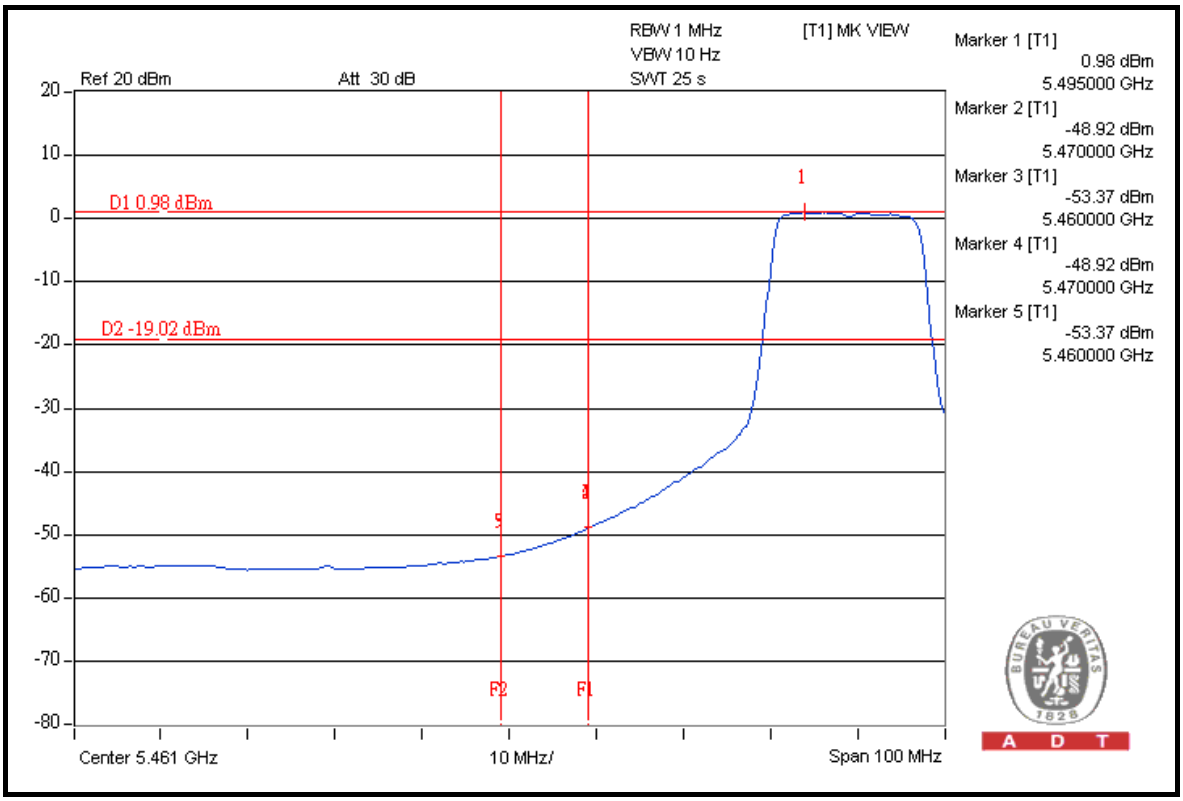
The band edge emission plot (5.460GHz) on the next page shows 54.35dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 100 is 99.02dBuV/m (Average), so the maximum field strength in restrict band is 99.02 – 54.35 = 44.67dBuV/m which is under 54dBuV/m limit.

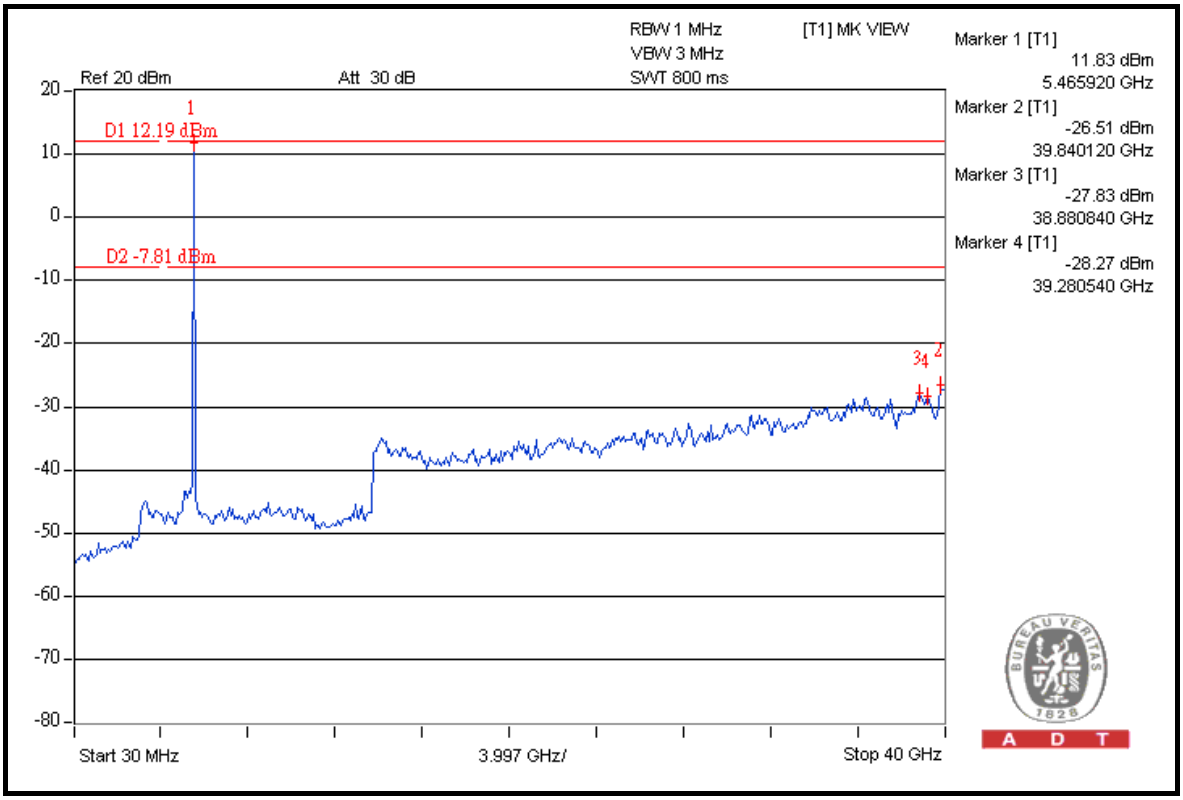
The band edge emission plot (5.470GHz) on the next page shows 43.17dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 100 is 110.23dBuV/m (Peak), so the maximum field strength in restrict band is 110.23 – 43.17 = 67.06dBuV/m which is under 68.3dBuV/m limit.

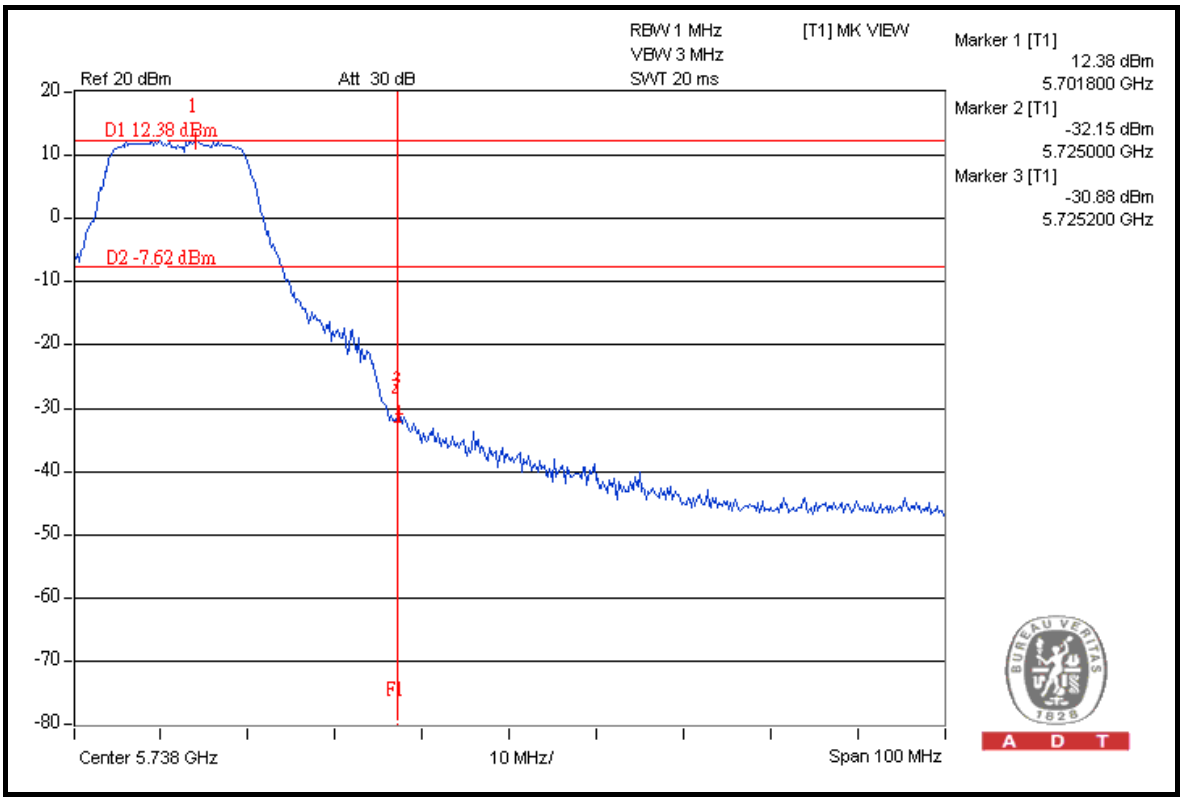
Channel 140 (5700MHz)

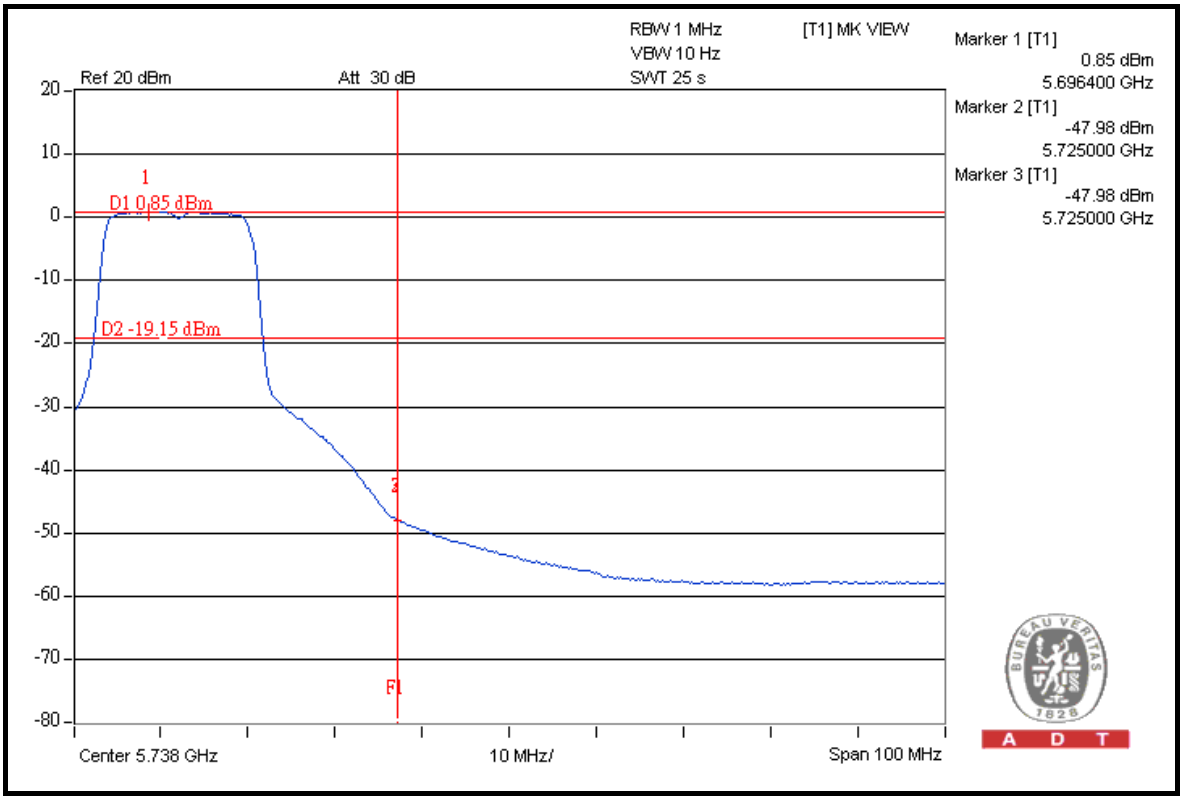
The band edge emission plot on the next second page shows 43.26dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 140 is 110.14dBuV/m (Peak), so the maximum field strength in restrict band is 110.14 – 43.26 = 66.88dBuV/m which is under 68.3dBuV/m limit.

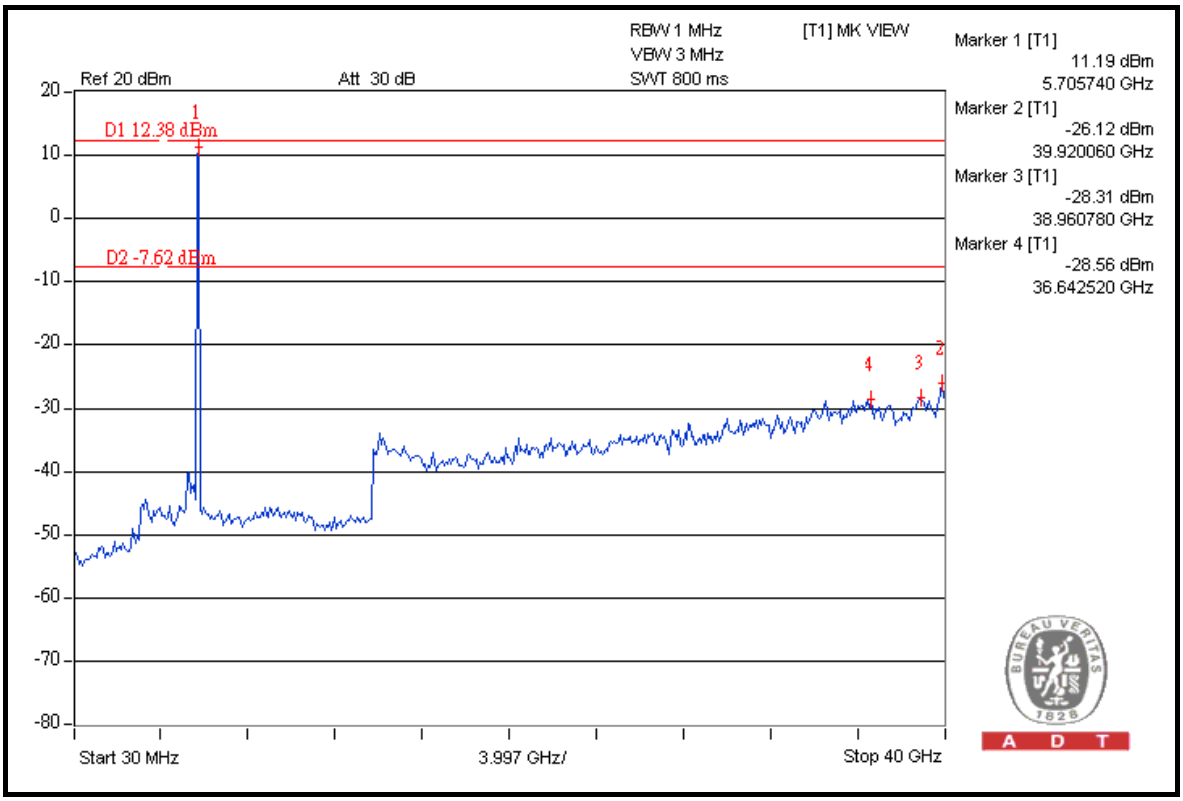

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 12.19 dBm
D2 -7.81 dBm
Marker 1 [T1]
12.19 dBm
5.502600 GHz
Marker 2 [T1]
-32.96 dBm
5.470000 GHz
Marker 3 [T1]
-30.98 dBm
5.468600 GHz
Marker 4 [T1]
-39.81 dBm
5.460000 GHz
Marker 5 [T1]
-33.58 dBm
5.453400 GHz
Center 5.461 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.98 dBm
D2 -19.02 dBm
Marker 1 [T1]
0.98 dBm
5.495000 GHz
Marker 2 [T1]
-48.92 dBm
5.470000 GHz
Marker 3 [T1]
-53.37 dBm
5.460000 GHz
Marker 4 [T1]
-48.92 dBm
5.470000 GHz
Marker 5 [T1]
-53.37 dBm
5.460000 GHz
Center 5.461 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 12.19 dBm
D2 -7.81 dBm
Marker 1 [T1]
11.83 dBm
5.465920 GHz
Marker 2 [T1]
-26.51 dBm
39.840120 GHz
Marker 3 [T1]
-27.83 dBm
38.880840 GHz
Marker 4 [T1]
-28.27 dBm
39.280540 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 12.38 dBm
D2 -7.62 dBm
Marker 1 [T1]
12.38 dBm
5.701800 GHz
Marker 2 [T1]
-32.15 dBm
5.725000 GHz
Marker 3 [T1]
-30.88 dBm
5.725200 GHz
Center 5.738 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.85 dBm
D2 -19.15 dBm
Marker 1 [T1]
0.85 dBm
5.696400 GHz
Marker 2 [T1]
-47.98 dBm
5.725000 GHz
Marker 3 [T1]
-47.98 dBm
5.725000 GHz
Center 5.738 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 12.38 dBm
D2 -7.62 dBm
Marker 1 [T1]
11.19 dBm
5.705740 GHz
Marker 2 [T1]
-26.12 dBm
39.920060 GHz
Marker 3 [T1]
-28.31 dBm
38.960780 GHz
Marker 4 [T1]
-28.56 dBm
36.642520 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

802.11a OFDM MODULATION (TURBO MODE)

Channel 42 (5210MHz)

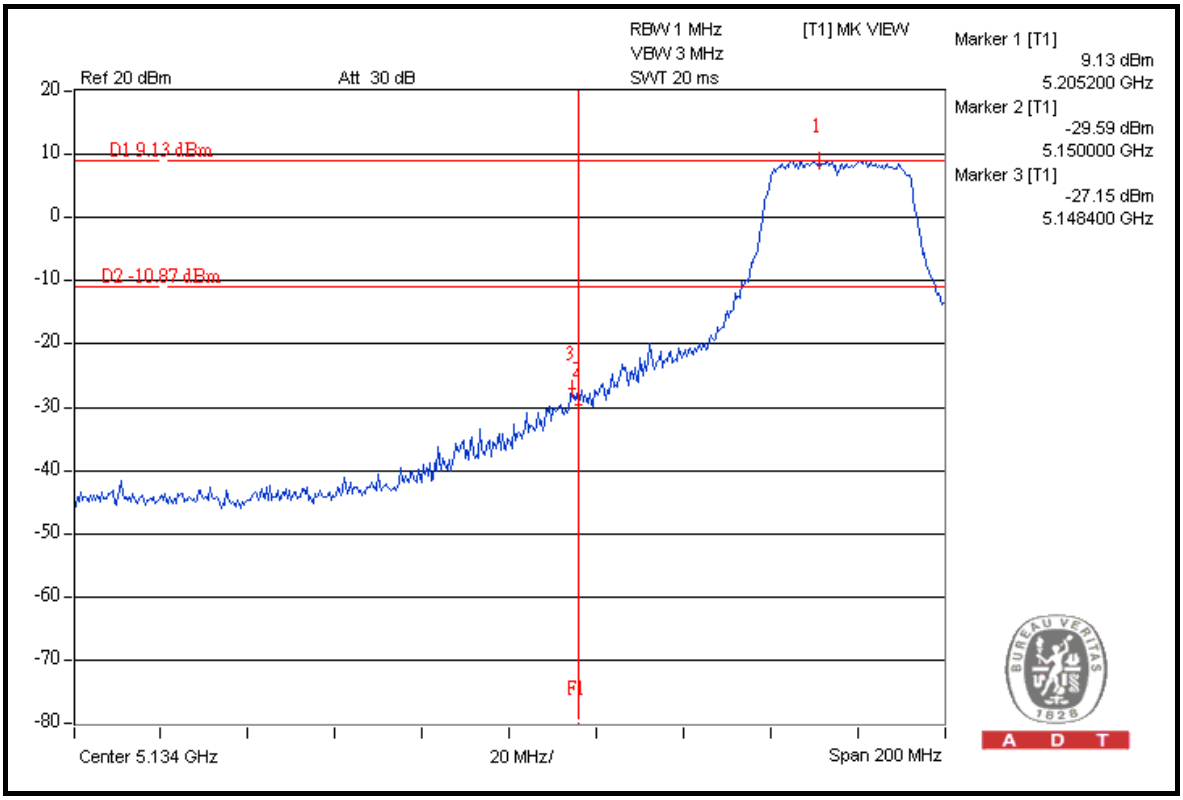
The band edge emission plot on the next page shows 36.28dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 42 is 107.11dBuV/m (Peak), so the maximum field strength in restrict band is 107.11 – 36.28 = 70.83dBuV/m which is under 74dBuV/m limit.

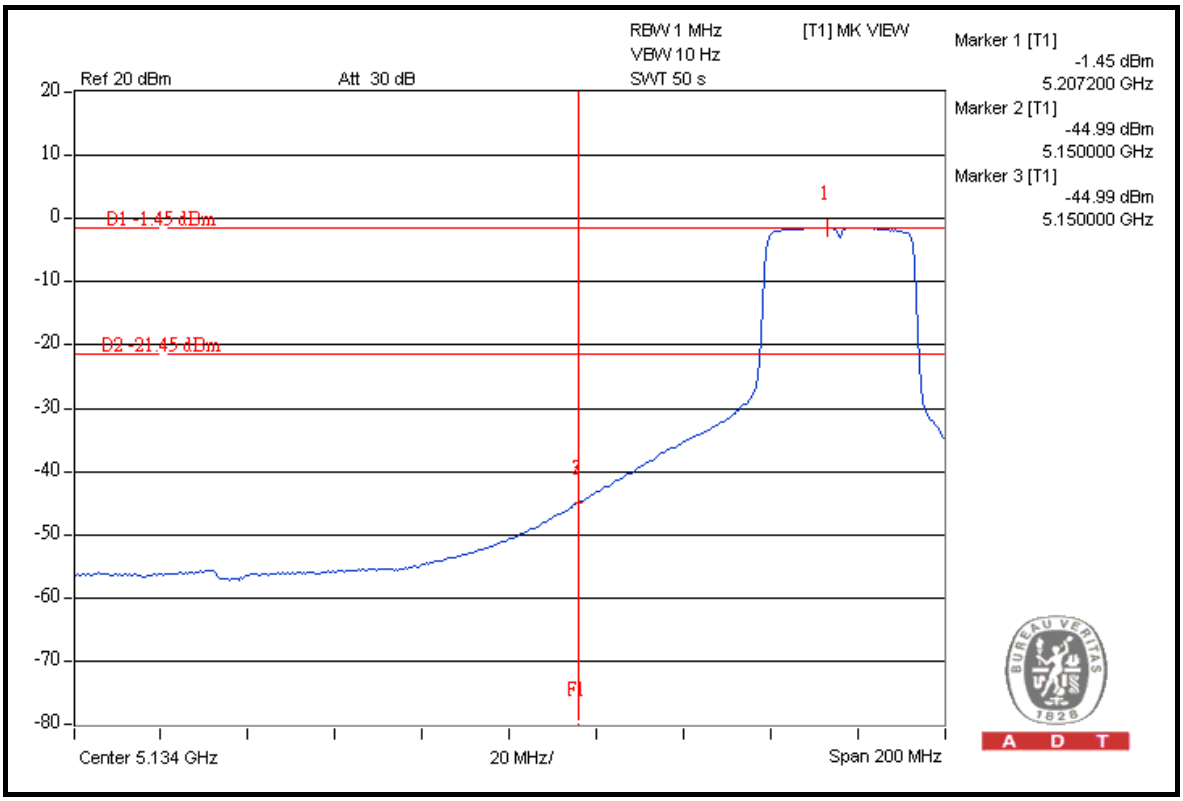
The band edge emission plot on the next page shows 43.54dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 42 is 96.47dBuV/m (Average), so the maximum field strength in restrict band is 96.47 – 43.54 = 52.93dBuV/m which is under 54dBuV/m limit.

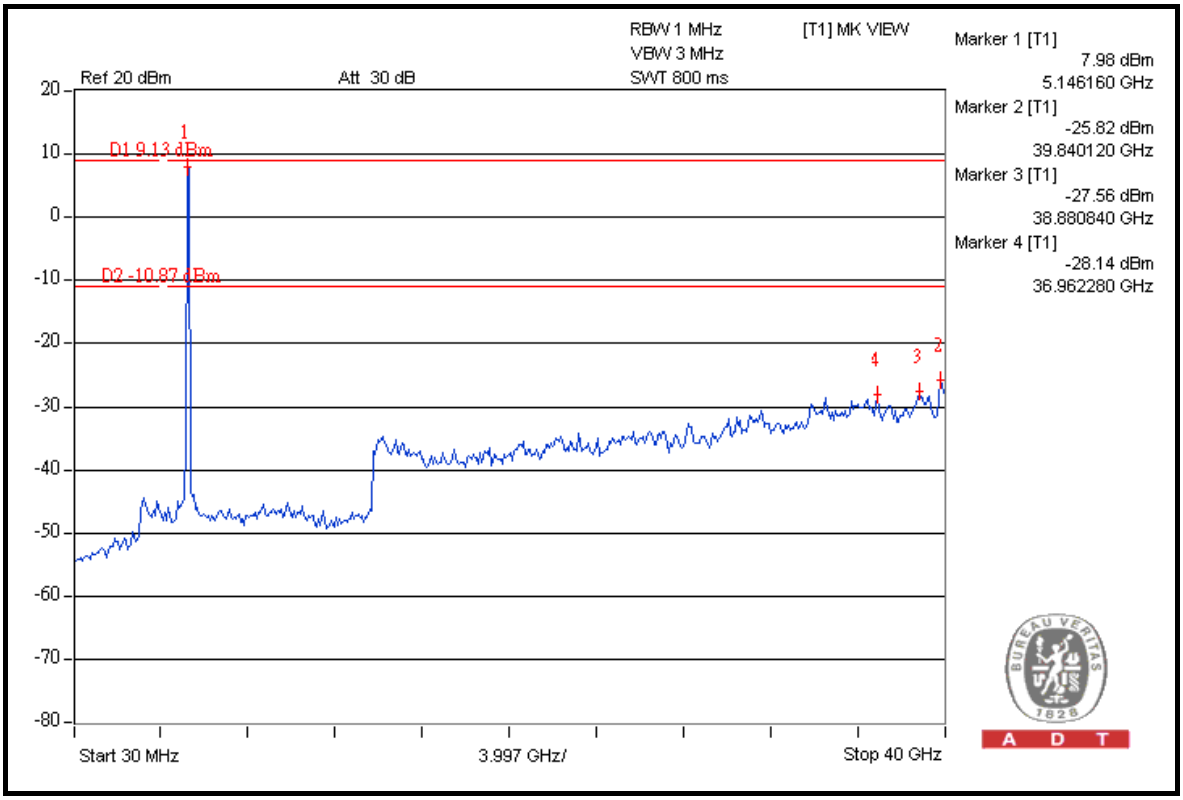
Channel 42 (5210MHz)

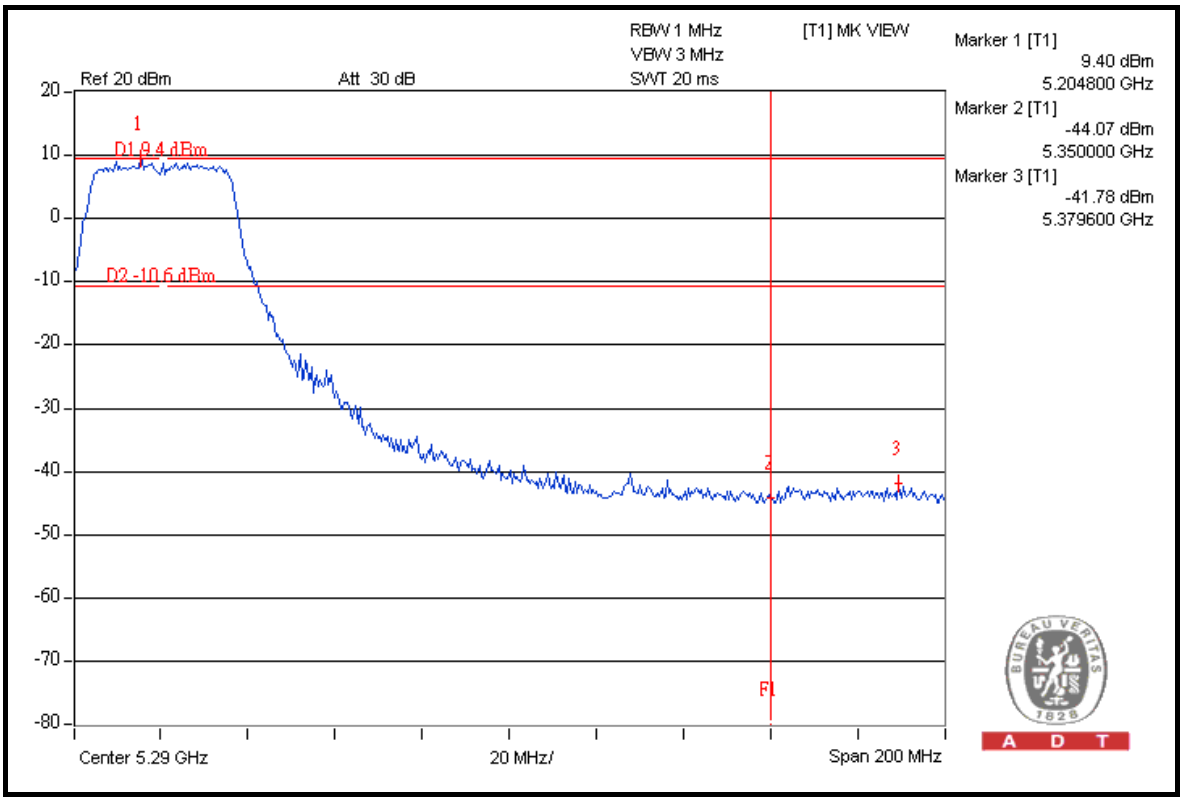
The band edge emission plot on the next page shows 51.18dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 42 is 107.11dBuV/m (Peak), so the maximum field strength in restrict band is 107.11 – 51.18 = 55.93dBuV/m which is under 74dBuV/m limit.

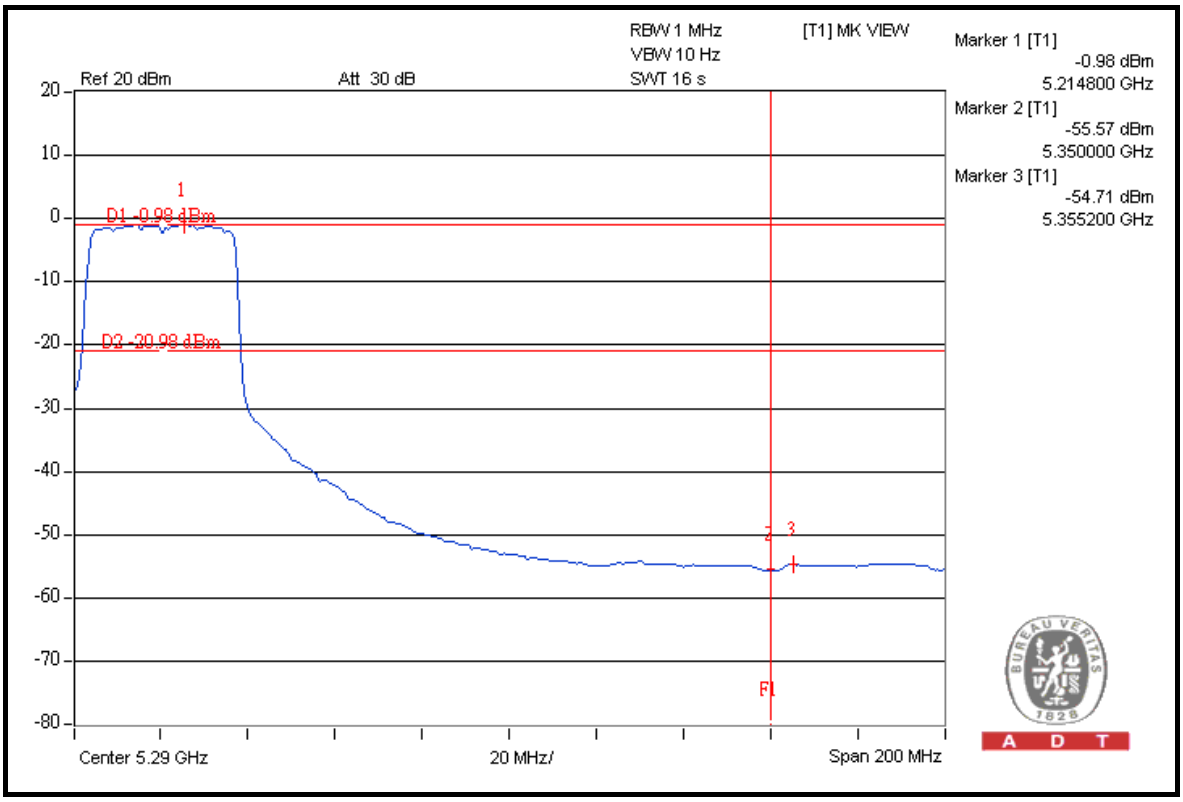
The band edge emission plot on the next page shows 53.73dBc between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 42 is 96.47dBuV/m (Average), so the maximum field strength in restrict band is 96.47 – 53.73 = 42.74dBuV/m which is under 54dBuV/m limit.

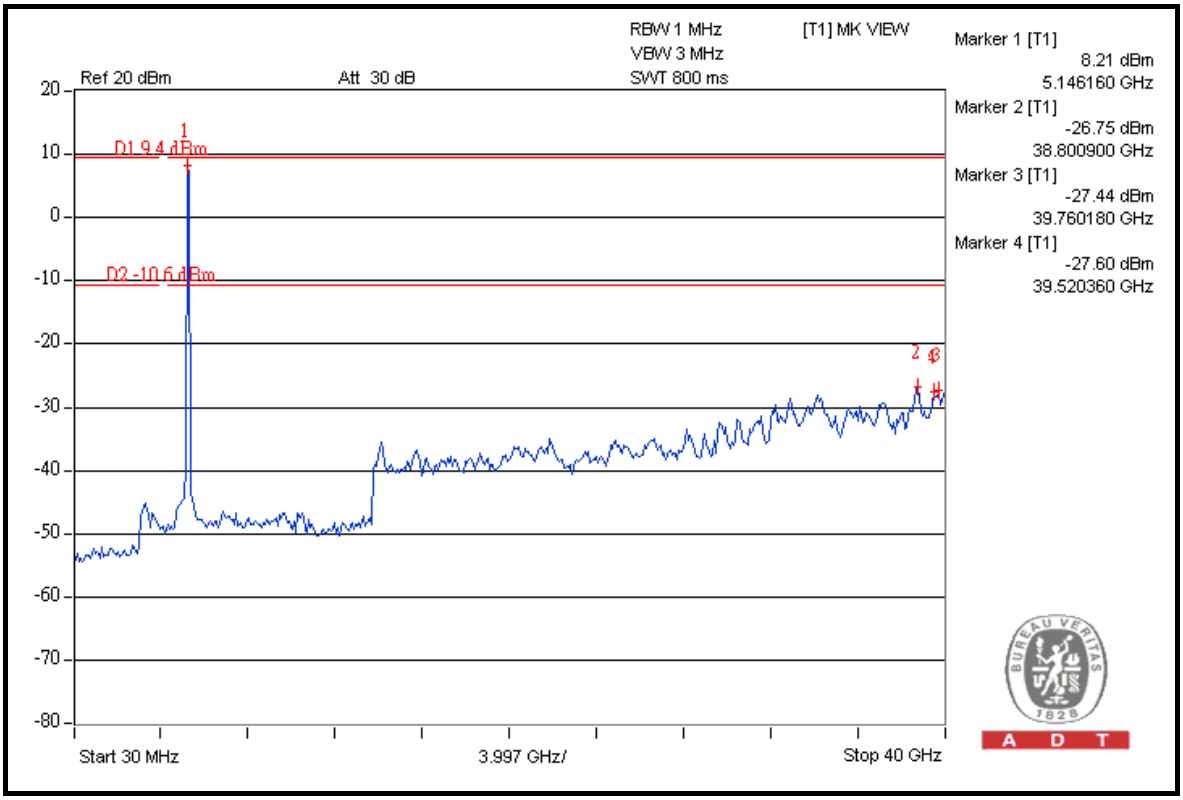

RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 9.13 dBm
D2 -10.87 dBm
Marker 1 [T1]
9.13 dBm
5.205200 GHz
Marker 2 [T1]
-29.59 dBm
5.150000 GHz
Marker 3 [T1]
-27.15 dBm
5.148400 GHz
Center 5.134 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -1.45 dBm
D2 -21.45 dBm
Marker 1 [T1]
-1.45 dBm
5.207200 GHz
Marker 2 [T1]
-44.99 dBm
5.150000 GHz
Marker 3 [T1]
-44.99 dBm
5.150000 GHz
Center 5.134 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 9.13 dBm
D2 -10.87 dBm
Marker 1 [T1]
7.98 dBm
5.146160 GHz
Marker 2 [T1]
-25.82 dBm
39.840120 GHz
Marker 3 [T1]
-27.56 dBm
38.880840 GHz
Marker 4 [T1]
-28.14 dBm
36.962280 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 3 MHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 9.4 dBm
D2 -10.6 dBm
Marker 1 [T1]
9.40 dBm
5.204800 GHz
Marker 2 [T1]
-44.07 dBm
5.350000 GHz
Marker 3 [T1]
-41.78 dBm
5.379600 GHz
Center 5.29 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-0.98 dBm
5.214800 GHz
Marker 2 [T1]
-55.57 dBm
5.350000 GHz
Marker 3 [T1]
-54.71 dBm
5.355200 GHz
D1 -0.98 dBm
D2 -20.98 dBm
Center 5.29 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 3 MHz
SWT 800 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
8.21 dBm
5.146160 GHz
Marker 2 [T1]
-26.75 dBm
38.800900 GHz
Marker 3 [T1]
-27.44 dBm
39.760180 GHz
Marker 4 [T1]
-27.60 dBm
39.520360 GHz
D1 9.4 dBm
D2 -10.6 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

4.8 ANTENNA REQUIREMENT

4.8.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.8.2 ANTENNA CONNECTED CONSTRUCTION

The antennas used in this product is Dipole antenna with R-SMA connector. The maximum Gain of the antenna is 2.26dBi.

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---