FCC TEST REPORT

REPORT NO.:	RF110323C15
MODEL NO.:	WZR-HP-G450H
FCC ID:	FDI-09101912-0
RECEIVED:	Mar. 23, 2011
TESTED:	Mar. 26 ~ May 12, 2011
ISSUED:	May 17, 2011

APPLICANT:	BUFFALO INC.
ADDRESS:	Akamon-dori Bldg, 30-20, Ohsu 3-chome, Naka-ku ,Nagoya 460-8315, Japan

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

TABLE OF CONTENTS

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	NA	May 17, 2011

1. CERTIFICATION

PRODUCT:	Nfiniti High Power Wireless N Router & Access Point
MODEL:	WZR-HP-G450H
BRAND:	Buffalo
APPLICANT:	BUFFALO INC.
TEST SAMPLE:	ENGINEERING SAMPLE
TESTED:	Mar. 26 ~ May 12, 2011
STANDARDS:	**FCC Part 15, Subpart C (Section 15.247)**
	ANSI C63.4-2003
	ANSI C63.10-2009

The above equipment (Model: WZR-HP-G450H) 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: May 17, 2011
Polly Chien / Specialist

APPROVED BY : _____ , DATE: May 17, 2011
Gary Chang / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART 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 -13.01dB at 0.177MHz.
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 -3.2dB at 2483.50 MHz.
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	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	150kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.19 dB
	200MHz ~1000MHz	3.21 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Nfiniti High Power Wireless N Router & Access Point
MODEL NO.	WZR-HP-G450H
FCC ID	FDI-09101912-0
POWER SUPPLY	12Vdc (adapter)
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 450.0Mbps
OPERATING FREQUENCY	2412 ~ 2462MHz
NUMBER OF CHANNEL	11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz)
OUTPUT POWER	394.1mW
ANTENNA TYPE	Dipole antenna with 5dBi gain (for final test) Dipole antenna with 2dBi gain
ANTENNA CONNECTOR	R-SMA
DATA CABLE	NA
I/O PORTS	RJ45, USB
ACCESSORY DEVICES	Adapter

NOTE:

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

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

2. The EUT uses following adapters.

Adapter 1	
Brand	Buffalo
Model	Model : WA-18x12y "x" in the model name may be A to Z, the "G" represents fixed pin type and the "H" represents removable pin type. "y" in the model name may be A to Z or "Blank", Alphabet denotes different type of Plug Sharp for fixed pin type model. "Blank" for removable pin type. We test WA-18H12.
Input Power	100-240Vac, 50-60Hz, 0.5A
Output Power	12Vdc, 1.5A
Power Line	DC 1.5m non-shielded cable w/o core

Adapter 2	
Brand	Buffalo
Model	UU324-1215
Input Power	100-240Vac, 50/60Hz, 0.6A
Output Power	12Vdc, 1.5A
Power Line	DC 1.5m non-shielded cable w/o core

Adapter 3	
Brand	Buffalo
Model	Model : WA-18x12y "x" in the model name may be A to Z, the "G" represents fixed pin type and the "H" represents removable pin type. "y" in the model name may be A to Z or "Blank", Alphabet denotes different type of Plug Sharp for fixed pin type model. "Blank" for removable pin type. We test WA-18G12U.
Input Power	100-240Vac, 50-60Hz, 0.5A
Output Power	12Vdc, 1.5A
Power Line	DC 1.5m non-shielded cable w/o core

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

3.2 DESCRIPTION OF TEST MODES

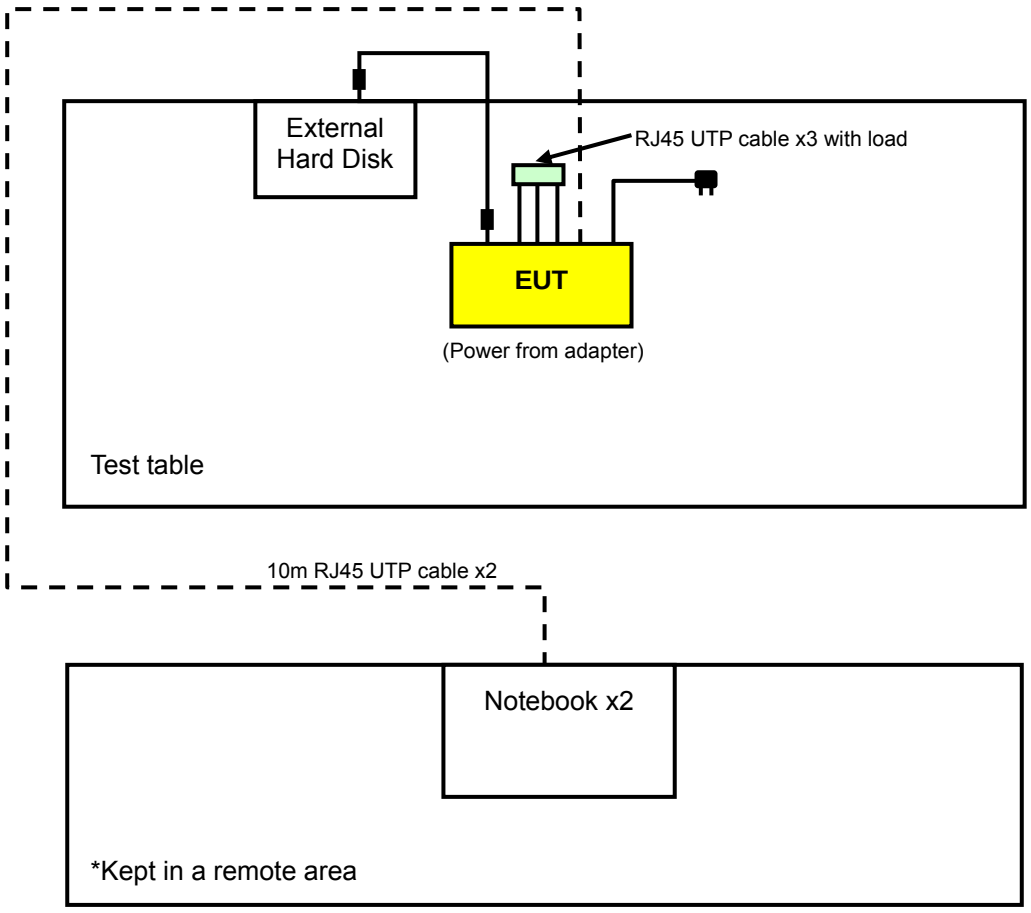
11 channels are provided for 802.11b, 802.11g and 802.11n (20MHz):

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		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Power from adapter 1
B	-	√	√	-	Power from adapter 2
C	-	√	√	-	Power from adapter 3

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, antenna 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)	ANT. AXIS
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Z
	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Z
	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2	Z
	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 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)	ANT. AXIS
A, B, C	802.11n (20MHz)	1 to 11	11	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	802.11n (20MHz)	1 to 11	11	OFDM	BPSK	7.2

BANDEDGE MEASUREMENT:

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

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

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11b	1 to 11	1, 11	DSSS	DBPSK	1.0
	802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 11	OFDM	BPSK	7.2
	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)
A	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
	802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	7.2
	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, 65%RH, 1014 hPa	120Vac, 60Hz	David Huang
RE<1G	25deg. C, 68%RH, 1012 hPa	120Vac, 60Hz	Sun Lin
PLC	25deg. C, 68%RH, 1012 hPa	120Vac, 60Hz	Sun Lin
APCM	25deg. C, 65%RH, 1016 hPa	120Vac, 60Hz	David Huang

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	D531	CN-0XM006-48643 -81U-2610	QDS-BRCM1020
2	NOTEBOOK	DELL	D830	10026042688	NA
3	EXTERNAL HARD DISK	DELL	RD1000	CN-0F088R-70561-96D-002F-A00	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10m UTP RJ45 cable
2	10m UTP RJ45 cable
3	2m shielded cable, terminated with USB connector, with two cores

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.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.1.2 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	FSU43	100115	Aug. 02, 2010	Aug. 01, 2011
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	Nov. 02, 2010	Nov. 01, 2011
Preamplifier Agilent	8447D	2944A10738	Nov. 02, 2010	Nov. 01, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274041/4	Aug. 21, 2010	Aug. 20, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 21, 2010	Aug. 20, 2011
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 988962.

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

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.

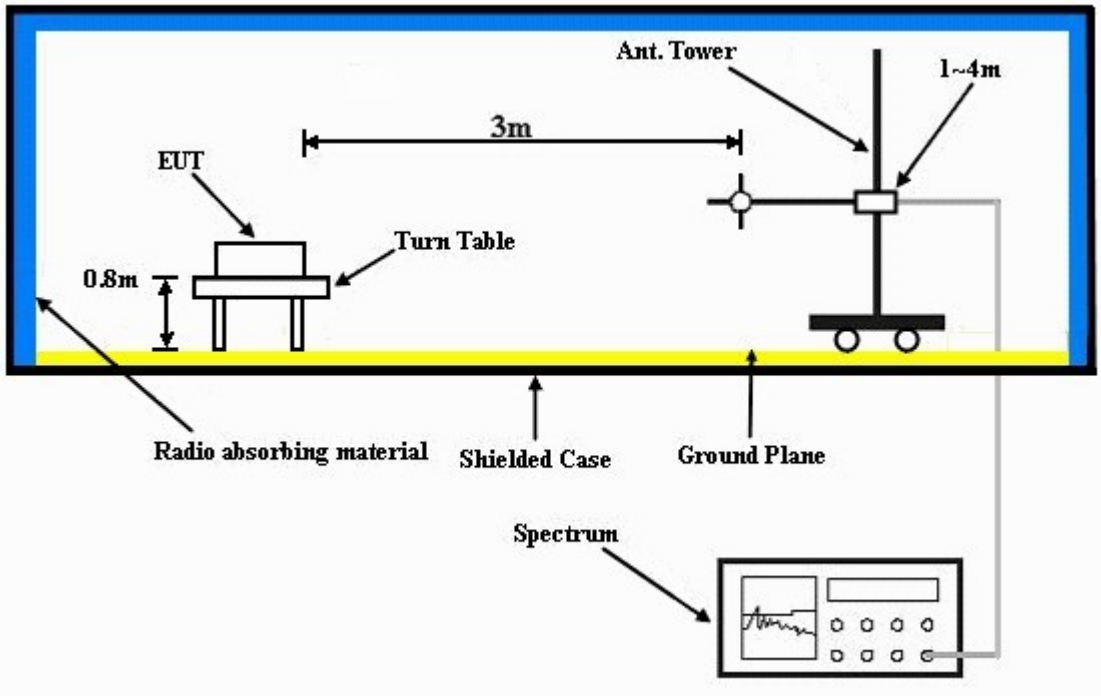
NOTE:

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

4.1.4 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 notebooks outside of testing area to act as communication partners.
c. The communication partners connected with EUT via a RJ45 UTP cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
d. The communication partner sent data to EUT by command "PING".
e. The necessary accessories enable the EUT in full functions.

4.1.7 TEST RESULTS

802.11b

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	**TESTED BY**	David Huang

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	2288.00	54.4 PK	74.0	-19.6	1.20 H	341	23.70	30.70
2	2288.00	44.0 AV	54.0	-10.0	1.20 H	341	13.30	30.70
3	2390.00	55.4 PK	74.0	-18.6	1.42 H	310	24.30	31.10
4	2390.00	43.6 AV	54.0	-10.4	1.42 H	310	12.50	31.10
5	*2412.00	101.6 PK			1.42 H	310	70.40	31.20
6	*2412.00	97.5 AV			1.42 H	310	66.30	31.20
7	4824.00	51.1 PK	74.0	-22.9	1.27 H	51	13.90	37.20
8	4824.00	42.6 AV	54.0	-11.4	1.27 H	51	5.40	37.20
9	#7236.00	54.3 PK	81.6	-27.3	1.00 H	224	11.20	43.10
10	#7236.00	42.5 AV	77.5	-35.0	1.00 H	224	-0.60	43.10

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	David Huang

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	2288.00	58.3 PK	74.0	-15.7	1.57 V	123	27.60	30.70
2	2288.00	48.7 AV	54.0	-5.3	1.57 V	123	18.00	30.70
3	2390.00	59.7 PK	74.0	-14.3	1.27 V	332	28.60	31.10
4	2390.00	47.0 AV	54.0	-7.0	1.27 V	332	15.90	31.10
5	*2412.00	114.0 PK			1.27 V	332	82.80	31.20
6	*2412.00	109.8 AV			1.27 V	332	78.60	31.20
7	4824.00	54.9 PK	74.0	-19.1	1.16 V	102	17.70	37.20
8	4824.00	51.0 AV	54.0	-3.0	1.16 V	102	13.80	37.20
9	#7236.00	57.8 PK	94.0	-36.2	1.05 V	93	14.70	43.10
10	#7236.00	49.5 AV	89.8	-40.3	1.05 V	93	6.40	43.10

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	David Huang

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	2288.00	53.3 PK	74.0	-20.7	1.20 H	223	22.60	30.70
2	2288.00	43.8 AV	54.0	-10.2	1.20 H	223	13.10	30.70
3	*2437.00	101.9 PK			1.32 H	127	70.70	31.20
4	*2437.00	97.8 AV			1.32 H	127	66.60	31.20
5	4874.00	50.2 PK	74.0	-23.8	1.12 H	56	12.90	37.30
6	4874.00	42.9 AV	54.0	-11.1	1.12 H	56	5.60	37.30
7	7311.00	54.0 PK	74.0	-20.0	1.00 H	347	10.80	43.20
8	7311.00	42.0 AV	54.0	-12.0	1.00 H	347	-1.20	43.20
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	2288.00	57.3 PK	74.0	-16.7	1.35 V	241	26.60	30.70
2	2288.00	47.0 AV	54.0	-7.0	1.35 V	241	16.30	30.70
3	*2437.00	114.2 PK			1.46 V	115	83.00	31.20
4	*2437.00	110.3 AV			1.46 V	115	79.10	31.20
5	4874.00	52.8 PK	74.0	-21.2	1.14 V	104	15.50	37.30
6	4874.00	50.4 AV	54.0	-3.6	1.14 V	104	13.10	37.30
7	7311.00	56.1 PK	74.0	-17.9	1.06 V	129	12.90	43.20
8	7311.00	45.9 AV	54.0	-8.1	1.06 V	129	2.70	43.20

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	David Huang

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	2288.00	53.4 PK	74.0	-20.6	1.10 H	214	22.70	30.70
2	2288.00	43.4 AV	54.0	-10.6	1.10 H	214	12.70	30.70
3	*2462.00	101.7 PK			1.33 H	207	70.40	31.30
4	*2462.00	98.0 AV			1.33 H	207	66.70	31.30
5	2483.50	55.0 PK	74.0	-19.0	1.00 H	154	23.60	31.40
6	2483.50	46.1 AV	54.0	-7.9	1.00 H	154	14.70	31.40
7	4924.00	51.3 PK	74.0	-22.7	1.00 H	157	13.90	37.40
8	4924.00	47.7 AV	54.0	-6.3	1.00 H	157	10.30	37.40
9	7386.00	53.2 PK	74.0	-20.8	1.00 H	228	9.80	43.40
10	7386.00	41.1 AV	54.0	-12.9	1.00 H	228	-2.30	43.40

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.
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	David Huang

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	2288.00	58.0 PK	74.0	-16.0	1.14 V	117	27.30	30.70
2	2288.00	48.5 AV	54.0	-5.5	1.14 V	117	17.80	30.70
3	*2462.00	113.9 PK			1.11 V	259	82.60	31.30
4	*2462.00	110.0 AV			1.11 V	259	78.70	31.30
5	2483.50	59.2 PK	74.0	-14.8	1.11 V	259	27.80	31.40
6	2483.50	48.1 AV	54.0	-5.9	1.11 V	259	16.70	31.40
7	4924.00	53.6 PK	74.0	-20.4	1.13 V	105	16.20	37.40
8	4924.00	50.5 AV	54.0	-3.5	1.13 V	105	13.10	37.40
9	7386.00	56.7 PK	74.0	-17.3	1.20 V	245	13.30	43.40
10	7386.00	48.5 AV	54.0	-5.5	1.20 V	245	5.10	43.40

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.

5. " * ": Fundamental frequency.

802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	David Huang

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	2288.00	55.5 PK	74.0	-18.5	1.20 H	152	24.80	30.70
2	2288.00	45.2 AV	54.0	-8.8	1.20 H	152	14.50	30.70
3	2390.00	54.2 PK	74.0	-19.8	1.41 H	312	23.10	31.10
4	2390.00	43.4 AV	54.0	-10.6	1.41 H	312	12.30	31.10
5	*2412.00	97.7 PK			1.41 H	312	66.50	31.20
6	*2412.00	86.1 AV			1.41 H	312	54.90	31.20
7	4824.00	48.0 PK	74.0	-26.0	1.42 H	114	10.80	37.20
8	4824.00	33.4 AV	54.0	-20.6	1.42 H	114	-3.80	37.20
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	2288.00	57.5 PK	74.0	-16.5	1.30 V	147	26.80	30.70
2	2288.00	48.4 AV	54.0	-5.6	1.30 V	147	17.70	30.70
3	2390.00	55.8 PK	74.0	-18.2	1.00 V	193	24.70	31.10
4	2390.00	45.2 AV	54.0	-8.8	1.00 V	193	14.10	31.10
5	*2412.00	110.4 PK			1.00 V	193	79.20	31.20
6	*2412.00	97.8 AV			1.00 V	193	66.60	31.20
7	4824.00	47.7 PK	74.0	-26.3	1.39 V	89	10.50	37.20
8	4824.00	34.7 AV	54.0	-19.3	1.39 V	89	-2.50	37.20

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	David Huang

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	2288.00	53.9 PK	74.0	-20.1	1.20 H	256	23.20	30.70
2	2288.00	43.1 AV	54.0	-10.9	1.20 H	256	12.40	30.70
3	*2437.00	98.3 PK			1.34 H	261	67.10	31.20
4	*2437.00	86.2 AV			1.34 H	261	55.00	31.20
5	4874.00	48.3 PK	74.0	-25.7	1.00 H	196	11.00	37.30
6	4874.00	33.7 AV	54.0	-20.3	1.00 H	196	-3.60	37.30
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	2288.00	59.0 PK	74.0	-15.0	1.57 V	123	28.30	30.70
2	2288.00	46.3 AV	54.0	-7.7	1.57 V	123	15.60	30.70
3	*2437.00	110.4 PK			1.45 V	295	79.20	31.20
4	*2437.00	98.4 AV			1.45 V	295	67.20	31.20
5	4874.00	47.9 PK	74.0	-26.1	1.00 V	123	10.60	37.30
6	4874.00	35.2 AV	54.0	-18.8	1.00 V	123	-2.10	37.30

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	David Huang

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	2288.00	52.0 PK	74.0	-22.0	1.00 H	174	21.30	30.70
2	2288.00	43.4 AV	54.0	-10.6	1.00 H	174	12.70	30.70
3	*2462.00	98.7 PK			1.30 H	218	67.40	31.30
4	*2462.00	86.8 AV			1.30 H	218	55.50	31.30
5	2483.50	55.1 PK	74.0	-18.9	1.30 H	218	23.70	31.40
6	2483.50	44.3 AV	54.0	-9.7	1.30 H	218	12.90	31.40
7	4924.00	45.1 PK	74.0	-28.9	1.10 H	225	7.70	37.40
8	4924.00	34.6 AV	54.0	-19.4	1.10 H	225	-2.80	37.40
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	2288.00	56.6 PK	74.0	-17.4	1.30 V	264	25.90	30.70
2	2288.00	48.3 AV	54.0	-5.7	1.30 V	264	17.60	30.70
3	*2462.00	110.5 PK			1.00 V	184	79.20	31.30
4	*2462.00	98.5 AV			1.00 V	184	67.20	31.30
5	2483.50	57.4 PK	74.0	-16.6	1.00 V	184	26.00	31.40
6	2483.50	47.2 AV	54.0	-6.8	1.00 V	184	15.80	31.40
7	4924.00	47.6 PK	74.0	-26.4	1.20 V	148	10.20	37.40
8	4924.00	37.1 AV	54.0	-16.9	1.20 V	148	-0.30	37.40

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.

5. " * ": Fundamental frequency.

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	Frank Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2288.00	52.0 PK	74.0	-22.0	1.10 H	169	21.30	30.70
2	2288.00	41.8 AV	54.0	-12.2	1.10 H	169	11.10	30.70
3	2390.00	54.3 PK	74.0	-19.7	1.42 H	313	23.20	31.10
4	2390.00	42.5 AV	54.0	-11.5	1.42 H	313	11.40	31.10
5	*2412.00	97.9 PK			1.42 H	313	66.70	31.20
6	*2412.00	85.3 AV			1.42 H	313	54.10	31.20
7	4824.00	48.4 PK	74.0	-25.6	1.20 H	233	11.20	37.20
8	4824.00	36.3 AV	54.0	-17.7	1.20 H	233	-0.90	37.20
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	2288.00	55.0 PK	74.0	-19.0	1.34 V	169	24.30	30.70
2	2288.00	46.2 AV	54.0	-7.8	1.34 V	169	15.50	30.70
3	2390.00	66.5 PK	74.0	-7.5	1.24 V	200	35.40	31.10
4	2390.00	50.0 AV	54.0	-4.0	1.24 V	200	18.90	31.10
5	*2412.00	110.0 PK			1.24 V	200	78.80	31.20
6	*2412.00	96.8 AV			1.24 V	200	65.60	31.20
7	4824.00	48.4 PK	74.0	-25.6	1.00 V	184	11.20	37.20
8	4824.00	36.8 AV	54.0	-17.2	1.00 V	184	-0.40	37.20

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	Frank Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2288.00	51.3 PK	74.0	-22.7	1.20 H	214	20.60	30.70
2	2288.00	42.9 AV	54.0	-11.1	1.20 H	214	12.20	30.70
3	*2437.00	97.5 PK			1.45 H	232	66.30	31.20
4	*2437.00	85.1 AV			1.45 H	232	53.90	31.20
5	4874.00	45.1 PK	74.0	-28.9	1.10 H	183	7.80	37.30
6	4874.00	34.1 AV	54.0	-19.9	1.10 H	183	-3.20	37.30
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	2288.00	55.6 PK	74.0	-18.4	1.30 V	326	24.90	30.70
2	2288.00	46.5 AV	54.0	-7.5	1.30 V	326	15.80	30.70
3	*2437.00	110.1 PK			1.30 V	216	78.90	31.20
4	*2437.00	97.2 AV			1.30 V	216	66.00	31.20
5	4874.00	47.1 PK	74.0	-26.9	1.24 V	322	9.80	37.30
6	4874.00	36.5 AV	54.0	-17.5	1.24 V	322	-0.80	37.30

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	Frank Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2288.00	51.4 PK	74.0	-22.6	1.10 H	253	20.70	30.70
2	2288.00	41.9 AV	54.0	-12.1	1.10 H	253	11.20	30.70
3	*2462.00	97.3 PK			1.37 H	275	66.00	31.30
4	*2462.00	84.8 AV			1.37 H	275	53.50	31.30
5	2483.50	56.5 PK	74.0	-17.5	1.37 H	275	25.10	31.40
6	2483.50	41.2 AV	54.0	-12.8	1.37 H	275	9.80	31.40
7	4924.00	45.2 PK	74.0	-28.8	1.14 H	196	7.80	37.40
8	4924.00	34.5 AV	54.0	-19.5	1.14 H	196	-2.90	37.40
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	2288.00	55.8 PK	74.0	-18.2	1.30 V	221	25.10	30.70
2	2288.00	45.8 AV	54.0	-8.2	1.30 V	221	15.10	30.70
3	*2462.00	110.0 PK			1.41 V	324	78.70	31.30
4	*2462.00	97.0 AV			1.41 V	324	65.70	31.30
5	2483.50	64.6 PK	74.0	-9.4	1.41 V	324	33.20	31.40
6	2483.50	49.2 AV	54.0	-4.8	1.41 V	324	17.80	31.40
7	4924.00	48.0 PK	74.0	-26.0	1.20 V	66	10.60	37.40
8	4924.00	37.0 AV	54.0	-17.0	1.20 V	66	-0.40	37.40

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.

5. " * ": Fundamental frequency.

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	Frank Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2288.00	52.2 PK	74.0	-21.8	1.20 H	224	21.50	30.70
2	2288.00	42.4 AV	54.0	-11.6	1.20 H	224	11.70	30.70
3	2390.00	55.6 PK	74.0	-18.4	1.40 H	314	24.50	31.10
4	2390.00	42.5 AV	54.0	-11.5	1.40 H	314	11.40	31.10
5	*2422.00	91.7 PK			1.40 H	314	60.50	31.20
6	*2422.00	80.0 AV			1.40 H	314	48.80	31.20
7	4844.00	44.0 PK	74.0	-30.0	1.10 H	263	6.80	37.20
8	4844.00	33.7 AV	54.0	-20.3	1.10 H	263	-3.50	37.20
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	2288.00	52.6 PK	74.0	-21.4	1.25 V	134	21.90	30.70
2	2288.00	42.4 AV	54.0	-11.6	1.25 V	134	11.70	30.70
3	2390.00	67.7 PK	74.0	-6.3	1.25 V	271	36.60	31.10
4	2390.00	50.4 AV	54.0	-3.6	1.25 V	271	19.30	31.10
5	*2422.00	106.8 PK			1.25 V	271	75.60	31.20
6	*2422.00	93.9 AV			1.25 V	271	62.70	31.20
7	4844.00	46.0 PK	74.0	-28.0	1.00 V	123	8.80	37.20
8	4844.00	35.0 AV	54.0	-19.0	1.00 V	123	-2.20	37.20

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	Frank Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2288.00	50.4 PK	74.0	-23.6	1.10 H	158	19.70	30.70
2	2288.00	41.0 AV	54.0	-13.0	1.10 H	158	10.30	30.70
3	*2437.00	92.9 PK			1.38 H	318	61.70	31.20
4	*2437.00	80.7 AV			1.38 H	318	49.50	31.20
5	4874.00	44.5 PK	74.0	-29.5	1.00 H	231	7.20	37.30
6	4874.00	33.5 AV	54.0	-20.5	1.00 H	231	-3.80	37.30
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	2288.00	55.1 PK	74.0	-18.9	1.27 V	224	24.40	30.70
2	2288.00	45.2 AV	54.0	-8.8	1.27 V	224	14.50	30.70
3	*2437.00	107.1 PK			1.20 V	193	75.90	31.20
4	*2437.00	94.4 AV			1.20 V	193	63.20	31.20
5	4874.00	45.1 PK	74.0	-28.9	1.10 V	144	7.80	37.30
6	4874.00	34.1 AV	54.0	-19.9	1.10 V	144	-3.20	37.30

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH 1014 hPa	TESTED BY	Frank Wang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2288.00	49.9 PK	74.0	-24.1	1.20 H	314	19.20	30.70
2	2288.00	41.2 AV	54.0	-12.8	1.20 H	314	10.50	30.70
3	*2452.00	92.0 PK			1.40 H	315	60.70	31.30
4	*2452.00	80.1 AV			1.40 H	315	48.80	31.30
5	2483.50	59.7 PK	74.0	-14.3	1.40 H	315	28.30	31.40
6	2483.50	43.6 AV	54.0	-10.4	1.40 H	315	12.20	31.40
7	4904.00	44.0 PK	74.0	-30.0	1.20 H	220	6.70	37.30
8	4904.00	33.3 AV	54.0	-20.7	1.20 H	220	-4.00	37.30
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	2288.00	55.4 PK	74.0	-18.6	1.20 V	233	24.70	30.70
2	2288.00	45.0 AV	54.0	-9.0	1.20 V	233	14.30	30.70
3	*2452.00	106.6 PK			1.20 V	113	75.30	31.30
4	*2452.00	93.5 AV			1.20 V	113	62.20	31.30
5	2483.50	66.0 PK	74.0	-8.0	1.20 V	113	34.60	31.40
6	**2483.50**	**50.8 AV**	**54.0**	**-3.2**	**1.20 V**	**113**	**19.40**	**31.40**
7	4904.00	46.5 PK	74.0	-27.5	1.10 V	171	9.20	37.30
8	4904.00	35.3 AV	54.0	-18.7	1.00 V	171	-2.00	37.30

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.

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH 1012 hPa	TESTED BY	Sun Lin
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	230.16	36.8 QP	46.0	-9.2	1.00 H	109	23.80	13.00
2	249.60	41.4 QP	46.0	-4.6	1.00 H	103	27.90	13.50
3	270.99	40.3 QP	46.0	-5.7	1.00 H	253	26.00	14.30
4	375.98	35.0 QP	46.0	-11.0	1.00 H	223	17.20	17.80
5	624.85	38.8 QP	46.0	-7.2	1.25 H	127	14.80	24.00
6	729.84	34.1 QP	46.0	-11.9	1.00 H	238	8.40	25.70
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	230.16	37.3 QP	46.0	-8.7	1.25 V	109	24.30	13.00
2	249.60	41.5 QP	46.0	-4.5	1.00 V	91	28.00	13.50
3	270.99	40.2 QP	46.0	-5.8	1.00 V	241	25.90	14.30
4	375.98	36.6 QP	46.0	-9.4	1.00 V	229	18.80	17.80
5	624.85	39.8 QP	46.0	-6.2	1.25 V	136	15.80	24.00
6	751.23	35.6 QP	46.0	-10.4	1.00 V	232	9.40	26.20

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH 1012 hPa	TESTED BY	Sun Lin
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	249.60	39.6 QP	46.0	-6.4	1.25 H	265	26.10	13.50
2	270.99	38.4 QP	46.0	-7.6	1.25 H	61	24.10	14.30
3	375.98	37.4 QP	46.0	-8.6	1.00 H	214	19.60	17.80
4	624.85	37.6 QP	46.0	-8.4	1.25 H	139	13.60	24.00
5	751.23	37.4 QP	46.0	-8.6	1.00 H	106	11.20	26.20
6	770.67	36.7 QP	46.0	-9.3	1.00 H	112	10.00	26.70
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	42.67	34.7 QP	40.0	-5.3	1.00 V	154	20.10	14.60
2	72.67	34.1 QP	40.0	-5.9	1.00 V	247	22.20	11.90
3	249.60	41.7 QP	46.0	-4.3	1.50 V	154	28.20	13.50
4	270.99	41.3 QP	46.0	-4.7	1.75 V	139	27.00	14.30
5	624.85	38.7 QP	46.0	-7.3	1.00 V	82	14.70	24.00
6	751.23	37.2 QP	46.0	-8.8	1.50 V	259	11.00	26.20

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.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH 1012 hPa	TESTED BY	Sun Lin
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	249.99	41.7 QP	46.0	-4.3	1.16 H	285	28.20	13.50
2	270.99	39.9 QP	46.0	-6.1	1.00 H	280	25.60	14.30
3	375.98	36.0 QP	46.0	-10.0	1.00 H	202	18.20	17.80
4	500.42	33.0 QP	46.0	-13.0	1.50 H	214	11.60	21.40
5	624.85	36.8 QP	46.0	-9.2	1.50 H	13	12.80	24.00
6	751.23	39.6 QP	46.0	-6.4	1.00 H	220	13.40	26.20
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	37.83	35.8 QP	40.0	-4.2	1.00 V	225	22.20	13.60
2	72.67	34.2 QP	40.0	-5.8	1.00 V	286	22.30	11.90
3	249.60	39.3 QP	46.0	-6.7	1.75 V	175	25.80	13.50
4	290.43	36.3 QP	46.0	-9.7	1.50 V	187	21.30	15.00
5	375.98	36.5 QP	46.0	-9.5	1.25 V	241	18.70	17.80
6	624.85	41.2 QP	46.0	-4.8	2.00 V	109	17.20	24.00

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.

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

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

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 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	Jun. 28, 2010	Jun. 27, 2011
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jul. 12, 2010	Jul. 11, 2011
Software ADT	ADT_Cond_ V7.3.7	NA	NA	NA

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

2. The test was performed in HwaYa Shielded Room 1.

3. The VCCI Site Registration No. is C-2040.

4.2.3 TEST PROCEDURES

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

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

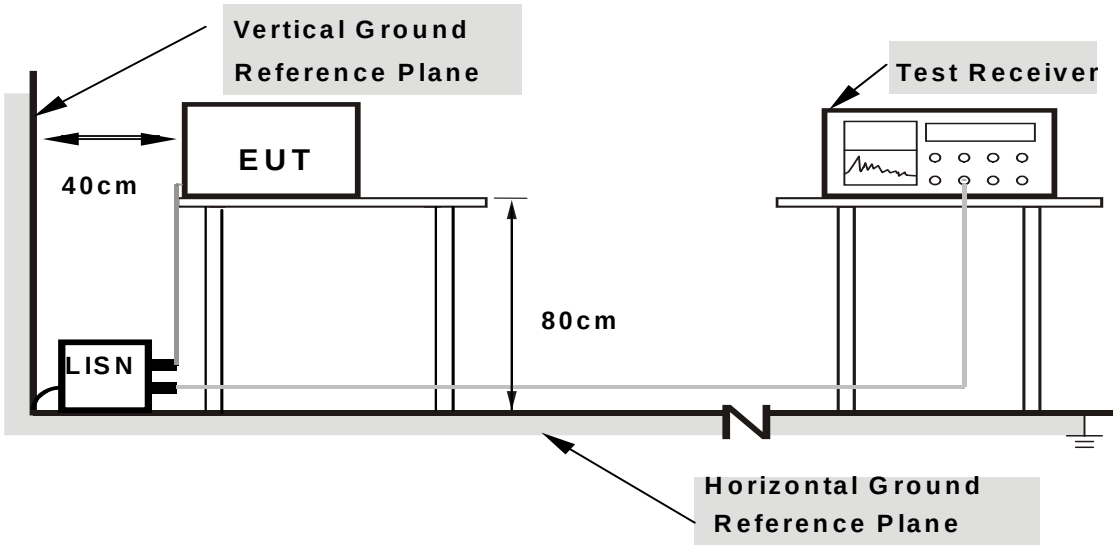
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

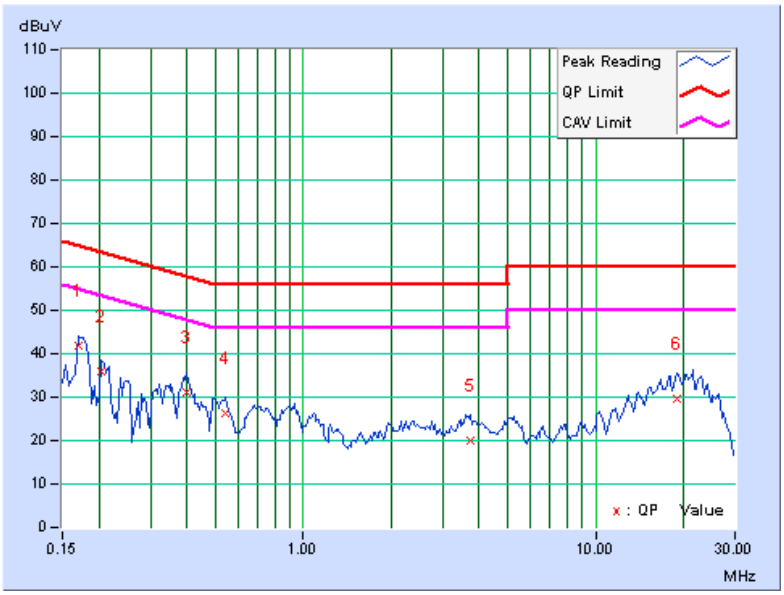
4.2.7 TEST RESULTS

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

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.14	41.55	-	41.69	-	64.98	54.98	-23.29	-
2	0.205	0.14	35.94	-	36.08	-	63.42	53.42	-27.34	-
3	0.400	0.15	30.88	-	31.03	-	57.85	47.85	-26.82	-
4	0.545	0.16	26.15	-	26.31	-	56.00	46.00	-29.69	-
5	3.734	0.34	19.75	-	20.09	-	56.00	46.00	-35.91	-
6	18.949	1.42	28.08	-	29.50	-	60.00	50.00	-30.50	-

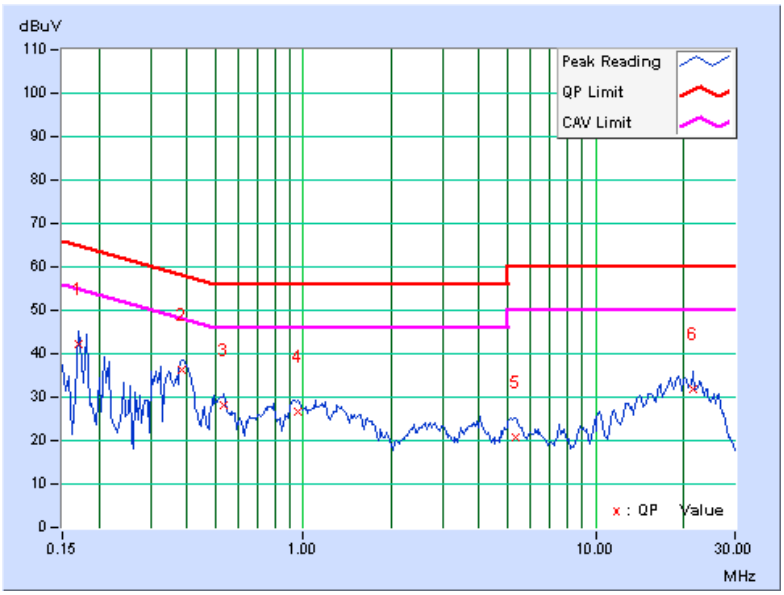
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	A		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.170	0.13	42.12	-	42.25	-	64.98	54.98	-22.74	-
2	0.384	0.14	36.30	-	36.44	-	58.18	48.18	-21.75	-
3	0.537	0.15	27.90	-	28.05	-	56.00	46.00	-27.95	-
4	0.955	0.18	26.35	-	26.53	-	56.00	46.00	-29.47	-
5	5.348	0.42	20.42	-	20.84	-	60.00	50.00	-39.16	-
6	21.559	1.42	30.34	-	31.76	-	60.00	50.00	-28.24	-

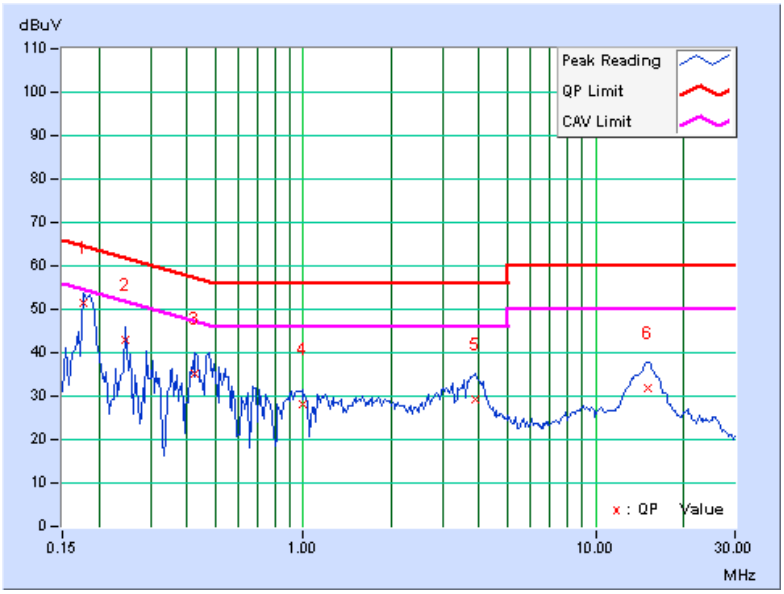
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.177**	**0.14**	**51.46**	**-**	**51.60**	**-**	**64.61**	**54.61**	**-13.01**	**-**
2	0.248	0.14	42.68	-	42.82	-	61.84	51.84	-19.01	-
3	0.427	0.15	35.21	-	35.36	-	57.30	47.30	-21.94	-
4	0.990	0.19	27.79	-	27.98	-	56.00	46.00	-28.02	-
5	3.895	0.35	28.89	-	29.24	-	56.00	46.00	-26.76	-
6	15.152	1.15	30.86	-	32.01	-	60.00	50.00	-27.99	-

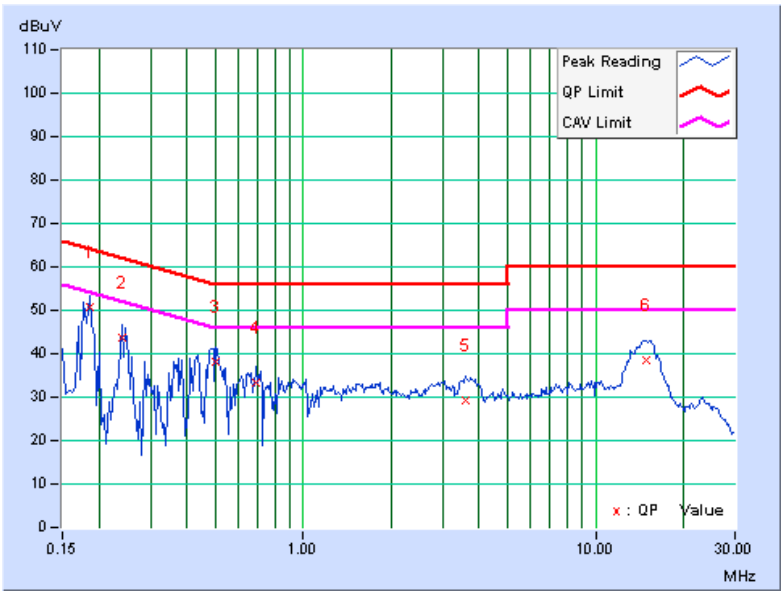
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.13	50.64	-	50.77	-	64.25	54.25	-13.48	-
2	0.240	0.13	43.59	-	43.72	-	62.10	52.10	-18.38	-
3	0.502	0.15	38.01	-	38.16	-	56.00	46.00	-17.84	-
4	0.693	0.16	33.19	-	33.35	-	56.00	46.00	-22.65	-
5	3.590	0.31	28.81	-	29.12	-	56.00	46.00	-26.88	-
6	14.961	1.00	37.68	-	38.68	-	60.00	50.00	-21.32	-

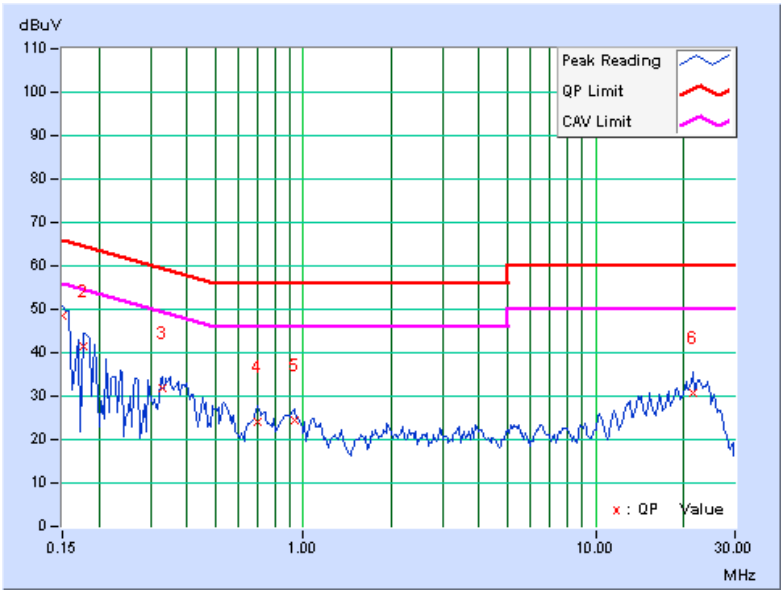
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	C		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.15	48.26	-	48.41	-	66.00	56.00	-17.59	-
2	0.177	0.14	41.27	-	41.41	-	64.61	54.61	-23.20	-
3	0.330	0.15	31.75	-	31.90	-	59.46	49.46	-27.56	-
4	0.701	0.17	24.05	-	24.22	-	56.00	46.00	-31.78	-
5	0.931	0.19	24.18	-	24.37	-	56.00	46.00	-31.63	-
6	21.559	1.62	29.22	-	30.84	-	60.00	50.00	-29.16	-

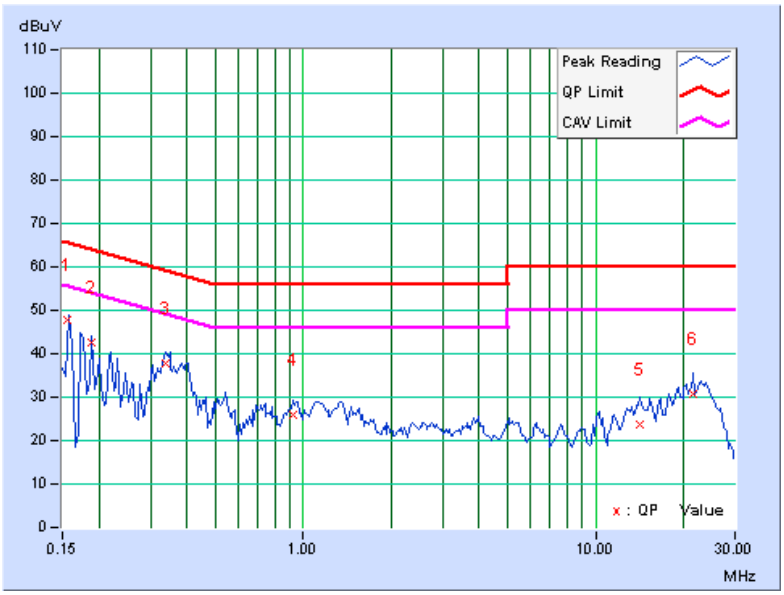
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	C		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.155	0.13	47.56	-	47.69	-	65.72	55.72	-18.04	-
2	0.189	0.13	42.28	-	42.41	-	64.08	54.08	-21.67	-
3	0.338	0.14	37.48	-	37.62	-	59.26	49.26	-21.65	-
4	0.927	0.18	25.84	-	26.02	-	56.00	46.00	-29.98	-
5	14.195	0.95	22.92	-	23.87	-	60.00	50.00	-36.13	-
6	21.555	1.42	29.32	-	30.74	-	60.00	50.00	-29.26	-

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
R&S SPECTRUM ANALYZER	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.

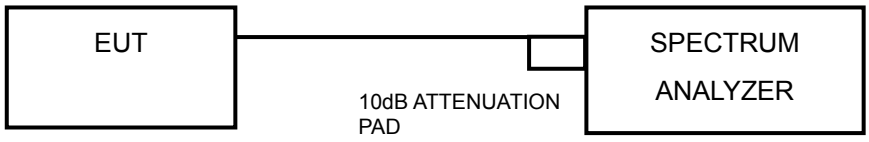
4.3.3 TEST PROCEDURE

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

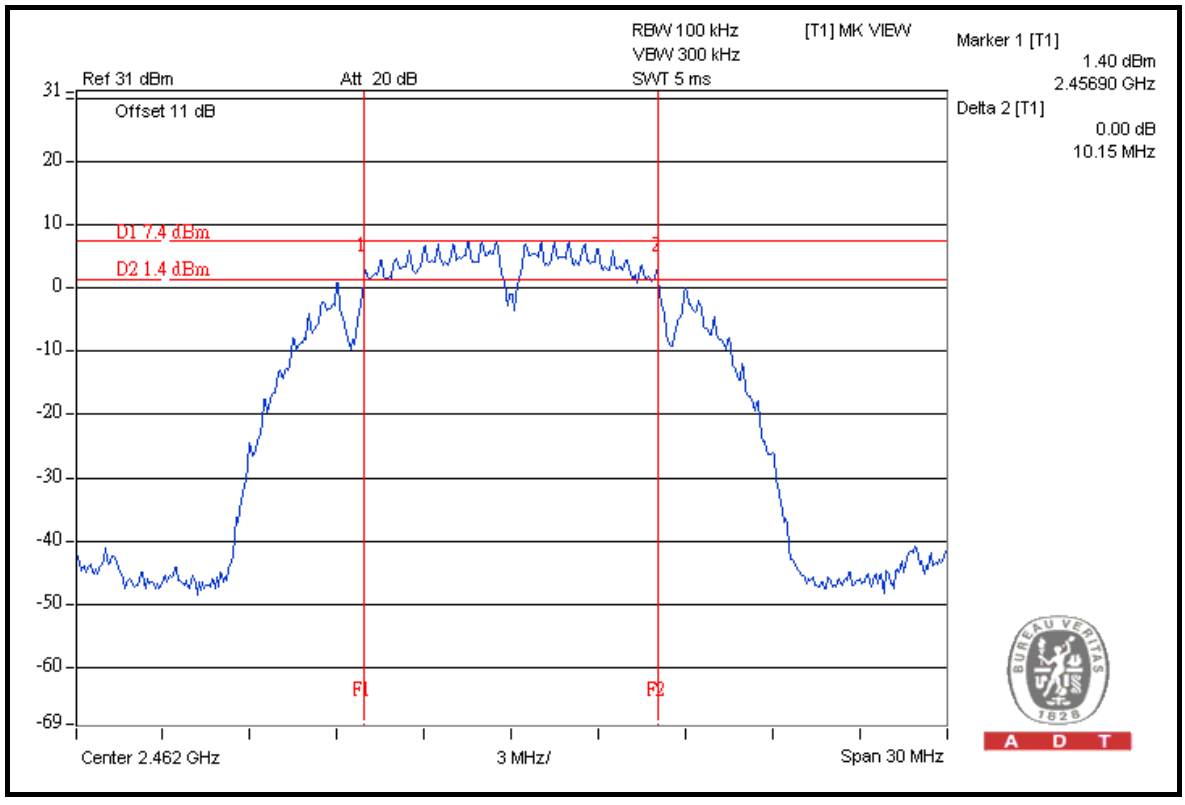
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	10.11	9.66	10.08	0.5	PASS
6	2437	10.09	10.13	10.13	0.5	PASS
11	2462	10.13	10.15	10.13	0.5	PASS

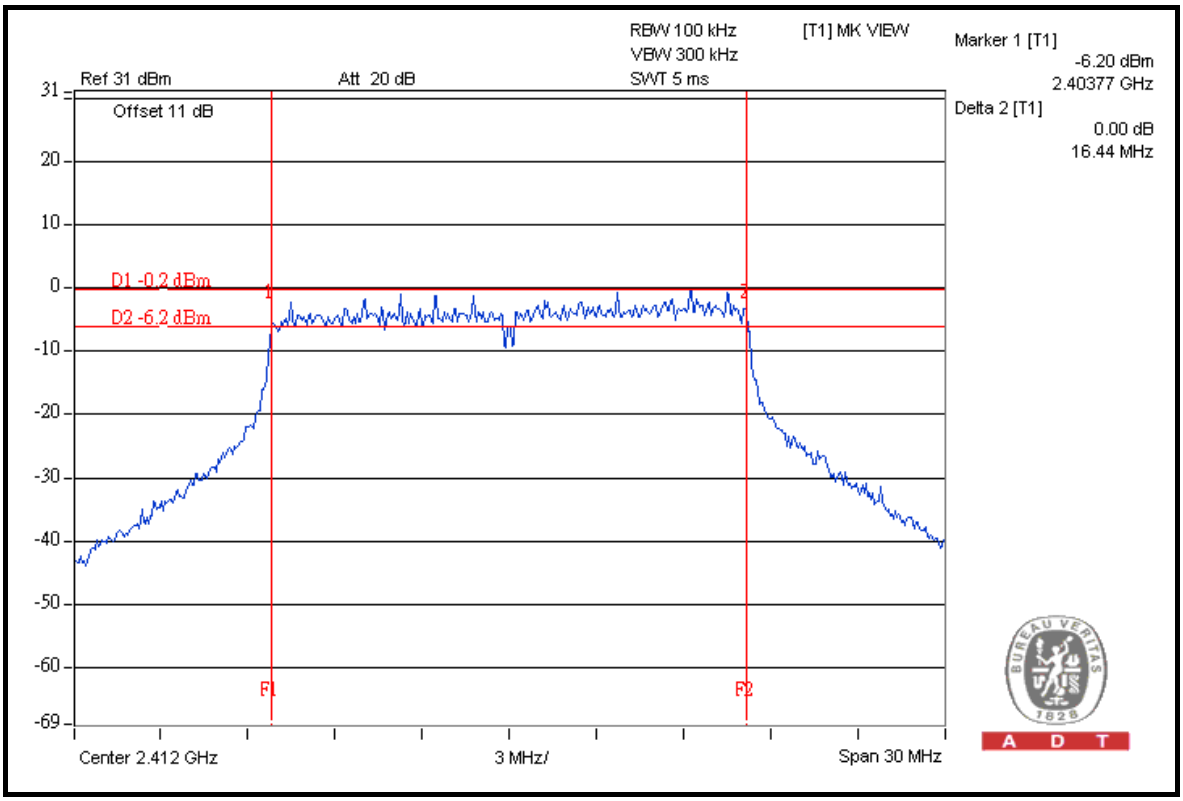
FOR CHAIN 1: CH 11



802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	16.41	16.42	16.44	0.5	PASS
6	2437	16.42	16.43	16.44	0.5	PASS
11	2462	16.40	16.41	16.41	0.5	PASS

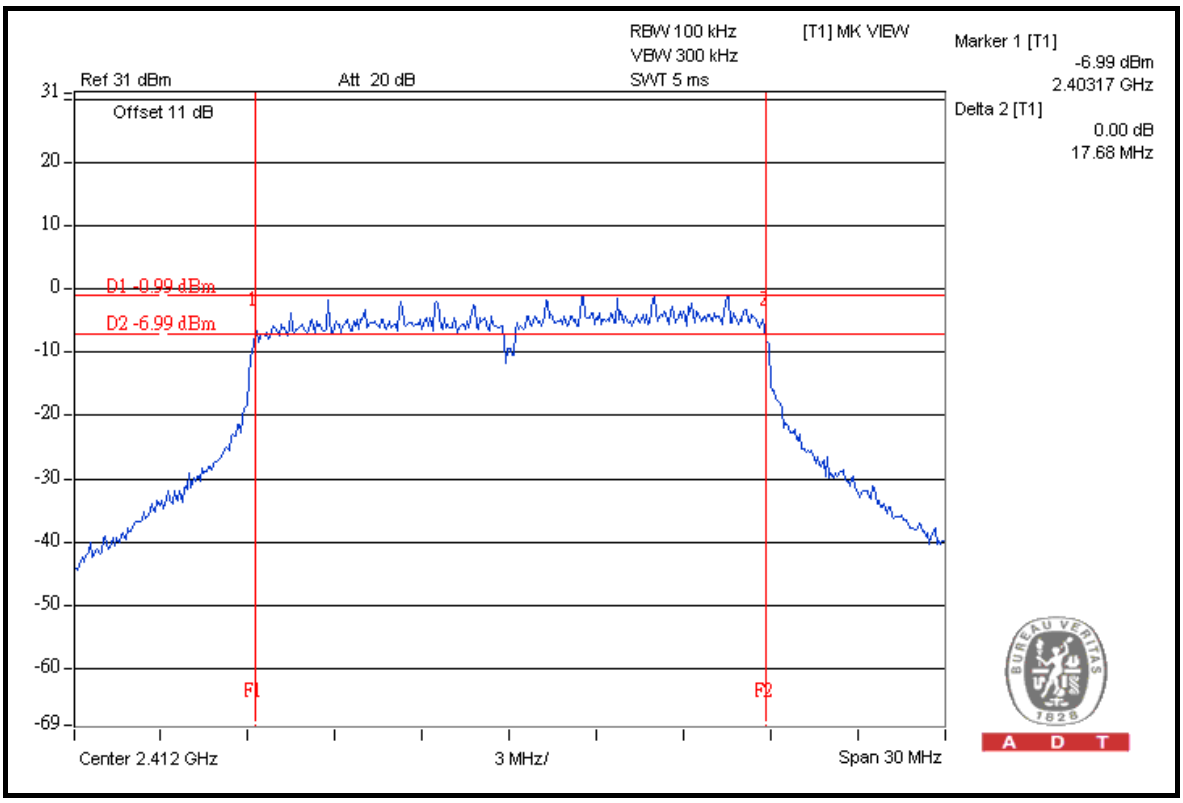
FOR CHAIN 2: CH 1



802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	17.68	17.40	17.33	0.5	PASS
6	2437	17.66	17.39	17.64	0.5	PASS
11	2462	17.66	17.63	17.62	0.5	PASS

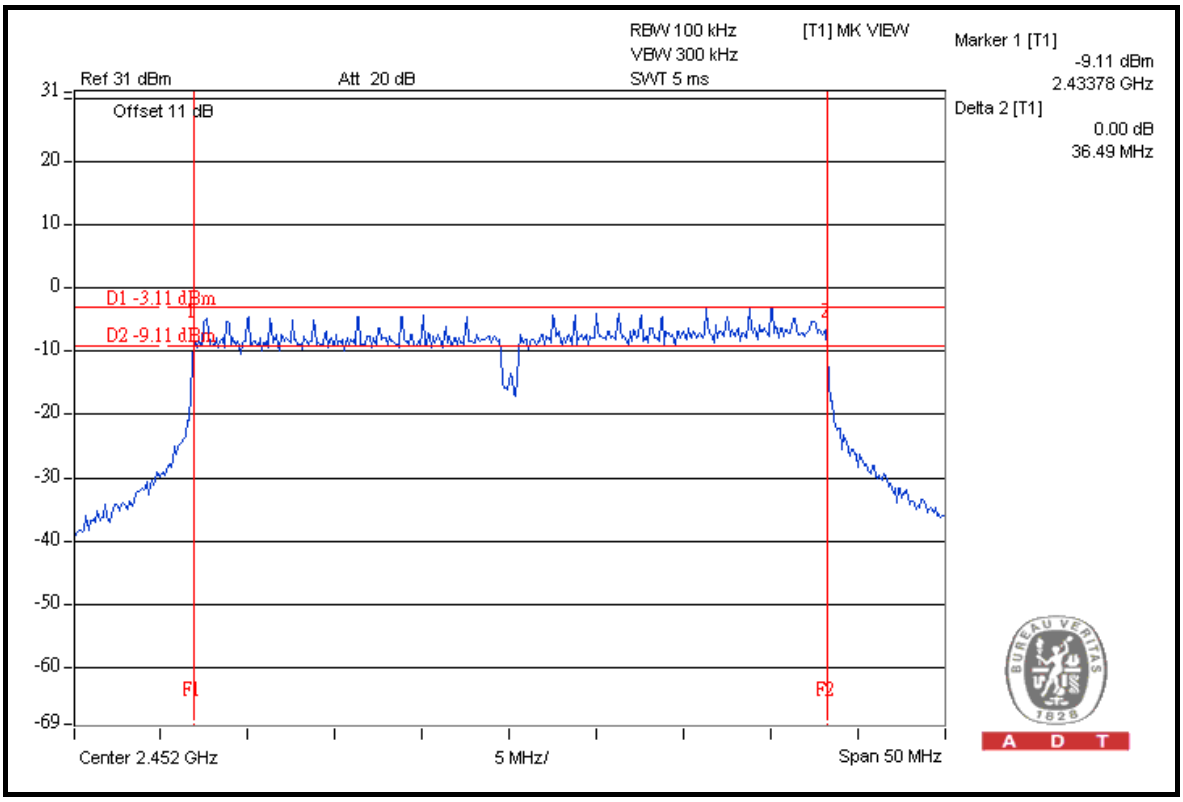
FOR CHAIN 0: CH 1



802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2422	35.87	35.89	35.91	0.5	PASS
4	2437	35.87	35.86	35.92	0.5	PASS
7	2452	36.49	36.46	36.49	0.5	PASS

FOR CHAIN 2: CH 7



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	0824011	Aug. 02, 2010	Aug. 01, 2011
Power Sensor	MA2411B	0738171	Aug. 02, 2010	Aug. 01, 2011

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.

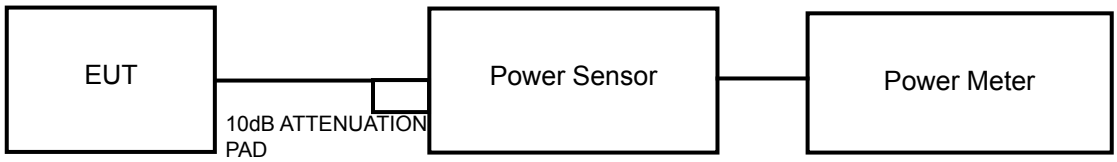
4.4.3 TEST PROCEDURES

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

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	19.3	19.5	20.1	276.6	24.4	26.2	PASS
6	2437	19.9	19.9	20.0	295.4	24.7	26.2	PASS
11	2462	19.9	19.9	19.2	278.6	24.5	26.2	PASS

802.11g

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	21.0	21.0	21.5	393.0	25.9	26.2	PASS
6	2437	20.8	20.9	20.9	366.3	25.6	26.2	PASS
11	2462	21.1	21.1	20.8	377.9	25.8	26.2	PASS

802.11n (20MHz)

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	21.4	20.6	21.1	381.7	25.8	26.2	PASS
6	2437	21.3	20.9	21.1	386.7	25.9	26.2	PASS
11	2462	20.6	21.5	21.4	**394.1**	26.0	26.2	PASS

802.11n (40MHz)

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
1	2412	21.5	20.6	20.9	379.1	25.8	26.2	PASS
6	2437	21.1	20.8	21.3	383.9	25.8	26.2	PASS
11	2462	20.0	20.4	20.8	329.9	25.2	26.2	PASS

NOTE: Directional gain =5dBi + 10log(3)=9.8dBi > 6dBi , so the conducted power limit shall be reduced to 30-(9.8-6)=26.2dBm

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
R&S SPECTRUM ANALYZER	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 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

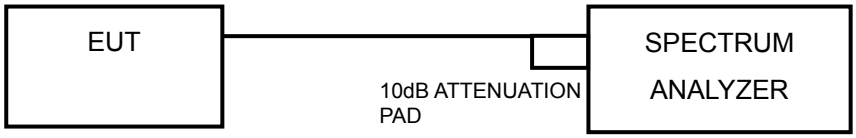
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

Follow method 2 of KDB 662911 D01 Multiple Transmitter Output v01 to calculate total power density of 3 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.

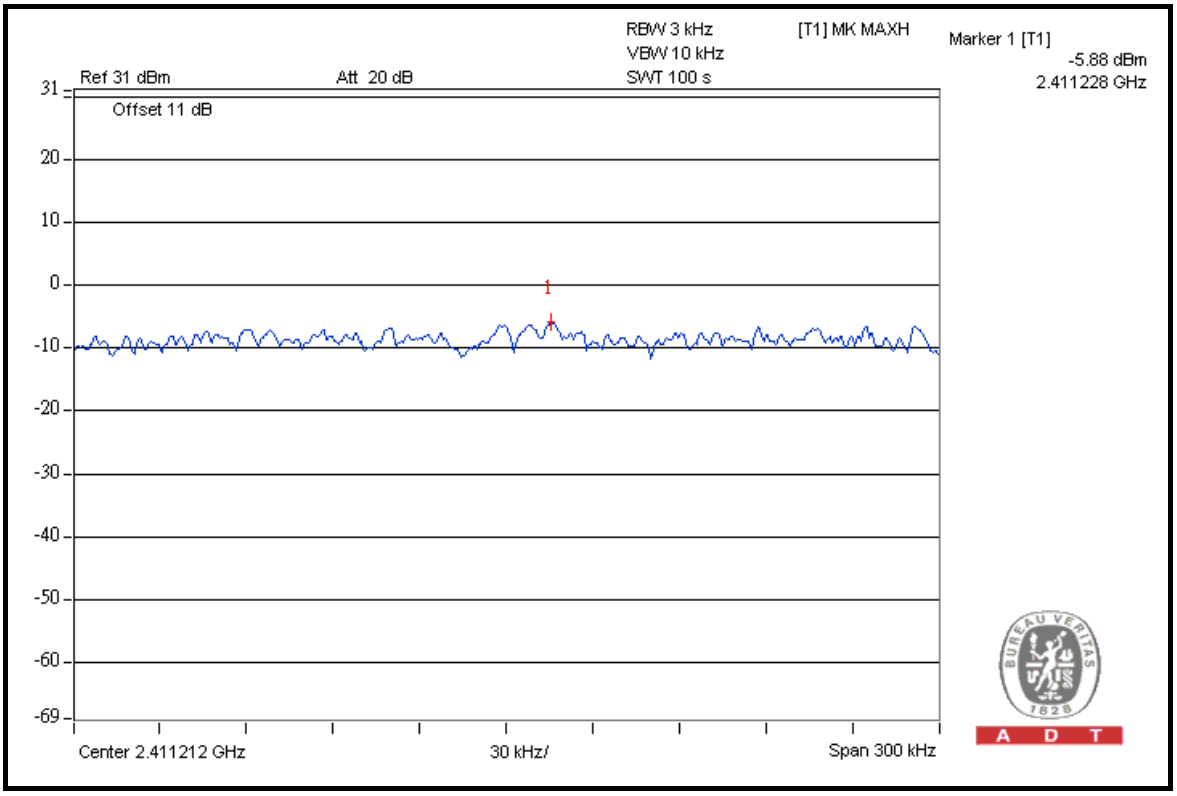
4.5.7 TEST RESULTS

802.11b

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=3) dB			
0	1	2412	-7.0	4.77	-2.2	4.2	PASS
	6	2437	-6.3	4.77	-1.5	4.2	PASS
	11	2462	-6.3	4.77	-1.5	4.2	PASS
1	1	2412	-7.1	4.77	-2.3	4.2	PASS
	6	2437	-6.6	4.77	-1.8	4.2	PASS
	11	2462	-6.6	4.77	-1.8	4.2	PASS
2	1	2412	-5.9	4.77	-1.1	4.2	PASS
	6	2437	-6.1	4.77	-1.3	4.2	PASS
	11	2462	-6.8	4.77	-2.0	4.2	PASS

NOTE: Directional gain =5dBi + 10log(3)=9.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(9.8-6)=4.2dBm

FOR CHAIN 2: CH 1

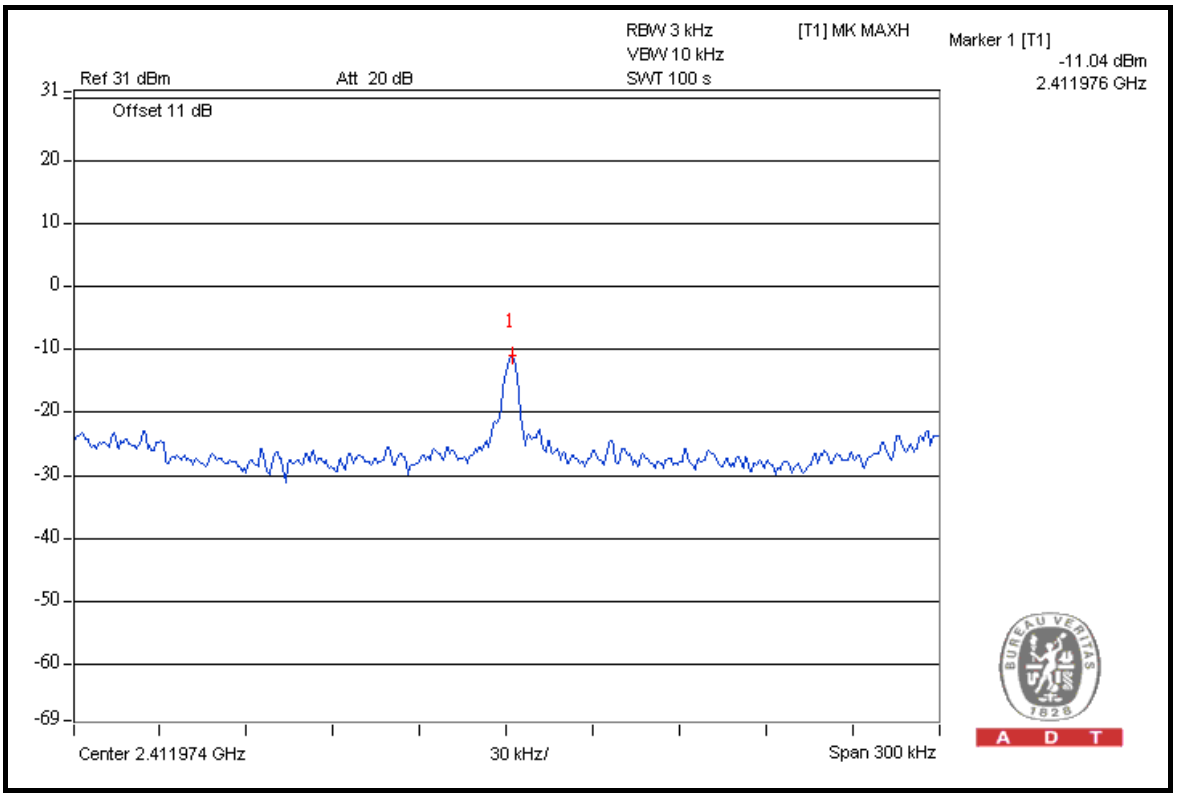


802.11g

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=3) dB			
0	1	2412	-13.4	4.77	-8.6	4.2	PASS
	6	2437	-13.8	4.77	-9.0	4.2	PASS
	11	2462	-13.4	4.77	-8.6	4.2	PASS
1	1	2412	-15.0	4.77	-10.2	4.2	PASS
	6	2437	-14.8	4.77	-10.0	4.2	PASS
	11	2462	-12.7	4.77	-7.9	4.2	PASS
2	1	2412	-11.0	4.77	-6.2	4.2	PASS
	6	2437	-11.4	4.77	-6.6	4.2	PASS
	11	2462	-11.7	4.77	-6.9	4.2	PASS

NOTE: Directional gain =5dBi + 10log(3)=9.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(9.8-6)=4.2dBm

FOR CHAIN 2 CH 1

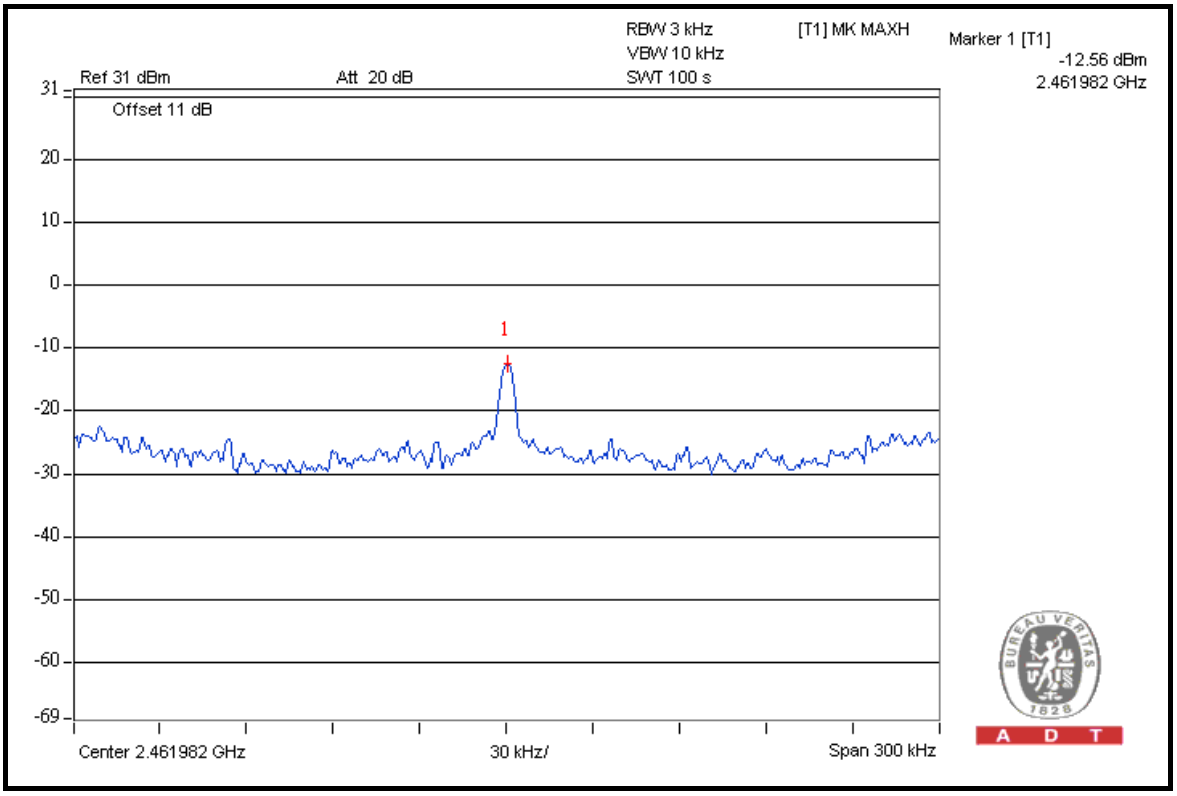


802.11n (20MHz)

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=3) dB			
0	1	2412	-13.7	4.77	-8.9	4.2	PASS
	6	2437	-13.9	4.77	-9.1	4.2	PASS
	11	2462	-14.6	4.77	-9.8	4.2	PASS
1	1	2412	-13.6	4.77	-8.8	4.2	PASS
	6	2437	-13.4	4.77	-8.6	4.2	PASS
	11	2462	-12.6	4.77	-7.8	4.2	PASS
2	1	2412	-14.3	4.77	-9.5	4.2	PASS
	6	2437	-14.2	4.77	-9.4	4.2	PASS
	11	2462	-13.9	4.77	-9.1	4.2	PASS

NOTE: Directional gain =5dBi + 10log(3)=9.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(9.8-6)=4.2dBm

FOR CHAIN 1: CH 11

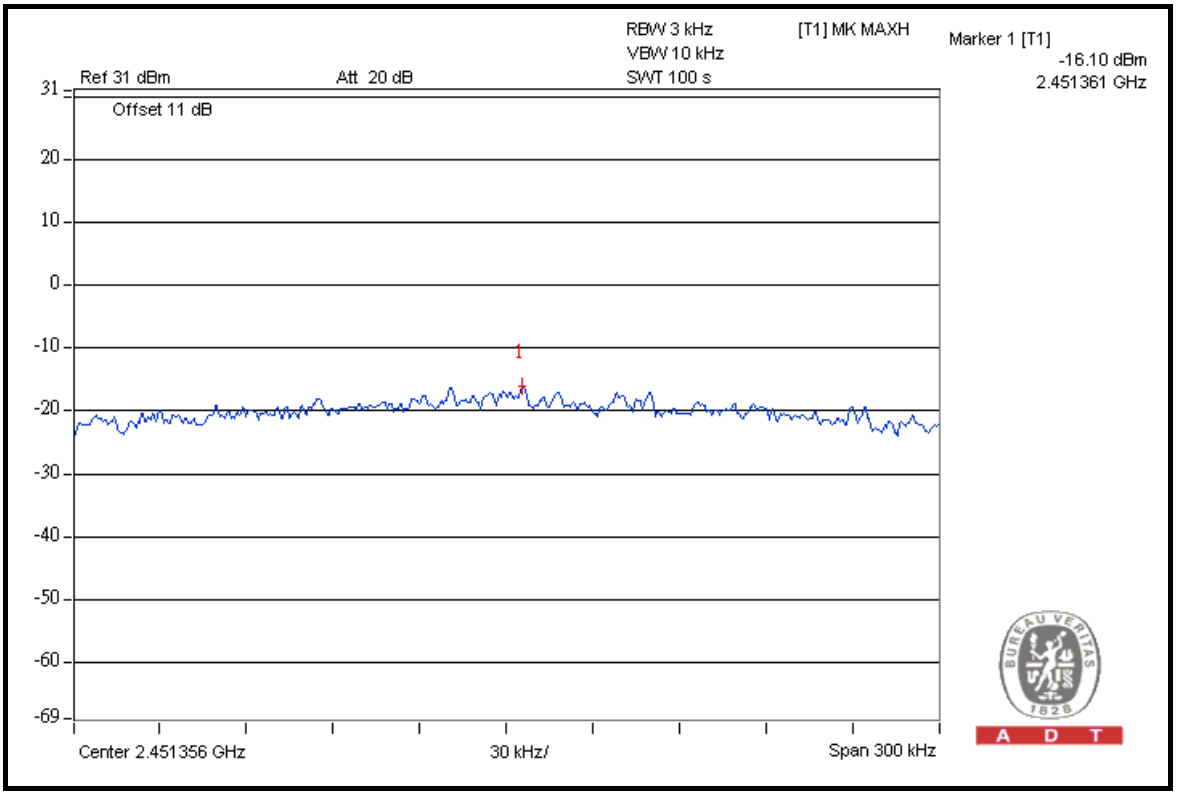


802.11n (40MHz)

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=3) dB			
0	1	2422	-17.4	4.77	-12.6	4.2	PASS
	4	2437	-18.1	4.77	-13.3	4.2	PASS
	7	2452	-18.8	4.77	-14.0	4.2	PASS
1	1	2422	-18.4	4.77	-13.6	4.2	PASS
	4	2437	-18.0	4.77	-13.2	4.2	PASS
	7	2452	-18.7	4.77	-13.9	4.2	PASS
2	1	2422	-16.5	4.77	-11.7	4.2	PASS
	4	2437	-16.1	4.77	-11.3	4.2	PASS
	7	2452	-16.5	4.77	-11.7	4.2	PASS

NOTE: Directional gain =5dBi + 10log(3)=9.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(9.8-6)=4.2dBm

FOR CHAIN 2: CH 4



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
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 27, 2010	Dec. 26, 2011
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	100115	Aug. 02, 2010	Aug. 01, 2011
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	Nov. 02, 2010	Nov. 01, 2011
Preamplifier Agilent	8447D	2944A10738	Nov. 02, 2010	Nov. 01, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	274041/4	Aug. 21, 2010	Aug. 20, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	283397/4	Aug. 21, 2010	Aug. 20, 2011
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.

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 10Hz 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

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)	114.0	54.57	59.43	74.00
2412.00 (AV)	109.8	58.71	51.09	54.00

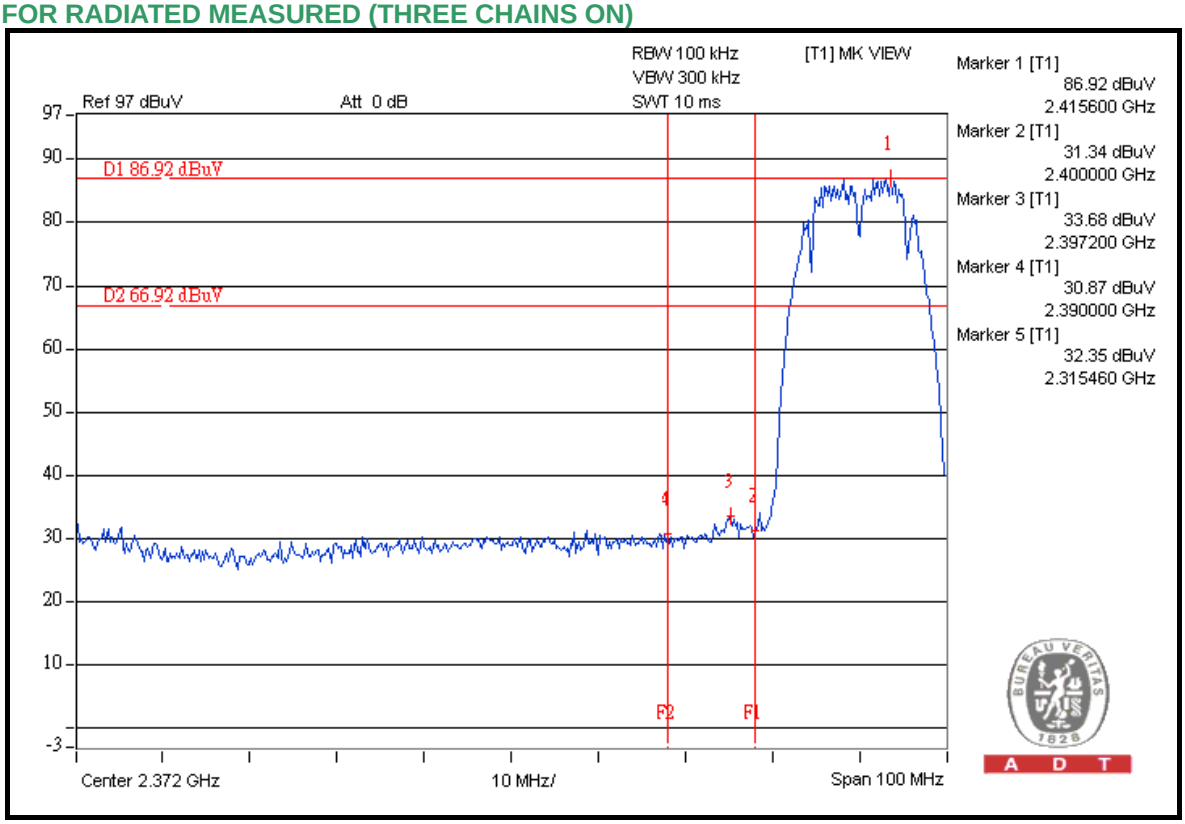
RESTRICT BAND (2483.5 ~ 2500 MHz)

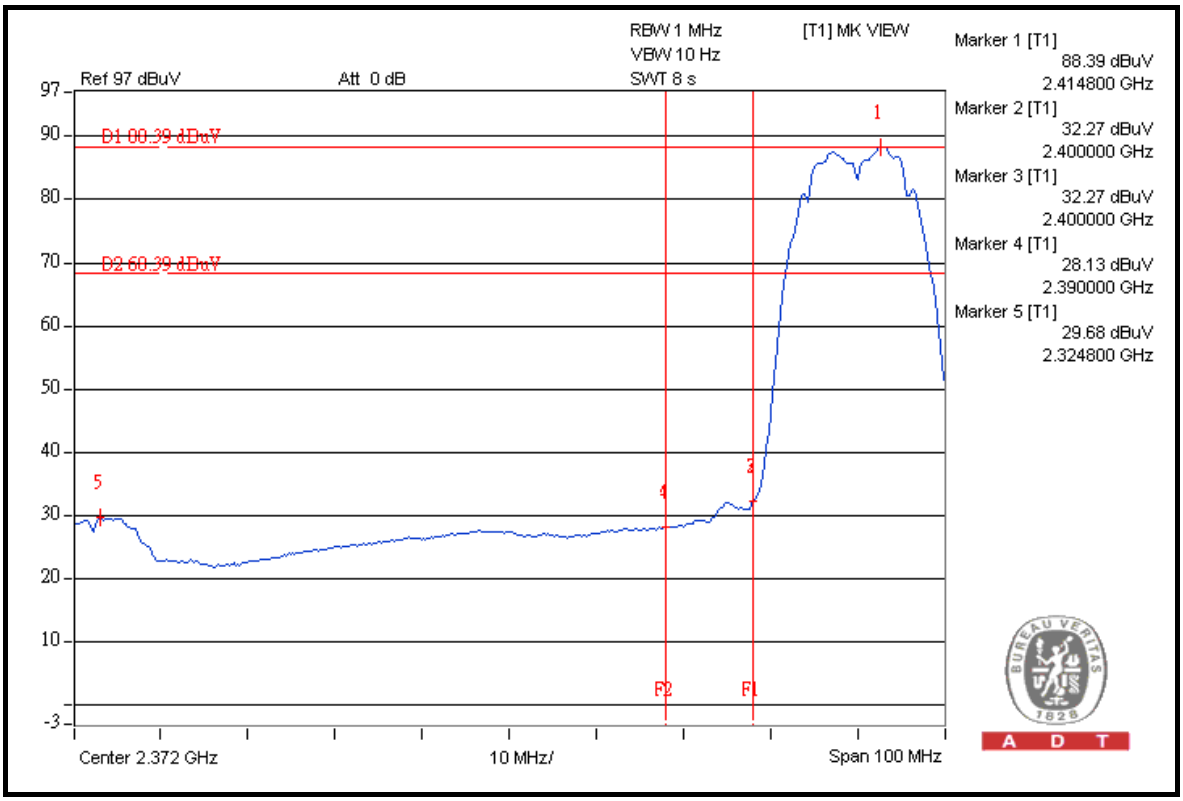
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	113.9	53.82	60.08	74.00
2462.00 (AV)	110.0	57.49	52.51	54.00

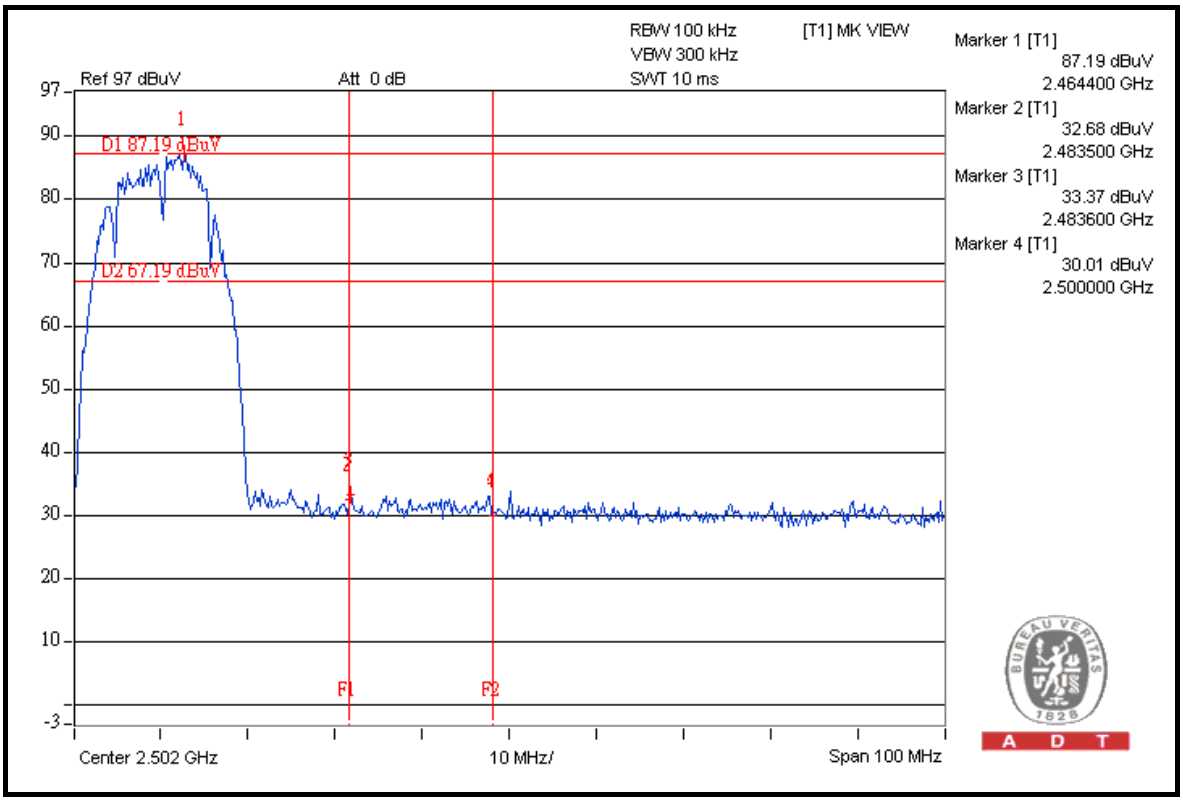
NOTE:

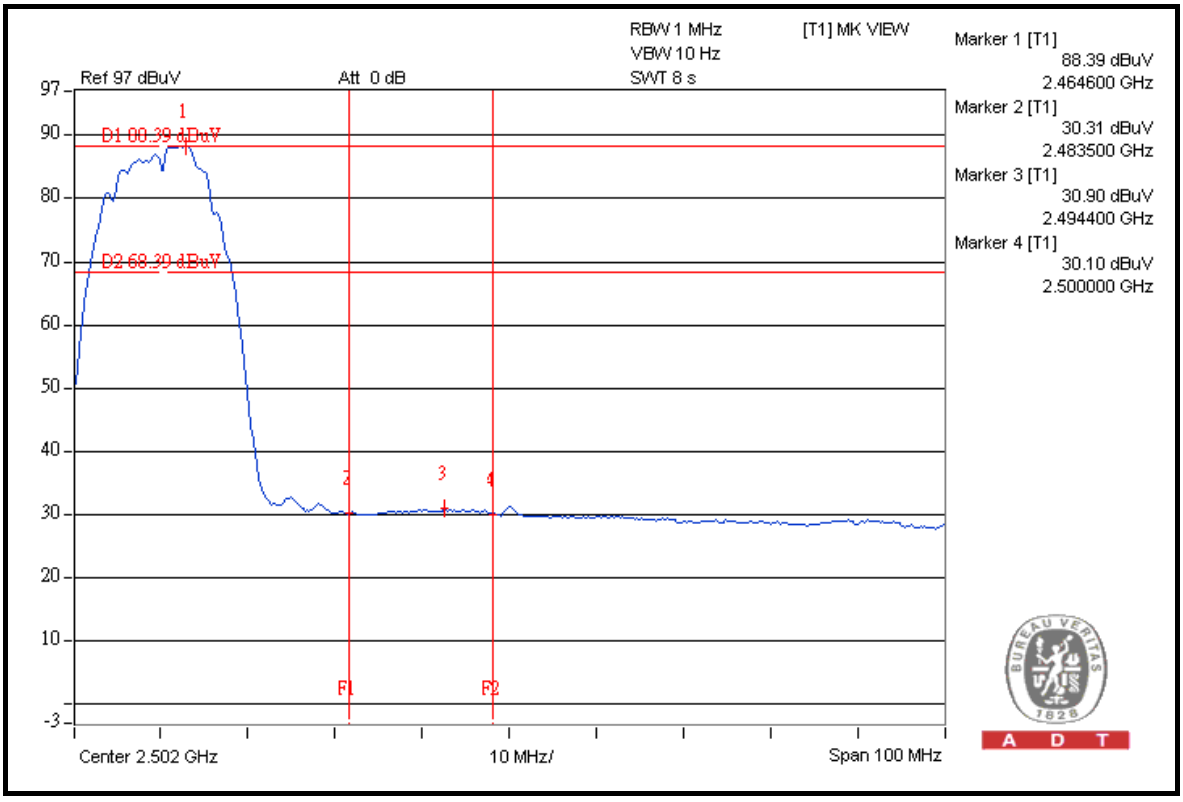
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 2 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (THREE CHAINS ON)



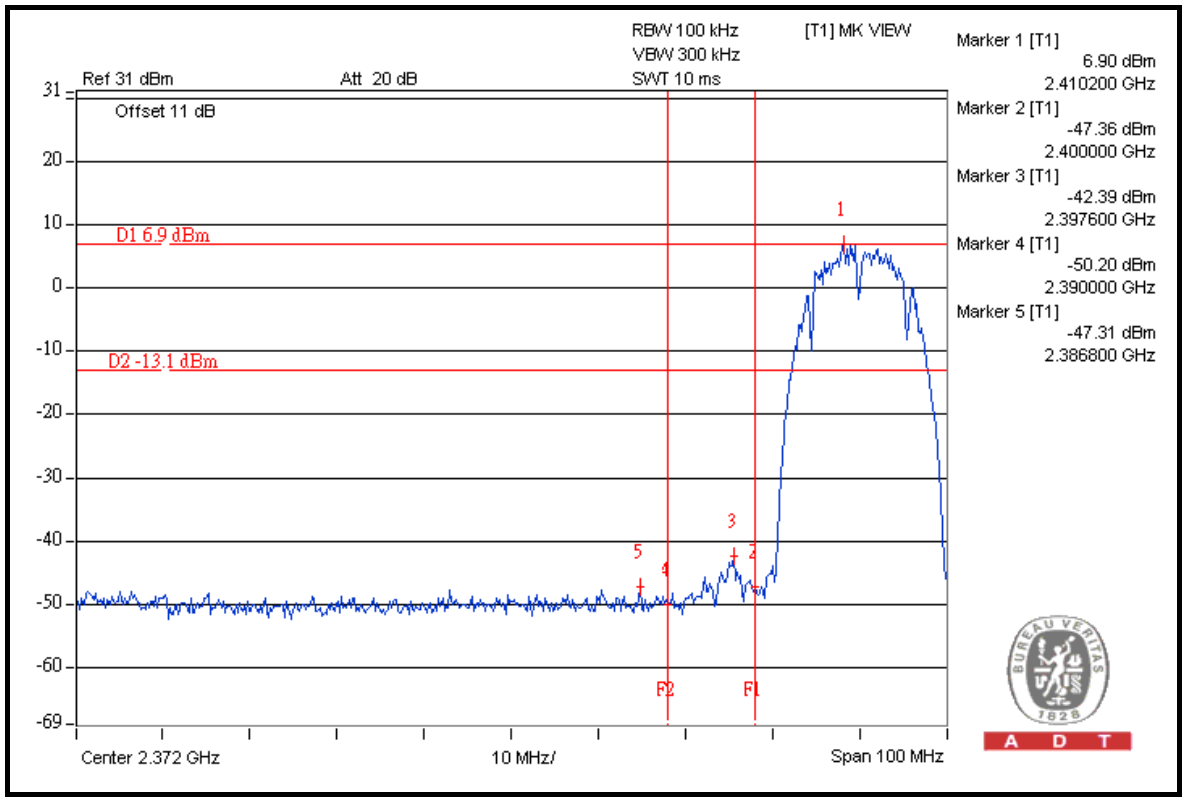


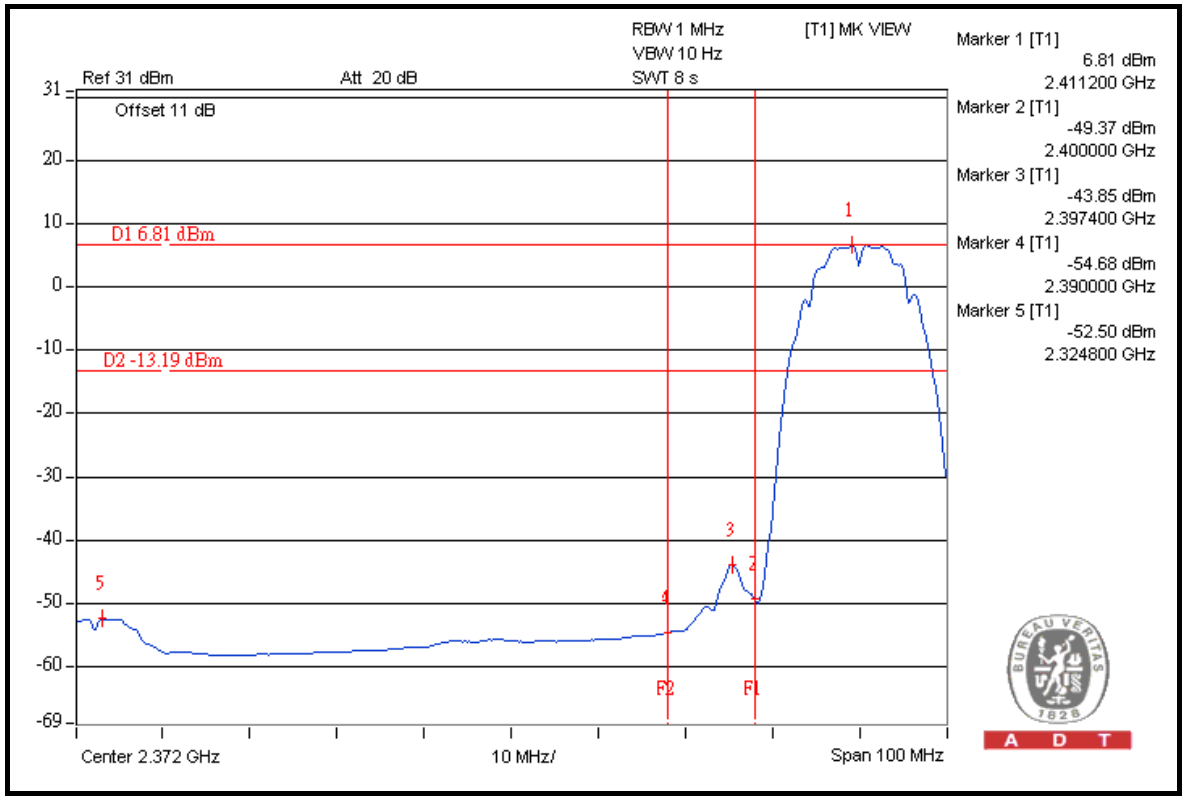

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 87.19 dBuV
D2 67.19 dBuV
Marker 1 [T1]
87.19 dBuV
2.464400 GHz
Marker 2 [T1]
32.68 dBuV
2.483500 GHz
Marker 3 [T1]
33.37 dBuV
2.483600 GHz
Marker 4 [T1]
30.01 dBuV
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

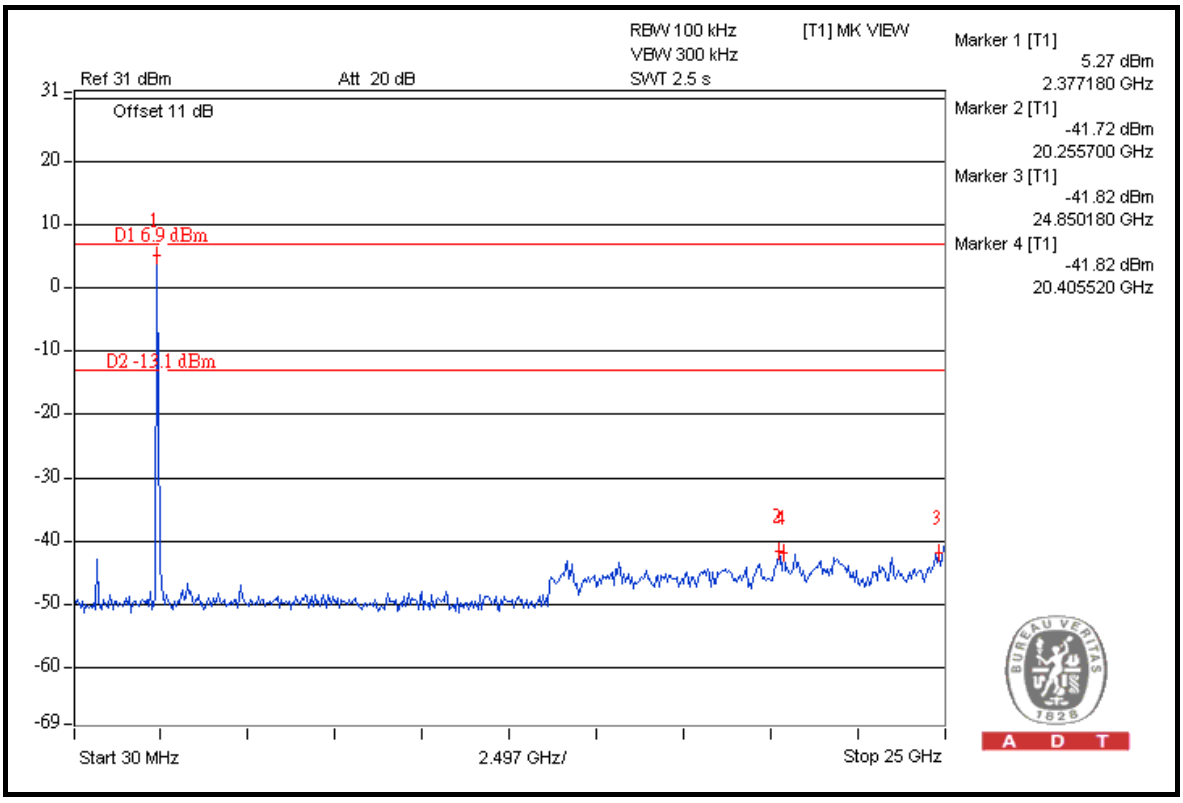

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 88.39 dBuV
D2 68.39 dBuV
Marker 1 [T1]
88.39 dBuV
2.464600 GHz
Marker 2 [T1]
30.31 dBuV
2.483500 GHz
Marker 3 [T1]
30.90 dBuV
2.494400 GHz
Marker 4 [T1]
30.10 dBuV
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

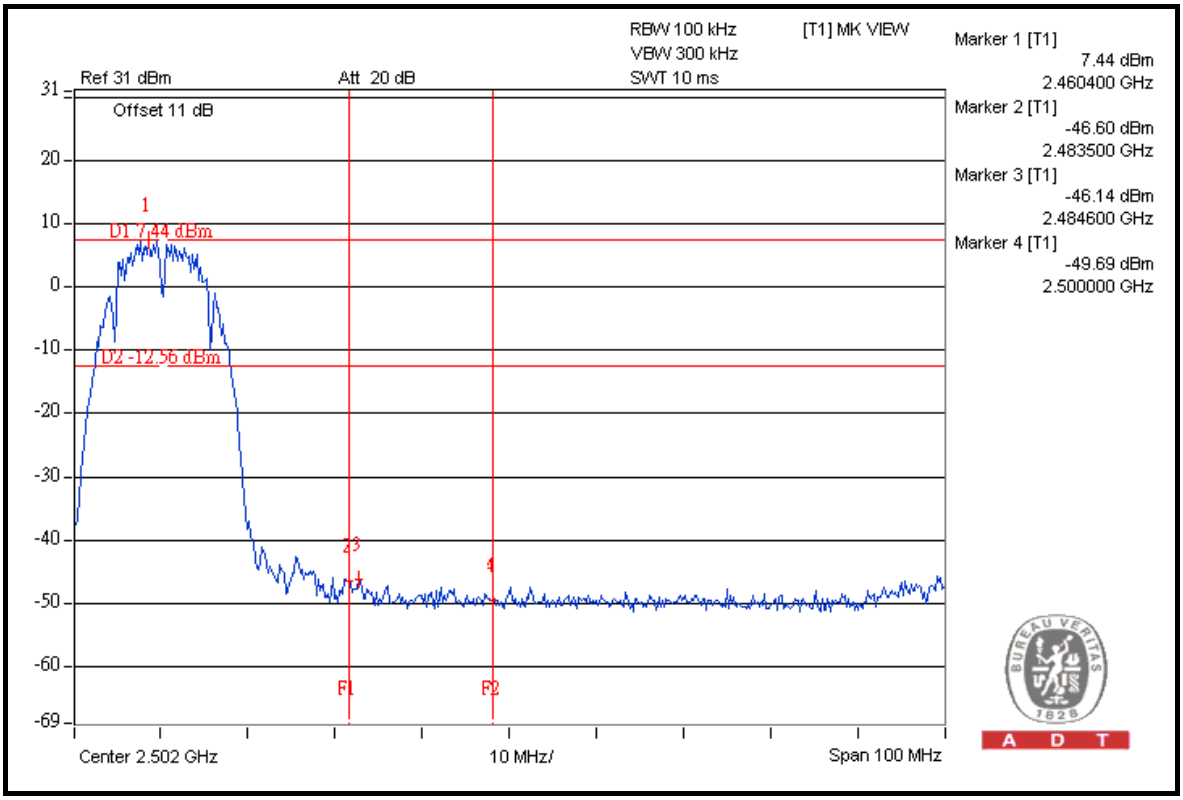
FOR CONDUCTED MEASURED

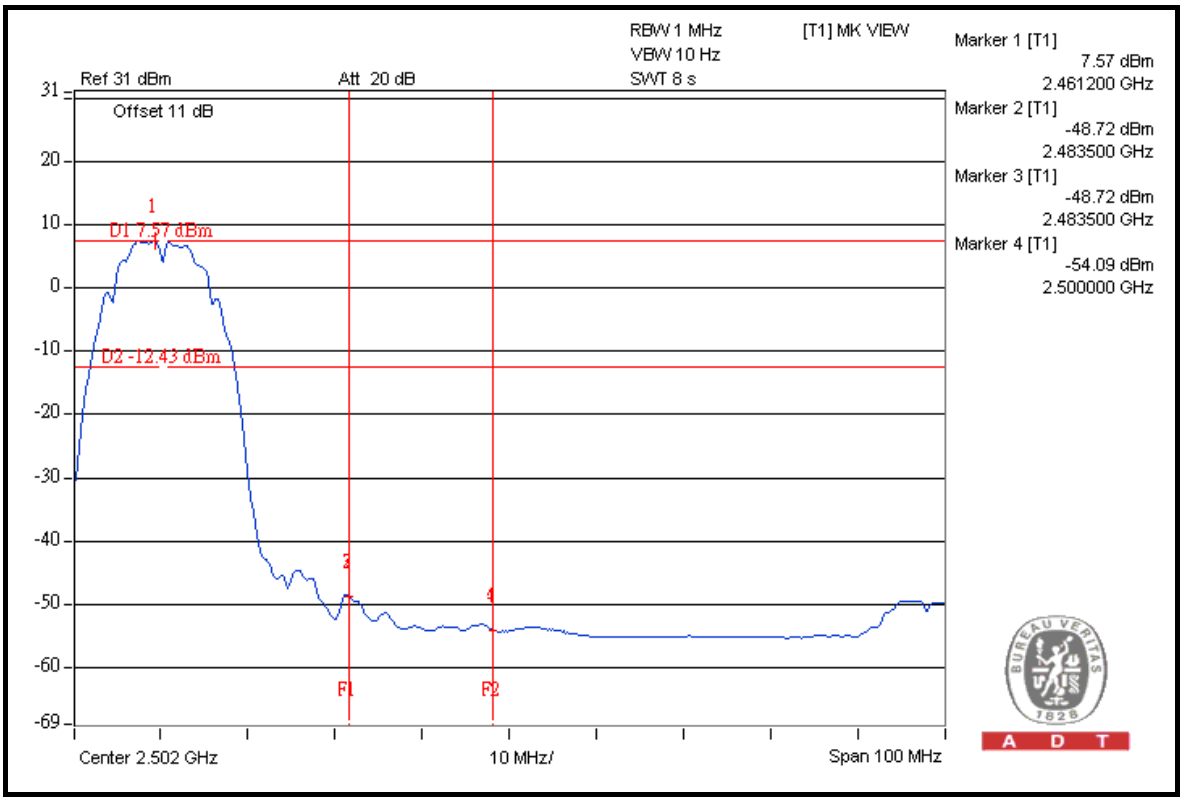
CHAIN 0

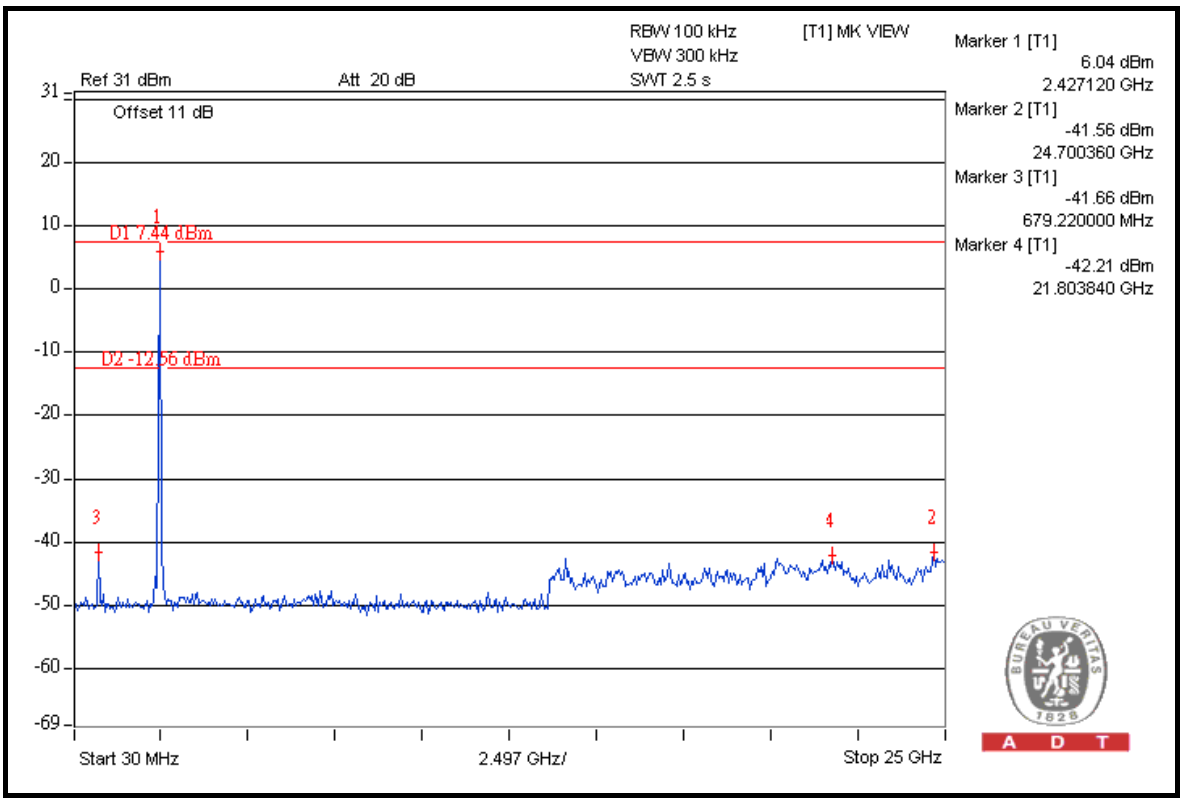




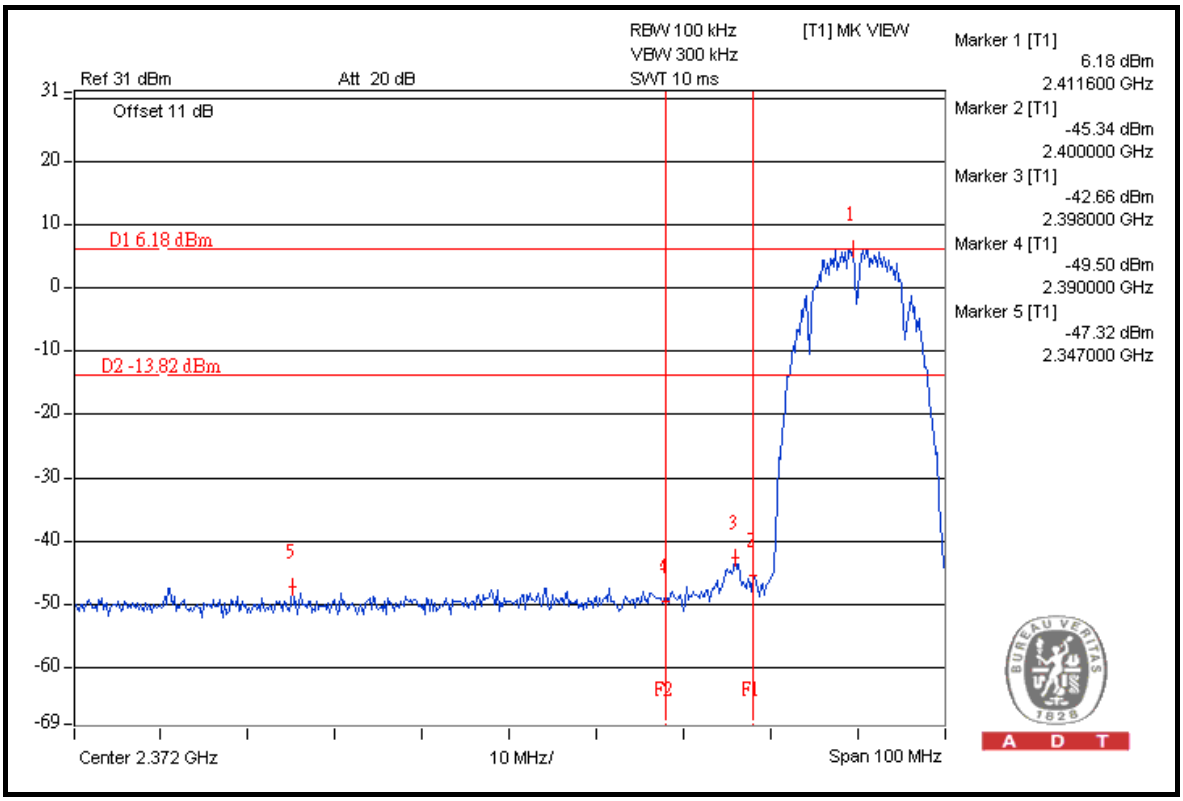

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 6.9 dBm
D2 -13.1 dBm
Marker 1 [T1]
5.27 dBm
2.377180 GHz
Marker 2 [T1]
-41.72 dBm
20.255700 GHz
Marker 3 [T1]
-41.82 dBm
24.850180 GHz
Marker 4 [T1]
-41.82 dBm
20.405520 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

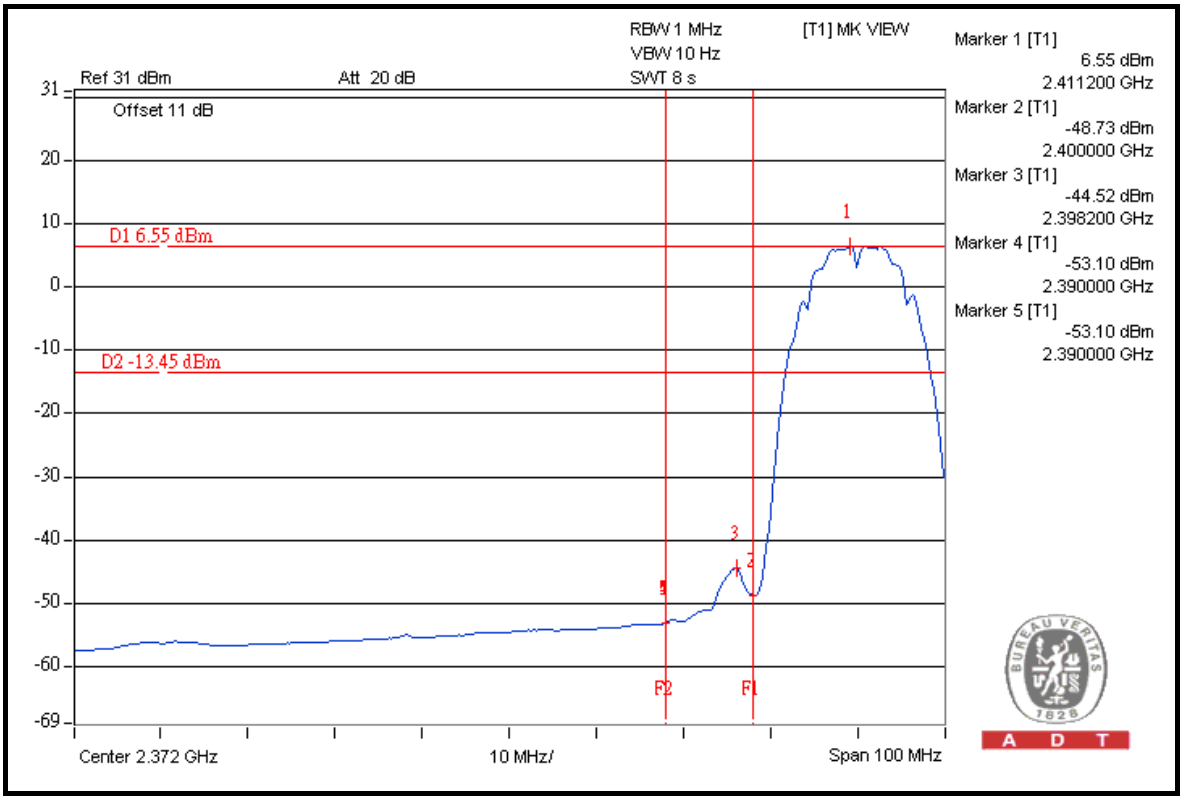

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.44 dBm
D2 -12.56 dBm
Marker 1 [T1]
7.44 dBm
2.460400 GHz
Marker 2 [T1]
-46.60 dBm
2.483500 GHz
Marker 3 [T1]
-46.14 dBm
2.484600 GHz
Marker 4 [T1]
-49.69 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

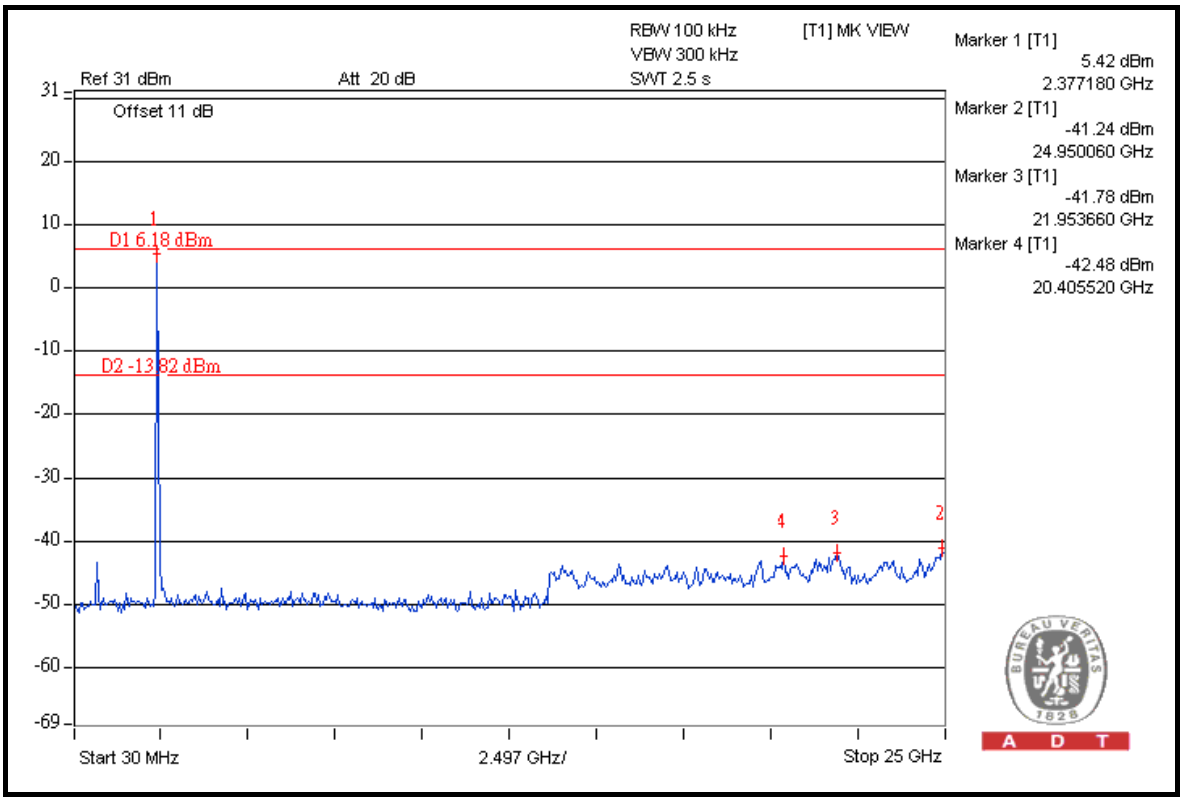

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.57 dBm
D2 -12.43 dBm
Marker 1 [T1]
7.57 dBm
2.461200 GHz
Marker 2 [T1]
-48.72 dBm
2.483500 GHz
Marker 3 [T1]
-48.72 dBm
2.483500 GHz
Marker 4 [T1]
-54.09 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

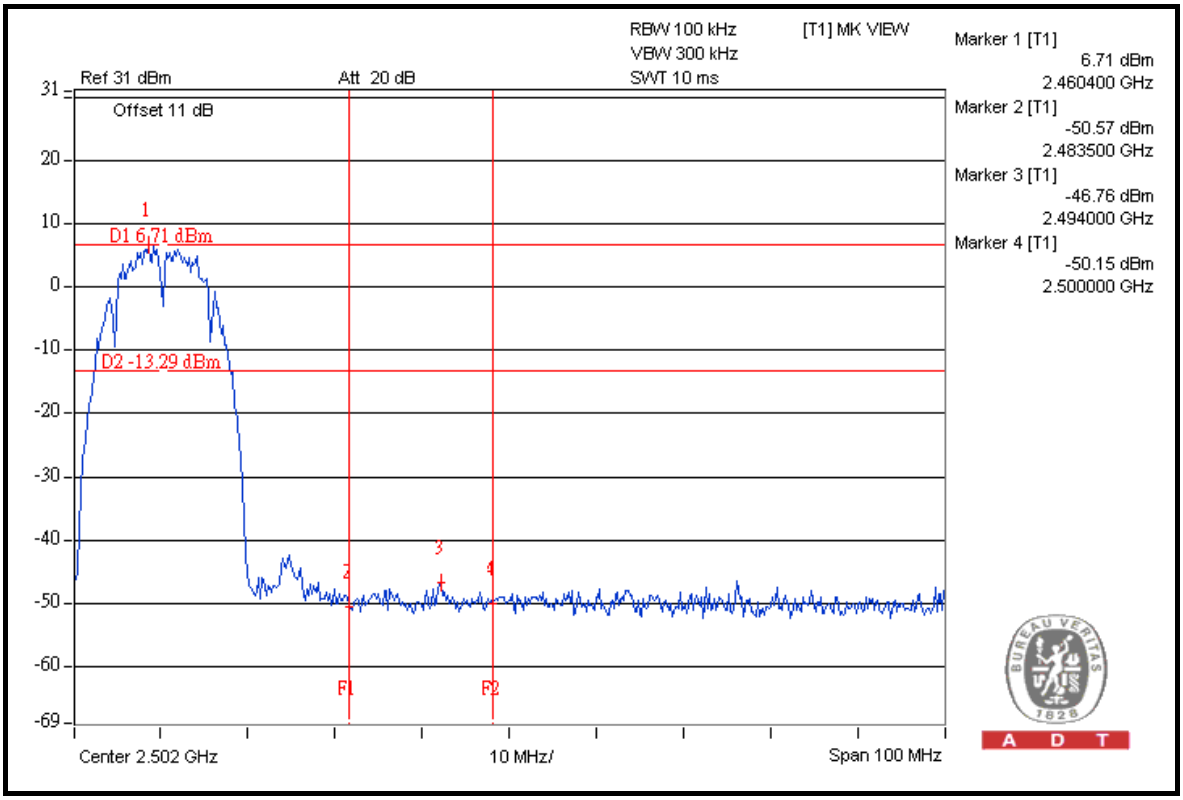

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.44 dBm
D2 -12.56 dBm
Marker 1 [T1]
6.04 dBm
2.427120 GHz
Marker 2 [T1]
-41.56 dBm
24.700360 GHz
Marker 3 [T1]
-41.66 dBm
679.220000 MHz
Marker 4 [T1]
-42.21 dBm
21.803840 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

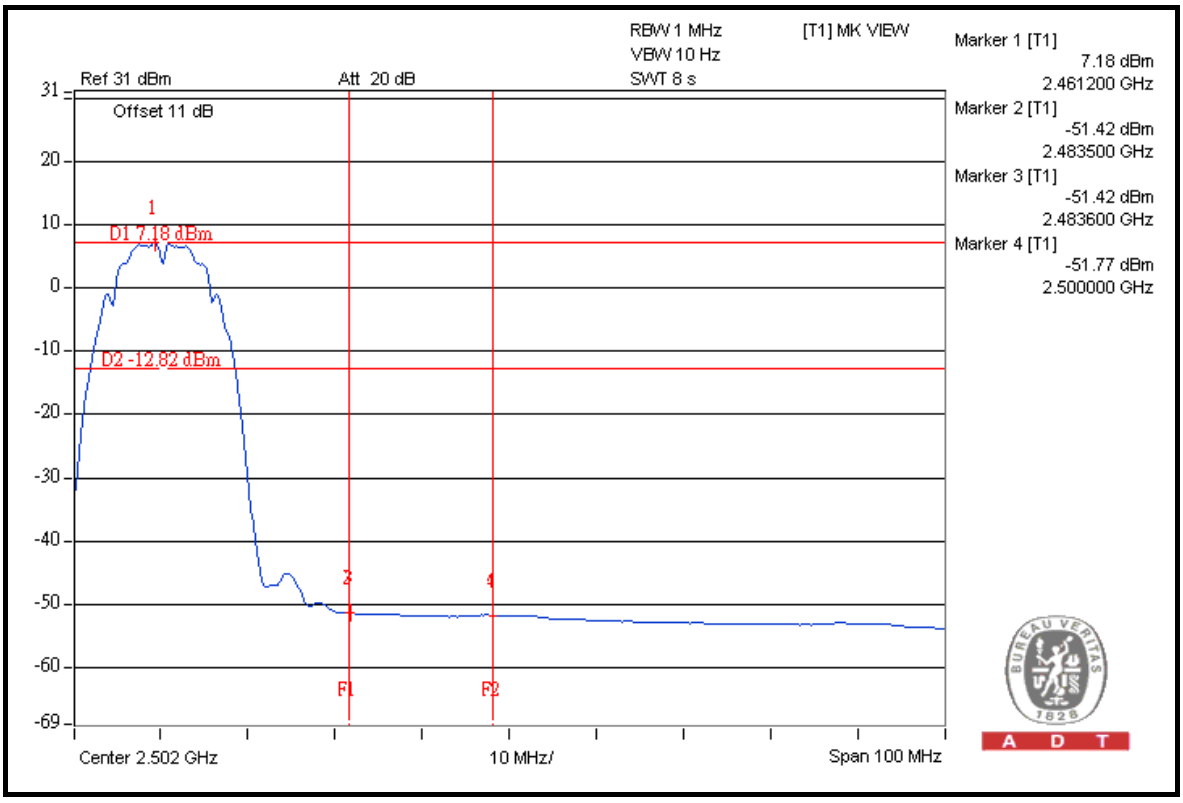
CHAIN 1

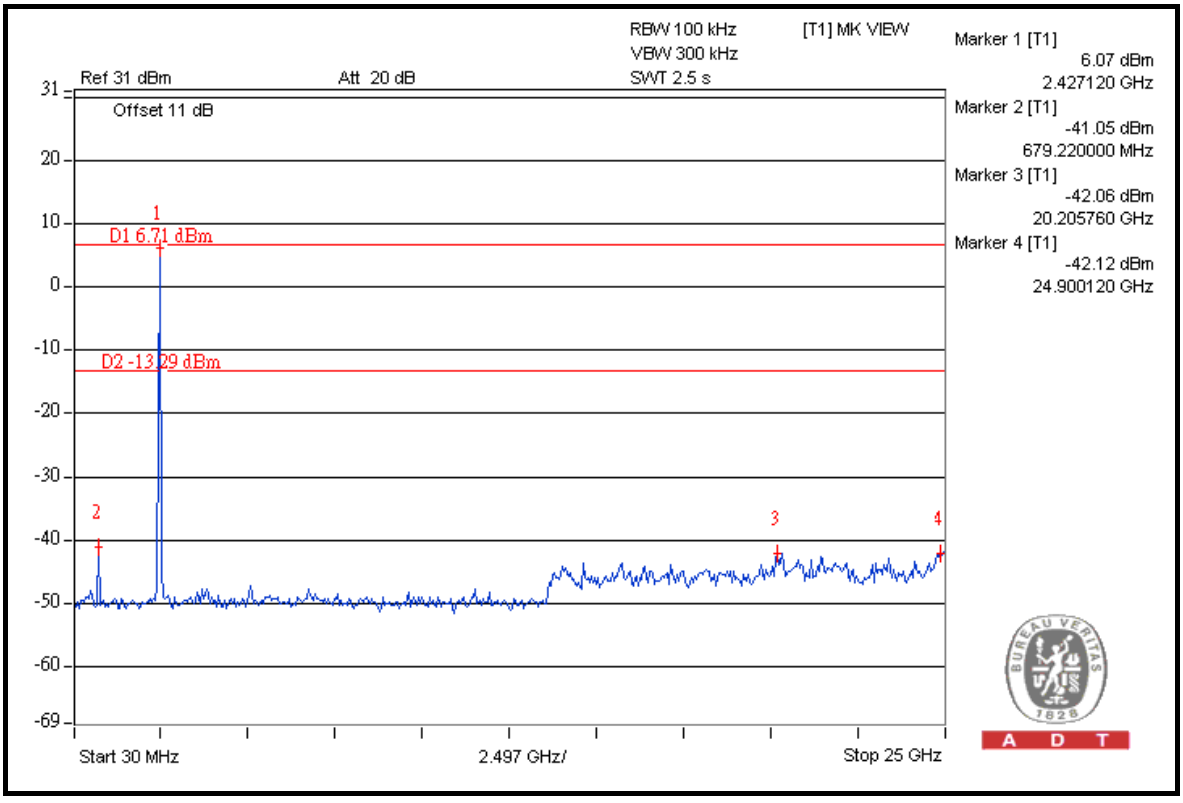

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 6.18 dBm
D2 -13.82 dBm
Marker 1 [T1]
6.18 dBm
2.411600 GHz
Marker 2 [T1]
-45.34 dBm
2.400000 GHz
Marker 3 [T1]
-42.66 dBm
2.398000 GHz
Marker 4 [T1]
-49.50 dBm
2.390000 GHz
Marker 5 [T1]
-47.32 dBm
2.347000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 6.55 dBm
D2 -13.45 dBm
Marker 1 [T1]
6.55 dBm
2.411200 GHz
Marker 2 [T1]
-48.73 dBm
2.400000 GHz
Marker 3 [T1]
-44.52 dBm
2.398200 GHz
Marker 4 [T1]
-53.10 dBm
2.390000 GHz
Marker 5 [T1]
-53.10 dBm
2.390000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz

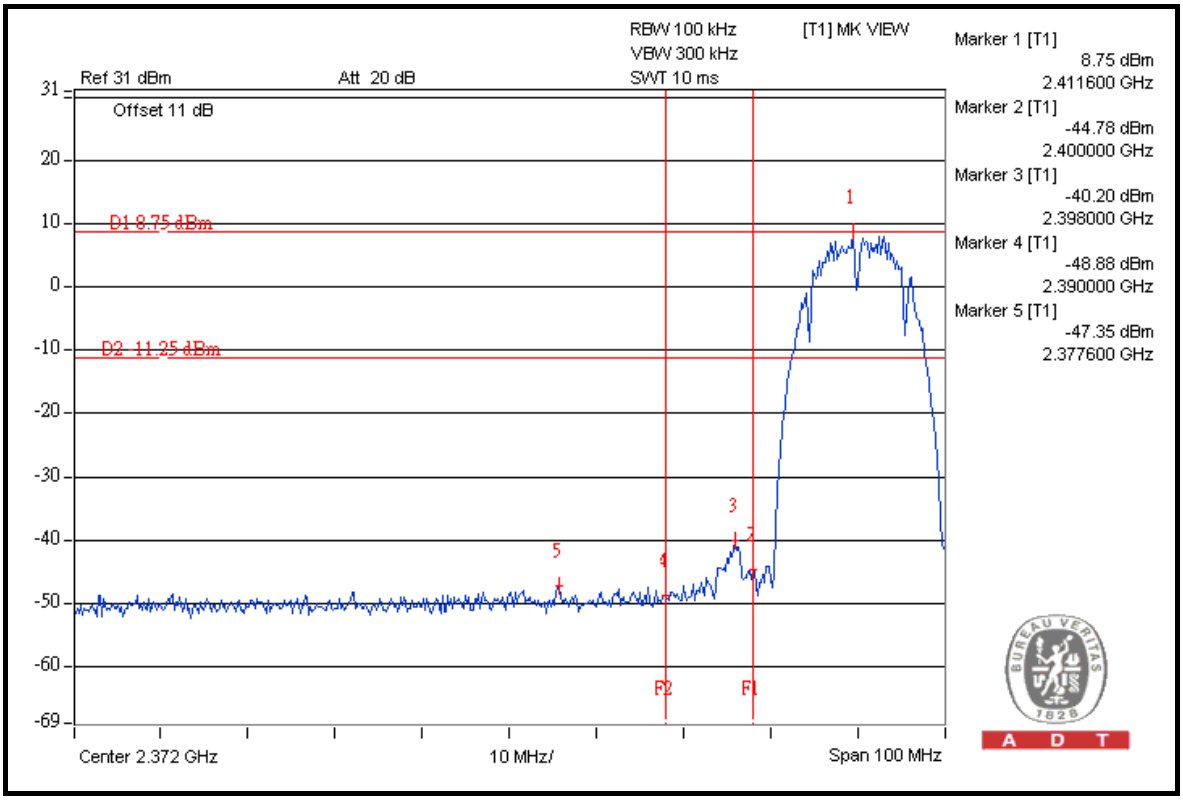

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 6.18 dBm
D2 -13.82 dBm
Marker 1 [T1]
5.42 dBm
2.377180 GHz
Marker 2 [T1]
-41.24 dBm
24.950060 GHz
Marker 3 [T1]
-41.78 dBm
21.953660 GHz
Marker 4 [T1]
-42.48 dBm
20.405520 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

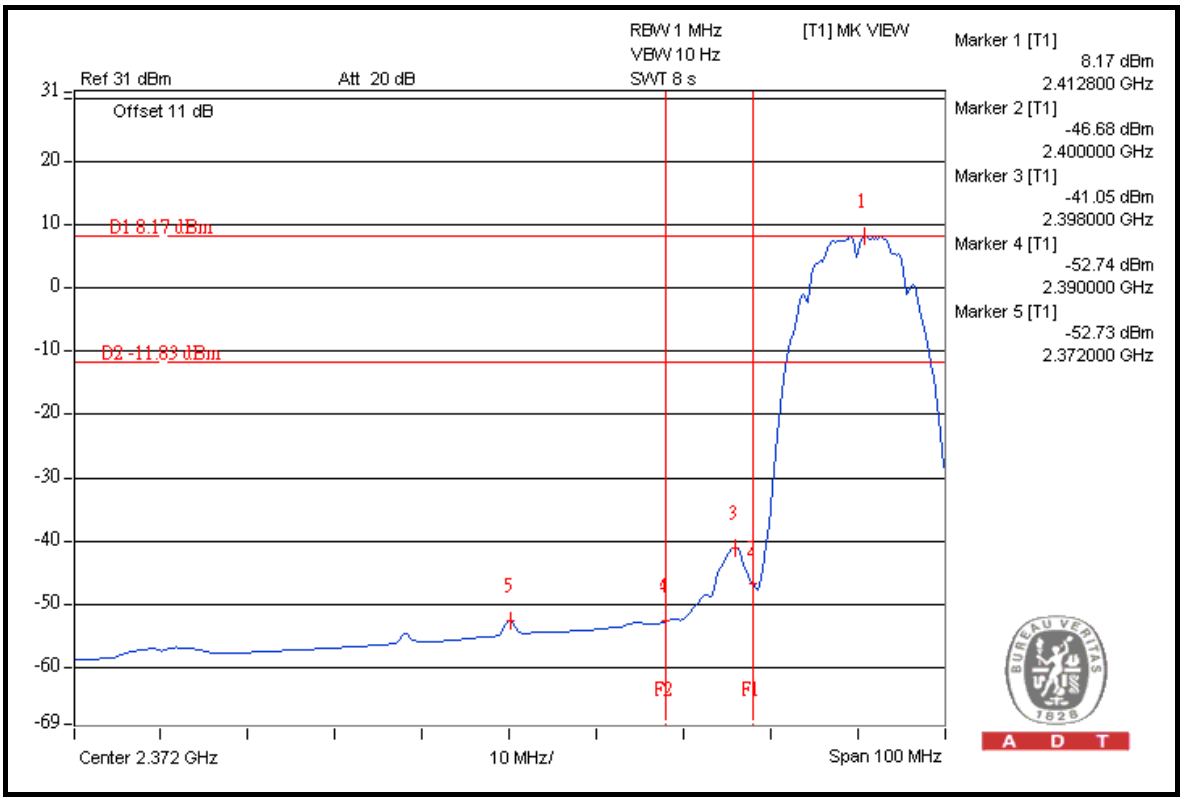

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 6.71 dBm
D2 -13.29 dBm
Marker 1 [T1]
6.71 dBm
2.460400 GHz
Marker 2 [T1]
-50.57 dBm
2.483500 GHz
Marker 3 [T1]
-46.76 dBm
2.494000 GHz
Marker 4 [T1]
-50.15 dBm
2.500000 GHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

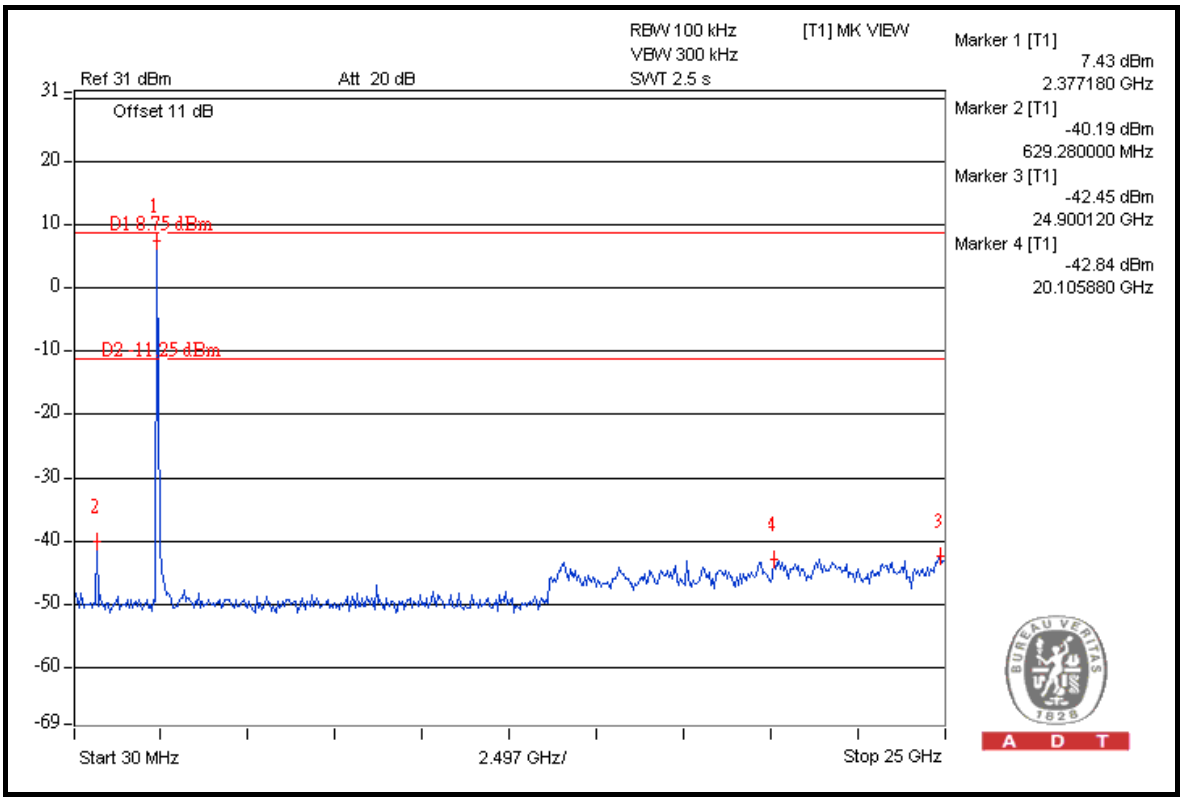

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.18 dBm
D2 -12.82 dBm
Marker 1 [T1]
7.18 dBm
2.461200 GHz
Marker 2 [T1]
-51.42 dBm
2.483500 GHz
Marker 3 [T1]
-51.42 dBm
2.483600 GHz
Marker 4 [T1]
-51.77 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

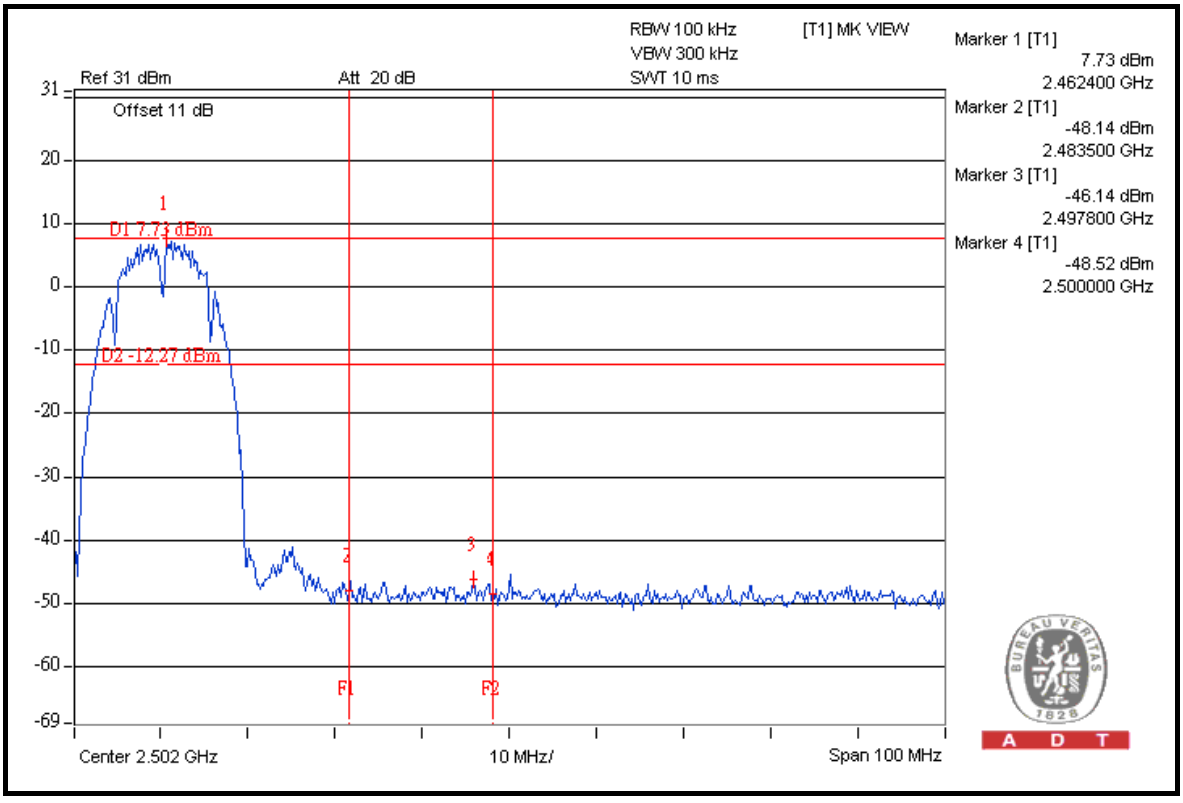

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 6.71 dBm
D2 -13.29 dBm
Marker 1 [T1]
6.07 dBm
2.427120 GHz
Marker 2 [T1]
-41.05 dBm
679.220000 MHz
Marker 3 [T1]
-42.06 dBm
20.205760 GHz
Marker 4 [T1]
-42.12 dBm
24.900120 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

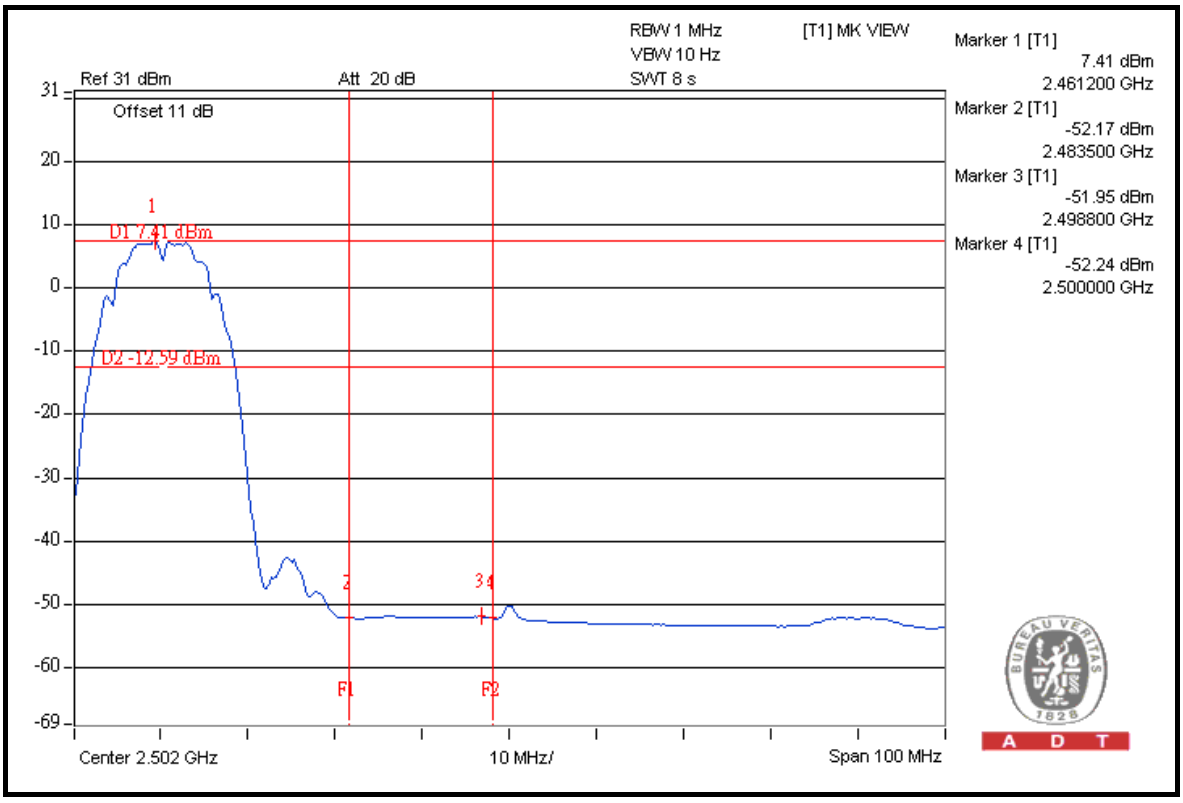
CHAIN 2

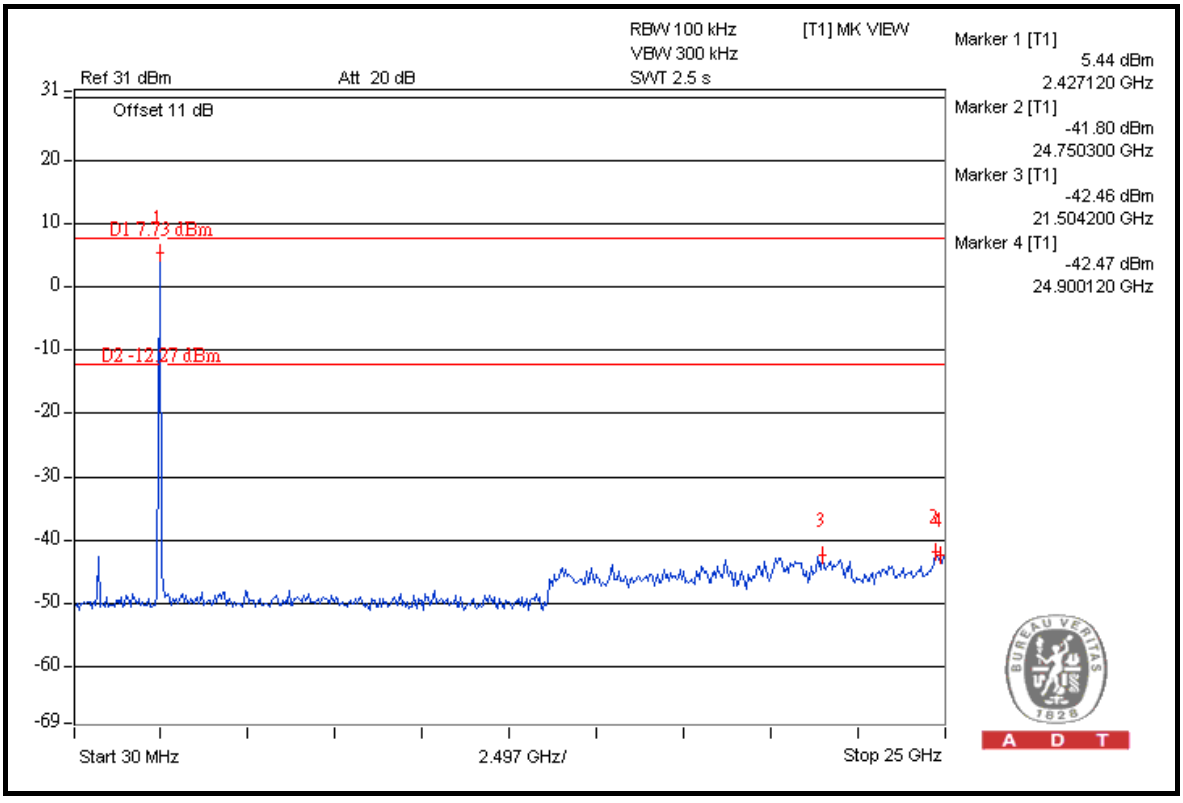

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.75 dBm
D2 -11.25 dBm
Marker 1 [T1]
8.75 dBm
2.411600 GHz
Marker 2 [T1]
-44.78 dBm
2.400000 GHz
Marker 3 [T1]
-40.20 dBm
2.398000 GHz
Marker 4 [T1]
-48.88 dBm
2.390000 GHz
Marker 5 [T1]
-47.35 dBm
2.377600 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.17 dBm
D2 -11.83 dBm
Marker 1 [T1]
8.17 dBm
2.412800 GHz
Marker 2 [T1]
-46.68 dBm
2.400000 GHz
Marker 3 [T1]
-41.05 dBm
2.398000 GHz
Marker 4 [T1]
-52.74 dBm
2.390000 GHz
Marker 5 [T1]
-52.73 dBm
2.372000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.75 dBm
D2 -11.25 dBm
Marker 1 [T1]
7.43 dBm
2.377180 GHz
Marker 2 [T1]
-40.19 dBm
629.280000 MHz
Marker 3 [T1]
-42.45 dBm
24.900120 GHz
Marker 4 [T1]
-42.84 dBm
20.105880 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.73 dBm
D2 -12.27 dBm
Marker 1 [T1]
7.73 dBm
2.462400 GHz
Marker 2 [T1]
-48.14 dBm
2.483500 GHz
Marker 3 [T1]
-46.14 dBm
2.497800 GHz
Marker 4 [T1]
-48.52 dBm
2.500000 GHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.41 dBm
D2 -12.59 dBm
Marker 1 [T1]
7.41 dBm
2.461200 GHz
Marker 2 [T1]
-52.17 dBm
2.483500 GHz
Marker 3 [T1]
-51.95 dBm
2.498800 GHz
Marker 4 [T1]
-52.24 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.73 dBm
D2 -12.27 dBm
Marker 1 [T1]
5.44 dBm
2.427120 GHz
Marker 2 [T1]
-41.80 dBm
24.750300 GHz
Marker 3 [T1]
-42.46 dBm
21.504200 GHz
Marker 4 [T1]
-42.47 dBm
24.900120 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g

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)	110.4	46.39	64.01	74.00
2412.00 (AV)	97.8	52.09	45.71	54.00

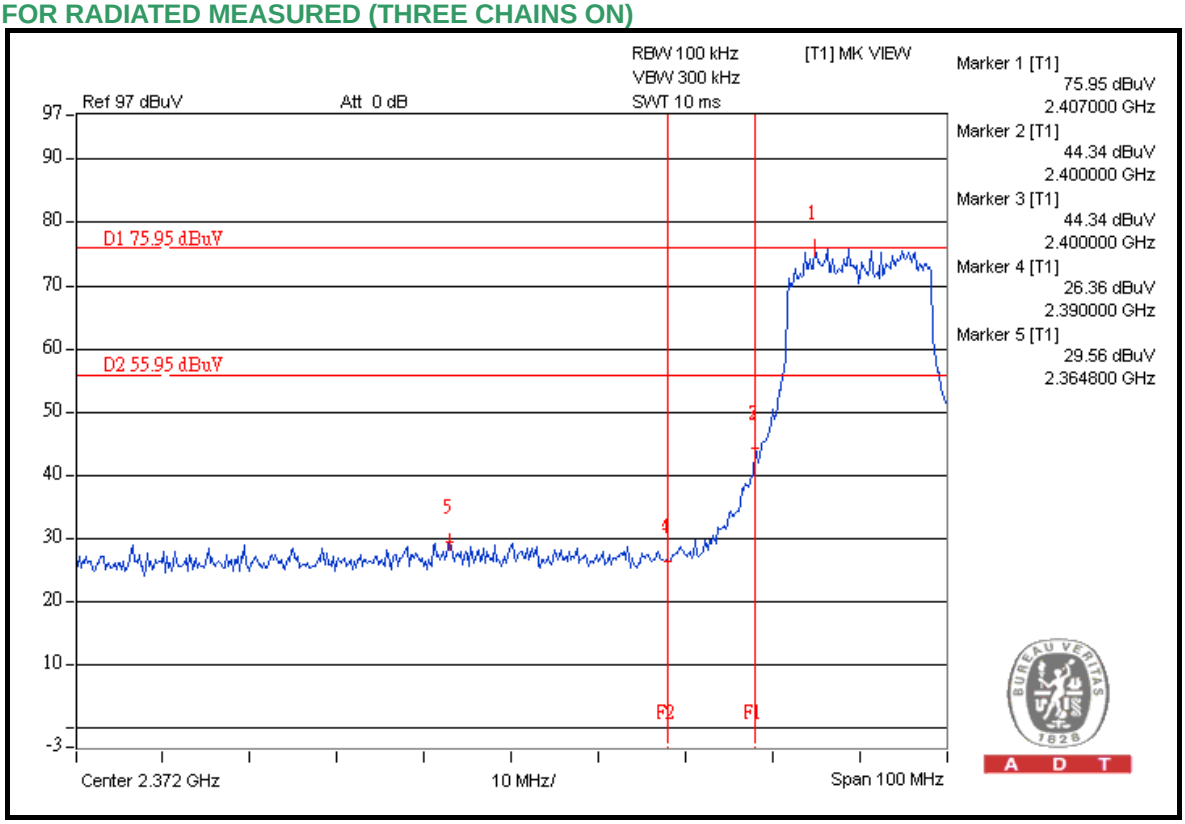
RESTRICT BAND (2483.5 ~ 2500 MHz)

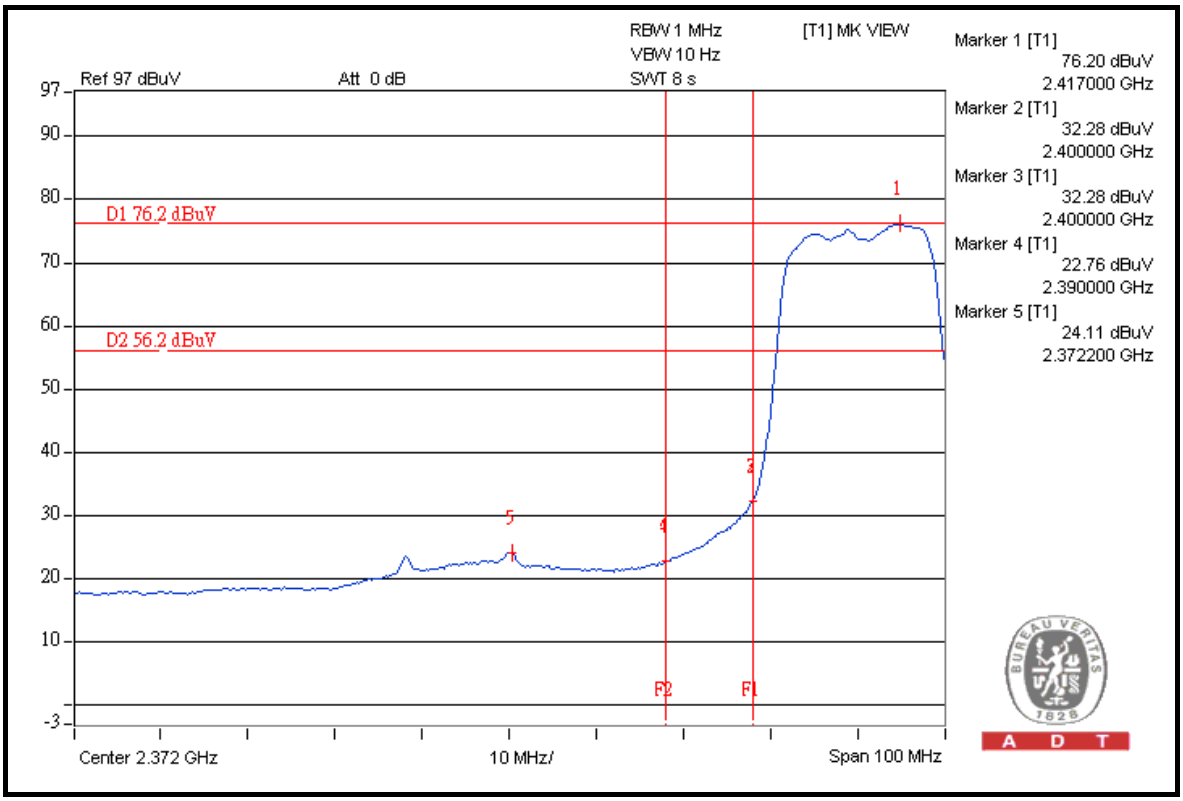
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	110.5	43.84	66.66	74.00
2462.00 (AV)	98.5	49.61	48.89	54.00

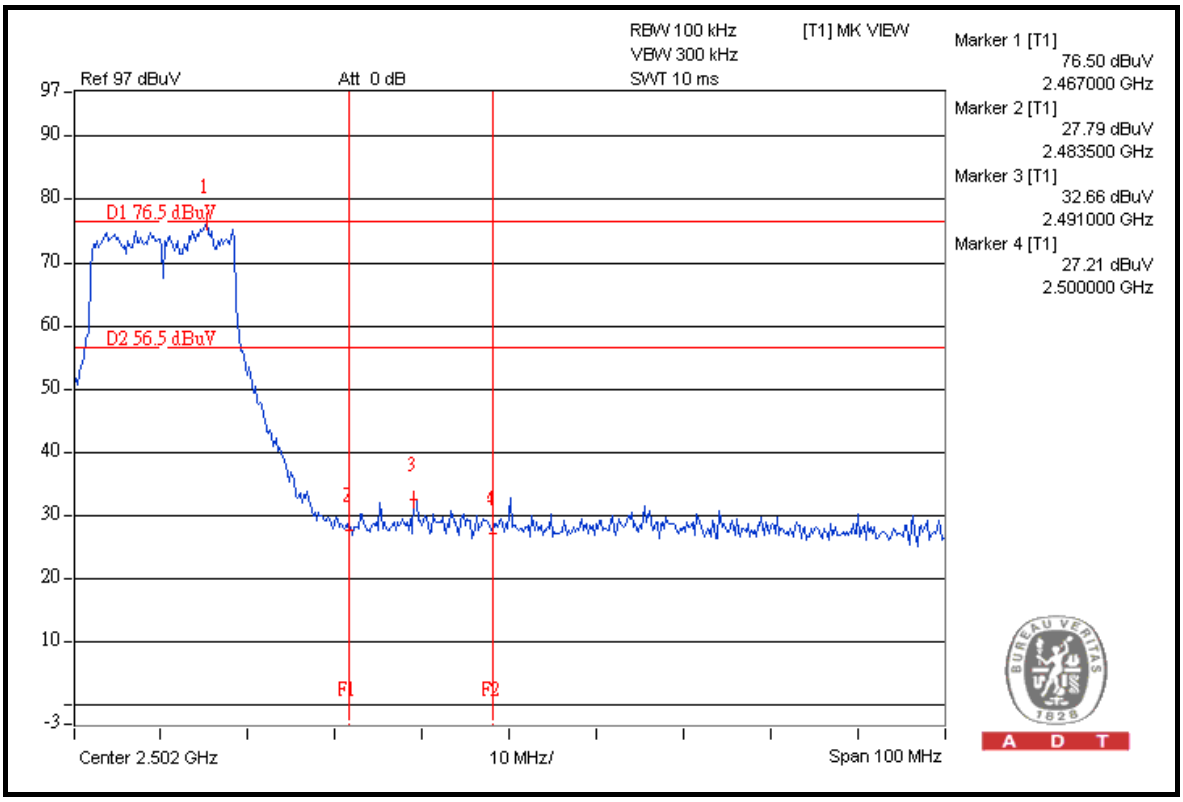
NOTE:

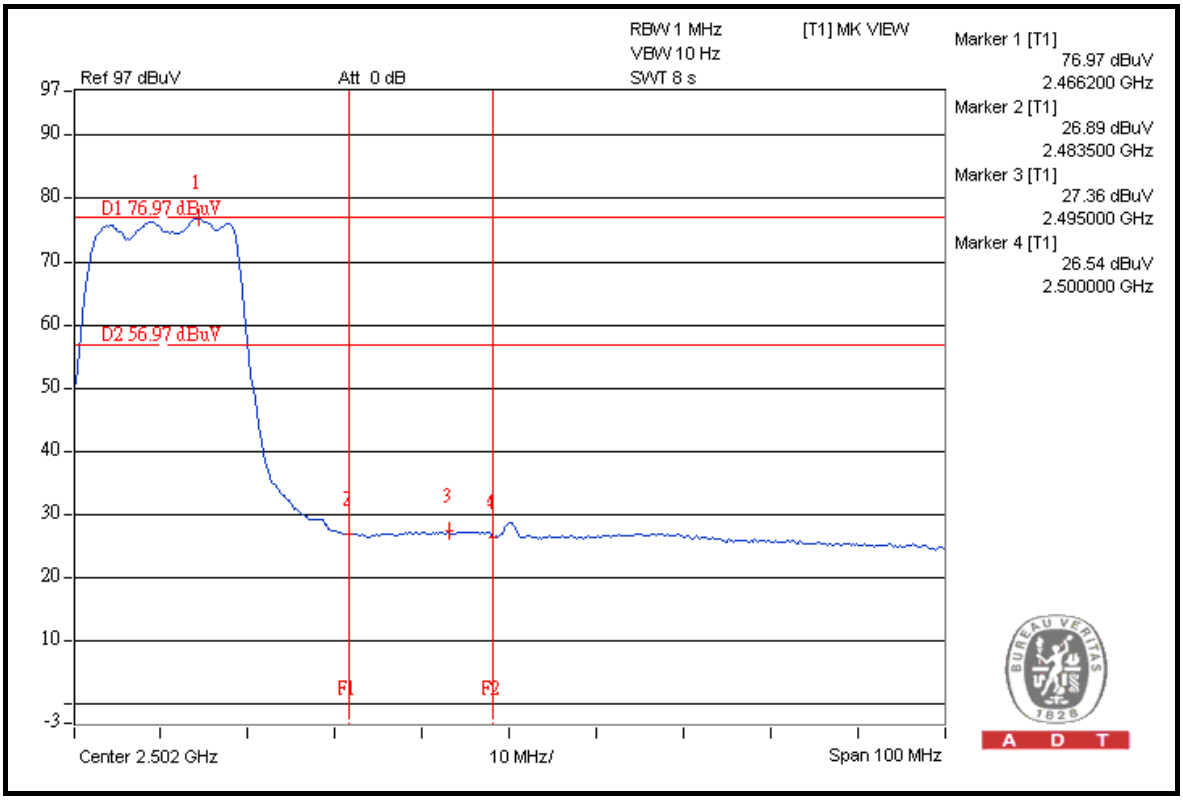
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 2 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (THREE CHAINS ON)



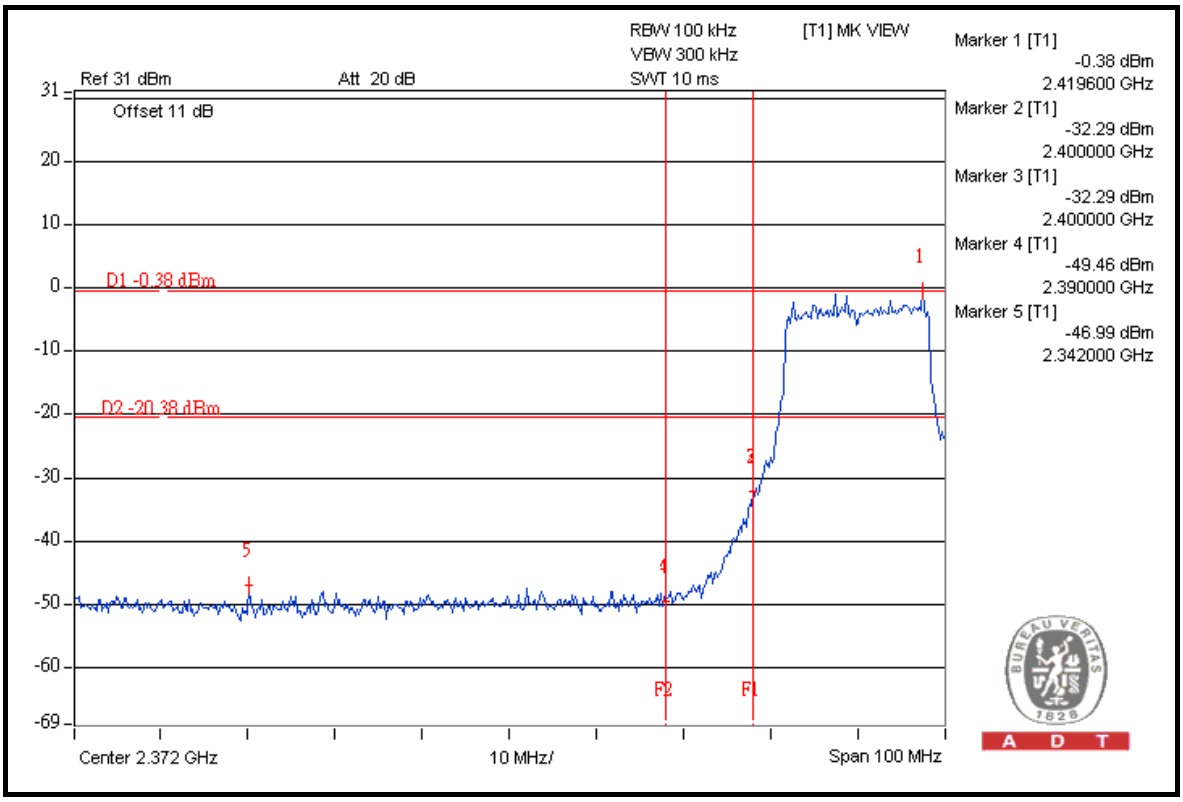


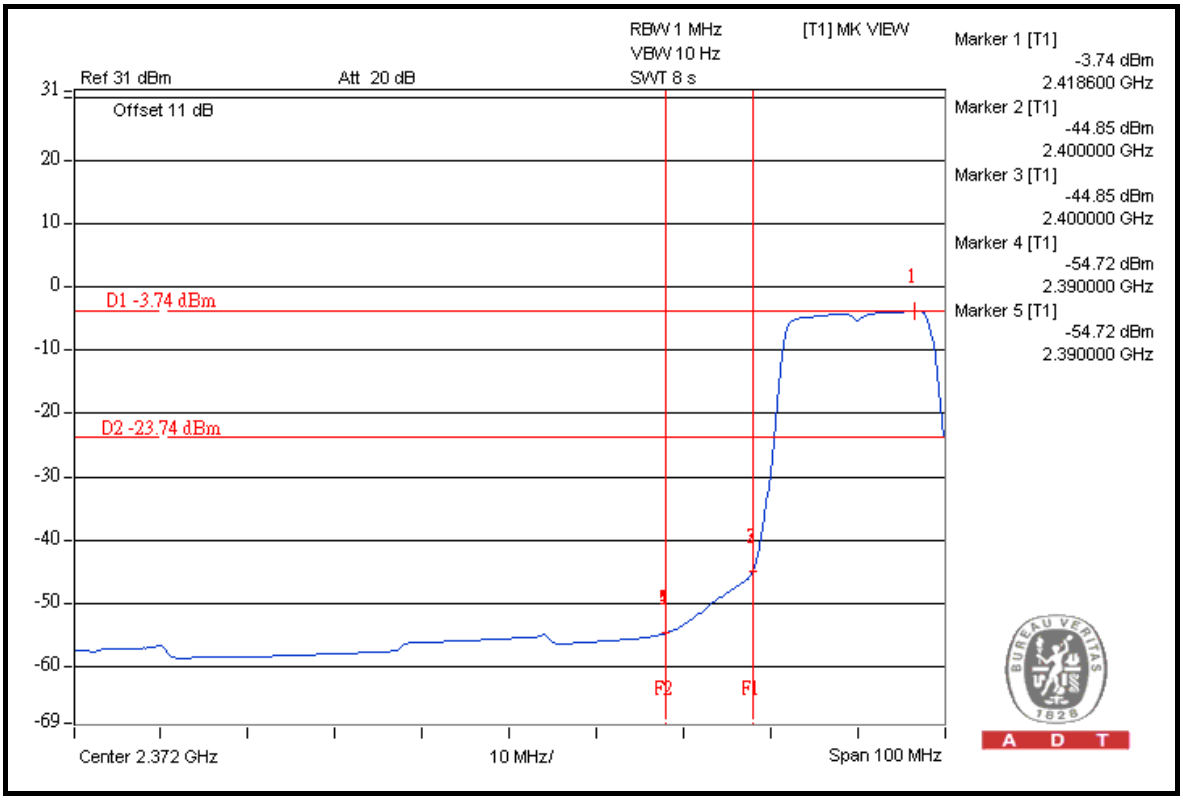

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
76.50 dBuV
2.467000 GHz
Marker 2 [T1]
27.79 dBuV
2.483500 GHz
Marker 3 [T1]
32.66 dBuV
2.491000 GHz
Marker 4 [T1]
27.21 dBuV
2.500000 GHz
D1 76.5 dBuV
D2 56.5 dBuV
97
90
80
70
60
50
40
30
20
10
-3
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

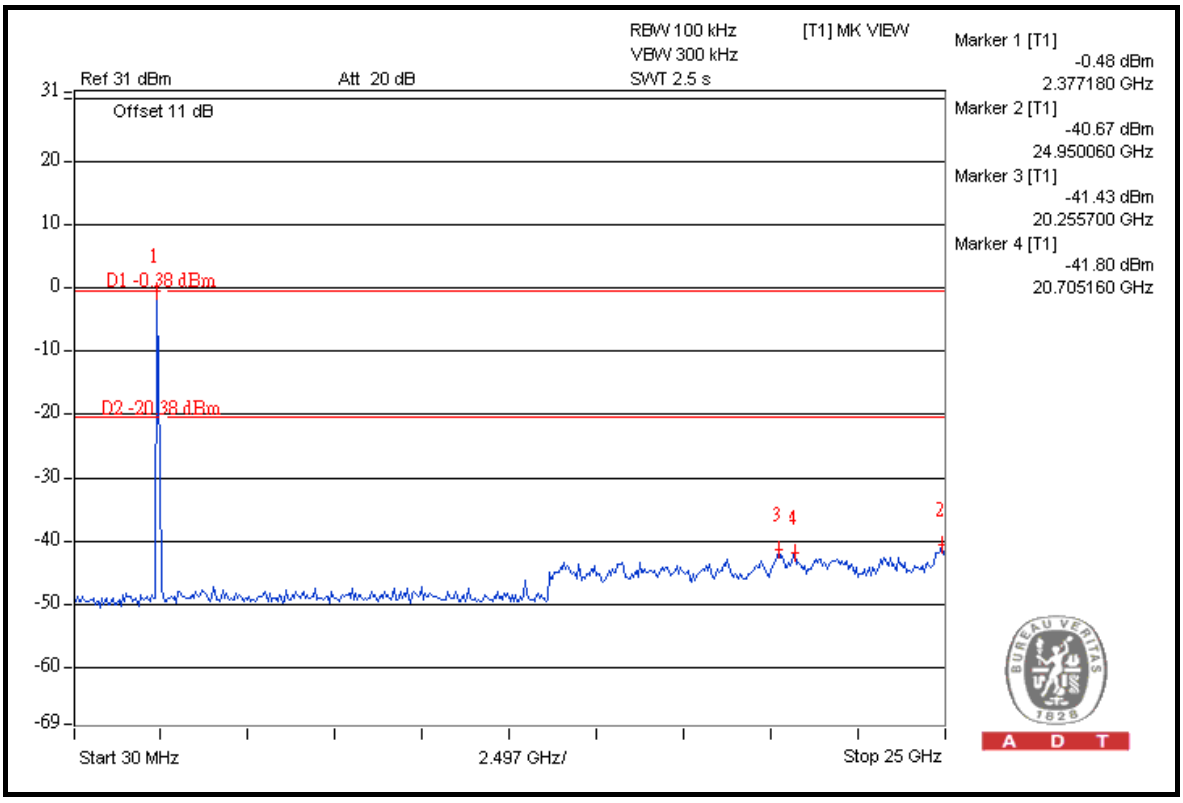

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
76.97 dBuV
2.466200 GHz
Marker 2 [T1]
26.89 dBuV
2.483500 GHz
Marker 3 [T1]
27.36 dBuV
2.495000 GHz
Marker 4 [T1]
26.54 dBuV
2.500000 GHz
D1 76.97 dBuV
D2 56.97 dBuV
97
90
80
70
60
50
40
30
20
10
-3
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

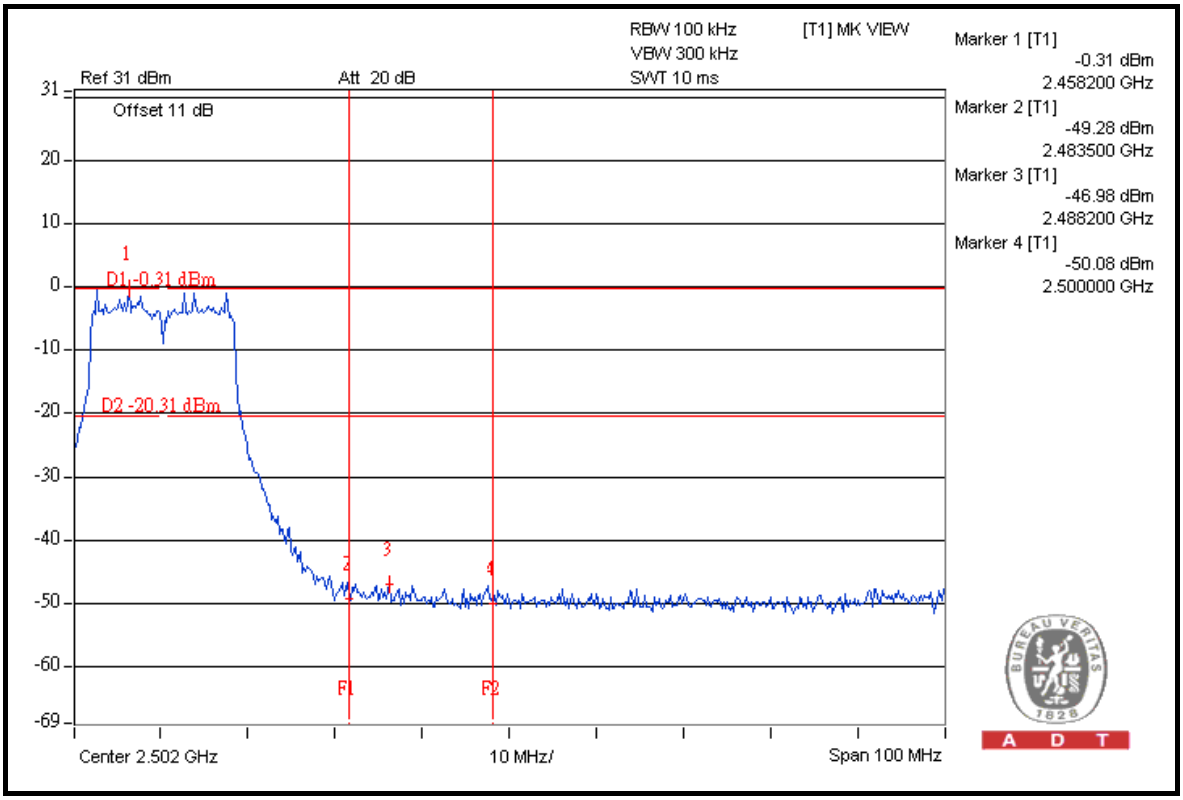
FOR CONDUCTED MEASURED

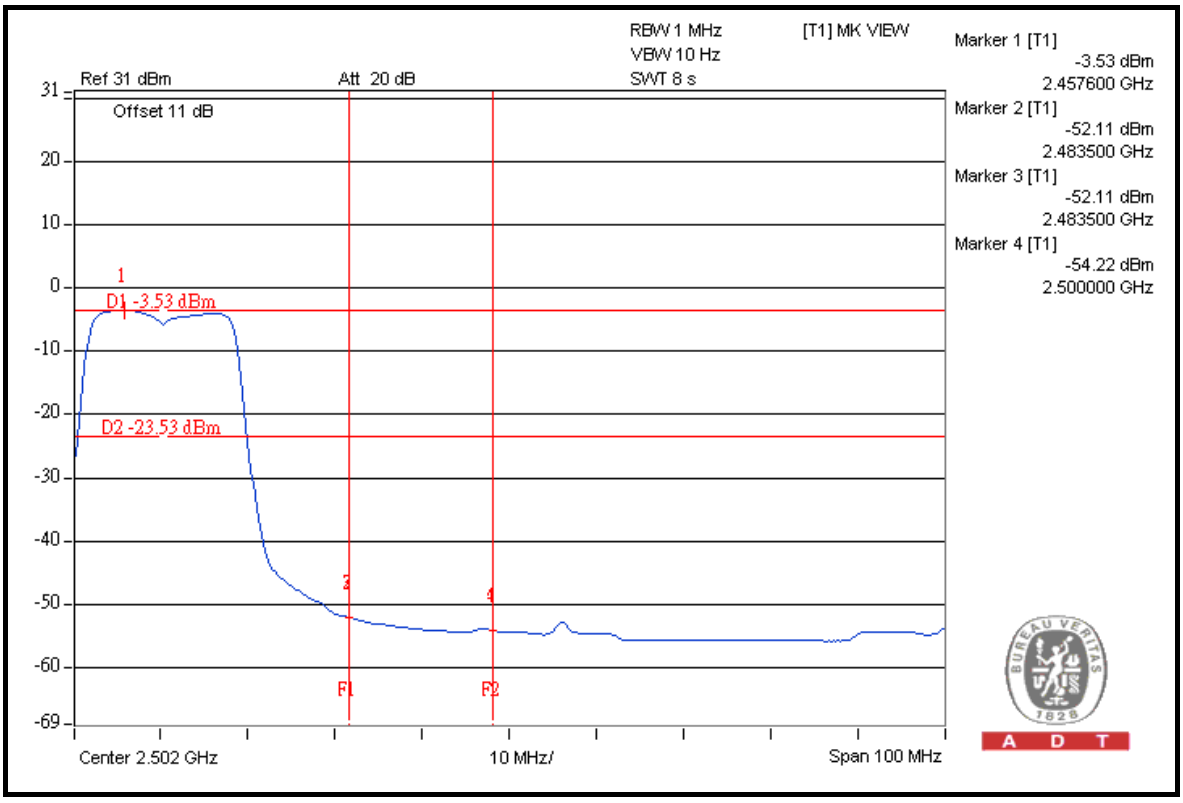
CHAIN 0

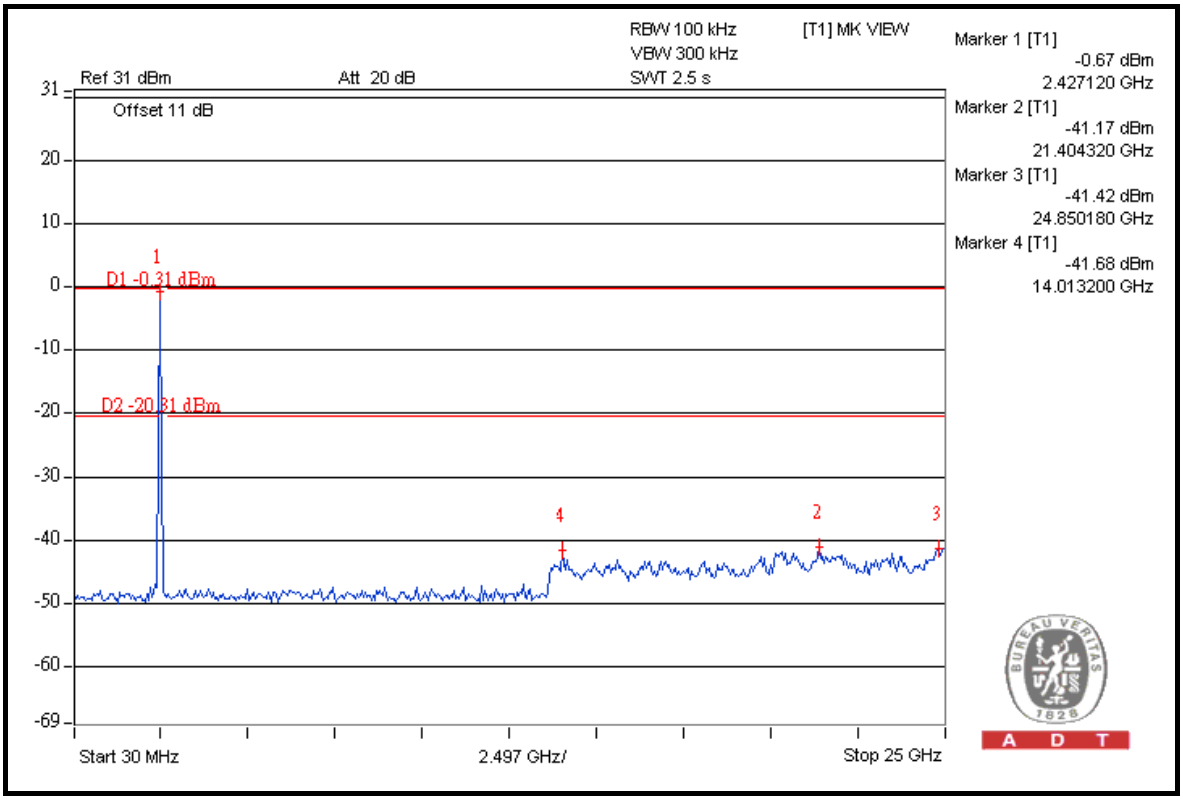




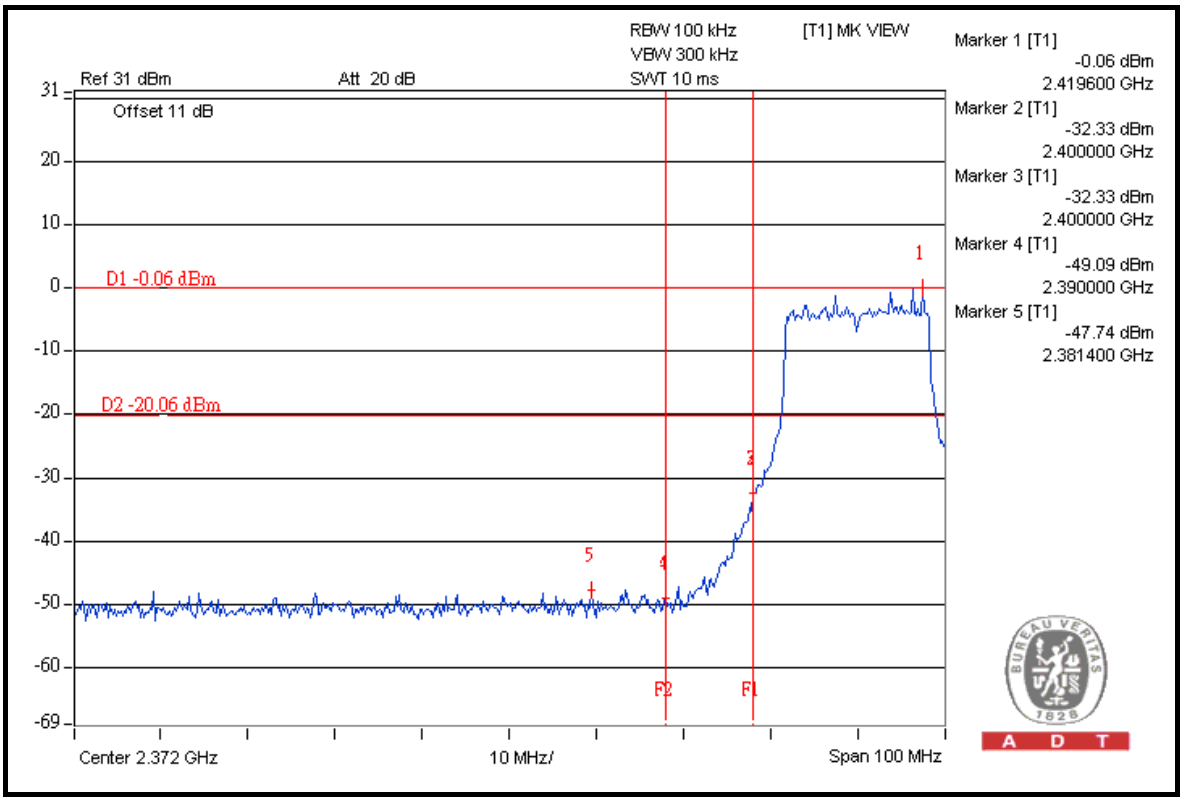

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
Marker 1 [T1]
-0.48 dBm
2.377180 GHz
Marker 2 [T1]
-40.67 dBm
24.950060 GHz
Marker 3 [T1]
-41.43 dBm
20.255700 GHz
Marker 4 [T1]
-41.80 dBm
20.705160 GHz
D1 -0.38 dBm
D2 -20.38 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

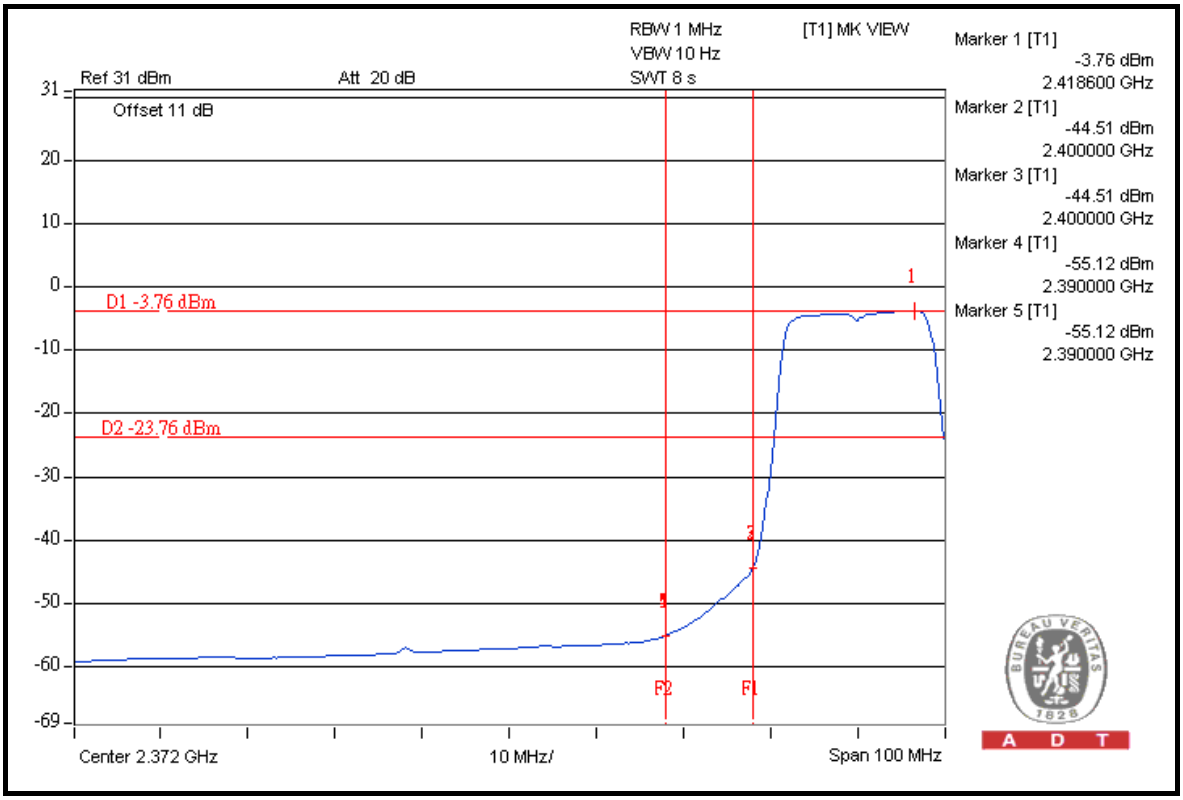

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
Marker 1 [T1]
-0.31 dBm
2.458200 GHz
Marker 2 [T1]
-49.28 dBm
2.483500 GHz
Marker 3 [T1]
-46.98 dBm
2.488200 GHz
Marker 4 [T1]
-50.08 dBm
2.500000 GHz
D1 -0.31 dBm
D2 -20.31 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

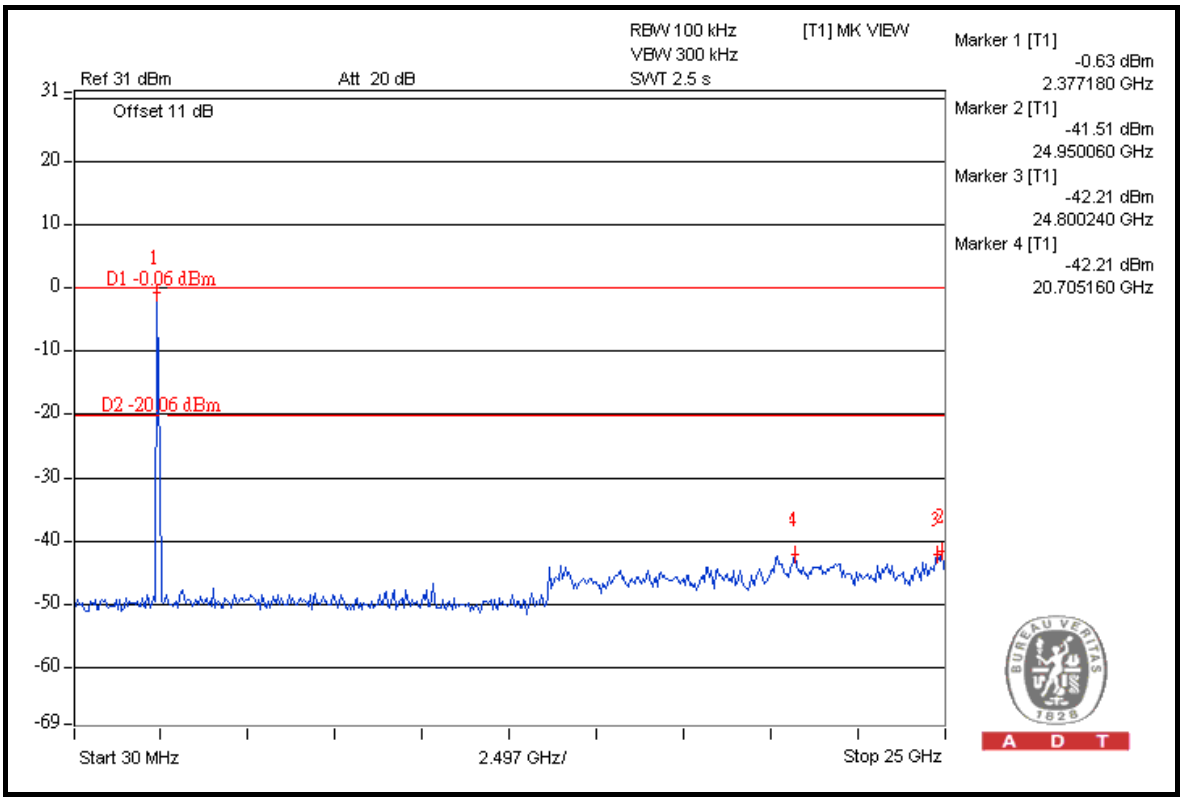

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.53 dBm
D2 -23.53 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
-3.53 dBm
2.457600 GHz
Marker 2 [T1]
-52.11 dBm
2.483500 GHz
Marker 3 [T1]
-52.11 dBm
2.483500 GHz
Marker 4 [T1]
-54.22 dBm
2.500000 GHz

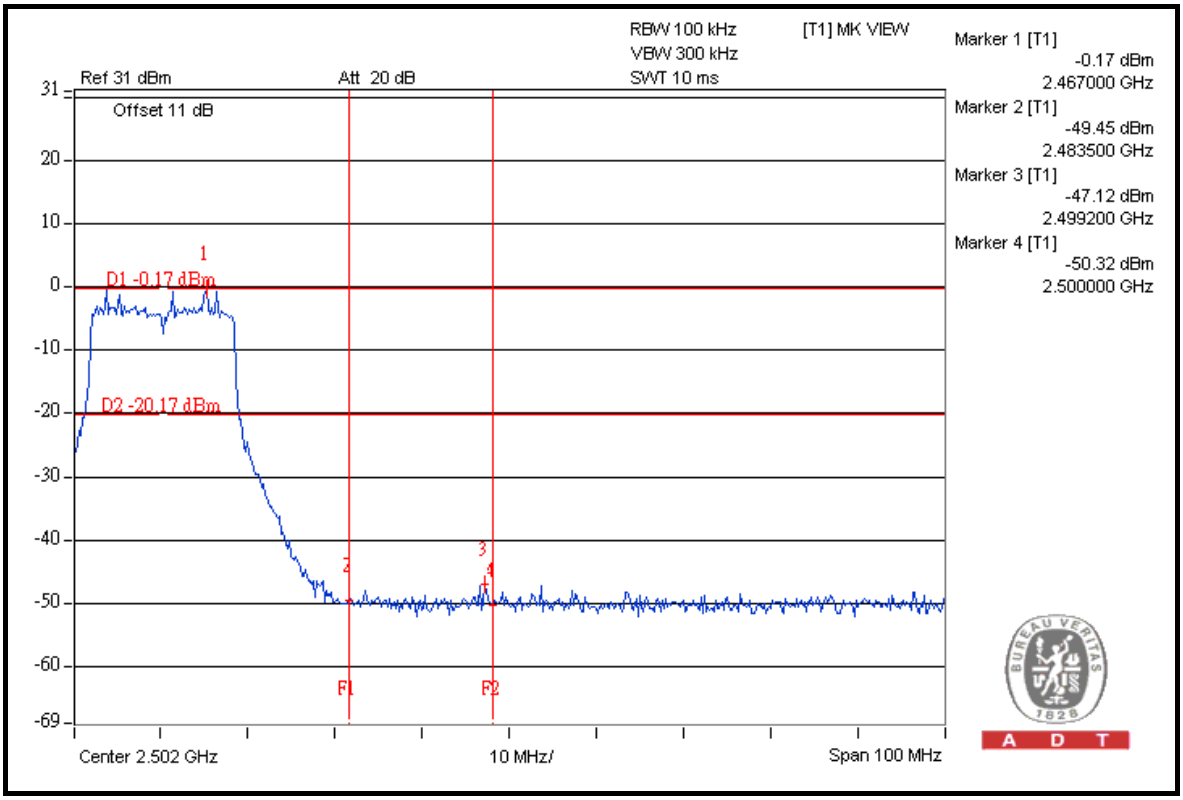

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.31 dBm
D2 -20.31 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-0.67 dBm
2.427120 GHz
Marker 2 [T1]
-41.17 dBm
21.404320 GHz
Marker 3 [T1]
-41.42 dBm
24.850180 GHz
Marker 4 [T1]
-41.68 dBm
14.013200 GHz

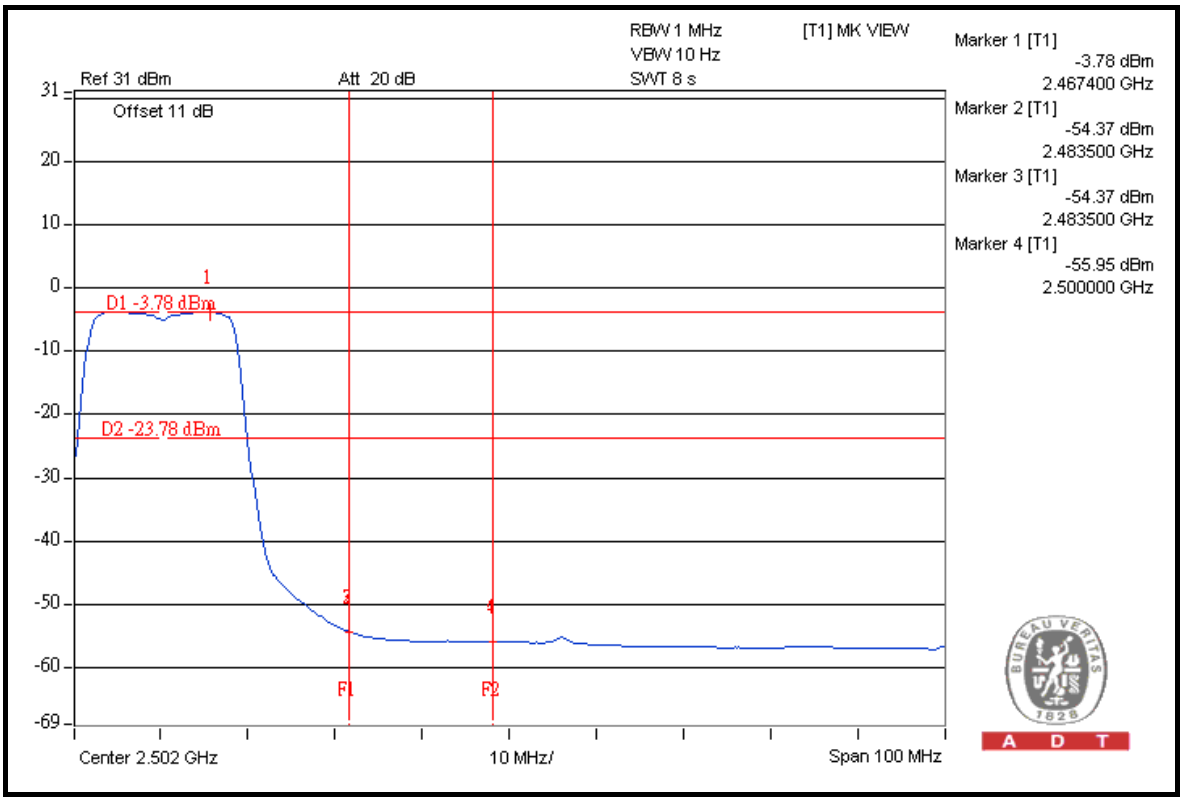
CHAIN 1

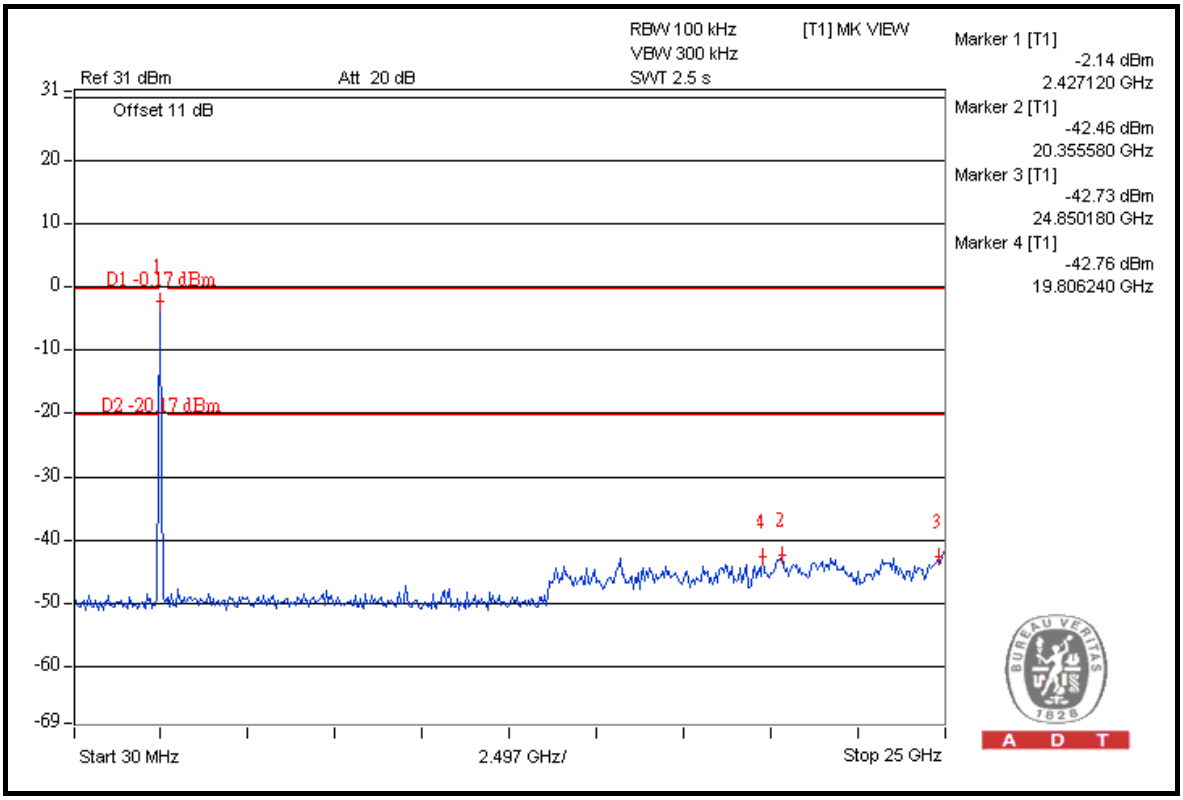

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.06 dBm
D2 -20.06 dBm
Marker 1 [T1]
-0.06 dBm
2.419600 GHz
Marker 2 [T1]
-32.33 dBm
2.400000 GHz
Marker 3 [T1]
-32.33 dBm
2.400000 GHz
Marker 4 [T1]
-49.09 dBm
2.390000 GHz
Marker 5 [T1]
-47.74 dBm
2.381400 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.76 dBm
D2 -23.76 dBm
Marker 1 [T1]
-3.76 dBm
2.418600 GHz
Marker 2 [T1]
-44.51 dBm
2.400000 GHz
Marker 3 [T1]
-44.51 dBm
2.400000 GHz
Marker 4 [T1]
-55.12 dBm
2.390000 GHz
Marker 5 [T1]
-55.12 dBm
2.390000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz

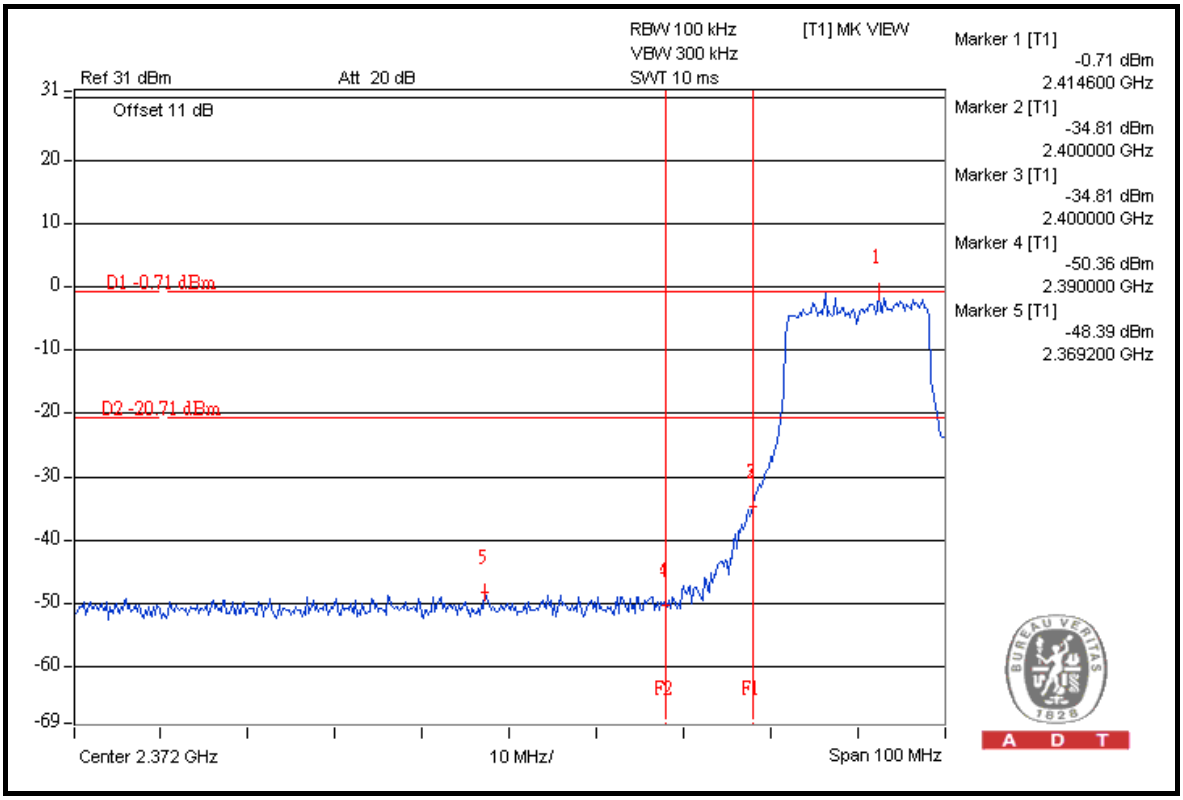

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.06 dBm
D2 -20.06 dBm
Marker 1 [T1]
-0.63 dBm
2.377180 GHz
Marker 2 [T1]
-41.51 dBm
24.950060 GHz
Marker 3 [T1]
-42.21 dBm
24.800240 GHz
Marker 4 [T1]
-42.21 dBm
20.705160 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

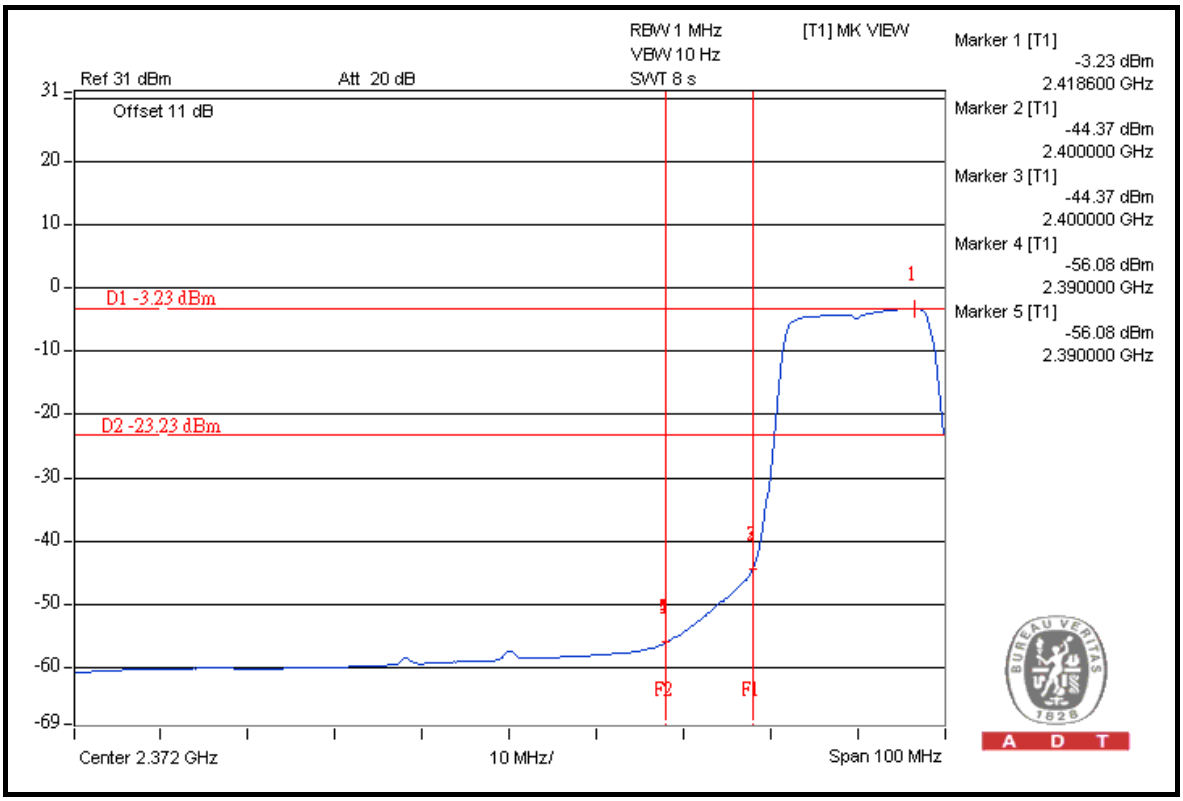

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.17 dBm
D2 -20.17 dBm
Marker 1 [T1]
-0.17 dBm
2.467000 GHz
Marker 2 [T1]
-49.45 dBm
2.483500 GHz
Marker 3 [T1]
-47.12 dBm
2.499200 GHz
Marker 4 [T1]
-50.32 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

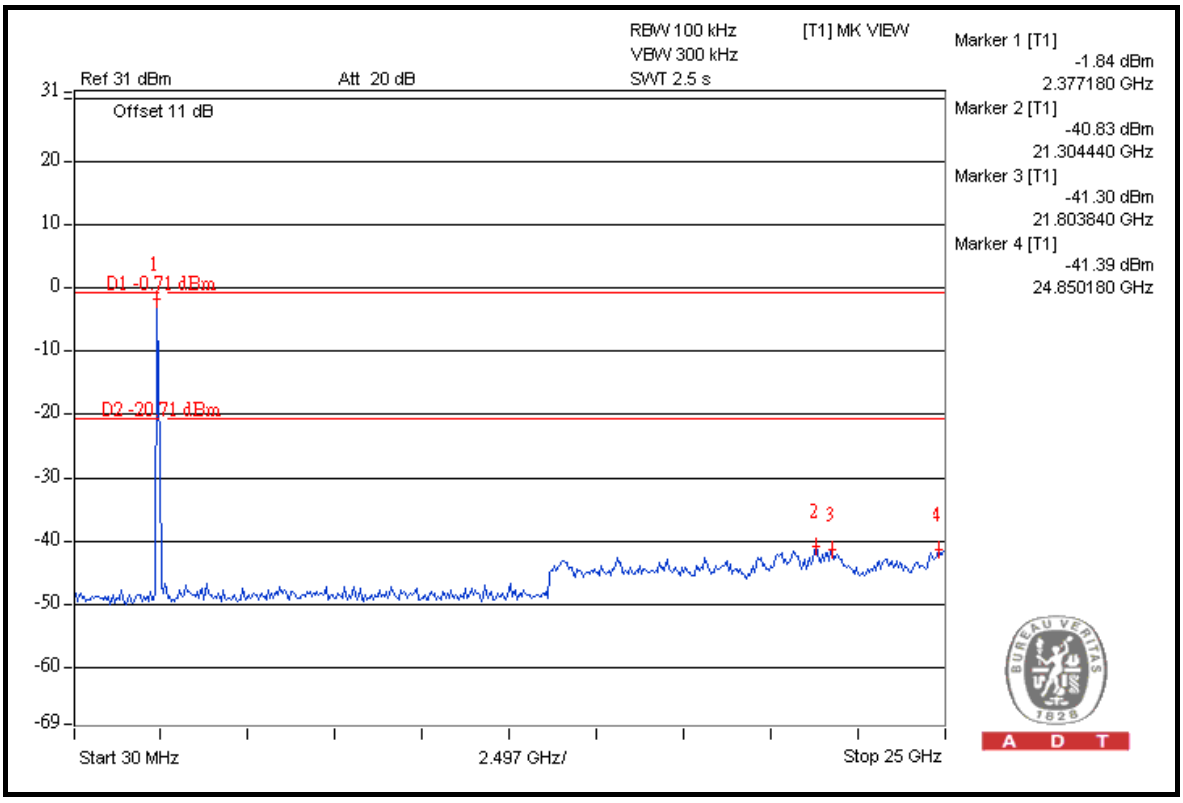

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.78 dBm
D2 -23.78 dBm
Marker 1 [T1]
-3.78 dBm
2.467400 GHz
Marker 2 [T1]
-54.37 dBm
2.483500 GHz
Marker 3 [T1]
-54.37 dBm
2.483500 GHz
Marker 4 [T1]
-55.95 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

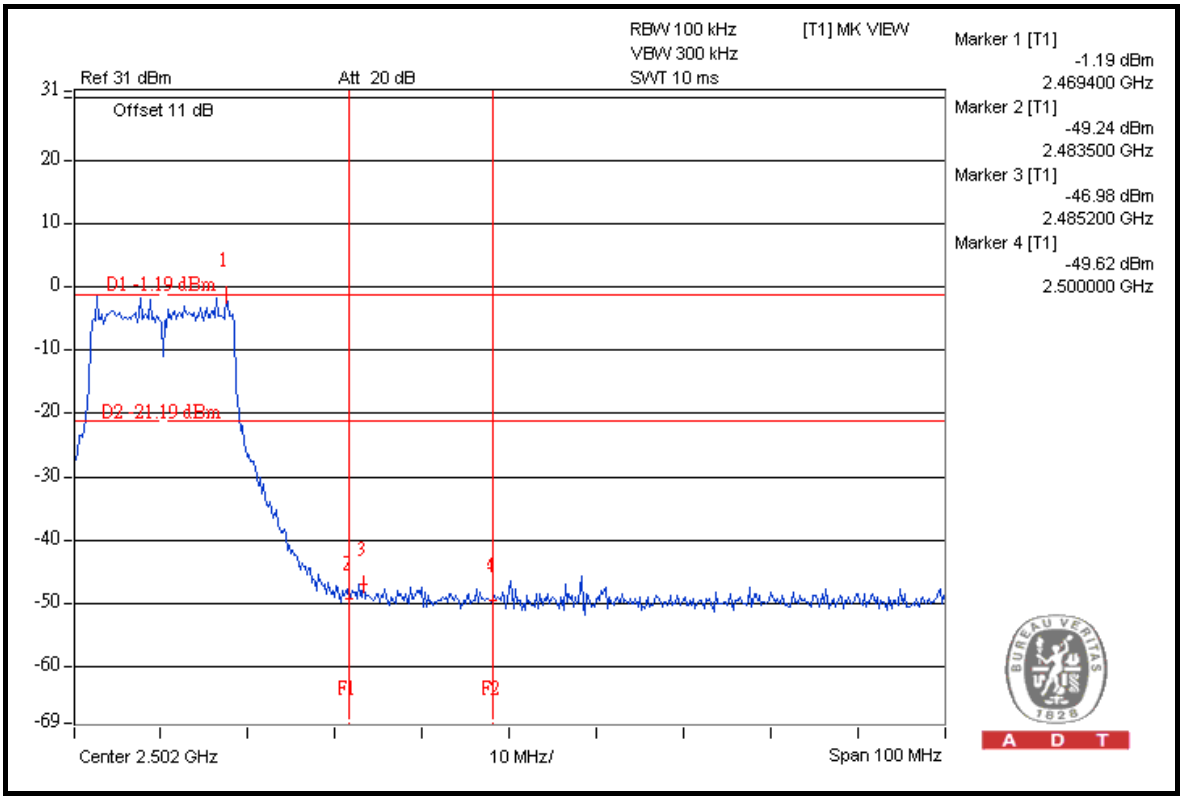

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.17 dBm
D2 -20.17 dBm
Marker 1 [T1]
-2.14 dBm
2.427120 GHz
Marker 2 [T1]
-42.46 dBm
20.355580 GHz
Marker 3 [T1]
-42.73 dBm
24.850180 GHz
Marker 4 [T1]
-42.76 dBm
19.806240 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

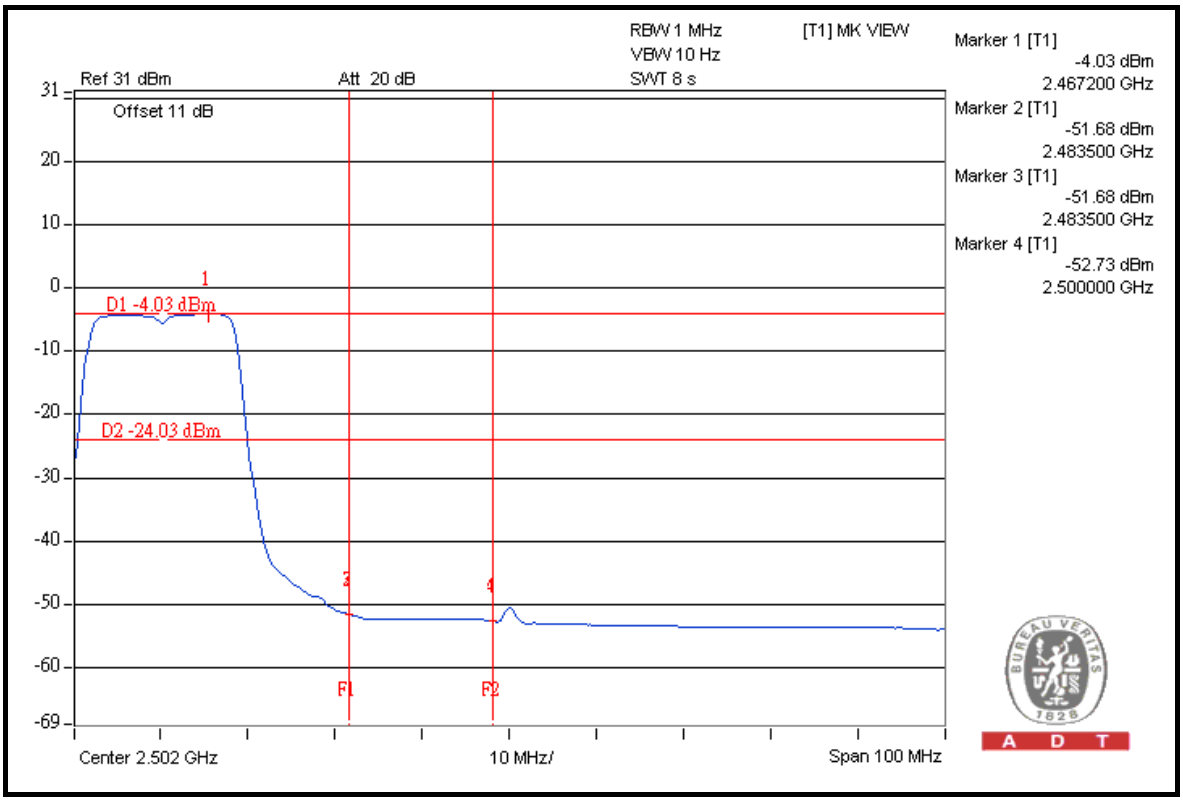
CHAIN 2

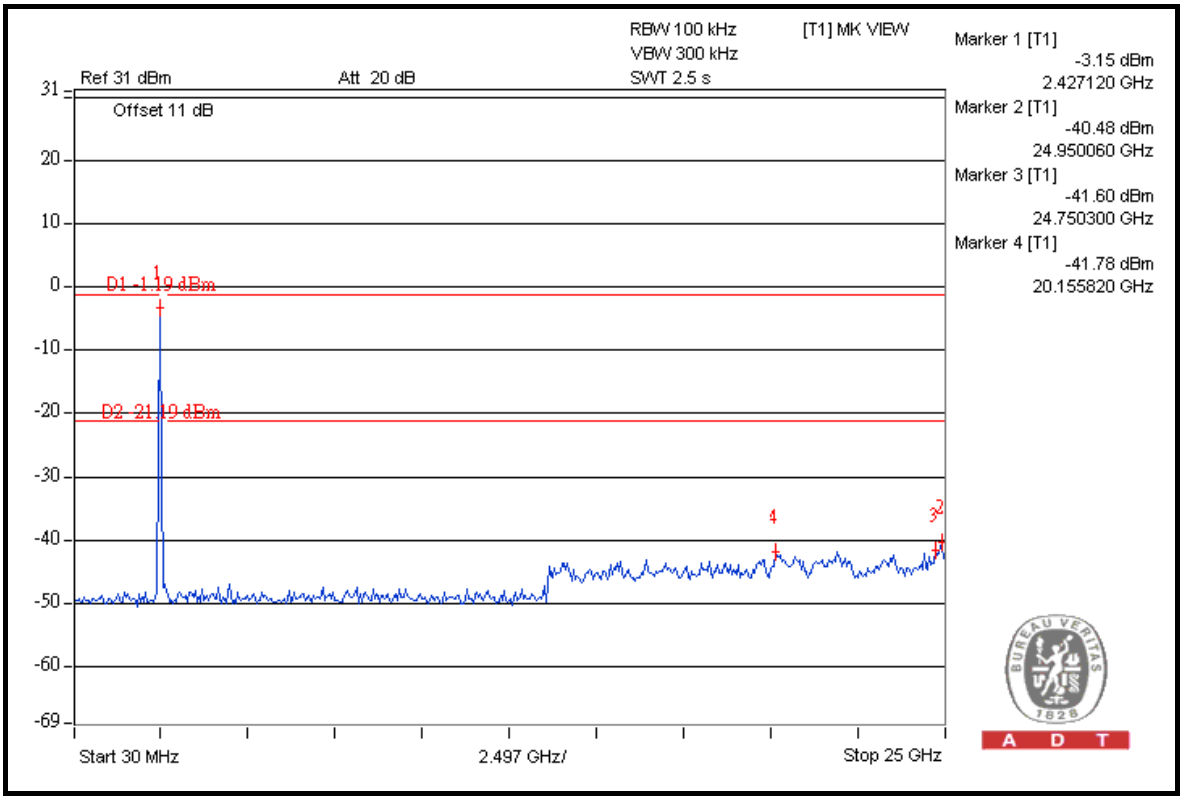

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.71 dBm
D2 -20.71 dBm
Marker 1 [T1]
-0.71 dBm
2.414600 GHz
Marker 2 [T1]
-34.81 dBm
2.400000 GHz
Marker 3 [T1]
-34.81 dBm
2.400000 GHz
Marker 4 [T1]
-50.36 dBm
2.390000 GHz
Marker 5 [T1]
-48.39 dBm
2.369200 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.23 dBm
D2 -23.23 dBm
Marker 1 [T1]
-3.23 dBm
2.418600 GHz
Marker 2 [T1]
-44.37 dBm
2.400000 GHz
Marker 3 [T1]
-44.37 dBm
2.400000 GHz
Marker 4 [T1]
-56.08 dBm
2.390000 GHz
Marker 5 [T1]
-56.08 dBm
2.390000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.71 dBm
D2 -20.71 dBm
Marker 1 [T1]
-1.84 dBm
2.377180 GHz
Marker 2 [T1]
-40.83 dBm
21.304440 GHz
Marker 3 [T1]
-41.30 dBm
21.803840 GHz
Marker 4 [T1]
-41.39 dBm
24.850180 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -1.19 dBm
D2 -21.19 dBm
Marker 1 [T1]
-1.19 dBm
2.469400 GHz
Marker 2 [T1]
-49.24 dBm
2.483500 GHz
Marker 3 [T1]
-46.98 dBm
2.485200 GHz
Marker 4 [T1]
-49.62 dBm
2.500000 GHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.03 dBm
D2 -24.03 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
-4.03 dBm
2.467200 GHz
Marker 2 [T1]
-51.68 dBm
2.483500 GHz
Marker 3 [T1]
-51.68 dBm
2.483500 GHz
Marker 4 [T1]
-52.73 dBm
2.500000 GHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -1.19 dBm
D2 -21.19 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-3.15 dBm
2.427120 GHz
Marker 2 [T1]
-40.48 dBm
24.950060 GHz
Marker 3 [T1]
-41.60 dBm
24.750300 GHz
Marker 4 [T1]
-41.78 dBm
20.155820 GHz

802.11n (20MHz)

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)	110.0	42.39	67.61	74.00
2412.00 (AV)	96.8	46.57	50.23	54.00

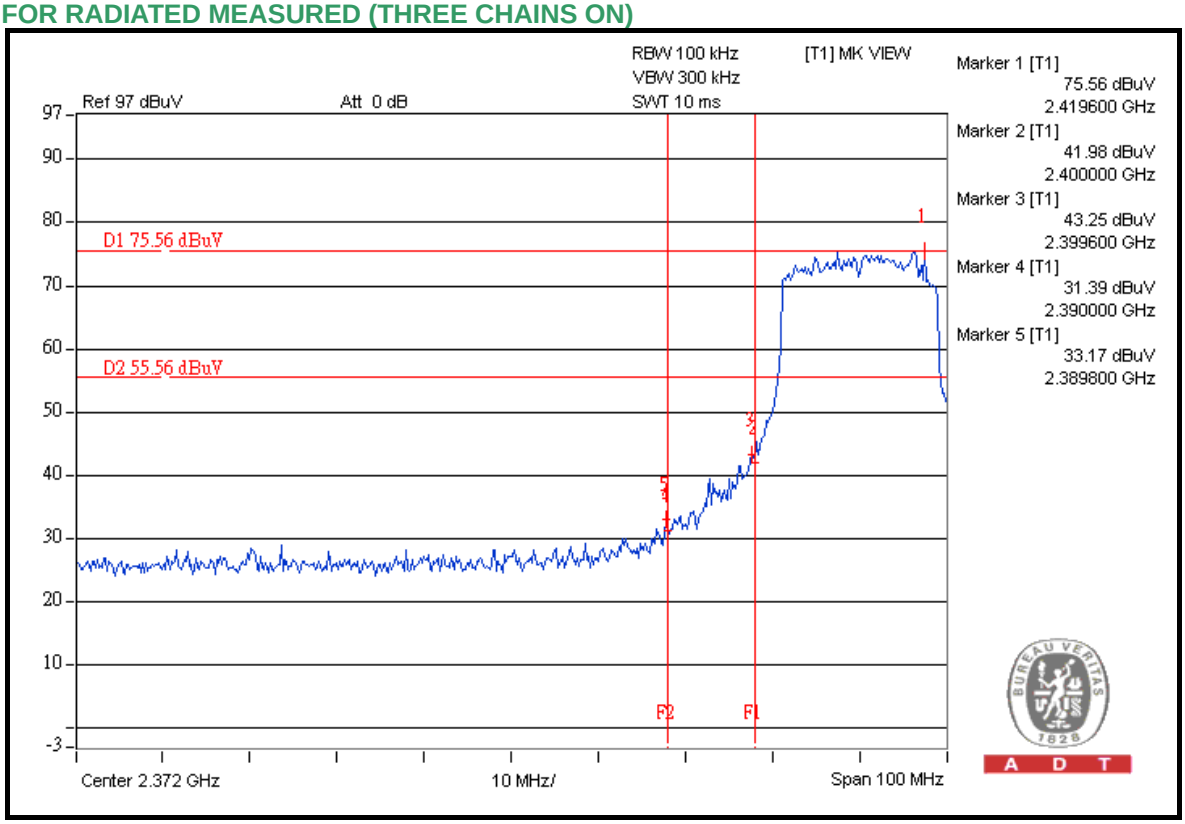
RESTRICT BAND (2483.5 ~ 2500 MHz)

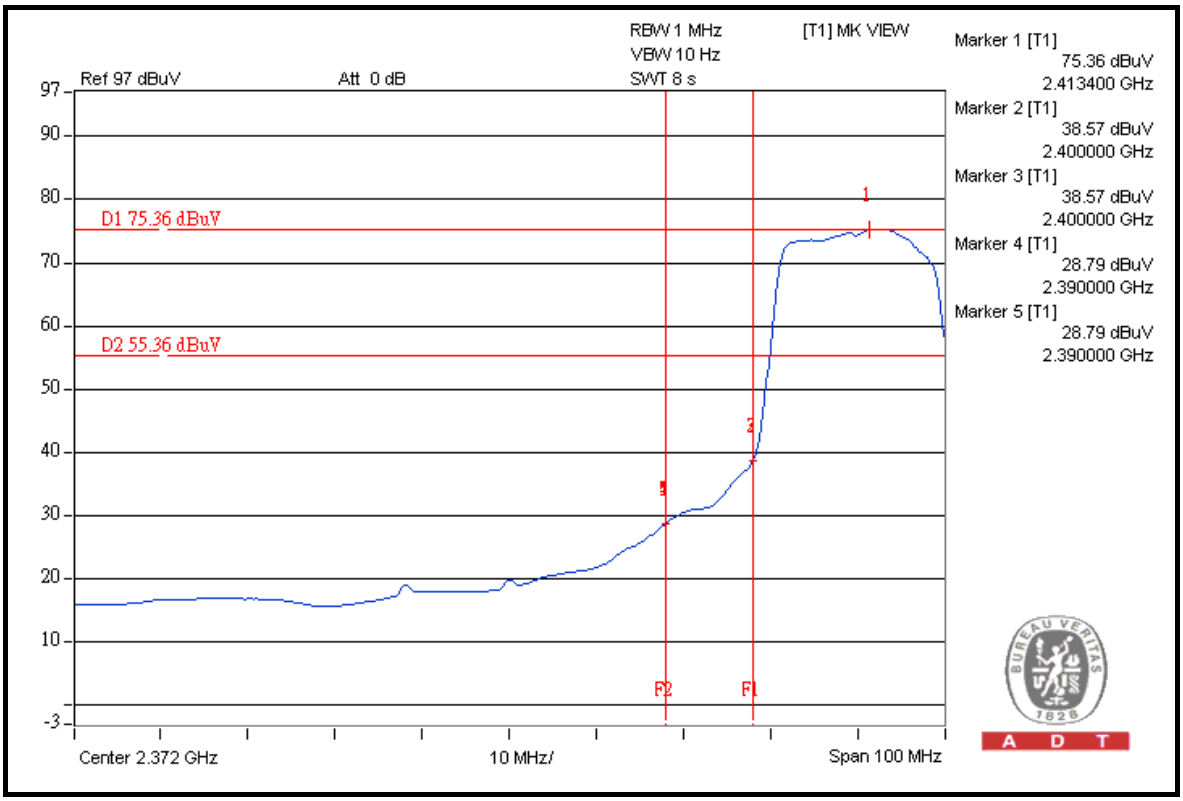
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	110.0	44.75	65.25	74.00
2462.00 (AV)	97.0	48.40	48.60	54.00

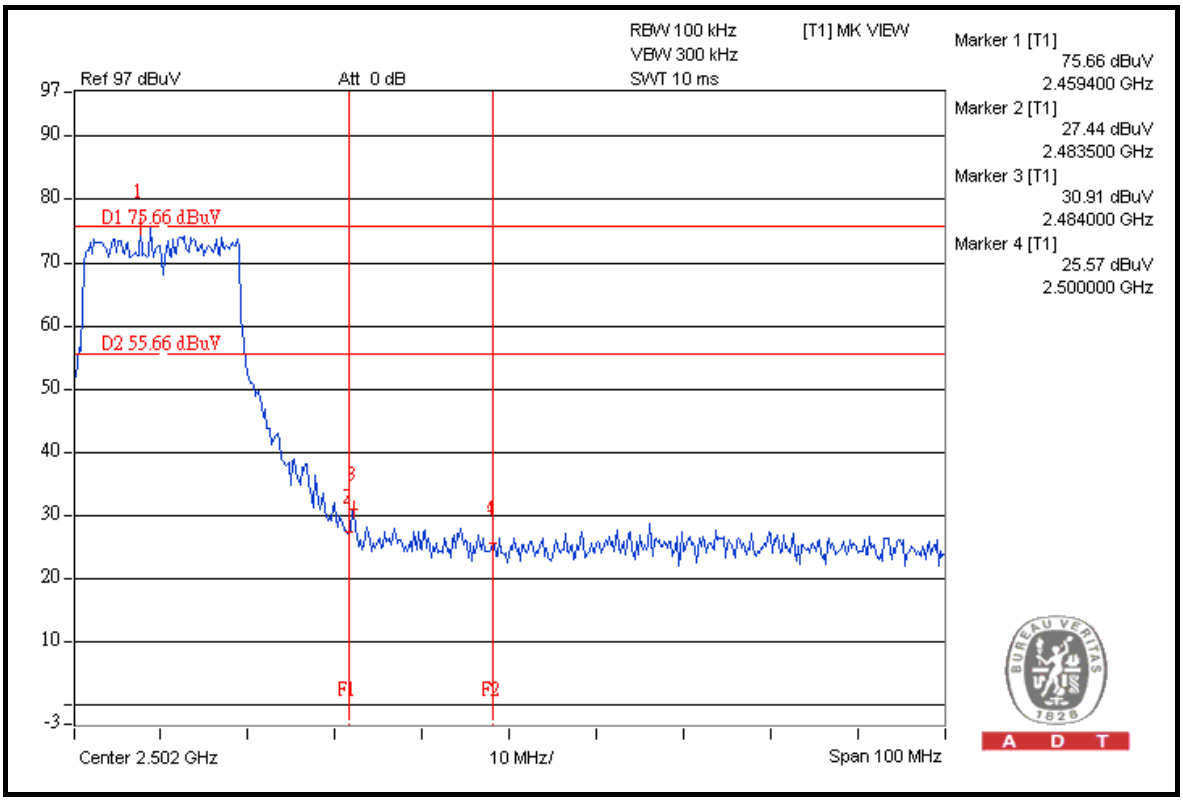
NOTE:

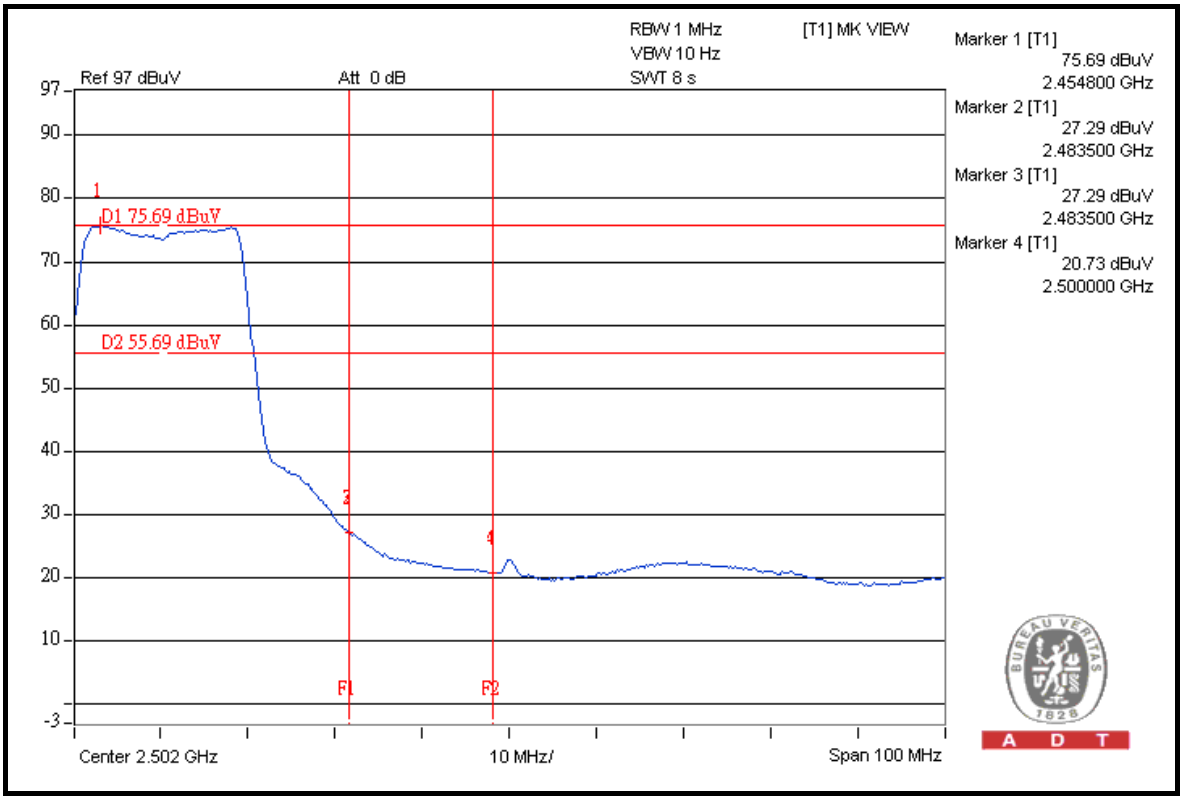
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 2 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (THREE CHAINS ON)



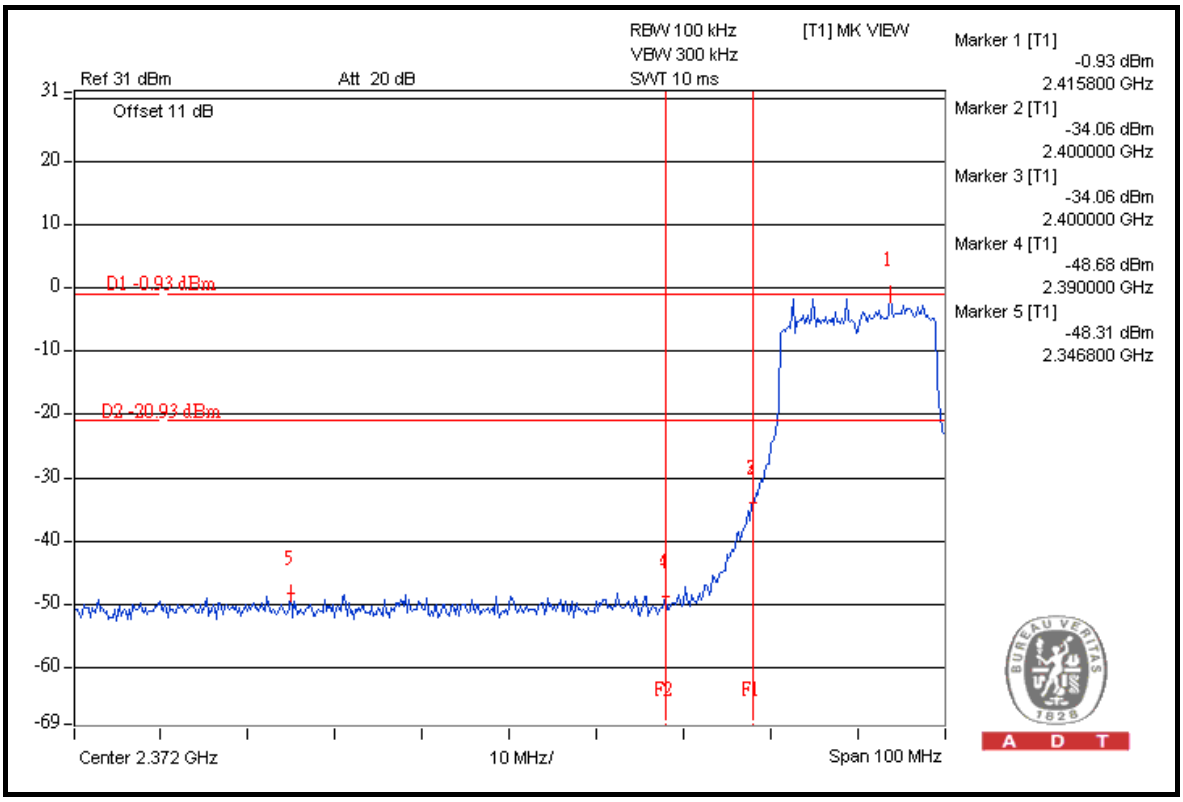


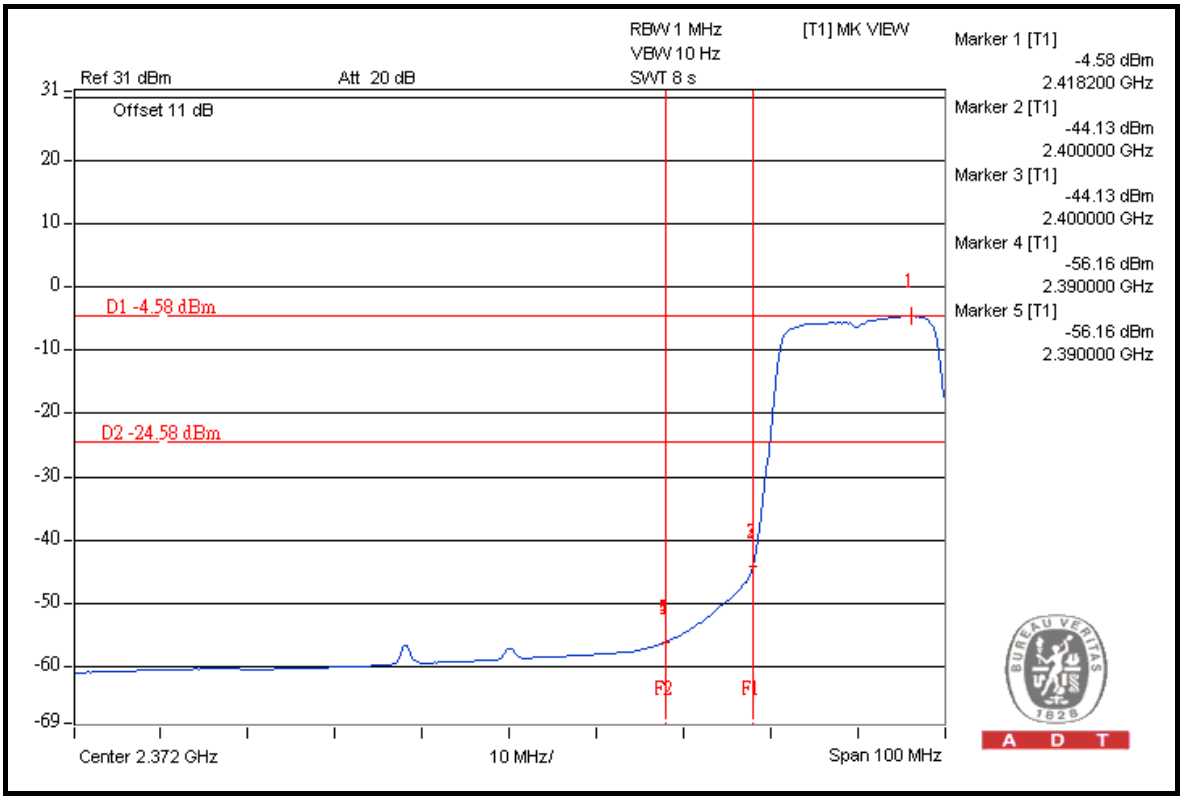

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 75.66 dBuV
D2 55.66 dBuV
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
75.66 dBuV
2.459400 GHz
Marker 2 [T1]
27.44 dBuV
2.483500 GHz
Marker 3 [T1]
30.91 dBuV
2.484000 GHz
Marker 4 [T1]
25.57 dBuV
2.500000 GHz

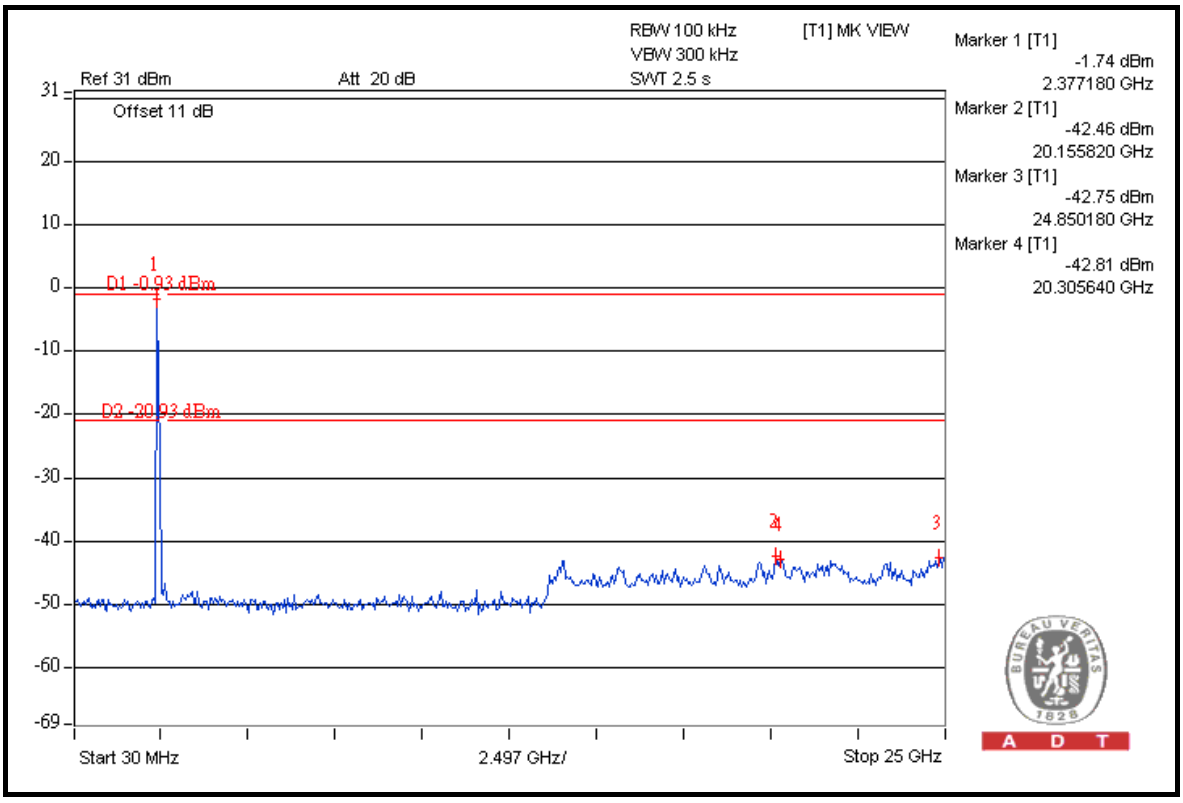

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 75.69 dBuV
D2 55.69 dBuV
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
75.69 dBuV
2.454800 GHz
Marker 2 [T1]
27.29 dBuV
2.483500 GHz
Marker 3 [T1]
27.29 dBuV
2.483500 GHz
Marker 4 [T1]
20.73 dBuV
2.500000 GHz

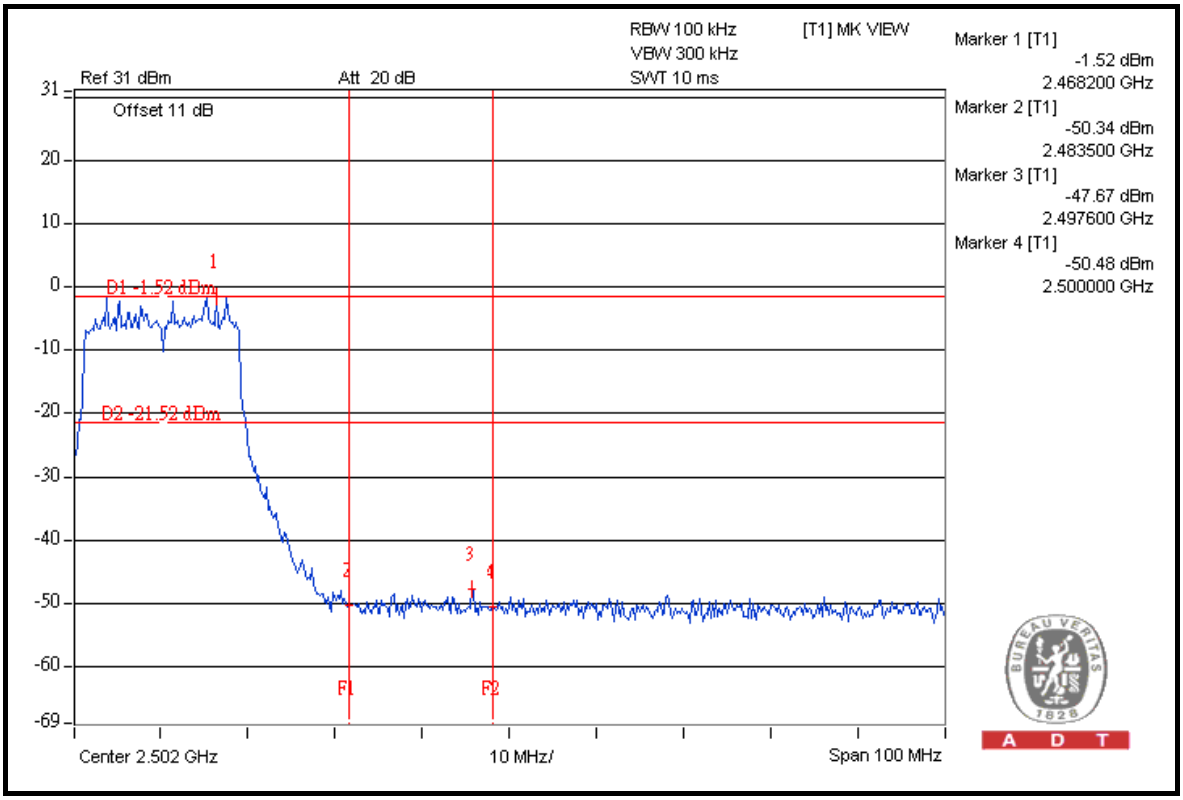
FOR CONDUCTED MEASURED

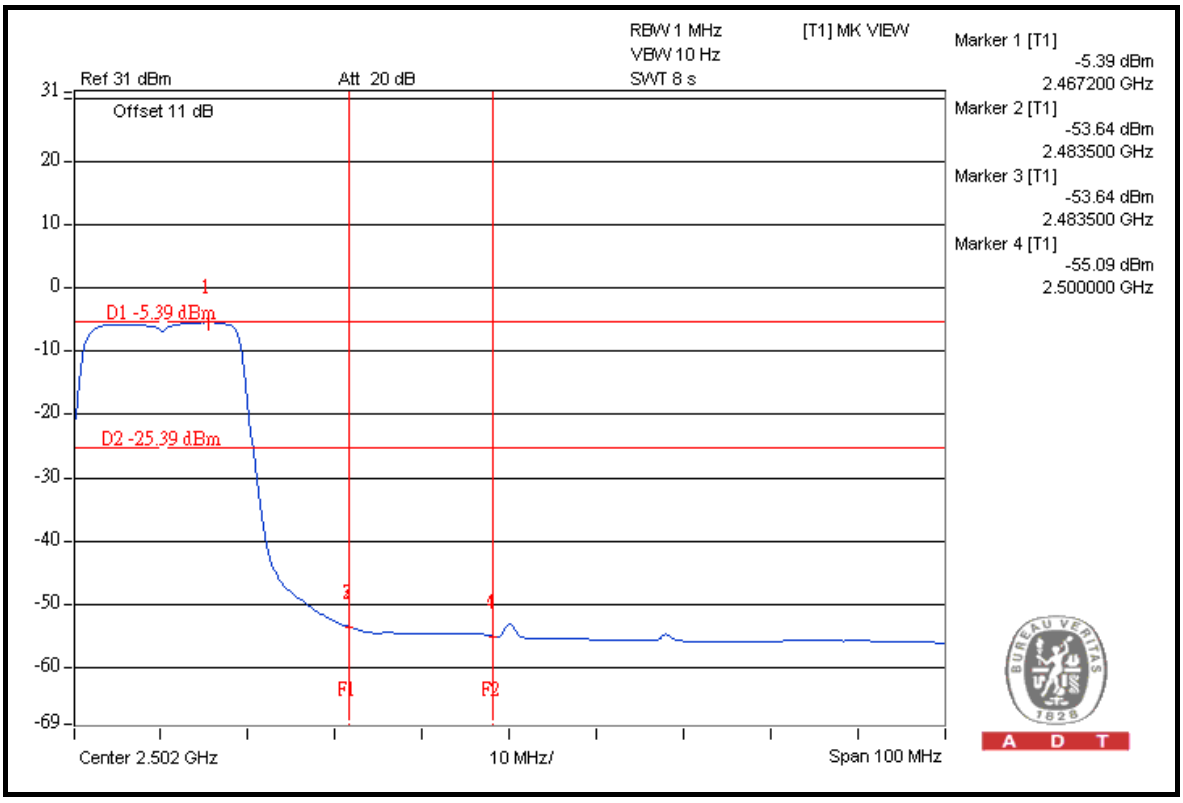
CHAIN 0

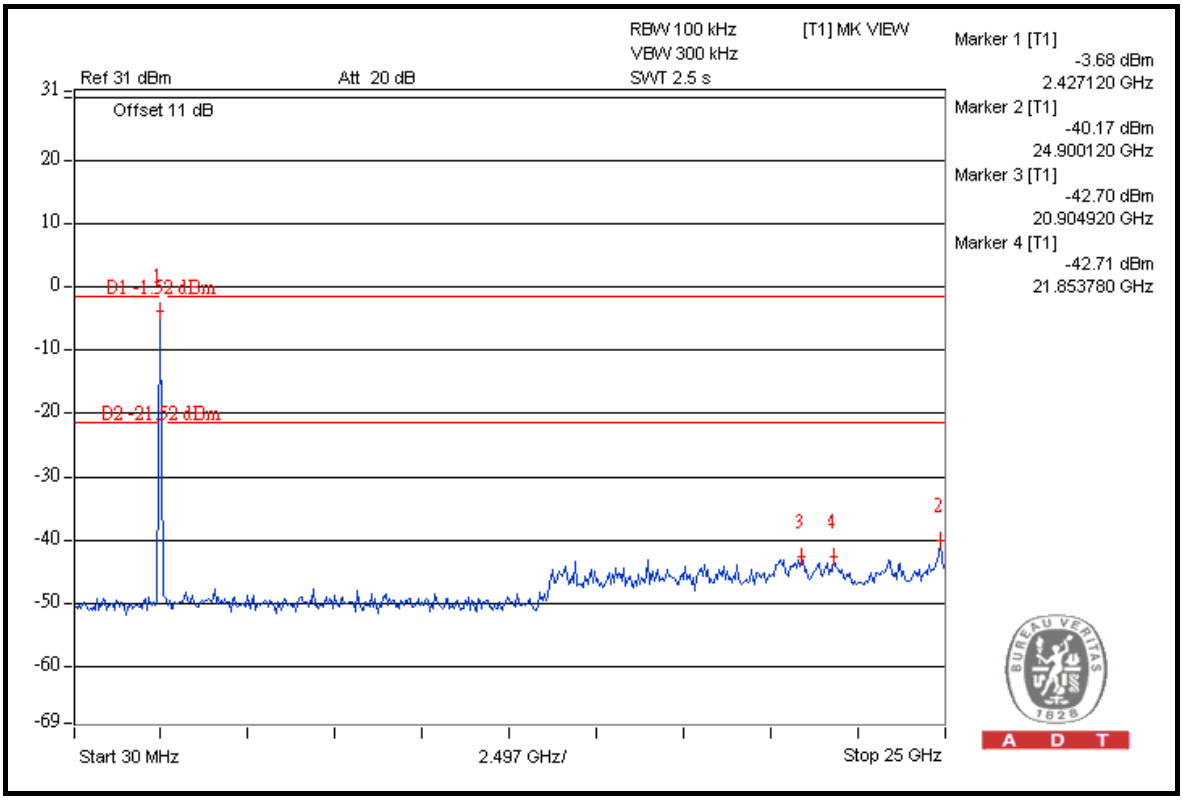




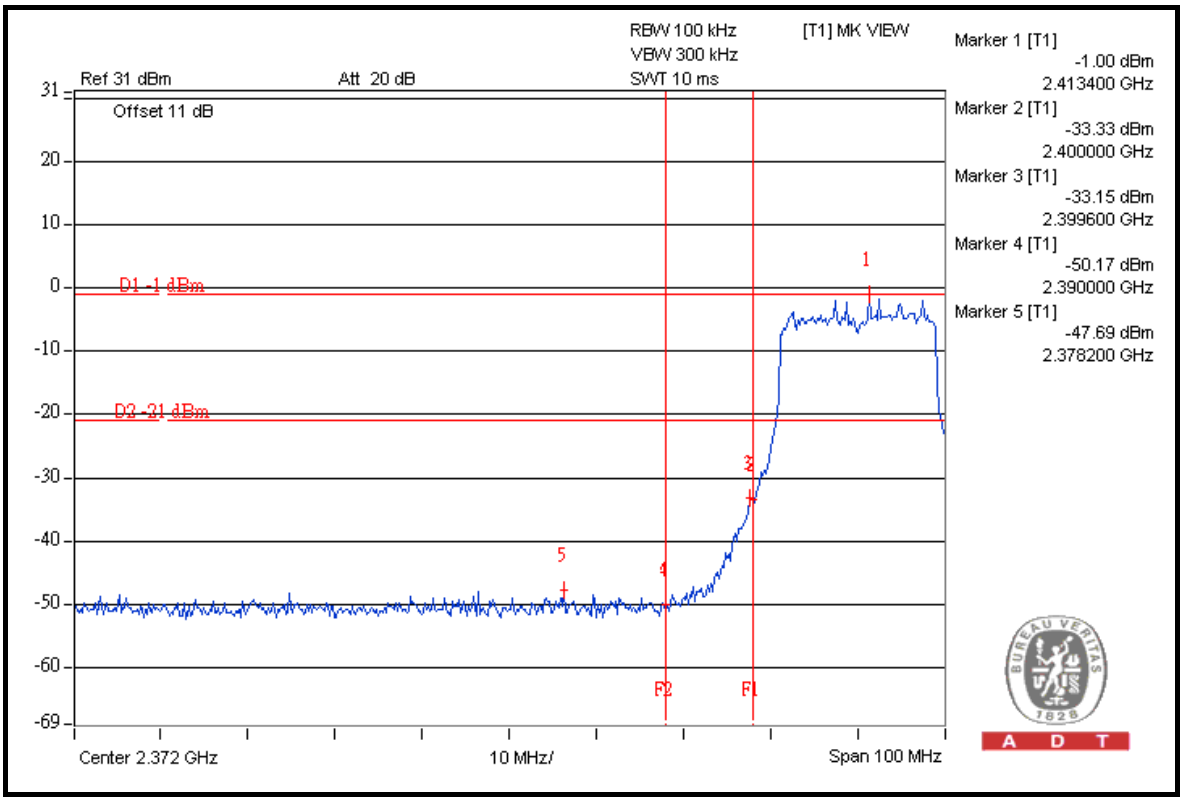

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.93 dBm
D2 -30.93 dBm
Marker 1 [T1]
-1.74 dBm
2.377180 GHz
Marker 2 [T1]
-42.46 dBm
20.155820 GHz
Marker 3 [T1]
-42.75 dBm
24.850180 GHz
Marker 4 [T1]
-42.81 dBm
20.305640 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

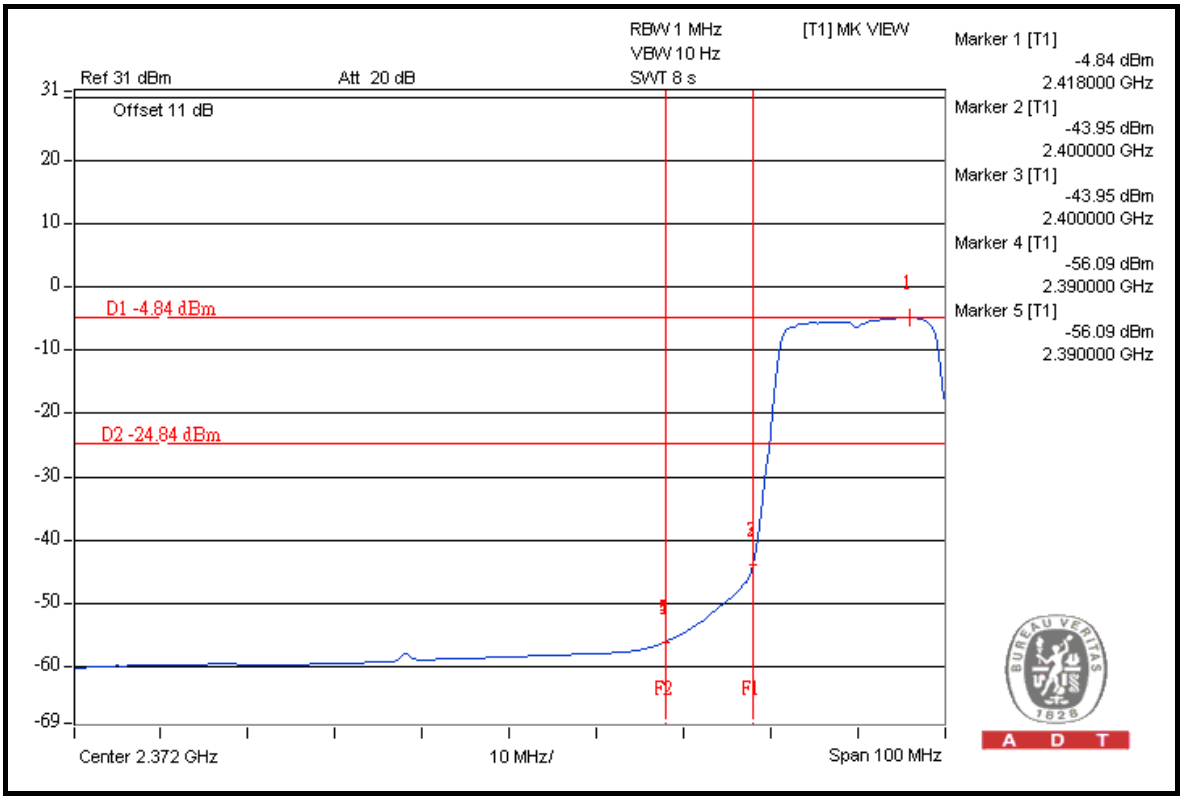

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -1.52 dBm
D2 -21.52 dBm
Marker 1 [T1]
-1.52 dBm
2.468200 GHz
Marker 2 [T1]
-50.34 dBm
2.483500 GHz
Marker 3 [T1]
-47.67 dBm
2.497600 GHz
Marker 4 [T1]
-50.48 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

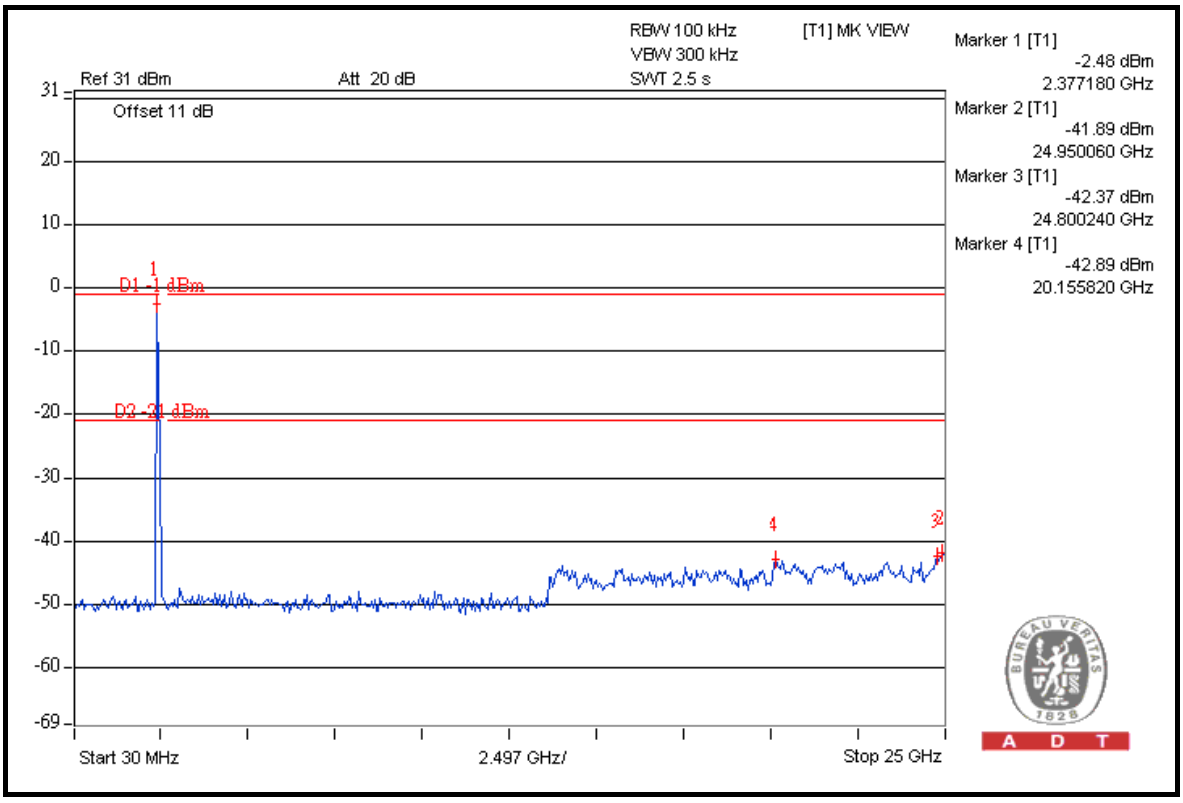

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
Marker 1 [T1]
-5.39 dBm
2.467200 GHz
Marker 2 [T1]
-53.64 dBm
2.483500 GHz
Marker 3 [T1]
-53.64 dBm
2.483500 GHz
Marker 4 [T1]
-55.09 dBm
2.500000 GHz
D1 -5.39 dBm
D2 -25.39 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

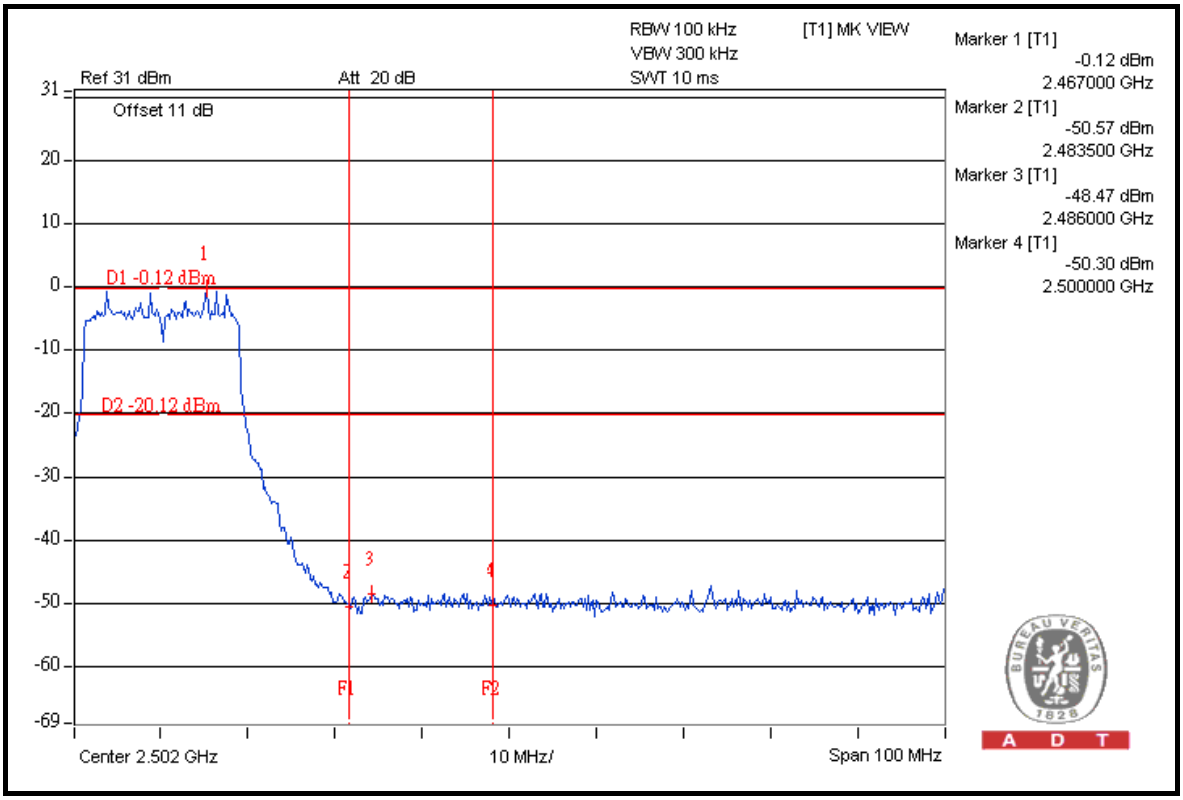

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
Marker 1 [T1]
-3.68 dBm
2.427120 GHz
Marker 2 [T1]
-40.17 dBm
24.900120 GHz
Marker 3 [T1]
-42.70 dBm
20.904920 GHz
Marker 4 [T1]
-42.71 dBm
21.853780 GHz
D1 -1.52 dBm
D2 -21.52 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

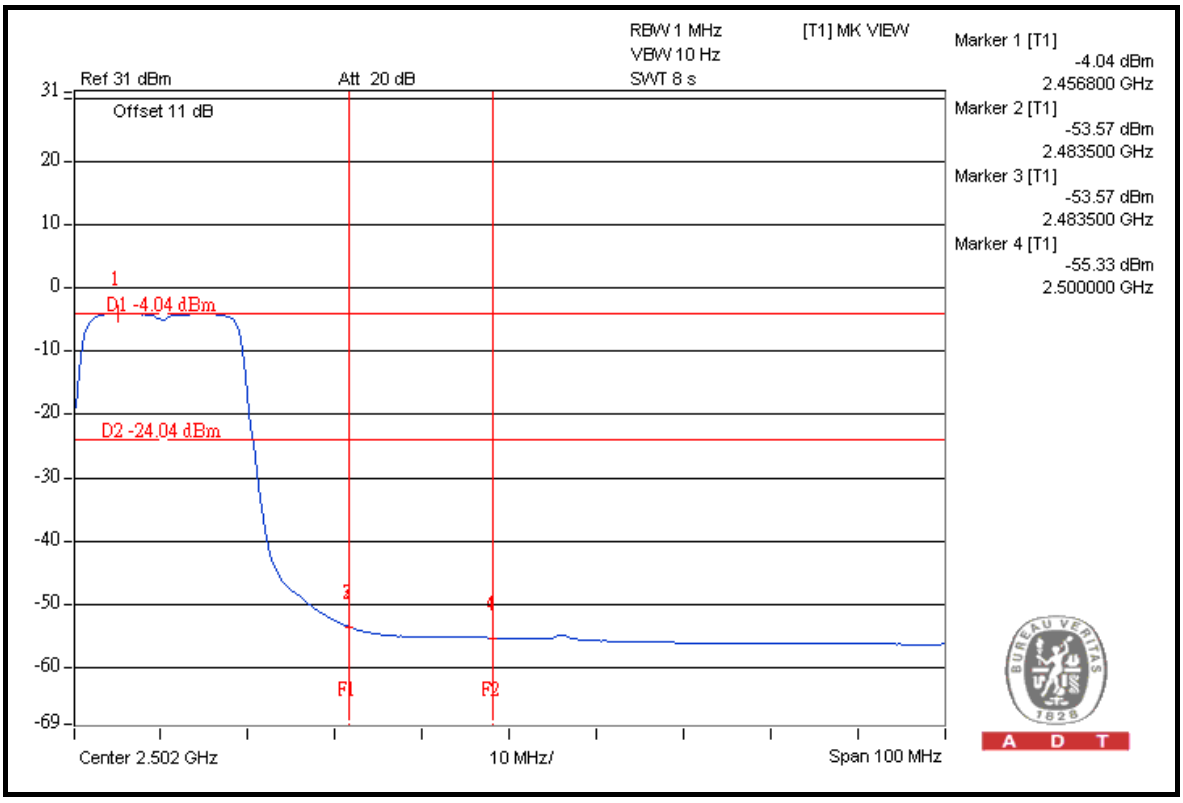
CHAIN 1

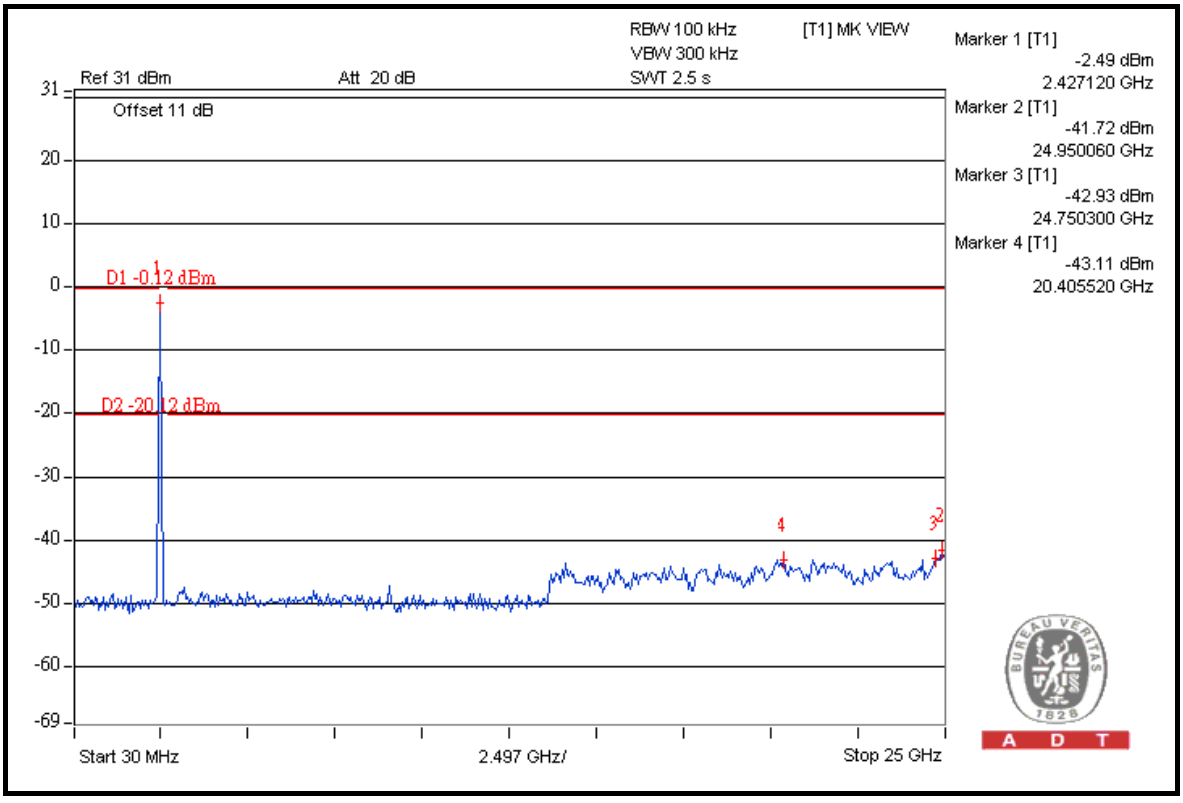

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -1 dBm
D2 -21 dBm
Marker 1 [T1]
-1.00 dBm
2.413400 GHz
Marker 2 [T1]
-33.33 dBm
2.400000 GHz
Marker 3 [T1]
-33.15 dBm
2.399600 GHz
Marker 4 [T1]
-50.17 dBm
2.390000 GHz
Marker 5 [T1]
-47.69 dBm
2.378200 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.84 dBm
D2 -24.84 dBm
Marker 1 [T1]
-4.84 dBm
2.418000 GHz
Marker 2 [T1]
-43.95 dBm
2.400000 GHz
Marker 3 [T1]
-43.95 dBm
2.400000 GHz
Marker 4 [T1]
-56.09 dBm
2.390000 GHz
Marker 5 [T1]
-56.09 dBm
2.390000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz

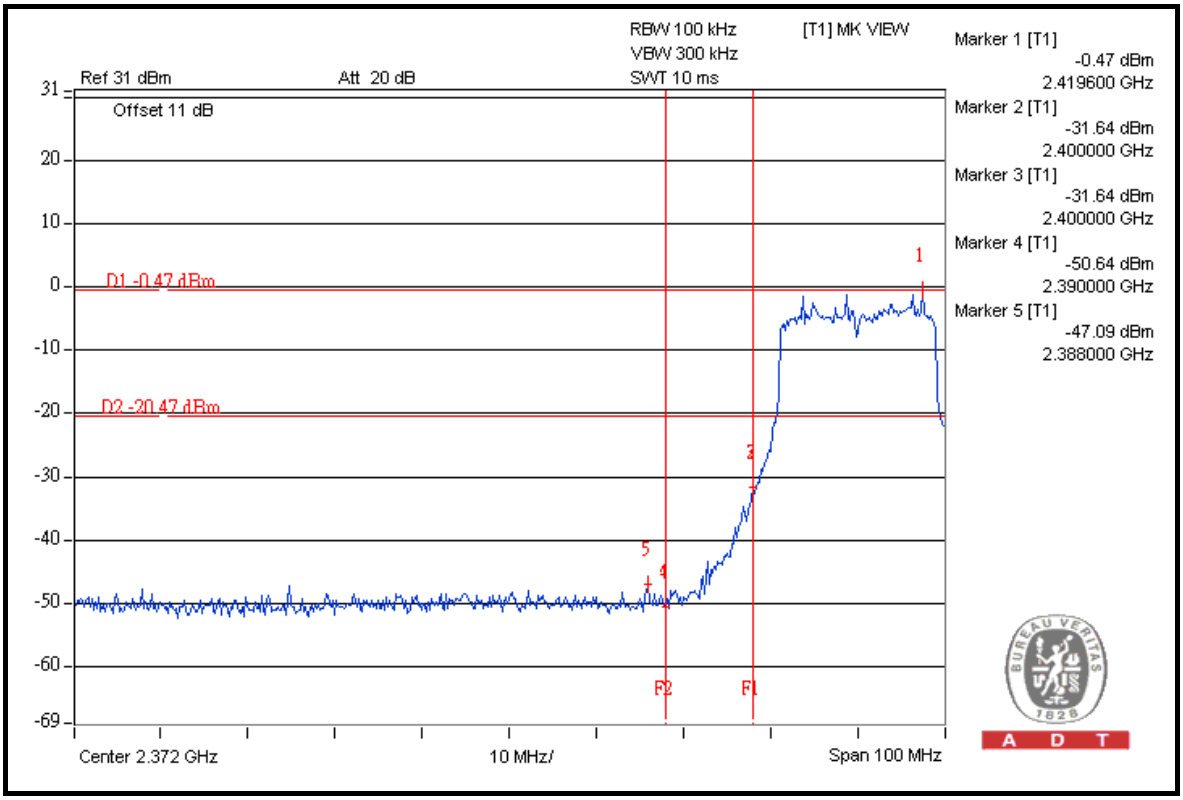

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -1 dBm
D2 -21 dBm
Marker 1 [T1]
-2.48 dBm
2.377180 GHz
Marker 2 [T1]
-41.89 dBm
24.950060 GHz
Marker 3 [T1]
-42.37 dBm
24.800240 GHz
Marker 4 [T1]
-42.89 dBm
20.155820 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

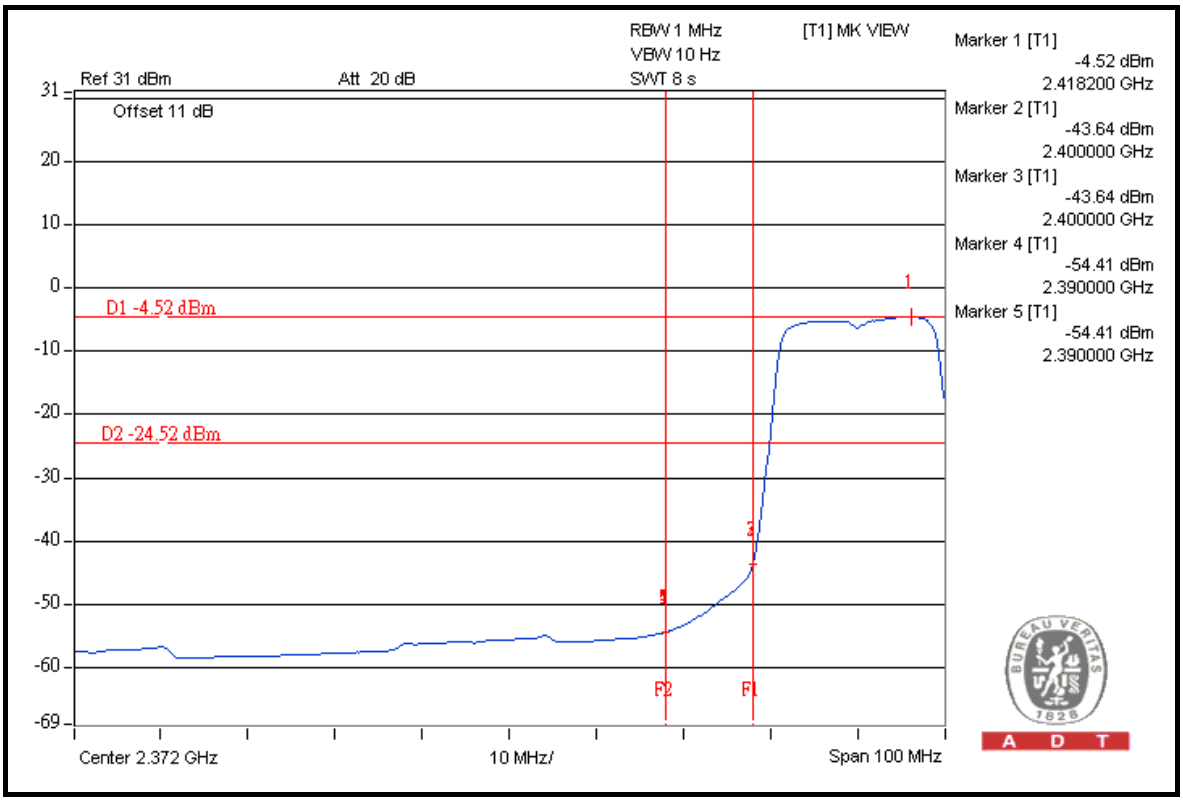

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.12 dBm
D2 -20.12 dBm
Marker 1 [T1]
-0.12 dBm
2.467000 GHz
Marker 2 [T1]
-50.57 dBm
2.483500 GHz
Marker 3 [T1]
-48.47 dBm
2.486000 GHz
Marker 4 [T1]
-50.30 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

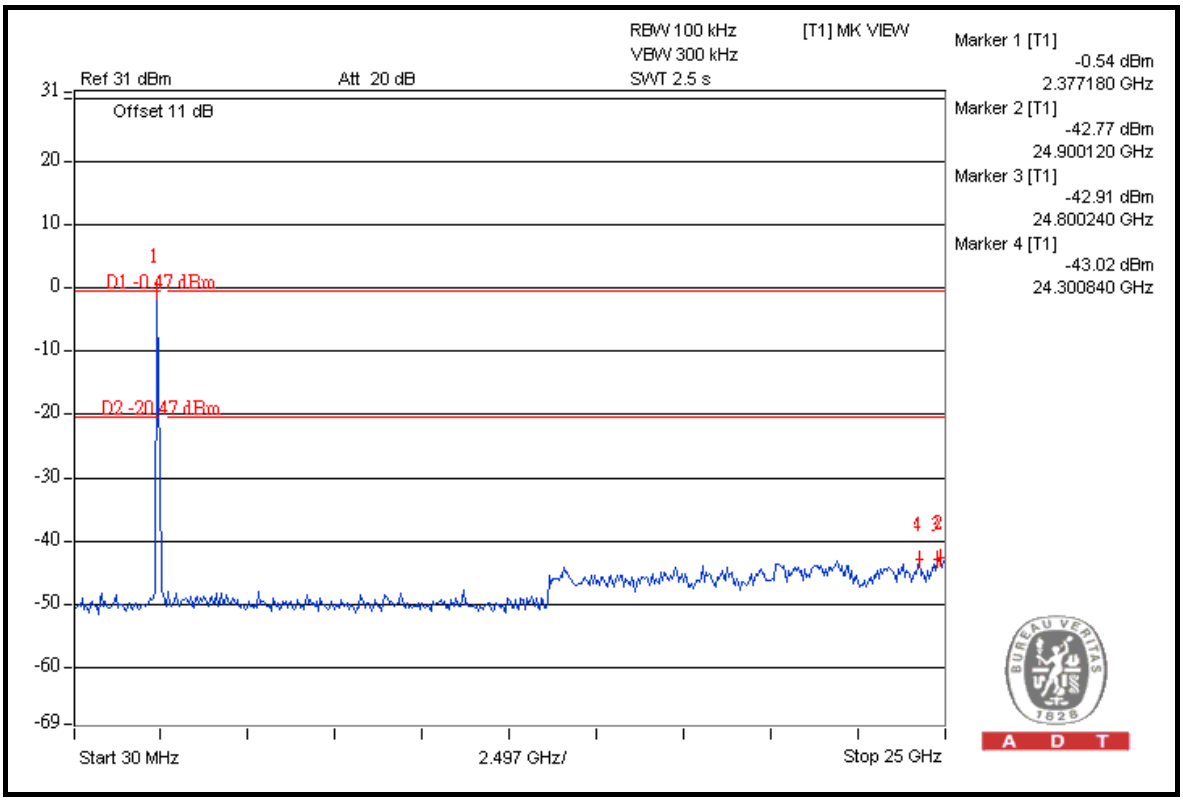

RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.04 dBm
D2 -24.04 dBm
Marker 1 [T1]
-4.04 dBm
2.456800 GHz
Marker 2 [T1]
-53.57 dBm
2.483500 GHz
Marker 3 [T1]
-53.57 dBm
2.483500 GHz
Marker 4 [T1]
-55.33 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

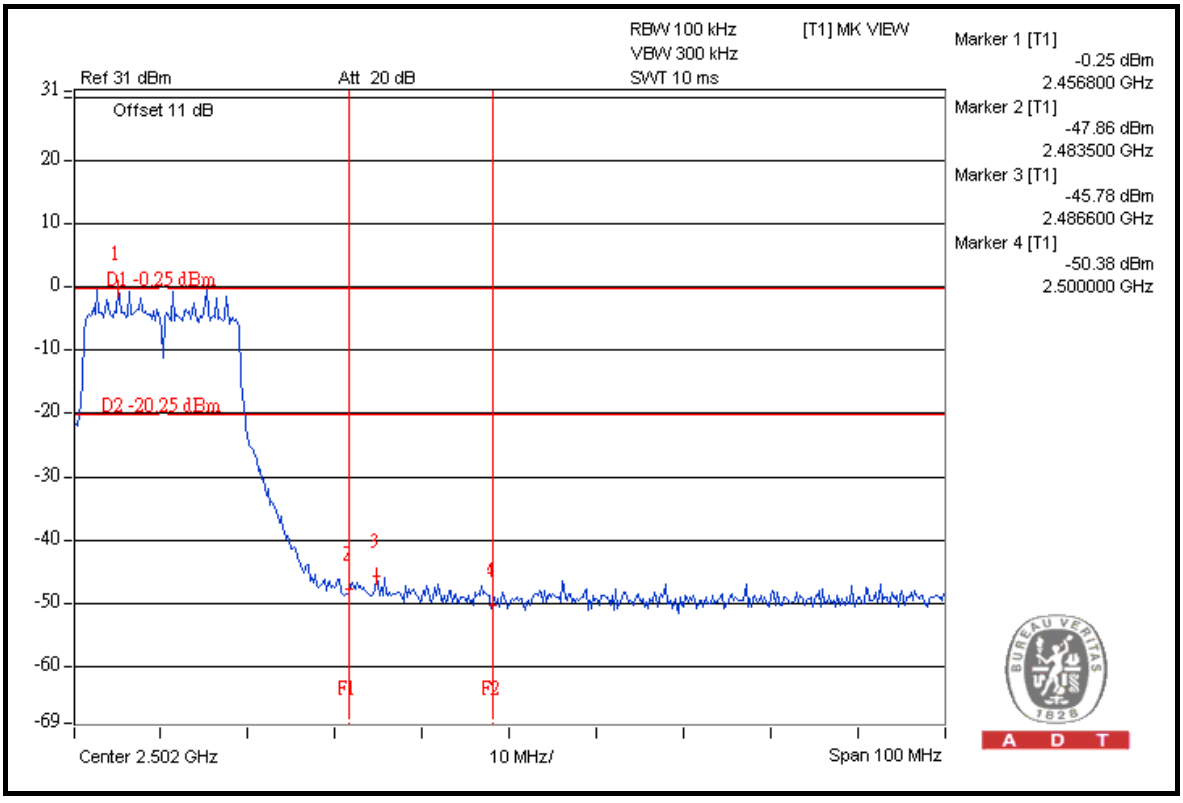

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.12 dBm
D2 -20.12 dBm
Marker 1 [T1]
-2.49 dBm
2.427120 GHz
Marker 2 [T1]
-41.72 dBm
24.950060 GHz
Marker 3 [T1]
-42.93 dBm
24.750300 GHz
Marker 4 [T1]
-43.11 dBm
20.405520 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

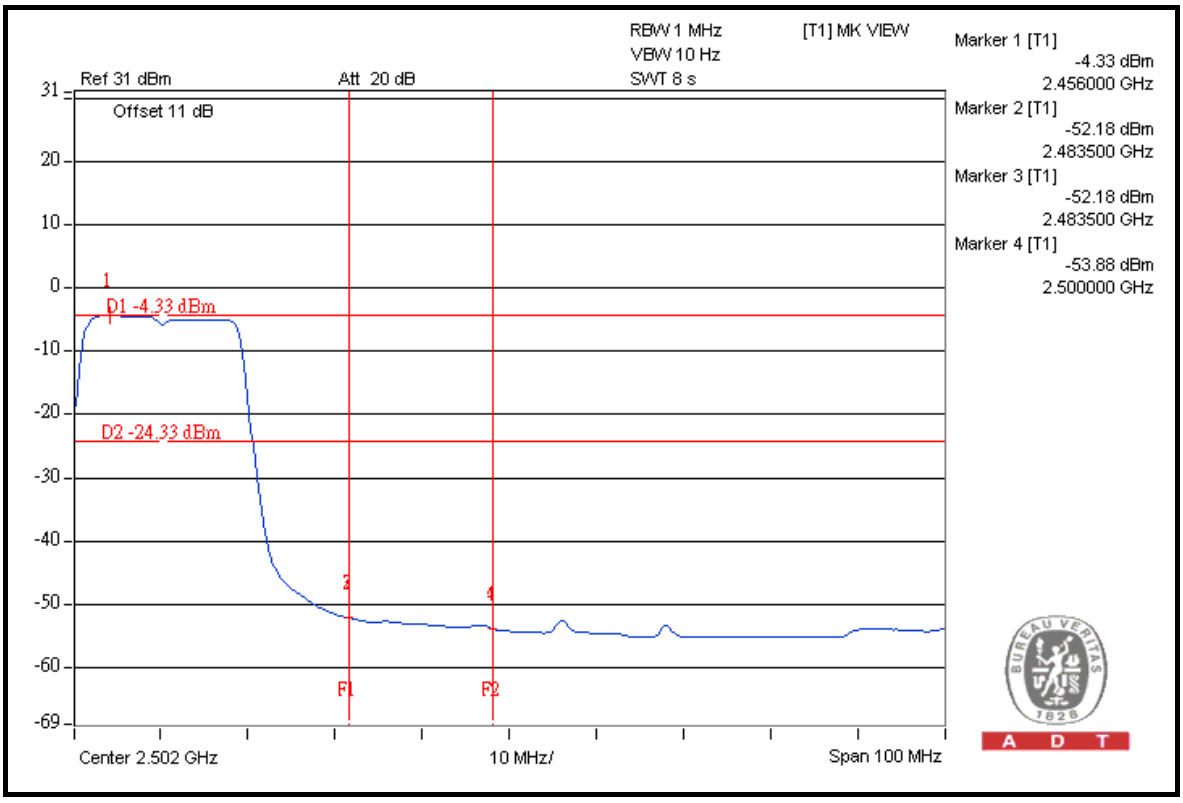
CHAIN 2

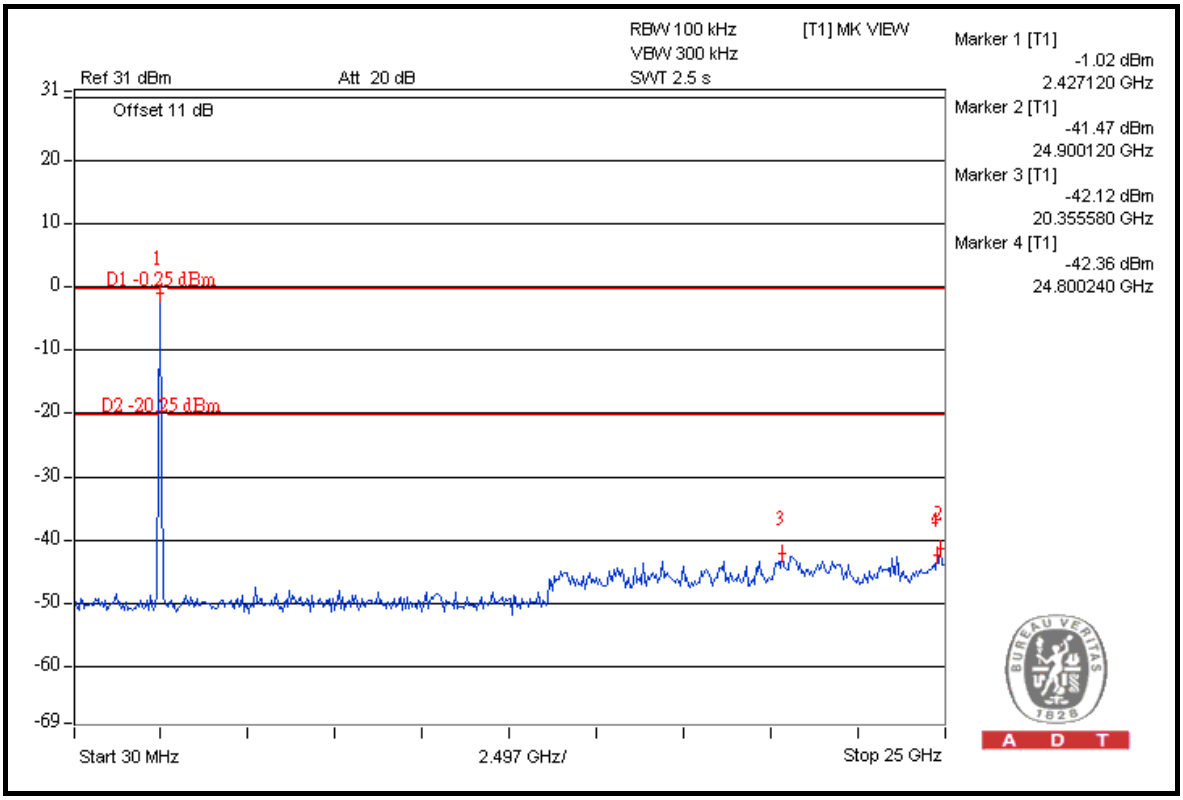

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.47 dBm
D2 -20.47 dBm
Marker 1 [T1]
-0.47 dBm
2.419600 GHz
Marker 2 [T1]
-31.64 dBm
2.400000 GHz
Marker 3 [T1]
-31.64 dBm
2.400000 GHz
Marker 4 [T1]
-50.64 dBm
2.390000 GHz
Marker 5 [T1]
-47.09 dBm
2.388000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.52 dBm
D2 -24.52 dBm
Marker 1 [T1]
-4.52 dBm
2.418200 GHz
Marker 2 [T1]
-43.64 dBm
2.400000 GHz
Marker 3 [T1]
-43.64 dBm
2.400000 GHz
Marker 4 [T1]
-54.41 dBm
2.390000 GHz
Marker 5 [T1]
-54.41 dBm
2.390000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.47 dBm
D2 -20.47 dBm
Marker 1 [T1]
-0.54 dBm
2.377180 GHz
Marker 2 [T1]
-42.77 dBm
24.900120 GHz
Marker 3 [T1]
-42.91 dBm
24.800240 GHz
Marker 4 [T1]
-43.02 dBm
24.300840 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.25 dBm
D2 -20.25 dBm
Marker 1 [T1]
-0.25 dBm
2.456800 GHz
Marker 2 [T1]
-47.86 dBm
2.483500 GHz
Marker 3 [T1]
-45.78 dBm
2.486600 GHz
Marker 4 [T1]
-50.38 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 8 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.33 dBm
D2 -24.33 dBm
Marker 1 [T1]
-4.33 dBm
2.456000 GHz
Marker 2 [T1]
-52.18 dBm
2.483500 GHz
Marker 3 [T1]
-52.18 dBm
2.483500 GHz
Marker 4 [T1]
-53.88 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.25 dBm
D2 -20.25 dBm
Marker 1 [T1]
-1.02 dBm
2.427120 GHz
Marker 2 [T1]
-41.47 dBm
24.900120 GHz
Marker 3 [T1]
-42.12 dBm
20.355580 GHz
Marker 4 [T1]
-42.36 dBm
24.800240 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11n (40MHz)

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)	106.8	43.71	63.09	74.00
2422.00 (AV)	93.9	44.16	49.74	54.00

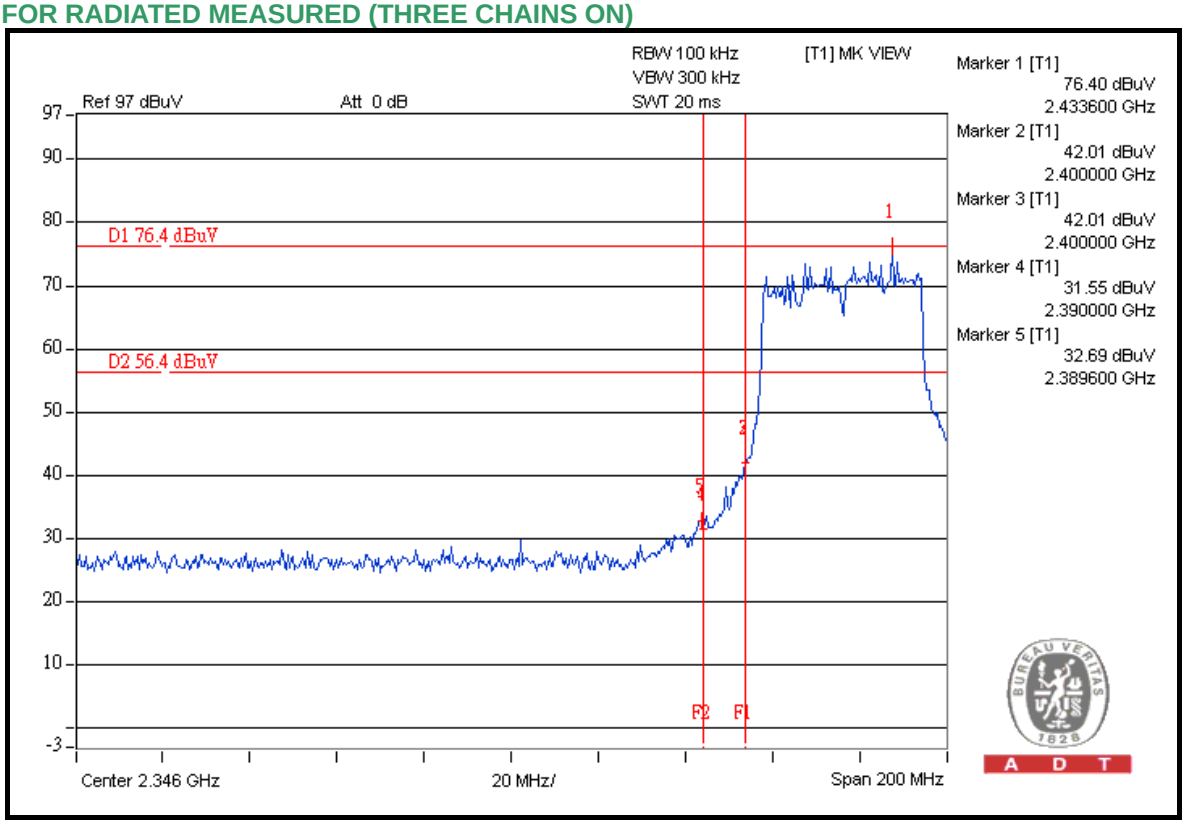
RESTRICT BAND (2483.5 ~ 2500 MHz)

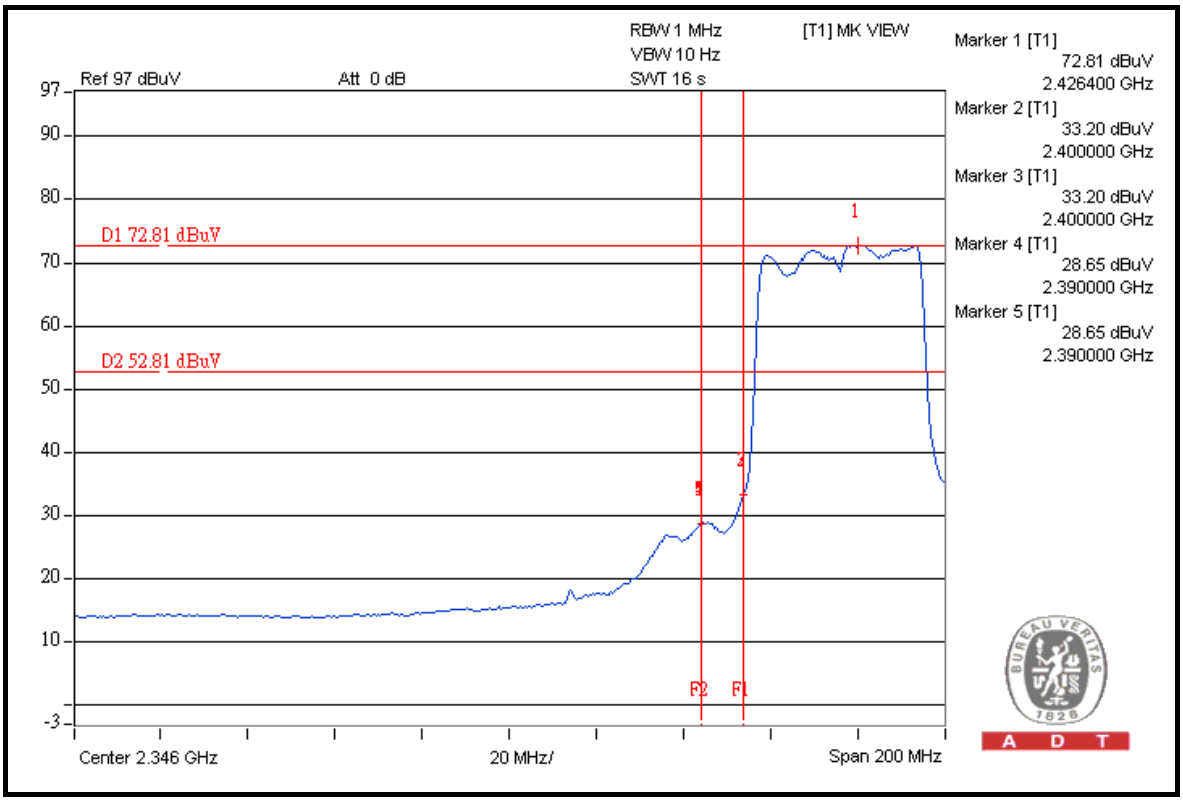
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2452.00 (PK)	106.6	40.40	66.20	74.00
2452.00 (AV)	93.5	42.66	50.84	54.00

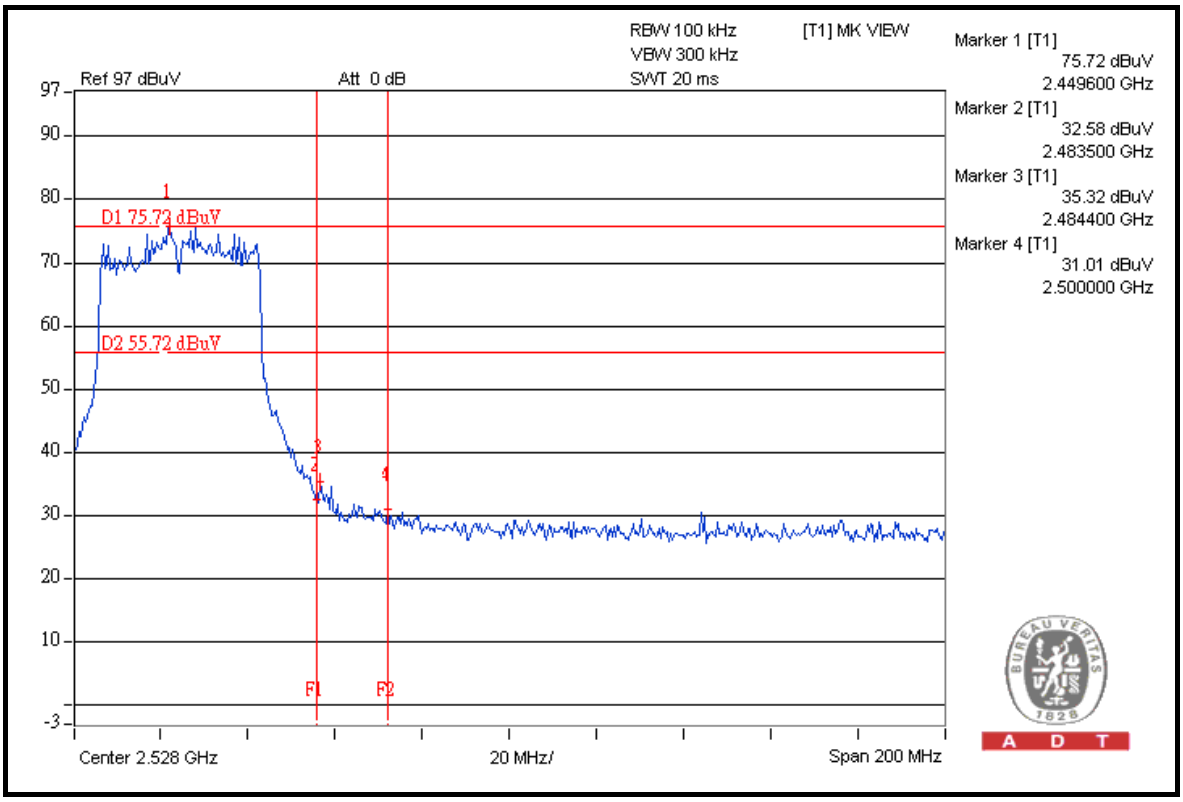
NOTE:

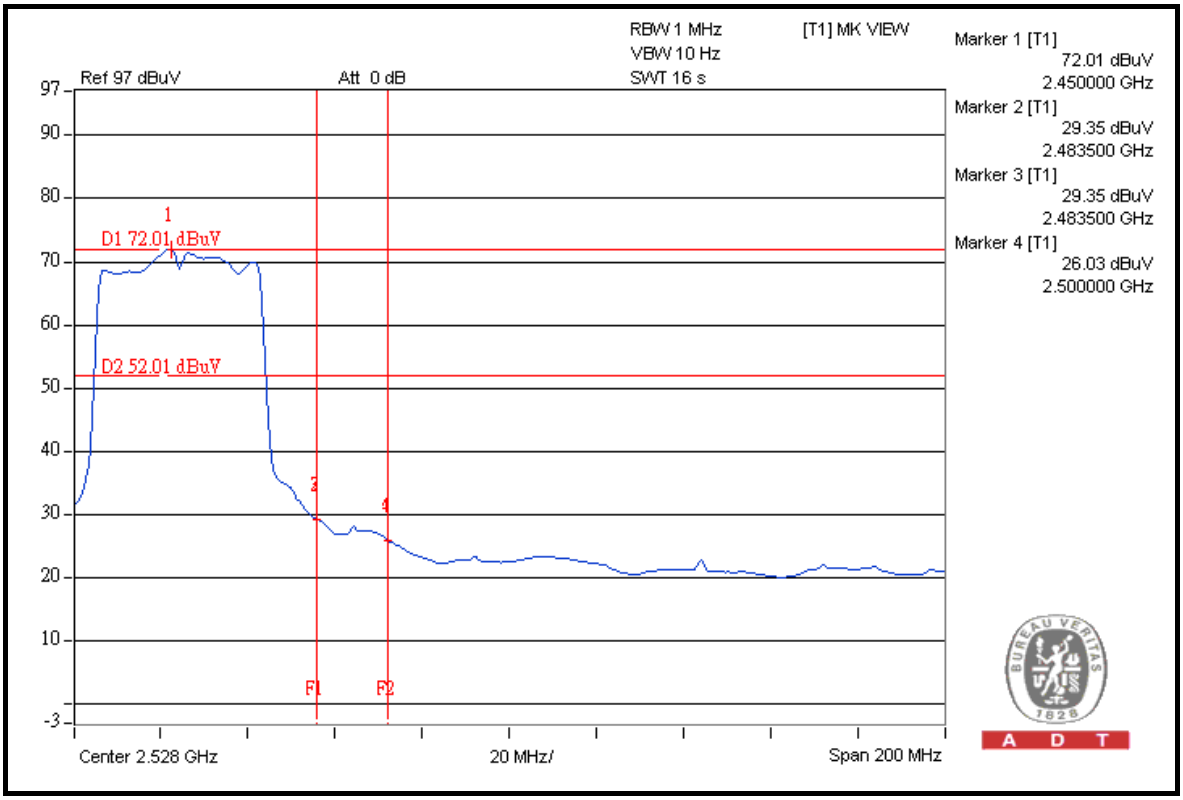
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 2 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (THREE CHAINS ON)



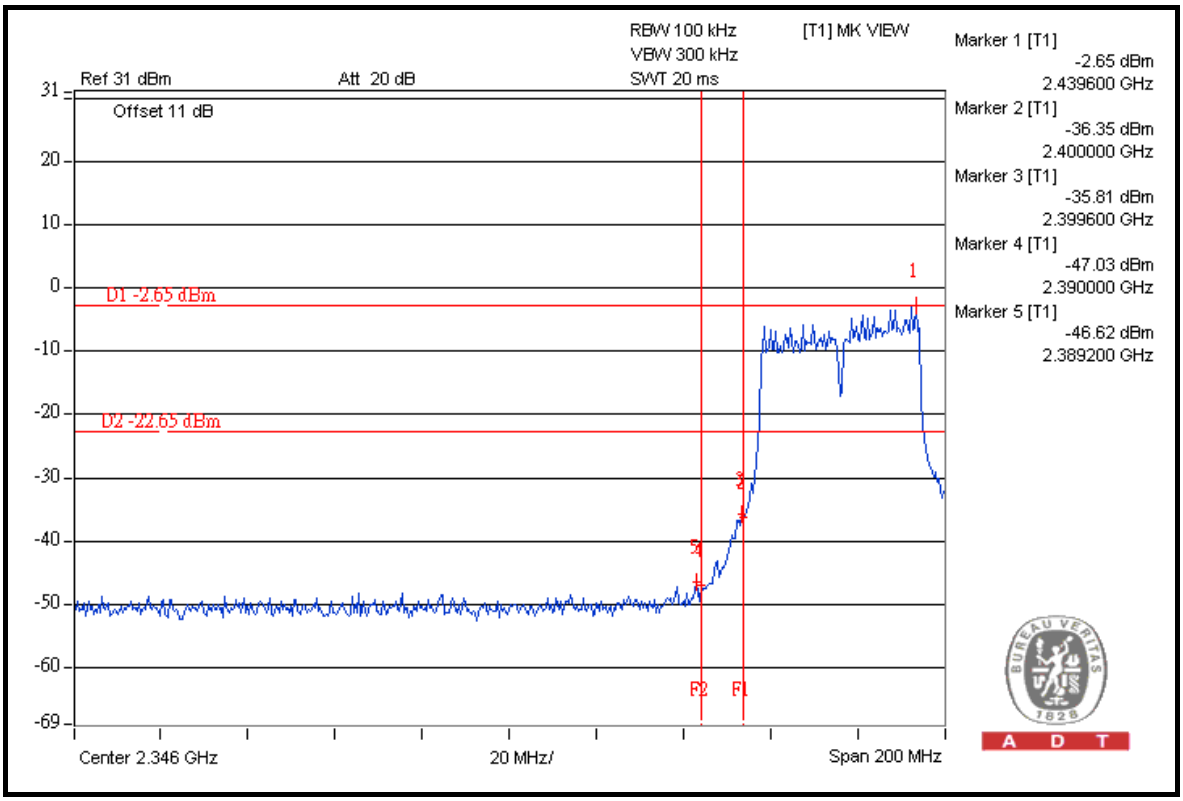


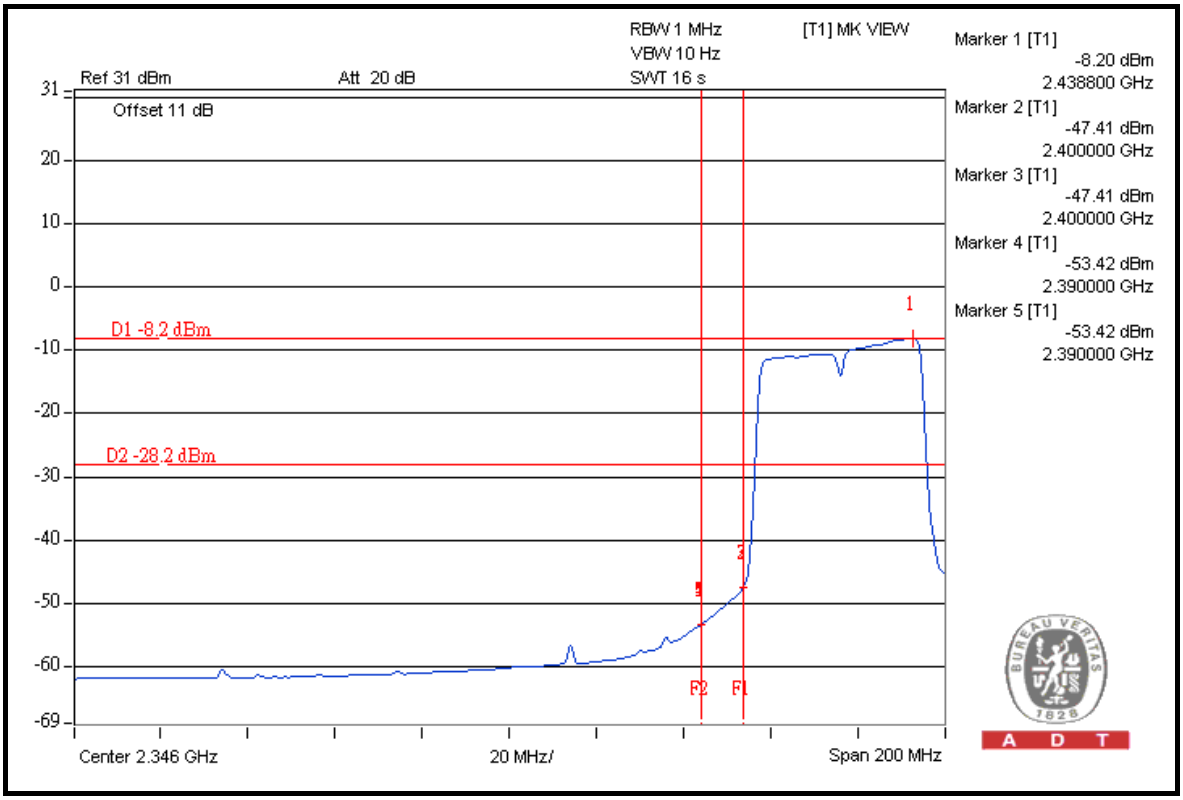

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
75.72 dBuV
2.449600 GHz
Marker 2 [T1]
32.58 dBuV
2.483500 GHz
Marker 3 [T1]
35.32 dBuV
2.484400 GHz
Marker 4 [T1]
31.01 dBuV
2.500000 GHz
D1 75.72 dBuV
D2 55.72 dBuV
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz

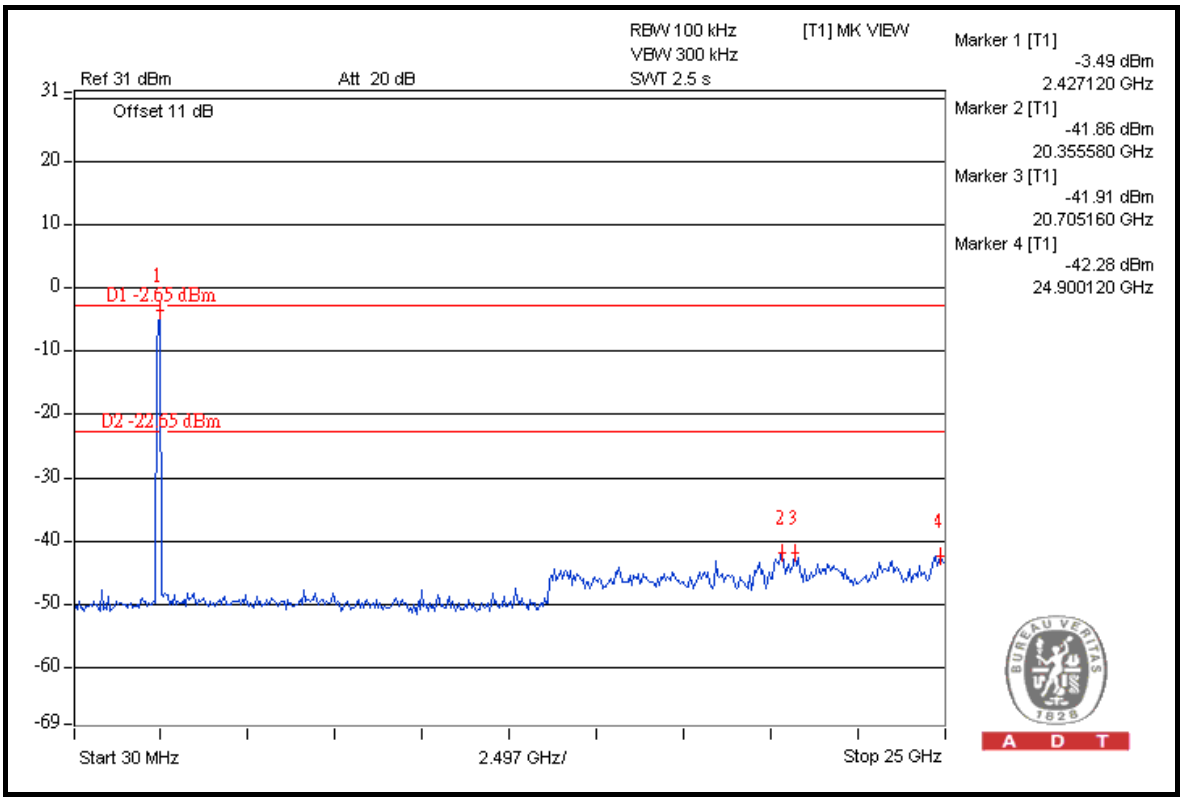

RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
72.01 dBuV
2.450000 GHz
Marker 2 [T1]
29.35 dBuV
2.483500 GHz
Marker 3 [T1]
29.35 dBuV
2.483500 GHz
Marker 4 [T1]
26.03 dBuV
2.500000 GHz
D1 72.01 dBuV
D2 52.01 dBuV
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz

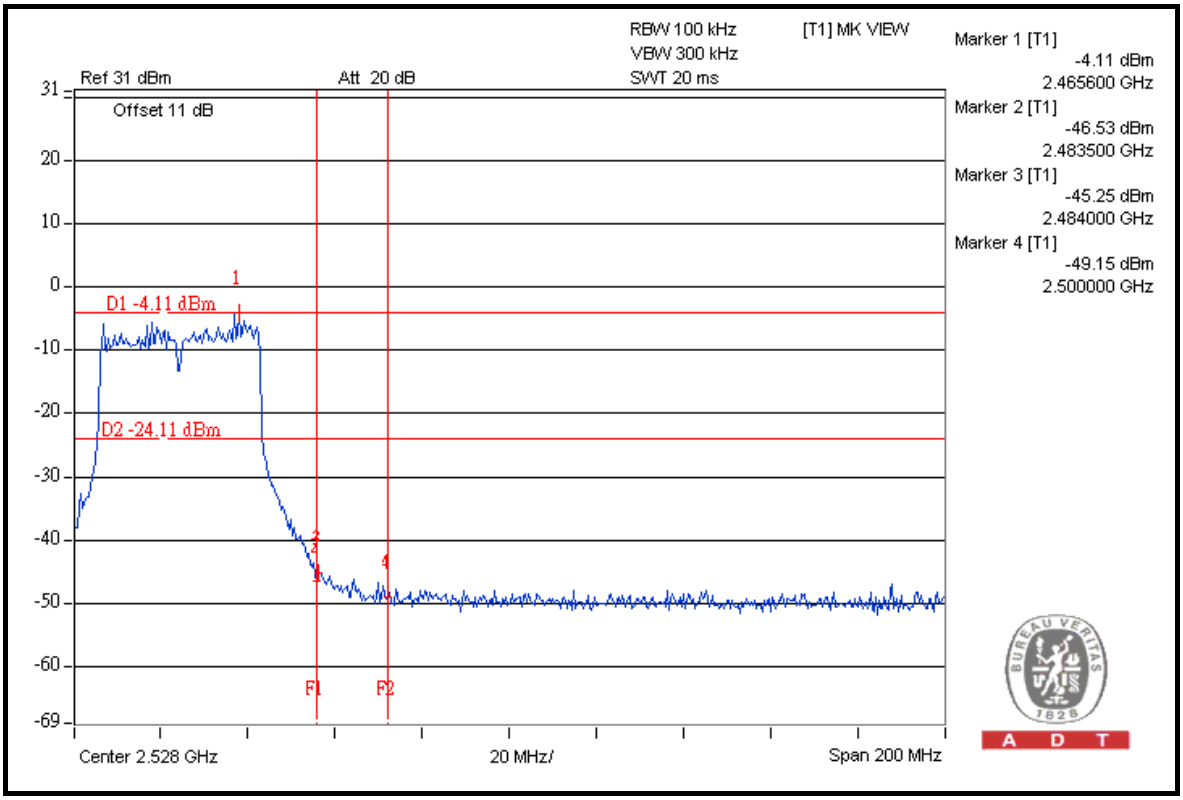
FOR CONDUCTED MEASURED

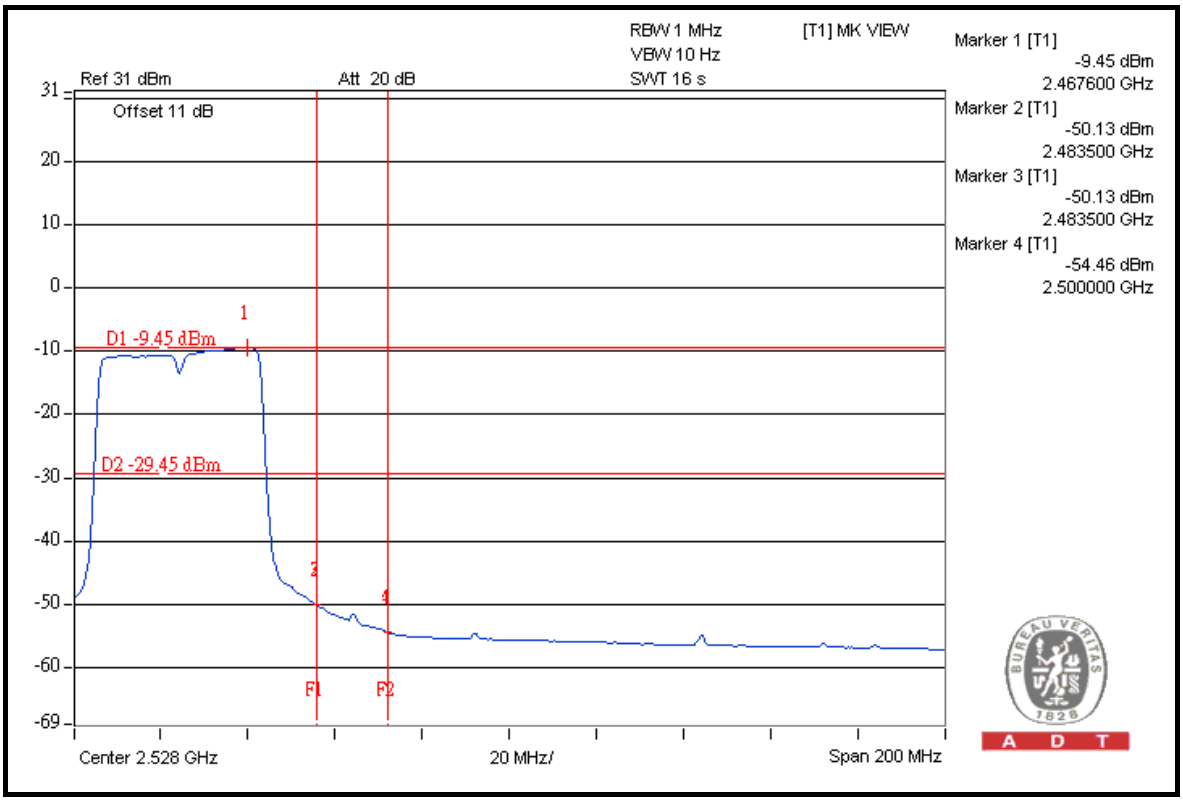
CHAIN 0

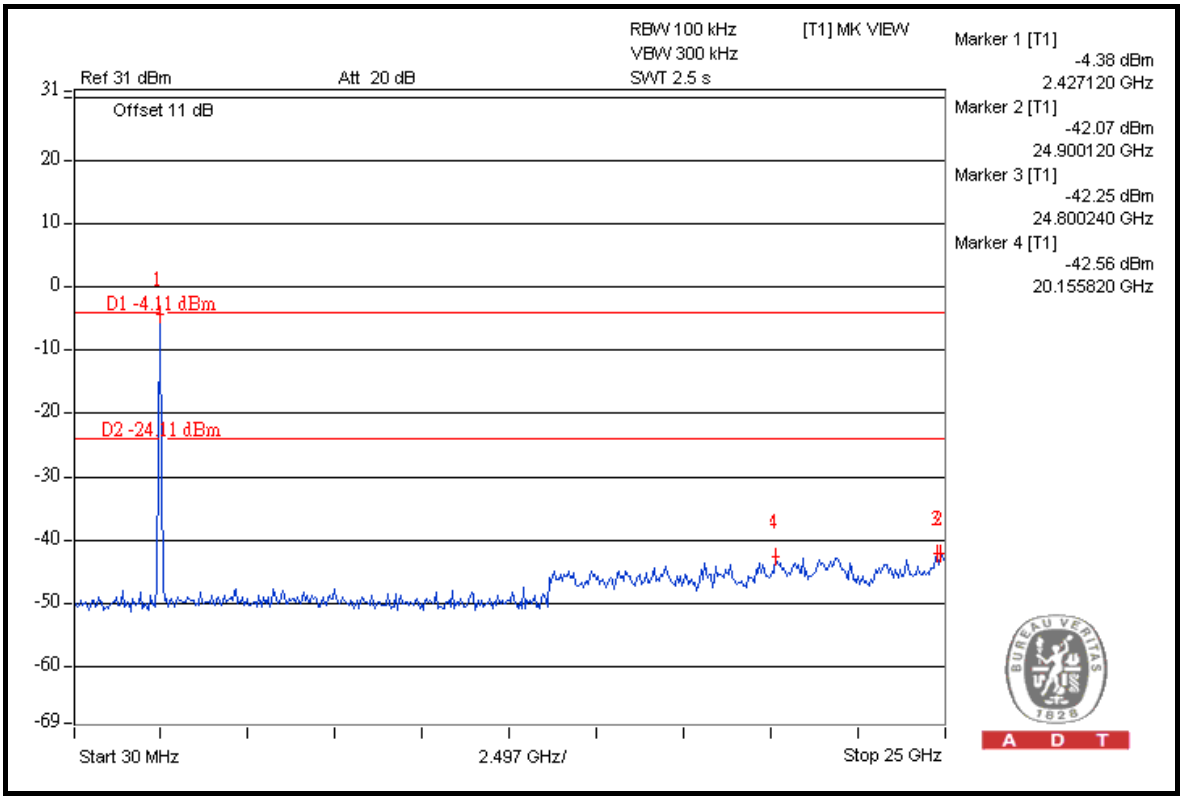




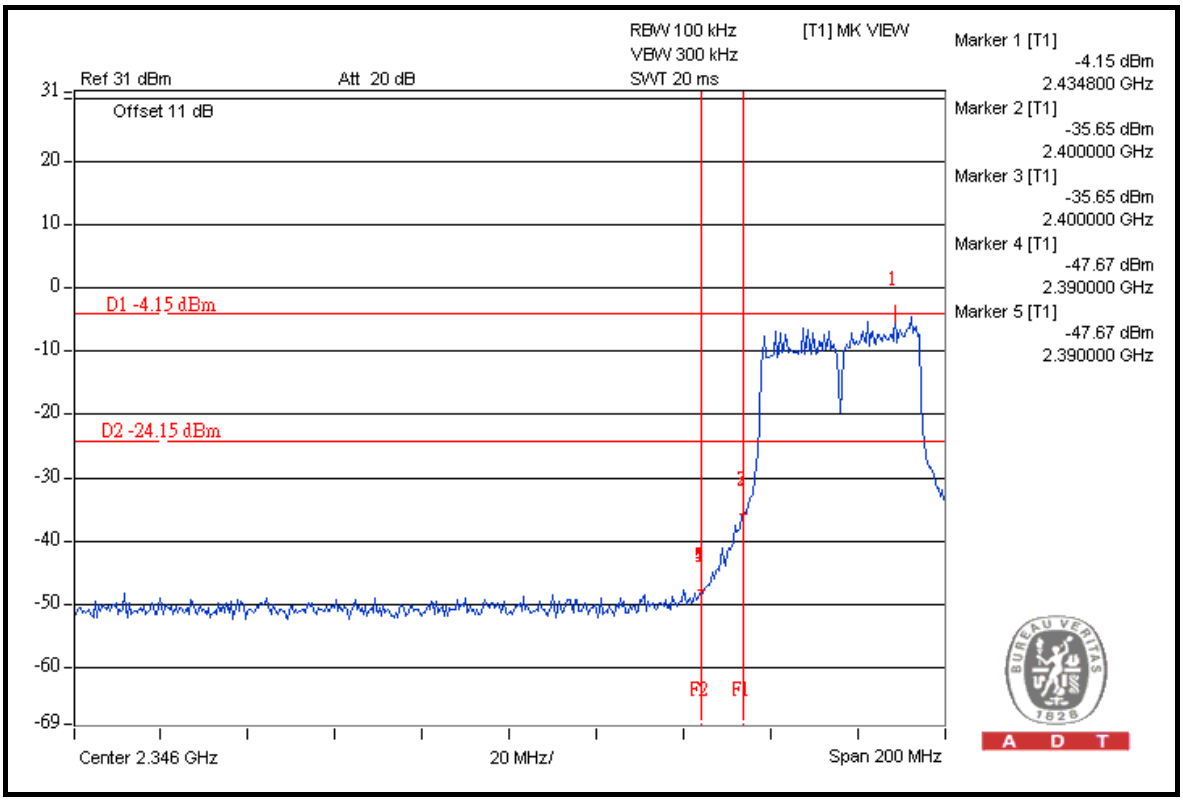

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -2.65 dBm
D2 -22.65 dBm
Marker 1 [T1]
-3.49 dBm
2.427120 GHz
Marker 2 [T1]
-41.86 dBm
20.355580 GHz
Marker 3 [T1]
-41.91 dBm
20.705160 GHz
Marker 4 [T1]
-42.28 dBm
24.900120 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

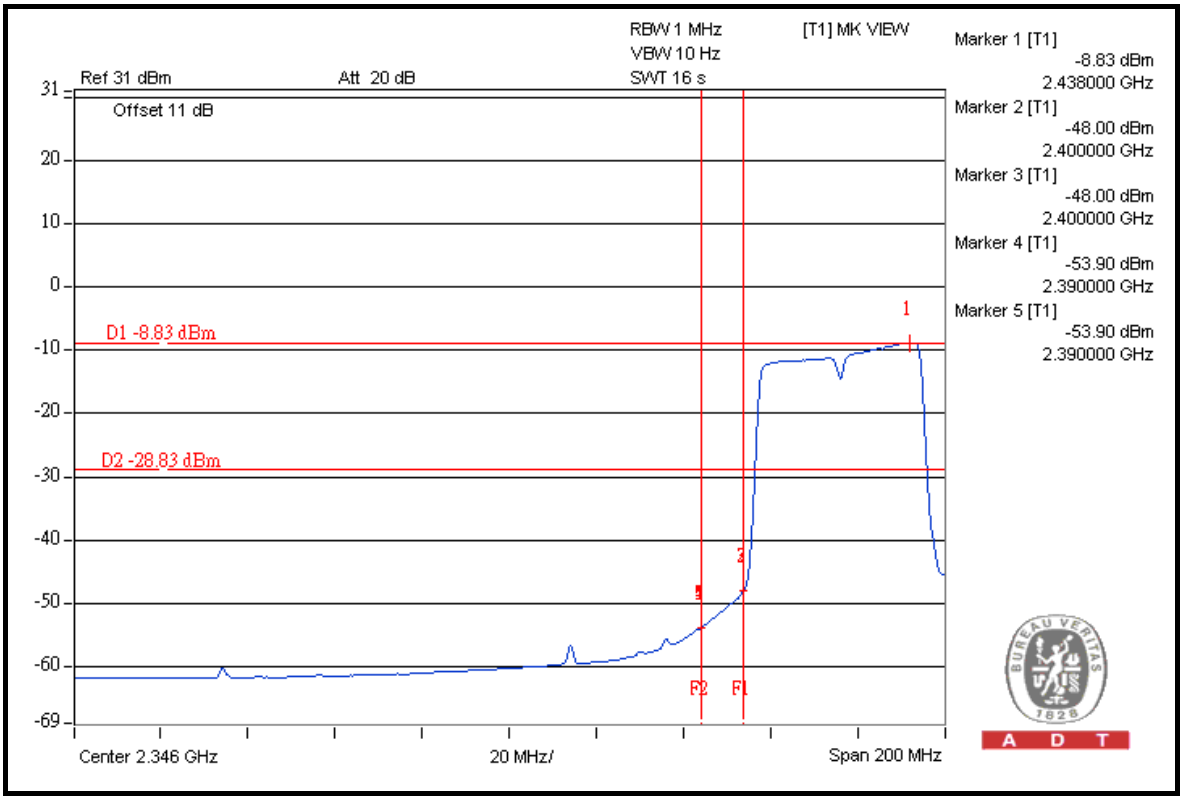

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.11 dBm
D2 -24.11 dBm
Marker 1 [T1]
-4.11 dBm
2.465600 GHz
Marker 2 [T1]
-46.53 dBm
2.483500 GHz
Marker 3 [T1]
-45.25 dBm
2.484000 GHz
Marker 4 [T1]
-49.15 dBm
2.500000 GHz
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz

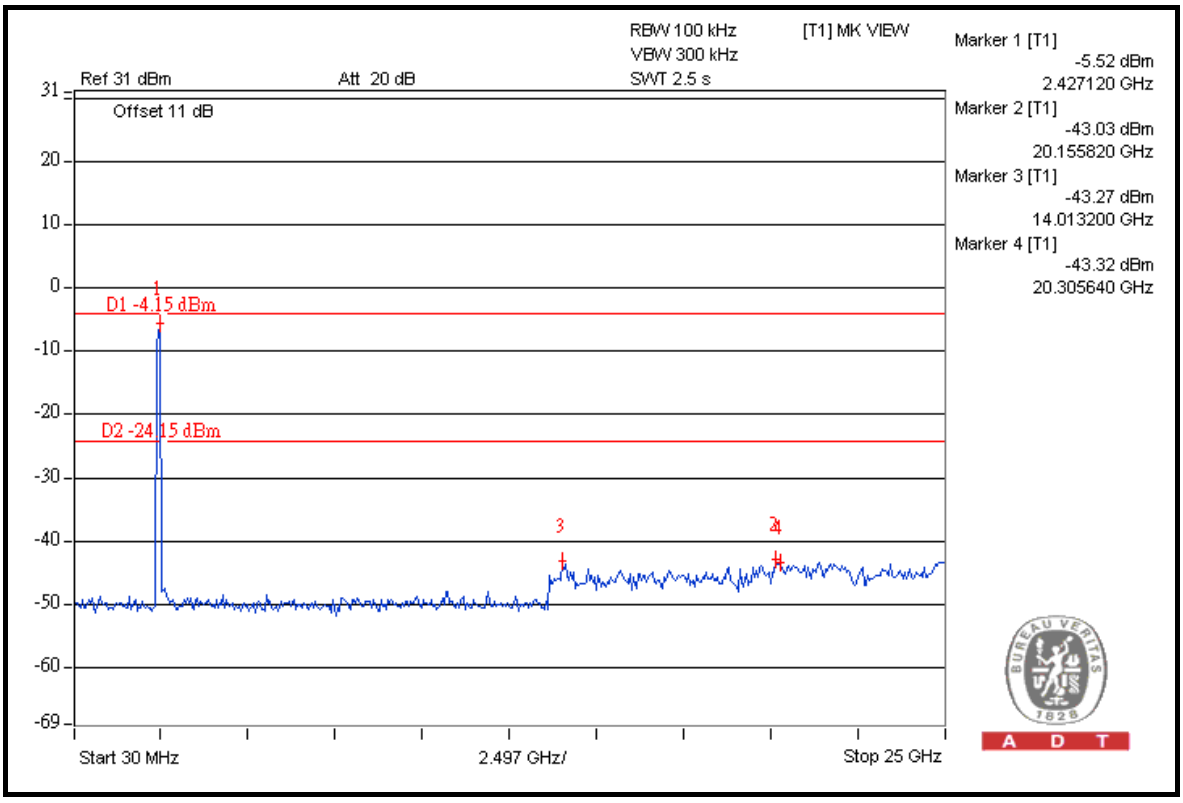

RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -9.45 dBm
D2 -29.45 dBm
Marker 1 [T1]
-9.45 dBm
2.467600 GHz
Marker 2 [T1]
-50.13 dBm
2.483500 GHz
Marker 3 [T1]
-50.13 dBm
2.483500 GHz
Marker 4 [T1]
-54.46 dBm
2.500000 GHz
Center 2.528 GHz
20 MHz/
Span 200 MHz

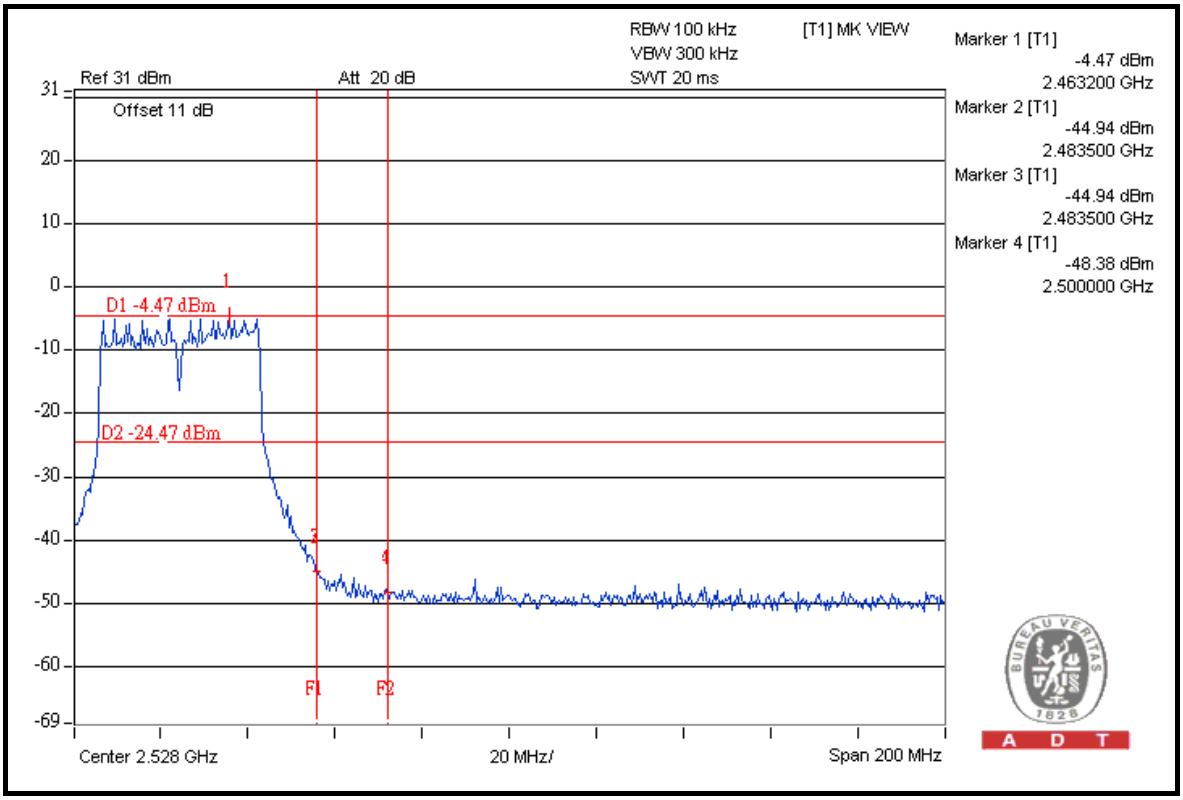

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.11 dBm
D2 -24.11 dBm
Marker 1 [T1]
-4.38 dBm
2.427120 GHz
Marker 2 [T1]
-42.07 dBm
24.900120 GHz
Marker 3 [T1]
-42.25 dBm
24.800240 GHz
Marker 4 [T1]
-42.56 dBm
20.155820 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

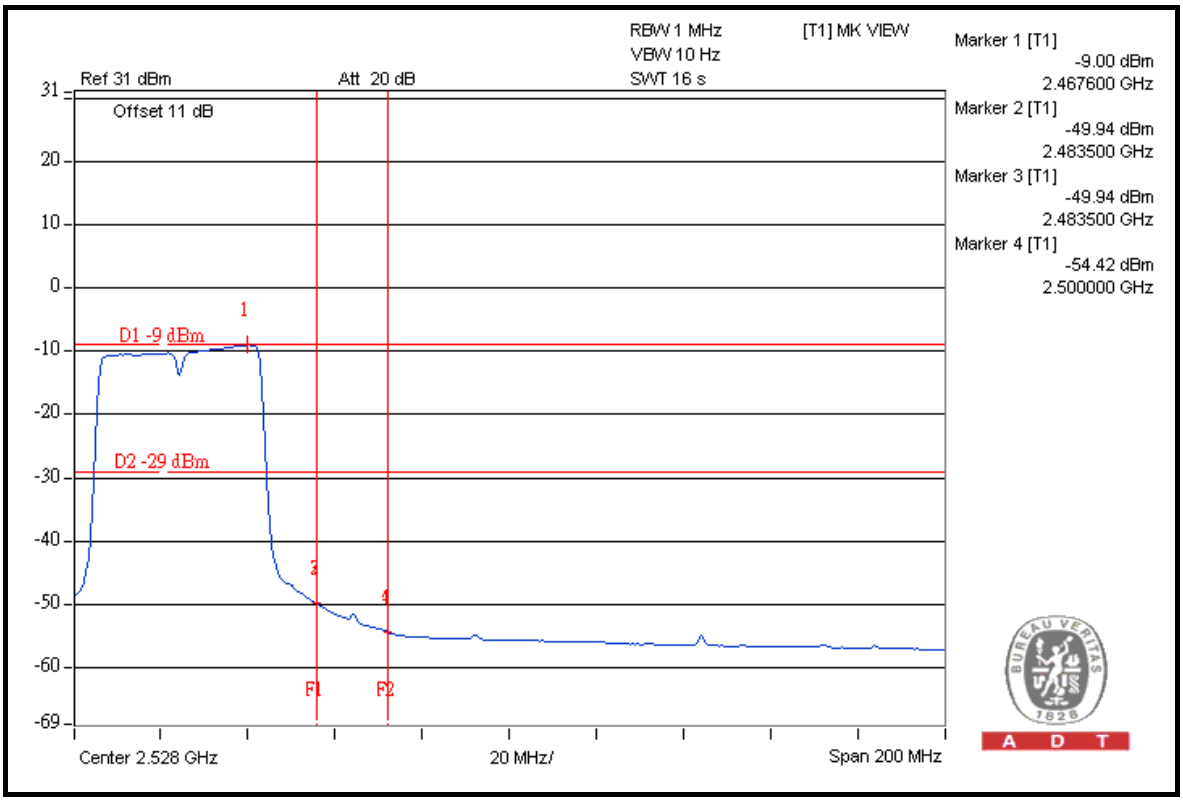
CHAIN 1

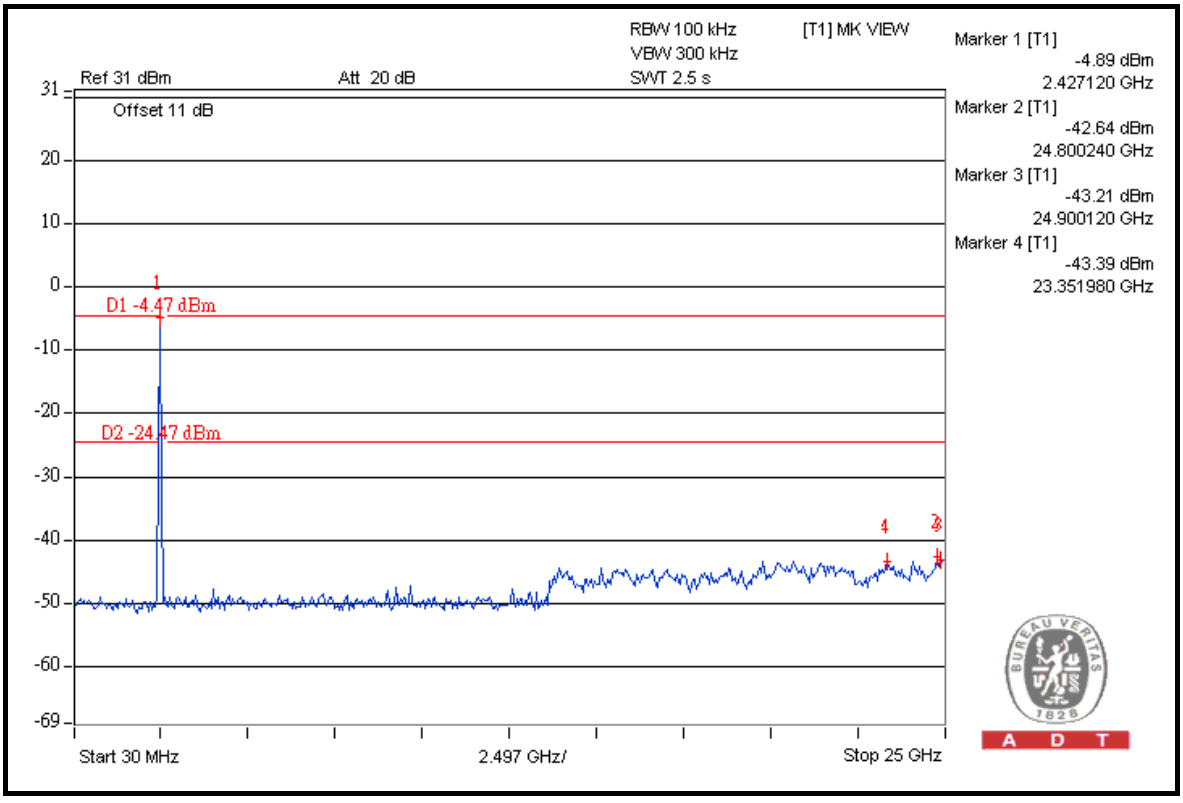

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.15 dBm
D2 -24.15 dBm
Marker 1 [T1]
-4.15 dBm
2.434800 GHz
Marker 2 [T1]
-35.65 dBm
2.400000 GHz
Marker 3 [T1]
-35.65 dBm
2.400000 GHz
Marker 4 [T1]
-47.67 dBm
2.390000 GHz
Marker 5 [T1]
-47.67 dBm
2.390000 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -8.83 dBm
D2 -28.83 dBm
Marker 1 [T1]
-8.83 dBm
2.438000 GHz
Marker 2 [T1]
-48.00 dBm
2.400000 GHz
Marker 3 [T1]
-48.00 dBm
2.400000 GHz
Marker 4 [T1]
-53.90 dBm
2.390000 GHz
Marker 5 [T1]
-53.90 dBm
2.390000 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz

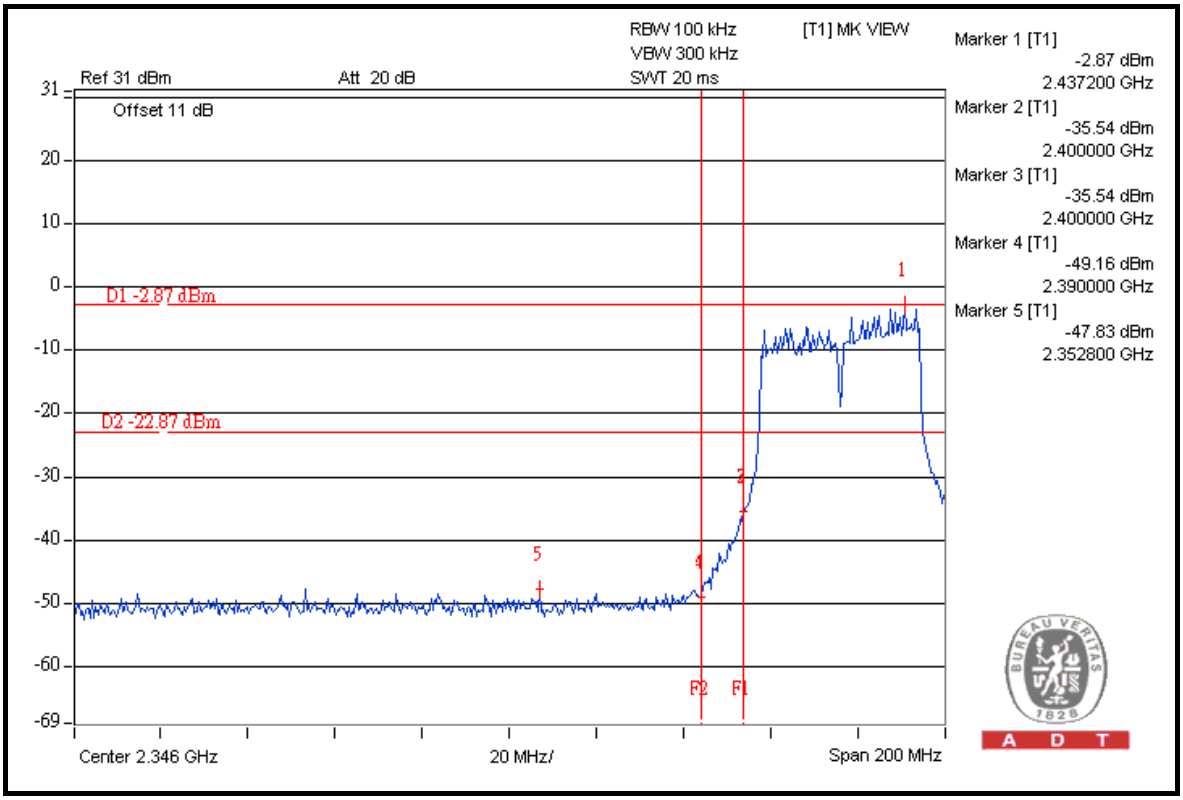

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.15 dBm
D2 -24.15 dBm
Marker 1 [T1]
-5.52 dBm
2.427120 GHz
Marker 2 [T1]
-43.03 dBm
20.155820 GHz
Marker 3 [T1]
-43.27 dBm
14.013200 GHz
Marker 4 [T1]
-43.32 dBm
20.305640 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

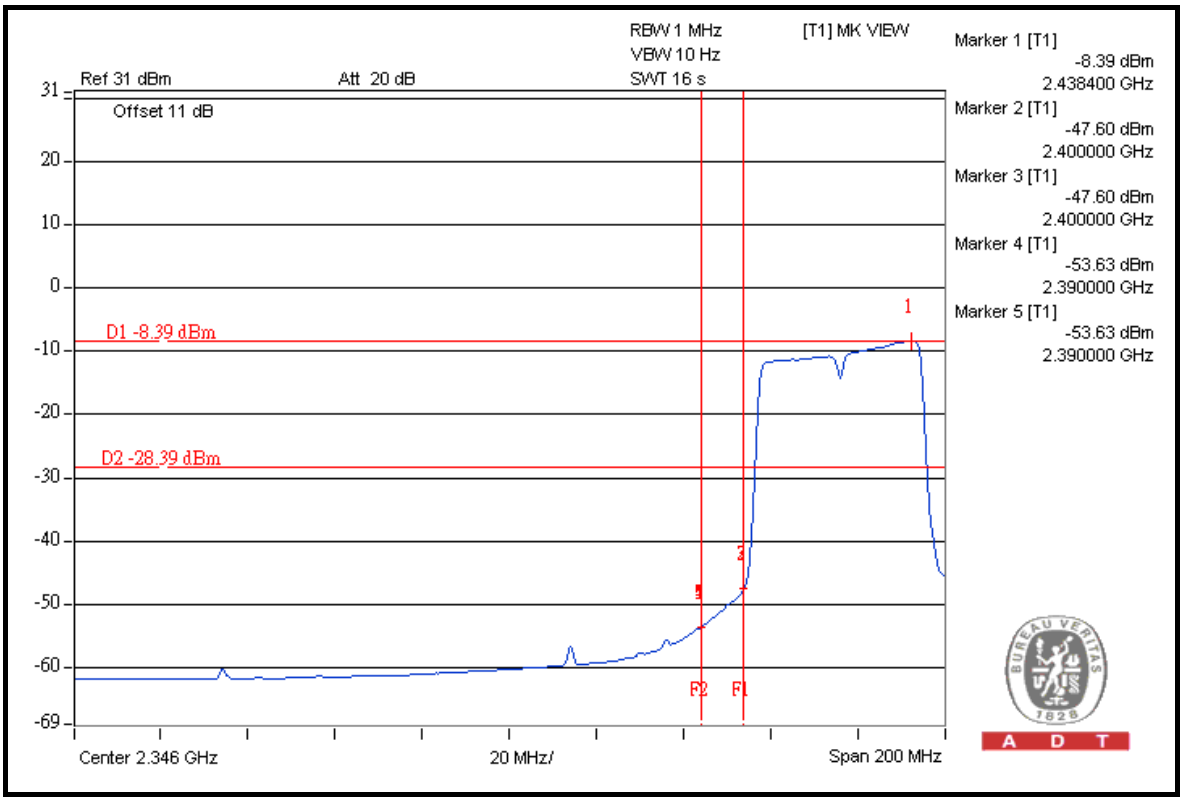

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.47 dBm
D2 -24.47 dBm
Marker 1 [T1]
-4.47 dBm
2.463200 GHz
Marker 2 [T1]
-44.94 dBm
2.483500 GHz
Marker 3 [T1]
-44.94 dBm
2.483500 GHz
Marker 4 [T1]
-48.38 dBm
2.500000 GHz
Center 2.528 GHz
20 MHz/
Span 200 MHz

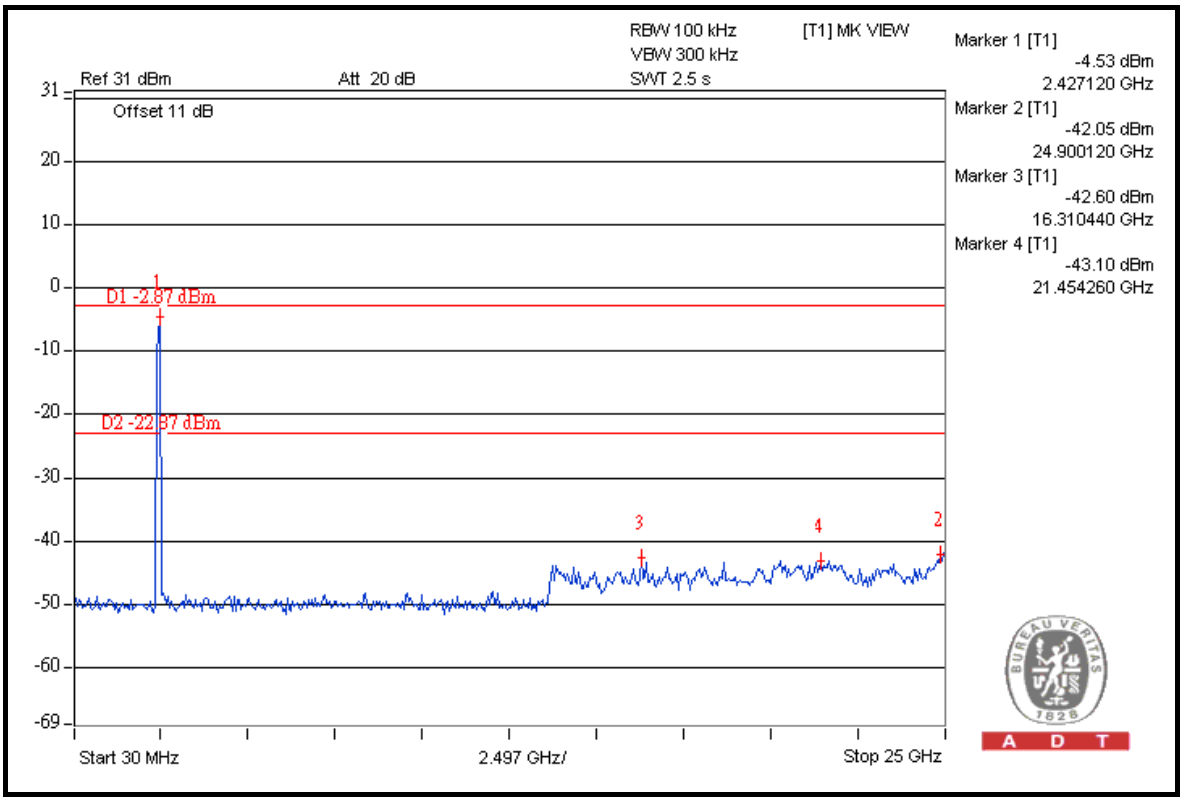

RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -9 dBm
D2 -29 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-9.00 dBm
2.467600 GHz
Marker 2 [T1]
-49.94 dBm
2.483500 GHz
Marker 3 [T1]
-49.94 dBm
2.483500 GHz
Marker 4 [T1]
-54.42 dBm
2.500000 GHz

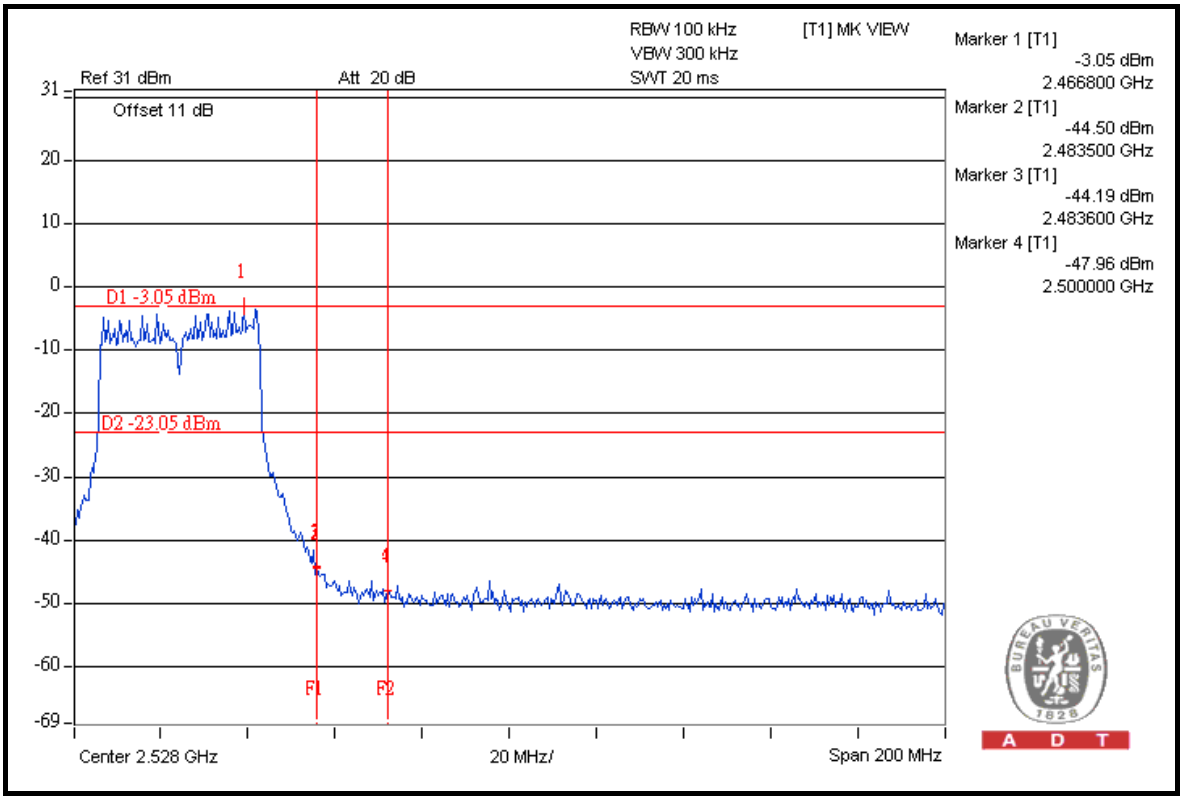

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -4.47 dBm
D2 -24.47 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-4.89 dBm
2.427120 GHz
Marker 2 [T1]
-42.64 dBm
24.800240 GHz
Marker 3 [T1]
-43.21 dBm
24.900120 GHz
Marker 4 [T1]
-43.39 dBm
23.351980 GHz

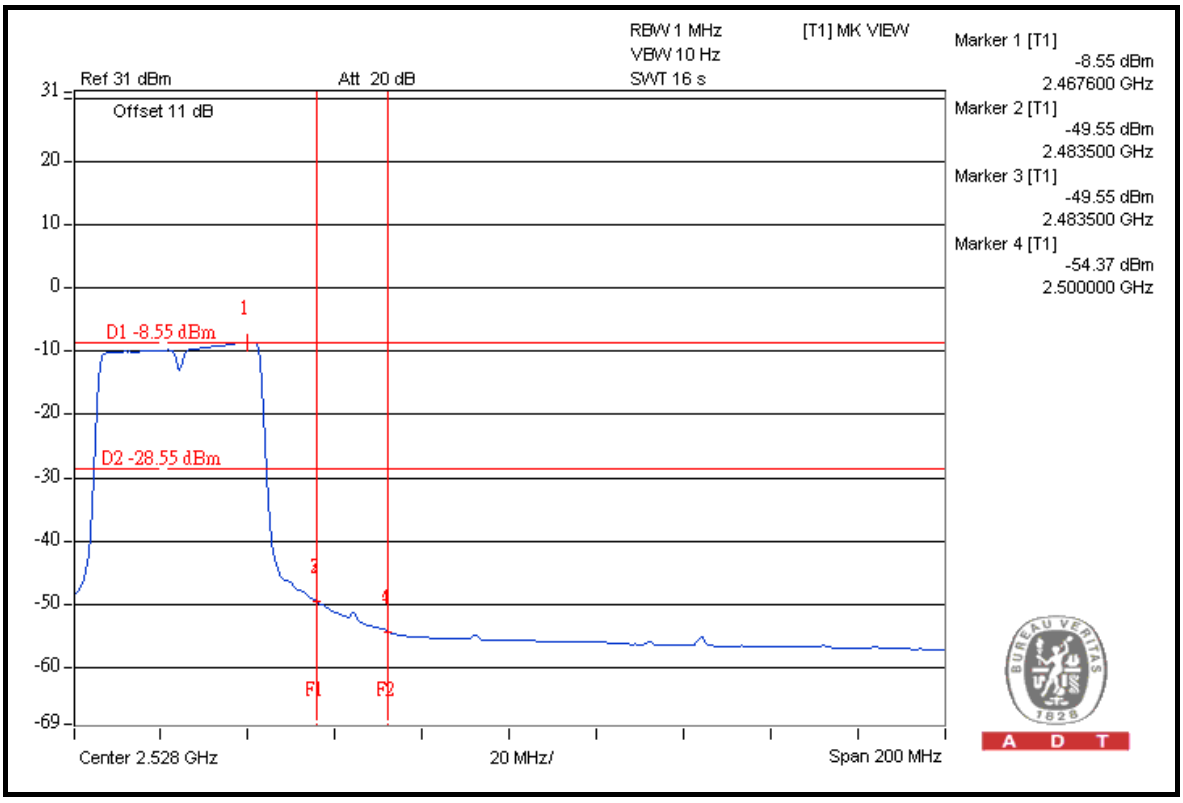
CHAIN 2

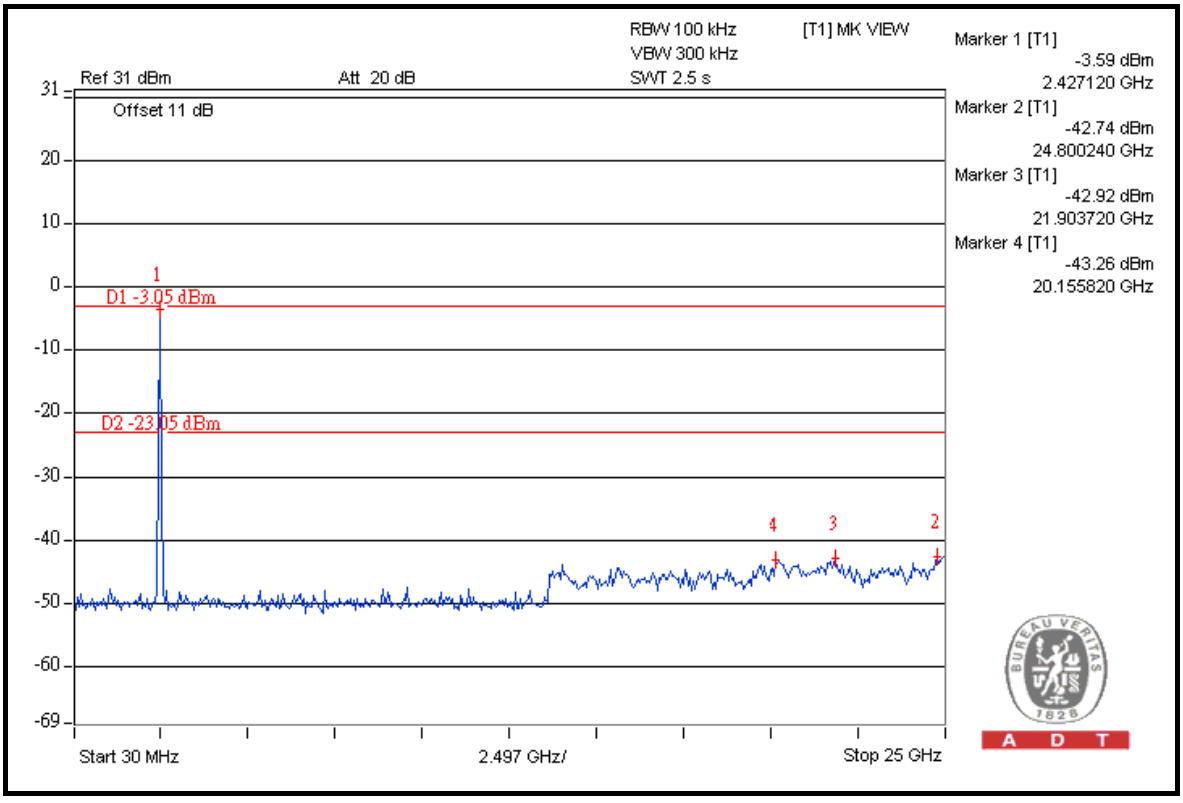

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -2.87 dBm
D2 -22.87 dBm
Marker 1 [T1]
-2.87 dBm
2.437200 GHz
Marker 2 [T1]
-35.54 dBm
2.400000 GHz
Marker 3 [T1]
-35.54 dBm
2.400000 GHz
Marker 4 [T1]
-49.16 dBm
2.390000 GHz
Marker 5 [T1]
-47.83 dBm
2.352800 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -8.39 dBm
D2 -28.39 dBm
Marker 1 [T1]
-8.39 dBm
2.438400 GHz
Marker 2 [T1]
-47.60 dBm
2.400000 GHz
Marker 3 [T1]
-47.60 dBm
2.400000 GHz
Marker 4 [T1]
-53.63 dBm
2.390000 GHz
Marker 5 [T1]
-53.63 dBm
2.390000 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -2.87 dBm
D2 -22.87 dBm
Marker 1 [T1]
-4.53 dBm
2.427120 GHz
Marker 2 [T1]
-42.05 dBm
24.900120 GHz
Marker 3 [T1]
-42.60 dBm
16.310440 GHz
Marker 4 [T1]
-43.10 dBm
21.454260 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.05 dBm
D2 -23.05 dBm
Marker 1 [T1]
-3.05 dBm
2.466800 GHz
Marker 2 [T1]
-44.50 dBm
2.483500 GHz
Marker 3 [T1]
-44.19 dBm
2.483600 GHz
Marker 4 [T1]
-47.96 dBm
2.500000 GHz
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 16 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -8.55 dBm
D2 -28.55 dBm
Marker 1 [T1]
-8.55 dBm
2.467600 GHz
Marker 2 [T1]
-49.55 dBm
2.483500 GHz
Marker 3 [T1]
-49.55 dBm
2.483500 GHz
Marker 4 [T1]
-54.37 dBm
2.500000 GHz
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.05 dBm
D2 -23.05 dBm
Marker 1 [T1]
-3.59 dBm
2.427120 GHz
Marker 2 [T1]
-42.74 dBm
24.800240 GHz
Marker 3 [T1]
-42.92 dBm
21.903720 GHz
Marker 4 [T1]
-43.26 dBm
20.155820 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

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

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

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

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

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

Web Site: www.adt.com.tw

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

7. APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---