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FCC TEST REPORT (15.247)

REPORT NO.: RF110927C30

MODEL NO.: DWL-6600AP

FCC ID: KA2WL6600APA1

RECEIVED: Jul. 25, 2011

TESTED: Jul. 25 ~ Nov. 01, 2011

ISSUED: Nov. 07, 2011

APPLICANT: D-Link Corporation

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U.S.A.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	N/A	Nov. 07, 2011



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1. CERTIFICATION

PRODUCT: Unified Concurrent Dual-band Access Point

MODEL: DWL-6600AP

BRAND: D-Link

APPLICANT: D-Link Corporation

TESTED: Jul. 25 ~ Nov. 01, 2011

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**

ANSI C63.4-2003

ANSI C63.10-2009

The above equipment (model: DWL-6600AP) 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 :  , DATE : Nov. 07, 2011
Joanna Wang / Senior Specialist

APPROVED BY :  , DATE : Nov. 07, 2011
Gary Chang / Technical Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -12.32dB at 21.272MHz.
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 2483.5MHz and 5725.00MHz.
15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Internal antenna: Antenna connector is IPEX PLUG not a standard connector. External antenna: Antenna connector is R-SMA not a standard connector.

2.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44dB
Radiated emissions	30MHz ~ 200MHz	3.19dB
	200MHz ~1000MHz	3.21dB
	1GHz ~ 18GHz	2.26dB
	18GHz ~ 40GHz	1.94dB

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	Unified Concurrent Dual-band Access Point
MODEL NO.	DWL-6600AP
FCC ID	KA2WL6600APA1
POWER SUPPLY	12Vdc (adapter) 48Vdc (POE)
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b: 11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps
OPERATING FREQUENCY	2.4GHz: 2412 ~ 2462MHz 5.0GHz: 5745 ~ 5825MHz
NUMBER OF CHANNEL	2.4GHz: 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) 5.0GHz: 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	633.1mW for 2412 ~ 2462MHz 362.7mW for 5745 ~ 5825MHz
ANTENNA TYPE	Refer to NOTE
DATA CABLE	1.8m non-shielded RS232 to RJ11 cable without core
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Adapter

NOTE:

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

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

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

Frequency Band (MHz)	2412~2462	5180~5240	5745~5825
802.11b	√		
802.11g	√		
802.11a		√	√
802.11n (20MHz)	√	√	√
802.11n (40MHz)	√	√	√

3. The EUT uses following adapter and POE.

ADAPTER	
BRAND	D-Link
MODEL	CAP012121 US
INPUT POWER	100-240Vac, 47-63Hz, 0.35A
OUTPUT POWER	12.0Vdc, 1.0A
POWER LINE	1.2m non-shielded cable without core

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

**The POE is for support unit only.

4. The following antennas were provided to the EUT.

Internal antenna:

Antenna	Antenna Type	Antenna Gain	Antenna Connector
Ant 1 (2.4G)	PIFA	3.47 dBi	IPEX PLUG
Ant 2 (2.4G)	PIFA	2.23 dBi	
Ant 3 (5G)	PIFA	1.40 dBi @ 5.0G 1.43 dBi @ 5.2G 3.65 dBi @ 5.5G 4.19 dBi @ 5.8G	
Ant 4 (5G)	PIFA	2.38 dBi @ 5.0G 4.09 dBi @ 5.2G 4.75 dBi @ 5.5G 5.23 dBi @ 5.8G	

External antenna:

Antenna	Antenna Type	Antenna Gain	Antenna Connector
Ant 1, 2, 3, 4 (2.4+5G)	Dipole	3 dBi @ 2.4G 5 dBi @ 5.0G 5 dBi @ 5.2G 5 dBi @ 5.5G 5 dBi @ 5.8G	R-SMA

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

3.2 DESCRIPTION OF TEST MODES

FOR 2.4GHz:

11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

7 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2422MHz	5	2442MHz
2	2427MHz	6	2447MHz
3	2432MHz	7	2452MHz
4	2437MHz		

FOR 5.0GHz (5745 ~ 5825MHz):

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

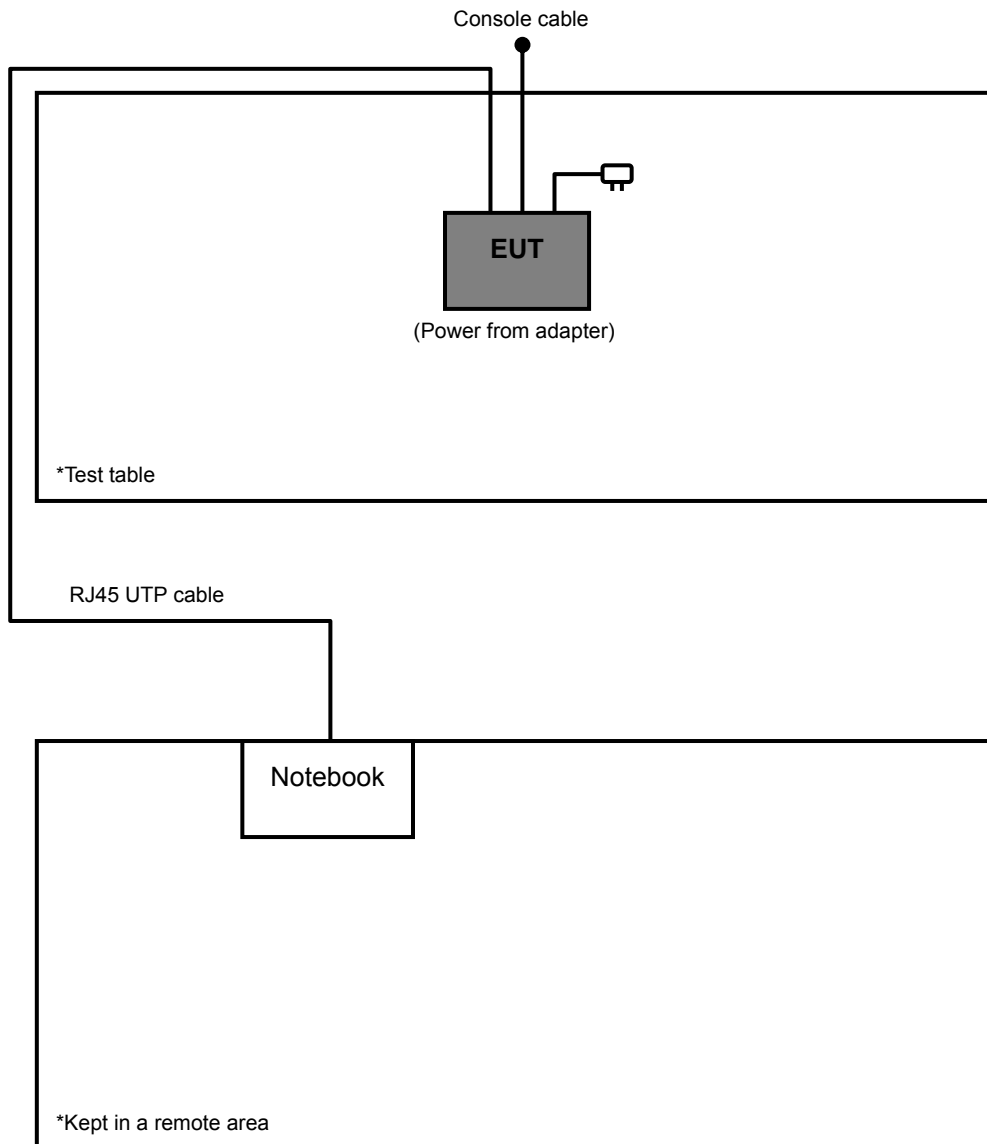
CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

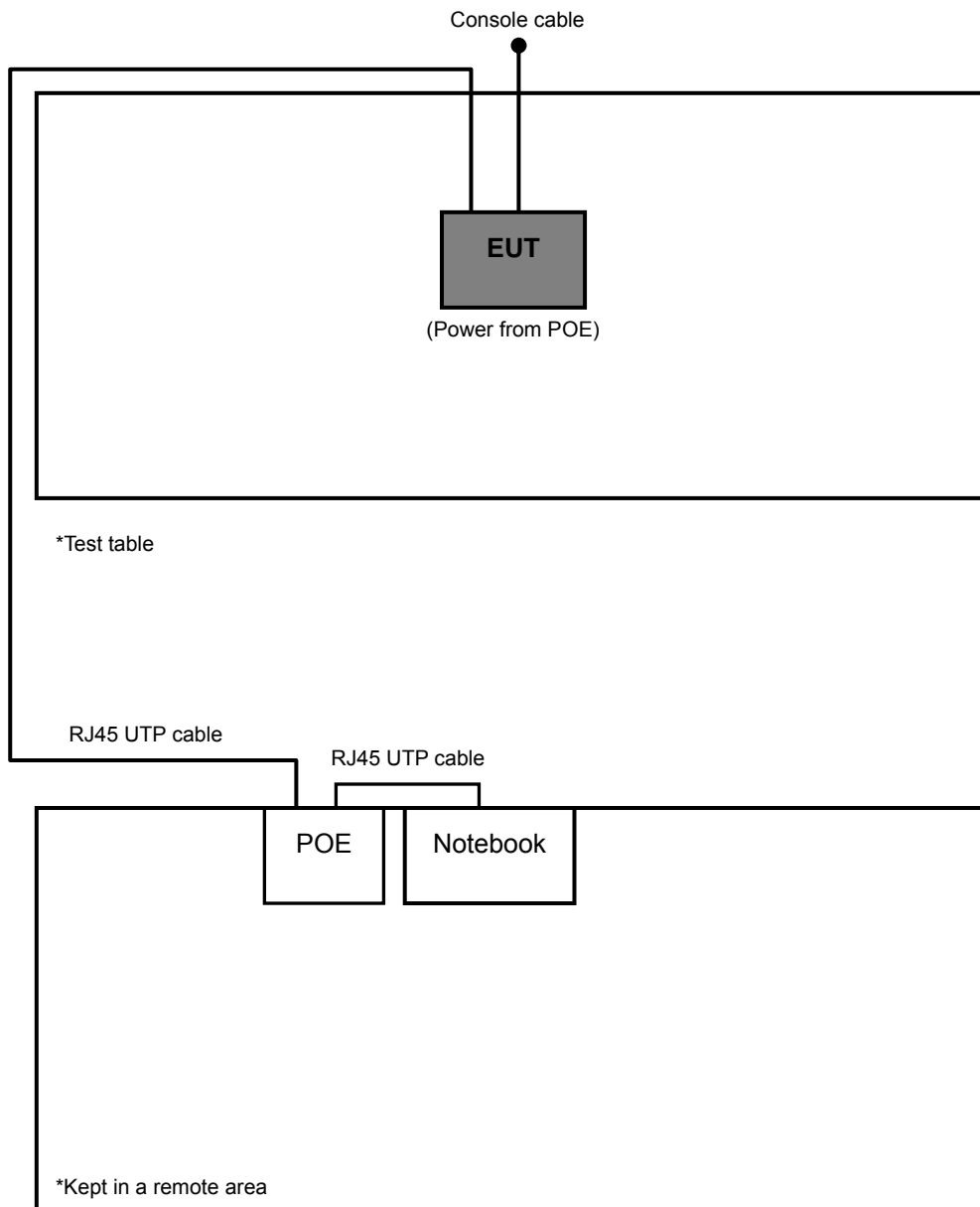
3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

TEST MODE A & C





TEST MODE B & D



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.4GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION	
	RE≥1G	RE<1G	PLC	APCM	ANTENNA	POWER
A	-	√	√	-	Internal	Adapter
B	√	√	√	√		POE
C	-	√	√	-	External	Adapter
D	√	√	√	-		POE

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

NOTE: “-”: Means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
B, D	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Z
B, D	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Z
B, D	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	Z
B, D	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0	Z

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A, B, C, D	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	7.2	Z

POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C, D	802.11n (20MHz)	1 to 11	6	OFDM	BPSK	7.2



BANDEDGE MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
B	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
B	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
B	802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2
B	802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	15.0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
B	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
B	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
B	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
B	802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 68%RH	120Vac, 60Hz	Brad Wu
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Antony Lee
PLC	24deg. C, 65%RH (Adapter mode) 24deg. C, 65%RH (POE mode)	120Vac, 60Hz	Antony Lee (Adapter mode) Match Tsui (POE mode)
APCM	25deg. C, 68%RH	120Vac, 60Hz	Antony Lee



FOR 5.745 ~ 5.825GHz:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION	
	RE≥1G	RE<1G	PLC	APCM	ANTENNA	POWER
A	-	√	√	-	Internal	Adapter
B	√	√	√	√		POE
C	-	√	√	-	External	Adapter
D	√	√	√	-		POE

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

NOTE: "-": Means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
B, D	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0	Z
B, D	802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2	Z
B, D	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0	Z

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
A, B, C, D	802.11n (40MHz)	151 to 159	151	OFDM	BPSK	15.0	Z

POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C, D	802.11n (40MHz)	151 to 159	151	OFDM	BPSK	15.0

**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	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
B	802.11a	149 to 165	149, 165	OFDM	BPSK	6.0
B	802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	7.2
B	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
B	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
B	802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	7.2
B	802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	15.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE \geq 1G	26deg. C, 65%RH	120Vac, 60Hz	Frank Wang
RE $<$ 1G	25deg. C, 65%RH	120Vac, 60Hz	Antony Lee
PLC	24deg. C, 65%RH (Adapter mode) 24deg. C, 65%RH (POE mode)	120Vac, 60Hz	Antony Lee (Adapter mode) Match Tsui (POE mode)
APCM	25deg. C, 68%RH	120Vac, 60Hz	Antony Lee



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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 C (15.247)

ANSI C63.4-2003

ANSI C63.10-2009

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	E5410	1HC2XM1	FCC DoC Approved
2	POE	PowerDsine™ 3001	PD-3001/AC	NA	NA

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

NOTE:

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



4. TEST TYPES AND RESULTS (FOR 2.4GHz BAND)

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a). Other emissions shall be at least 20dB below the highest level of the desired power.

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.



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4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 27, 2010	Dec. 26, 2011
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Jan. 06, 2011	Jan. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01961	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10738	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250792/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	Aug. 19, 2011	Aug. 18, 2012
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

- 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 460141.
 5. The IC Site Registration No. is IC7450F-4.



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4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

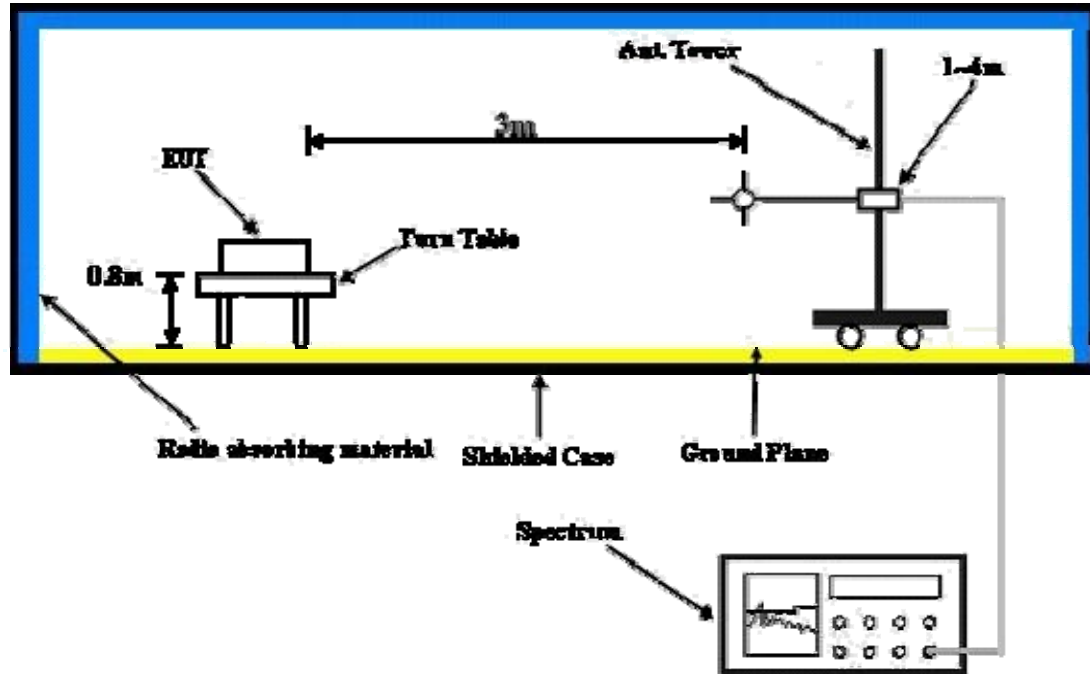
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 100kHz and video bandwidth is 300kHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on the testing table.
- b. Prepared the notebook outside of testing area to act as communication partner.
- c. The notebook ran a test program (provided by manufacturer) to enable EUT under continuous communication link.



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4.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA :

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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	2390.00	62.5 PK	74.0	-11.5	1.21 H	305	29.80	32.70
2	2390.00	49.8 AV	54.0	-4.2	1.21 H	305	17.10	32.70
3	*2412.00	110.5 PK			1.21 H	305	77.80	32.70
4	*2412.00	106.4 AV			1.21 H	305	73.70	32.70
5	4824.00	56.0 PK	74.0	-18.0	1.18 H	17	17.00	39.00
6	4824.00	52.0 AV	54.0	-2.0	1.18 H	17	13.00	39.00
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	2390.00	57.4 PK	74.0	-16.6	1.04 V	20	24.70	32.70
2	2390.00	46.8 AV	54.0	-7.2	1.04 V	20	14.10	32.70
3	*2412.00	103.3 PK			1.04 V	20	70.60	32.70
4	*2412.00	99.8 AV			1.04 V	20	67.10	32.70
5	4824.00	53.0 PK	74.0	-21.0	1.07 V	329	14.00	39.00
6	4824.00	46.4 AV	54.0	-7.6	1.07 V	329	7.40	39.00

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	*2437.00	112.1 PK			1.80 H	298	79.30	32.80
2	*2437.00	108.0 AV			1.80 H	298	75.20	32.80
3	4874.00	56.4 PK	74.0	-17.6	1.61 H	23	17.30	39.10
4	4874.00	52.4 AV	54.0	-1.6	1.61 H	23	13.30	39.10
5	7311.00	57.8 PK	74.0	-16.2	1.63 H	72	12.70	45.10
6	7311.00	45.2 AV	54.0	-8.8	1.63 H	72	0.10	45.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.7 PK			1.02 V	16	72.90	32.80
2	*2437.00	102.7 AV			1.02 V	16	69.90	32.80
3	4874.00	53.6 PK	74.0	-20.4	1.00 V	320	14.50	39.10
4	4874.00	47.2 AV	54.0	-6.8	1.00 V	320	8.10	39.10
5	7311.00	57.4 PK	74.0	-16.6	1.13 V	358	12.30	45.10
6	7311.00	44.8 AV	54.0	-9.2	1.13 V	358	-0.30	45.10

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	*2462.00	112.8 PK			1.00 H	331	79.90	32.90
2	*2462.00	108.0 AV			1.00 H	331	75.10	32.90
3	2483.50	58.4 PK	74.0	-15.6	1.00 H	332	25.40	33.00
4	2483.50	48.8 AV	54.0	-5.2	1.00 H	332	15.80	33.00
5	4924.00	54.9 PK	74.0	-19.1	1.00 H	9	15.70	39.20
6	4924.00	52.7 AV	54.0	-1.3	1.00 H	9	13.50	39.20
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	*2462.00	105.2 PK			1.03 V	28	72.30	32.90
2	*2462.00	102.2 AV			1.03 V	28	69.30	32.90
3	2483.50	58.7 PK	74.0	-15.3	1.03 V	28	25.70	33.00
4	2483.50	47.2 AV	54.0	-6.8	1.03 V	28	14.20	33.00
5	4924.00	53.2 PK	74.0	-20.8	1.05 V	331	14.00	39.20
6	4924.00	47.1 AV	54.0	-6.9	1.05 V	331	7.90	39.20

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	2390.00	58.2 PK	74.0	-15.8	1.00 H	19	25.50	32.70
2	2390.00	45.7 AV	54.0	-8.3	1.00 H	19	13.00	32.70
3	*2412.00	106.5 PK			1.00 H	19	73.80	32.70
4	*2412.00	102.2 AV			1.00 H	19	69.50	32.70
5	2492.00	61.9 PK	74.0	-12.1	1.00 H	11	28.90	33.00
6	2492.00	49.7 AV	54.0	-4.3	1.00 H	11	16.70	33.00
7	4824.00	52.8 PK	74.0	-21.2	1.06 H	95	13.80	39.00
8	4824.00	47.4 AV	54.0	-6.6	1.06 H	95	8.40	39.00
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	2390.00	58.6 PK	74.0	-15.4	1.10 V	20	25.90	32.70
2	2390.00	46.2 AV	54.0	-7.8	1.10 V	20	13.50	32.70
3	*2412.00	108.0 PK			1.10 V	20	75.30	32.70
4	*2412.00	103.9 AV			1.10 V	20	71.20	32.70
5	2492.00	63.0 PK	74.0	-11.0	1.06 V	16	30.00	33.00
6	2492.00	51.9 AV	54.0	-2.1	1.06 V	16	18.90	33.00
7	4824.00	56.1 PK	74.0	-17.9	1.13 V	202	17.10	39.00
8	4824.00	52.4 AV	54.0	-1.6	1.13 V	202	13.40	39.00

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	*2437.00	108.0 PK			1.01 H	22	75.20	32.80
2	*2437.00	103.6 AV			1.01 H	22	70.80	32.80
3	4874.00	52.4 PK	74.0	-21.6	1.01 H	16	13.30	39.10
4	4874.00	47.0 AV	54.0	-7.0	1.01 H	16	7.90	39.10
5	7311.00	54.2 PK	74.0	-19.8	1.05 H	116	9.10	45.10
6	7311.00	40.6 AV	54.0	-13.4	1.05 H	116	-4.50	45.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	109.6 PK			1.10 V	19	76.80	32.80
2	*2437.00	105.4 AV			1.10 V	19	72.60	32.80
3	4874.00	56.8 PK	74.0	-17.2	1.03 V	201	17.70	39.10
4	4874.00	52.9 AV	54.0	-1.1	1.03 V	201	13.80	39.10
5	7311.00	54.9 PK	74.0	-19.1	1.05 V	116	9.80	45.10
6	7311.00	41.6 AV	54.0	-12.4	1.05 V	116	-3.50	45.10

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	*2462.00	108.5 PK			1.02 H	24	75.60	32.90
2	*2462.00	104.1 AV			1.02 H	24	71.20	32.90
3	2500.00	60.8 PK	74.0	-13.2	1.02 H	24	27.70	33.10
4	2500.00	50.3 AV	54.0	-3.7	1.02 H	24	17.20	33.10
5	4924.00	52.9 PK	74.0	-21.1	1.06 H	155	13.70	39.20
6	4924.00	47.6 AV	54.0	-6.4	1.06 H	155	8.40	39.20
7	7386.00	54.8 PK	74.0	-19.2	1.03 H	216	9.50	45.30
8	7386.00	41.0 AV	54.0	-13.0	1.03 H	216	-4.30	45.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	110.4 PK			1.06 V	4	77.50	32.90
2	*2462.00	106.1 AV			1.06 V	4	73.20	32.90
3	2500.00	62.0 PK	74.0	-12.0	1.07 V	4	28.90	33.10
4	2500.00	51.6 AV	54.0	-2.4	1.07 V	4	18.50	33.10
5	4924.00	55.8 PK	74.0	-18.2	1.02 V	194	16.60	39.20
6	4924.00	52.5 AV	54.0	-1.5	1.02 V	194	13.30	39.20
7	7386.00	54.4 PK	74.0	-19.6	1.02 V	47	9.10	45.30
8	7386.00	42.2 AV	54.0	-11.8	1.02 V	47	-3.10	45.30

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	2390.00	63.9 PK	74.0	-10.1	1.05 H	149	31.20	32.70
2	2390.00	51.8 AV	54.0	-2.2	1.05 H	149	19.10	32.70
3	*2412.00	112.0 PK			1.06 H	158	79.30	32.70
4	*2412.00	102.2 AV			1.06 H	158	69.50	32.70
5	4824.00	48.6 PK	74.0	-25.4	1.20 H	167	9.60	39.00
6	4824.00	36.9 AV	54.0	-17.1	1.20 H	167	-2.10	39.00
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	2390.00	62.1 PK	74.0	-11.9	1.34 V	249	29.40	32.70
2	2390.00	49.9 AV	54.0	-4.1	1.34 V	249	17.20	32.70
3	*2412.00	106.7 PK			1.16 V	314	74.00	32.70
4	*2412.00	95.2 AV			1.16 V	314	62.50	32.70
5	4824.00	48.5 PK	74.0	-25.5	1.67 V	206	9.50	39.00
6	4824.00	34.1 AV	54.0	-19.9	1.67 V	206	-4.90	39.00

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	*2437.00	113.7 PK			1.30 H	276	80.90	32.80
2	*2437.00	103.0 AV			1.30 H	276	70.20	32.80
3	4874.00	46.8 PK	74.0	-27.2	1.65 H	205	7.70	39.10
4	4874.00	36.1 AV	54.0	-17.9	1.65 H	205	-3.00	39.10
5	7311.00	46.4 PK	74.0	-27.6	1.19 H	20	1.30	45.10
6	7311.00	36.9 AV	54.0	-17.1	1.19 H	20	-8.20	45.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.5 PK			1.14 V	351	74.70	32.80
2	*2437.00	96.1 AV			1.14 V	351	63.30	32.80
3	4874.00	47.3 PK	74.0	-26.7	1.53 V	281	8.20	39.10
4	4874.00	36.4 AV	54.0	-17.6	1.53 V	281	-2.70	39.10
5	7311.00	46.7 PK	74.0	-27.3	1.27 V	306	1.60	45.10
6	7311.00	34.3 AV	54.0	-19.7	1.27 V	306	-10.80	45.10

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	*2462.00	111.3 PK			1.28 H	261	78.40	32.90
2	*2462.00	101.3 AV			1.28 H	261	68.40	32.90
3	2483.50	70.4 PK	74.0	-3.6	1.20 H	328	37.40	33.00
4	2483.50	52.8 AV	54.0	-1.2	1.20 H	328	19.80	33.00
5	4924.00	50.9 PK	74.0	-23.1	1.08 H	352	11.70	39.20
6	4924.00	36.7 AV	54.0	-17.3	1.08 H	352	-2.50	39.20
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	*2462.00	107.0 PK			1.14 V	276	74.10	32.90
2	*2462.00	95.1 AV			1.14 V	276	62.20	32.90
3	2483.50	62.5 PK	74.0	-11.5	1.69 V	326	29.50	33.00
4	2483.50	51.4 AV	54.0	-2.6	1.69 V	326	18.40	33.00
5	4924.00	47.3 PK	74.0	-26.7	1.64 V	241	8.10	39.20
6	4924.00	35.6 AV	54.0	-18.4	1.64 V	241	-3.60	39.20

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



A D T

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

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	2390.00	68.4 PK	74.0	-5.6	1.19 H	6	35.70	32.70
2	2390.00	52.8 AV	54.0	-1.2	1.19 H	6	20.10	32.70
3	*2412.00	112.6 PK			1.17 H	200	79.90	32.70
4	*2412.00	102.1 AV			1.17 H	200	69.40	32.70
5	4824.00	56.6 PK	74.0	-17.4	1.15 H	13	17.60	39.00
6	4824.00	41.0 AV	54.0	-13.0	1.15 H	13	2.00	39.00
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	2390.00	66.1 PK	74.0	-7.9	1.00 V	189	33.40	32.70
2	2390.00	51.8 AV	54.0	-2.2	1.00 V	189	19.10	32.70
3	*2412.00	111.9 PK			1.00 V	48	79.20	32.70
4	*2412.00	101.5 AV			1.00 V	48	68.80	32.70
5	4824.00	55.6 PK	74.0	-18.4	1.00 V	20	16.60	39.00
6	4824.00	40.2 AV	54.0	-13.8	1.00 V	20	1.20	39.00

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	*2437.00	113.3 PK			1.16 H	194	80.50	32.80
2	*2437.00	103.4 AV			1.16 H	194	70.60	32.80
3	4874.00	55.6 PK	74.0	-18.4	1.24 H	13	16.50	39.10
4	4874.00	40.1 AV	54.0	-13.9	1.24 H	13	1.00	39.10
5	7311.00	51.7 PK	74.0	-22.3	1.24 H	27	6.60	45.10
6	7311.00	37.9 AV	54.0	-16.1	1.24 H	27	-7.20	45.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	112.6 PK			1.23 V	171	79.80	32.80
2	*2437.00	102.1 AV			1.23 V	171	69.30	32.80
3	4874.00	54.4 PK	74.0	-19.6	1.20 V	28	15.30	39.10
4	4874.00	38.9 AV	54.0	-15.1	1.20 V	28	-0.20	39.10
5	7311.00	52.9 PK	74.0	-21.1	1.24 V	301	7.80	45.10
6	7311.00	38.4 AV	54.0	-15.6	1.24 V	301	-6.70	45.10

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	*2462.00	112.1 PK			1.14 H	14	79.20	32.90
2	*2462.00	101.3 AV			1.14 H	14	68.40	32.90
3	2483.50	70.1 PK	74.0	-3.9	1.16 H	172	37.10	33.00
4	2483.50	52.6 AV	54.0	-1.4	1.16 H	172	19.60	33.00
5	4924.00	52.6 PK	74.0	-21.4	1.11 H	8	13.40	39.20
6	4924.00	37.8 AV	54.0	-16.2	1.11 H	8	-1.40	39.20
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	*2462.00	111.3 PK			1.19 V	206	78.40	32.90
2	*2462.00	100.8 AV			1.19 V	206	67.90	32.90
3	2483.50	69.8 PK	74.0	-4.2	1.26 V	257	36.80	33.00
4	2483.50	52.2 AV	54.0	-1.8	1.26 V	257	19.20	33.00
5	4924.00	52.1 PK	74.0	-21.9	1.32 V	152	12.90	39.20
6	4924.00	37.5 AV	54.0	-16.5	1.32 V	152	-1.70	39.20

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



A D T

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	2390.00	64.5 PK	74.0	-9.5	1.00 H	347	31.80	32.70
2	2390.00	52.4 AV	54.0	-1.6	1.00 H	0	19.70	32.70
3	*2412.00	112.6 PK			1.00 H	345	79.90	32.70
4	*2412.00	102.7 AV			1.00 H	345	70.00	32.70
5	4824.00	49.0 PK	74.0	-25.0	1.01 H	52	10.00	39.00
6	4824.00	37.3 AV	54.0	-16.7	1.01 H	52	-1.70	39.00
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	2390.00	62.7 PK	74.0	-11.3	1.05 V	8	30.00	32.70
2	2390.00	50.5 AV	54.0	-3.5	1.05 V	8	17.80	32.70
3	*2412.00	107.1 PK			1.05 V	8	74.40	32.70
4	*2412.00	95.8 AV			1.05 V	8	63.10	32.70
5	4824.00	48.9 PK	74.0	-25.1	1.00 V	34	9.90	39.00
6	4824.00	34.6 AV	54.0	-19.4	1.00 V	34	-4.40	39.00

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	*2437.00	114.6 PK			1.12 H	3	81.80	32.80
2	*2437.00	103.8 AV			1.12 H	3	71.00	32.80
3	4874.00	47.2 PK	74.0	-26.8	1.00 H	9	8.10	39.10
4	4874.00	36.9 AV	54.0	-17.1	1.00 H	9	-2.20	39.10
5	7311.00	47.1 PK	74.0	-26.9	1.20 H	258	2.00	45.10
6	7311.00	37.8 AV	54.0	-16.2	1.20 H	258	-7.30	45.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	108.2 PK			1.00 V	26	75.40	32.80
2	*2437.00	97.8 AV			1.00 V	26	65.00	32.80
3	4874.00	48.2 PK	74.0	-25.8	1.00 V	162	9.10	39.10
4	4874.00	37.2 AV	54.0	-16.8	1.00 V	162	-1.90	39.10
5	7311.00	47.6 PK	74.0	-26.4	1.03 V	341	2.50	45.10
6	7311.00	35.1 AV	54.0	-18.9	1.03 V	341	-10.00	45.10

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	*2462.00	111.1 PK			1.44 H	6	78.20	32.90
2	*2462.00	100.9 AV			1.44 H	6	68.00	32.90
3	2483.50	70.6 PK	74.0	-3.4	1.44 H	5	37.60	33.00
4	2483.50	52.5 AV	54.0	-1.5	1.44 H	5	19.50	33.00
5	4924.00	51.1 PK	74.0	-22.9	1.00 H	23	11.90	39.20
6	4924.00	37.0 AV	54.0	-17.0	1.00 H	23	-2.20	39.20
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	*2462.00	106.9 PK			1.05 V	3	74.00	32.90
2	*2462.00	94.8 AV			1.05 V	3	61.90	32.90
3	2483.50	62.2 PK	74.0	-11.8	1.05 V	2	29.20	33.00
4	2483.50	51.2 AV	54.0	-2.8	1.05 V	2	18.20	33.00
5	4924.00	47.2 PK	74.0	-26.8	1.02 V	329	8.00	39.20
6	4924.00	35.3 AV	54.0	-18.7	1.02 V	329	-3.90	39.20

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	2390.00	71.9 PK	74.0	-2.1	1.08 H	22	39.20	32.70
2	2390.00	52.7 AV	54.0	-1.3	1.08 H	22	20.00	32.70
3	*2412.00	113.6 PK			1.08 H	22	80.90	32.70
4	*2412.00	100.1 AV			1.08 H	22	67.40	32.70
5	4824.00	55.9 PK	74.0	-18.1	1.04 H	113	16.90	39.00
6	4824.00	42.1 AV	54.0	-11.9	1.04 H	113	3.10	39.00
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	2390.00	71.3 PK	74.0	-2.7	1.15 V	0	38.60	32.70
2	2390.00	52.2 AV	54.0	-1.8	1.15 V	0	19.50	32.70
3	*2412.00	111.3 PK			1.15 V	16	78.60	32.70
4	*2412.00	98.7 AV			1.15 V	16	66.00	32.70
5	4824.00	55.6 PK	74.0	-18.4	1.08 V	115	16.60	39.00
6	4824.00	41.8 AV	54.0	-12.2	1.08 V	115	2.80	39.00

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	*2437.00	114.2 PK			1.05 H	23	81.40	32.80
2	*2437.00	100.9 AV			1.05 H	23	68.10	32.80
3	4874.00	56.4 PK	74.0	-17.6	1.03 H	116	17.30	39.10
4	4874.00	42.5 AV	54.0	-11.5	1.03 H	116	3.40	39.10
5	7311.00	56.2 PK	74.0	-17.8	1.01 H	59	11.10	45.10
6	7311.00	41.0 AV	54.0	-13.0	1.01 H	59	-4.10	45.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	111.6 PK			1.10 V	20	78.80	32.80
2	*2437.00	99.0 AV			1.10 V	20	66.20	32.80
3	4874.00	55.9 PK	74.0	-18.1	1.03 V	114	16.80	39.10
4	4874.00	42.1 AV	54.0	-11.9	1.03 V	114	3.00	39.10
5	7311.00	56.6 PK	74.0	-17.4	1.03 V	125	11.50	45.10
6	7311.00	41.3 AV	54.0	-12.7	1.03 V	125	-3.80	45.10

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	*2462.00	112.1 PK			1.05 H	18	79.20	32.90
2	*2462.00	98.4 AV			1.05 H	18	65.50	32.90
3	2483.50	71.2 PK	74.0	-2.8	1.02 H	21	38.20	33.00
4	2483.50	52.9 AV	54.0	-1.1	1.02 H	21	19.90	33.00
5	4924.00	56.1 PK	74.0	-17.9	1.04 H	113	16.90	39.20
6	4924.00	42.2 AV	54.0	-11.8	1.04 H	113	3.00	39.20
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	*2462.00	109.8 PK			1.09 V	18	76.90	32.90
2	*2462.00	97.1 AV			1.09 V	18	64.20	32.90
3	2483.50	70.1 PK	74.0	-3.9	1.09 V	18	37.10	33.00
4	2483.50	51.6 AV	54.0	-2.4	1.09 V	18	18.60	33.00
5	4924.00	55.4 PK	74.0	-18.6	1.08 V	111	16.20	39.20
6	4924.00	41.8 AV	54.0	-12.2	1.08 V	111	2.60	39.20

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



A D T

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	2390.00	71.3 PK	74.0	-2.7	1.47 H	11	38.60	32.70
2	2390.00	52.2 AV	54.0	-1.8	1.47 H	11	19.50	32.70
3	*2422.00	107.3 PK			1.45 H	360	74.50	32.80
4	*2422.00	97.3 AV			1.45 H	360	64.50	32.80
5	4844.00	47.2 PK	74.0	-26.8	1.26 H	37	8.20	39.00
6	4844.00	35.9 AV	54.0	-18.1	1.26 H	37	-3.10	39.00
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	2390.00	62.5 PK	74.0	-11.5	1.00 V	33	29.80	32.70
2	2390.00	48.6 AV	54.0	-5.4	1.00 V	33	15.90	32.70
3	*2422.00	101.9 PK			1.00 V	29	69.10	32.80
4	*2422.00	90.5 AV			1.00 V	29	57.70	32.80
5	4844.00	47.8 PK	74.0	-26.2	1.00 V	56	8.80	39.00
6	4844.00	35.0 AV	54.0	-19.0	1.00 V	56	-4.00	39.00

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	*2437.00	109.1 PK			1.77 H	297	76.30	32.80
2	*2437.00	98.3 AV			1.77 H	297	65.50	32.80
3	4874.00	47.6 PK	74.0	-26.4	1.22 H	39	8.50	39.10
4	4874.00	35.4 AV	54.0	-18.6	1.22 H	39	-3.70	39.10
5	7311.00	47.5 PK	74.0	-26.5	1.29 H	41	2.40	45.10
6	7311.00	36.2 AV	54.0	-17.8	1.29 H	41	-8.90	45.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	102.6 PK			1.00 V	31	69.80	32.80
2	*2437.00	91.6 AV			1.00 V	31	58.80	32.80
3	4874.00	48.6 PK	74.0	-25.4	1.00 V	169	9.50	39.10
4	4874.00	37.9 AV	54.0	-16.1	1.00 V	169	-1.20	39.10
5	7311.00	48.0 PK	74.0	-26.0	1.08 V	179	2.90	45.10
6	7311.00	35.5 AV	54.0	-18.5	1.08 V	179	-9.60	45.10

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
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	*2452.00	105.3 PK			1.20 H	311	72.40	32.90
2	*2452.00	94.8 AV			1.20 H	311	61.90	32.90
3	2483.50	67.3 PK	74.0	-6.7	1.41 H	20	34.30	33.00
4	2483.50	53.0 AV	54.0	-1.0	1.41 H	20	20.00	33.00
5	4904.00	47.3 PK	74.0	-26.7	1.20 H	39	8.10	39.20
6	4904.00	35.4 AV	54.0	-18.6	1.20 H	39	-3.80	39.20
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	*2452.00	97.5 PK			1.00 V	18	64.60	32.90
2	*2452.00	87.9 AV			1.00 V	18	55.00	32.90
3	2483.50	60.6 PK	74.0	-13.4	1.00 V	16	27.60	33.00
4	2483.50	48.9 AV	54.0	-5.1	1.00 V	16	15.90	33.00
5	4904.00	48.6 PK	74.0	-25.4	1.00 V	62	9.40	39.20
6	4904.00	35.3 AV	54.0	-18.7	1.00 V	62	-3.90	39.20

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	2390.00	72.8 PK	74.0	-1.2	1.07 H	25	40.10	32.70
2	2390.00	52.9 AV	54.0	-1.1	1.07 H	25	20.20	32.70
3	*2422.00	109.0 PK			1.05 H	23	76.20	32.80
4	*2422.00	94.6 AV			1.05 H	23	61.80	32.80
5	4844.00	47.0 PK	74.0	-27.0	1.06 H	149	8.00	39.00
6	4844.00	35.6 AV	54.0	-18.4	1.06 H	149	-3.40	39.00
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	2390.00	71.5 PK	74.0	-2.5	1.14 V	16	38.80	32.70
2	2390.00	51.2 AV	54.0	-2.8	1.14 V	16	18.50	32.70
3	*2422.00	106.8 PK			1.14 V	16	74.00	32.80
4	*2422.00	92.6 AV			1.14 V	16	59.80	32.80
5	4844.00	46.5 PK	74.0	-27.5	1.01 V	114	7.50	39.00
6	4844.00	35.2 AV	54.0	-18.8	1.01 V	114	-3.80	39.00

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	2390.00	63.3 PK	74.0	-10.7	1.03 H	15	30.60	32.70
2	2390.00	49.3 AV	54.0	-4.7	1.03 H	15	16.60	32.70
3	*2437.00	110.6 PK			1.05 H	21	77.80	32.80
4	*2437.00	96.0 AV			1.05 H	21	63.20	32.80
5	2483.50	71.8 PK	74.0	-2.2	1.03 H	15	38.80	33.00
6	2483.50	52.8 AV	54.0	-1.2	1.03 H	15	19.80	33.00
7	4874.00	47.8 PK	74.0	-26.2	1.04 H	115	8.70	39.10
8	4874.00	36.4 AV	54.0	-17.6	1.04 H	115	-2.70	39.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.0 PK	74.0	-12.0	1.15 V	19	29.30	32.70
2	2390.00	48.1 AV	54.0	-5.9	1.15 V	19	15.40	32.70
3	*2437.00	108.3 PK			1.15 V	19	75.50	32.80
4	*2437.00	94.1 AV			1.15 V	19	61.30	32.80
5	2483.50	70.2 PK	74.0	-3.8	1.15 V	19	37.20	33.00
6	2483.50	51.5 AV	54.0	-2.5	1.15 V	19	18.50	33.00
7	4874.00	47.5 PK	74.0	-26.5	1.01 V	119	8.40	39.10
8	4874.00	36.1 AV	54.0	-17.9	1.01 V	119	-3.00	39.10

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



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Brad Wu
TEST MODE	D		

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	*2452.00	107.0 PK			1.04 H	21	74.10	32.90
2	*2452.00	92.5 AV			1.04 H	21	59.60	32.90
3	2483.50	66.8 PK	74.0	-7.2	1.04 H	21	33.80	33.00
4	2483.50	52.5 AV	54.0	-1.5	1.04 H	21	19.50	33.00
5	4904.00	47.4 PK	74.0	-26.6	1.01 H	88	8.20	39.20
6	4904.00	36.0 AV	54.0	-18.0	1.01 H	88	-3.20	39.20
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	*2452.00	105.0 PK			1.14 V	21	72.10	32.90
2	*2452.00	90.8 AV			1.14 V	21	57.90	32.90
3	2483.50	64.5 PK	74.0	-9.5	1.14 V	21	31.50	33.00
4	2483.50	51.2 AV	54.0	-2.8	1.14 V	21	18.20	33.00
5	4904.00	47.1 PK	74.0	-26.9	1.01 V	236	7.90	39.20
6	4904.00	35.8 AV	54.0	-18.2	1.01 V	236	-3.40	39.20

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



A D T

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	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	125.17	33.4 QP	43.5	-10.1	1.50 H	121	20.30	13.10
2	249.60	39.9 QP	46.0	-6.1	1.25 H	313	26.40	13.50
3	375.98	38.0 QP	46.0	-8.0	1.00 H	235	20.20	17.80
4	500.42	39.2 QP	46.0	-6.8	1.75 H	193	17.80	21.40
5	626.80	40.1 QP	46.0	-5.9	1.25 H	247	16.00	24.10
6	877.61	43.5 QP	46.0	-2.5	1.50 H	106	15.10	28.40
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	43.03	35.0 QP	40.0	-5.0	1.50 V	92	20.30	14.70
2	71.60	33.7 QP	40.0	-6.3	1.50 V	85	21.60	12.10
3	140.72	39.2 QP	43.5	-4.3	1.50 V	82	24.30	14.90
4	249.60	35.2 QP	46.0	-10.8	1.75 V	169	21.70	13.50
5	375.98	35.8 QP	46.0	-10.2	1.25 V	277	18.00	17.80
6	500.42	37.4 QP	46.0	-8.6	1.00 V	100	16.00	21.40
7	875.61	44.0 QP	46.0	-2.0	1.75 V	217	15.60	28.40

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	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	105.73	33.0 QP	43.5	-10.5	1.75 H	124	21.40	11.60
2	241.83	41.6 QP	46.0	-4.4	1.00 H	130	28.30	13.30
3	453.75	33.9 QP	46.0	-12.1	1.00 H	103	13.80	20.10
4	626.80	33.2 QP	46.0	-12.8	1.25 H	52	9.10	24.10
5	751.23	35.4 QP	46.0	-10.6	1.00 H	100	9.20	26.20
6	877.61	37.7 QP	46.0	-8.3	1.75 H	136	9.30	28.40
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	35.73	38.8 QP	40.0	-1.2	1.50 V	136	25.60	13.20
2	74.62	37.0 QP	40.0	-3.0	1.50 V	274	25.50	11.50
3	241.83	36.0 QP	46.0	-10.0	1.75 V	103	22.70	13.30
4	453.75	36.8 QP	46.0	-9.2	1.00 V	205	16.70	20.10
5	751.23	33.5 QP	46.0	-12.5	1.50 V	217	7.30	26.20
6	877.61	38.6 QP	46.0	-7.4	1.00 V	85	10.20	28.40

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	125.17	30.7 QP	43.5	-12.8	1.75 H	247	17.60	13.10
2	249.60	40.0 QP	46.0	-6.0	1.00 H	130	26.50	13.50
3	375.98	38.0 QP	46.0	-8.0	1.00 H	241	20.20	17.80
4	500.42	39.6 QP	46.0	-6.4	1.75 H	202	18.20	21.40
5	626.80	40.9 QP	46.0	-5.1	1.25 H	247	16.80	24.10
6	877.61	42.5 QP	46.0	-3.5	1.50 H	79	14.10	28.40
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	30.90	35.7 QP	40.0	-4.3	1.25 V	358	22.80	12.90
2	249.60	34.9 QP	46.0	-11.1	1.75 V	151	21.40	13.50
3	375.98	38.8 QP	46.0	-7.2	1.50 V	58	21.00	17.80
4	500.42	36.1 QP	46.0	-9.9	1.00 V	88	14.70	21.40
5	626.80	41.8 QP	46.0	-4.2	1.00 V	130	17.70	24.10
6	877.61	44.7 QP	46.0	-1.3	1.00 V	82	16.30	28.40

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	D		

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	37.68	33.5 QP	40.0	-6.5	1.00 H	130	19.90	13.60
2	241.83	42.9 QP	46.0	-3.1	1.00 H	139	29.60	13.30
3	453.75	33.9 QP	46.0	-12.1	1.00 H	97	13.80	20.10
4	626.80	32.5 QP	46.0	-13.5	1.25 H	244	8.40	24.10
5	751.23	34.1 QP	46.0	-11.9	1.00 H	319	7.90	26.20
6	877.61	36.3 QP	46.0	-9.7	1.00 H	10	7.90	28.40
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	37.68	38.6 QP	40.0	-1.4	1.00 V	328	25.00	13.60
2	107.67	32.1 QP	43.5	-11.4	1.25 V	304	20.40	11.70
3	241.83	38.1 QP	46.0	-7.9	1.75 V	97	24.80	13.30
4	453.75	37.5 QP	46.0	-8.5	1.00 V	199	17.40	20.10
5	626.80	32.0 QP	46.0	-14.0	1.00 V	124	7.90	24.10
6	877.61	39.6 QP	46.0	-6.4	1.75 V	124	11.20	28.40

- 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.



ADT

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 30, 2010	Nov. 29, 2011
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 30, 2010	Dec. 29, 2011
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 06, 2011	Jan. 05, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	835239/001	Feb. 22, 2011	Feb. 21, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
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.



A D T

4.2.3 TEST PROCEDURES

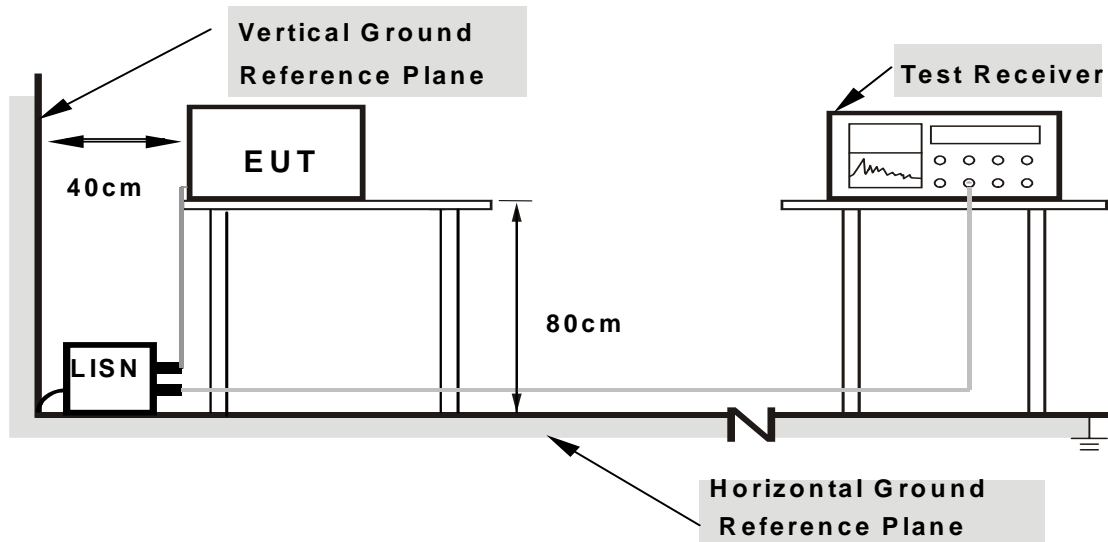
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



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

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

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

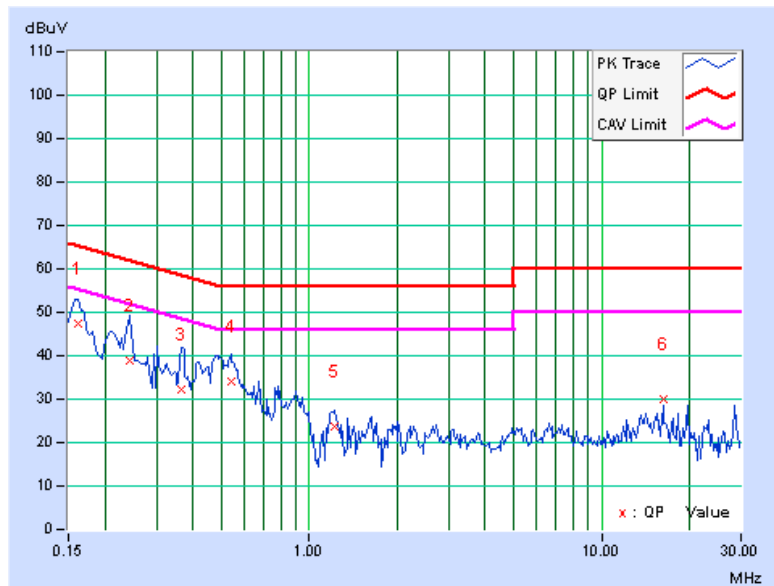
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.12	47.32	32.16	47.44	32.28	65.38	55.38	-17.94	-23.10
2	0.244	0.09	38.95	11.33	39.04	11.42	61.97	51.97	-22.93	-40.55
3	0.365	0.09	32.19	15.44	32.28	15.53	58.62	48.62	-26.34	-33.09
4	0.541	0.09	33.84	21.55	33.93	21.64	56.00	46.00	-22.07	-24.36
5	1.227	0.10	23.66	13.96	23.76	14.06	56.00	46.00	-32.24	-31.94
6	16.230	0.44	29.51	24.75	29.95	25.19	60.00	50.00	-30.05	-24.81

- 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.



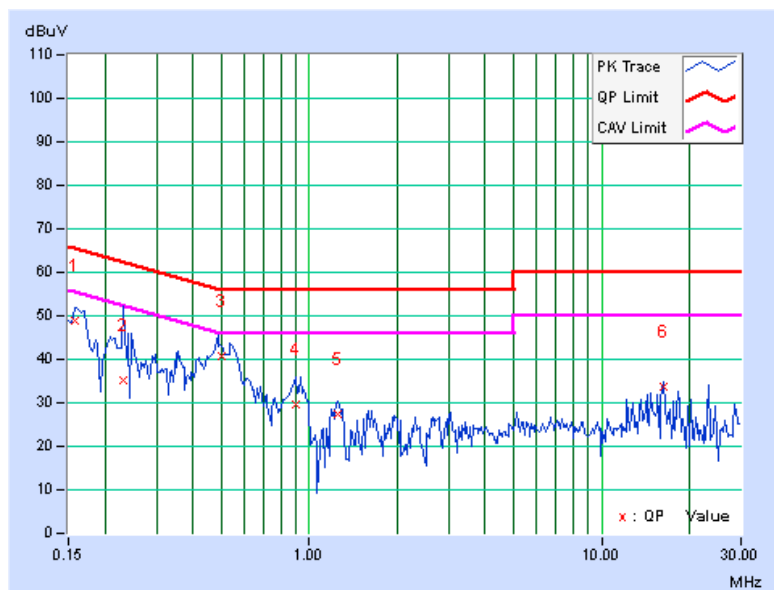


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.14	48.91	36.63	49.05	36.77	65.58	55.58	-16.53	-18.81
2	0.232	0.11	35.17	23.76	35.28	23.87	62.38	52.38	-27.10	-28.51
3	0.500	0.09	40.59	28.29	40.68	28.38	56.00	46.00	-15.32	-17.62
4	0.900	0.11	29.52	17.21	29.63	17.32	56.00	46.00	-26.37	-28.68
5	1.250	0.11	27.47	16.97	27.58	17.08	56.00	46.00	-28.42	-28.92
6	16.230	0.40	33.34	27.74	33.74	28.14	60.00	50.00	-26.26	-21.86

- 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.



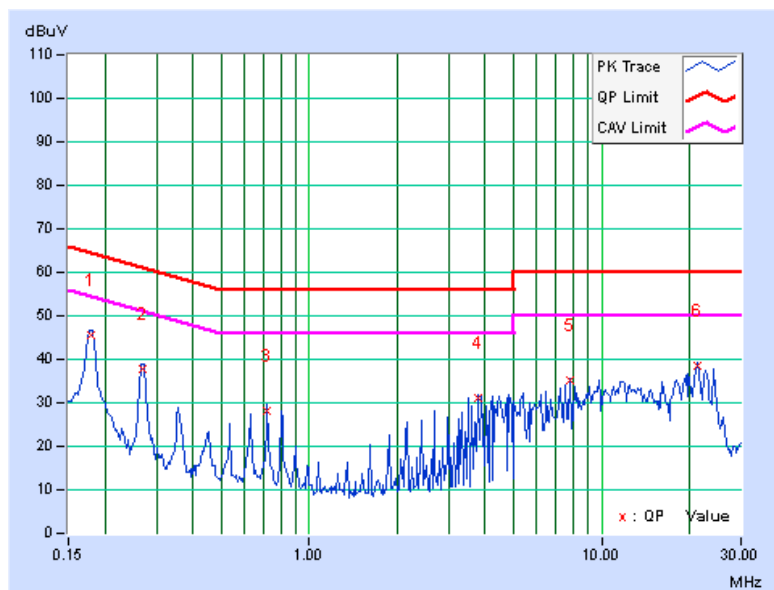


A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.179	0.12	45.46	36.14	45.58	36.26	64.55	54.55	-18.97	-18.29
2	0.269	0.12	37.49	28.34	37.61	28.46	61.16	51.16	-23.55	-22.70
3	0.716	0.14	27.98	21.02	28.12	21.16	56.00	46.00	-27.88	-24.84
4	3.770	0.30	30.70	25.23	31.00	25.53	56.00	46.00	-25.00	-20.47
5	7.807	0.53	34.52	33.38	35.05	33.91	60.00	50.00	-24.95	-16.09
6	21.272	1.18	37.22	36.50	38.40	37.68	60.00	50.00	-21.60	-12.32

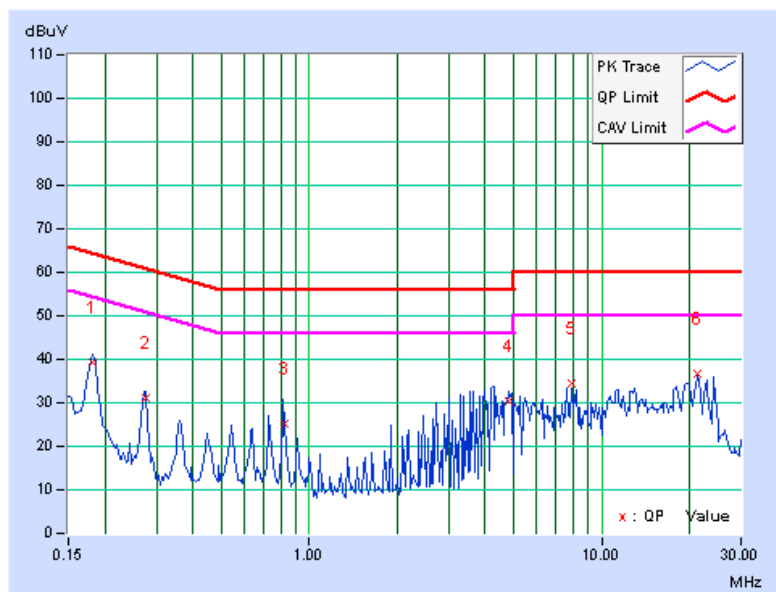
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.183	0.13	39.20	29.79	39.33	29.92	64.37	54.37	-25.04	-24.45
2	0.275	0.13	30.91	22.42	31.04	22.55	60.97	50.97	-29.92	-28.41
3	0.822	0.17	25.16	16.16	25.33	16.33	56.00	46.00	-30.67	-29.67
4	4.828	0.36	30.17	24.91	30.53	25.27	56.00	46.00	-25.47	-20.73
5	7.892	0.51	34.08	33.16	34.59	33.67	60.00	50.00	-25.41	-16.33
6	21.230	0.97	35.65	34.66	36.62	35.63	60.00	50.00	-23.38	-14.37

- 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.



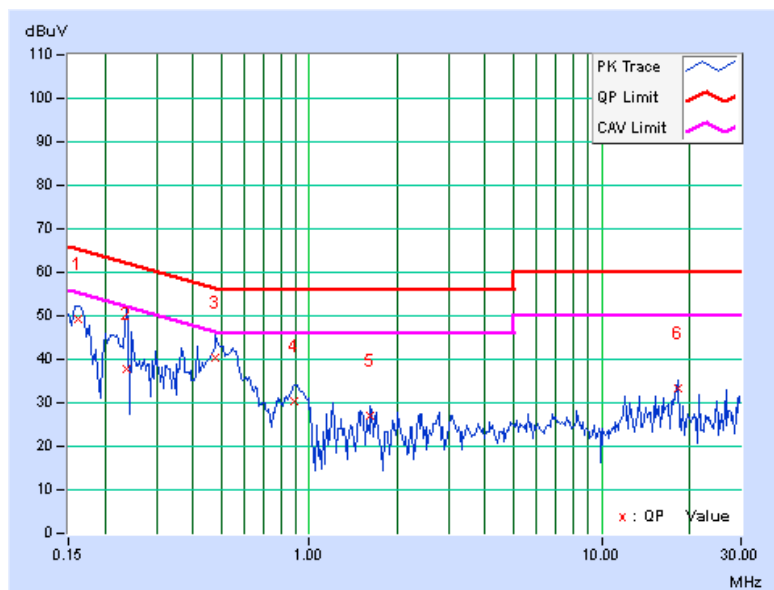


A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	C		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.162	0.12	49.26	37.27	49.38	37.39	65.38	55.38	-16.00	-17.99
2	0.236	0.09	37.71	23.86	37.80	23.95	62.24	52.24	-24.44	-28.29
3	0.478	0.09	40.28	29.41	40.37	29.50	56.37	46.37	-16.00	-16.87
4	0.892	0.10	30.12	18.80	30.22	18.90	56.00	46.00	-25.78	-27.10
5	1.621	0.11	27.01	18.36	27.12	18.47	56.00	46.00	-28.88	-27.53
6	18.305	0.46	32.84	27.07	33.30	27.53	60.00	50.00	-26.70	-22.47

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



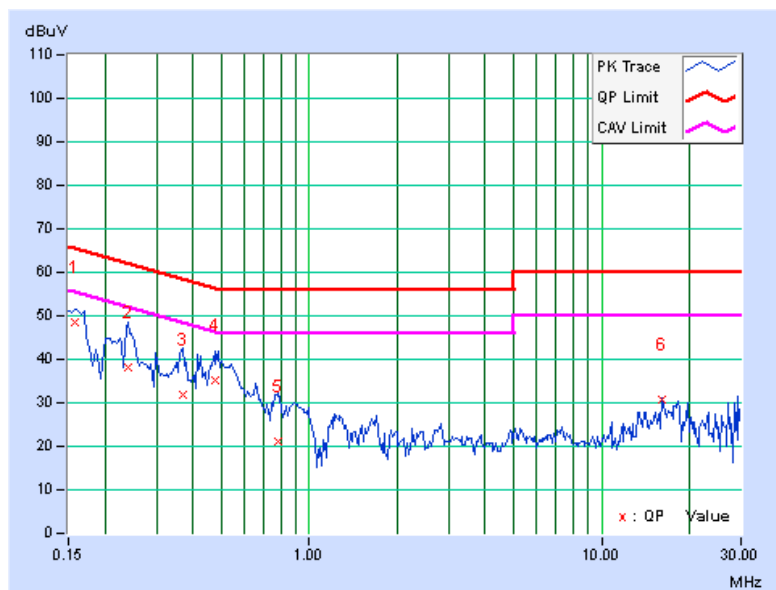


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	C		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.14	48.53	32.96	48.67	33.10	65.58	55.58	-16.91	-22.48
2	0.240	0.11	38.15	14.41	38.26	14.52	62.10	52.10	-23.85	-37.59
3	0.369	0.09	31.62	16.18	31.71	16.27	58.53	48.53	-26.82	-32.26
4	0.474	0.09	35.00	23.70	35.09	23.79	56.44	46.44	-21.35	-22.65
5	0.787	0.10	20.92	4.48	21.02	4.58	56.00	46.00	-34.98	-41.42
6	16.168	0.40	30.44	25.87	30.84	26.27	60.00	50.00	-29.16	-23.73

- 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.



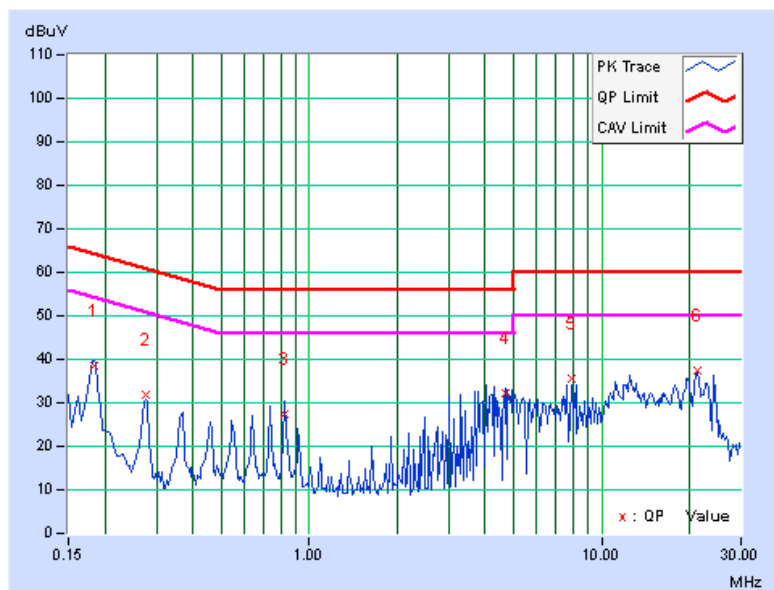


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PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	D		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.184	0.12	38.46	31.19	38.58	31.31	64.31	54.31	-25.73	-23.00
2	0.275	0.12	31.63	24.11	31.75	24.23	60.97	50.97	-29.22	-26.74
3	0.826	0.15	27.26	17.94	27.41	18.09	56.00	46.00	-28.59	-27.91
4	4.676	0.35	31.83	27.25	32.18	27.60	56.00	46.00	-23.82	-18.40
5	7.918	0.54	34.87	33.11	35.41	33.65	60.00	50.00	-24.59	-16.35
6	21.292	1.19	36.14	35.44	37.33	36.63	60.00	50.00	-22.67	-13.37

- 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.



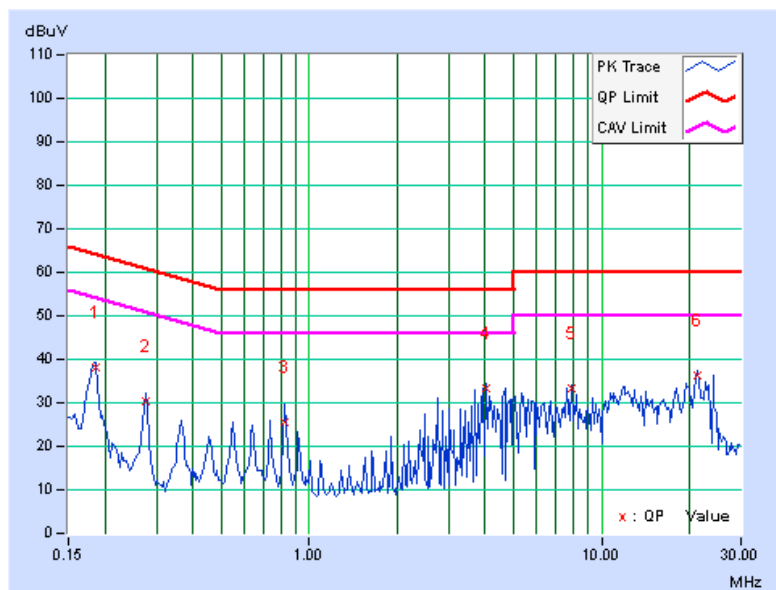


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	D		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.13	37.86	28.61	37.99	28.74	64.25	54.25	-26.26	-25.51
2	0.276	0.13	30.21	21.64	30.34	21.77	60.93	50.93	-30.58	-29.15
3	0.826	0.17	25.39	16.44	25.56	16.61	56.00	46.00	-30.44	-29.39
4	4.039	0.32	32.98	28.71	33.30	29.03	56.00	46.00	-22.70	-16.97
5	7.922	0.51	32.91	32.71	33.42	33.22	60.00	50.00	-26.58	-16.78
6	21.313	0.97	35.49	34.75	36.46	35.72	60.00	50.00	-23.54	-14.28

- 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 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012

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

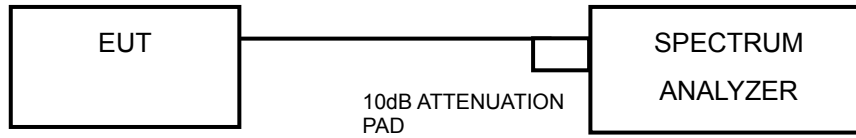
4.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



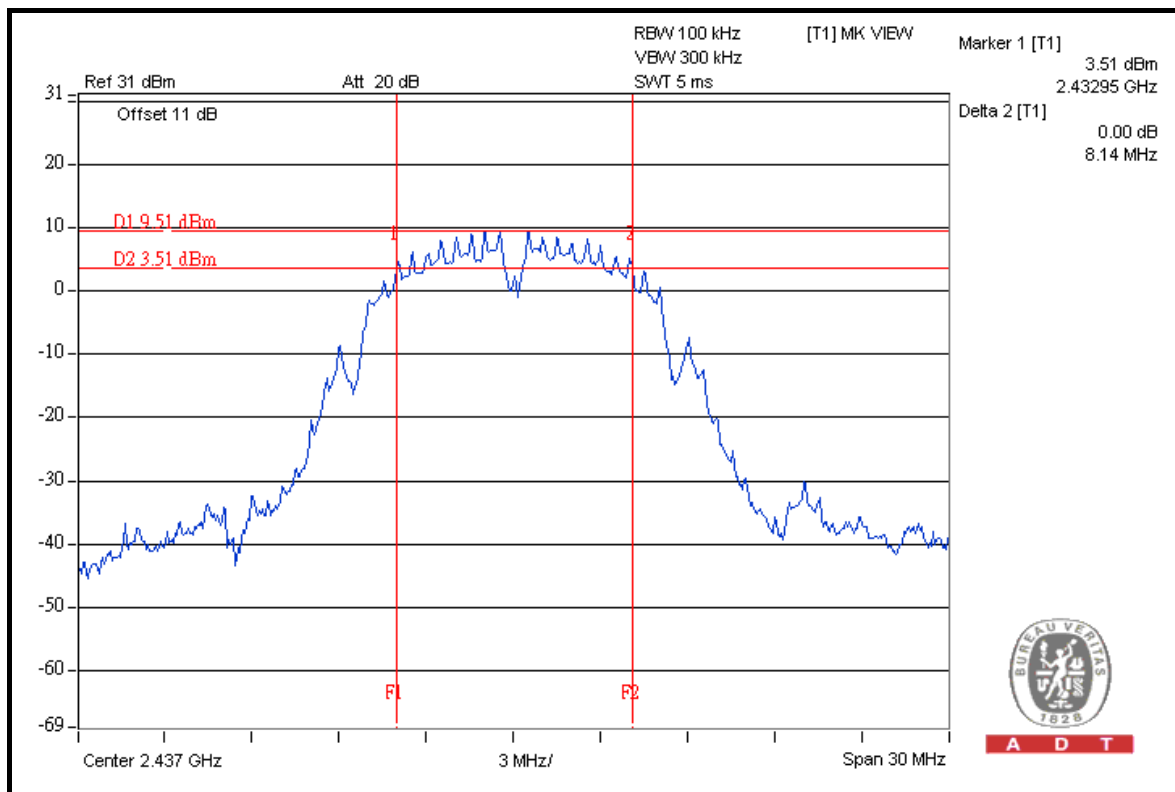
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4.3.7 TEST RESULTS

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	8.09	0.5	PASS
6	2437	8.14	0.5	PASS
11	2462	8.09	0.5	PASS

CH 6



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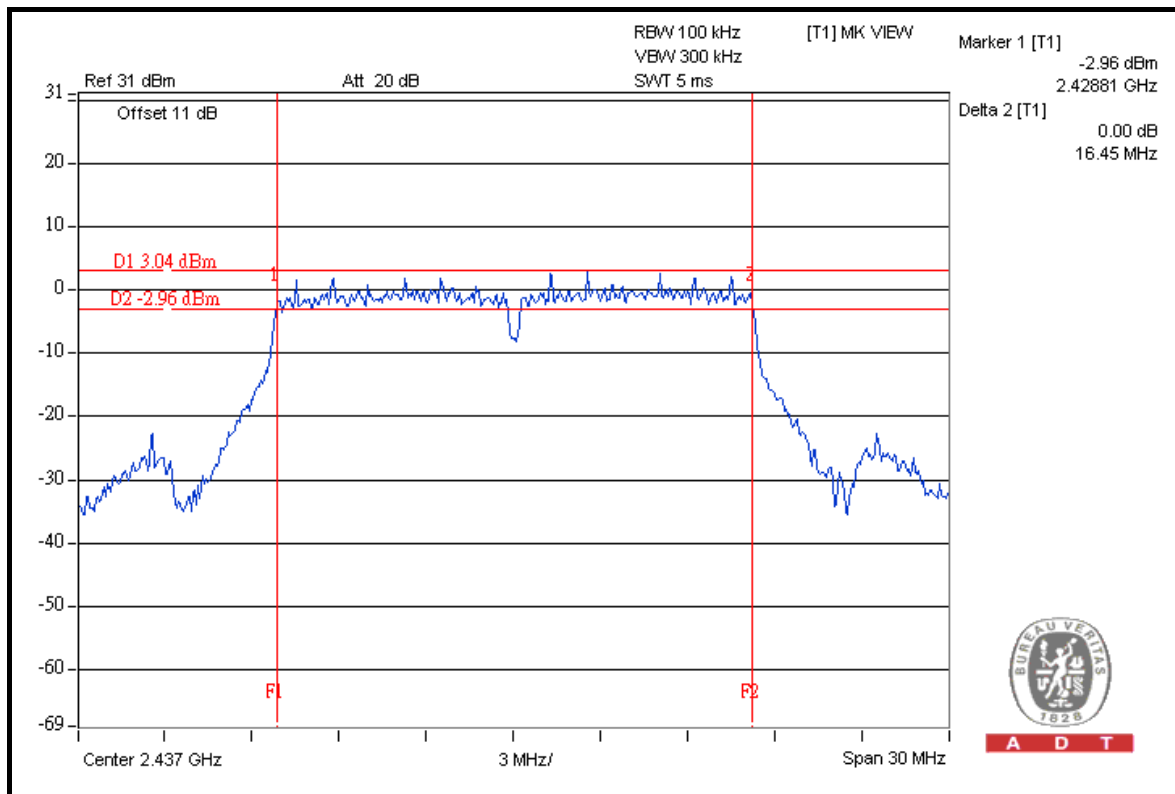


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802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	16.43	16.42	0.5	PASS
6	2437	16.45	16.42	0.5	PASS
11	2462	16.44	16.44	0.5	PASS

FOR CHAIN 0: CH 6



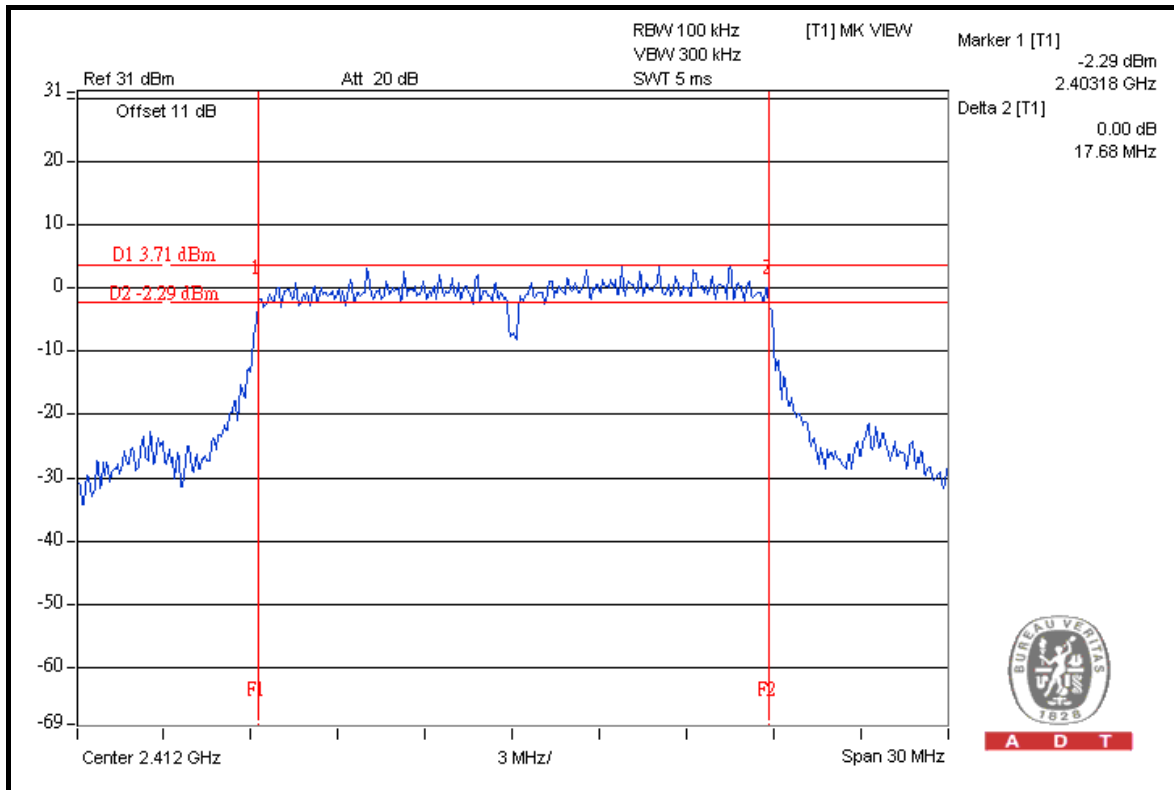


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802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	17.53	17.68	0.5	PASS
6	2437	17.61	17.62	0.5	PASS
11	2462	17.60	17.62	0.5	PASS

FOR CHAIN 1: CH 1



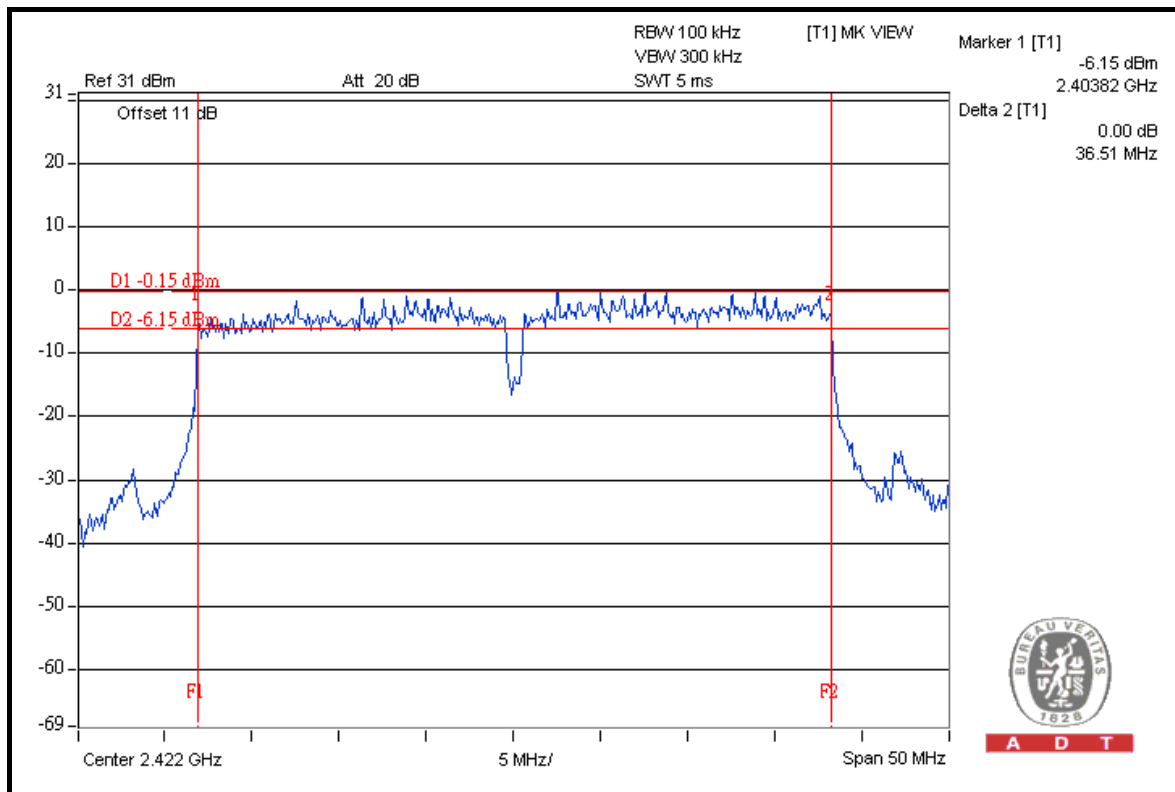


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802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2422	35.85	36.51	0.5	PASS
4	2437	35.79	36.46	0.5	PASS
7	2452	35.77	36.00	0.5	PASS

FOR CHAIN 1: CH 1





A D T

4.4 MAXIMUM OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

The Maximum Output Power Measurement is 30dBm.

4.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0842014	Apr. 26, 2011	Apr. 25, 2012
Power Sensor	MA2411B	0738404	Apr. 26, 2011	Apr. 25, 2012

NOTE:

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

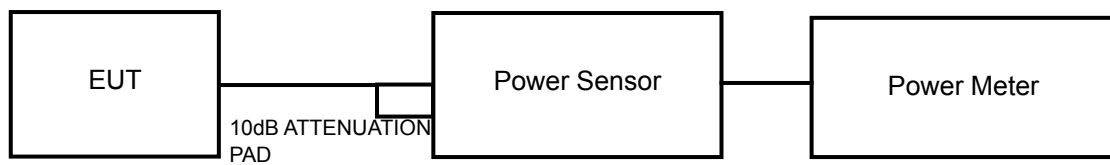
4.4.3 TEST PROCEDURES

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.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation.

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.



4.4.7 TEST RESULTS

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/ FAIL
1	2412	120.2	20.8	30	PASS
6	2437	158.5	22.0	30	PASS
11	2462	186.2	22.7	30	PASS

802.11g

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS/ FAIL
		CHAIN 0	CHAIN 1				
1	2412	23.9	23.6	474.6	26.8	30	PASS
6	2437	24.0	23.8	491.1	26.9	30	PASS
11	2462	23.7	23.6	463.5	26.7	30	PASS

802.11n (20MHz)

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS/ FAIL
		CHAIN 0	CHAIN 1				
1	2412	24.0	23.8	491.1	26.9	30	PASS
6	2437	25.2	24.8	633.1	28.0	30	PASS
11	2462	23.7	23.5	458.3	26.6	30	PASS

802.11n (40MHz)

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS/ FAIL
		CHAIN 0	CHAIN 1				
1	2422	23.9	24.1	502.5	27.0	30	PASS
4	2437	24.7	23.8	535.0	27.3	30	PASS
7	2452	21.3	21.5	276.2	24.4	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012

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 PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 10kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

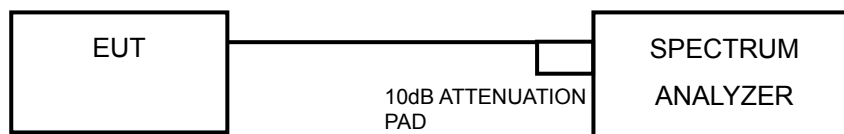
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

Follow method 2 of KDB 662911 D01 Multiple Transmitter Output v01 to calculate total power density of 2 TX port.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation.

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6.



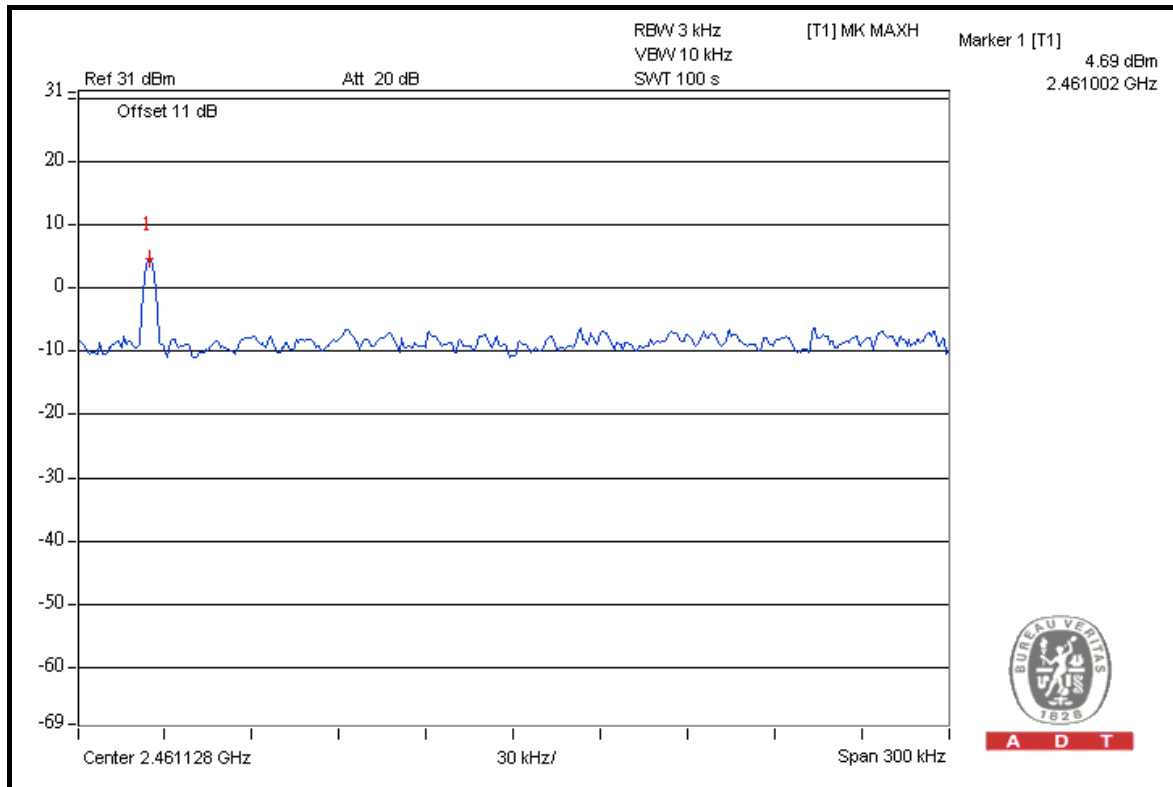
A D T

4.5.7 TEST RESULTS

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAX. LIMIT (dBm)	PASS/ FAIL
1	2412	2.5	8	PASS
6	2437	3.9	8	PASS
11	2462	4.7	8	PASS

CH 11



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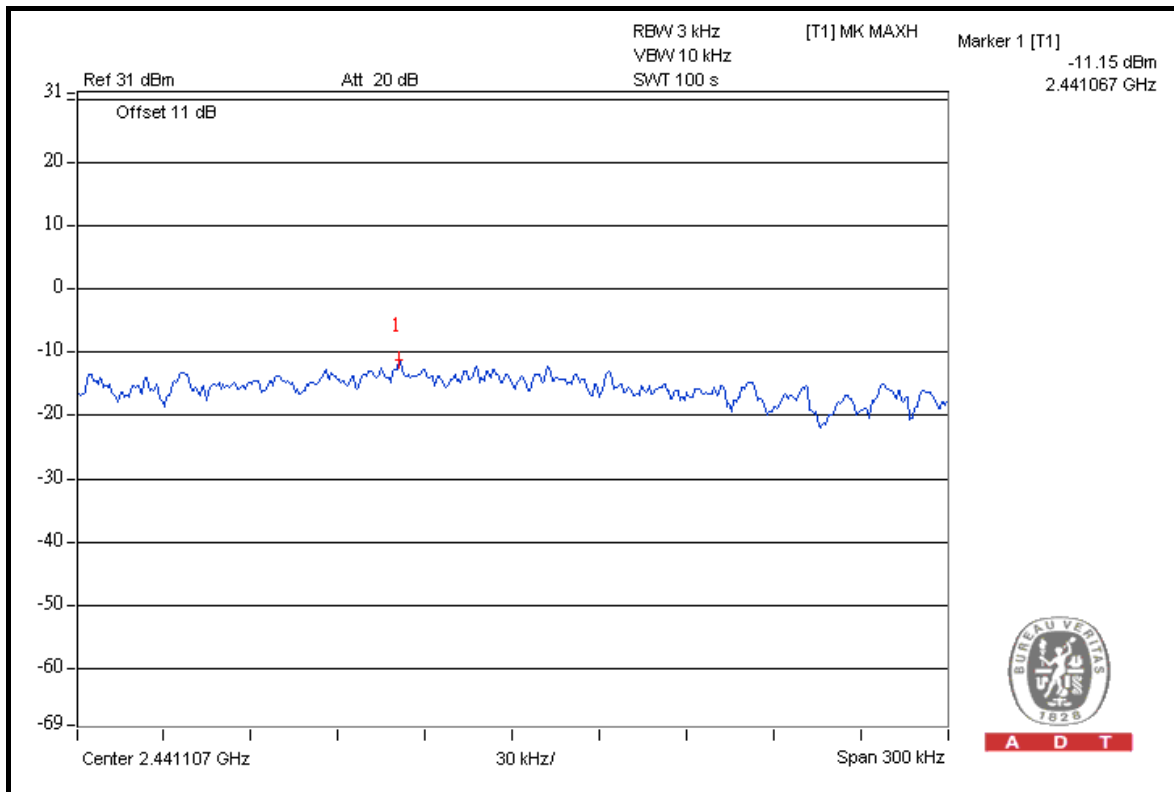


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802.11g

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=2) dB			
0	1	2412	-11.5	3.01	-8.5	8	PASS
	6	2437	-11.2	3.01	-8.2	8	PASS
	11	2462	-11.8	3.01	-8.8	8	PASS
1	1	2412	-12.7	3.01	-9.6	8	PASS
	6	2437	-12.3	3.01	-9.3	8	PASS
	11	2462	-12.6	3.01	-9.6	8	PASS

FOR CHAIN 0: CH 6



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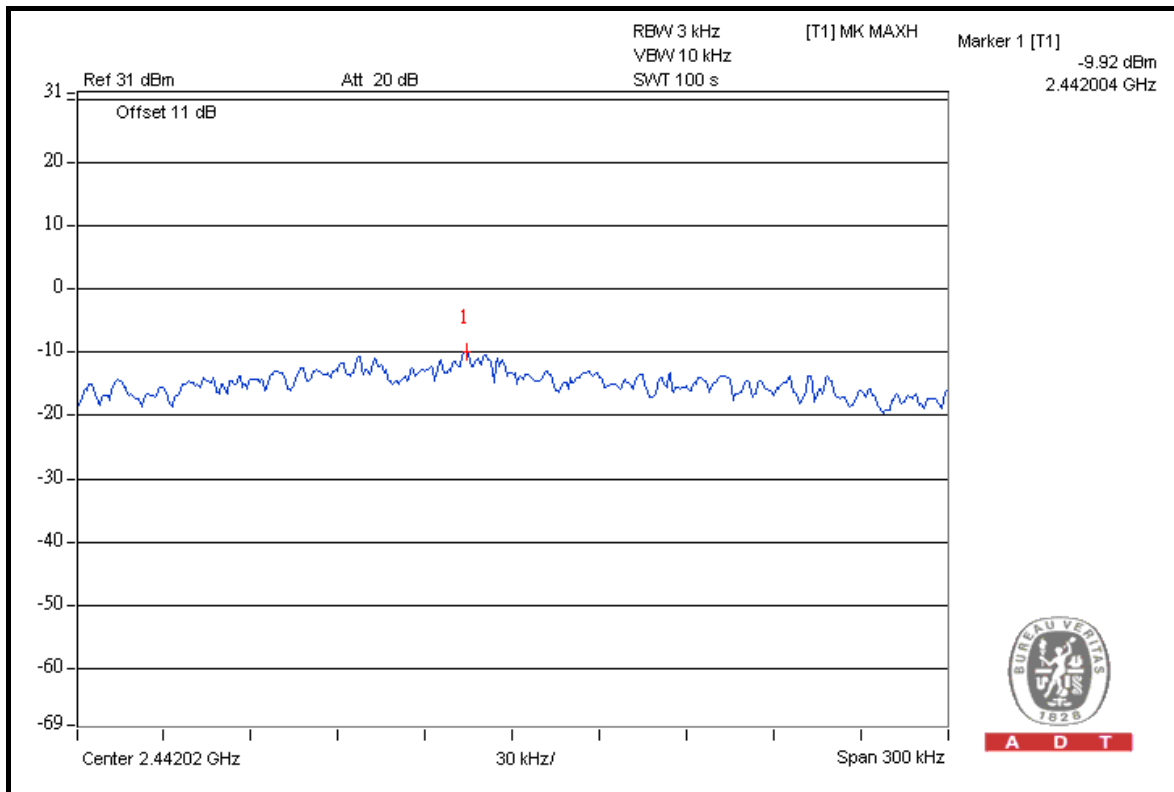


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802.11n (20MHz)

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=2) dB			
0	1	2412	-11.4	3.01	-8.4	8	PASS
	6	2437	-9.9	3.01	-6.9	8	PASS
	11	2462	-12.0	3.01	-9.0	8	PASS
1	1	2412	-11.3	3.01	-8.3	8	PASS
	6	2437	-10.3	3.01	-7.3	8	PASS
	11	2462	-11.8	3.01	-8.8	8	PASS

FOR CHAIN 0: CH 6



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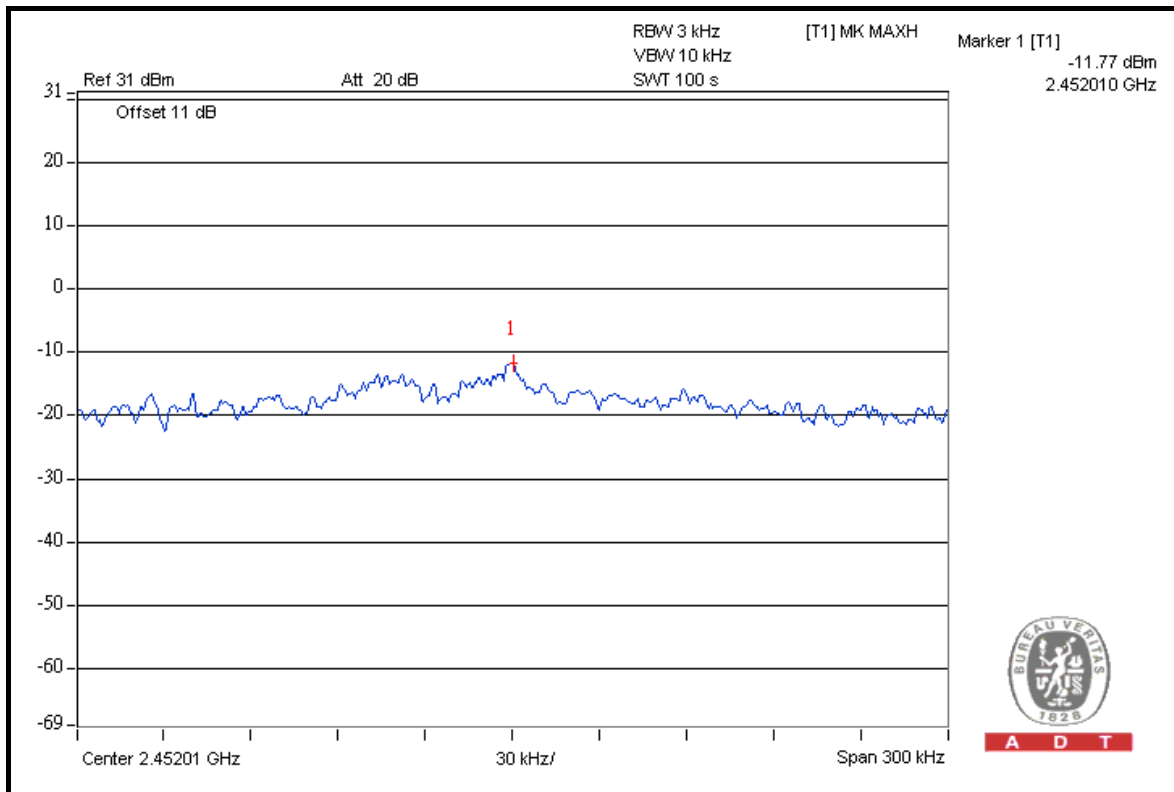


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802.11n (40MHz)

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=2) dB			
0	1	2422	-13.0	3.01	-10.0	8	PASS
	4	2437	-11.8	3.01	-8.8	8	PASS
	7	2452	-15.5	3.01	-12.5	8	PASS
1	1	2422	-13.4	3.01	-10.4	8	PASS
	4	2437	-13.2	3.01	-10.2	8	PASS
	7	2452	-16.0	3.01	-13.0	8	PASS

FOR CHAIN 0: CH 6





4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
FOR CONDUCTED MEASUREMENT				
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012
FOR RADIATED MEASUREMENT				
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 27, 2010	Dec. 26, 2011
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Jan. 06, 2011	Jan. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01961	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10738	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250792/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	Aug. 19, 2011	Aug. 18, 2012
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

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



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4.6.3 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. Set both RBW and VBW of spectrum analyzer to 100kHz and 300kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (Peak RBW = 100kHz, VBW = 300kHz) are attached on the following pages.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz for Average detection (AV) at frequency above 1GHz.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation.

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6.



4.6.6 TEST RESULTS

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

802.11b

TEST MODE B

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	110.50	55.27	55.23	74.00
2412.00 (AV)	106.40	58.95	47.45	54.00

RESTRICT BAND (2483.5 ~ 2500 MHz)

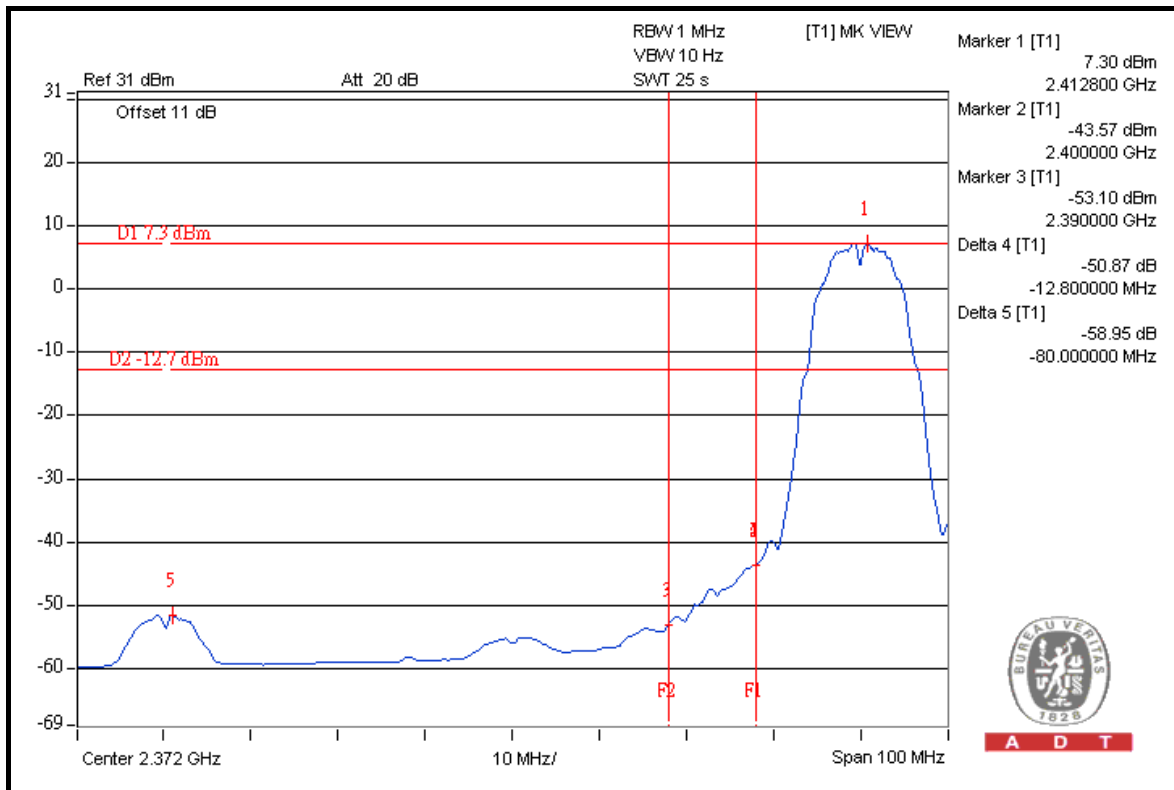
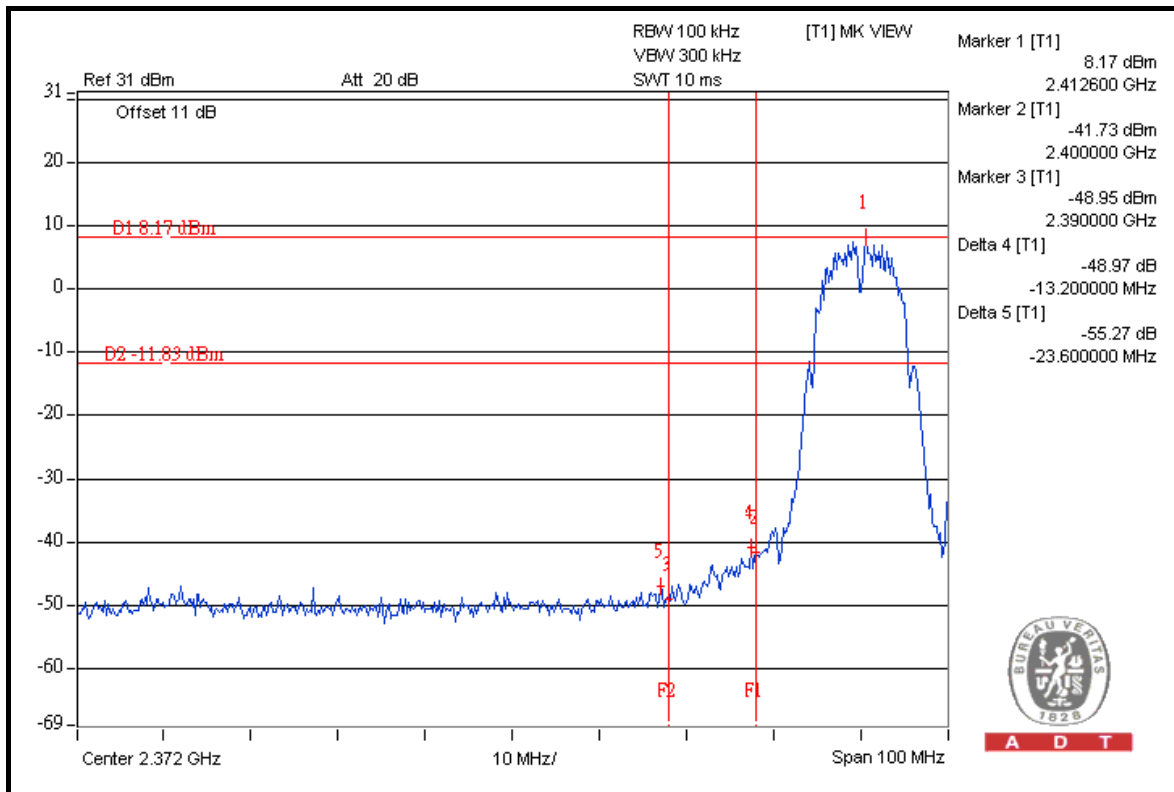
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	112.80	54.75	58.05	74.00
2462.00 (AV)	108.00	56.94	51.06	54.00

NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

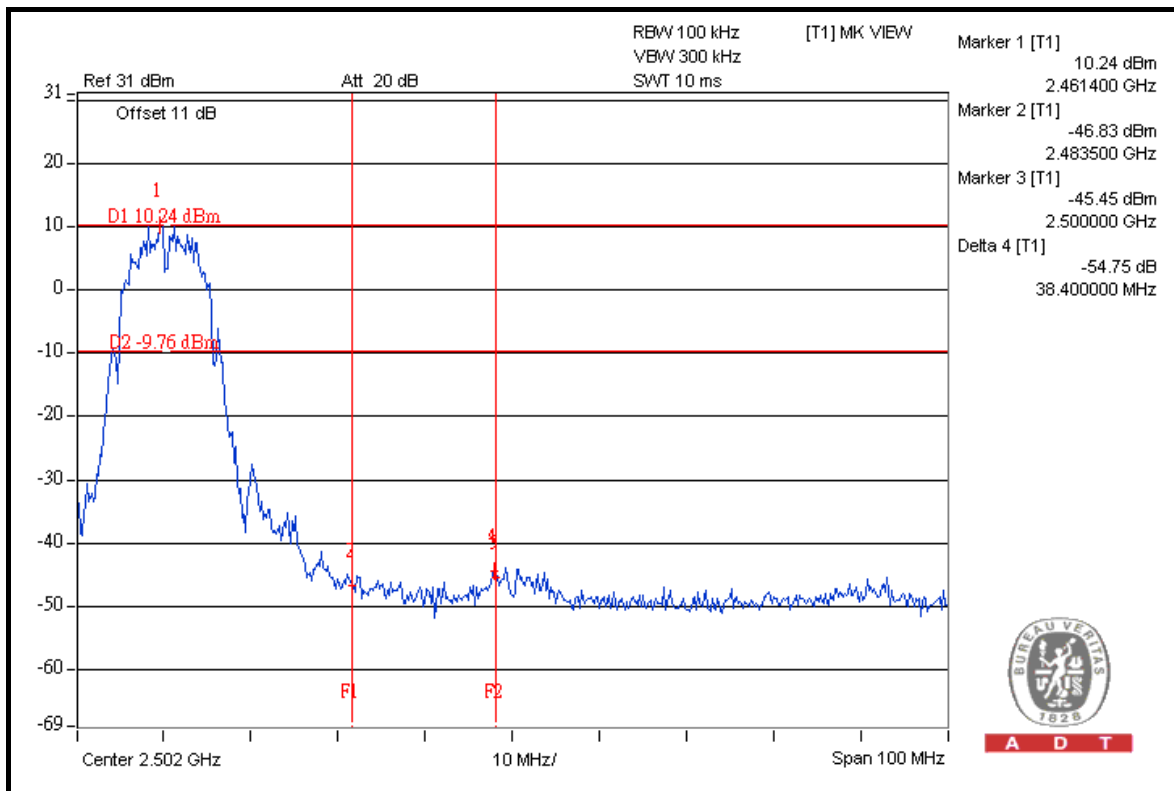
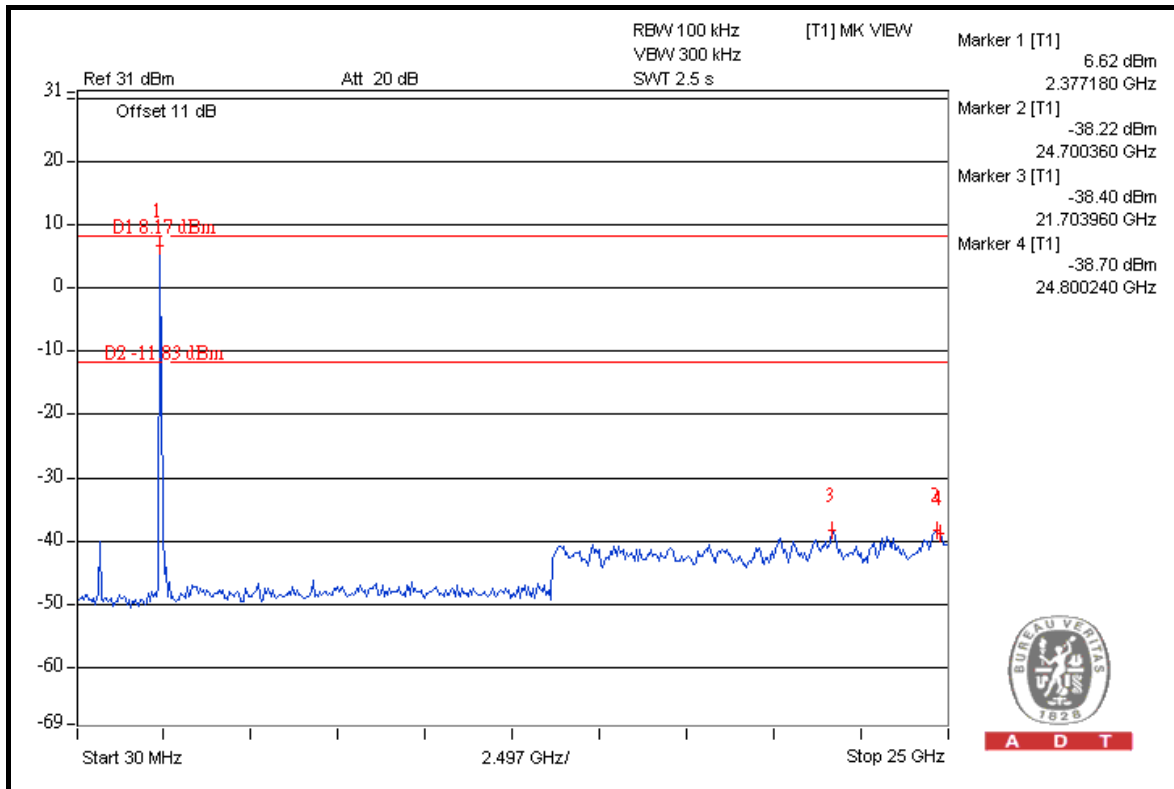


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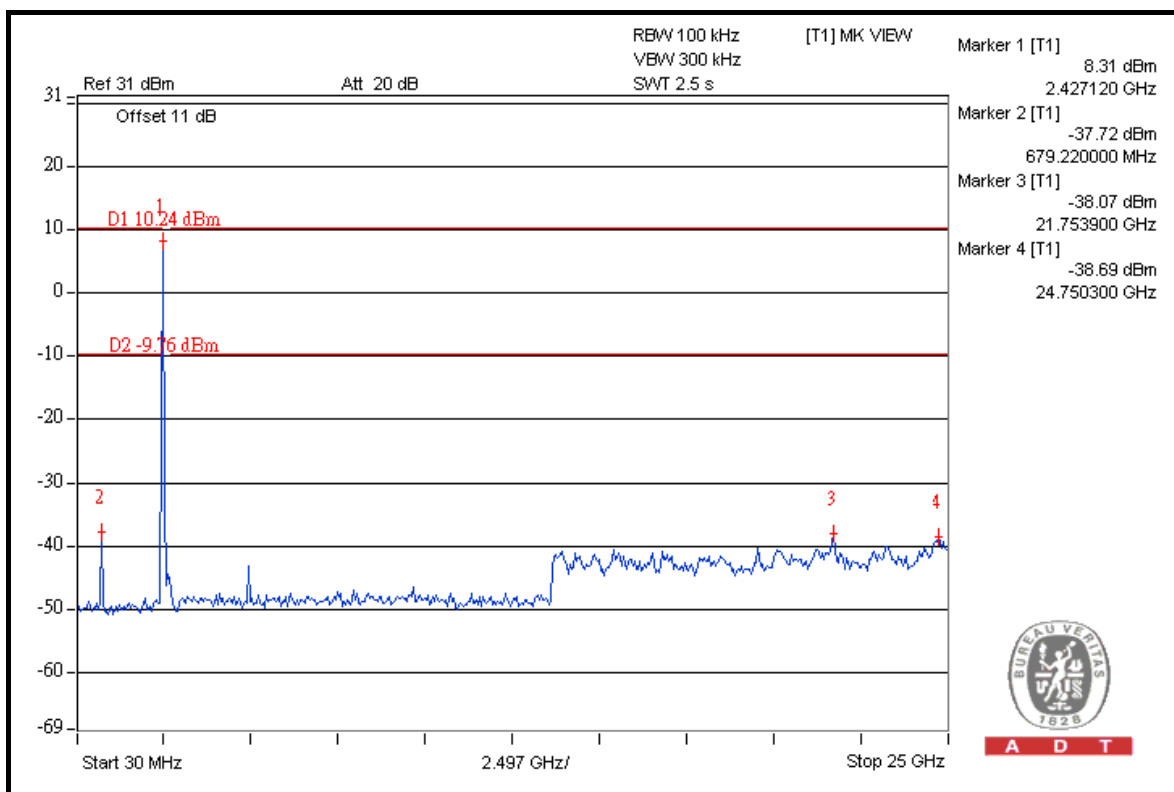
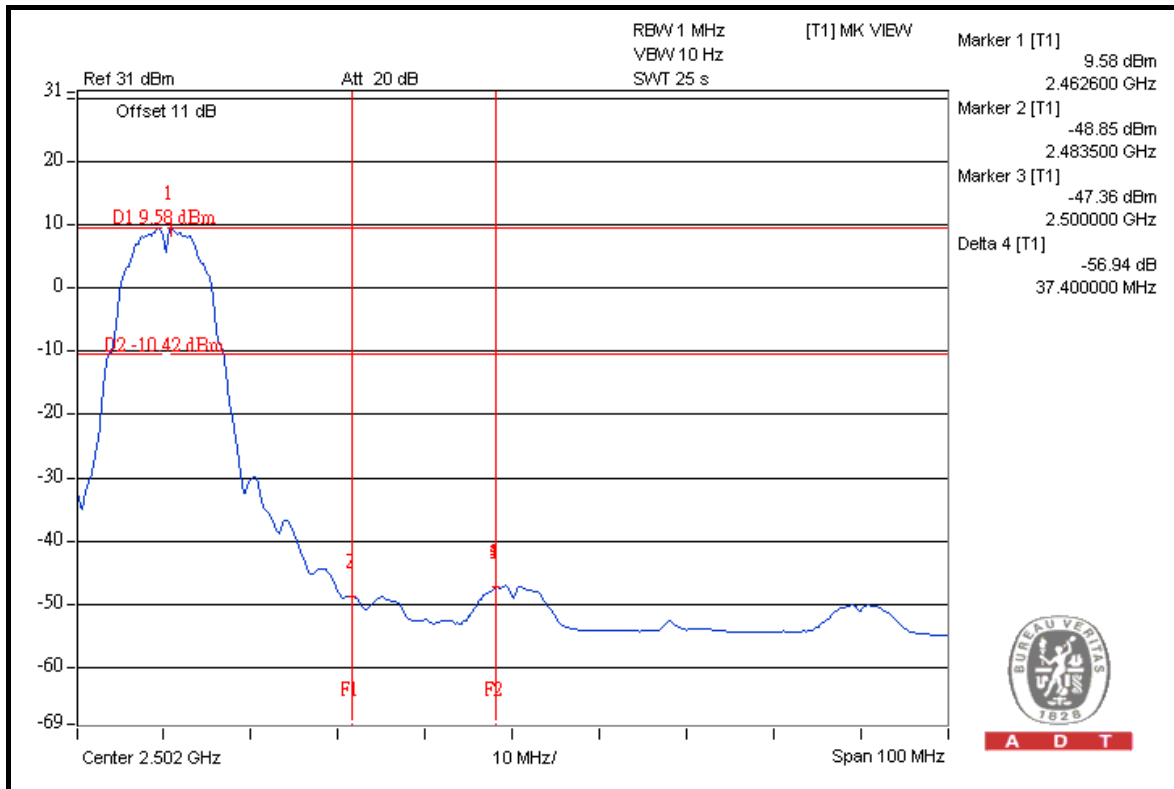


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A D T





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TEST MODE D

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	108.00	55.27	52.73	74.00
2412.00 (AV)	103.90	58.95	44.95	54.00

RESTRICT BAND (2483.5 ~ 2500 MHz)

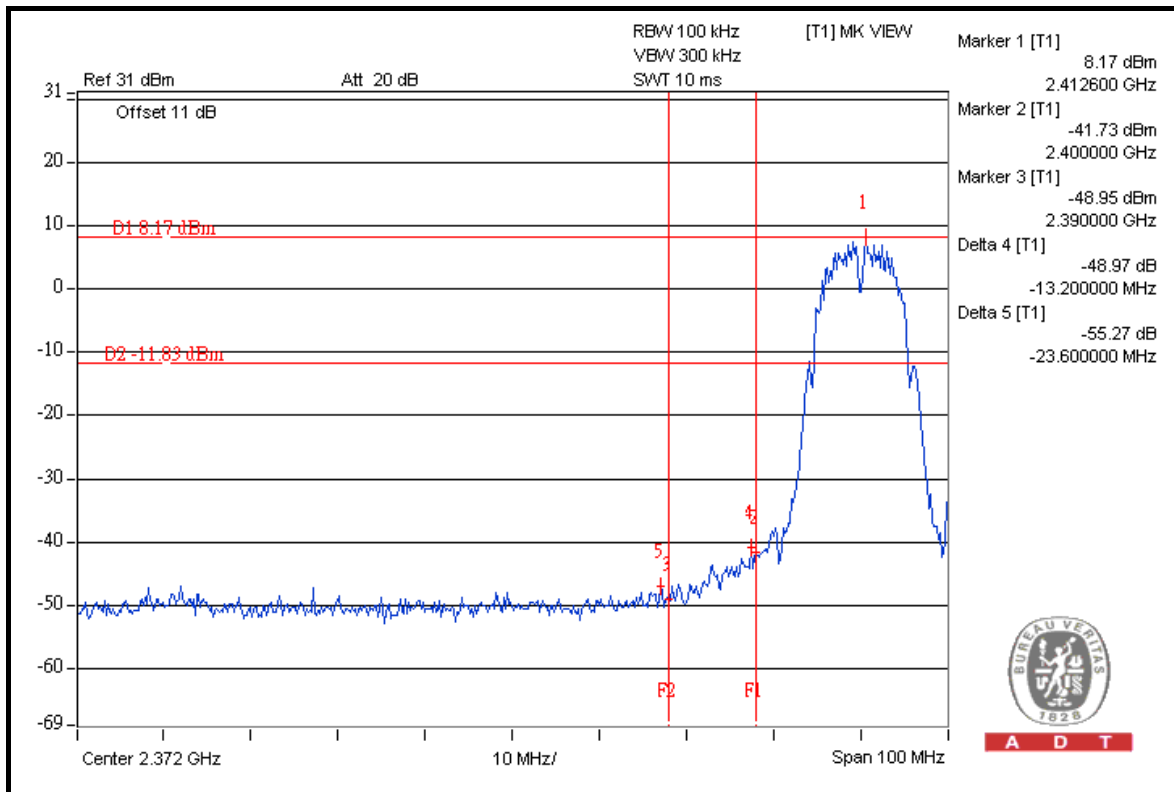
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	110.40	54.75	55.65	74.00
2462.00 (AV)	106.10	56.94	49.16	54.00

NOTE:

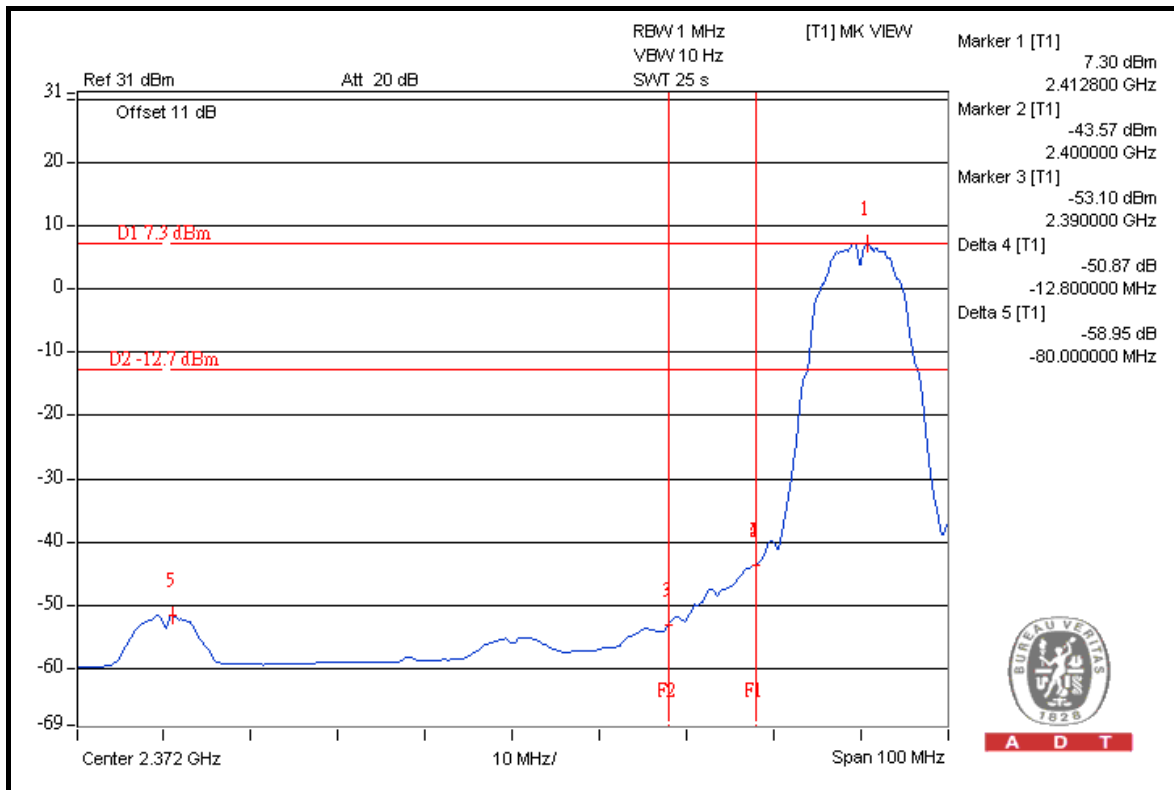
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.



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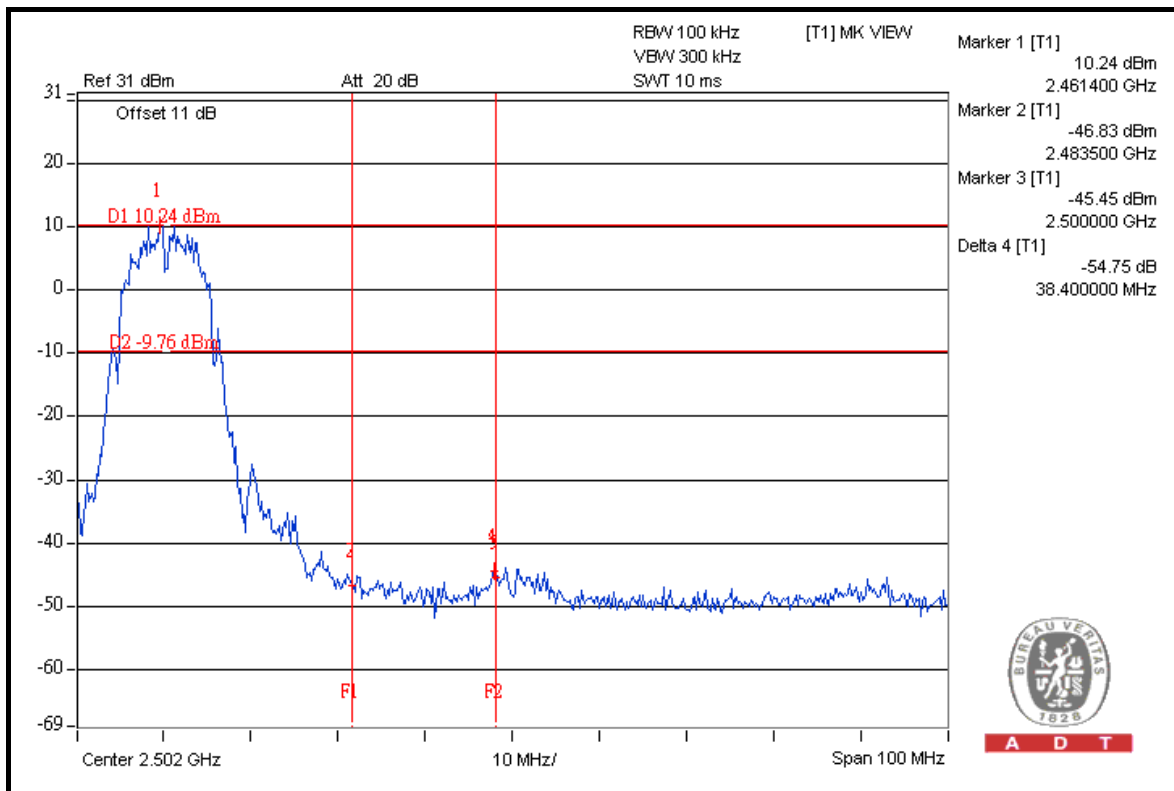
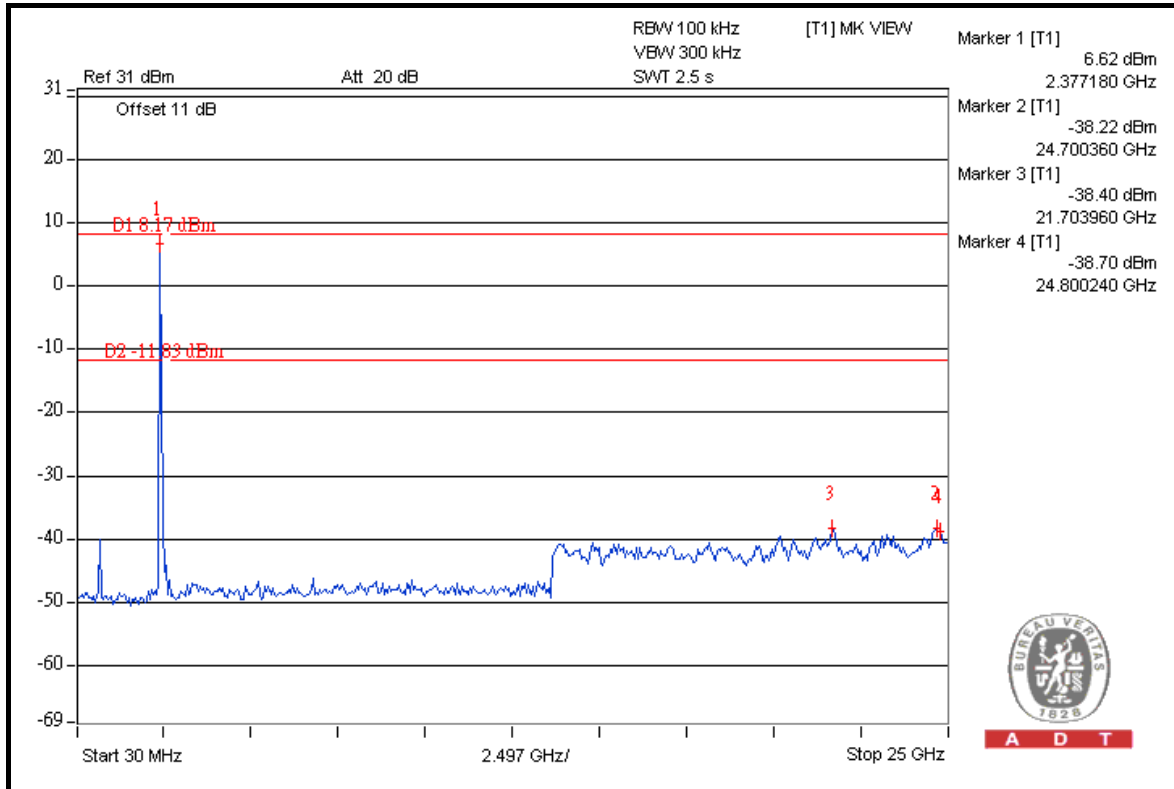
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A D T

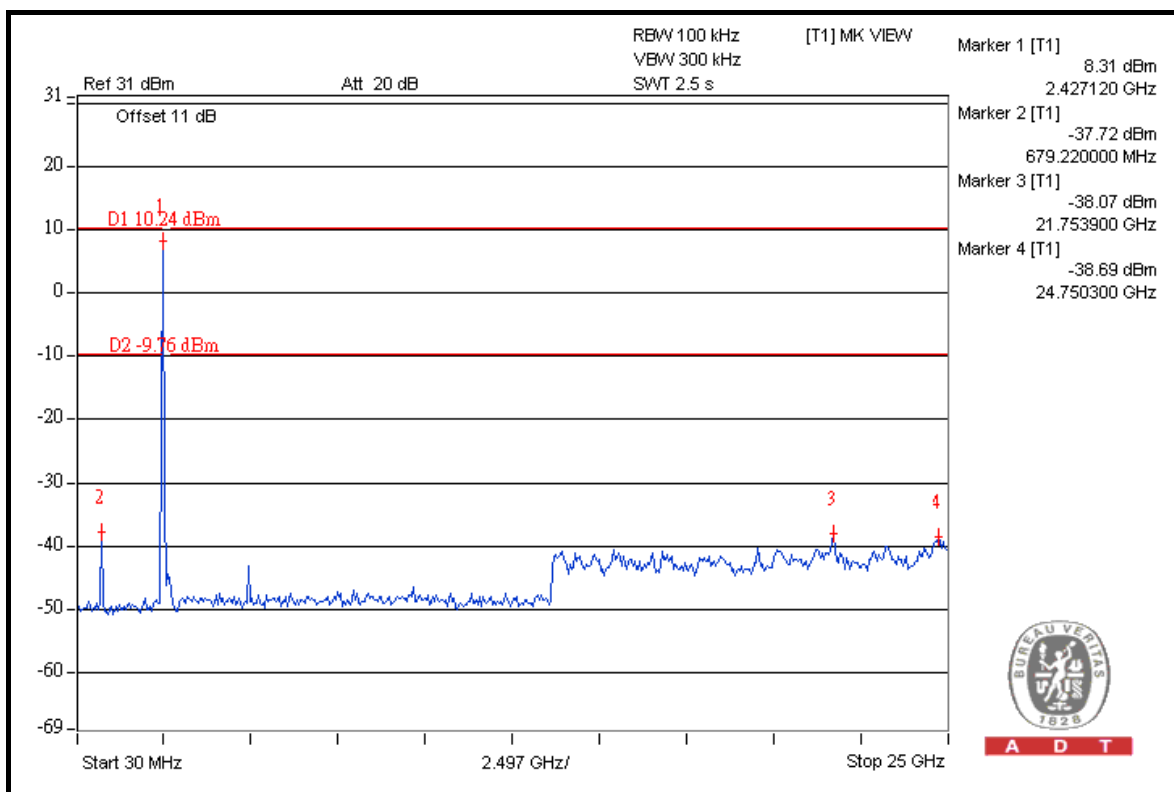
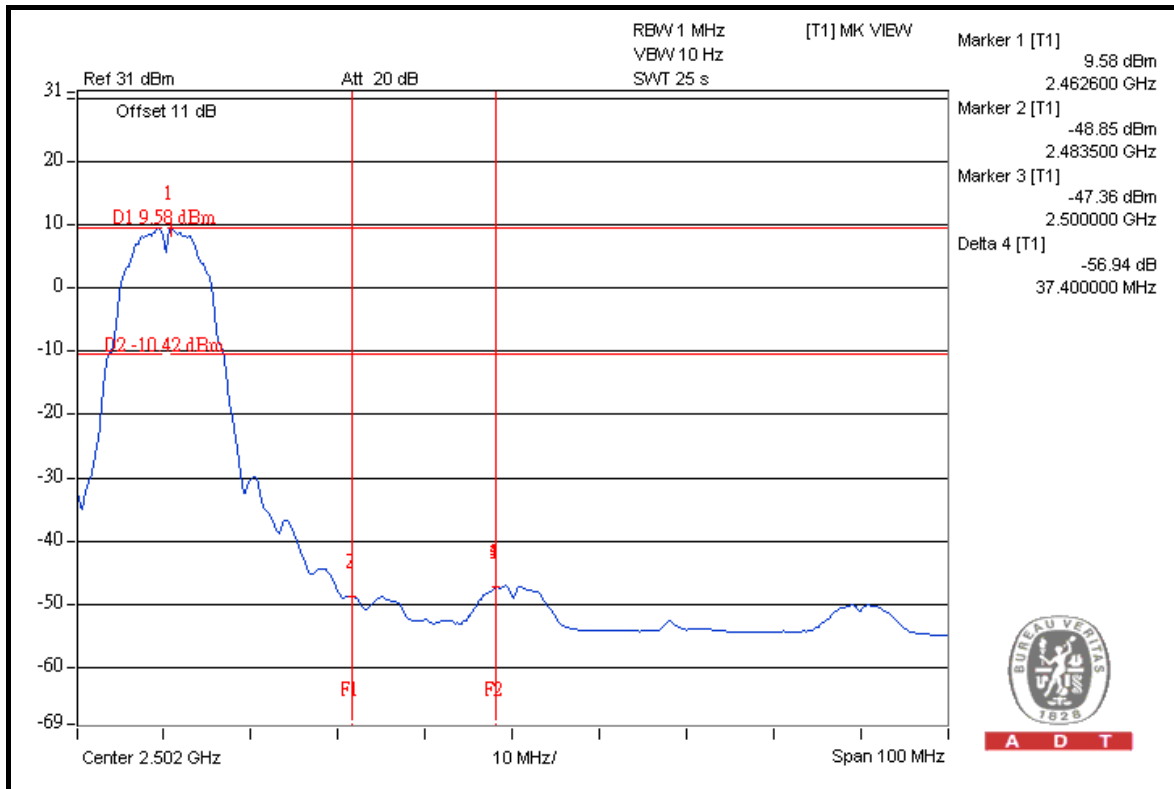


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802.11g

TEST MODE B

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	112.00	45.63	66.37	74.00
2412.00 (AV)	102.20	51.79	50.41	54.00

RESTRICT BAND (2483.5 ~ 2500 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	111.30	45.45	65.85	74.00
2462.00 (AV)	101.30	48.54	52.76	54.00

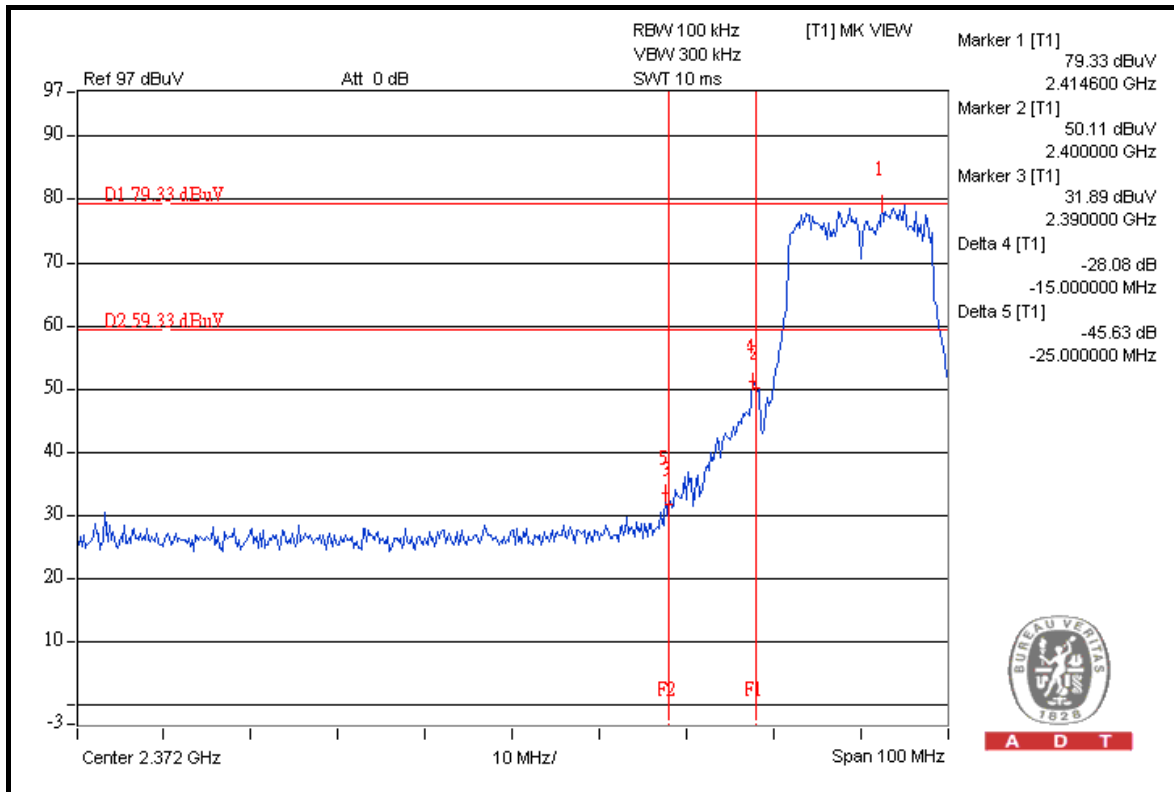
NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

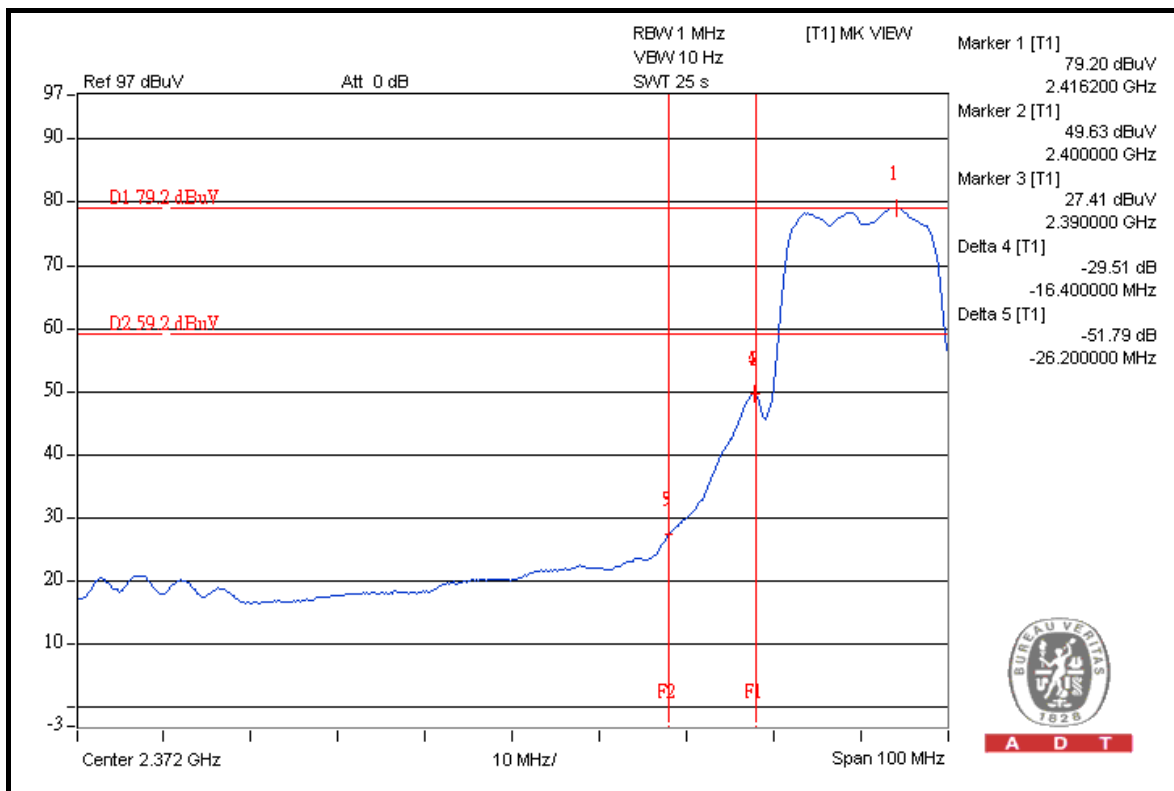


A D T

FOR RADIATED MEASURED (TWO CHAINS ON)



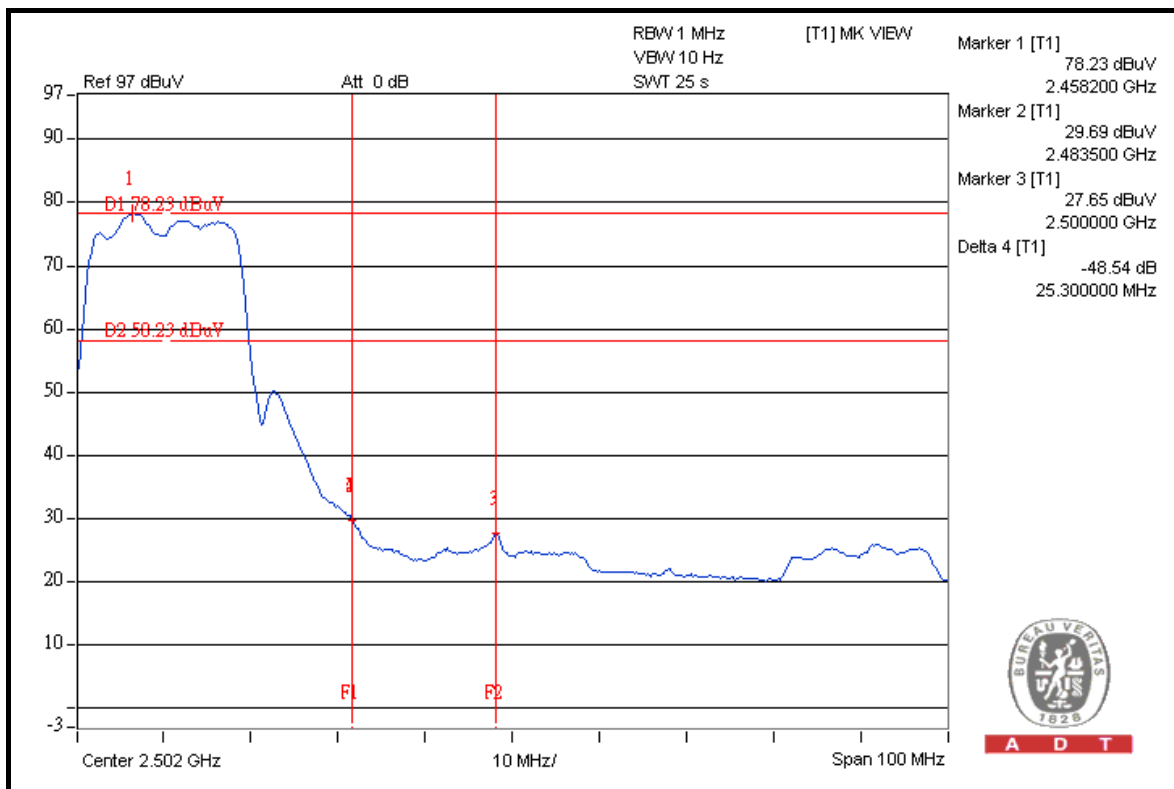
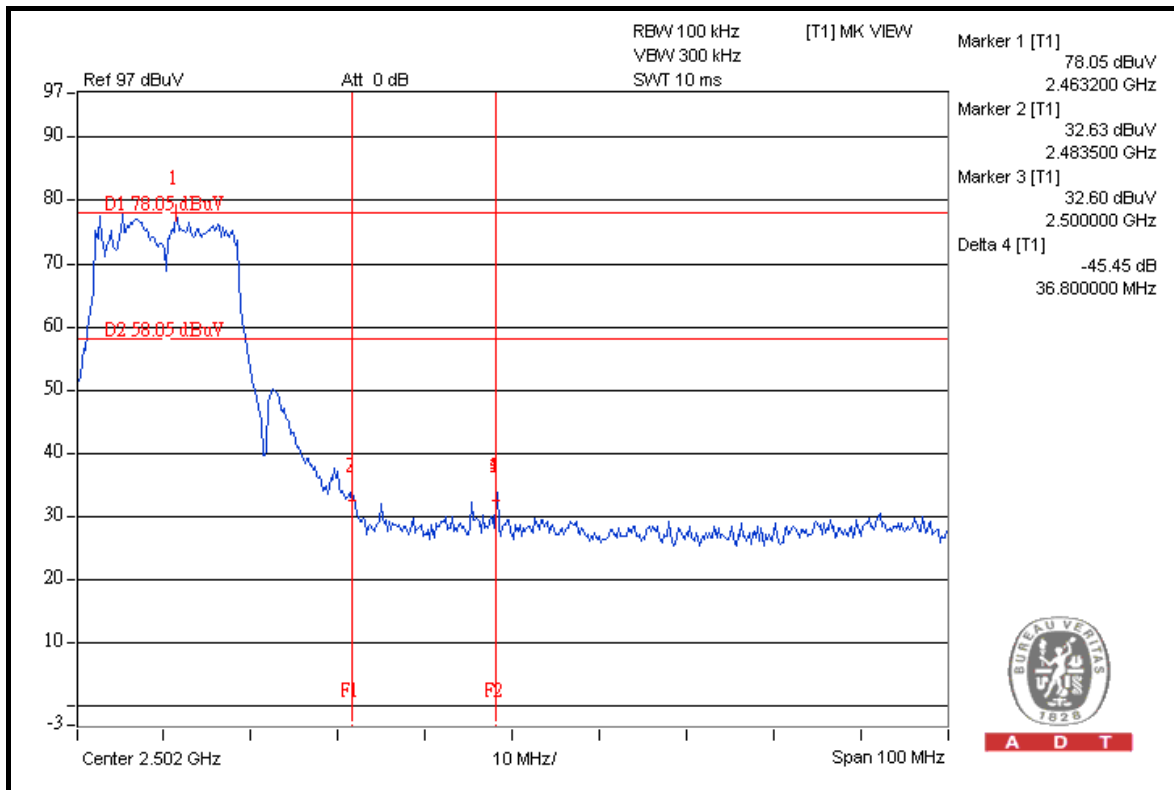
A D T



A D T



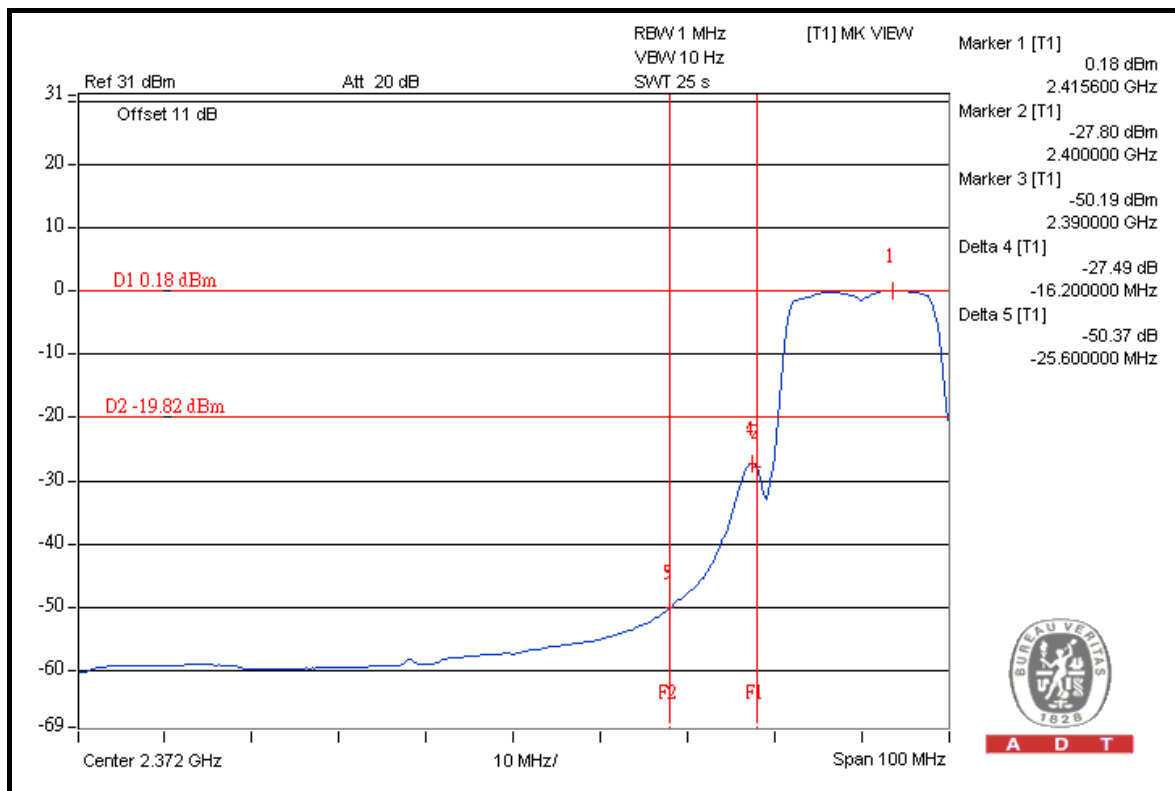
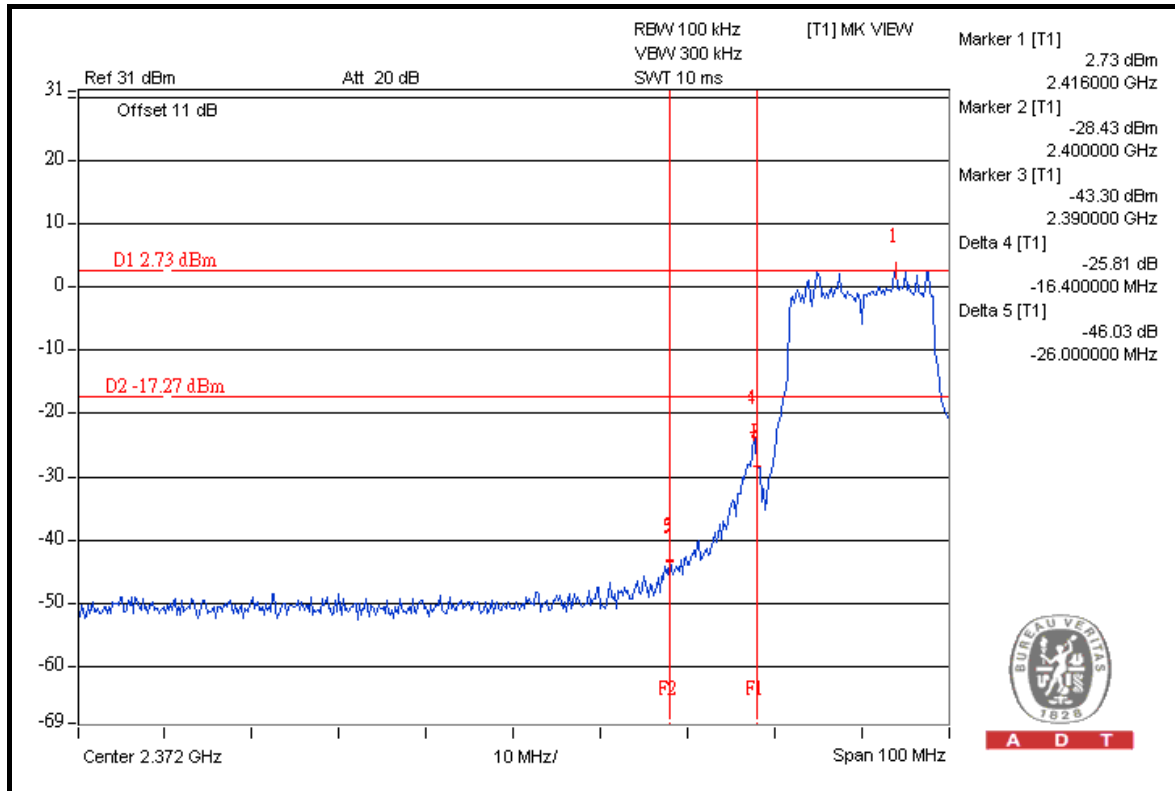
A D T





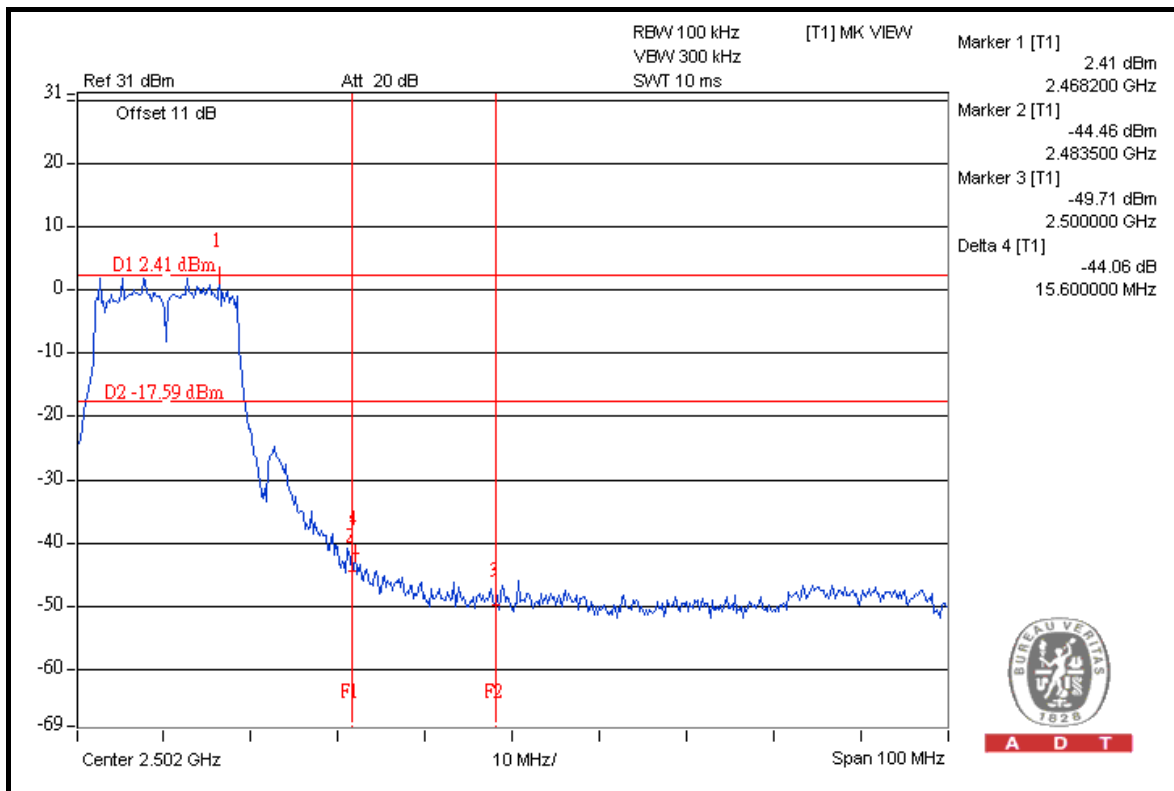
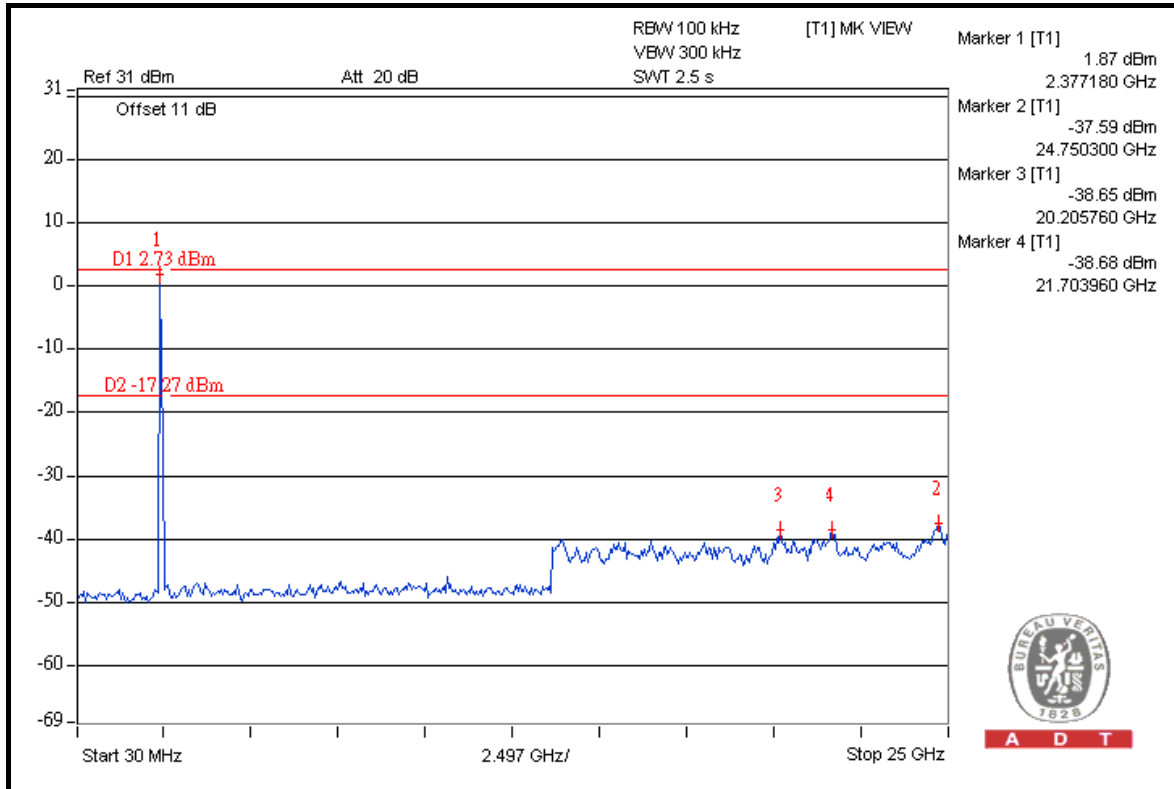
A D T

FOR CONDUCTED MEASURED CHAIN 0



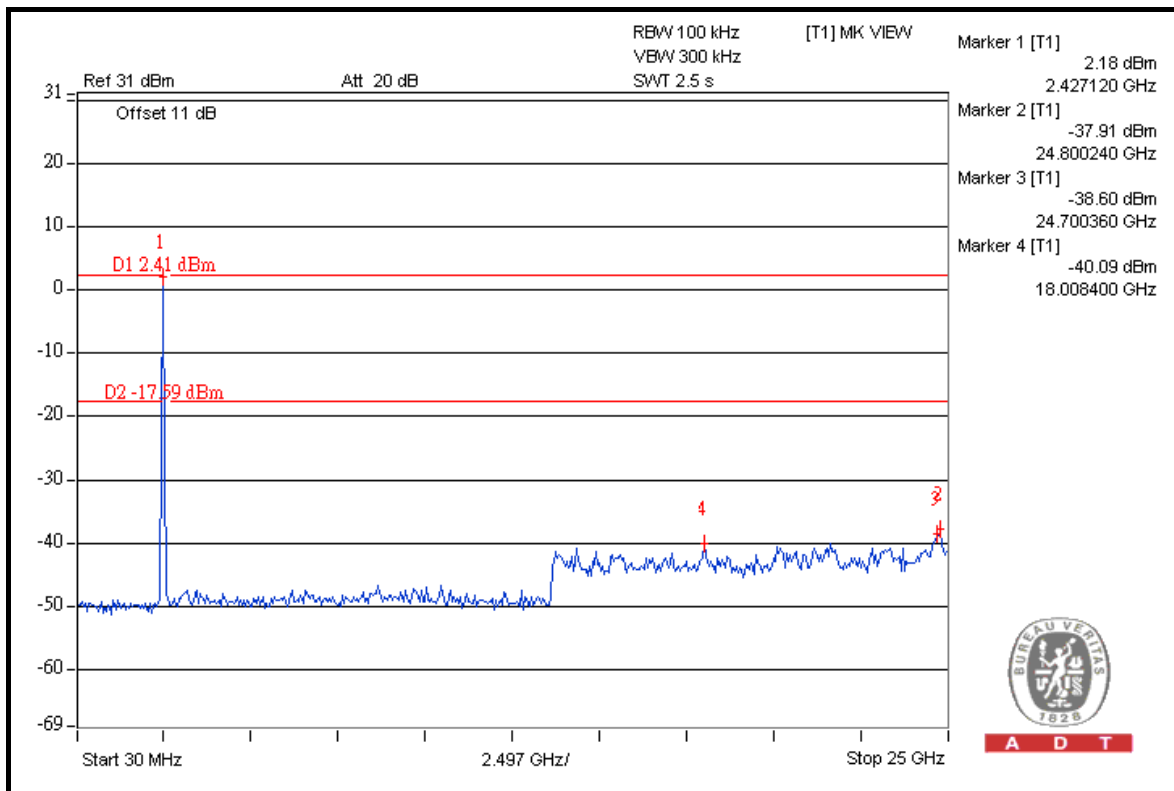
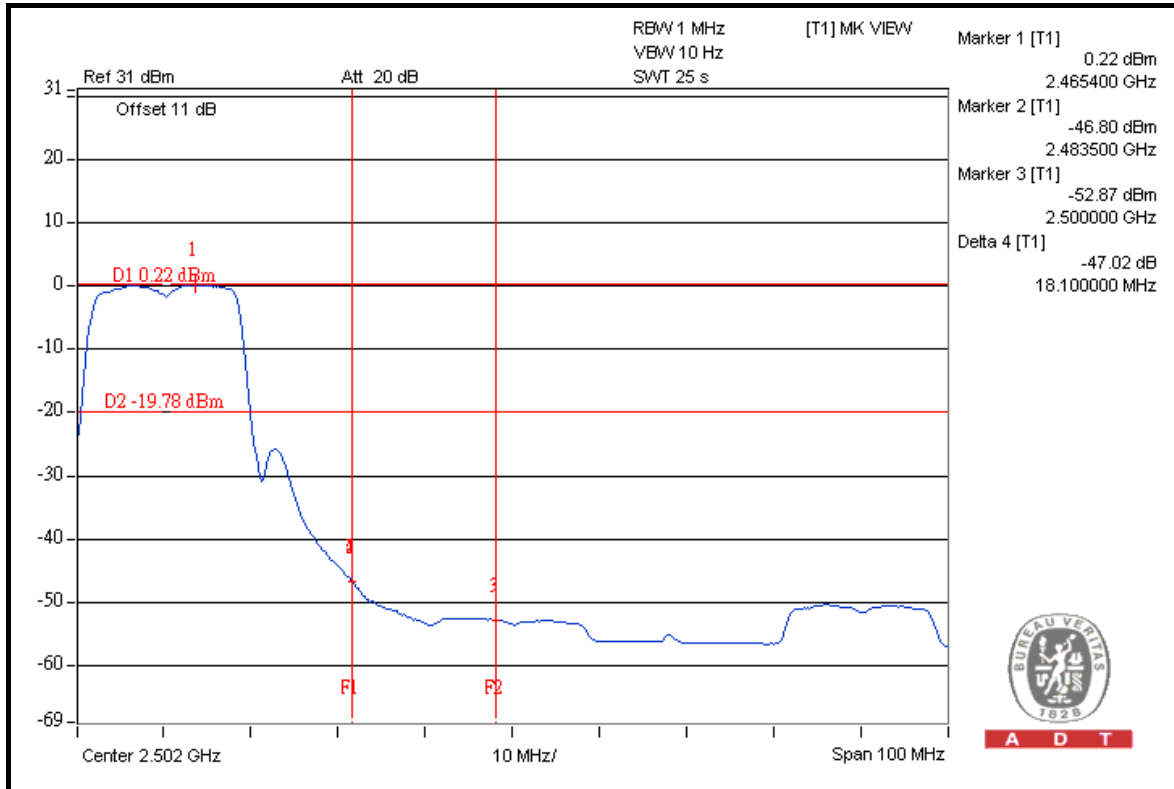


A D T





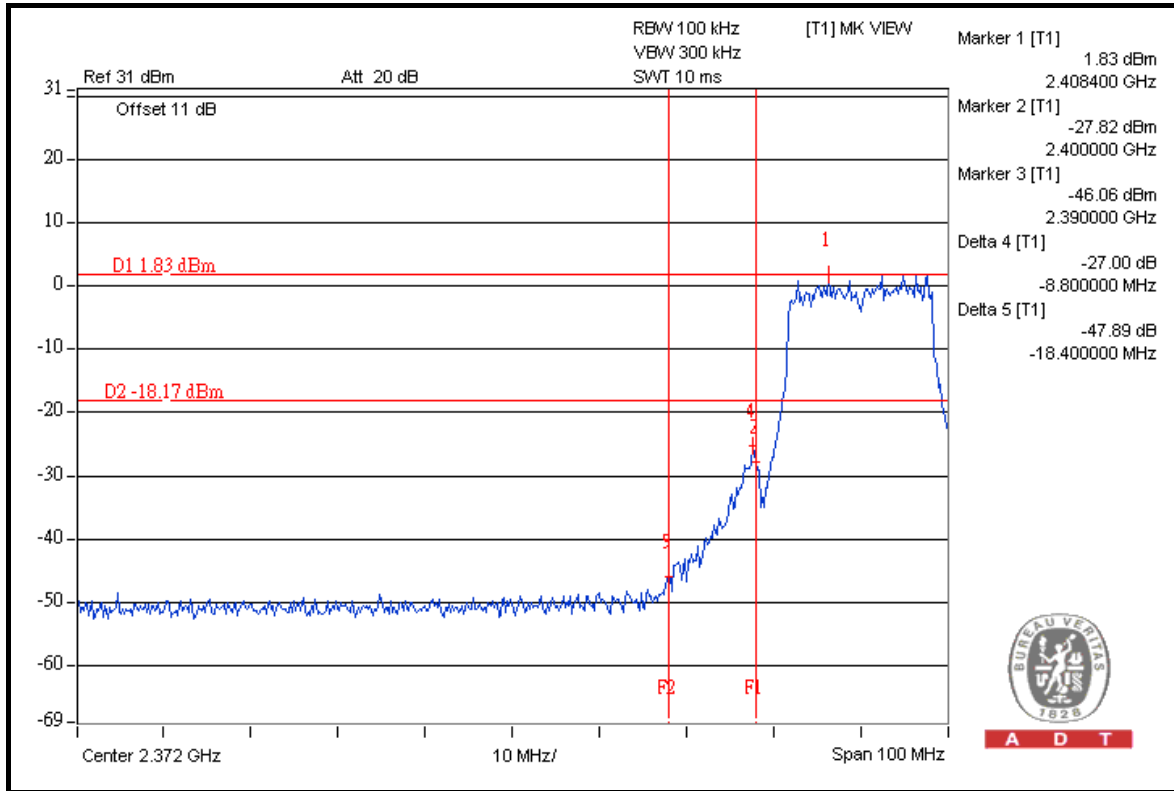
A D T



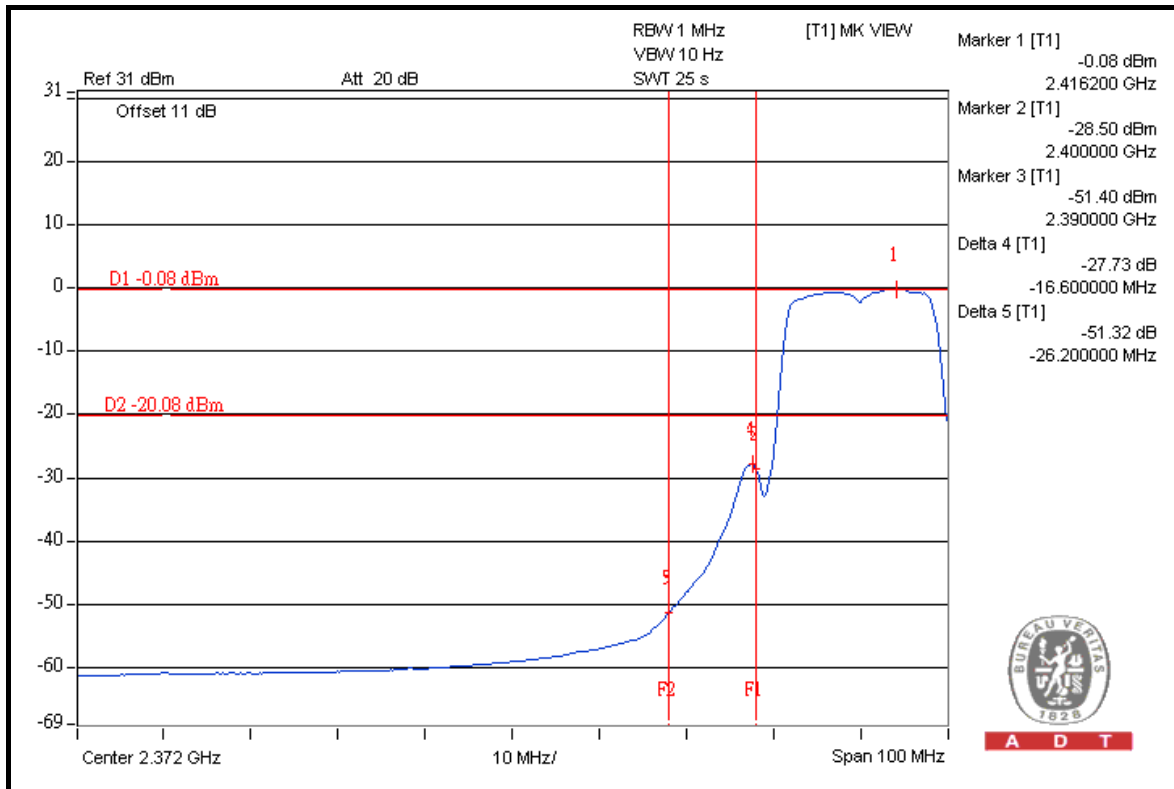


A D T

CHAIN 1



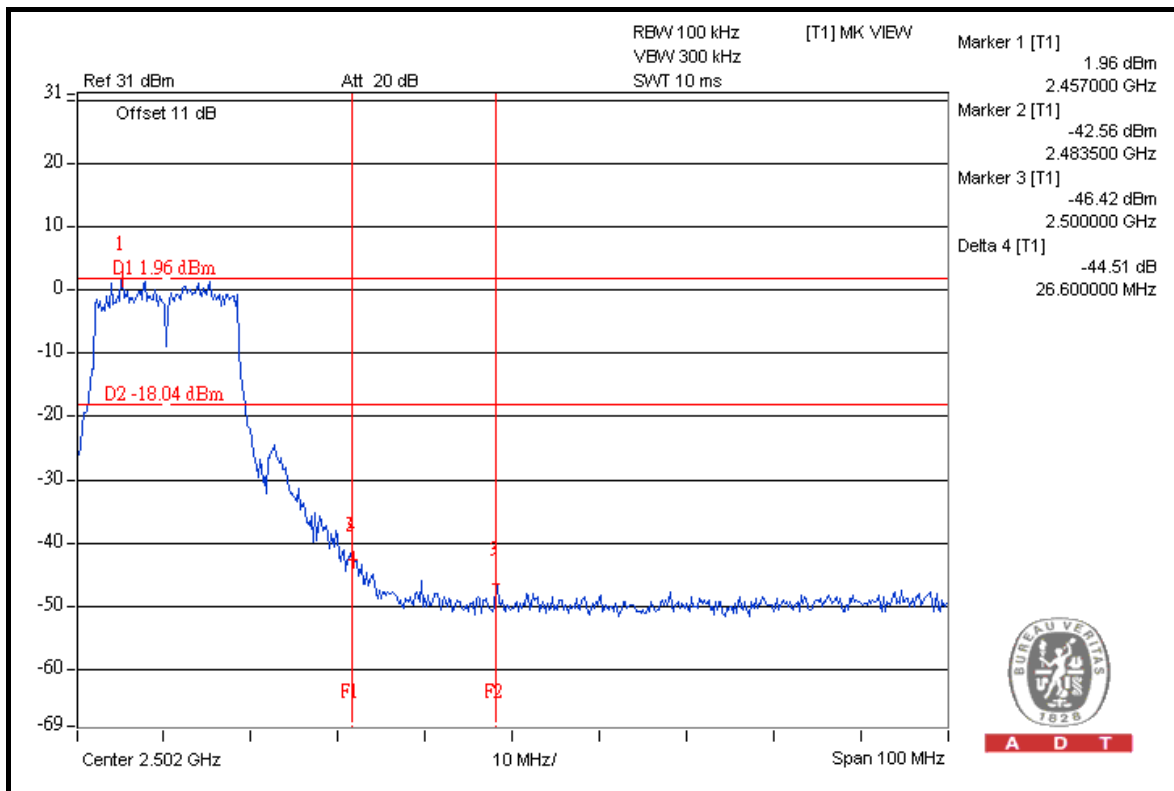
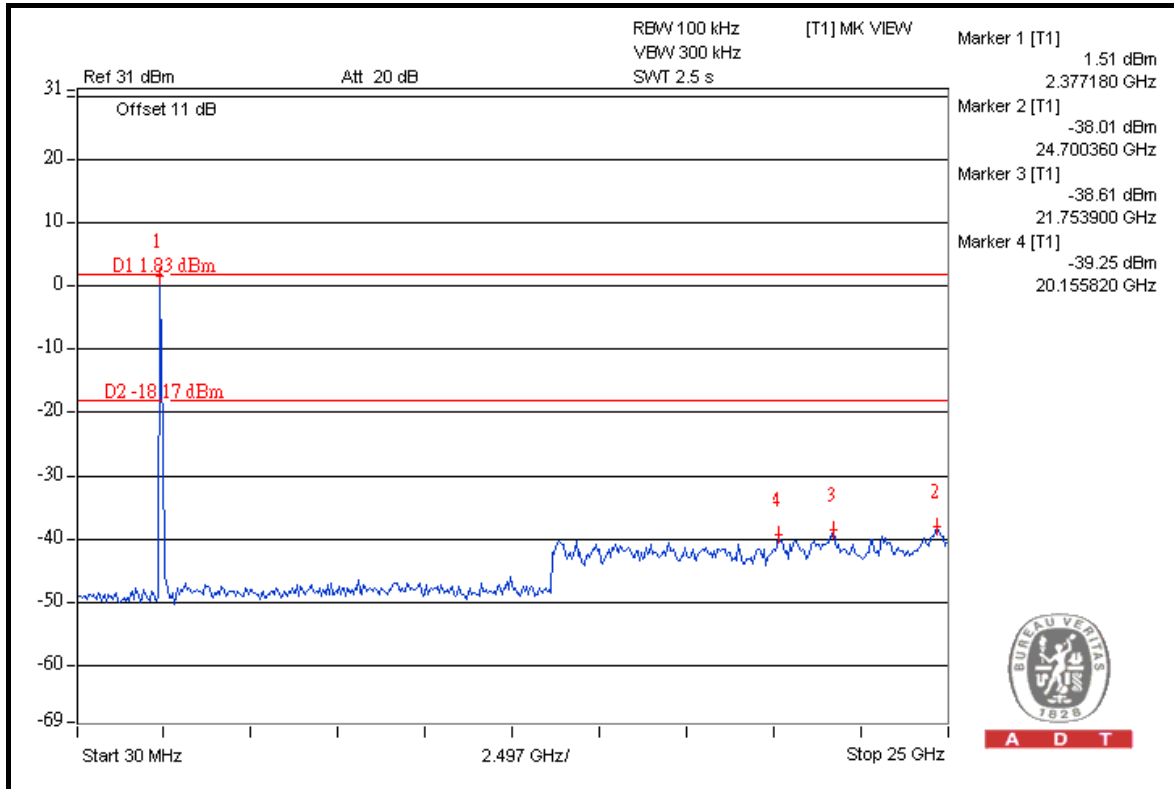
A D T



A D T

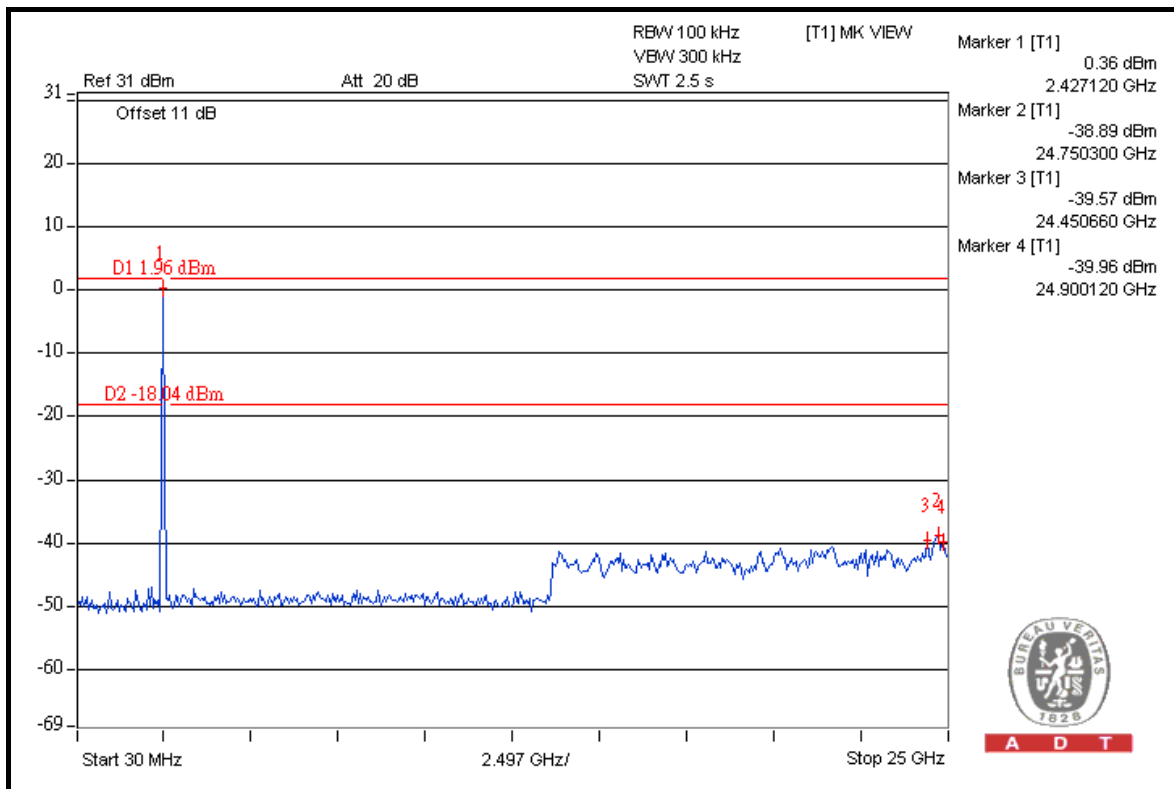
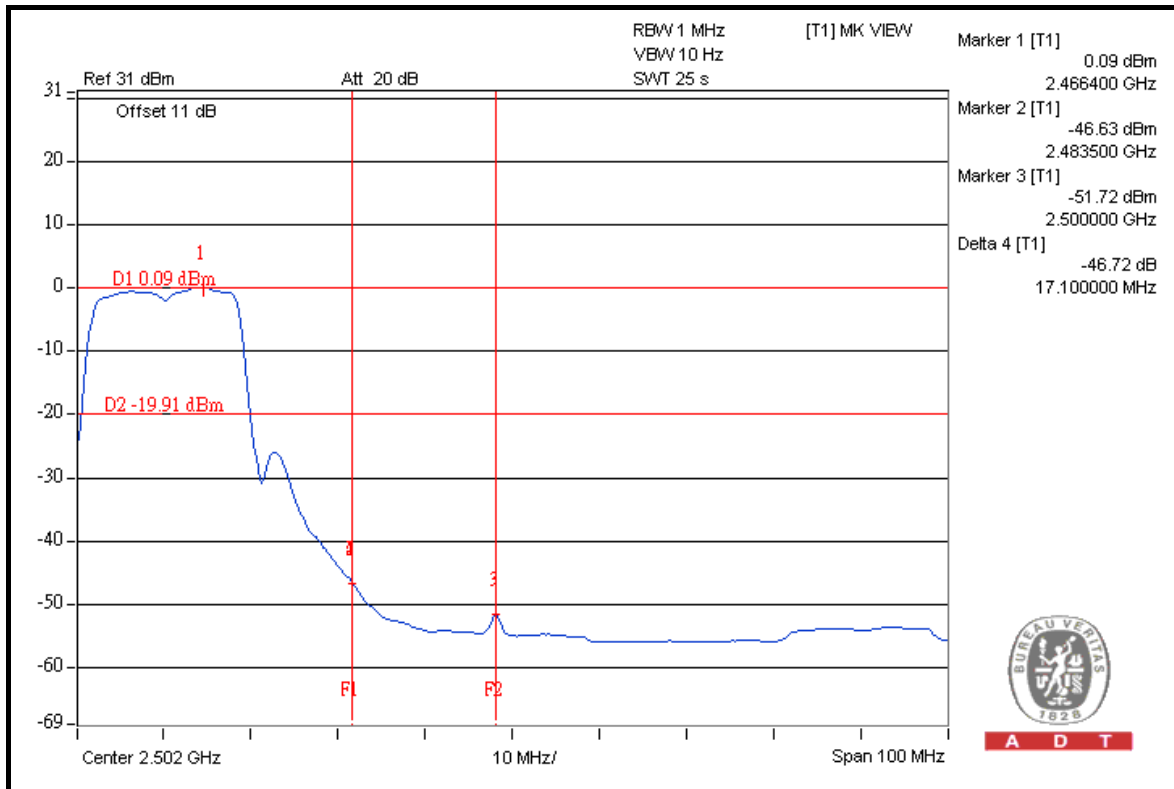


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TEST MODE D

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	112.60	44.44	68.16	74.00
2412.00 (AV)	102.10	49.78	52.32	54.00

RESTRICT BAND (2483.5 ~ 2500 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	112.10	46.36	65.74	74.00
2462.00 (AV)	101.30	48.62	52.68	54.00

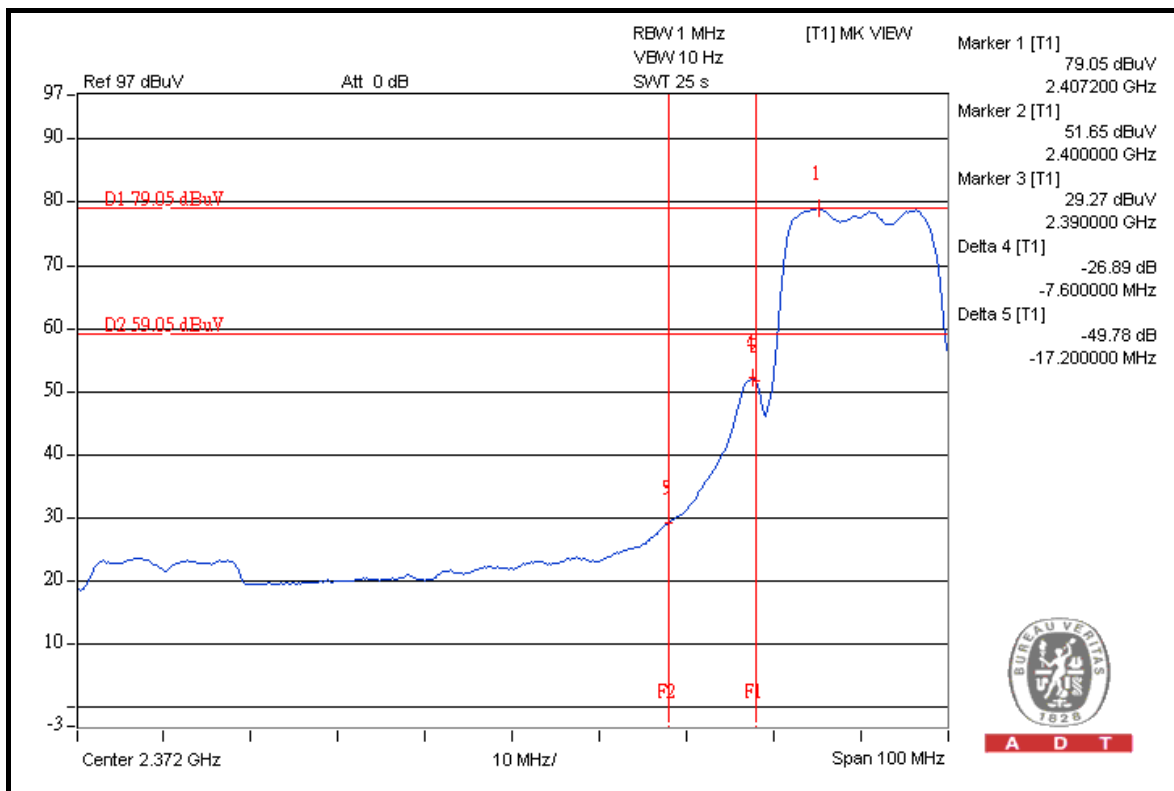
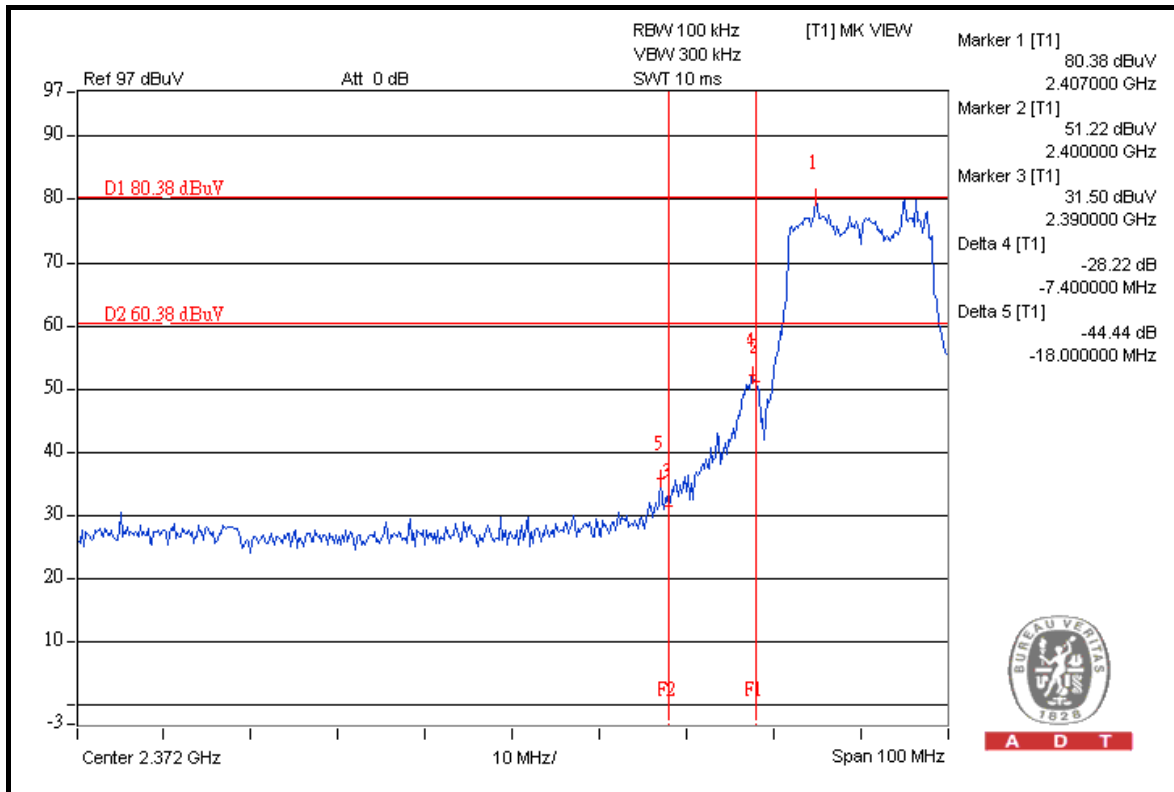
NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.



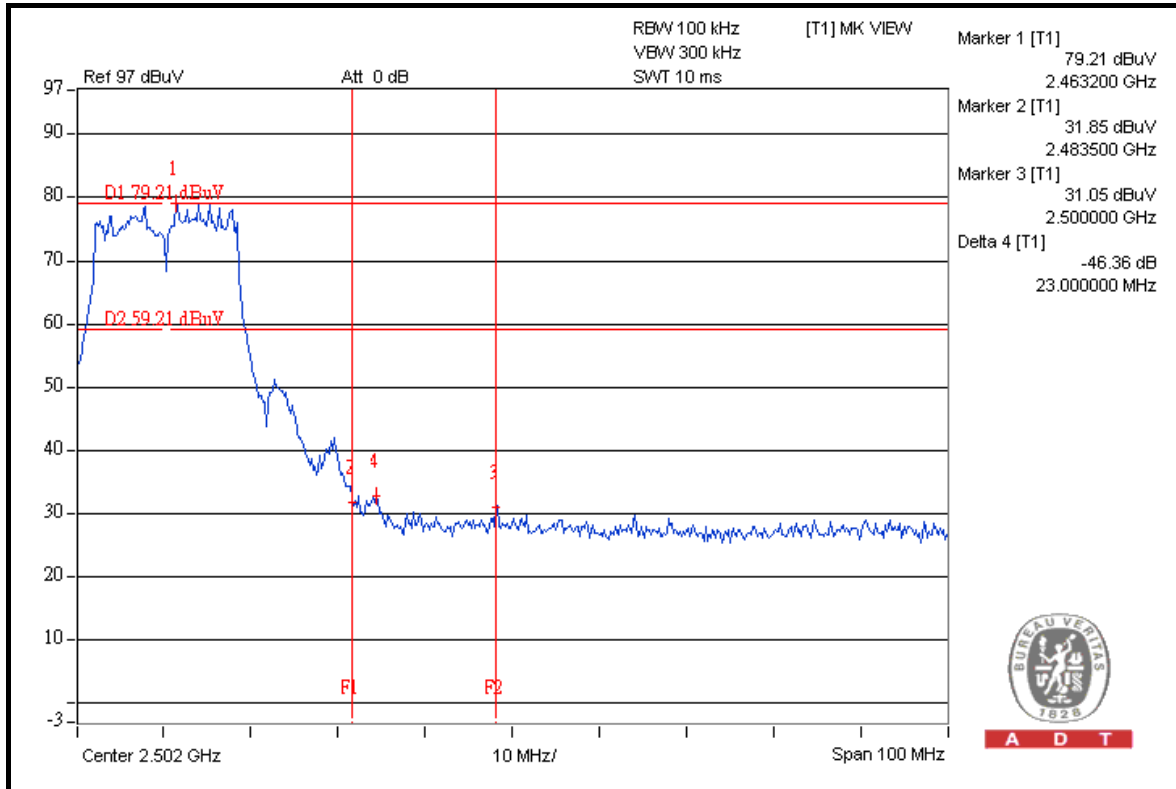
A D T

FOR RADIATED MEASURED (TWO CHAINS ON)

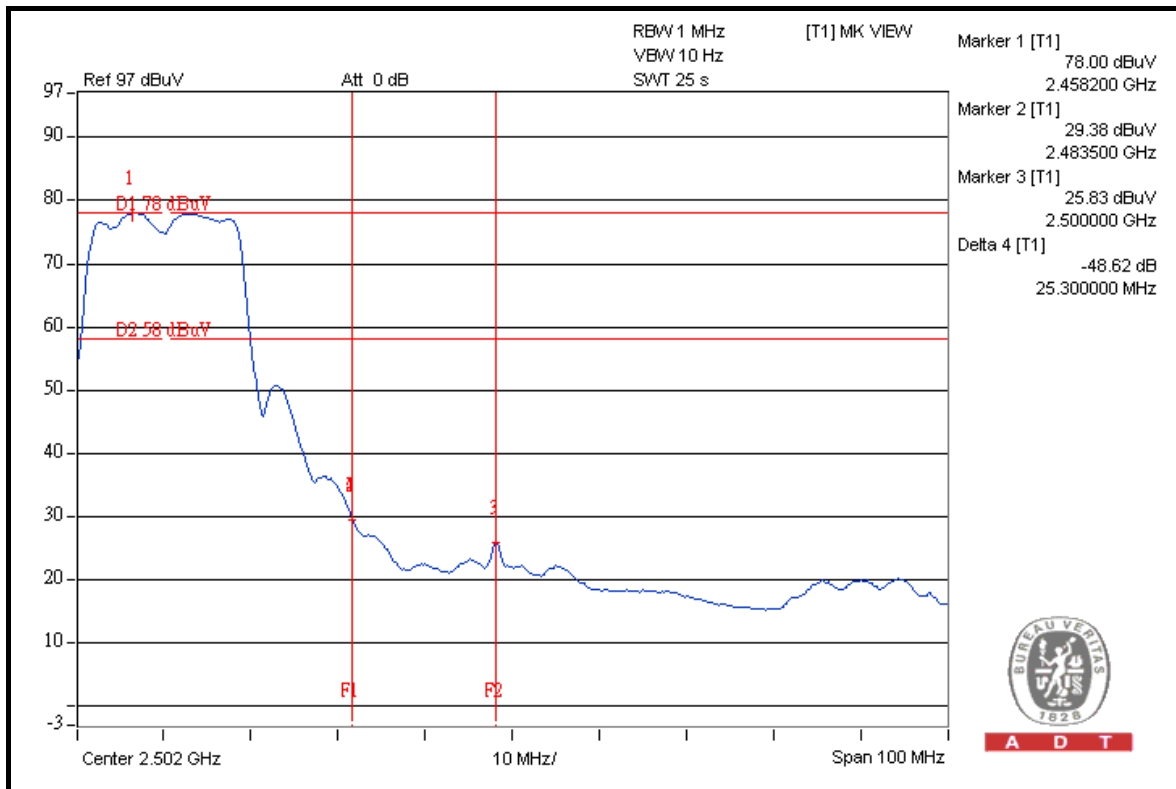




A D T



A D T

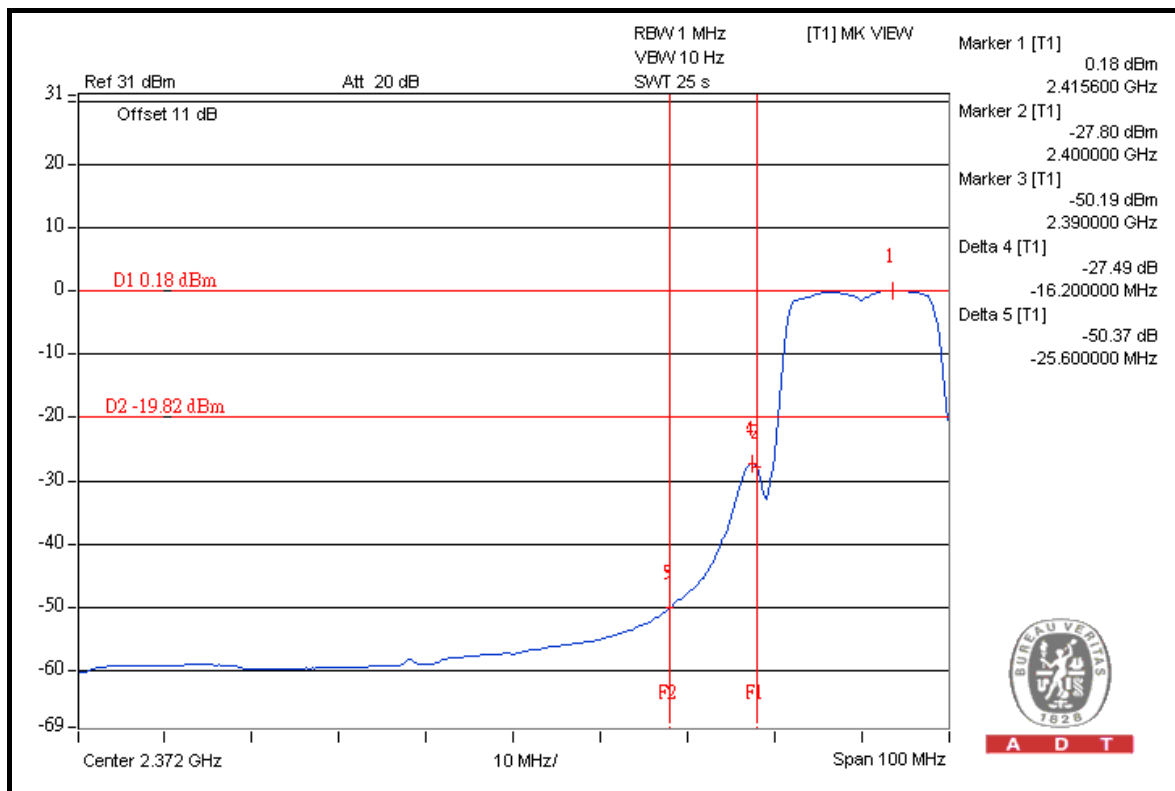
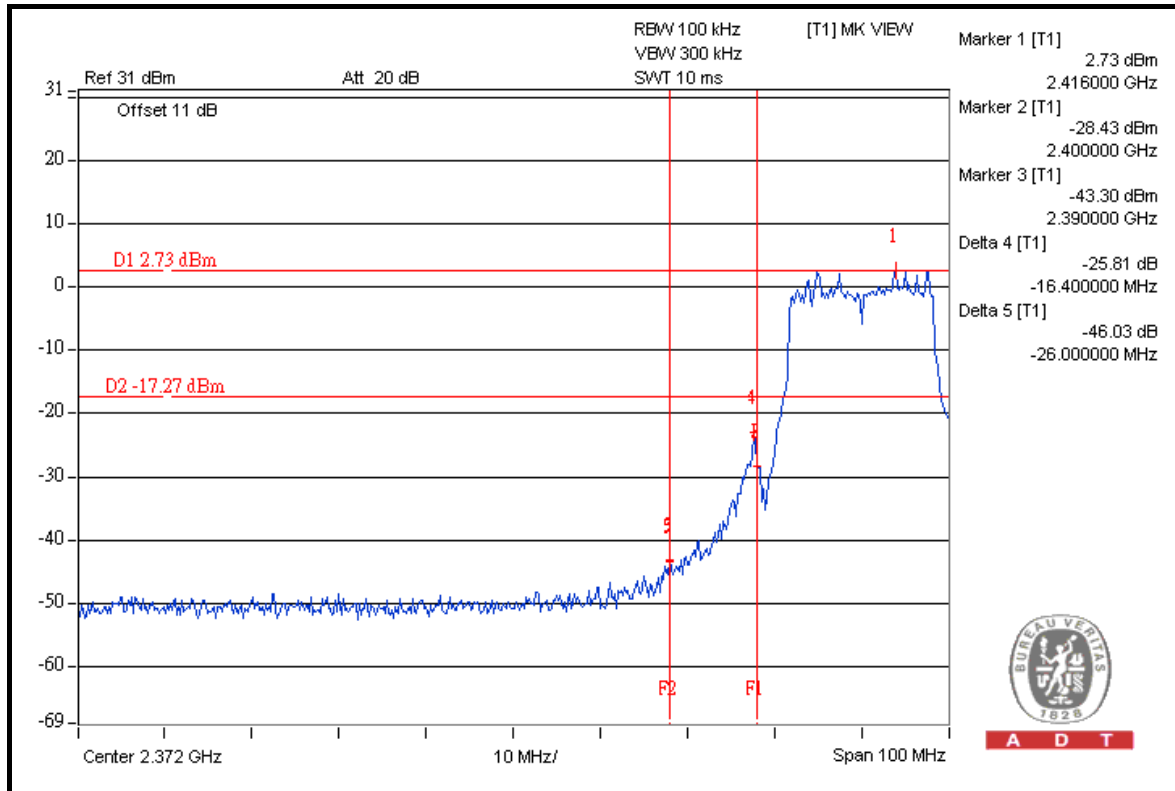


A D T



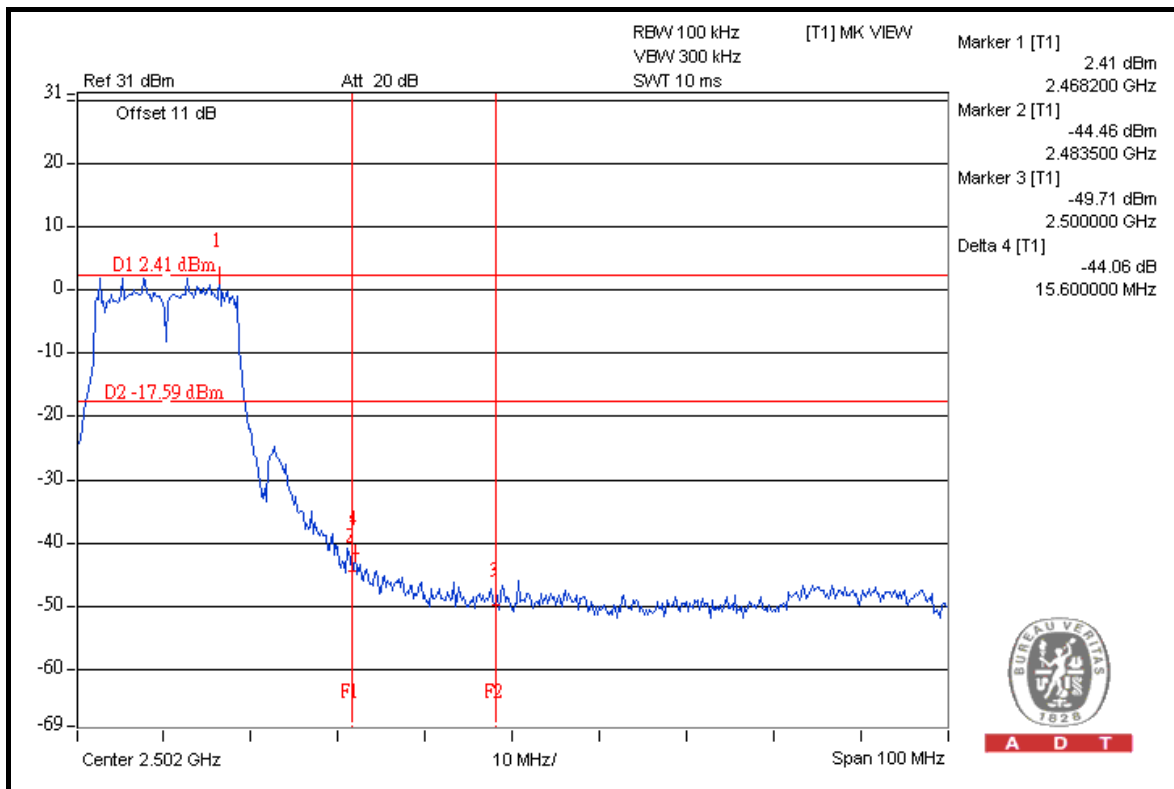
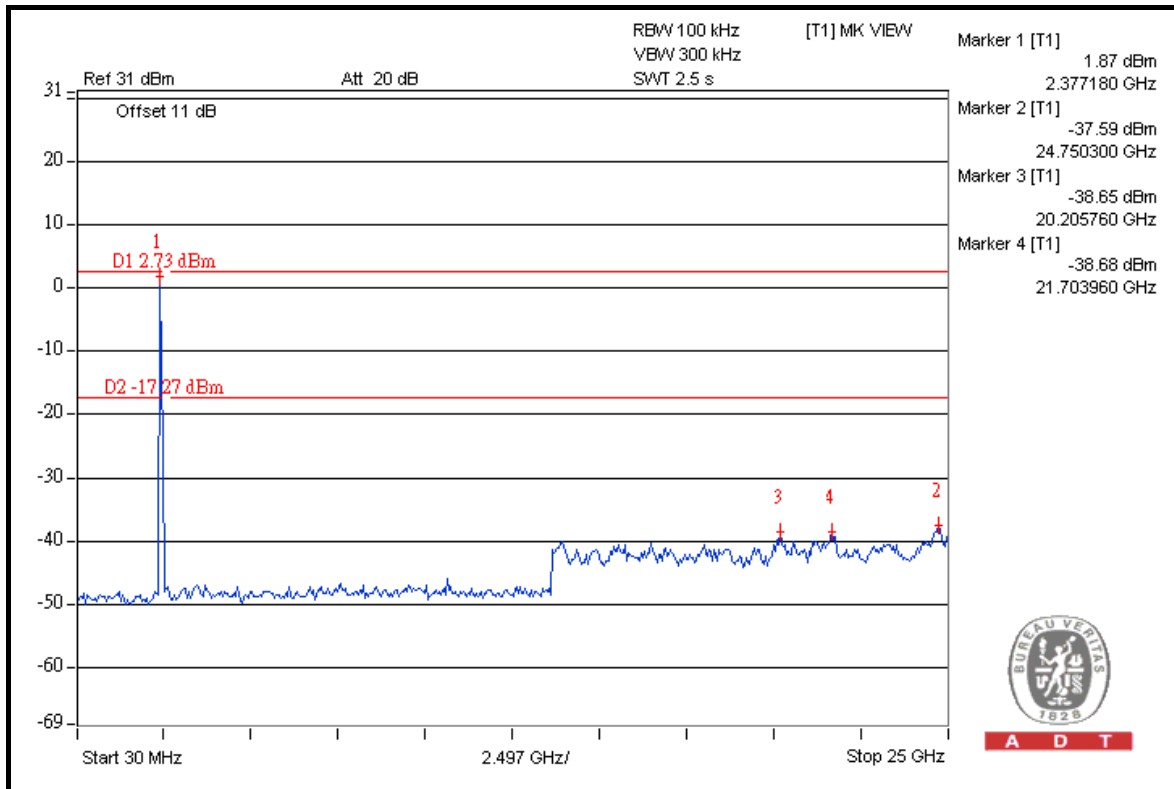
A D T

FOR CONDUCTED MEASURED CHAIN 0



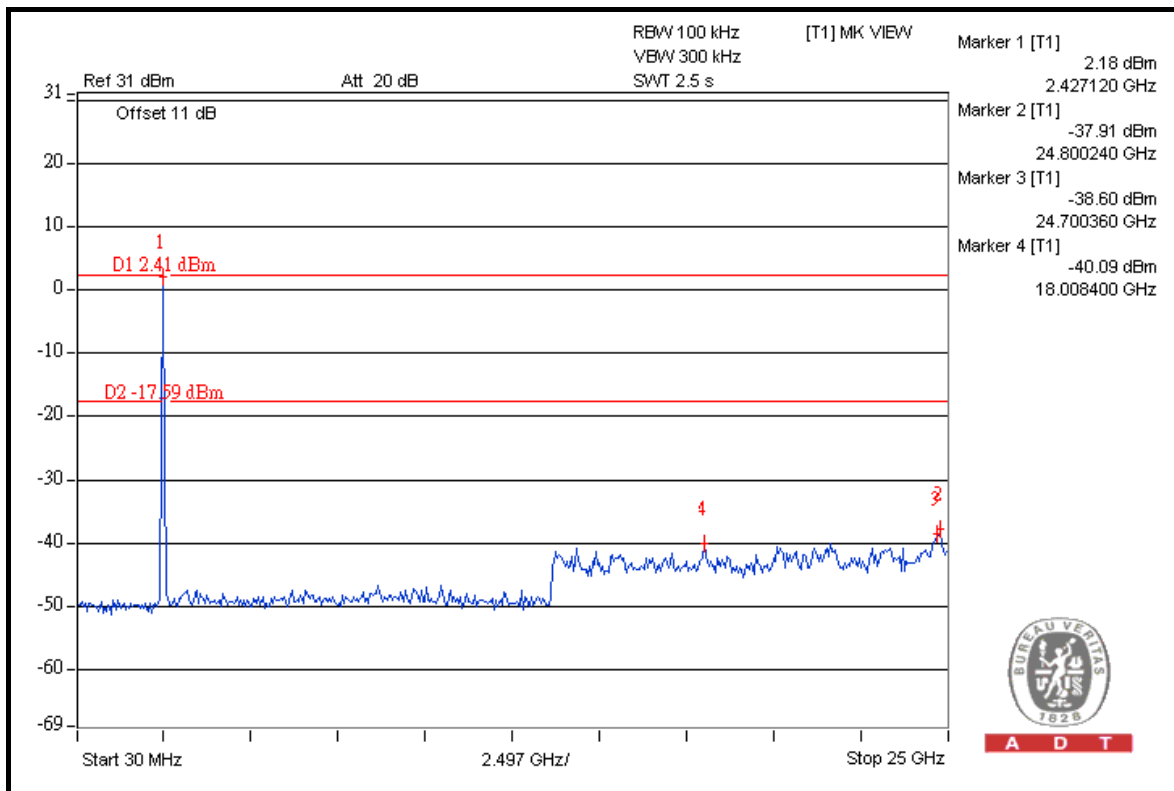
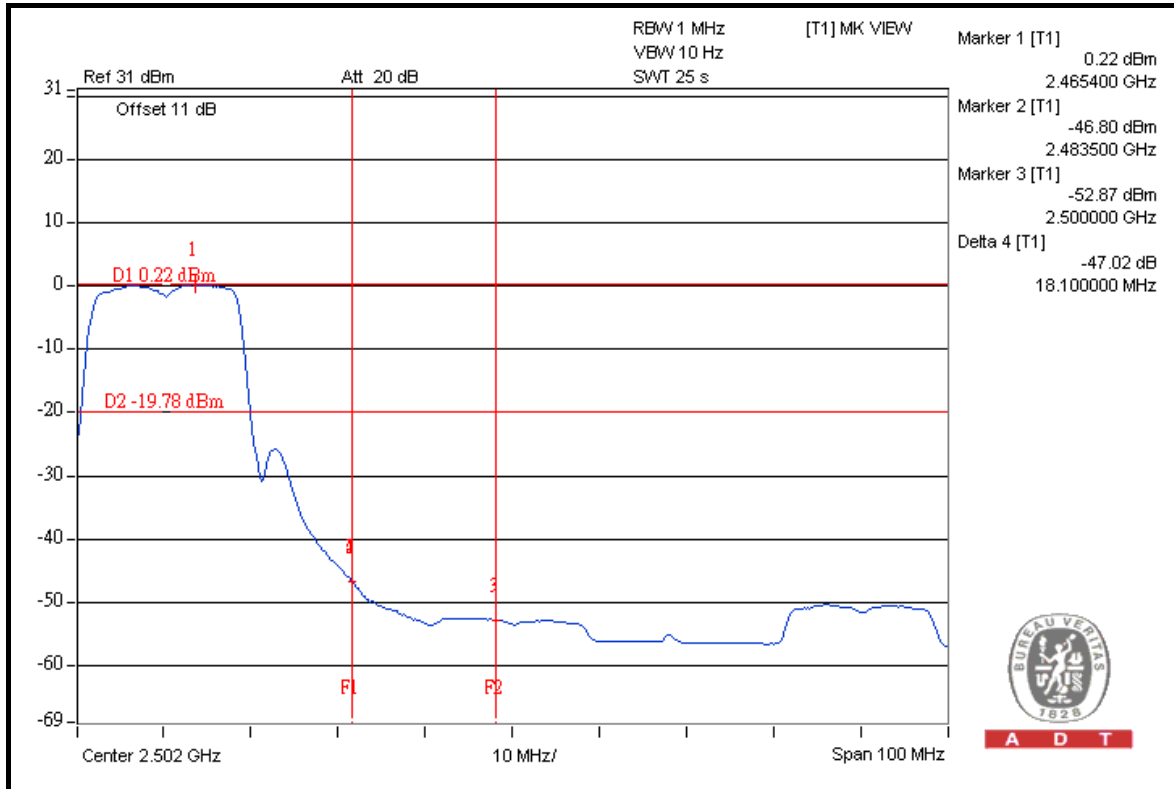


A D T





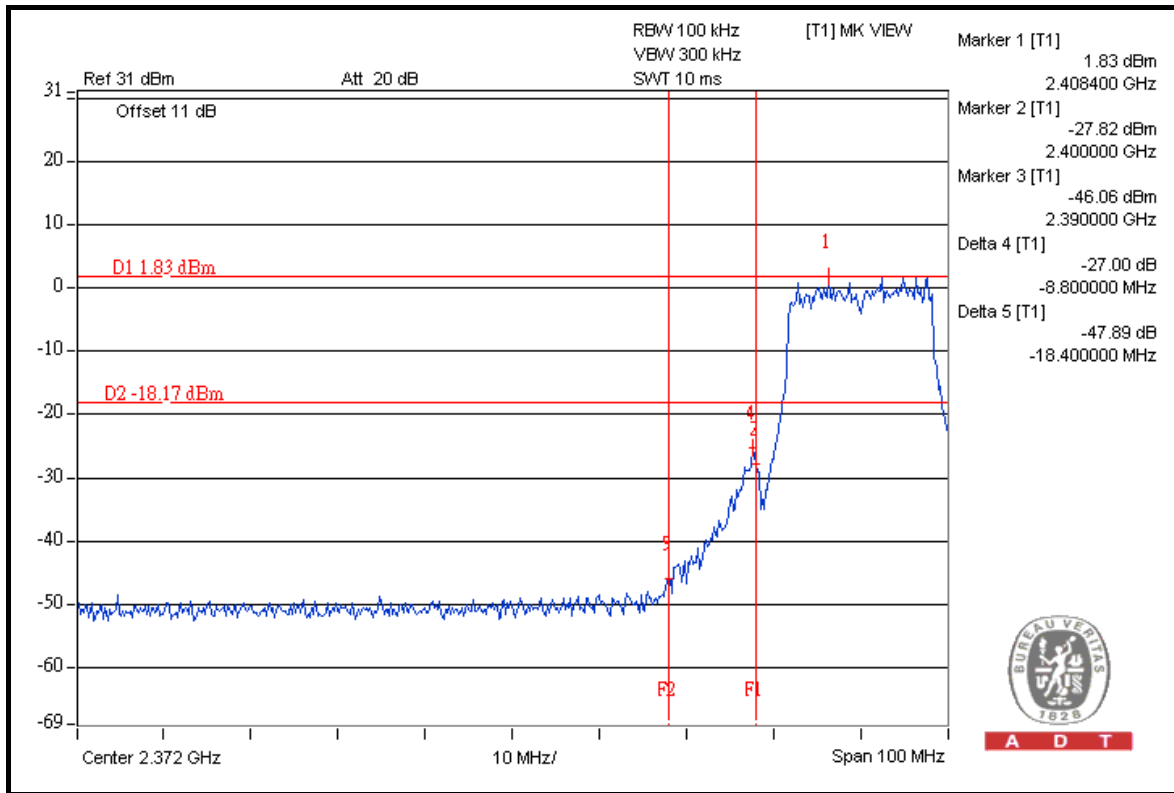
A D T



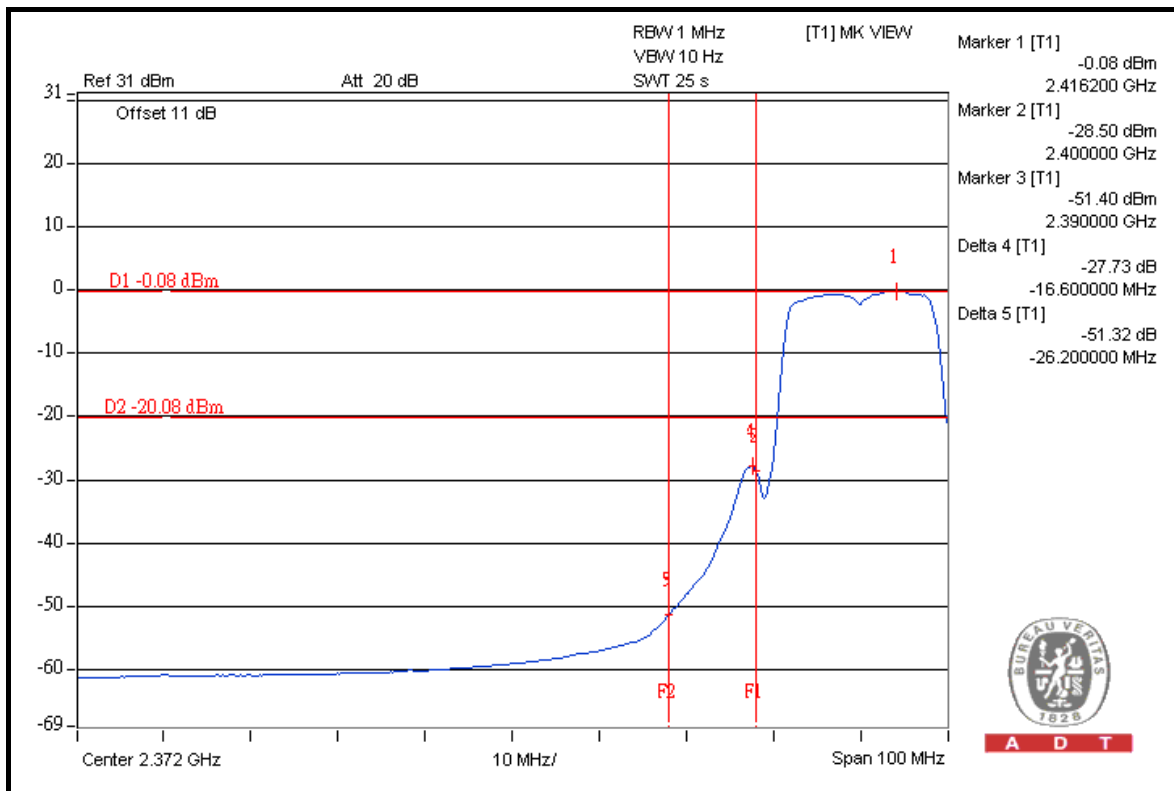


A D T

CHAIN 1



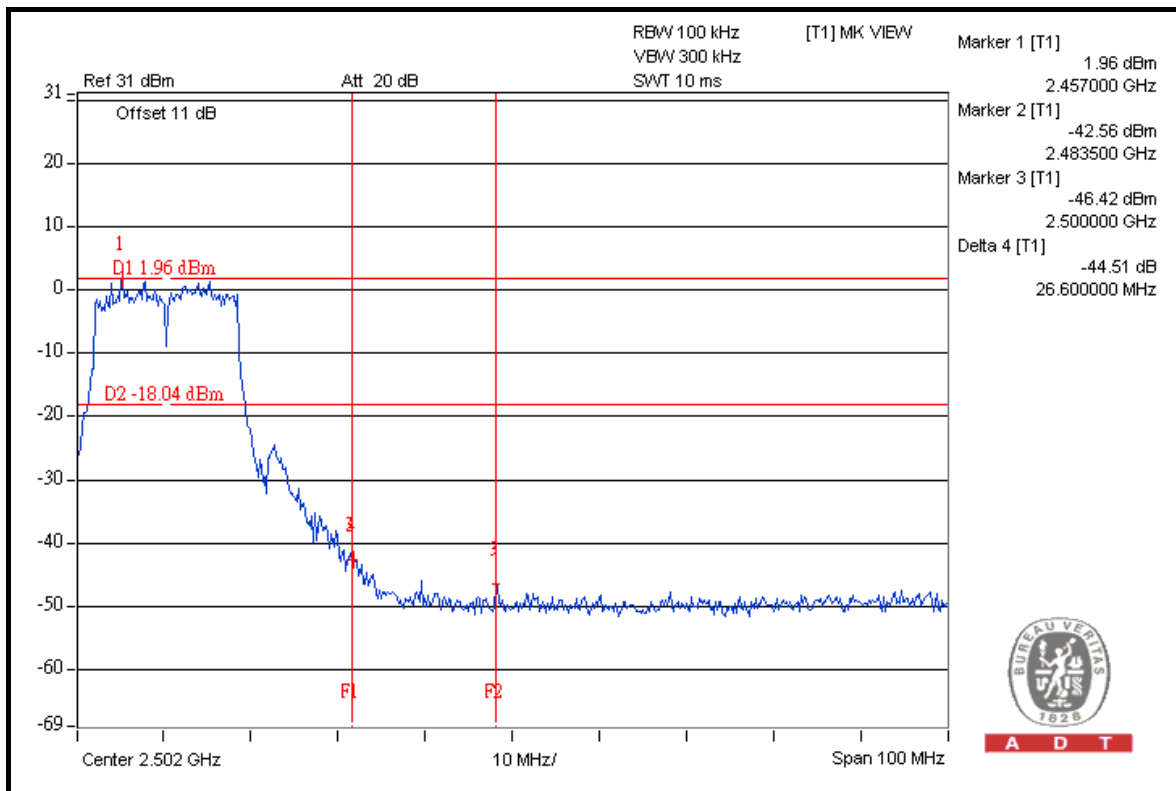
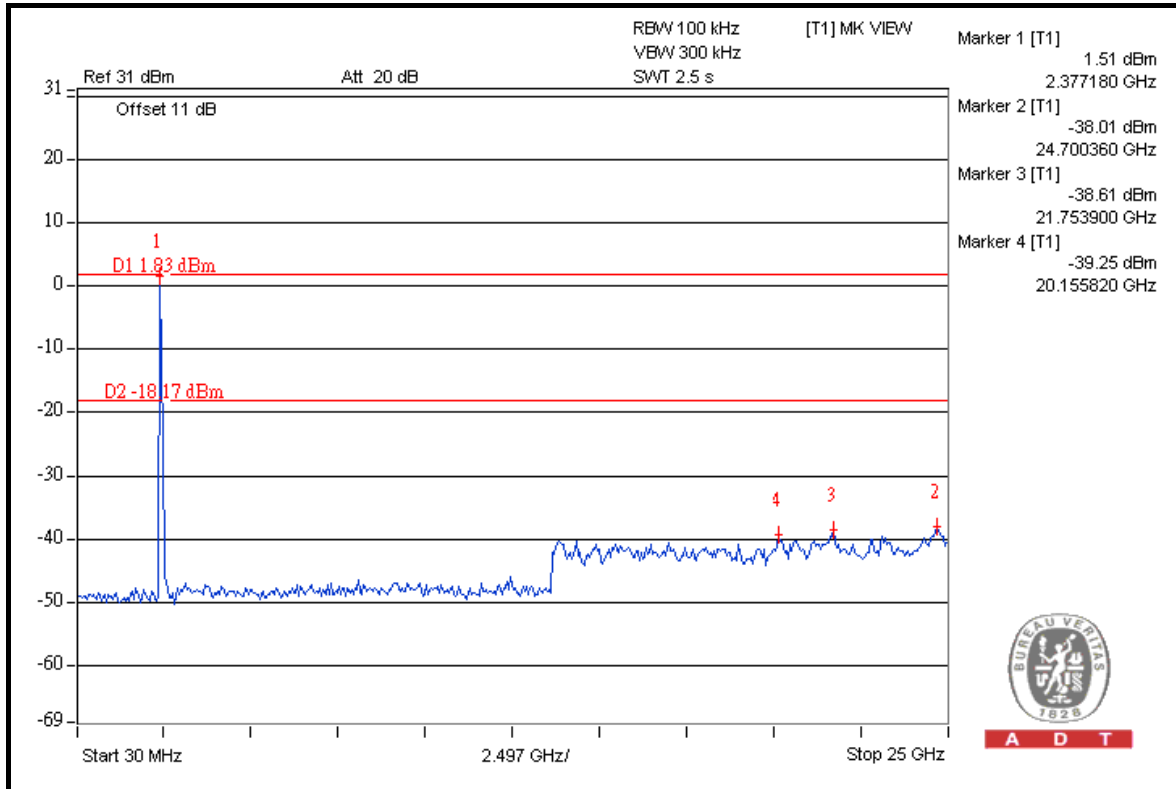
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A D T

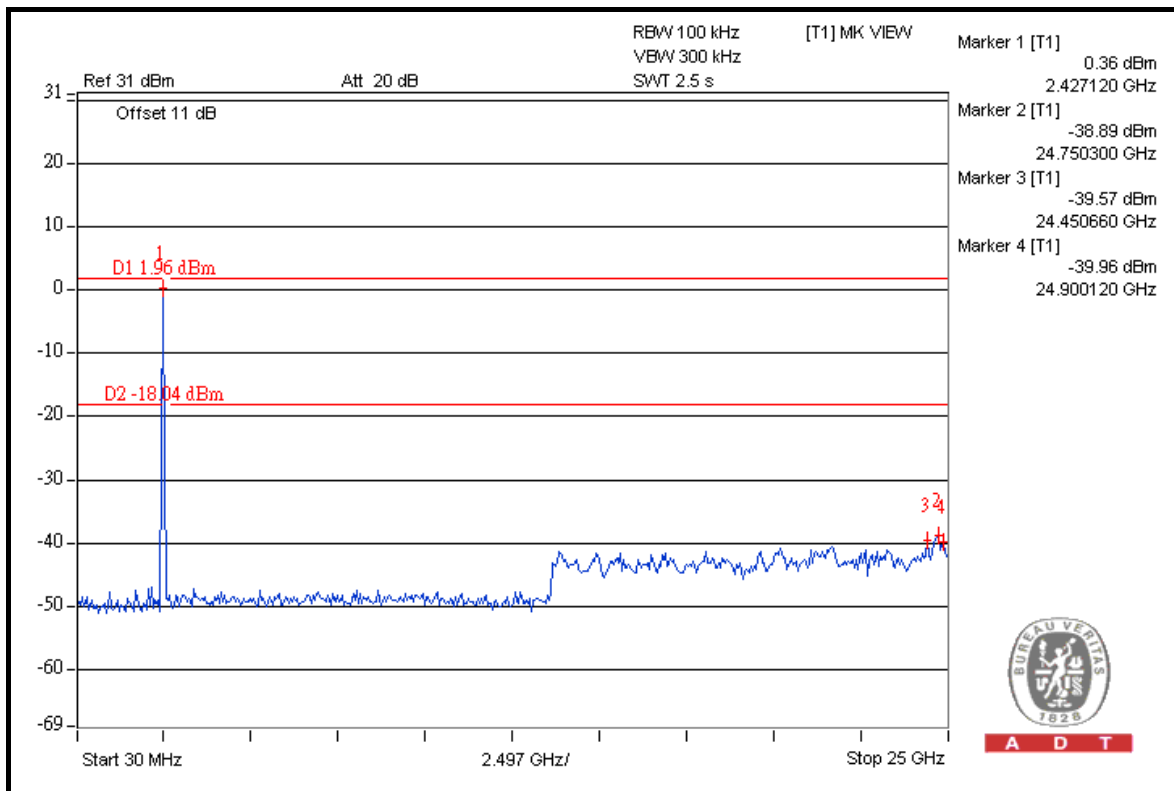
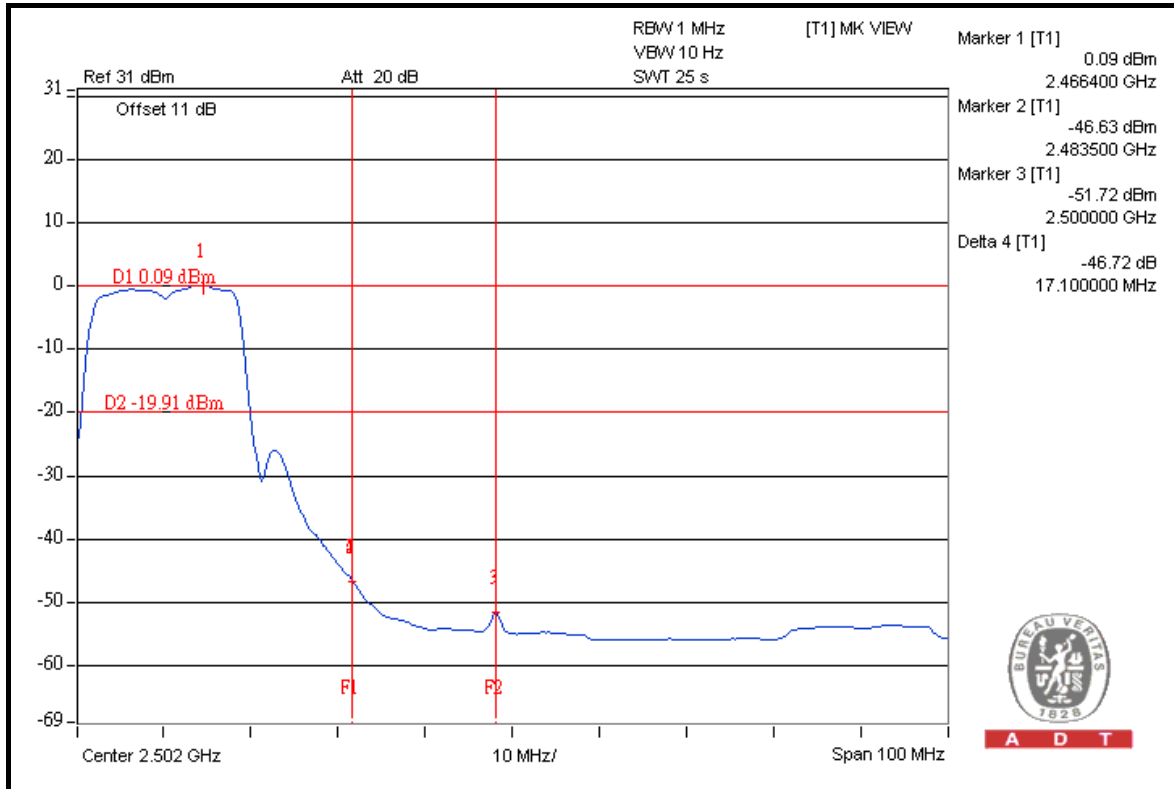


A D T





A D T





A D T

802.11n (20MHz)

TEST MODE B

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	112.60	49.13	63.47	74.00
2412.00 (AV)	102.70	50.72	51.98	54.00

RESTRICT BAND (2483.5 ~ 2500 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	111.10	47.06	64.04	74.00
2462.00 (AV)	100.90	48.48	52.42	54.00

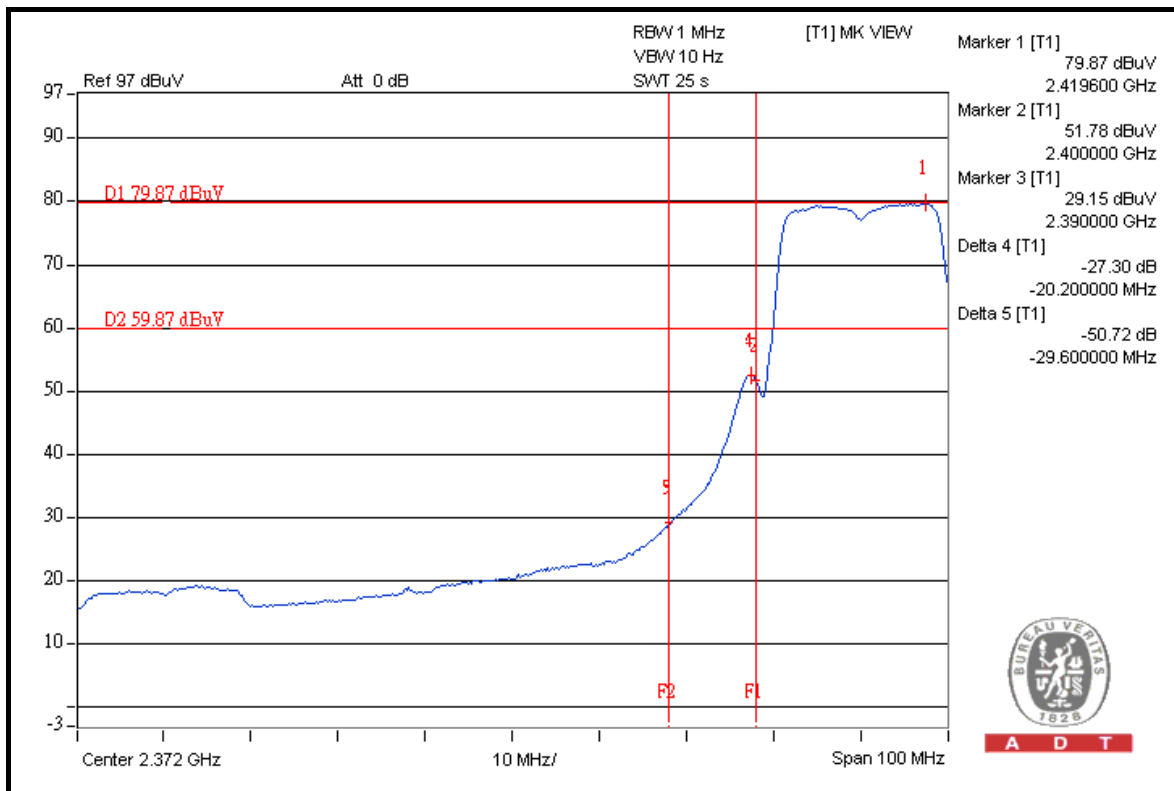
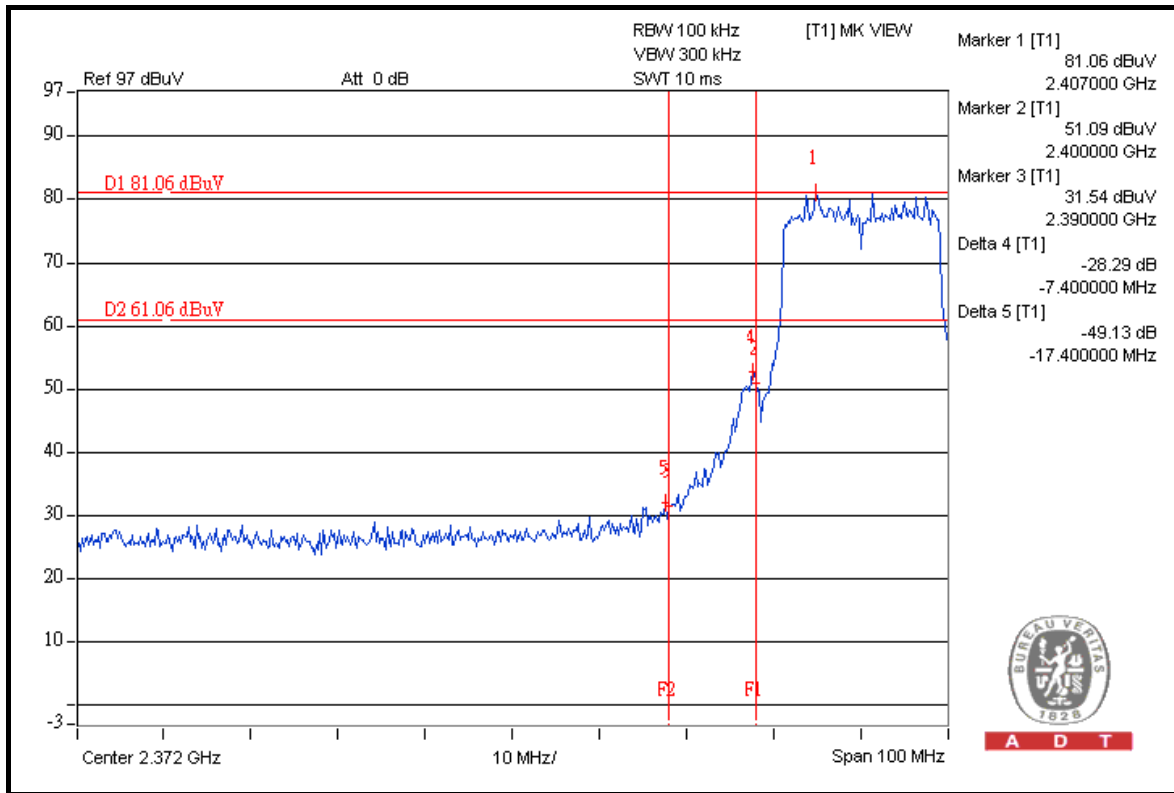
NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.



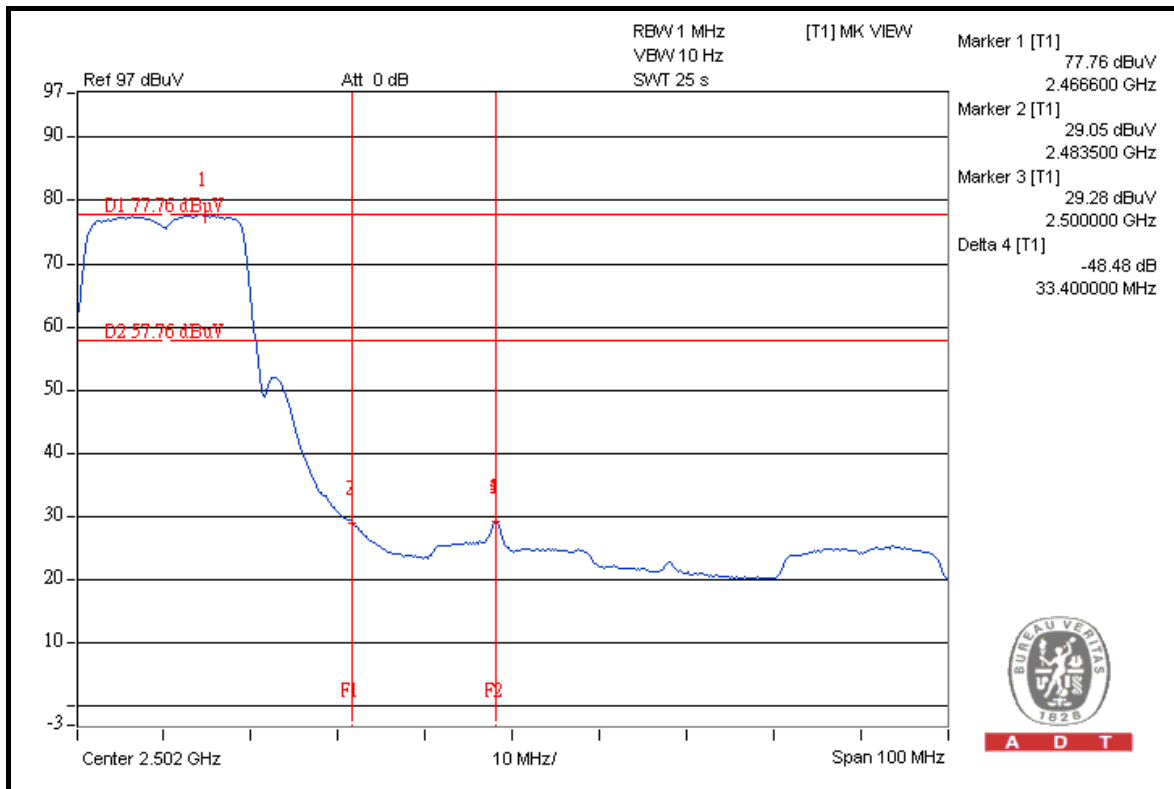
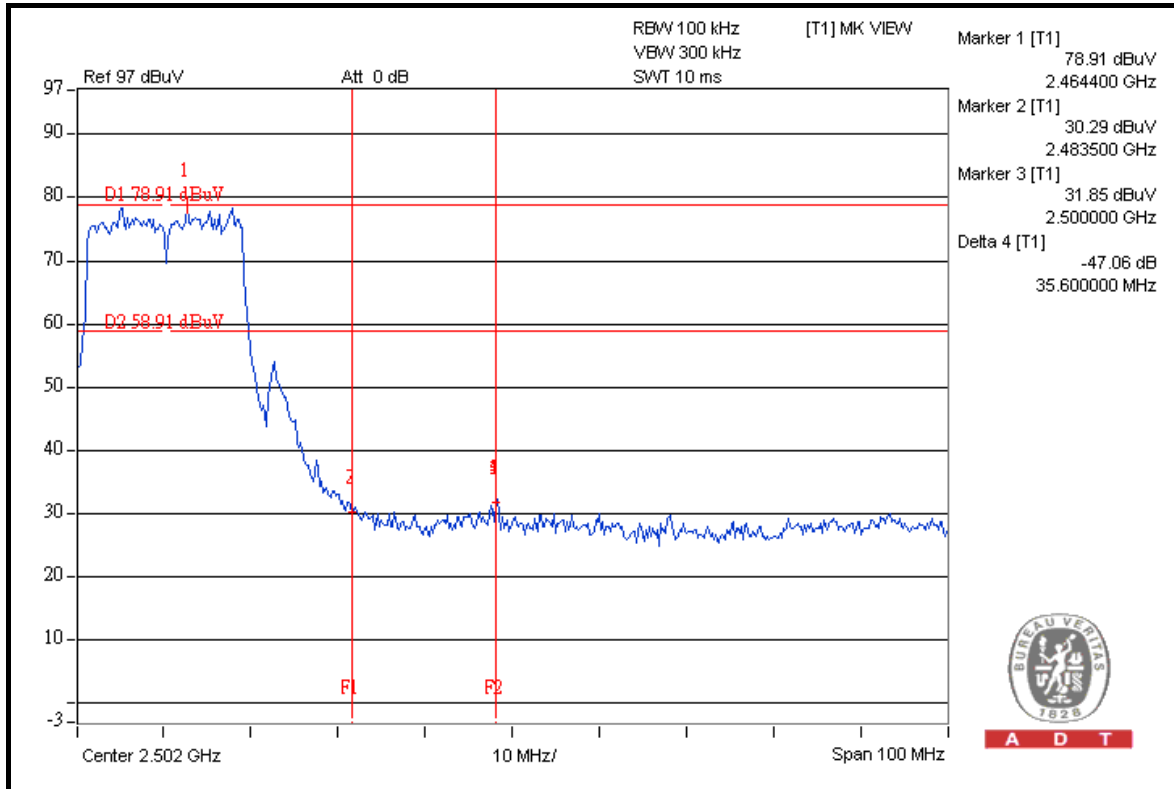
A D T

FOR RADIATED MEASURED (TWO CHAINS ON)





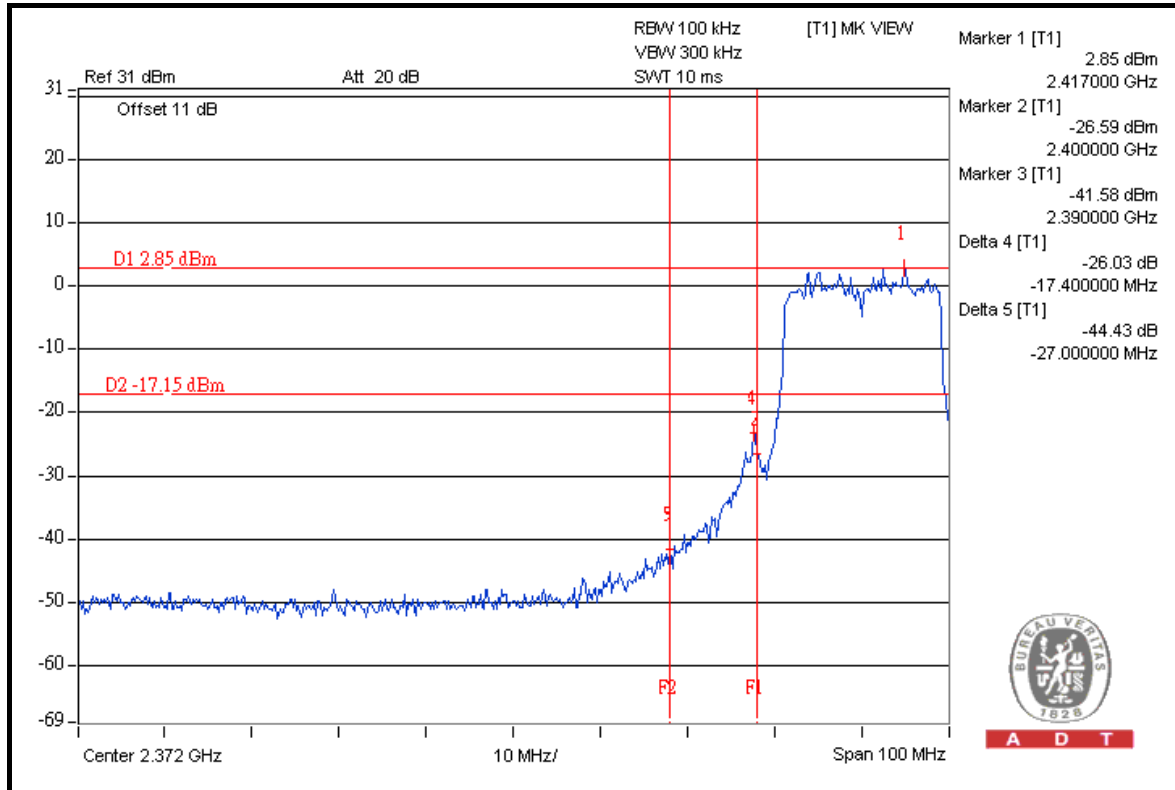
A D T



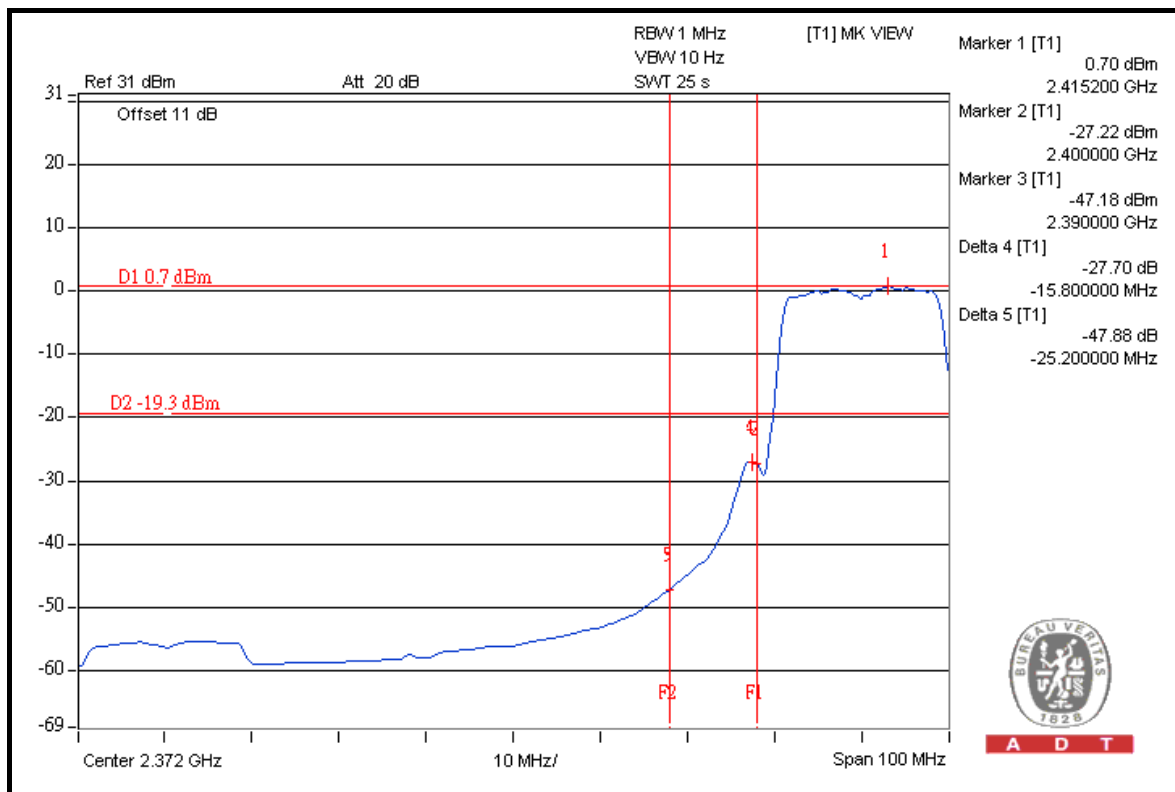


A D T

FOR CONDUCTED MEASURED CHAIN 0



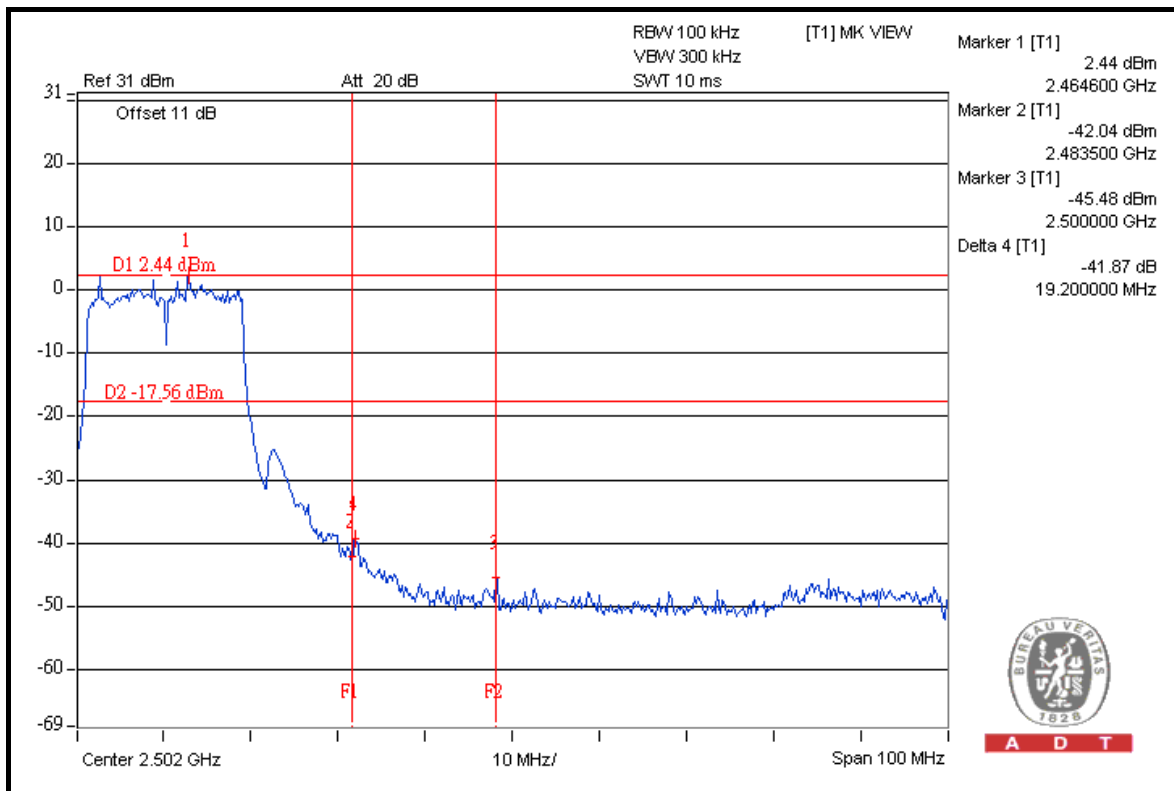
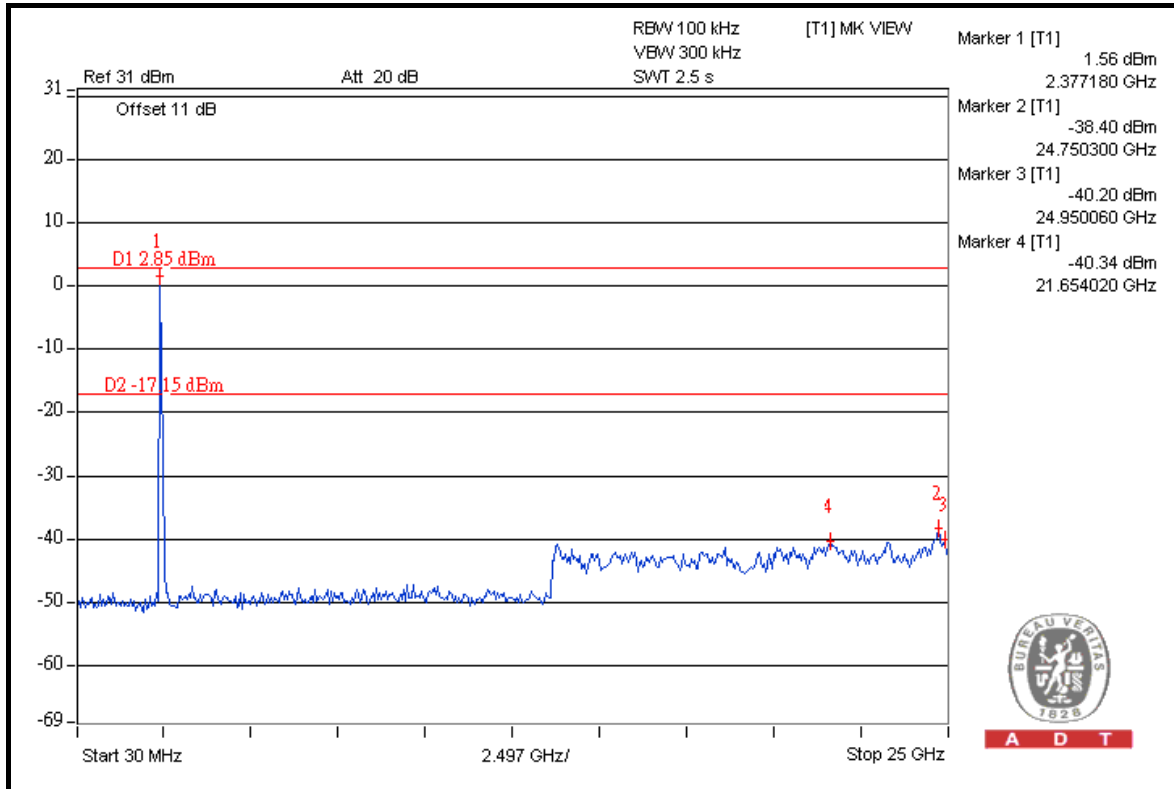
A D T



A D T

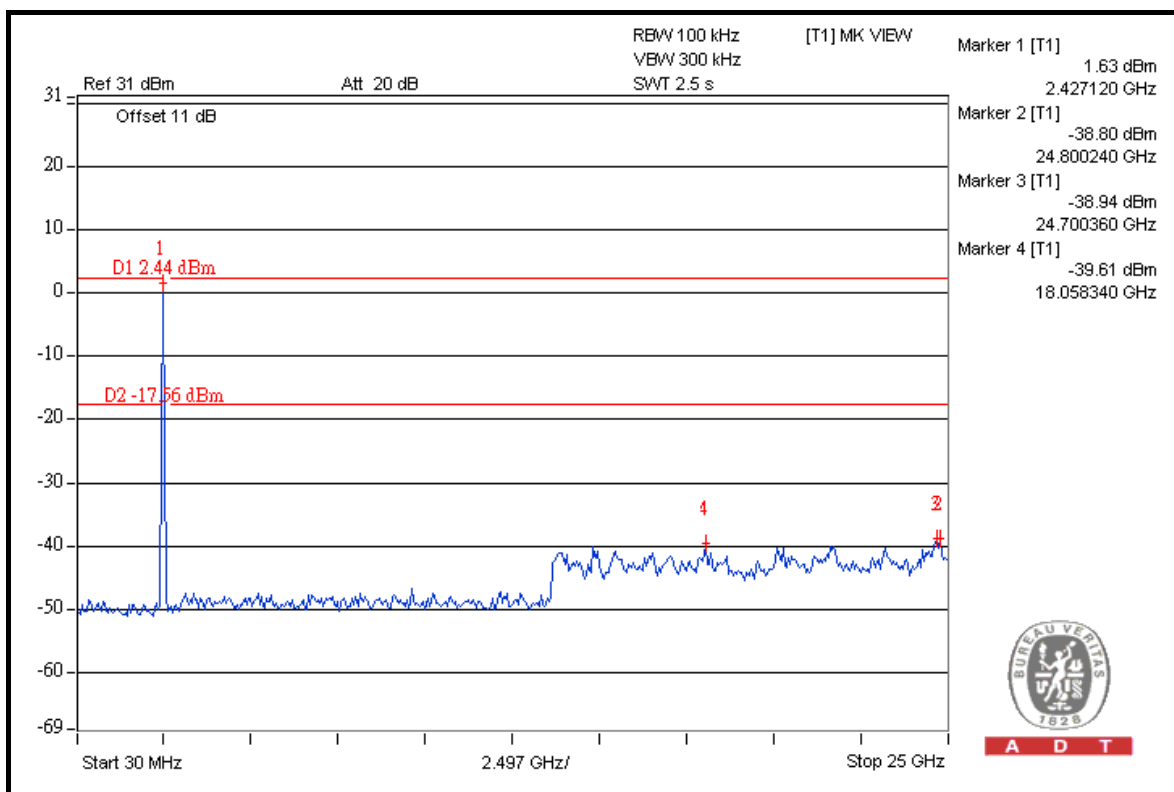
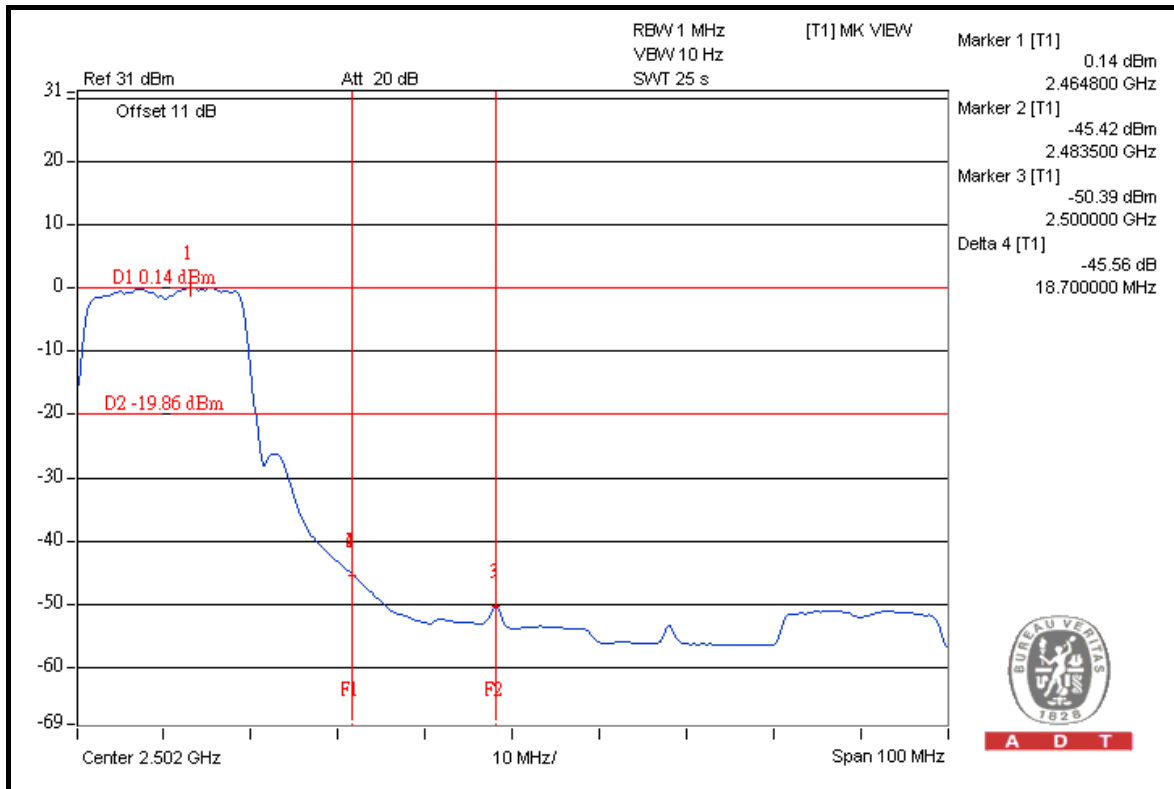


A D T





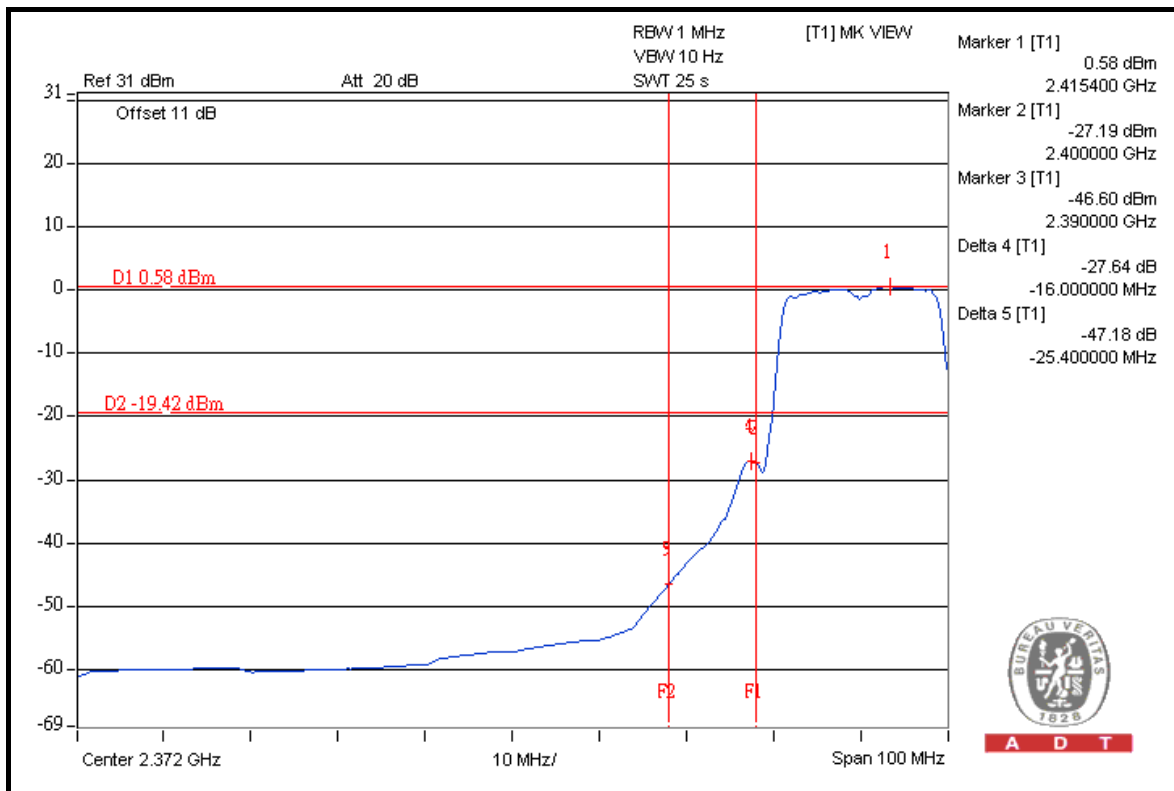
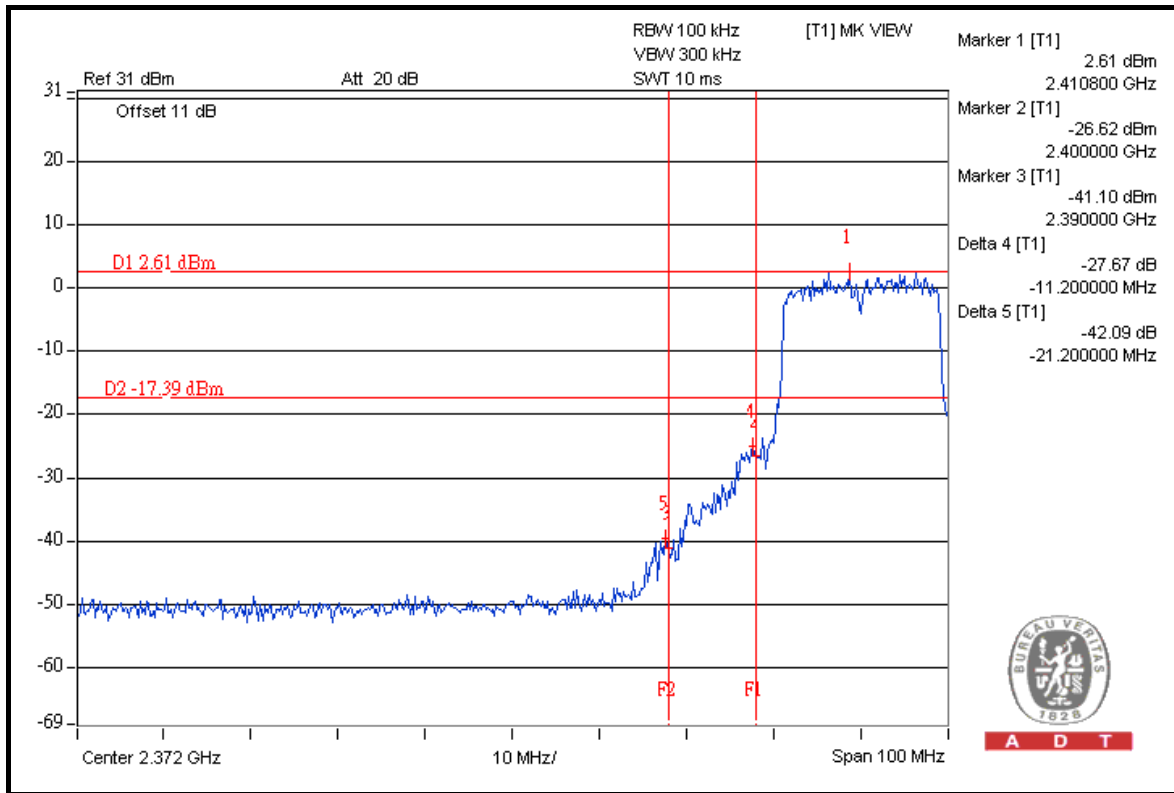
A D T





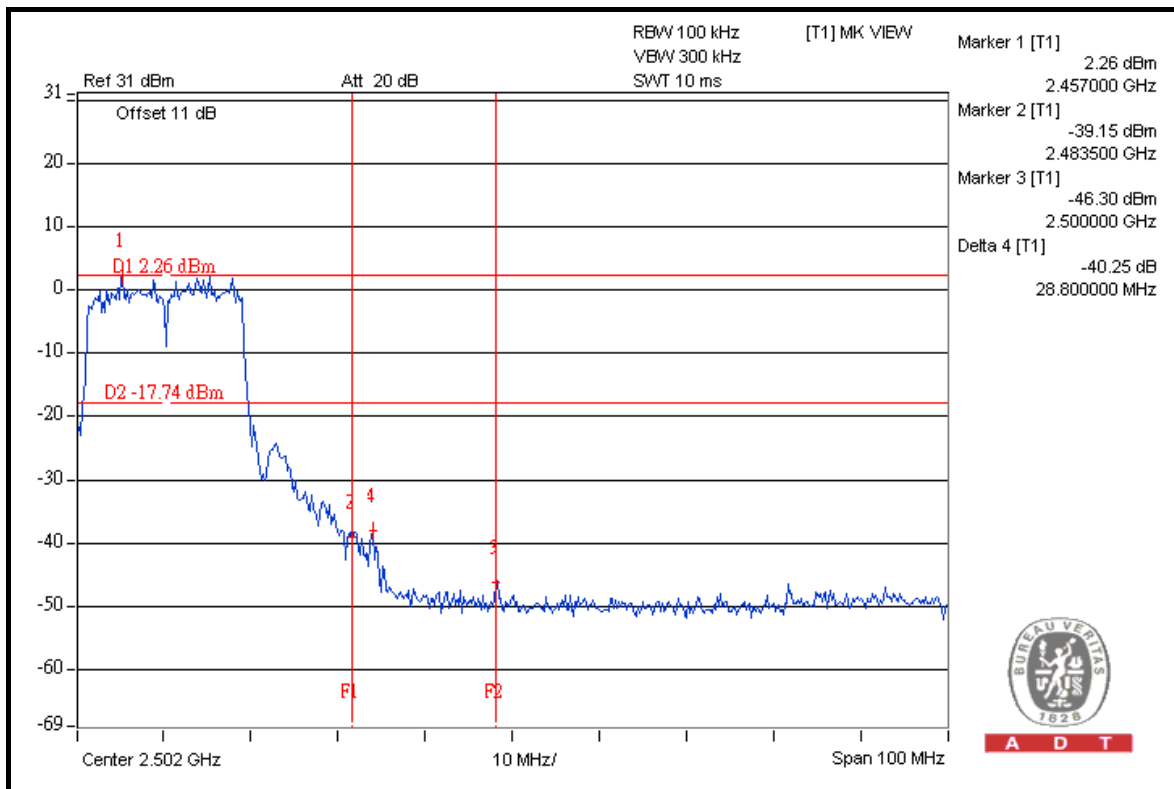
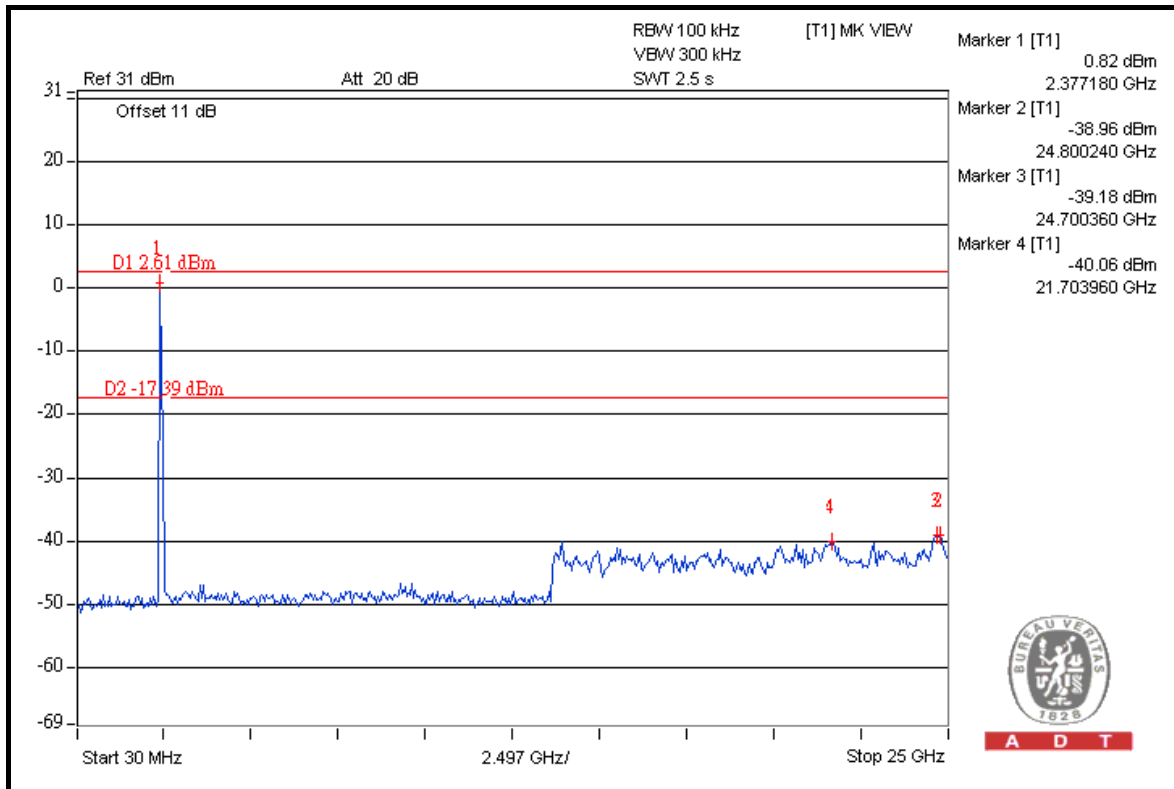
A D T

CHAIN 1



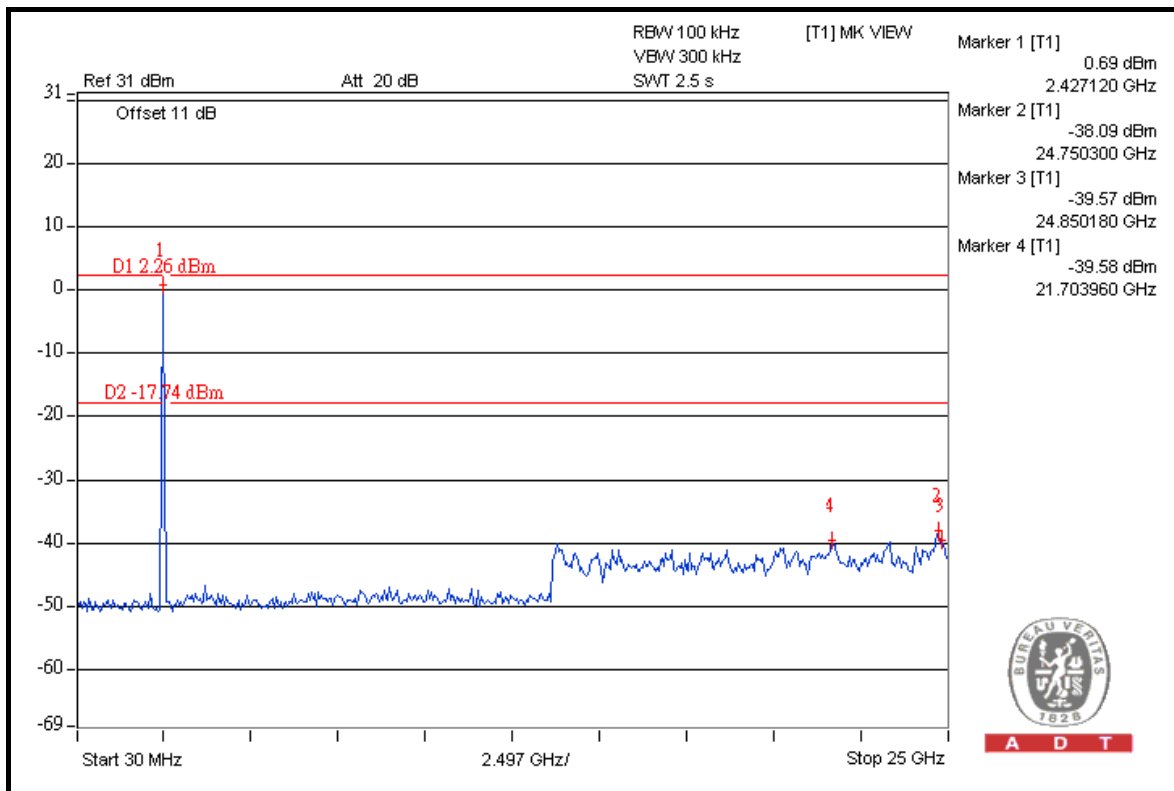
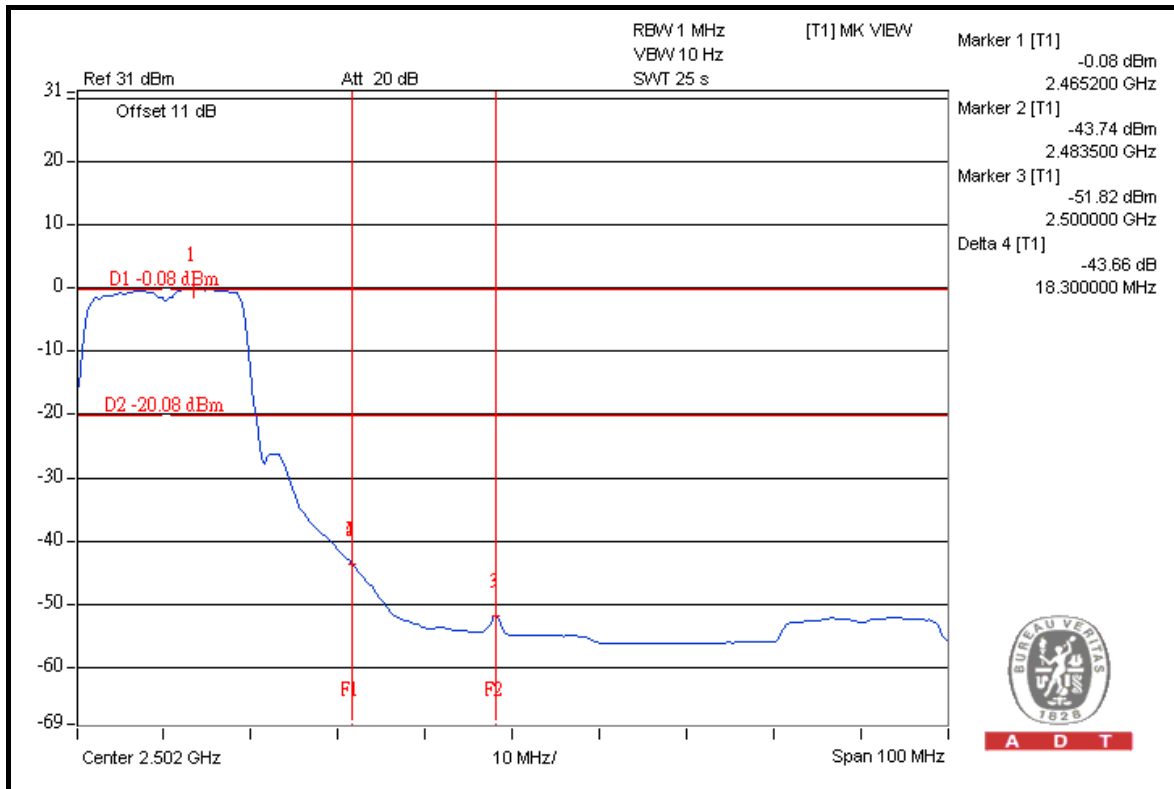


A D T





A D T





A D T

TEST MODE D

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	113.60	49.22	64.38	74.00
2412.00 (AV)	100.10	47.88	52.22	54.00

RESTRICT BAND (2483.5 ~ 2500 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	112.10	46.27	65.83	74.00
2462.00 (AV)	98.40	45.59	52.81	54.00

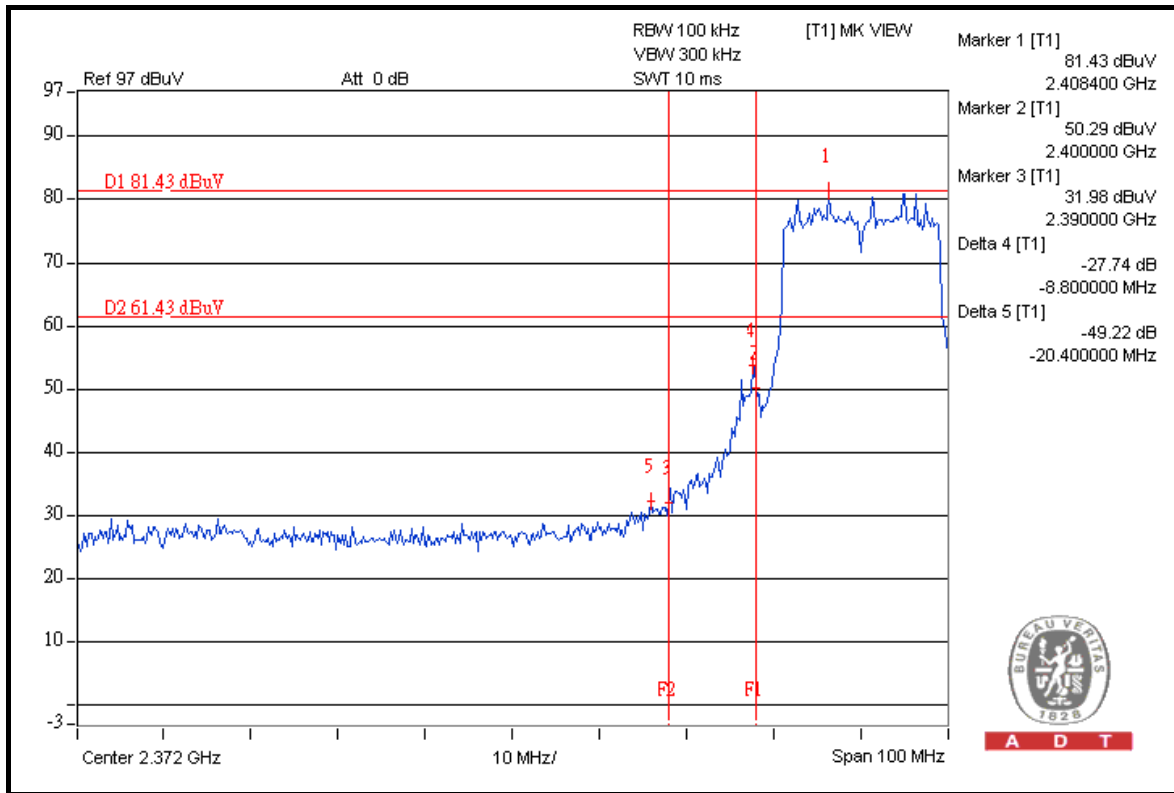
NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

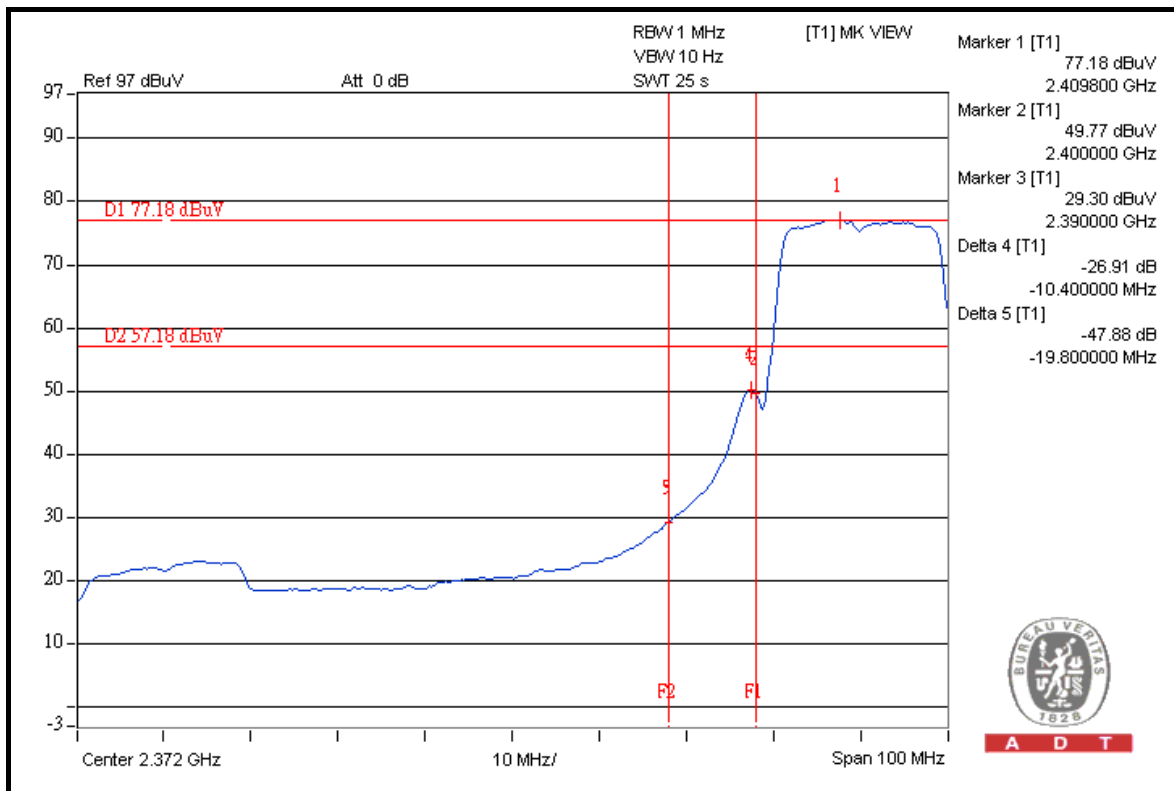


A D T

FOR RADIATED MEASURED (TWO CHAINS ON)



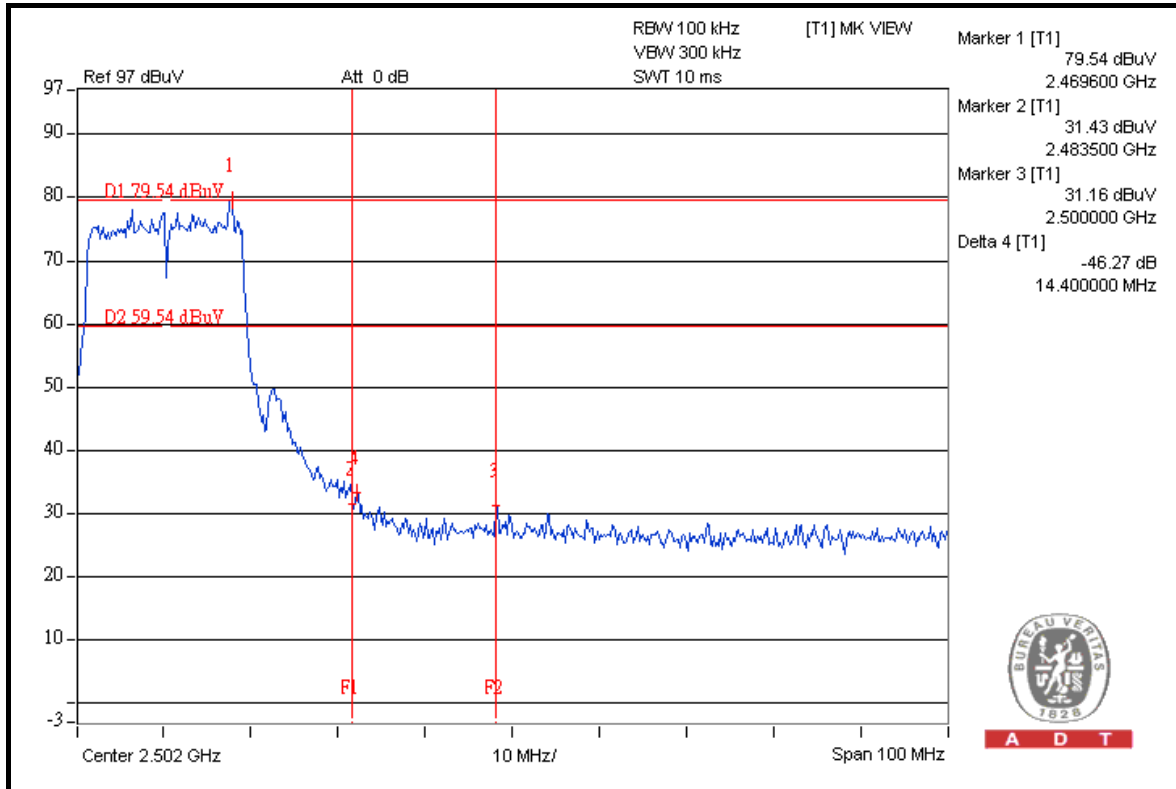
A D T



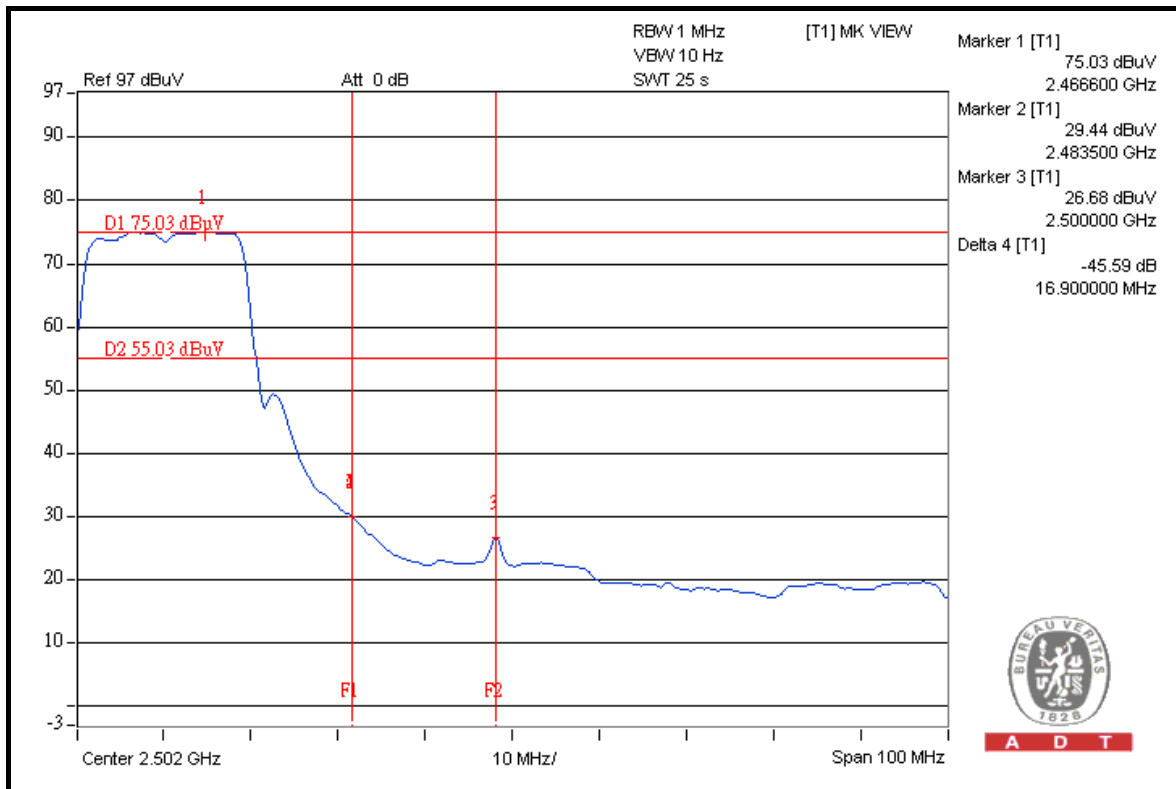
A D T



A D T



A D T

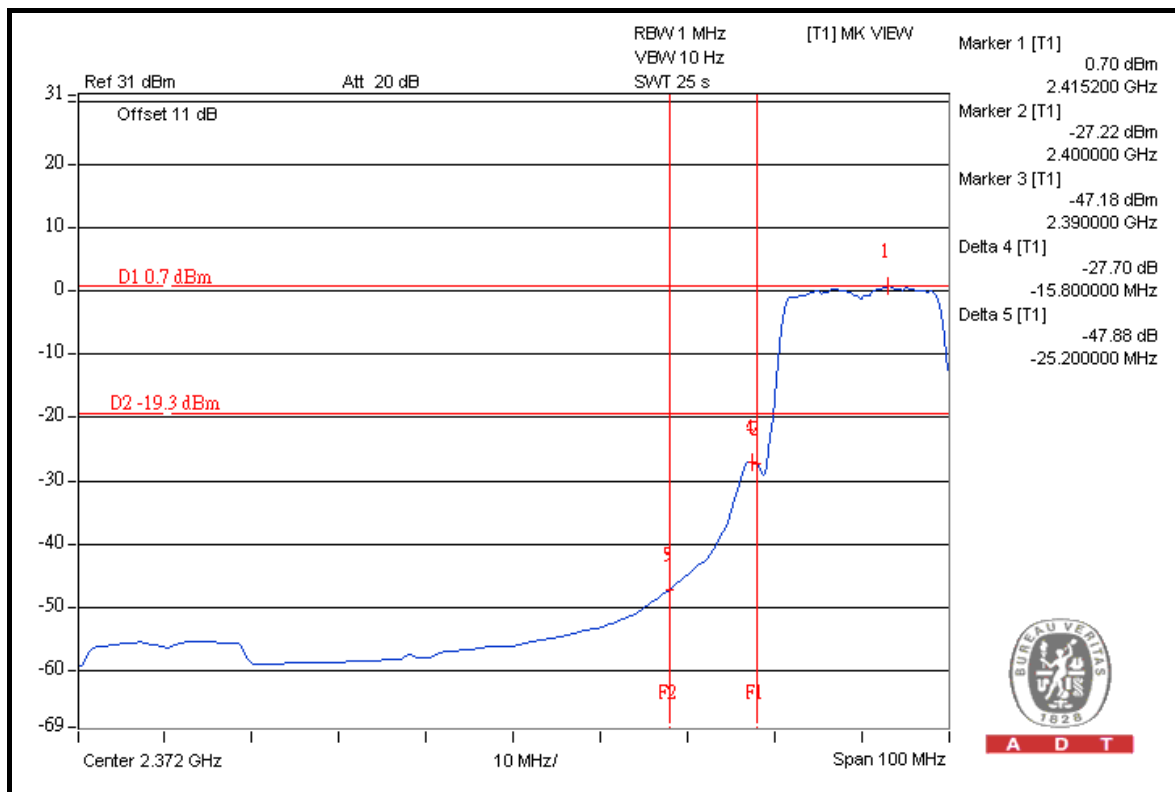
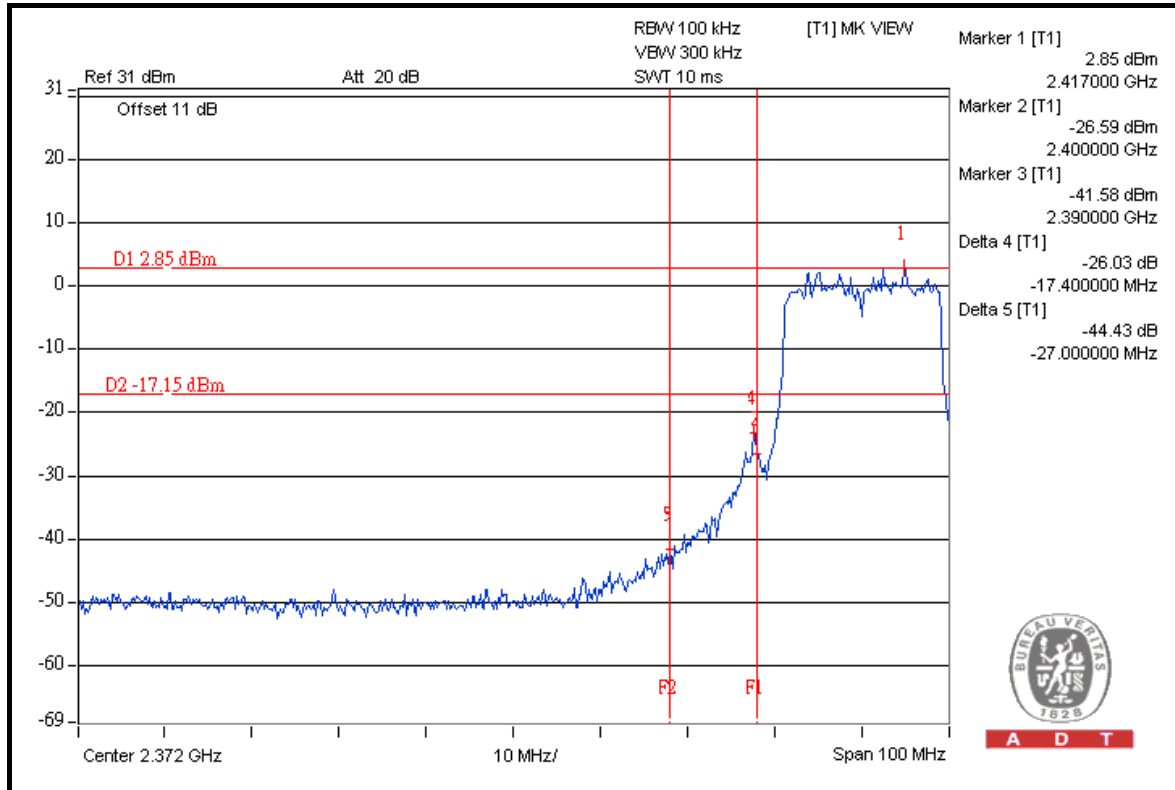


A D T



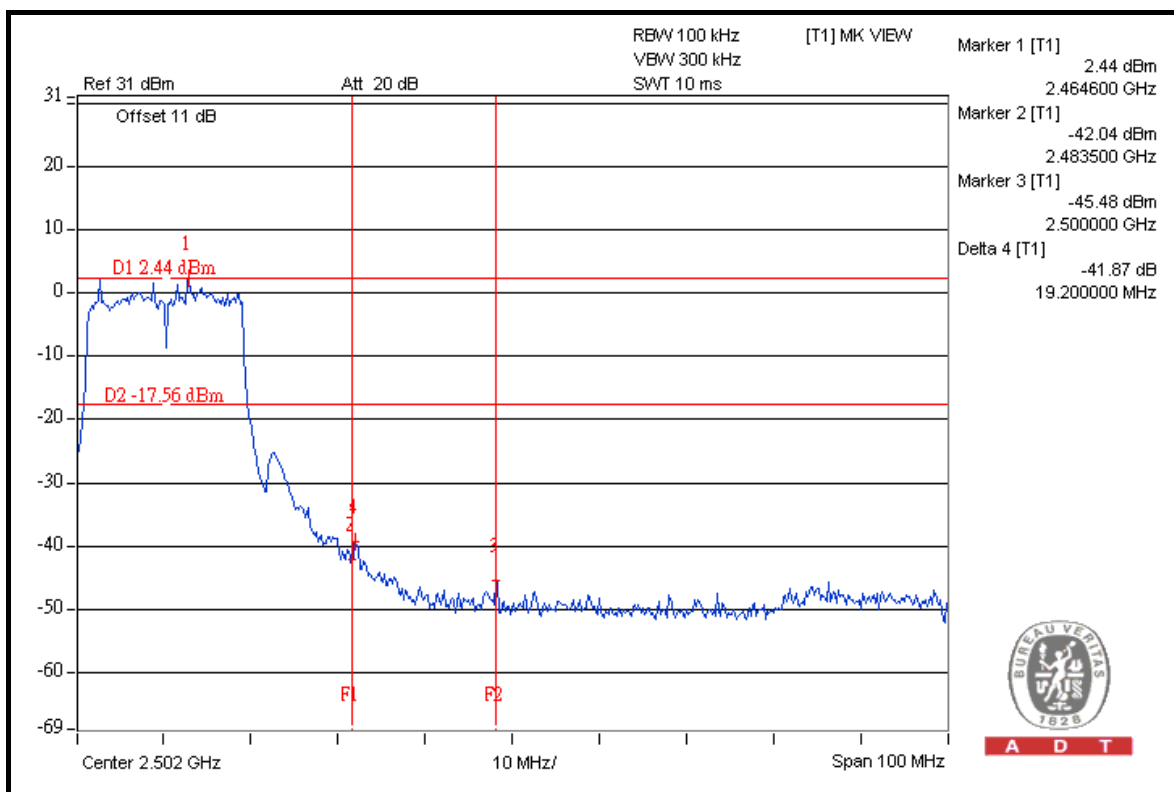
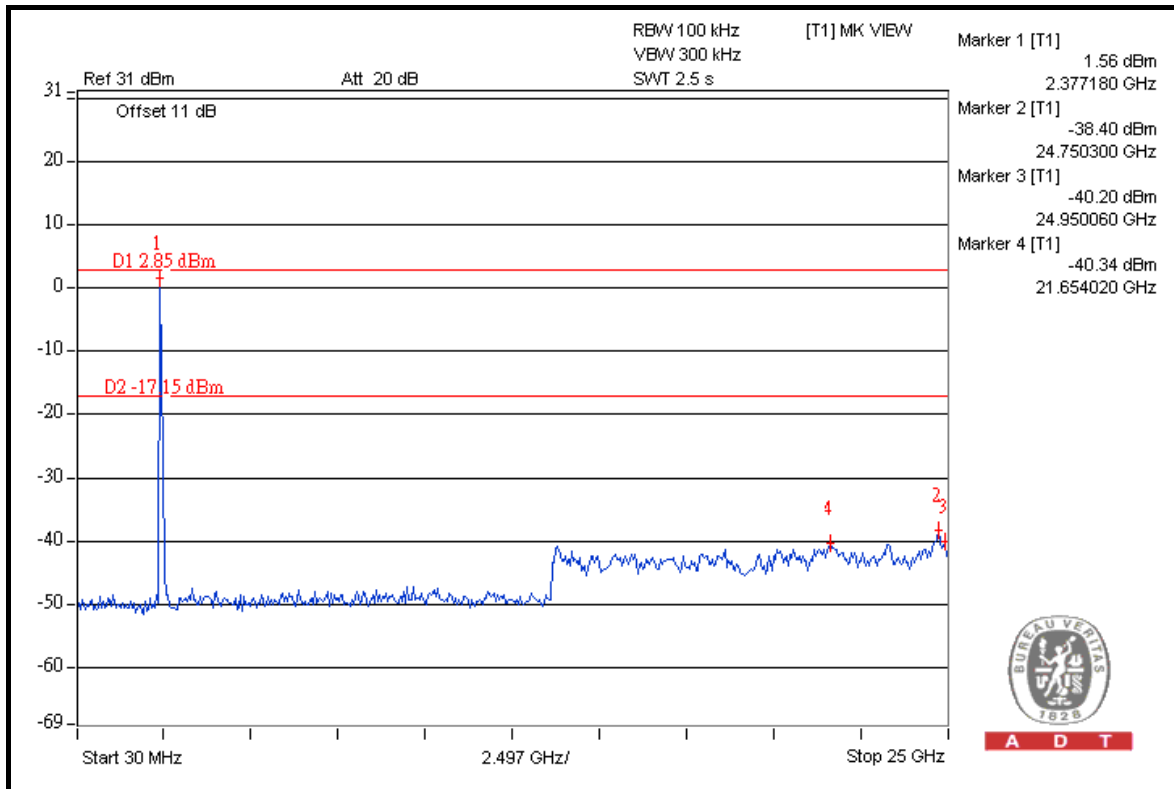
A D T

FOR CONDUCTED MEASURED CHAIN 0



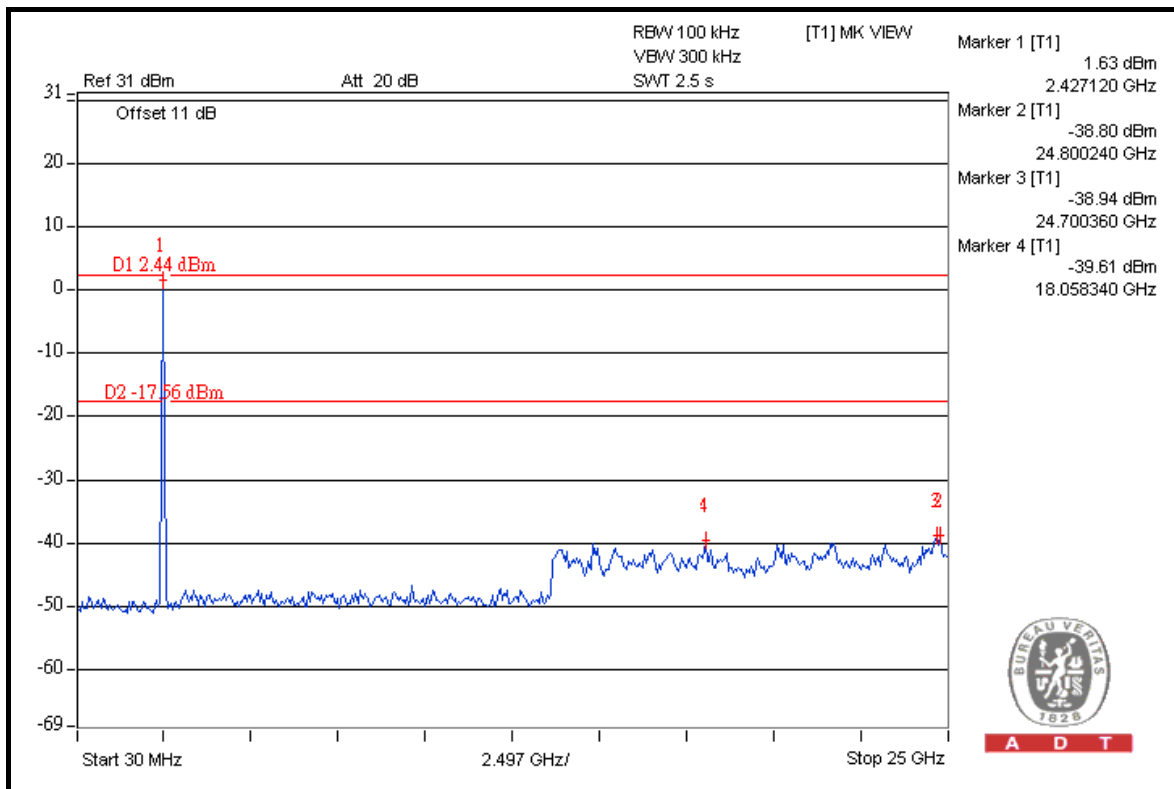
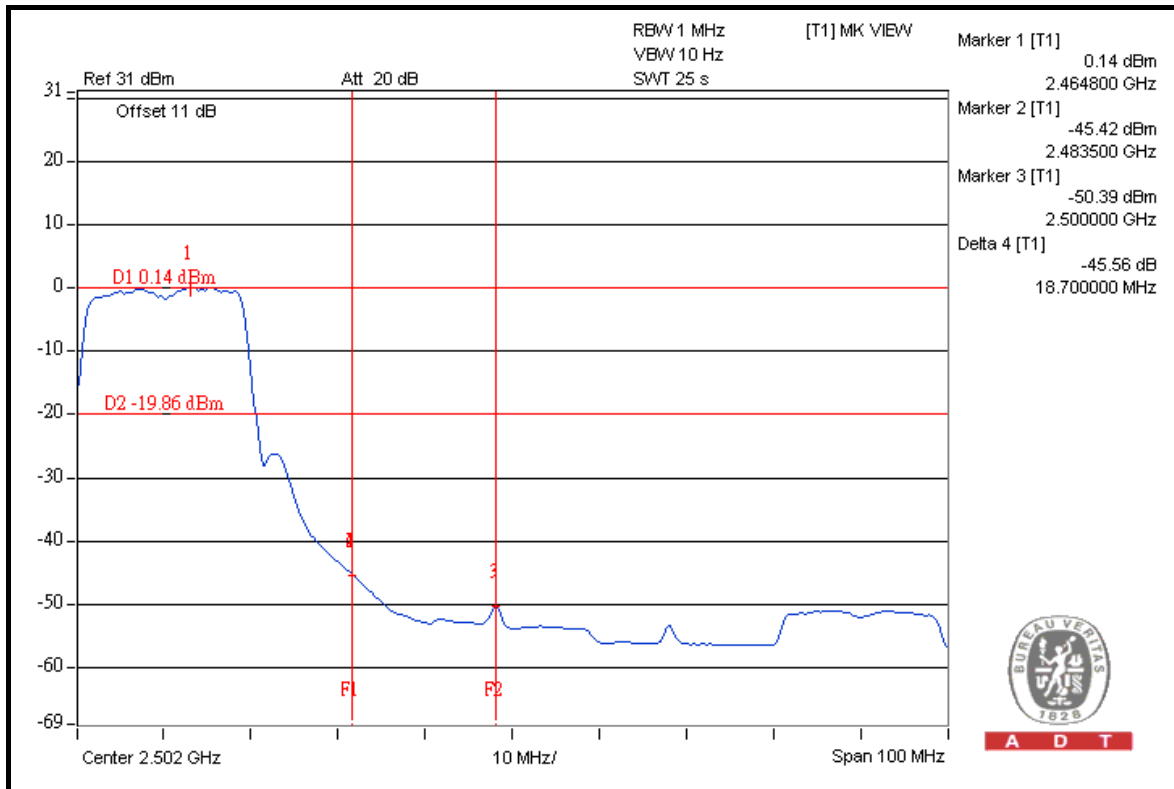


A D T





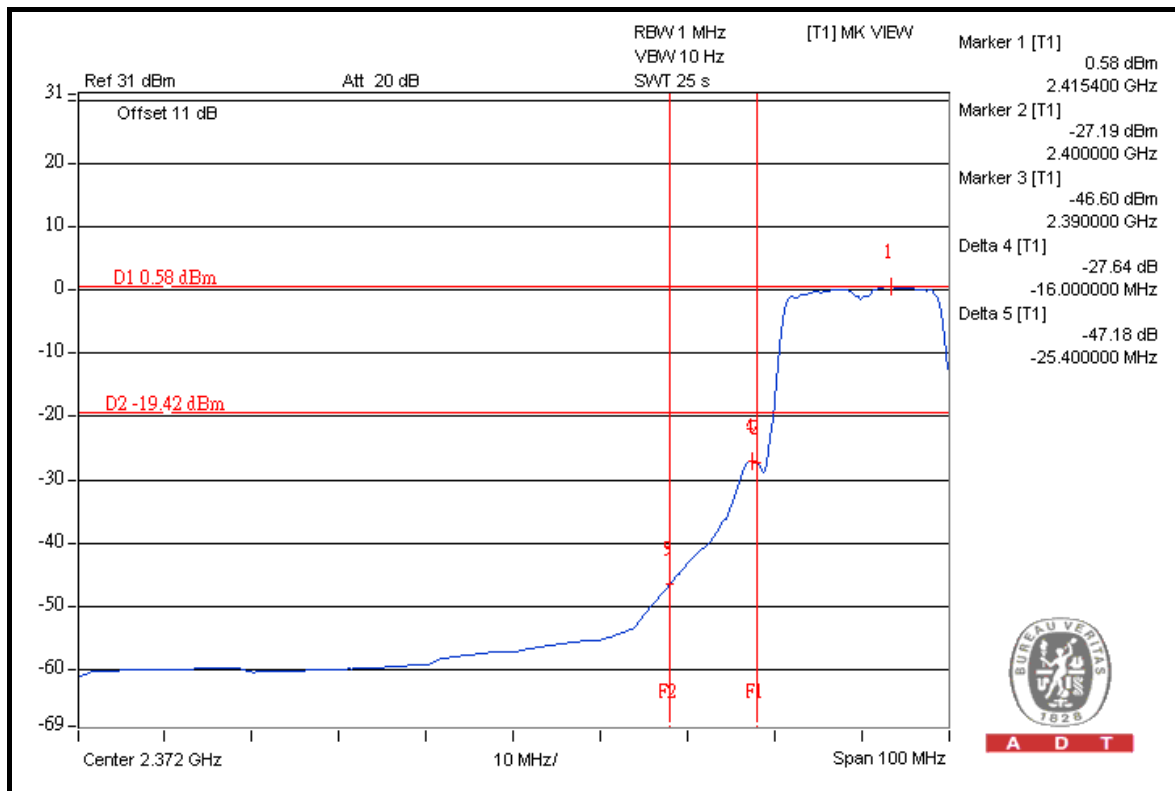
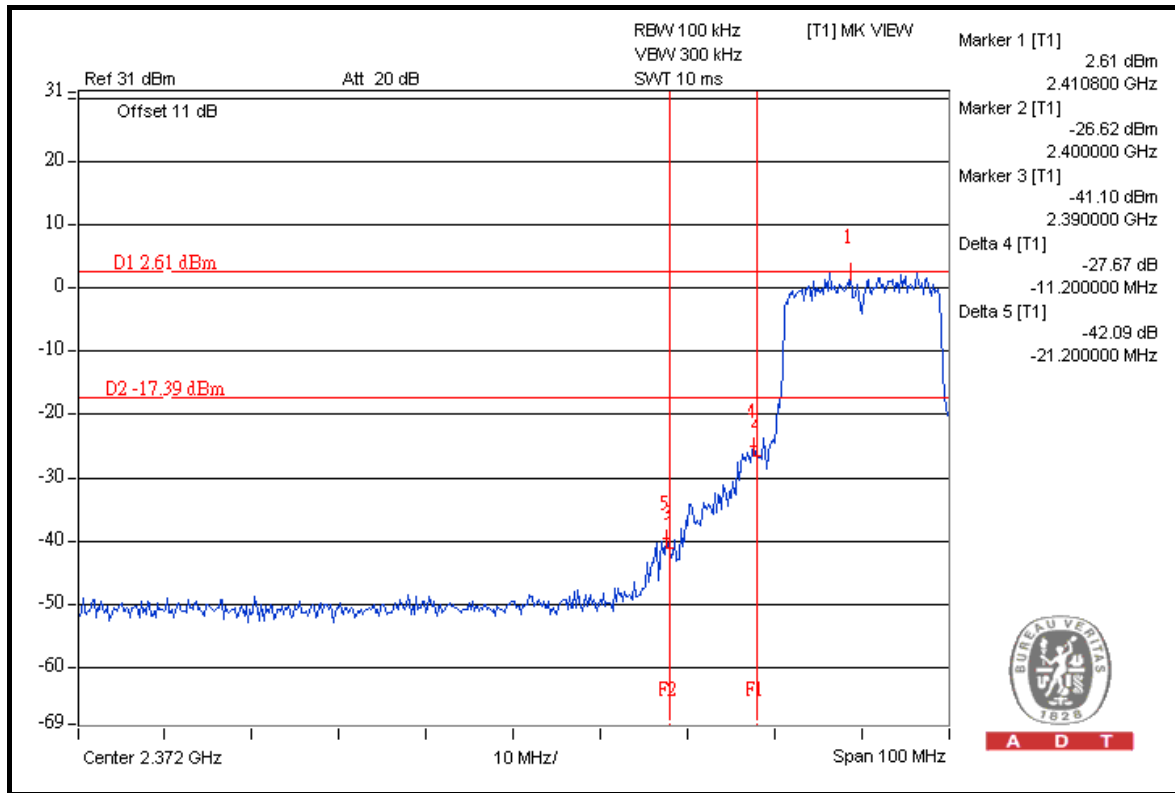
A D T





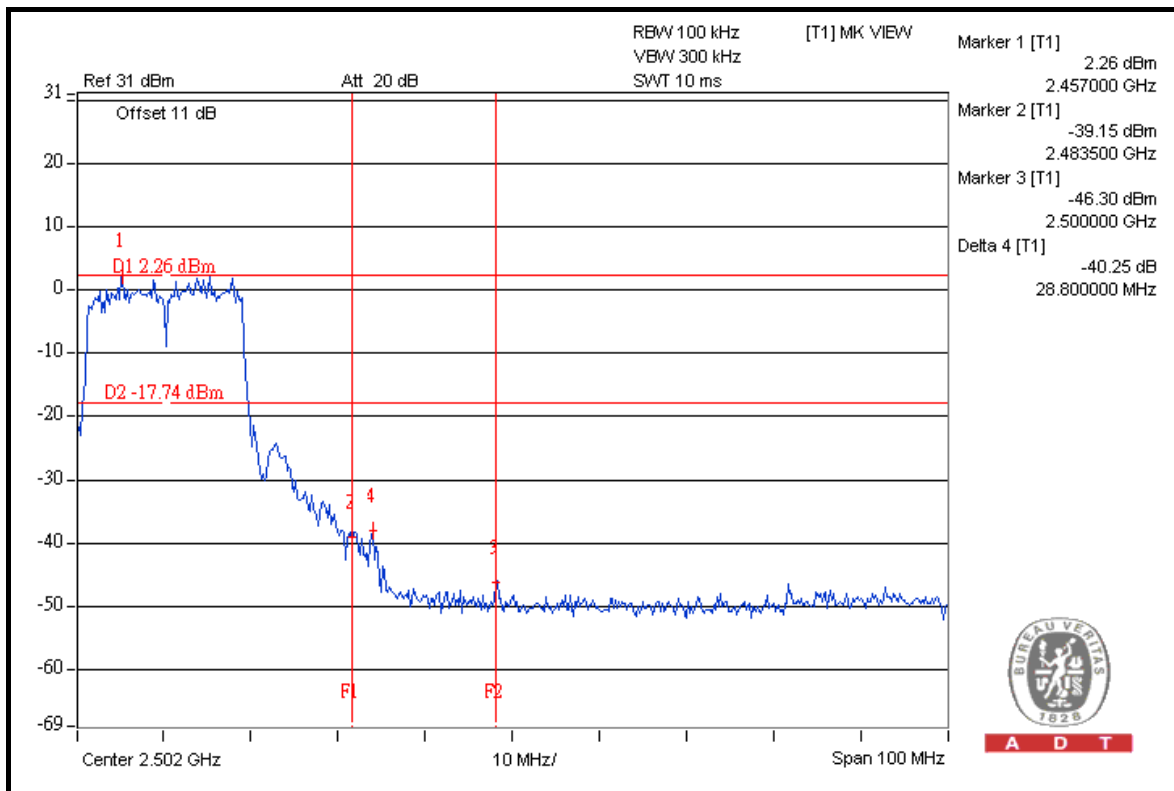
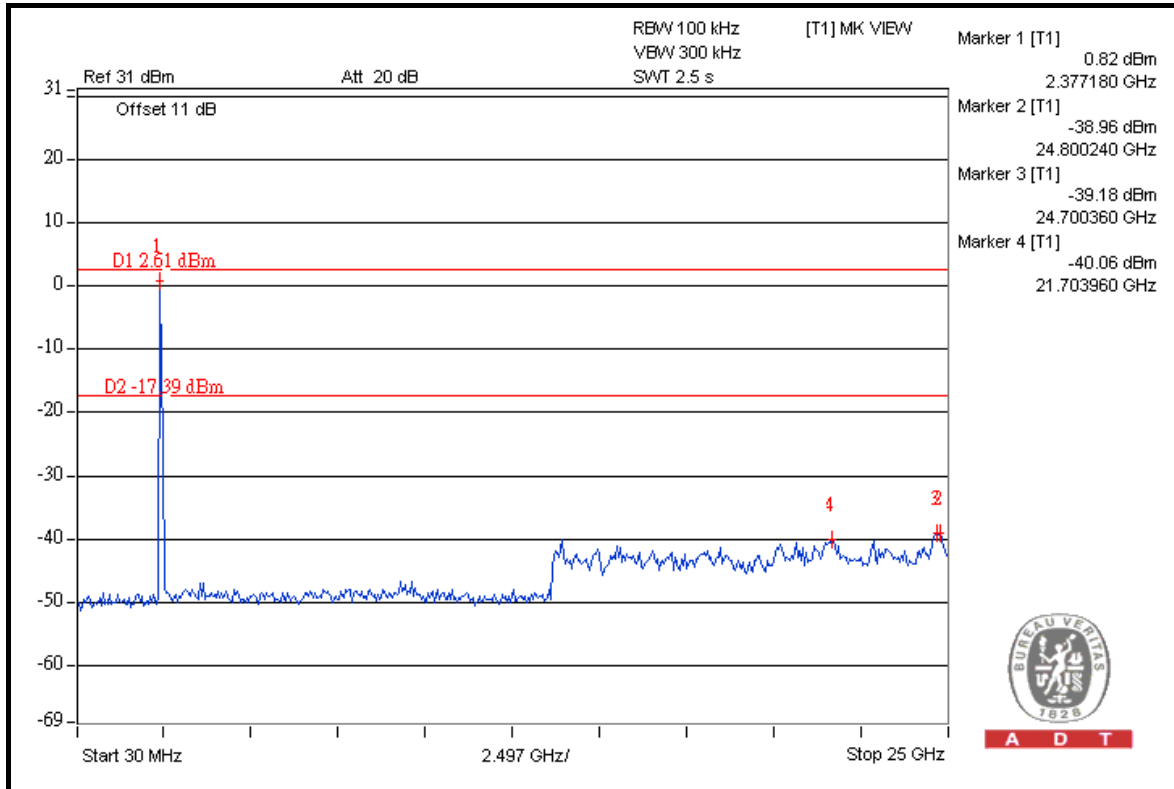
A D T

CHAIN 1



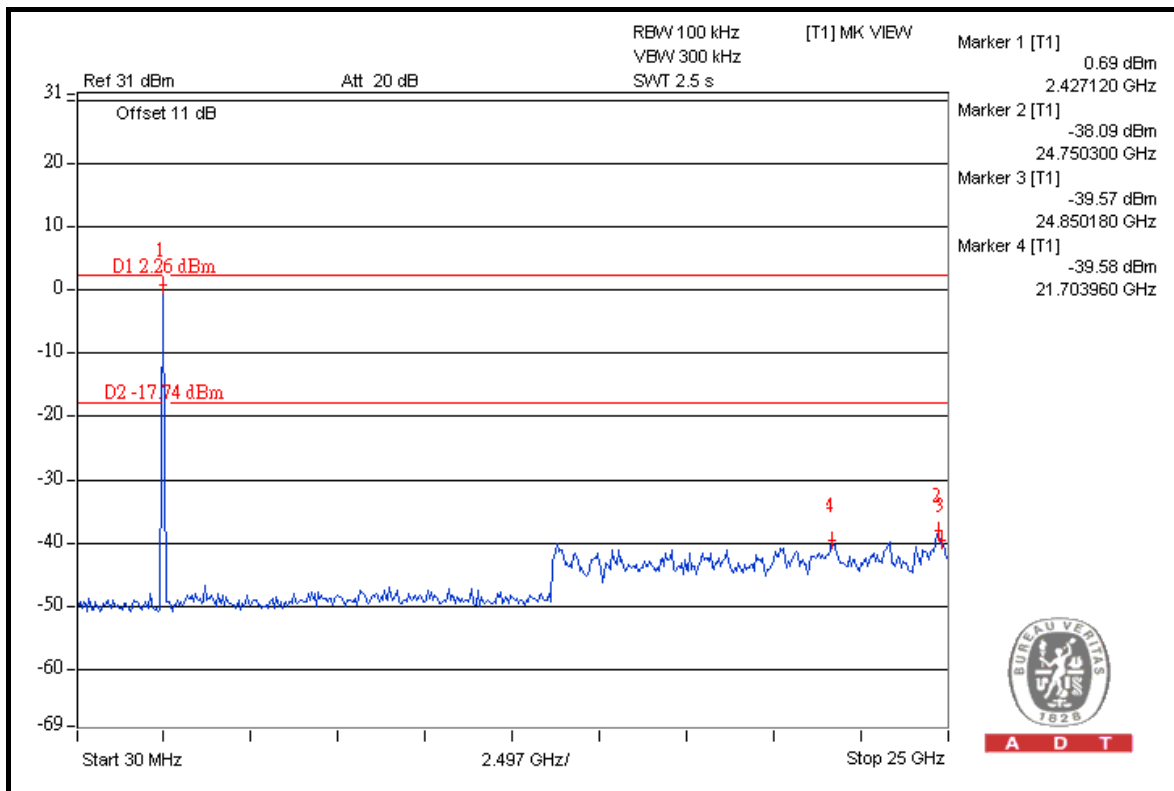
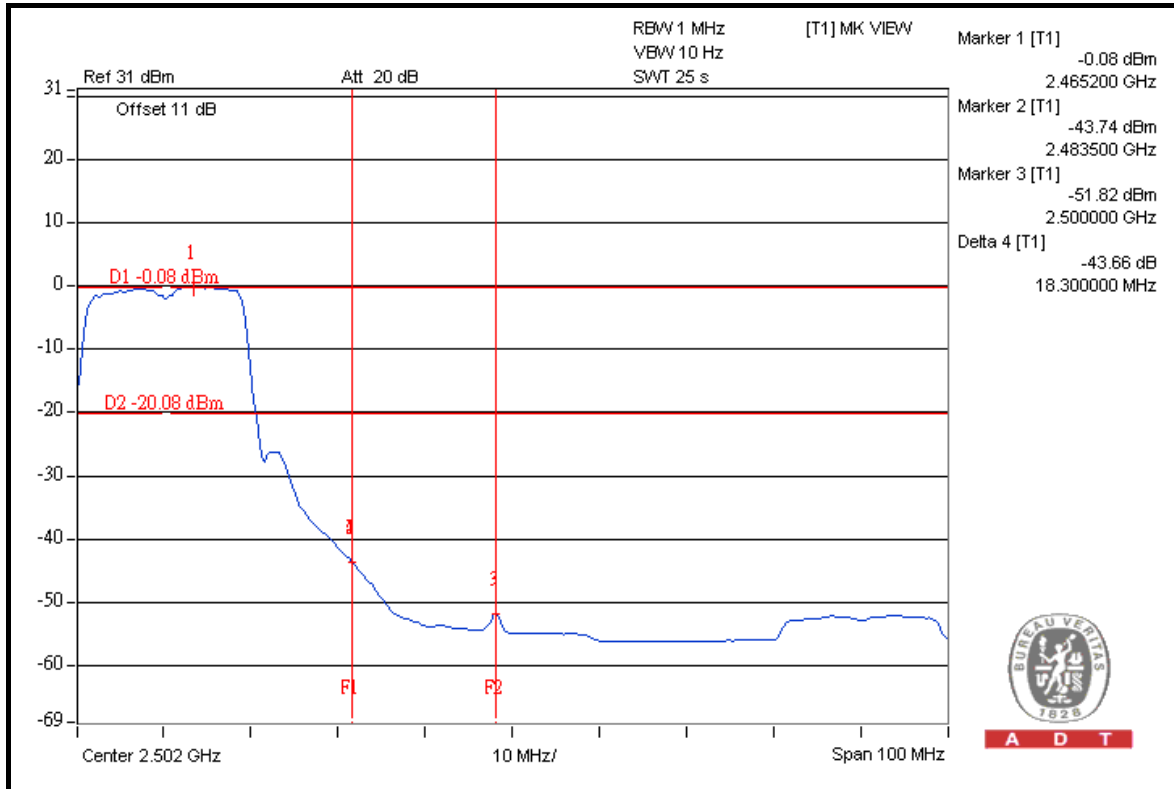


A D T





A D T





A D T

802.11n (40MHz)

TEST MODE B

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2422.00 (PK)	107.30	42.80	64.50	74.00
2422.00 (AV)	97.30	46.34	50.96	54.00

RESTRICT BAND (2483.5 ~ 2500 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2452.00 (PK)	105.30	42.20	63.10	74.00
2452.00 (AV)	94.80	43.02	51.78	54.00

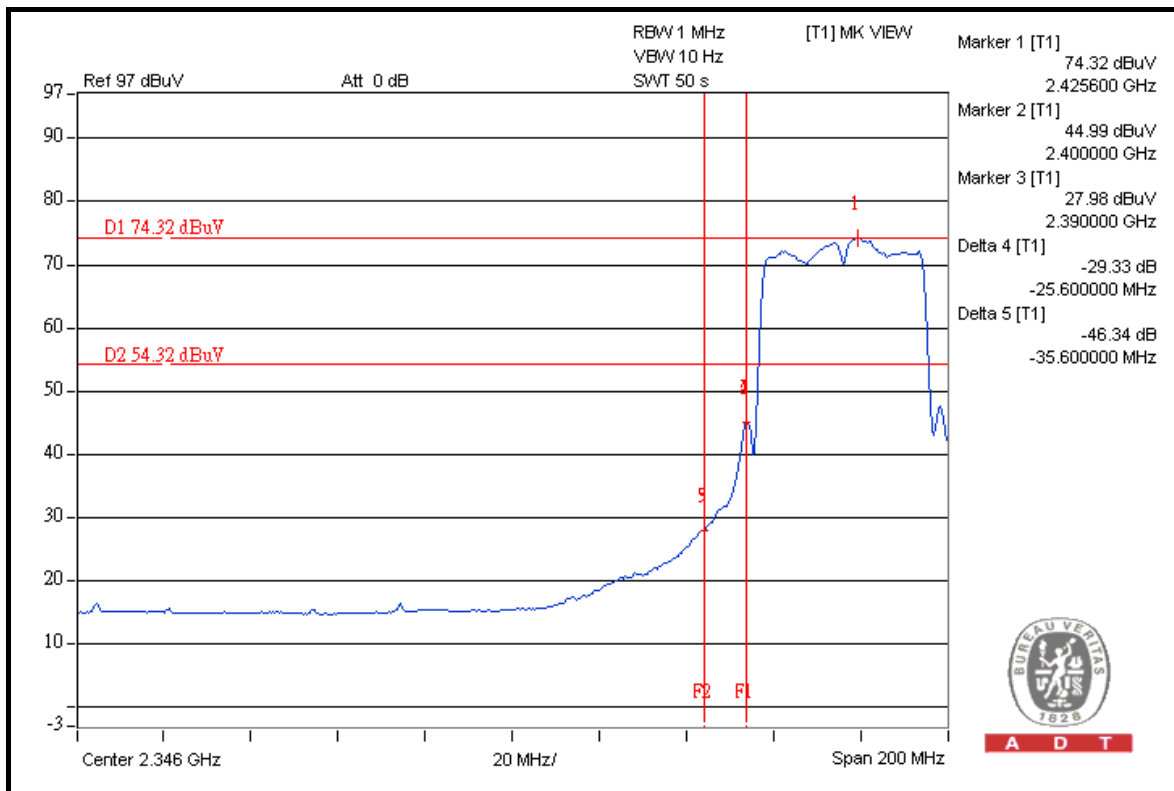
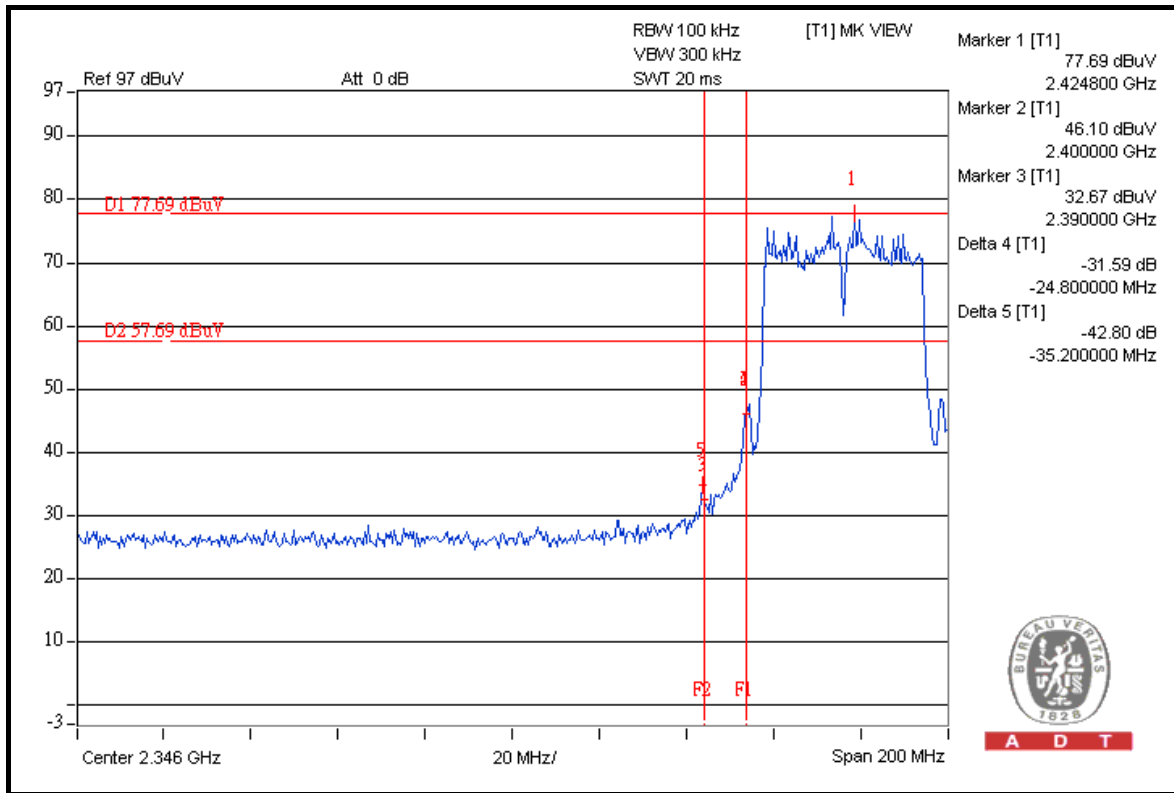
NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.



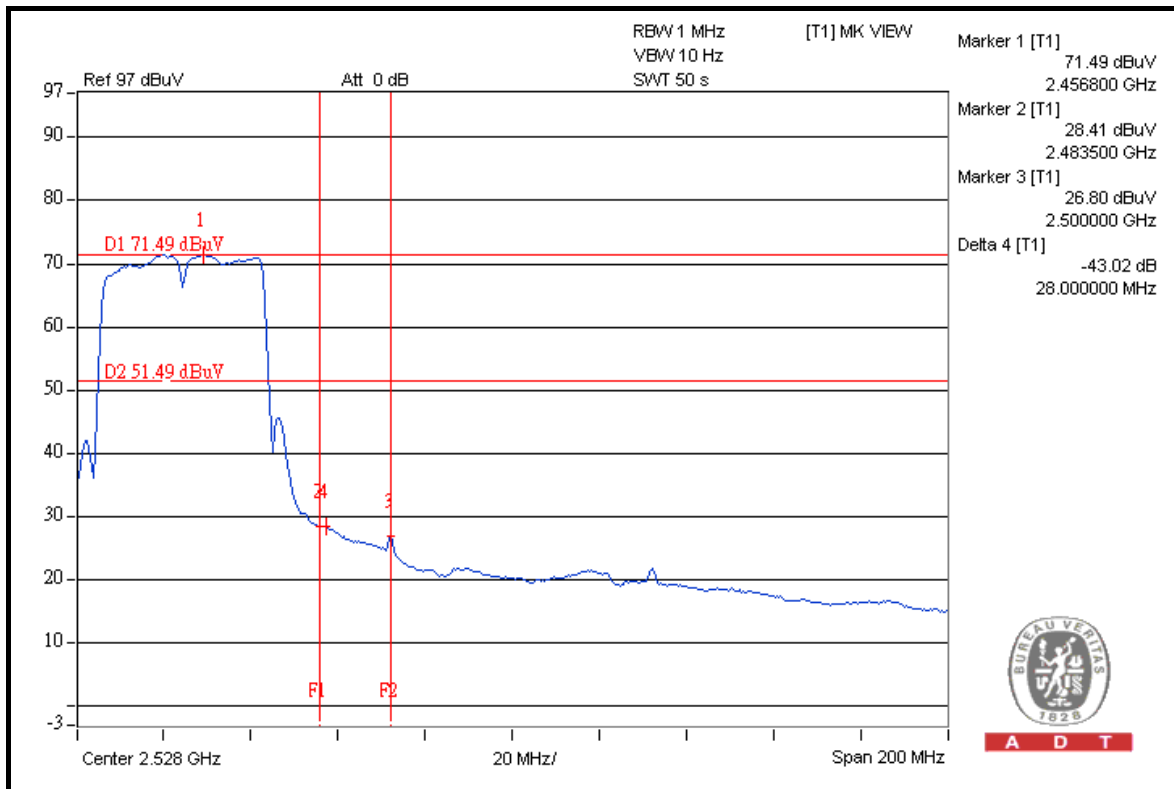
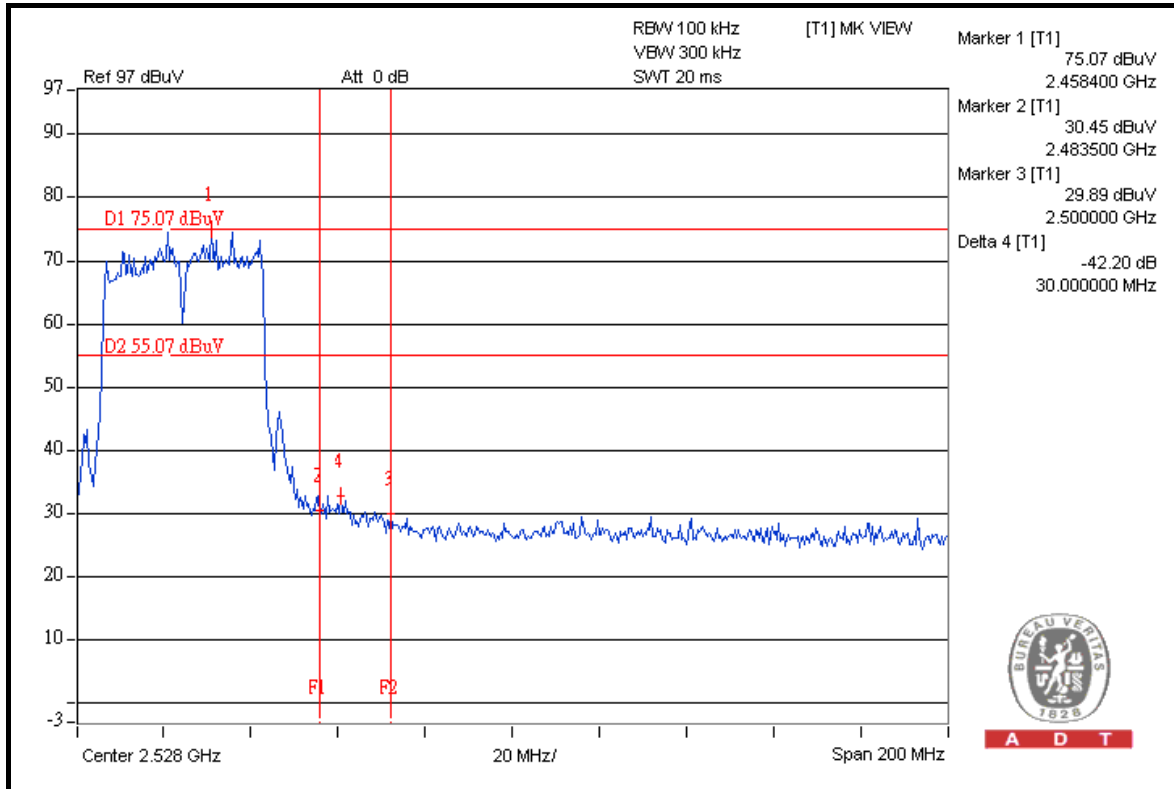
A D T

FOR RADIATED MEASURED (TWO CHAINS ON)





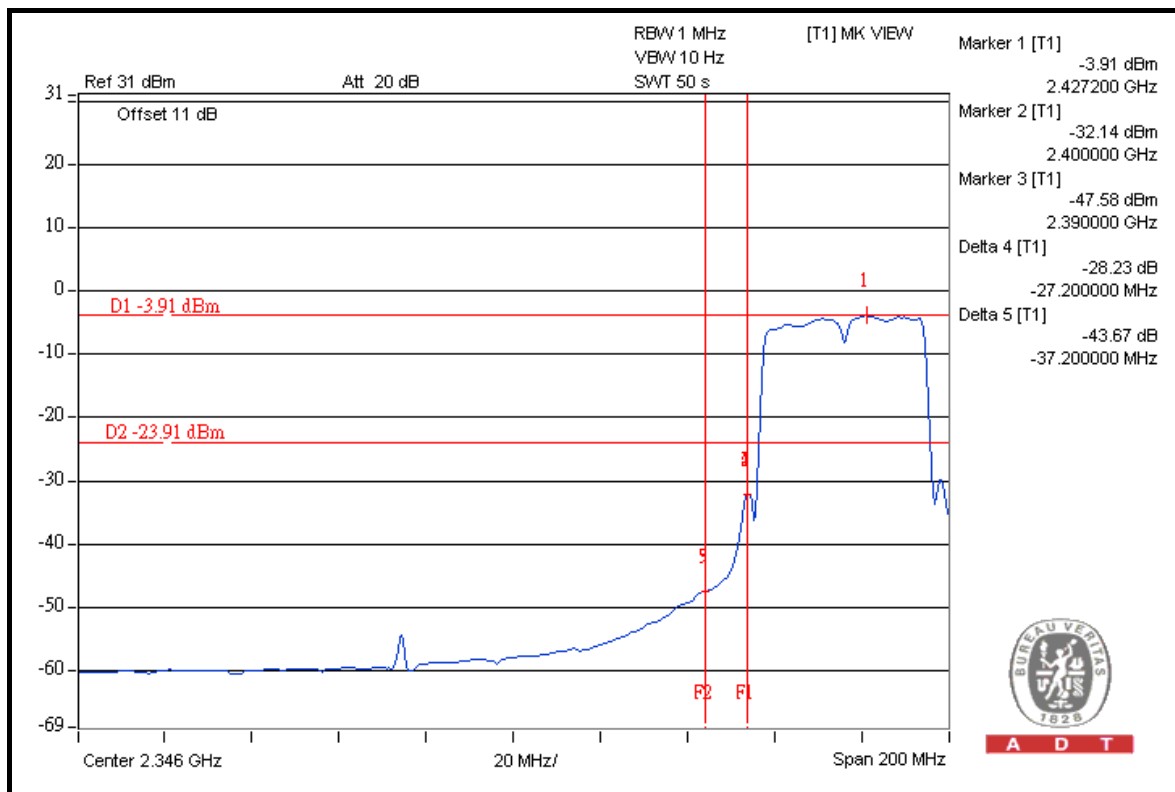
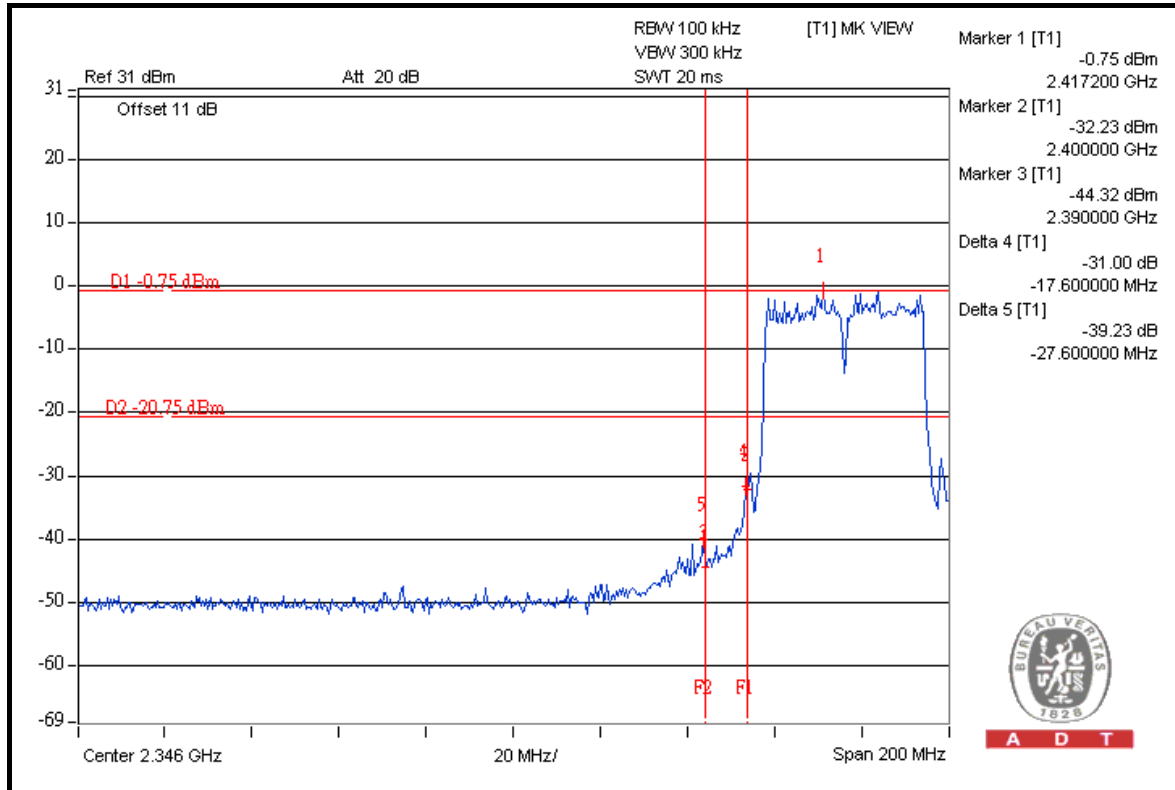
A D T





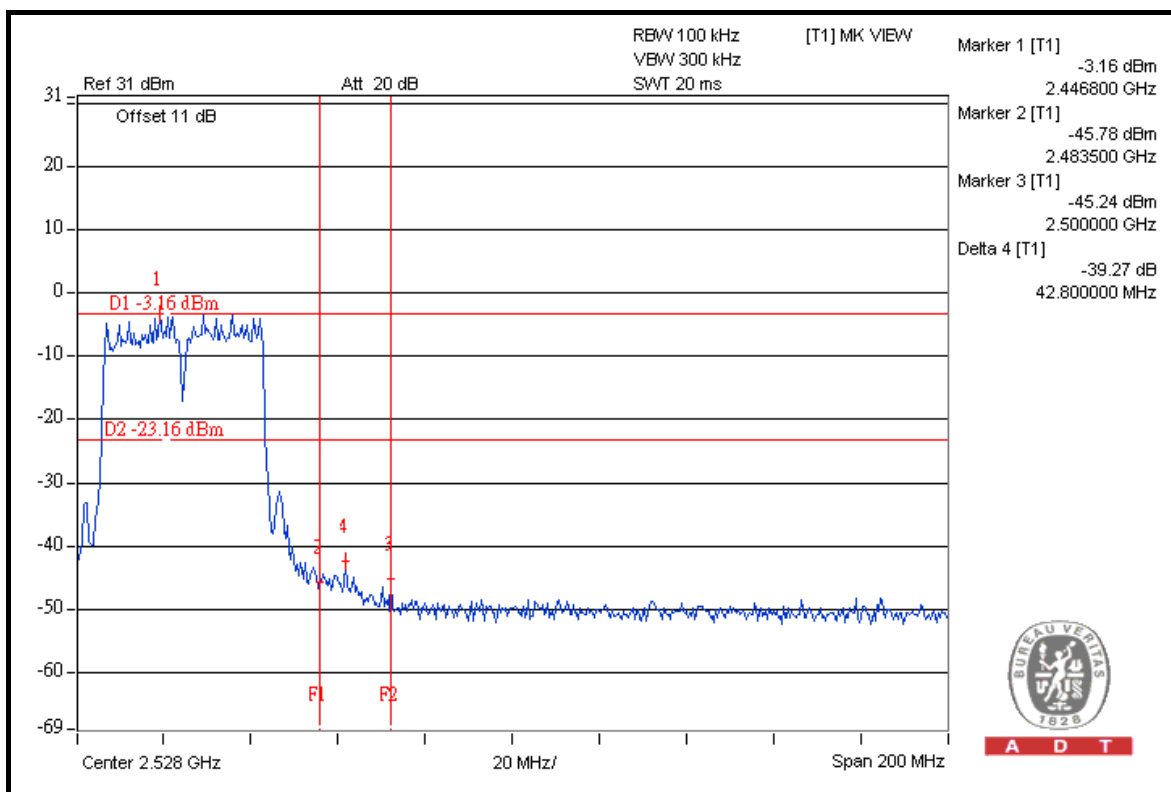
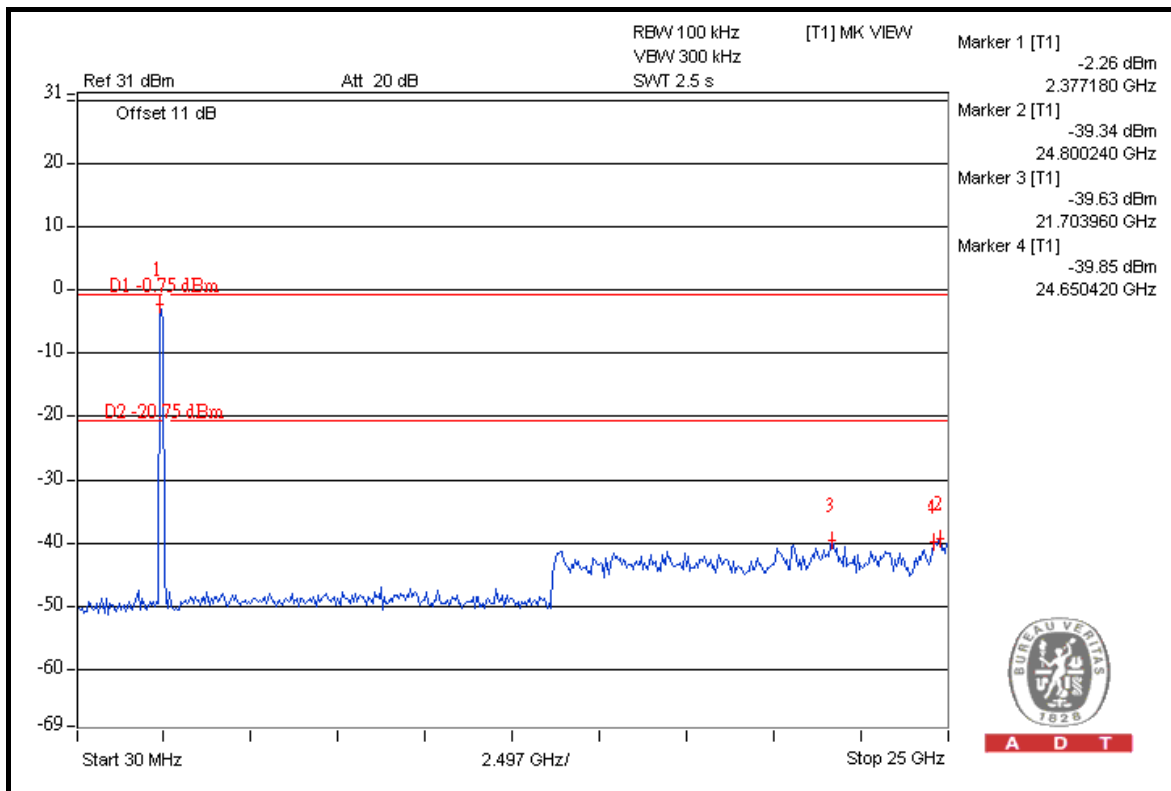
A D T

FOR CONDUCTED MEASURED CHAIN 0



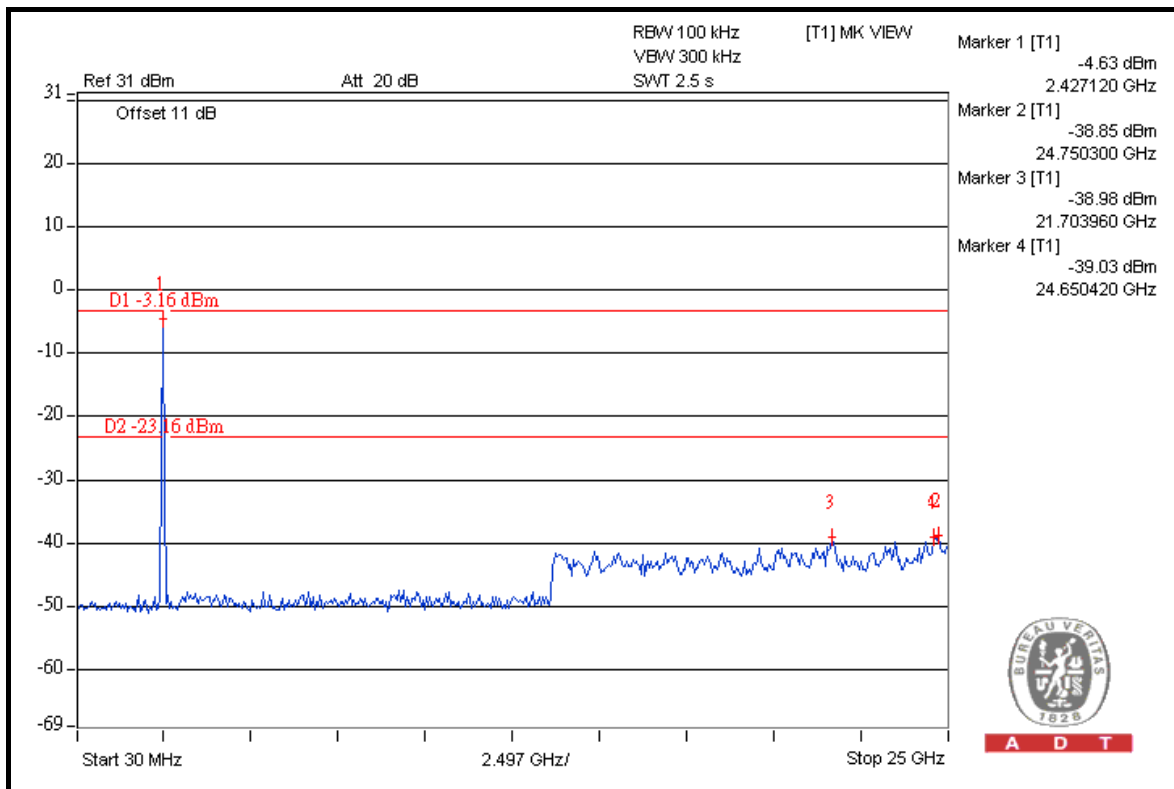
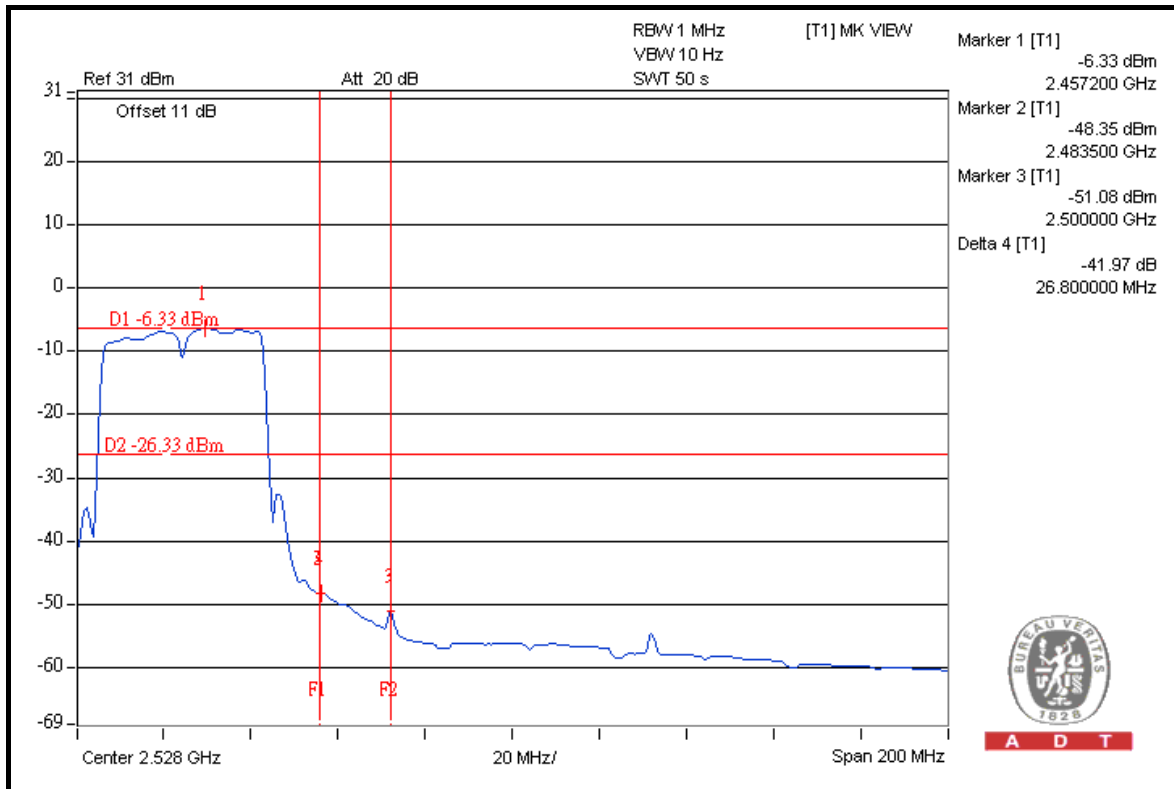


A D T





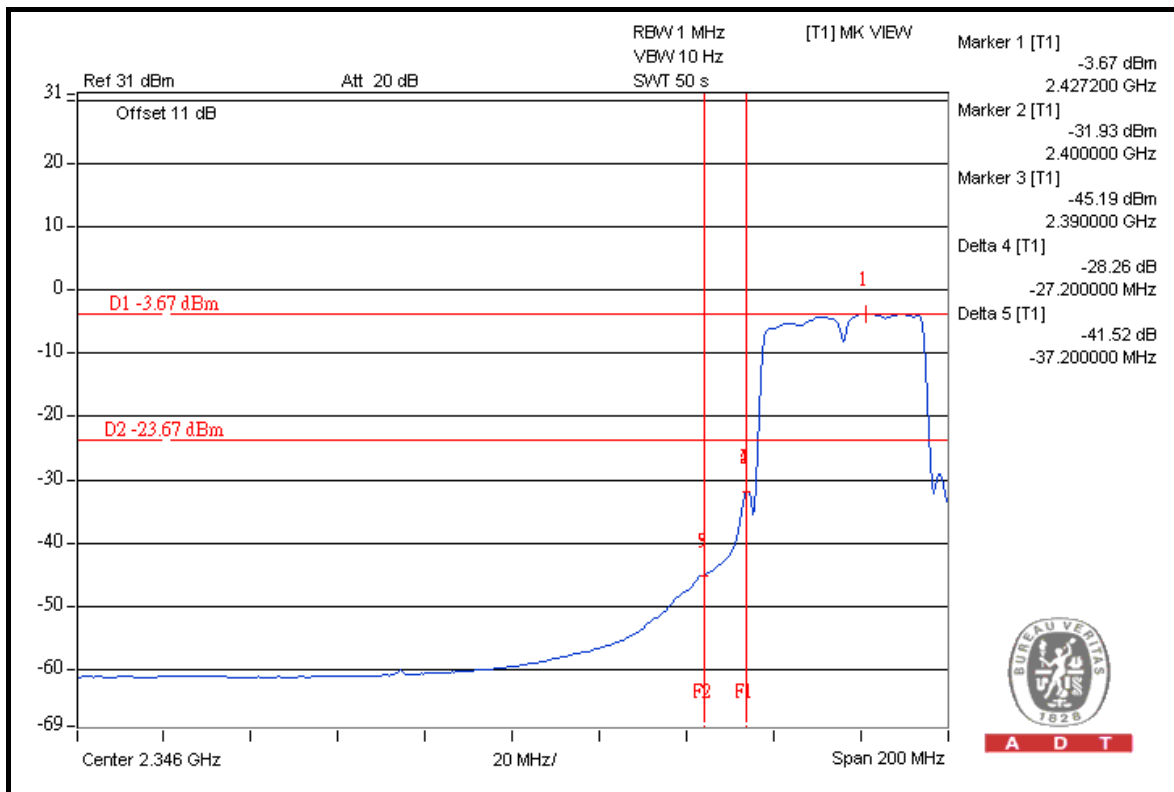
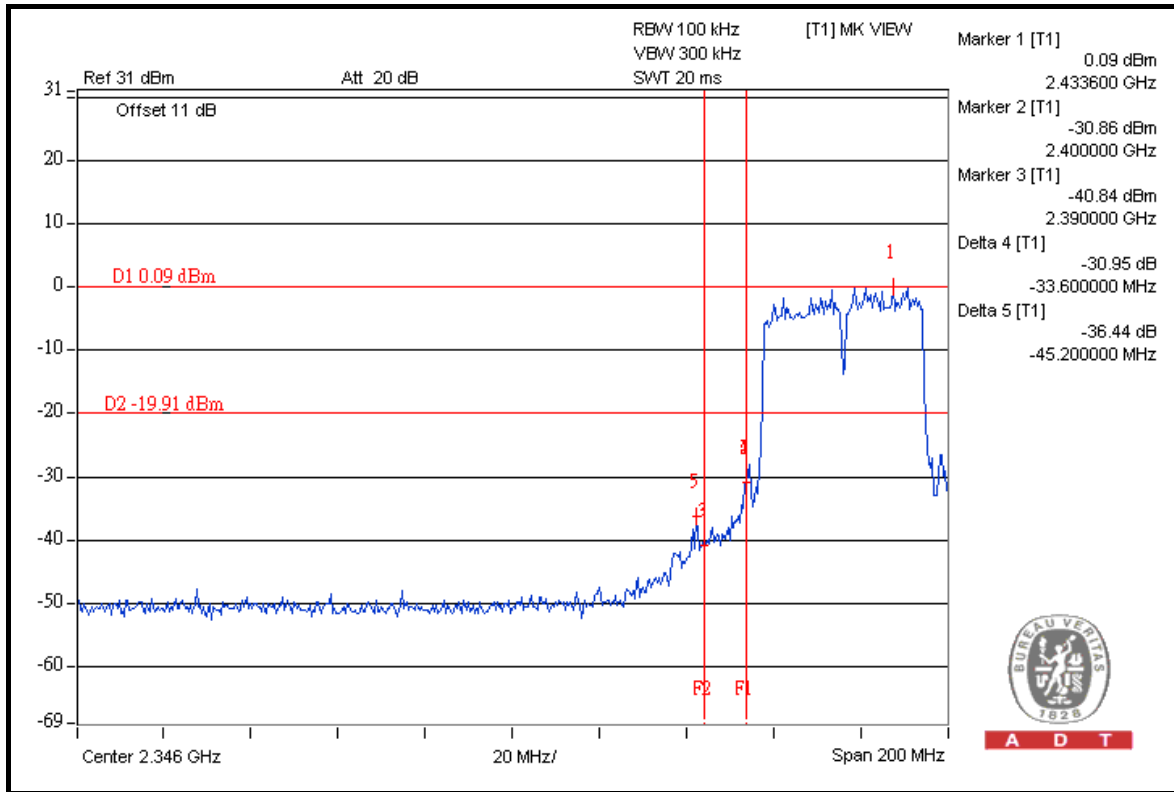
A D T





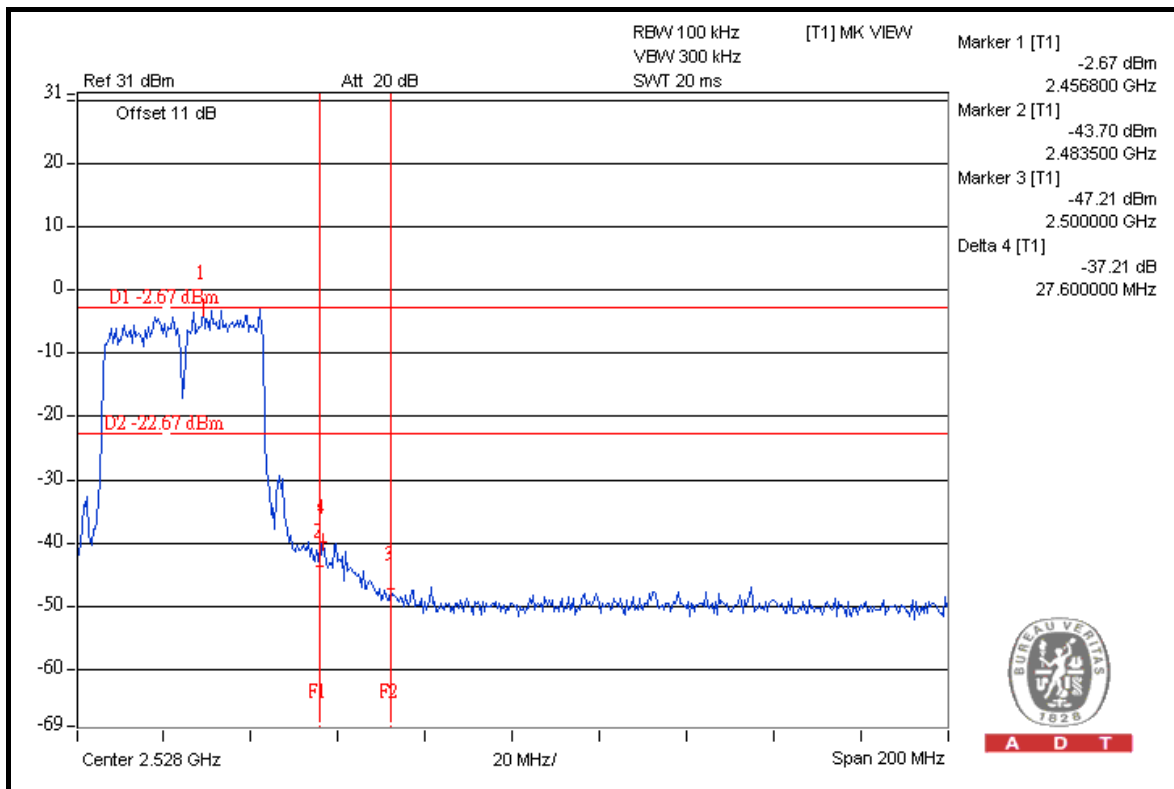
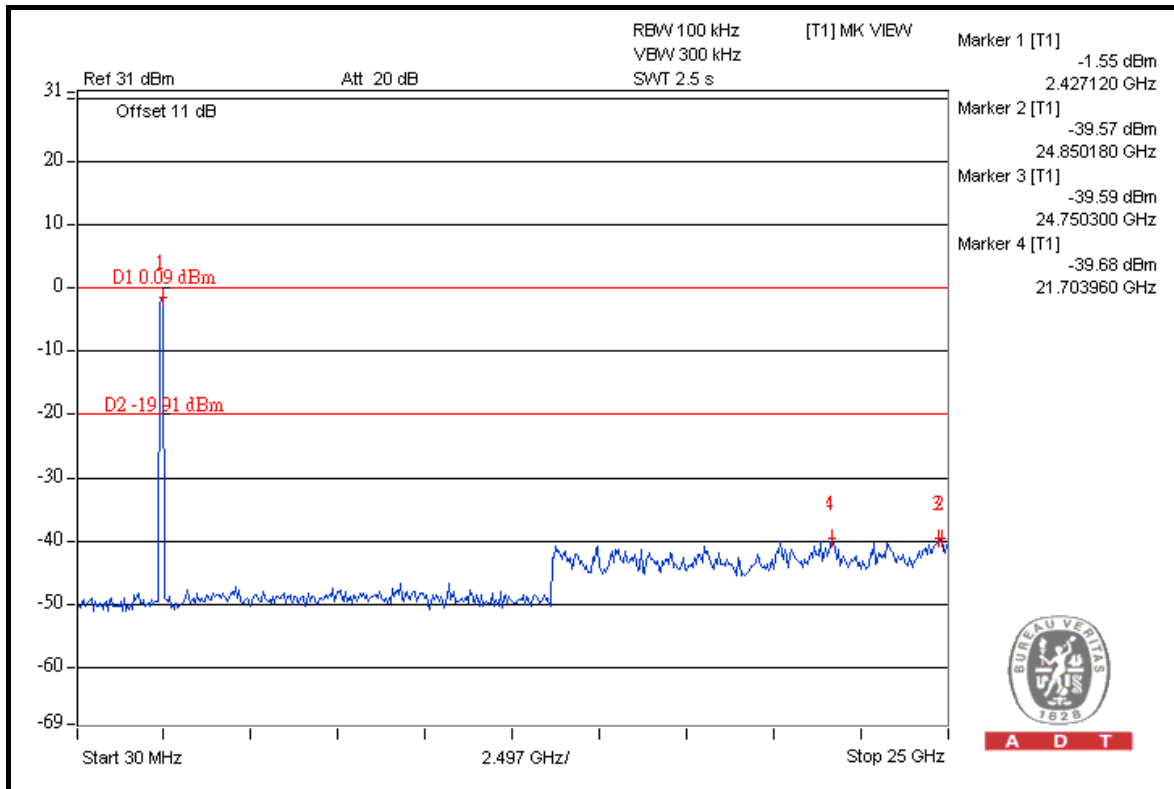
A D T

CHAIN 1



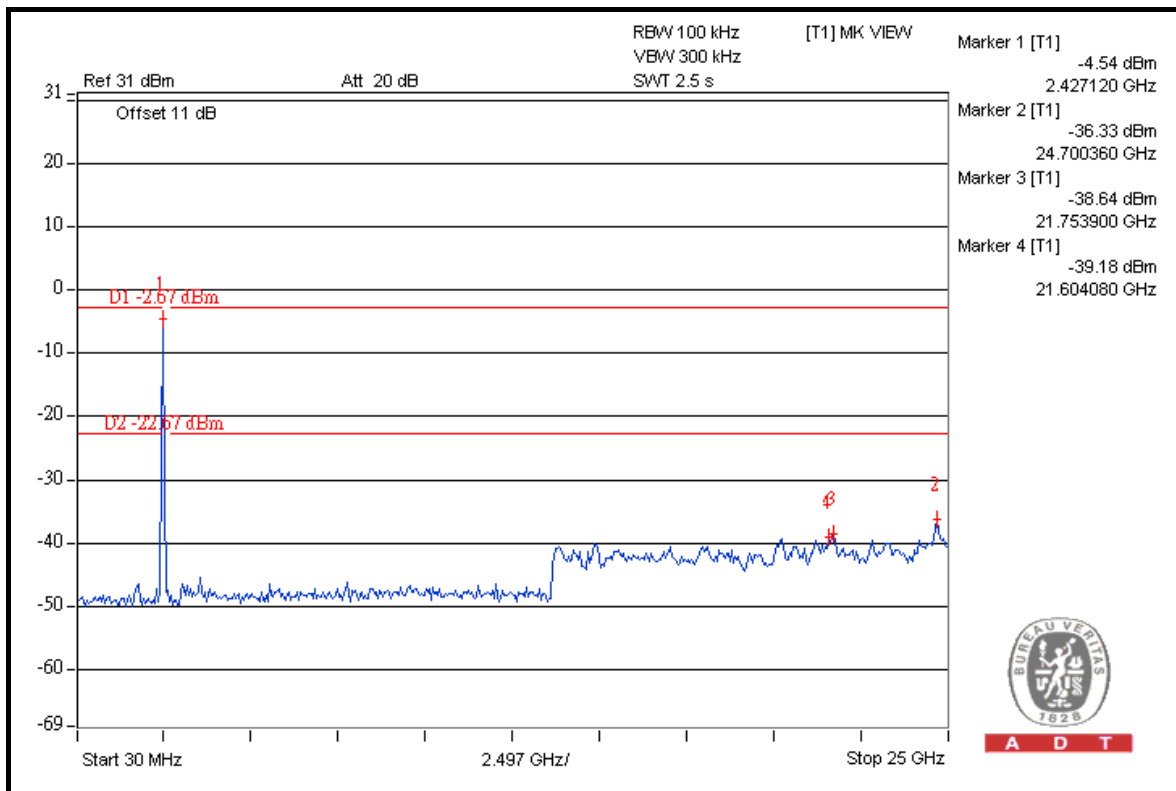
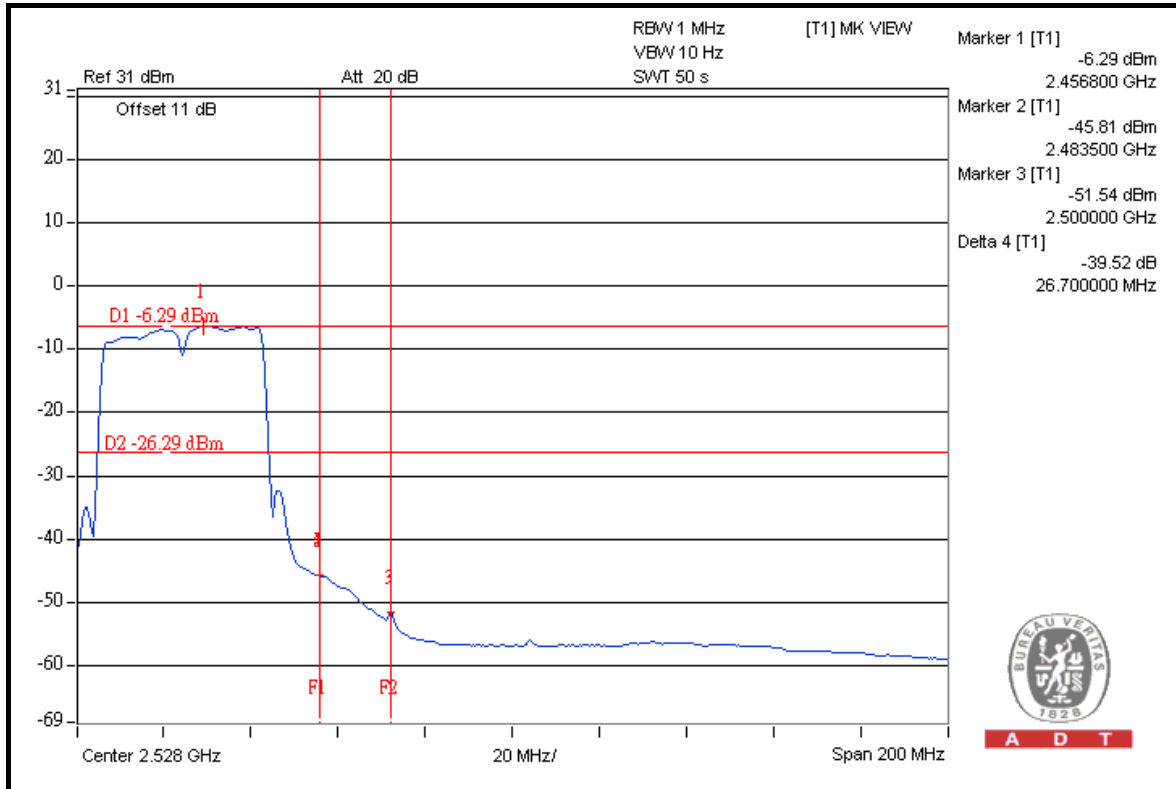


A D T





A D T





A D T

TEST MODE D

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2422.00 (PK)	109.00	43.01	65.99	74.00
2422.00 (AV)	94.60	43.44	51.16	54.00

RESTRICT BAND (2483.5 ~ 2500 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2452.00 (PK)	107.00	38.10	68.90	74.00
2452.00 (AV)	92.50	40.17	52.33	54.00

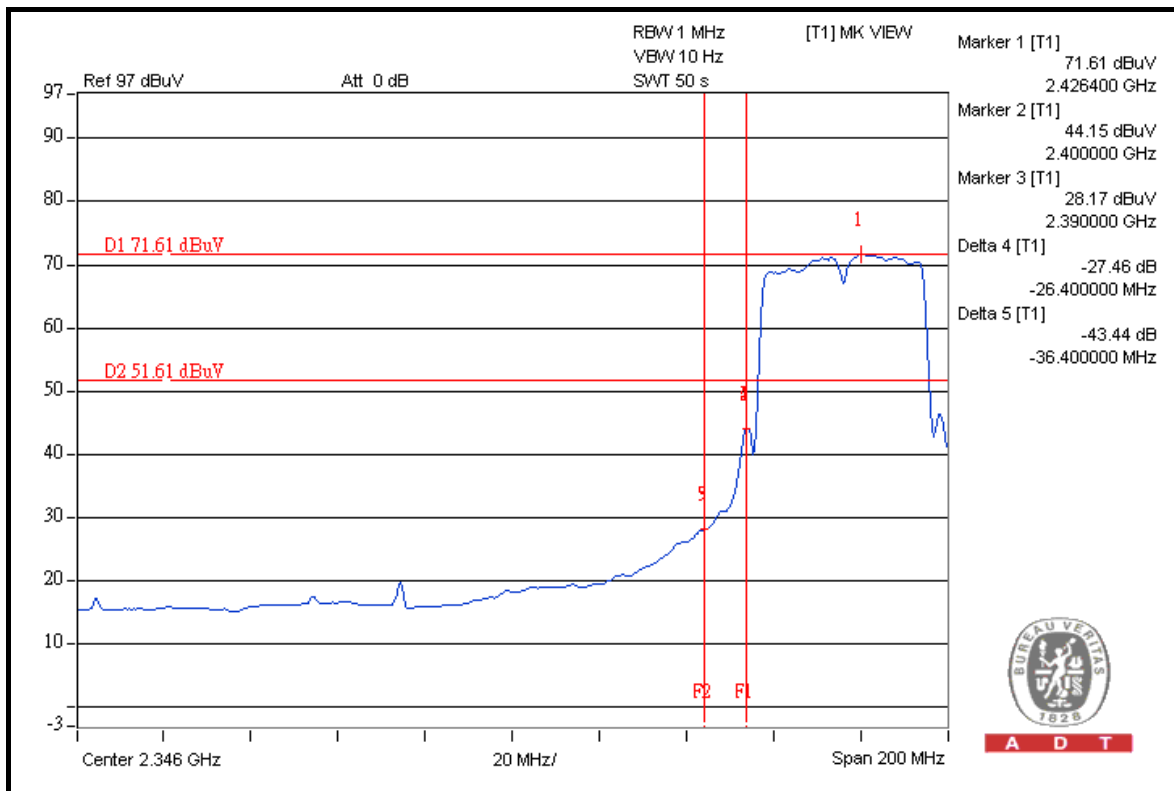
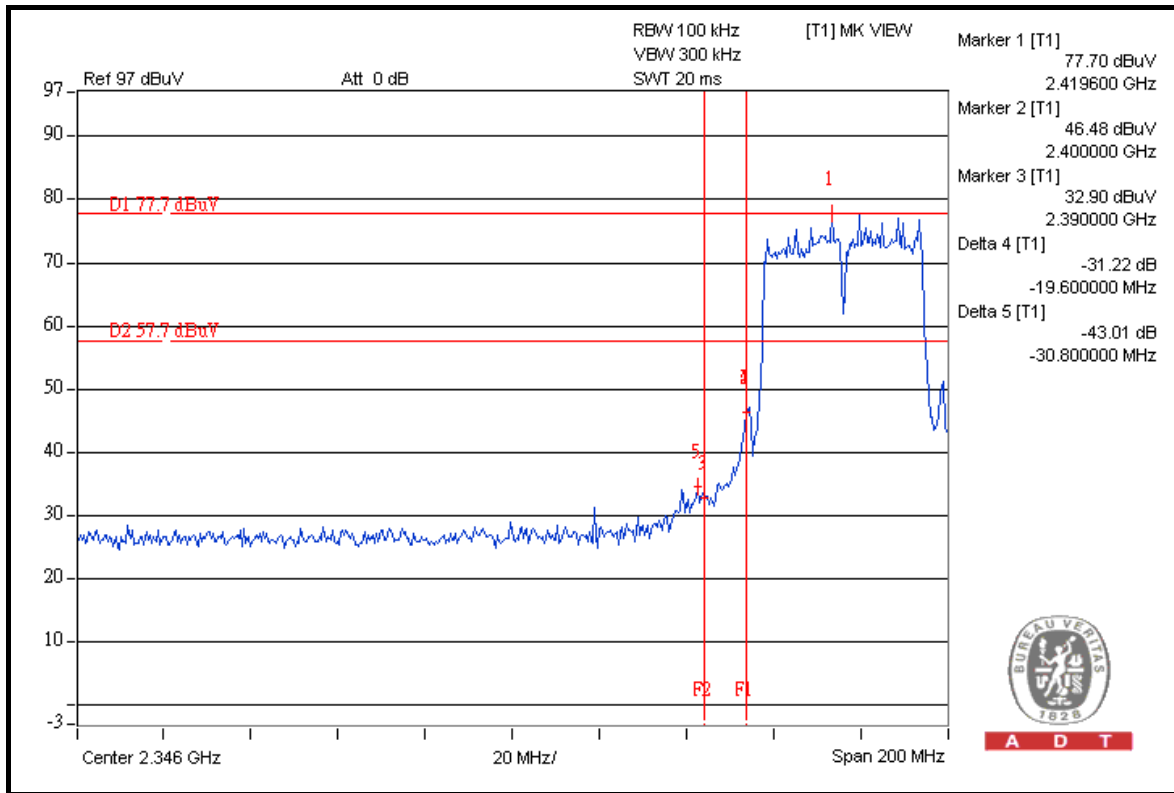
NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.



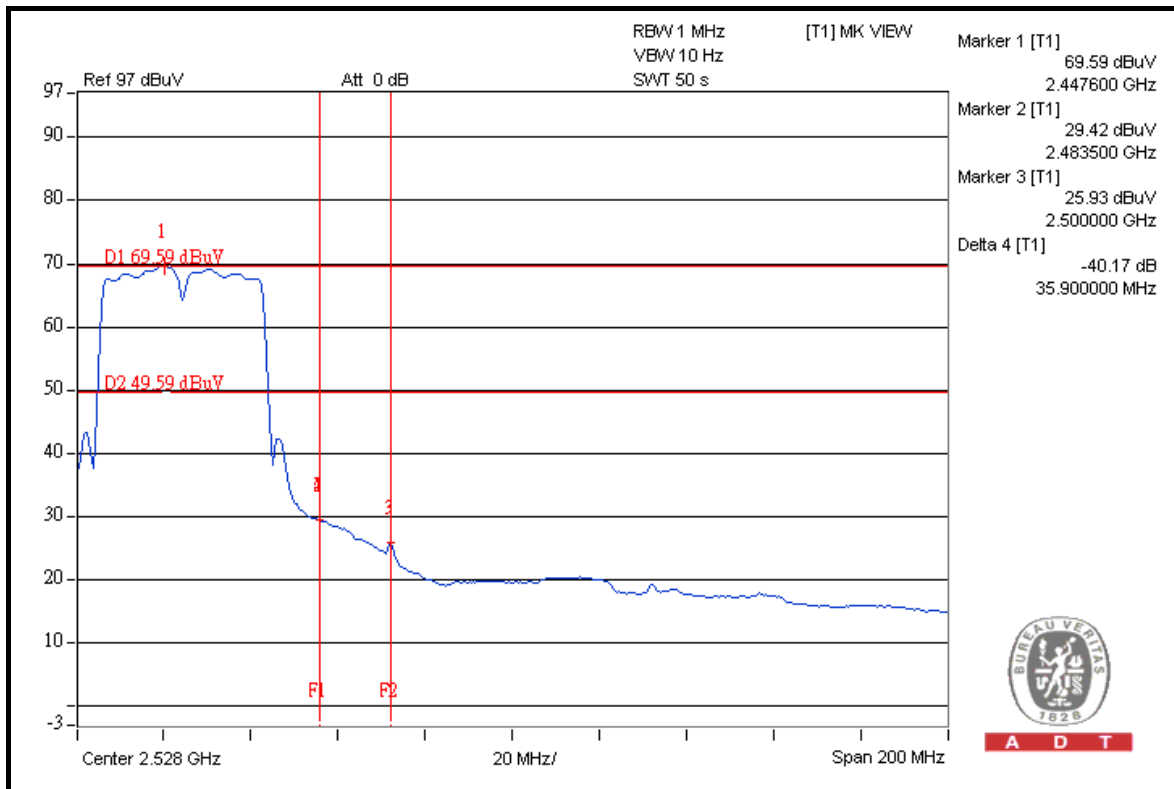
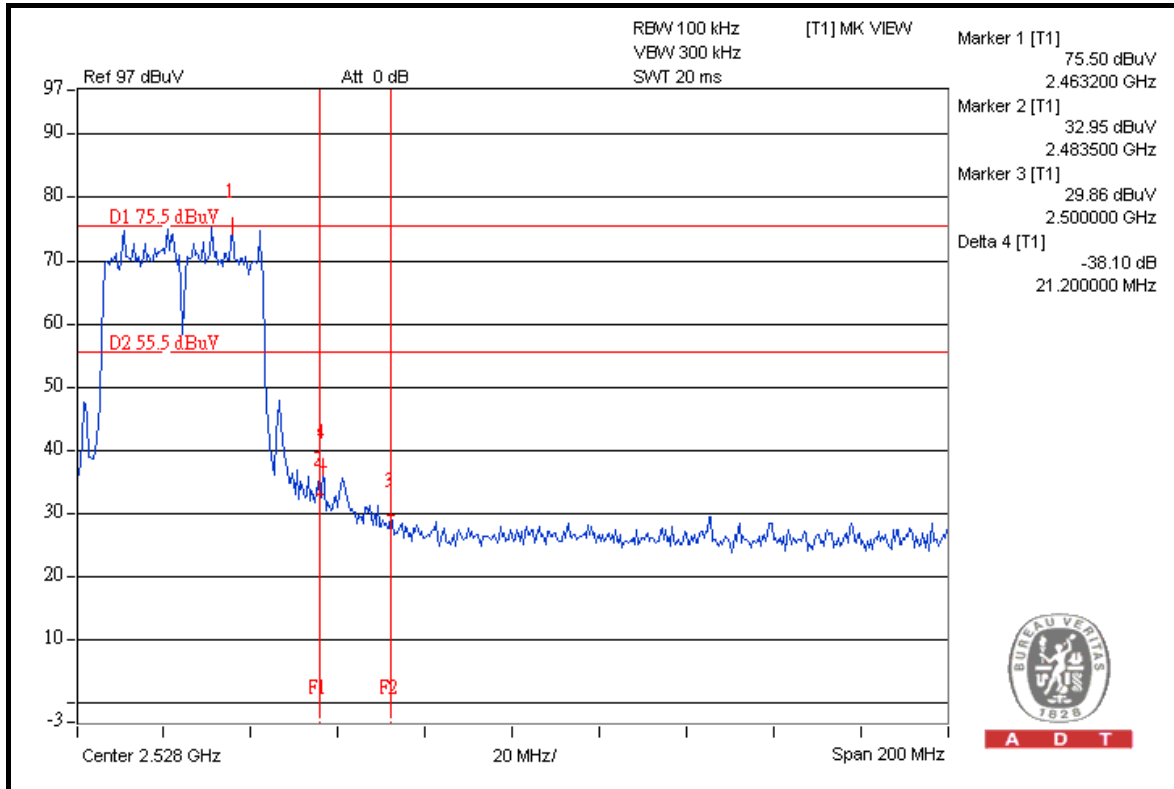
A D T

FOR RADIATED MEASURED (TWO CHAINS ON)





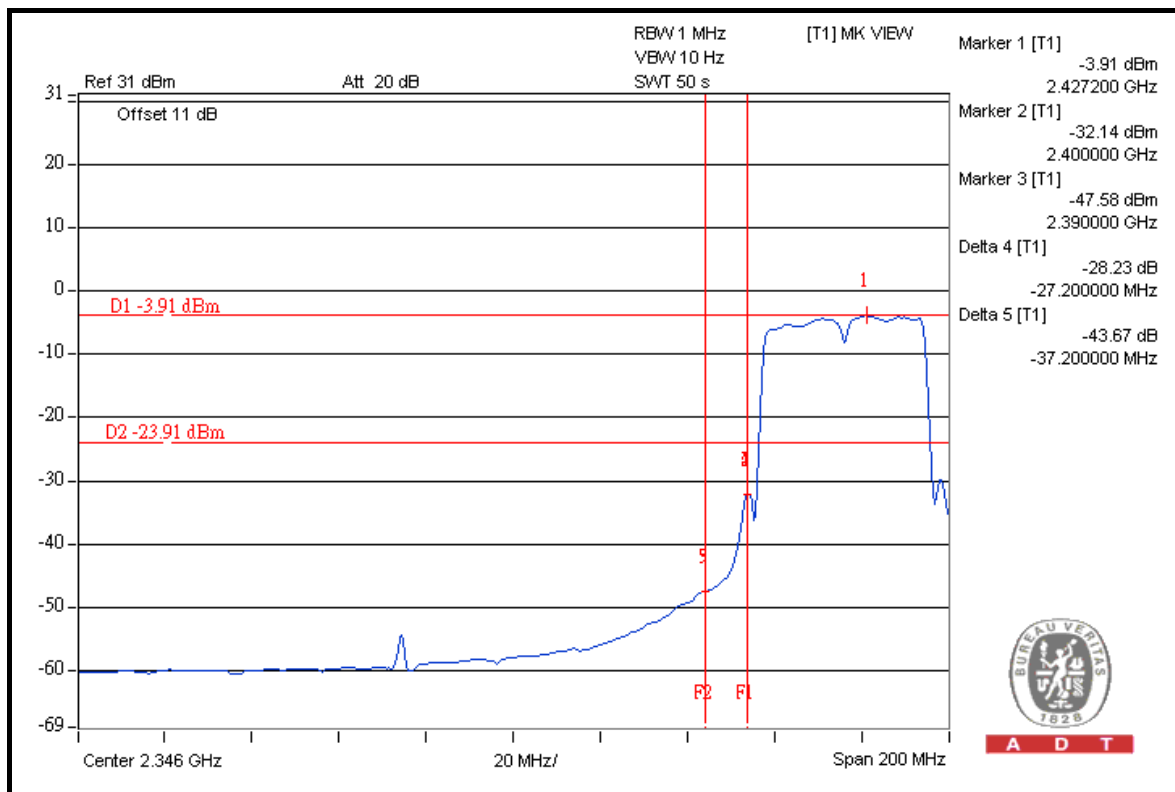
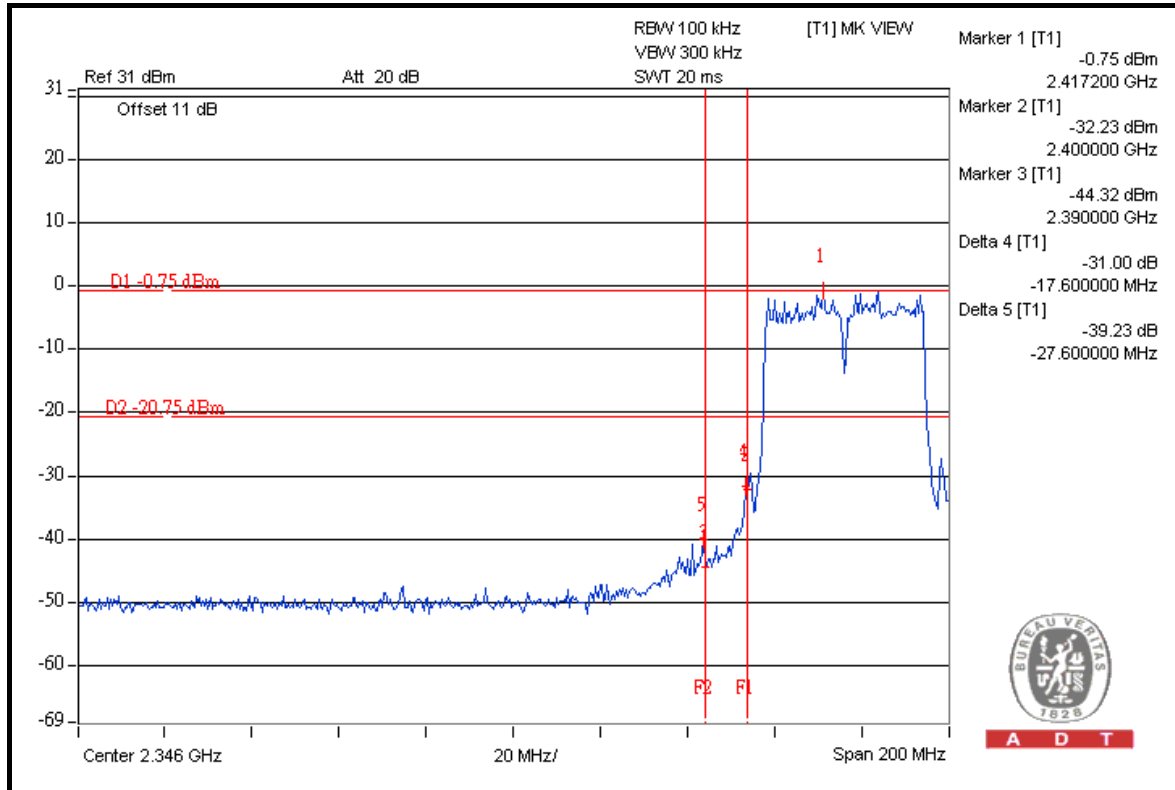
A D T





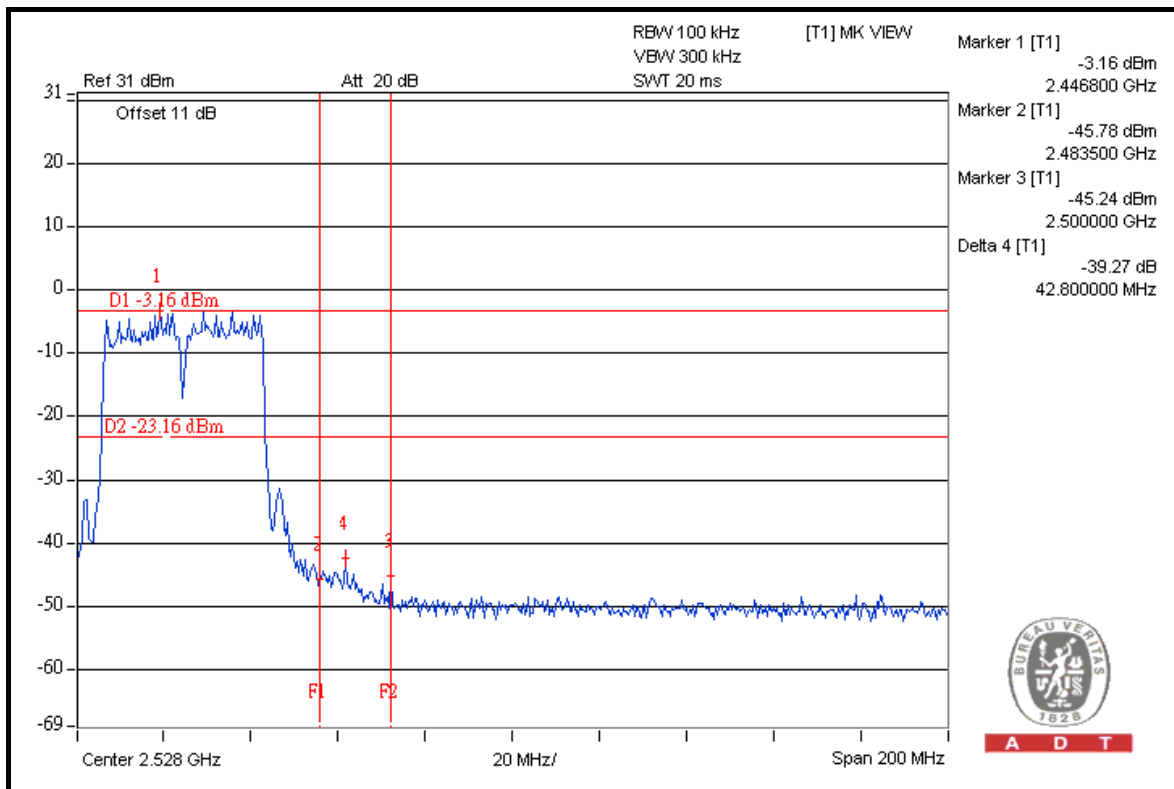
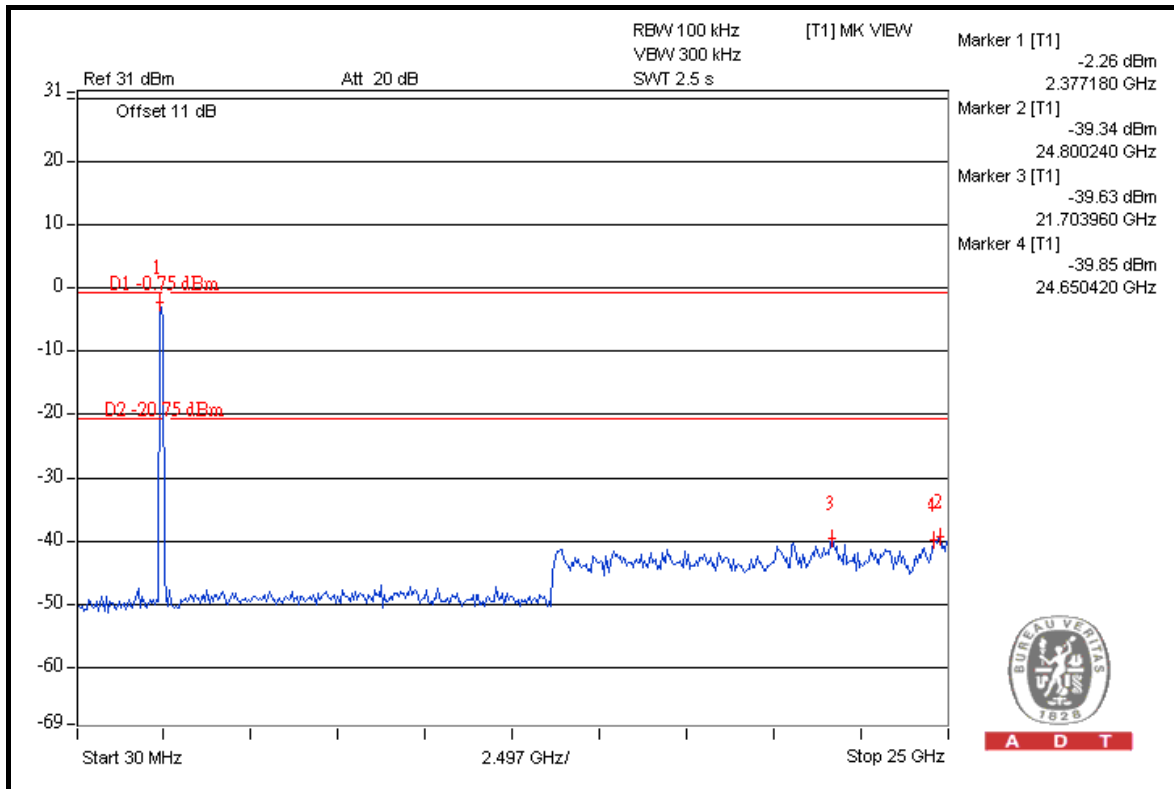
A D T

FOR CONDUCTED MEASURED CHAIN 0



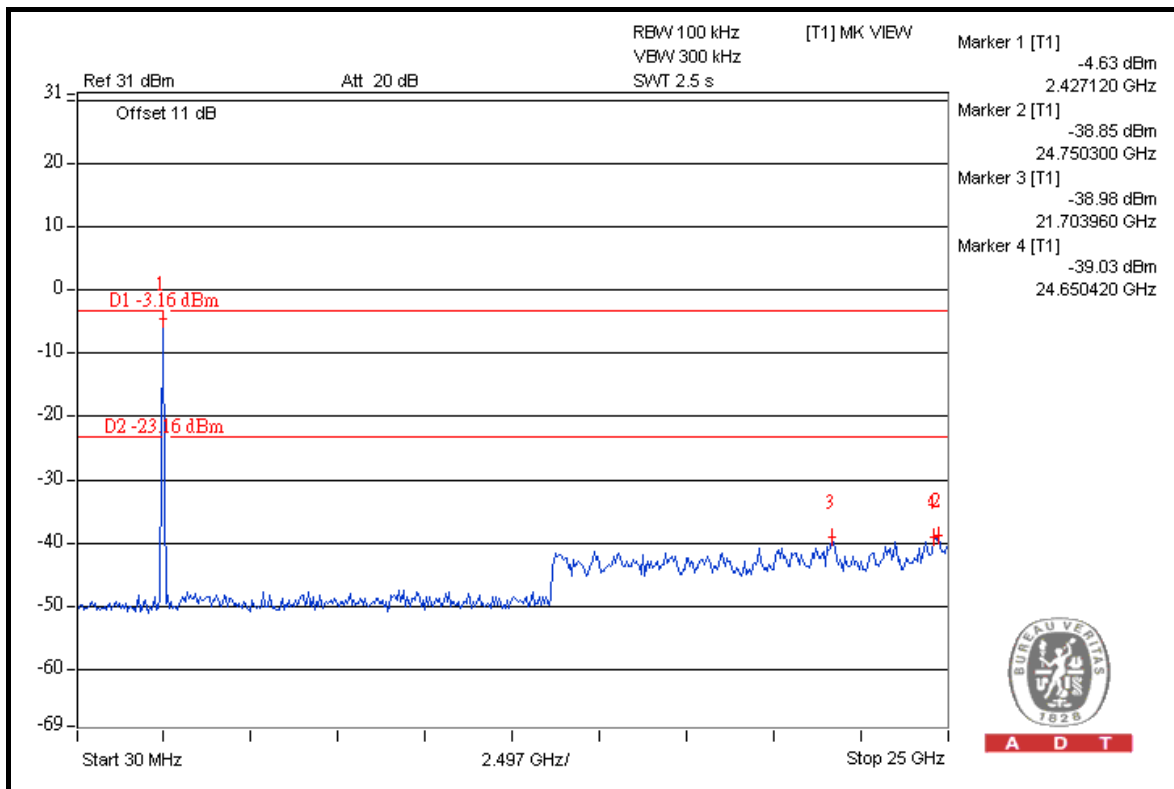
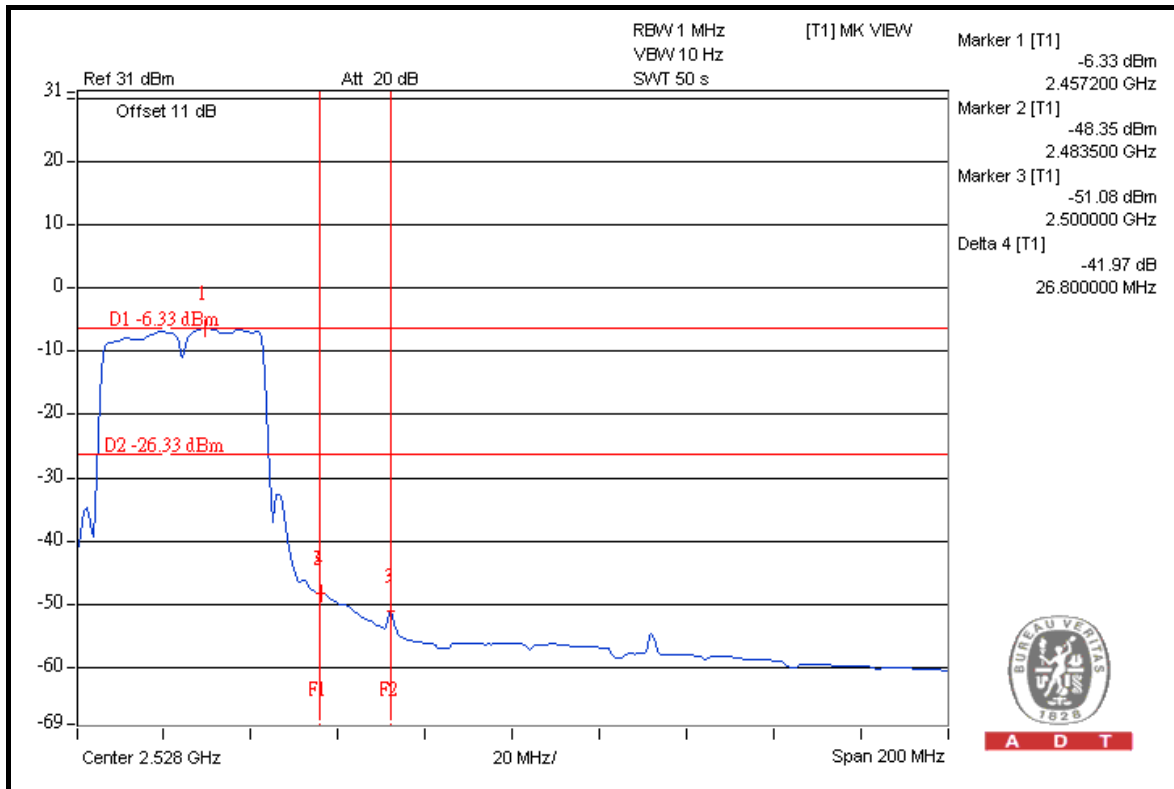


A D T





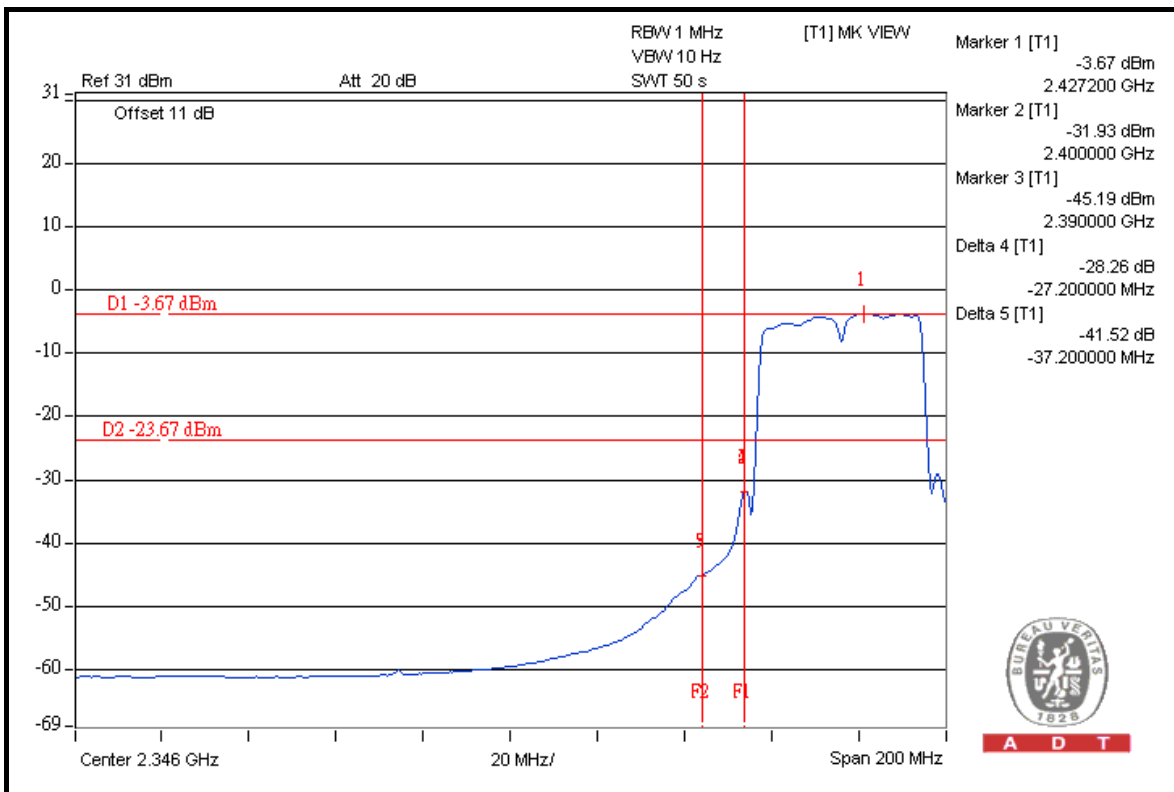
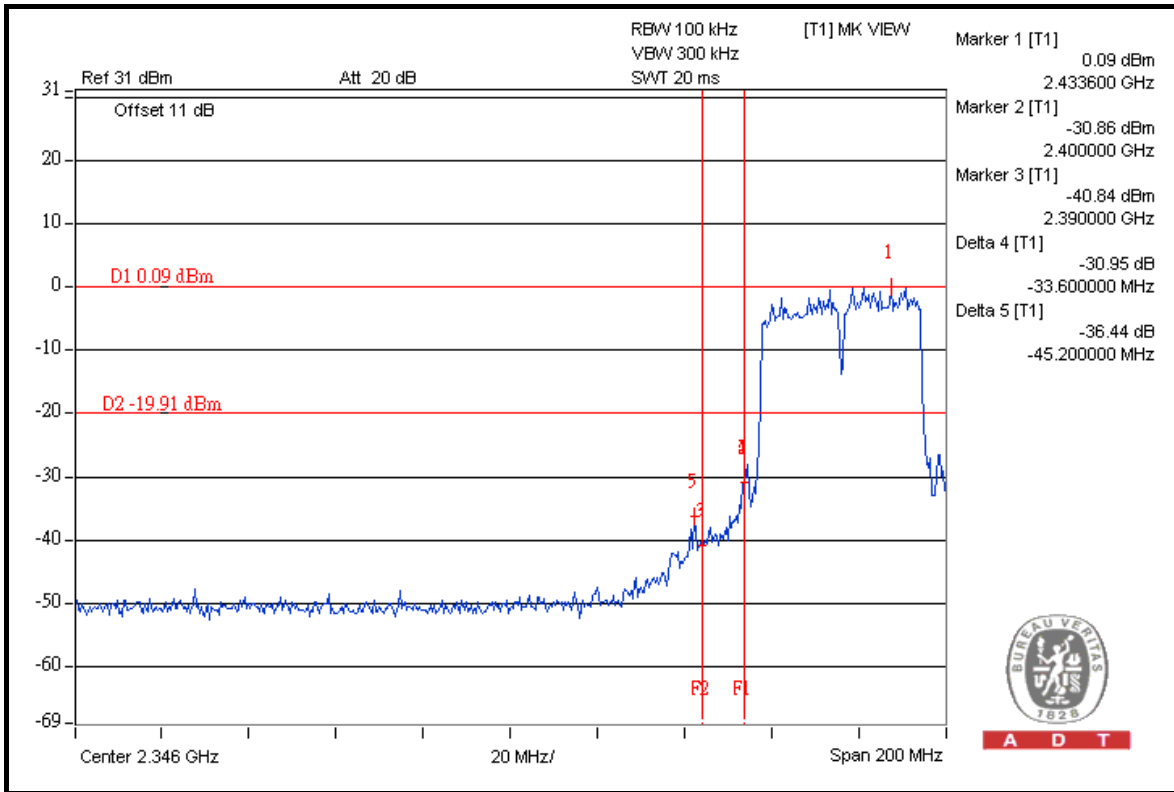
A D T





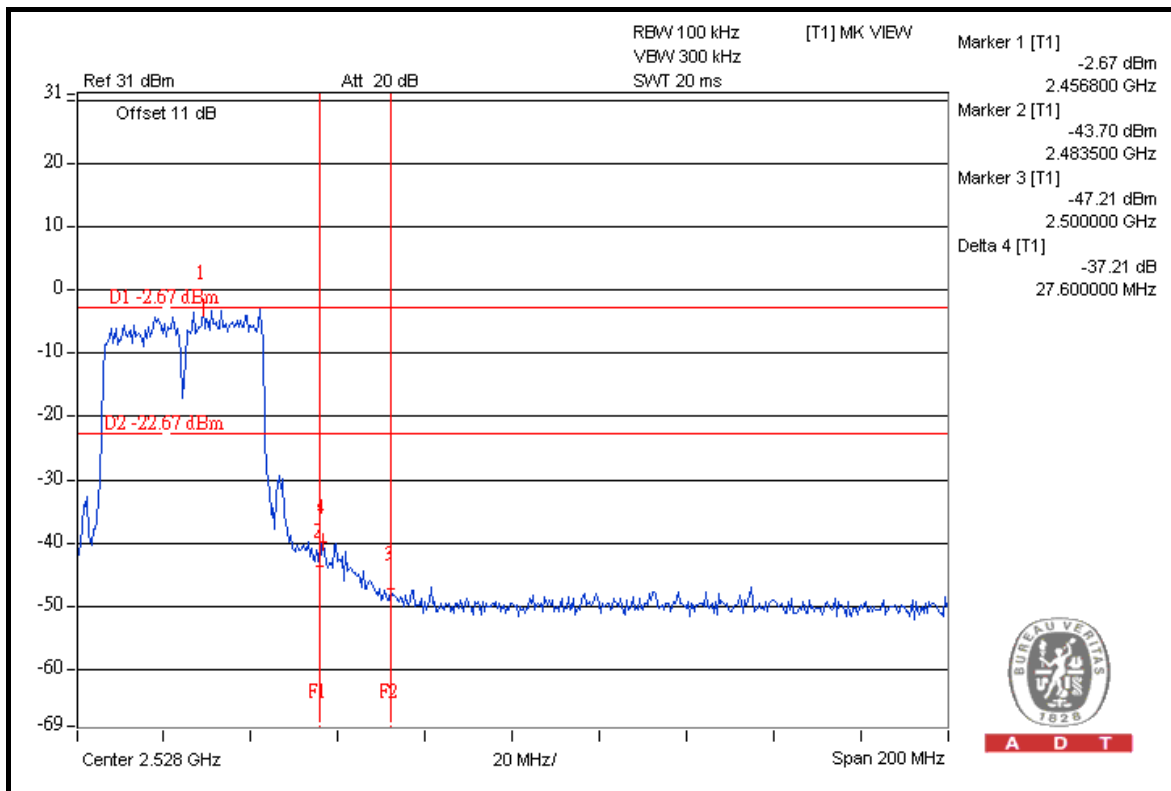
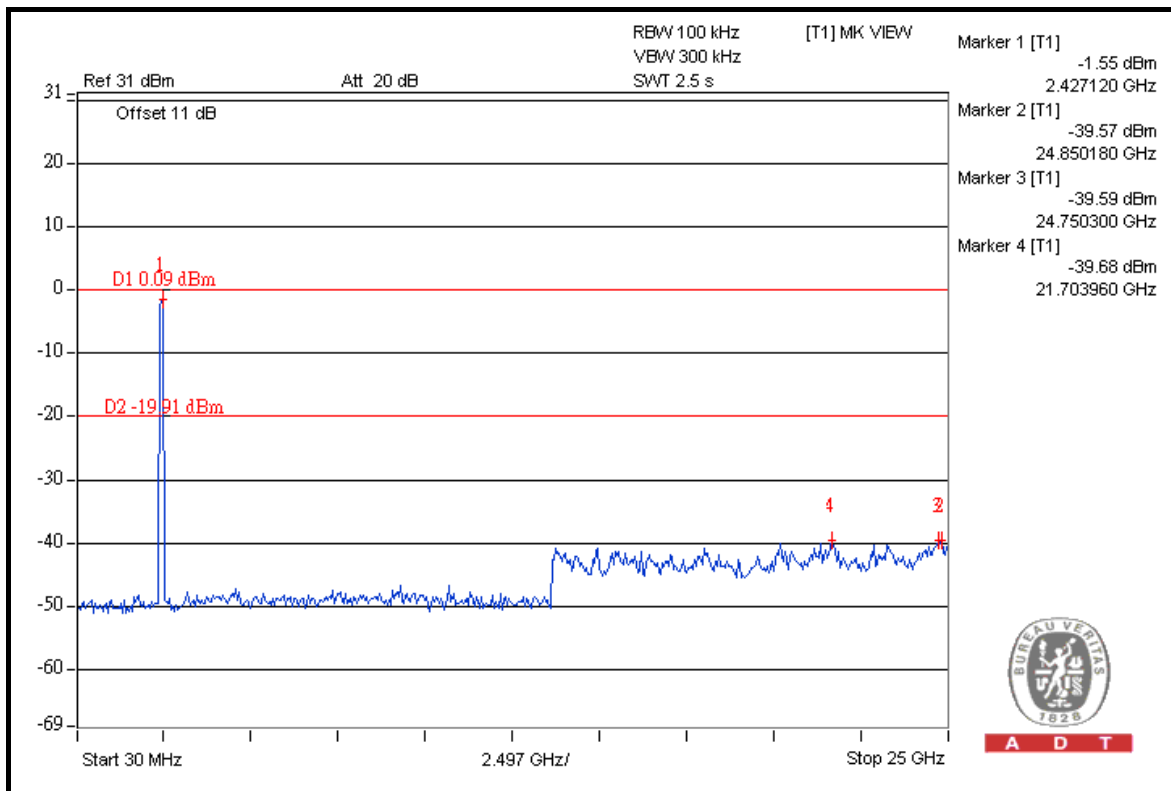
A D T

CHAIN 1



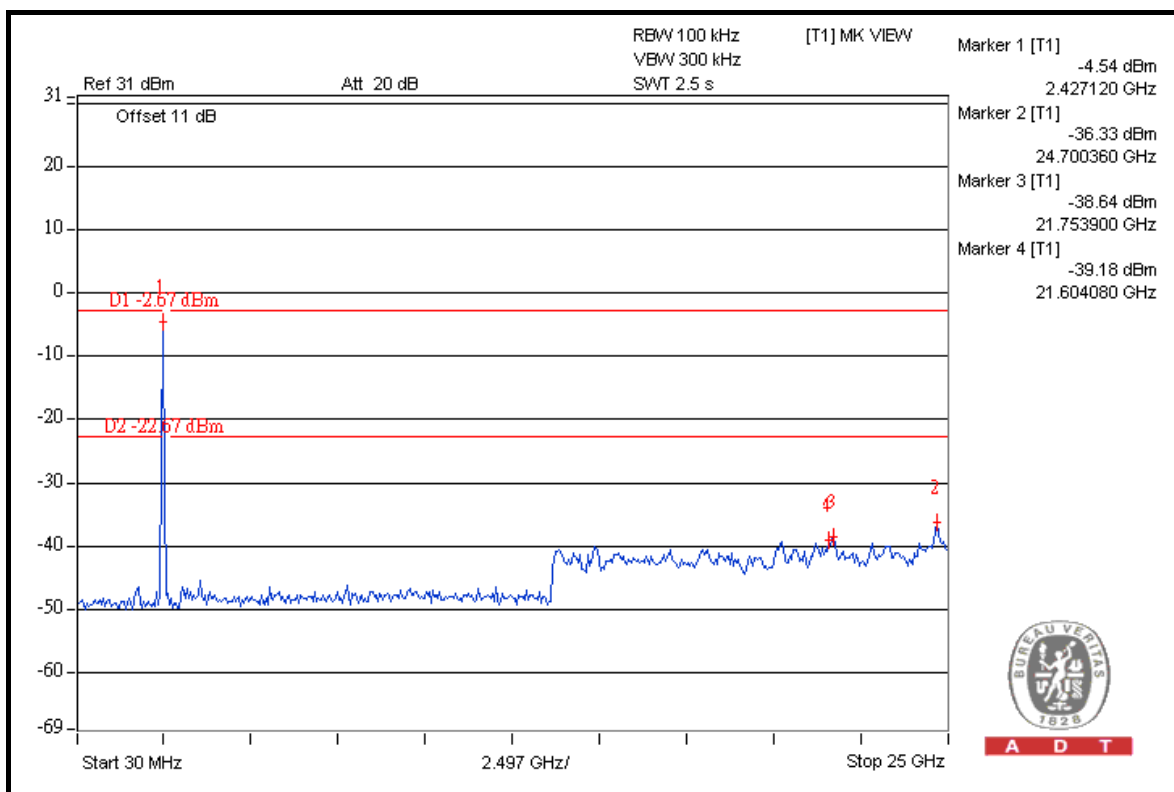
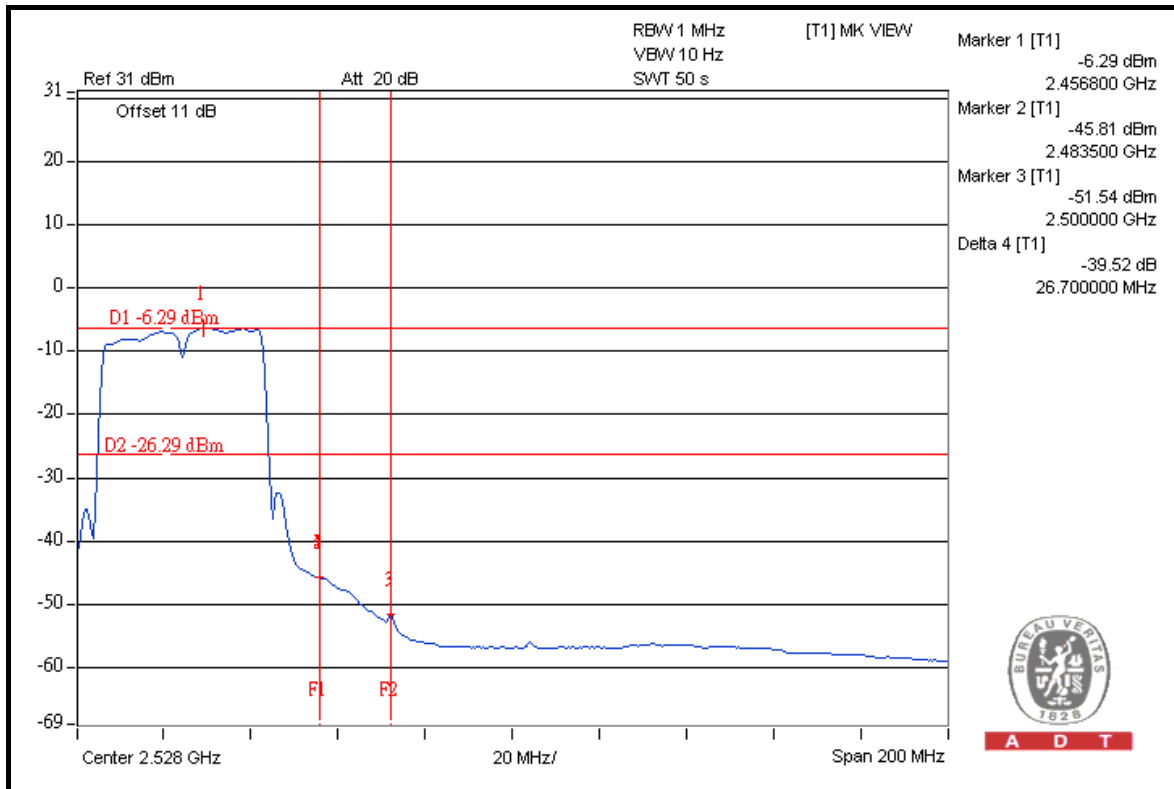


A D T





A D T





5. TEST TYPES AND RESULTS (FOR 5.0GHz BAND)

5.1 RADIATED EMISSION MEASUREMENT

5.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a). Other emissions shall be at least 20dB below the highest level of the desired power.

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.



A D T

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 27, 2010	Dec. 26, 2011
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Jan. 06, 2011	Jan. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01961	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10738	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250792/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	Aug. 19, 2011	Aug. 18, 2012
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	815221	Oct. 29, 2011	Oct. 28, 2012

- 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 460141.
 5. The IC Site Registration No. is IC7450F-4.



5.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. 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 lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

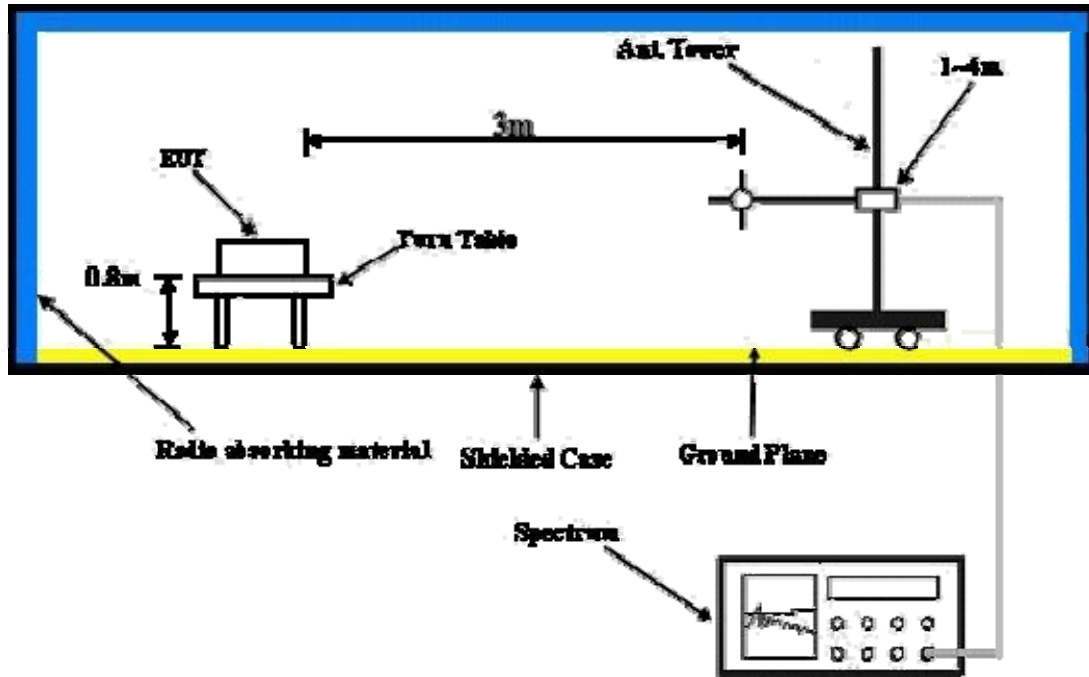
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 100kHz and video bandwidth is 300kHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

5.1.5 TEST SETUP



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

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6.



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5.1.7 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA :

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	92.9 PK	94.7	-1.8	1.16 H	275	52.40	40.50
2	#5725.00	75.6 AV	81.8	-6.2	1.16 H	275	35.10	40.50
3	*5745.00	114.7 PK			1.20 H	214	74.20	40.50
4	*5745.00	101.8 AV			1.20 H	214	61.30	40.50
5	11490.00	63.5 PK	74.0	-10.5	1.60 H	328	11.60	51.90
6	11490.00	48.5 AV	54.0	-5.5	1.60 H	328	-3.40	51.90
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	#5725.00	87.7 PK	90.2	-2.5	1.14 V	306	47.20	40.50
2	#5725.00	71.6 AV	76.9	-5.3	1.14 V	306	31.10	40.50
3	*5745.00	110.2 PK			1.26 V	294	69.70	40.50
4	*5745.00	96.9 AV			1.26 V	294	56.40	40.50
5	11490.00	64.5 PK	74.0	-9.5	1.02 V	136	12.60	51.90
6	11490.00	48.7 AV	54.0	-5.3	1.02 V	136	-3.20	51.90

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	114.5 PK			1.16 H	214	73.90	40.60
2	*5785.00	101.9 AV			1.16 H	214	61.30	40.60
3	11570.00	63.8 PK	74.0	-10.2	1.09 H	158	11.90	51.90
4	11570.00	48.7 AV	54.0	-5.3	1.09 H	158	-3.20	51.90
5	#17355.00	66.8 PK	94.5	-27.7	1.34 H	3	11.10	55.70
6	#17355.00	52.6 AV	81.9	-29.3	1.34 H	3	-3.10	55.70
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	*5785.00	111.0 PK			1.42 V	250	70.40	40.60
2	*5785.00	98.0 AV			1.42 V	250	57.40	40.60
3	11570.00	64.5 PK	74.0	-9.5	1.18 V	209	12.60	51.90
4	11570.00	48.9 AV	54.0	-5.1	1.18 V	209	-3.00	51.90
5	#17355.00	68.2 PK	91.0	-22.8	1.36 V	260	12.50	55.70
6	#17355.00	53.1 AV	78.0	-24.9	1.36 V	260	-2.60	55.70

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	115.9 PK			1.05 H	317	75.20	40.70
2	*5825.00	101.7 AV			1.05 H	317	61.00	40.70
3	#5850.00	85.3 PK	95.9	-10.6	1.14 H	206	44.50	40.80
4	#5850.00	67.9 AV	81.7	-13.8	1.14 H	206	27.10	40.80
5	11650.00	63.4 PK	74.0	-10.6	1.30 H	274	11.70	51.70
6	11650.00	48.1 AV	54.0	-5.9	1.30 H	274	-3.60	51.70
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	*5825.00	109.8 PK			1.08 V	346	69.10	40.70
2	*5825.00	97.5 AV			1.08 V	346	56.80	40.70
3	#5850.00	76.3 PK	89.8	-13.5	1.14 V	238	35.50	40.80
4	#5850.00	59.9 AV	77.5	-17.6	1.14 V	238	19.10	40.80
5	11650.00	64.3 PK	74.0	-9.7	1.39 V	241	12.60	51.70
6	11650.00	48.6 AV	54.0	-5.4	1.39 V	241	-3.10	51.70

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	D		

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	#5725.00	87.9 PK	92.9	-5.0	1.24 H	165	47.40	40.50
2	#5725.00	70.8 AV	79.4	-8.6	1.24 H	165	30.30	40.50
3	*5745.00	112.9 PK			1.04 H	206	72.40	40.50
4	*5745.00	99.4 AV			1.04 H	206	58.90	40.50
5	11490.00	61.4 PK	74.0	-12.6	1.51 H	114	9.50	51.90
6	11490.00	47.5 AV	54.0	-6.5	1.51 H	114	-4.40	51.90
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	#5725.00	89.1 PK	94.6	-5.5	1.14 V	68	48.60	40.50
2	#5725.00	71.7 AV	80.5	-8.8	1.14 V	68	31.20	40.50
3	*5745.00	114.6 PK			1.07 V	269	74.10	40.50
4	*5745.00	100.5 AV			1.07 V	269	60.00	40.50
5	11490.00	62.5 PK	74.0	-11.5	1.57 V	20	10.60	51.90
6	11490.00	48.3 AV	54.0	-5.7	1.57 V	20	-3.60	51.90

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	D		

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	*5785.00	113.1 PK			1.26 H	257	72.50	40.60
2	*5785.00	100.3 AV			1.26 H	257	59.70	40.60
3	11570.00	62.7 PK	74.0	-11.3	1.38 H	62	10.80	51.90
4	11570.00	47.5 AV	54.0	-6.5	1.38 H	62	-4.40	51.90
5	#17355.00	66.6 PK	93.1	-26.5	1.28 H	219	10.90	55.70
6	#17355.00	51.5 AV	80.3	-28.8	1.28 H	219	-4.20	55.70
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	*5785.00	115.2 PK			1.34 V	160	74.60	40.60
2	*5785.00	101.1 AV			1.34 V	160	60.50	40.60
3	11570.00	62.4 PK	74.0	-11.6	1.09 V	351	10.50	51.90
4	11570.00	47.2 AV	54.0	-6.8	1.09 V	351	-4.70	51.90
5	#17355.00	67.8 PK	95.2	-27.4	1.40 V	339	12.10	55.70
6	#17355.00	52.7 AV	81.1	-28.4	1.40 V	339	-3.00	55.70

- 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 limit value is defined as per 15.247.
 7. “#“:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	D		

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	*5825.00	113.6 PK			1.07 H	351	72.90	40.70
2	*5825.00	100.1 AV			1.07 H	351	59.40	40.70
3	#5850.00	79.9 PK	93.6	-13.7	1.53 H	245	39.10	40.80
4	#5850.00	62.7 AV	80.1	-17.4	1.53 H	245	21.90	40.80
5	11650.00	60.3 PK	74.0	-13.7	1.36 H	270	8.60	51.70
6	11650.00	46.3 AV	54.0	-7.7	1.36 H	270	-5.40	51.70
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	*5825.00	115.7 PK			1.08 V	304	75.00	40.70
2	*5825.00	101.7 AV			1.08 V	304	61.00	40.70
3	#5850.00	85.4 PK	95.7	-10.3	1.30 V	104	44.60	40.80
4	#5850.00	66.5 AV	81.7	-15.2	1.30 V	104	25.70	40.80
5	11650.00	61.7 PK	74.0	-12.3	1.51 V	198	10.00	51.70
6	11650.00	46.5 AV	54.0	-7.5	1.51 V	198	-5.20	51.70

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



A D T

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	92.4 PK	94.3	-1.9	1.38 H	286	51.90	40.50
2	#5725.00	75.2 AV	81.3	-6.1	1.38 H	286	34.70	40.50
3	*5745.00	114.3 PK			1.38 H	286	73.80	40.50
4	*5745.00	101.3 AV			1.38 H	286	60.80	40.50
5	11490.00	63.2 PK	74.0	-10.8	1.00 H	66	11.30	51.90
6	11490.00	48.0 AV	54.0	-6.0	1.00 H	66	-3.90	51.90
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	#5725.00	87.3 PK	89.6	-2.3	1.00 V	353	46.80	40.50
2	#5725.00	71.1 AV	76.5	-5.4	1.00 V	353	30.60	40.50
3	*5745.00	109.6 PK			1.00 V	353	69.10	40.50
4	*5745.00	96.5 AV			1.00 V	353	56.00	40.50
5	11490.00	64.0 PK	74.0	-10.0	1.00 V	24	12.10	51.90
6	11490.00	48.5 AV	54.0	-5.5	1.00 V	24	-3.40	51.90

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	114.1 PK			1.38 H	280	73.50	40.60
2	*5785.00	101.4 AV			1.38 H	280	60.80	40.60
3	11570.00	63.4 PK	74.0	-10.6	1.00 H	71	11.50	51.90
4	11570.00	48.2 AV	54.0	-5.8	1.00 H	71	-3.70	51.90
5	#17355.00	66.5 PK	94.1	-27.6	1.20 H	290	10.80	55.70
6	#17355.00	52.0 AV	81.4	-29.4	1.20 H	290	-3.70	55.70
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	*5785.00	110.4 PK			1.00 V	358	69.80	40.60
2	*5785.00	97.6 AV			1.00 V	358	57.00	40.60
3	11570.00	64.0 PK	74.0	-10.0	1.00 V	35	12.10	51.90
4	11570.00	48.6 AV	54.0	-5.4	1.00 V	35	-3.30	51.90
5	#17355.00	67.6 PK	90.4	-22.8	1.06 V	48	11.90	55.70
6	#17355.00	52.7 AV	77.6	-24.9	1.06 V	48	-3.00	55.70

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	115.3 PK			1.36 H	285	74.60	40.70
2	*5825.00	101.4 AV			1.36 H	285	60.70	40.70
3	#5850.00	84.8 PK	95.3	-10.5	1.36 H	285	44.00	40.80
4	#5850.00	67.3 AV	81.4	-14.1	1.36 H	285	26.50	40.80
5	11650.00	63.0 PK	74.0	-11.0	1.00 H	70	11.30	51.70
6	11650.00	47.8 AV	54.0	-6.2	1.00 H	70	-3.90	51.70
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	*5825.00	109.2 PK			1.45 V	8	68.50	40.70
2	*5825.00	97.0 AV			1.45 V	8	56.30	40.70
3	#5850.00	75.9 PK	89.2	-13.3	1.45 V	8	35.10	40.80
4	#5850.00	59.6 AV	77.0	-17.4	1.45 V	8	18.80	40.80
5	11650.00	63.8 PK	74.0	-10.2	1.00 V	32	12.10	51.70
6	11650.00	48.2 AV	54.0	-5.8	1.00 V	32	-3.50	51.70

- 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 limit value is defined as per 15.247.
 7. “#“:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	D		

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	#5725.00	87.6 PK	92.4	-4.8	1.32 H	350	47.10	40.50
2	#5725.00	70.5 AV	79.1	-8.6	1.32 H	350	30.00	40.50
3	*5745.00	112.4 PK			1.32 H	350	71.90	40.50
4	*5745.00	99.1 AV			1.32 H	350	58.60	40.50
5	11490.00	61.2 PK	74.0	-12.8	1.12 H	48	9.30	51.90
6	11490.00	47.4 AV	54.0	-6.6	1.12 H	48	-4.50	51.90
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	#5725.00	88.7 PK	94.1	-5.4	1.00 V	244	48.20	40.50
2	#5725.00	71.4 AV	80.0	-8.6	1.00 V	244	30.90	40.50
3	*5745.00	114.1 PK			1.00 V	245	73.60	40.50
4	*5745.00	100.0 AV			1.00 V	245	59.50	40.50
5	11490.00	62.4 PK	74.0	-11.6	1.00 V	330	10.50	51.90
6	11490.00	48.2 AV	54.0	-5.8	1.00 V	330	-3.70	51.90

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	D		

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	*5785.00	112.8 PK			1.00 H	340	72.20	40.60
2	*5785.00	99.8 AV			1.00 H	340	59.20	40.60
3	11570.00	62.4 PK	74.0	-11.6	1.25 H	66	10.50	51.90
4	11570.00	47.1 AV	54.0	-6.9	1.25 H	66	-4.80	51.90
5	#17355.00	66.1 PK	92.8	-26.7	1.00 H	332	10.40	55.70
6	#17355.00	51.2 AV	79.8	-28.6	1.00 H	332	-4.50	55.70
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	*5785.00	114.8 PK			1.09 V	264	74.20	40.60
2	*5785.00	100.8 AV			1.09 V	264	60.20	40.60
3	11570.00	62.1 PK	74.0	-11.9	1.15 V	18	10.20	51.90
4	11570.00	47.1 AV	54.0	-6.9	1.15 V	18	-4.80	51.90
5	#17355.00	67.3 PK	94.8	-27.5	1.66 V	55	11.60	55.70
6	#17355.00	52.4 AV	80.8	-28.4	1.66 V	55	-3.30	55.70

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	D		

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	*5825.00	113.1 PK			1.00 H	340	72.40	40.70
2	*5825.00	99.8 AV			1.00 H	340	59.10	40.70
3	#5850.00	79.3 PK	93.1	-13.8	1.00 H	329	38.50	40.80
4	#5850.00	62.3 AV	79.8	-17.5	1.00 H	329	21.50	40.80
5	11650.00	59.9 PK	74.0	-14.1	1.00 H	250	8.20	51.70
6	11650.00	45.7 AV	54.0	-8.3	1.00 H	250	-6.00	51.70
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	*5825.00	115.1 PK			1.06 V	267	74.40	40.70
2	*5825.00	101.2 AV			1.06 V	267	60.50	40.70
3	#5850.00	85.0 PK	95.1	-10.1	1.08 V	254	44.20	40.80
4	#5850.00	66.2 AV	81.2	-15.0	1.08 V	254	25.40	40.80
5	11650.00	61.0 PK	74.0	-13.0	1.44 V	34	9.30	51.70
6	11650.00	46.0 AV	54.0	-8.0	1.44 V	34	-5.70	51.70

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



A D T

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	90.1 PK	91.5	-1.4	1.37 H	287	49.60	40.50
2	#5725.00	76.5 AV	77.5	-1.0	1.37 H	287	36.00	40.50
3	*5755.00	111.5 PK			1.37 H	287	71.00	40.50
4	*5755.00	97.5 AV			1.37 H	287	57.00	40.50
5	11490.00	61.3 PK	74.0	-12.7	1.00 H	12	9.40	51.90
6	11490.00	46.6 AV	54.0	-7.4	1.00 H	12	-5.30	51.90
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	#5725.00	87.7 PK	88.7	-1.0	1.45 V	0	47.20	40.50
2	#5725.00	73.3 AV	74.5	-1.2	1.45 V	0	32.80	40.50
3	*5755.00	108.7 PK			1.45 V	0	68.20	40.50
4	*5755.00	94.5 AV			1.45 V	0	54.00	40.50
5	11490.00	62.7 PK	74.0	-11.3	1.00 V	20	10.80	51.90
6	11490.00	47.0 AV	54.0	-7.0	1.00 V	20	-4.90	51.90

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	111.3 PK			1.02 H	45	70.70	40.60
2	*5795.00	96.9 AV			1.02 H	45	56.30	40.60
3	#5850.00	80.1 PK	91.3	-11.2	1.02 H	45	39.30	40.80
4	#5850.00	63.6 AV	76.9	-13.3	1.02 H	45	22.80	40.80
5	11590.00	61.1 PK	74.0	-12.9	1.06 H	82	9.20	51.90
6	11590.00	46.9 AV	54.0	-7.1	1.06 H	82	-5.00	51.90
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	*5795.00	109.1 PK			1.06 V	48	68.50	40.60
2	*5795.00	94.5 AV			1.06 V	48	53.90	40.60
3	#5850.00	78.0 PK	89.1	-11.1	1.06 V	48	37.20	40.80
4	#5850.00	59.6 AV	74.5	-14.9	1.06 V	48	18.80	40.80
5	11590.00	62.1 PK	74.0	-11.9	1.06 V	20	10.20	51.90
6	11590.00	47.7 AV	54.0	-6.3	1.06 V	20	-4.20	51.90

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	D		

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	#5725.00	88.9 PK	90.0	-1.1	1.29 H	344	48.40	40.50
2	#5725.00	74.1 AV	75.5	-1.4	1.29 H	344	33.60	40.50
3	*5755.00	110.0 PK			1.36 H	345	69.50	40.50
4	*5755.00	95.5 AV			1.36 H	345	55.00	40.50
5	11510.00	61.3 PK	74.0	-12.7	1.00 H	135	9.40	51.90
6	11510.00	47.7 AV	54.0	-6.3	1.00 H	135	-4.20	51.90
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	#5725.00	90.0 PK	91.1	-1.1	1.09 V	297	49.50	40.50
2	#5725.00	75.8 AV	77.2	-1.4	1.09 V	297	35.30	40.50
3	*5755.00	111.1 PK			1.09 V	297	70.60	40.50
4	*5755.00	97.2 AV			1.09 V	297	56.70	40.50
5	11510.00	61.4 PK	74.0	-12.6	1.09 V	20	9.50	51.90
6	11510.00	48.1 AV	54.0	-5.9	1.09 V	20	-3.80	51.90

- 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 limit value is defined as per 15.247.
 7. "#":The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH	TESTED BY	Frank Wang
TEST MODE	D		

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	*5795.00	110.8 PK			1.30 H	345	70.20	40.60
2	*5795.00	96.3 AV			1.30 H	345	55.70	40.60
3	#5850.00	79.6 PK	90.8	-11.2	1.30 H	345	38.80	40.80
4	#5850.00	62.5 AV	76.3	-13.8	1.30 H	345	21.70	40.80
5	11590.00	61.0 PK	74.0	-13.0	1.02 H	143	9.10	51.90
6	11590.00	47.4 AV	54.0	-6.6	1.02 H	143	-4.50	51.90
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	*5795.00	111.5 PK			1.06 V	278	70.90	40.60
2	*5795.00	97.5 AV			1.06 V	278	56.90	40.60
3	#5850.00	81.0 PK	91.5	-10.5	1.06 V	278	40.20	40.80
4	#5850.00	63.9 AV	77.5	-13.6	1.06 V	278	23.10	40.80
5	11590.00	62.5 PK	74.0	-11.5	1.06 V	2	10.60	51.90
6	11590.00	48.8 AV	54.0	-5.2	1.06 V	2	-3.10	51.90

- 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 limit value is defined as per 15.247.
 7. “#“: The radiated frequency is out the restricted band.



A D T

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	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	125.17	30.8 QP	43.5	-12.7	1.50 H	283	17.70	13.10
2	249.60	40.4 QP	46.0	-5.6	1.00 H	136	26.90	13.50
3	375.98	36.4 QP	46.0	-9.6	1.00 H	214	18.60	17.80
4	500.42	39.3 QP	46.0	-6.7	1.50 H	211	17.90	21.40
5	626.80	40.6 QP	46.0	-5.4	1.25 H	247	16.50	24.10
6	877.61	43.1 QP	46.0	-2.9	1.50 H	76	14.70	28.40
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	33.79	34.1 QP	40.0	-5.9	1.25 V	112	21.10	13.00
2	76.56	34.1 QP	40.0	-5.9	1.50 V	193	23.10	11.00
3	249.60	35.3 QP	46.0	-10.7	1.75 V	145	21.80	13.50
4	375.98	38.3 QP	46.0	-7.7	1.50 V	52	20.50	17.80
5	500.42	38.0 QP	46.0	-8.0	1.00 V	88	16.60	21.40
6	877.61	43.6 QP	46.0	-2.4	1.00 V	136	15.20	28.40

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	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	33.79	37.9 QP	40.0	-2.1	1.00 H	52	24.90	13.00
2	241.83	42.2 QP	46.0	-3.8	1.00 H	136	28.90	13.30
3	282.66	42.9 QP	46.0	-3.1	1.00 H	277	28.20	14.70
4	453.75	33.9 QP	46.0	-12.1	1.00 H	109	13.80	20.10
5	574.30	33.7 QP	46.0	-12.3	1.25 H	358	10.60	23.10
6	877.61	36.4 QP	46.0	-9.6	1.50 H	151	8.00	28.40
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	39.62	38.8 QP	40.0	-1.2	1.00 V	10	24.80	14.00
2	136.84	37.7 QP	43.5	-5.8	1.50 V	352	23.20	14.50
3	241.83	36.6 QP	46.0	-9.4	1.75 V	103	23.30	13.30
4	453.75	37.1 QP	46.0	-8.9	1.00 V	202	17.00	20.10
5	677.35	34.2 QP	46.0	-11.8	1.50 V	352	9.50	24.70
6	877.61	38.7 QP	46.0	-7.3	1.75 V	121	10.30	28.40

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	C		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	125.17	32.2 QP	43.5	-11.3	1.50 H	250	19.10	13.10
2	249.60	39.6 QP	46.0	-6.4	1.00 H	130	26.10	13.50
3	375.98	38.1 QP	46.0	-7.9	1.00 H	247	20.30	17.80
4	500.42	38.3 QP	46.0	-7.7	1.50 H	223	16.90	21.40
5	626.80	40.1 QP	46.0	-5.9	1.25 H	58	16.00	24.10
6	877.61	43.1 QP	46.0	-2.9	1.50 H	298	14.70	28.40
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	53.23	37.0 QP	40.0	-3.0	1.75 V	166	22.80	14.20
2	249.60	35.6 QP	46.0	-10.4	1.00 V	10	22.10	13.50
3	375.98	37.4 QP	46.0	-8.6	1.75 V	25	19.60	17.80
4	500.42	37.0 QP	46.0	-9.0	1.00 V	82	15.60	21.40
5	626.80	41.3 QP	46.0	-4.7	1.00 V	85	17.20	24.10
6	877.61	42.9 QP	46.0	-3.1	1.75 V	118	14.50	28.40

- 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.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Antony Lee
TEST MODE	D		

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	41.57	37.6 QP	40.0	-2.4	1.00 H	4	23.20	14.40
2	129.06	31.8 QP	43.5	-11.7	1.50 H	262	18.20	13.60
3	239.88	41.5 QP	46.0	-4.5	1.00 H	139	28.30	13.20
4	453.75	33.9 QP	46.0	-12.1	1.00 H	103	13.80	20.10
5	751.23	34.7 QP	46.0	-11.3	1.00 H	88	8.50	26.20
6	877.61	36.7 QP	46.0	-9.3	1.00 H	316	8.30	28.40
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	37.68	38.6 QP	40.0	-1.4	1.25 V	355	25.00	13.60
2	107.67	32.9 QP	43.5	-10.6	1.00 V	331	21.20	11.70
3	241.83	36.2 QP	46.0	-9.8	1.75 V	106	22.90	13.30
4	453.75	37.2 QP	46.0	-8.8	1.00 V	190	17.10	20.10
5	626.80	32.3 QP	46.0	-13.7	1.00 V	109	8.20	24.10
6	877.61	37.9 QP	46.0	-8.1	1.00 V	136	9.50	28.40

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



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5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

5.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 30, 2010	Nov. 29, 2011
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 30, 2010	Dec. 29, 2011
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 06, 2011	Jan. 05, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	835239/001	Feb. 22, 2011	Feb. 21, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
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.



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5.2.3 TEST PROCEDURES

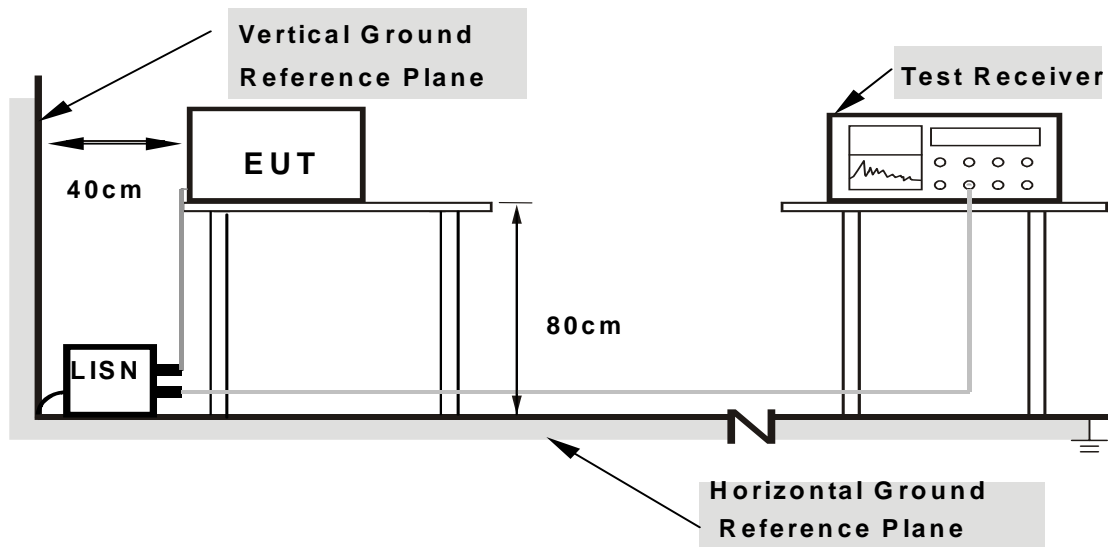
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 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).

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

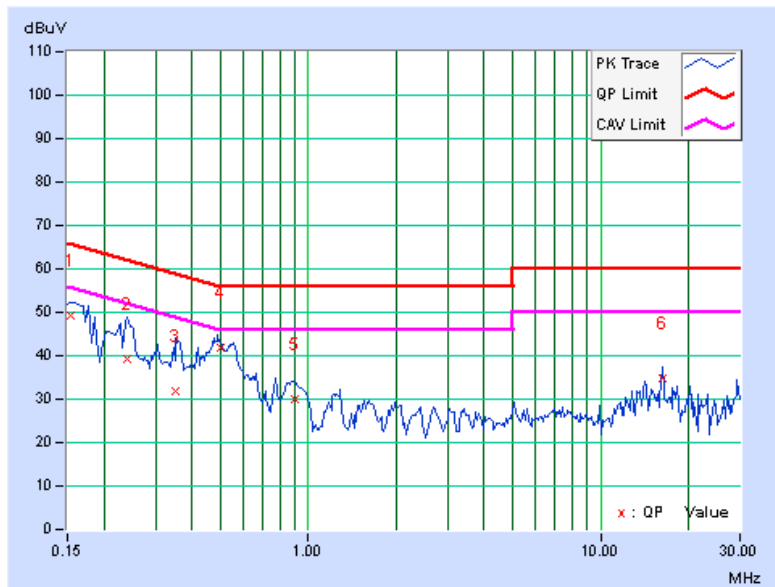
5.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11n (40MHz)

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.154	0.12	49.30	34.58	49.42	34.70	65.79	55.79	-16.36	-21.08
2	0.240	0.09	39.01	16.50	39.10	16.59	62.10	52.10	-23.00	-35.51
3	0.353	0.09	31.85	15.09	31.94	15.18	58.89	48.89	-26.95	-33.71
4	0.500	0.09	41.64	29.23	41.73	29.32	56.00	46.00	-14.27	-16.68
5	0.896	0.10	29.81	18.01	29.91	18.11	56.00	46.00	-26.09	-27.89
6	16.227	0.44	34.48	28.98	34.92	29.42	60.00	50.00	-25.08	-20.58

- 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.



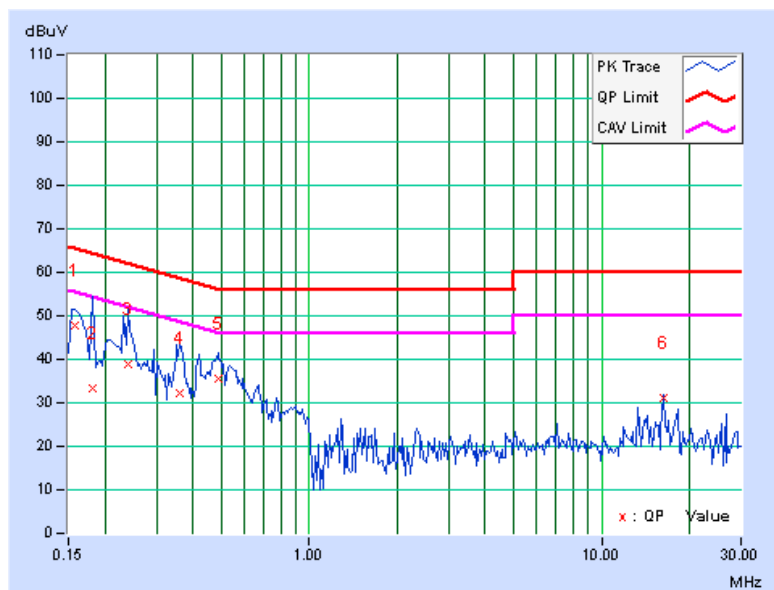


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.14	47.48	31.95	47.62	32.09	65.58	55.58	-17.96	-23.49
2	0.181	0.12	33.11	18.21	33.23	18.33	64.43	54.43	-31.20	-36.10
3	0.240	0.11	38.86	13.93	38.97	14.04	62.10	52.10	-23.14	-38.07
4	0.361	0.09	32.14	15.45	32.23	15.54	58.71	48.71	-26.47	-33.16
5	0.486	0.09	35.63	24.06	35.72	24.15	56.24	46.24	-20.51	-22.08
6	16.227	0.40	30.76	26.06	31.16	26.46	60.00	50.00	-28.84	-23.54

- 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.



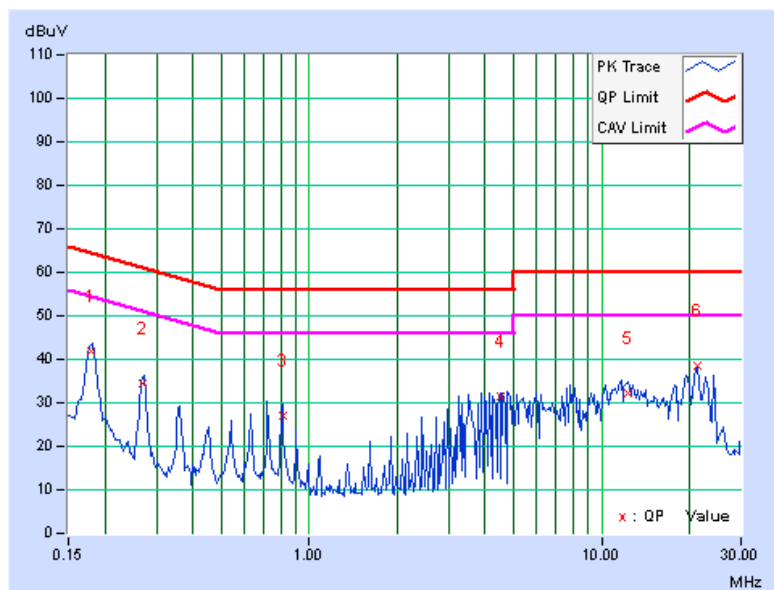


A D T

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.179	0.12	41.66	33.35	41.78	33.47	64.55	54.55	-22.77	-21.08
2	0.269	0.12	34.26	25.89	34.38	26.01	61.14	51.14	-26.76	-25.13
3	0.811	0.15	27.00	20.54	27.15	20.69	56.00	46.00	-28.85	-25.31
4	4.509	0.34	31.31	26.60	31.65	26.94	56.00	46.00	-24.35	-19.06
5	12.359	0.76	31.28	25.59	32.04	26.35	60.00	50.00	-27.96	-23.65
6	21.391	1.19	37.21	35.48	38.40	36.67	60.00	50.00	-21.60	-13.33

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



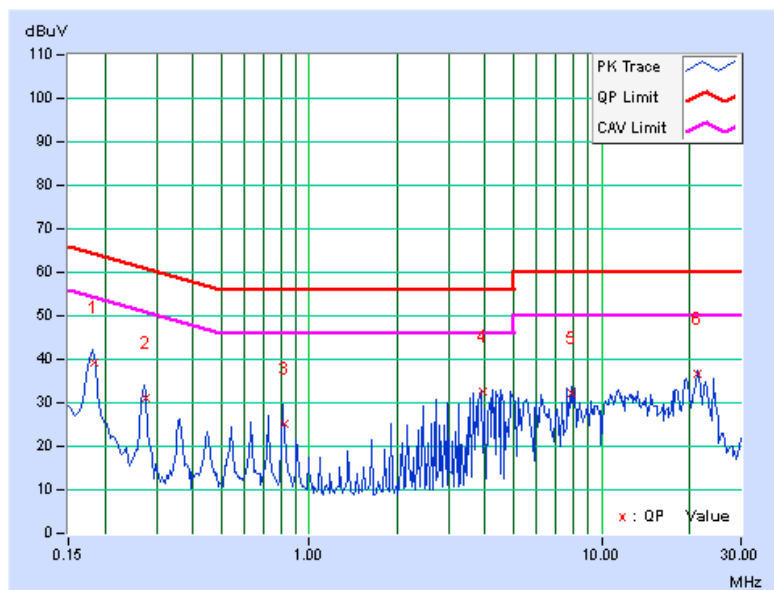


A D T

PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.184	0.13	39.03	29.59	39.16	29.72	64.31	54.31	-25.15	-24.59
2	0.275	0.13	31.02	22.43	31.15	22.56	60.97	50.97	-29.81	-28.40
3	0.820	0.17	25.10	16.70	25.27	16.87	56.00	46.00	-30.73	-29.13
4	3.910	0.31	32.16	28.19	32.47	28.50	56.00	46.00	-23.53	-17.50
5	7.888	0.51	31.73	31.24	32.24	31.75	60.00	50.00	-27.76	-18.25
6	21.209	0.97	35.81	35.10	36.78	36.07	60.00	50.00	-23.22	-13.93

- 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.



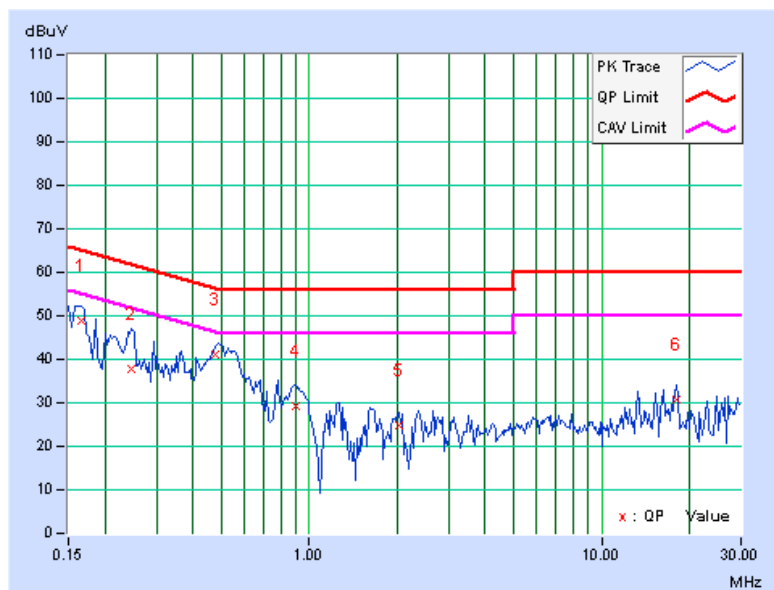


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PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	C		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.166	0.11	48.81	35.73	48.92	35.84	65.18	55.18	-16.25	-19.33
2	0.248	0.09	37.85	13.15	37.94	13.24	61.84	51.84	-23.90	-38.60
3	0.478	0.09	41.12	30.07	41.21	30.16	56.37	46.37	-15.16	-16.21
4	0.904	0.10	28.99	17.20	29.09	17.30	56.00	46.00	-26.91	-28.70
5	2.020	0.11	24.67	17.21	24.78	17.32	56.00	46.00	-31.22	-28.68
6	17.938	0.45	30.16	24.52	30.61	24.97	60.00	50.00	-29.39	-25.03

- 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.



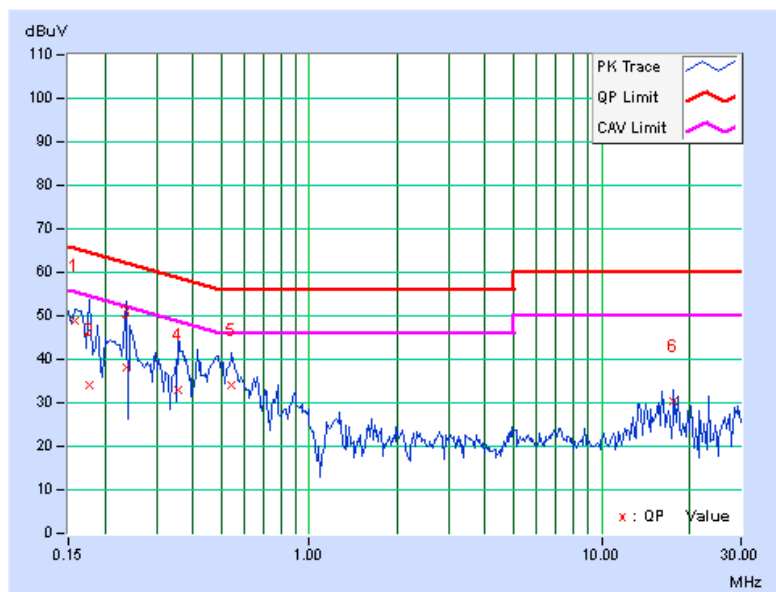


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PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	C		

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	(dB)	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.158	0.14	48.59	32.96	48.73	33.10	65.58	55.58	-16.85	-22.48
2	0.177	0.12	34.05	25.48	34.17	25.60	64.61	54.61	-30.44	-29.01
3	0.236	0.11	37.99	20.68	38.10	20.79	62.24	52.24	-24.14	-31.45
4	0.357	0.09	32.94	14.68	33.03	14.77	58.80	48.80	-25.76	-34.02
5	0.545	0.09	33.82	22.25	33.91	22.34	56.00	46.00	-22.09	-23.66
6	17.691	0.41	29.96	25.00	30.37	25.41	60.00	50.00	-29.63	-24.59

- 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.



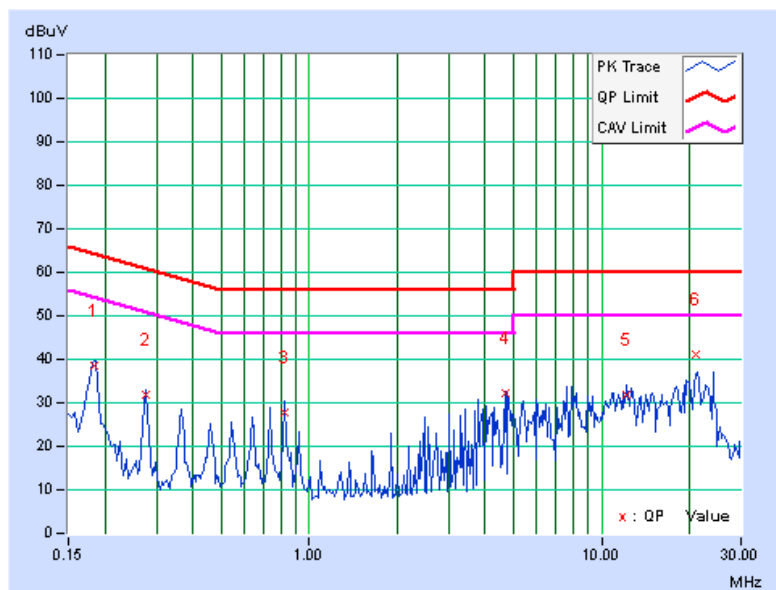


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PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	D		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.184	0.12	38.36	31.13	38.48	31.25	64.31	54.31	-25.83	-23.06
2	0.275	0.12	31.59	24.07	31.71	24.19	60.97	50.97	-29.26	-26.78
3	0.826	0.15	27.48	18.42	27.63	18.57	56.00	46.00	-28.37	-27.43
4	4.680	0.35	31.85	27.29	32.20	27.64	56.00	46.00	-23.80	-18.36
5	12.203	0.75	31.11	26.31	31.86	27.06	60.00	50.00	-28.14	-22.94
6	21.030	1.17	39.84	34.85	41.01	36.02	60.00	50.00	-18.99	-13.98

- 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.



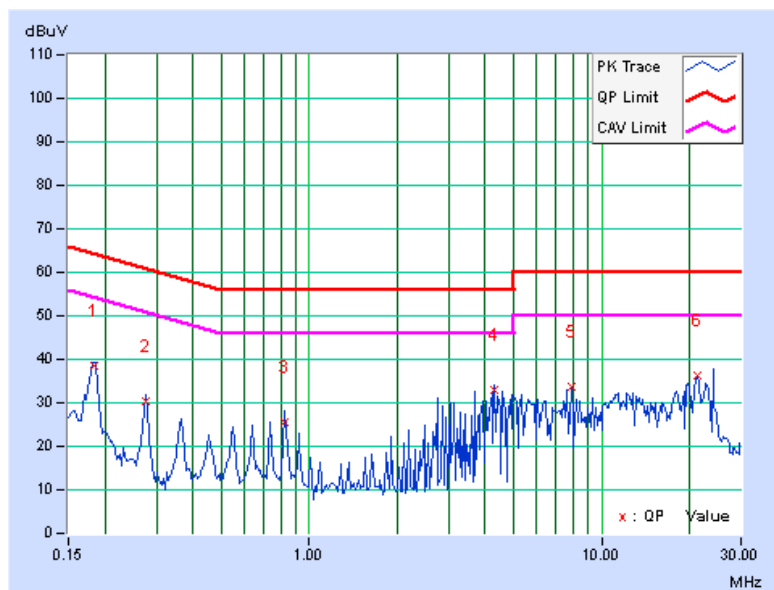


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PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	D		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.184	0.13	38.22	28.99	38.35	29.12	64.31	54.31	-25.96	-25.19
2	0.275	0.13	30.35	21.49	30.48	21.62	60.97	50.97	-30.48	-29.34
3	0.826	0.17	25.39	16.34	25.56	16.51	56.00	46.00	-30.44	-29.49
4	4.313	0.34	32.79	28.66	33.13	29.00	56.00	46.00	-22.87	-17.00
5	7.922	0.51	33.01	34.07	33.52	34.58	60.00	50.00	-26.48	-15.42
6	21.306	0.97	35.49	34.65	36.46	35.62	60.00	50.00	-23.54	-14.38

- 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.



5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012

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

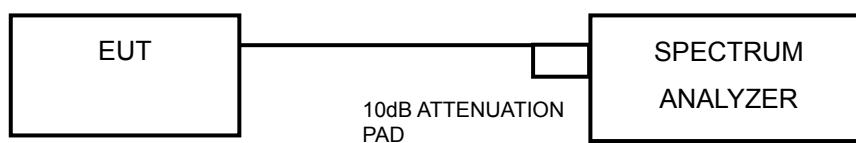
5.3.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation.

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



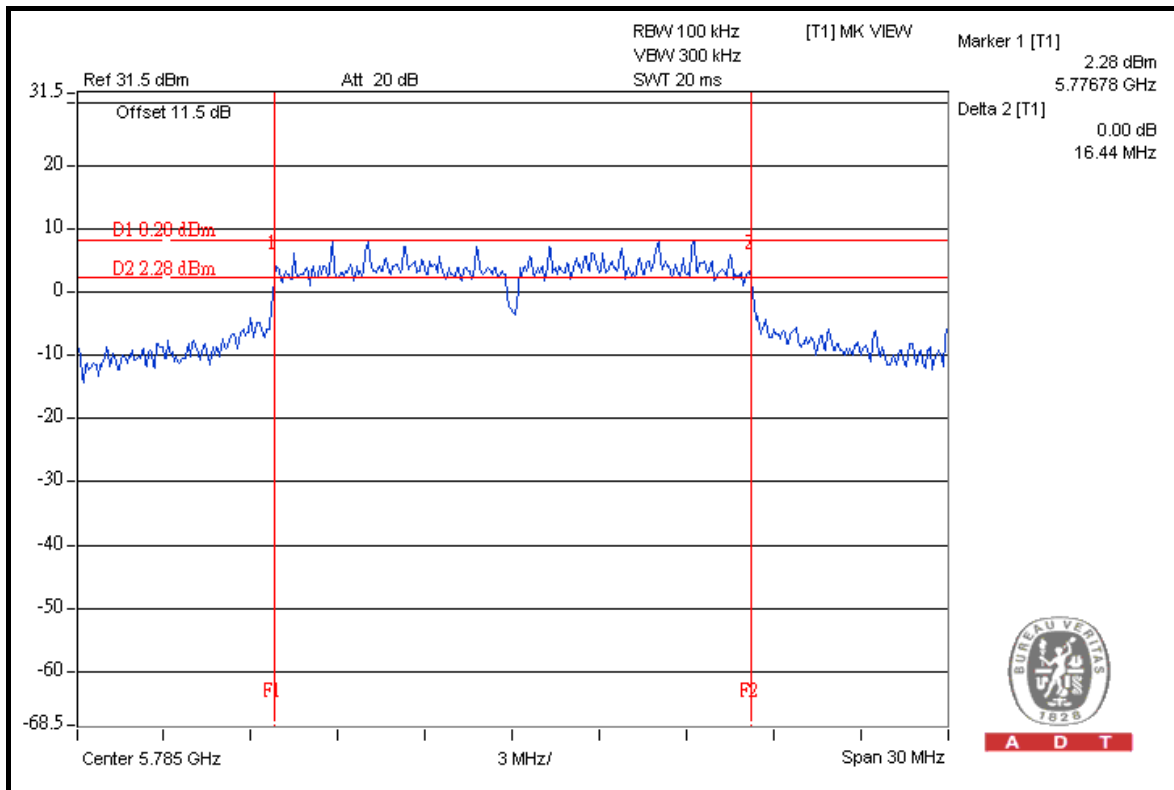
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5.3.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	16.34	16.39	0.5	PASS
157	5785	16.41	16.44	0.5	PASS
165	5825	16.38	16.33	0.5	PASS

FOR CHAIN 1: CH 157



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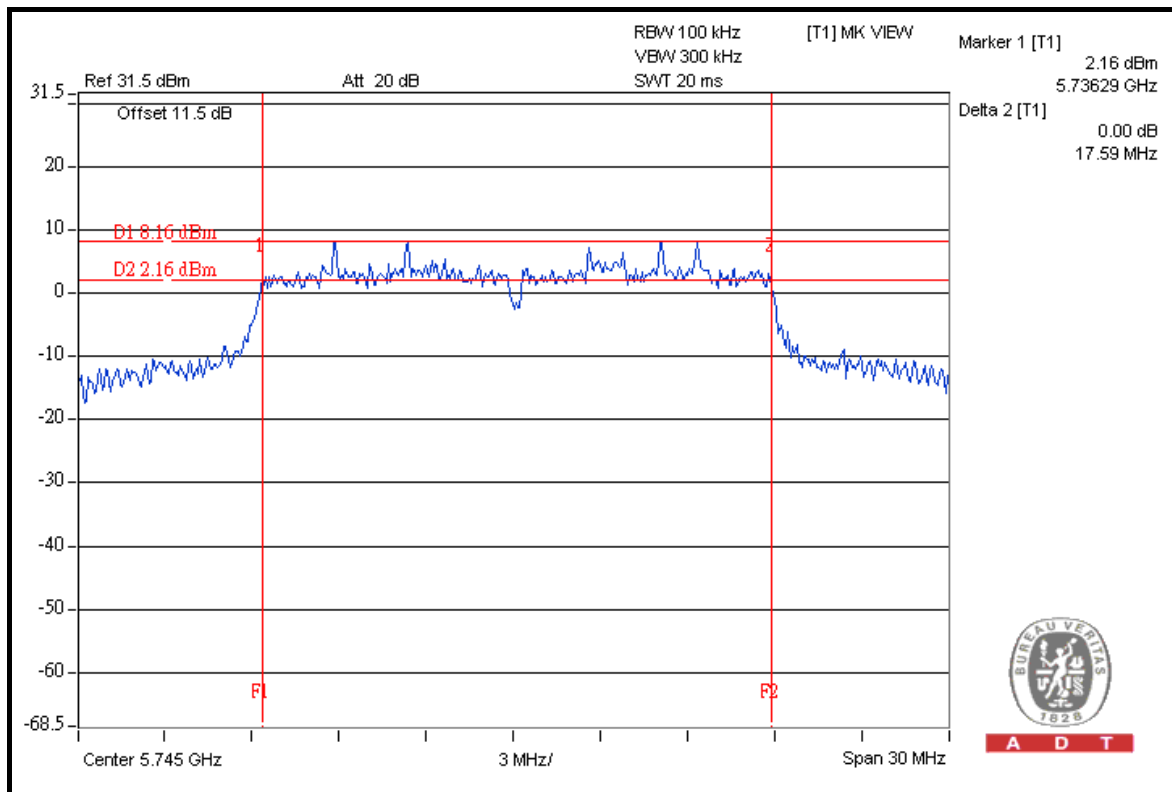


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802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	17.59	17.57	0.5	PASS
157	5785	17.35	17.57	0.5	PASS
165	5825	17.32	16.72	0.5	PASS

FOR CHAIN 0: CH 149



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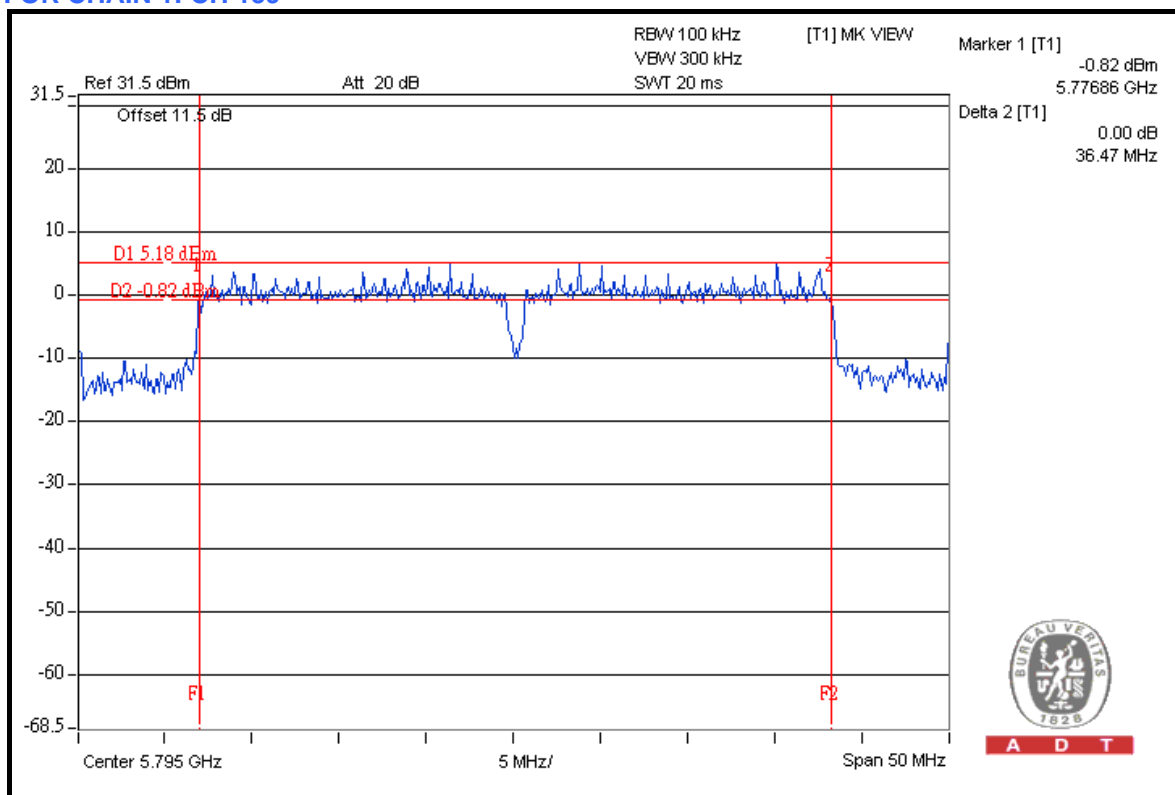


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802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
151	5755	35.51	36.43	0.5	PASS
159	5795	35.27	36.47	0.5	PASS

FOR CHAIN 1: CH 159



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5.4 MAXIMUM OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

The Maximum Output Power Measurement is 30dBm.

5.4.2 INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
High Speed Peak Power Meter	ML2495A	0842014	Apr. 26, 2011	Apr. 25, 2012
Power Sensor	MA2411B	0738404	Apr. 26, 2011	Apr. 25, 2012

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

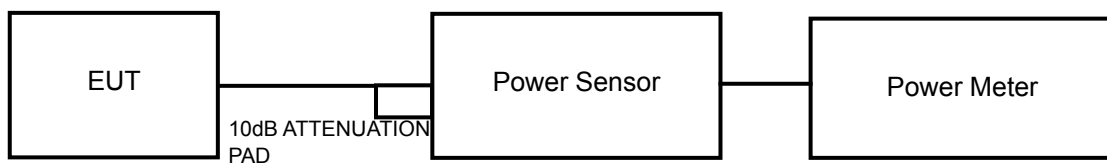
5.4.3 TEST PROCEDURES

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.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation.

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

Same as Item 5.3.6.



5.4.7 TEST RESULTS

802.11a

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS/ FAIL
		CHAIN 0	CHAIN 1				
149	5745	22.0	21.7	306.4	24.9	28	PASS
157	5785	21.9	21.5	296.1	24.7	28	PASS
165	5825	21.8	21.2	283.2	24.5	28	PASS

NOTE: Directional gain = $5\text{dBi} + 10\log(2) = 8\text{dBi} > 6\text{dBi}$, so the conducted power limit shall be reduced to $30 - (8 - 6) = 28\text{dBm}$.

802.11n (20MHz)

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS/ FAIL
		CHAIN 0	CHAIN 1				
149	5745	21.4	22.0	296.5	24.7	28	PASS
157	5785	21.2	21.7	279.7	24.5	28	PASS
165	5825	21.3	21.3	269.8	24.3	28	PASS

NOTE: Directional gain = $5\text{dBi} + 10\log(2) = 8\text{dBi} > 6\text{dBi}$, so the conducted power limit shall be reduced to $30 - (8 - 6) = 28\text{dBm}$.

802.11n (40MHz)

CHAN.	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS/ FAIL
		CHAIN 0	CHAIN 1				
151	5755	23.1	22.0	362.7	25.6	28	PASS
159	5795	21.2	21.7	279.7	24.5	28	PASS

NOTE: Directional gain = $5\text{dBi} + 10\log(2) = 8\text{dBi} > 6\text{dBi}$, so the conducted power limit shall be reduced to $30 - (8 - 6) = 28\text{dBm}$.



5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012

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

5.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 10kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

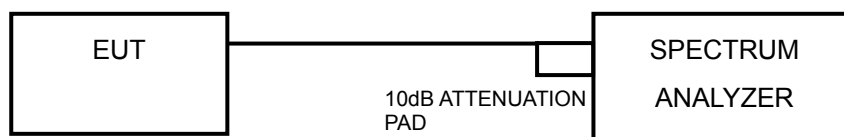
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

Follow method 2 of KDB 662911 D01 Multiple Transmitter Output v01 to calculate total power density of 2 TX port.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation.

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

Same as Item 5.3.6.



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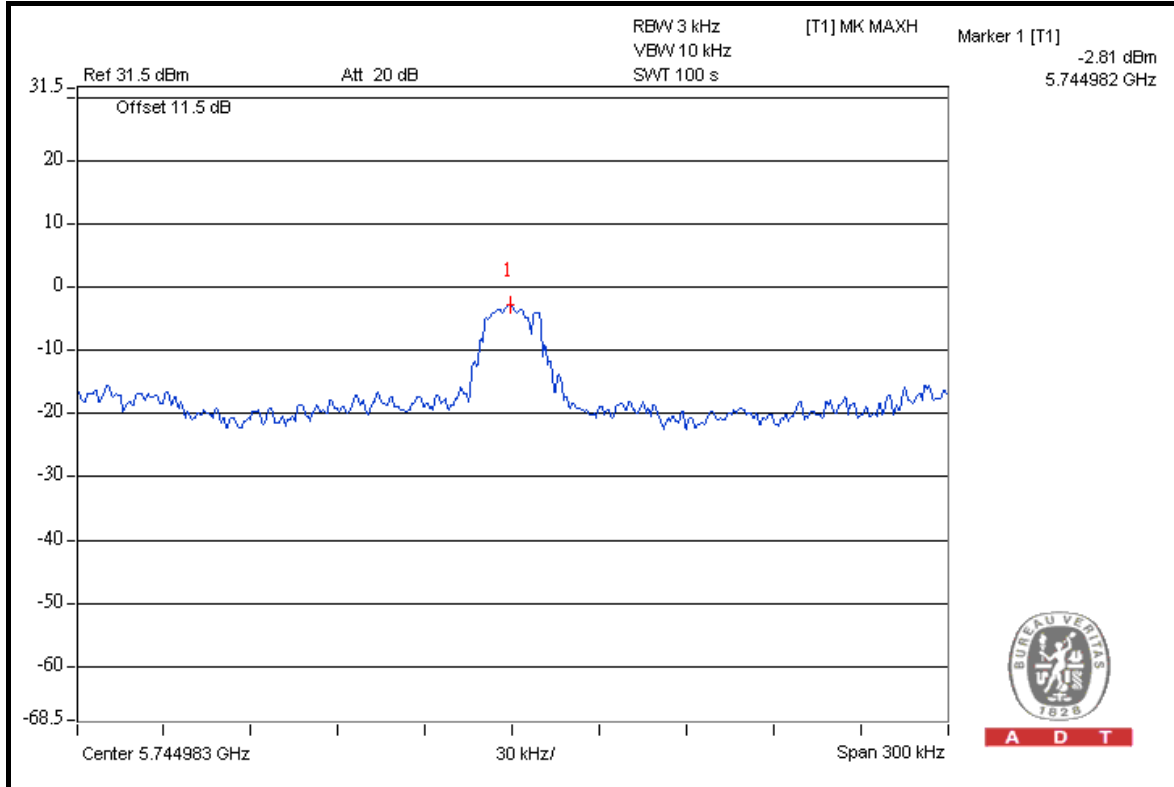
5.5.7 TEST RESULTS

802.11a

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=2) dB			
0	149	5745	-2.8	3.01	0.2	6	PASS
	157	5785	-9.3	3.01	-6.3	6	PASS
	165	5825	-9.4	3.01	-6.4	6	PASS
1	149	5745	-8.3	3.01	-5.3	6	PASS
	157	5785	-8.4	3.01	-5.4	6	PASS
	165	5825	-8.6	3.01	-5.6	6	PASS

NOTE: Directional gain = 5dBi + 10log(2) = 8dBi > 6dBi, so the power density limit shall be reduced to 8 - (8 - 6) = 6dBm.

FOR CHAIN 0: CH 149





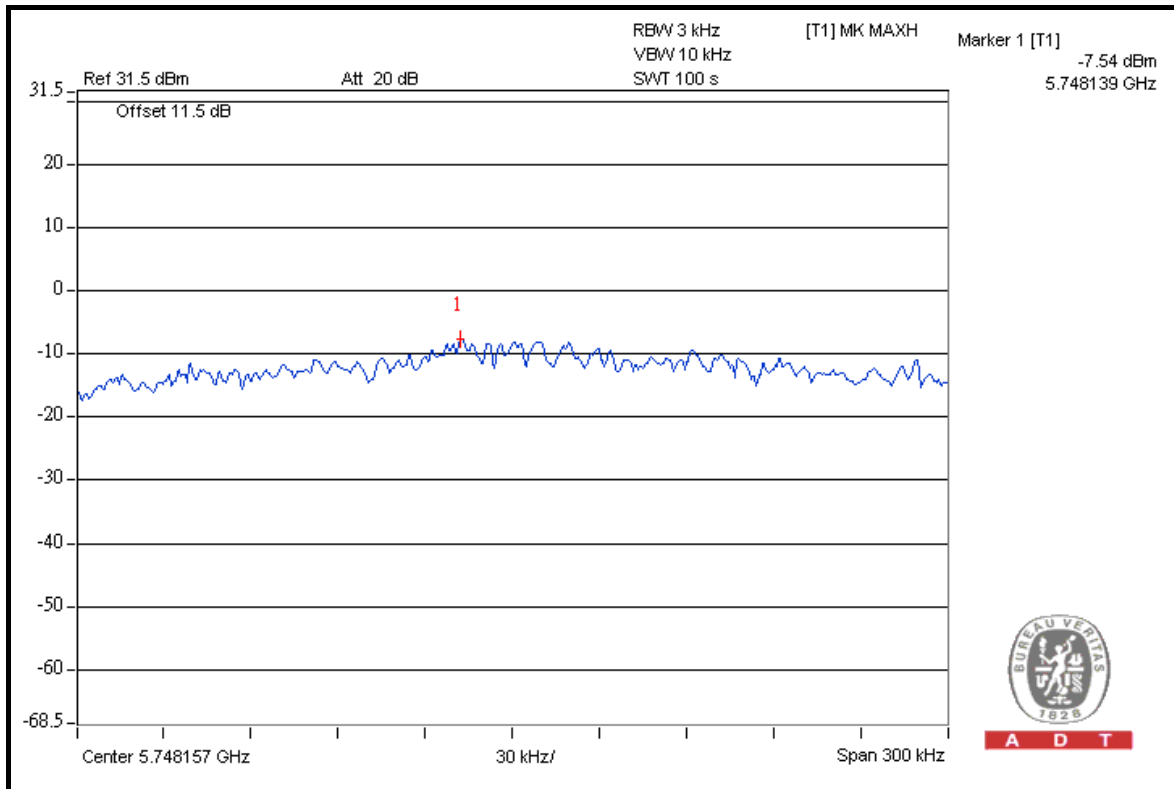
A D T

802.11n (20MHz)

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=2) dB			
0	149	5745	-7.5	3.01	-4.5	6	PASS
	157	5785	-7.8	3.01	-4.8	6	PASS
	165	5825	-7.7	3.01	-4.7	6	PASS
1	149	5745	-8.7	3.01	-5.7	6	PASS
	157	5785	-9.1	3.01	-6.1	6	PASS
	165	5825	-9.5	3.01	-6.5	6	PASS

NOTE: Directional gain = 5dBi + 10log(2) = 8dBi > 6dBi, so the power density limit shall be reduced to 8 - (8 - 6) = 6dBm.

FOR CHAIN 0: CH 149



A D T



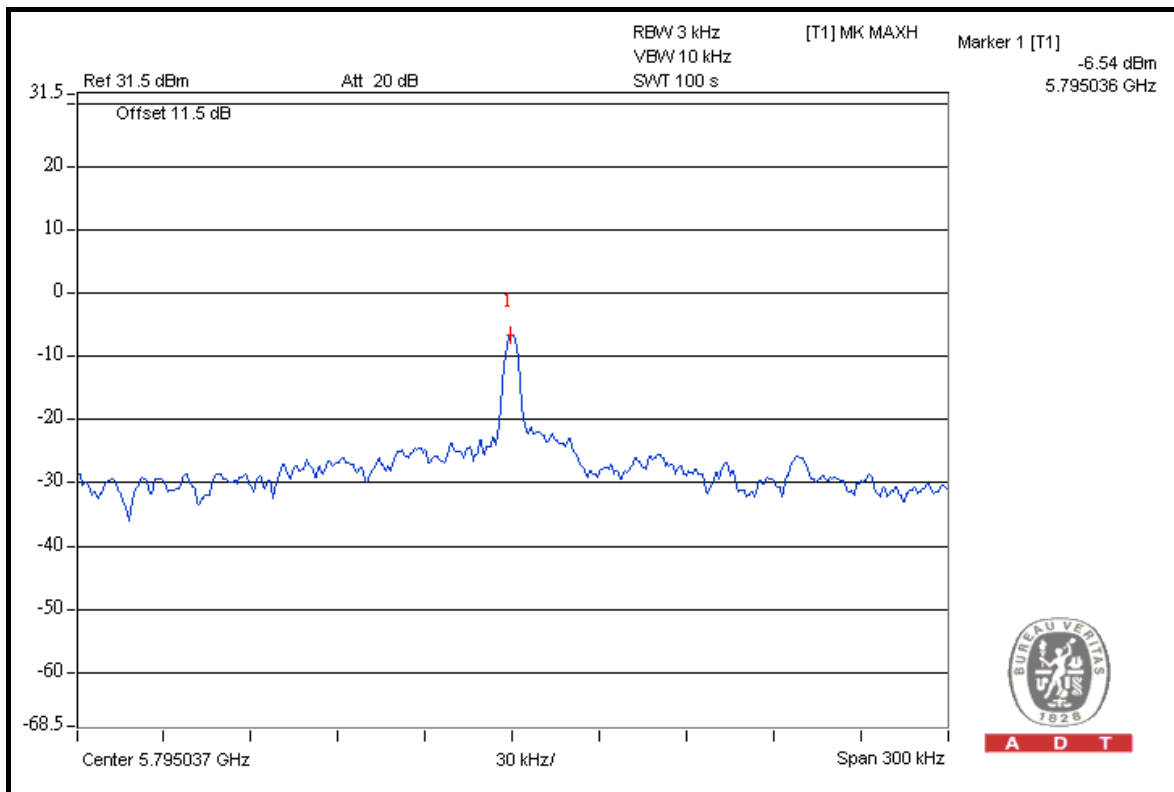
A D T

802.11n (40MHz)

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=2) dB			
0	151	5755	-7.2	3.01	-4.2	6	PASS
	159	5795	-6.5	3.01	-3.5	6	PASS
1	151	5755	-10.5	3.01	-7.5	6	PASS
	159	5795	-10.6	3.01	-7.6	6	PASS

NOTE: Directional gain = 5dBi + 10log(2) = 8dBi > 6dBi, so the power density limit shall be reduced to 8 - (8 - 6) = 6dBm.

FOR CHAIN 0: CH 159



5.6 BAND EDGES MEASUREMENT

5.6.1 LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

5.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
FOR CONDUCTED MEASUREMENT				
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012
FOR RADIATED MEASUREMENT				
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 27, 2010	Dec. 26, 2011
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-408	Jan. 06, 2011	Jan. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01961	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8447D	2944A10738	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250792/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295012/4	Aug. 19, 2011	Aug. 18, 2012
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

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



5.6.3 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. Set both RBW and VBW of spectrum analyzer to 100kHz and 300kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 1kHz for Average detection (AV) at frequency above 1GHz.



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5.6.4 DEVIATION FROM TEST STANDARD

No deviation.

5.6.5 EUT OPERATING CONDITION

Same as Item 5.3.6.

5.6.6 TEST RESULTS

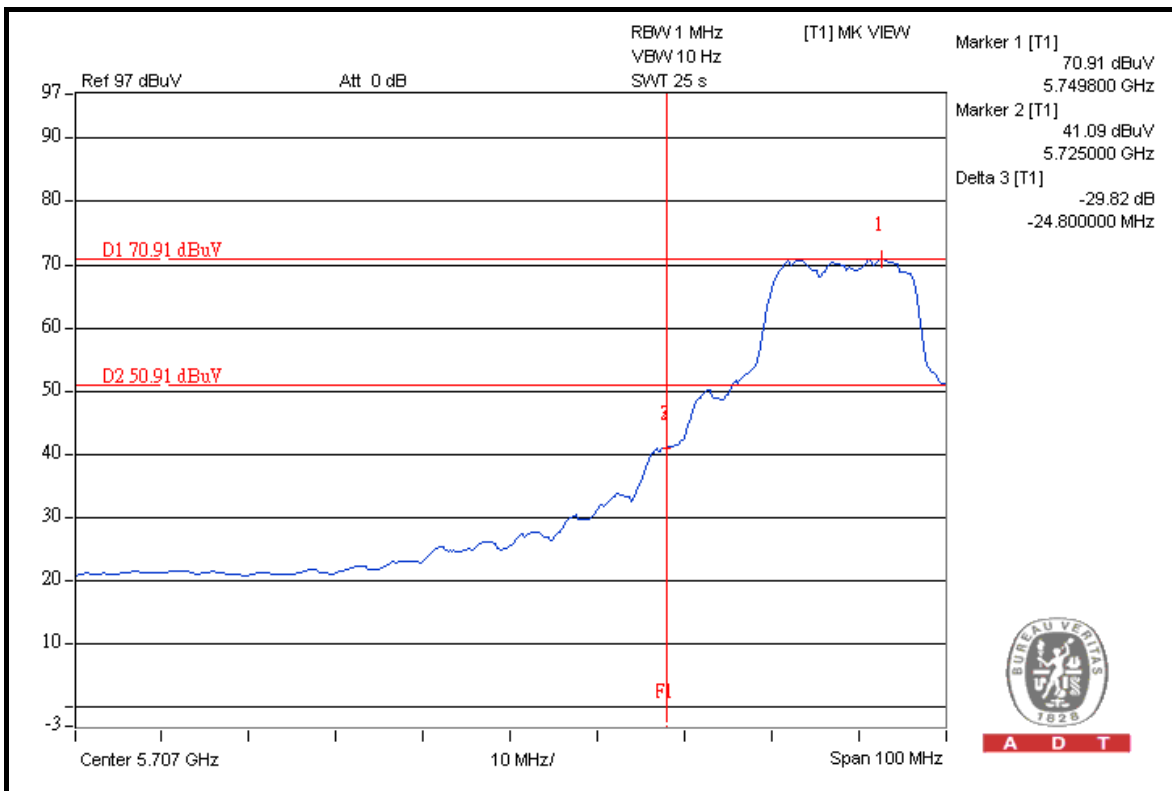
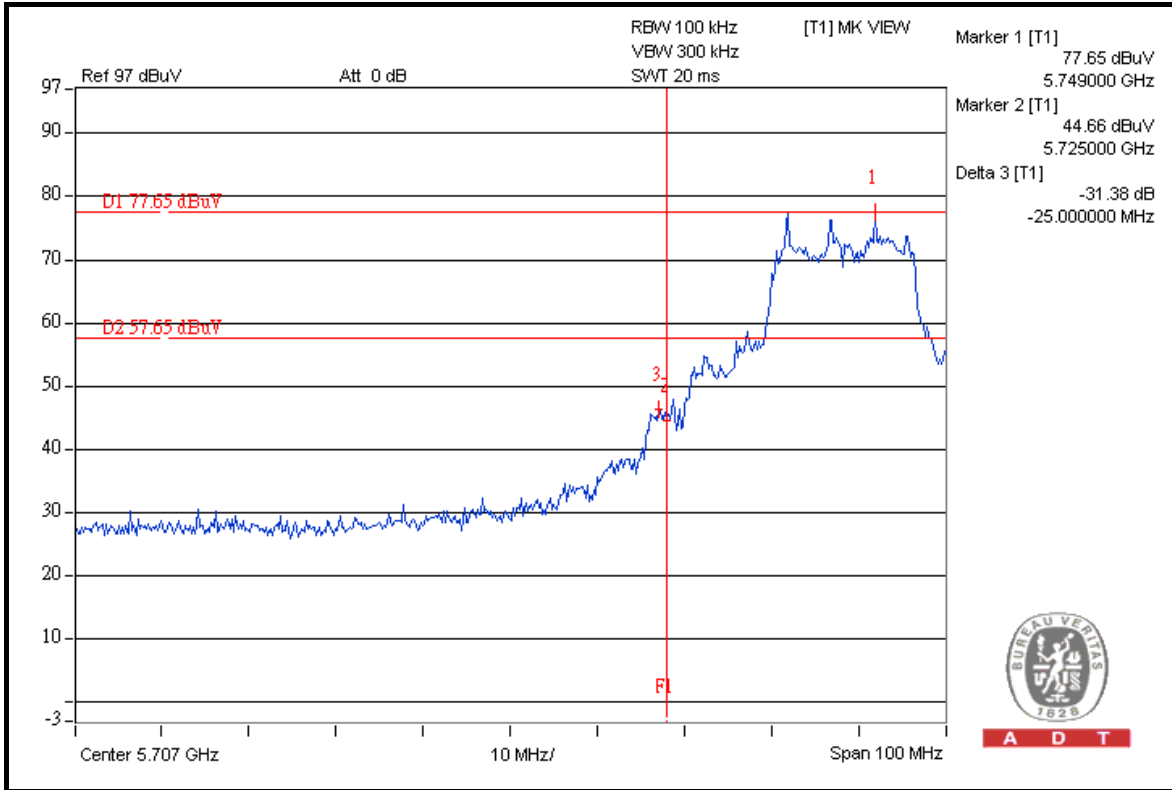
The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).



A D T

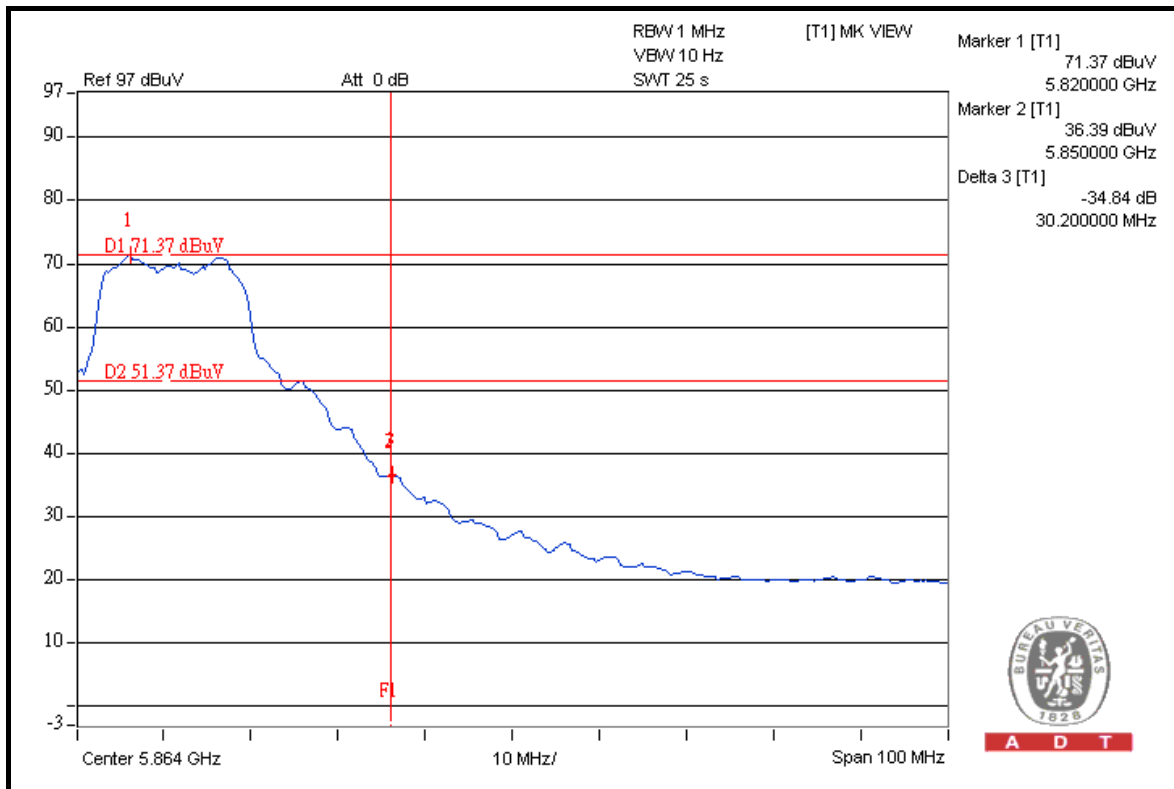
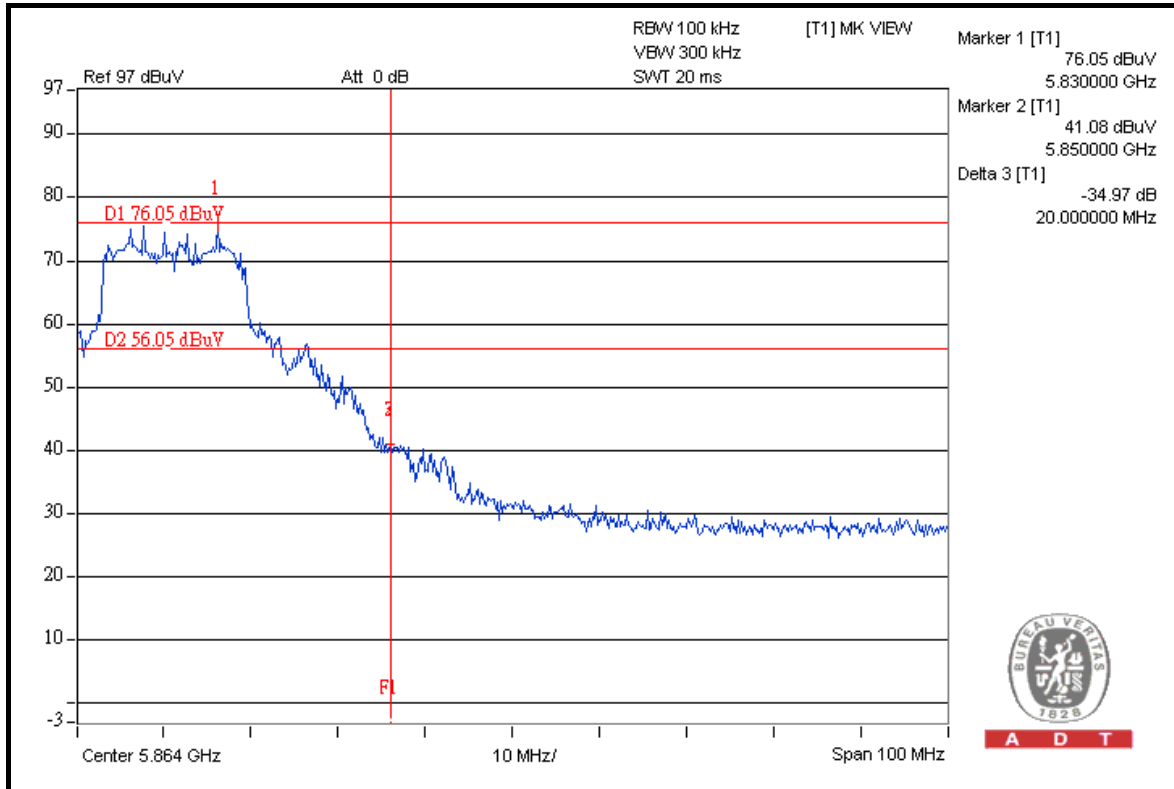
802.11a – TEST MODE B

FOR RADIATED MEASURED (TWO CHAINS ON)





A D T

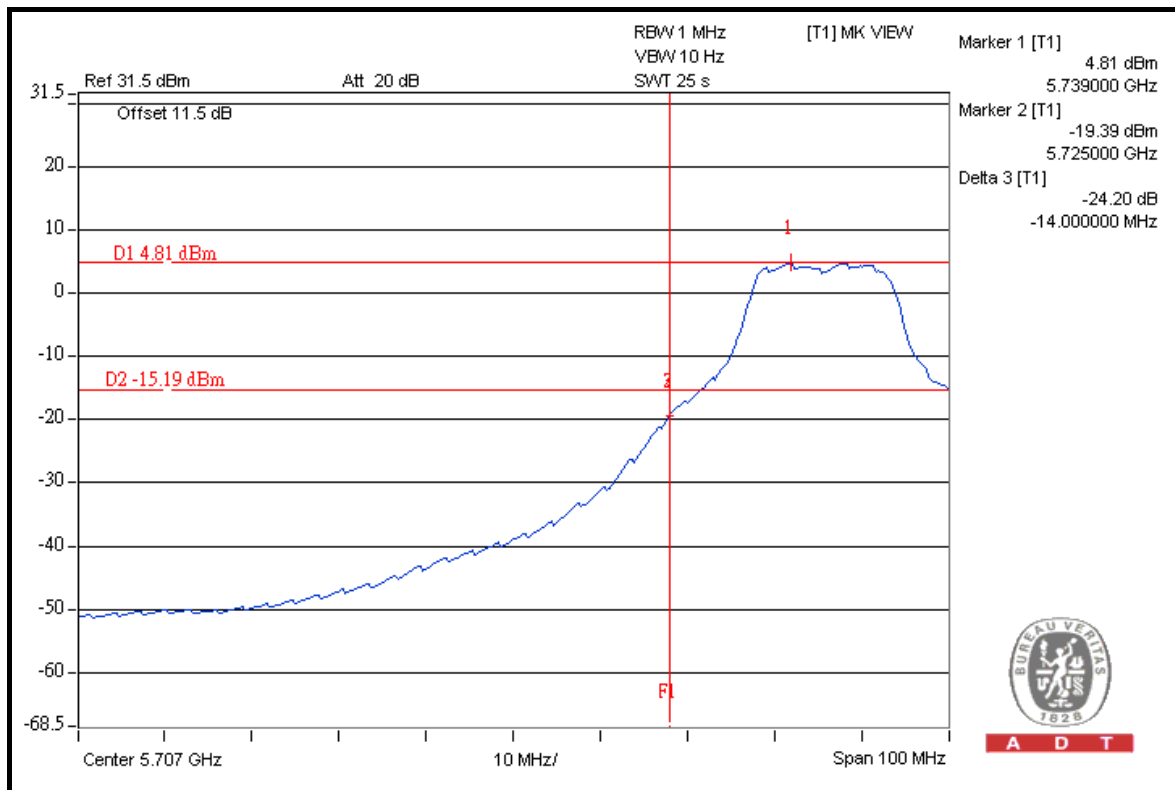
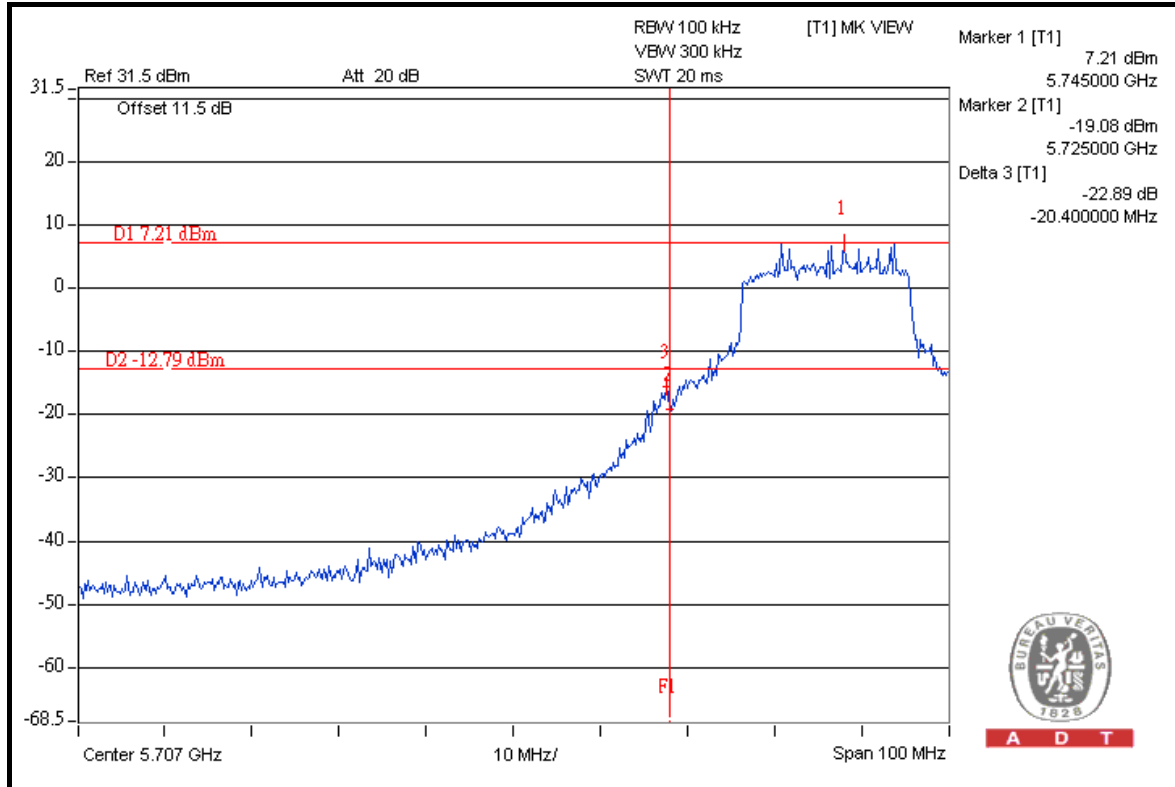




A D T

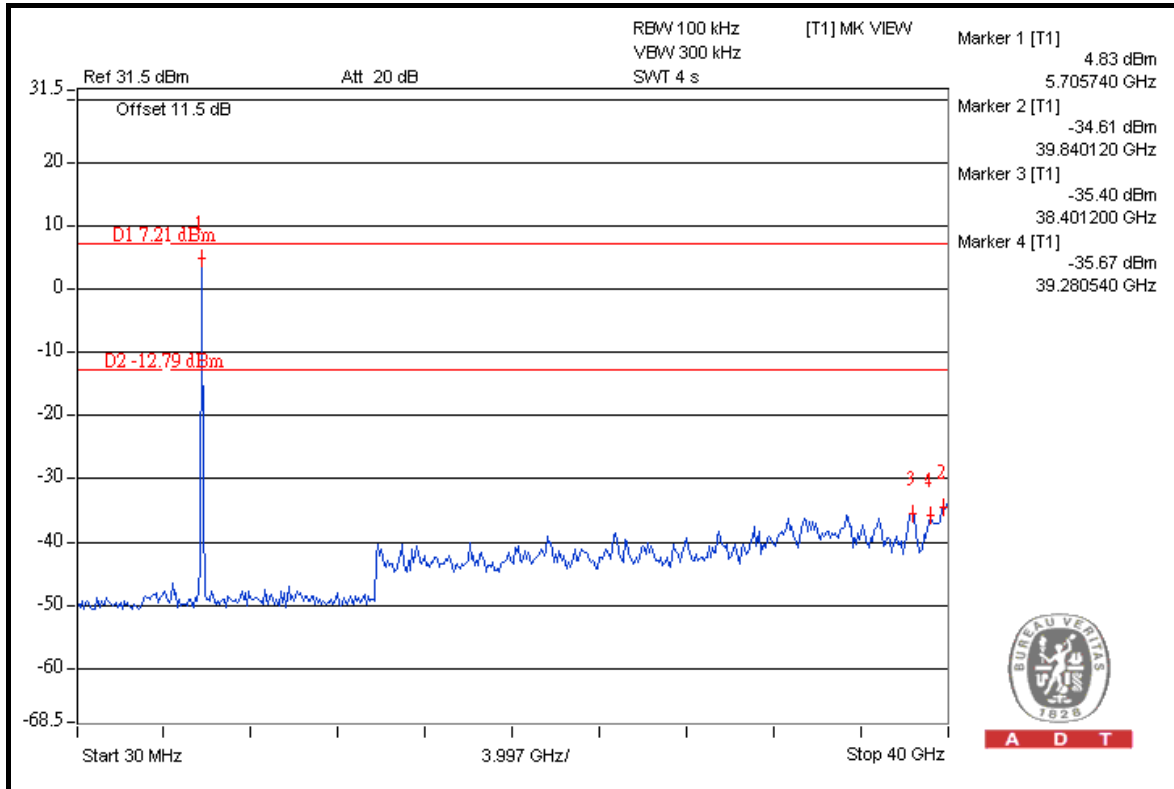
FOR CONDUCTED MEASURED

CHAIN 0

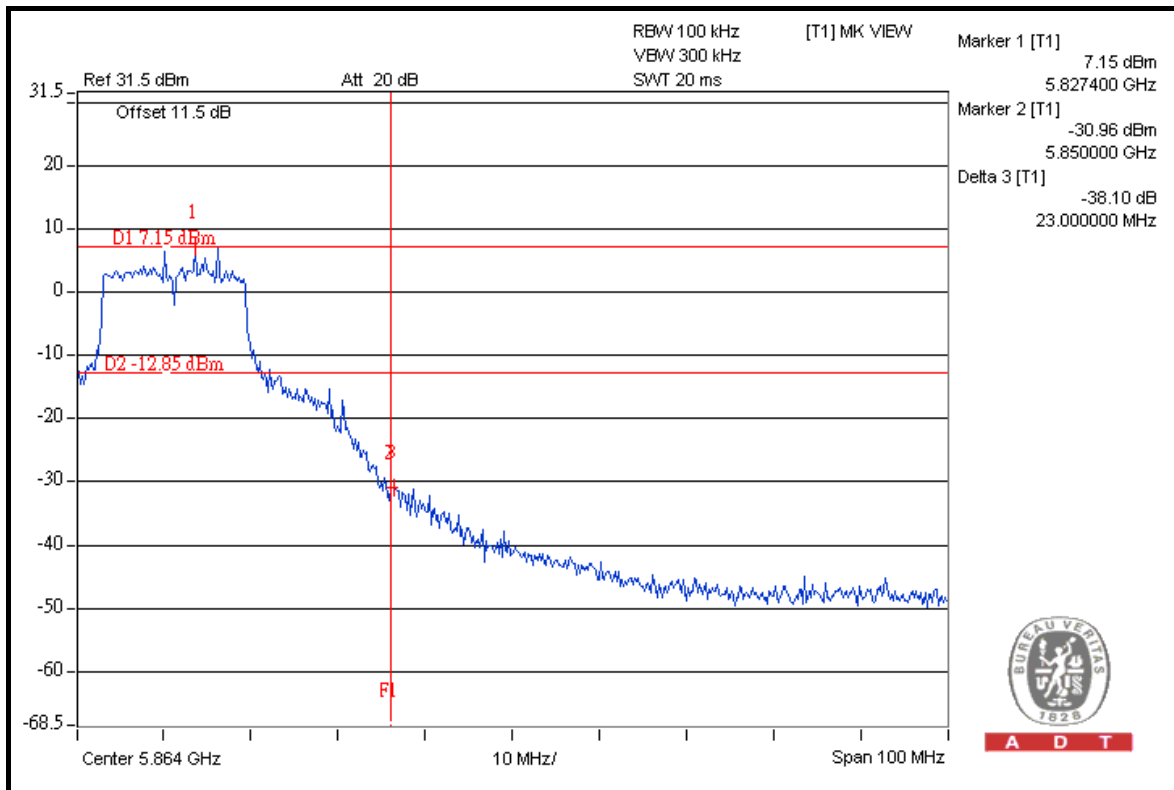




A D T



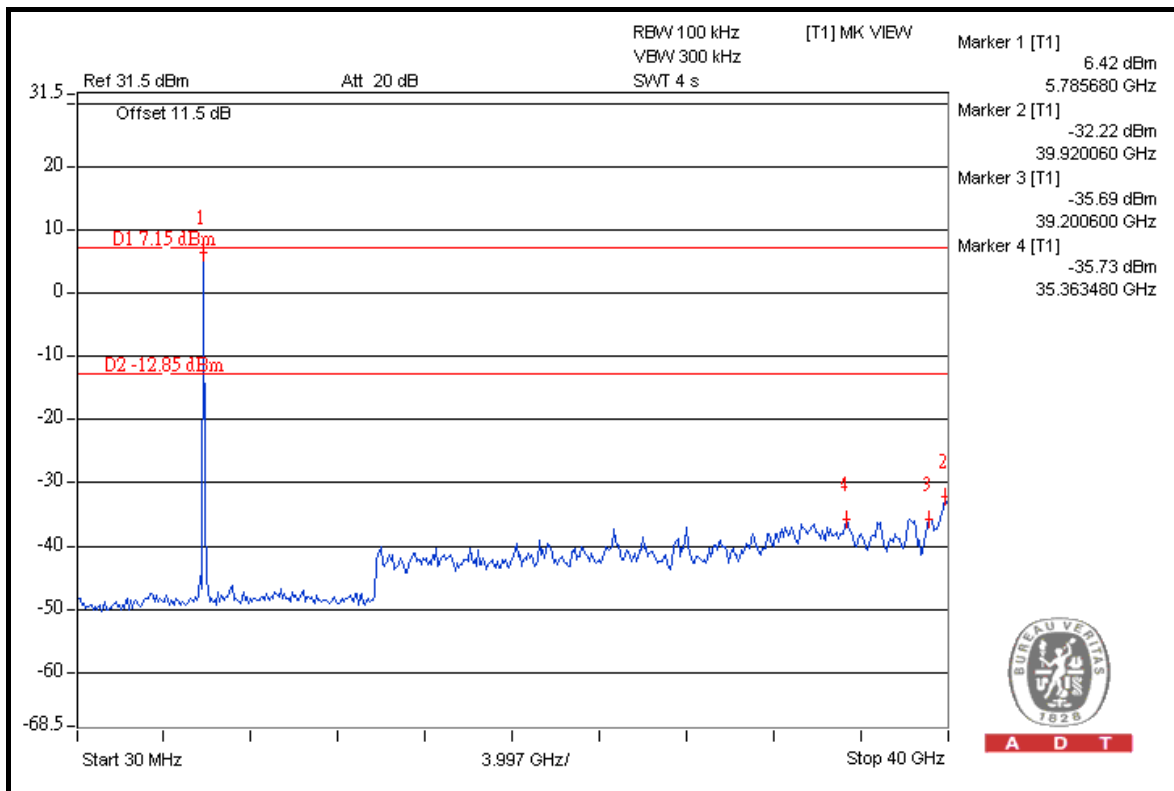
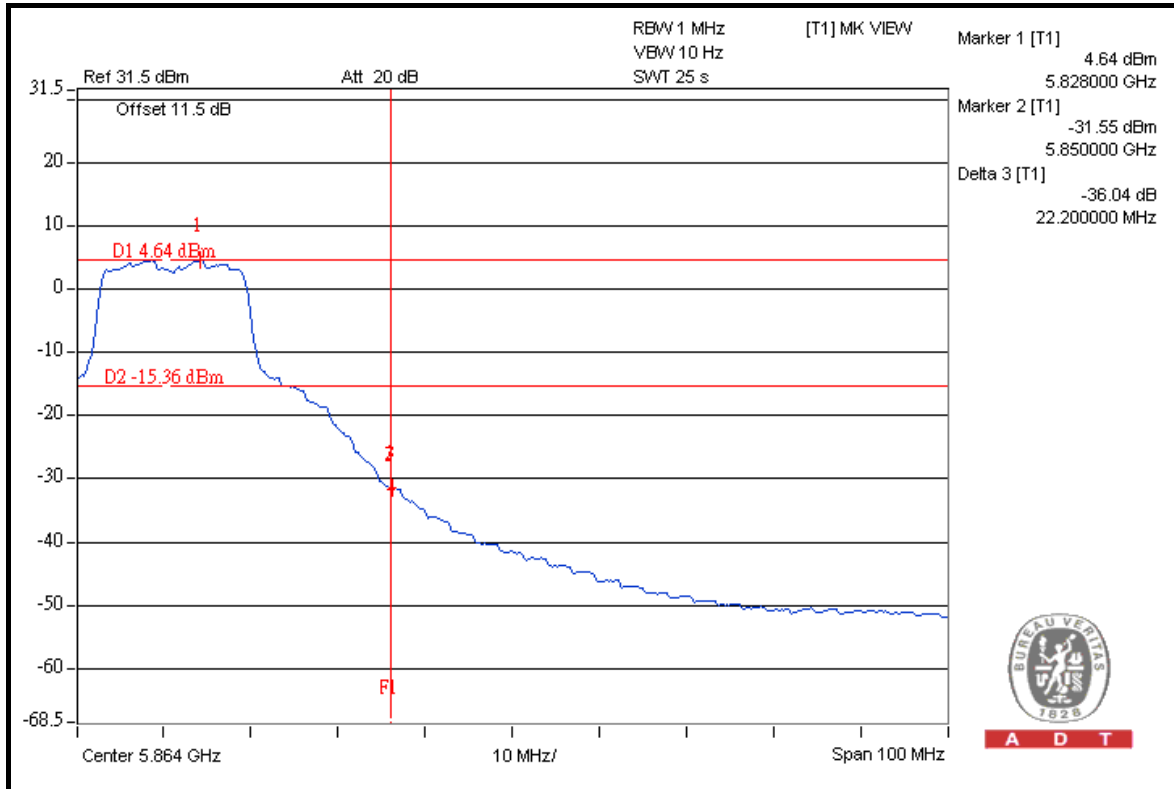
A D T



A D T



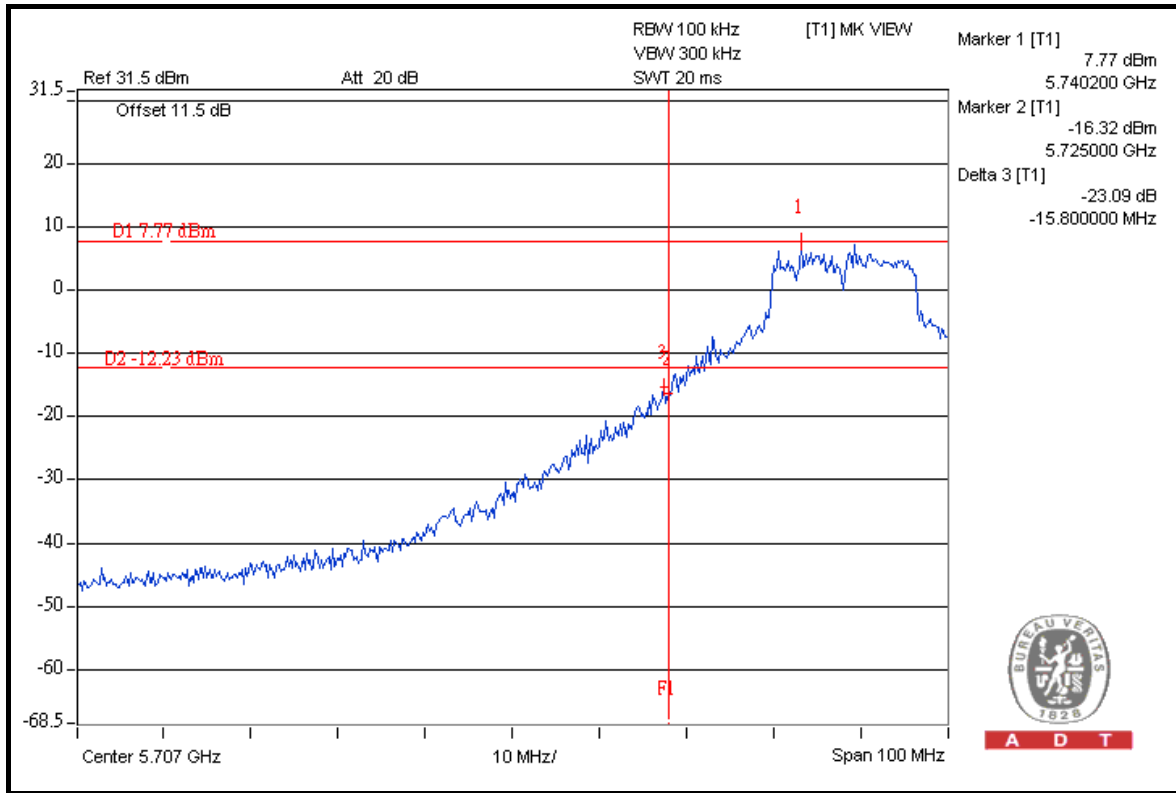
A D T



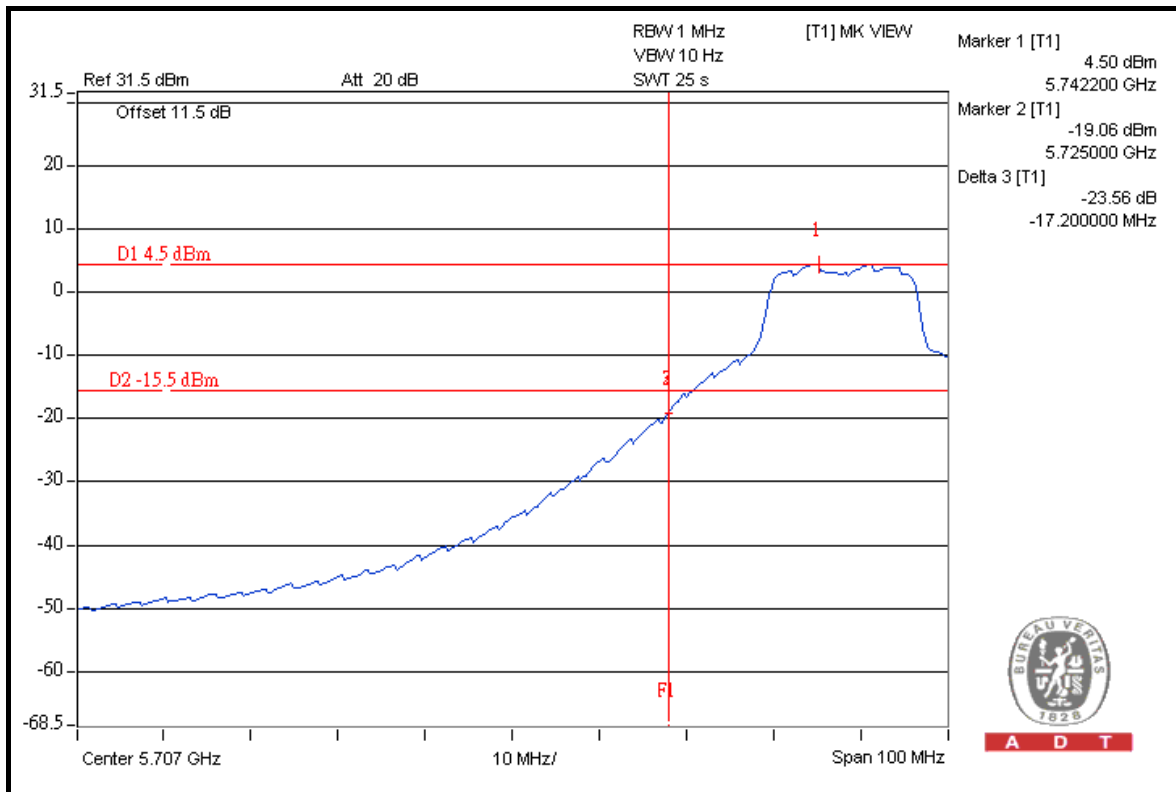


A D T

CHAIN 1



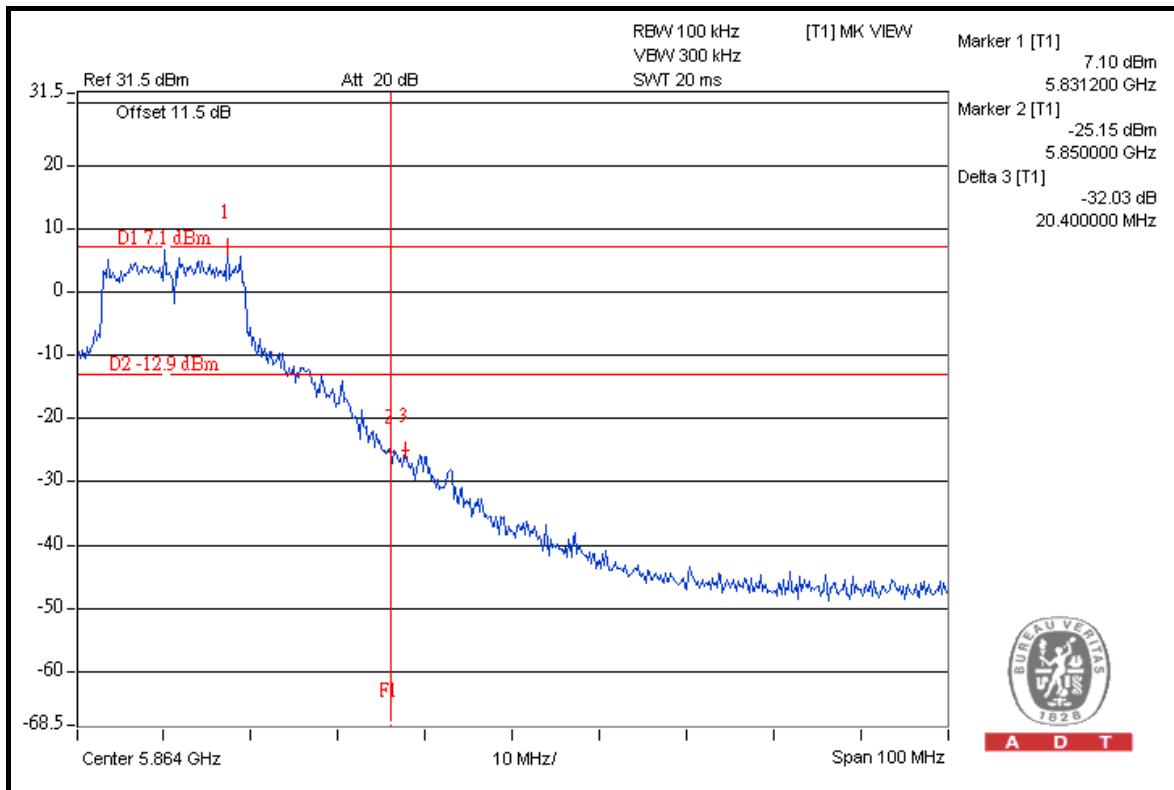
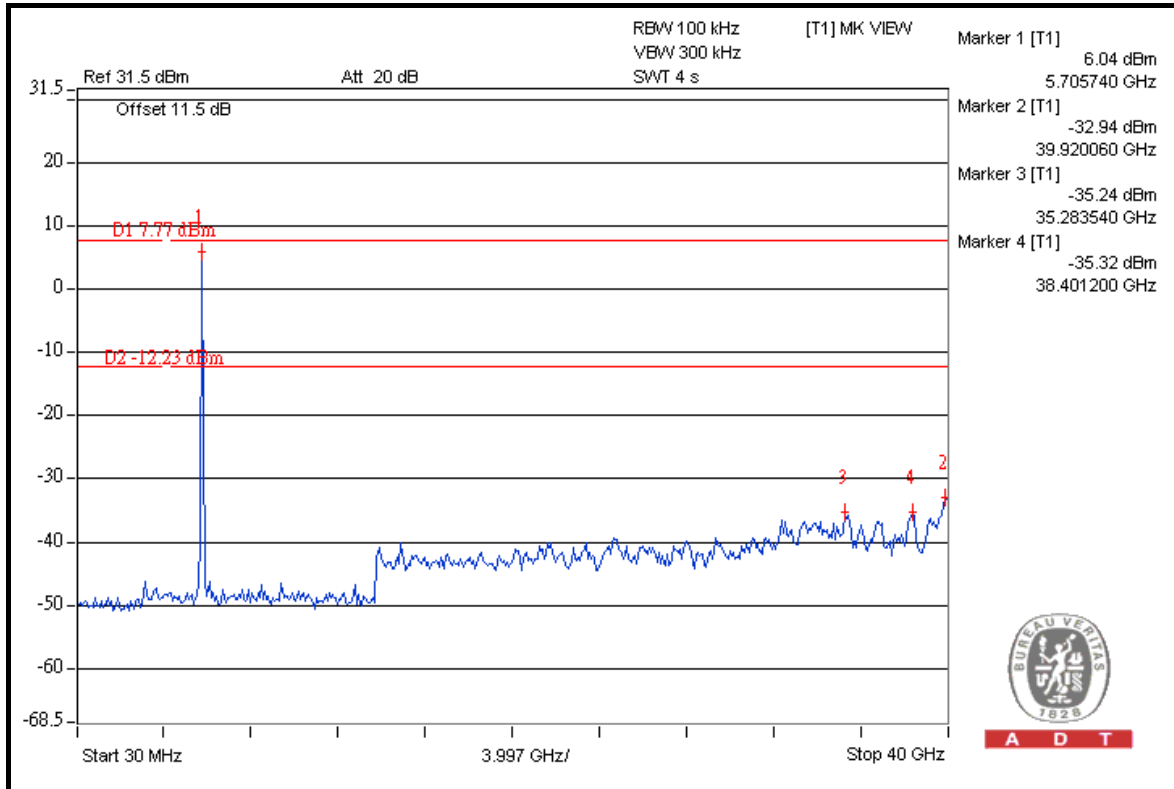
A D T



A D T

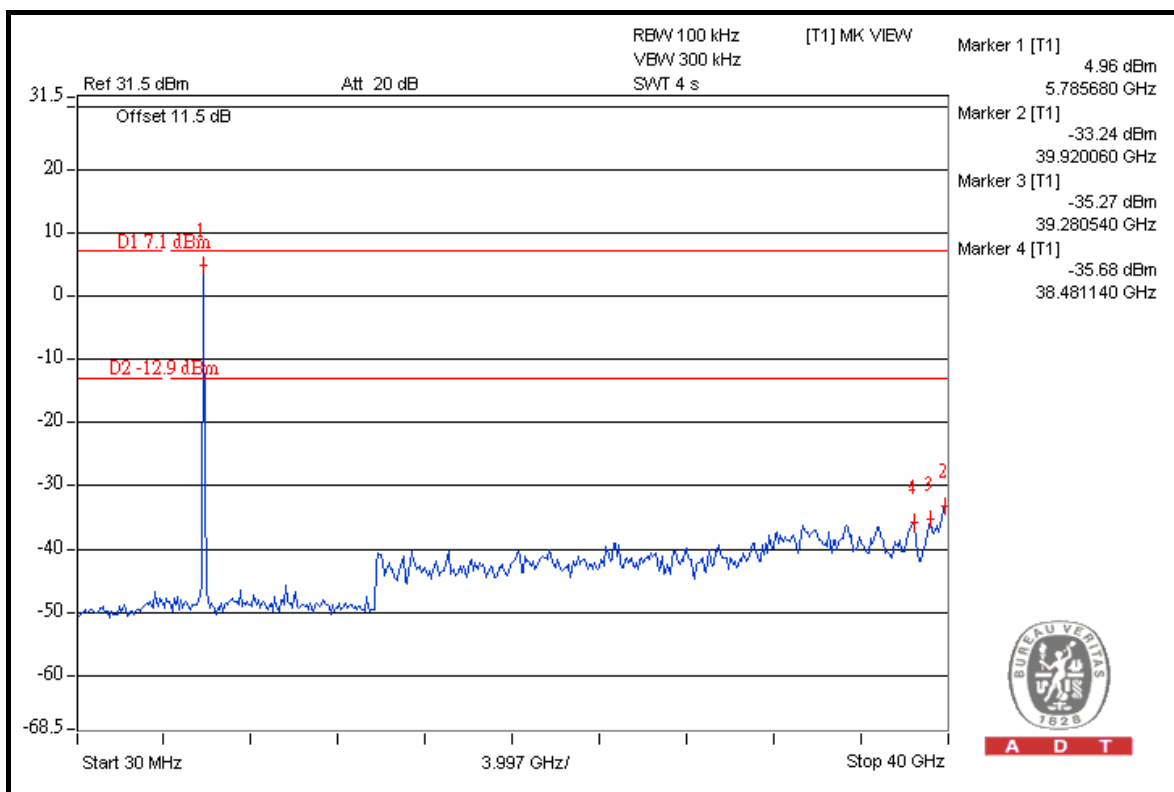
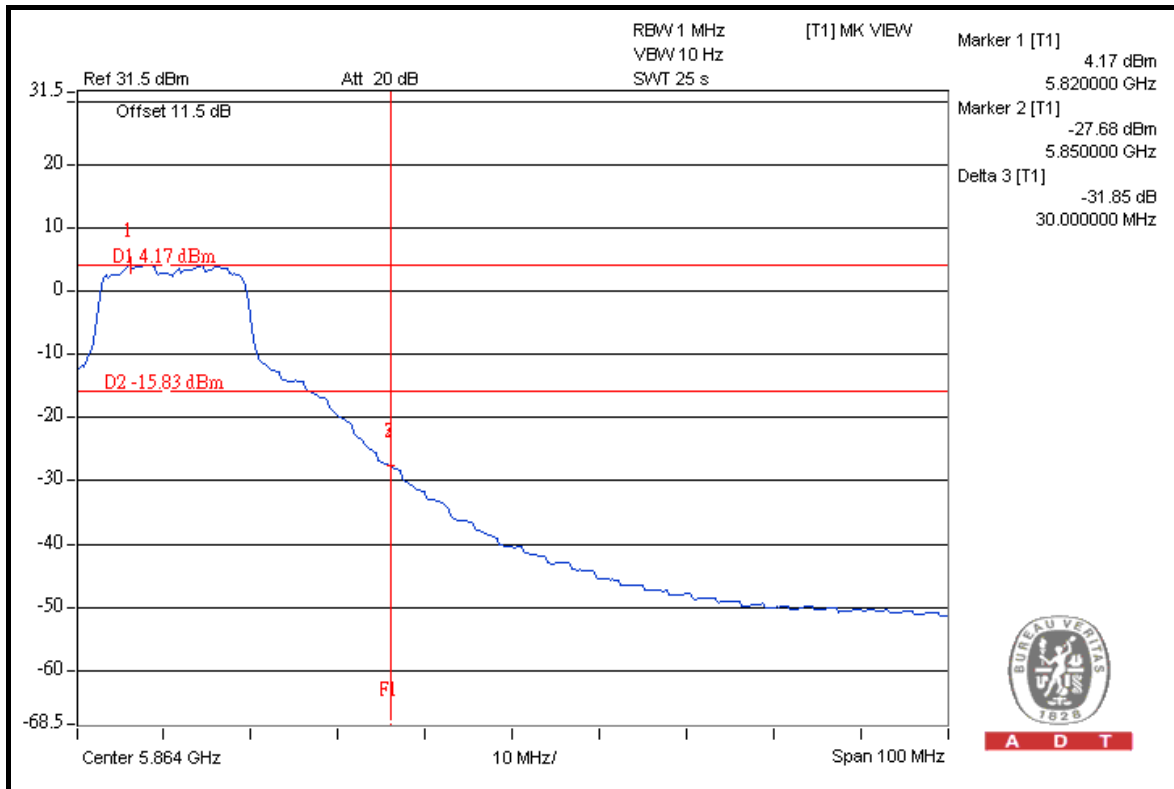


A D T





A D T

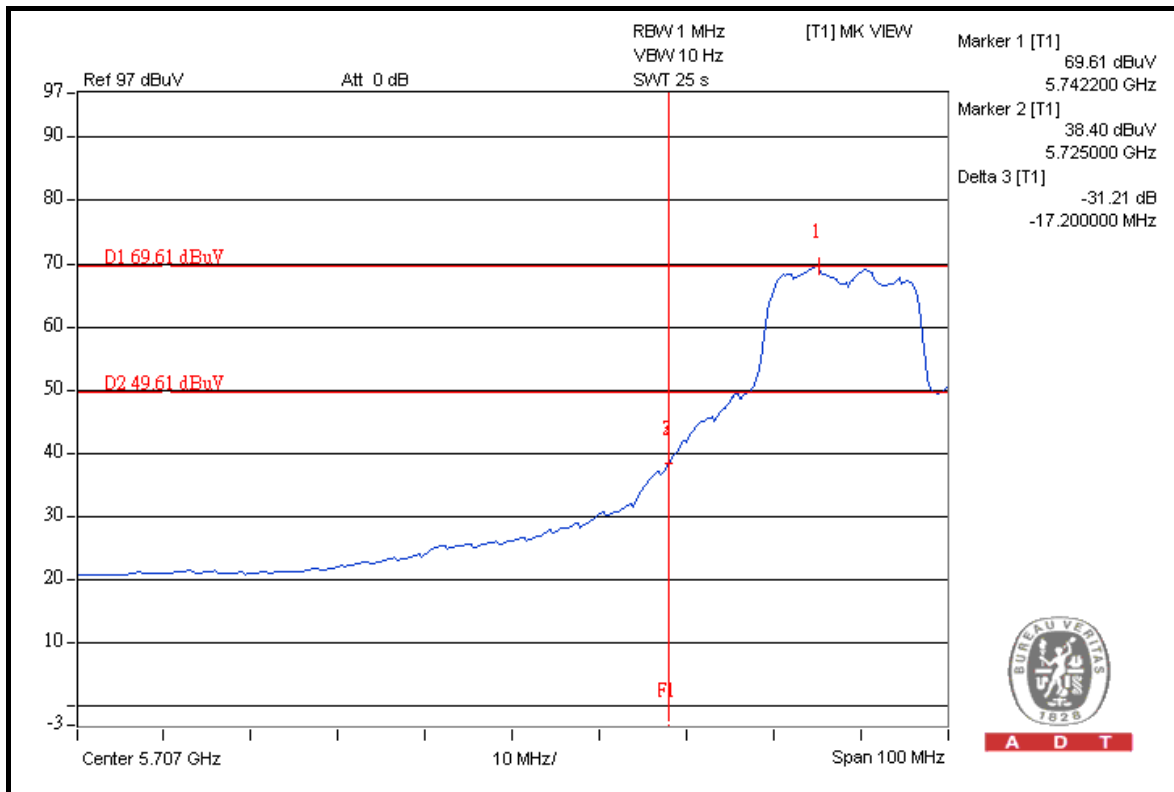
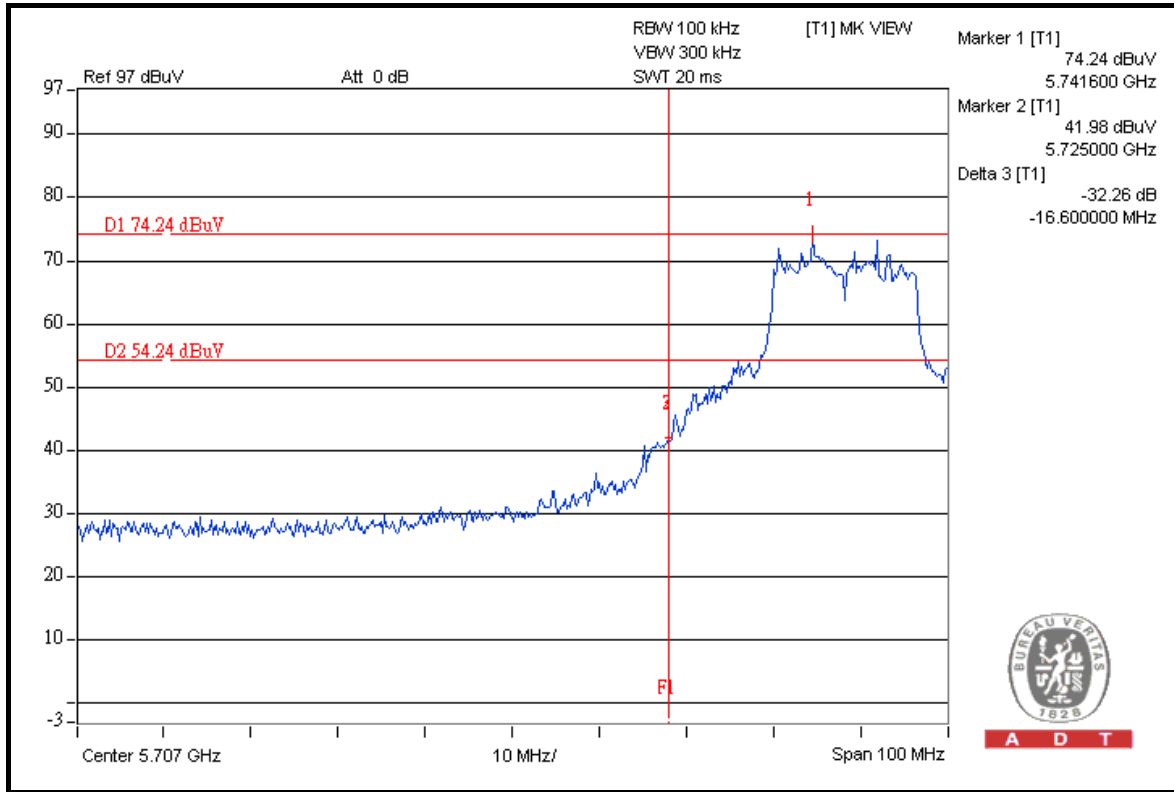




A D T

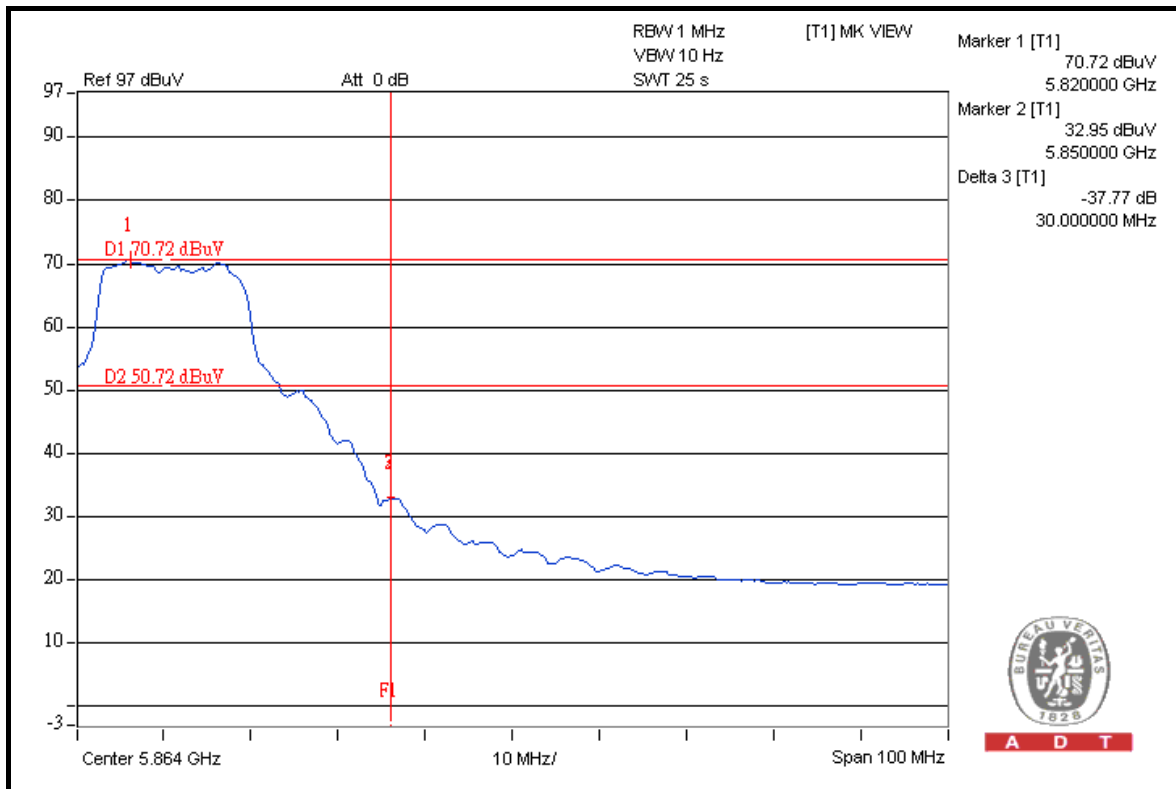
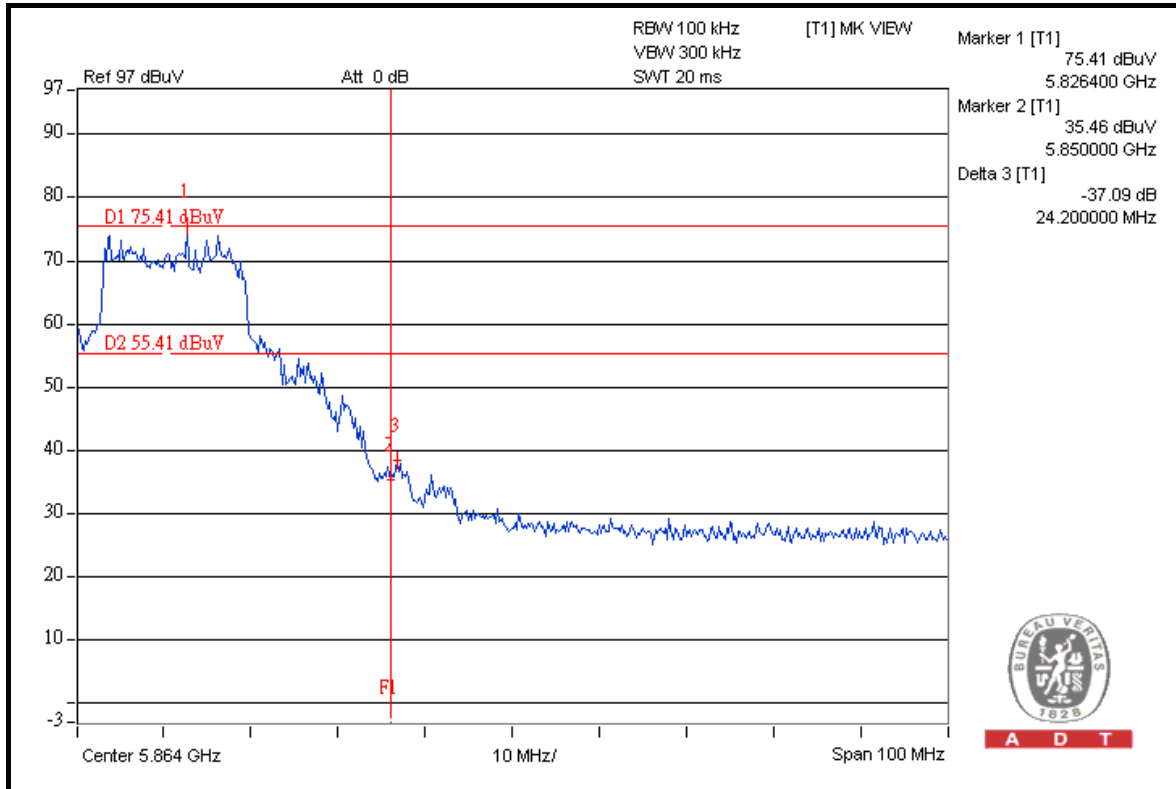
802.11a – TEST MODE D

FOR RADIATED MEASURED (TWO CHAINS ON)





A D T

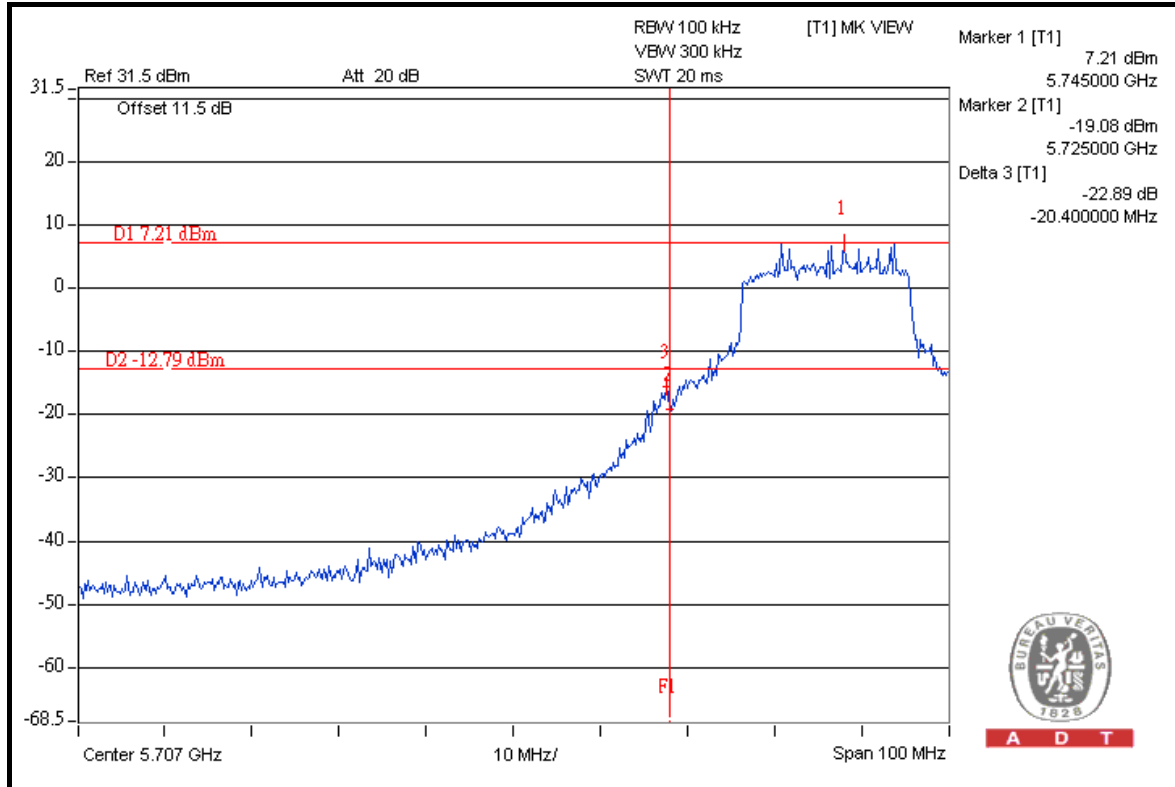




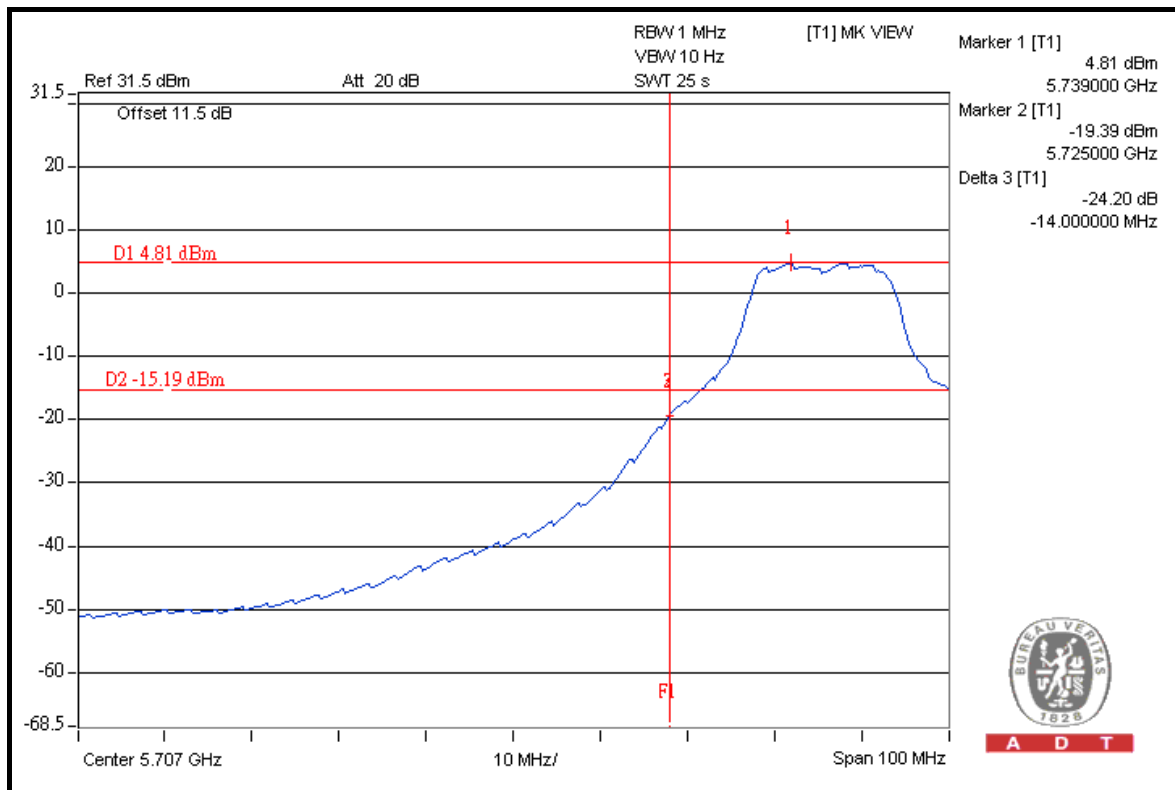
A D T

FOR CONDUCTED MEASURED

CHAIN 0



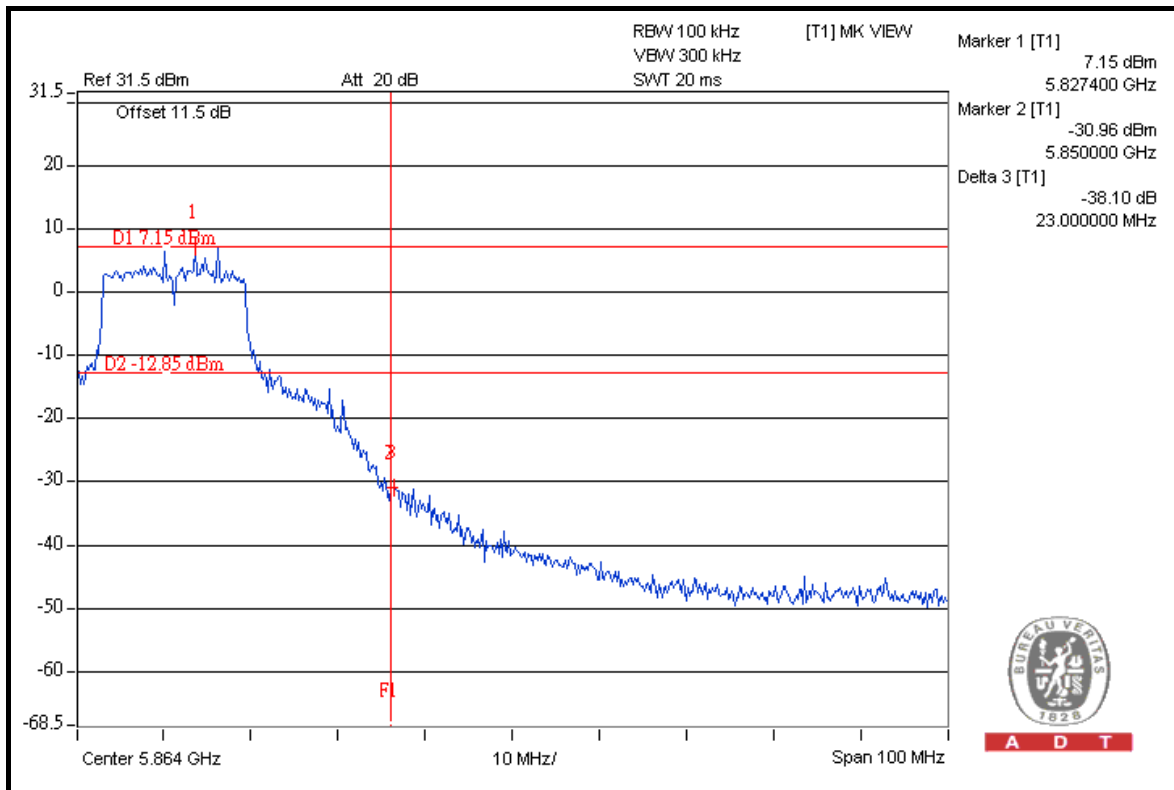
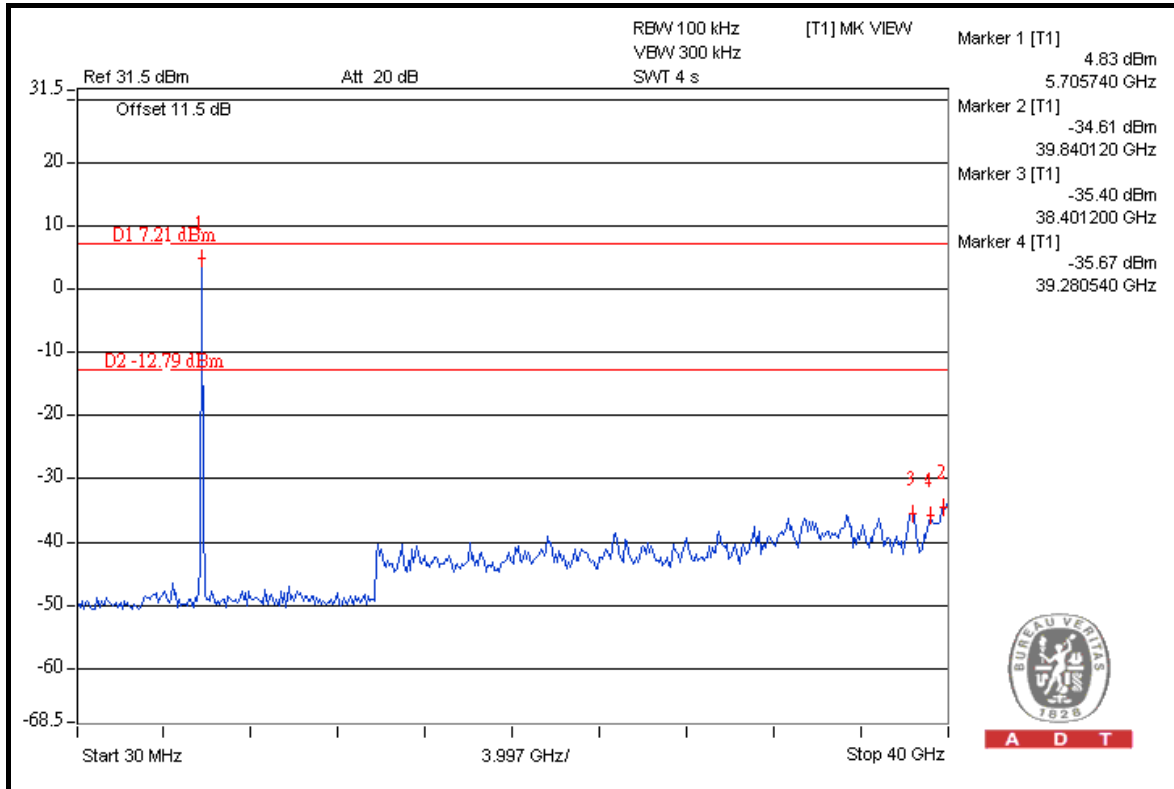
A D T



A D T

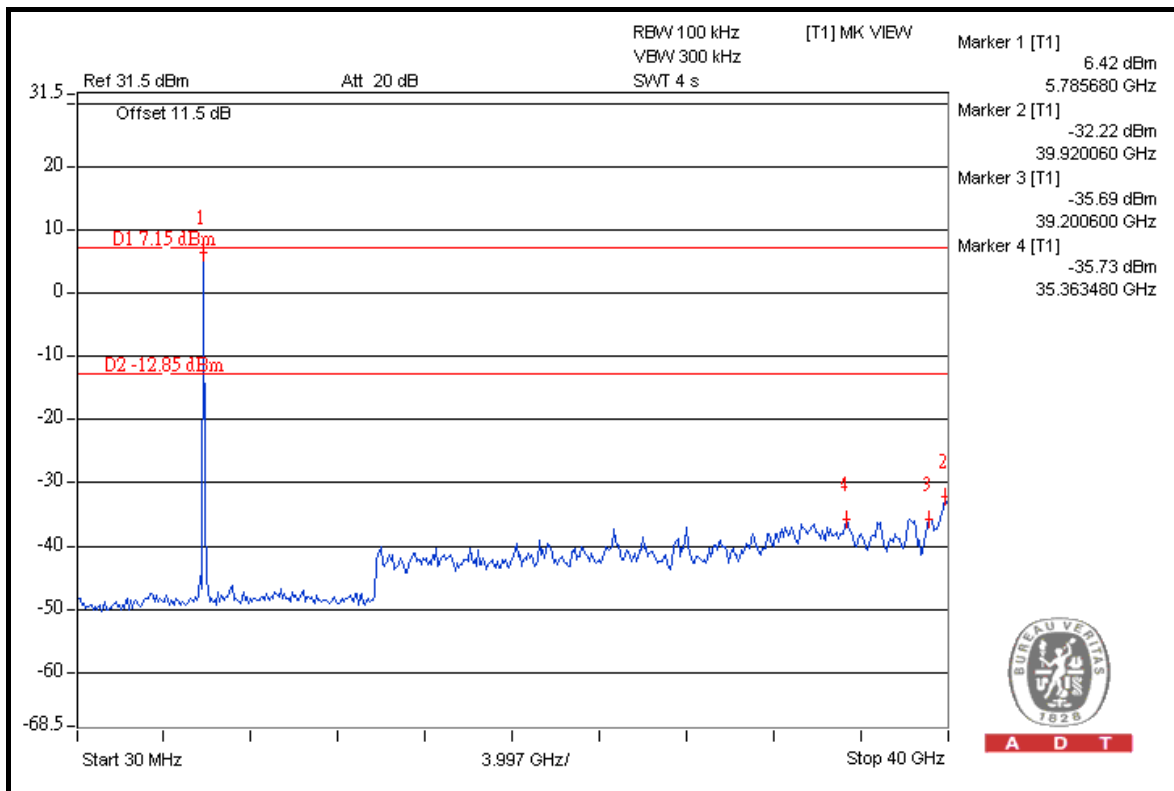
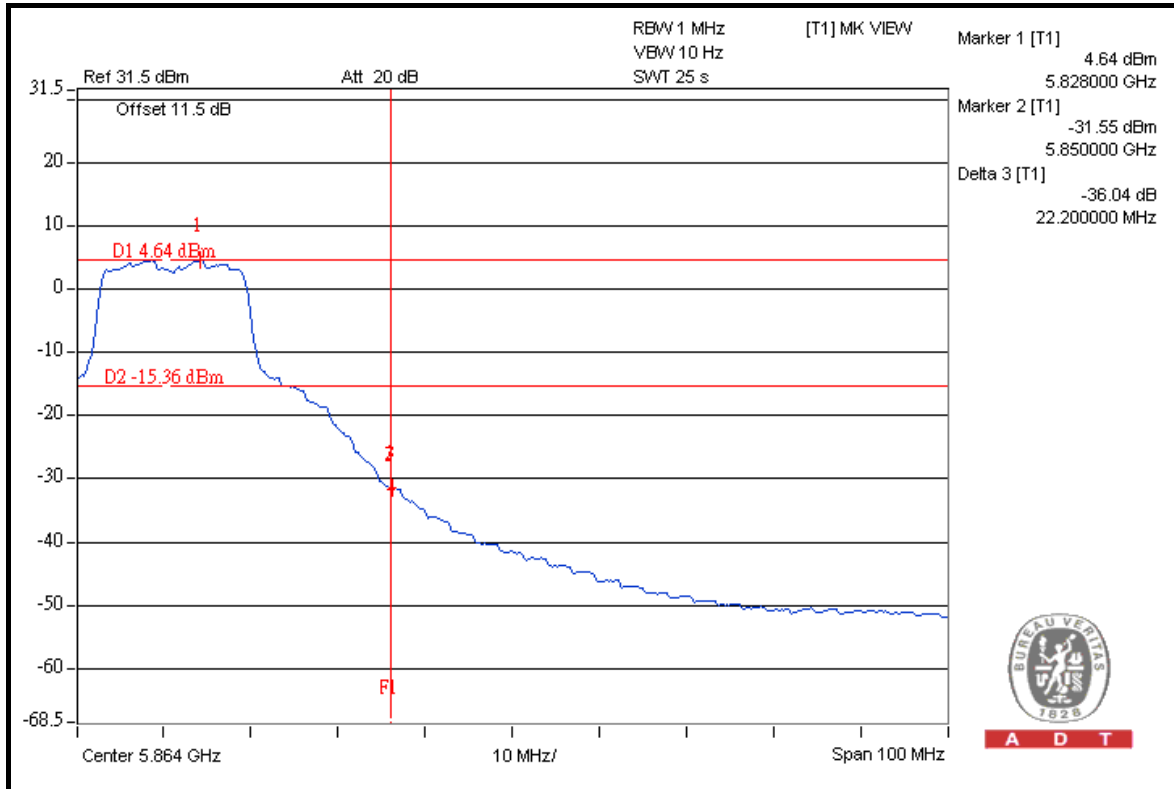


A D T





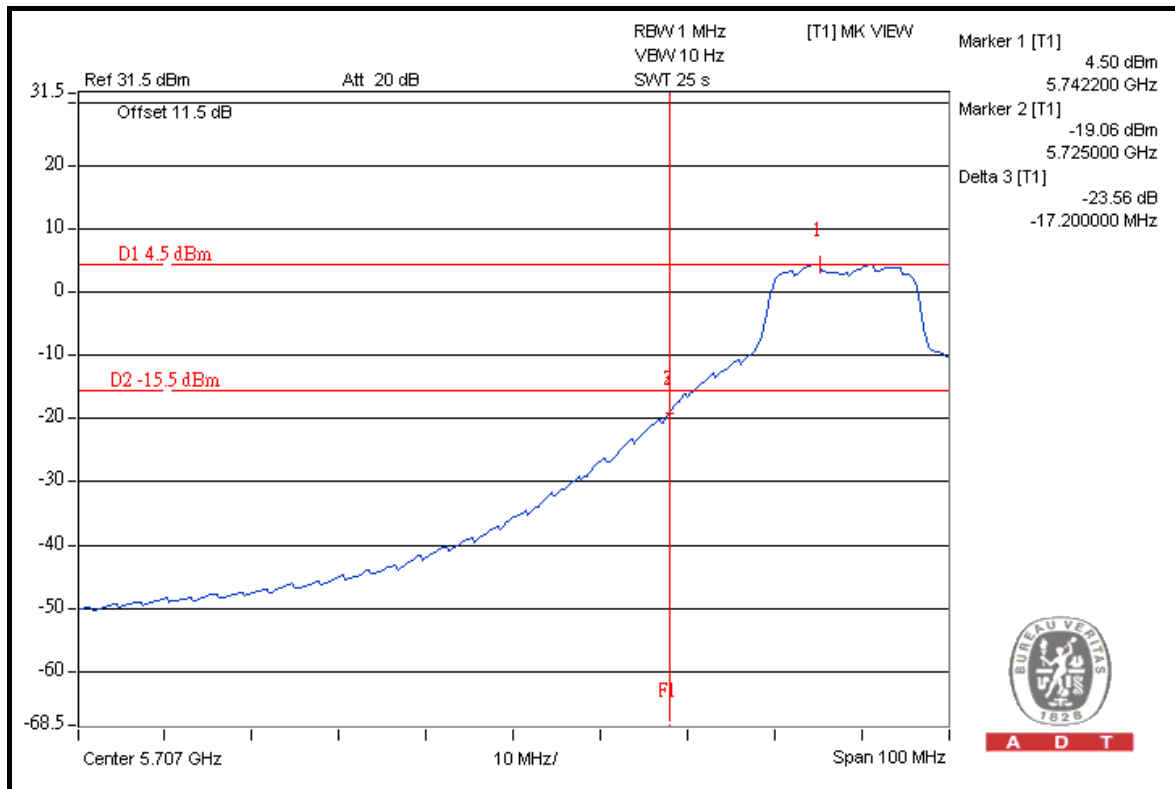
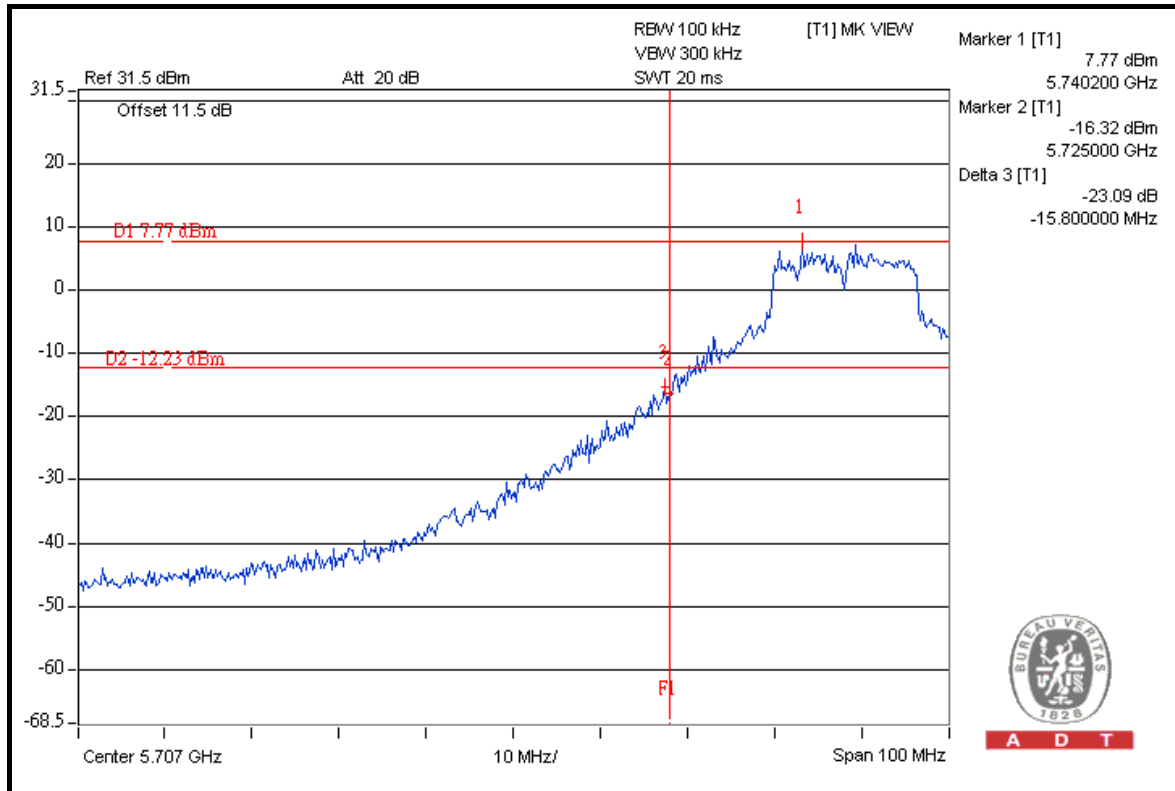
A D T





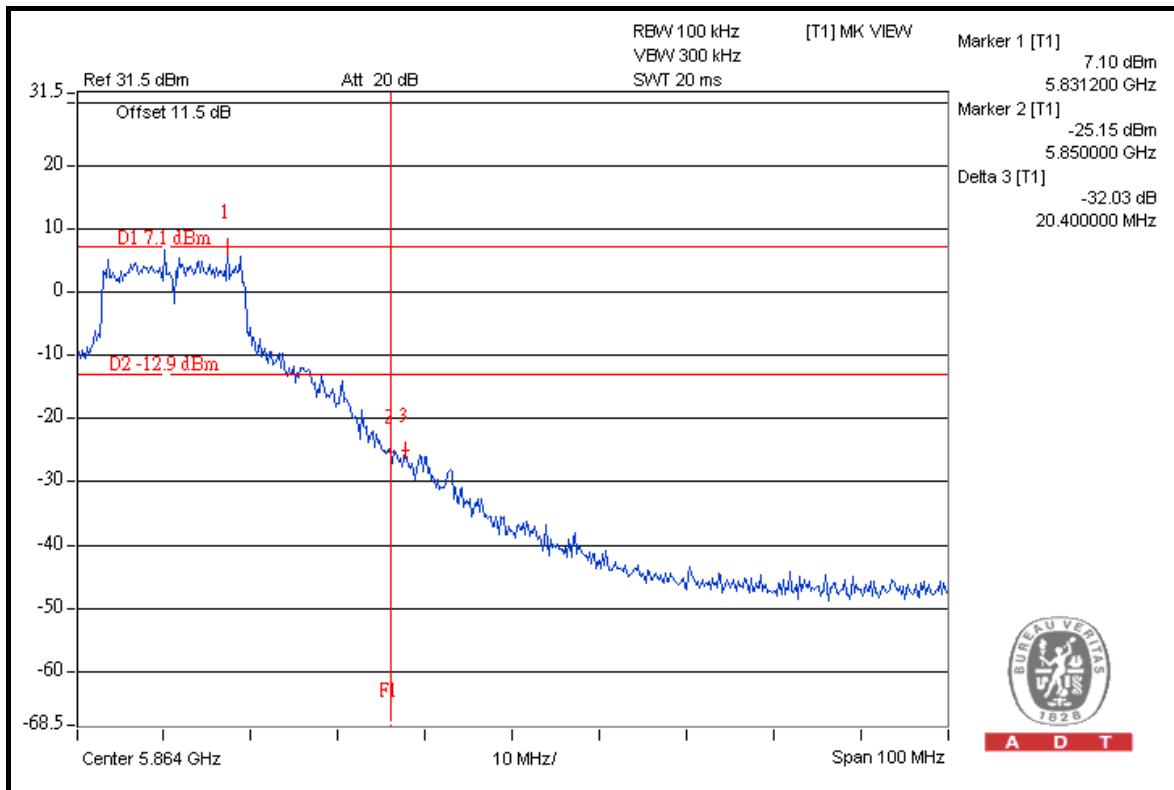
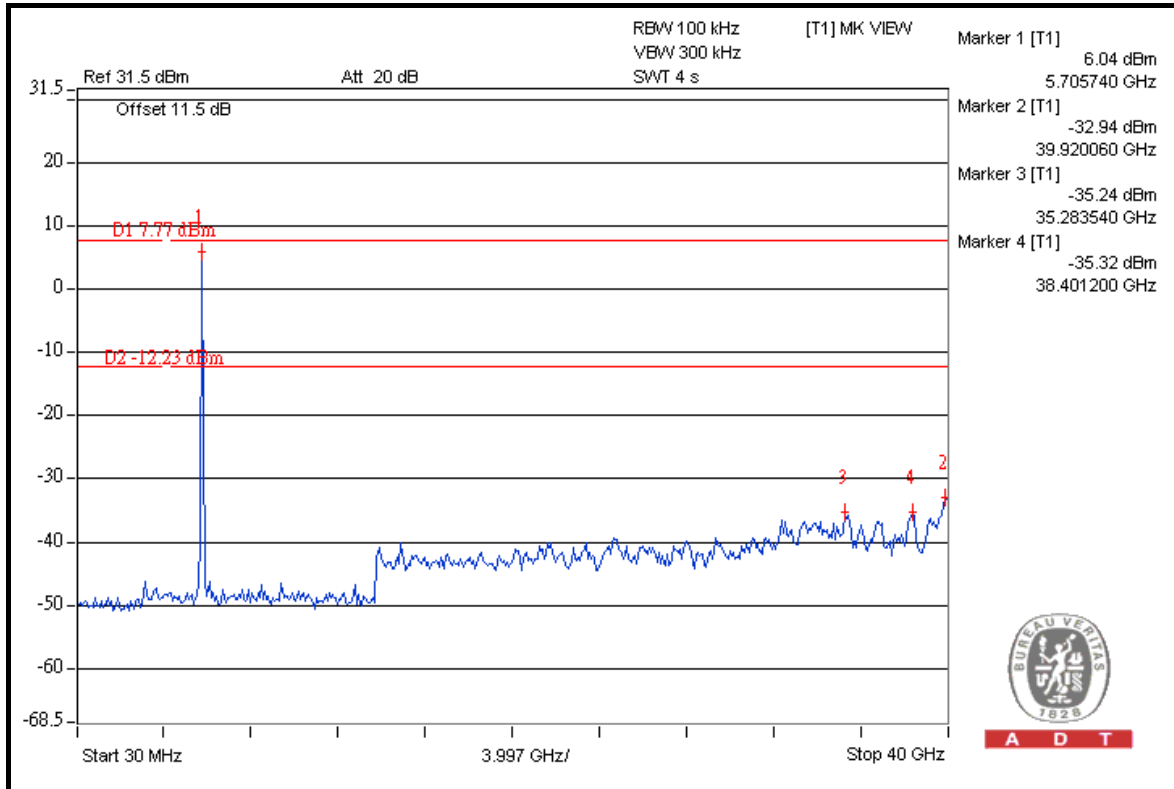
A D T

CHAIN 1



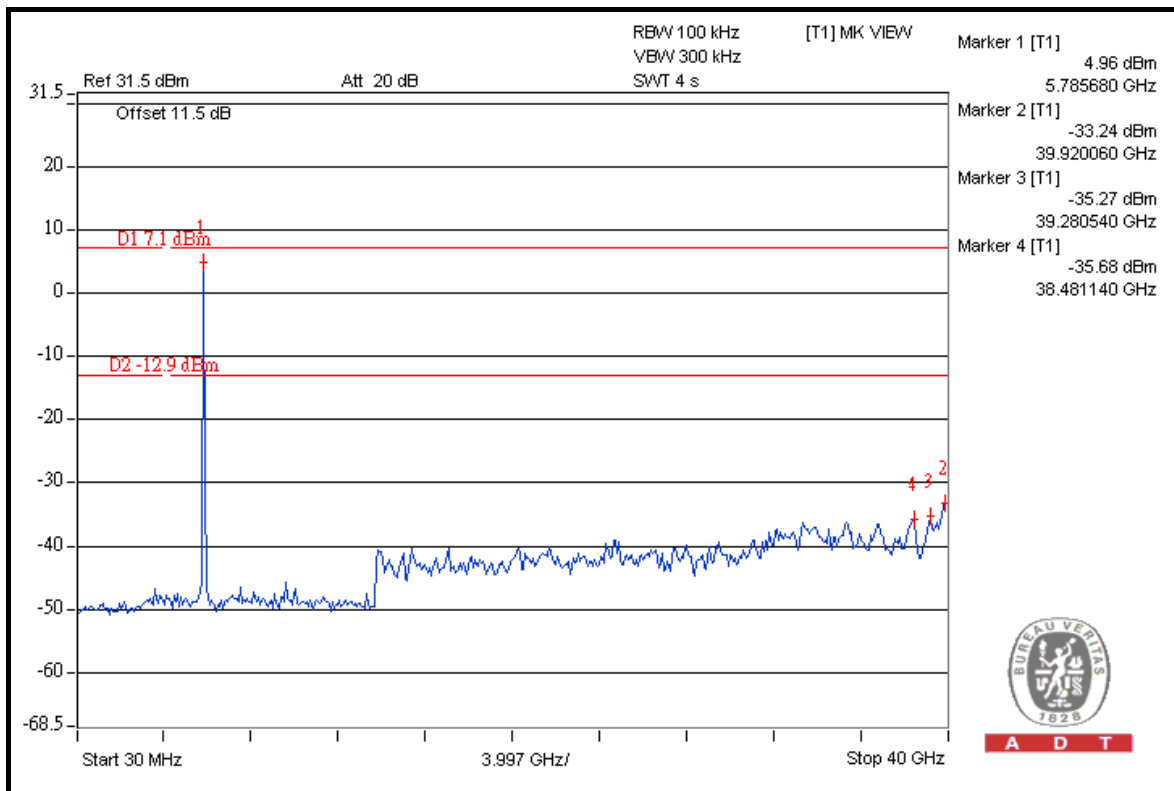
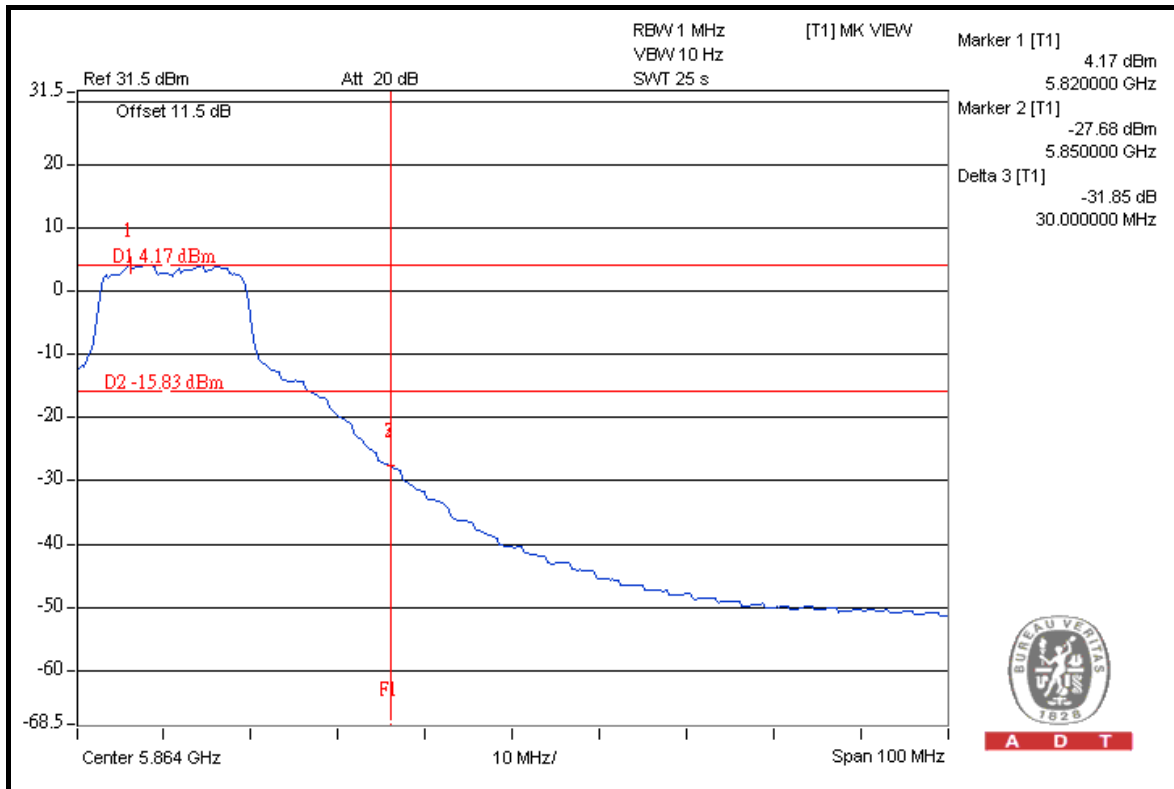


A D T





A D T

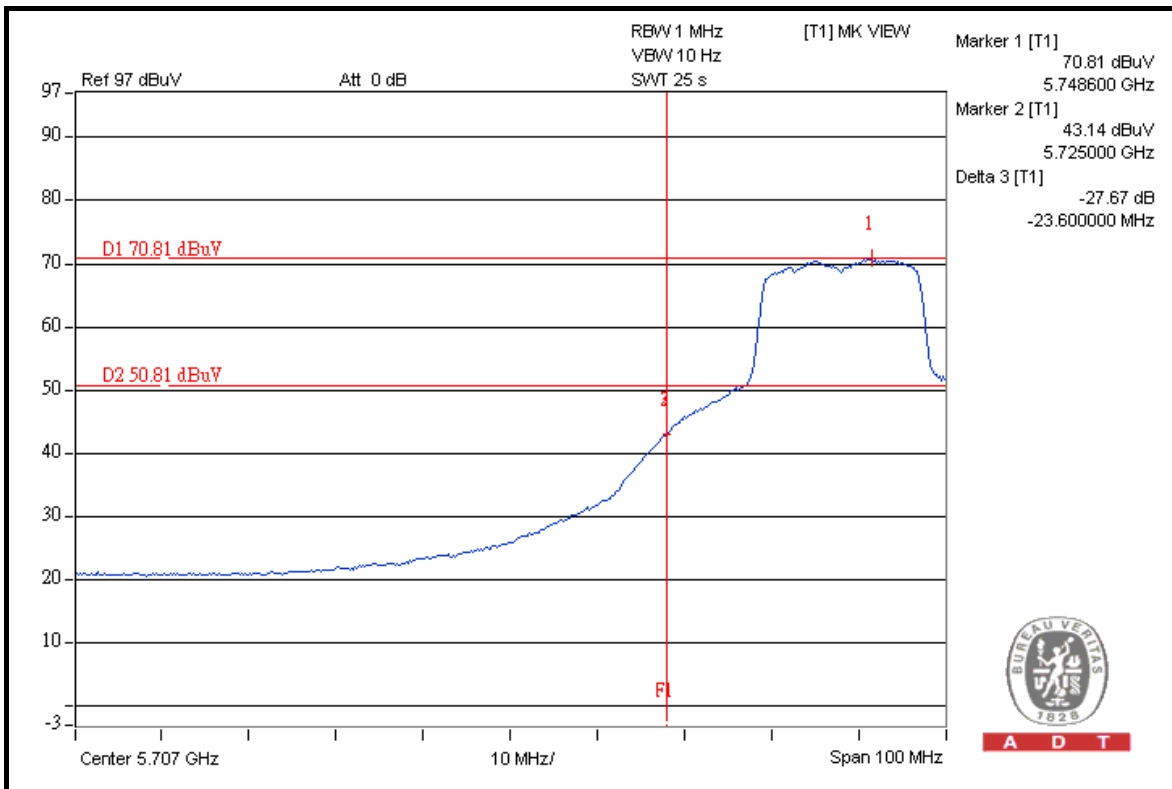
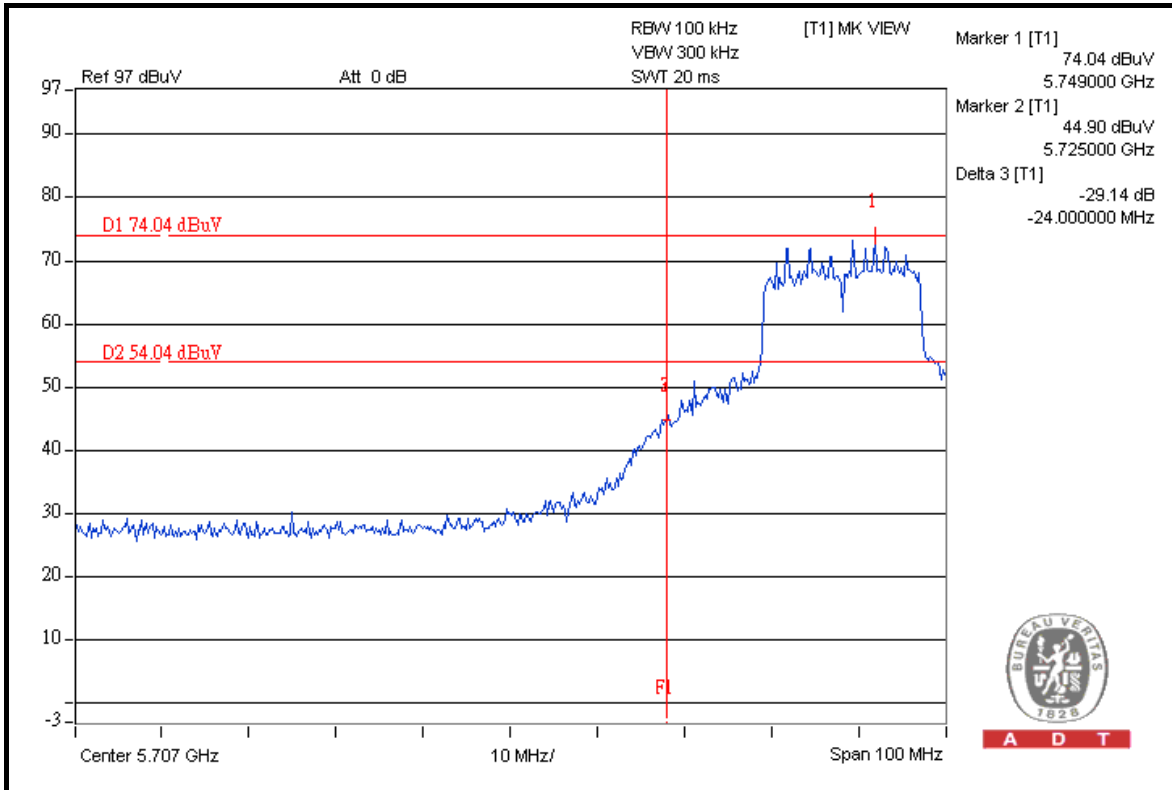




A D T

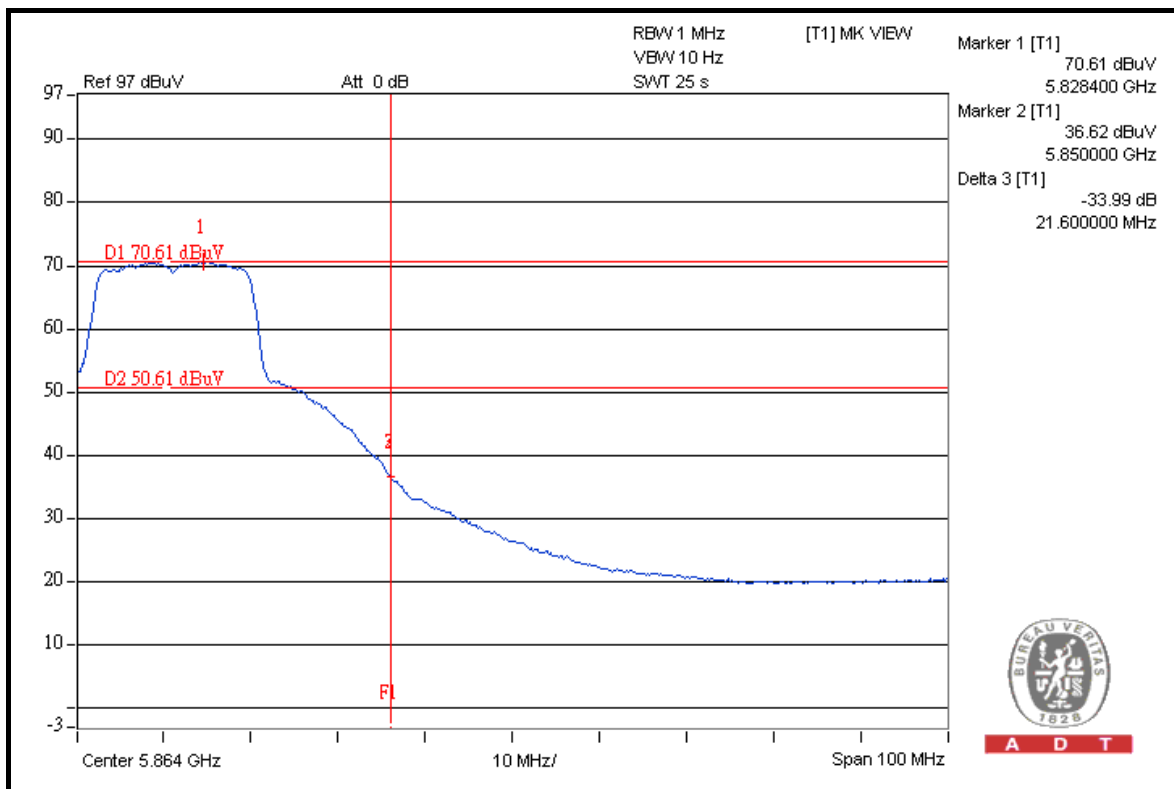
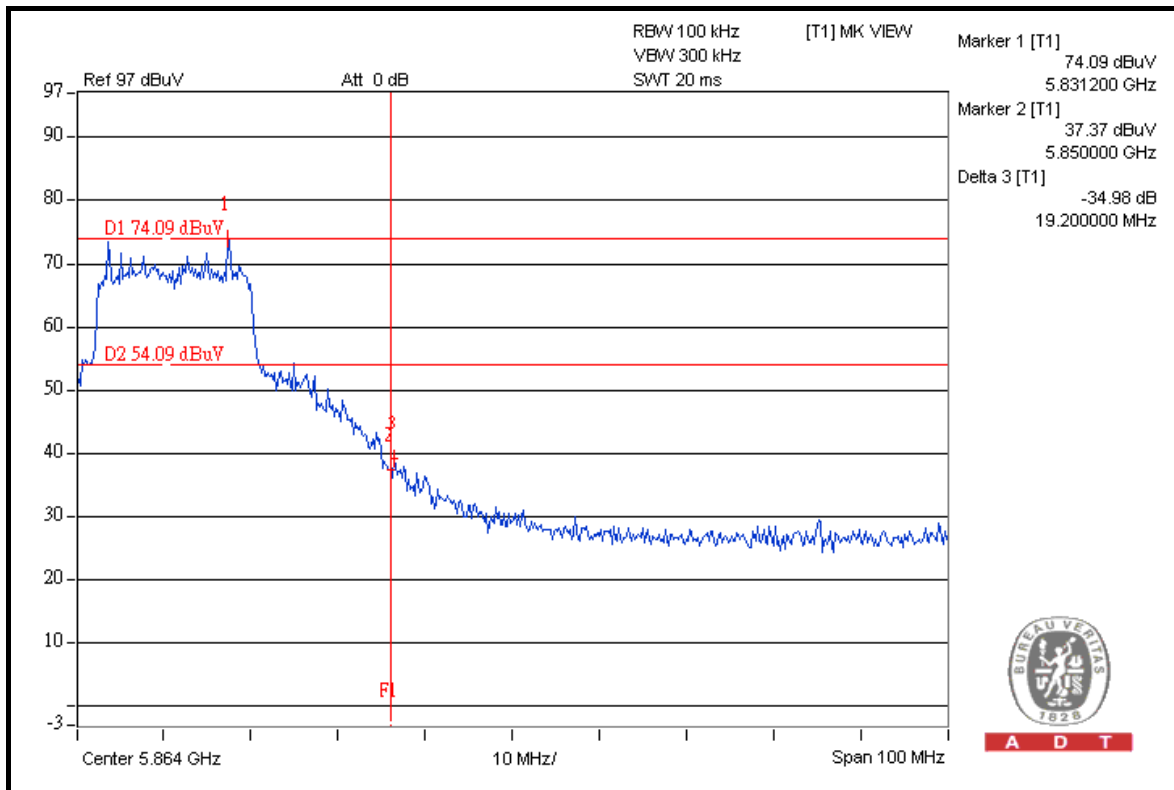
802.11n (20MHz) – TEST MODE B

FOR RADIATED MEASURED (TWO CHAINS ON)





A D T

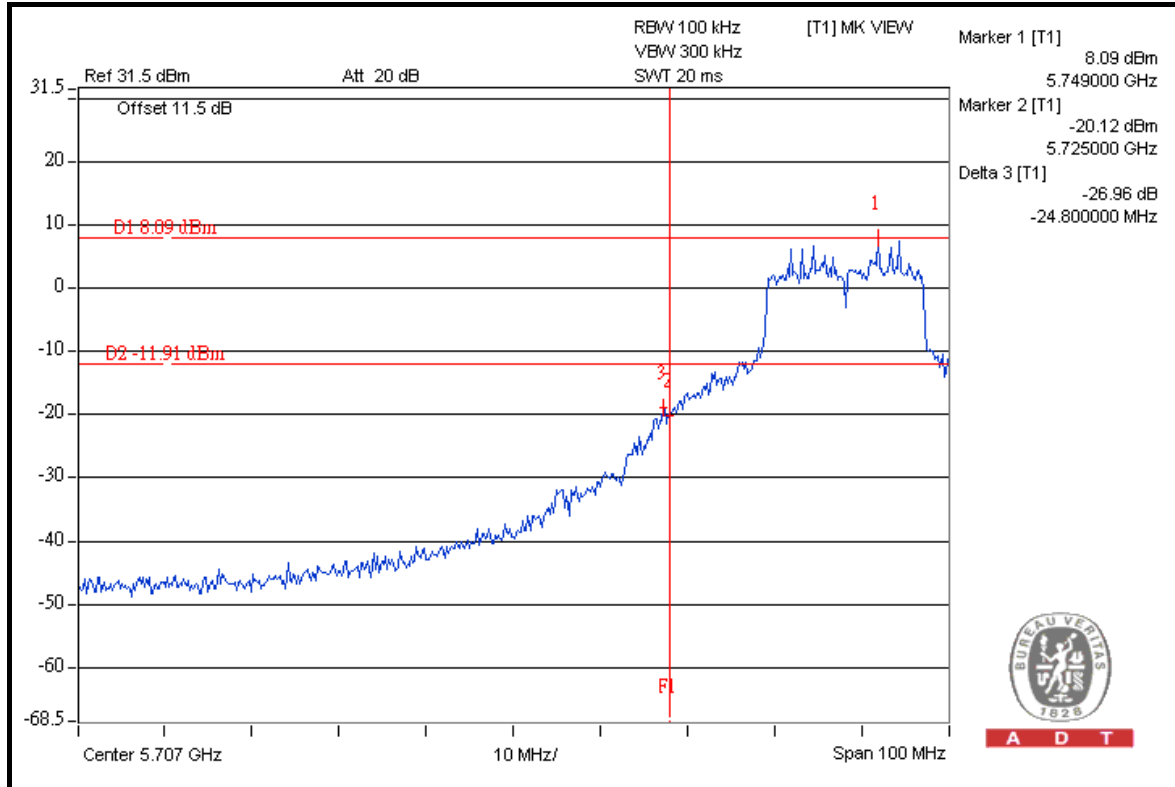




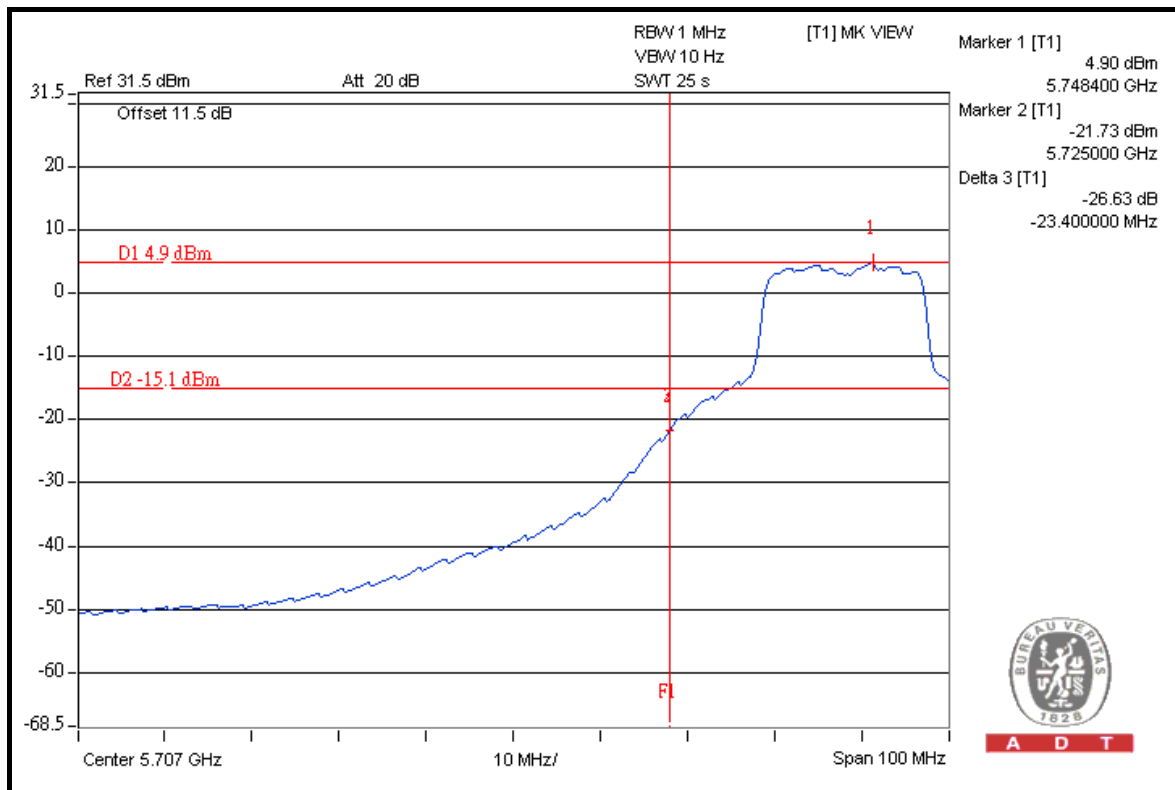
A D T

FOR CONDUCTED MEASURED

CHAIN 0



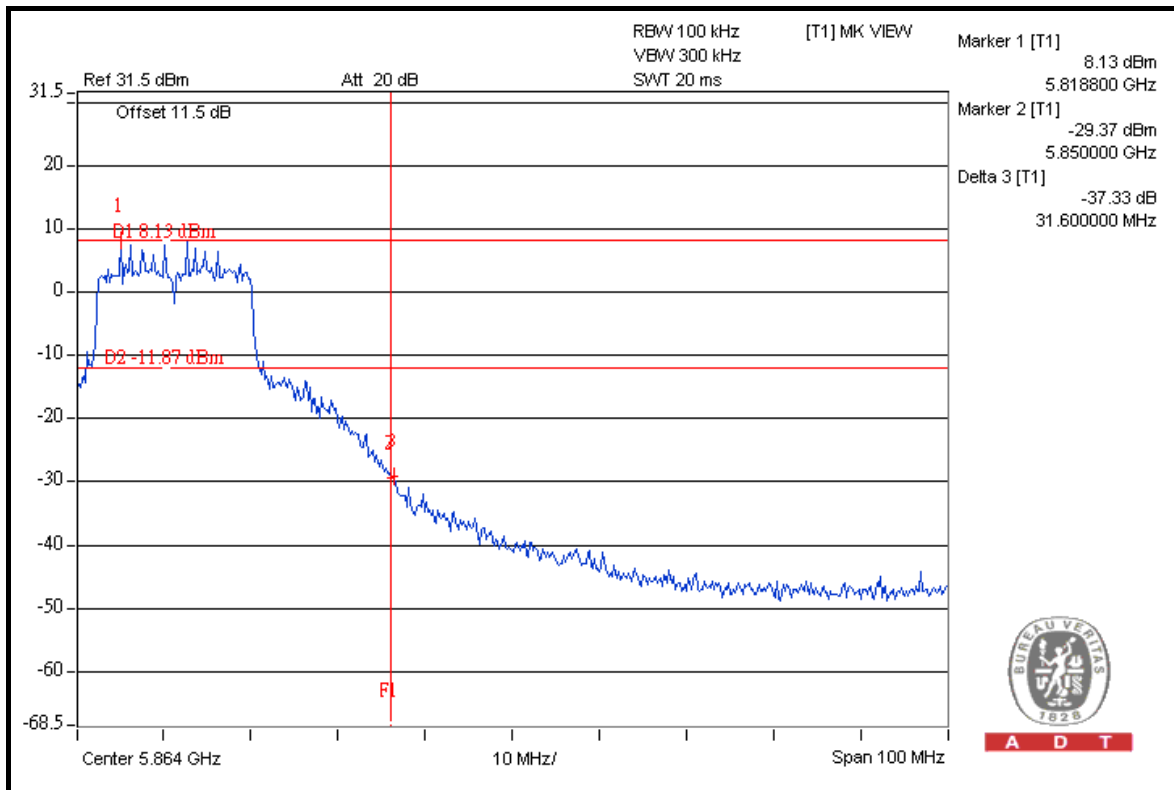
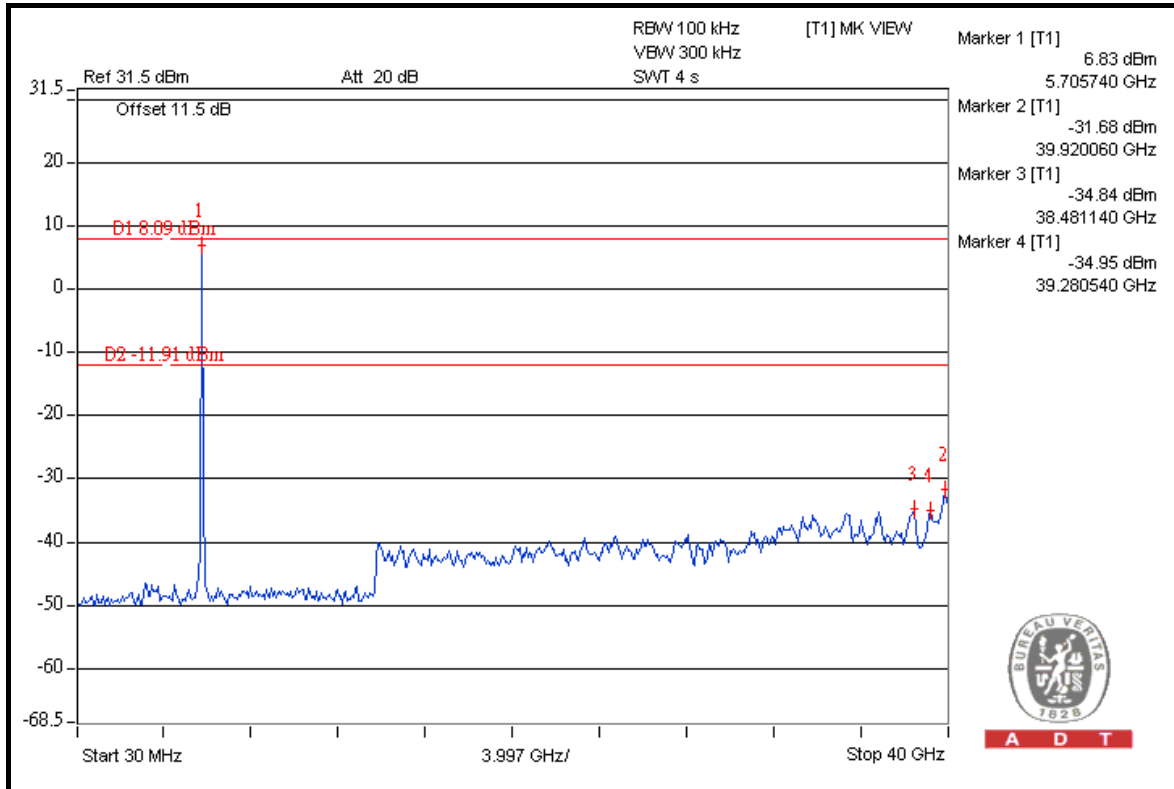
A D T



A D T

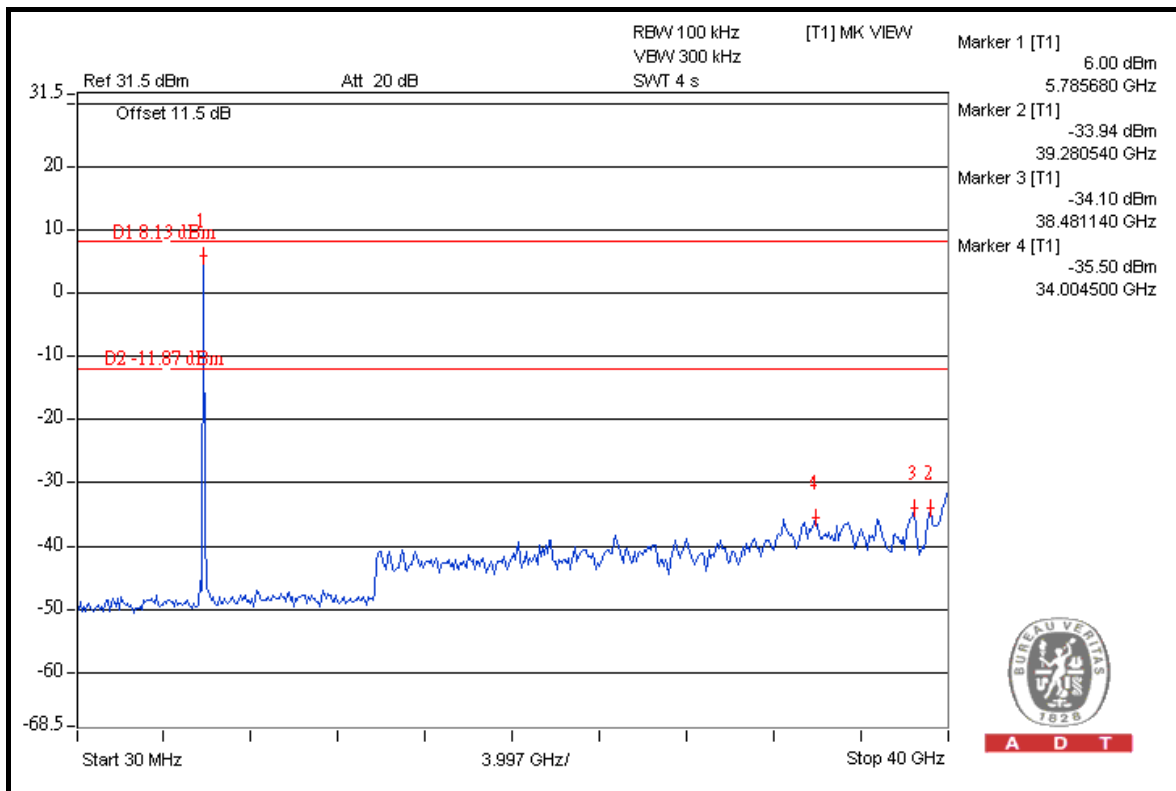
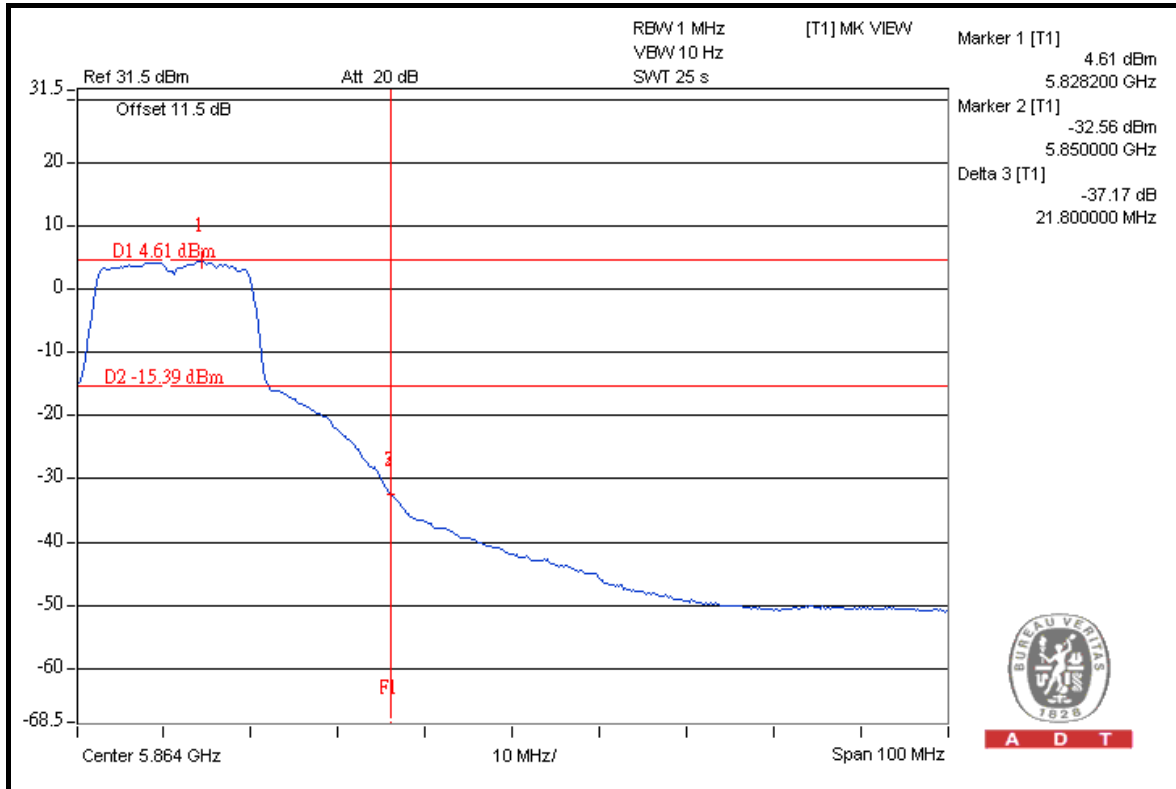


A D T





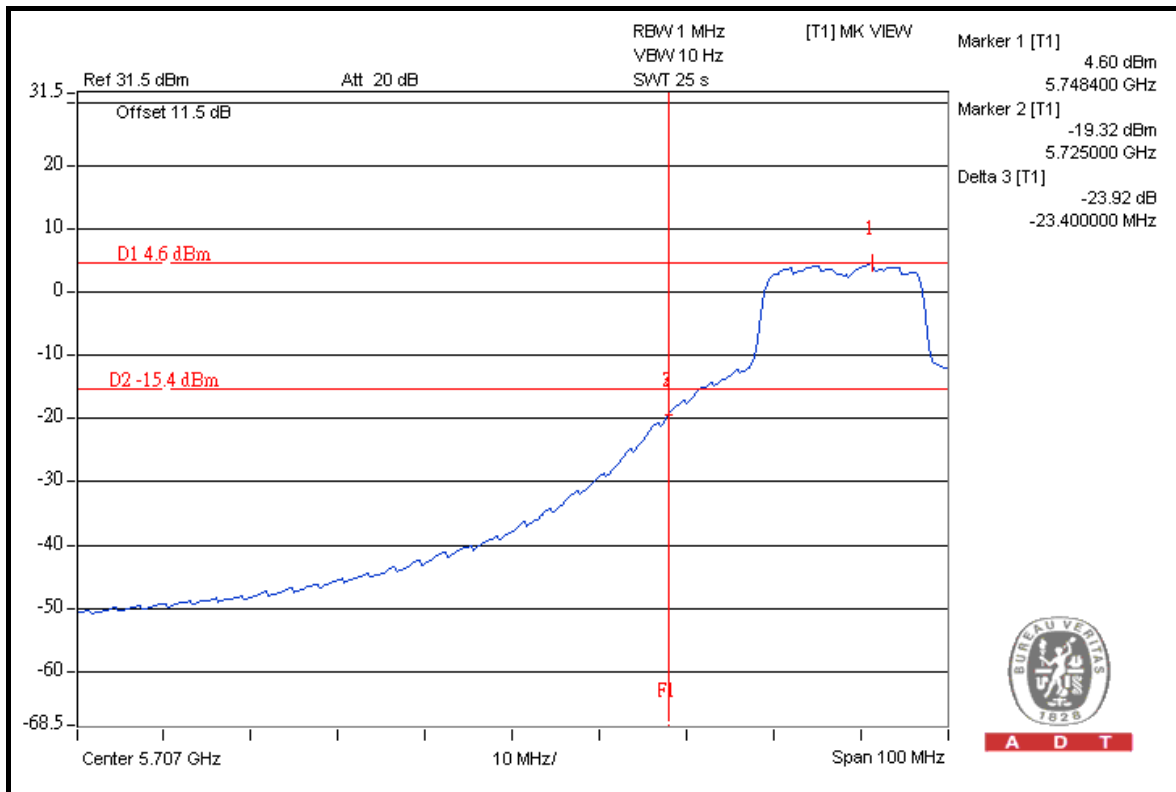
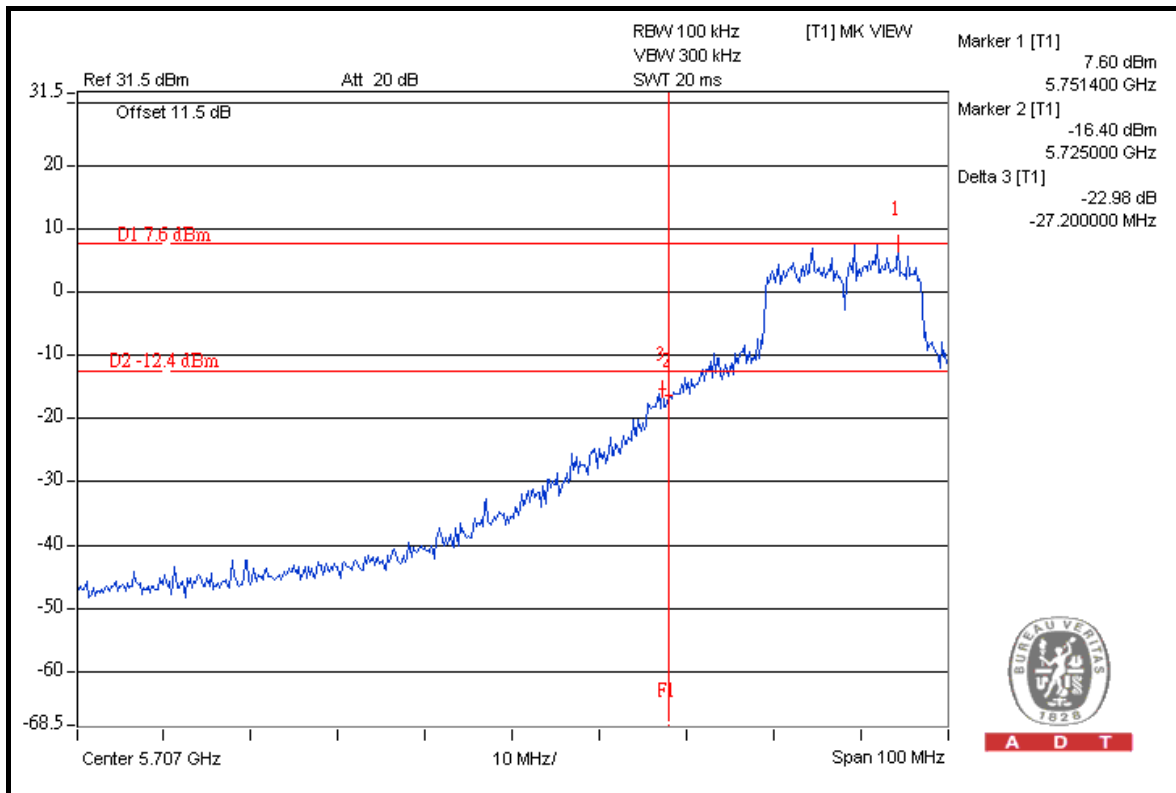
A D T





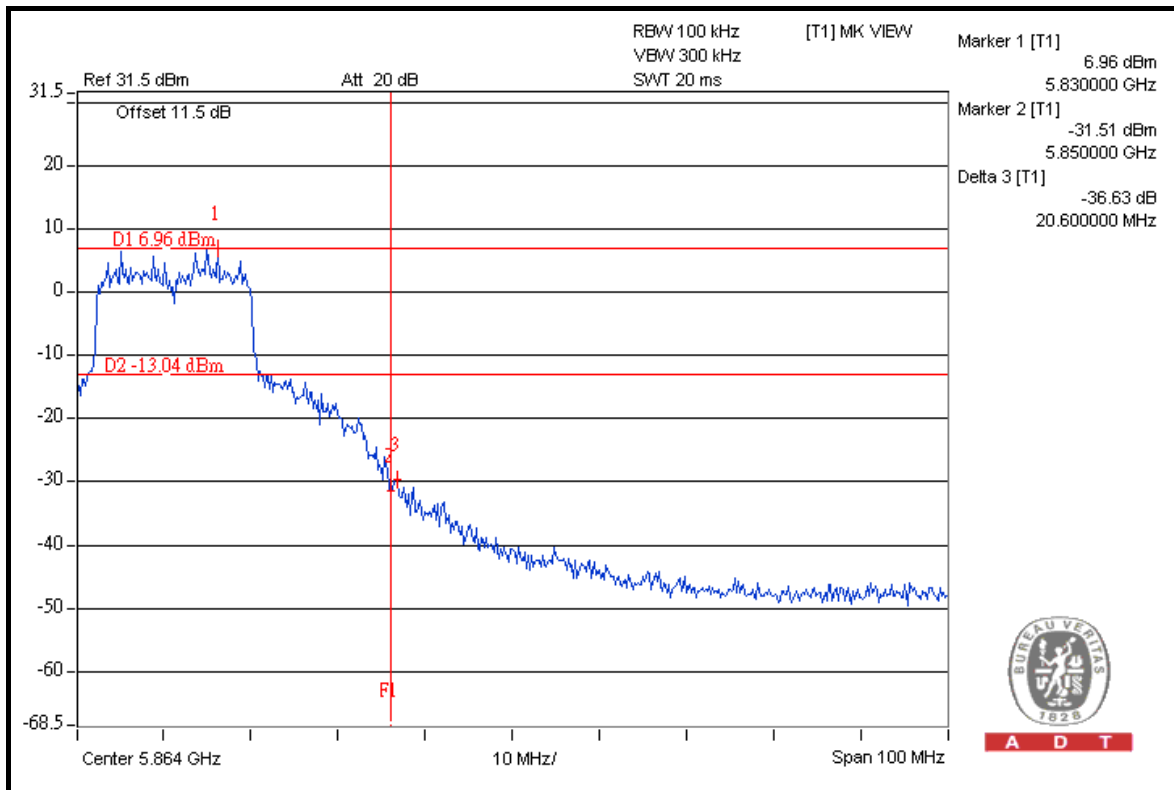
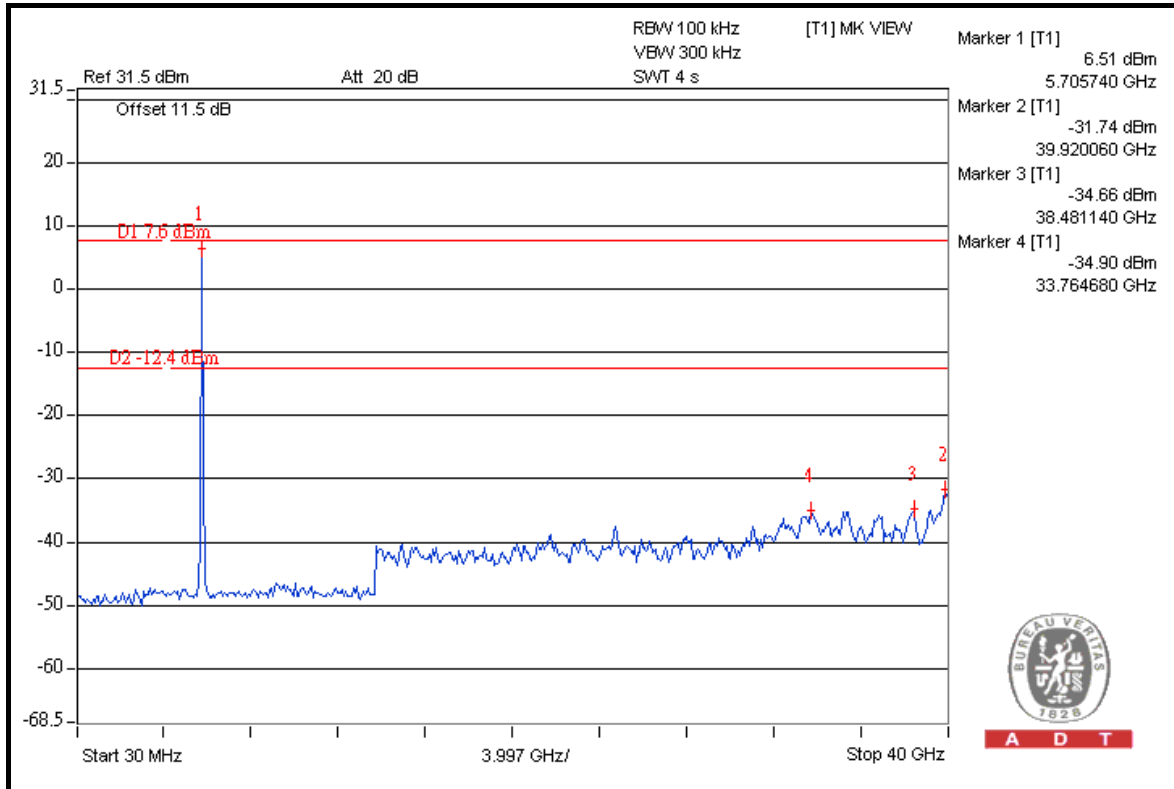
A D T

CHAIN 1



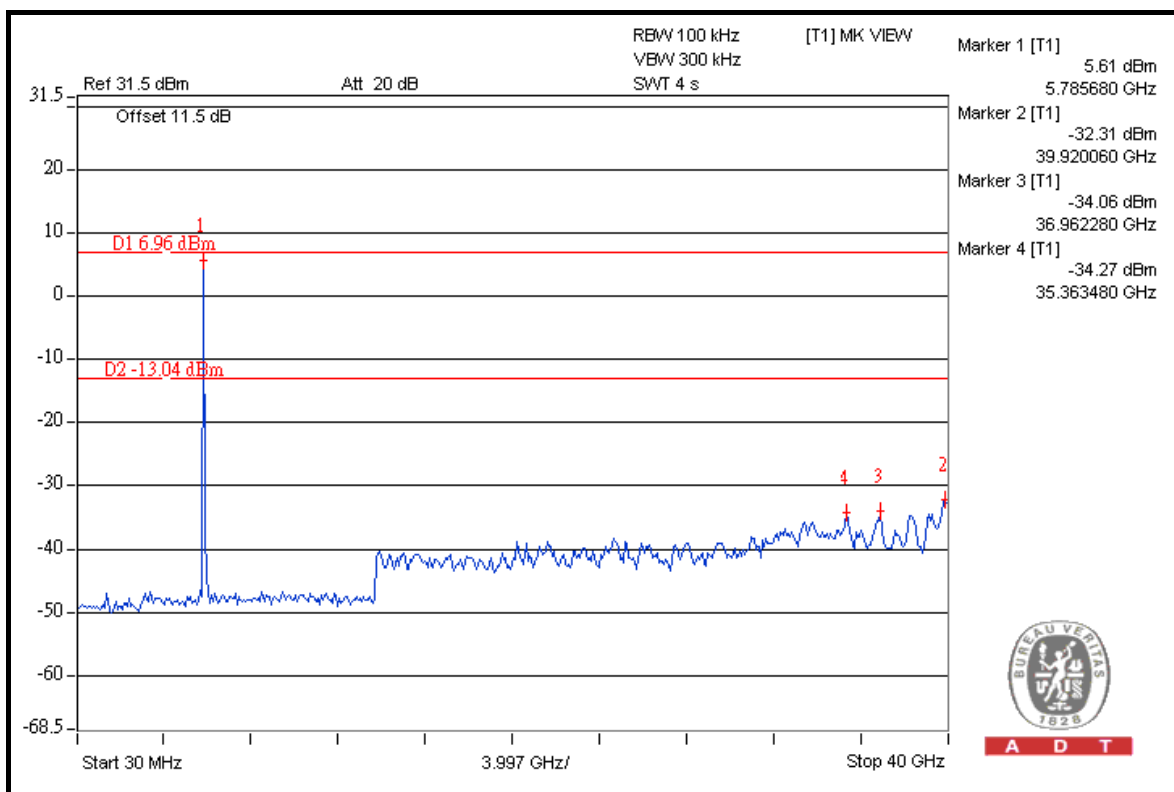
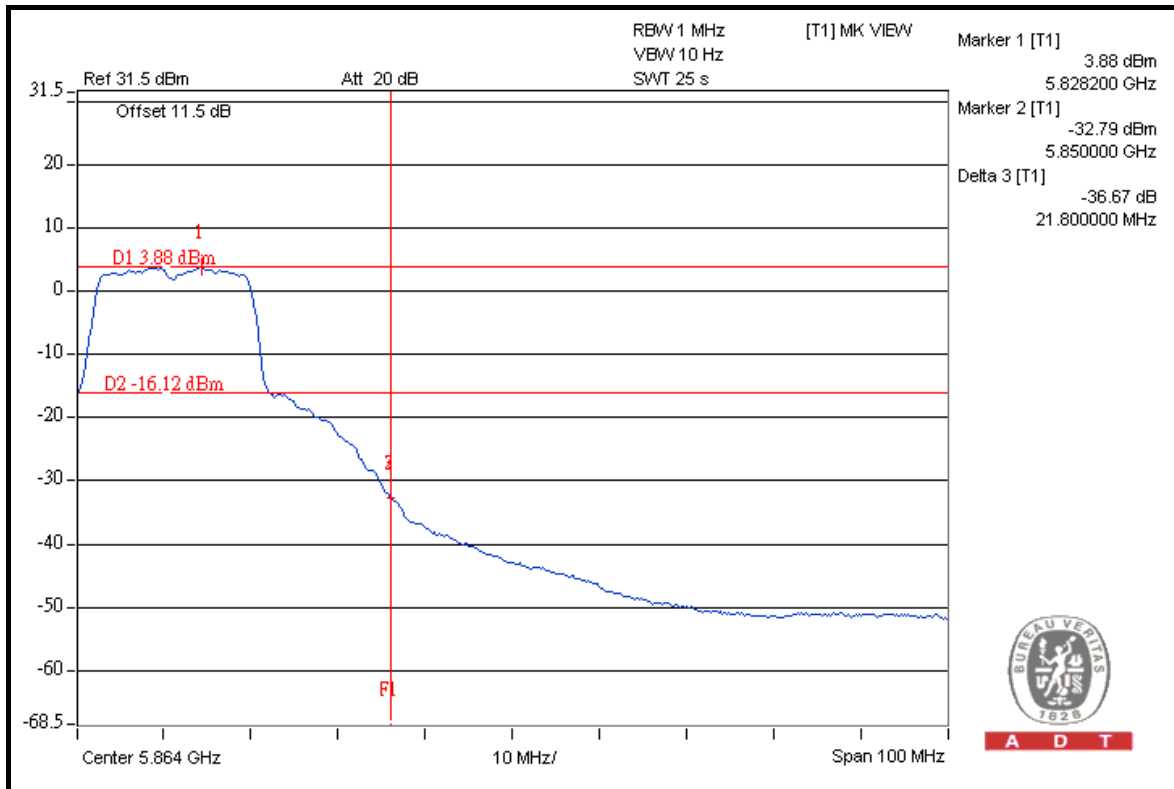


A D T





A D T

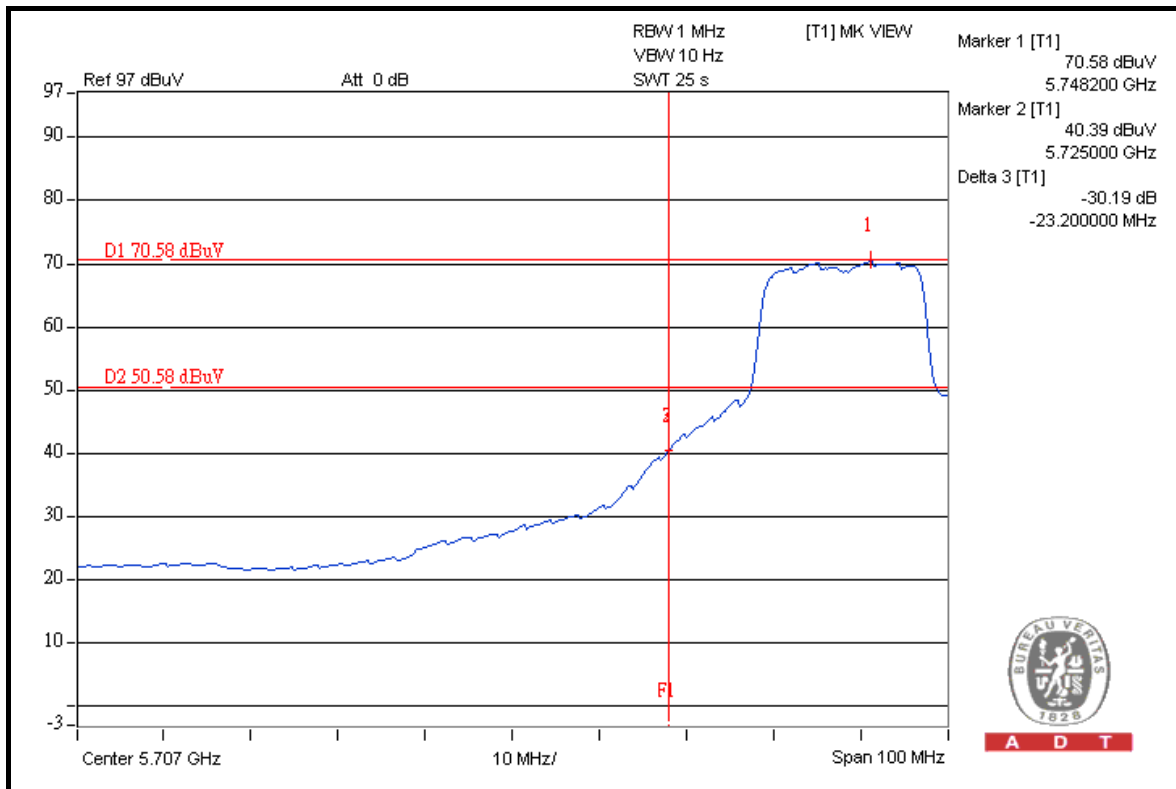
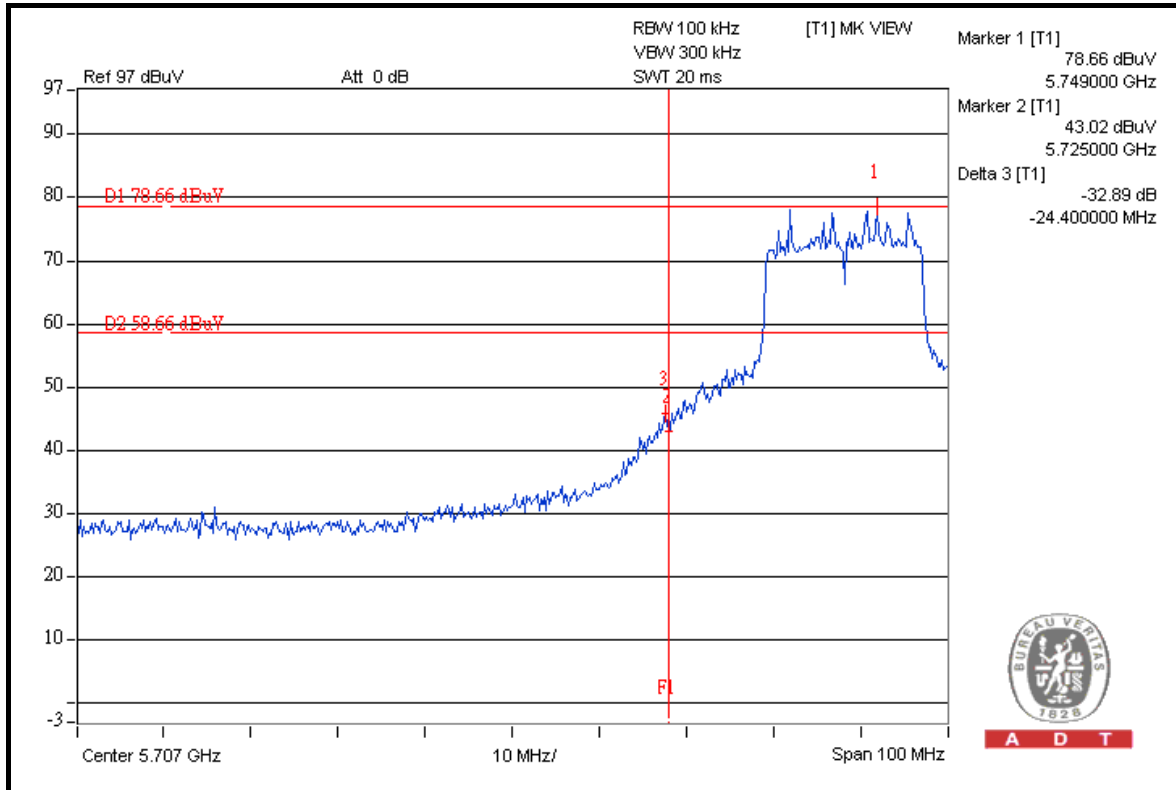




A D T

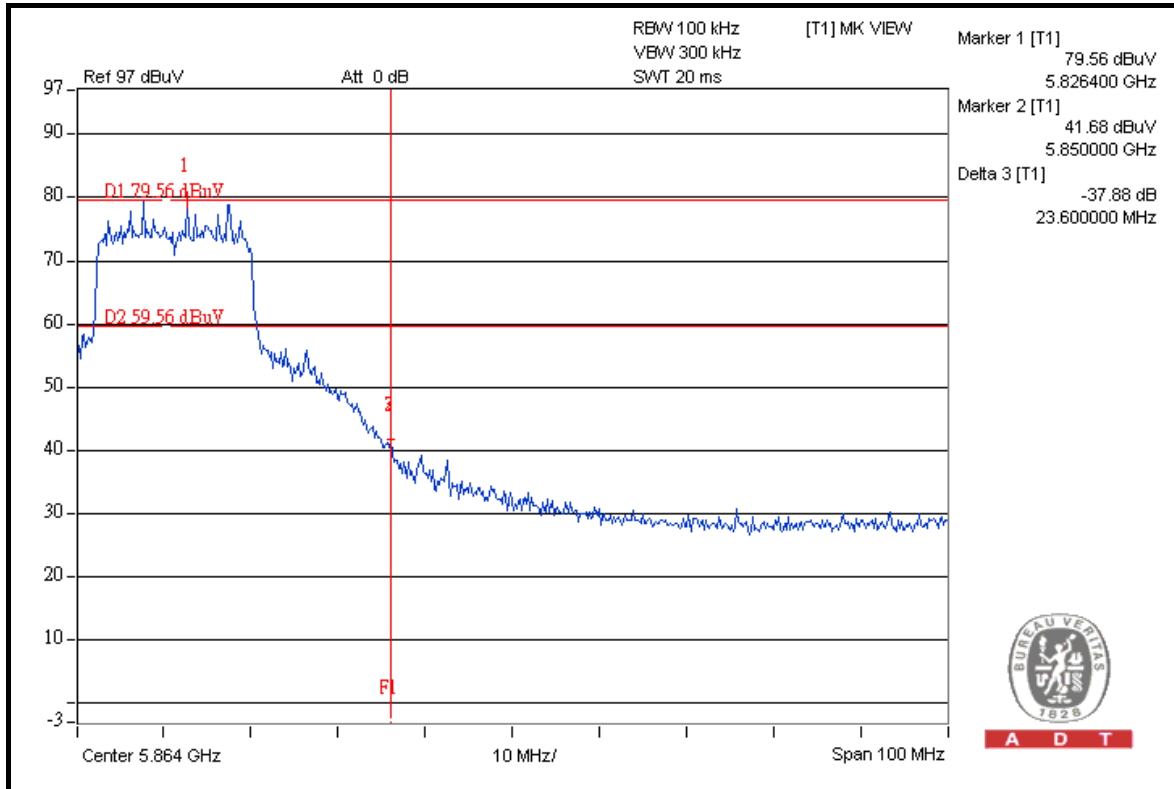
802.11n (20MHz) – TEST MODE D

FOR RADIATED MEASURED (TWO CHAINS ON)

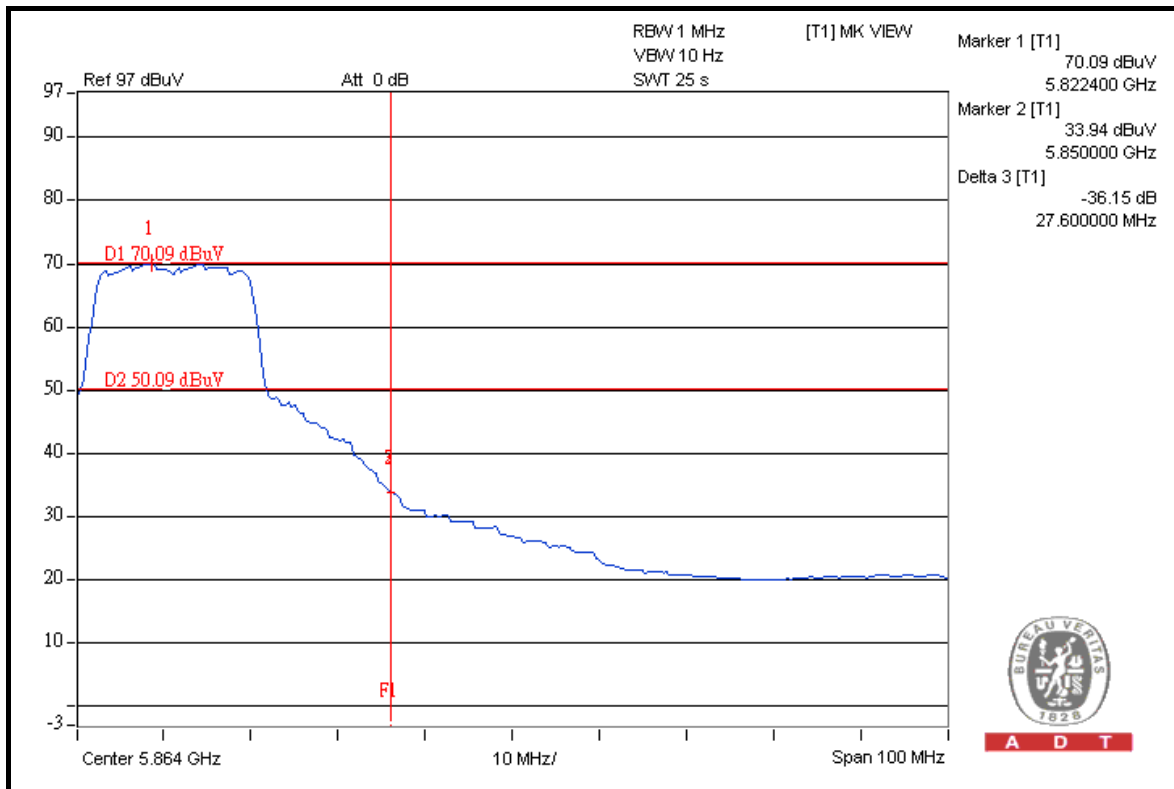




A D T



A D T



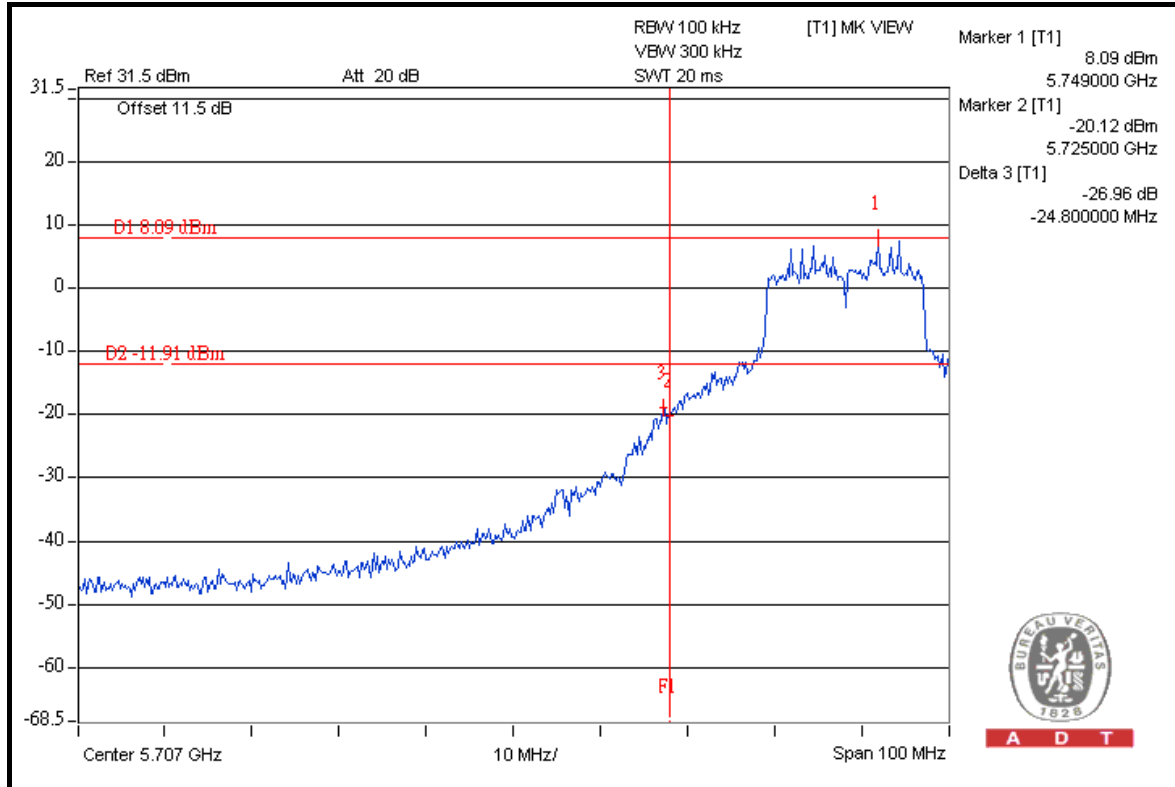
A D T



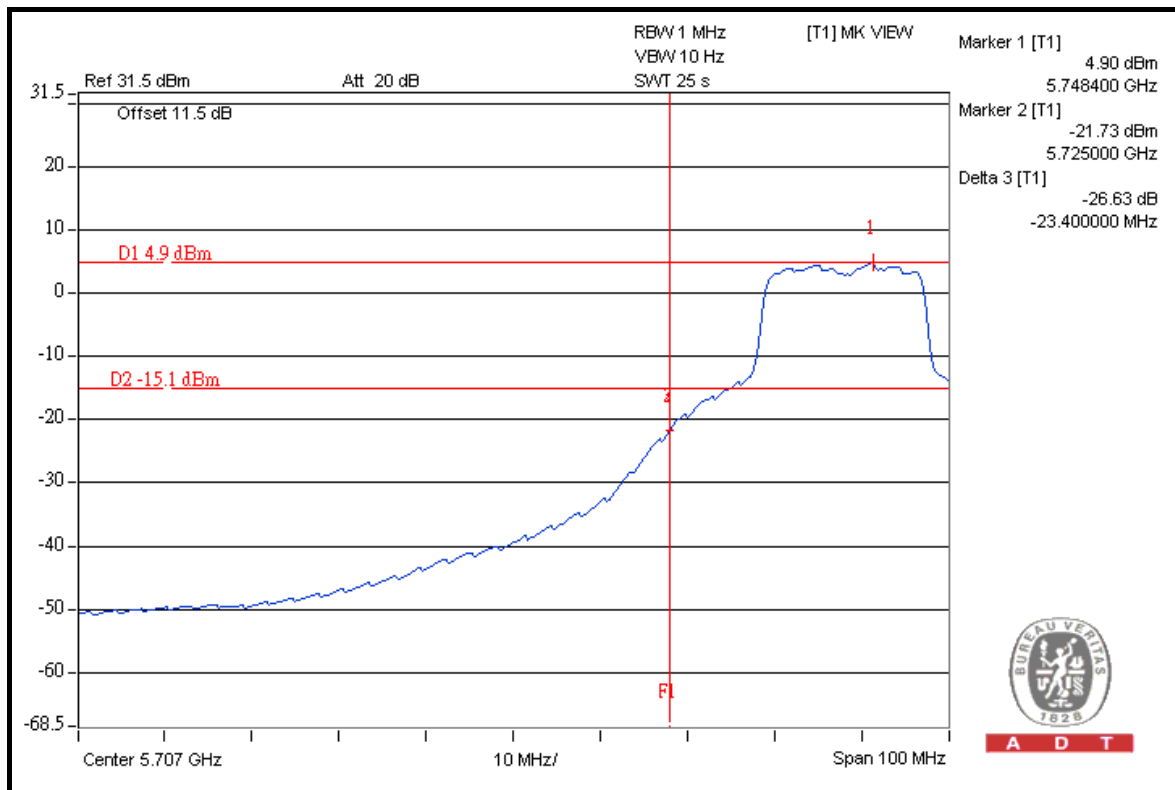
A D T

FOR CONDUCTED MEASURED

CHAIN 0



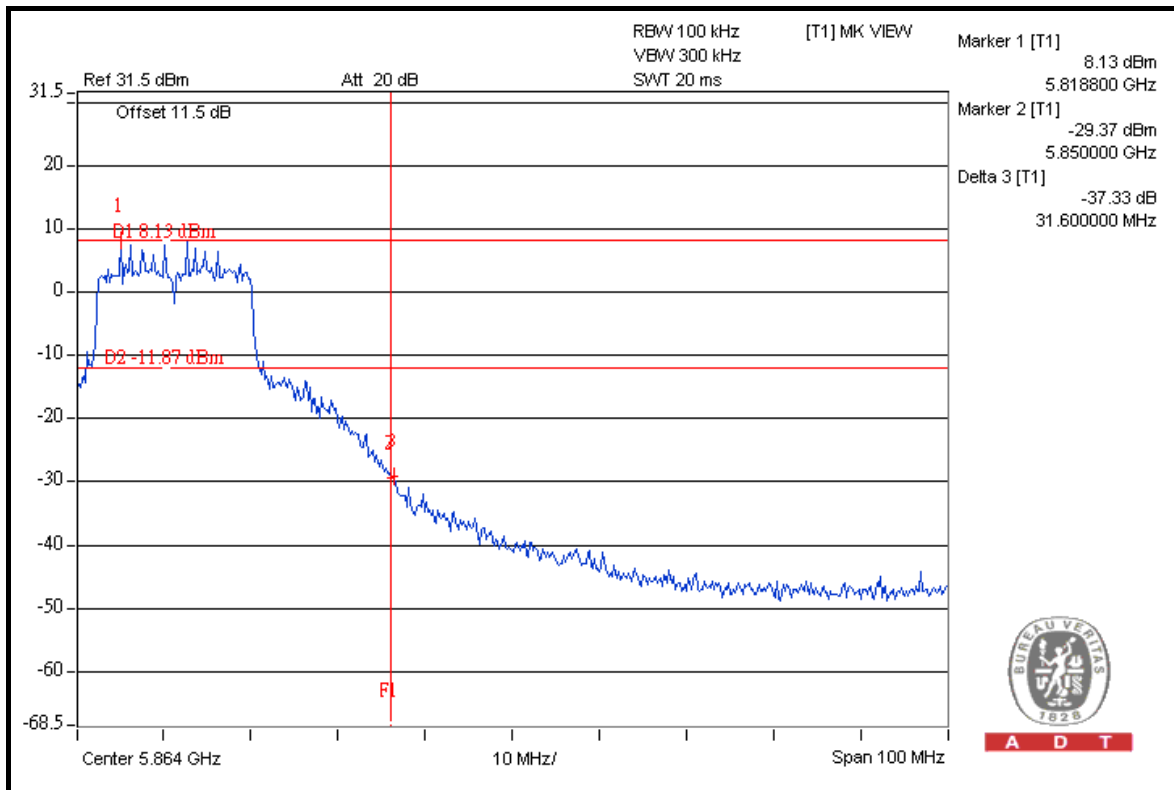
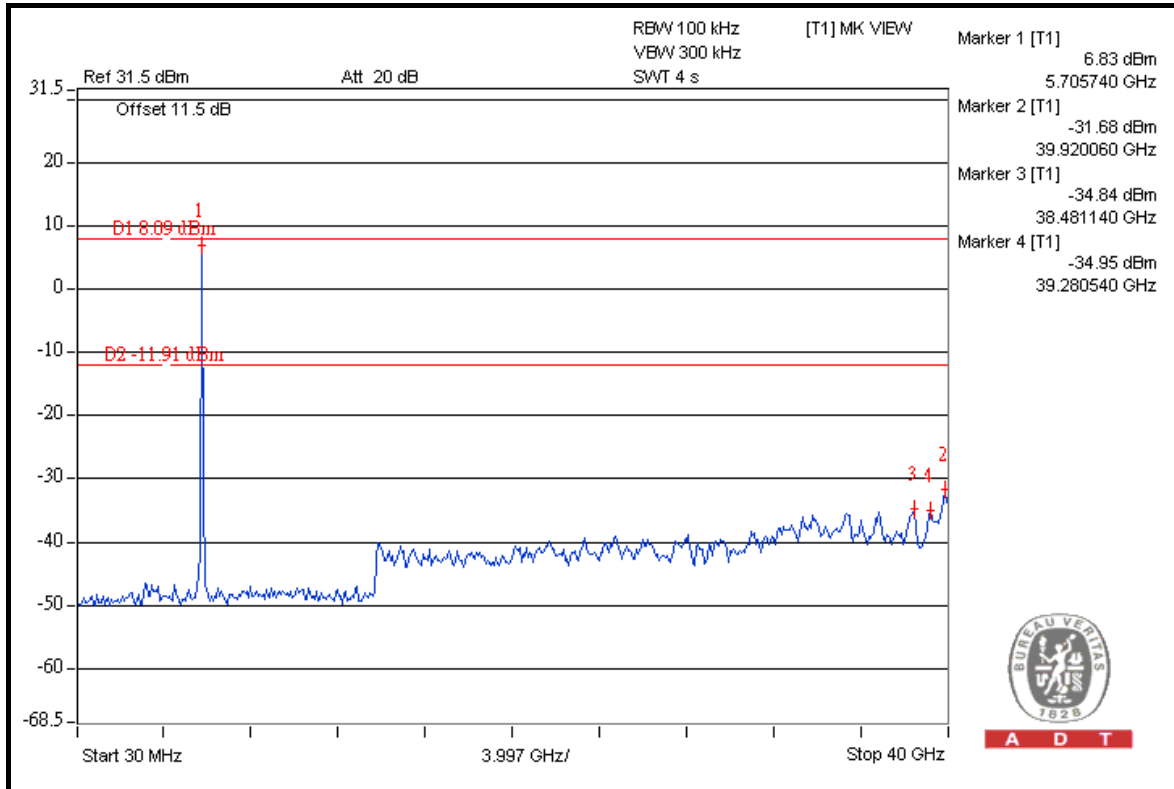
A D T



A D T

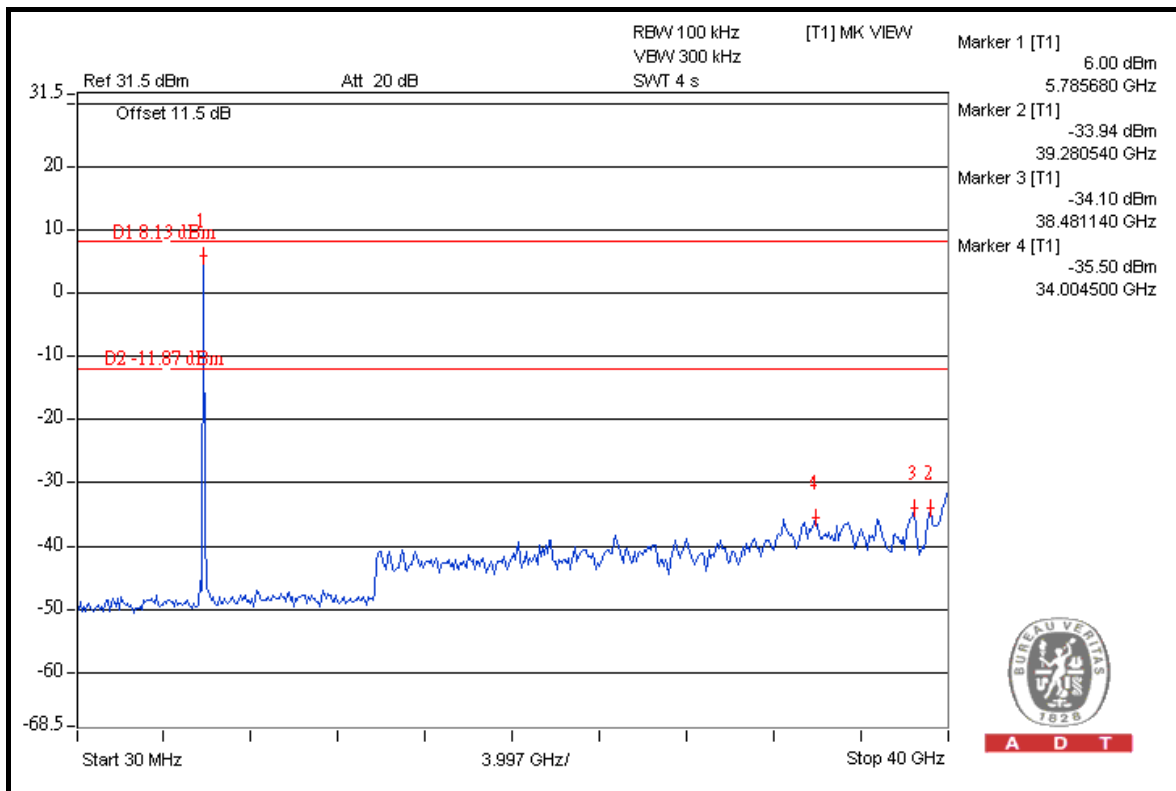
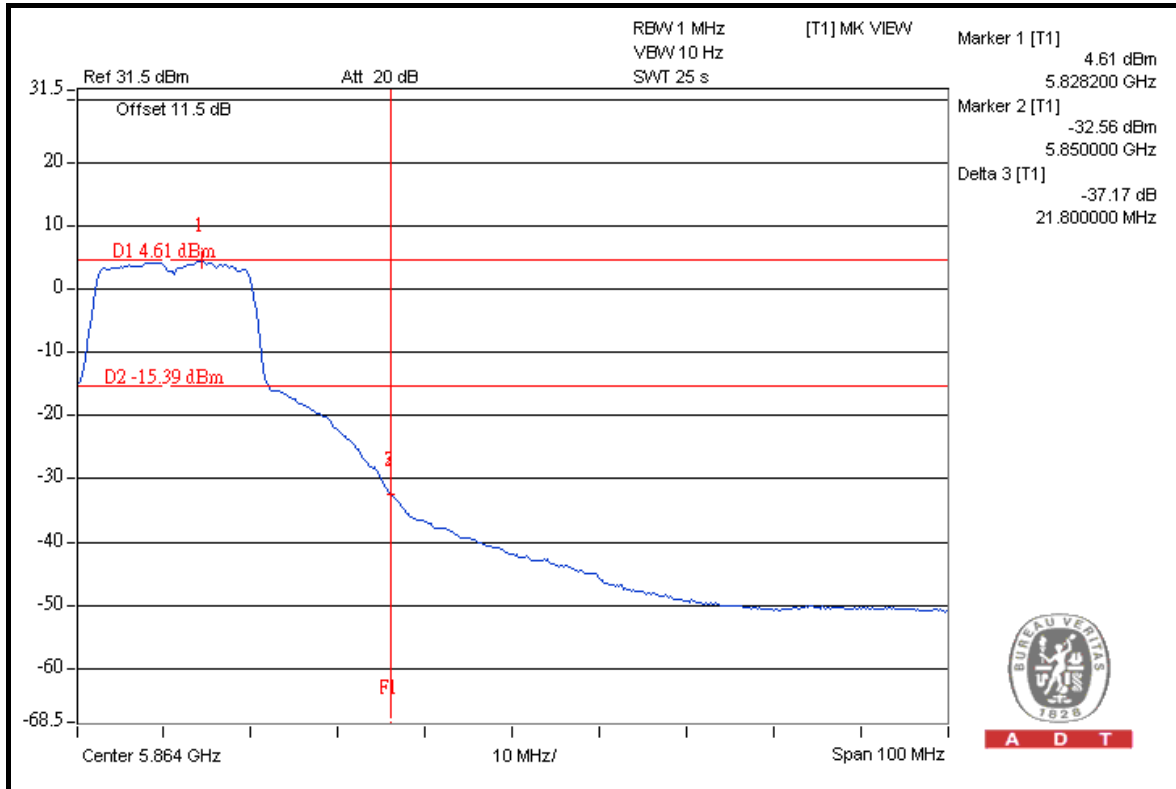


A D T





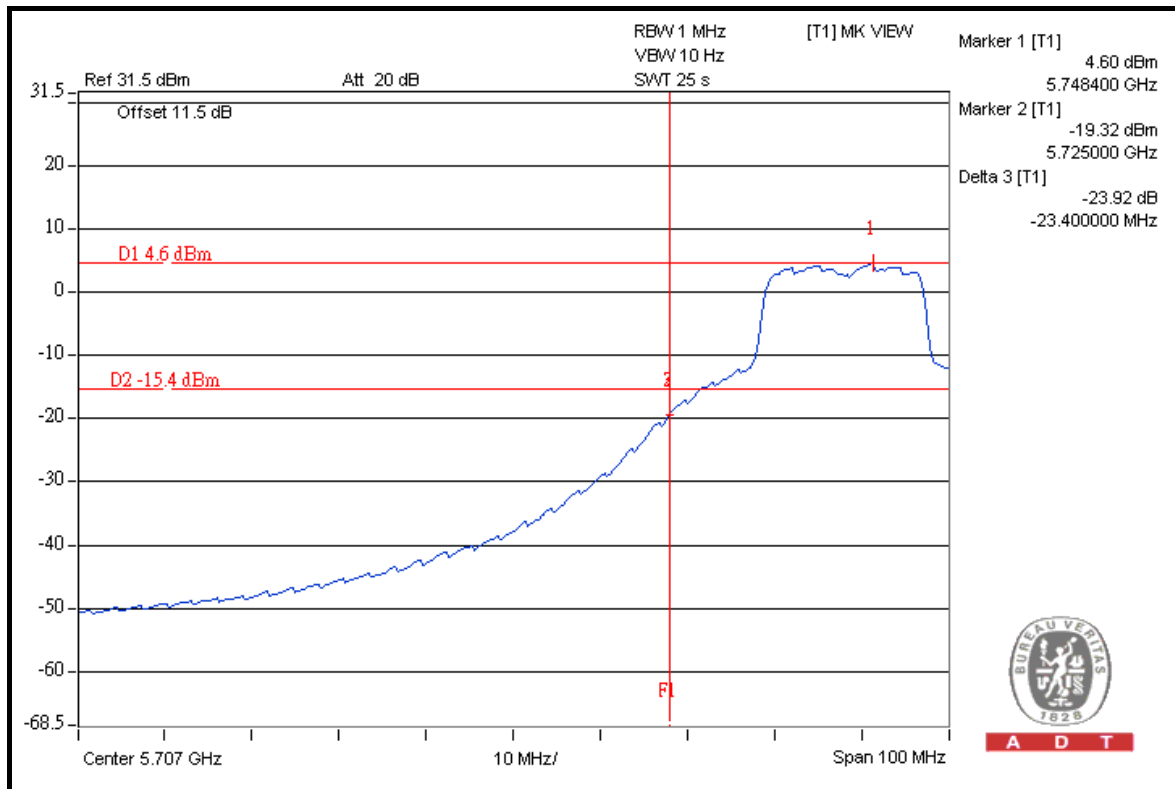
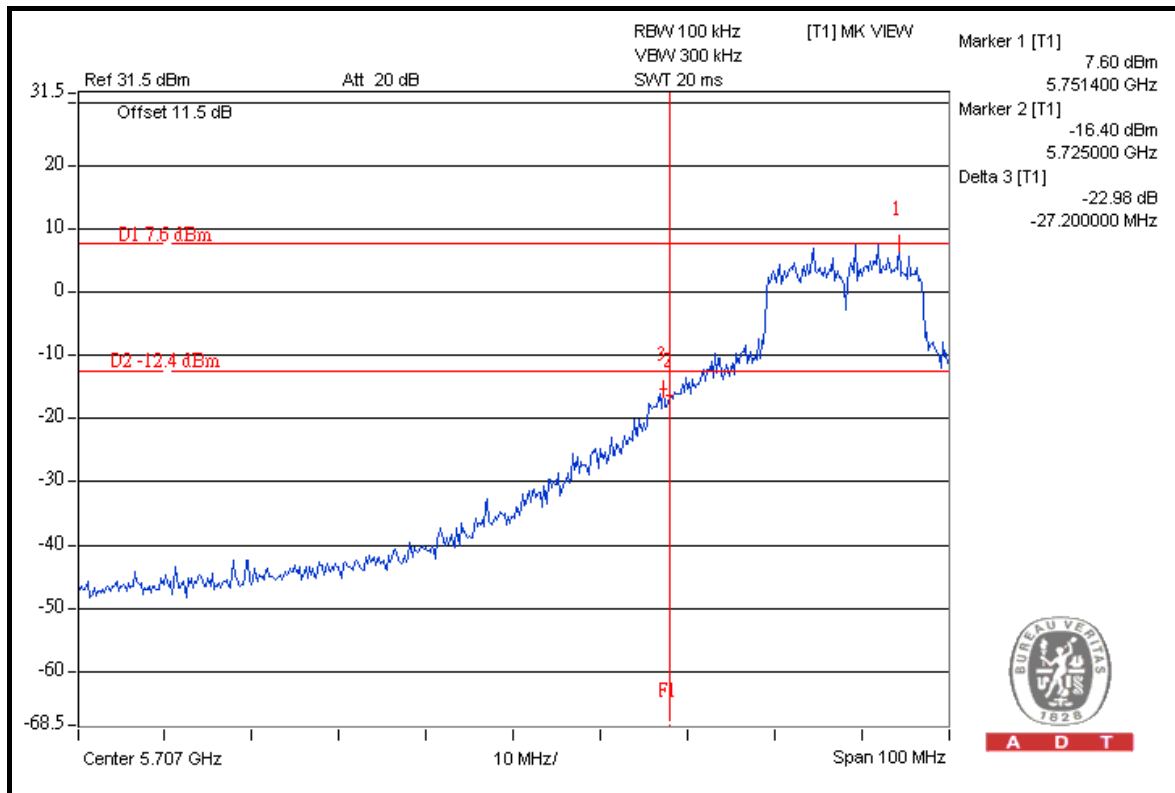
A D T





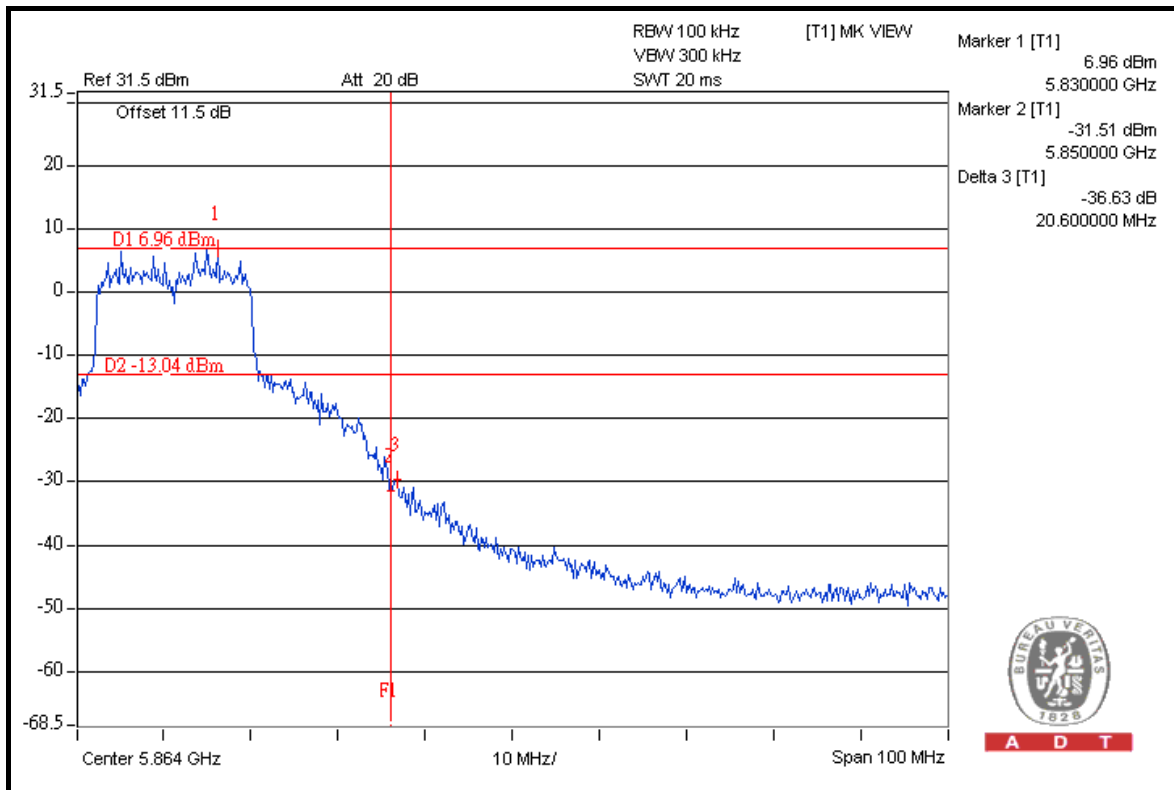
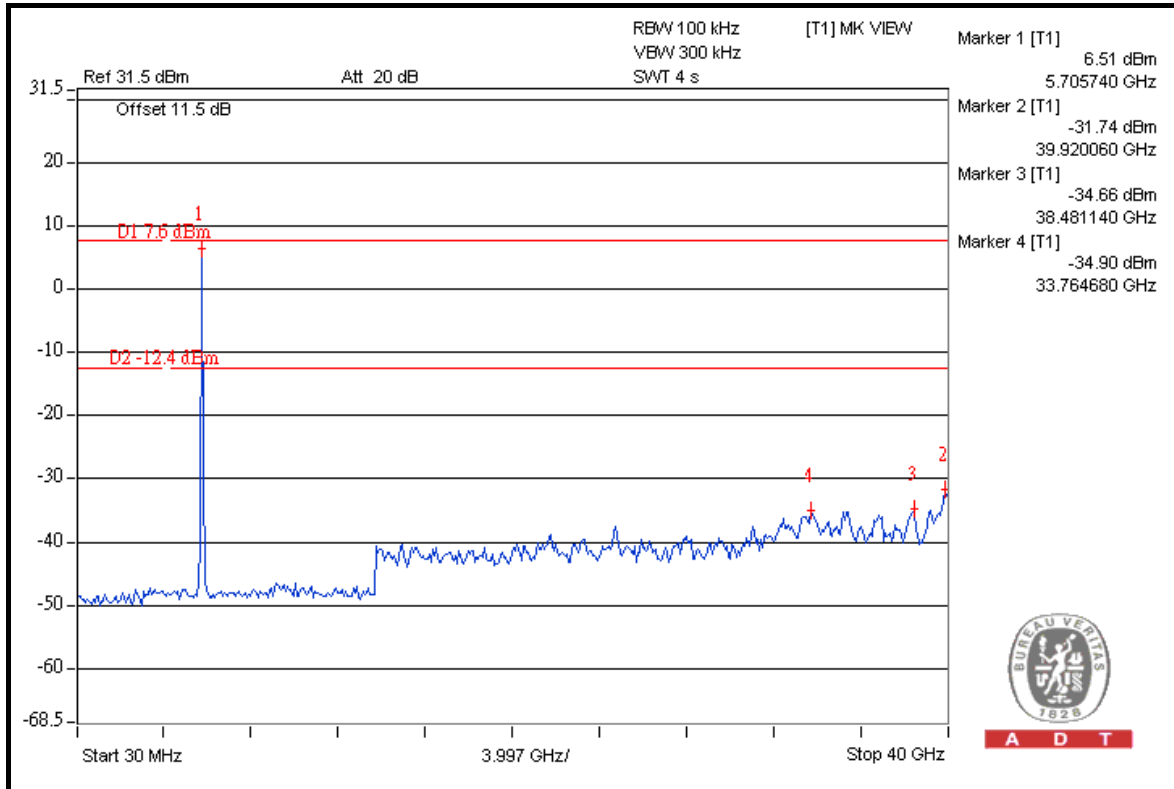
A D T

CHAIN 1



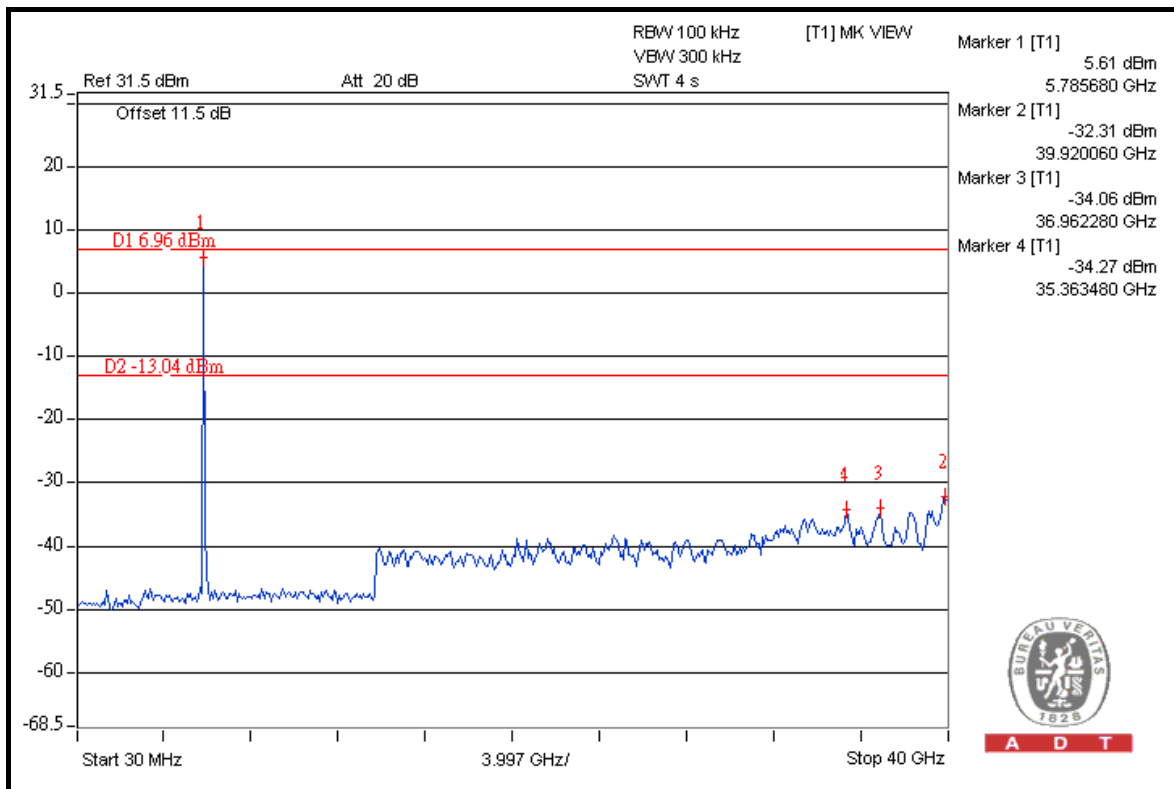
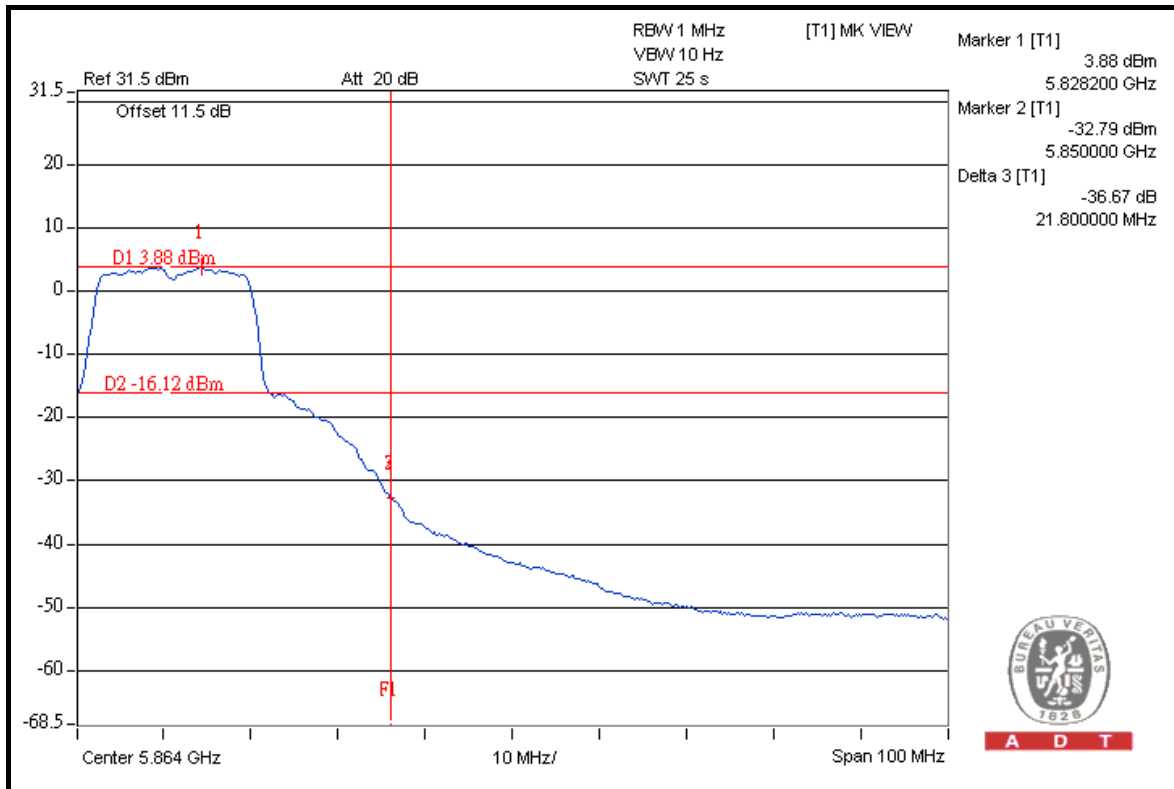


A D T





A D T

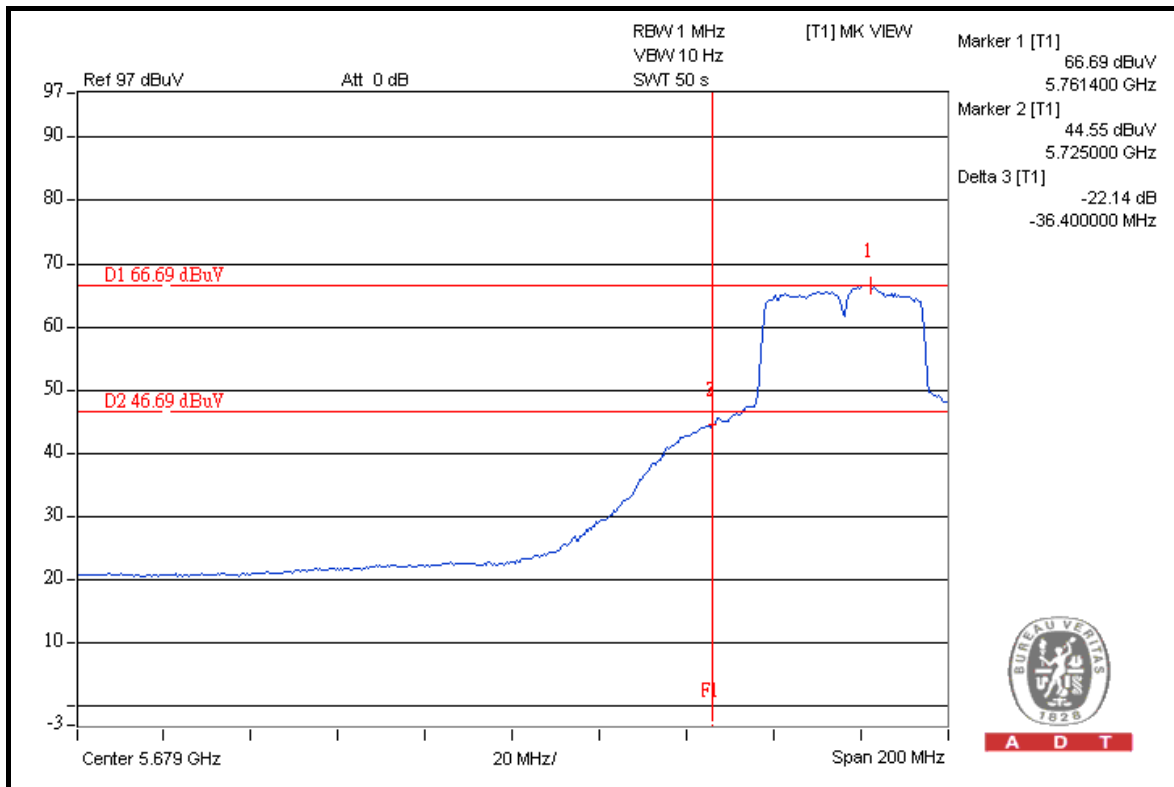
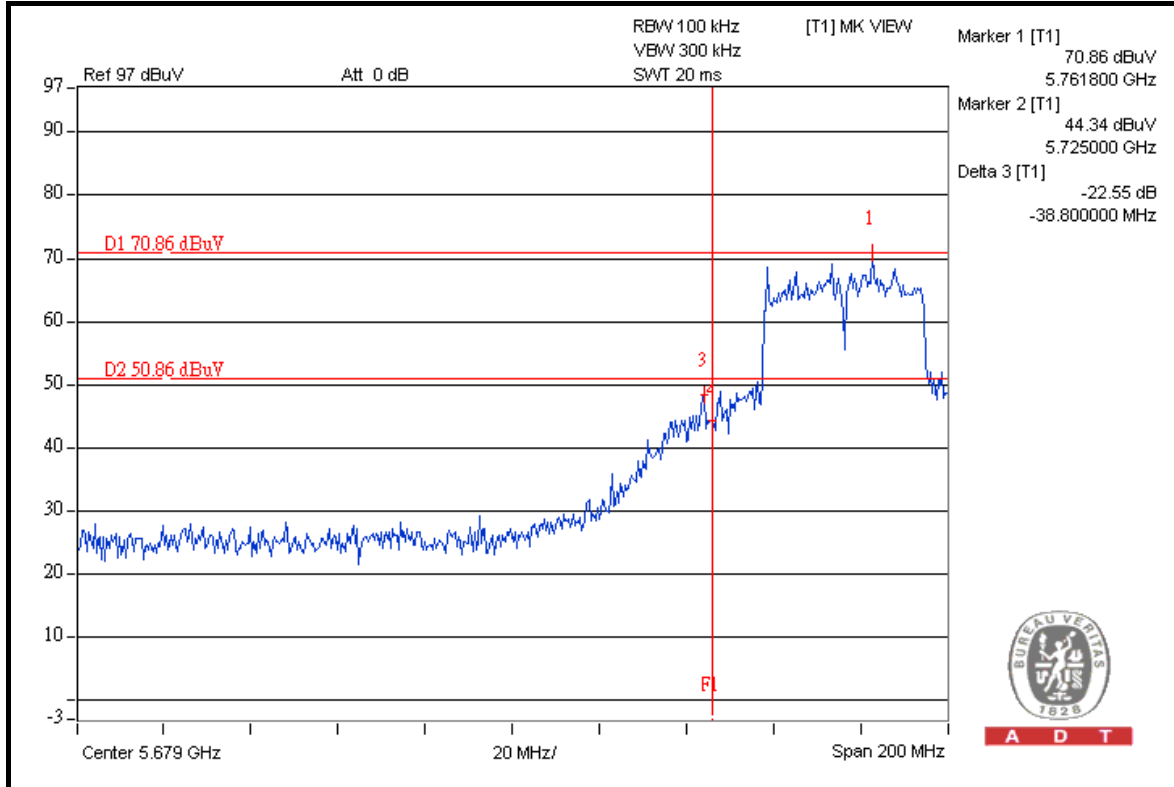




A D T

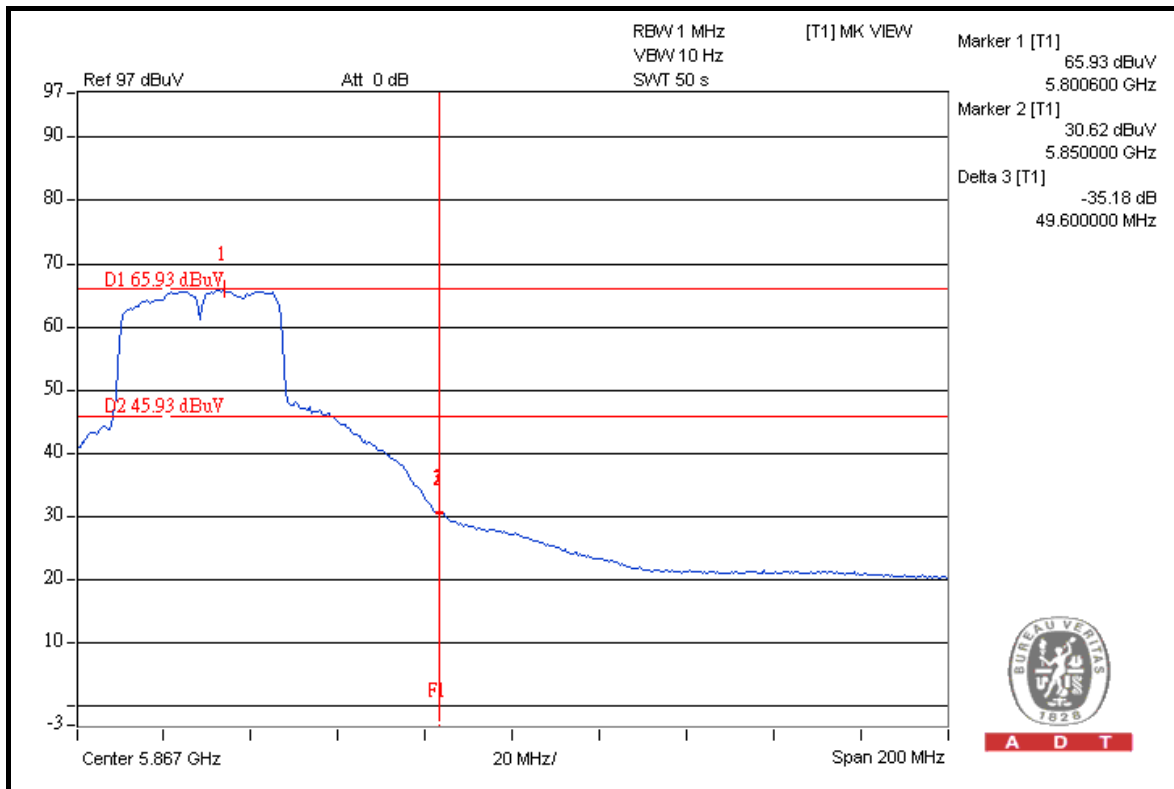
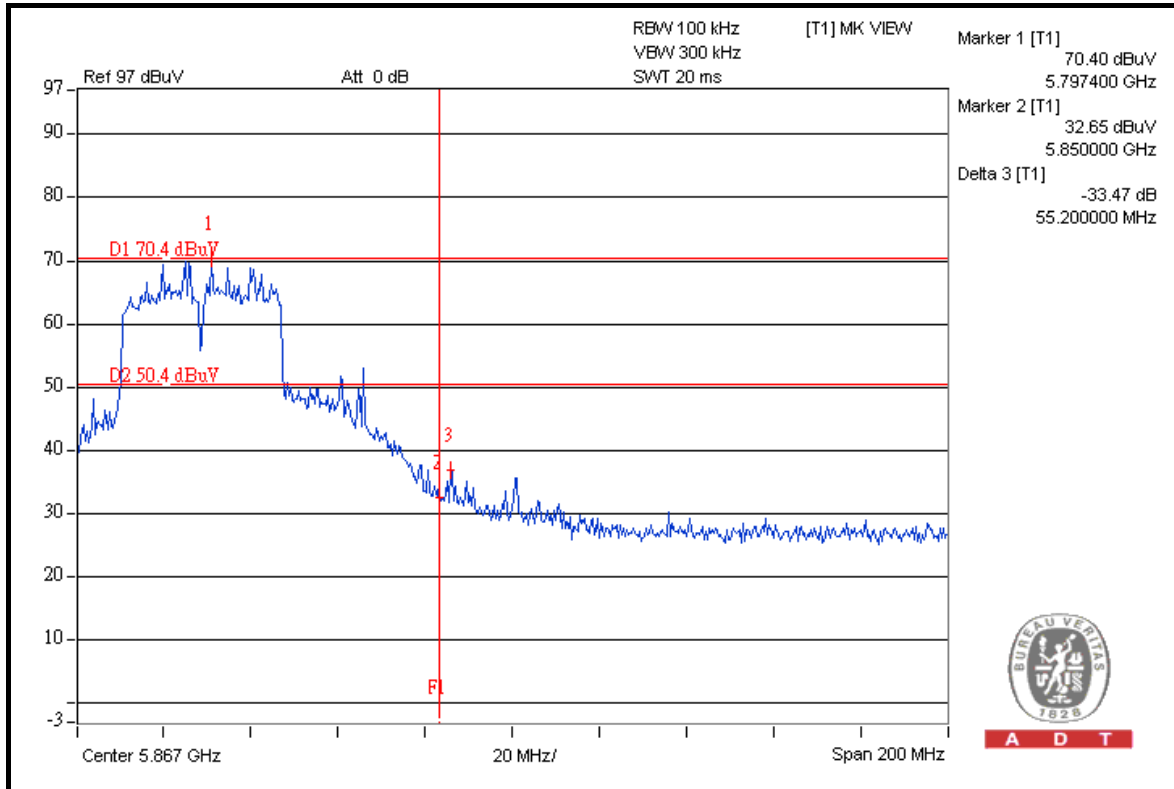
802.11n (40MHz) – TEST MODE B

FOR RADIATED MEASURED (TWO CHAINS ON)





A D T

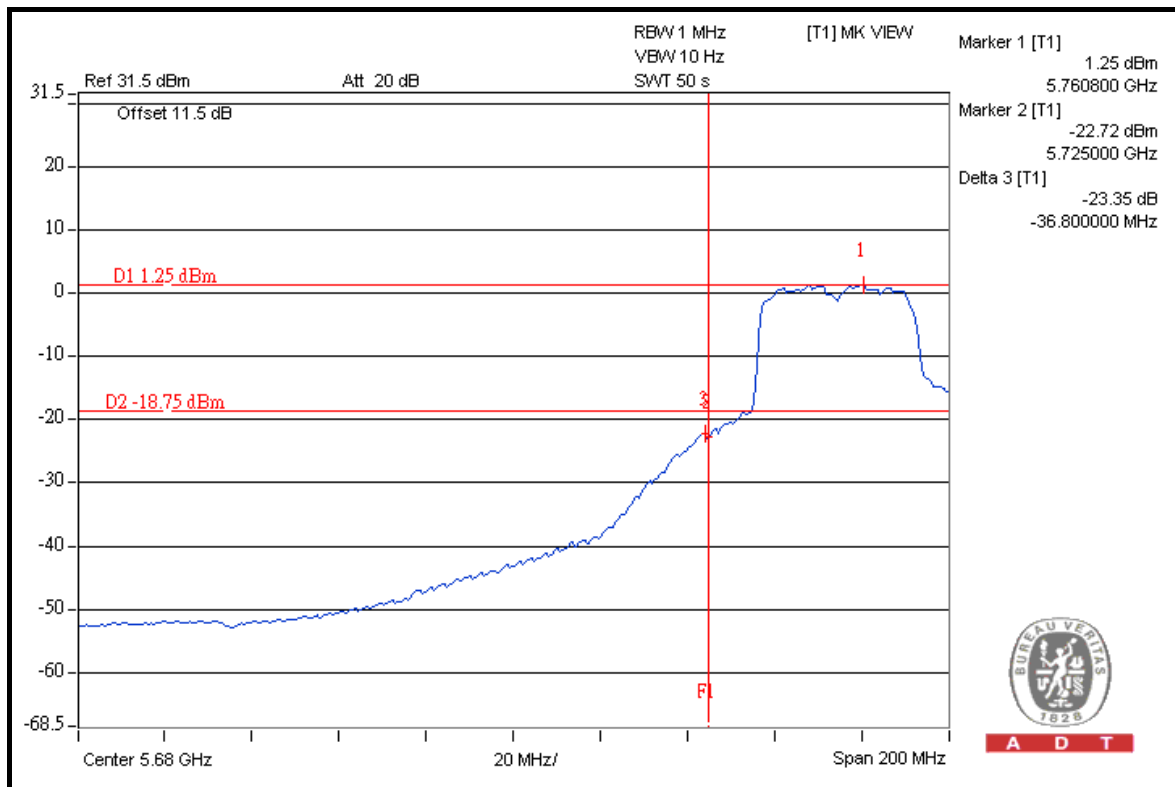
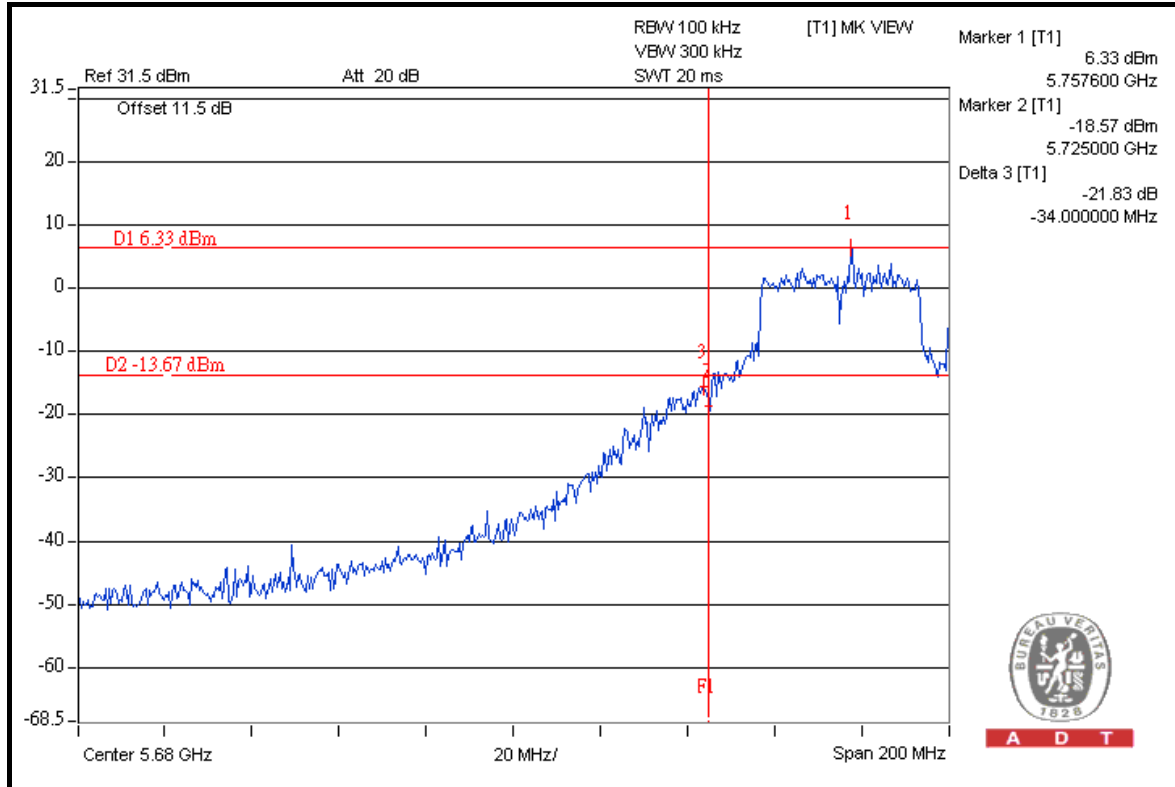




A D T

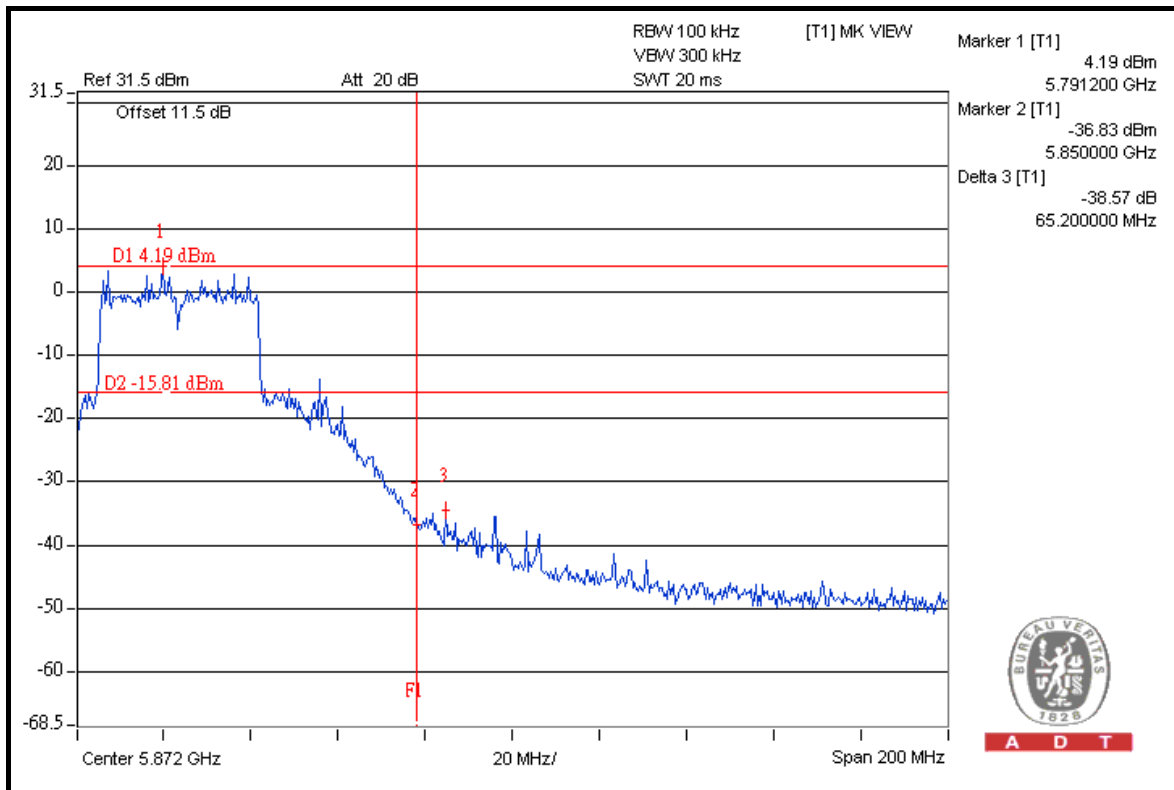
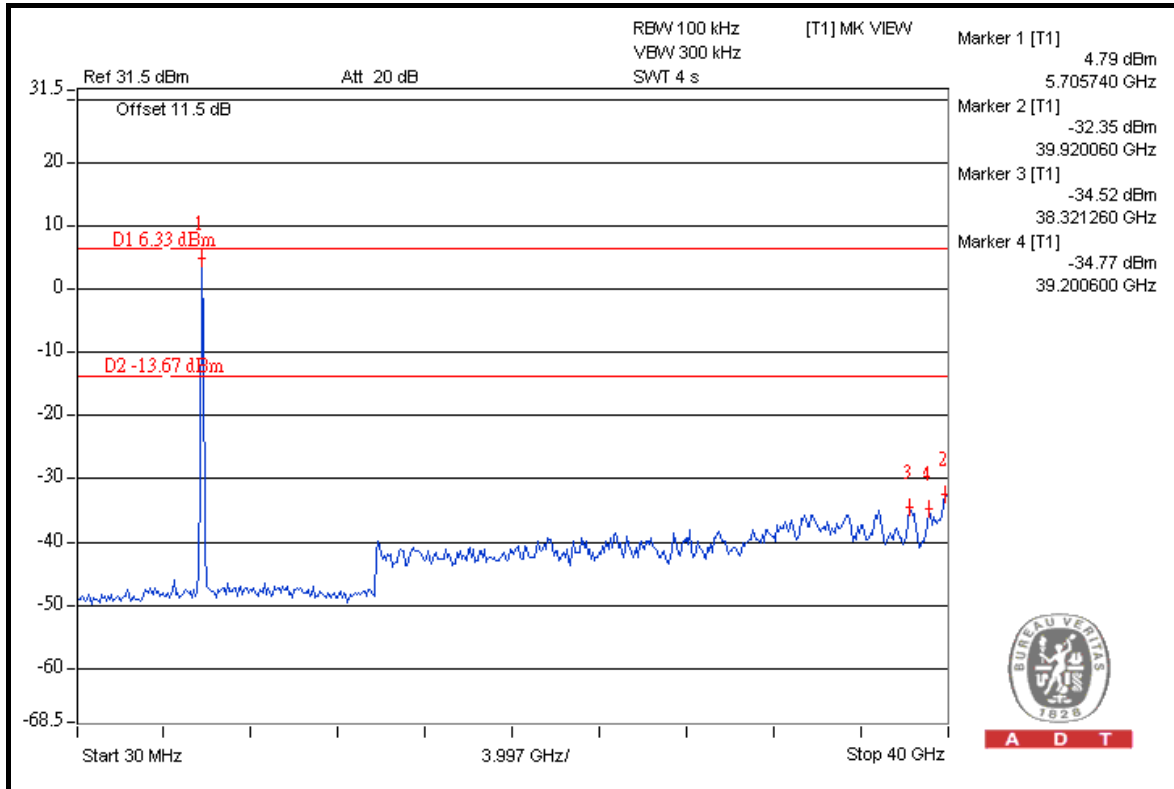
FOR CONDUCTED MEASURED

CHAIN 0



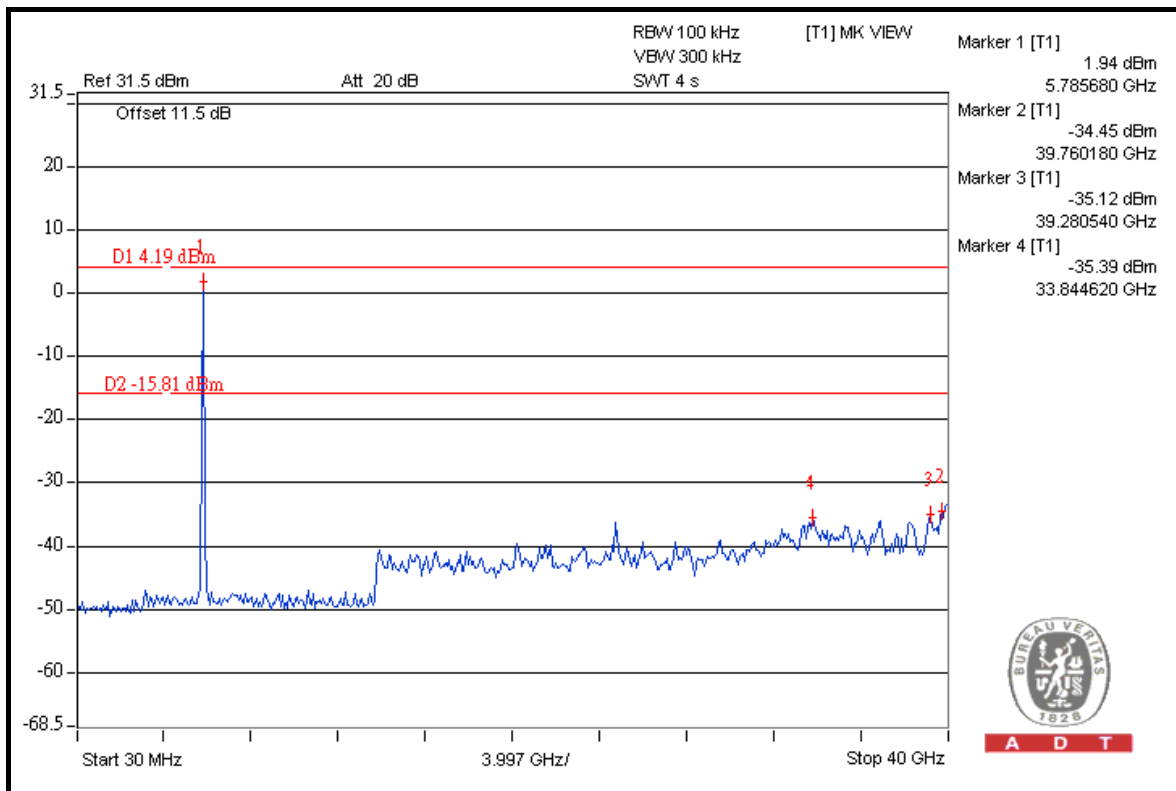
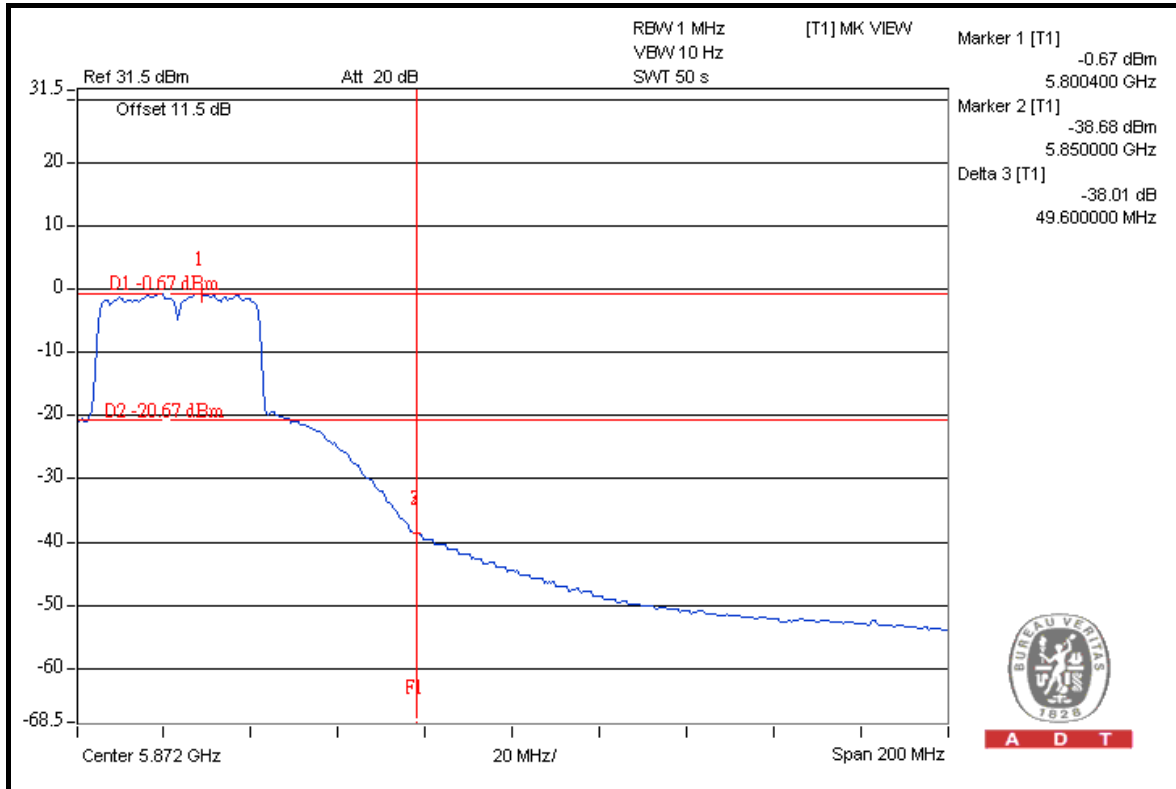


A D T





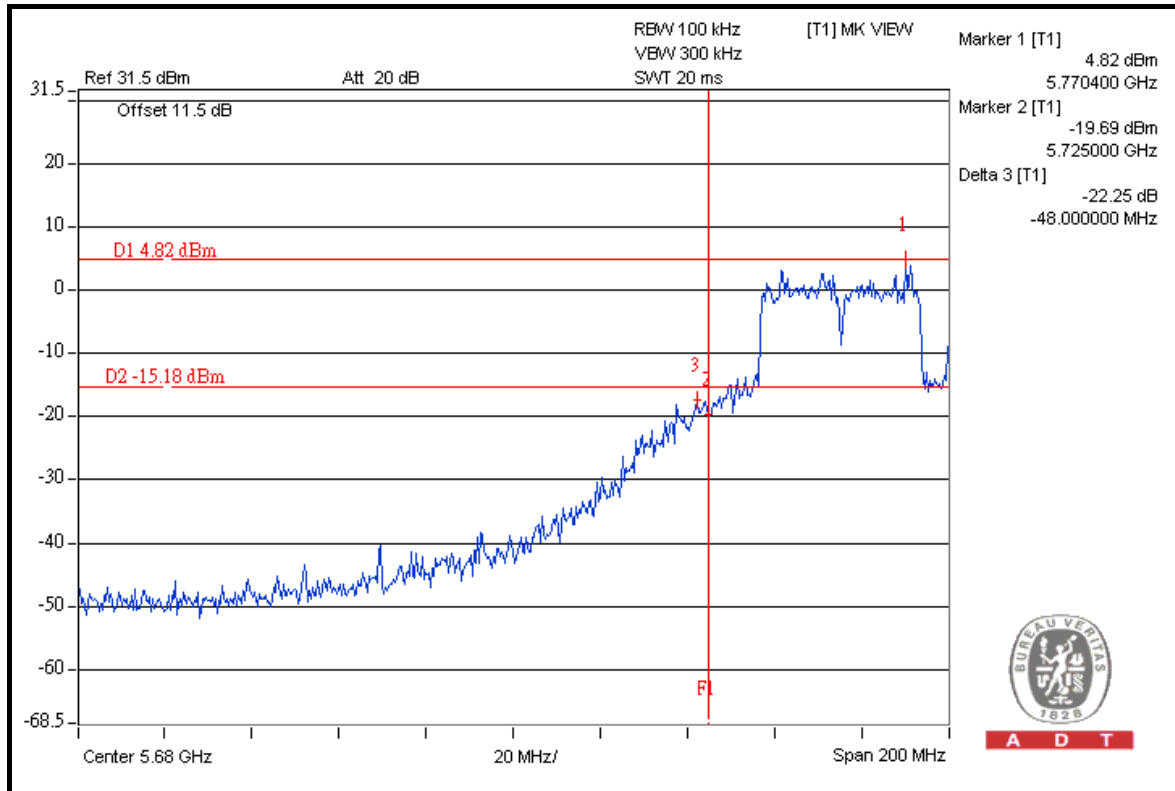
A D T



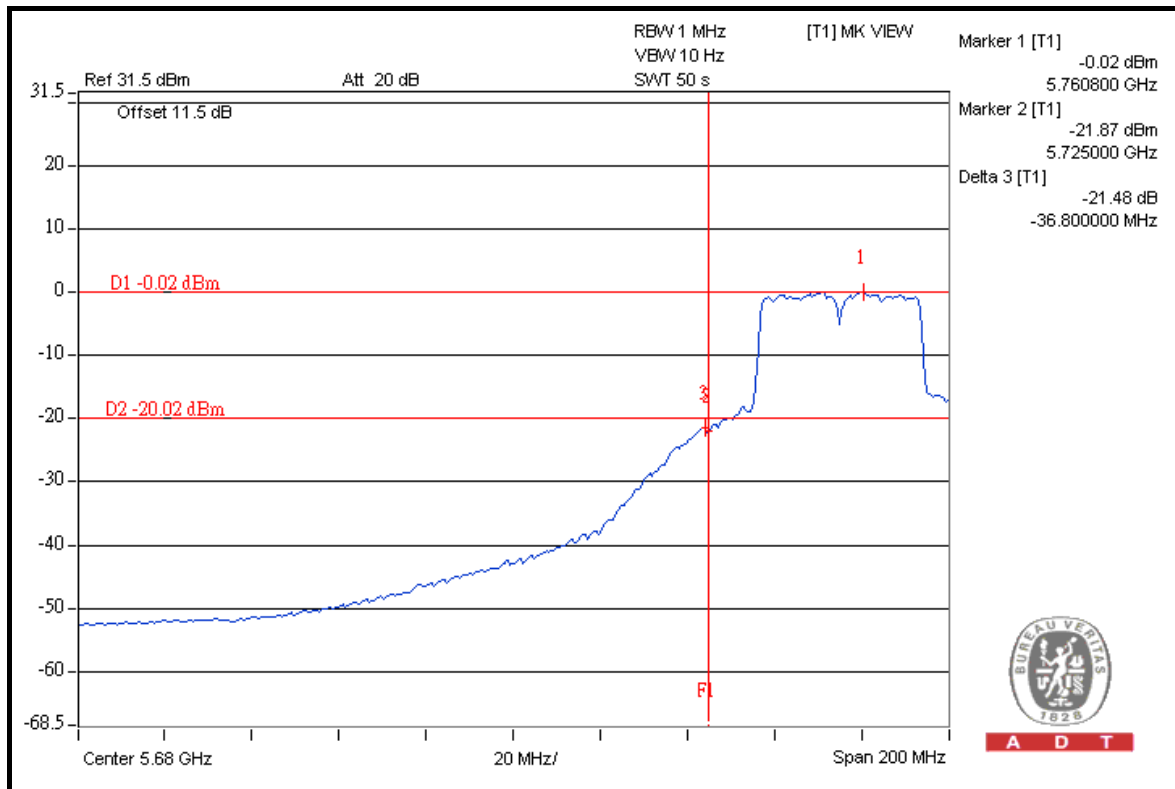


A D T

CHAIN 1



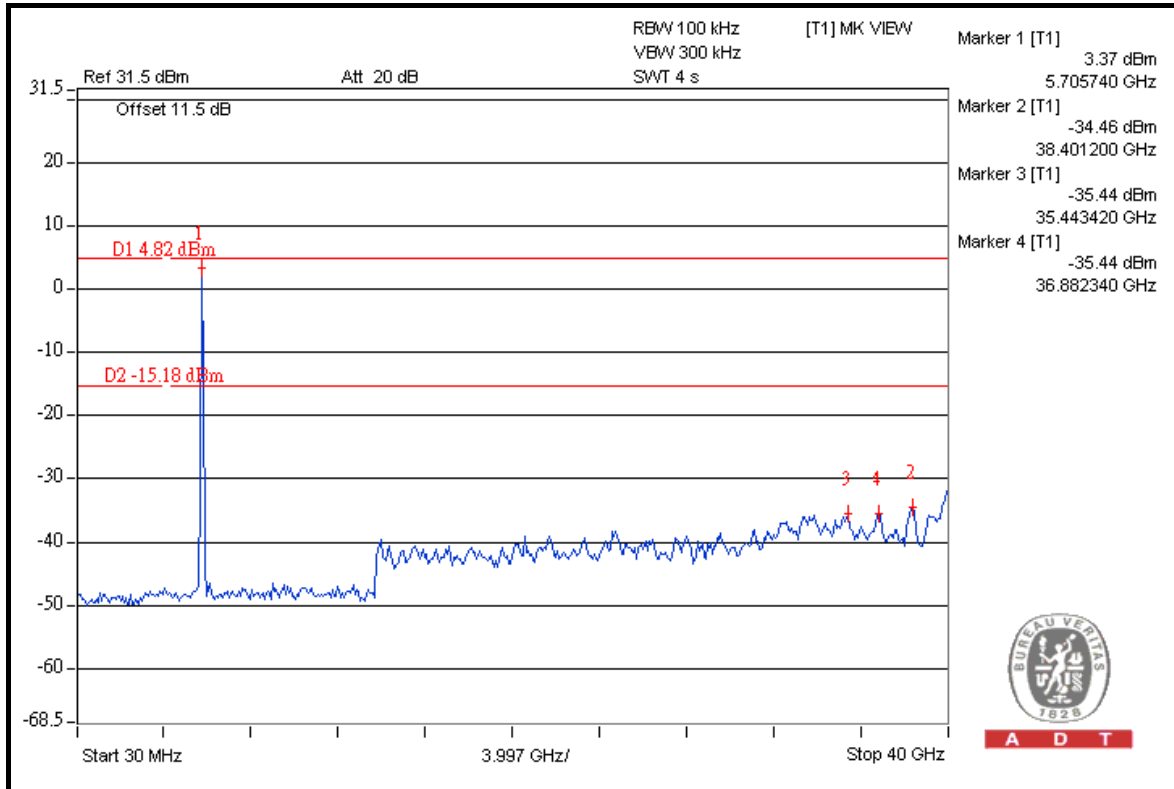
A D T



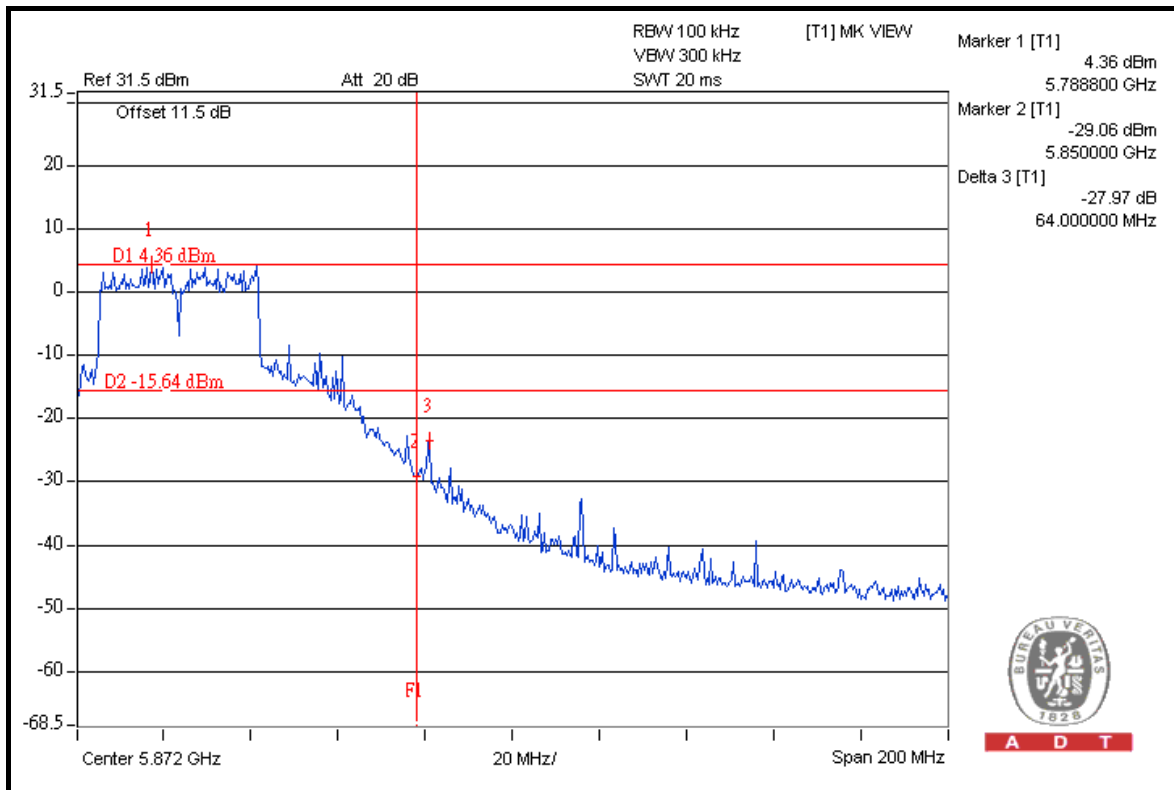
A D T



A D T



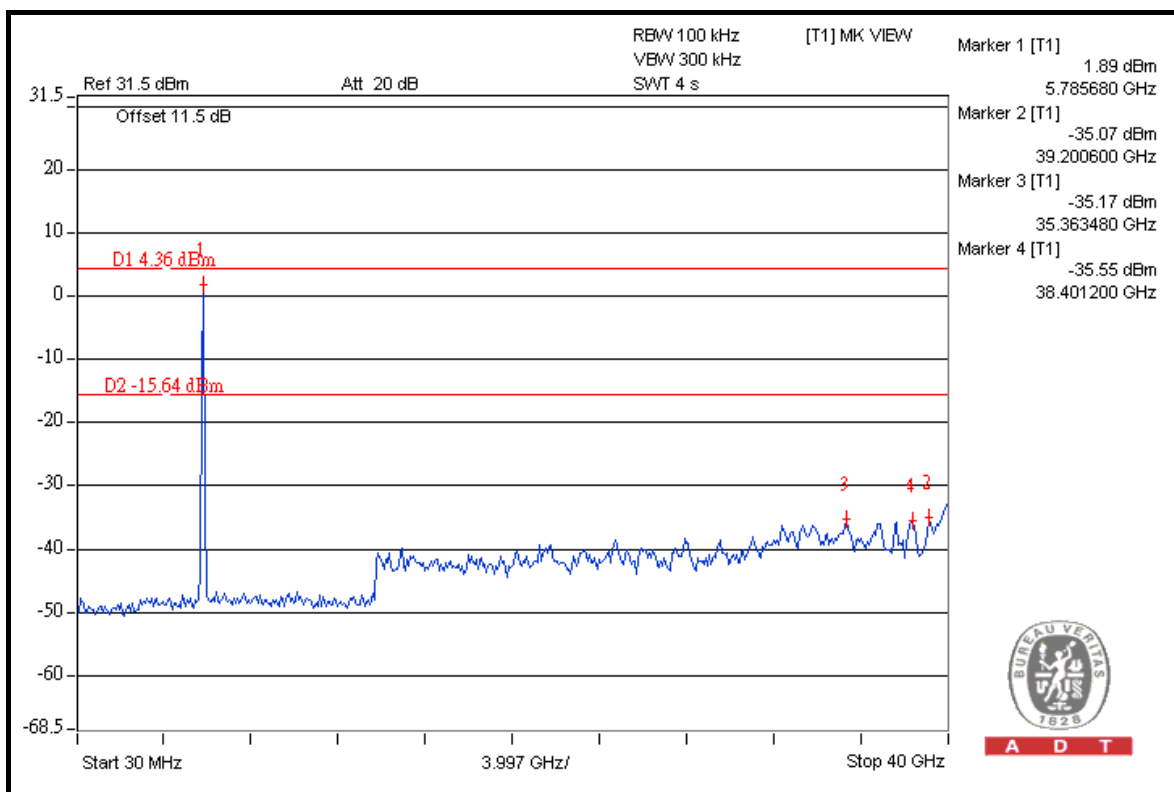
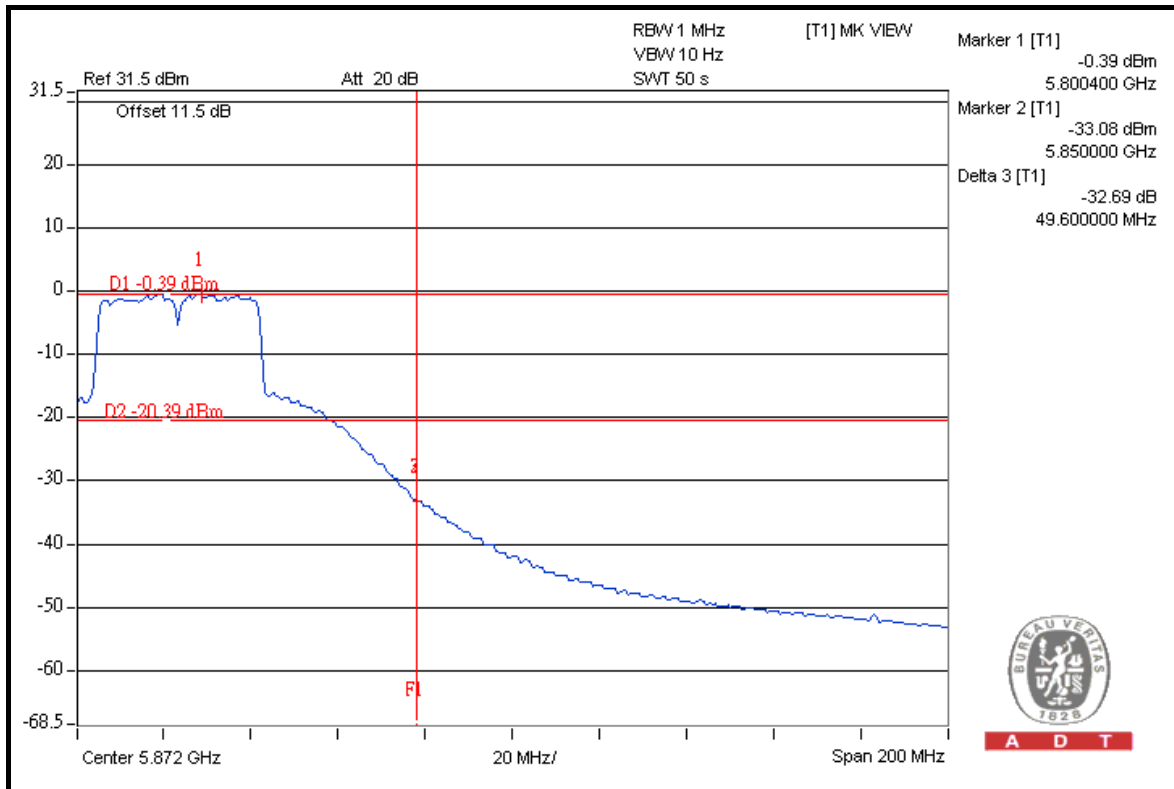
A D T



A D T



A D T

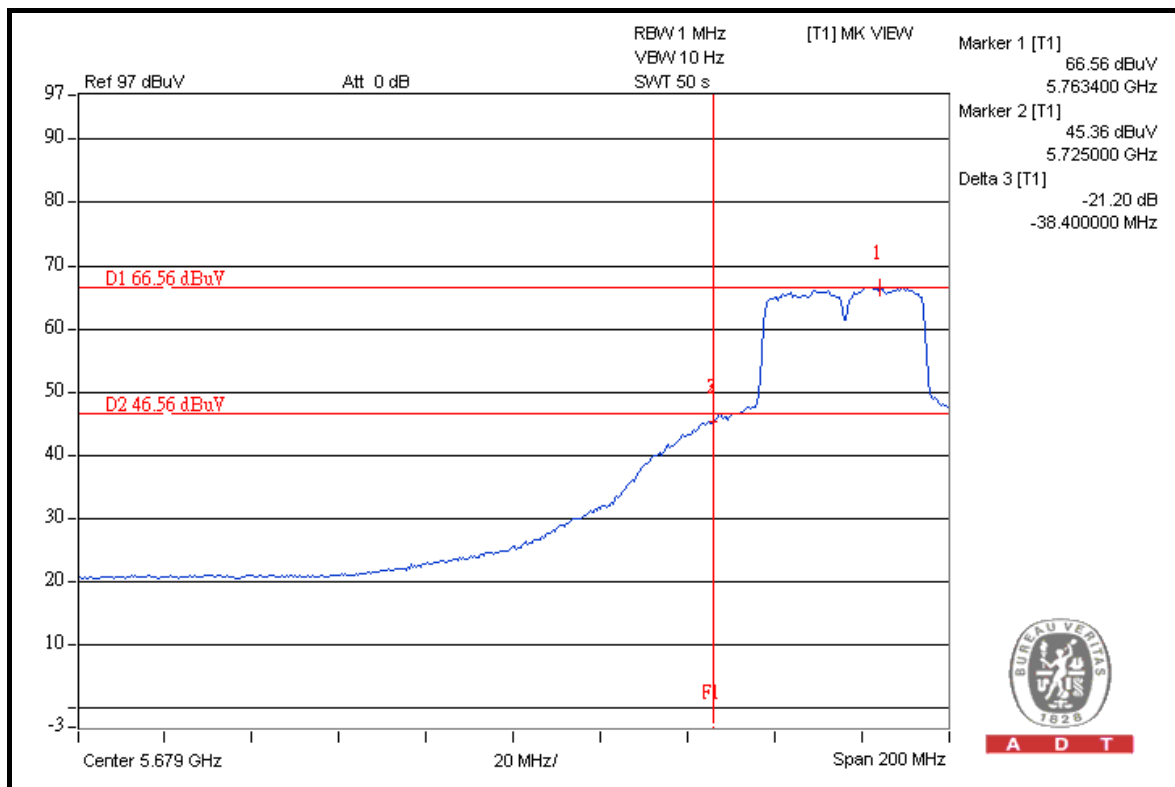
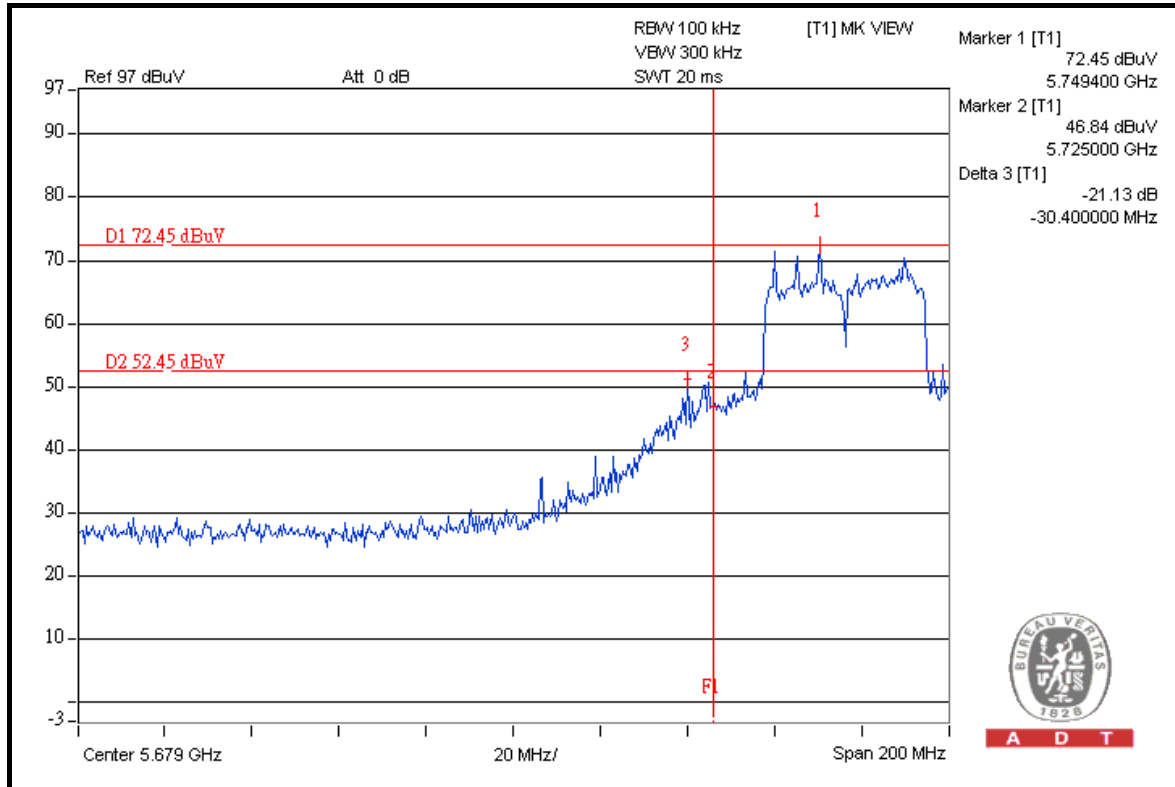




A D T

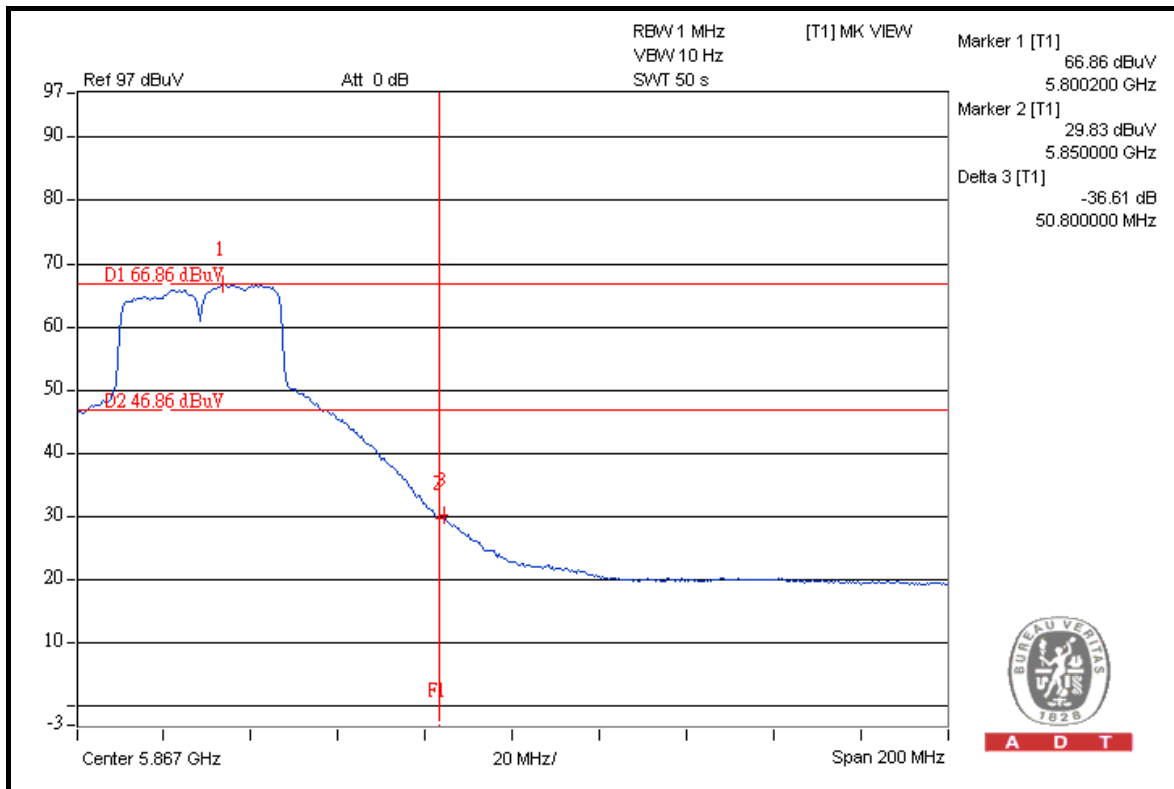
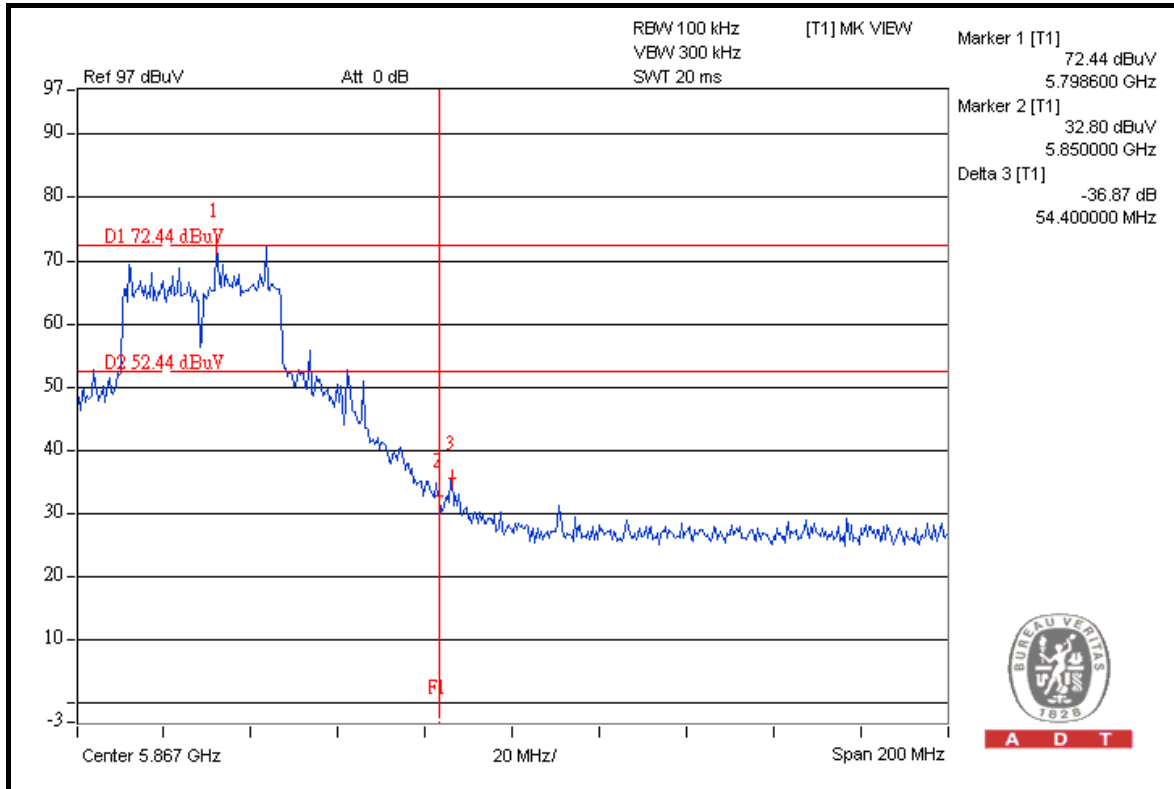
802.11n (40MHz) – TEST MODE D

FOR RADIATED MEASURED (TWO CHAINS ON)





A D T

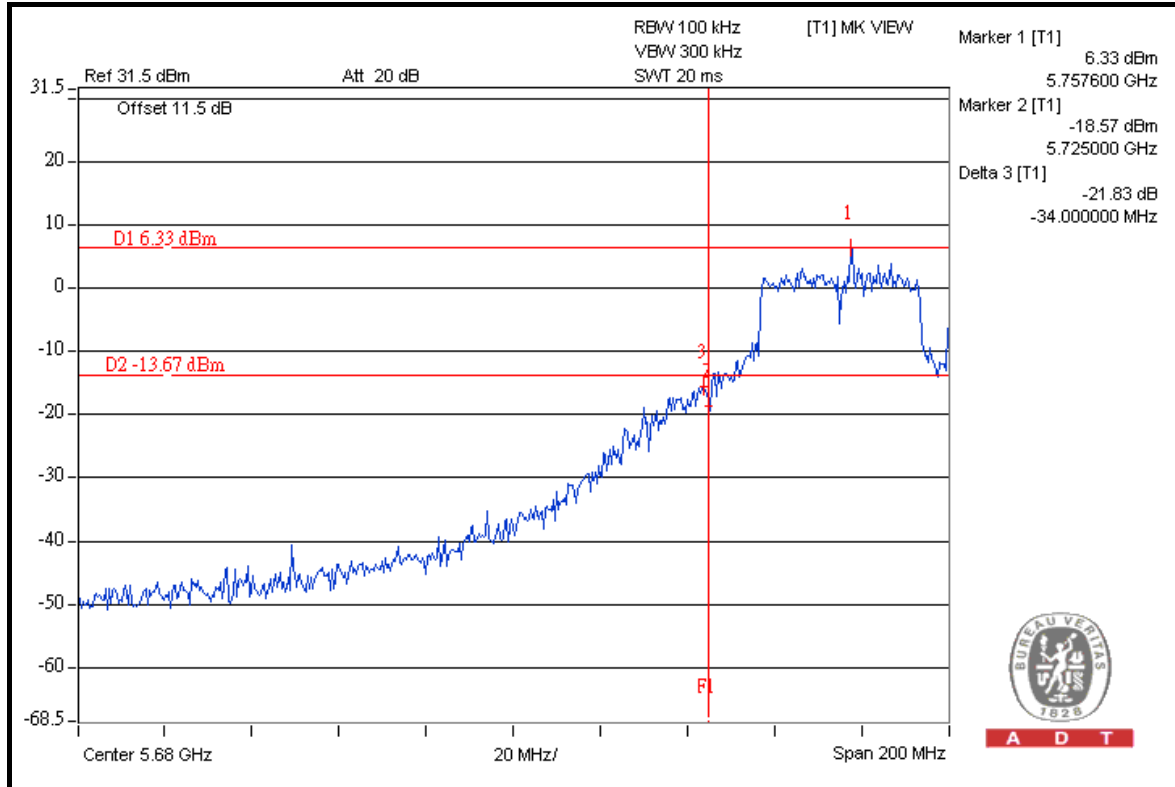




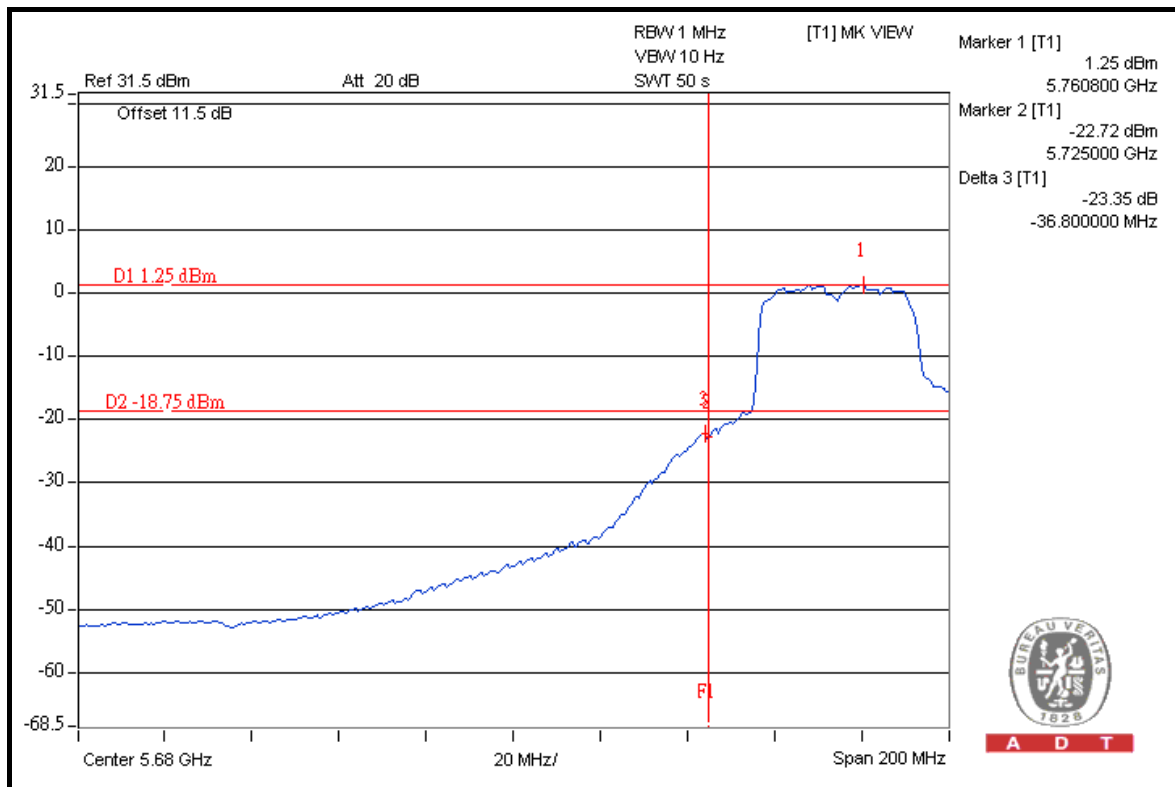
A D T

FOR CONDUCTED MEASURED

CHAIN 0



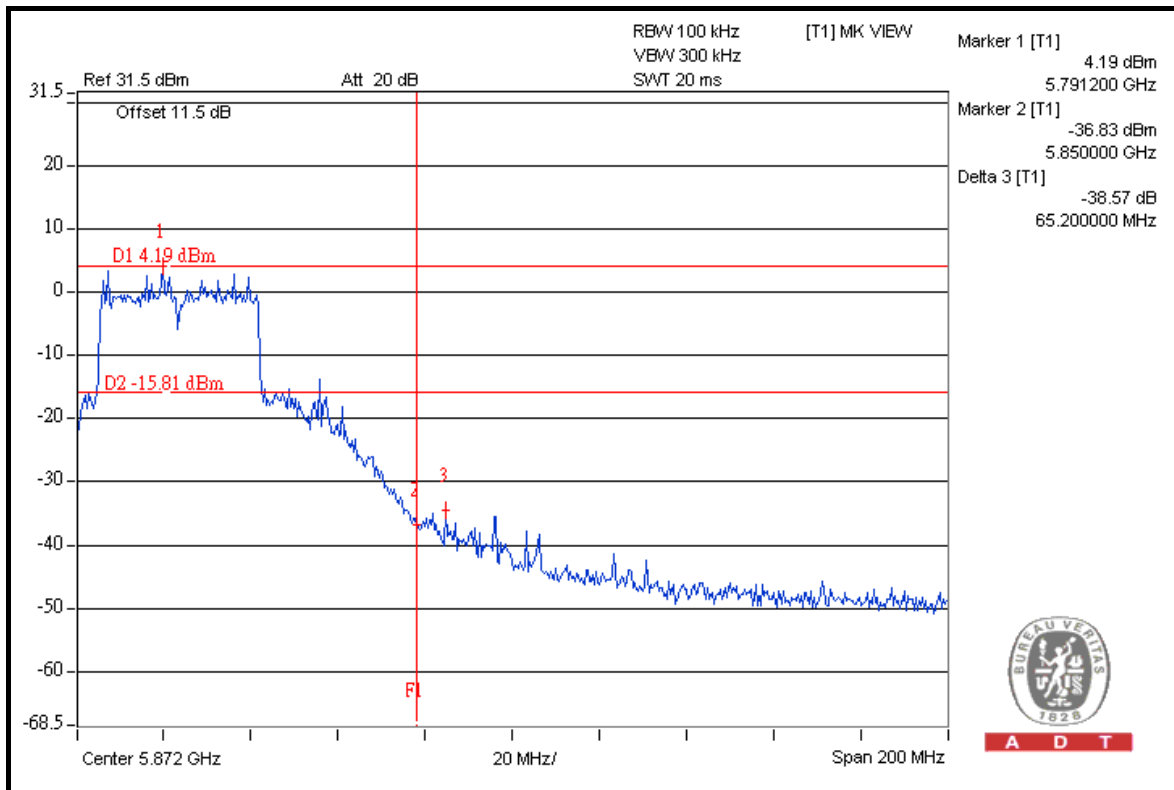
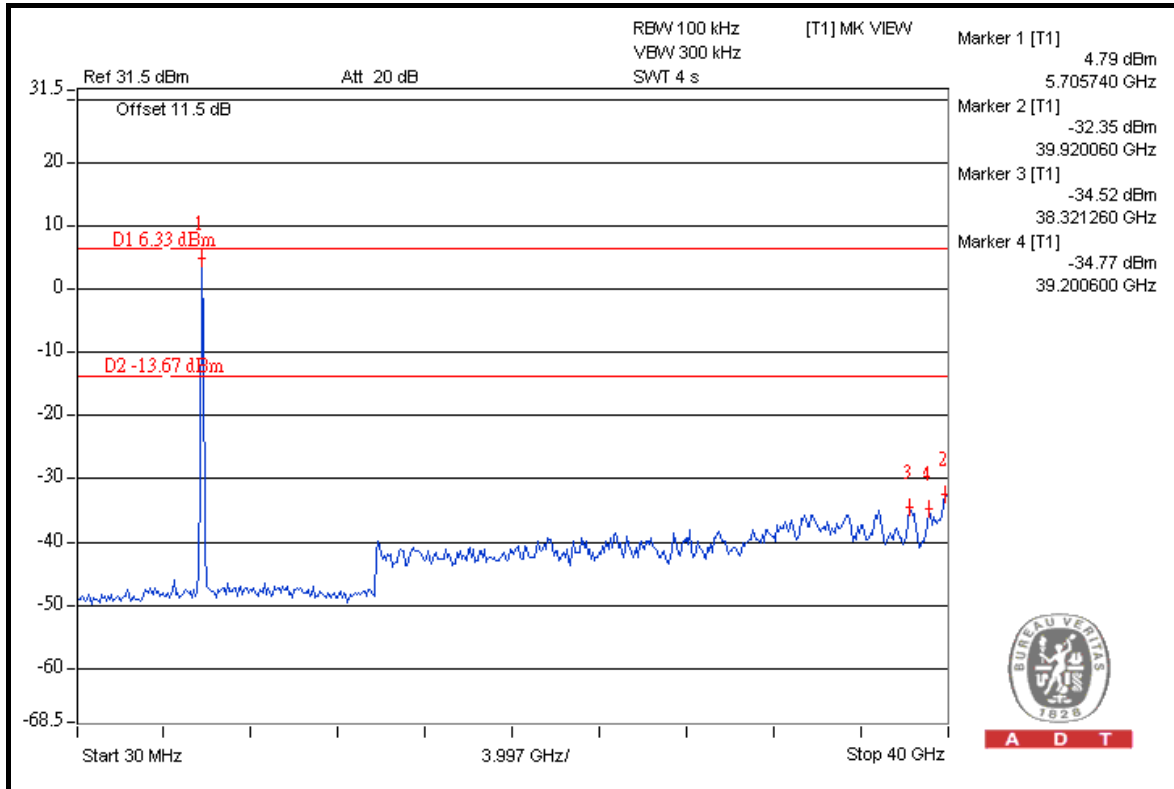
A D T



A D T

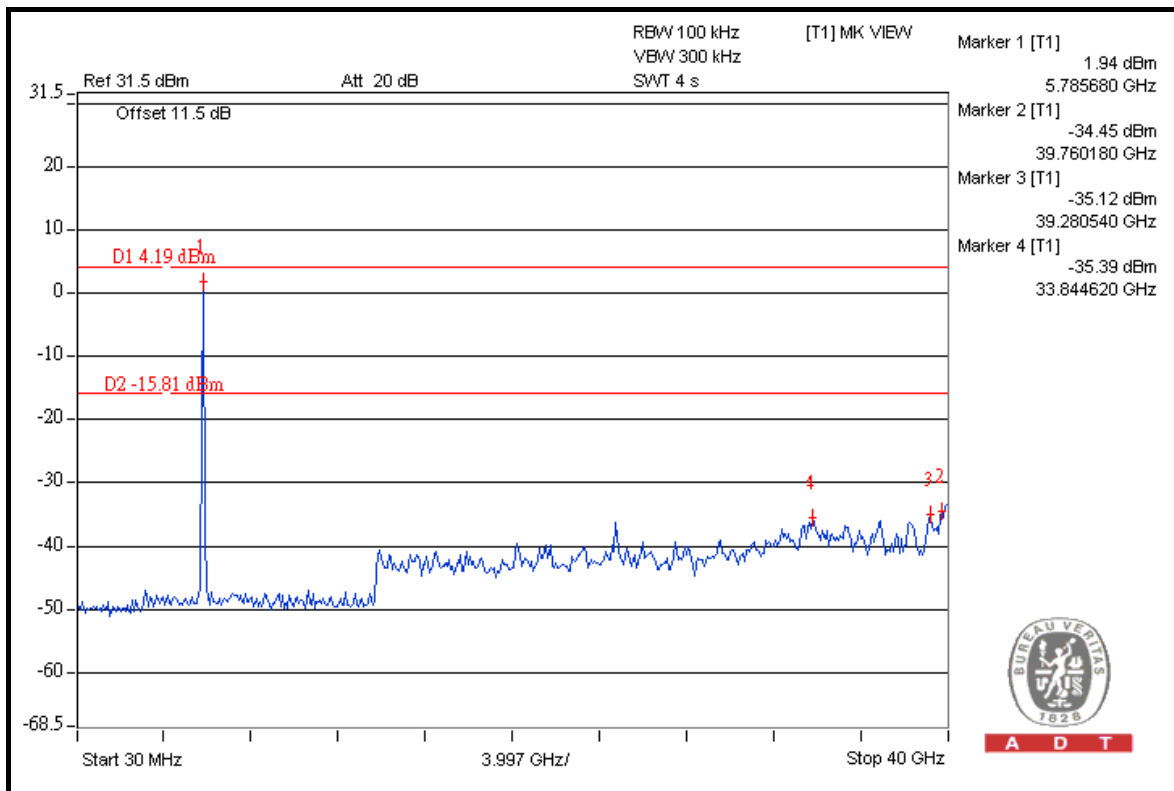
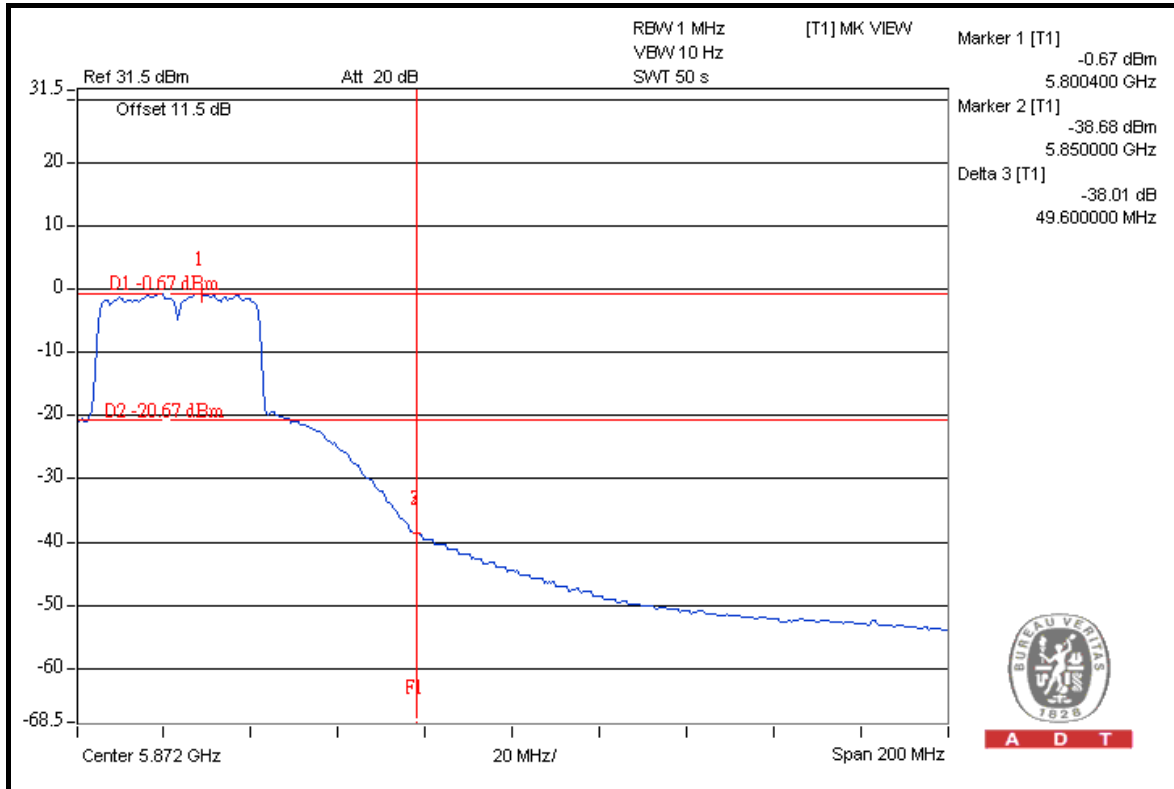


A D T





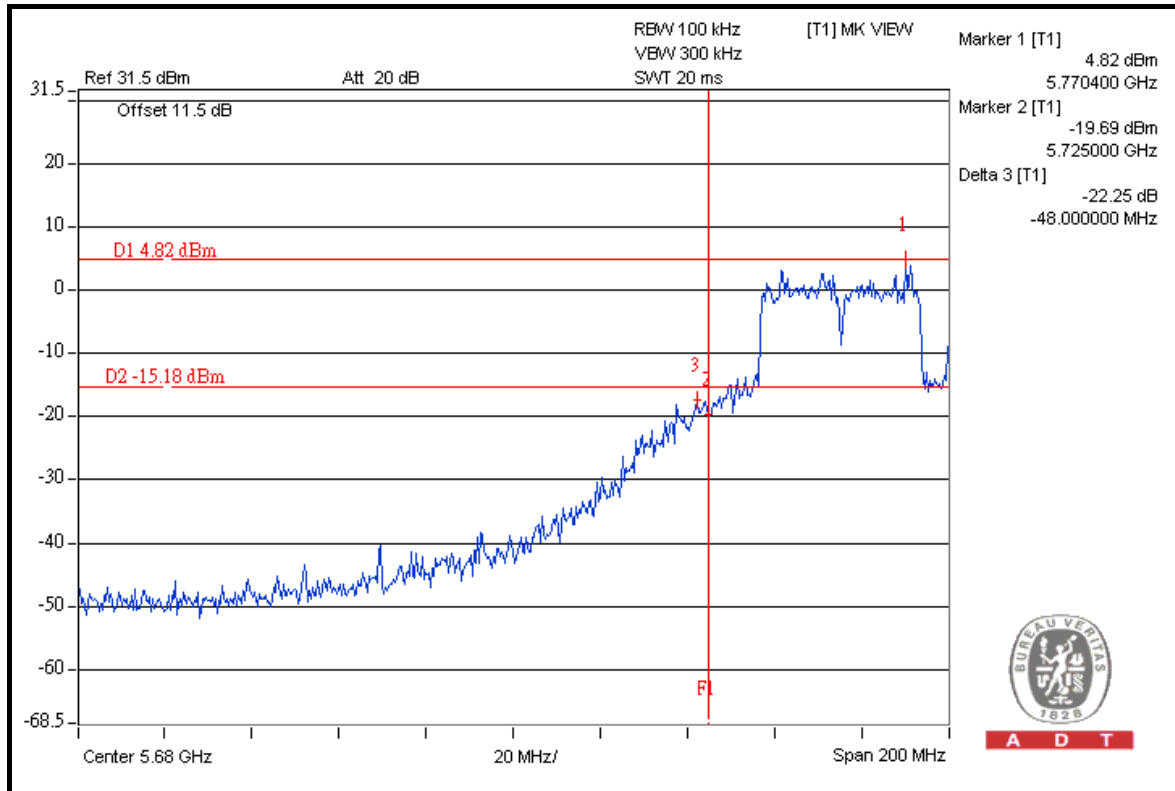
A D T



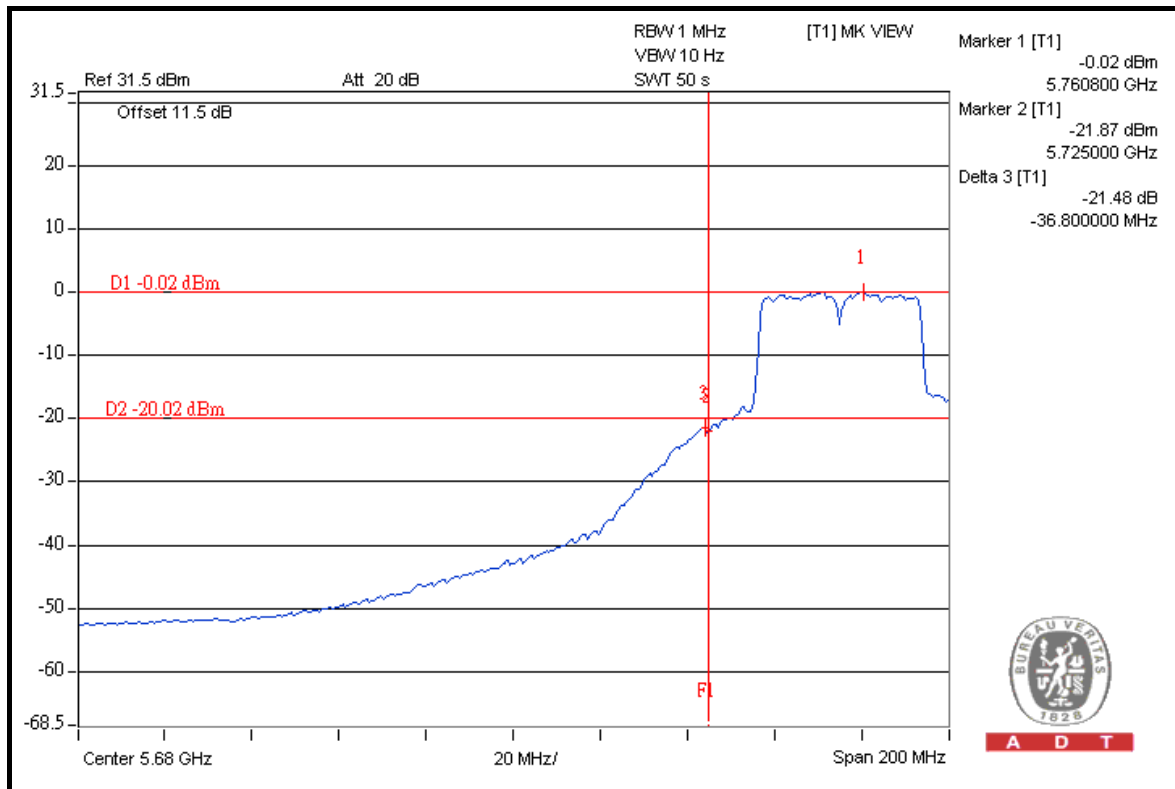


A D T

CHAIN 1



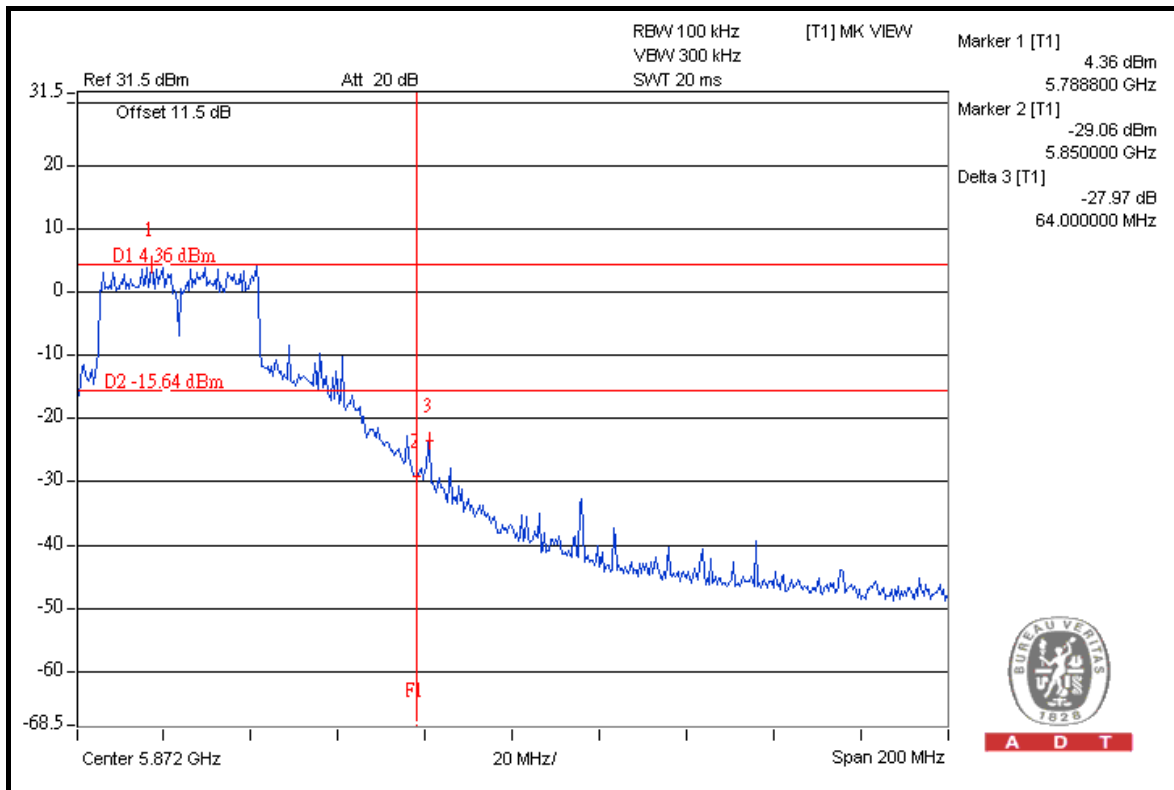
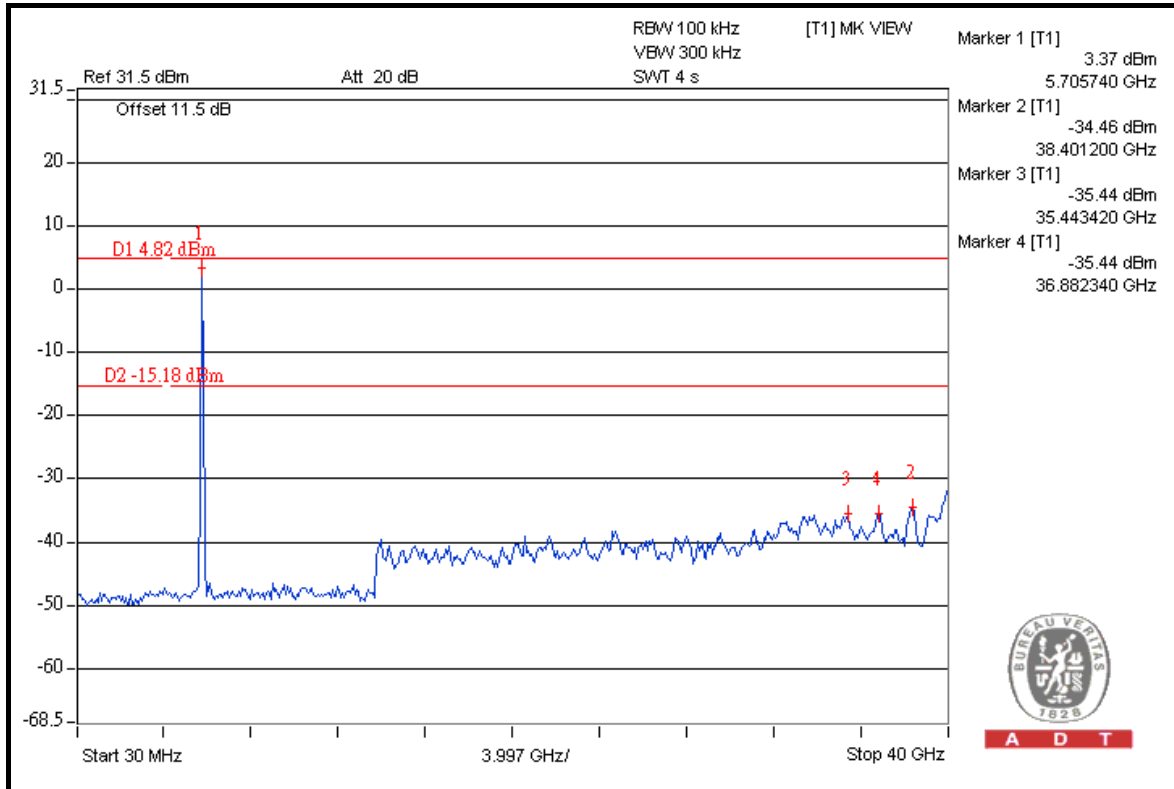
A D T



A D T

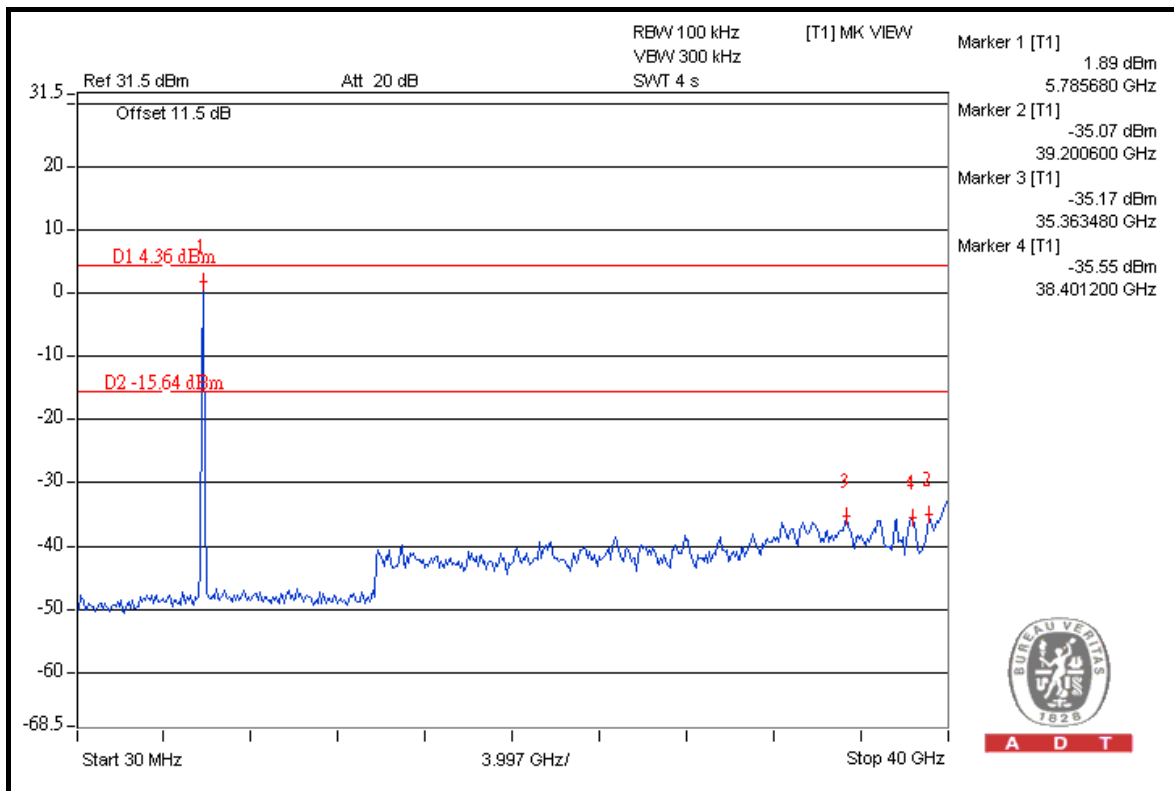
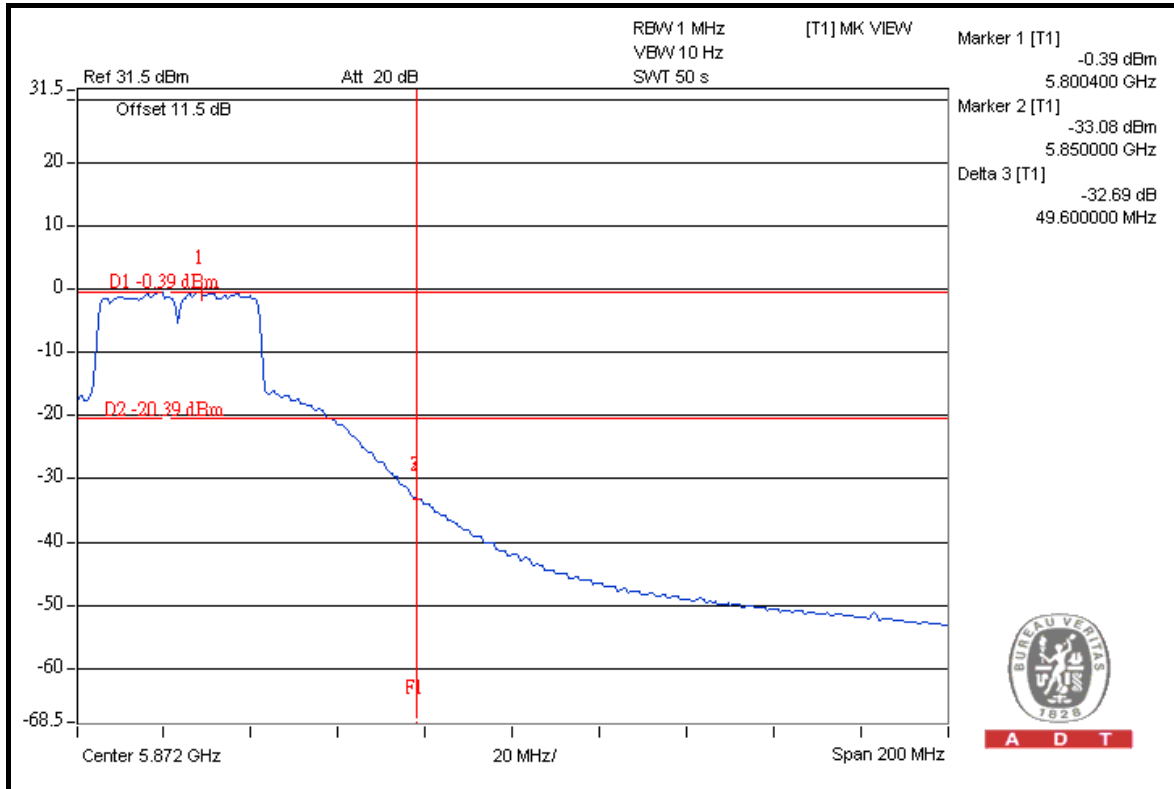


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6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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7. 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 according to ISO/IEC 17025.

Copies of accreditation and authorization 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

Email: service.adt@tw.bureauveritas.com

Web Site: www.adt.com.tw

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



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8. 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---