FCC TEST REPORT (15.247)

REPORT NO.:	RF110914C18
MODEL NO.:	DIR-857MO1
FCC ID:	KA2IR857MO1
RECEIVED:	Sep. 07, 2011
TESTED:	Sep. 17 ~ Oct. 27, 2011
ISSUED:	Oct. 28, 2011

APPLICANT:	D-Link Corporation
ADDRESS:	17595 Mt. Herrmann, Fountain Valley, CA 92708, U.S.A.

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
Original release	N/A	Oct. 28, 2011

1. CERTIFICATION

PRODUCT:	HD Media Router 3000
MODEL:	DIR-857MO1
BRAND:	D-Link
APPLICANT:	D-Link Corporation
TESTED:	Sep. 17 ~ Oct. 27, 2011
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 15, Subpart C (Section 15.247)**
	ANSI C63.4-2003
	ANSI C63.10-2009

The above equipment (Model: DIR-857MO1) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Andrea Hsia / Specialist , DATE : Oct. 28, 2011

APPROVED BY : Gary Chang / Assistant Manager , DATE : Oct. 28, 2011

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 -18.41dB at 0.705MHz.
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit.
15.247(b)	Maximum Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit.
15.247(d)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 2386.00 & 2483.50MHz.
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 UFL not a standard connector.

2.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	2.93 dB
	200MHz ~1000MHz	2.95 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	HD Media Router 3000
MODEL NO.	DIR-857MO1
FCC ID	KA2IR857MO1
POWER SUPPLY	3.3Vdc
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11.0/ 5.5/ 2.0/ 1.0Mbps 802.11g: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 450.0Mbps
OPERATING FREQUENCY	**2.4GHz:** 2412 ~ 2462MHz **5.0GHz:** 5745 ~ 5825MHz
NUMBER OF CHANNEL	**2.4GHz:** 11 for 802.11b, 802.11g, 802.11n (20MHz) 7 for 802.11n (40MHz) **5.0GHz:** 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	652.7mW for 2412 ~ 2462MHz 626.0mW for 5745 ~ 5825MHz
ANTENNA TYPE	PIFA antenna with 3.0dBi gain
ANTENNA CONNECTOR	UFL
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	NA

NOTE:

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

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

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

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

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

FOR 2.4GHz:

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

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

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

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

FOR 5.0GHz (5745 ~ 5825MHz):

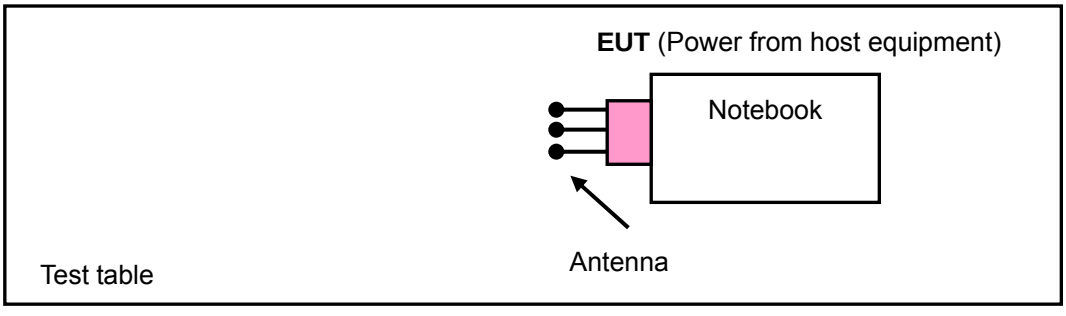
5 channels are provided for 802.11a, 802.11n (20MHz):

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.4GHz:

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

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

RADIATED EMISSION TEST (ABOVE 1GHz):

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
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

RADIATED EMISSION TEST (BELOW 1GHz):

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	11	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	11	OFDM	BPSK	6.0

BANDEDGE MEASUREMENT:

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
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:

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
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, 68%RH	120Vac, 60Hz	Sun Lin
RE<1G	25deg. C, 68%RH	120Vac, 60Hz	Sun Lin
PLC	25deg. C, 65%RH	120Vac, 60Hz	Match Tsui
APCM	25deg. C, 68%RH	120Vac, 60Hz	Sun Lin

FOR 5.745 ~ 5.825GHz:

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

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

RADIATED EMISSION TEST (ABOVE 1GHz):

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

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

RADIATED EMISSION TEST (BELOW 1GHz):

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (20MHz)	149 to 165	157	OFDM	BPSK	7.2

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (20MHz)	149 to 165	157	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.

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

ANTENNA PORT CONDUCTED MEASUREMENT:

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

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

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

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 68%RH	120Vac, 60Hz	Sun Lin
RE<1G	25deg. C, 68%RH	120Vac, 60Hz	Sun Lin
PLC	25deg. C, 65%RH	120Vac, 60Hz	Match Tsui
APCM	25deg. C, 68%RH	120Vac, 60Hz	Sun Lin

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	E5420	CHHYLQ1	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA

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

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

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 19, 2011	Apr. 18, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jan. 06, 2011	Jan. 05, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Sep. 06, 2011	Sep. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01911	Nov. 03, 2010	Nov. 02, 2011
Preamplifier Agilent	8447D	2944A10638	Nov. 03, 2010	Nov. 02, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295013/4 283403/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 13, 2011	Aug. 12, 2012
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	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 Chamber 9.

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

4. The FCC Site Registration No. is 460141.

5. The IC Site Registration No. is IC 7450F-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.

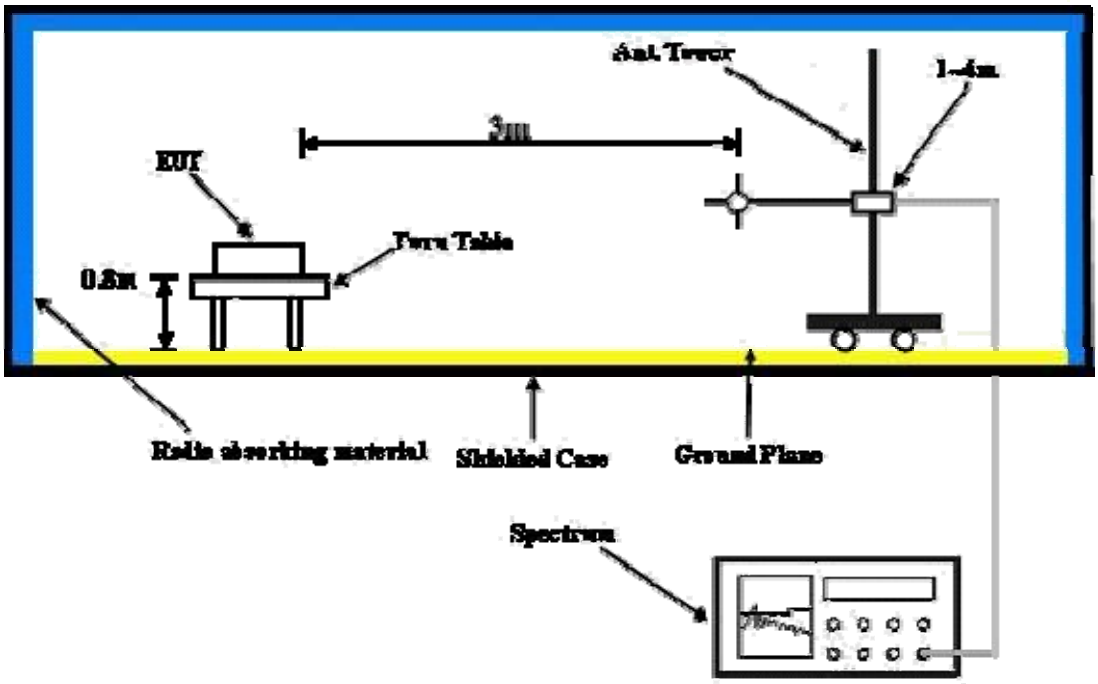
NOTE:

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



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

4.1.6 EUT OPERATING CONDITIONS

a. Plugged the EUT into notebook and placed them on the testing table.
b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
c. The necessary accessories enable the system in full functions.

4.1.7 TEST RESULTS

ABOVE 1GHz: 802.11b

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

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	2386.00	58.6 PK	74.0	-15.4	1.00 H	359	27.20	31.40
2	2386.00	48.8 AV	54.0	-5.2	1.00 H	359	17.40	31.40
3	*2412.00	111.8 PK			1.00 H	359	80.30	31.50
4	*2412.00	108.0 AV			1.00 H	359	76.50	31.50
5	2500.00	57.1 PK	74.0	-16.9	1.00 H	358	25.30	31.80
6	2500.00	46.2 AV	54.0	-7.8	1.00 H	358	14.40	31.80
7	4824.00	46.4 PK	74.0	-27.6	1.01 H	322	8.80	37.60
8	4824.00	36.9 AV	54.0	-17.1	1.01 H	322	-0.70	37.60
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	2386.00	60.9 PK	74.0	-13.1	1.07 V	236	29.50	31.40
2	**2386.00**	**53.0 AV**	**54.0**	**-1.0**	**1.07 V**	**236**	**21.60**	**31.40**
3	*2412.00	112.5 PK			1.07 V	236	81.00	31.50
4	*2412.00	108.6 AV			1.07 V	236	77.10	31.50
5	2500.00	60.0 PK	74.0	-14.0	1.33 V	159	28.20	31.80
6	2500.00	50.9 AV	54.0	-3.1	1.33 V	159	19.10	31.80
7	4824.00	49.1 PK	74.0	-24.9	1.17 V	285	11.50	37.60
8	4824.00	42.7 AV	54.0	-11.3	1.17 V	285	5.10	37.60

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 (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	2353.00	58.8 PK	74.0	-15.2	1.04 H	199	27.50	31.30
2	2353.00	49.7 AV	54.0	-4.3	1.04 H	199	18.40	31.30
3	*2437.00	111.5 PK			1.00 H	191	79.90	31.60
4	*2437.00	107.6 AV			1.00 H	191	76.00	31.60
5	4874.00	47.5 PK	74.0	-26.5	1.00 H	242	9.80	37.70
6	4874.00	39.6 AV	54.0	-14.4	1.00 H	242	1.90	37.70
7	7311.00	51.2 PK	74.0	-22.8	1.44 H	235	7.70	43.50
8	7311.00	41.0 AV	54.0	-13.0	1.44 H	235	-2.50	43.50
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	2353.00	58.5 PK	74.0	-15.5	1.04 V	270	27.20	31.30
2	2353.00	52.5 AV	54.0	-1.5	1.04 V	270	21.20	31.30
3	*2437.00	112.6 PK			1.23 V	280	81.00	31.60
4	*2437.00	108.8 AV			1.23 V	280	77.20	31.60
5	4874.00	48.7 PK	74.0	-25.3	1.23 V	105	11.00	37.70
6	4874.00	42.5 AV	54.0	-11.5	1.23 V	105	4.80	37.70
7	7311.00	52.9 PK	74.0	-21.1	1.45 V	134	9.40	43.50
8	7311.00	44.0 AV	54.0	-10.0	1.45 V	134	0.50	43.50

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 (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	2378.00	58.2 PK	74.0	-15.8	1.06 H	278	26.80	31.40
2	2378.00	48.6 AV	54.0	-5.4	1.06 H	278	17.20	31.40
3	*2462.00	110.3 PK			1.00 H	298	78.60	31.70
4	*2462.00	106.5 AV			1.00 H	298	74.80	31.70
5	2483.50	57.9 PK	74.0	-16.1	1.02 H	288	26.10	31.80
6	2483.50	48.5 AV	54.0	-5.5	1.02 H	288	16.70	31.80
7	4924.00	48.2 PK	74.0	-25.8	1.02 H	248	10.40	37.80
8	4924.00	40.5 AV	54.0	-13.5	1.02 H	248	2.70	37.80
9	7311.00	51.8 PK	74.0	-22.2	1.22 H	47	8.30	43.50
10	7311.00	41.5 AV	54.0	-12.5	1.22 H	47	-2.00	43.50
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	2378.00	61.5 PK	74.0	-12.5	1.07 V	229	30.10	31.40
2	2378.00	52.4 AV	54.0	-1.6	1.07 V	229	21.00	31.40
3	*2462.00	111.5 PK			1.02 V	248	79.80	31.70
4	*2462.00	107.6 AV			1.02 V	248	75.90	31.70
5	2483.50	62.2 PK	74.0	-11.8	1.02 V	242	30.40	31.80
6	2483.50	49.7 AV	54.0	-4.3	1.02 V	242	17.90	31.80
7	4924.00	47.3 PK	74.0	-26.7	1.26 V	305	9.50	37.80
8	4924.00	40.8 AV	54.0	-13.2	1.26 V	305	3.00	37.80
9	7386.00	53.8 PK	74.0	-20.2	1.15 V	132	10.10	43.70
10	7386.00	46.3 AV	54.0	-7.7	1.15 V	132	2.60	43.70

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

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.6 PK	74.0	-6.4	1.01 H	202	36.20	31.40
2	2390.00	52.0 AV	54.0	-2.0	1.01 H	202	20.60	31.40
3	*2412.00	111.5 PK			1.18 H	237	80.00	31.50
4	*2412.00	101.6 AV			1.18 H	237	70.10	31.50
5	4824.00	43.2 PK	74.0	-30.8	1.47 H	248	5.60	37.60
6	4824.00	32.7 AV	54.0	-21.3	1.47 H	248	-4.90	37.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.7 PK	74.0	-7.3	1.13 V	190	35.30	31.40
2	2390.00	52.4 AV	54.0	-1.6	1.13 V	190	21.00	31.40
3	*2412.00	112.8 PK			1.13 V	205	81.30	31.50
4	*2412.00	102.4 AV			1.13 V	205	70.90	31.50
5	4824.00	46.9 PK	74.0	-27.1	1.38 V	322	9.30	37.60
6	4824.00	35.8 AV	54.0	-18.2	1.38 V	322	-1.80	37.60

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 (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	111.2 PK			1.17 H	240	79.60	31.60
2	*2437.00	101.3 AV			1.17 H	240	69.70	31.60
3	4874.00	43.3 PK	74.0	-30.7	1.22 H	108	5.60	37.70
4	4874.00	32.2 AV	54.0	-21.8	1.22 H	108	-5.50	37.70
5	7311.00	50.6 PK	74.0	-23.4	1.58 H	328	7.10	43.50
6	7311.00	40.3 AV	54.0	-13.7	1.58 H	328	-3.20	43.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	112.6 PK			1.12 V	109	81.00	31.60
2	*2437.00	102.1 AV			1.12 V	109	70.50	31.60
3	4874.00	45.9 PK	74.0	-28.1	1.28 V	322	8.20	37.70
4	4874.00	35.3 AV	54.0	-18.7	1.28 V	322	-2.40	37.70
5	7311.00	50.9 PK	74.0	-23.1	1.37 V	95	7.40	43.50
6	7311.00	41.2 AV	54.0	-12.8	1.37 V	95	-2.30	43.50

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 (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	111.0 PK			1.14 H	235	79.30	31.70
2	*2462.00	100.8 AV			1.14 H	235	69.10	31.70
3	2483.50	71.2 PK	74.0	-2.8	1.15 H	238	39.40	31.80
4	2483.50	51.4 AV	54.0	-2.6	1.15 H	238	19.60	31.80
5	4924.00	45.9 PK	74.0	-28.1	1.28 H	292	8.10	37.80
6	4924.00	34.6 AV	54.0	-19.4	1.28 H	292	-3.20	37.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.2 PK			1.12 V	38	80.50	31.70
2	*2462.00	101.8 AV			1.12 V	38	70.10	31.70
3	2483.50	71.6 PK	74.0	-2.4	1.12 V	58	39.80	31.80
4	2483.50	52.0 AV	54.0	-2.0	1.12 V	58	20.20	31.80
5	4924.00	46.8 PK	74.0	-27.2	1.12 V	189	9.00	37.80
6	4924.00	35.4 AV	54.0	-18.6	1.12 V	189	-2.40	37.80

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 (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.9 PK	74.0	-7.1	1.18 H	257	35.50	31.40
2	2390.00	52.2 AV	54.0	-1.8	1.18 H	257	20.80	31.40
3	*2412.00	110.7 PK			1.13 H	253	79.20	31.50
4	*2412.00	101.2 AV			1.13 H	253	69.70	31.50
5	4824.00	43.2 PK	74.0	-30.8	1.32 H	47	5.60	37.60
6	4824.00	32.4 AV	54.0	-21.6	1.32 H	47	-5.20	37.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.1 PK	74.0	-5.9	1.28 V	256	36.70	31.40
2	2390.00	52.6 AV	54.0	-1.4	1.28 V	256	21.20	31.40
3	*2412.00	112.3 PK			1.31 V	258	80.80	31.50
4	*2412.00	102.0 AV			1.31 V	258	70.50	31.50
5	4824.00	46.7 PK	74.0	-27.3	1.64 V	140	9.10	37.60
6	4824.00	34.5 AV	54.0	-19.5	1.64 V	140	-3.10	37.60

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 (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	112.0 PK			1.12 H	232	80.40	31.60
2	*2437.00	101.4 AV			1.12 H	232	69.80	31.60
3	4874.00	43.3 PK	74.0	-30.7	1.08 H	105	5.60	37.70
4	4874.00	33.0 AV	54.0	-21.0	1.08 H	105	-4.70	37.70
5	7311.00	48.9 PK	74.0	-25.1	1.22 H	243	5.40	43.50
6	7311.00	39.7 AV	54.0	-14.3	1.22 H	243	-3.80	43.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	113.8 PK			1.18 V	201	82.20	31.60
2	*2437.00	103.0 AV			1.18 V	201	71.40	31.60
3	4874.00	46.0 PK	74.0	-28.0	1.58 V	327	8.30	37.70
4	4874.00	34.2 AV	54.0	-19.8	1.58 V	327	-3.50	37.70
5	7311.00	52.6 PK	74.0	-21.4	1.52 V	118	9.10	43.50
6	7311.00	40.3 AV	54.0	-13.7	1.52 V	118	-3.20	43.50

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 (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.7 PK			1.15 H	229	81.00	31.70
2	*2462.00	101.8 AV			1.15 H	229	70.10	31.70
3	2483.50	72.3 PK	74.0	-1.7	1.17 H	232	40.50	31.80
4	2483.50	52.2 AV	54.0	-1.8	1.17 H	232	20.40	31.80
5	4924.00	43.6 PK	74.0	-30.4	1.36 H	247	5.80	37.80
6	4924.00	32.7 AV	54.0	-21.3	1.36 H	247	-5.10	37.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.5 PK			1.27 V	289	81.80	31.70
2	*2462.00	102.5 AV			1.27 V	289	70.80	31.70
3	**2483.50**	**73.0 PK**	**74.0**	**-1.0**	**1.24 V**	**295**	**41.20**	**31.80**
4	2483.50	52.6 AV	54.0	-1.4	1.24 V	295	20.80	31.80
5	4924.00	45.6 PK	74.0	-28.4	1.32 V	42	7.80	37.80
6	4924.00	34.3 AV	54.0	-19.7	1.32 V	42	-3.50	37.80

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 (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.4 PK	74.0	-5.6	1.17 H	241	37.00	31.40
2	2390.00	51.9 AV	54.0	-2.1	1.17 H	241	20.50	31.40
3	*2422.00	104.0 PK			1.17 H	247	72.50	31.50
4	*2422.00	93.6 AV			1.17 H	247	62.10	31.50
5	4844.00	43.4 PK	74.0	-30.6	1.56 H	357	5.70	37.70
6	4844.00	32.8 AV	54.0	-21.2	1.56 H	357	-4.90	37.70
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	2390.00	64.7 PK	74.0	-9.3	1.12 V	192	33.30	31.40
2	2390.00	52.5 AV	54.0	-1.5	1.12 V	192	21.10	31.40
3	*2422.00	104.5 PK			1.08 V	235	72.90	31.60
4	*2422.00	94.0 AV			1.08 V	235	62.40	31.60
5	4844.00	45.3 PK	74.0	-28.7	1.39 V	257	7.60	37.70
6	4844.00	34.2 AV	54.0	-19.8	1.39 V	257	-3.50	37.70

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.9 PK	74.0	-8.1	1.17 H	245	34.50	31.40
2	2390.00	51.6 AV	54.0	-2.4	1.17 H	245	20.20	31.40
3	*2437.00	106.9 PK			1.17 H	245	75.30	31.60
4	*2437.00	96.6 AV			1.17 H	245	65.00	31.60
5	4874.00	43.7 PK	74.0	-30.3	1.55 H	198	6.00	37.70
6	4874.00	33.0 AV	54.0	-21.0	1.55 H	198	-4.70	37.70
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	2390.00	67.9 PK	74.0	-6.1	1.09 V	236	36.50	31.40
2	2390.00	52.5 AV	54.0	-1.5	1.09 V	236	21.10	31.40
3	*2437.00	107.6 PK			1.09 V	167	76.00	31.60
4	*2437.00	97.7 AV			1.09 V	167	66.10	31.60
5	4874.00	45.3 PK	74.0	-28.7	1.27 V	328	7.60	37.70
6	4874.00	35.0 AV	54.0	-19.0	1.27 V	328	-2.70	37.70

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	108.0 PK			1.18 H	258	76.30	31.70
2	*2452.00	97.7 AV			1.18 H	258	66.00	31.70
3	2483.50	72.0 PK	74.0	-2.0	1.09 H	262	40.20	31.80
4	2483.50	52.2 AV	54.0	-1.8	1.09 H	262	20.40	31.80
5	4904.00	43.6 PK	74.0	-30.4	1.37 H	147	5.80	37.80
6	4904.00	33.0 AV	54.0	-21.0	1.37 H	147	-4.80	37.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	108.7 PK			1.12 V	162	77.00	31.70
2	*2452.00	98.7 AV			1.12 V	162	67.00	31.70
3	2483.50	72.8 PK	74.0	-1.2	1.12 V	154	41.00	31.80
4	**2483.50**	**53.0 AV**	**54.0**	**-1.0**	**1.12 V**	**154**	**21.20**	**31.80**
5	4904.00	45.4 PK	74.0	-28.6	1.22 V	145	7.60	37.80
6	4904.00	34.3 AV	54.0	-19.7	1.22 V	145	-3.50	37.80

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：802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	99.89	36.2 QP	43.5	-7.3	2.00 H	322	27.70	8.50
2	166.13	37.7 QP	43.5	-5.8	1.15 H	23	24.30	13.40
3	208.77	41.0 QP	43.5	-2.5	1.00 H	358	30.30	10.70
4	260.24	40.0 QP	46.0	-6.0	1.00 H	350	27.00	13.00
5	500.42	36.3 QP	46.0	-9.7	1.25 H	265	16.60	19.70
6	667.63	32.5 QP	46.0	-13.5	1.00 H	229	9.60	22.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	37.68	30.7 QP	40.0	-9.3	1.00 V	214	18.10	12.60
2	64.90	32.5 QP	40.0	-7.5	1.00 V	151	20.40	12.10
3	166.00	33.6 QP	43.5	-9.9	1.50 V	106	20.10	13.50
4	189.33	34.6 QP	43.5	-8.9	2.00 V	154	23.80	10.80
5	255.44	31.5 QP	46.0	-14.5	1.25 V	277	18.70	12.80
6	500.42	31.4 QP	46.0	-14.6	1.00 V	46	11.70	19.70

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

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	Jul. 07, 2011	Jul. 06, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 06, 2011	Jan. 05, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	835239/001	Feb. 22, 2011	Feb. 21, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
Software ADT	ADT_Cond_ V7.3.7	NA	NA	NA

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

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

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

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.

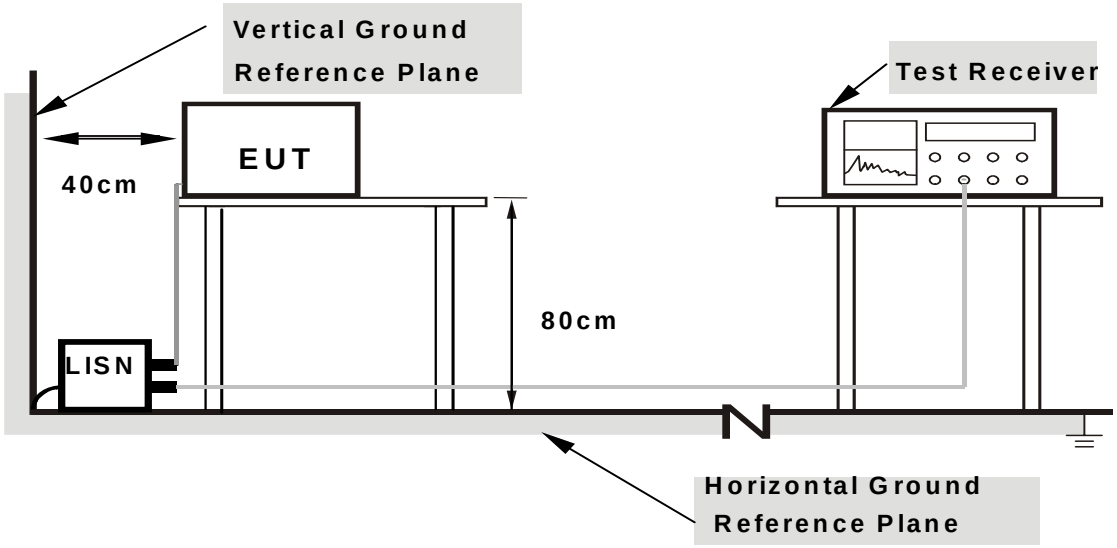
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

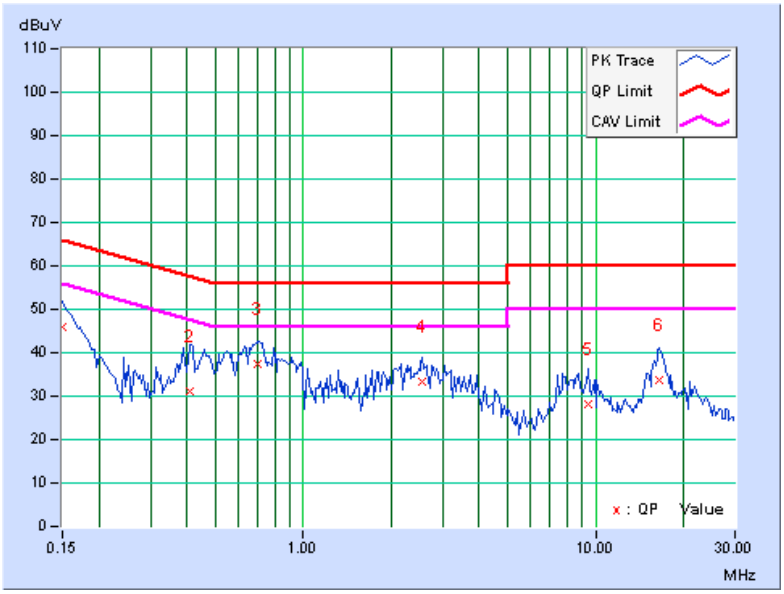
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA：802.11g

PHASE	Line 1	6dB BANDWIDTH	9kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.11	45.98	-	46.09	-	66.00	56.00	-19.91	-
2	0.412	0.12	31.08	-	31.20	-	57.61	47.61	-26.41	-
3	0.701	0.14	37.23	-	37.37	-	56.00	46.00	-18.63	-
4	2.566	0.22	33.20	-	33.42	-	56.00	46.00	-22.58	-
5	9.406	0.63	27.37	-	28.00	-	60.00	50.00	-32.00	-
6	16.570	0.95	32.75	-	33.70	-	60.00	50.00	-26.30	-

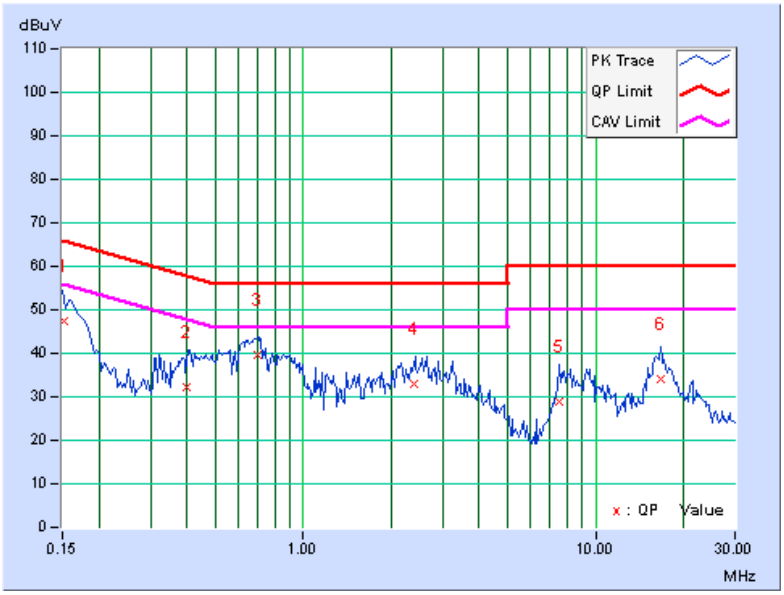
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 2	6dB BANDWIDTH	9kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.151	0.13	47.31	-	47.44	-	65.93	55.93	-18.49	-
2	0.400	0.14	32.08	-	32.22	-	57.85	47.85	-25.63	-
3	0.698	0.16	39.33	-	39.49	-	56.00	46.00	-16.51	-
4	2.406	0.22	32.61	-	32.83	-	56.00	46.00	-23.17	-
5	7.473	0.49	28.45	-	28.94	-	60.00	50.00	-31.06	-
6	16.634	0.81	33.09	-	33.90	-	60.00	50.00	-26.10	-

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



4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

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

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

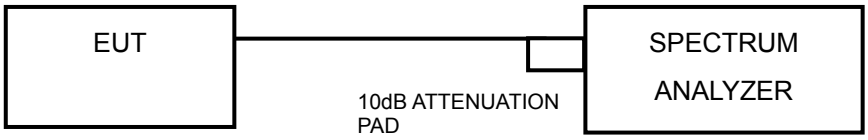
4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

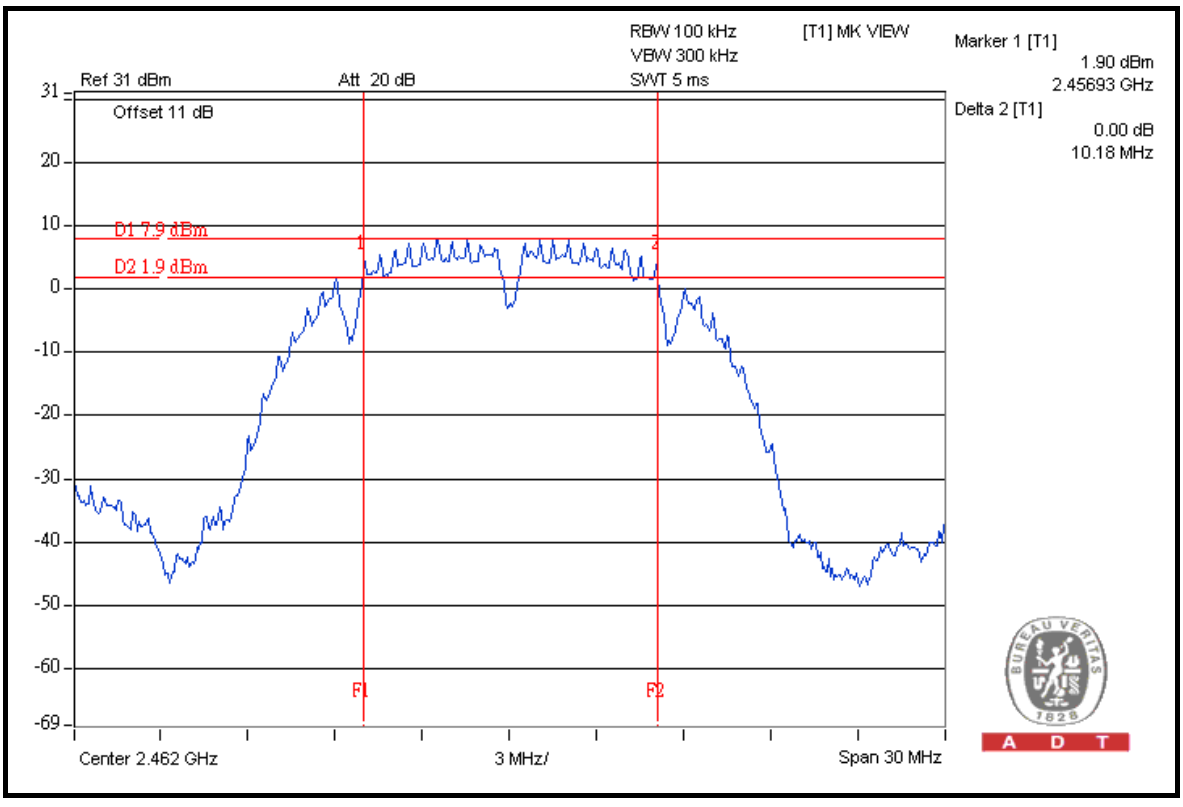
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

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	10.10	10.10	10.05	0.5	PASS
6	2437	10.14	10.09	10.07	0.5	PASS
11	2462	10.17	10.12	10.18	0.5	PASS

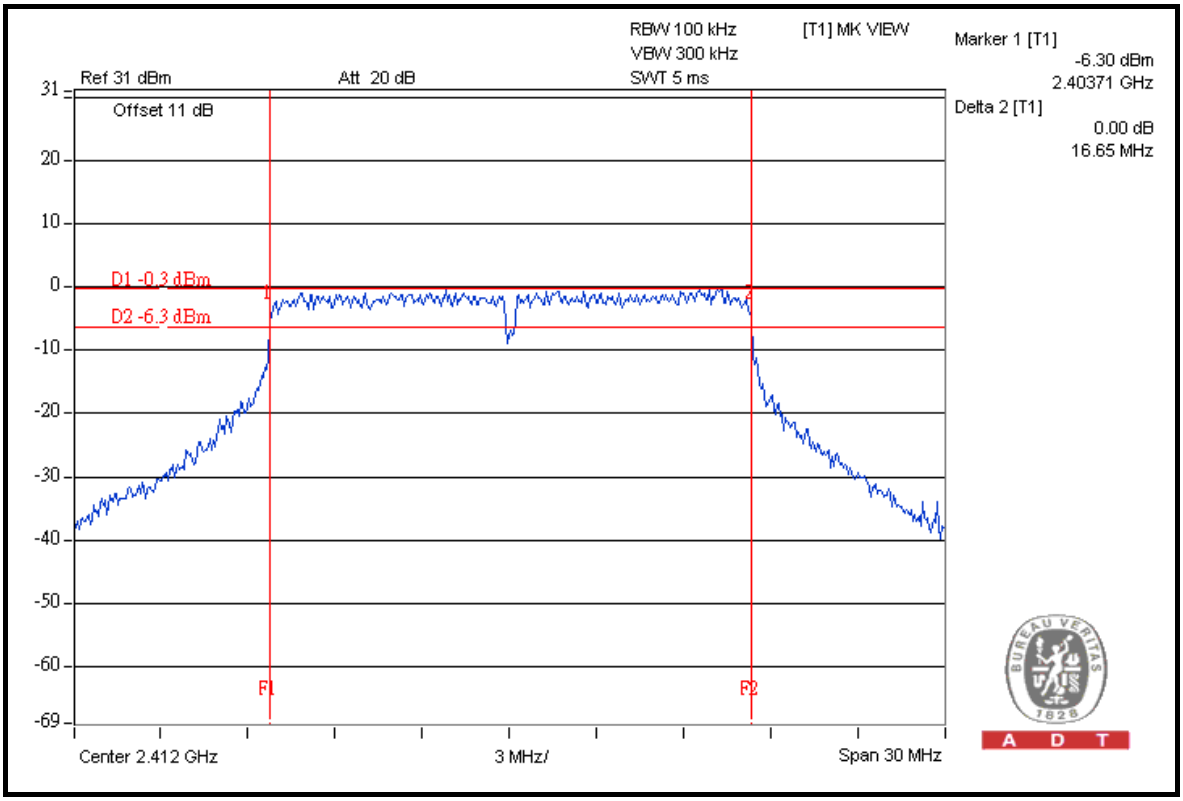
FOR CHAIN 2: CH 11



802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	16.65	16.56	16.58	0.5	PASS
6	2437	16.64	16.52	16.54	0.5	PASS
11	2462	16.64	16.57	16.56	0.5	PASS

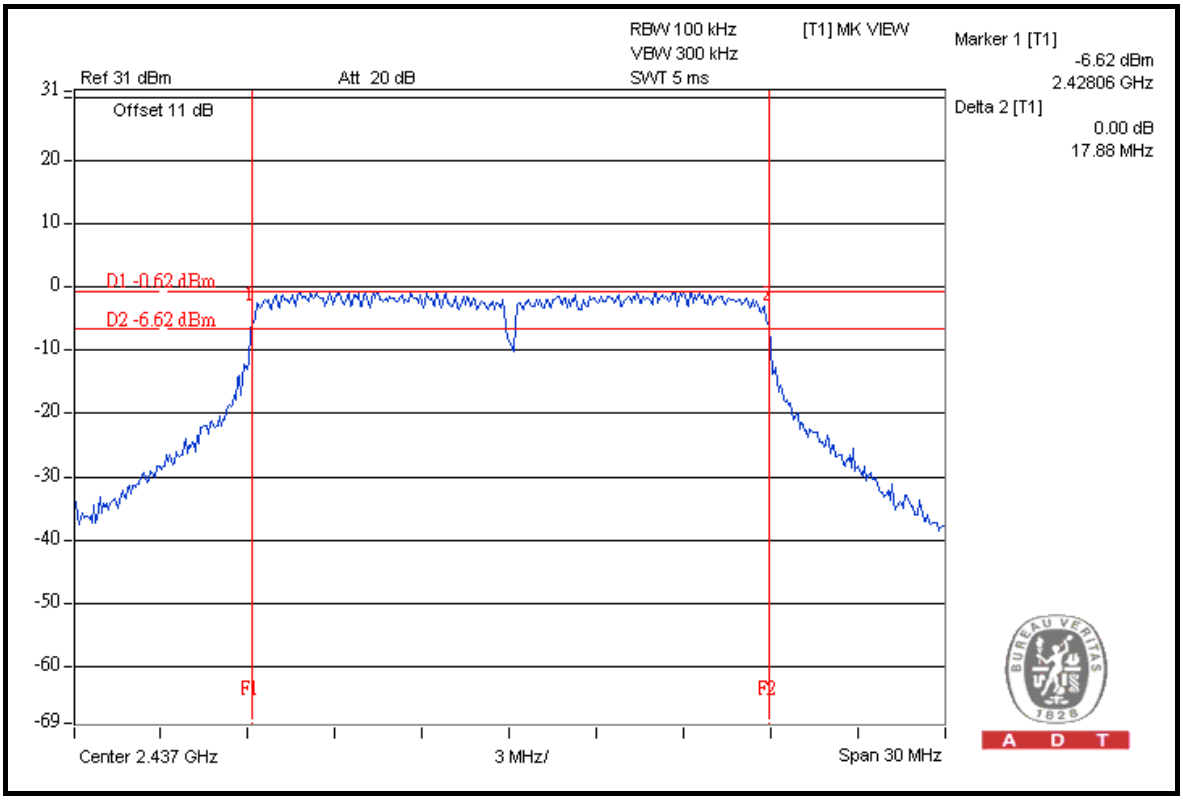
FOR CHAIN 0: CH 1



802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2412	17.85	17.83	17.78	0.5	PASS
6	2437	17.88	17.79	17.84	0.5	PASS
11	2462	17.76	17.72	17.84	0.5	PASS

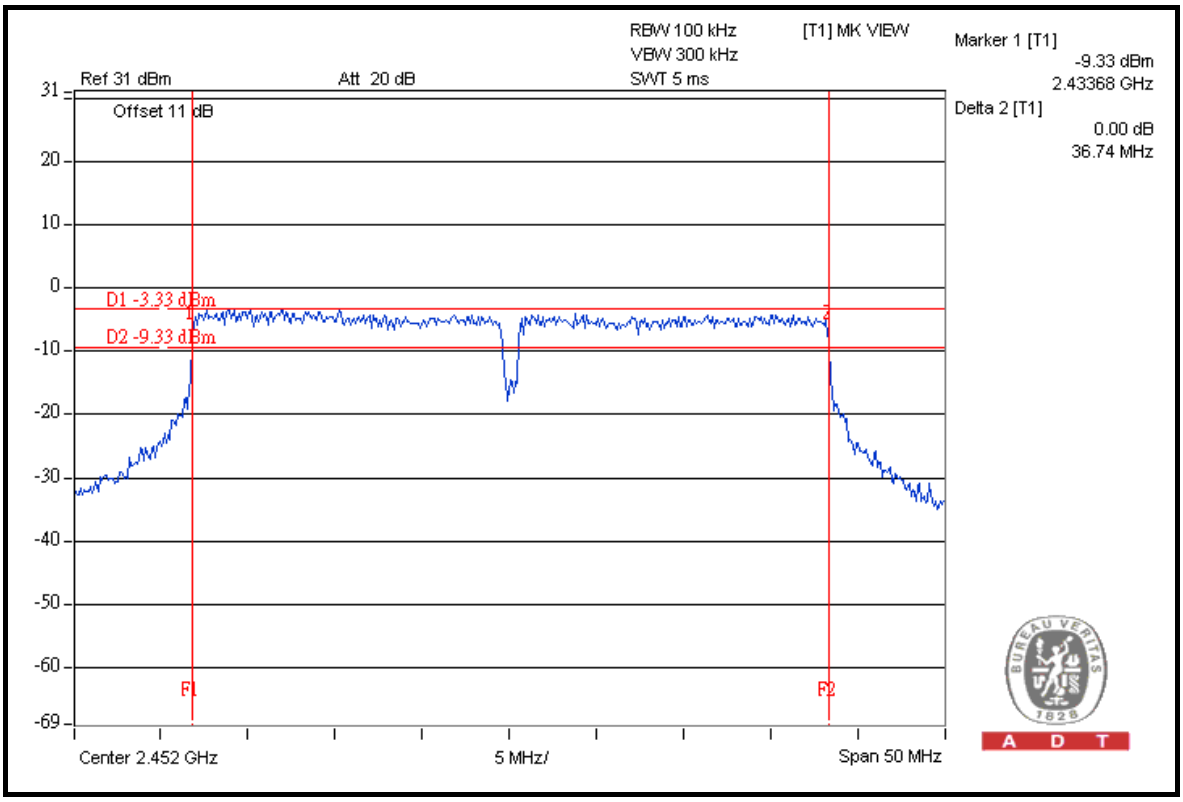
FOR CHAIN 0: CH 6



802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
1	2422	36.62	36.64	36.60	0.5	PASS
4	2437	36.72	36.71	36.64	0.5	PASS
7	2452	36.74	36.72	36.73	0.5	PASS

FOR CHAIN 0: 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	0842014	Apr. 26, 2011	Apr. 25, 2012
Power Sensor	MA2411B	0738404	Apr. 26, 2011	Apr. 25, 2012

NOTE:

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

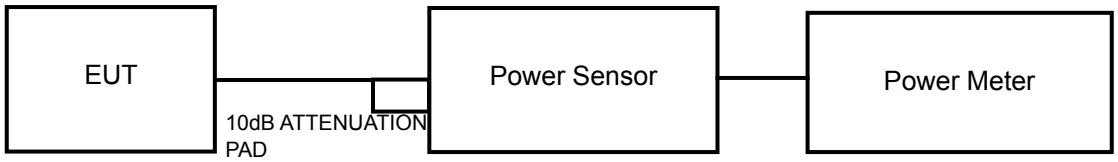
4.4.3 TEST PROCEDURES

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

4.4.4 DEVIATION FROM TEST STANDARD

No deviation.

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

802.11b

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	21.3	20.0	21.5	376.2	25.8	28.2	PASS
6	2437	21.2	21.2	21.5	404.9	26.1	28.2	PASS
11	2462	20.3	19.7	20.2	305.2	24.8	28.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 30-(7.8-6)=28.2dBm

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	23.5	23.1	23.5	651.9	28.1	28.2	PASS
6	2437	23.2	23.4	23.5	651.6	28.1	28.2	PASS
11	2462	23.4	23.0	23.7	652.7	28.1	28.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 30-(7.8-6)=28.2dBm

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	23.5	23.1	23.4	646.8	28.1	28.2	PASS
6	2437	23.2	23.5	23.3	646.6	28.1	28.2	PASS
11	2462	23.0	23.5	23.4	642.2	28.1	28.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 30-(7.8-6)=28.2dBm

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	2422	20.4	19.2	19.7	286.1	24.6	28.2	PASS
4	2437	22.5	22.7	22.2	530.0	27.2	28.2	PASS
7	2452	23.2	23.1	23.0	612.6	27.9	28.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 30-(7.8-6)=28.2dBm

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
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012

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

4.5.3 TEST PROCEDURE

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

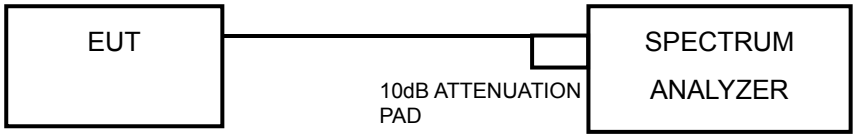
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

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

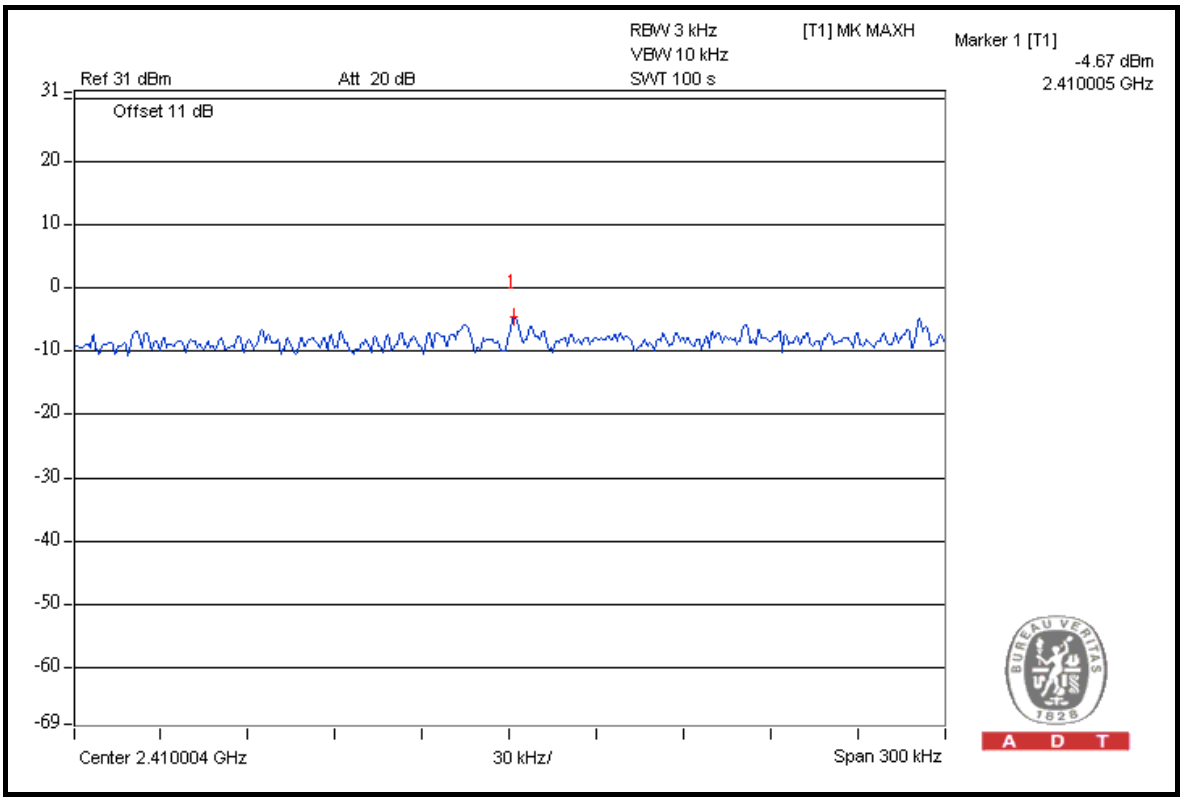
4.5.7 TEST RESULTS

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	-4.67	4.77	0.1	6.2	PASS
	6	2437	-4.77	4.77	0.0	6.2	PASS
	11	2462	-5.80	4.77	-1.0	6.2	PASS
1	1	2412	-6.22	4.77	-1.5	6.2	PASS
	6	2437	-4.88	4.77	-0.1	6.2	PASS
	11	2462	-6.61	4.77	-1.8	6.2	PASS
2	1	2412	-6.07	4.77	-1.3	6.2	PASS
	6	2437	-5.91	4.77	-1.1	6.2	PASS
	11	2462	-7.46	4.77	-2.7	6.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(7.8-6)=6.2dBm

FOR CHAIN 0: CH 1

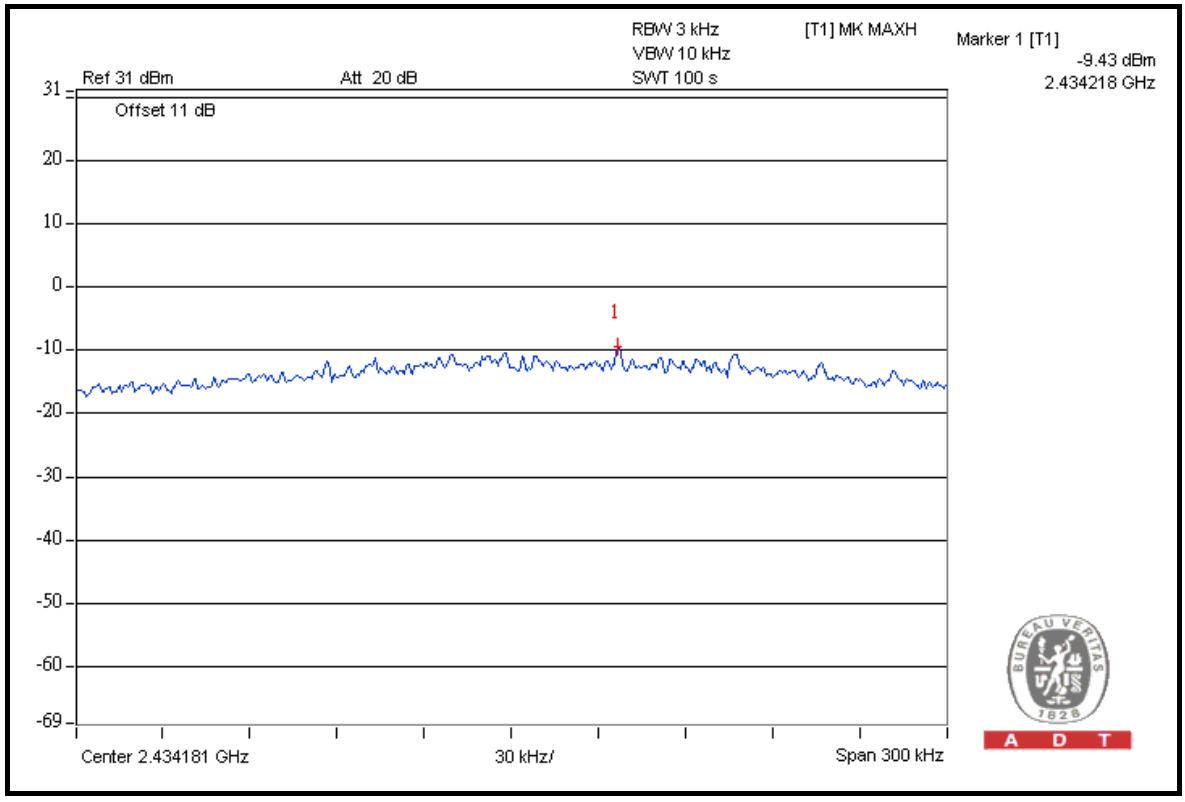


802.11g

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	-11.46	4.77	-6.7	6.2	PASS
	6	2437	-11.73	4.77	-7.0	6.2	PASS
	11	2462	-11.68	4.77	-6.9	6.2	PASS
1	1	2412	-9.78	4.77	-5.0	6.2	PASS
	6	2437	-9.67	4.77	-4.9	6.2	PASS
	11	2462	-10.09	4.77	-5.3	6.2	PASS
2	1	2412	-9.58	4.77	-4.8	6.2	PASS
	6	2437	-9.43	4.77	-4.7	6.2	PASS
	11	2462	-9.49	4.77	-4.7	6.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(7.8-6)=6.2dBm

FOR CHAIN 2: CH 6

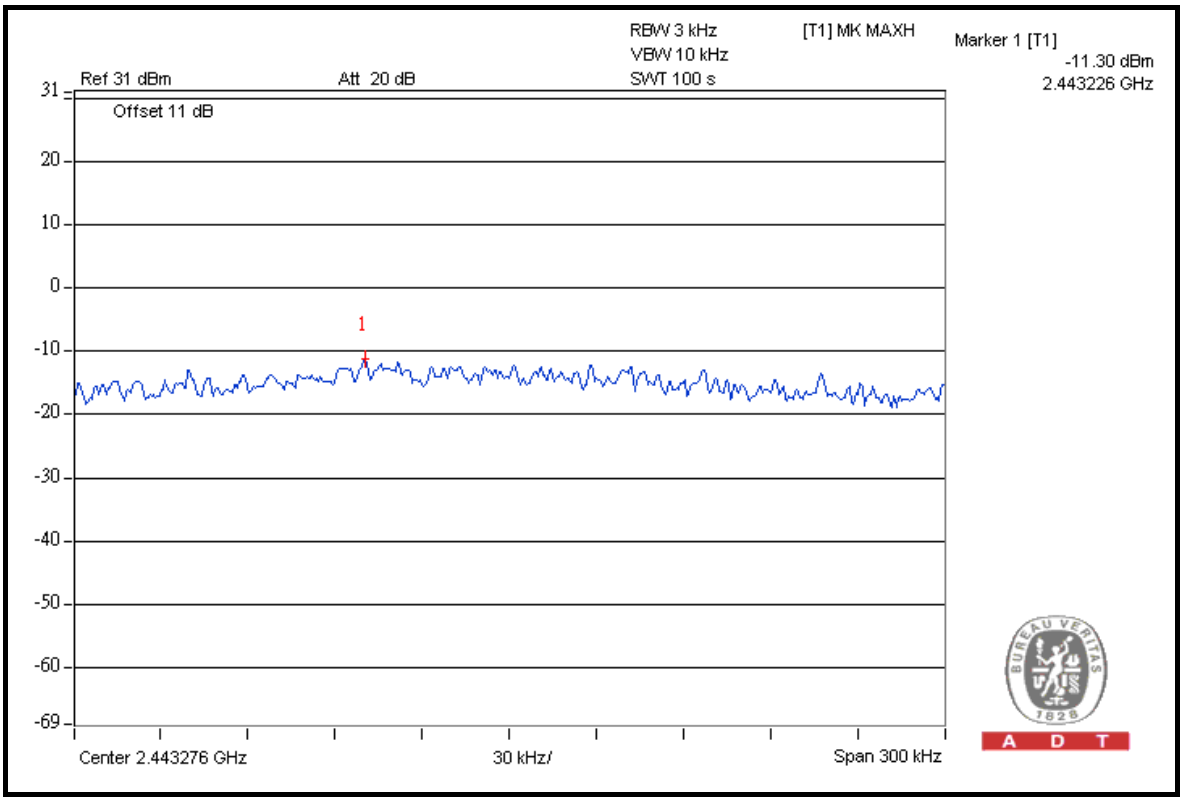


802.11n (20MHz)

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	-11.82	4.77	-7.1	6.2	PASS
	6	2437	-11.93	4.77	-7.2	6.2	PASS
	11	2462	-12.09	4.77	-7.3	6.2	PASS
1	1	2412	-11.93	4.77	-7.2	6.2	PASS
	6	2437	-11.30	4.77	-6.5	6.2	PASS
	11	2462	-11.36	4.77	-6.6	6.2	PASS
2	1	2412	-12.36	4.77	-7.6	6.2	PASS
	6	2437	-12.33	4.77	-7.6	6.2	PASS
	11	2462	-12.29	4.77	-7.5	6.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(7.8-6)=6.2dBm

FOR CHAIN 1: CH 6

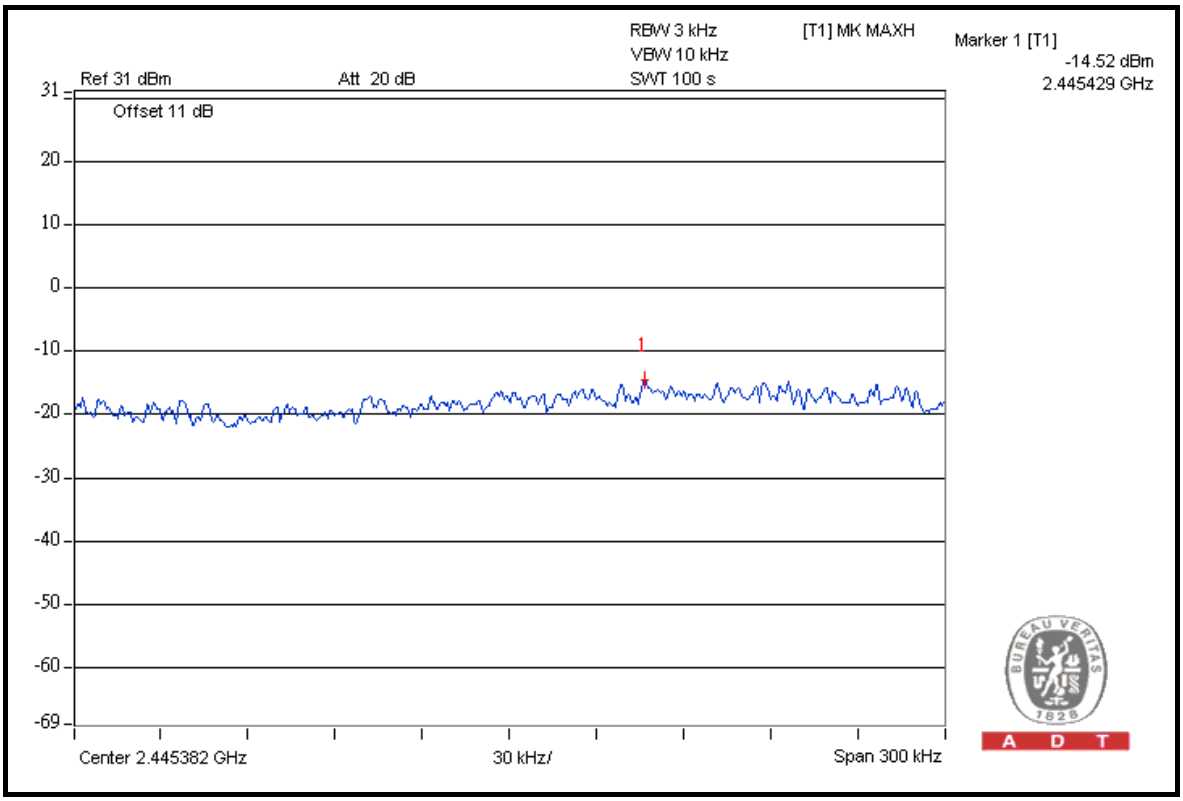


802.11n (40MHz)

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	-17.51	4.77	-12.7	6.2	PASS
	4	2437	-15.30	4.77	-10.5	6.2	PASS
	7	2452	-14.66	4.77	-9.9	6.2	PASS
1	1	2422	-18.60	4.77	-13.8	6.2	PASS
	4	2437	-15.20	4.77	-10.4	6.2	PASS
	7	2452	-14.52	4.77	-9.8	6.2	PASS
2	1	2422	-18.29	4.77	-13.5	6.2	PASS
	4	2437	-15.62	4.77	-10.9	6.2	PASS
	7	2452	-14.83	4.77	-10.1	6.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(7.8-6)=6.2dBm

FOR CHAIN 1: CH 7



4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
FOR CONDUCTED MEASUREMENT				
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012
FOR RADIATED MEASUREMENT				
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 19, 2011	Apr. 18, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jan. 06, 2011	Jan. 05, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Sep. 06, 2011	Sep. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01911	Nov. 03, 2010	Nov. 02, 2011
Preamplifier Agilent	8447D	2944A10638	Nov. 03, 2010	Nov. 02, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295013/4 283403/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 13, 2011	Aug. 12, 2012
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	NA	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 1kHz for Average detection (AV) at frequency above 1GHz.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation.

4.6.5 EUT OPERATING CONDITION

Same as Item 4.3.6.

4.6.6 TEST RESULTS

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

802.11b

RESTRICT BAND (2310 ~ 2390 MHz)

FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	112.5	54.60	57.90	74.00
2412.00 (AV)	108.6	57.91	50.69	54.00

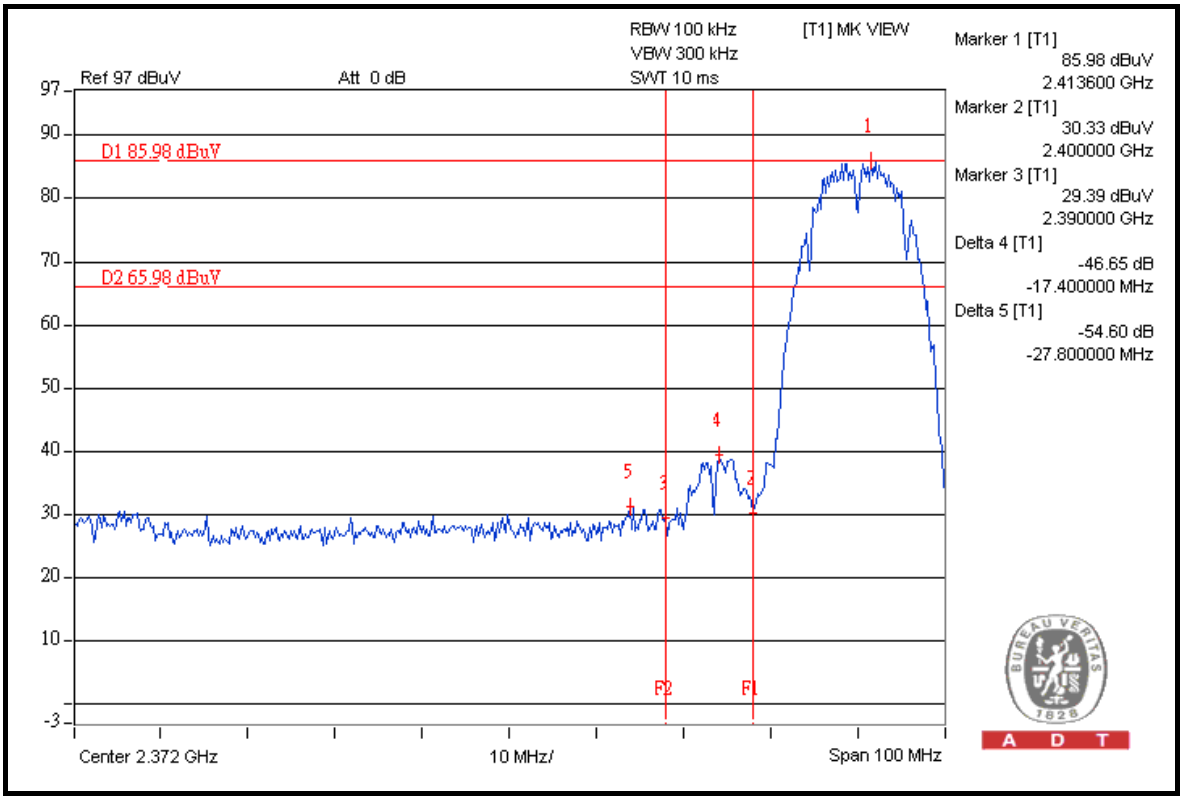
RESTRICT BAND (2483.5 ~ 2500 MHz)

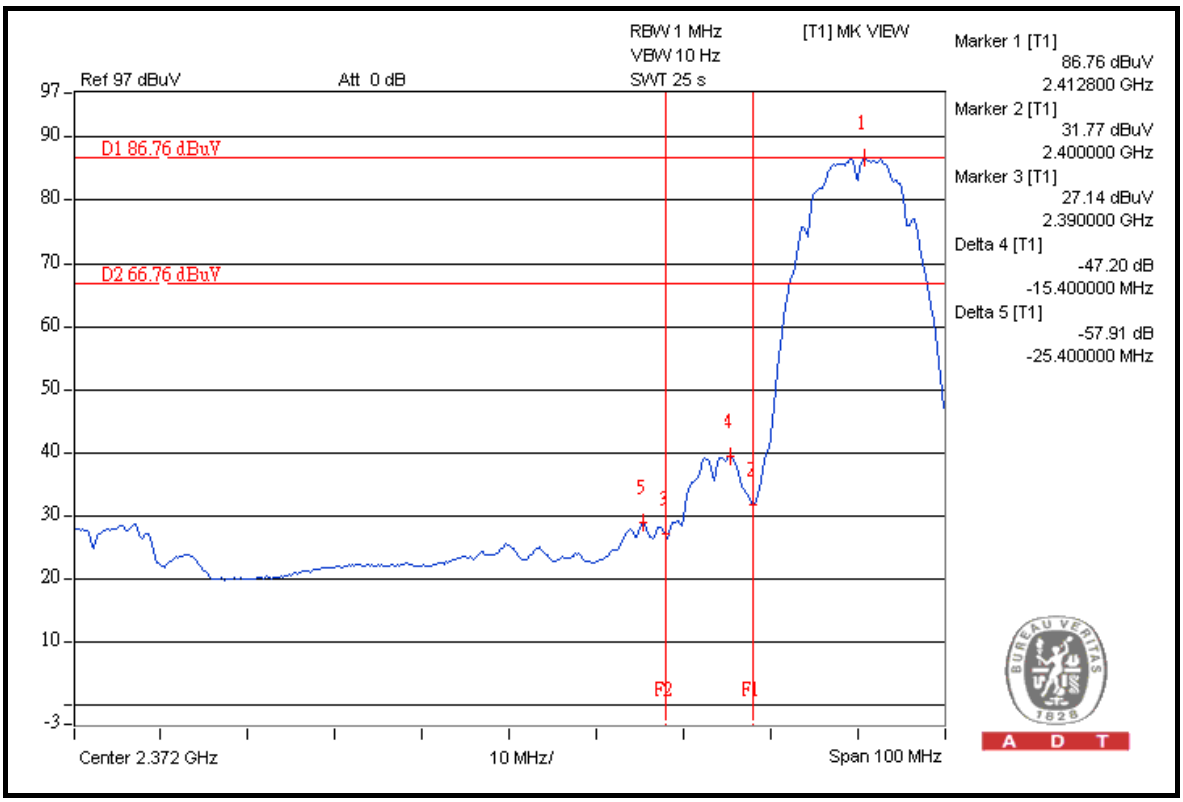
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	111.5	54.98	56.52	74.00
2462.00 (AV)	107.6	59.41	48.19	54.00

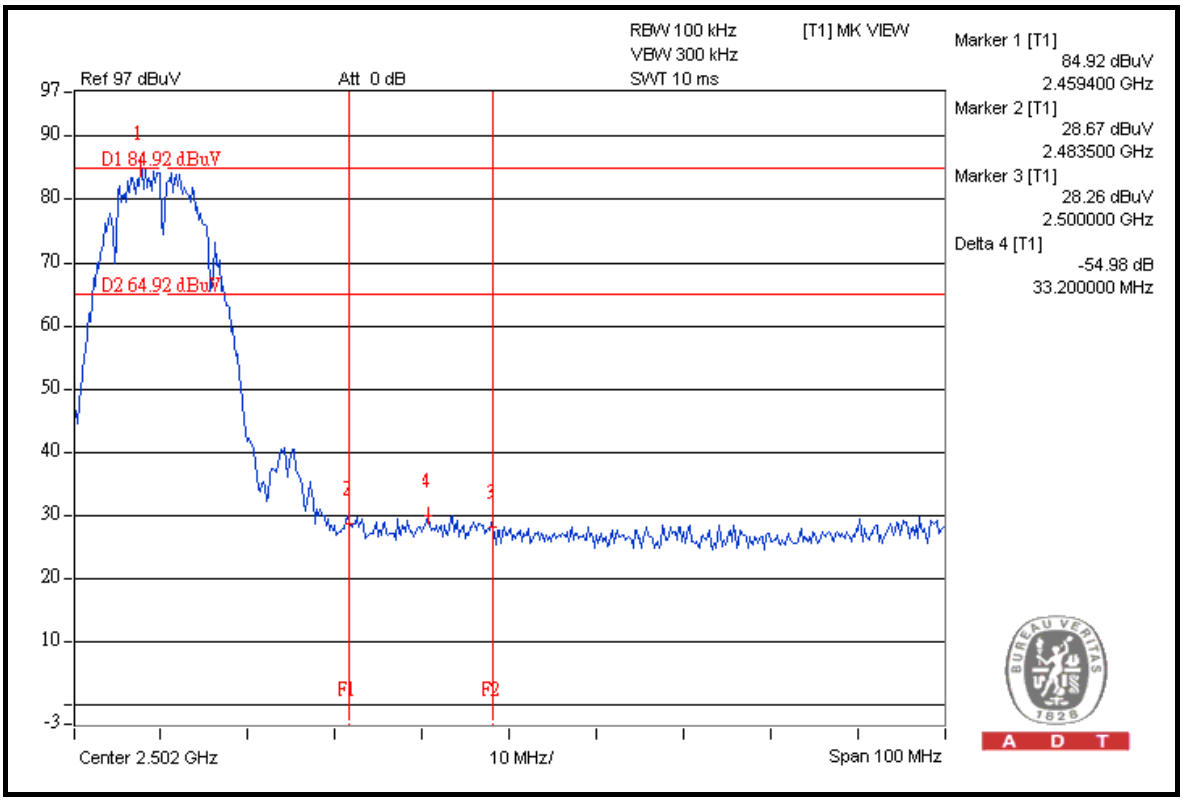
NOTE:

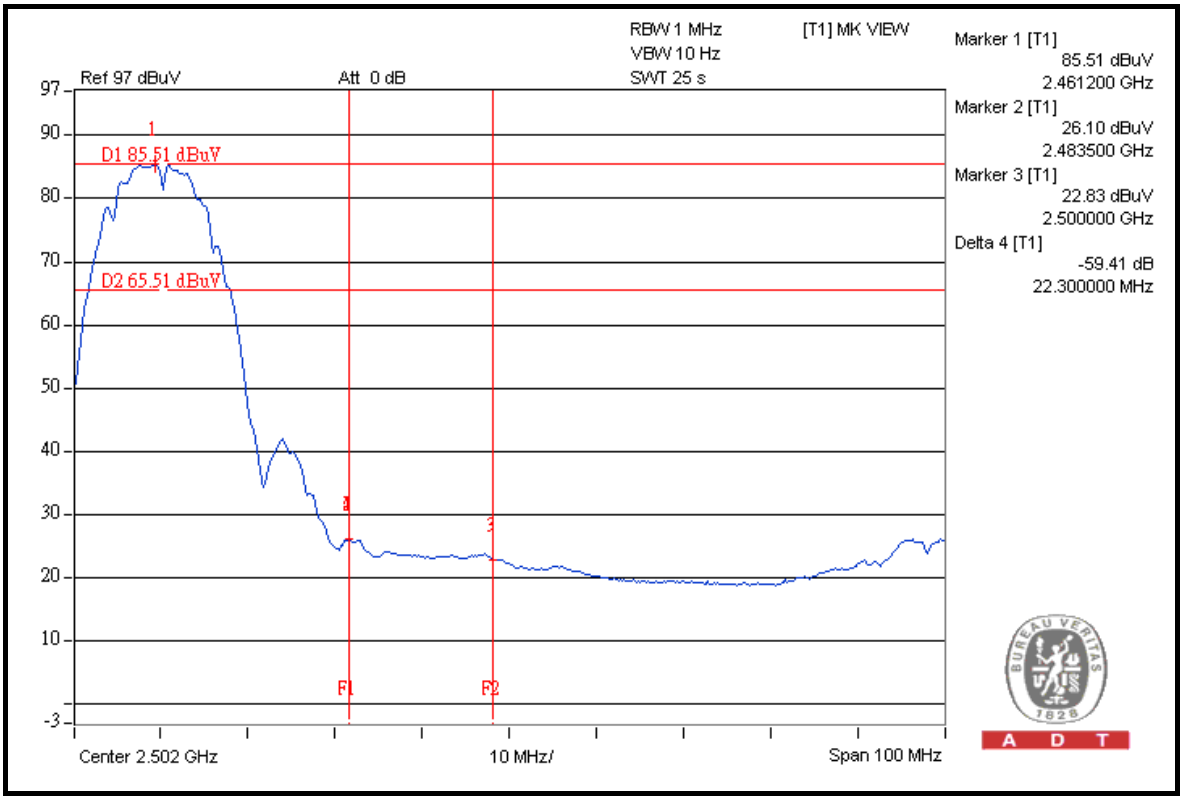
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (THREE CHAINS ON)



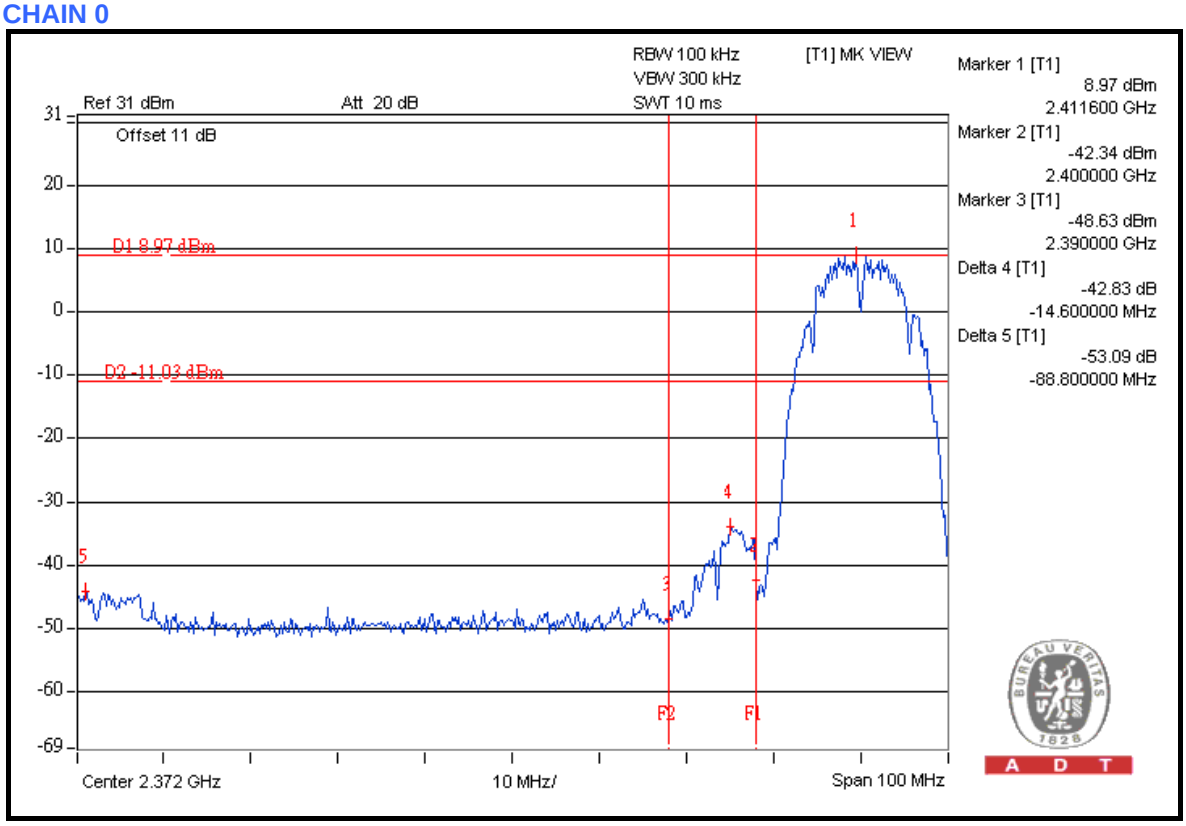


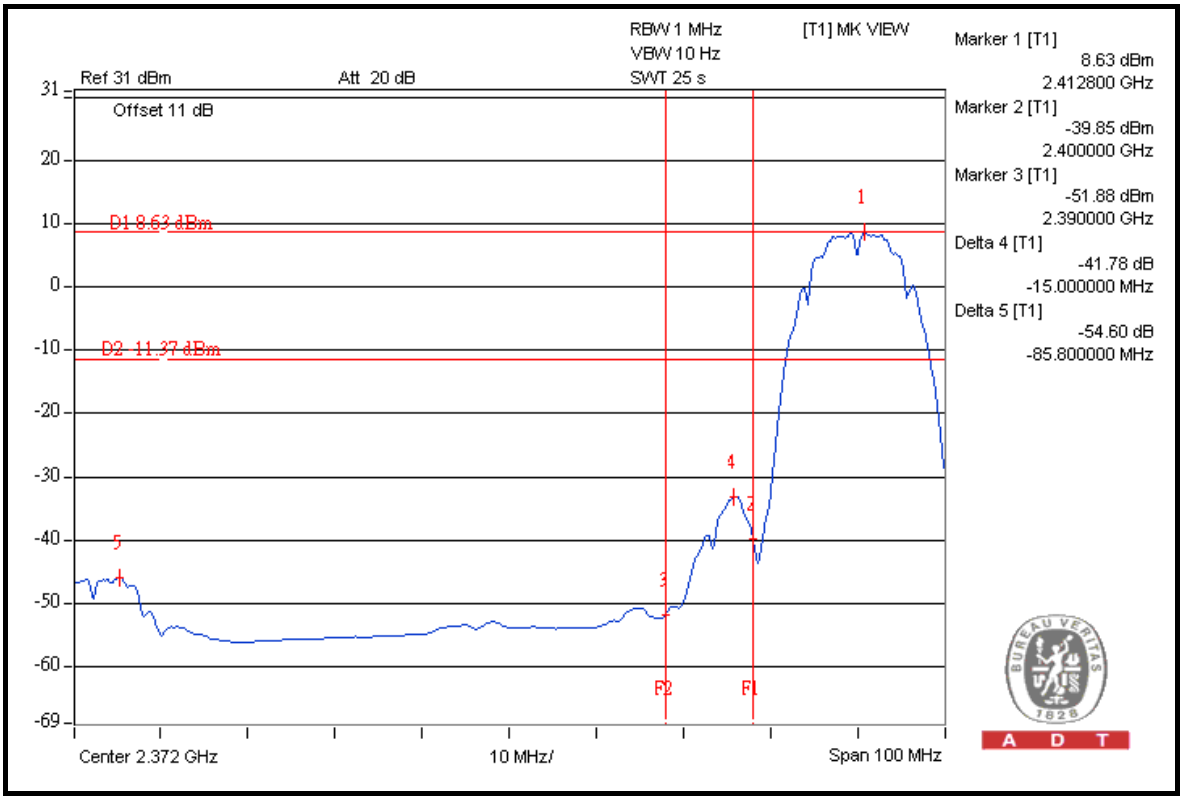

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 84.92 dBuV
D2 64.92 dBuV
Marker 1 [T1]
84.92 dBuV
2.459400 GHz
Marker 2 [T1]
28.67 dBuV
2.483500 GHz
Marker 3 [T1]
28.26 dBuV
2.500000 GHz
Delta 4 [T1]
-54.98 dB
33.200000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

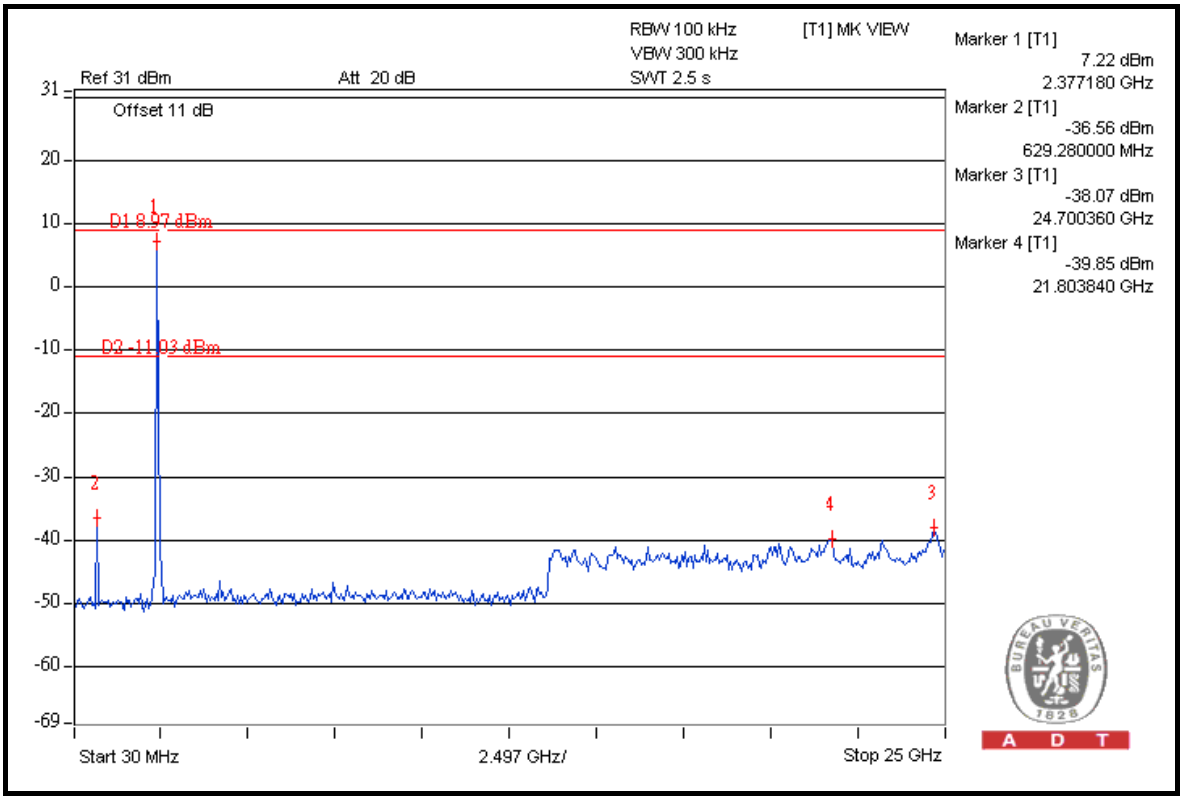

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 85.51 dBuV
D2 65.51 dBuV
Marker 1 [T1]
85.51 dBuV
2.461200 GHz
Marker 2 [T1]
26.10 dBuV
2.483500 GHz
Marker 3 [T1]
22.83 dBuV
2.500000 GHz
Delta 4 [T1]
-59.41 dB
22.300000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

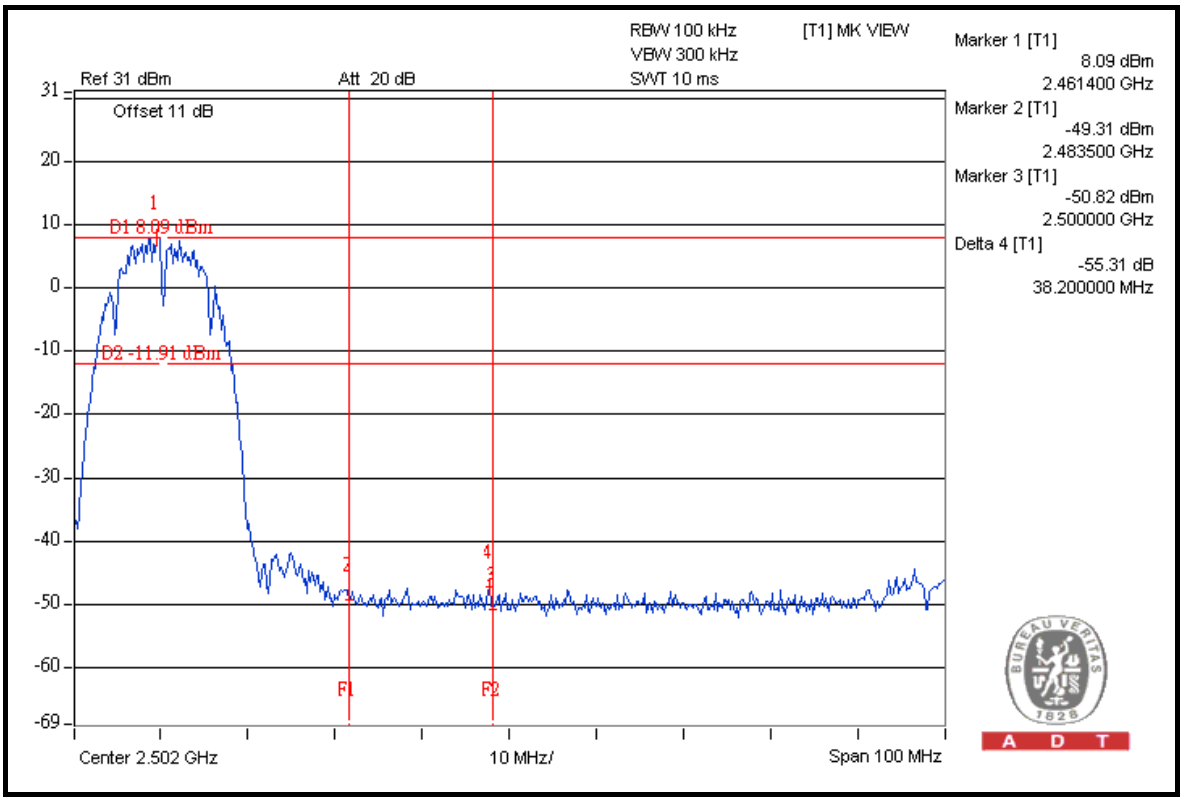
FOR CONDUCTED MEASURED

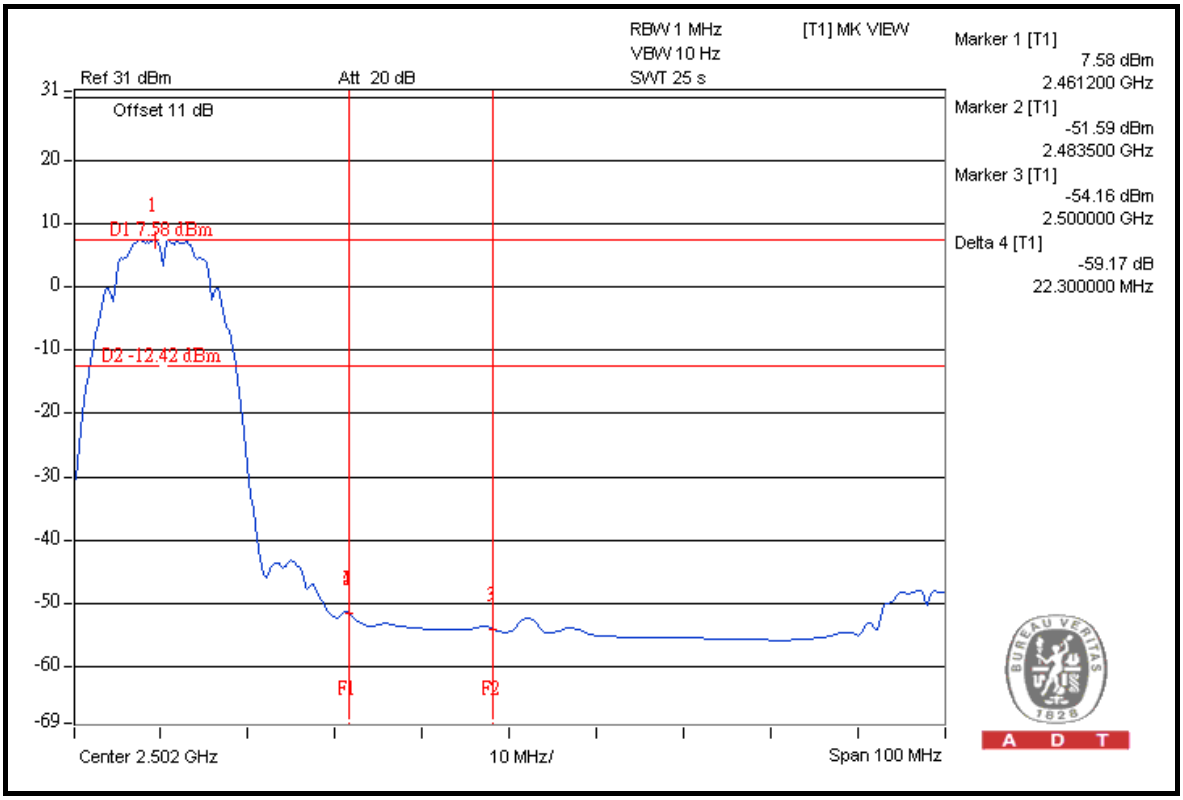
CHAIN 0

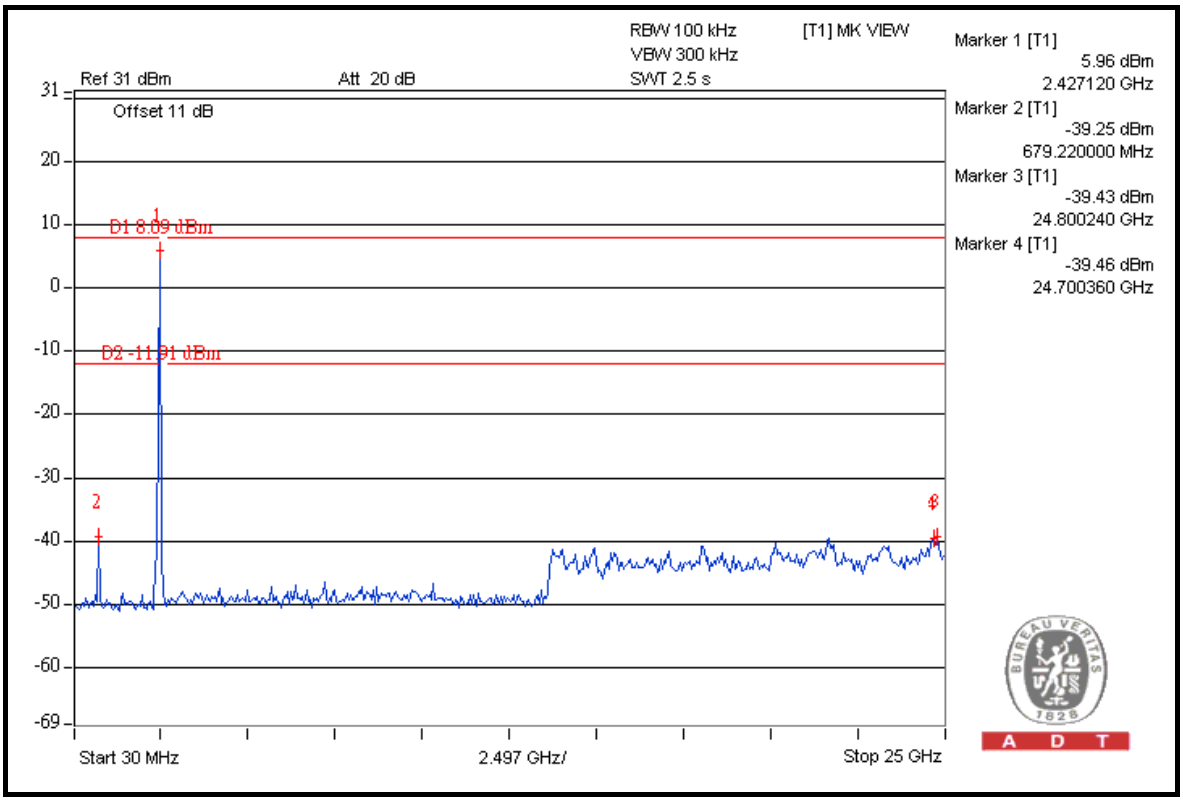




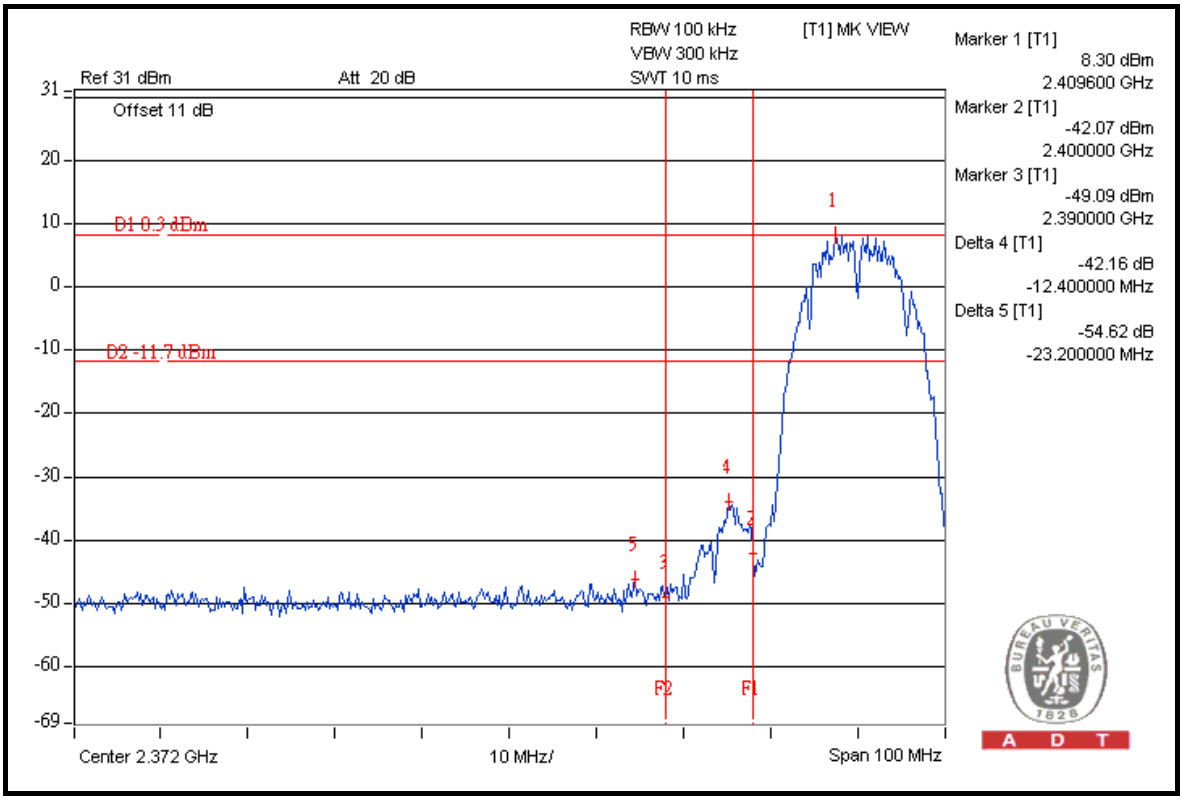

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.07 dBm
D2 -11.93 dBm
Marker 1 [T1]
7.22 dBm
2.377180 GHz
Marker 2 [T1]
-36.56 dBm
629.280000 MHz
Marker 3 [T1]
-38.07 dBm
24.700360 GHz
Marker 4 [T1]
-39.85 dBm
21.803840 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

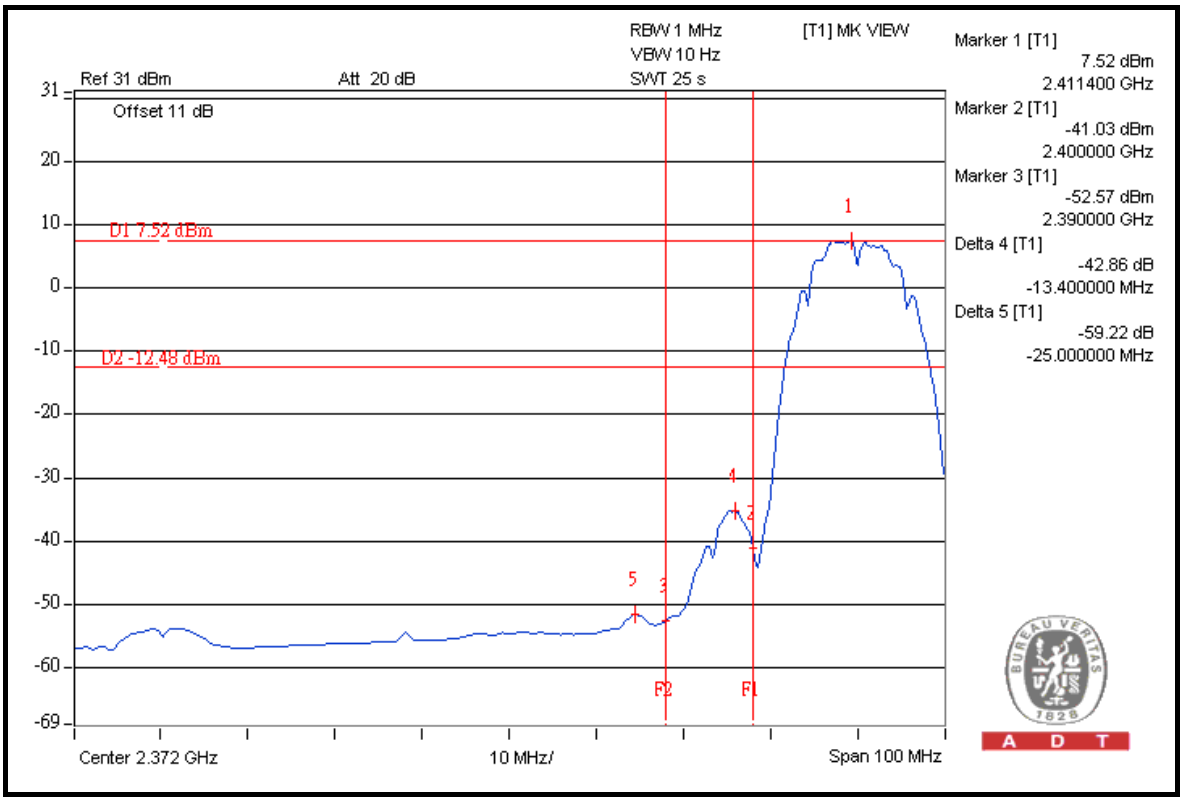

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.09 dBm
D2 -11.91 dBm
Marker 1 [T1]
8.09 dBm
2.461400 GHz
Marker 2 [T1]
-49.31 dBm
2.483500 GHz
Marker 3 [T1]
-50.82 dBm
2.500000 GHz
Delta 4 [T1]
-55.31 dB
38.200000 MHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

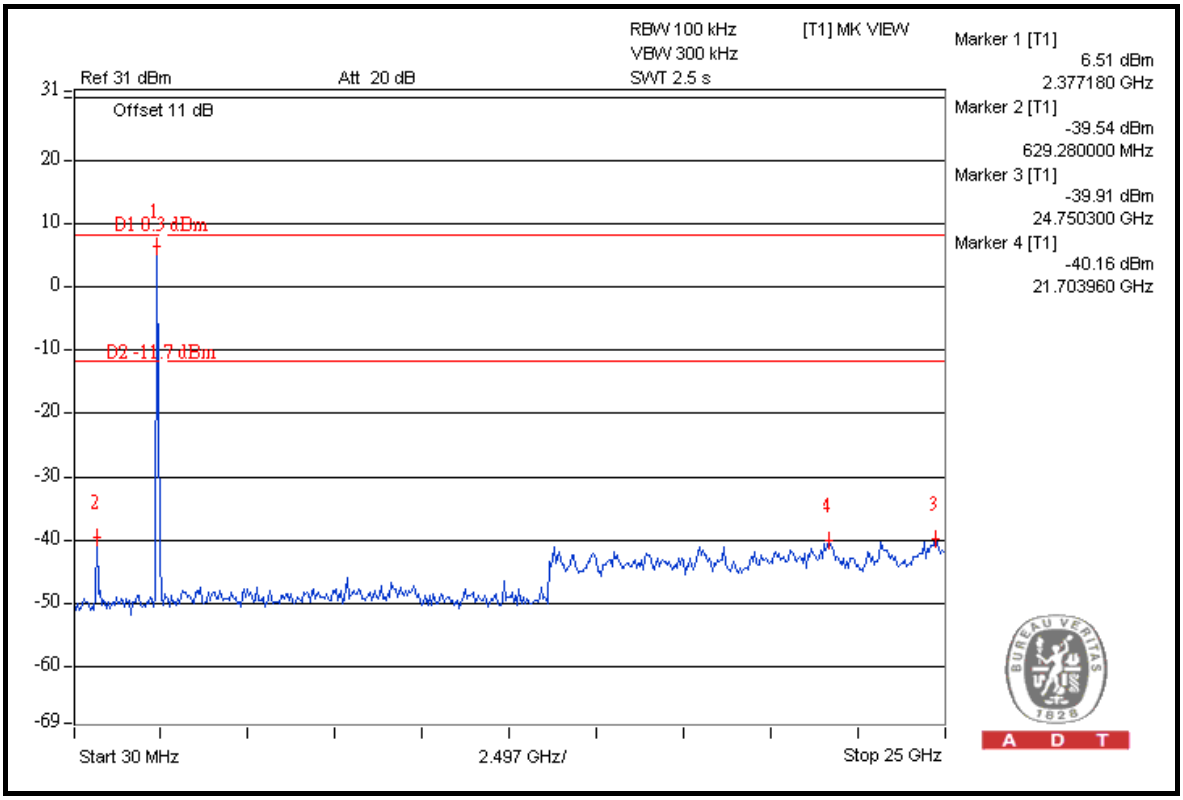

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.58 dBm
D2 -12.42 dBm
Marker 1 [T1]
7.58 dBm
2.461200 GHz
Marker 2 [T1]
-51.59 dBm
2.483500 GHz
Marker 3 [T1]
-54.16 dBm
2.500000 GHz
Delta 4 [T1]
-59.17 dB
22.300000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

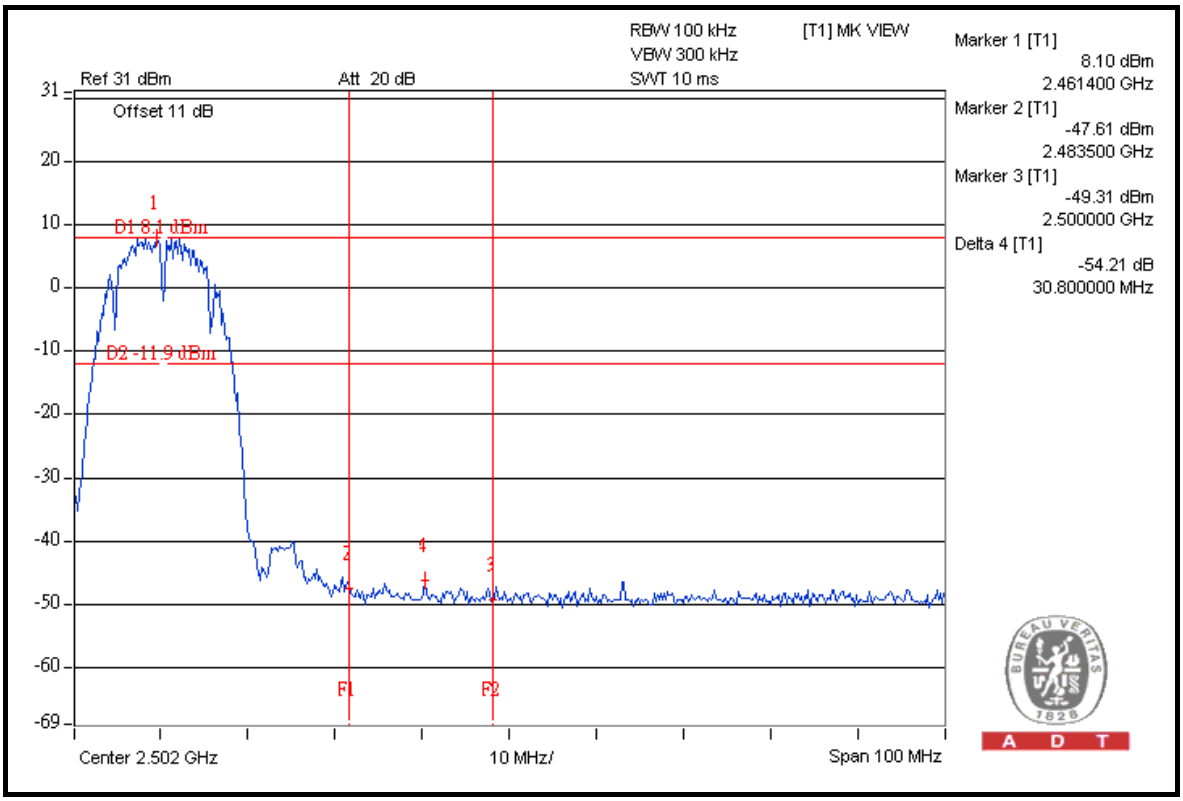

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.09 dBm
D2 -11.91 dBm
Marker 1 [T1]
5.96 dBm
2.427120 GHz
Marker 2 [T1]
-39.25 dBm
679.220000 MHz
Marker 3 [T1]
-39.43 dBm
24.800240 GHz
Marker 4 [T1]
-39.46 dBm
24.700360 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

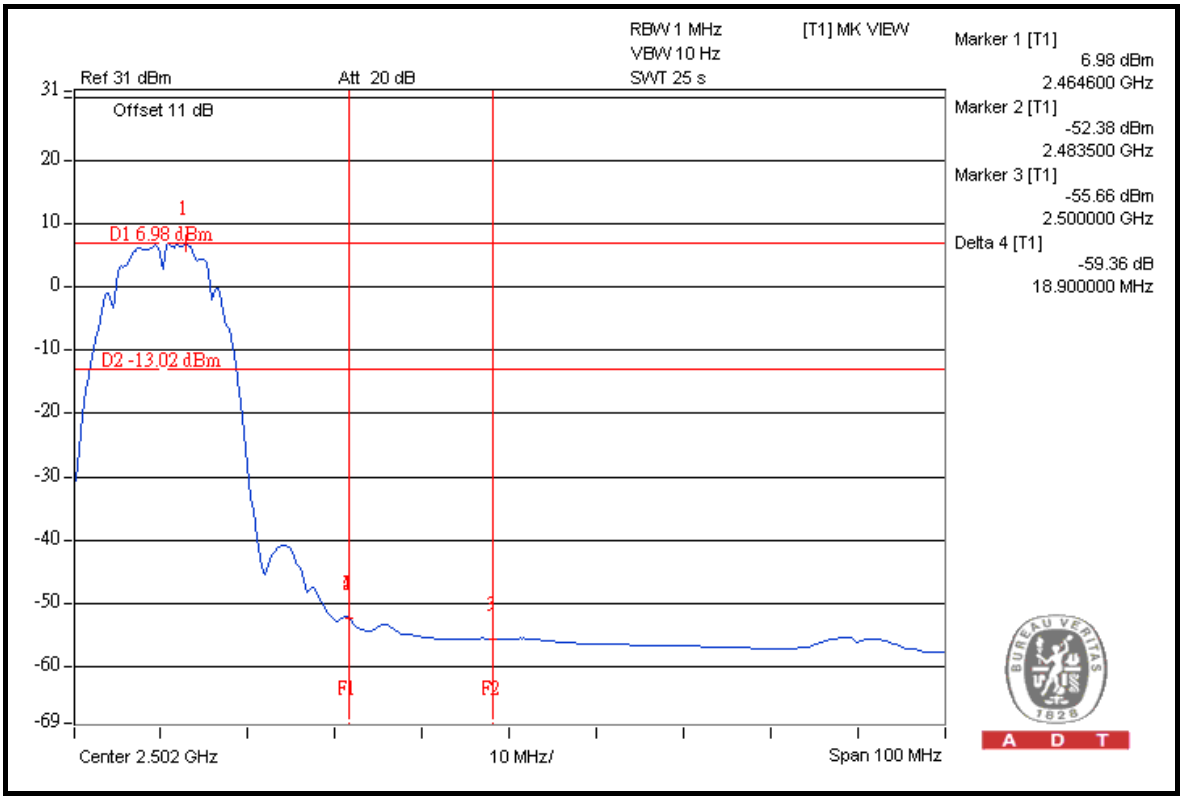
CHAIN 1

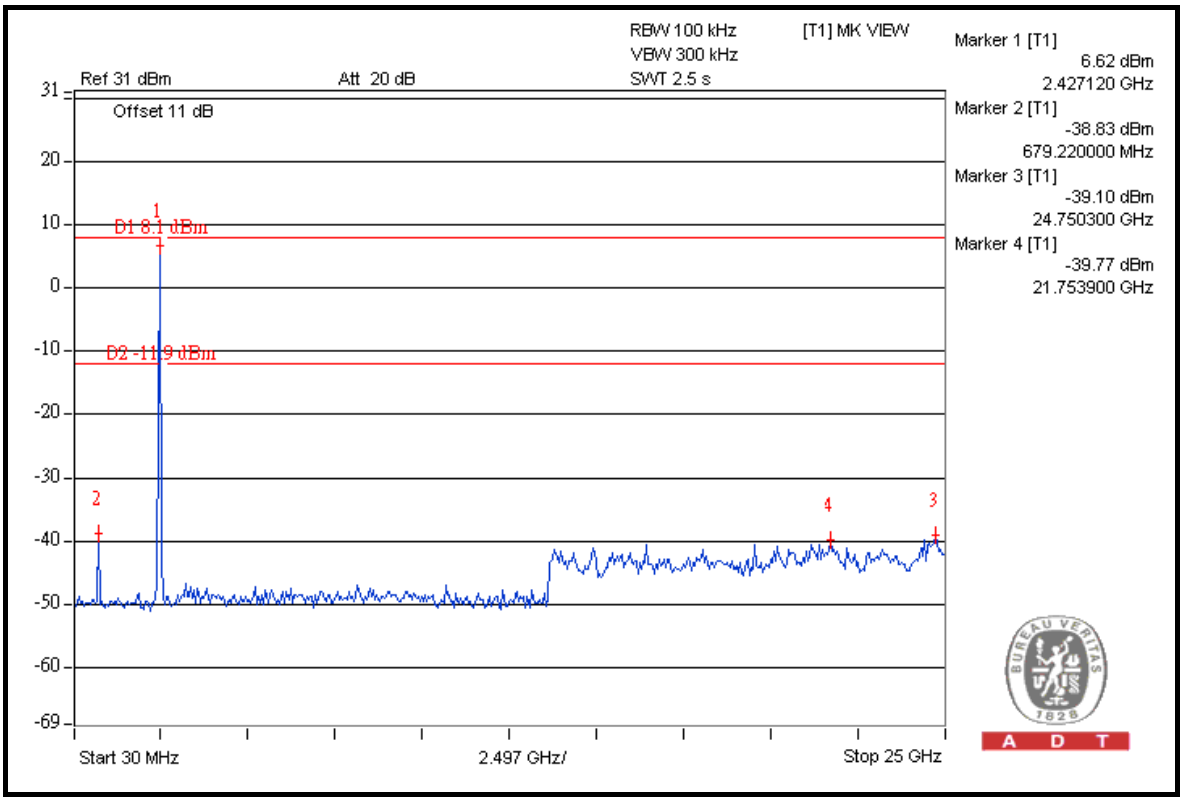

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.3 dBm
D2 -11.7 dBm
Marker 1 [T1]
8.30 dBm
2.409600 GHz
Marker 2 [T1]
-42.07 dBm
2.400000 GHz
Marker 3 [T1]
-49.09 dBm
2.390000 GHz
Delta 4 [T1]
-42.16 dB
-12.400000 MHz
Delta 5 [T1]
-54.62 dB
-23.200000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.52 dBm
D2 -12.48 dBm
Marker 1 [T1]
7.52 dBm
2.411400 GHz
Marker 2 [T1]
-41.03 dBm
2.400000 GHz
Marker 3 [T1]
-52.57 dBm
2.390000 GHz
Delta 4 [T1]
-42.86 dB
-13.400000 MHz
Delta 5 [T1]
-59.22 dB
-25.000000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz

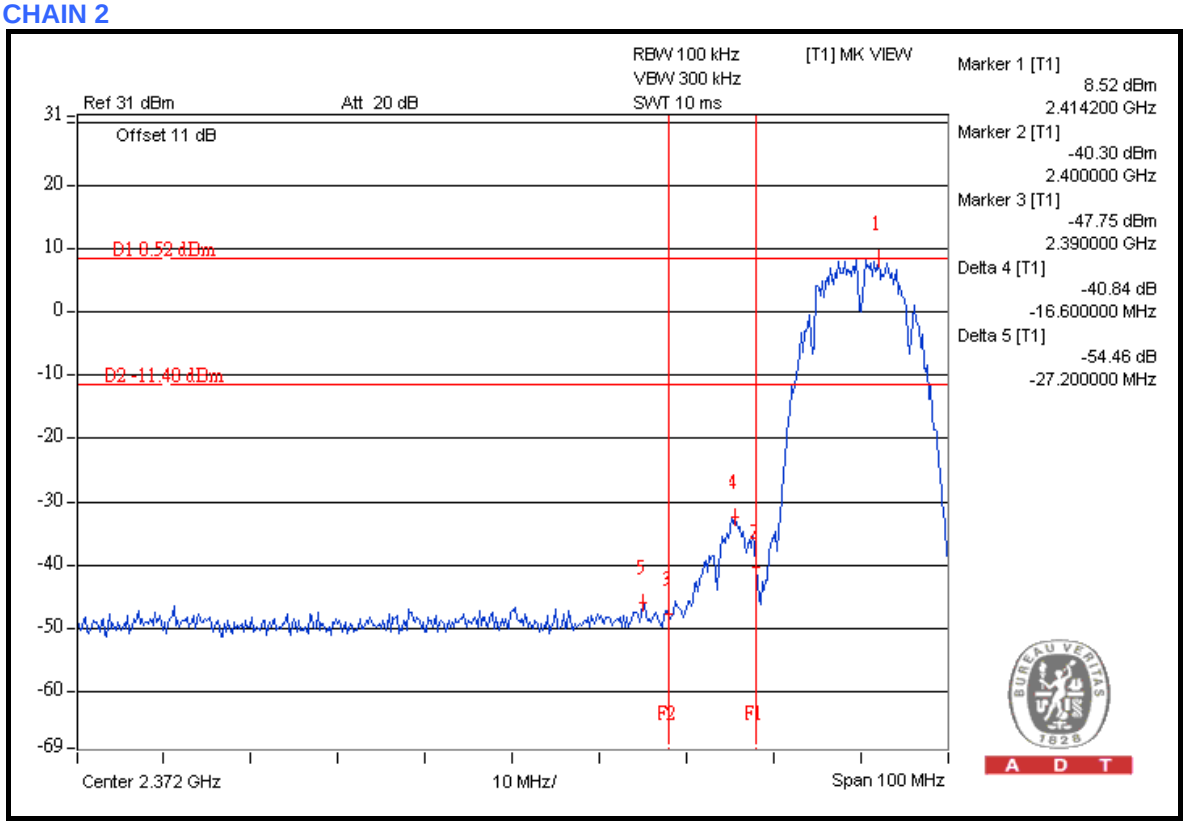

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.3 dBm
D2 -11.7 dBm
Marker 1 [T1]
6.51 dBm
2.377180 GHz
Marker 2 [T1]
-39.54 dBm
629.280000 MHz
Marker 3 [T1]
-39.91 dBm
24.750300 GHz
Marker 4 [T1]
-40.16 dBm
21.703960 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

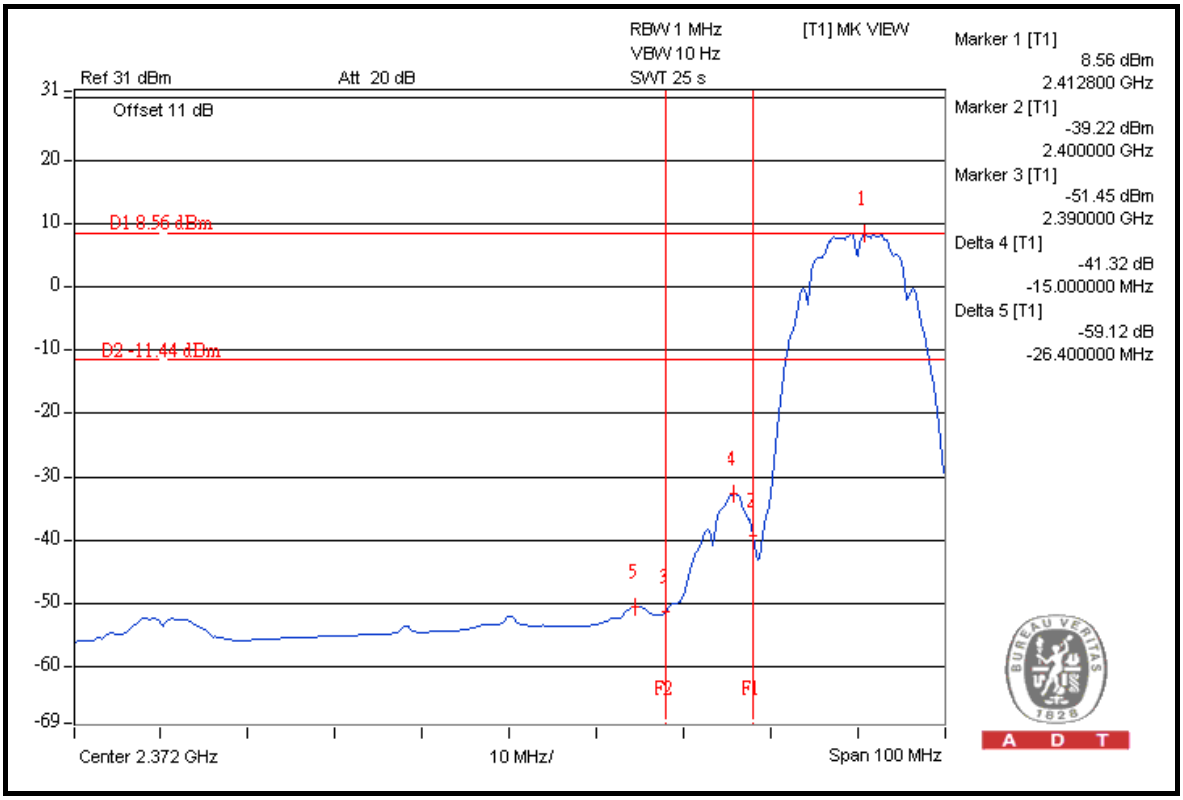

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.1 dBm
D2 -11.9 dBm
Marker 1 [T1]
8.10 dBm
2.461400 GHz
Marker 2 [T1]
-47.61 dBm
2.483500 GHz
Marker 3 [T1]
-49.31 dBm
2.500000 GHz
Delta 4 [T1]
-54.21 dB
30.800000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

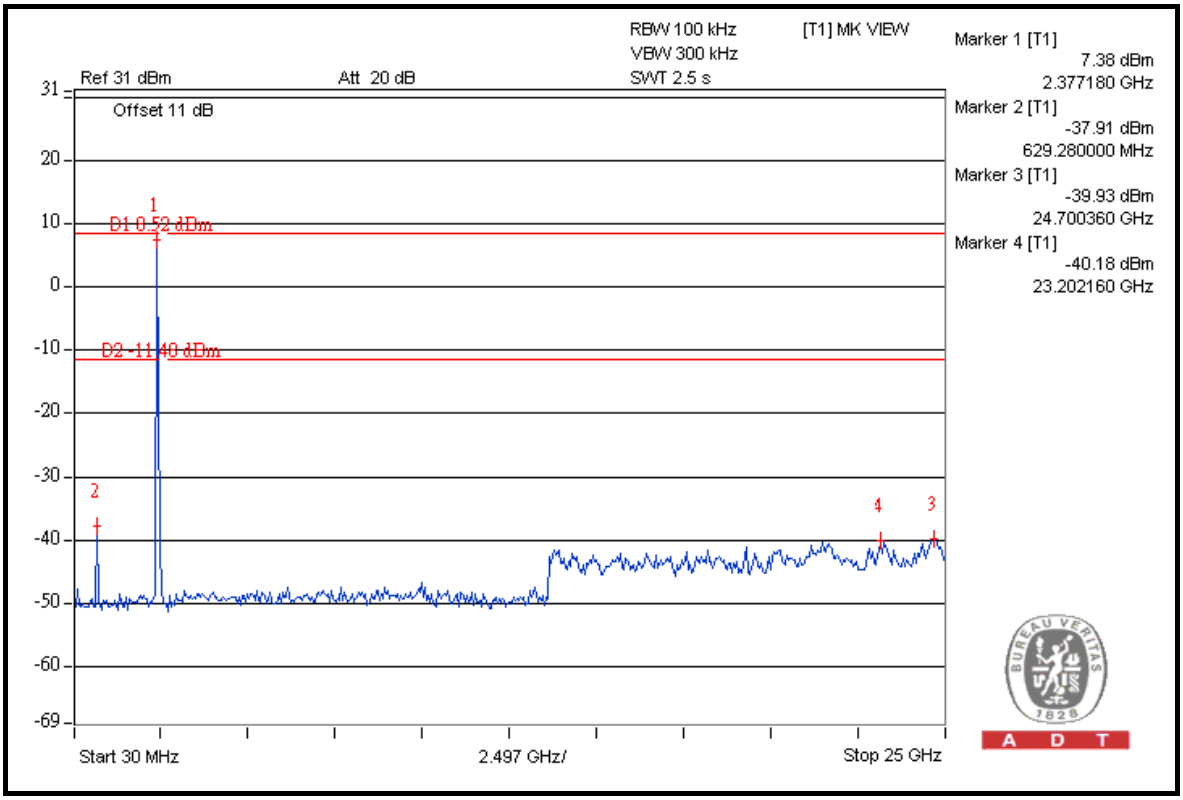

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 6.98 dBm
D2 -13.02 dBm
Marker 1 [T1]
6.98 dBm
2.464600 GHz
Marker 2 [T1]
-52.38 dBm
2.483500 GHz
Marker 3 [T1]
-55.66 dBm
2.500000 GHz
Delta 4 [T1]
-59.36 dB
18.900000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

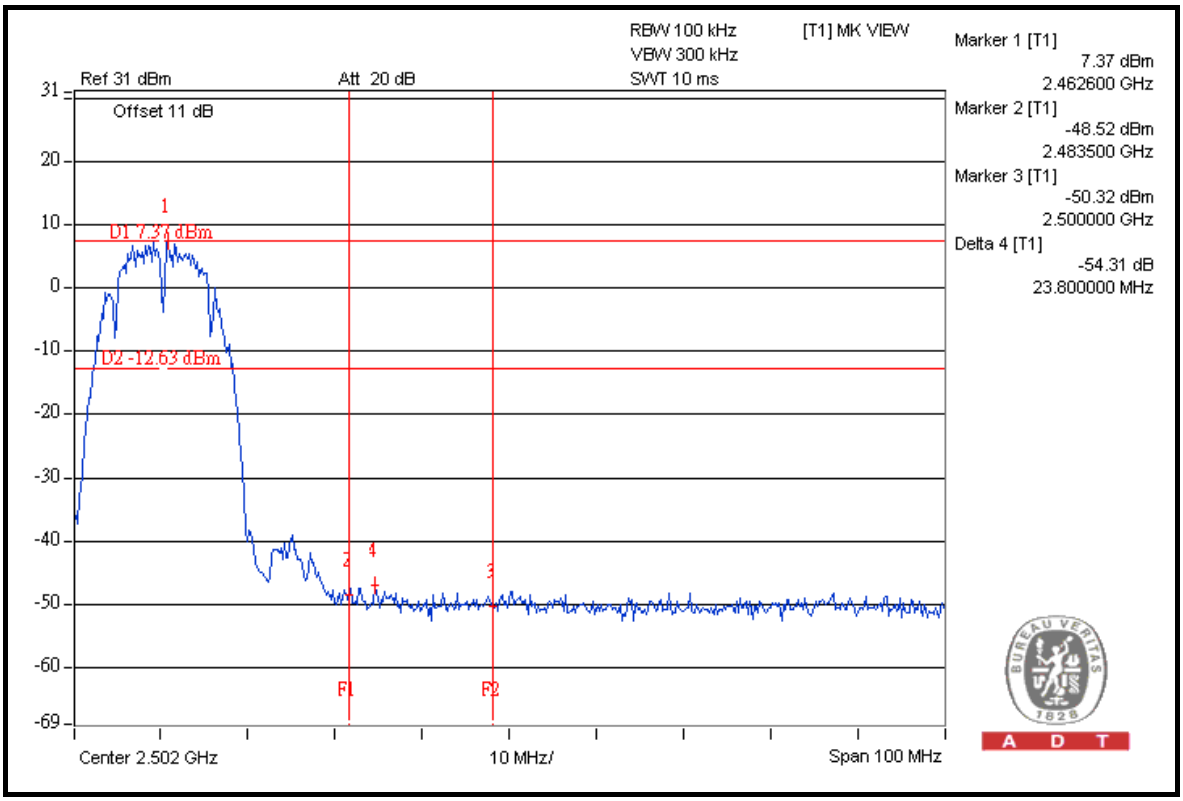

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.1 dBm
D2 -11.9 dBm
Marker 1 [T1]
6.62 dBm
2.427120 GHz
Marker 2 [T1]
-38.83 dBm
679.220000 MHz
Marker 3 [T1]
-39.10 dBm
24.750300 GHz
Marker 4 [T1]
-39.77 dBm
21.753900 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

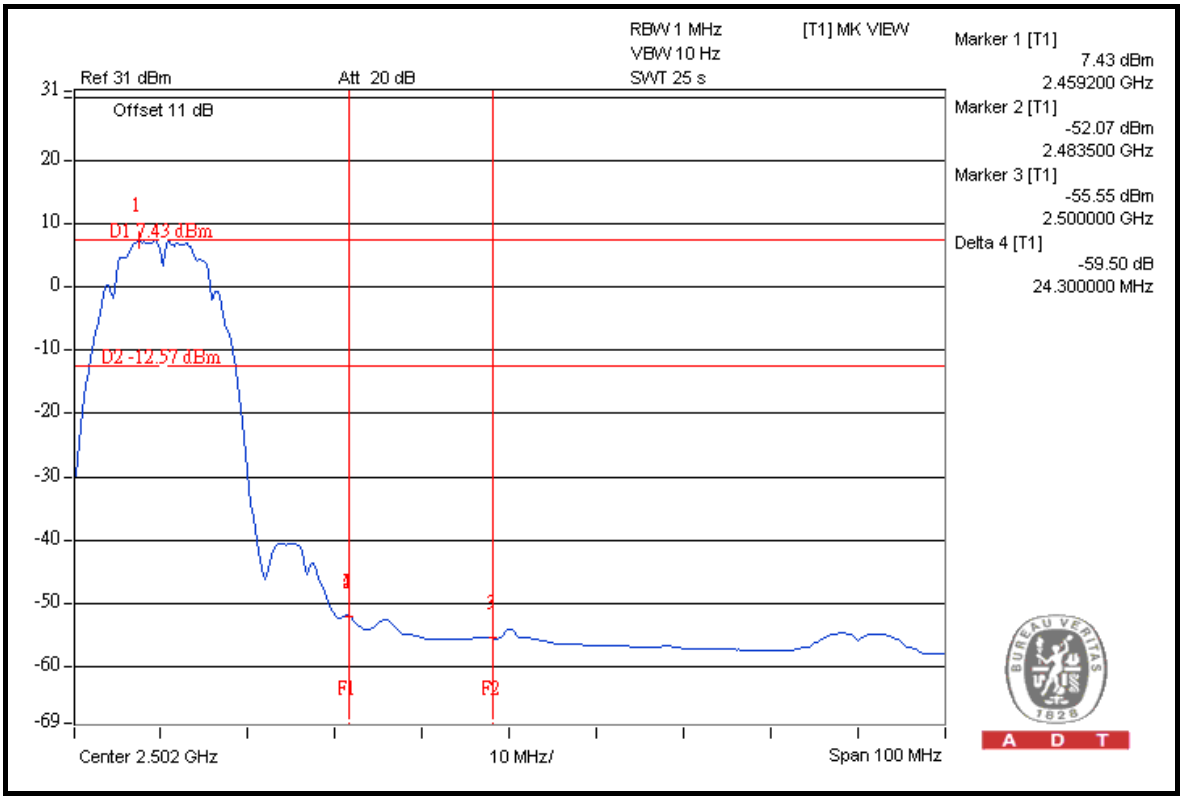
CHAIN 2

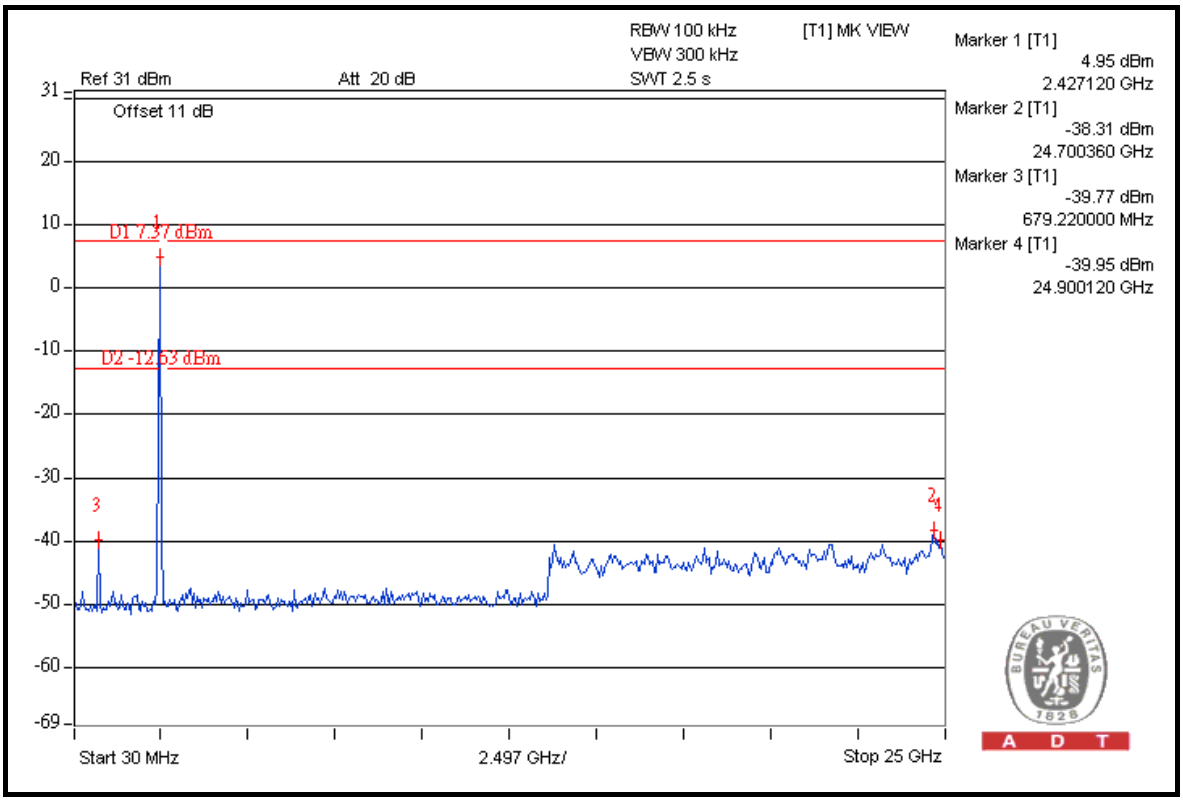

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.52 dBm
D2 -11.40 dBm
Marker 1 [T1]
8.52 dBm
2.414200 GHz
Marker 2 [T1]
-40.30 dBm
2.400000 GHz
Marker 3 [T1]
-47.75 dBm
2.390000 GHz
Delta 4 [T1]
-40.84 dB
-16.600000 MHz
Delta 5 [T1]
-54.46 dB
-27.200000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 8.56 dBm
D2 -11.44 dBm
Marker 1 [T1]
8.56 dBm
2.412800 GHz
Marker 2 [T1]
-39.22 dBm
2.400000 GHz
Marker 3 [T1]
-51.45 dBm
2.390000 GHz
Delta 4 [T1]
-41.32 dB
-15.000000 MHz
Delta 5 [T1]
-59.12 dB
-26.400000 MHz
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 0.52 dBm
D2 -11.40 dBm
Marker 1 [T1]
7.38 dBm
2.377180 GHz
Marker 2 [T1]
-37.91 dBm
629.280000 MHz
Marker 3 [T1]
-39.93 dBm
24.700360 GHz
Marker 4 [T1]
-40.18 dBm
23.202160 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 7.37 dBm
D2 -12.63 dBm
Marker 1 [T1]
7.37 dBm
2.462600 GHz
Marker 2 [T1]
-48.52 dBm
2.483500 GHz
Marker 3 [T1]
-50.32 dBm
2.500000 GHz
Delta 4 [T1]
-54.31 dB
23.800000 MHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.43 dBm
D2 -12.57 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
7.43 dBm
2.459200 GHz
Marker 2 [T1]
-52.07 dBm
2.483500 GHz
Marker 3 [T1]
-55.55 dBm
2.500000 GHz
Delta 4 [T1]
-59.50 dB
24.300000 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 7.37 dBm
D2 -12.63 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
4.95 dBm
2.427120 GHz
Marker 2 [T1]
-38.31 dBm
24.700360 GHz
Marker 3 [T1]
-39.77 dBm
679.220000 MHz
Marker 4 [T1]
-39.95 dBm
24.900120 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)	112.8	45.96	66.84	74.00
2412.00 (AV)	102.4	51.25	51.15	54.00

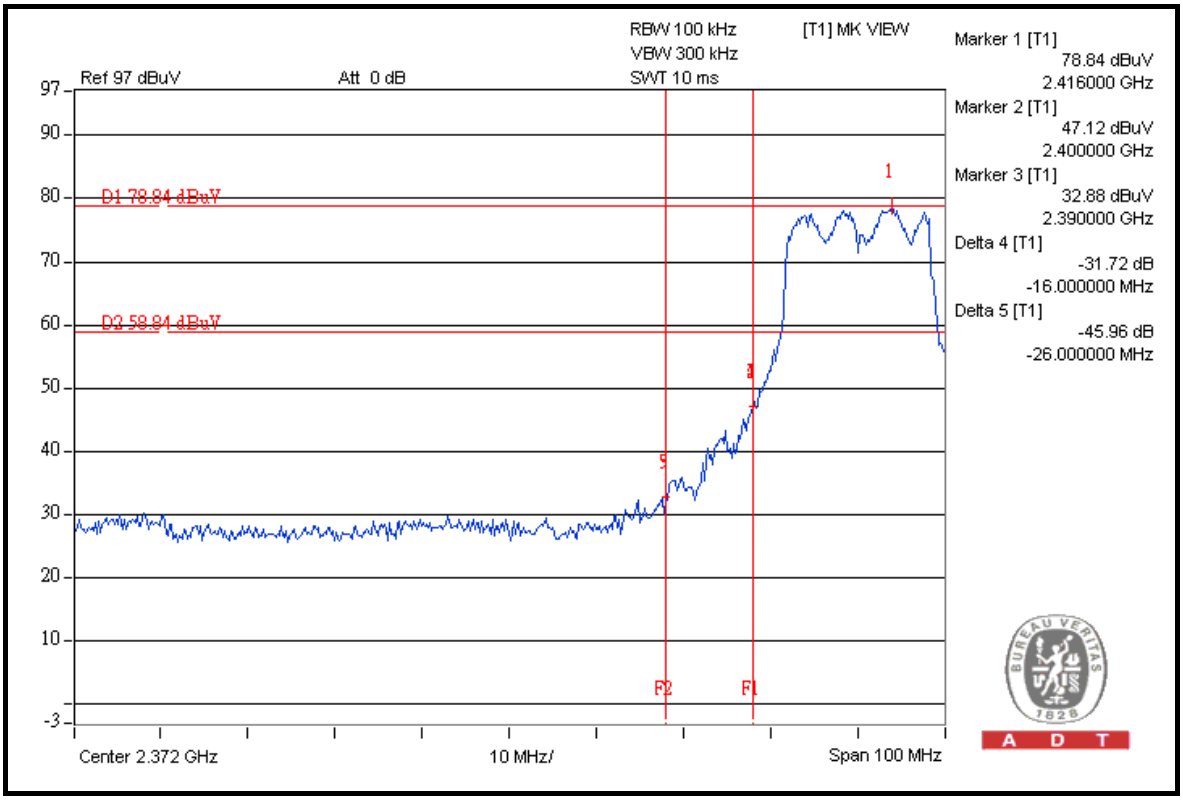
RESTRICT BAND (2483.5 ~ 2500 MHz)

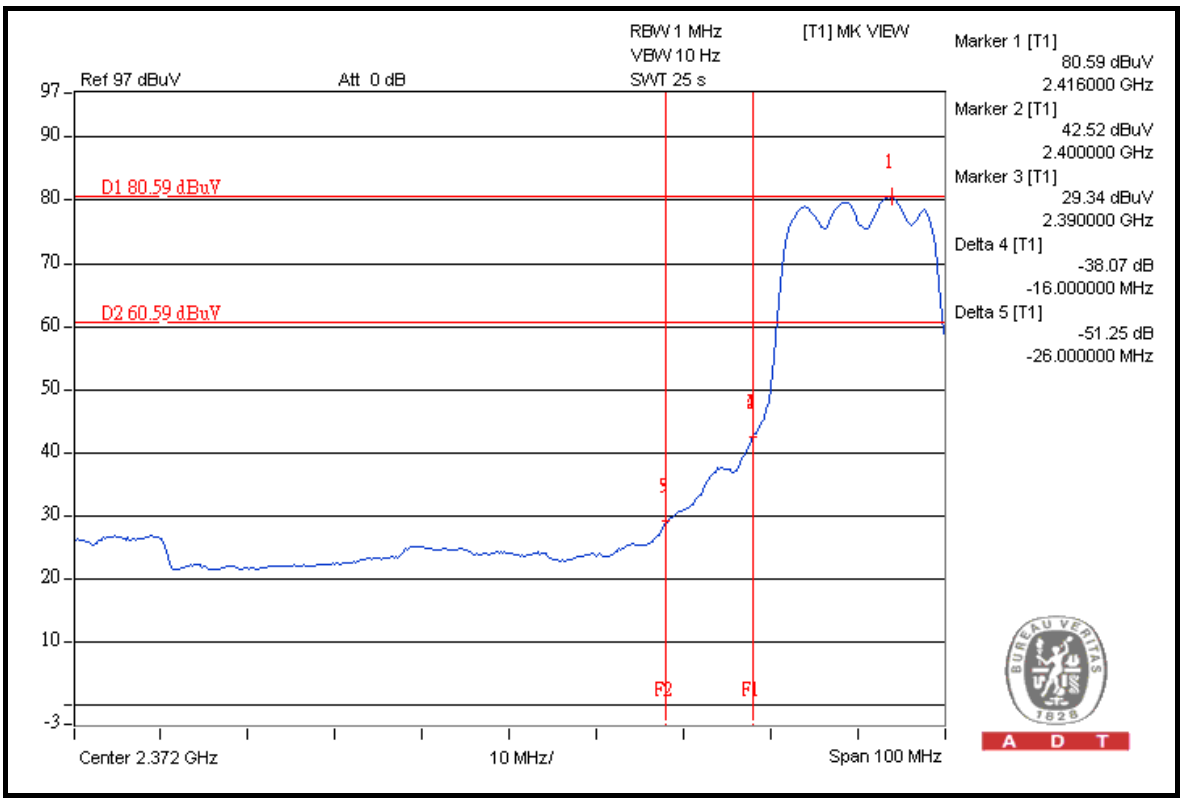
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	112.2	47.84	64.36	74.00
2462.00 (AV)	101.8	53.61	48.19	54.00

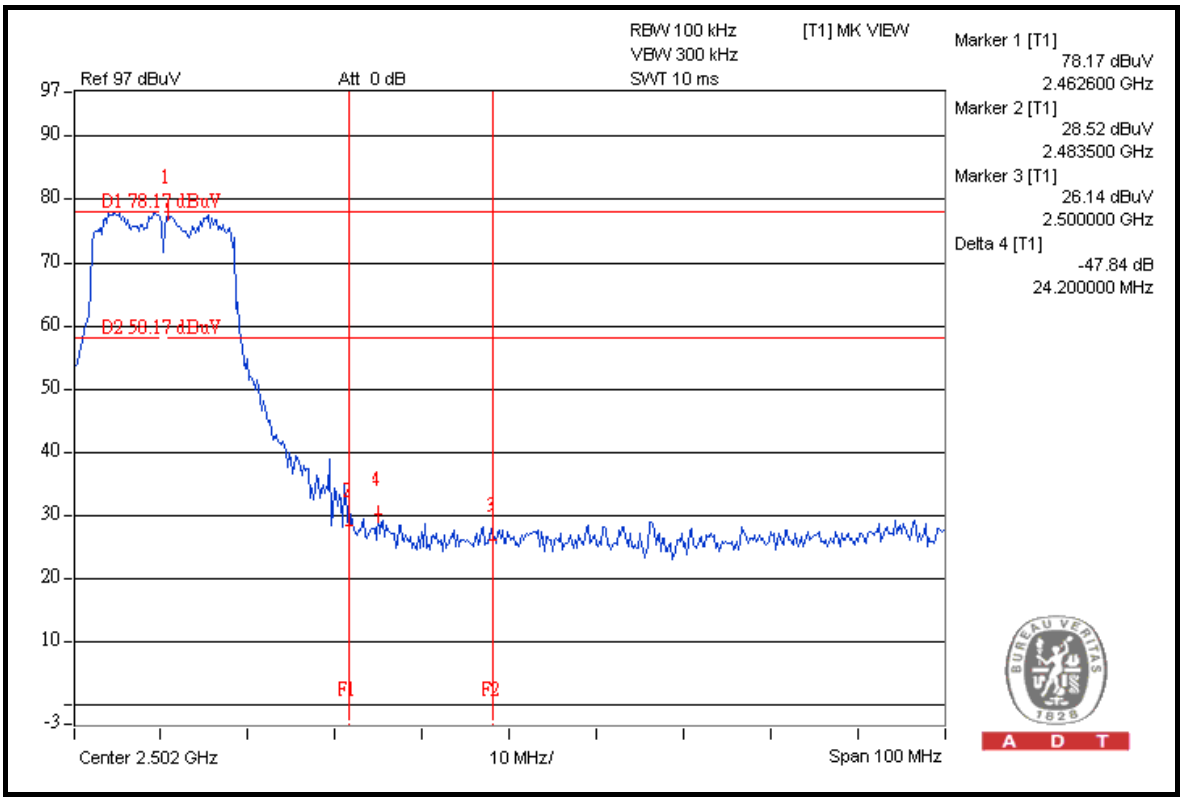
NOTE:

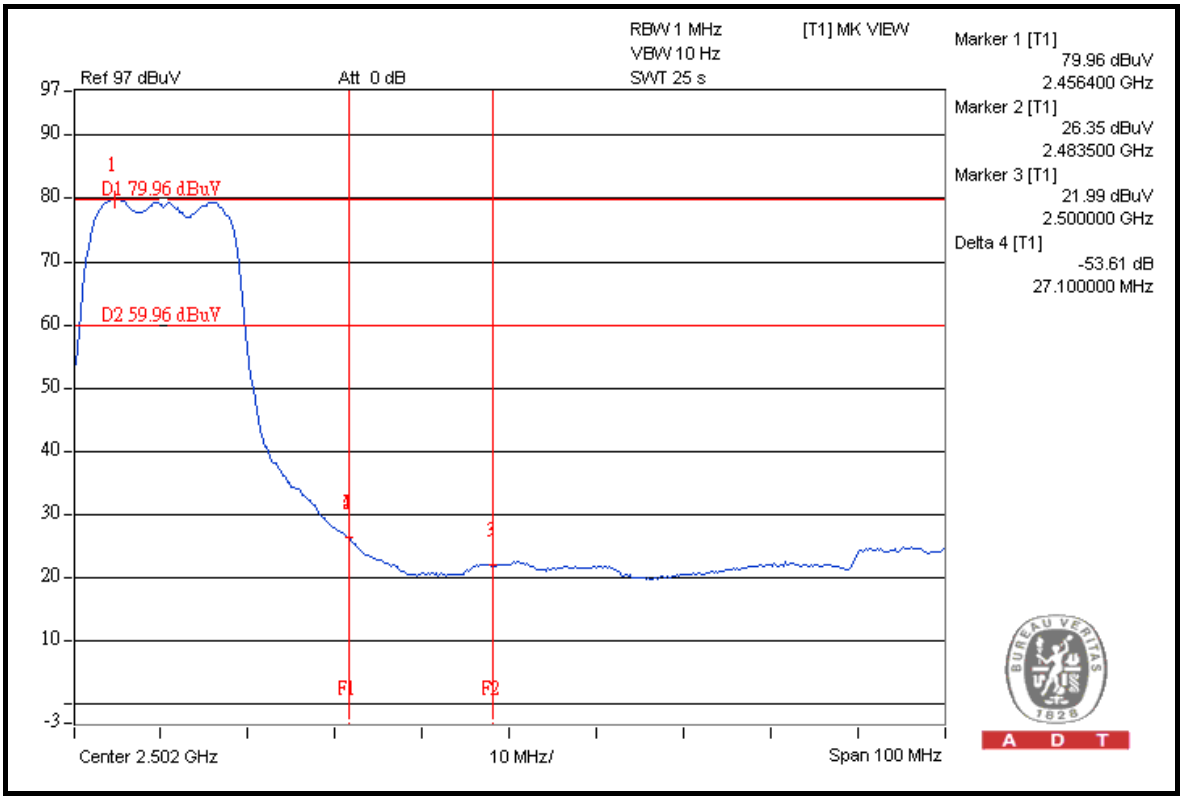
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (THREE CHAINS ON)



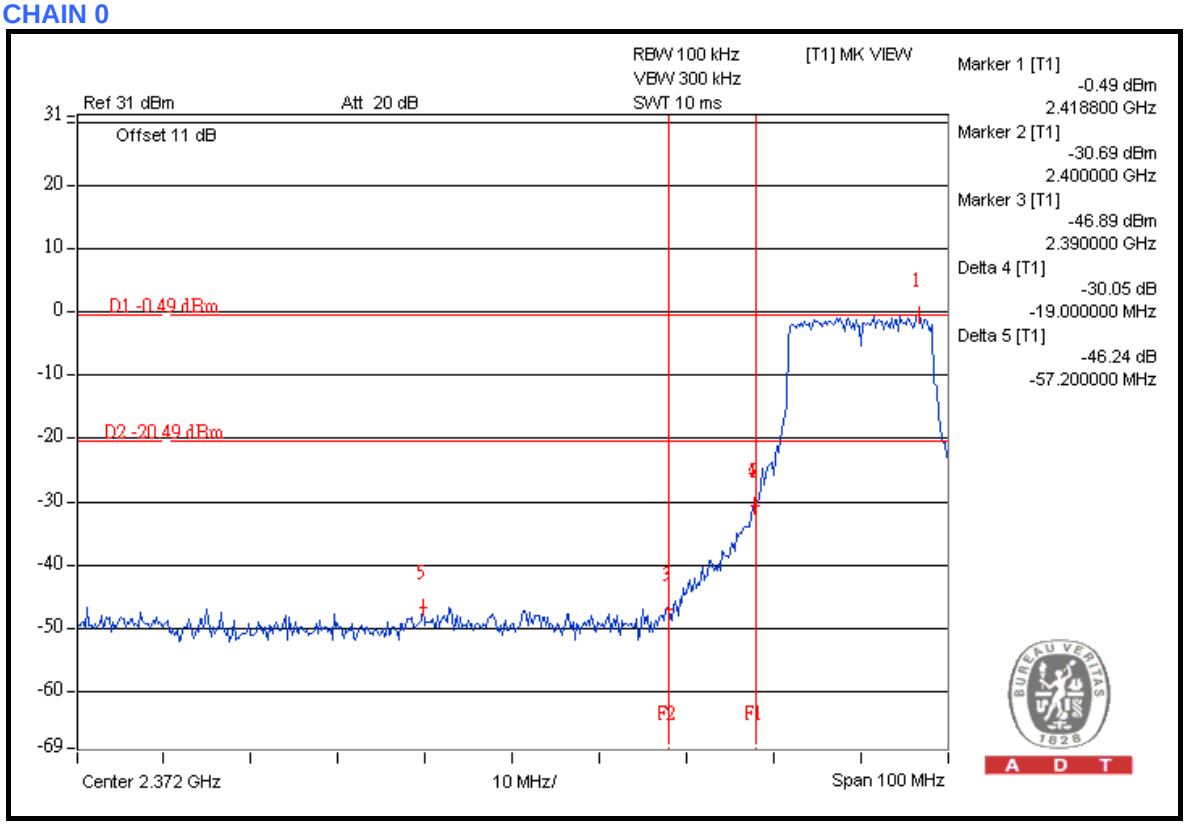


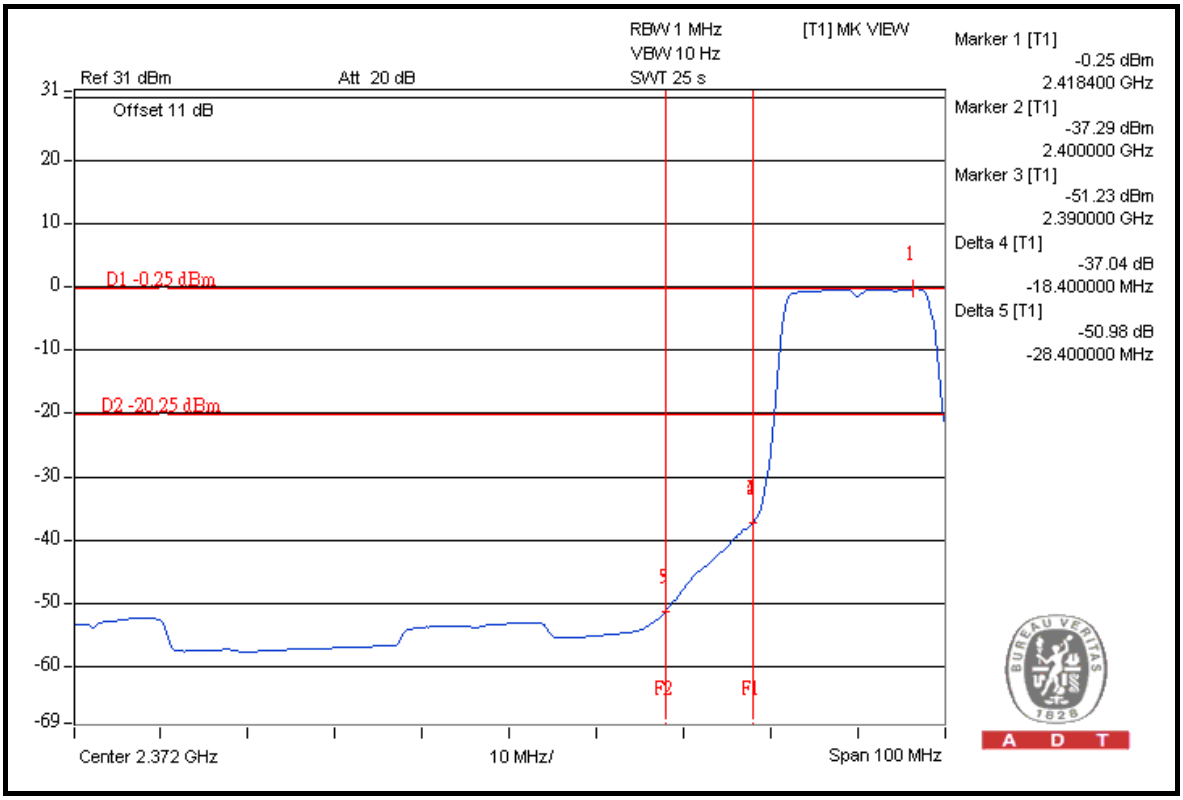

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 78.17 dBuV
D2 50.17 dBuV
Marker 1 [T1]
78.17 dBuV
2.462600 GHz
Marker 2 [T1]
28.52 dBuV
2.483500 GHz
Marker 3 [T1]
26.14 dBuV
2.500000 GHz
Delta 4 [T1]
-47.84 dB
24.200000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

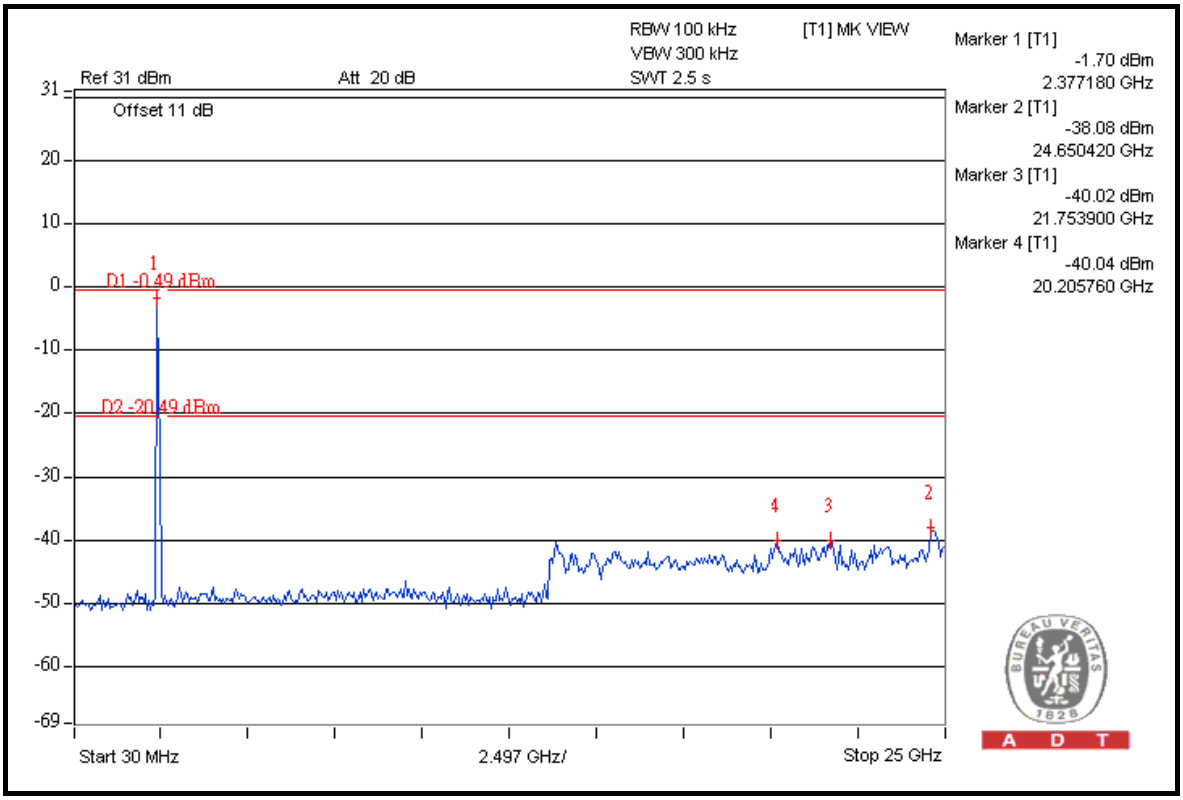

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 79.96 dBuV
D2 59.96 dBuV
Marker 1 [T1]
79.96 dBuV
2.456400 GHz
Marker 2 [T1]
26.35 dBuV
2.483500 GHz
Marker 3 [T1]
21.99 dBuV
2.500000 GHz
Delta 4 [T1]
-53.61 dB
27.100000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

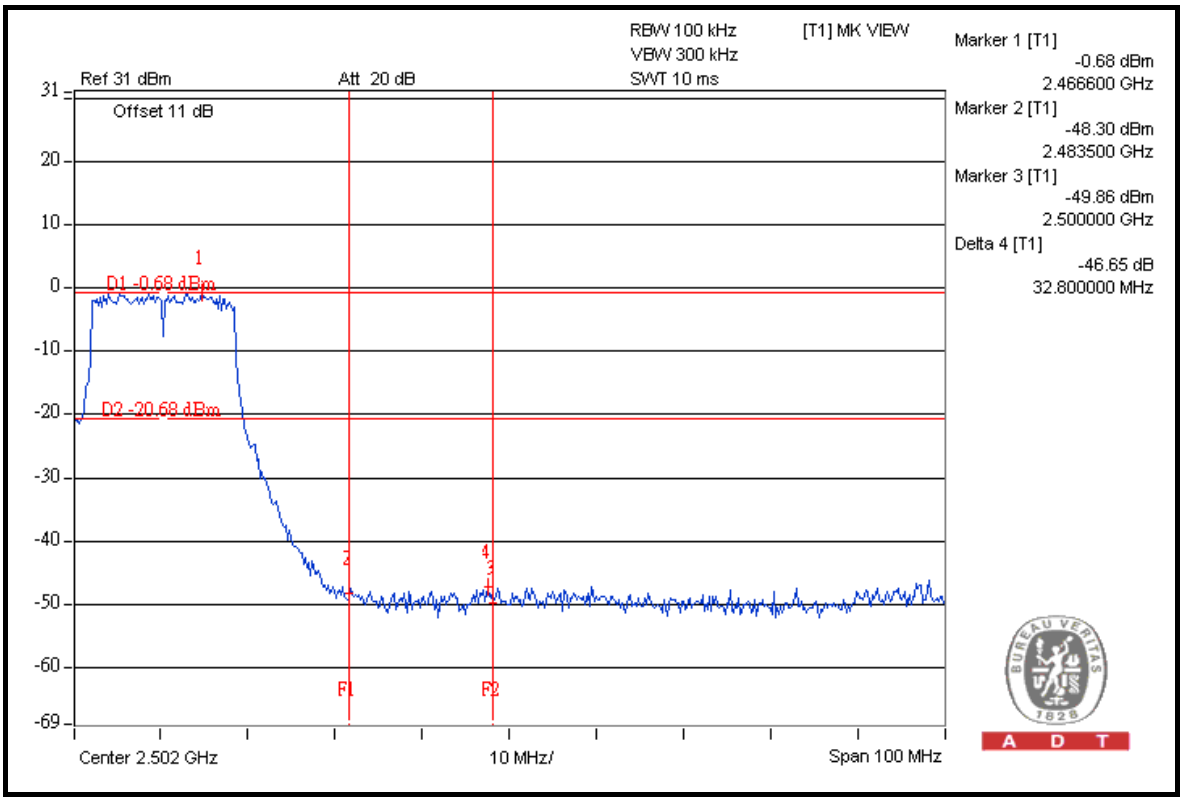
FOR CONDUCTED MEASURED

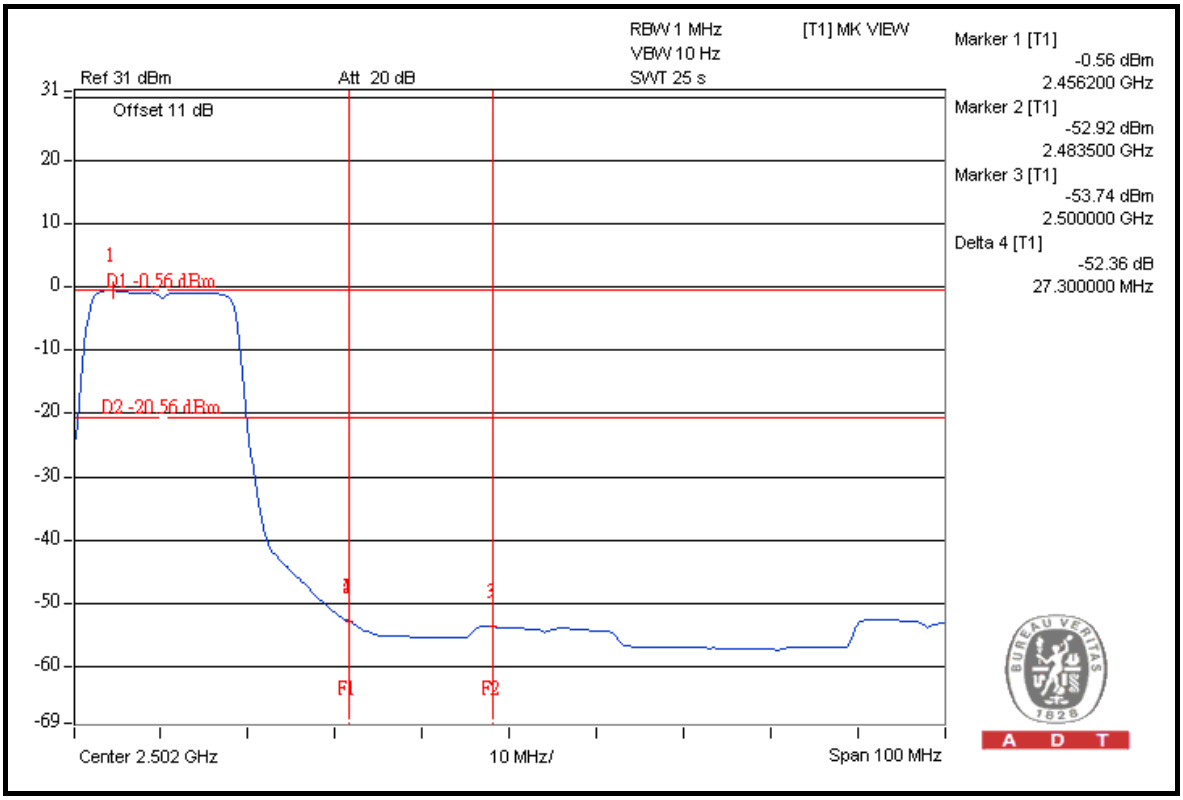
CHAIN 0

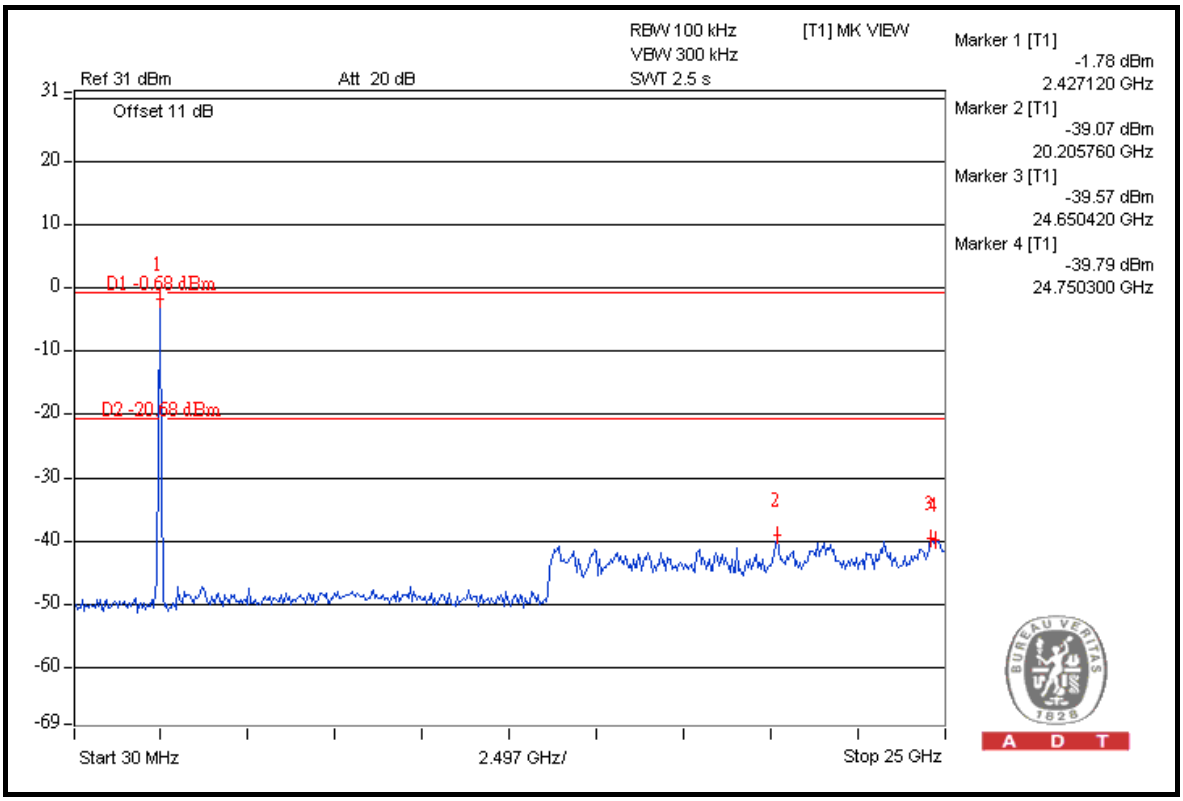




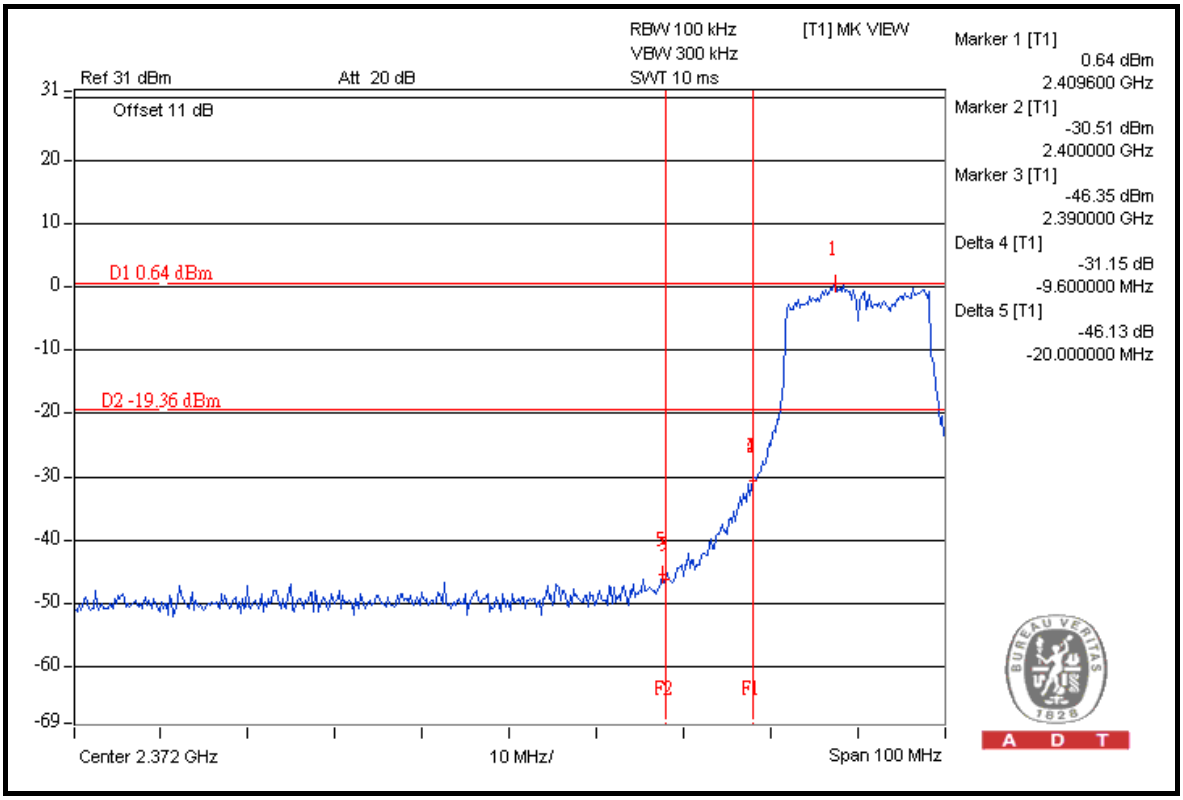

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -1.49 dBm
D2 -20.49 dBm
Marker 1 [T1]
-1.70 dBm
2.377180 GHz
Marker 2 [T1]
-38.08 dBm
24.650420 GHz
Marker 3 [T1]
-40.02 dBm
21.753900 GHz
Marker 4 [T1]
-40.04 dBm
20.205760 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

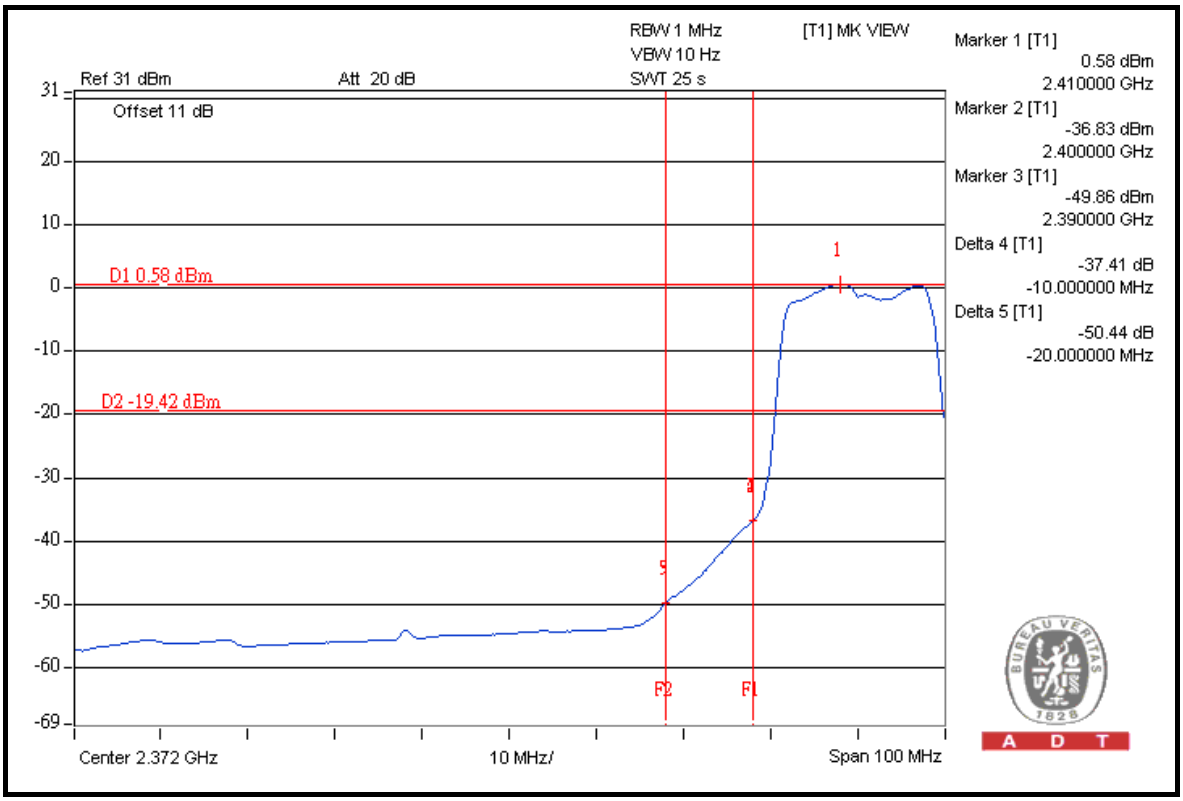

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.68 dBm
D2 -20.68 dBm
Marker 1 [T1]
-0.68 dBm
2.466600 GHz
Marker 2 [T1]
-48.30 dBm
2.483500 GHz
Marker 3 [T1]
-49.86 dBm
2.500000 GHz
Delta 4 [T1]
-46.65 dB
32.800000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

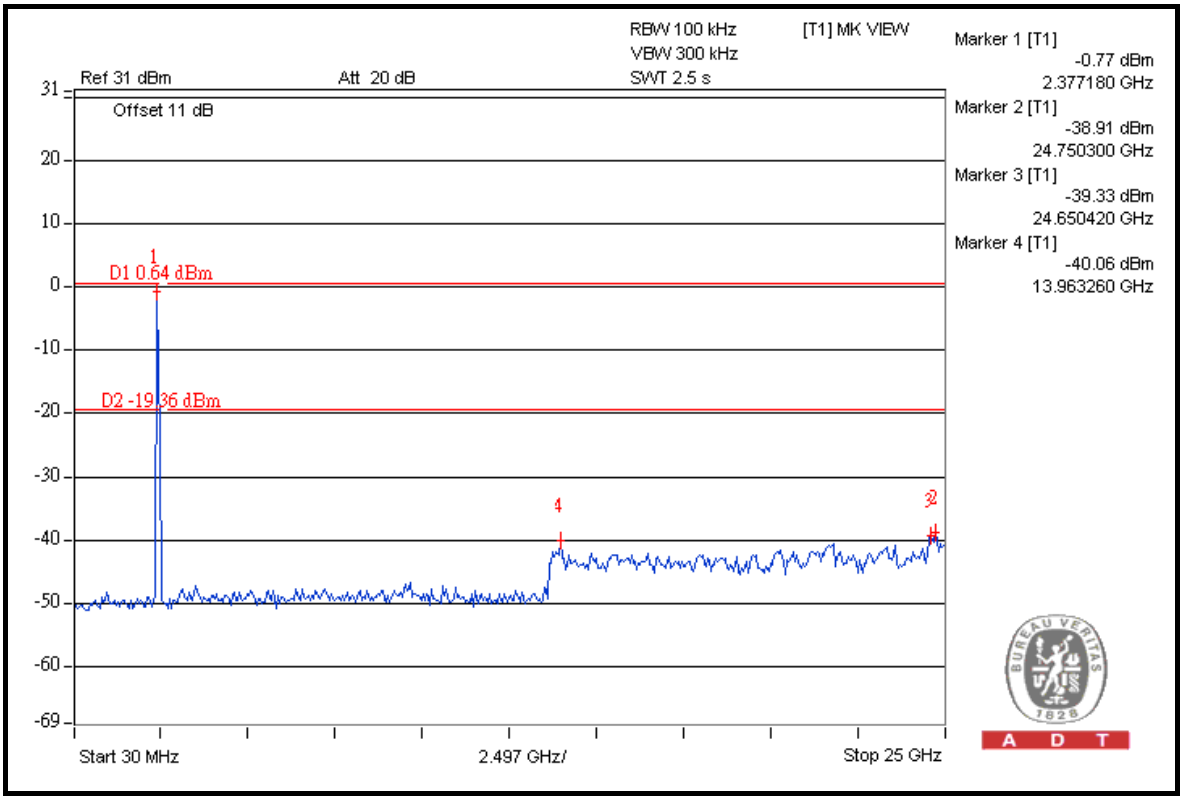

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.56 dBm
D2 -20.56 dBm
Marker 1 [T1]
-0.56 dBm
2.456200 GHz
Marker 2 [T1]
-52.92 dBm
2.483500 GHz
Marker 3 [T1]
-53.74 dBm
2.500000 GHz
Delta 4 [T1]
-52.36 dB
27.300000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

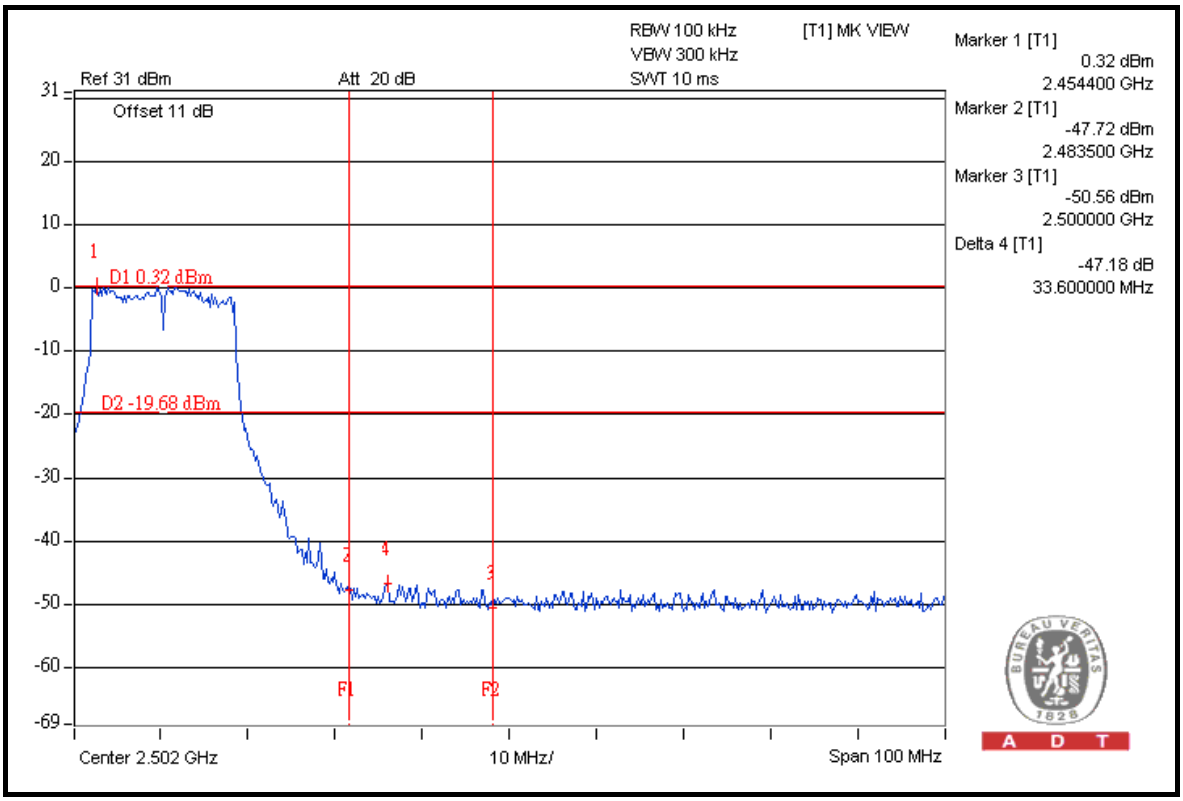

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.68 dBm
D2 -20.68 dBm
Marker 1 [T1]
-1.78 dBm
2.427120 GHz
Marker 2 [T1]
-39.07 dBm
20.205760 GHz
Marker 3 [T1]
-39.57 dBm
24.650420 GHz
Marker 4 [T1]
-39.79 dBm
24.750300 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

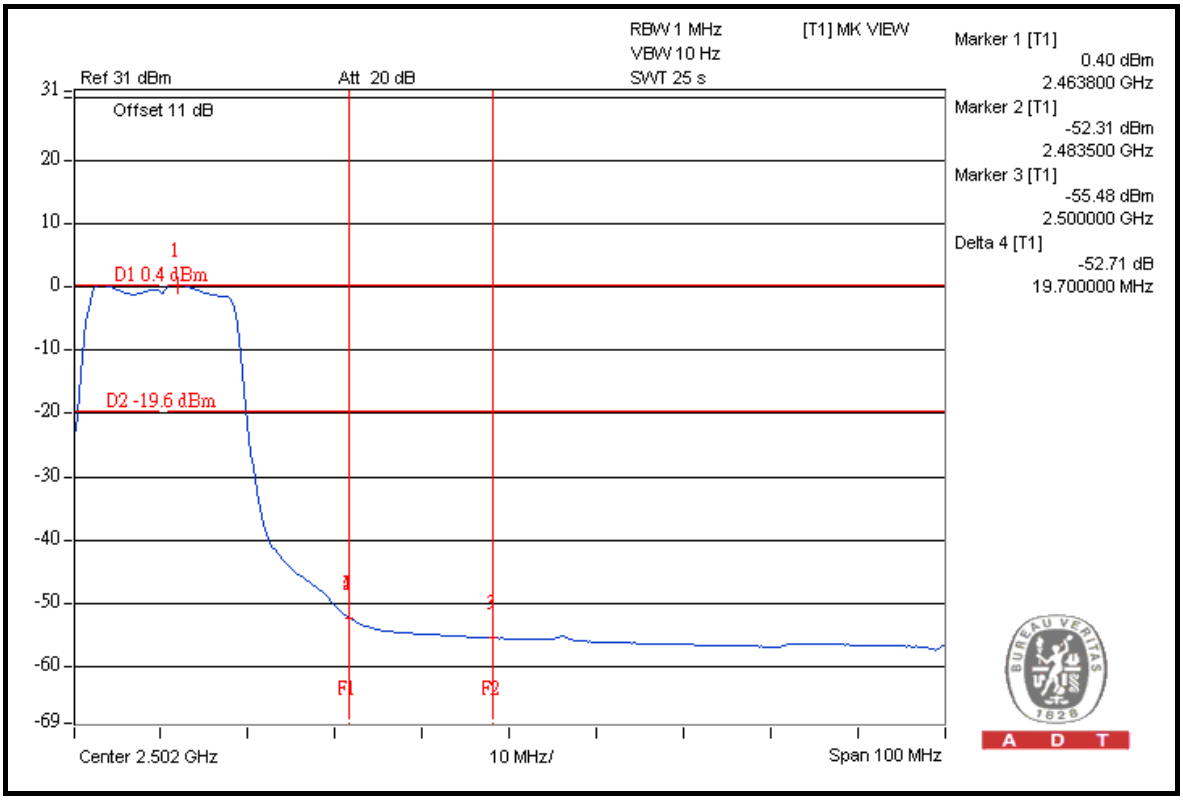
CHAIN 1

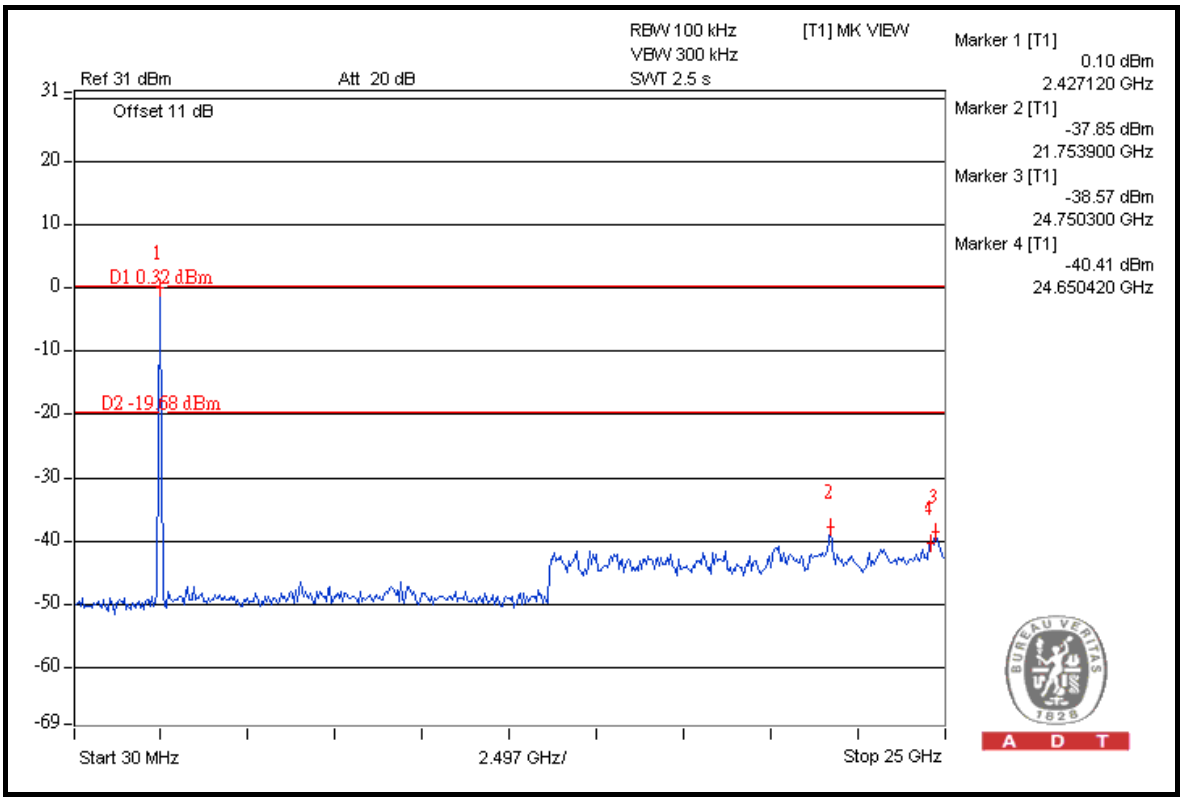

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.64 dBm
D2 -19.36 dBm
Marker 1 [T1]
0.64 dBm
2.409600 GHz
Marker 2 [T1]
-30.51 dBm
2.400000 GHz
Marker 3 [T1]
-46.35 dBm
2.390000 GHz
Delta 4 [T1]
-31.15 dB
-9.600000 MHz
Delta 5 [T1]
-46.13 dB
-20.000000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.58 dBm
D2 -19.42 dBm
Marker 1 [T1]
0.58 dBm
2.410000 GHz
Marker 2 [T1]
-36.83 dBm
2.400000 GHz
Marker 3 [T1]
-49.86 dBm
2.390000 GHz
Delta 4 [T1]
-37.41 dB
-10.000000 MHz
Delta 5 [T1]
-50.44 dB
-20.000000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz

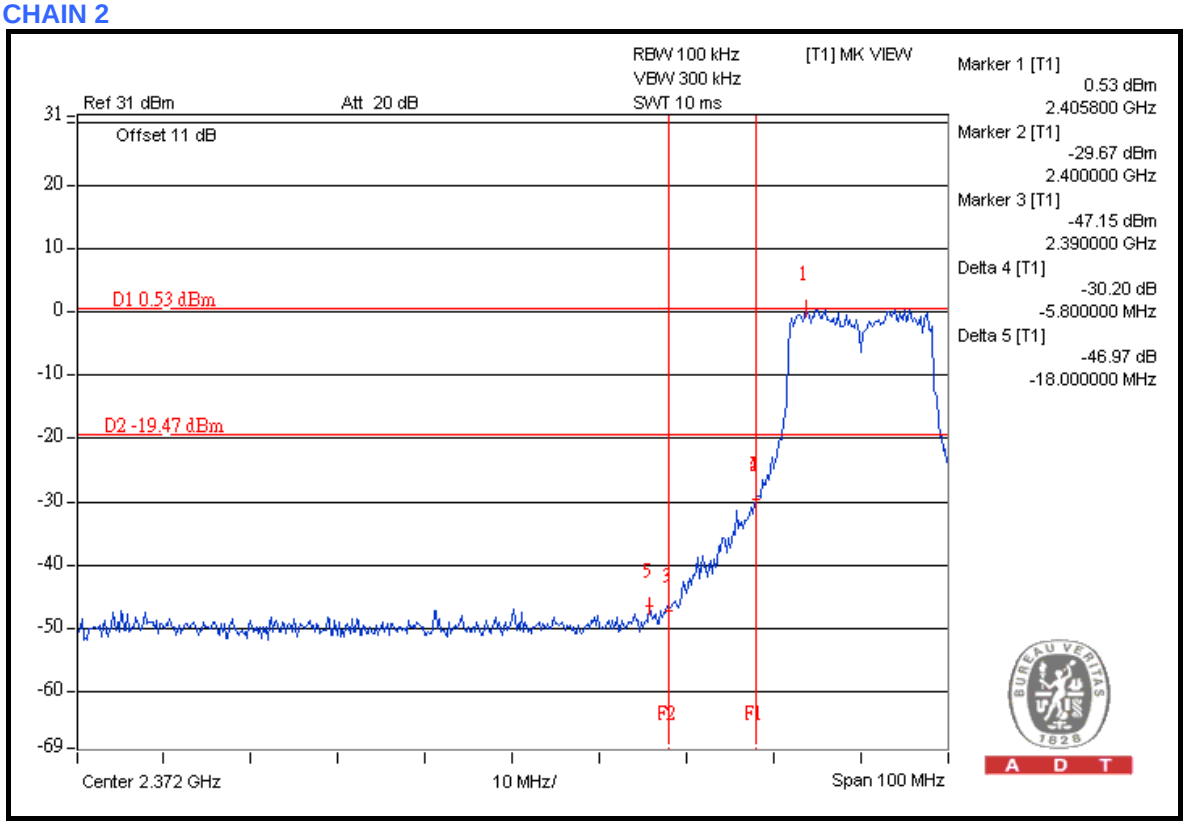

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.64 dBm
D2 -19.36 dBm
Marker 1 [T1]
-0.77 dBm
2.377180 GHz
Marker 2 [T1]
-38.91 dBm
24.750300 GHz
Marker 3 [T1]
-39.33 dBm
24.650420 GHz
Marker 4 [T1]
-40.06 dBm
13.963260 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

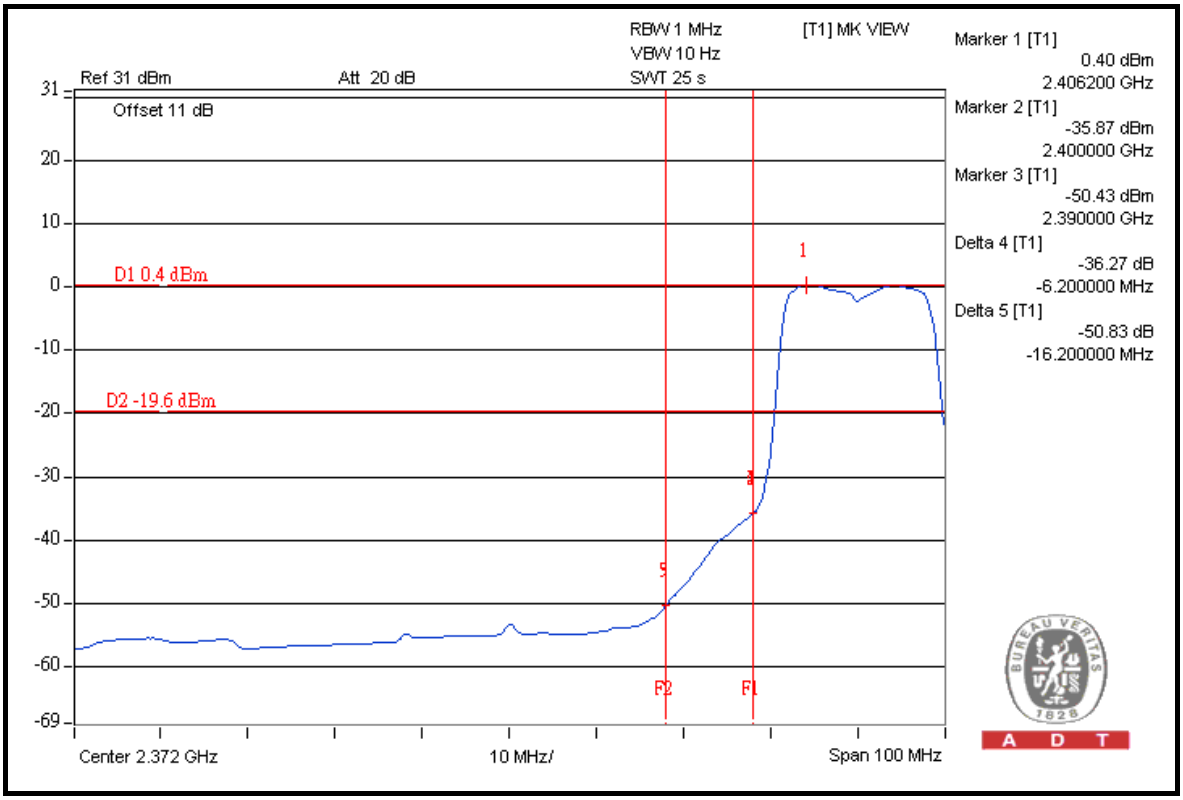

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.32 dBm
D2 -19.68 dBm
Marker 1 [T1]
0.32 dBm
2.454400 GHz
Marker 2 [T1]
-47.72 dBm
2.483500 GHz
Marker 3 [T1]
-50.56 dBm
2.500000 GHz
Delta 4 [T1]
-47.18 dB
33.600000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

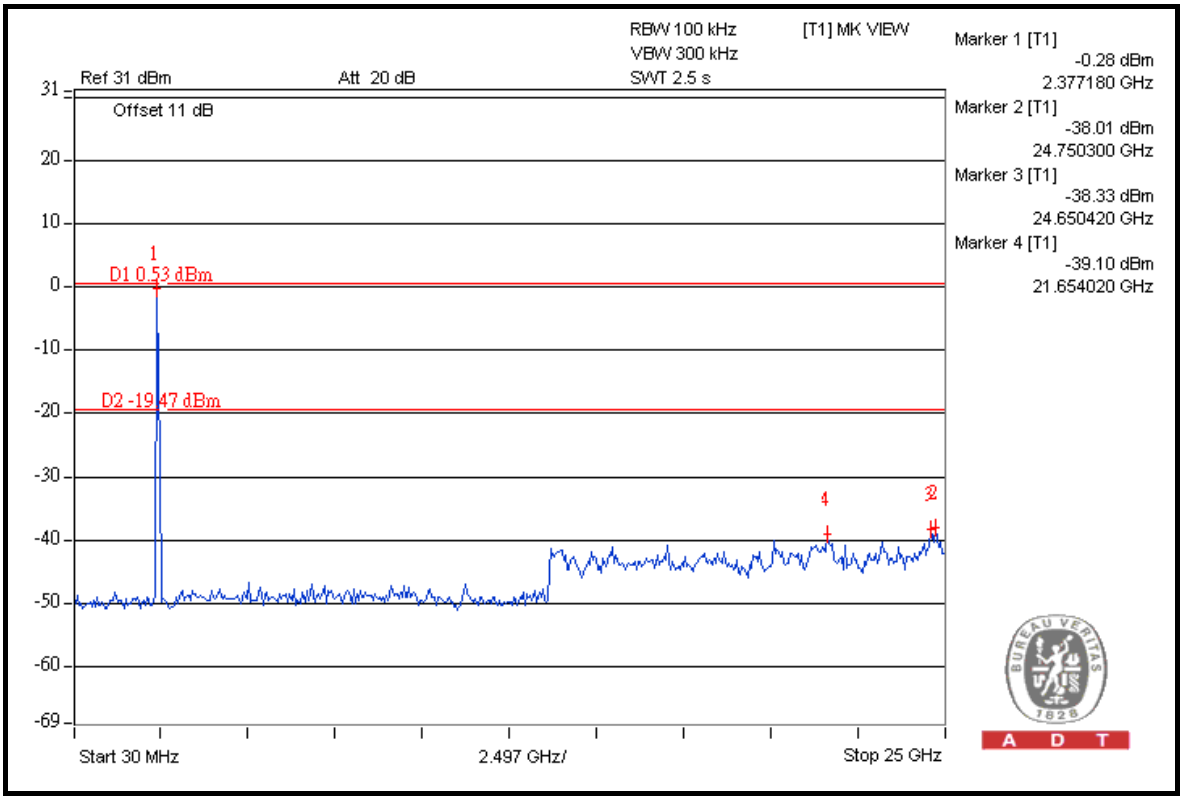

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.4 dBm
D2 -19.6 dBm
Marker 1 [T1]
0.40 dBm
2.463800 GHz
Marker 2 [T1]
-52.31 dBm
2.483500 GHz
Marker 3 [T1]
-55.48 dBm
2.500000 GHz
Delta 4 [T1]
-52.71 dB
19.700000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

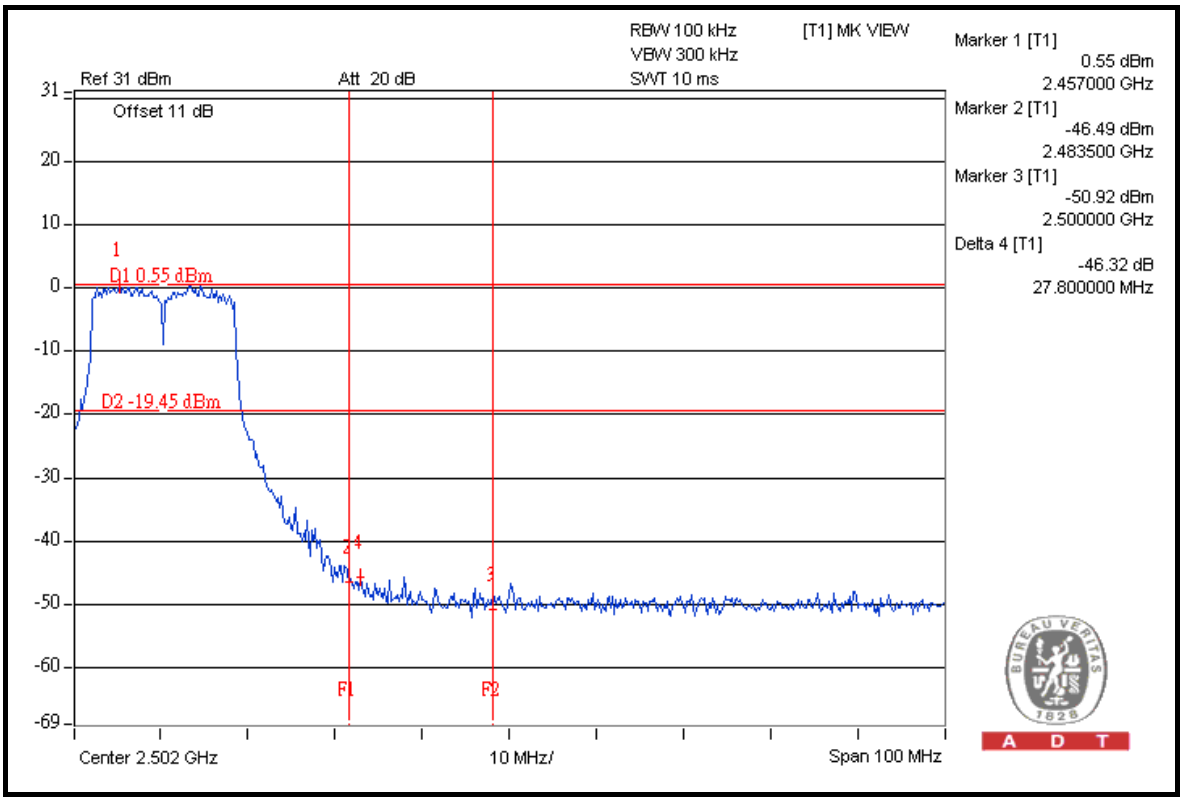

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.32 dBm
D2 -19.68 dBm
Marker 1 [T1]
0.10 dBm
2.427120 GHz
Marker 2 [T1]
-37.85 dBm
21.753900 GHz
Marker 3 [T1]
-38.57 dBm
24.750300 GHz
Marker 4 [T1]
-40.41 dBm
24.650420 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

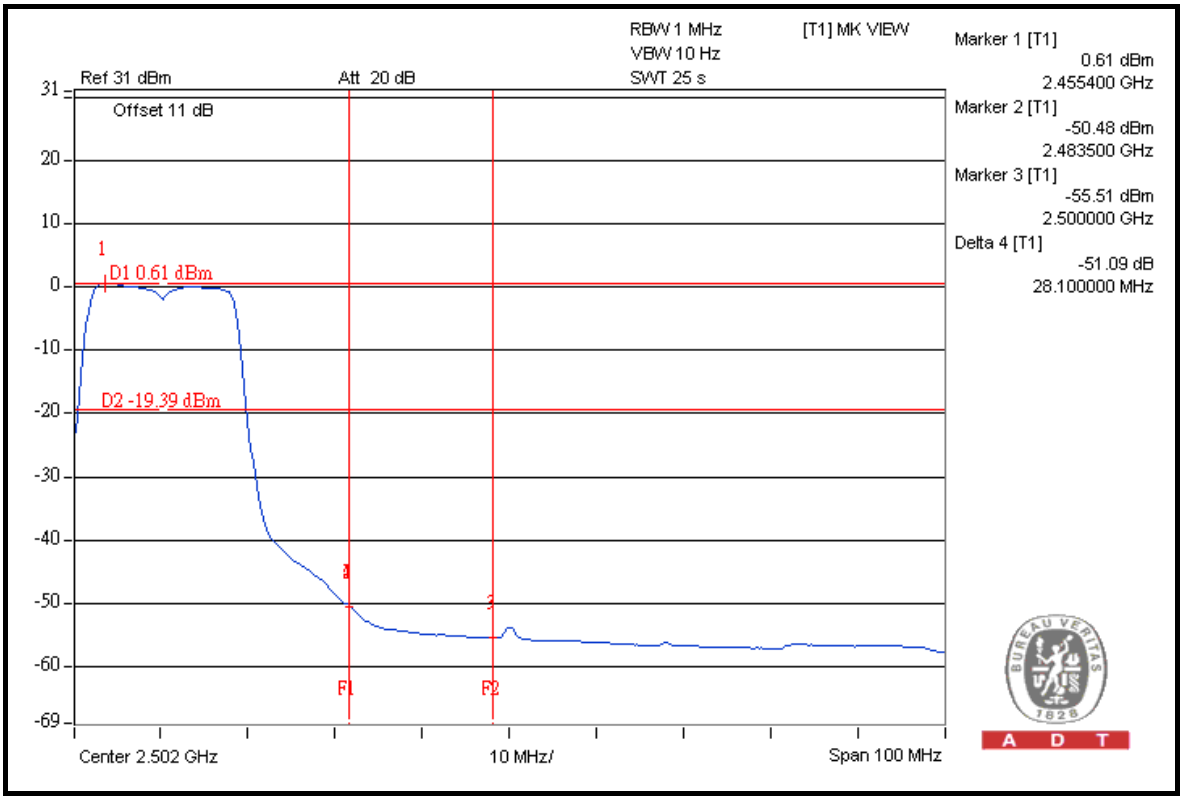
CHAIN 2

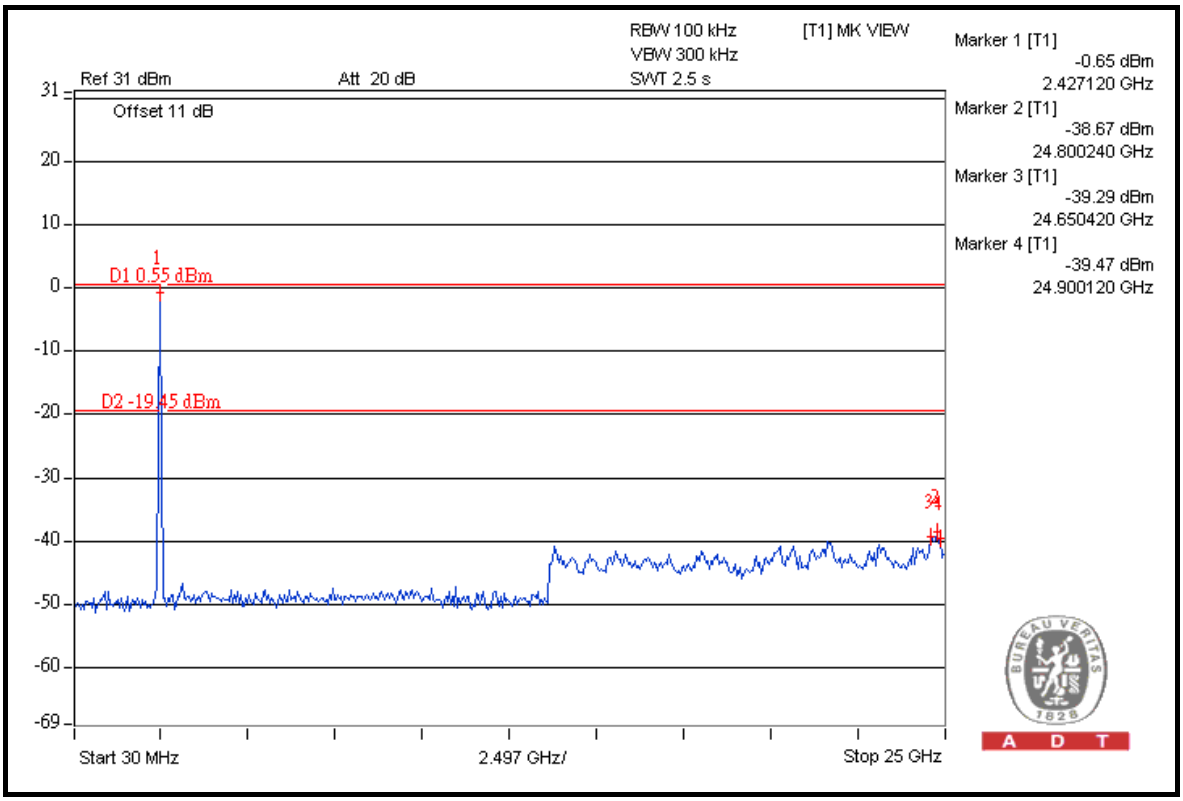

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.53 dBm
D2 -19.47 dBm
Marker 1 [T1]
0.53 dBm
2.405800 GHz
Marker 2 [T1]
-29.67 dBm
2.400000 GHz
Marker 3 [T1]
-47.15 dBm
2.390000 GHz
Delta 4 [T1]
-30.20 dB
-5.800000 MHz
Delta 5 [T1]
-46.97 dB
-18.000000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.4 dBm
D2 -19.6 dBm
Marker 1 [T1]
0.40 dBm
2.406200 GHz
Marker 2 [T1]
-35.87 dBm
2.400000 GHz
Marker 3 [T1]
-50.43 dBm
2.390000 GHz
Delta 4 [T1]
-36.27 dB
-6.200000 MHz
Delta 5 [T1]
-50.83 dB
-16.200000 MHz
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 0.53 dBm
D2 -19.47 dBm
Marker 1 [T1]
-0.28 dBm
2.377180 GHz
Marker 2 [T1]
-38.01 dBm
24.750300 GHz
Marker 3 [T1]
-38.33 dBm
24.650420 GHz
Marker 4 [T1]
-39.10 dBm
21.654020 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 0.55 dBm
D2 -19.45 dBm
Marker 1 [T1]
0.55 dBm
2.457000 GHz
Marker 2 [T1]
-46.49 dBm
2.483500 GHz
Marker 3 [T1]
-50.92 dBm
2.500000 GHz
Delta 4 [T1]
-46.32 dB
27.800000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.61 dBm
D2 -19.39 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
0.61 dBm
2.455400 GHz
Marker 2 [T1]
-50.48 dBm
2.483500 GHz
Marker 3 [T1]
-55.51 dBm
2.500000 GHz
Delta 4 [T1]
-51.09 dB
28.100000 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.55 dBm
D2 -19.45 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-0.65 dBm
2.427120 GHz
Marker 2 [T1]
-38.67 dBm
24.800240 GHz
Marker 3 [T1]
-39.29 dBm
24.650420 GHz
Marker 4 [T1]
-39.47 dBm
24.900120 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)	112.3	44.90	67.40	74.00
2412.00 (AV)	102.0	49.38	52.62	54.00

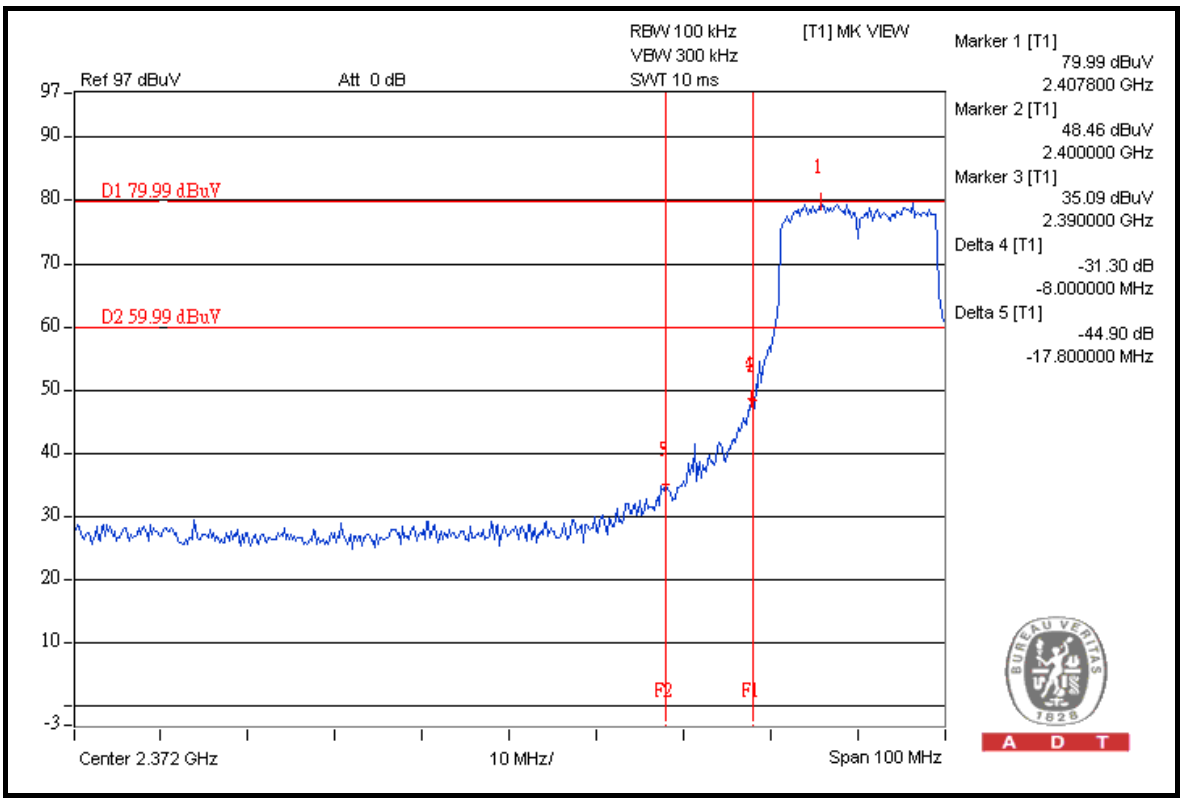
RESTRICT BAND (2483.5 ~ 2500 MHz)

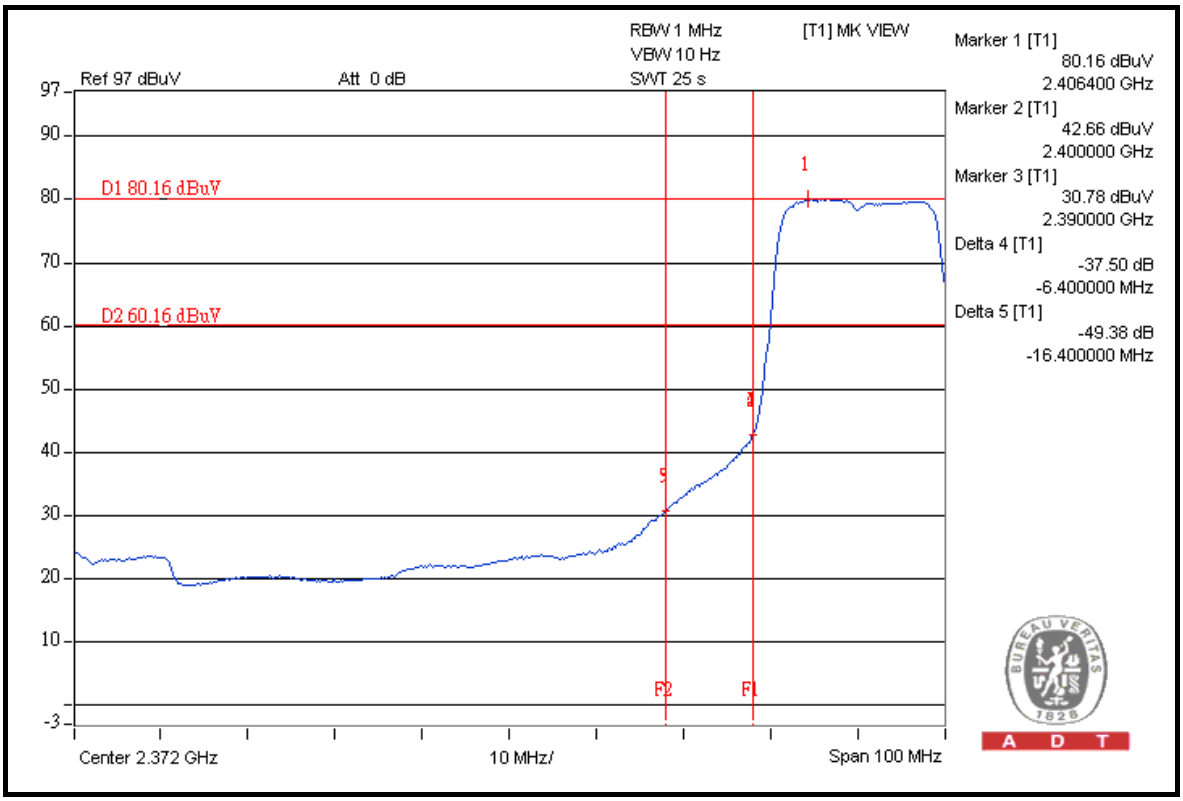
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	113.5	41.87	71.63	74.00
2462.00 (AV)	102.5	52.43	50.07	54.00

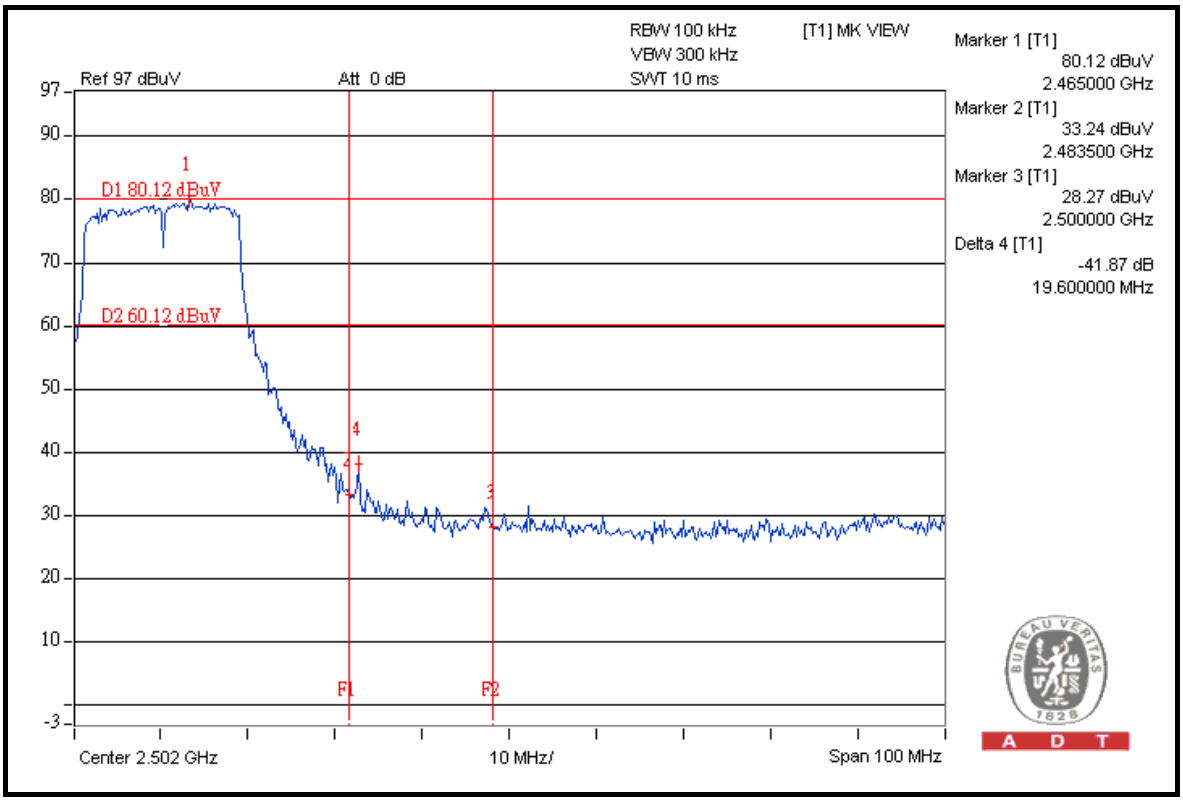
NOTE:

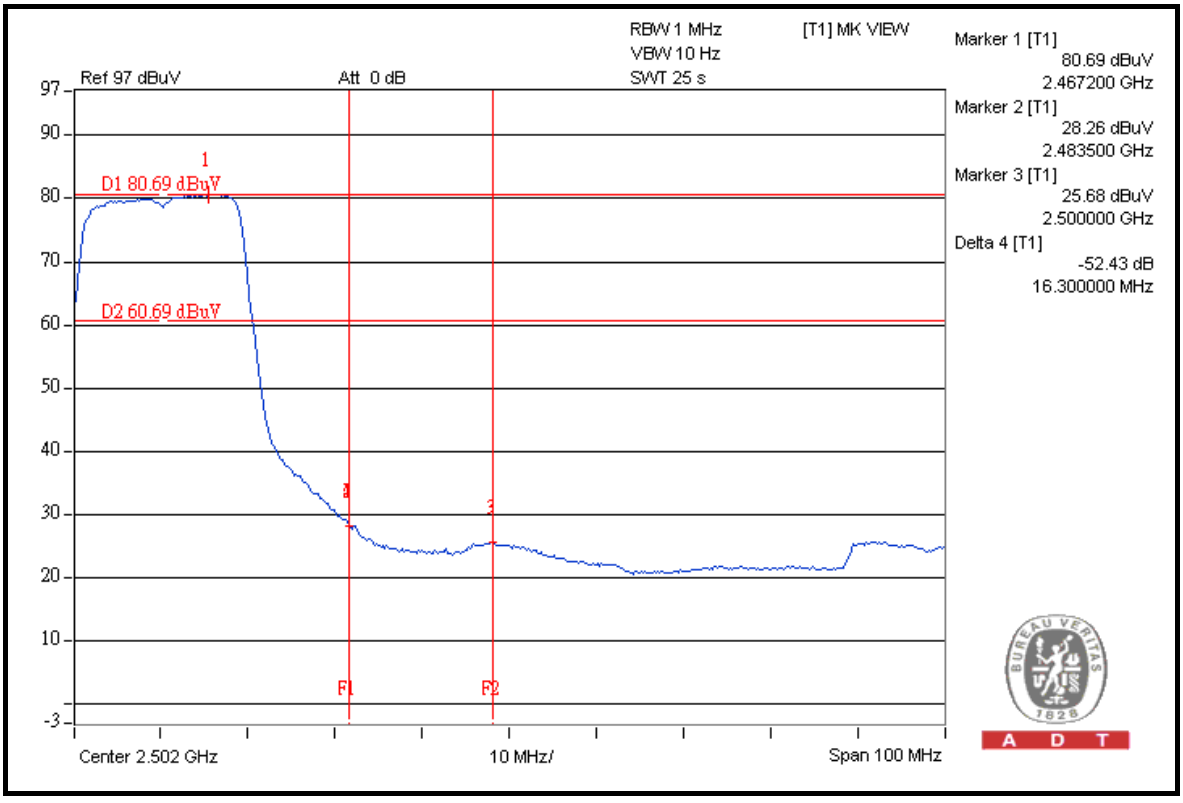
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (THREE CHAINS ON)



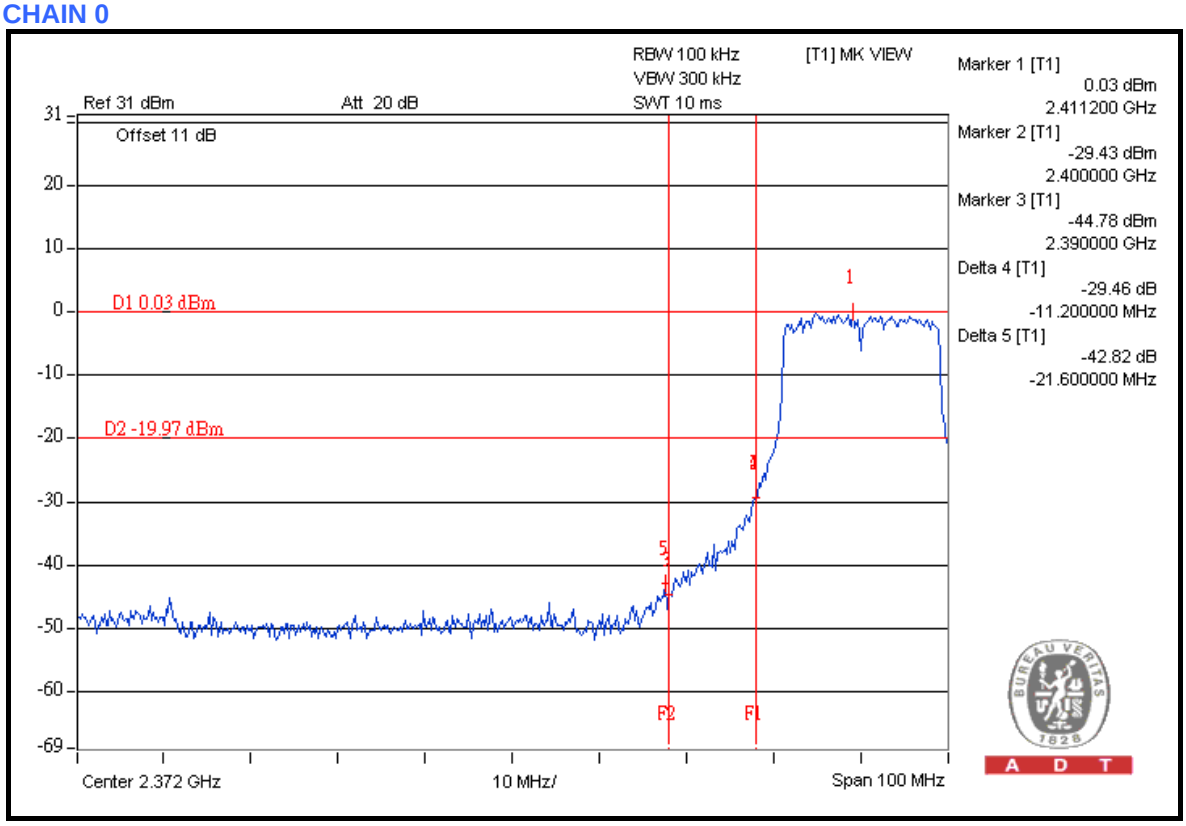


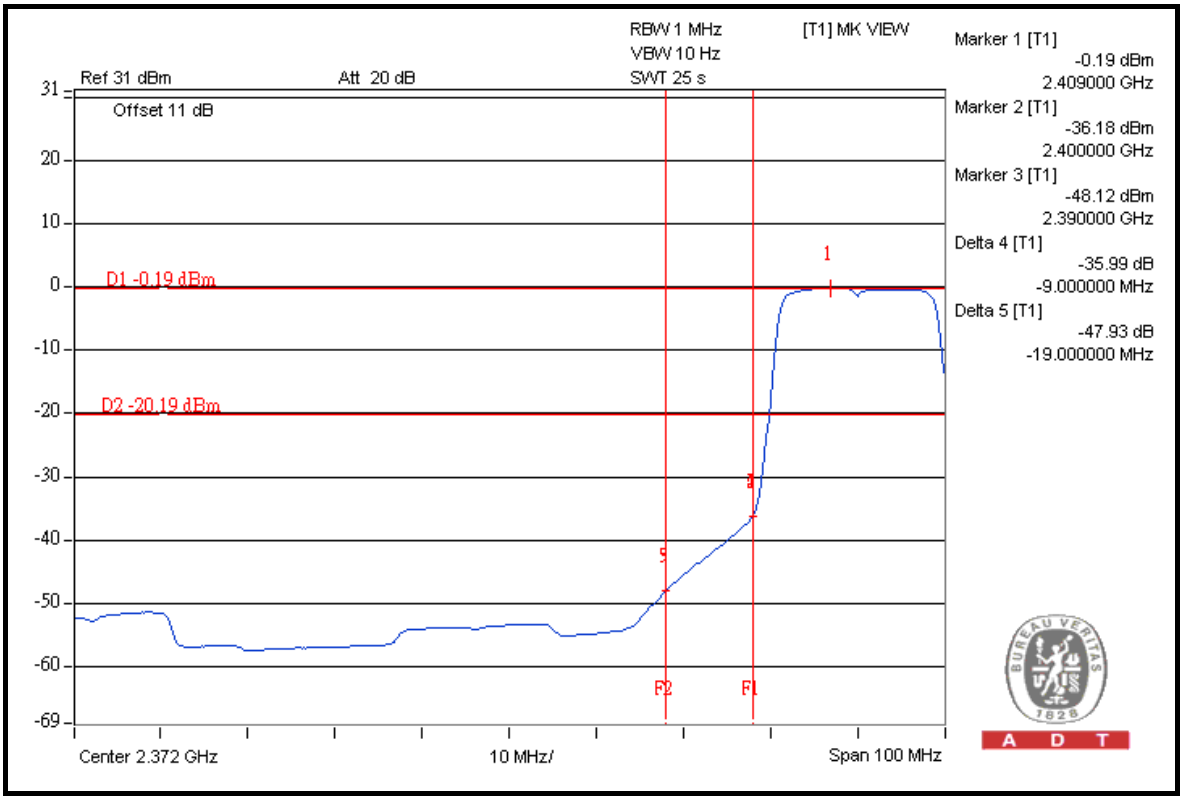

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
80.12 dBuV
2.465000 GHz
Marker 2 [T1]
33.24 dBuV
2.483500 GHz
Marker 3 [T1]
28.27 dBuV
2.500000 GHz
Delta 4 [T1]
-41.87 dB
19.600000 MHz
D1 80.12 dBuV
D2 60.12 dBuV
97
90
80
70
60
50
40
30
20
10
-3
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

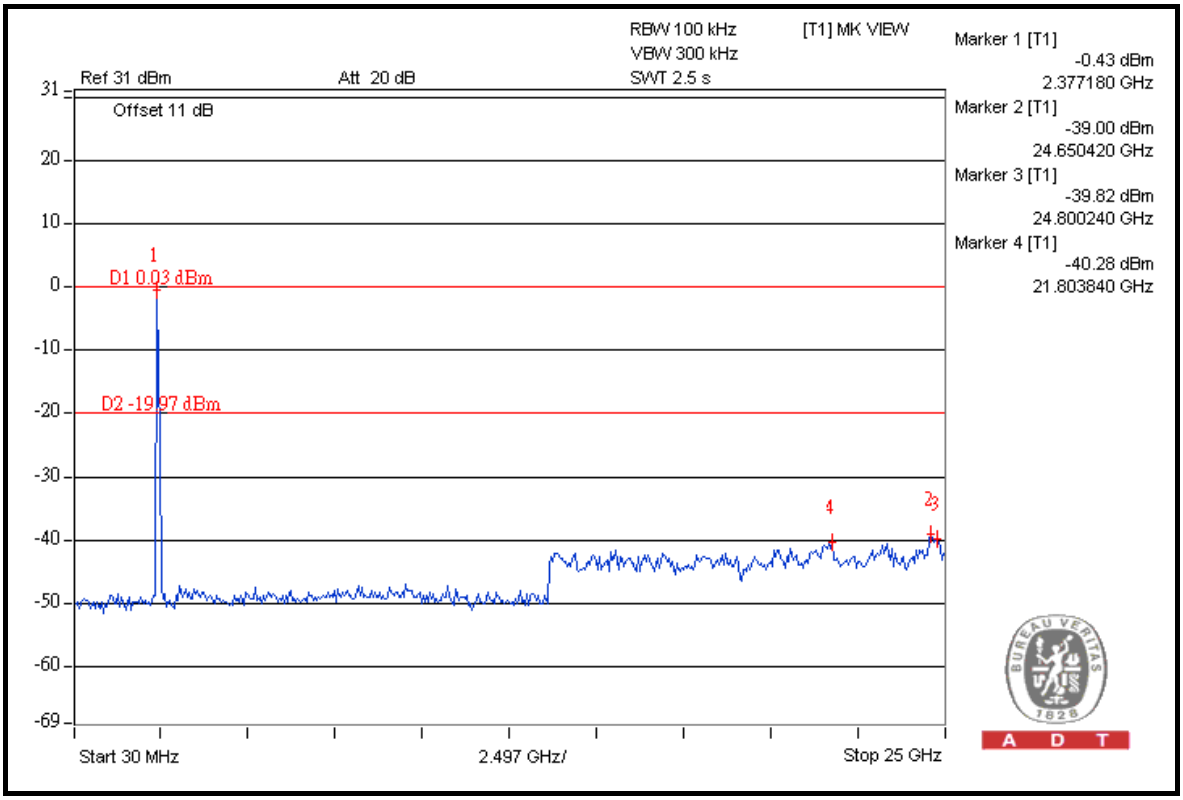

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
Marker 1 [T1]
80.69 dBuV
2.467200 GHz
Marker 2 [T1]
28.26 dBuV
2.483500 GHz
Marker 3 [T1]
25.68 dBuV
2.500000 GHz
Delta 4 [T1]
-52.43 dB
16.300000 MHz
D1 80.69 dBuV
D2 60.69 dBuV
97
90
80
70
60
50
40
30
20
10
-3
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

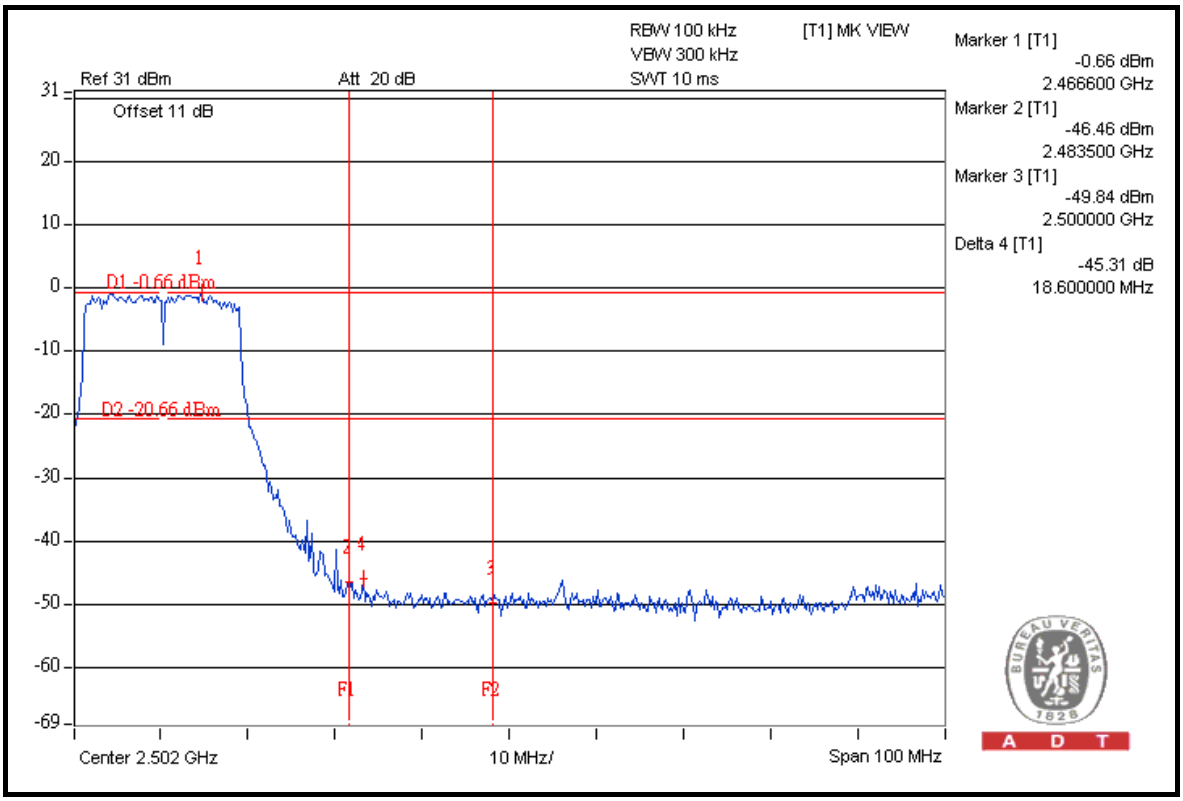
FOR CONDUCTED MEASURED

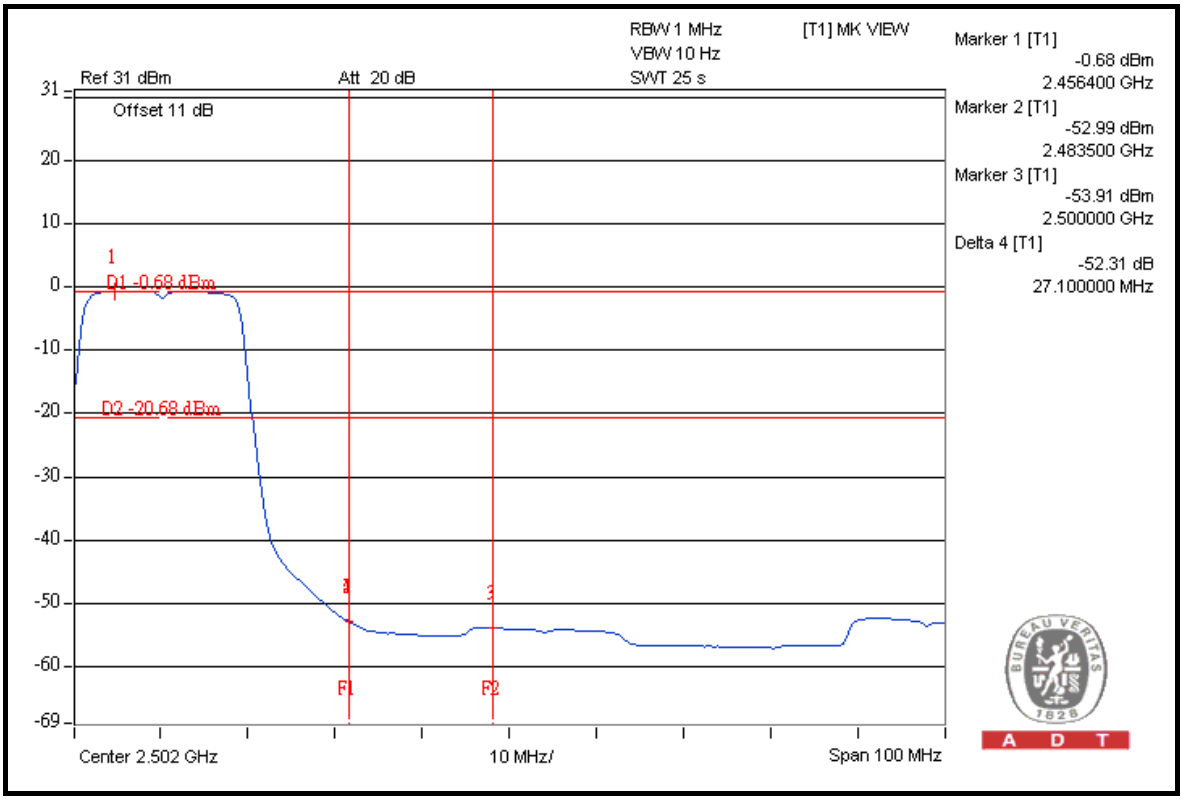
CHAIN 0

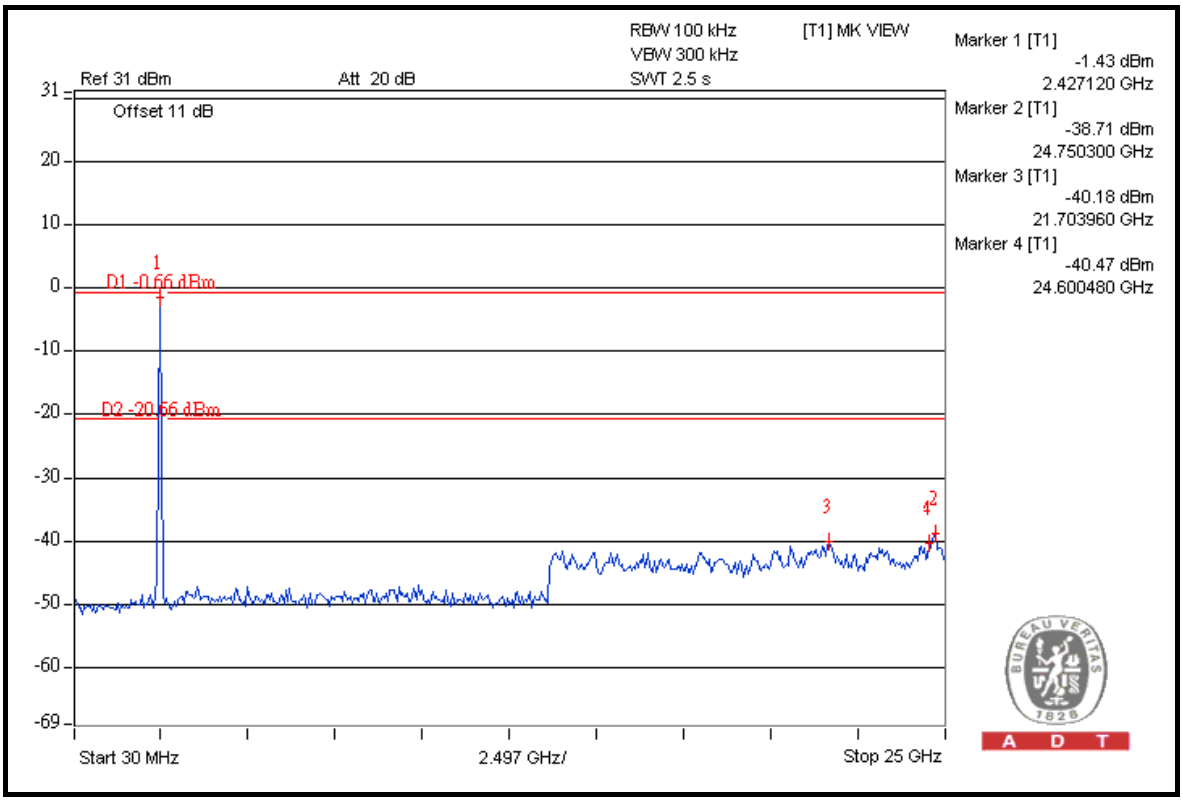




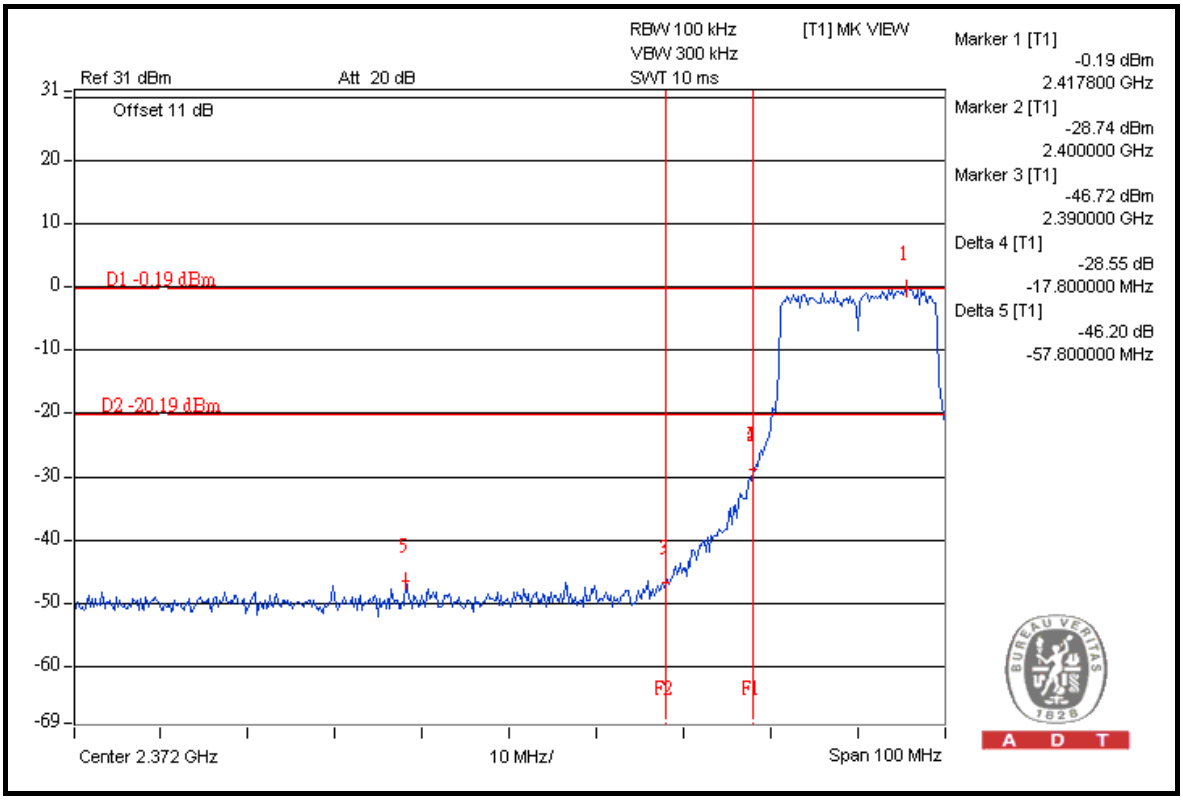

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.03 dBm
D2 -19.97 dBm
Marker 1 [T1]
-0.43 dBm
2.377180 GHz
Marker 2 [T1]
-39.00 dBm
24.650420 GHz
Marker 3 [T1]
-39.82 dBm
24.800240 GHz
Marker 4 [T1]
-40.28 dBm
21.803840 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

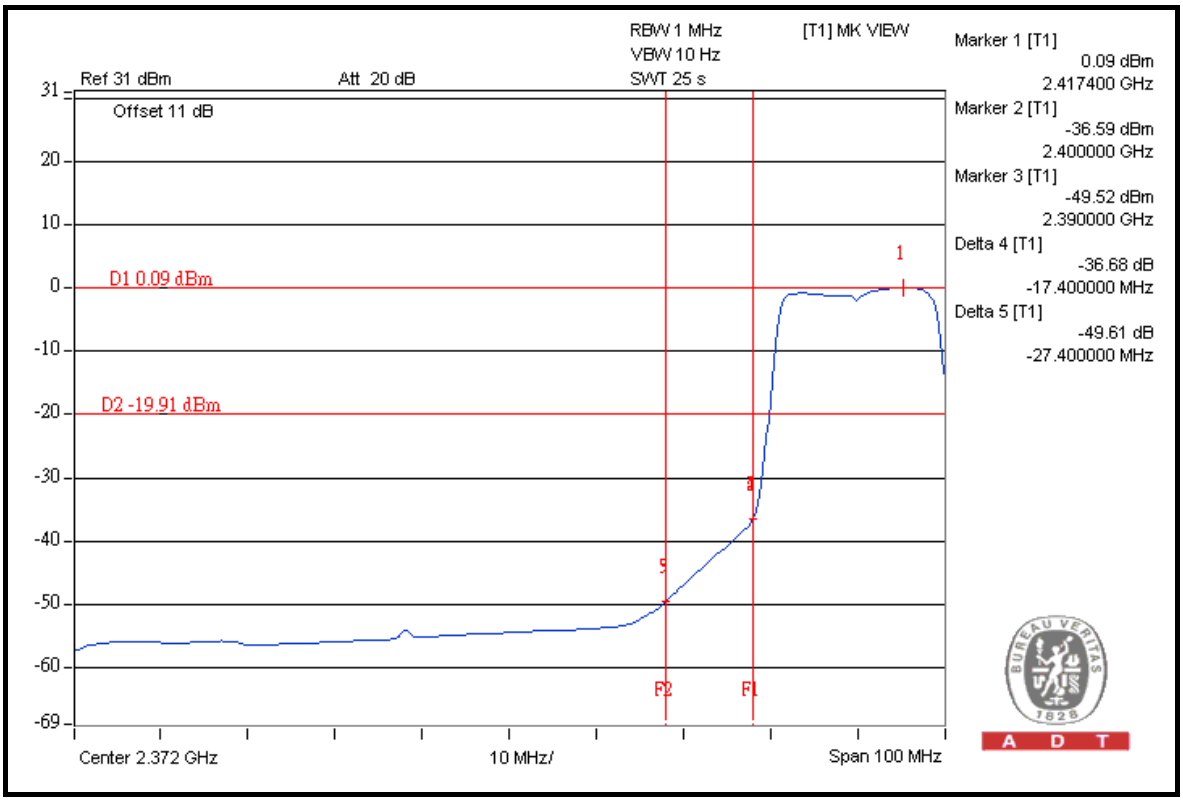

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.66 dBm
D2 -20.66 dBm
Marker 1 [T1]
-0.66 dBm
2.466600 GHz
Marker 2 [T1]
-46.46 dBm
2.483500 GHz
Marker 3 [T1]
-49.84 dBm
2.500000 GHz
Delta 4 [T1]
-45.31 dB
18.600000 MHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

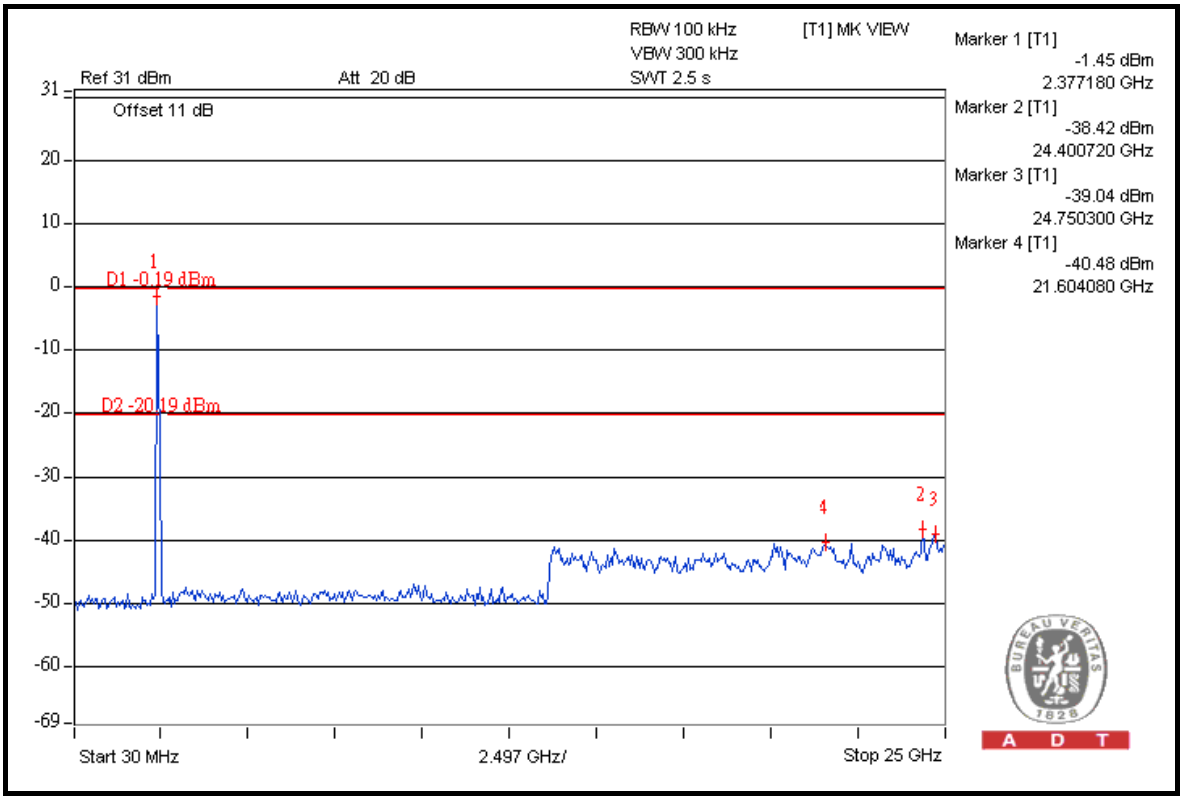

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.68 dBm
D2 -20.68 dBm
Marker 1 [T1]
-0.68 dBm
2.456400 GHz
Marker 2 [T1]
-52.99 dBm
2.483500 GHz
Marker 3 [T1]
-53.91 dBm
2.500000 GHz
Delta 4 [T1]
-52.31 dB
27.100000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

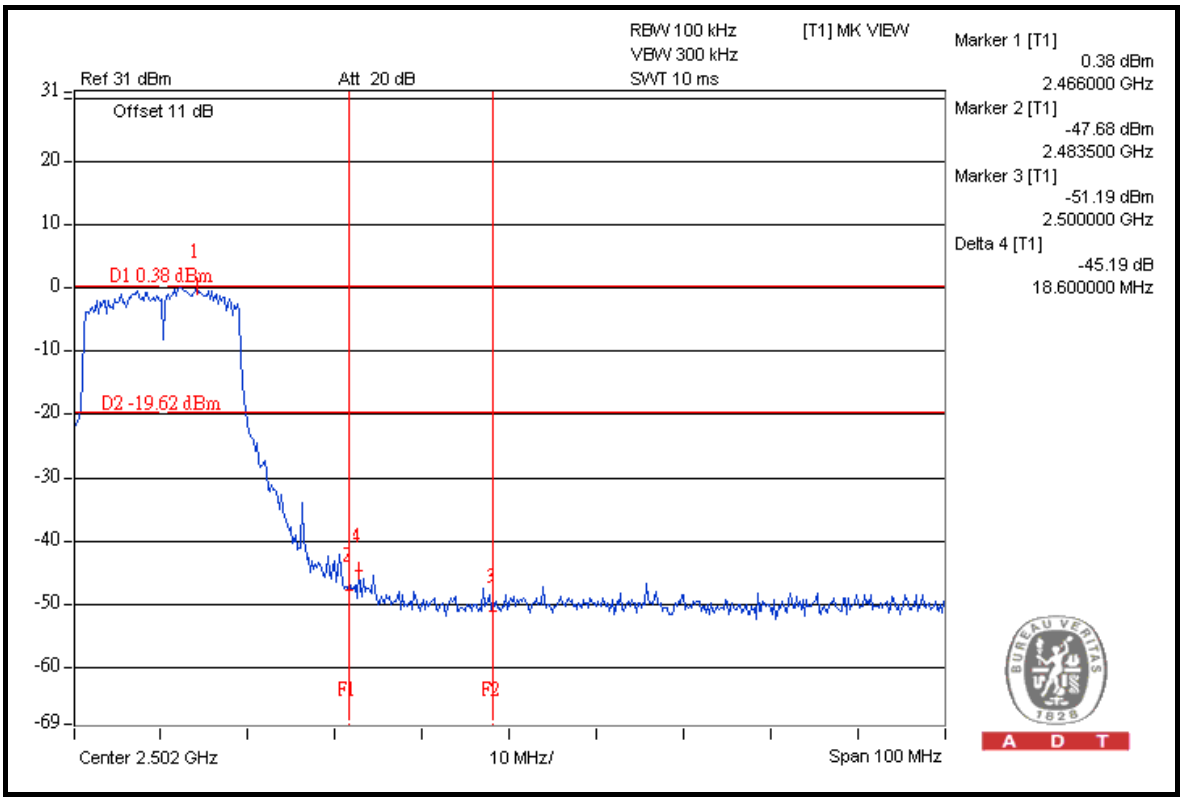

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -1.66 dBm
D2 -20.66 dBm
Marker 1 [T1]
-1.43 dBm
2.427120 GHz
Marker 2 [T1]
-38.71 dBm
24.750300 GHz
Marker 3 [T1]
-40.18 dBm
21.703960 GHz
Marker 4 [T1]
-40.47 dBm
24.600480 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

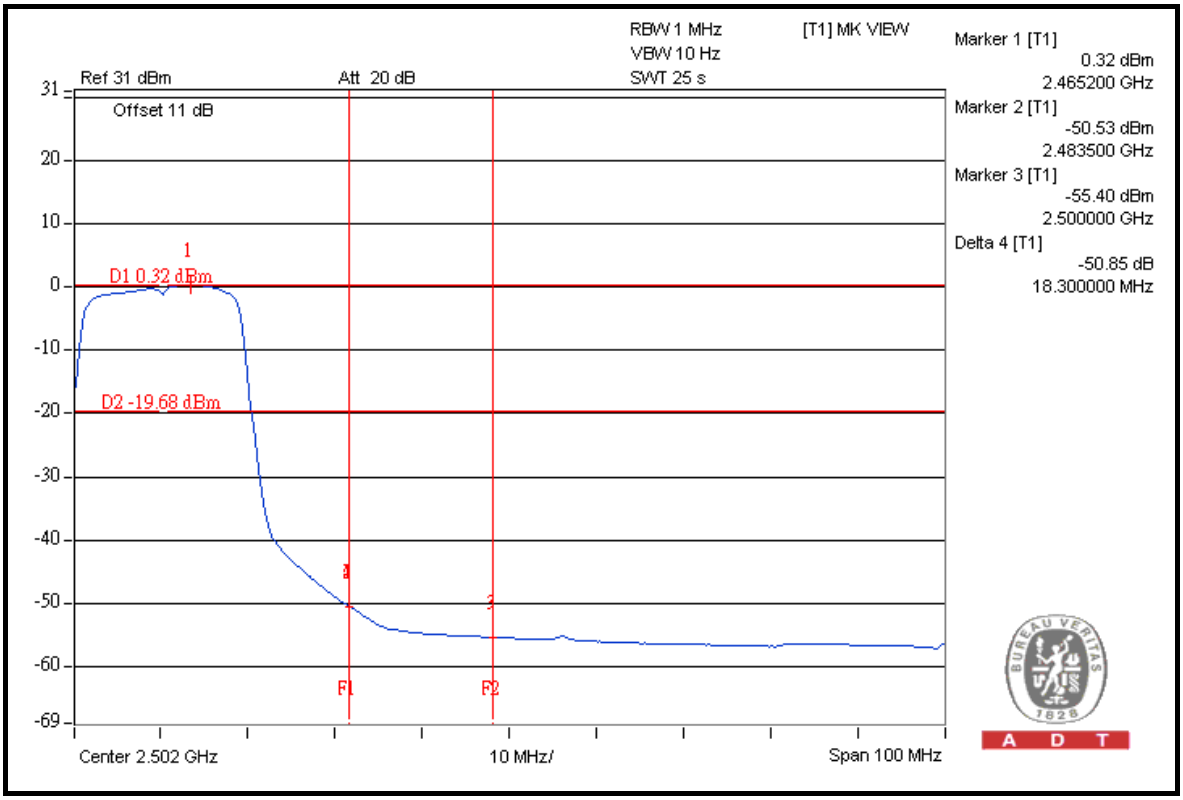
CHAIN 1

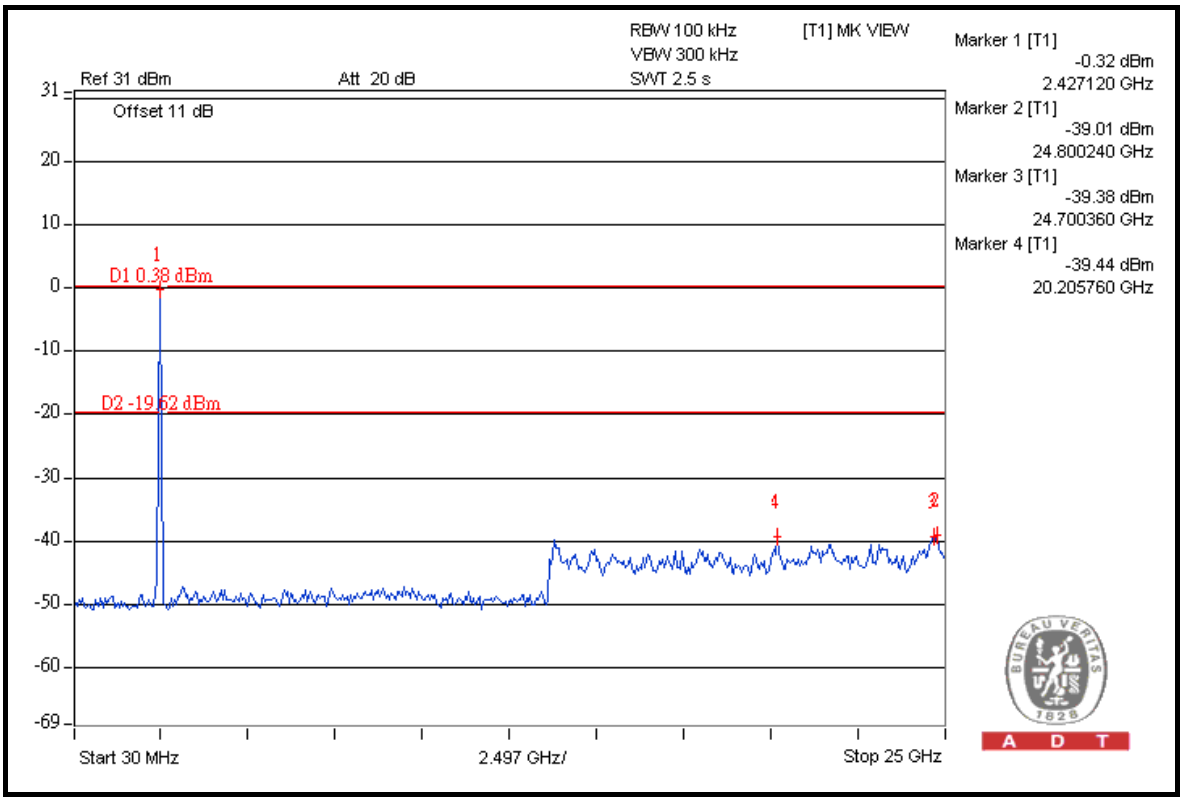

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.19 dBm
D2 -20.19 dBm
Marker 1 [T1]
-0.19 dBm
2.417800 GHz
Marker 2 [T1]
-28.74 dBm
2.400000 GHz
Marker 3 [T1]
-46.72 dBm
2.390000 GHz
Delta 4 [T1]
-28.55 dB
-17.800000 MHz
Delta 5 [T1]
-46.20 dB
-57.800000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.09 dBm
D2 -19.91 dBm
Marker 1 [T1]
0.09 dBm
2.417400 GHz
Marker 2 [T1]
-36.59 dBm
2.400000 GHz
Marker 3 [T1]
-49.52 dBm
2.390000 GHz
Delta 4 [T1]
-36.68 dB
-17.400000 MHz
Delta 5 [T1]
-49.61 dB
-27.400000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz

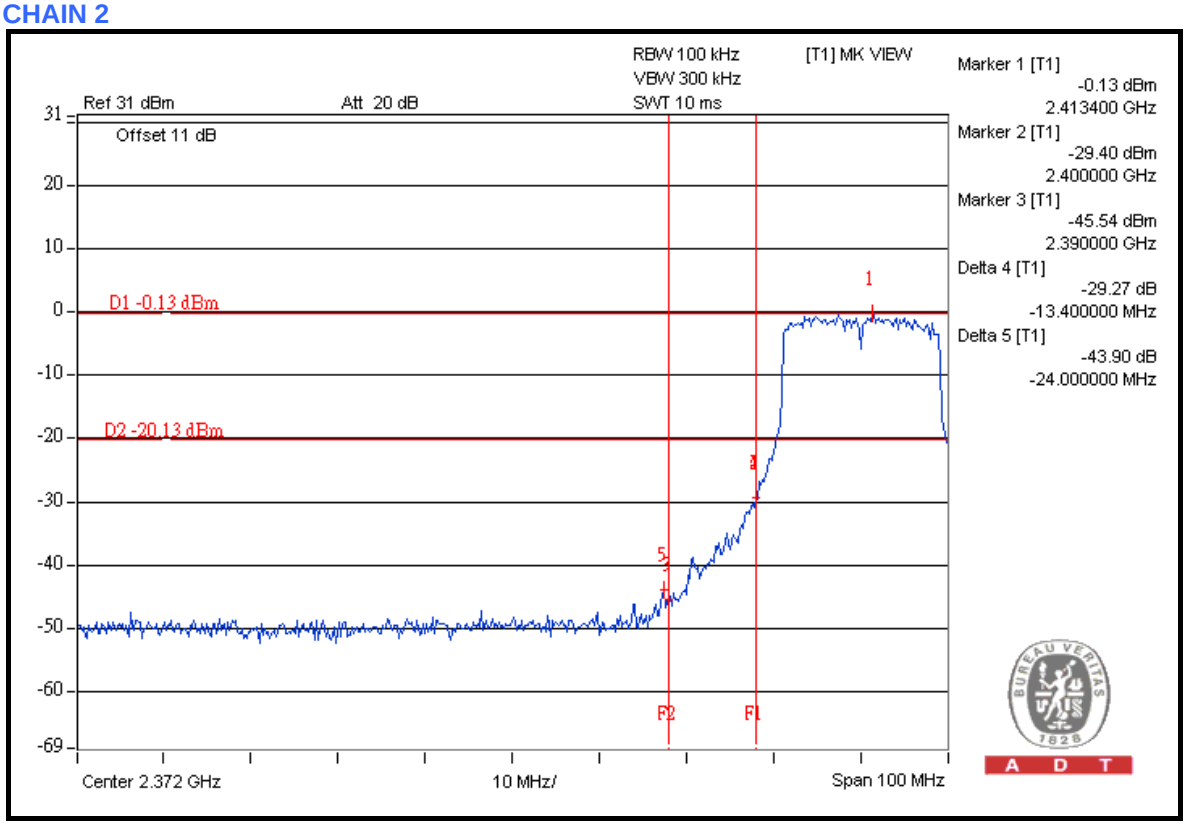

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.19 dBm
D2 -20.19 dBm
Marker 1 [T1]
-1.45 dBm
2.377180 GHz
Marker 2 [T1]
-38.42 dBm
24.400720 GHz
Marker 3 [T1]
-39.04 dBm
24.750300 GHz
Marker 4 [T1]
-40.48 dBm
21.604080 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

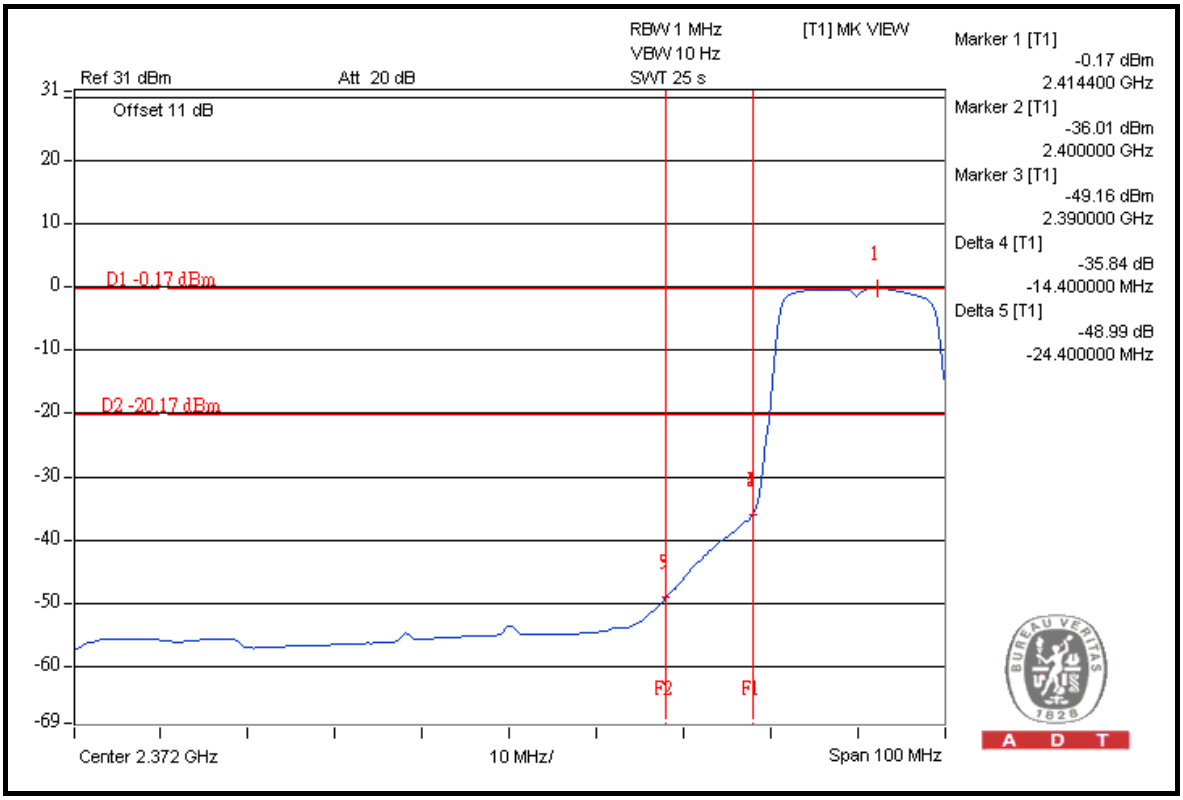

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.38 dBm
D2 -19.62 dBm
Marker 1 [T1]
0.38 dBm
2.466000 GHz
Marker 2 [T1]
-47.68 dBm
2.483500 GHz
Marker 3 [T1]
-51.19 dBm
2.500000 GHz
Delta 4 [T1]
-45.19 dB
18.600000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

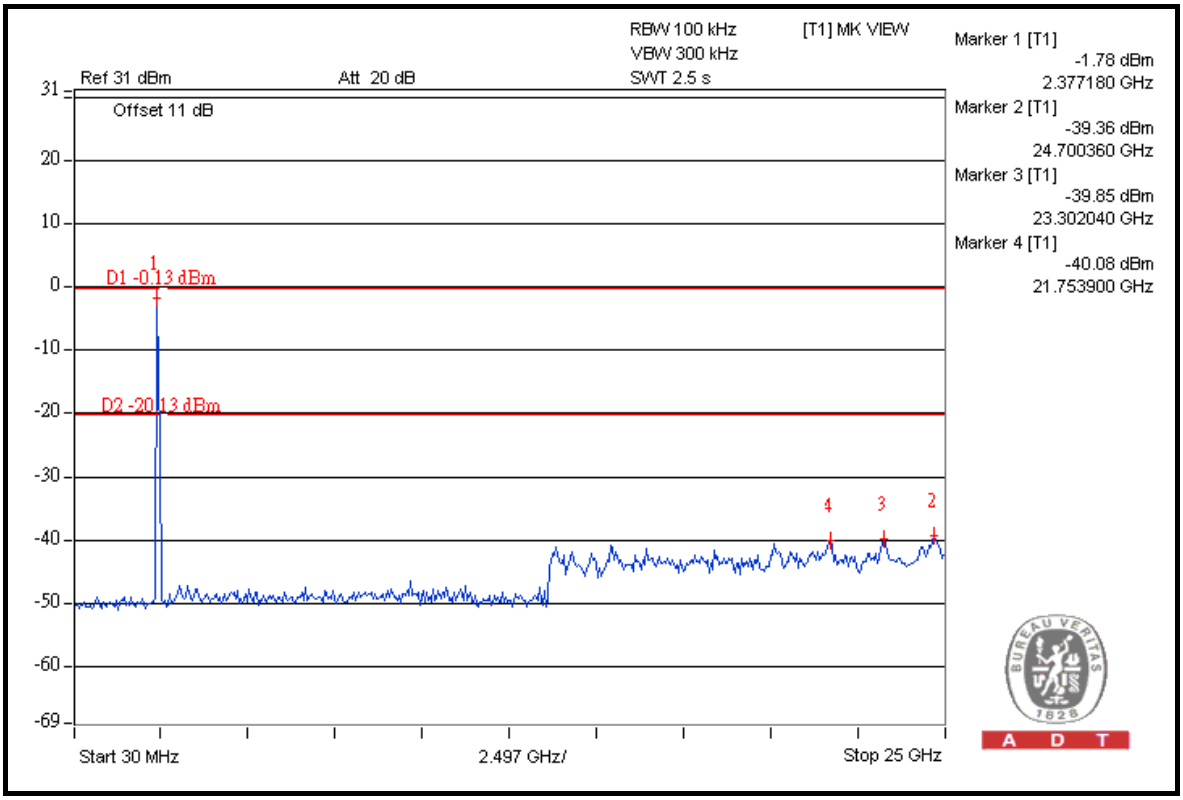

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.32 dBm
D2 -19.68 dBm
Marker 1 [T1]
0.32 dBm
2.465200 GHz
Marker 2 [T1]
-50.53 dBm
2.483500 GHz
Marker 3 [T1]
-55.40 dBm
2.500000 GHz
Delta 4 [T1]
-50.85 dB
18.300000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

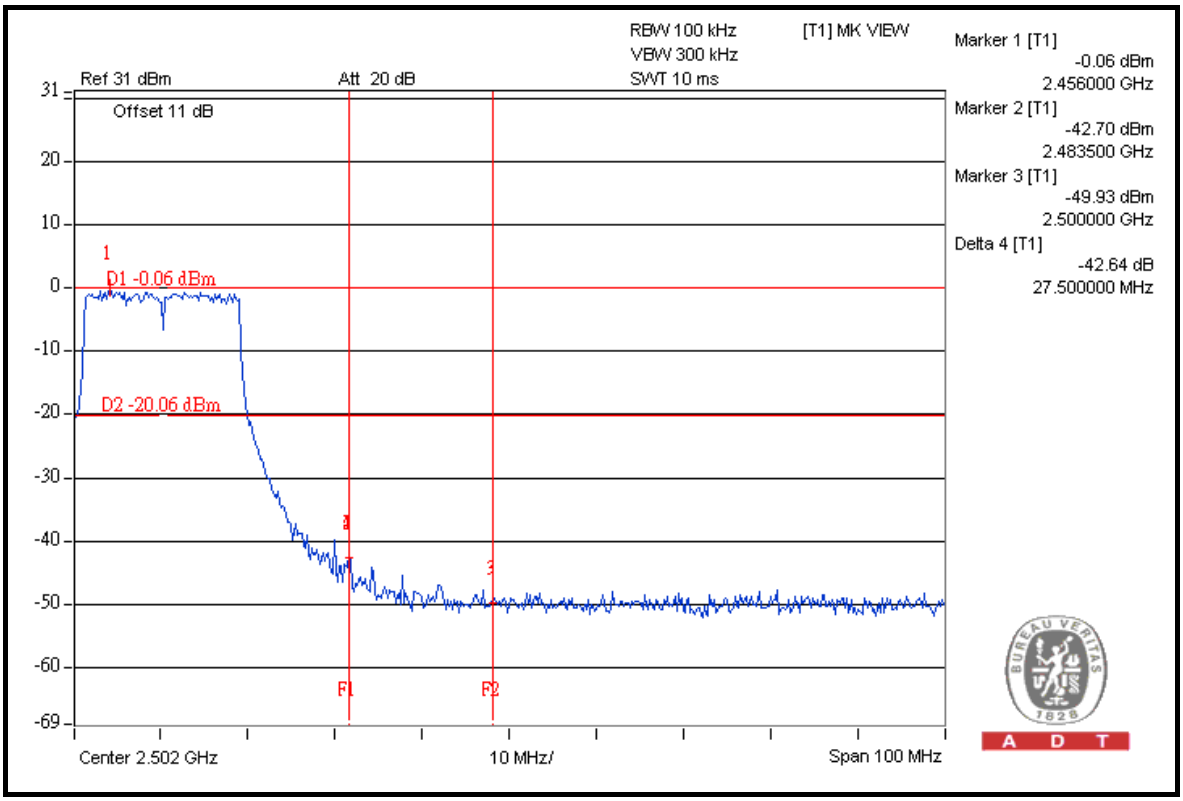

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.38 dBm
D2 -19.62 dBm
Marker 1 [T1]
-0.32 dBm
2.427120 GHz
Marker 2 [T1]
-39.01 dBm
24.800240 GHz
Marker 3 [T1]
-39.38 dBm
24.700360 GHz
Marker 4 [T1]
-39.44 dBm
20.205760 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

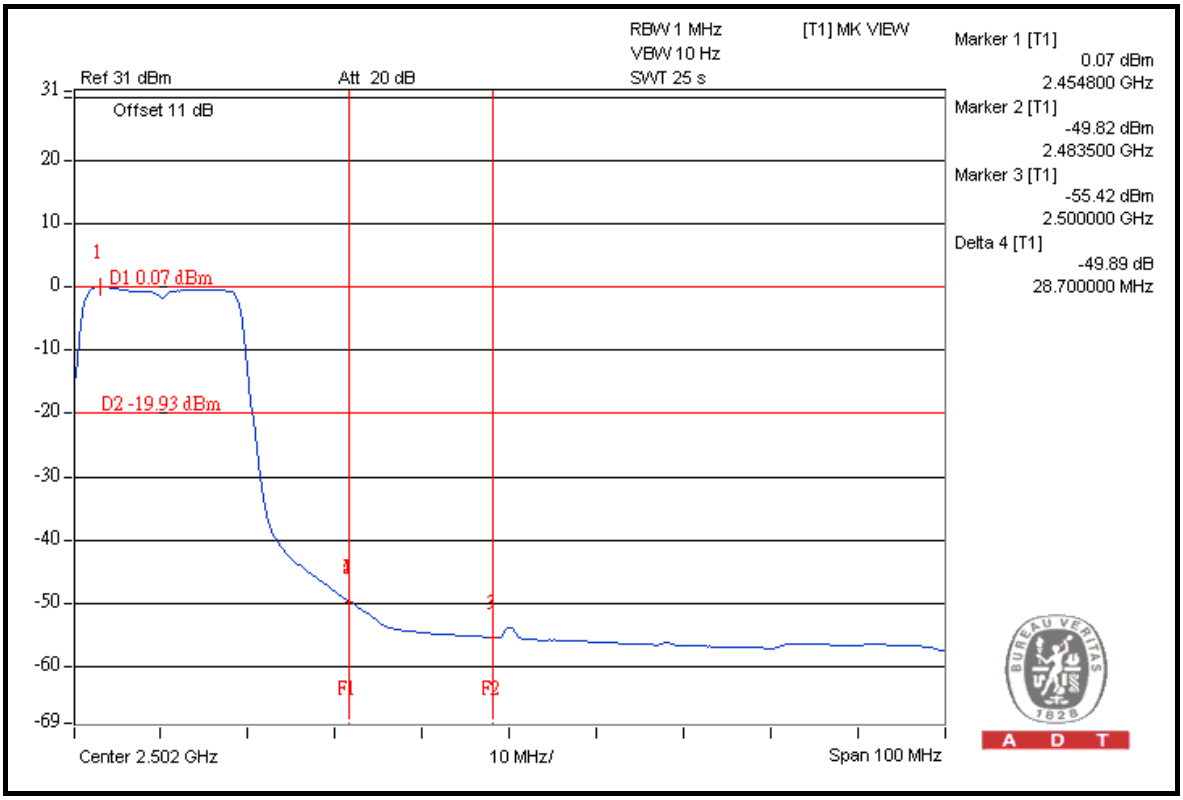
CHAIN 2

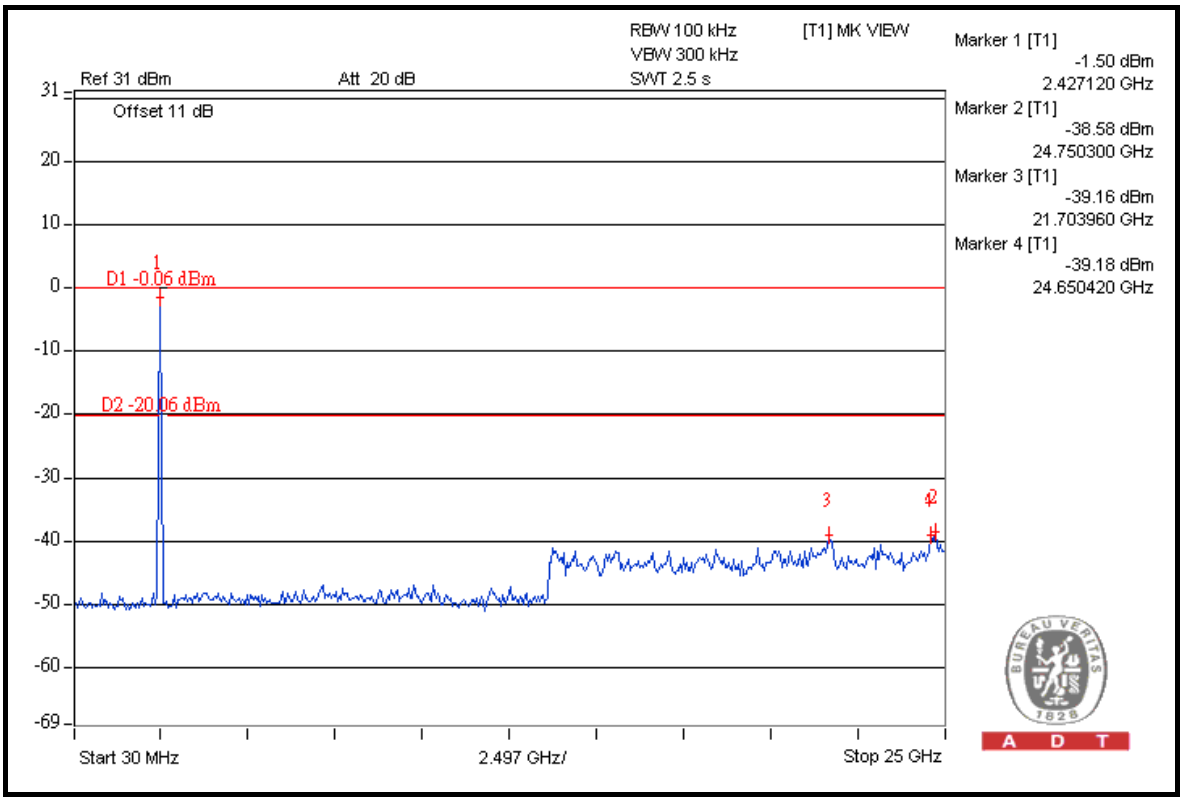

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -0.13 dBm
D2 -20.13 dBm
Marker 1 [T1]
-0.13 dBm
2.413400 GHz
Marker 2 [T1]
-29.40 dBm
2.400000 GHz
Marker 3 [T1]
-45.54 dBm
2.390000 GHz
Delta 4 [T1]
-29.27 dB
-13.400000 MHz
Delta 5 [T1]
-43.90 dB
-24.000000 MHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[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
2.414400 GHz
Marker 2 [T1]
-36.01 dBm
2.400000 GHz
Marker 3 [T1]
-49.16 dBm
2.390000 GHz
Delta 4 [T1]
-35.84 dB
-14.400000 MHz
Delta 5 [T1]
-48.99 dB
-24.400000 MHz
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 -0.13 dBm
D2 -20.13 dBm
Marker 1 [T1]
-1.78 dBm
2.377180 GHz
Marker 2 [T1]
-39.36 dBm
24.700360 GHz
Marker 3 [T1]
-39.85 dBm
23.302040 GHz
Marker 4 [T1]
-40.08 dBm
21.753900 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 -0.06 dBm
D2 -20.06 dBm
Marker 1 [T1]
-0.06 dBm
2.456000 GHz
Marker 2 [T1]
-42.70 dBm
2.483500 GHz
Marker 3 [T1]
-49.93 dBm
2.500000 GHz
Delta 4 [T1]
-42.64 dB
27.500000 MHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 0.07 dBm
D2 -19.93 dBm
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
0.07 dBm
2.454800 GHz
Marker 2 [T1]
-49.82 dBm
2.483500 GHz
Marker 3 [T1]
-55.42 dBm
2.500000 GHz
Delta 4 [T1]
-49.89 dB
28.700000 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
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-1.50 dBm
2.427120 GHz
Marker 2 [T1]
-38.58 dBm
24.750300 GHz
Marker 3 [T1]
-39.16 dBm
21.703960 GHz
Marker 4 [T1]
-39.18 dBm
24.650420 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)	104.5	37.67	66.83	74.00
2422.00 (AV)	94.0	41.72	52.28	54.00

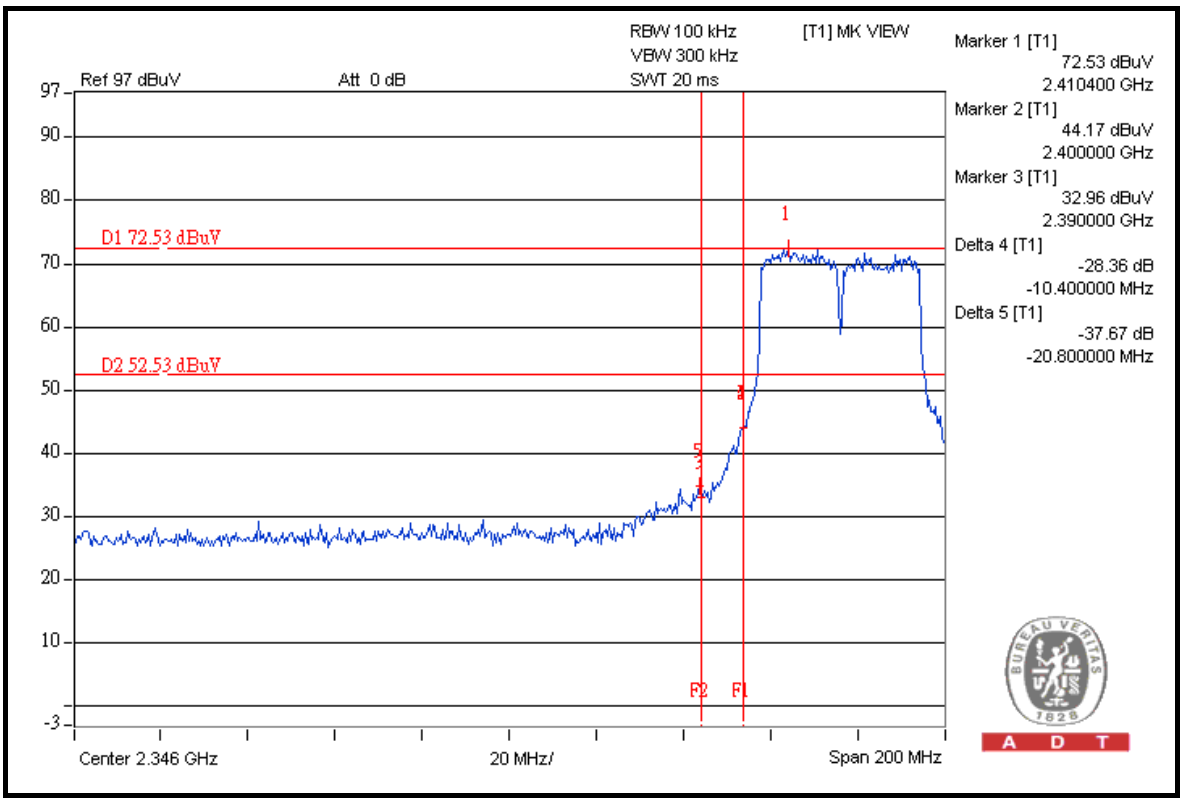
RESTRICT BAND (2483.5 ~ 2500 MHz)

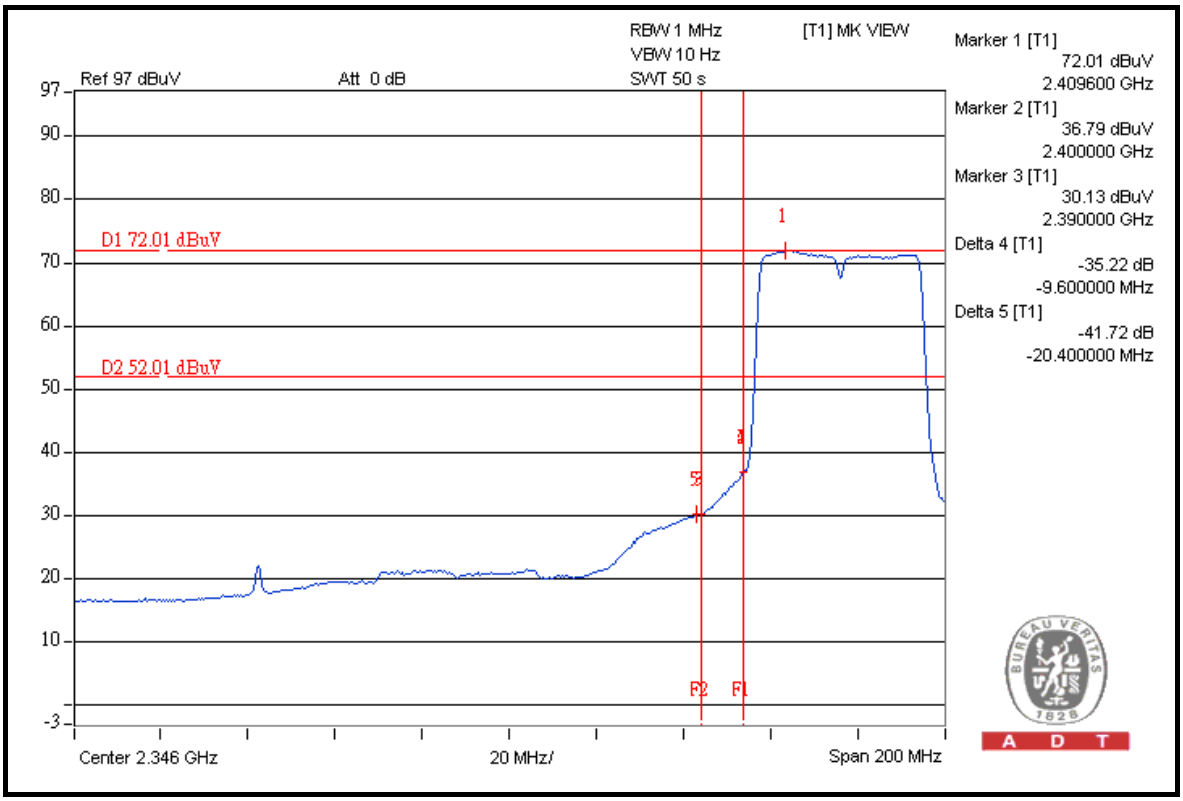
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2452.00 (PK)	108.7	42.72	65.98	74.00
2452.00 (AV)	98.7	45.79	52.91	54.00

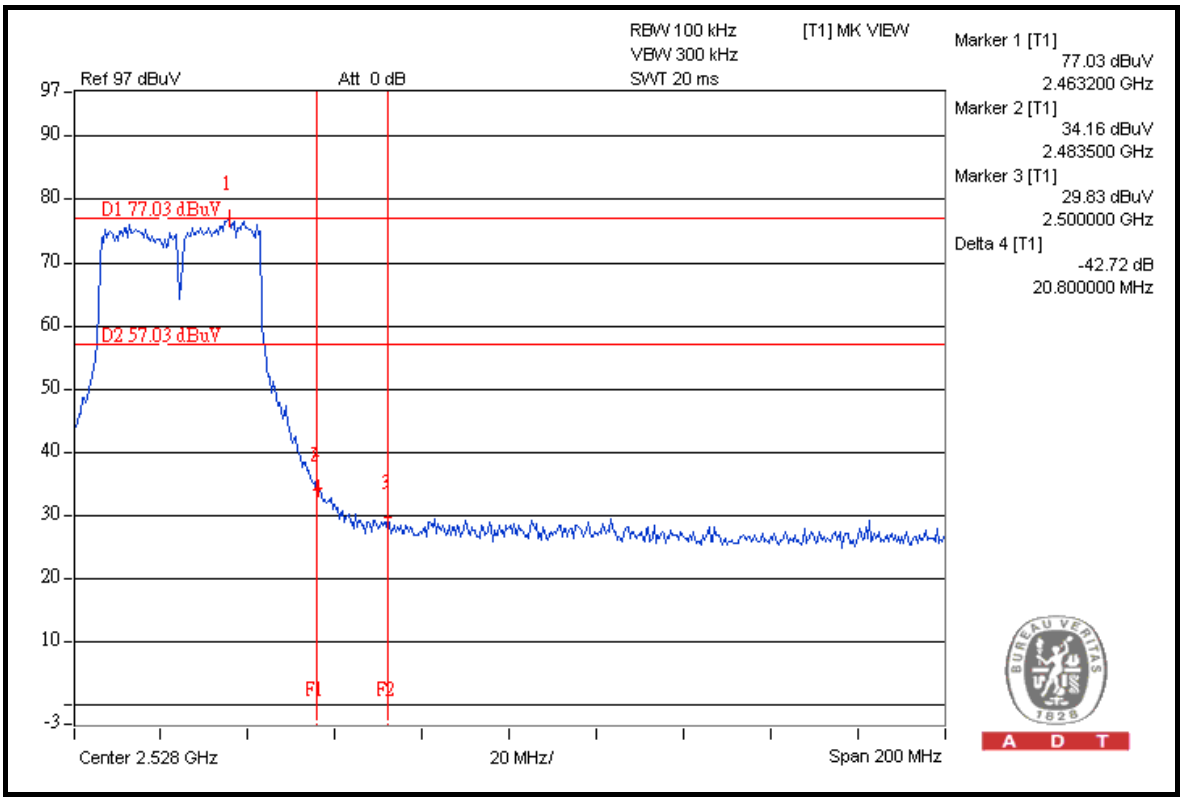
NOTE:

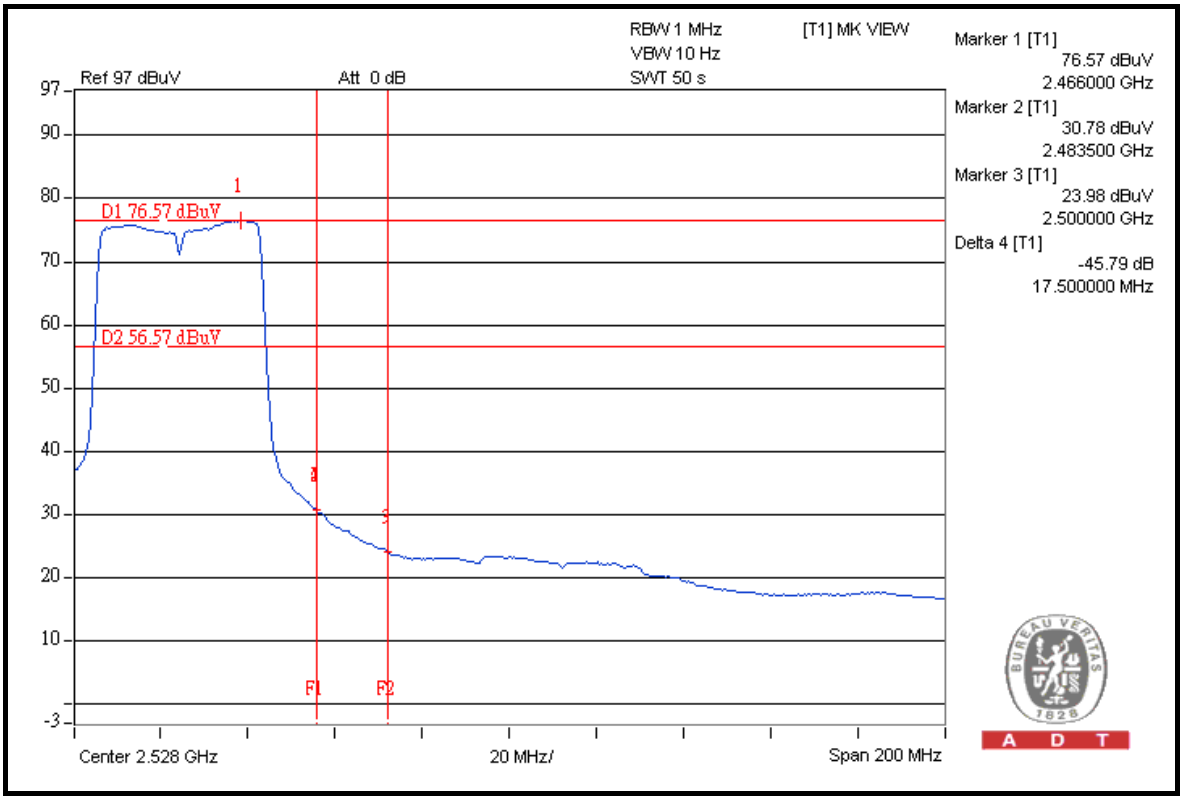
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (THREE CHAINS ON)



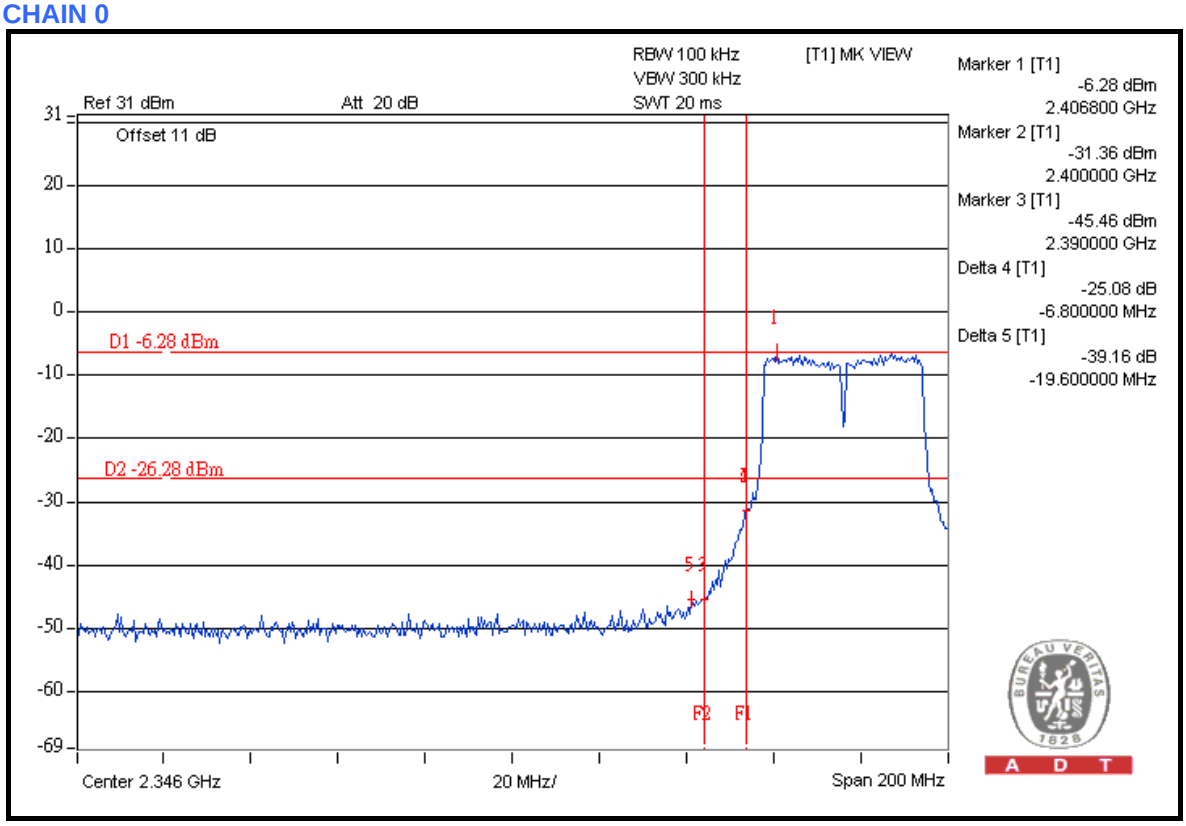


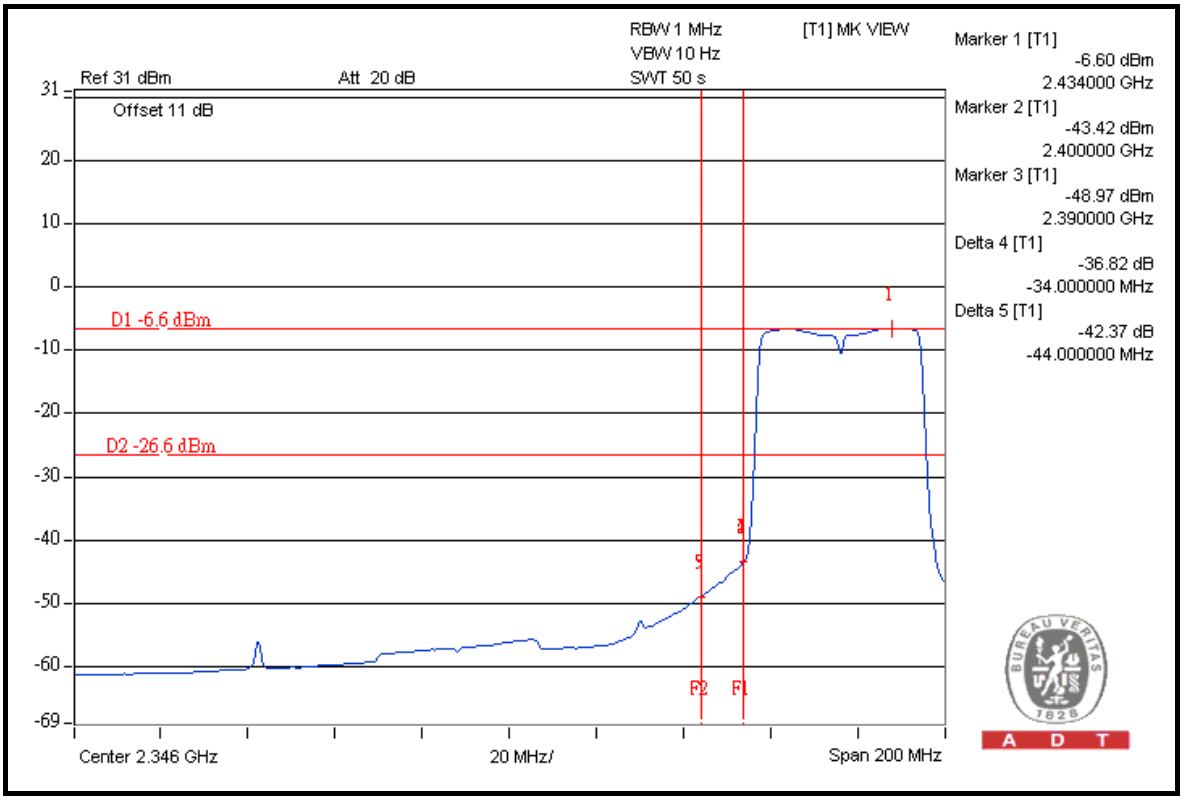

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 77.03 dBuV
D2 57.03 dBuV
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
77.03 dBuV
2.463200 GHz
Marker 2 [T1]
34.16 dBuV
2.483500 GHz
Marker 3 [T1]
29.83 dBuV
2.500000 GHz
Delta 4 [T1]
-42.72 dB
20.800000 MHz

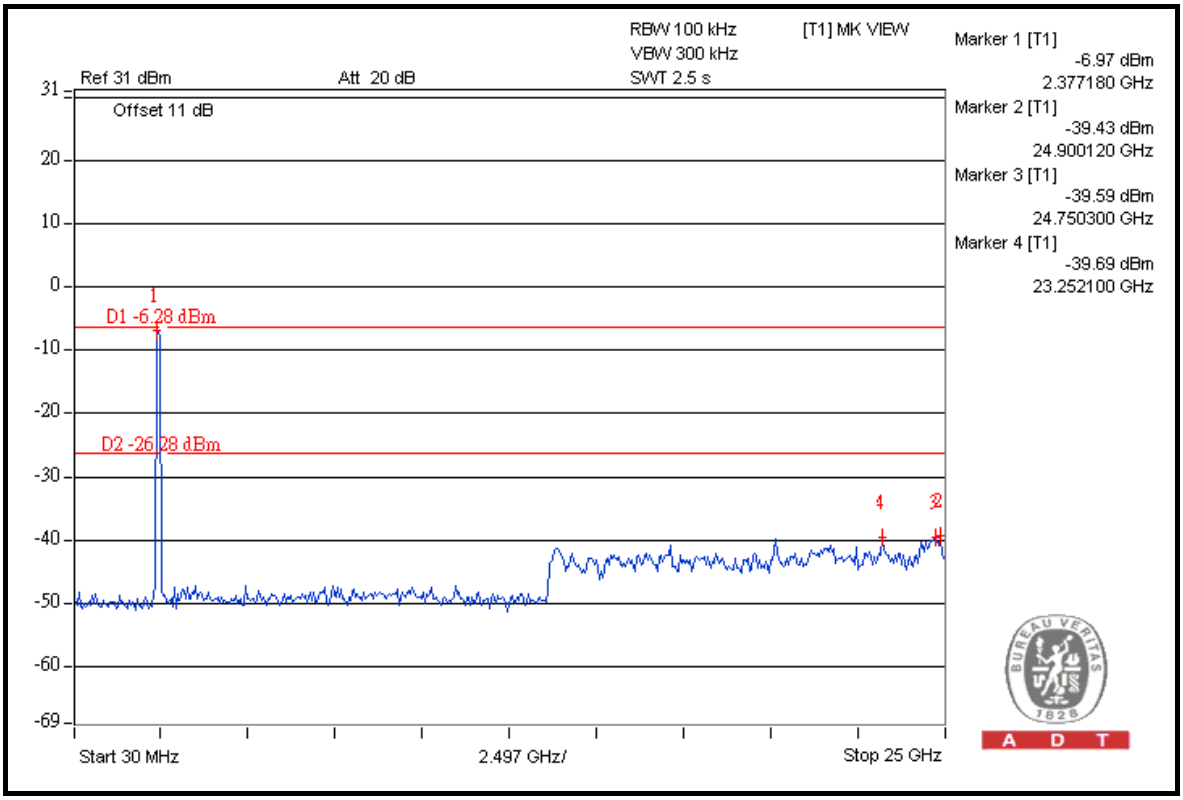

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 76.57 dBuV
D2 56.57 dBuV
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
76.57 dBuV
2.466000 GHz
Marker 2 [T1]
30.78 dBuV
2.483500 GHz
Marker 3 [T1]
23.98 dBuV
2.500000 GHz
Delta 4 [T1]
-45.79 dB
17.500000 MHz

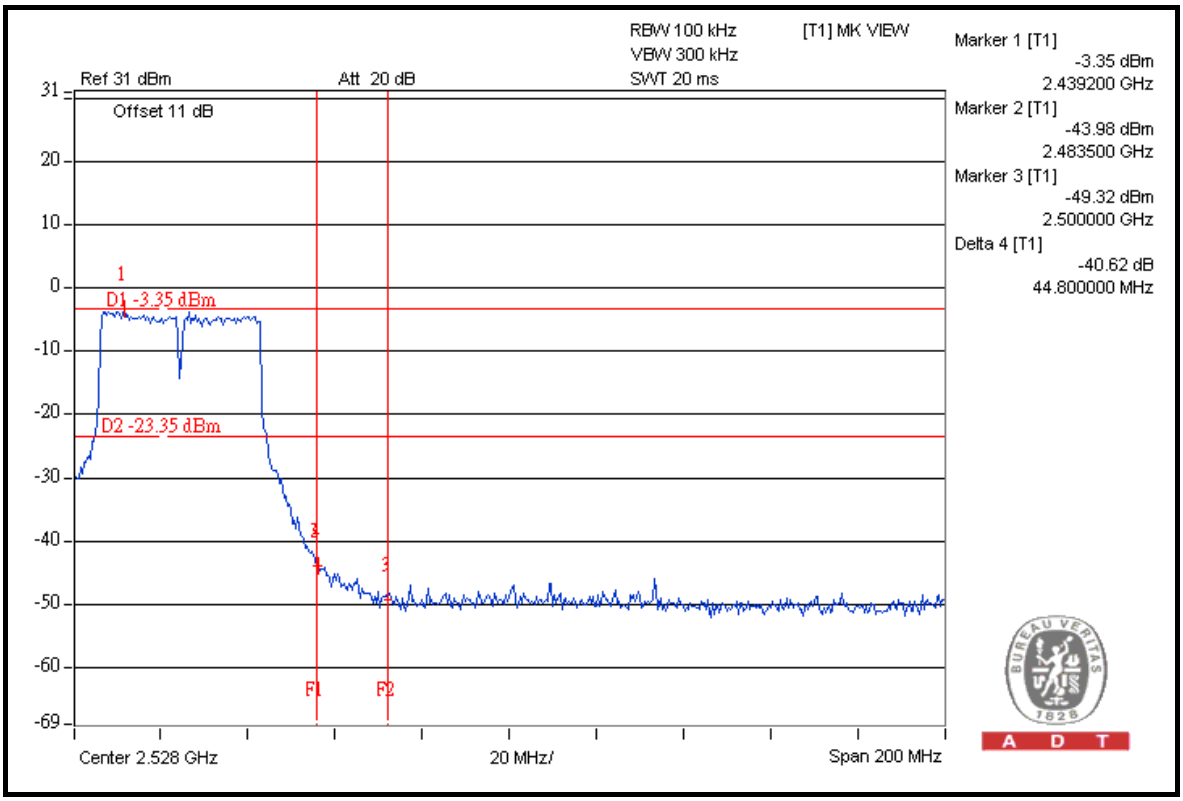
FOR CONDUCTED MEASURED

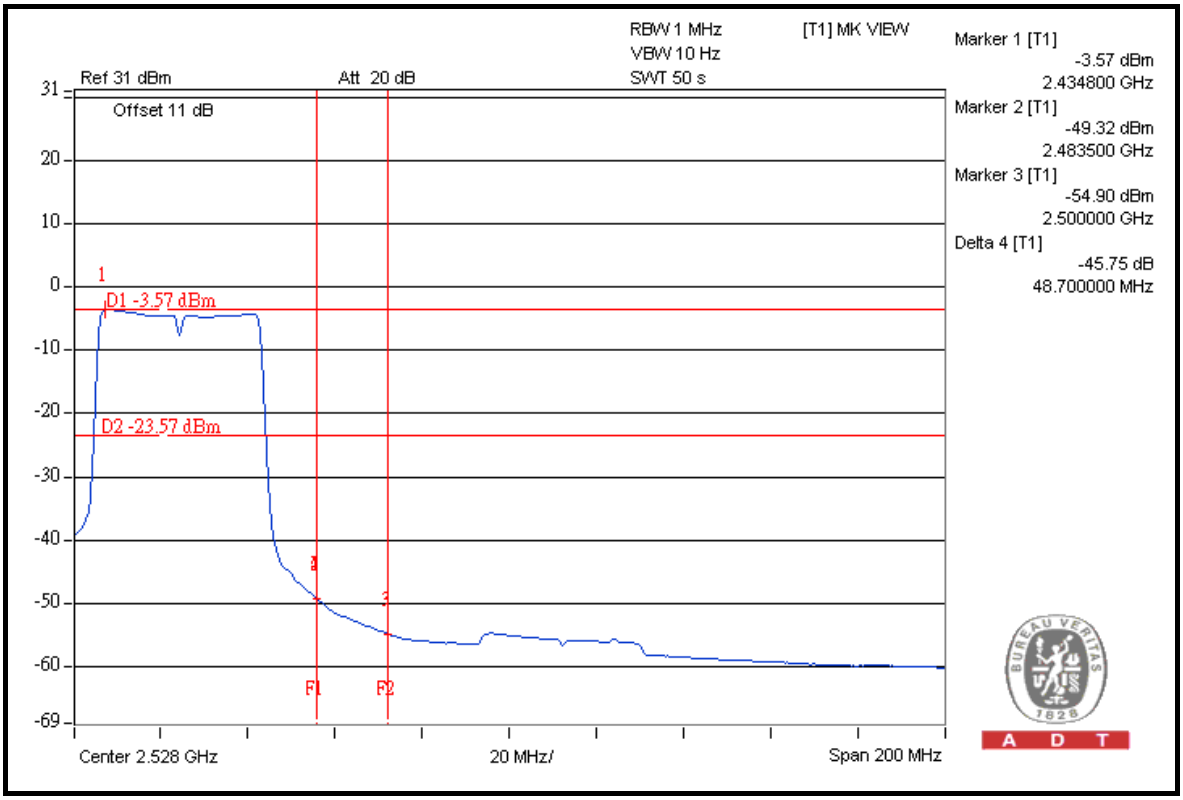
CHAIN 0

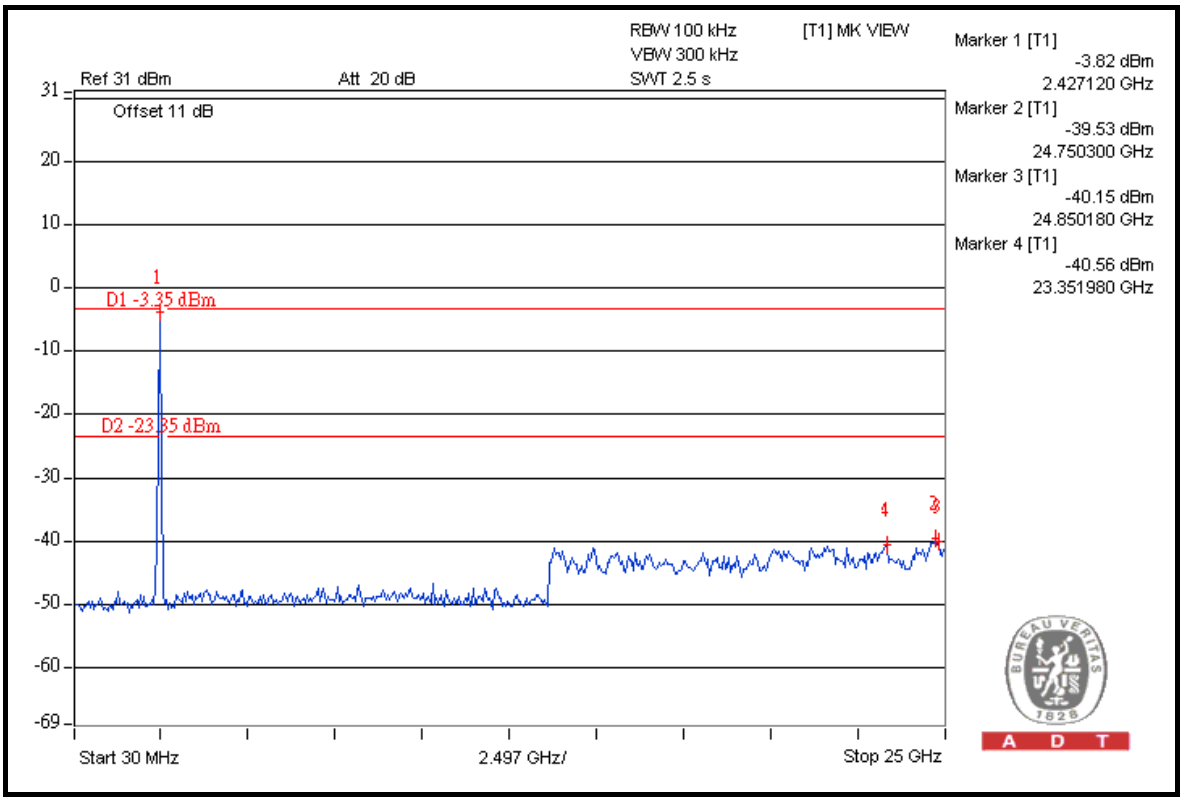




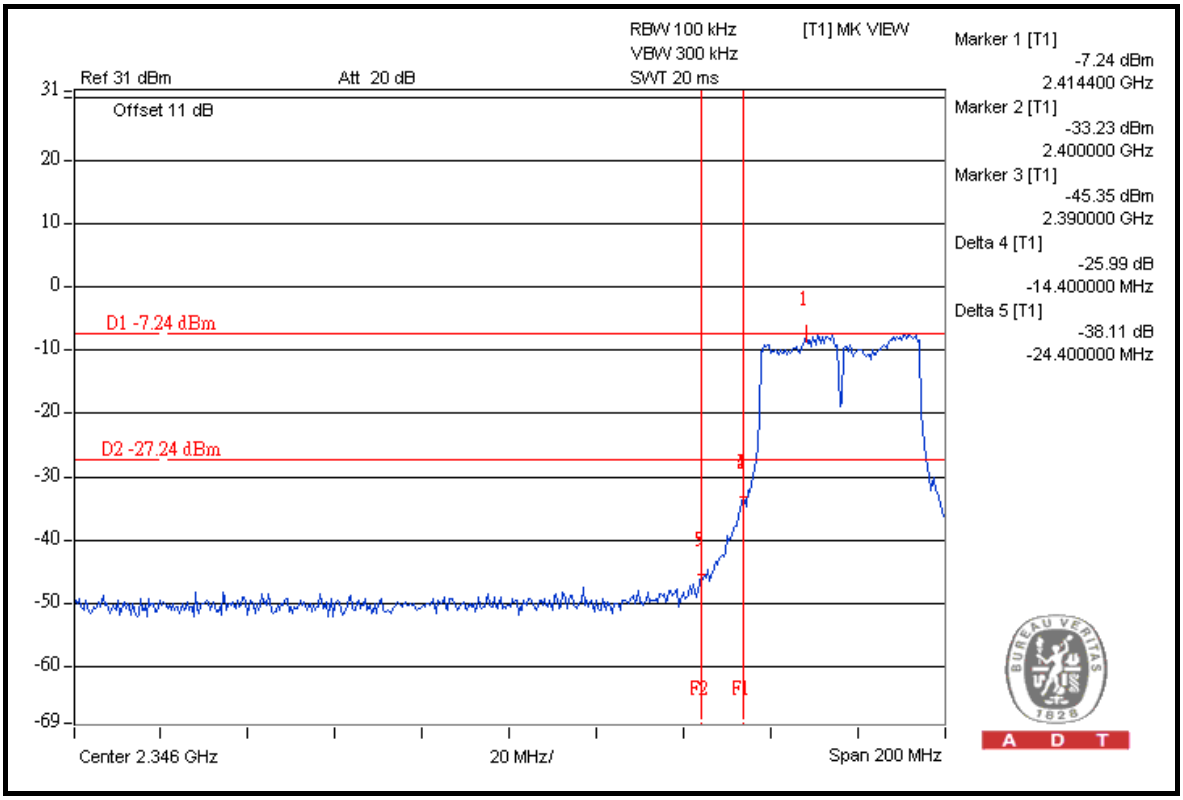

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -6.28 dBm
D2 -26.28 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-6.97 dBm
2.377180 GHz
Marker 2 [T1]
-39.43 dBm
24.900120 GHz
Marker 3 [T1]
-39.59 dBm
24.750300 GHz
Marker 4 [T1]
-39.69 dBm
23.252100 GHz

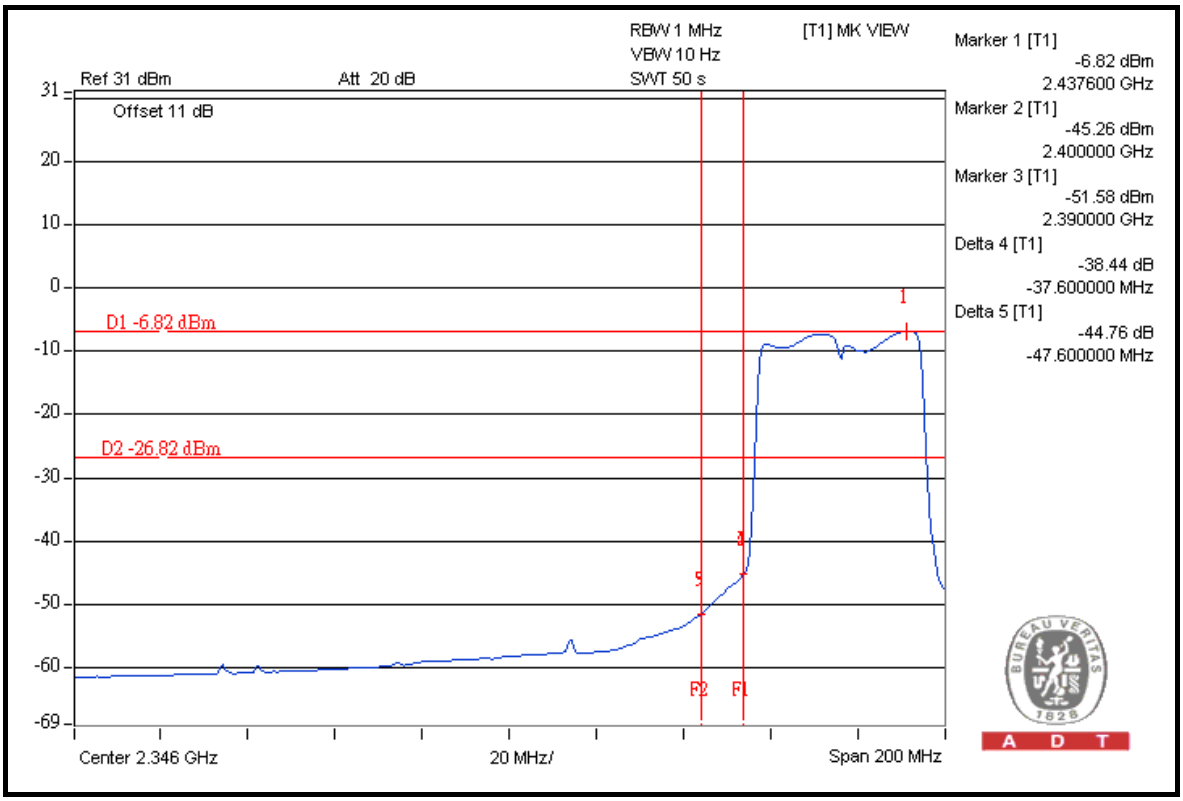

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.35 dBm
D2 -23.35 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-3.35 dBm
2.439200 GHz
Marker 2 [T1]
-43.98 dBm
2.483500 GHz
Marker 3 [T1]
-49.32 dBm
2.500000 GHz
Delta 4 [T1]
-40.62 dB
44.800000 MHz

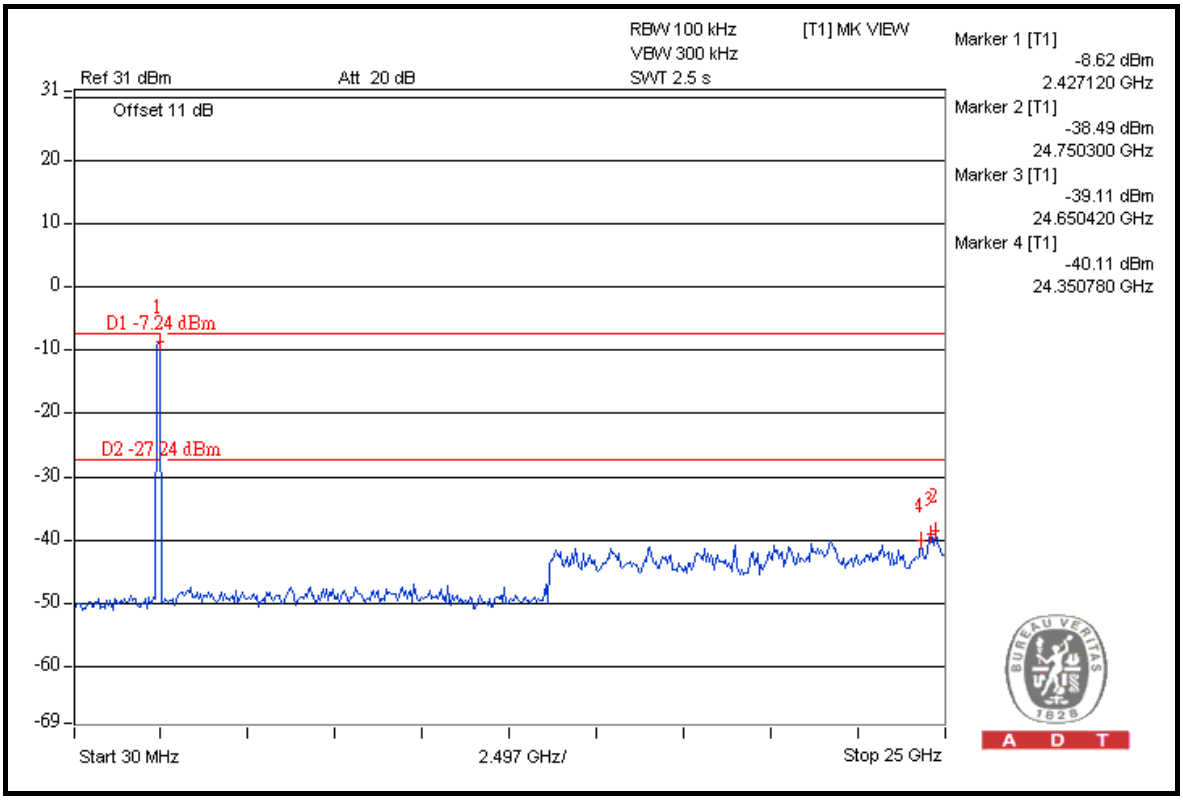

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.57 dBm
D2 -23.57 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-3.57 dBm
2.434800 GHz
Marker 2 [T1]
-49.32 dBm
2.483500 GHz
Marker 3 [T1]
-54.90 dBm
2.500000 GHz
Delta 4 [T1]
-45.75 dB
48.700000 MHz

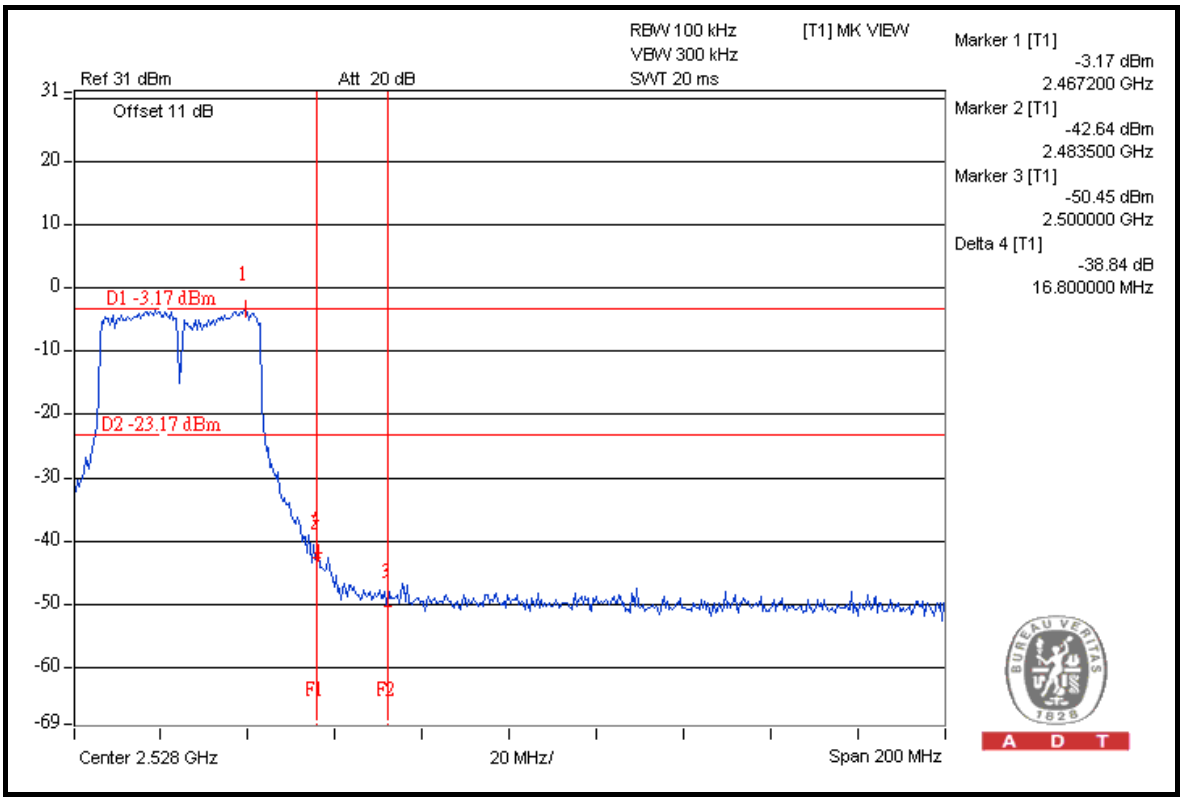

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.35 dBm
D2 -23.35 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-3.82 dBm
2.427120 GHz
Marker 2 [T1]
-39.53 dBm
24.750300 GHz
Marker 3 [T1]
-40.15 dBm
24.850180 GHz
Marker 4 [T1]
-40.56 dBm
23.351980 GHz

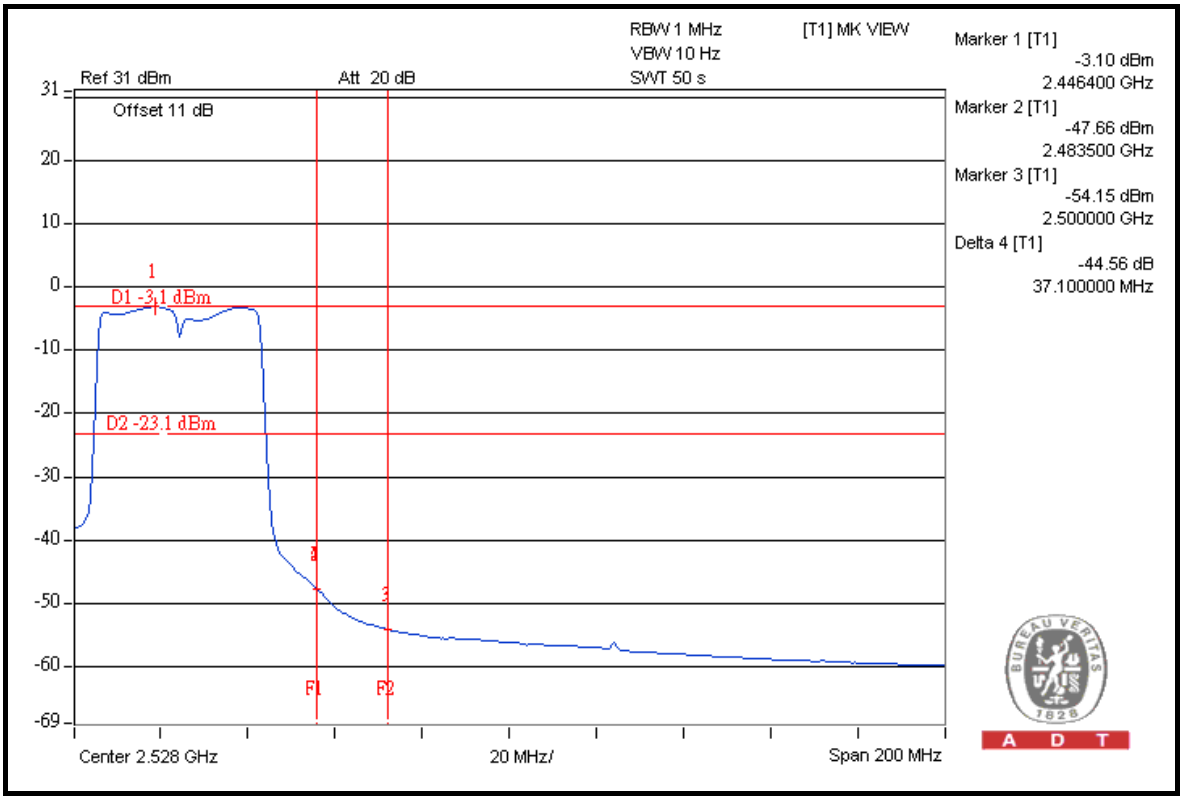
CHAIN 1

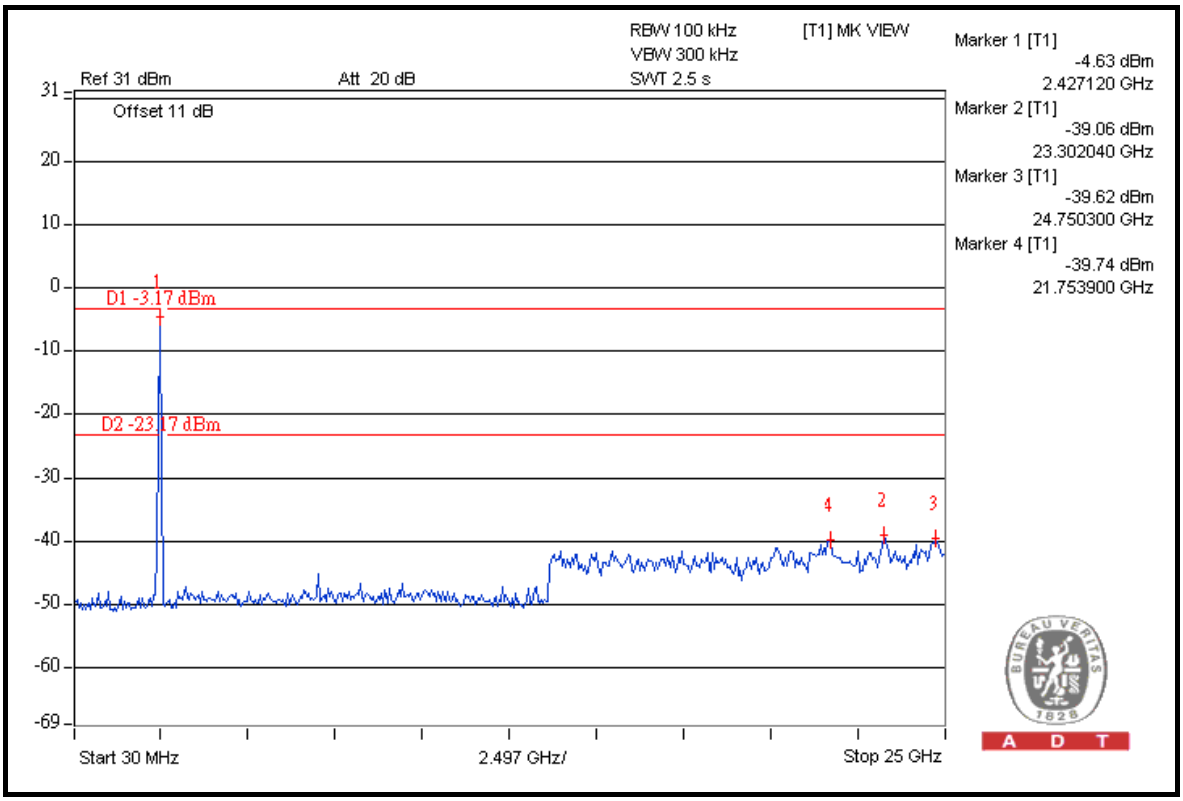

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -7.24 dBm
D2 -27.24 dBm
Center 2.346 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-7.24 dBm
2.414400 GHz
Marker 2 [T1]
-33.23 dBm
2.400000 GHz
Marker 3 [T1]
-45.35 dBm
2.390000 GHz
Delta 4 [T1]
-25.99 dB
-14.400000 MHz
Delta 5 [T1]
-38.11 dB
-24.400000 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -6.82 dBm
D2 -26.82 dBm
Center 2.346 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-6.82 dBm
2.437600 GHz
Marker 2 [T1]
-45.26 dBm
2.400000 GHz
Marker 3 [T1]
-51.58 dBm
2.390000 GHz
Delta 4 [T1]
-38.44 dB
-37.600000 MHz
Delta 5 [T1]
-44.76 dB
-47.600000 MHz

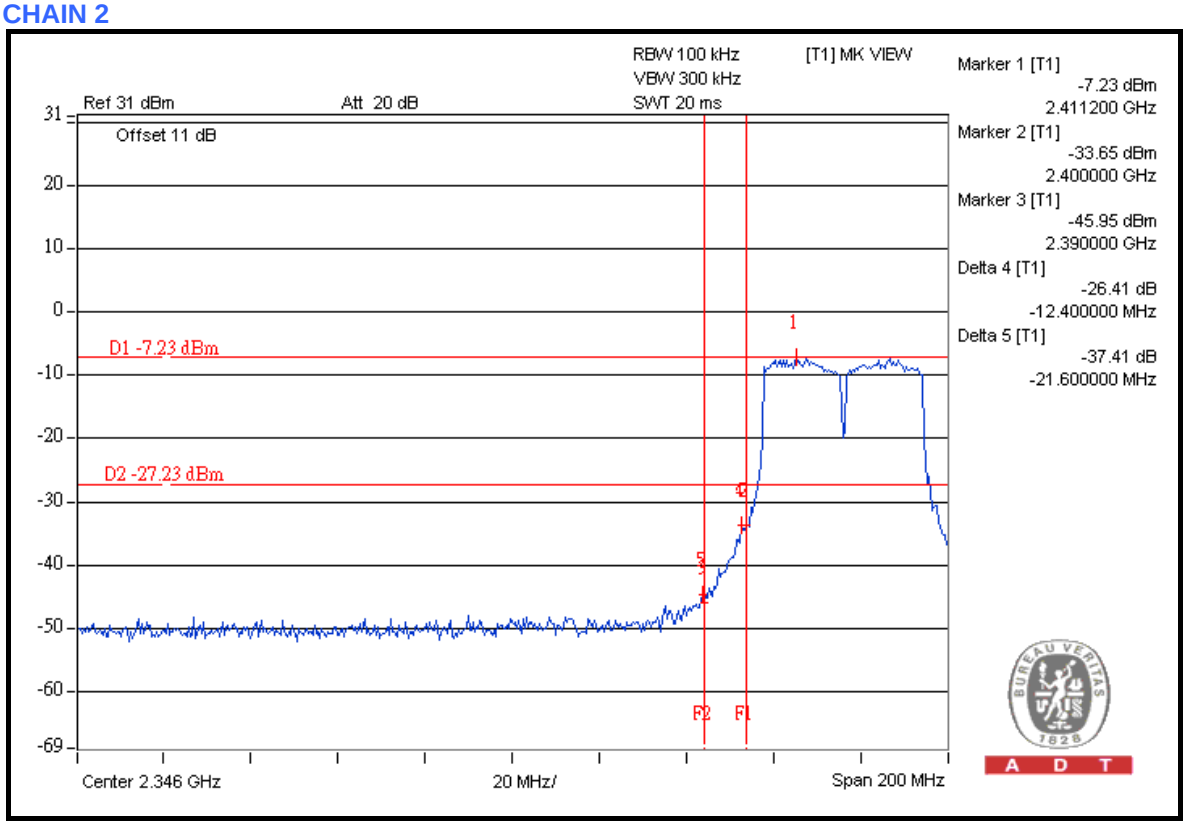

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -7.24 dBm
D2 -27.24 dBm
Marker 1 [T1]
-8.62 dBm
2.427120 GHz
Marker 2 [T1]
-38.49 dBm
24.750300 GHz
Marker 3 [T1]
-39.11 dBm
24.650420 GHz
Marker 4 [T1]
-40.11 dBm
24.350780 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

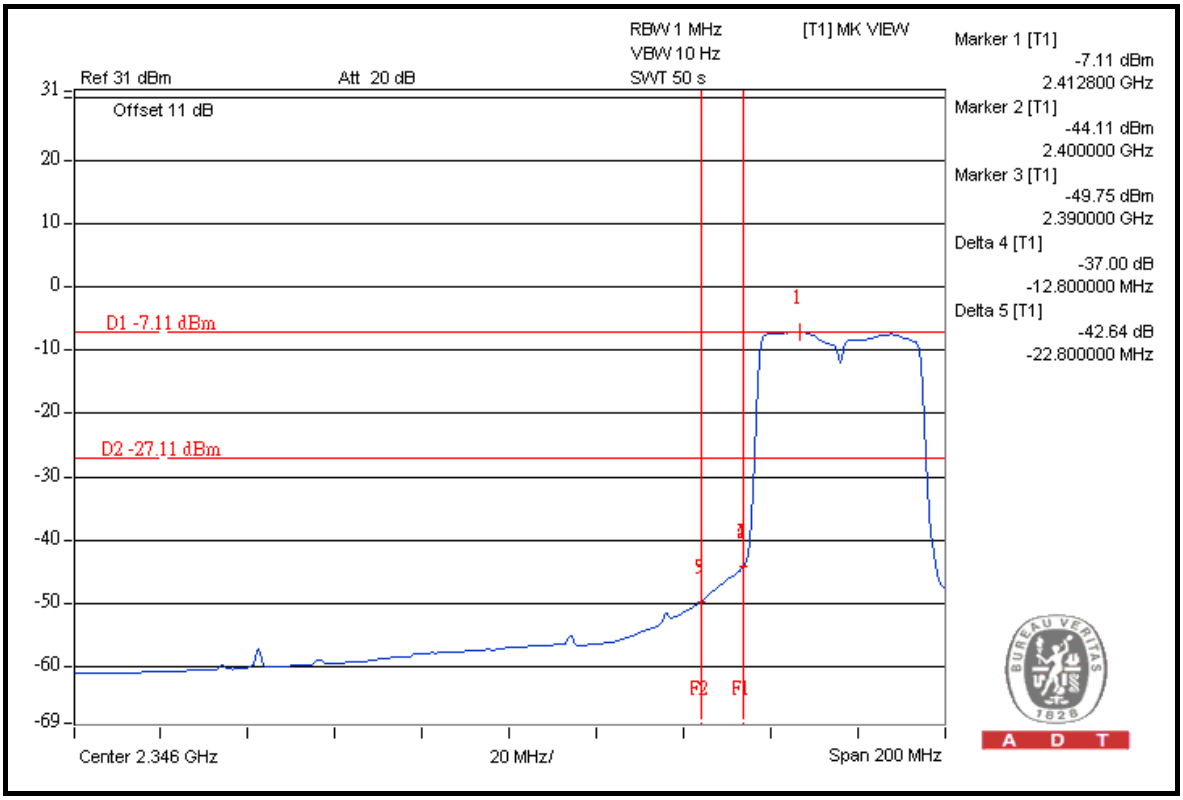

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.17 dBm
D2 -23.17 dBm
Marker 1 [T1]
-3.17 dBm
2.467200 GHz
Marker 2 [T1]
-42.64 dBm
2.483500 GHz
Marker 3 [T1]
-50.45 dBm
2.500000 GHz
Delta 4 [T1]
-38.84 dB
16.800000 MHz
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz

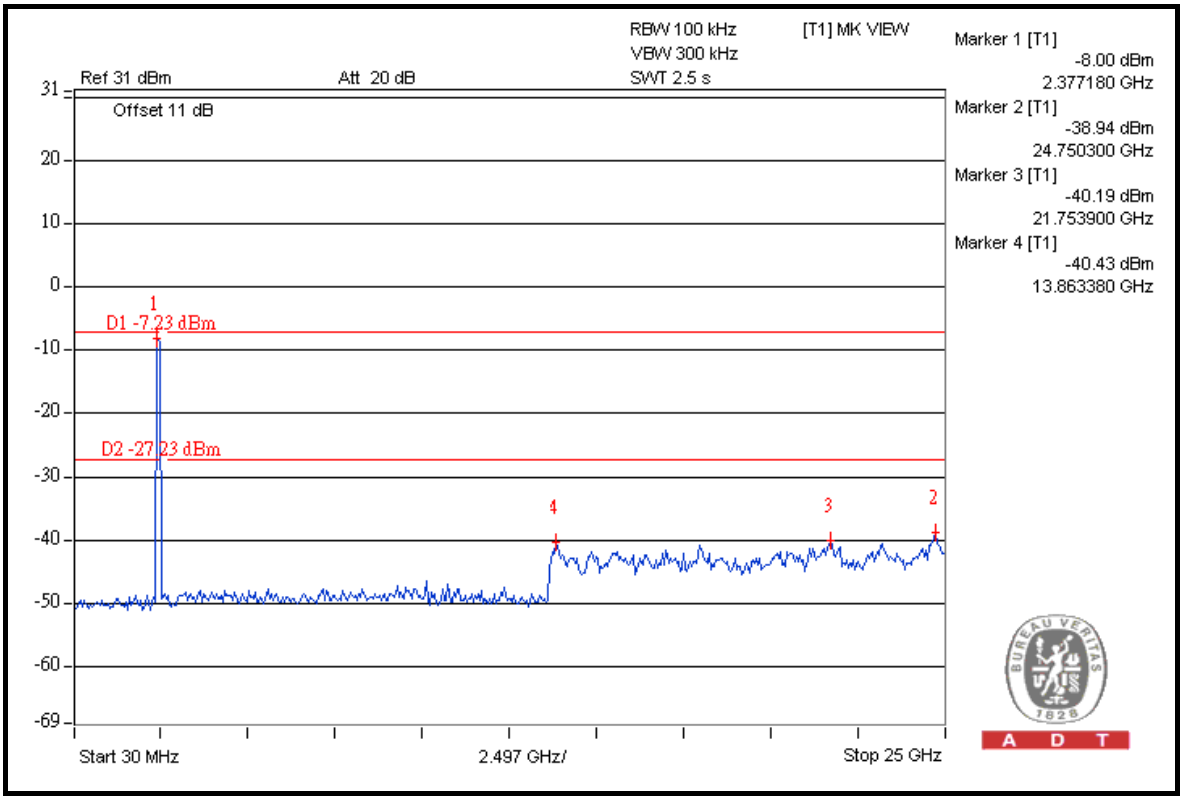

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.1 dBm
D2 -23.1 dBm
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-3.10 dBm
2.446400 GHz
Marker 2 [T1]
-47.66 dBm
2.483500 GHz
Marker 3 [T1]
-54.15 dBm
2.500000 GHz
Delta 4 [T1]
-44.56 dB
37.100000 MHz

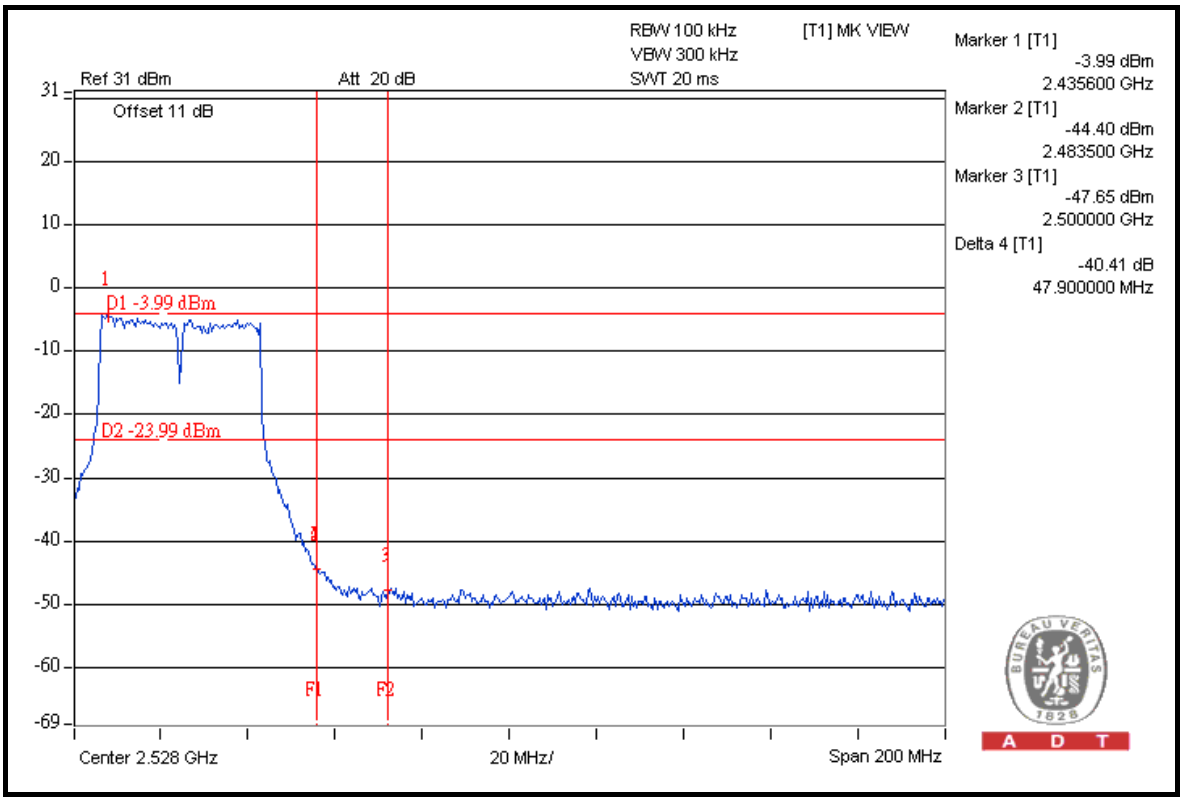

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.17 dBm
D2 -23.17 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-4.63 dBm
2.427120 GHz
Marker 2 [T1]
-39.06 dBm
23.302040 GHz
Marker 3 [T1]
-39.62 dBm
24.750300 GHz
Marker 4 [T1]
-39.74 dBm
21.753900 GHz

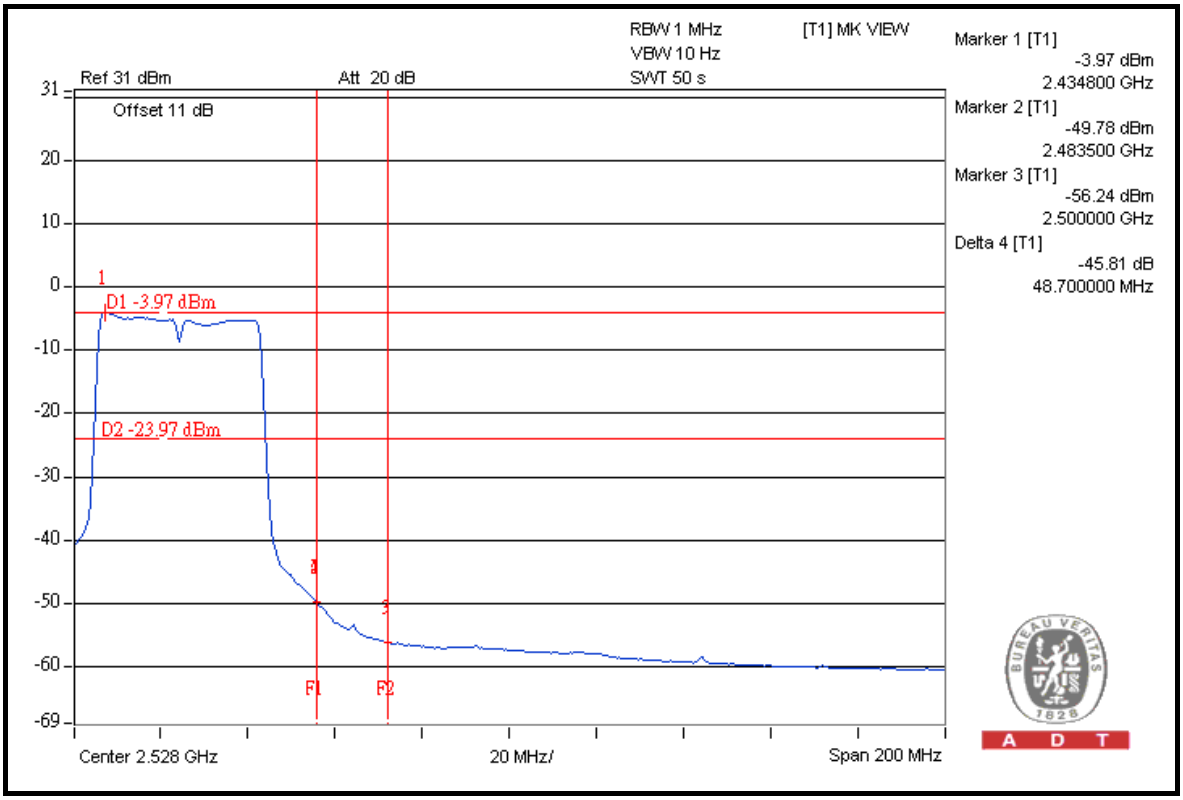
CHAIN 2

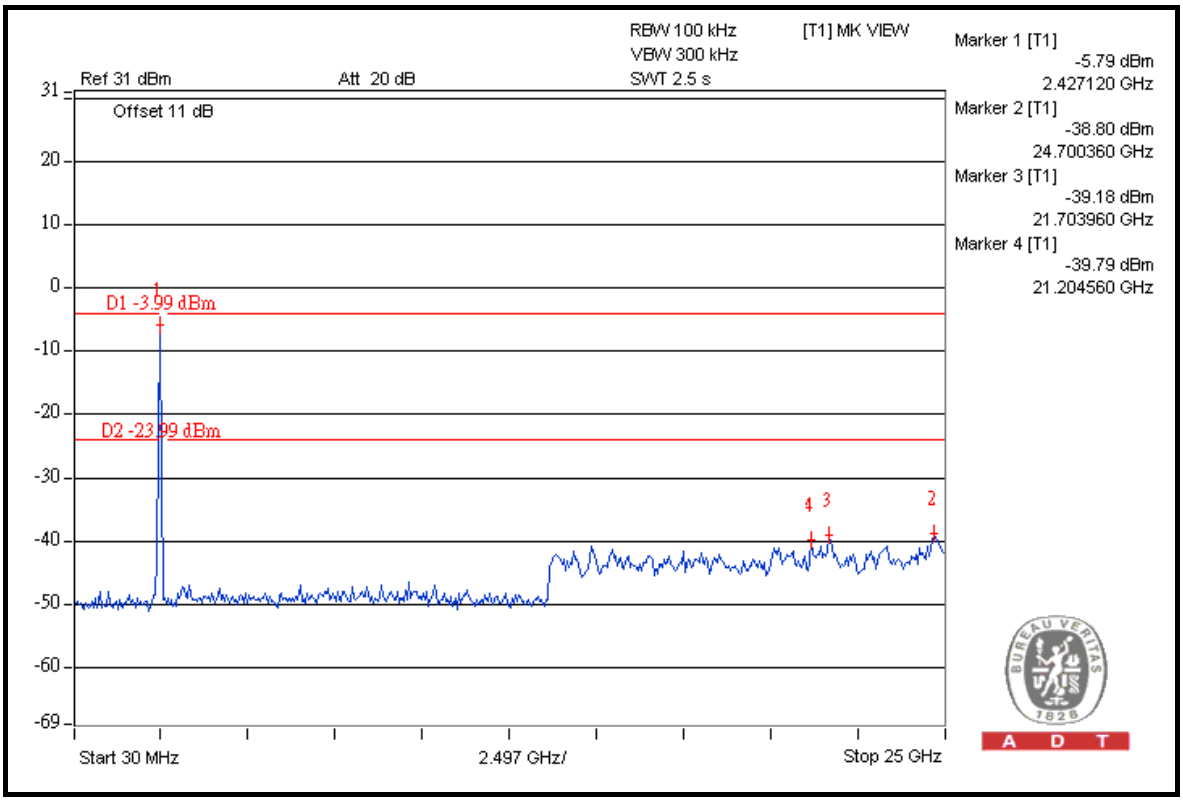

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -7.23 dBm
D2 -27.23 dBm
Center 2.346 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-7.23 dBm
2.411200 GHz
Marker 2 [T1]
-33.65 dBm
2.400000 GHz
Marker 3 [T1]
-45.95 dBm
2.390000 GHz
Delta 4 [T1]
-26.41 dB
-12.400000 MHz
Delta 5 [T1]
-37.41 dB
-21.600000 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -7.11 dBm
D2 -27.11 dBm
Center 2.346 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-7.11 dBm
2.412800 GHz
Marker 2 [T1]
-44.11 dBm
2.400000 GHz
Marker 3 [T1]
-49.75 dBm
2.390000 GHz
Delta 4 [T1]
-37.00 dB
-12.800000 MHz
Delta 5 [T1]
-42.64 dB
-22.800000 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -7.23 dBm
D2 -27.23 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-8.00 dBm
2.377180 GHz
Marker 2 [T1]
-38.94 dBm
24.750300 GHz
Marker 3 [T1]
-40.19 dBm
21.753900 GHz
Marker 4 [T1]
-40.43 dBm
13.863380 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.99 dBm
D2 -23.99 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-3.99 dBm
2.435600 GHz
Marker 2 [T1]
-44.40 dBm
2.483500 GHz
Marker 3 [T1]
-47.65 dBm
2.500000 GHz
Delta 4 [T1]
-40.41 dB
47.900000 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.97 dBm
D2 -23.97 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-3.97 dBm
2.434800 GHz
Marker 2 [T1]
-49.78 dBm
2.483500 GHz
Marker 3 [T1]
-56.24 dBm
2.500000 GHz
Delta 4 [T1]
-45.81 dB
48.700000 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 31 dBm
Att 20 dB
Offset 11 dB
D1 -3.99 dBm
D2 -23.99 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
-5.79 dBm
2.427120 GHz
Marker 2 [T1]
-38.80 dBm
24.700360 GHz
Marker 3 [T1]
-39.18 dBm
21.703960 GHz
Marker 4 [T1]
-39.79 dBm
21.204560 GHz

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

5.1 RADIATED EMISSION MEASUREMENT

5.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 19, 2011	Apr. 18, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jan. 06, 2011	Jan. 05, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Sep. 06, 2011	Sep. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01911	Nov. 03, 2010	Nov. 02, 2011
Preamplifier Agilent	8447D	2944A10638	Nov. 03, 2010	Nov. 02, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295013/4 283403/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 13, 2011	Aug. 12, 2012
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	NA	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Nov. 03, 2010	Nov. 02, 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. The test was performed in HwaYa Chamber 9.

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

4. The FCC Site Registration No. is 460141.

5. The IC Site Registration No. is IC 7450F-4.

5.1.3 TEST PROCEDURES

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

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

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

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

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

f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

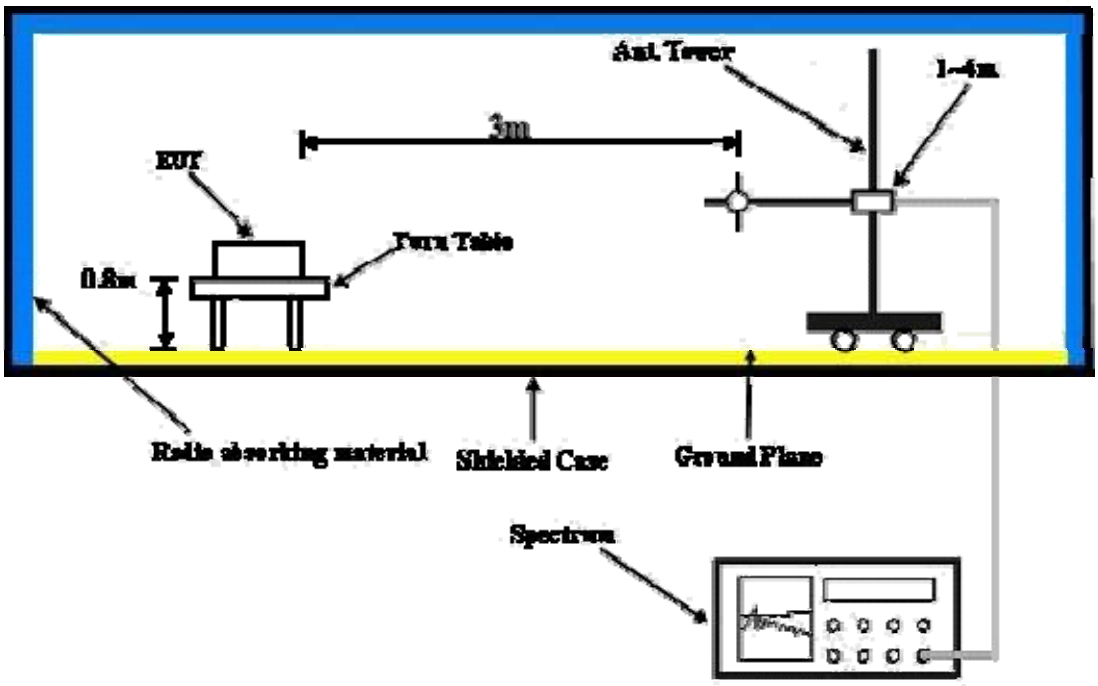
NOTE:

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

5.1.4 DEVIATION FROM TEST STANDARD

No deviation.

5.1.5 TEST SETUP



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

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

5.1.7 TEST RESULTS

ABOVE 1GHz: 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	5080.00	56.3 PK	74.0	-17.7	1.32 H	275	18.00	38.30
2	5080.00	47.0 AV	54.0	-7.0	1.32 H	275	8.70	38.30
3	#5725.00	73.9 PK	88.2	-14.3	1.47 H	241	34.50	39.40
4	#5725.00	54.5 AV	78.6	-24.1	1.47 H	241	15.10	39.40
5	*5745.00	108.2 PK			1.22 H	248	68.70	39.50
6	*5745.00	98.6 AV			1.22 H	248	59.10	39.50
7	11490.00	55.1 PK	74.0	-18.9	1.22 H	28	5.40	49.70
8	11490.00	44.5 AV	54.0	-9.5	1.22 H	28	-5.20	49.70
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	5080.00	57.2 PK	74.0	-16.8	1.00 V	272	18.90	38.30
2	5080.00	47.4 AV	54.0	-6.6	1.00 V	272	9.10	38.30
3	#5725.00	77.6 PK	89.7	-12.1	1.17 V	9	38.20	39.40
4	#5725.00	56.5 AV	80.2	-23.7	1.17 V	9	17.10	39.40
5	*5745.00	109.7 PK			1.00 V	48	70.20	39.50
6	*5745.00	100.2 AV			1.00 V	48	60.70	39.50
7	11490.00	58.6 PK	74.0	-15.4	1.12 V	358	8.90	49.70
8	11490.00	47.0 AV	54.0	-7.0	1.12 V	358	-2.70	49.70

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

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	5080.00	56.7 PK	74.0	-17.3	1.28 H	254	18.40	38.30
2	5080.00	47.2 AV	54.0	-6.8	1.28 H	254	8.90	38.30
3	*5785.00	107.8 PK			1.27 H	258	68.30	39.50
4	*5785.00	98.1 AV			1.27 H	258	58.60	39.50
5	11570.00	54.8 PK	74.0	-19.2	1.08 H	48	5.30	49.50
6	11570.00	44.8 AV	54.0	-9.2	1.08 H	48	-4.70	49.50
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	5080.00	58.2 PK	74.0	-15.8	1.71 V	268	19.90	38.30
2	5080.00	49.9 AV	54.0	-4.1	1.71 V	268	11.60	38.30
3	*5785.00	109.4 PK			1.08 V	58	69.80	39.60
4	*5785.00	99.6 AV			1.08 V	58	60.00	39.60
5	11570.00	60.8 PK	74.0	-13.2	1.12 V	358	11.30	49.50
6	11570.00	47.8 AV	54.0	-6.2	1.12 V	358	-1.70	49.50

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

6. The limit value is defined as per 15.247.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	5080.00	56.2 PK	74.0	-17.8	1.22 H	217	17.90	38.30
2	5080.00	46.8 AV	54.0	-7.2	1.22 H	217	8.50	38.30
3	*5825.00	107.2 PK			1.28 H	265	67.50	39.70
4	*5825.00	97.5 AV			1.28 H	265	57.80	39.70
5	#5850.00	60.2 PK	87.2	-27.0	1.21 H	275	20.50	39.70
6	#5850.00	38.8 AV	77.5	-38.7	1.21 H	275	-0.90	39.70
7	11650.00	55.2 PK	74.0	-18.8	1.17 H	58	5.80	49.40
8	11650.00	45.3 AV	54.0	-8.7	1.17 H	58	-4.10	49.40
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	5080.00	57.8 PK	74.0	-16.2	1.65 V	258	19.50	38.30
2	5080.00	49.7 AV	54.0	-4.3	1.65 V	258	11.40	38.30
3	*5825.00	108.9 PK			1.05 V	77	69.20	39.70
4	*5825.00	99.2 AV			1.05 V	77	59.50	39.70
5	#5850.00	67.8 PK	88.9	-21.1	1.45 V	48	28.10	39.70
6	#5850.00	46.2 AV	79.2	-33.0	1.45 V	48	6.50	39.70
7	11650.00	59.3 PK	74.0	-14.7	1.12 V	357	9.90	49.40
8	11650.00	46.9 AV	54.0	-7.1	1.12 V	357	-2.50	49.40

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

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	5080.00	57.6 PK	74.0	-16.4	1.00 H	238	19.30	38.30
2	5080.00	46.1 AV	54.0	-7.9	1.00 H	238	7.80	38.30
3	#5725.00	73.1 PK	88.8	-15.7	1.43 H	225	33.70	39.40
4	#5725.00	52.8 AV	79.0	-26.2	1.43 H	225	13.40	39.40
5	*5745.00	108.8 PK			1.27 H	269	69.30	39.50
6	*5745.00	99.0 AV			1.27 H	269	59.50	39.50
7	11490.00	55.2 PK	74.0	-18.8	1.31 H	225	5.50	49.70
8	11490.00	44.8 AV	54.0	-9.2	1.31 H	225	-4.90	49.70
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	5080.00	58.4 PK	74.0	-15.6	1.71 V	267	20.10	38.30
2	5080.00	49.6 AV	54.0	-4.4	1.71 V	267	11.30	38.30
3	#5725.00	77.5 PK	90.3	-12.8	1.13 V	8	38.10	39.40
4	#5725.00	57.4 AV	80.8	-23.4	1.13 V	8	18.00	39.40
5	*5745.00	110.3 PK			1.12 V	52	70.80	39.50
6	*5745.00	100.8 AV			1.12 V	52	61.30	39.50
7	11490.00	58.9 PK	74.0	-15.1	1.28 V	347	9.20	49.70
8	11490.00	47.2 AV	54.0	-6.8	1.28 V	347	-2.50	49.70

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	5080.00	57.2 PK	74.0	-16.8	1.02 H	267	18.90	38.30
2	5080.00	46.0 AV	54.0	-8.0	1.02 H	267	7.70	38.30
3	*5785.00	108.2 PK			1.47 H	258	68.60	39.60
4	*5785.00	98.5 AV			1.47 H	258	58.90	39.60
5	11570.00	55.6 PK	74.0	-18.4	1.28 H	263	6.10	49.50
6	11570.00	45.2 AV	54.0	-8.8	1.28 H	263	-4.30	49.50
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	5080.00	59.1 PK	74.0	-14.9	1.02 V	349	20.80	38.30
2	5080.00	49.8 AV	54.0	-4.2	1.02 V	349	11.50	38.30
3	*5785.00	109.8 PK			1.18 V	102	70.20	39.60
4	*5785.00	100.4 AV			1.18 V	102	60.80	39.60
5	11570.00	60.3 PK	74.0	-13.7	1.30 V	356	10.80	49.50
6	11570.00	47.4 AV	54.0	-6.6	1.30 V	356	-2.10	49.50

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

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	5080.00	57.7 PK	74.0	-16.3	1.08 H	255	19.40	38.30
2	5080.00	46.3 AV	54.0	-7.7	1.08 H	255	8.00	38.30
3	*5825.00	107.8 PK			1.43 H	262	68.10	39.70
4	*5825.00	98.0 AV			1.43 H	262	58.30	39.70
5	#5850.00	60.1 PK	87.8	-27.7	1.47 H	258	20.40	39.70
6	#5850.00	38.7 AV	78.0	-39.3	1.47 H	258	-1.00	39.70
7	11650.00	55.8 PK	74.0	-18.2	1.35 H	257	6.40	49.40
8	11650.00	45.8 AV	54.0	-8.2	1.35 H	257	-3.60	49.40
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	5080.00	58.2 PK	74.0	-15.8	1.30 V	28	19.90	38.30
2	5080.00	50.1 AV	54.0	-3.9	1.30 V	28	11.80	38.30
3	*5825.00	109.1 PK			1.02 V	68	69.40	39.70
4	*5825.00	99.6 AV			1.02 V	68	59.90	39.70
5	#5850.00	68.1 PK	89.1	-21.0	1.00 V	147	28.40	39.70
6	#5850.00	47.6 AV	79.6	-32.0	1.00 V	147	7.90	39.70
7	11650.00	58.6 PK	74.0	-15.4	1.39 V	279	9.20	49.40
8	11650.00	47.1 AV	54.0	-6.9	1.39 V	279	-2.30	49.40

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.

6. The limit value is defined as per 15.247.

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

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	5080.00	56.8 PK	74.0	-17.2	1.22 H	278	18.50	38.30
2	5080.00	47.2 AV	54.0	-6.8	1.22 H	278	8.90	38.30
3	#5725.00	75.7 PK	86.0	-10.3	1.48 H	257	36.30	39.40
4	#5725.00	60.2 AV	76.4	-16.2	1.48 H	257	20.80	39.40
5	*5755.00	106.0 PK			1.21 H	268	66.50	39.50
6	*5755.00	96.4 AV			1.21 H	268	56.90	39.50
7	11510.00	55.7 PK	74.0	-18.3	1.32 H	27	6.10	49.60
8	11510.00	44.2 AV	54.0	-9.8	1.32 H	27	-5.40	49.60
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	5080.00	58.1 PK	74.0	-15.9	1.02 V	354	19.80	38.30
2	5080.00	50.8 AV	54.0	-3.2	1.02 V	354	12.50	38.30
3	#5725.00	80.7 PK	87.5	-6.8	1.10 V	57	41.30	39.40
4	#5725.00	63.3 AV	78.0	-14.7	1.10 V	57	23.90	39.40
5	*5755.00	107.5 PK			1.00 V	52	68.00	39.50
6	*5755.00	98.0 AV			1.00 V	52	58.50	39.50
7	11510.00	58.6 PK	74.0	-15.4	1.05 V	356	9.00	49.60
8	11510.00	46.2 AV	54.0	-7.8	1.05 V	356	-3.40	49.60

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	5080.00	56.2 PK	74.0	-17.8	1.27 H	267	17.90	38.30
2	5080.00	47.5 AV	54.0	-6.5	1.27 H	267	9.20	38.30
3	*5795.00	105.5 PK			1.51 H	252	65.90	39.60
4	*5795.00	96.0 AV			1.51 H	252	56.40	39.60
5	#5850.00	57.8 PK	85.5	-27.7	1.47 H	258	18.10	39.70
6	#5850.00	40.2 AV	76.0	-35.8	1.47 H	258	0.50	39.70
7	11590.00	55.8 PK	74.0	-18.2	1.22 H	67	6.30	49.50
8	11590.00	44.7 AV	54.0	-9.3	1.22 H	67	-4.80	49.50
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	5080.00	57.8 PK	74.0	-16.2	1.88 V	272	19.50	38.30
2	5080.00	49.3 AV	54.0	-4.7	1.88 V	272	11.00	38.30
3	*5795.00	107.2 PK			1.02 V	65	67.60	39.60
4	*5795.00	97.5 AV			1.02 V	65	57.90	39.60
5	#5850.00	63.6 PK	87.2	-23.6	1.08 V	58	23.90	39.70
6	#5850.00	46.5 AV	77.5	-31.0	1.08 V	58	6.80	39.70
7	11590.00	60.6 PK	74.0	-13.4	1.85 V	58	11.10	49.50
8	11590.00	47.6 AV	54.0	-6.4	1.85 V	58	-1.90	49.50

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

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The limit value is defined as per 15.247.
7. "#":The radiated frequency is out the restricted band.

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 68%RH	TESTED BY	Sun Lin

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	99.23	36.2 QP	43.5	-7.3	1.75 H	151	27.80	8.40
2	166.97	38.9 QP	43.5	-4.6	1.58 H	158	25.60	13.30
3	210.31	40.2 QP	43.5	-3.3	1.25 H	89	29.40	10.80
4	298.47	39.0 QP	46.0	-7.0	1.58 H	299	24.40	14.60
5	432.59	33.7 QP	46.0	-12.3	1.75 H	205	15.90	17.80
6	700.99	32.9 QP	46.0	-13.1	1.25 H	89	9.70	23.20
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	189.64	34.8 QP	43.5	-8.7	1.05 V	127	24.00	10.80
2	241.83	31.9 QP	46.0	-14.1	1.75 V	247	19.70	12.20
3	298.60	30.2 QP	46.0	-15.8	1.50 V	269	15.60	14.60
4	498.25	29.9 QP	46.0	-16.1	1.25 V	58	10.30	19.60
5	597.92	27.2 QP	46.0	-18.8	1.25 V	278	5.20	22.00
6	667.47	29.8 QP	46.0	-16.2	1.50 V	203	6.90	22.90

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

5.2 CONDUCTED EMISSION MEASUREMENT

5.2.1 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.

5.2.2 T EST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 30, 2010	Nov. 29, 2011
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 30, 2010	Dec. 29, 2011
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Jul. 07, 2011	Jul. 06, 2012
LISN ROHDE & SCHWARZ	ESH2-Z5	100100	Jan. 06, 2011	Jan. 05, 2012
LISN ROHDE & SCHWARZ	ESH3-Z5	835239/001	Feb. 22, 2011	Feb. 21, 2012
V-LISN SCHWARZBECK	NNBL 8226-2	8226-142	Jun. 30, 2011	Jun. 29, 2012
LISN ROHDE & SCHWARZ	ENV216	100072	Jun. 10, 2011	Jun. 09, 2012
Software ADT	ADT_Cond_ V7.3.7	NA	NA	NA

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

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

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

5.2.3 TEST PROCEDURES

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

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

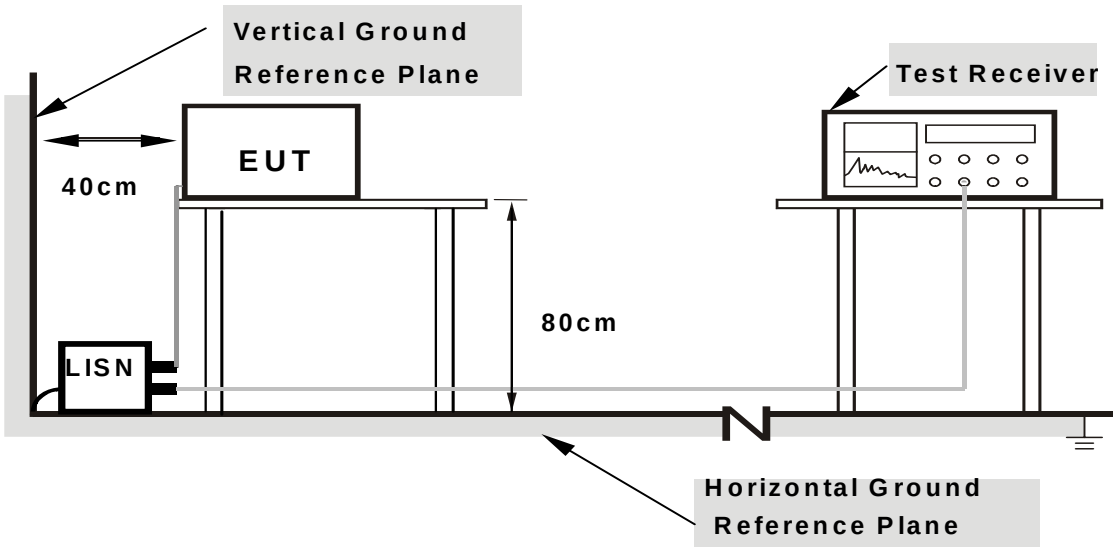
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

5.2.4 DEVIATION FROM TEST STANDARD

No deviation.

5.2.5 TEST SETUP



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

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

5.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6

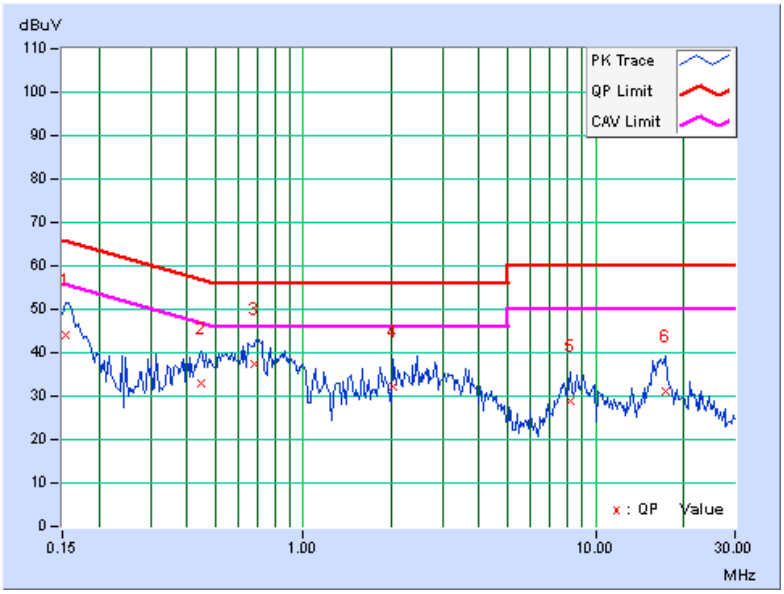
5.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA：802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz

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	0.154	0.12	44.12	-	44.24	-	65.79	55.79	-21.55	-
2	0.449	0.12	32.99	-	33.11	-	56.89	46.89	-23.77	-
3	0.679	0.14	37.36	-	37.50	-	56.00	46.00	-18.50	-
4	2.039	0.19	32.14	-	32.33	-	56.00	46.00	-23.67	-
5	8.160	0.55	28.32	-	28.87	-	60.00	50.00	-31.13	-
6	17.379	0.99	29.97	-	30.96	-	60.00	50.00	-29.04	-

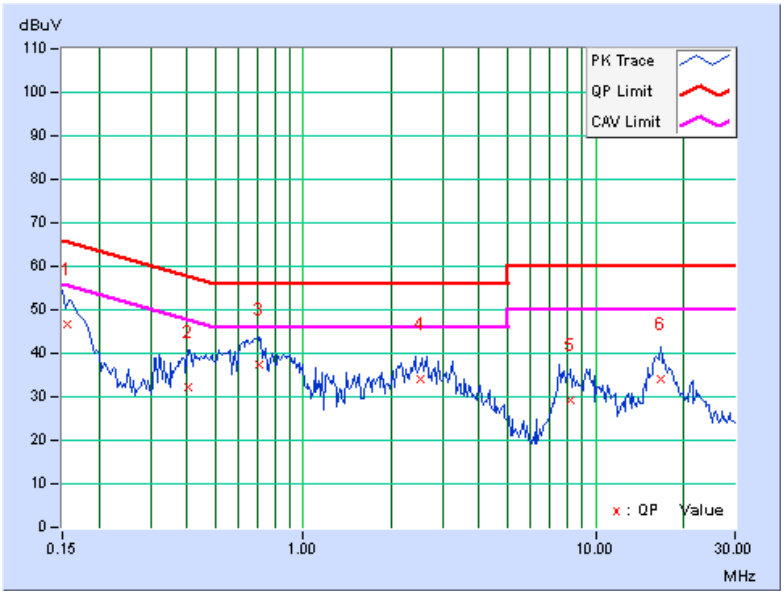
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



PHASE	Line 2	6dB BANDWIDTH	9kHz

	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.155	0.13	46.63	-	46.76	-	65.72	55.72	-18.97	-
2	0.404	0.14	32.02	-	32.16	-	57.77	47.77	-25.61	-
3	**0.705**	**0.16**	**37.43**	**-**	**37.59**	**-**	**56.00**	**46.00**	**-18.41**	**-**
4	2.508	0.23	33.81	-	34.04	-	56.00	46.00	-21.96	-
5	8.258	0.53	28.76	-	29.29	-	60.00	50.00	-30.71	-
6	16.635	0.81	33.31	-	34.12	-	60.00	50.00	-25.88	-

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



5.3 6dB BANDWIDTH MEASUREMENT

5.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

5.3.2 TEST INSTRUMENTS

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

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

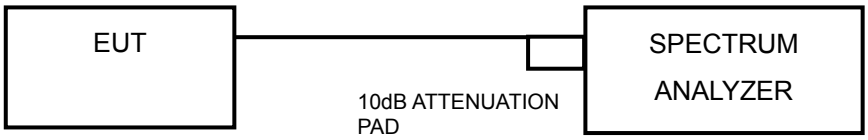
5.3.3 TEST PROCEDURE

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

5.3.4 DEVIATION FROM TEST STANDARD

No deviation.

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

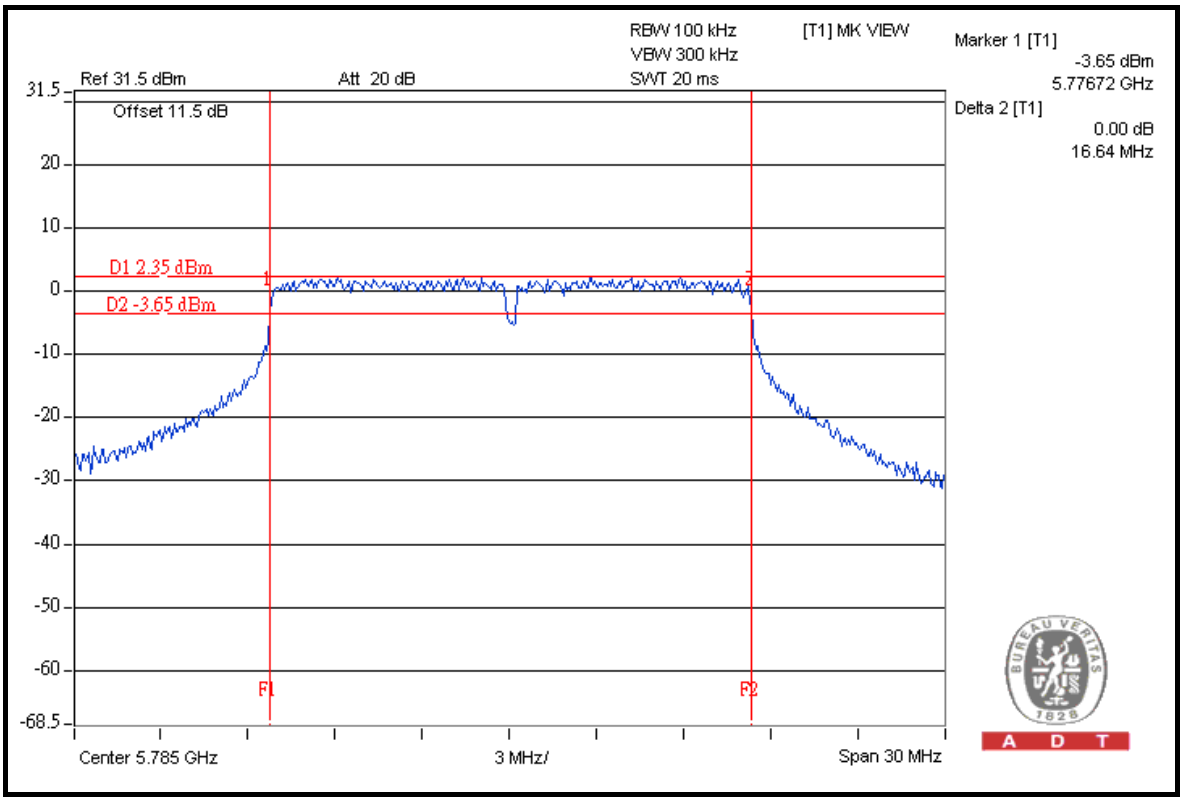
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.3.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	16.60	16.60	16.59	0.5	PASS
157	5785	16.64	16.61	16.58	0.5	PASS
165	5825	16.61	16.60	16.58	0.5	PASS

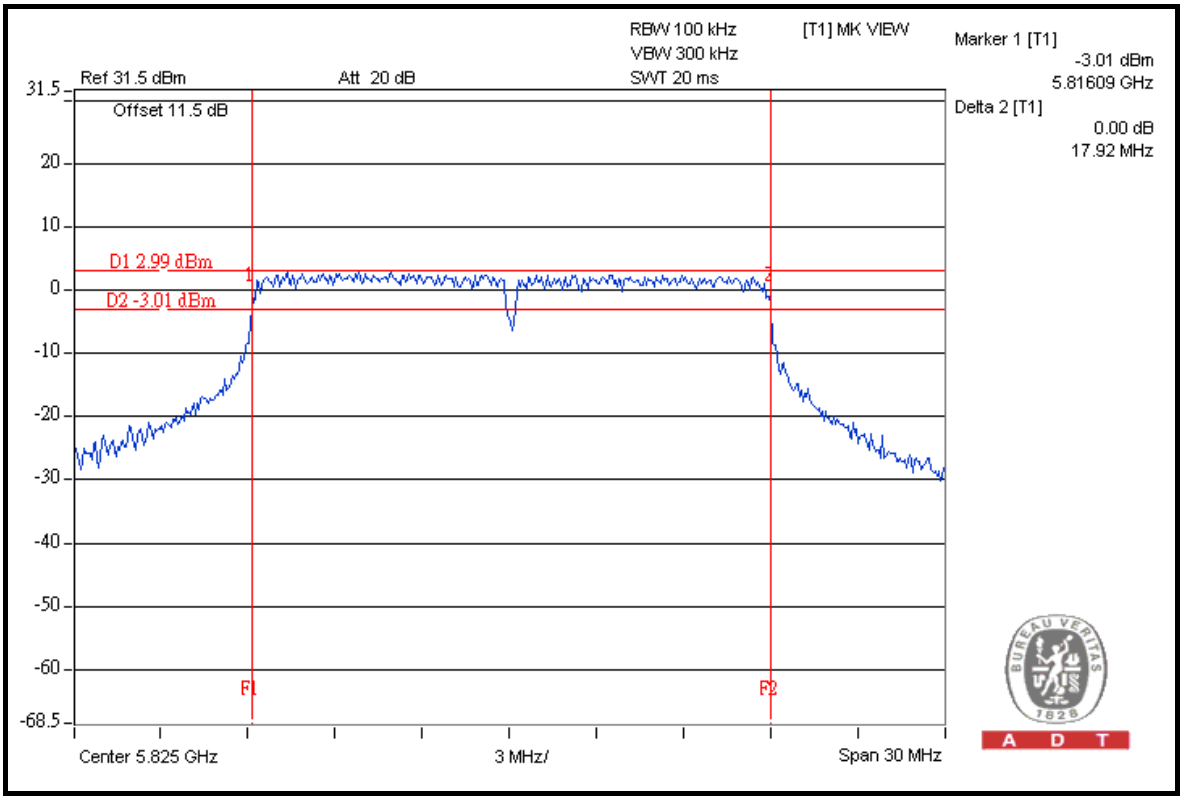
FOR CHAIN 0: CH 157



802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
149	5745	17.90	17.92	17.89	0.5	PASS
157	5785	17.87	17.87	17.85	0.5	PASS
165	5825	17.92	17.91	17.90	0.5	PASS

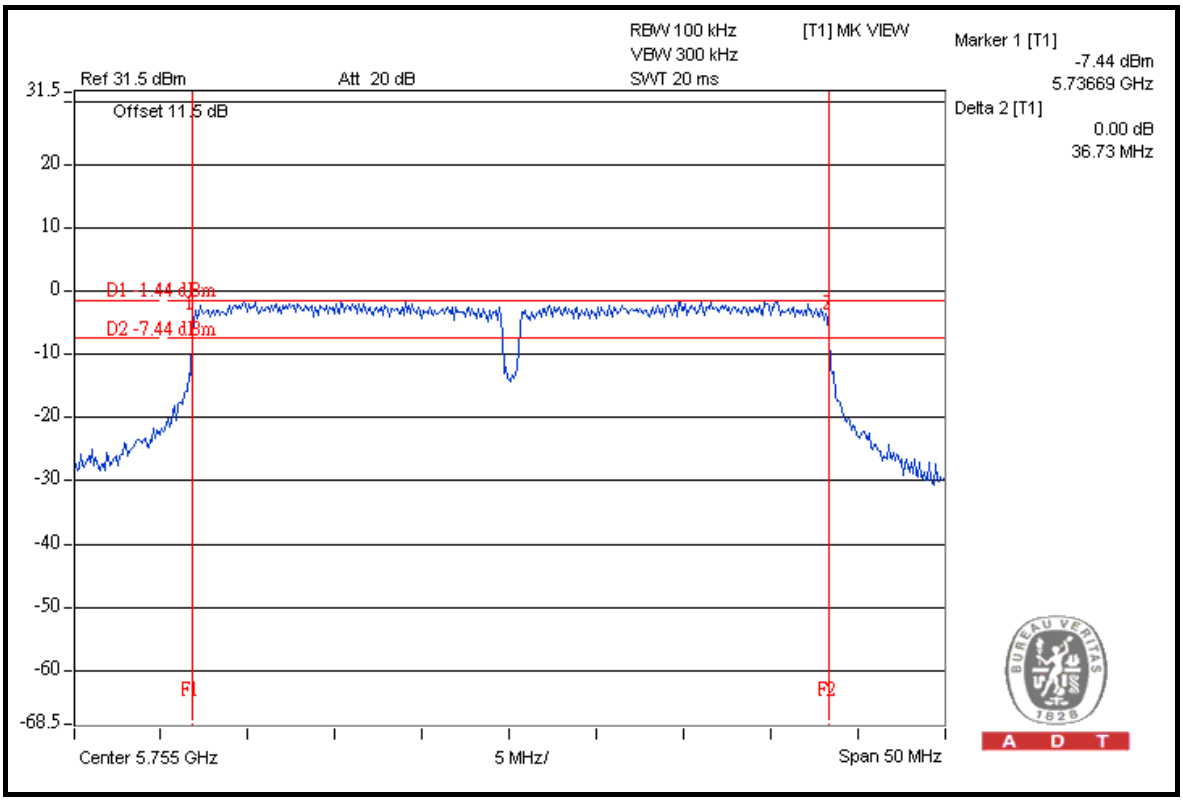
FOR CHAIN 0: CH 165



802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
151	5755	36.73	36.71	36.67	0.5	PASS
159	5795	36.71	36.70	36.68	0.5	PASS

FOR CHAIN 0: CH 151



5.4 MAXIMUM OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

The Maximum Output Power Measurement is 30dBm.

5.4.2 INSTRUMENTS

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

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

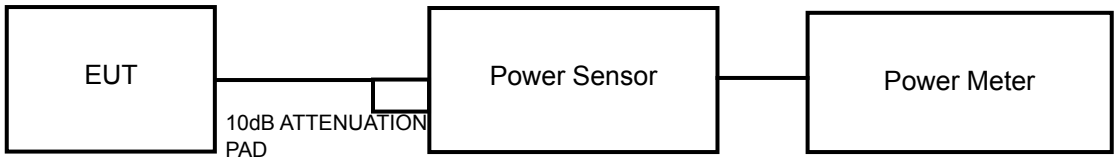
5.4.3 TEST PROCEDURES

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

5.4.4 DEVIATION FROM TEST STANDARD

No deviation.

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

Same as Item 5.3.6

5.4.7 TEST RESULTS

802.11a

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
149	5745	23.5	22.7	22.9	605.1	27.8	28.2	PASS
157	5785	23.7	22.5	23.2	621.2	27.9	28.2	PASS
165	5825	23.6	22.3	22.8	589.5	27.7	28.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 30-(7.8-6)=28.2dBm

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				
149	5745	23.8	23.1	22.5	621.9	27.9	28.2	PASS
157	5785	23.7	22.5	23.3	626.0	28.0	28.2	PASS
165	5825	23.4	22.3	23.1	592.8	27.7	28.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 30-(7.8-6)=28.2dBm

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				
151	5755	23.6	22.5	22.8	597.5	27.8	28.2	PASS
159	5795	23.7	22.5	23.3	626.0	28.0	28.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 30-(7.8-6)=28.2dBm

5.5 POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

5.5.2 TEST INSTRUMENTS

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

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

5.5.3 TEST PROCEDURE

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

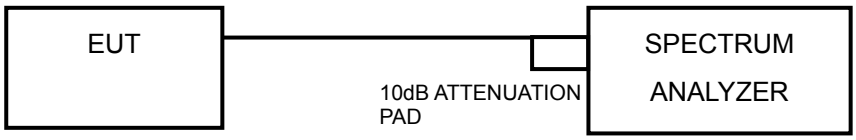
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

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

5.5.4 DEVIATION FROM TEST STANDARD

No deviation.

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

Same as Item 5.3.6.

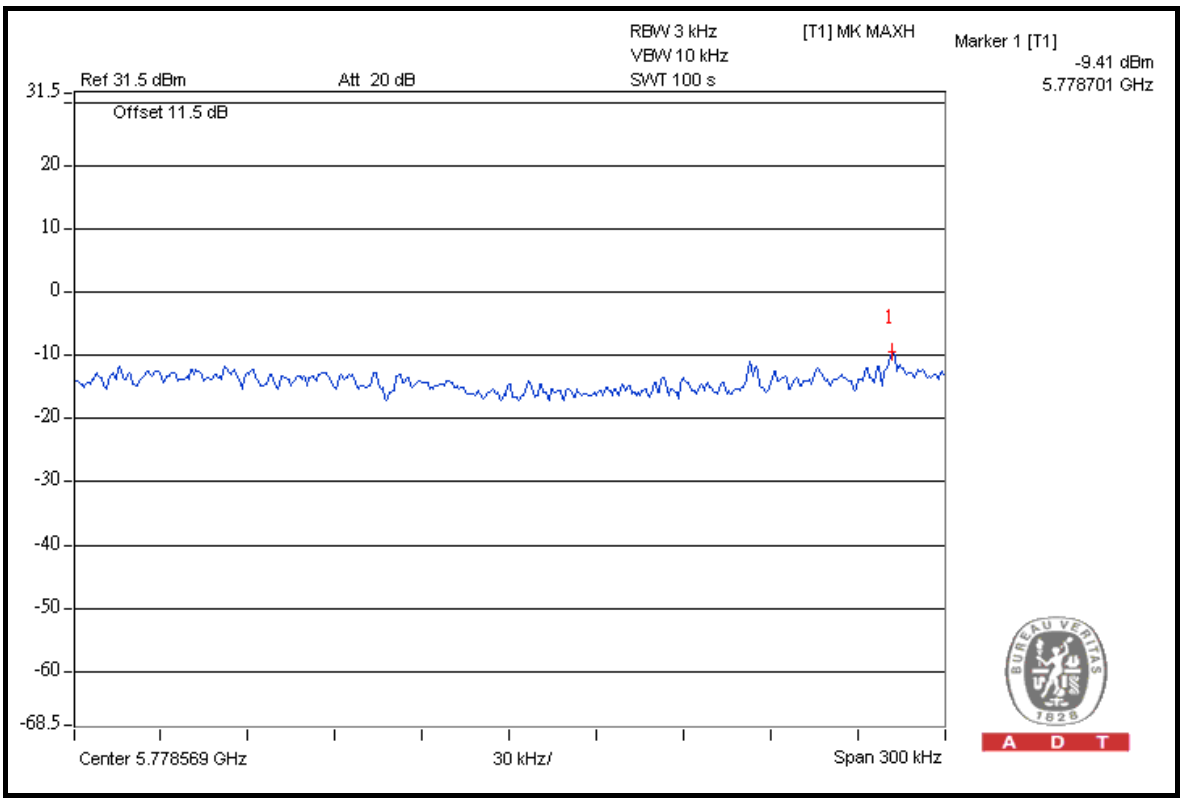
5.5.7 TEST RESULTS

802.11a

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=3) dB			
0	149	5745	-9.94	4.77	-5.2	6.2	PASS
	157	5785	-9.53	4.77	-4.8	6.2	PASS
	165	5825	-9.78	4.77	-5.0	6.2	PASS
1	149	5745	-9.78	4.77	-5.0	6.2	PASS
	157	5785	-10.01	4.77	-5.2	6.2	PASS
	165	5825	-10.42	4.77	-5.7	6.2	PASS
2	149	5745	-9.74	4.77	-5.0	6.2	PASS
	157	5785	-9.41	4.77	-4.6	6.2	PASS
	165	5825	-9.84	4.77	-5.1	6.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(7.8-6)=6.2dBm

FOR CHAIN 2: CH 157

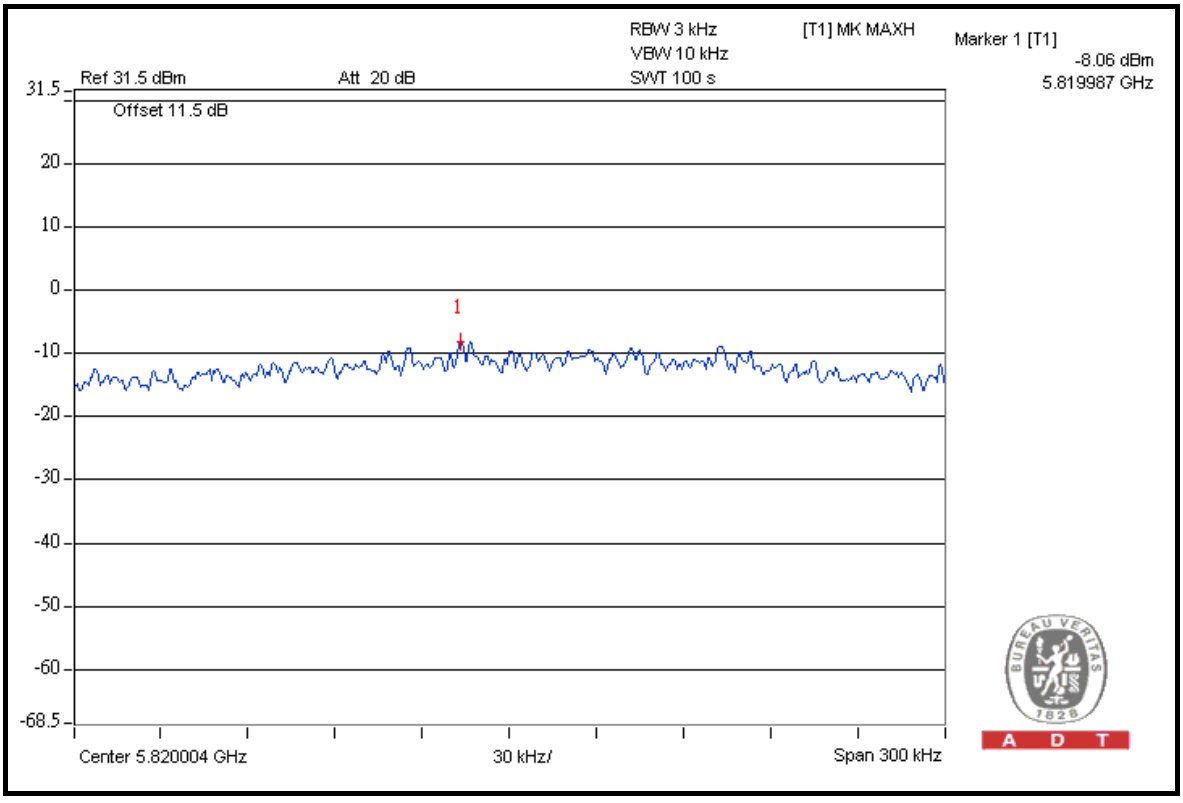


802.11n (20MHz)

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	149	5745	-9.80	4.77	-5.0	6.2	PASS
	157	5785	-9.71	4.77	-4.9	6.2	PASS
	165	5825	-8.06	4.77	-3.3	6.2	PASS
1	149	5745	-10.32	4.77	-5.6	6.2	PASS
	157	5785	-11.08	4.77	-6.3	6.2	PASS
	165	5825	-11.01	4.77	-6.2	6.2	PASS
2	149	5745	-10.90	4.77	-6.1	6.2	PASS
	157	5785	-9.94	4.77	-5.2	6.2	PASS
	165	5825	-10.40	4.77	-5.6	6.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(7.8-6)=6.2dBm

FOR CHAIN 0: CH 165

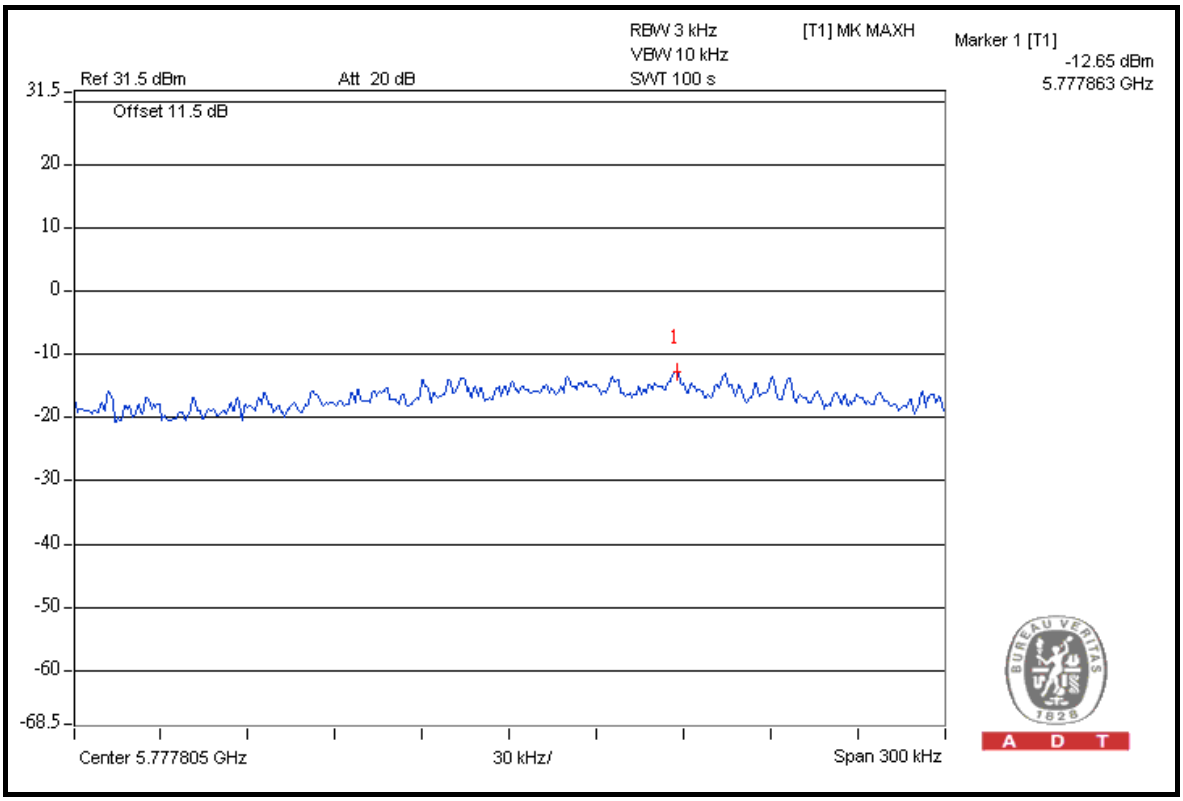


802.11n (40MHz)

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	151	5755	-13.07	4.77	-8.3	6.2	PASS
	159	5795	-13.12	4.77	-8.4	6.2	PASS
1	151	5755	-12.85	4.77	-8.1	6.2	PASS
	159	5795	-12.71	4.77	-7.9	6.2	PASS
2	151	5755	-13.25	4.77	-8.5	6.2	PASS
	159	5795	-12.65	4.77	-7.9	6.2	PASS

Directional gain =3dBi + 10log(3)=7.8dBi > 6dBi , so the conducted power limit shall be reduced to 8-(7.8-6)=6.2dBm

FOR CHAIN 2: CH 159



5.6 BAND EDGES MEASUREMENT

5.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

5.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
FOR CONDUCTED MEASUREMENT				
SPECTRUM ANALYZER R&S	FSP40	100039	Feb. 23, 2011	Feb. 22, 2012
FOR RADIATED MEASUREMENT				
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 19, 2011	Apr. 18, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jan. 06, 2011	Jan. 05, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Apr. 12, 2011	Apr. 11, 2012
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-563	Sep. 06, 2011	Sep. 05, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 27, 2010	Dec. 26, 2011
Preamplifier Agilent	8449B	3008A01911	Nov. 03, 2010	Nov. 02, 2011
Preamplifier Agilent	8447D	2944A10638	Nov. 03, 2010	Nov. 02, 2011
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	295013/4 283403/4	Aug. 19, 2011	Aug. 18, 2012
RF signal cable Worken	8D-FB	Cable-HYCH9-01	Aug. 13, 2011	Aug. 12, 2012
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower &Turn Table Controller EMCO	2090	NA	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Nov. 03, 2010	Nov. 02, 2011

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

5.6.3 TEST PROCEDURE

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

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

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

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

e. Set both RBW and VBW of spectrum analyzer to 100kHz and 300kHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

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

5.6.4 DEVIATION FROM TEST STANDARD

No deviation.

5.6.5 EUT OPERATING CONDITION

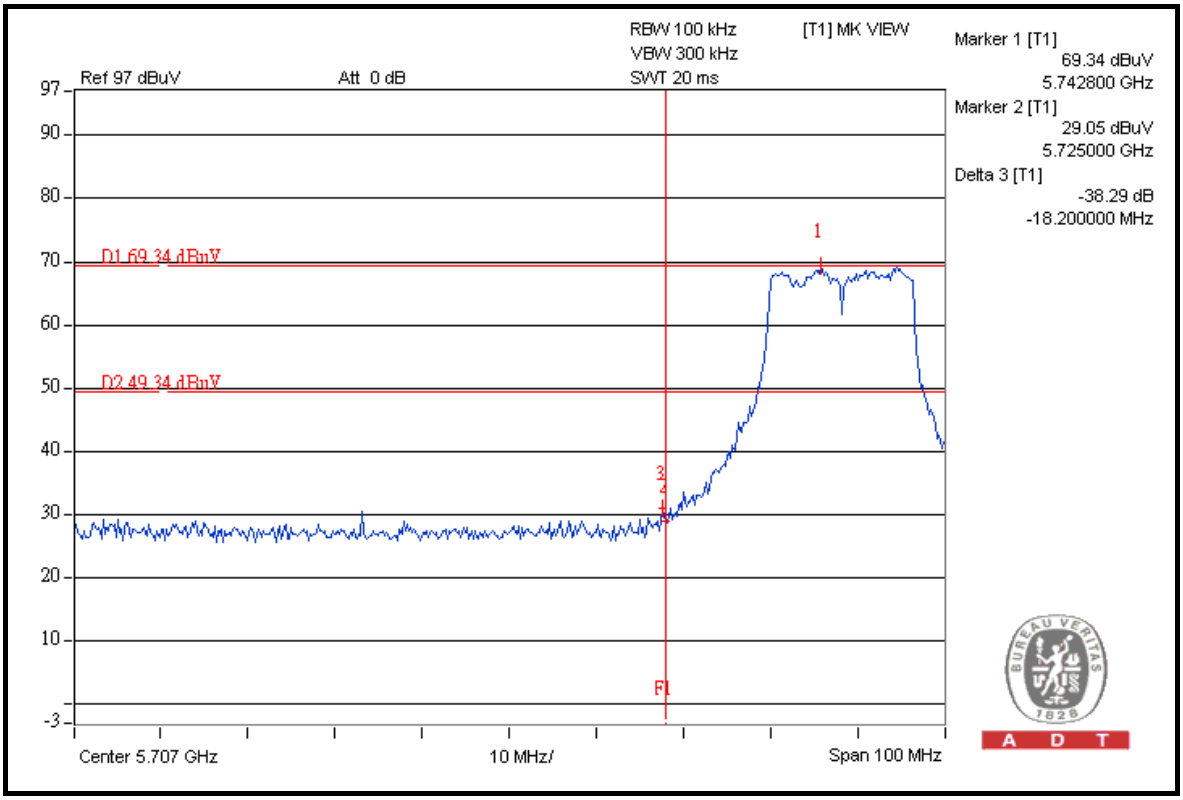
Same as Item 5.3.6.

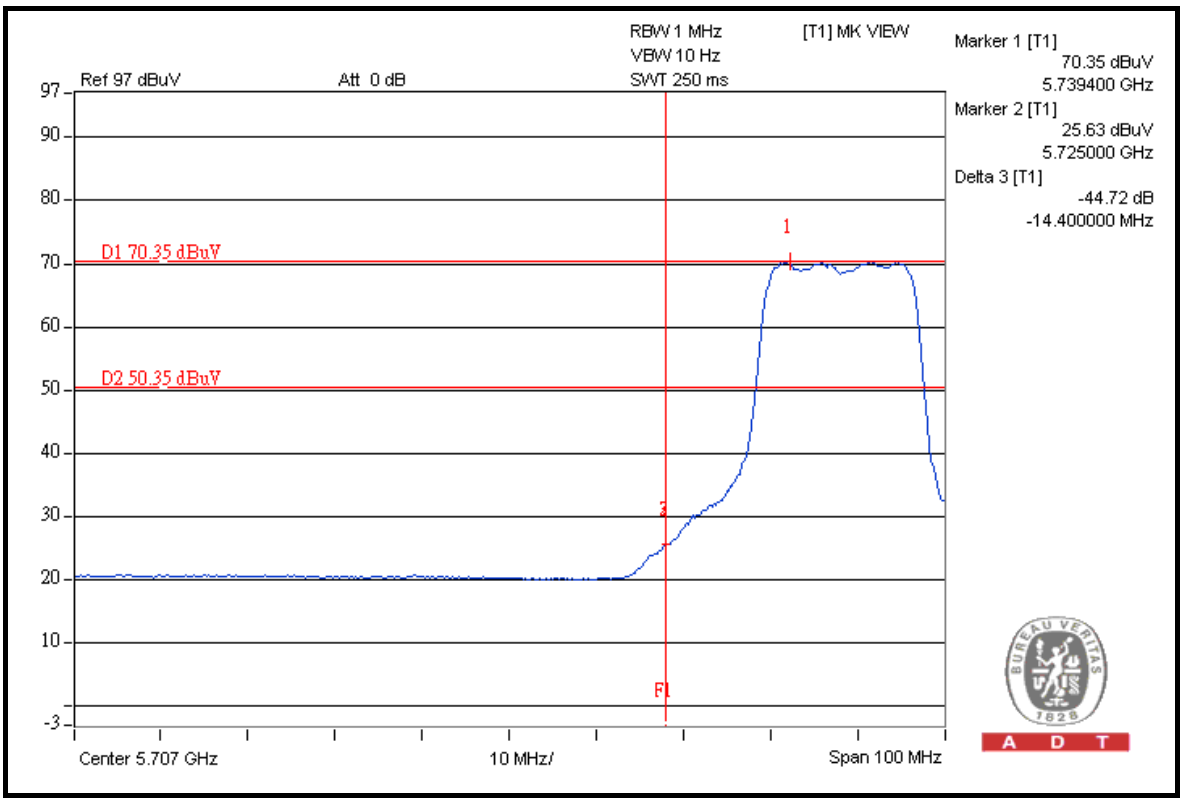
5.6.6 TEST RESULTS

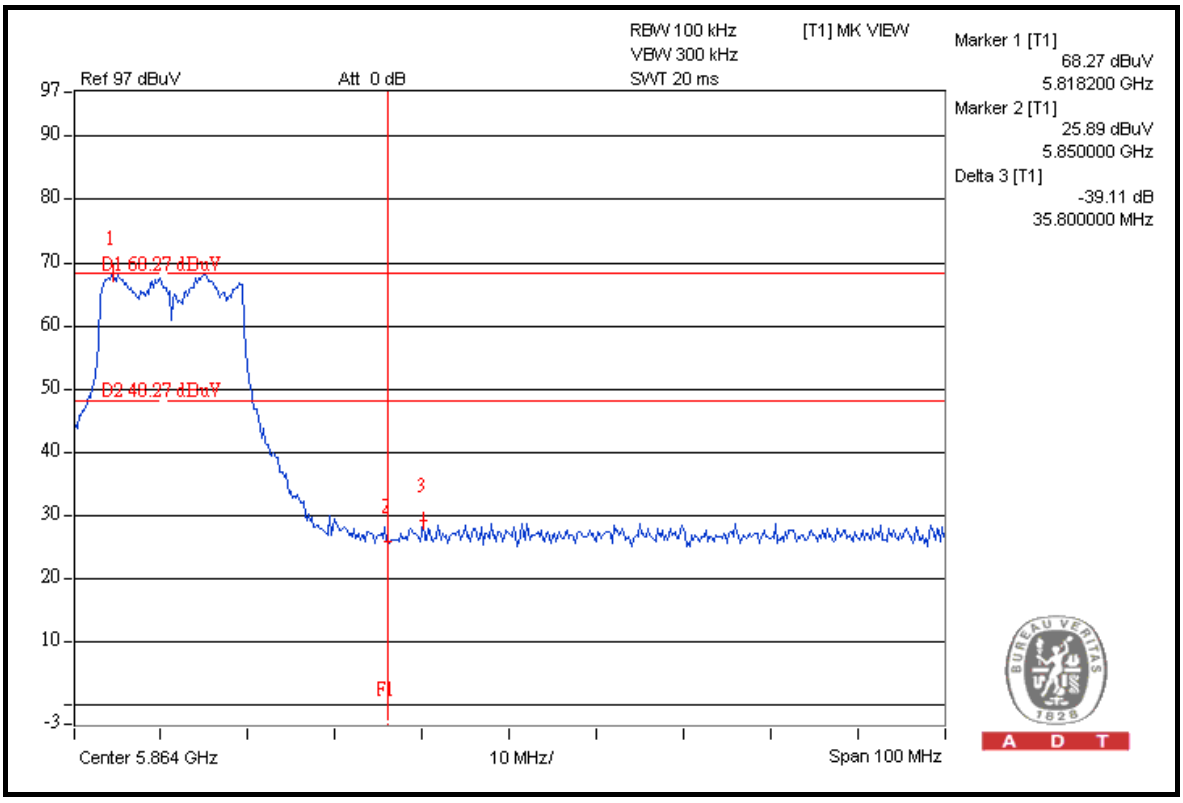
The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

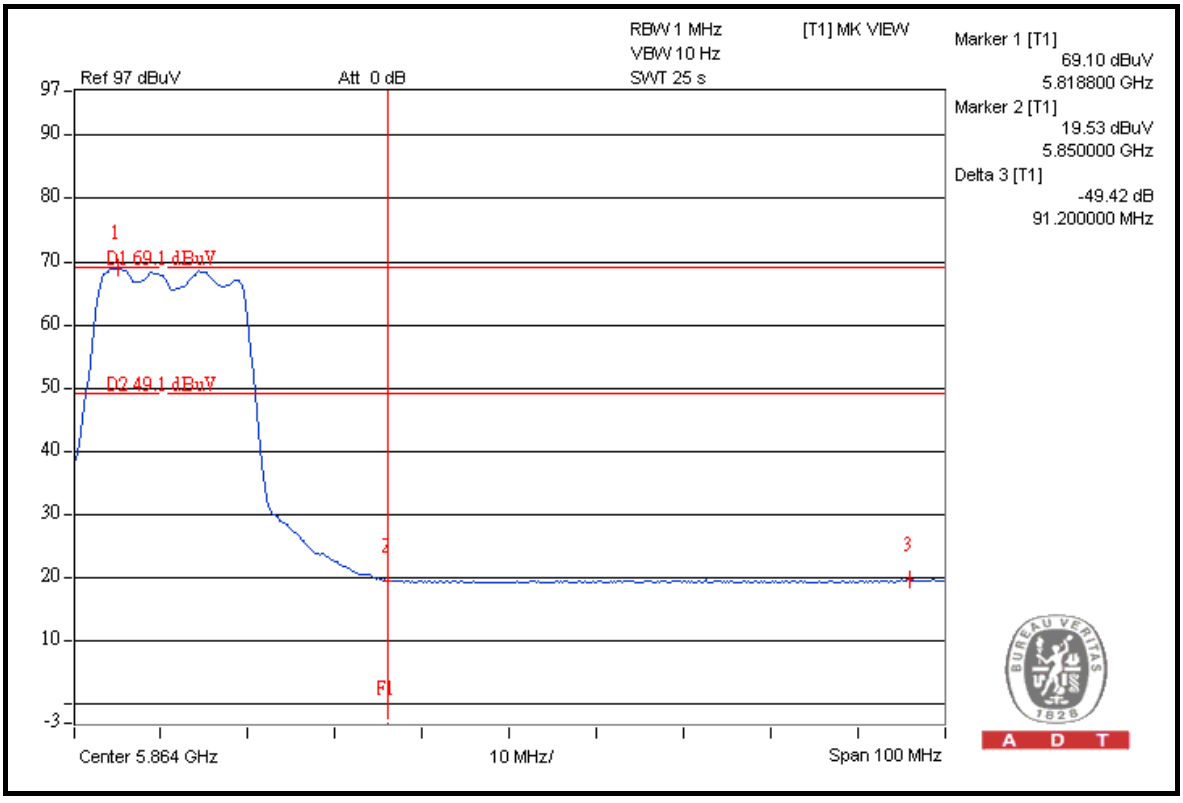
802.11a

FOR RADIATED MEASURED (THREE CHAINS ON)



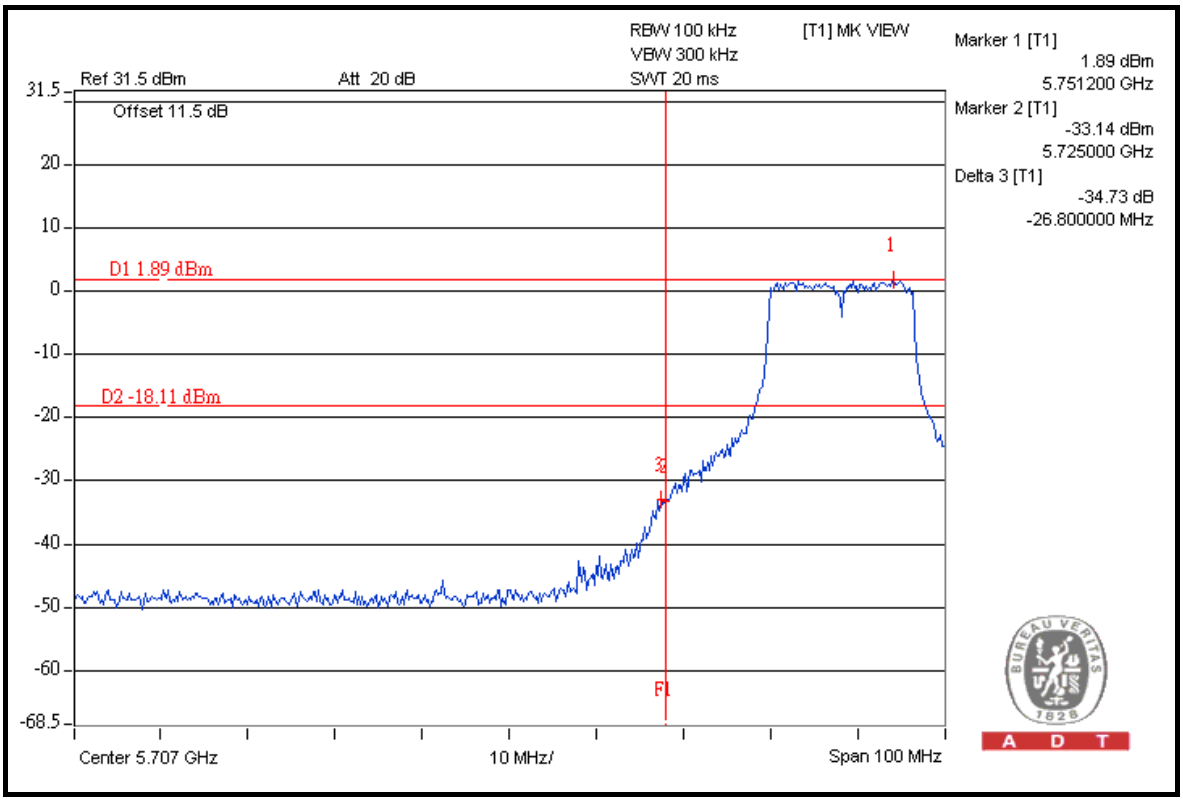


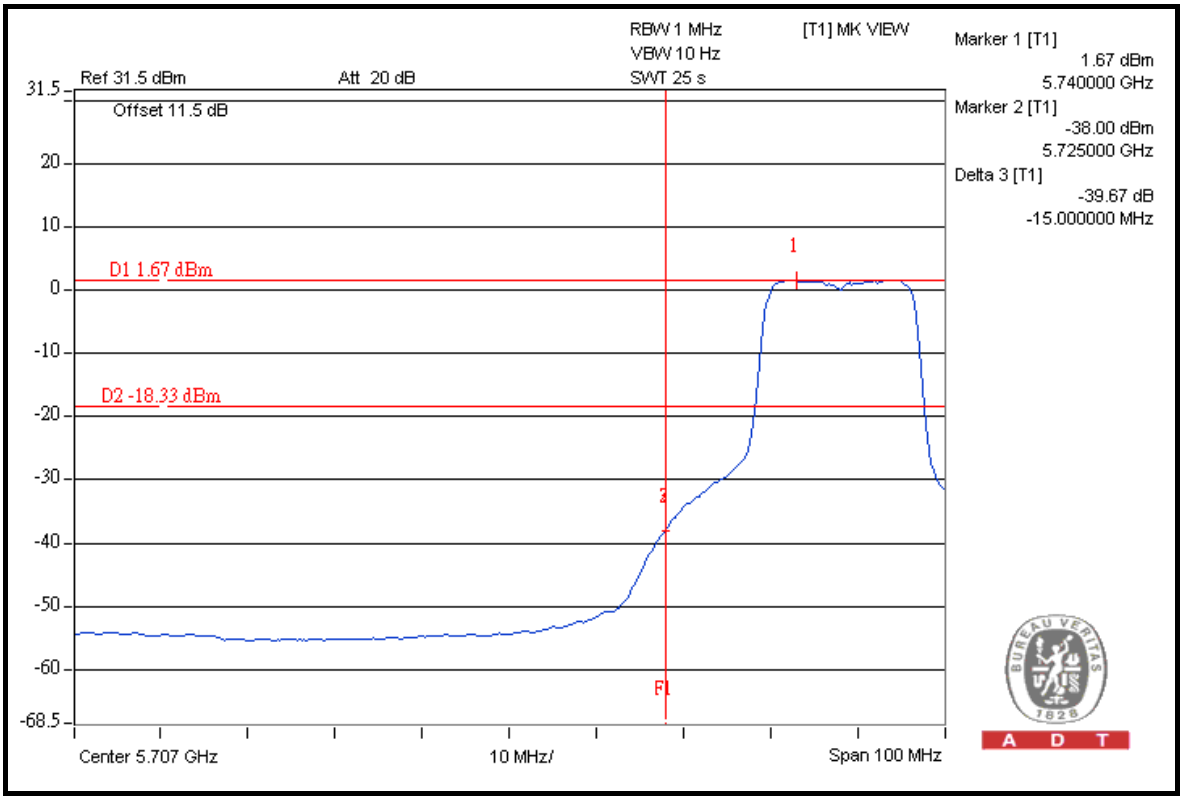

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
68.27 dBuV
5.818200 GHz
Marker 2 [T1]
25.89 dBuV
5.850000 GHz
Delta 3 [T1]
-39.11 dB
35.800000 MHz
Ref 97 dBuV
Att 0 dB
D1 60.27 dBuV
D2 40.27 dBuV
Center 5.864 GHz
10 MHz/
Span 100 MHz

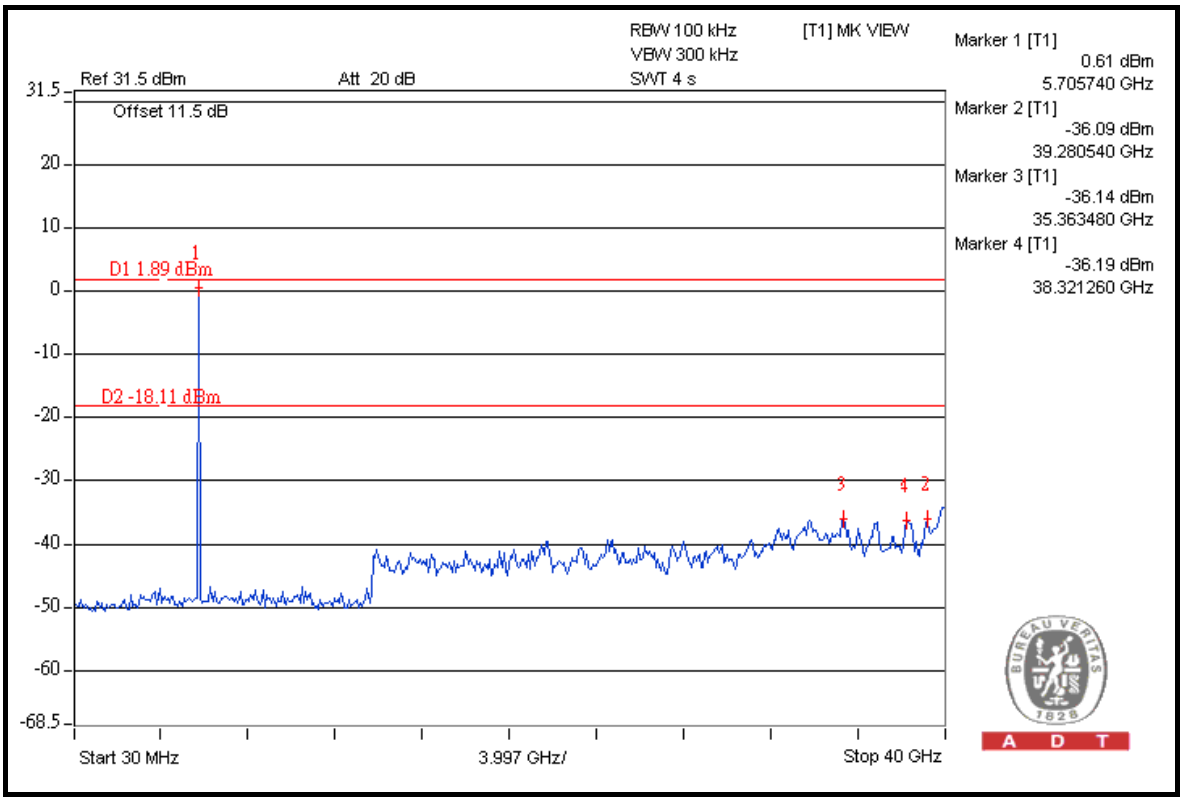

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Marker 1 [T1]
69.10 dBuV
5.818800 GHz
Marker 2 [T1]
19.53 dBuV
5.850000 GHz
Delta 3 [T1]
-49.42 dB
91.200000 MHz
Ref 97 dBuV
Att 0 dB
D1 69.1 dBuV
D2 49.1 dBuV
Center 5.864 GHz
10 MHz/
Span 100 MHz

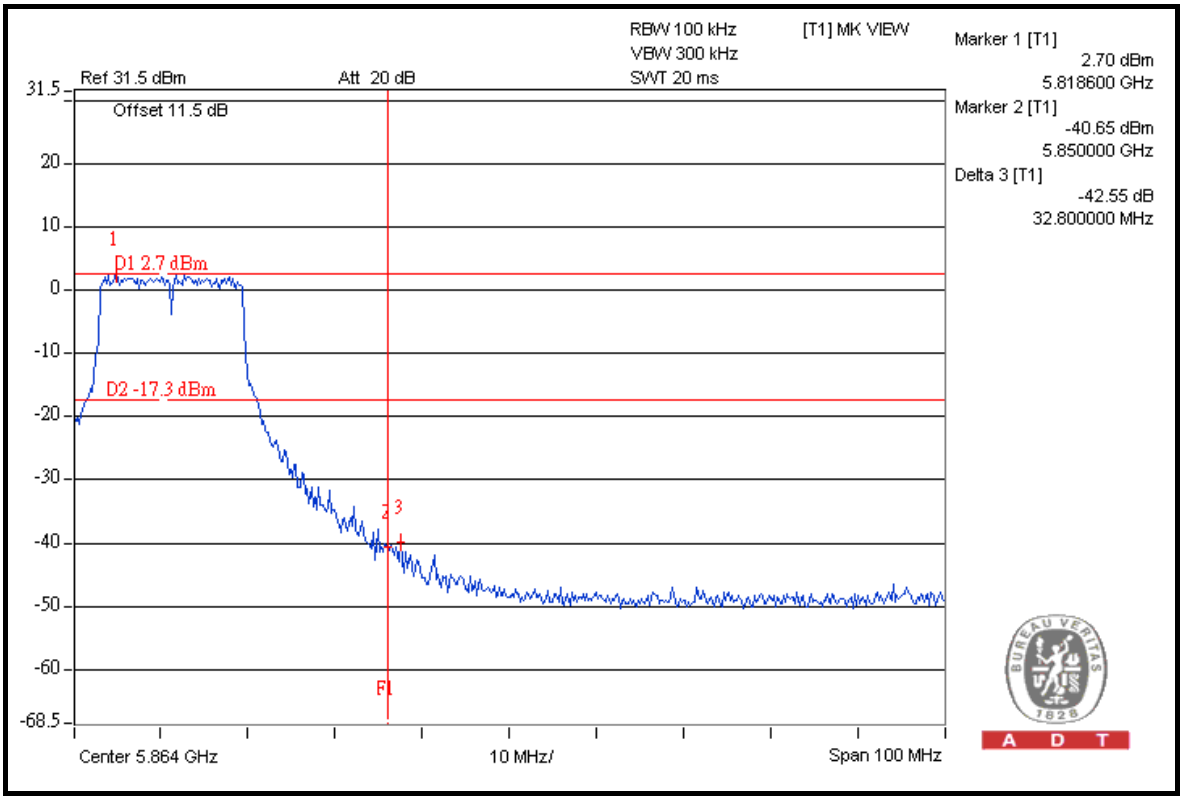
FOR CONDUCTED MEASURED

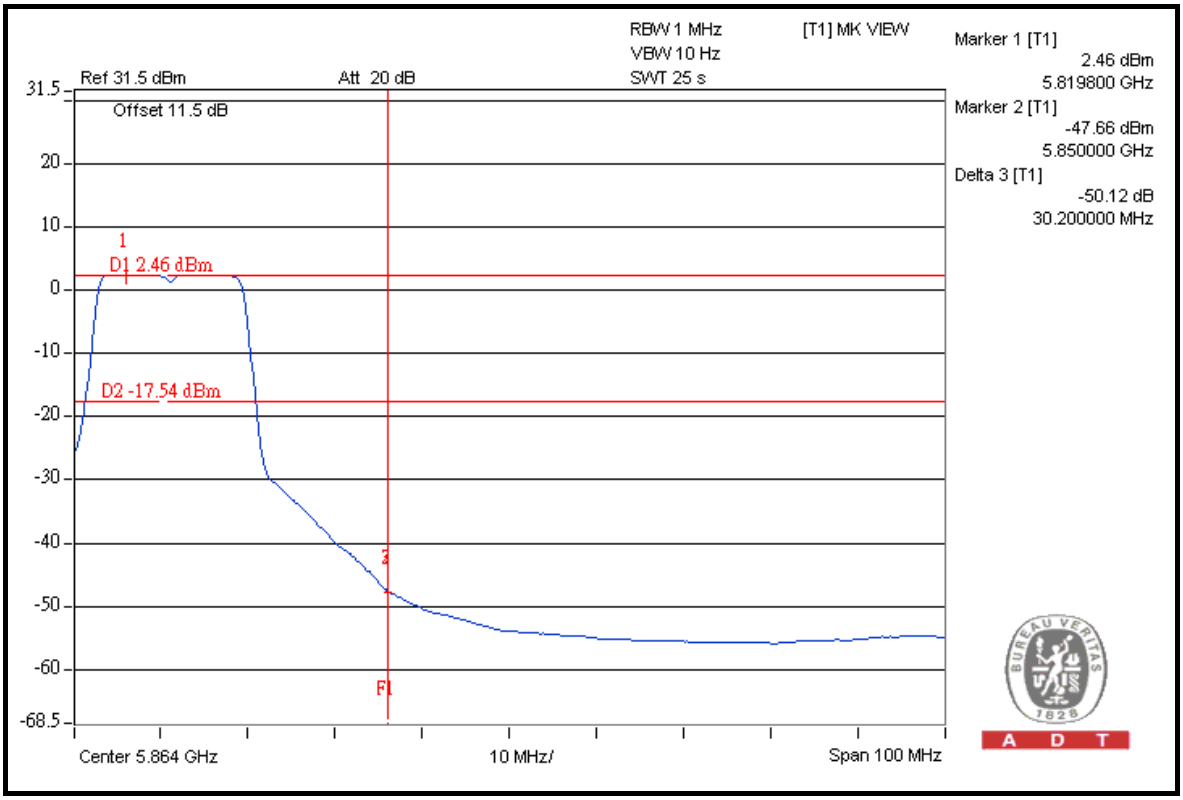
CHAIN 0

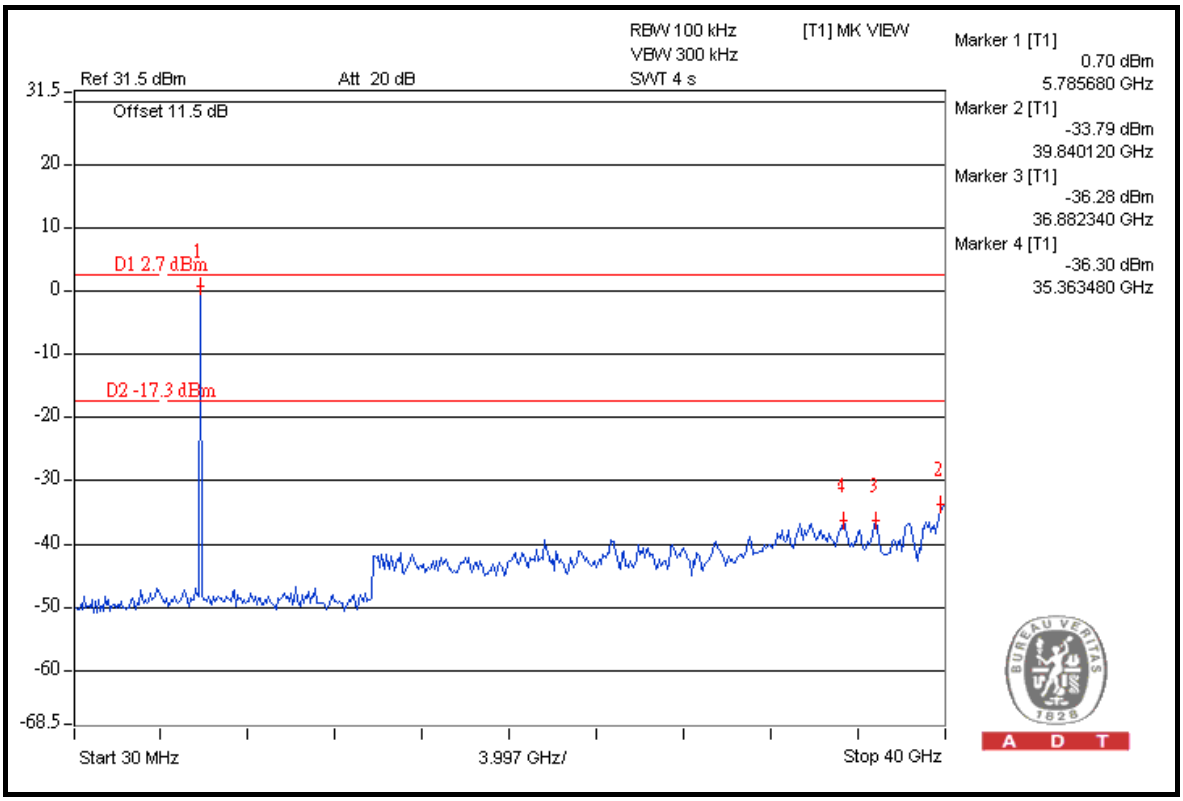




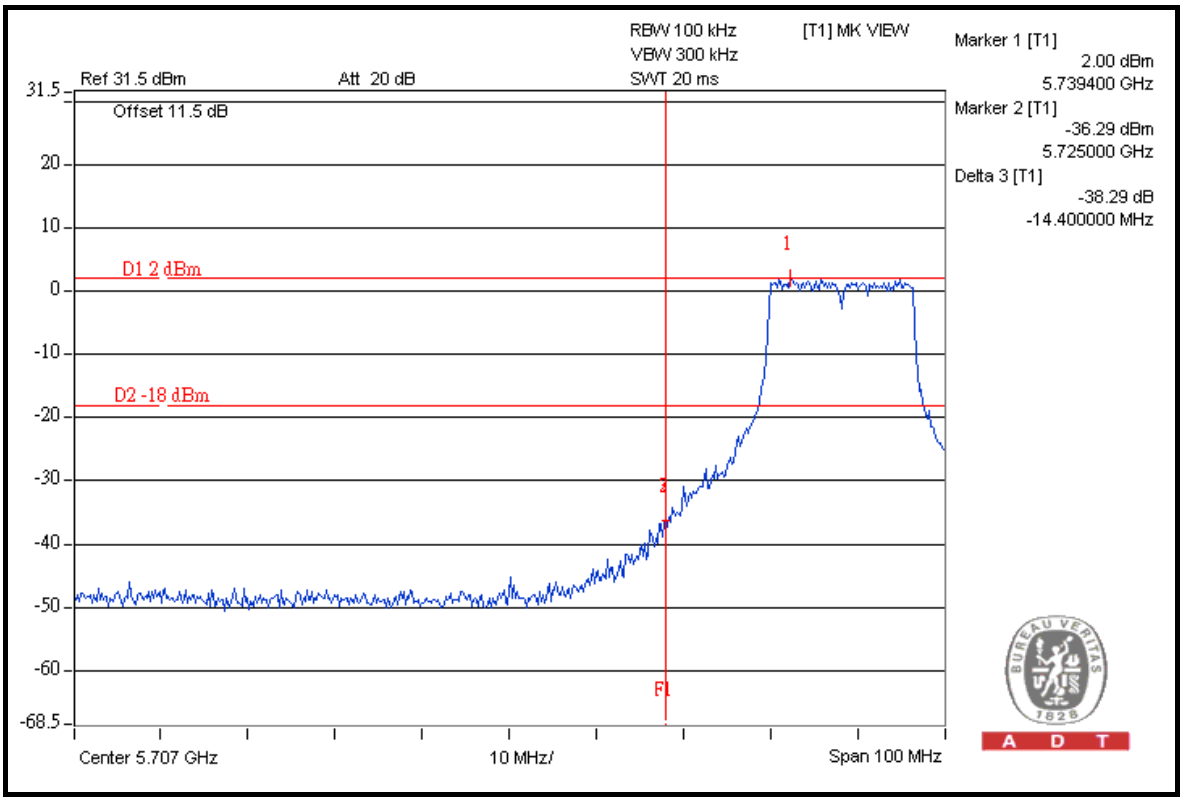

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 1.89 dBm
D2 -18.11 dBm
Marker 1 [T1]
0.61 dBm
5.705740 GHz
Marker 2 [T1]
-36.09 dBm
39.280540 GHz
Marker 3 [T1]
-36.14 dBm
35.363480 GHz
Marker 4 [T1]
-36.19 dBm
38.321260 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

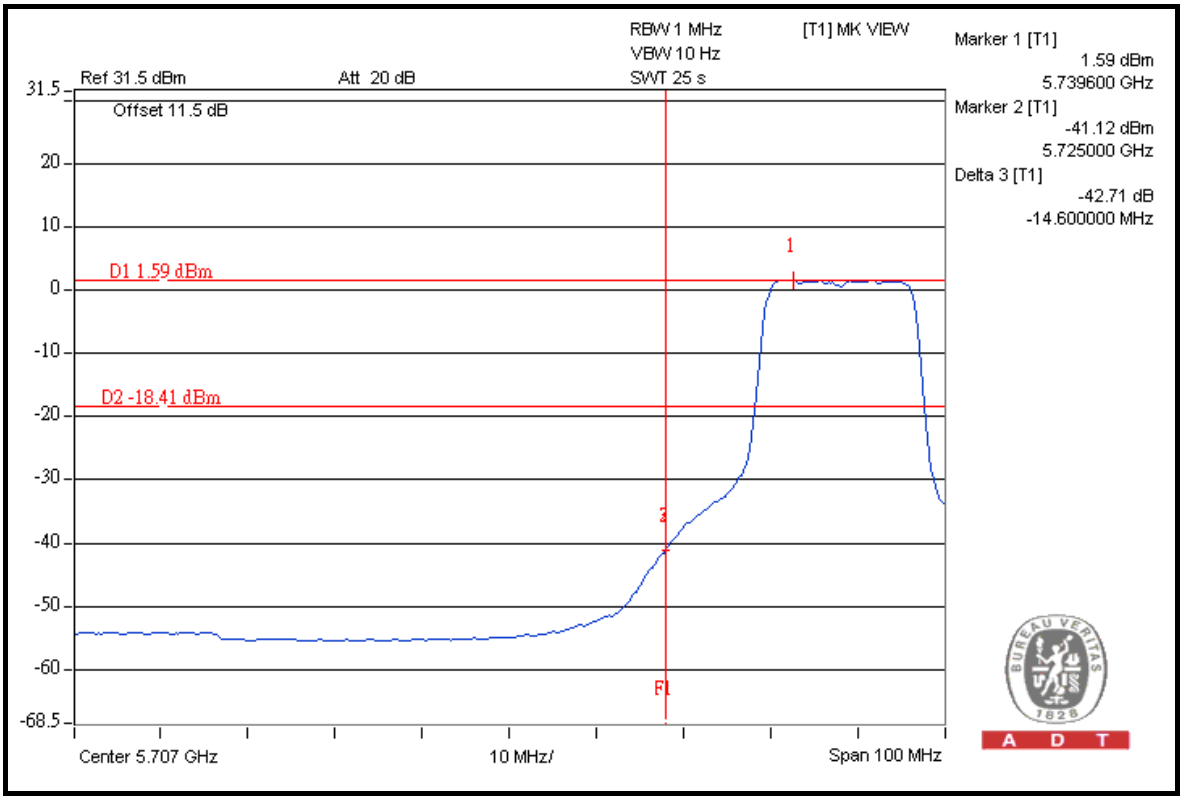

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2.7 dBm
D2 -17.3 dBm
Marker 1 [T1]
2.70 dBm
5.818600 GHz
Marker 2 [T1]
-40.65 dBm
5.850000 GHz
Delta 3 [T1]
-42.55 dB
32.800000 MHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

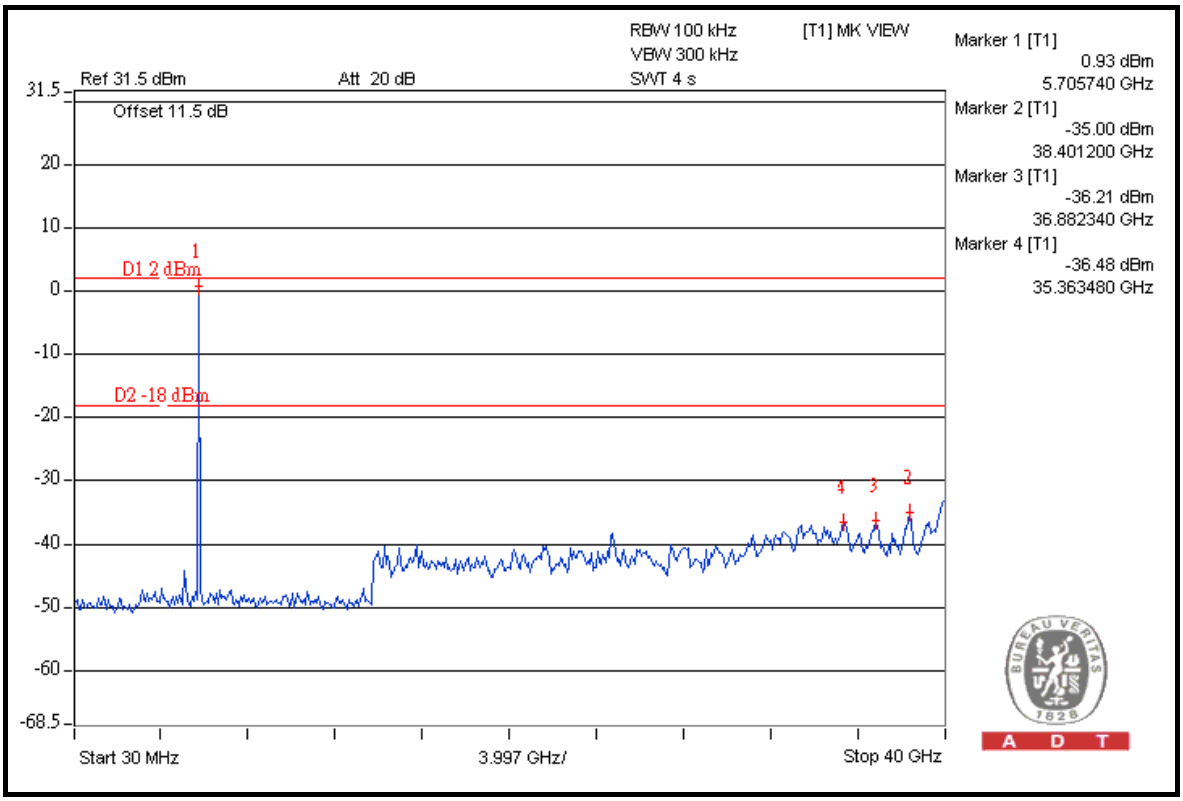

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 2.46 dBm
D2 -17.54 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
2.46 dBm
5.819800 GHz
Marker 2 [T1]
-47.66 dBm
5.850000 GHz
Delta 3 [T1]
-50.12 dB
30.200000 MHz

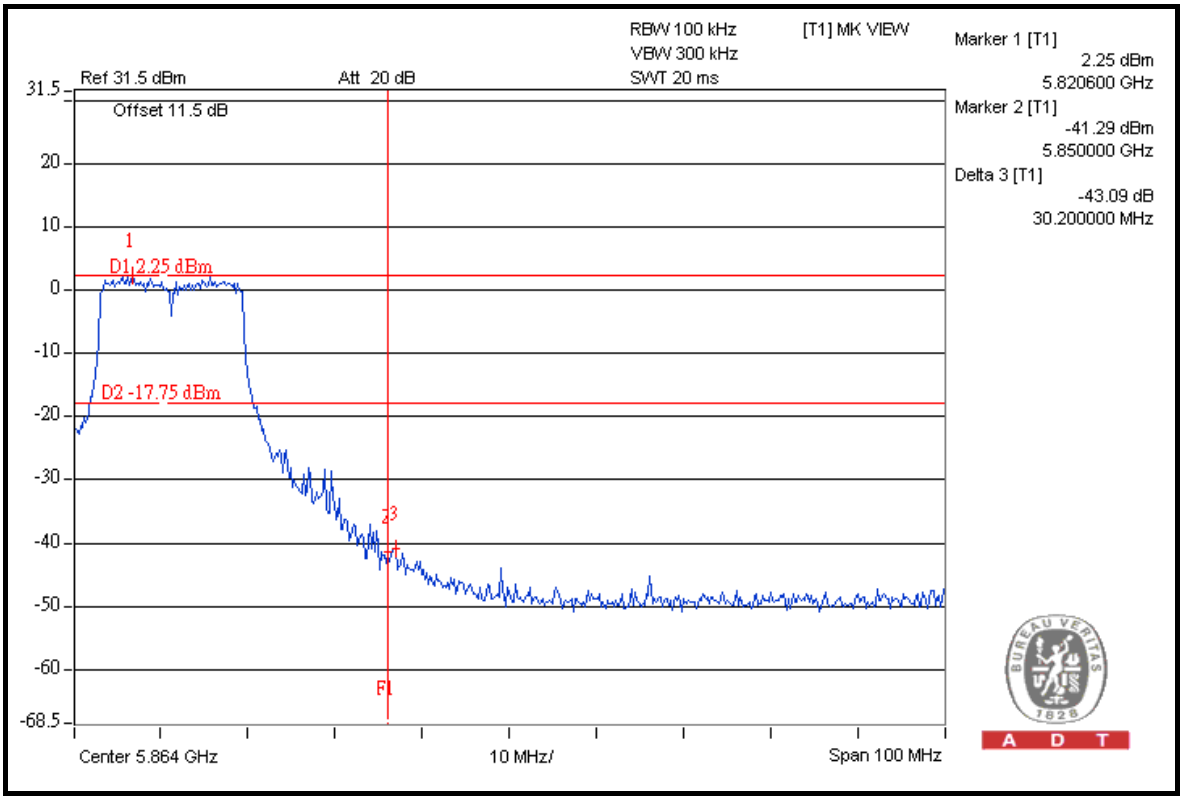

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 2.7 dBm
D2 -17.3 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
Marker 1 [T1]
0.70 dBm
5.785680 GHz
Marker 2 [T1]
-33.79 dBm
39.840120 GHz
Marker 3 [T1]
-36.28 dBm
36.882340 GHz
Marker 4 [T1]
-36.30 dBm
35.363480 GHz

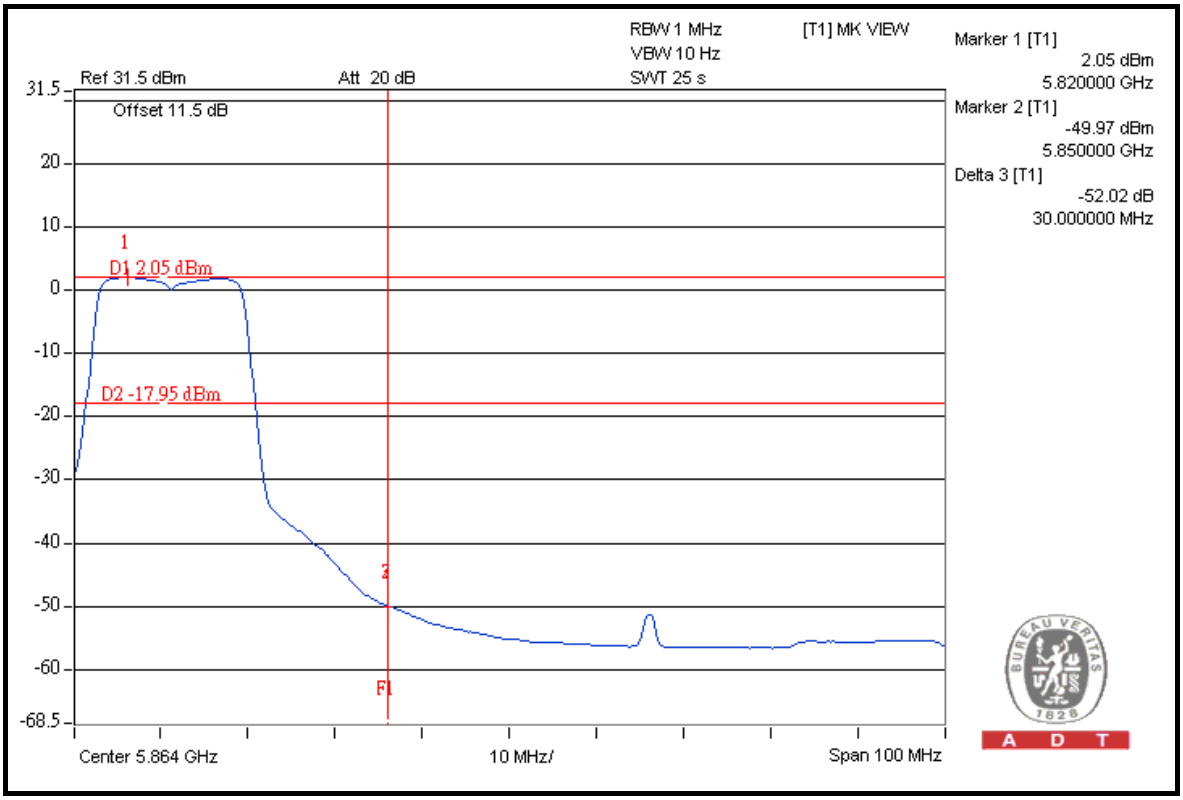
CHAIN 1

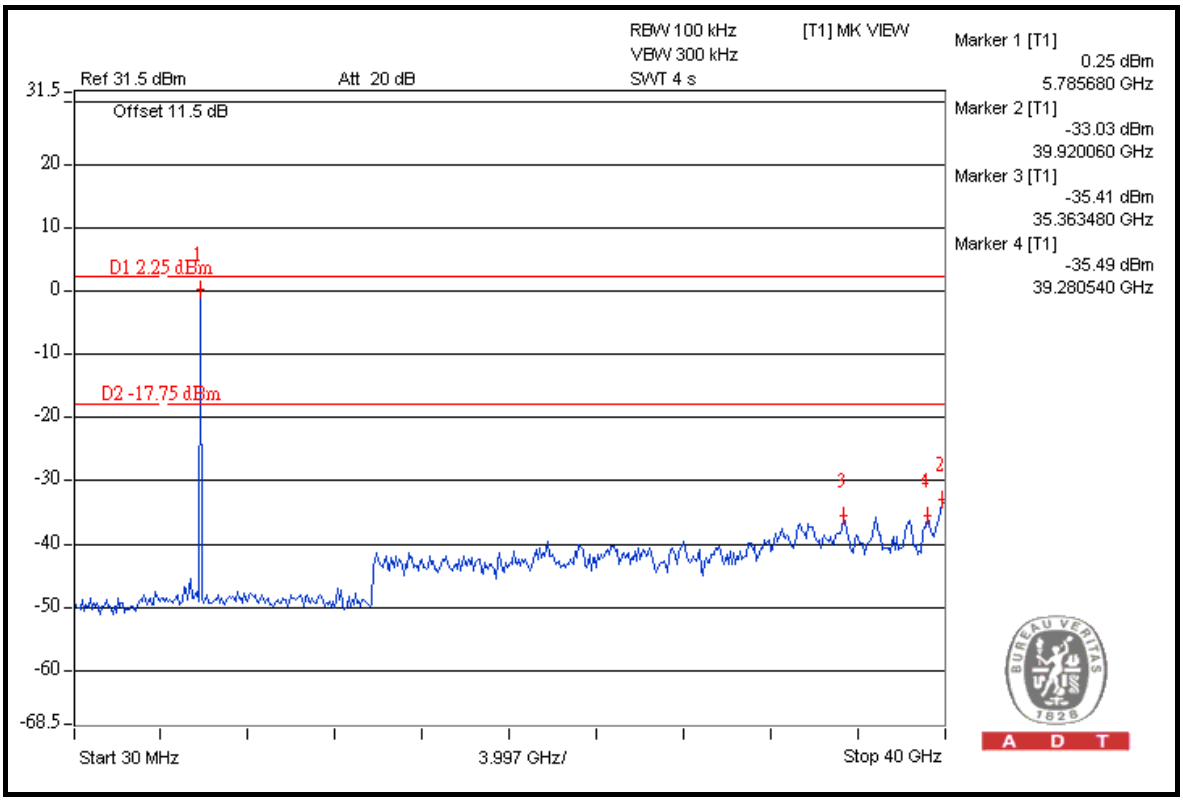

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
2.00 dBm
5.739400 GHz
Marker 2 [T1]
-36.29 dBm
5.725000 GHz
Delta 3 [T1]
-38.29 dB
-14.400000 MHz
D1 2 dBm
D2 -18 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
1.59 dBm
5.739600 GHz
Marker 2 [T1]
-41.12 dBm
5.725000 GHz
Delta 3 [T1]
-42.71 dB
-14.600000 MHz
D1 1.59 dBm
D2 -18.41 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.707 GHz
10 MHz/
Span 100 MHz

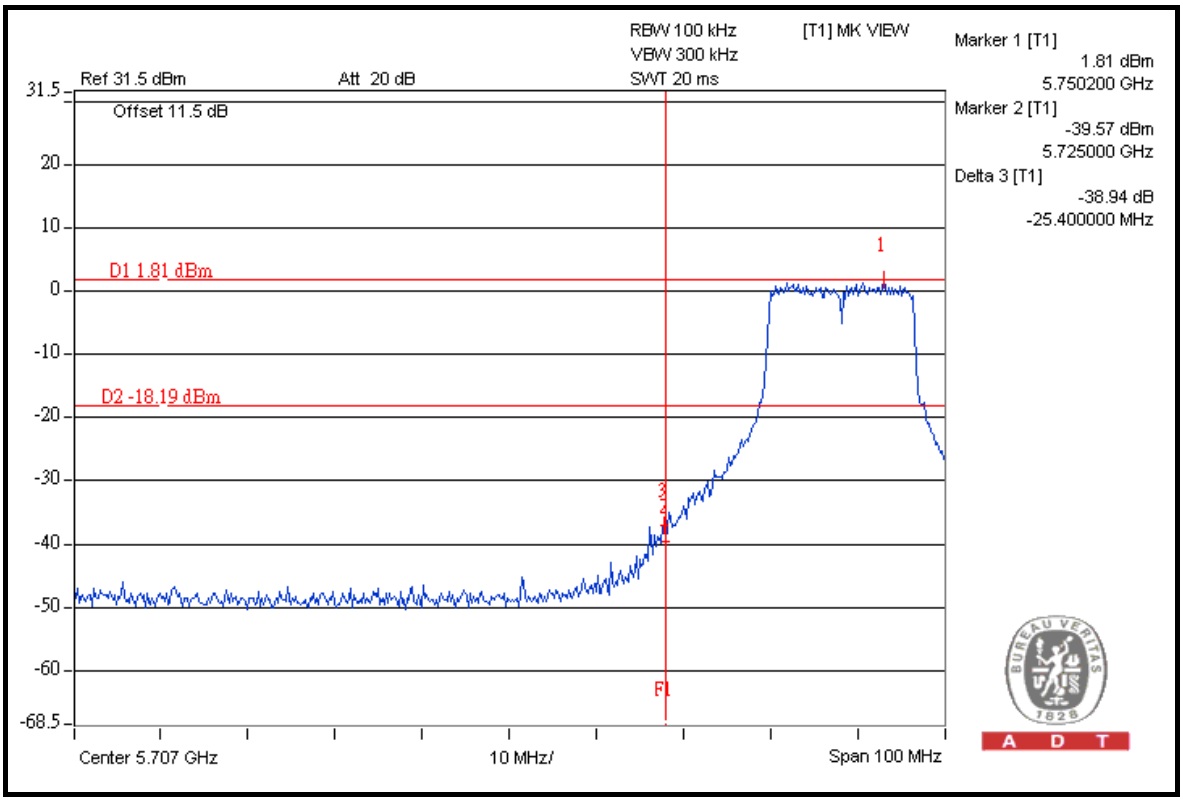

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2 dBm
D2 -18 dBm
Marker 1 [T1]
0.93 dBm
5.705740 GHz
Marker 2 [T1]
-35.00 dBm
38.401200 GHz
Marker 3 [T1]
-36.21 dBm
36.882340 GHz
Marker 4 [T1]
-36.48 dBm
35.363480 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

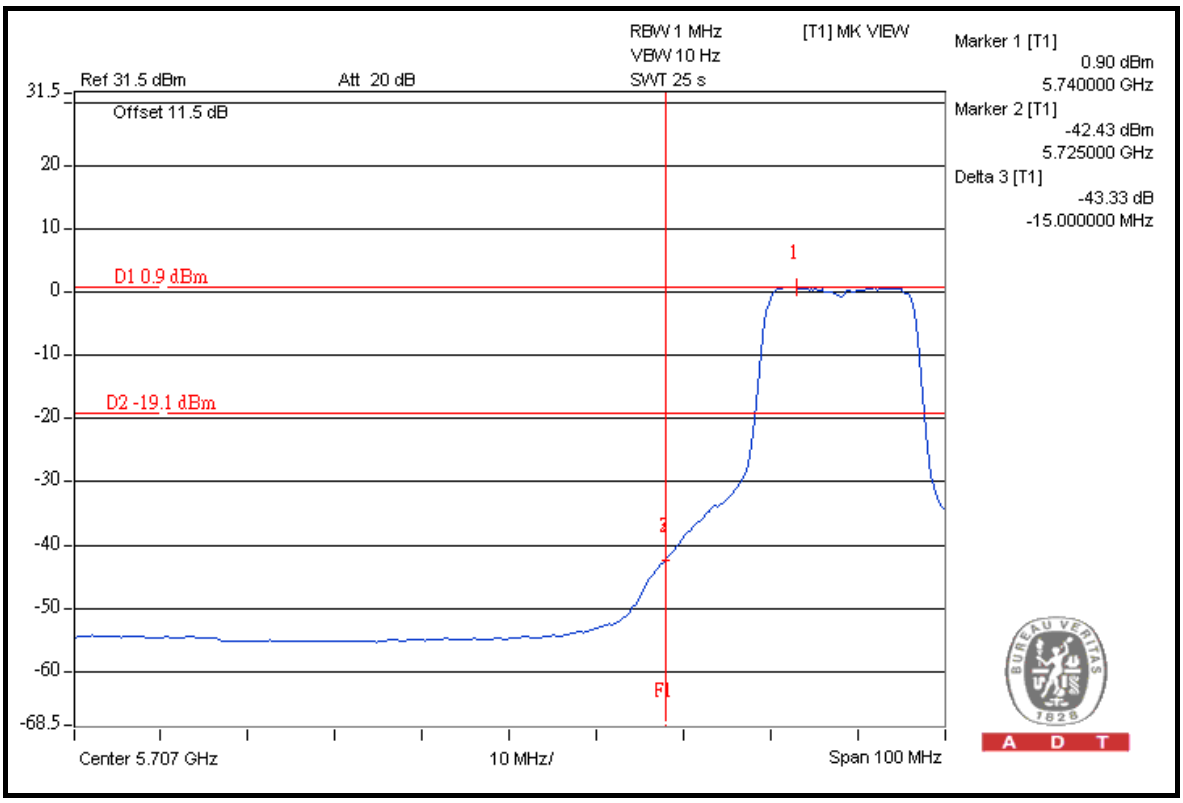

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2.25 dBm
D2 -17.75 dBm
Marker 1 [T1]
2.25 dBm
5.820600 GHz
Marker 2 [T1]
-41.29 dBm
5.850000 GHz
Delta 3 [T1]
-43.09 dB
30.200000 MHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

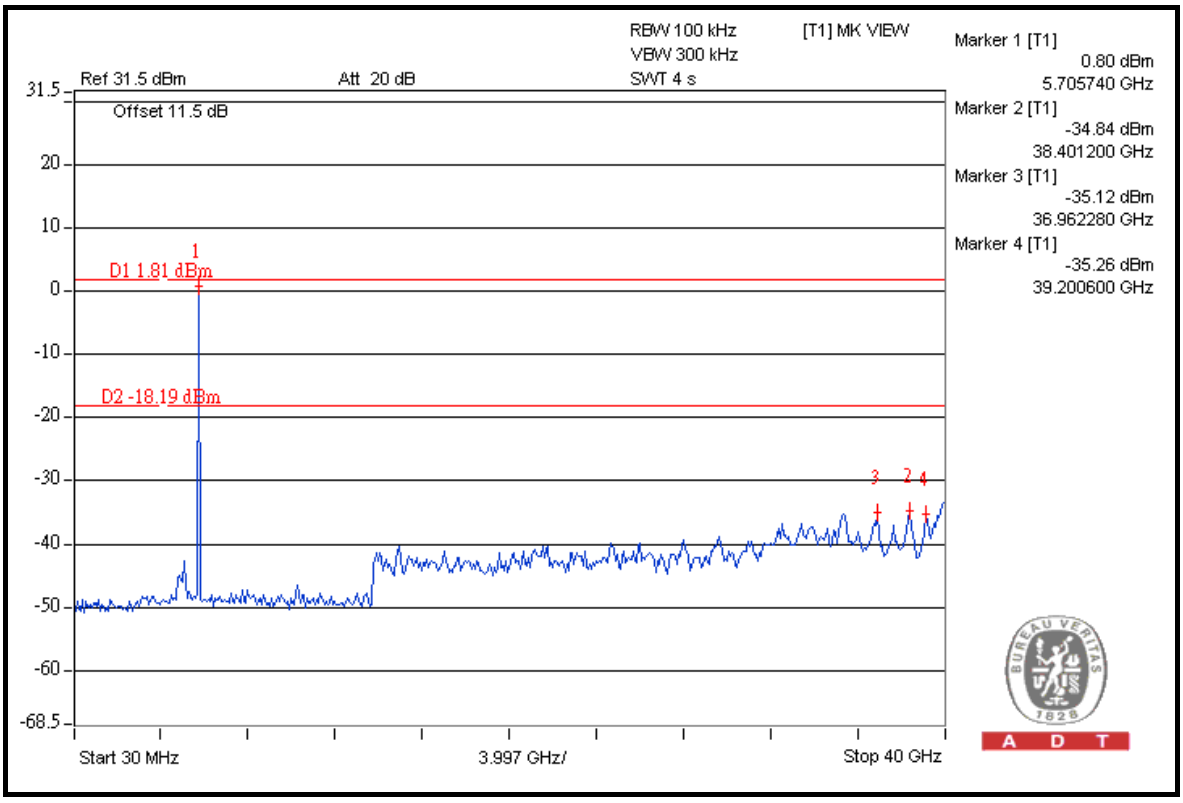

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 2.05 dBm
D2 -17.95 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
2.05 dBm
5.820000 GHz
Marker 2 [T1]
-49.97 dBm
5.850000 GHz
Delta 3 [T1]
-52.02 dB
30.000000 MHz

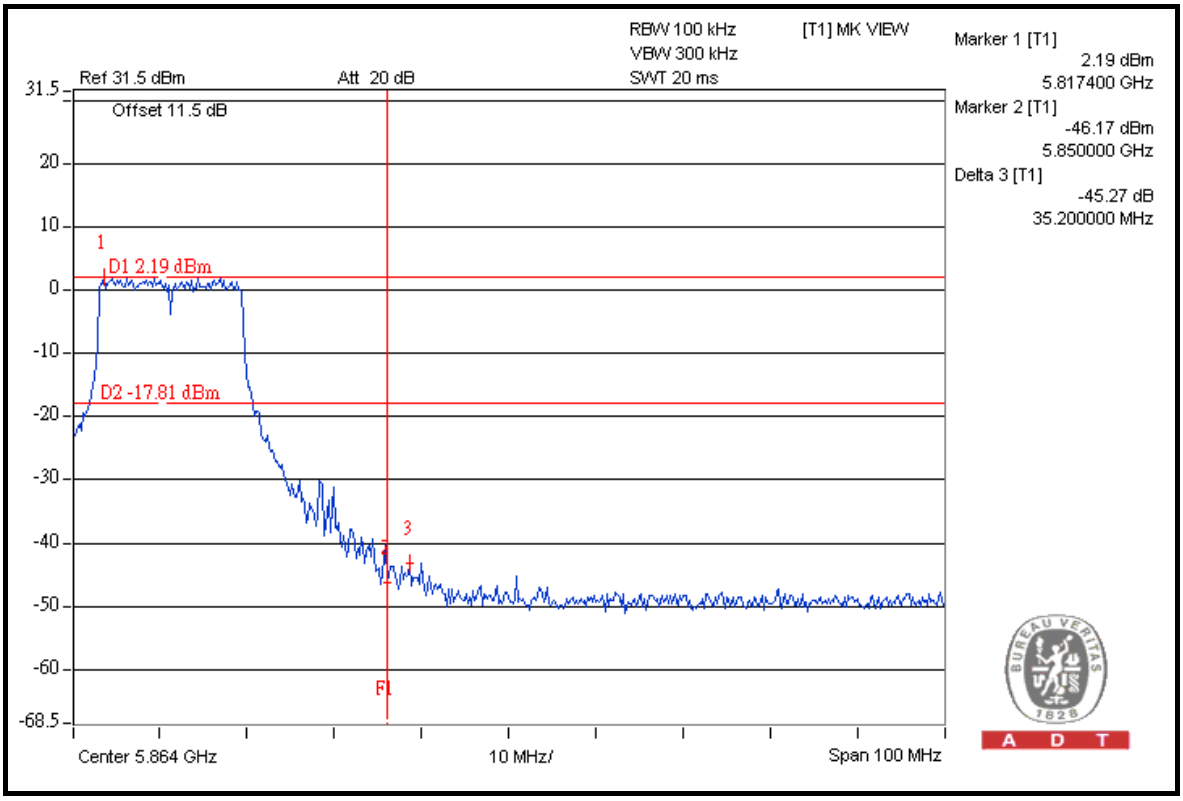

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 2.25 dBm
D2 -17.75 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
Marker 1 [T1]
0.25 dBm
5.785680 GHz
Marker 2 [T1]
-33.03 dBm
39.920060 GHz
Marker 3 [T1]
-35.41 dBm
35.363480 GHz
Marker 4 [T1]
-35.49 dBm
39.280540 GHz

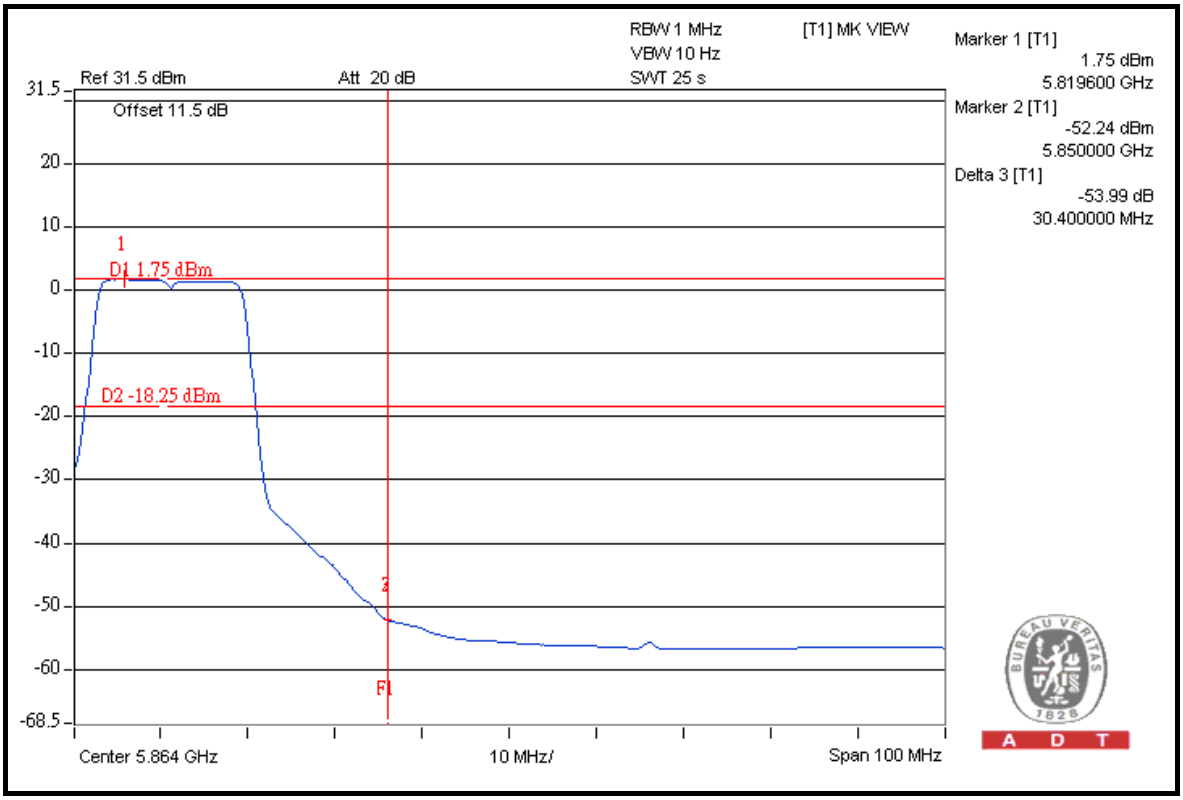
CHAIN 2

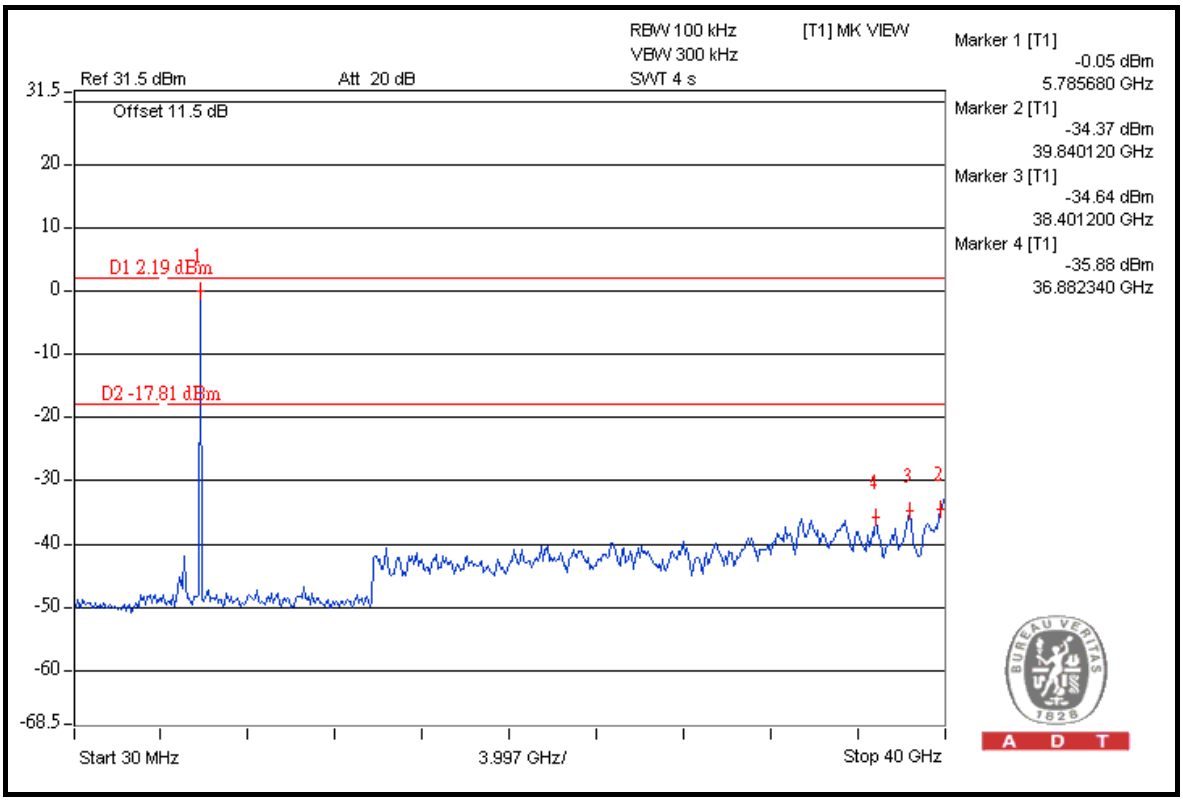

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
1.81 dBm
5.750200 GHz
Marker 2 [T1]
-39.57 dBm
5.725000 GHz
Delta 3 [T1]
-38.94 dB
-25.400000 MHz
D1 1.81 dBm
D2 -18.19 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
0.90 dBm
5.740000 GHz
Marker 2 [T1]
-42.43 dBm
5.725000 GHz
Delta 3 [T1]
-43.33 dB
-15.000000 MHz
D1 0.9 dBm
D2 -19.1 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 1.81 dBm
D2 -18.19 dBm
Marker 1 [T1]
0.80 dBm
5.705740 GHz
Marker 2 [T1]
-34.84 dBm
38.401200 GHz
Marker 3 [T1]
-35.12 dBm
36.962280 GHz
Marker 4 [T1]
-35.26 dBm
39.200600 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

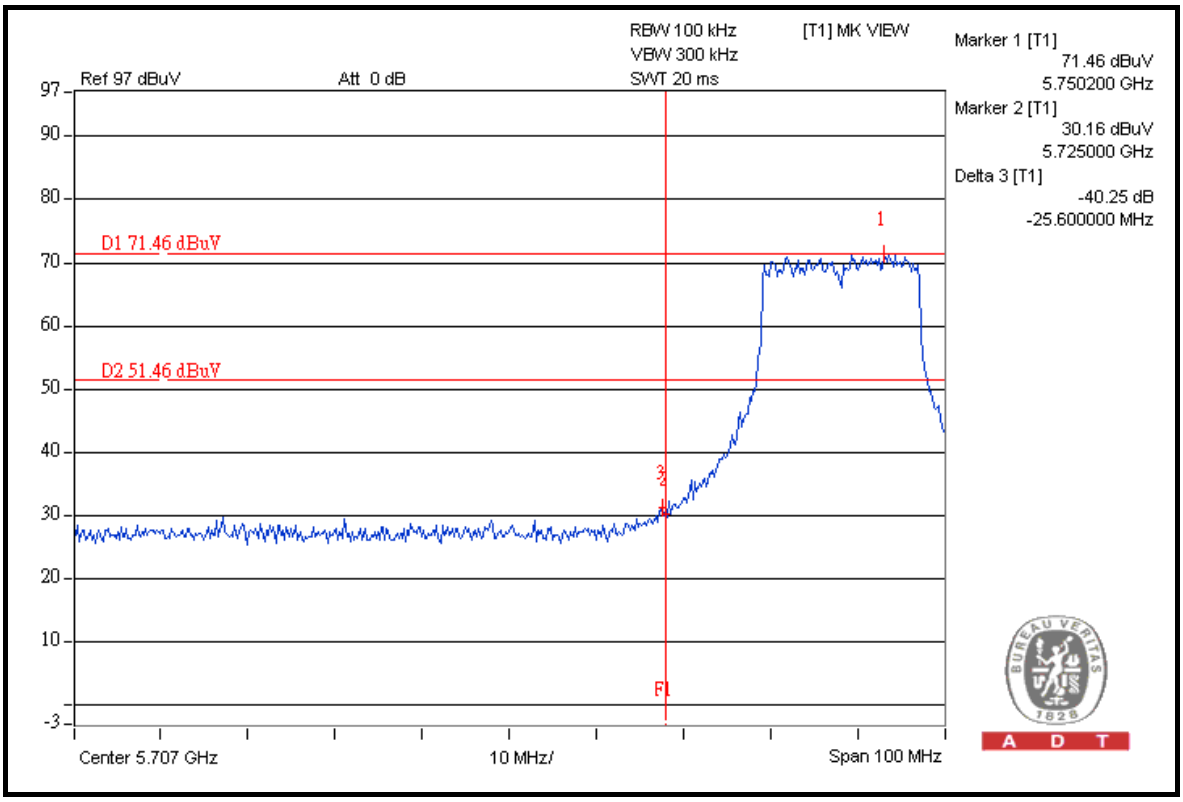

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2.19 dBm
D2 -17.81 dBm
Marker 1 [T1]
2.19 dBm
5.817400 GHz
Marker 2 [T1]
-46.17 dBm
5.850000 GHz
Delta 3 [T1]
-45.27 dB
35.200000 MHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

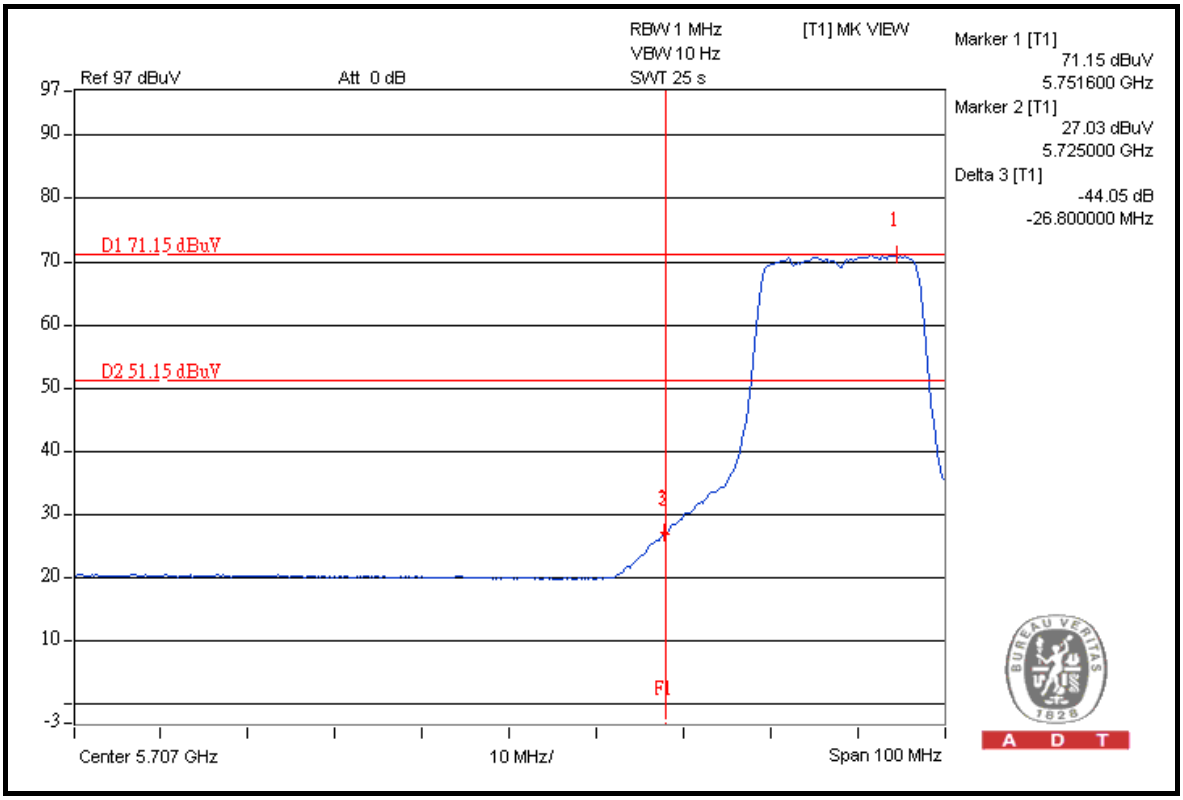

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 1.75 dBm
D2 -18.25 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
1.75 dBm
5.819600 GHz
Marker 2 [T1]
-52.24 dBm
5.850000 GHz
Delta 3 [T1]
-53.99 dB
30.400000 MHz

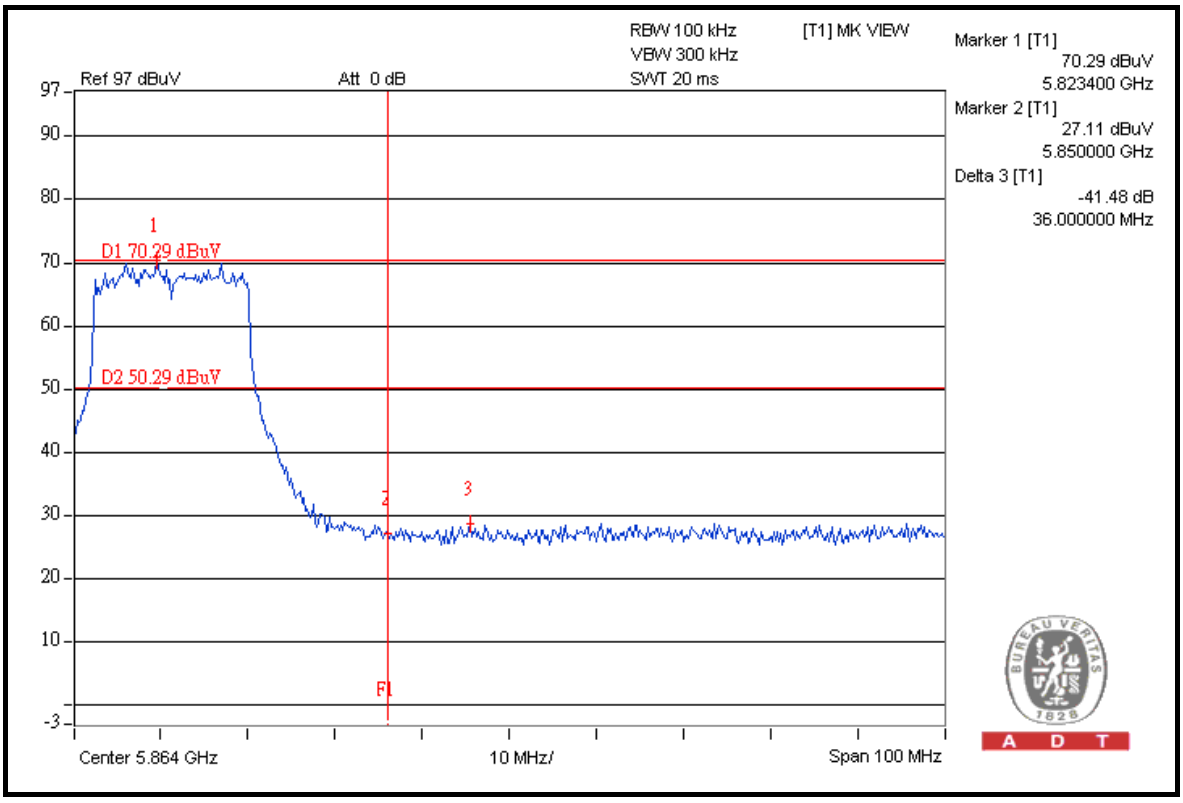

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2.19 dBm
D2 -17.81 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
Marker 1 [T1]
-0.05 dBm
5.785680 GHz
Marker 2 [T1]
-34.37 dBm
39.840120 GHz
Marker 3 [T1]
-34.64 dBm
38.401200 GHz
Marker 4 [T1]
-35.88 dBm
36.882340 GHz

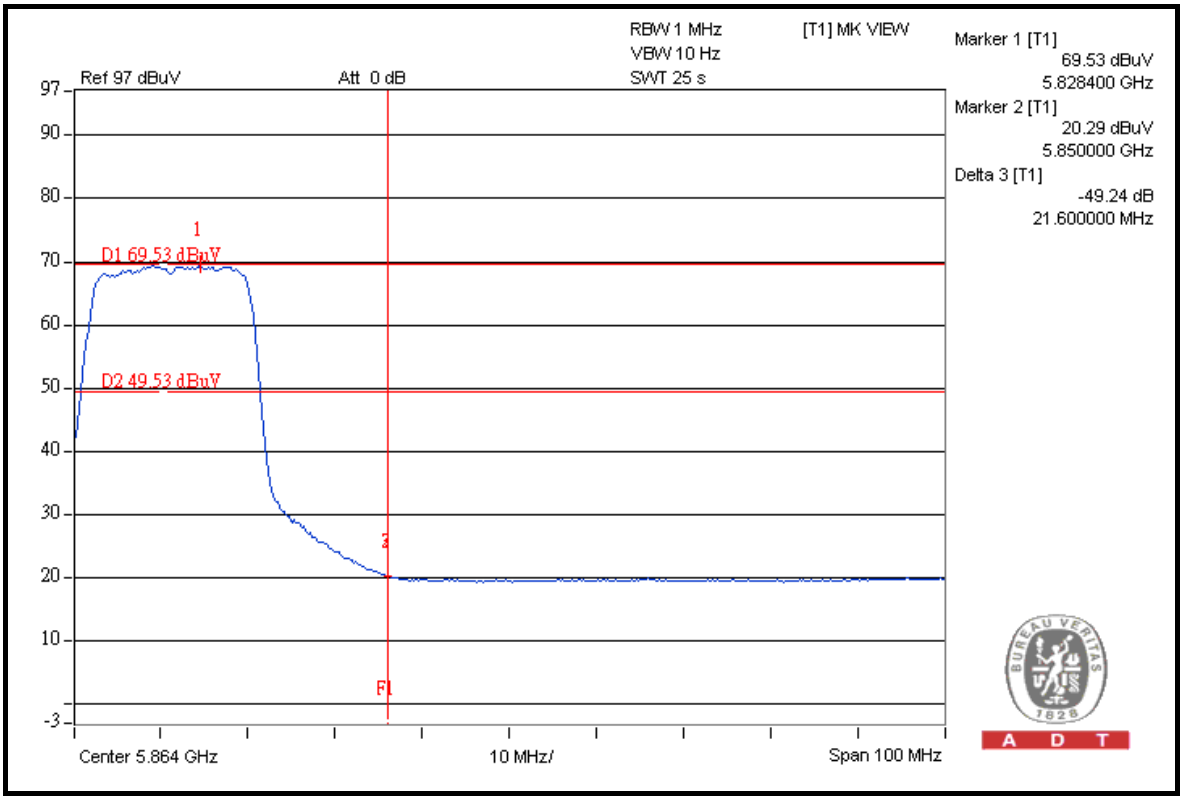
802.11n (20MHz)

FOR RADIATED MEASURED (THREE CHAINS ON)



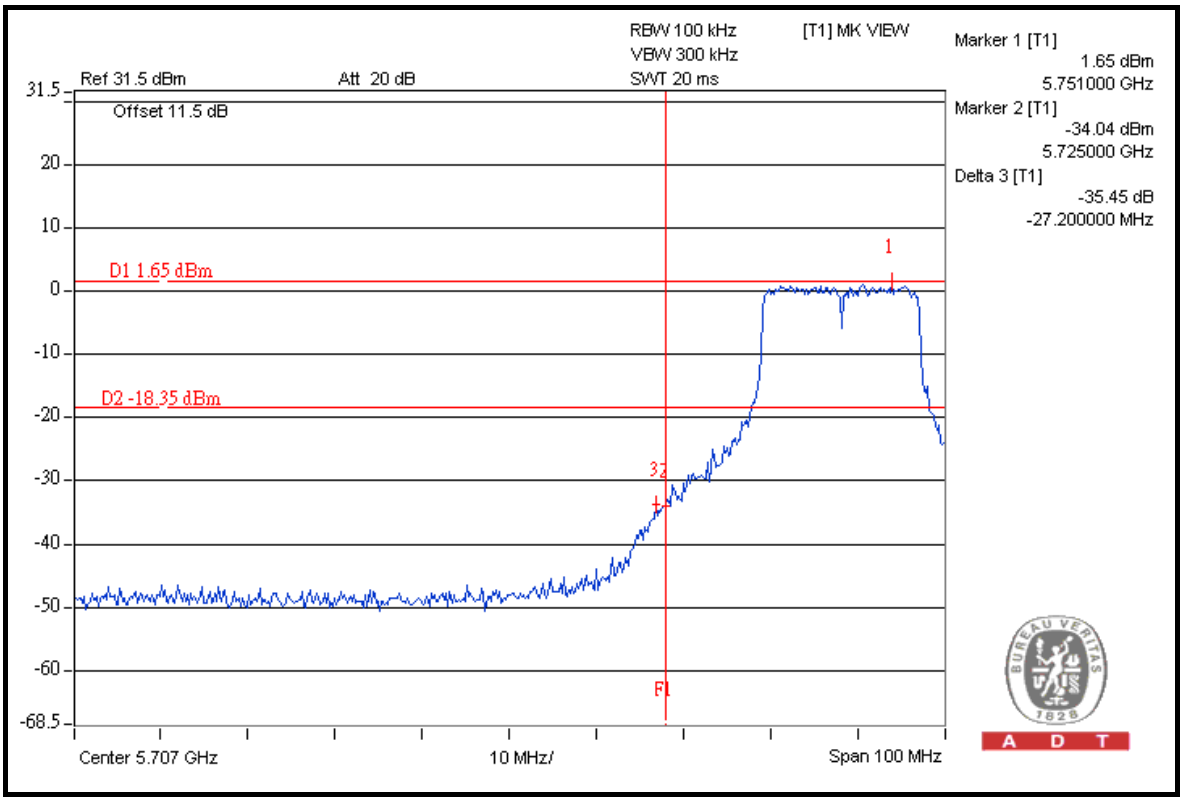


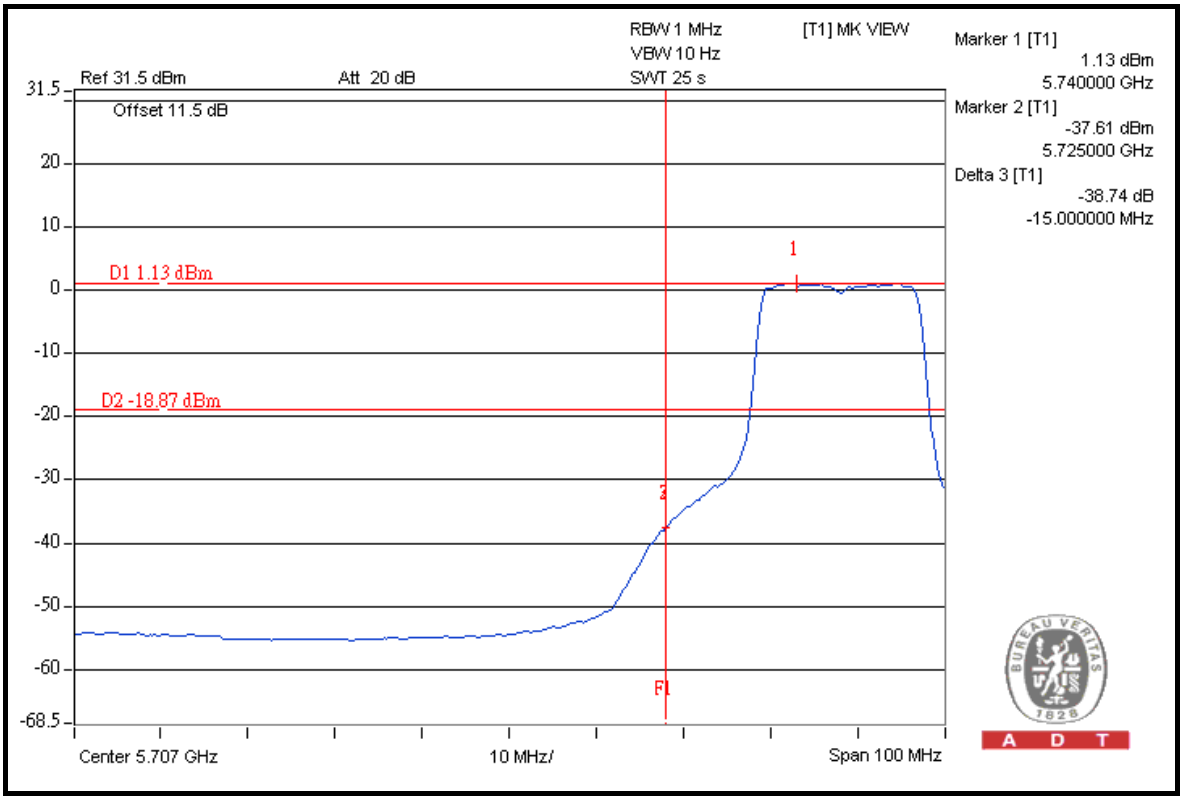

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
70.29 dBuV
5.823400 GHz
Marker 2 [T1]
27.11 dBuV
5.850000 GHz
Delta 3 [T1]
-41.48 dB
36.000000 MHz
Ref 97 dBuV
Att 0 dB
D1 70.29 dBuV
D2 50.29 dBuV
Center 5.864 GHz
10 MHz/
Span 100 MHz

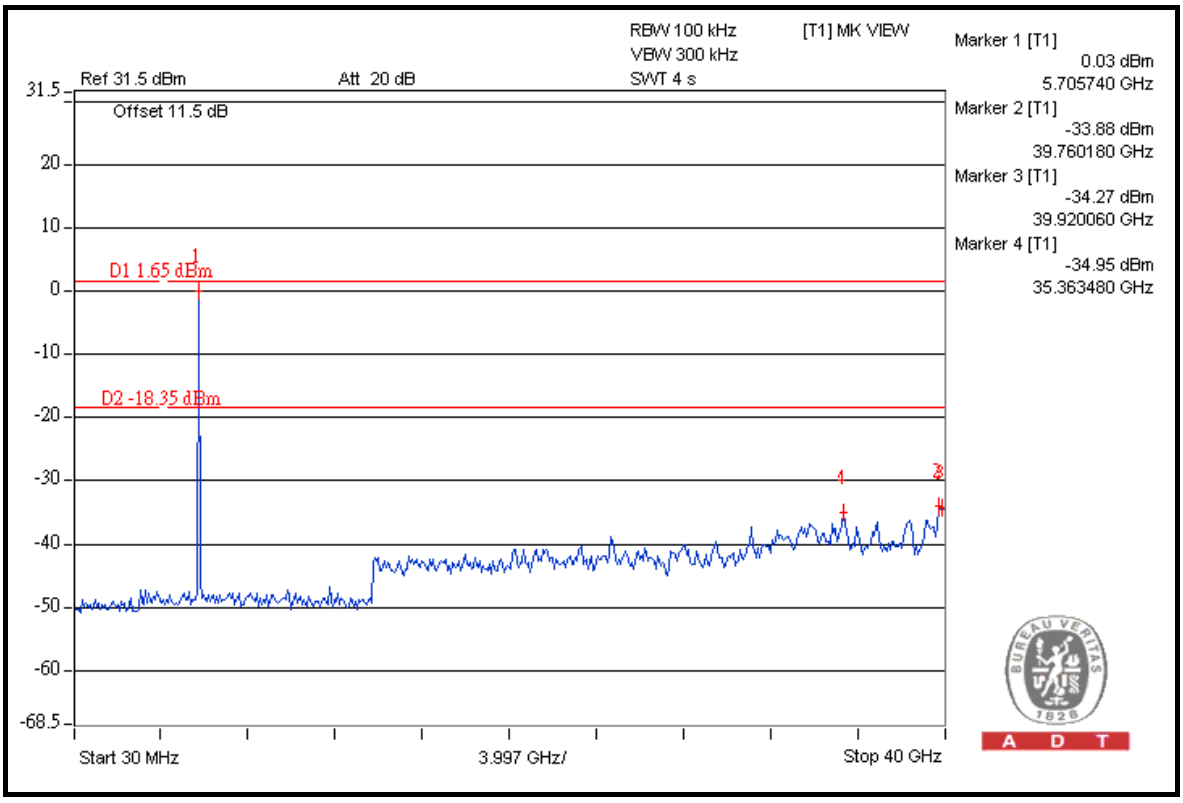

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Marker 1 [T1]
69.53 dBuV
5.828400 GHz
Marker 2 [T1]
20.29 dBuV
5.850000 GHz
Delta 3 [T1]
-49.24 dB
21.600000 MHz
Ref 97 dBuV
Att 0 dB
D1 69.53 dBuV
D2 49.53 dBuV
Center 5.864 GHz
10 MHz/
Span 100 MHz

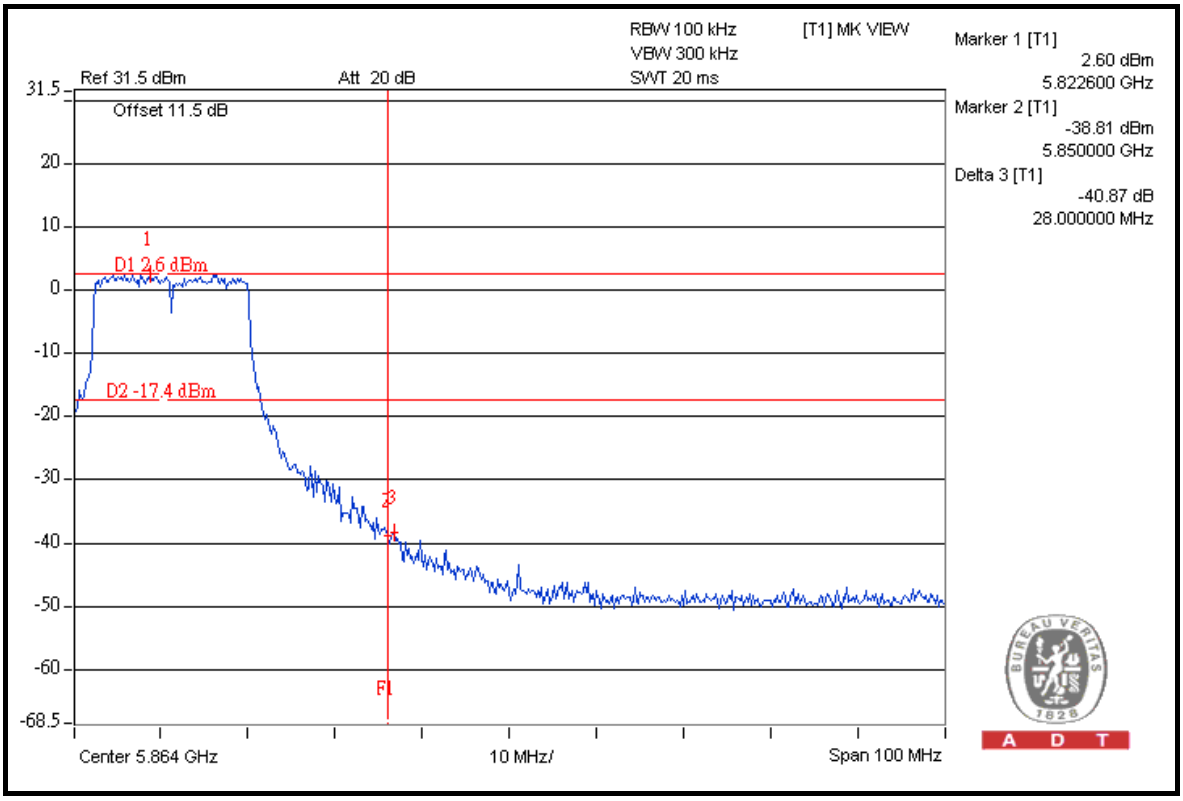
FOR CONDUCTED MEASURED

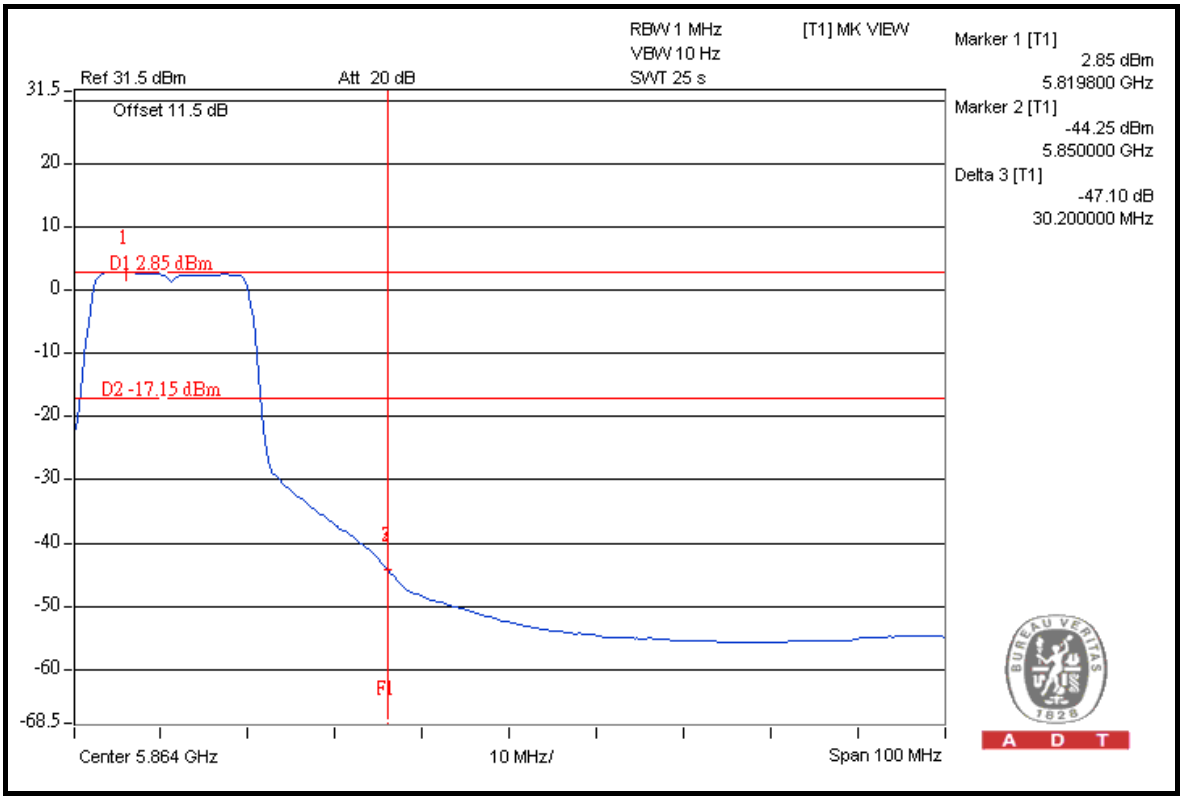
CHAIN 0

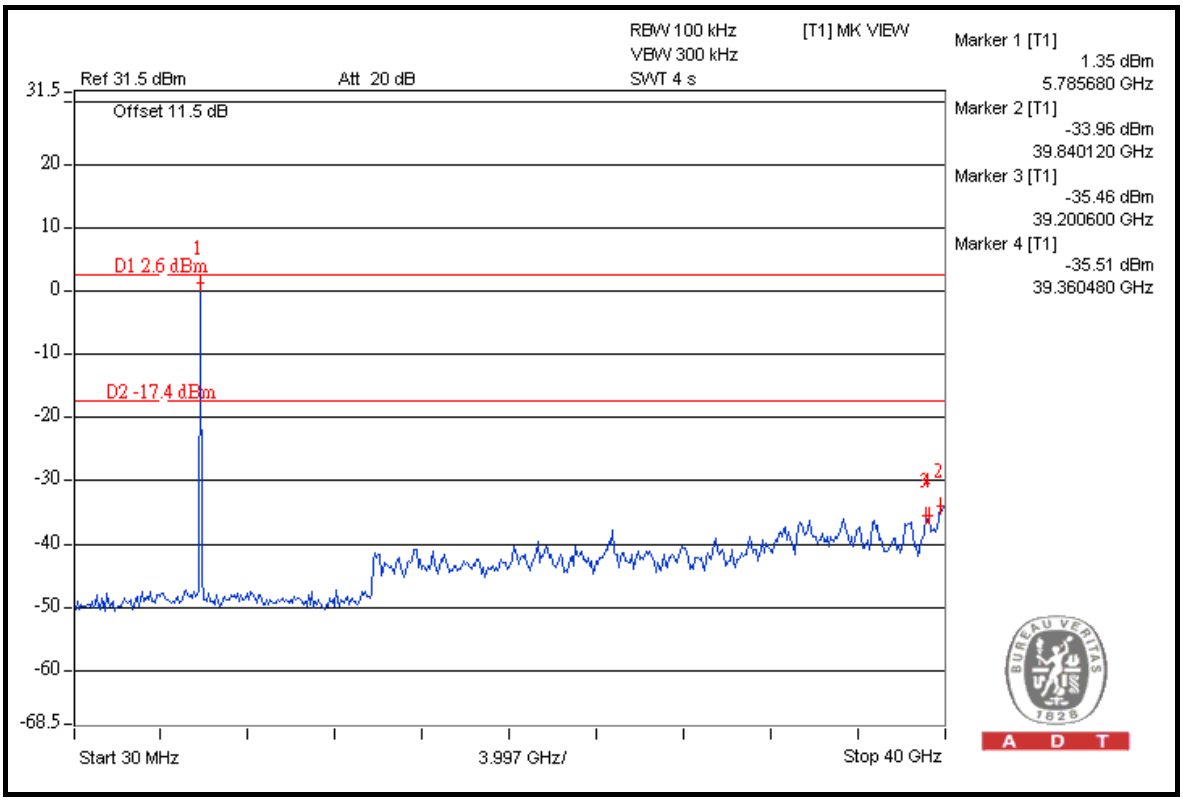




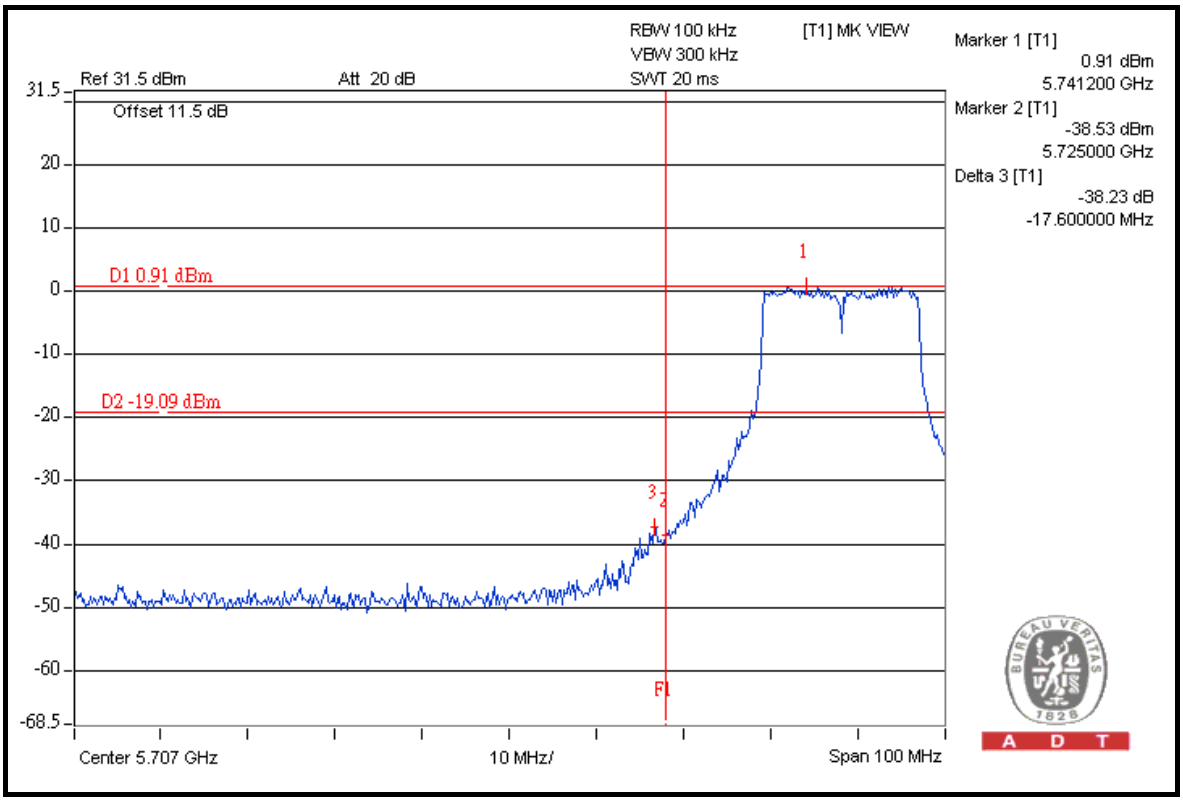

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 1.65 dBm
D2 -18.35 dBm
Marker 1 [T1]
0.03 dBm
5.705740 GHz
Marker 2 [T1]
-33.88 dBm
39.760180 GHz
Marker 3 [T1]
-34.27 dBm
39.920060 GHz
Marker 4 [T1]
-34.95 dBm
35.363480 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

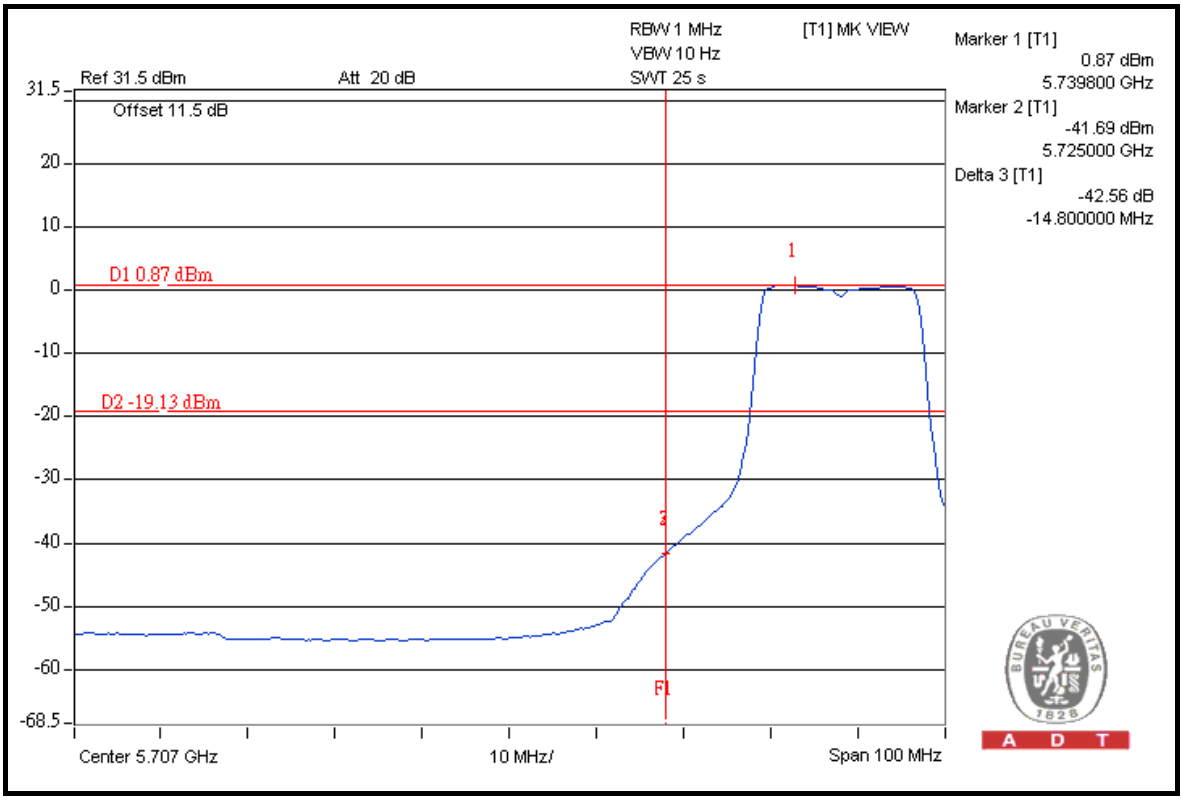

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2.6 dBm
D2 -17.4 dBm
Marker 1 [T1]
2.60 dBm
5.822600 GHz
Marker 2 [T1]
-38.81 dBm
5.850000 GHz
Delta 3 [T1]
-40.87 dB
28.000000 MHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

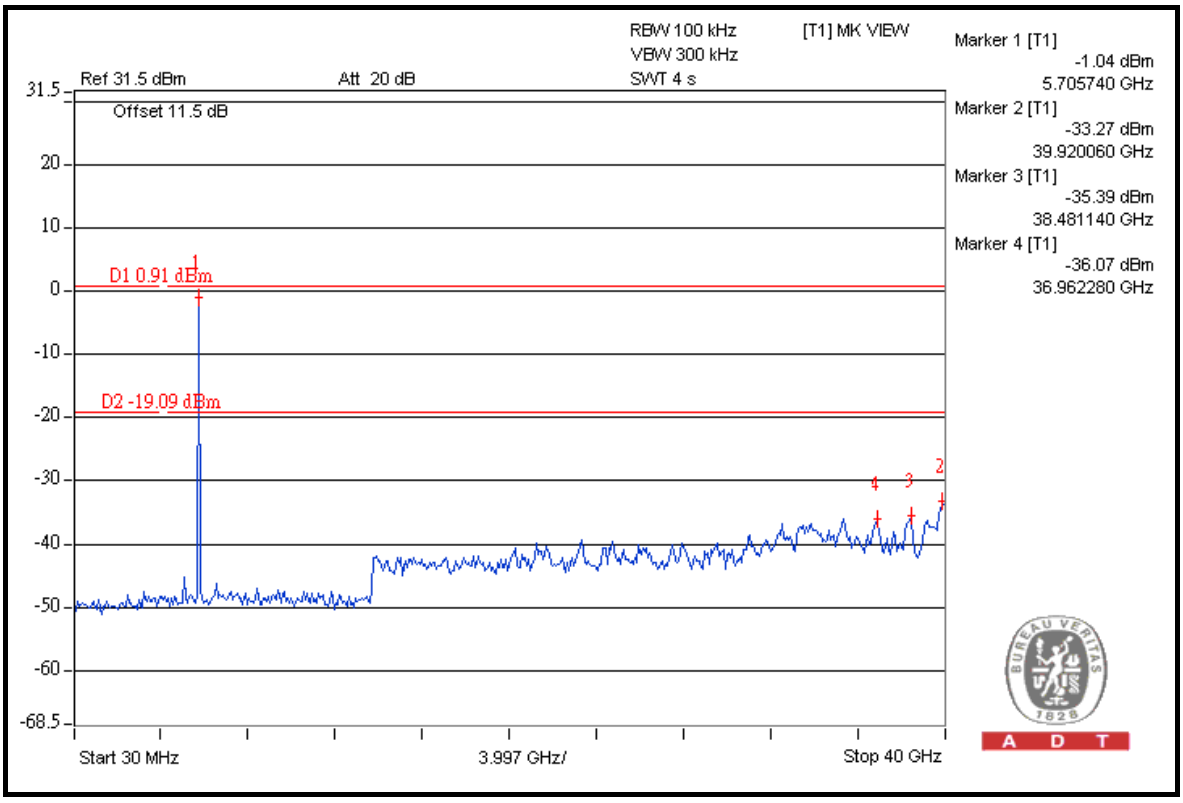

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Marker 1 [T1]
2.85 dBm
5.819800 GHz
Marker 2 [T1]
-44.25 dBm
5.850000 GHz
Delta 3 [T1]
-47.10 dB
30.200000 MHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2.85 dBm
D2 -17.15 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz

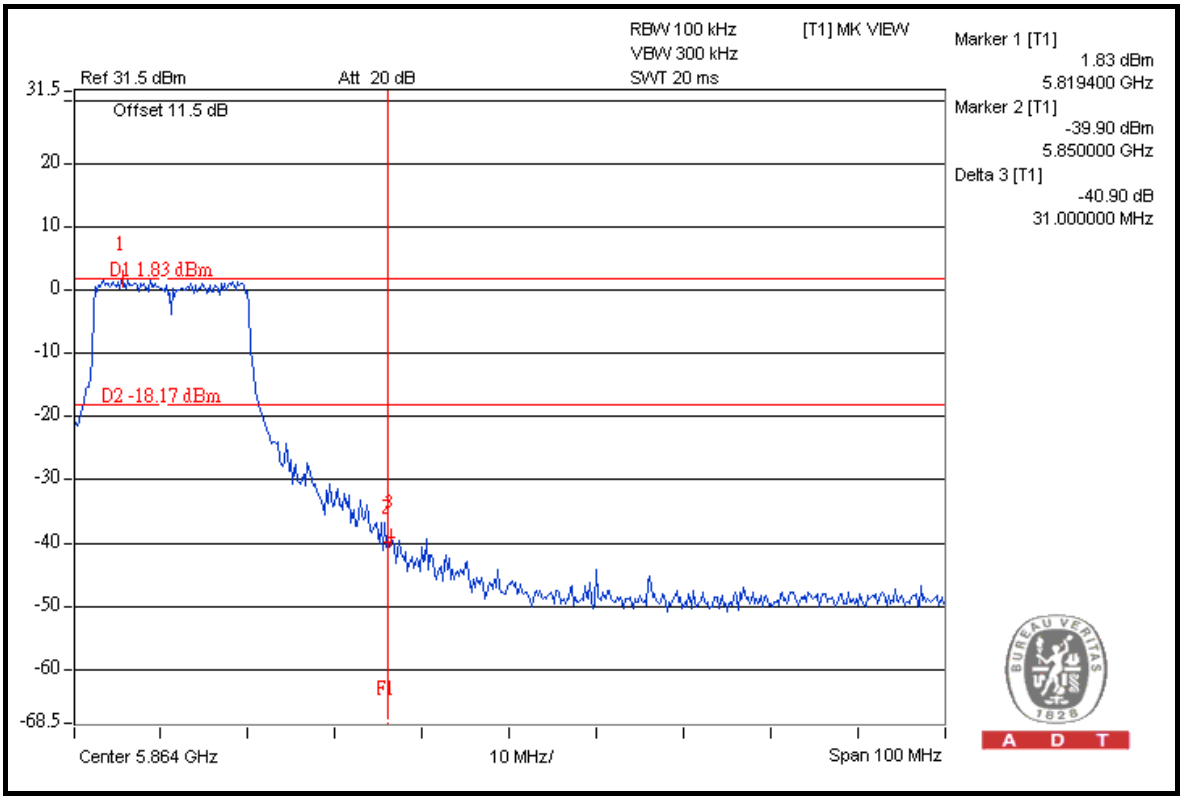

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Marker 1 [T1]
1.35 dBm
5.785680 GHz
Marker 2 [T1]
-33.96 dBm
39.840120 GHz
Marker 3 [T1]
-35.46 dBm
39.200600 GHz
Marker 4 [T1]
-35.51 dBm
39.360480 GHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2.6 dBm
D2 -17.4 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

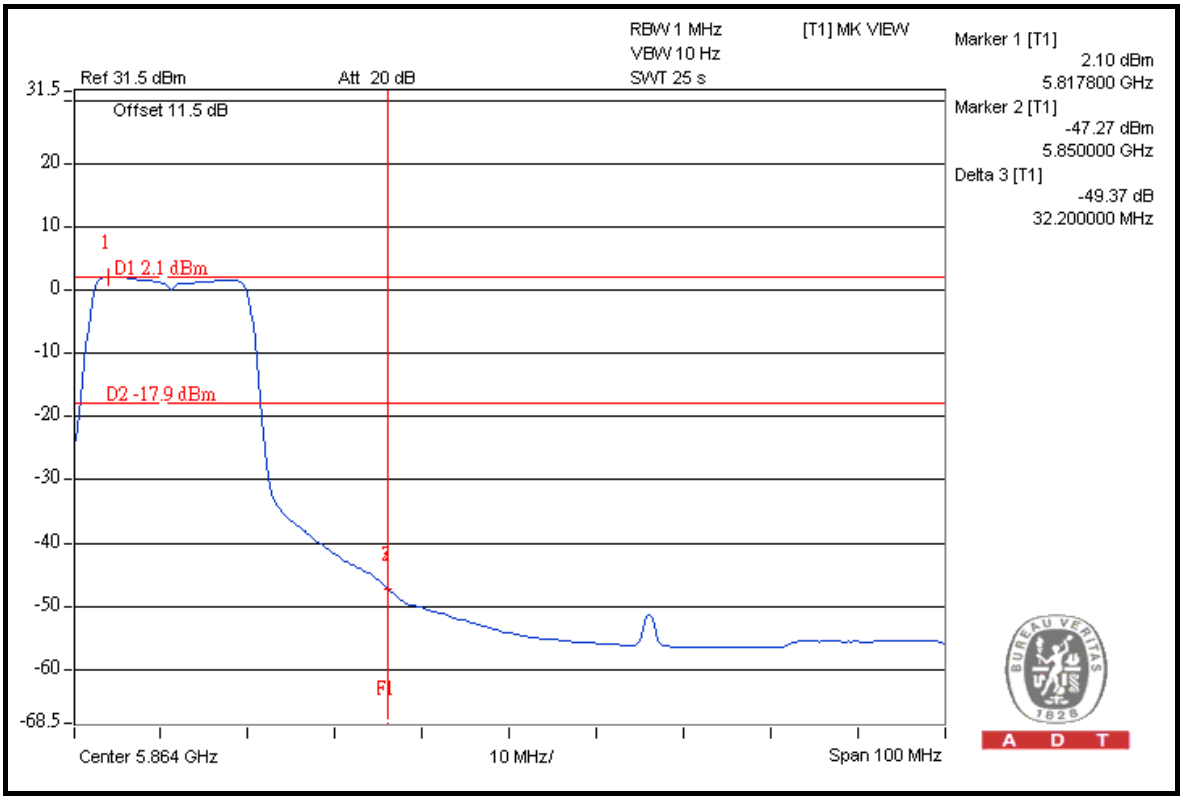
CHAIN 1

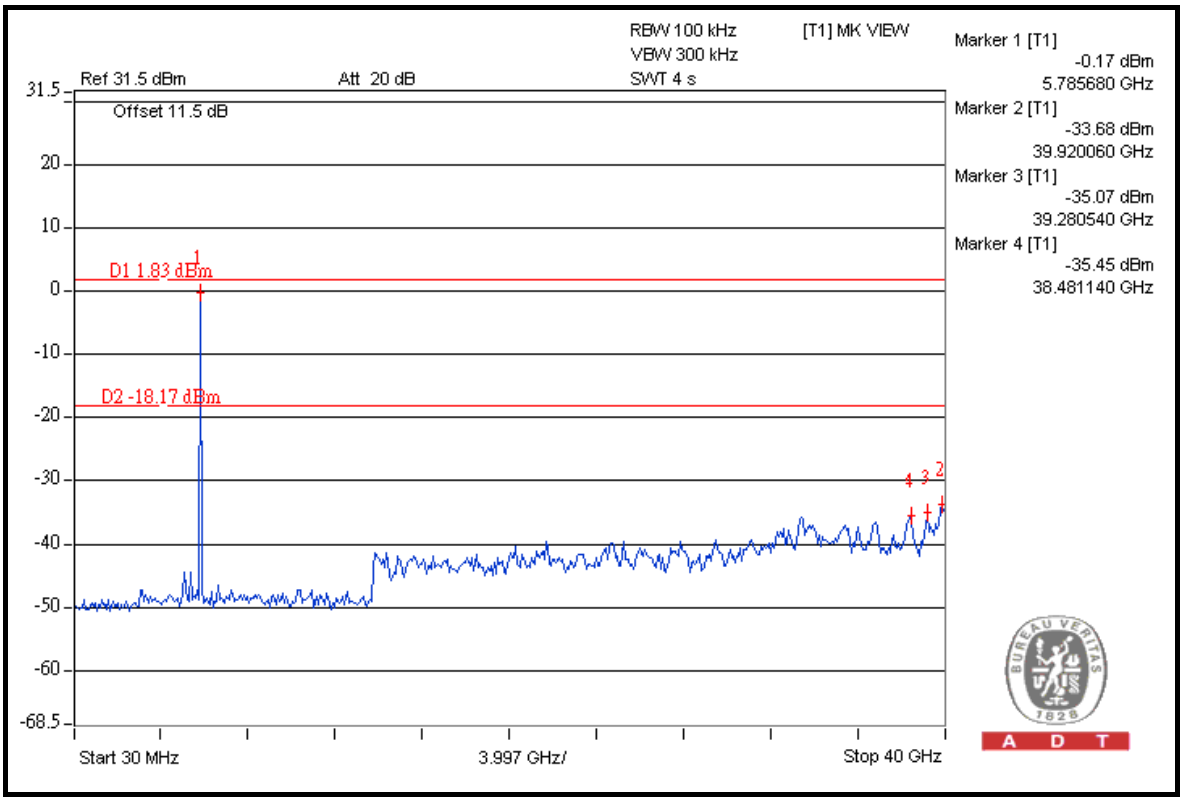

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
0.91 dBm
5.741200 GHz
Marker 2 [T1]
-38.53 dBm
5.725000 GHz
Delta 3 [T1]
-38.23 dB
-17.600000 MHz
D1 0.91 dBm
D2 -19.09 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
0.87 dBm
5.739800 GHz
Marker 2 [T1]
-41.69 dBm
5.725000 GHz
Delta 3 [T1]
-42.56 dB
-14.800000 MHz
D1 0.87 dBm
D2 -19.13 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.707 GHz
10 MHz/
Span 100 MHz

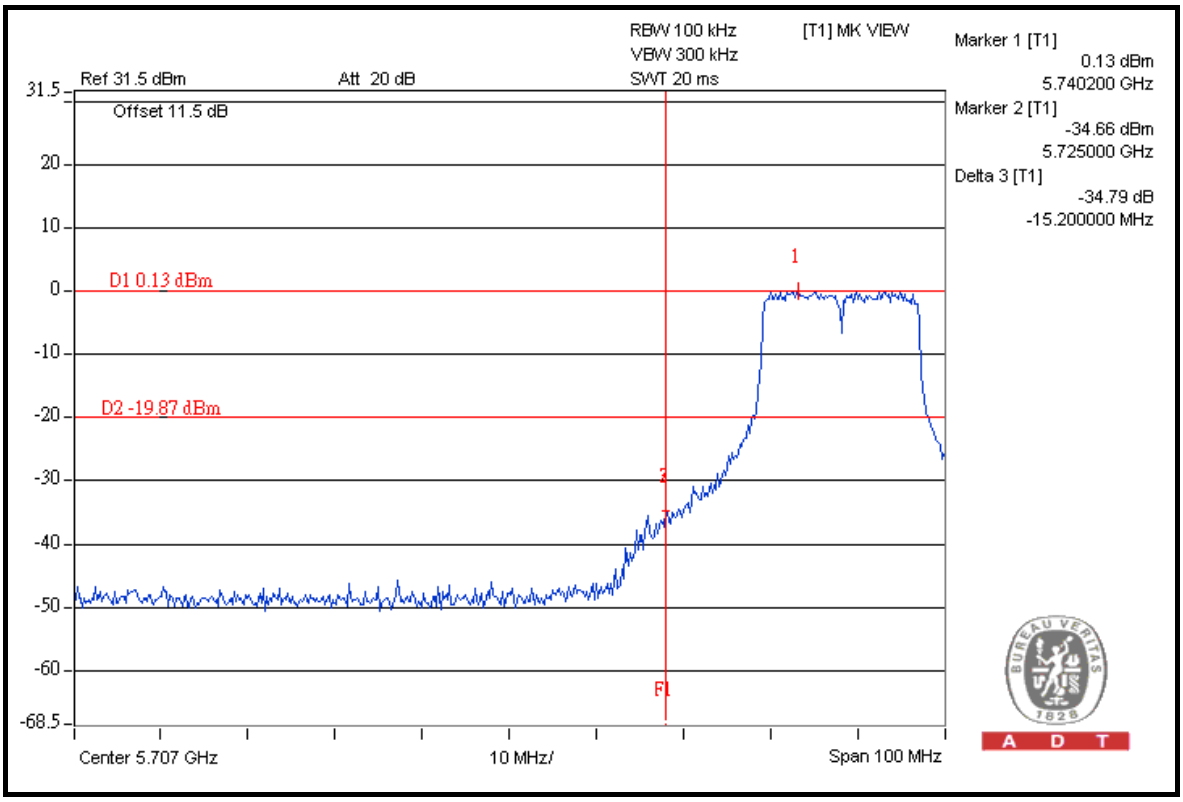

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 0.91 dBm
D2 -19.09 dBm
Marker 1 [T1]
-1.04 dBm
5.705740 GHz
Marker 2 [T1]
-33.27 dBm
39.920060 GHz
Marker 3 [T1]
-35.39 dBm
38.481140 GHz
Marker 4 [T1]
-36.07 dBm
36.962280 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

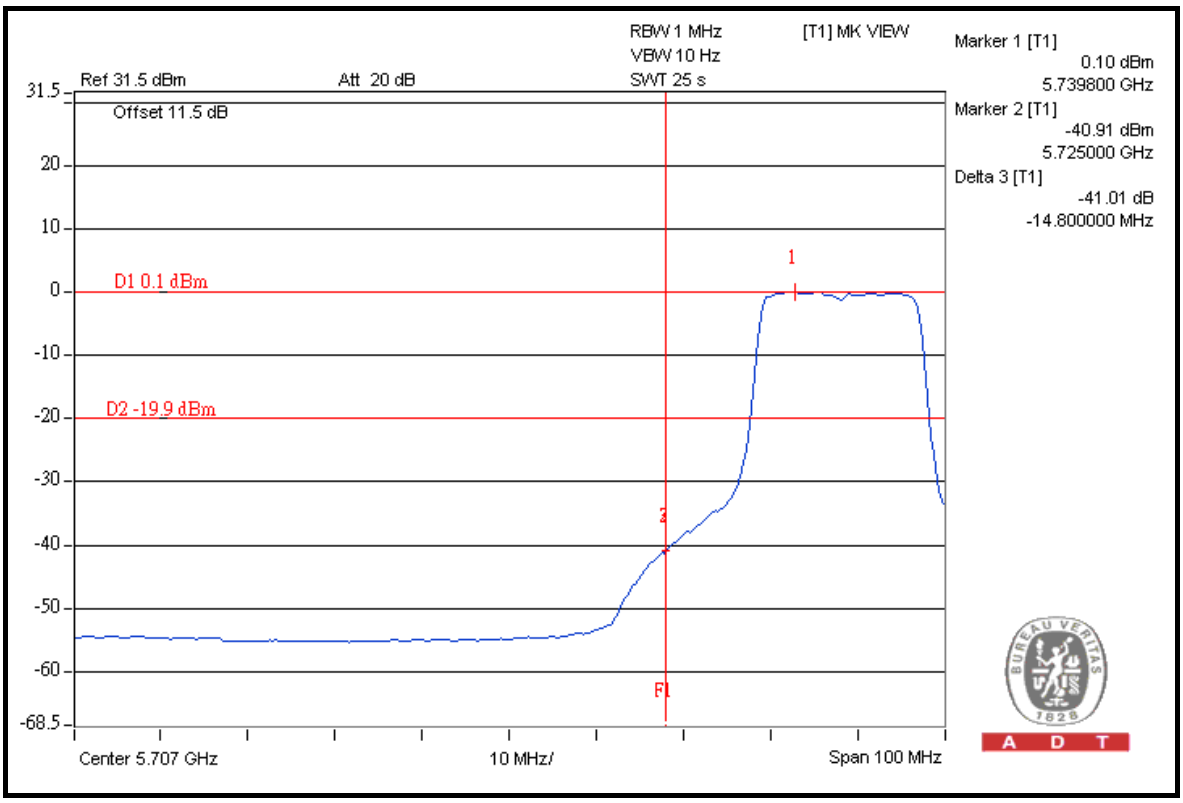

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 1.83 dBm
D2 -18.17 dBm
Marker 1 [T1]
1.83 dBm
5.819400 GHz
Marker 2 [T1]
-39.90 dBm
5.850000 GHz
Delta 3 [T1]
-40.90 dB
31.000000 MHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

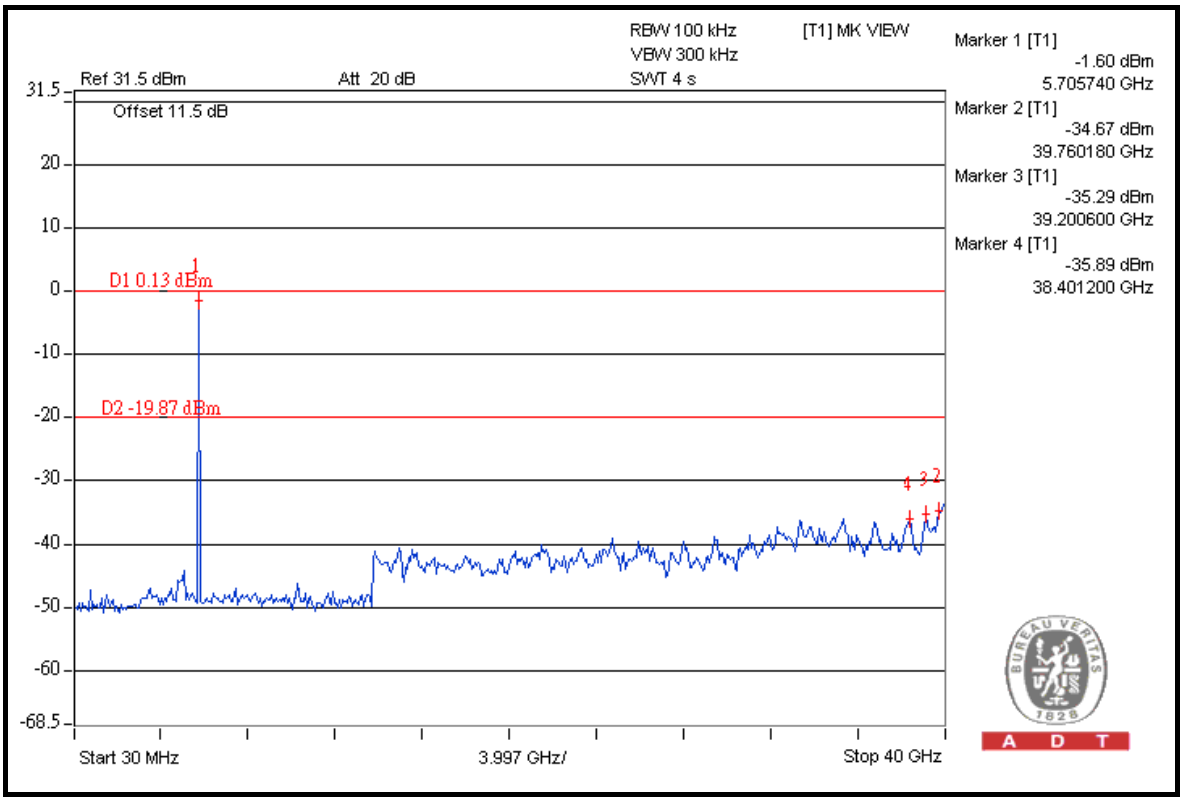

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 2.1 dBm
D2 -17.9 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
2.10 dBm
5.817800 GHz
Marker 2 [T1]
-47.27 dBm
5.850000 GHz
Delta 3 [T1]
-49.37 dB
32.200000 MHz

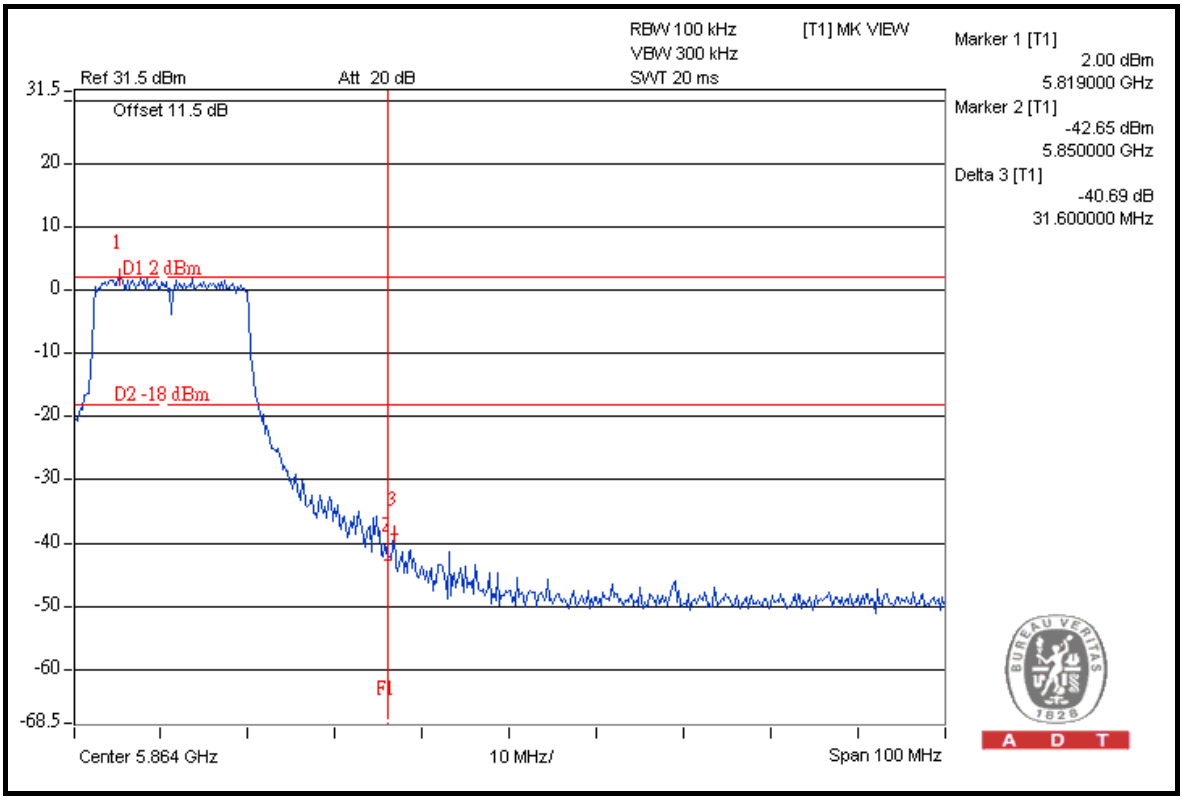

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 1.83 dBm
D2 -18.17 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
Marker 1 [T1]
-0.17 dBm
5.785680 GHz
Marker 2 [T1]
-33.68 dBm
39.920060 GHz
Marker 3 [T1]
-35.07 dBm
39.280540 GHz
Marker 4 [T1]
-35.45 dBm
38.481140 GHz

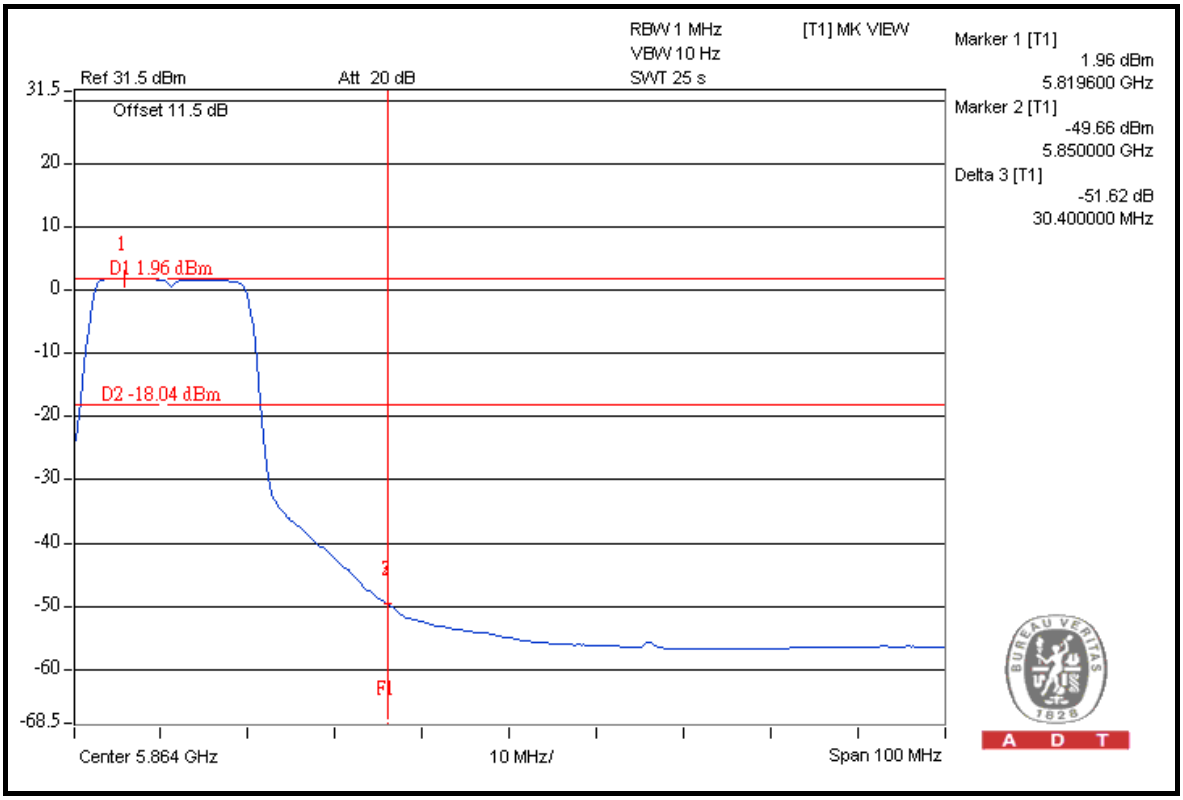
CHAIN 2

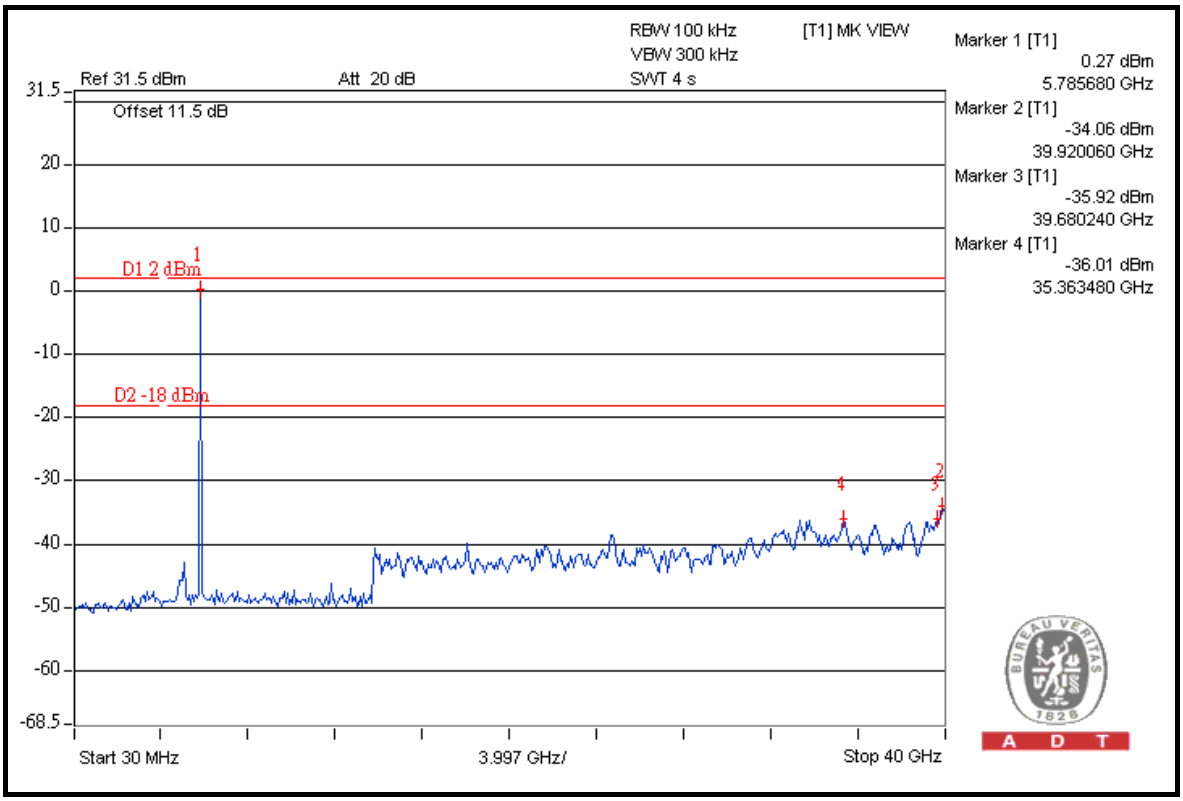

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
0.13 dBm
5.740200 GHz
Marker 2 [T1]
-34.66 dBm
5.725000 GHz
Delta 3 [T1]
-34.79 dB
-15.200000 MHz
D1 0.13 dBm
D2 -19.87 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
0.10 dBm
5.739800 GHz
Marker 2 [T1]
-40.91 dBm
5.725000 GHz
Delta 3 [T1]
-41.01 dB
-14.800000 MHz
D1 0.1 dBm
D2 -19.9 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 0.13 dBm
D2 -19.87 dBm
Marker 1 [T1]
-1.60 dBm
5.705740 GHz
Marker 2 [T1]
-34.67 dBm
39.760180 GHz
Marker 3 [T1]
-35.29 dBm
39.200600 GHz
Marker 4 [T1]
-35.89 dBm
38.401200 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

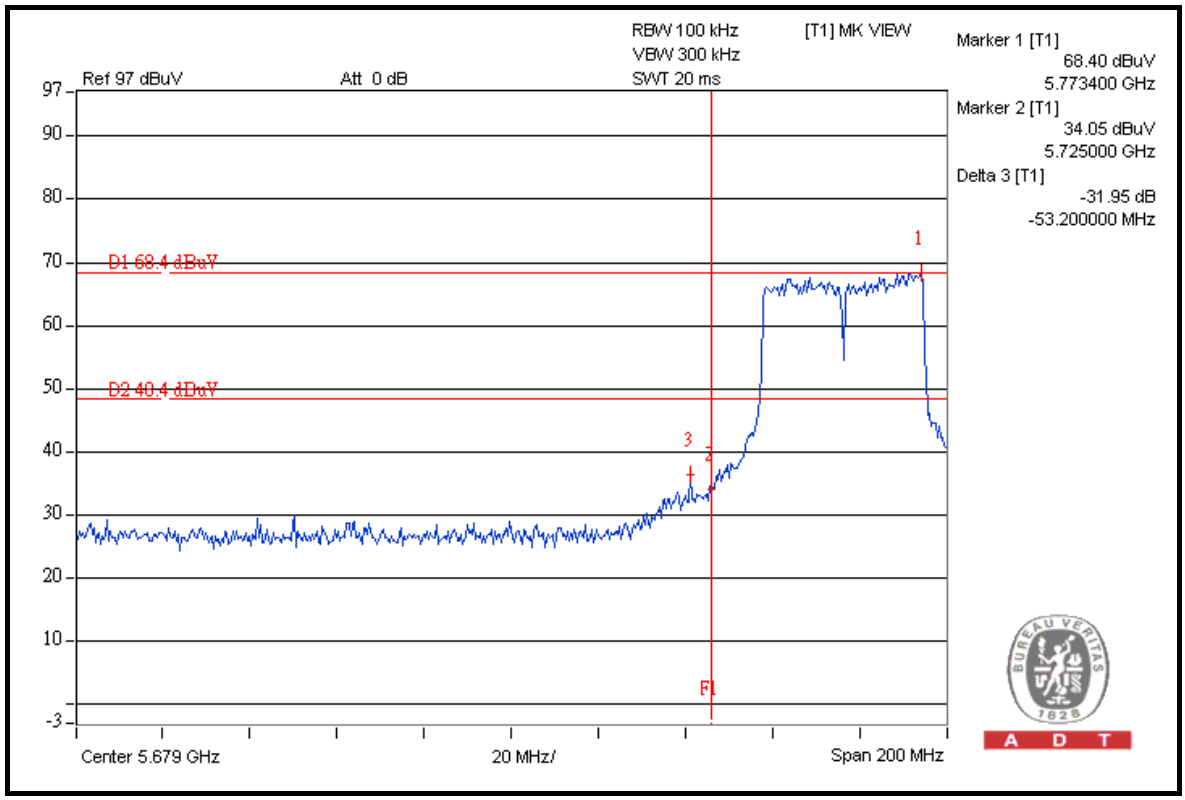

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 2 dBm
D2 -18 dBm
Marker 1 [T1]
2.00 dBm
5.819000 GHz
Marker 2 [T1]
-42.65 dBm
5.850000 GHz
Delta 3 [T1]
-40.69 dB
31.600000 MHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

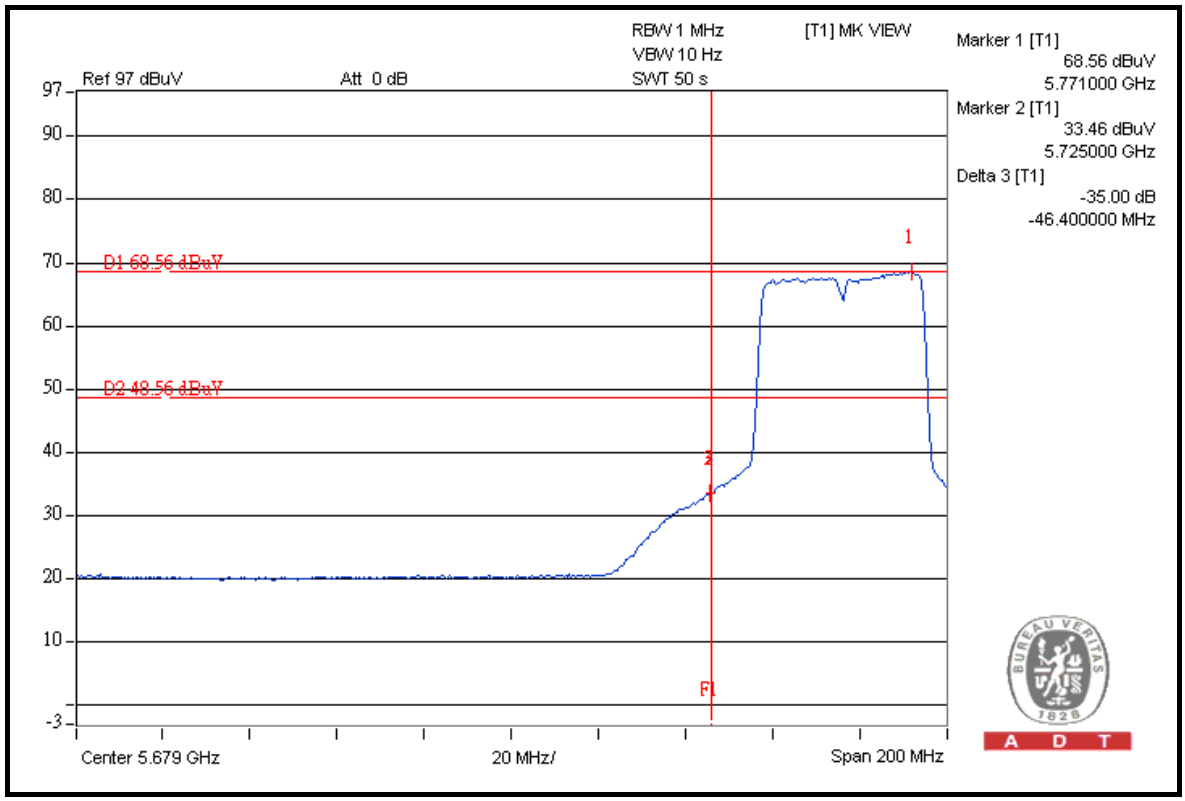

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 1.96 dBm
D2 -18.04 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
1.96 dBm
5.819600 GHz
Marker 2 [T1]
-49.66 dBm
5.850000 GHz
Delta 3 [T1]
-51.62 dB
30.400000 MHz

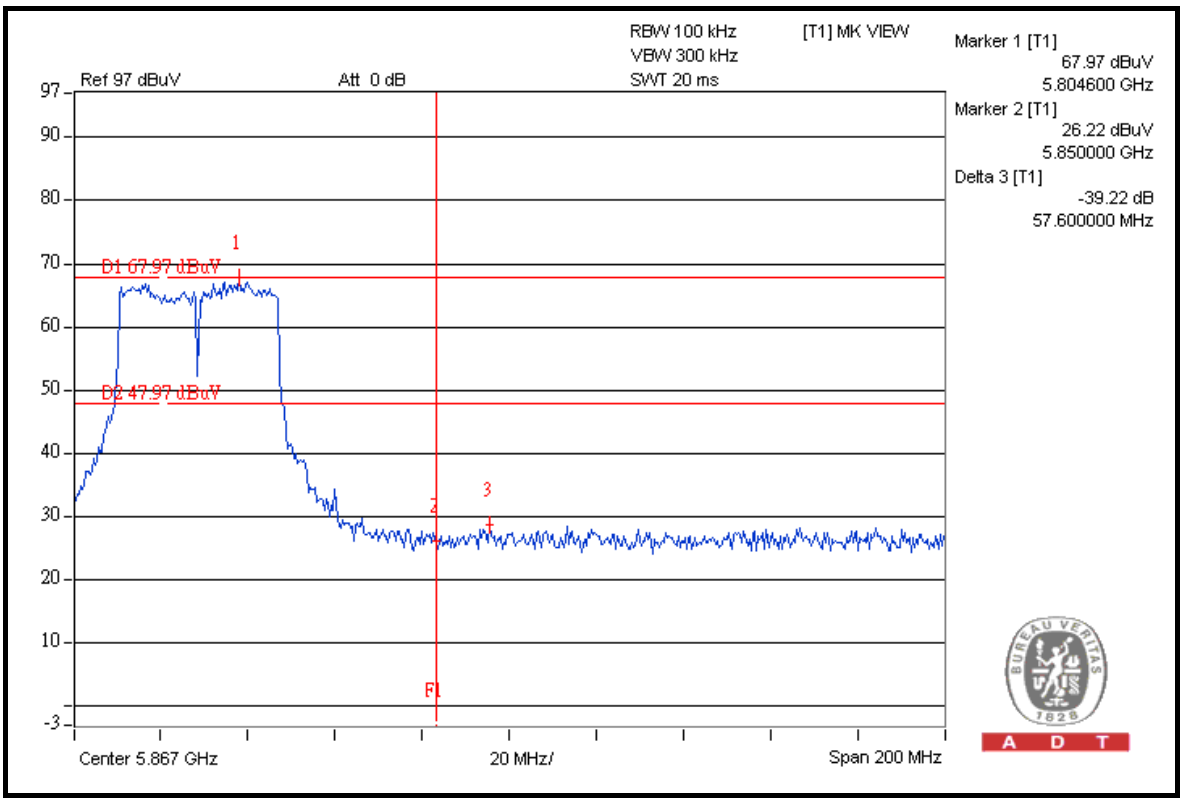

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 2 dBm
D2 -18 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
Marker 1 [T1]
0.27 dBm
5.785680 GHz
Marker 2 [T1]
-34.06 dBm
39.920060 GHz
Marker 3 [T1]
-35.92 dBm
39.680240 GHz
Marker 4 [T1]
-36.01 dBm
35.363480 GHz

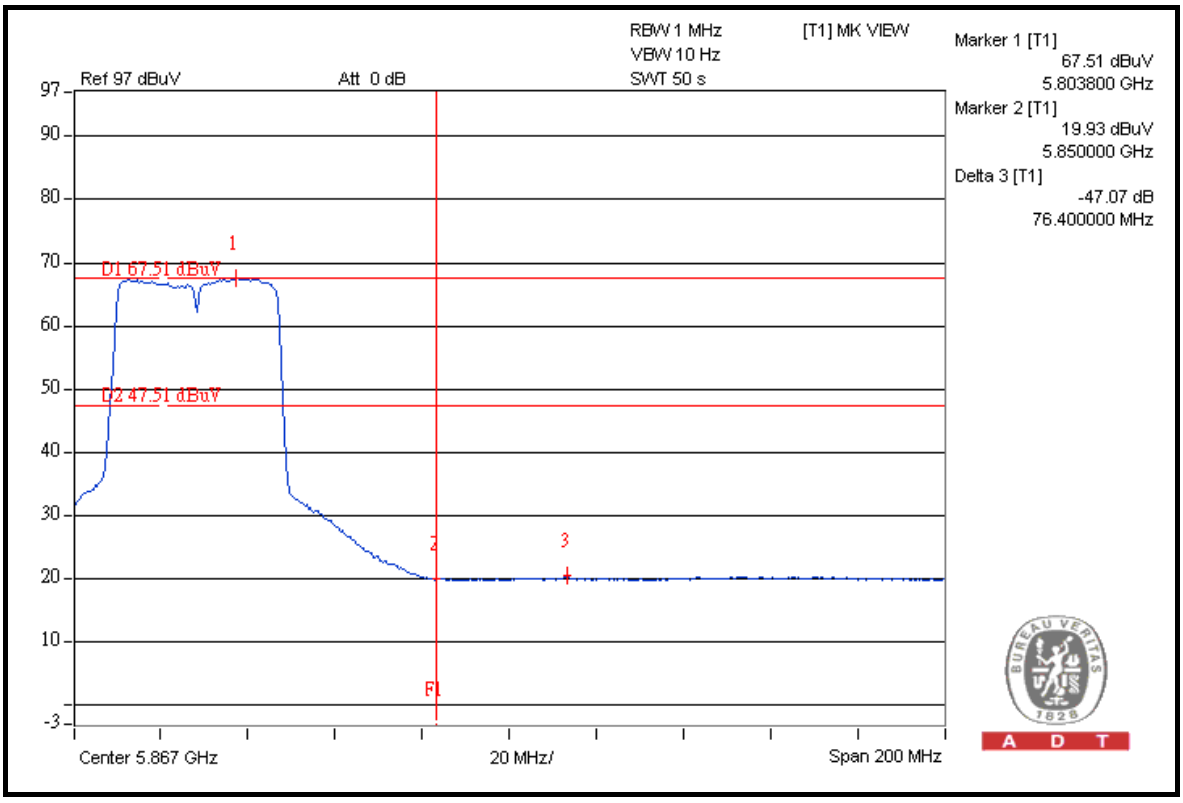
802.11n (40MHz)

FOR RADIATED MEASURED (THREE CHAINS ON)



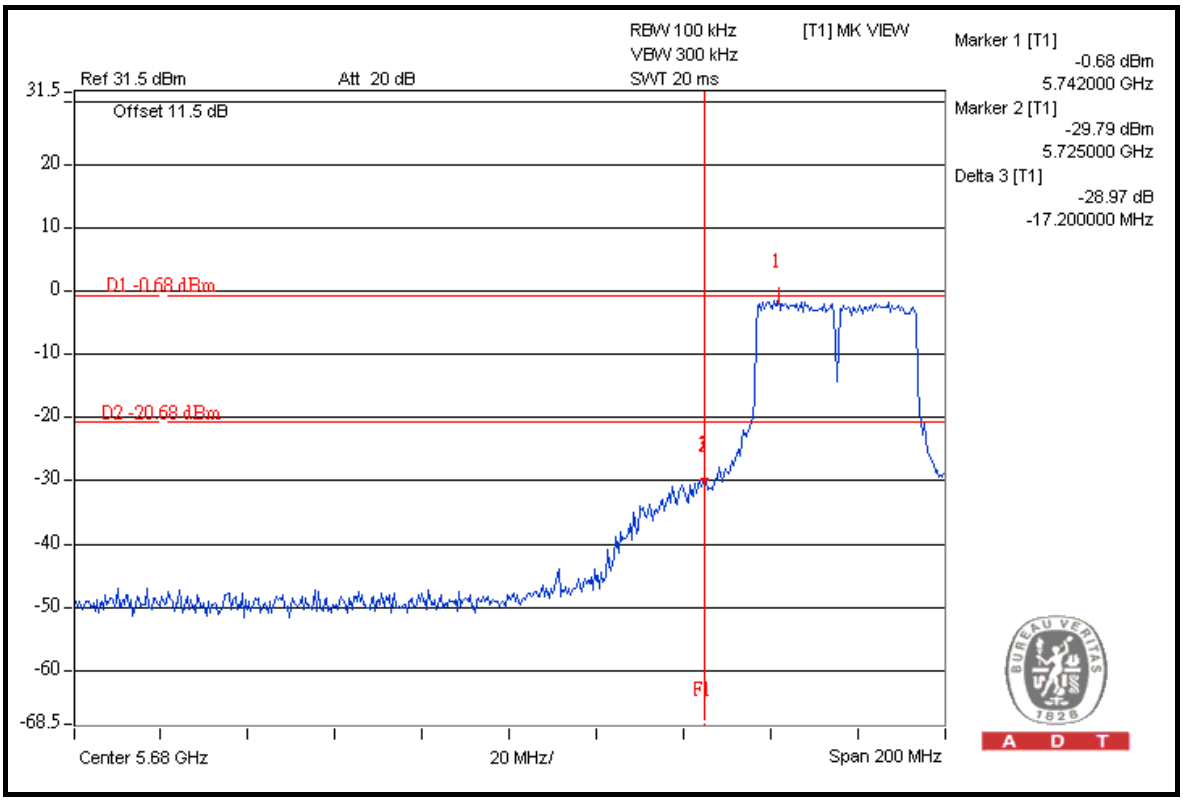


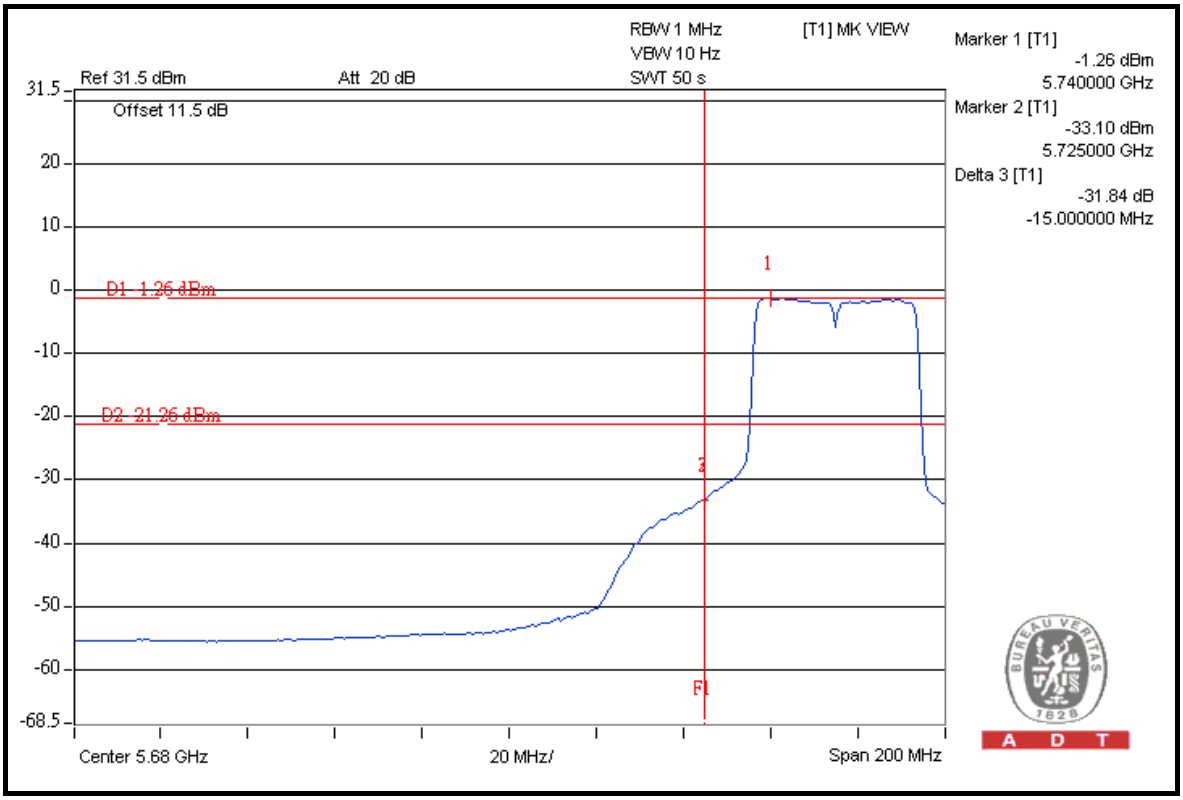

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
67.97 dBuV
5.804600 GHz
Marker 2 [T1]
26.22 dBuV
5.850000 GHz
Delta 3 [T1]
-39.22 dB
57.600000 MHz
Ref 97 dBuV
Att 0 dB
D1 67.97 dBuV
D2 47.97 dBuV
Center 5.867 GHz
20 MHz/
Span 200 MHz

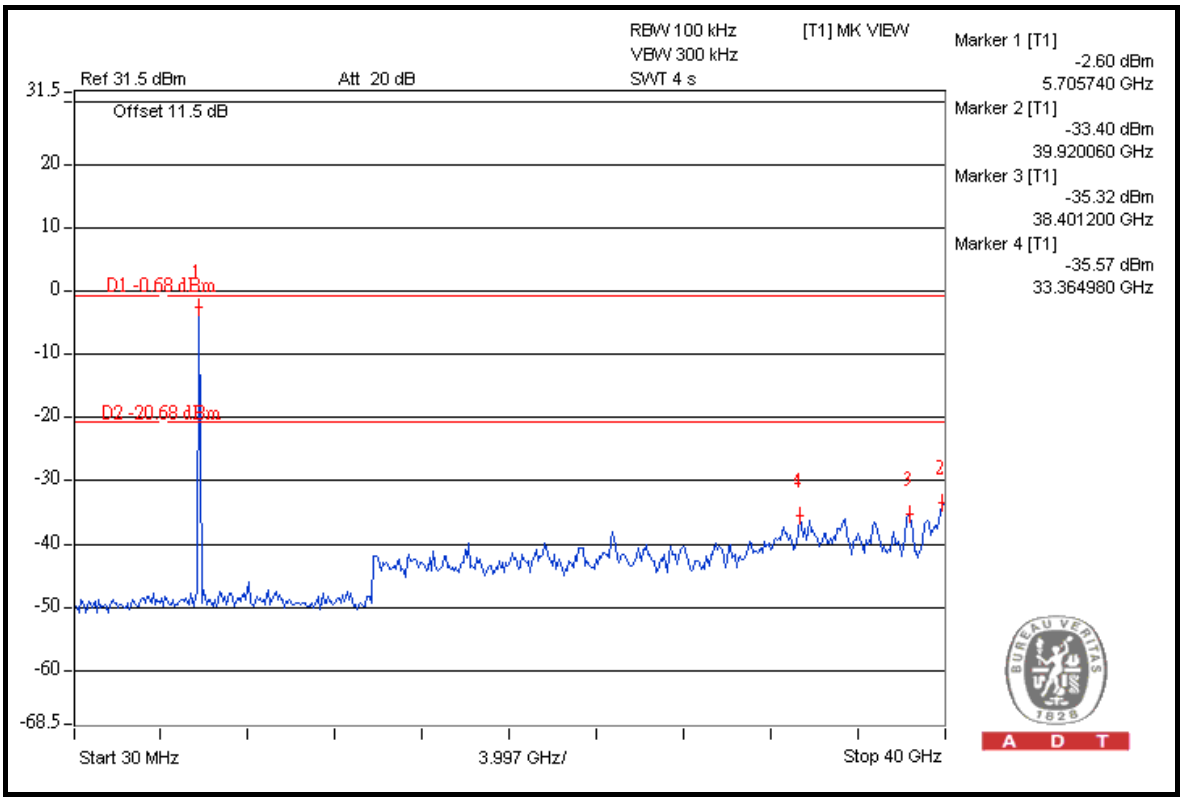

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Marker 1 [T1]
67.51 dBuV
5.803800 GHz
Marker 2 [T1]
19.93 dBuV
5.850000 GHz
Delta 3 [T1]
-47.07 dB
76.400000 MHz
Ref 97 dBuV
Att 0 dB
D1 67.51 dBuV
D2 47.51 dBuV
Center 5.867 GHz
20 MHz/
Span 200 MHz

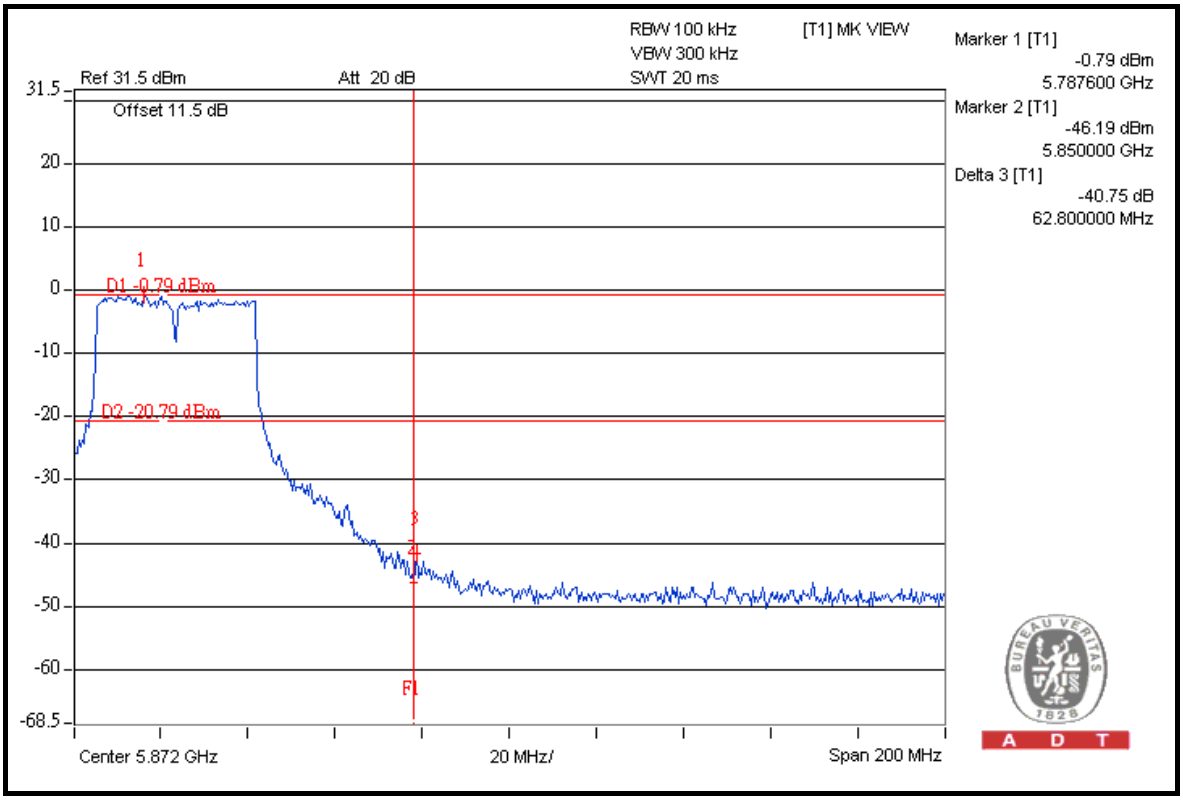
FOR CONDUCTED MEASURED

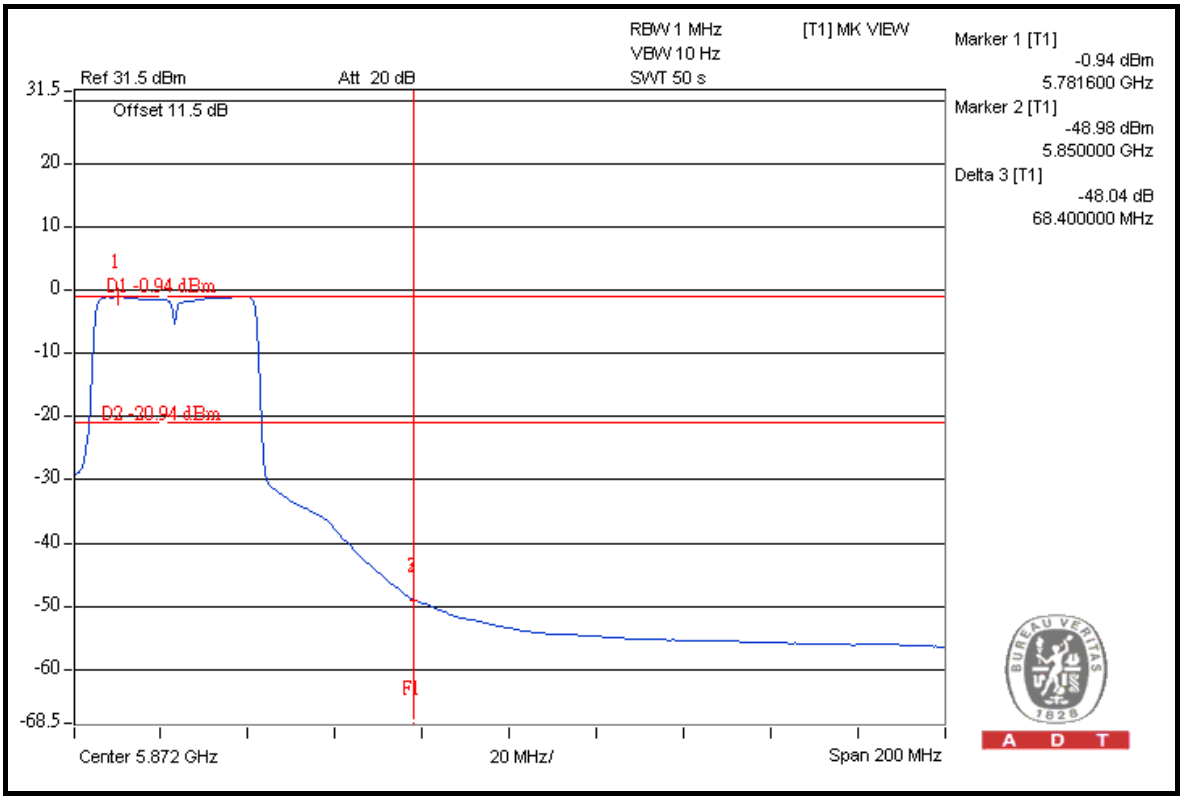
CHAIN 0

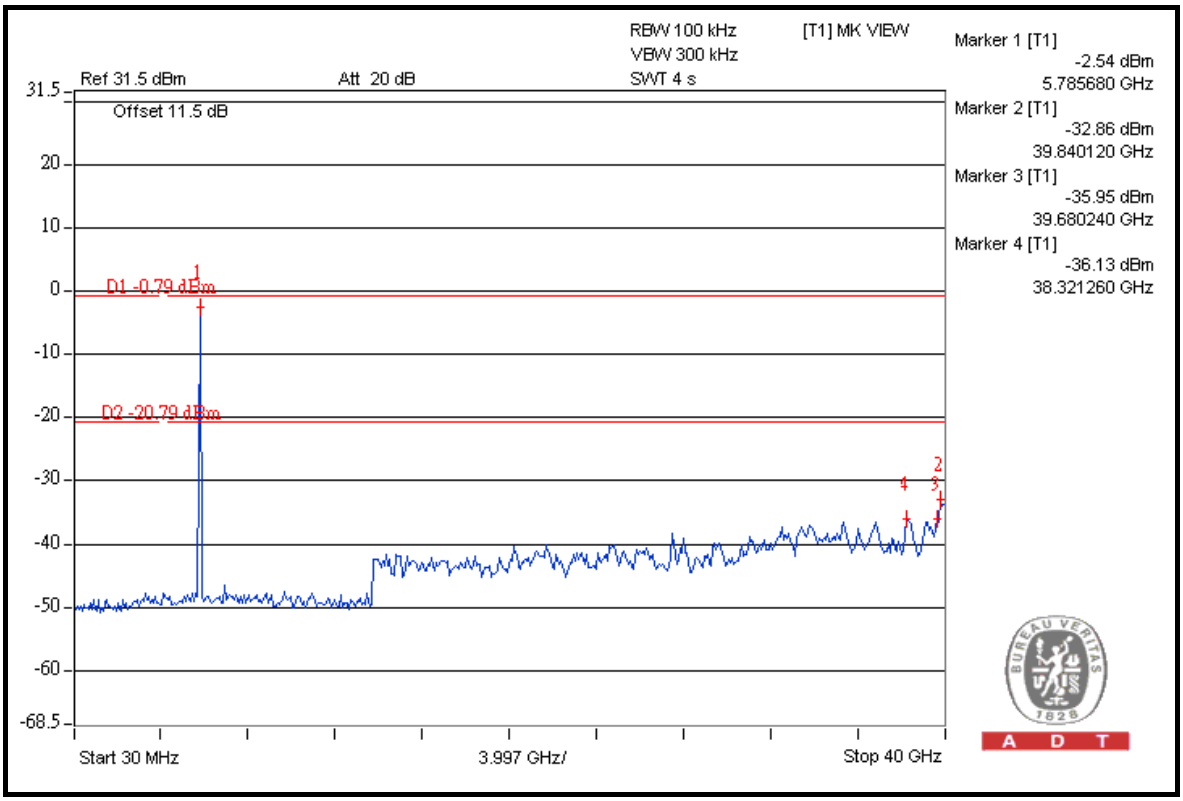




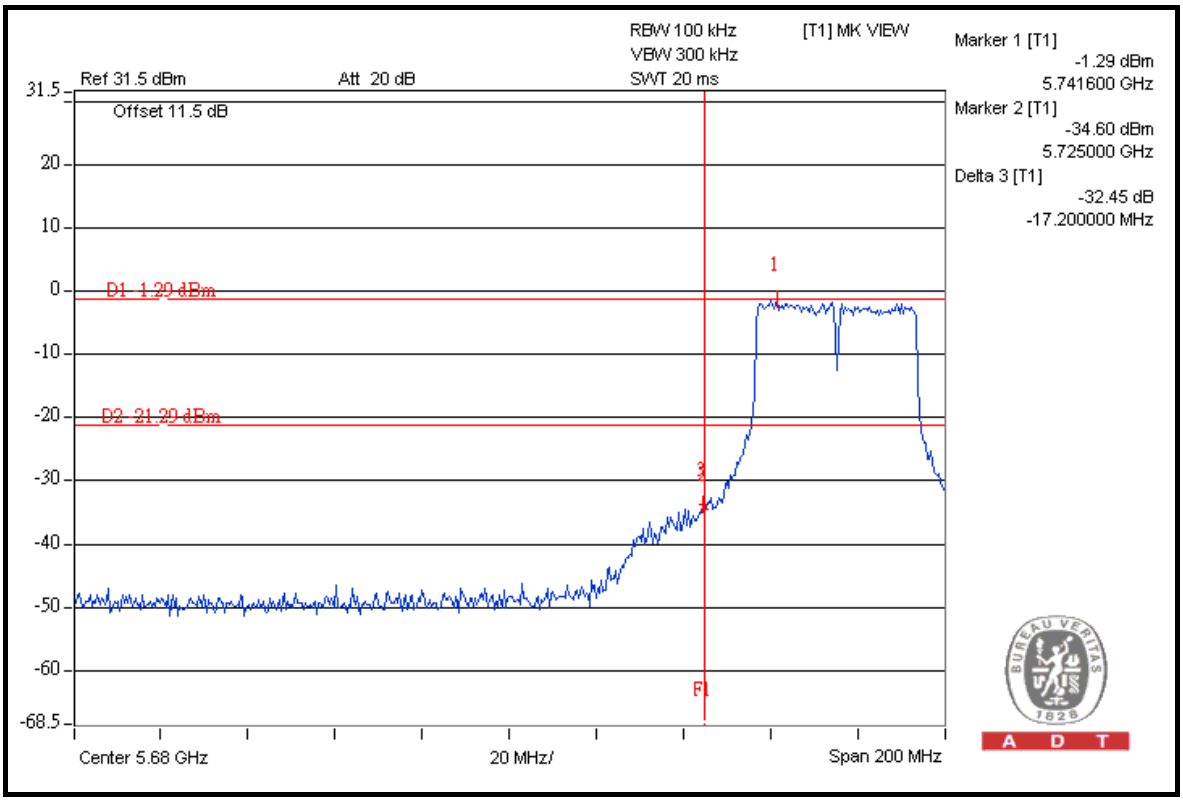

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 -0.68 dBm
D2 -20.68 dBm
Marker 1 [T1]
-2.60 dBm
5.705740 GHz
Marker 2 [T1]
-33.40 dBm
39.920060 GHz
Marker 3 [T1]
-35.32 dBm
38.401200 GHz
Marker 4 [T1]
-35.57 dBm
33.364980 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

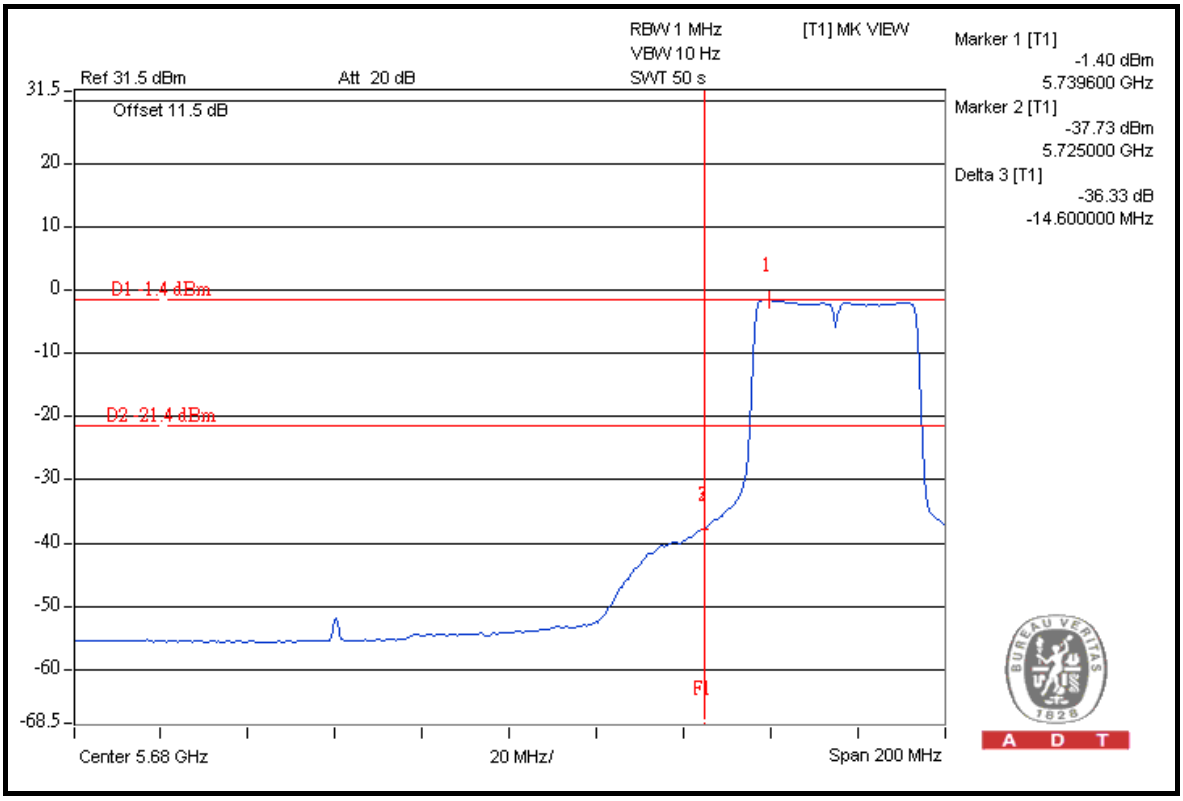

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 -0.79 dBm
D2 -20.79 dBm
Marker 1 [T1]
-0.79 dBm
5.787600 GHz
Marker 2 [T1]
-46.19 dBm
5.850000 GHz
Delta 3 [T1]
-40.75 dB
62.800000 MHz
Center 5.872 GHz
20 MHz/
Span 200 MHz

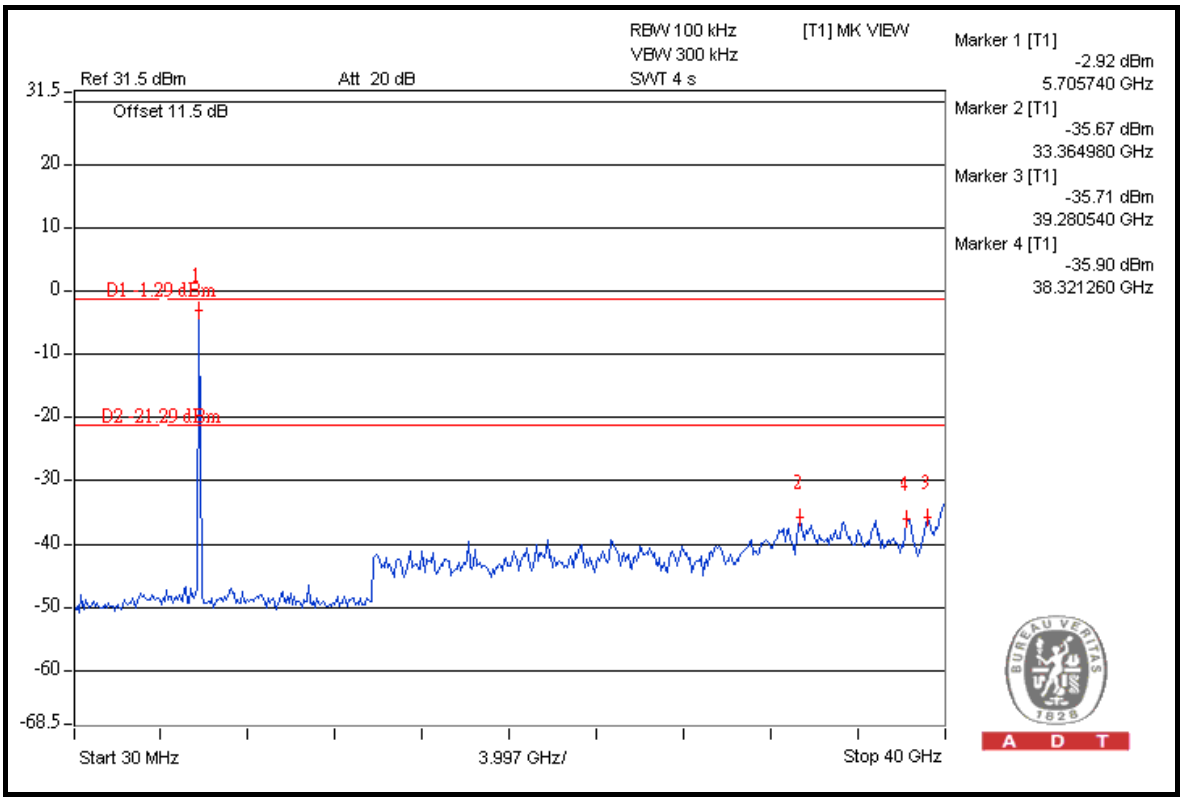

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 -0.94 dBm
D2 -20.94 dBm
Center 5.872 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-0.94 dBm
5.781600 GHz
Marker 2 [T1]
-48.98 dBm
5.850000 GHz
Delta 3 [T1]
-48.04 dB
68.400000 MHz

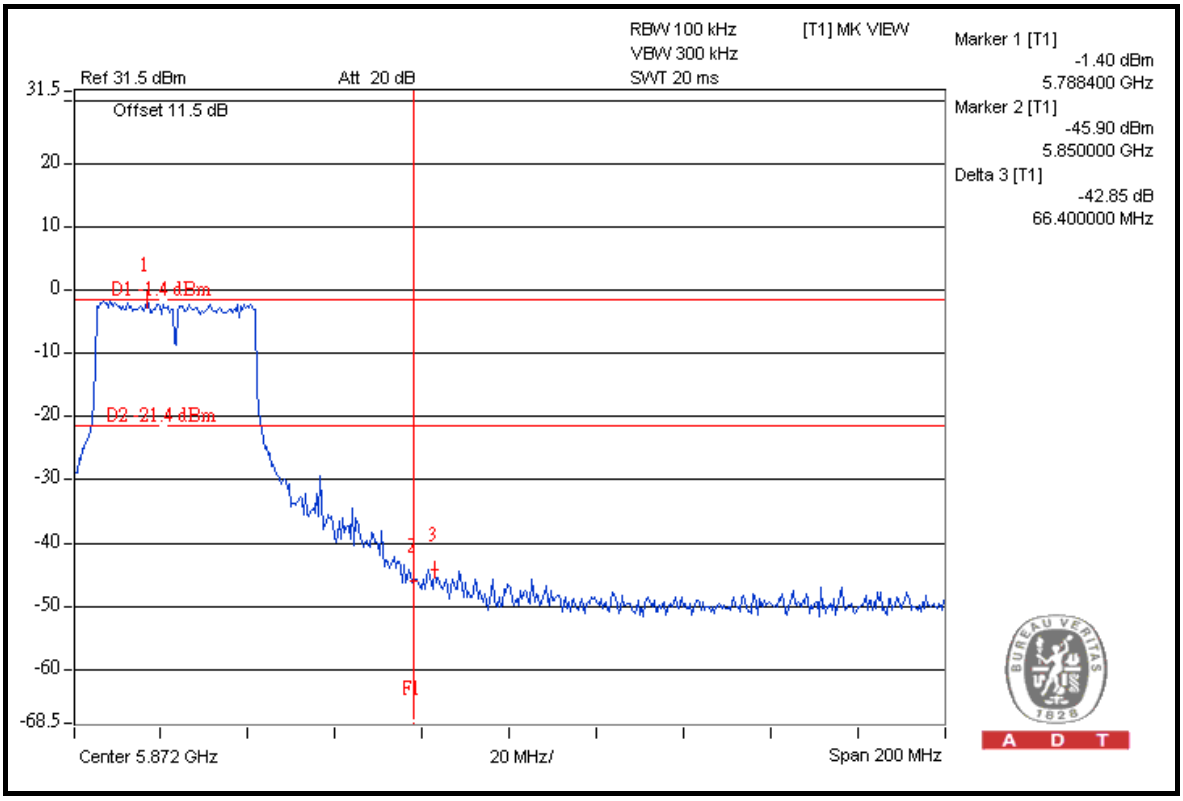

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 -0.79 dBm
D2 -20.79 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
Marker 1 [T1]
-2.54 dBm
5.785680 GHz
Marker 2 [T1]
-32.86 dBm
39.840120 GHz
Marker 3 [T1]
-35.95 dBm
39.680240 GHz
Marker 4 [T1]
-36.13 dBm
38.321260 GHz

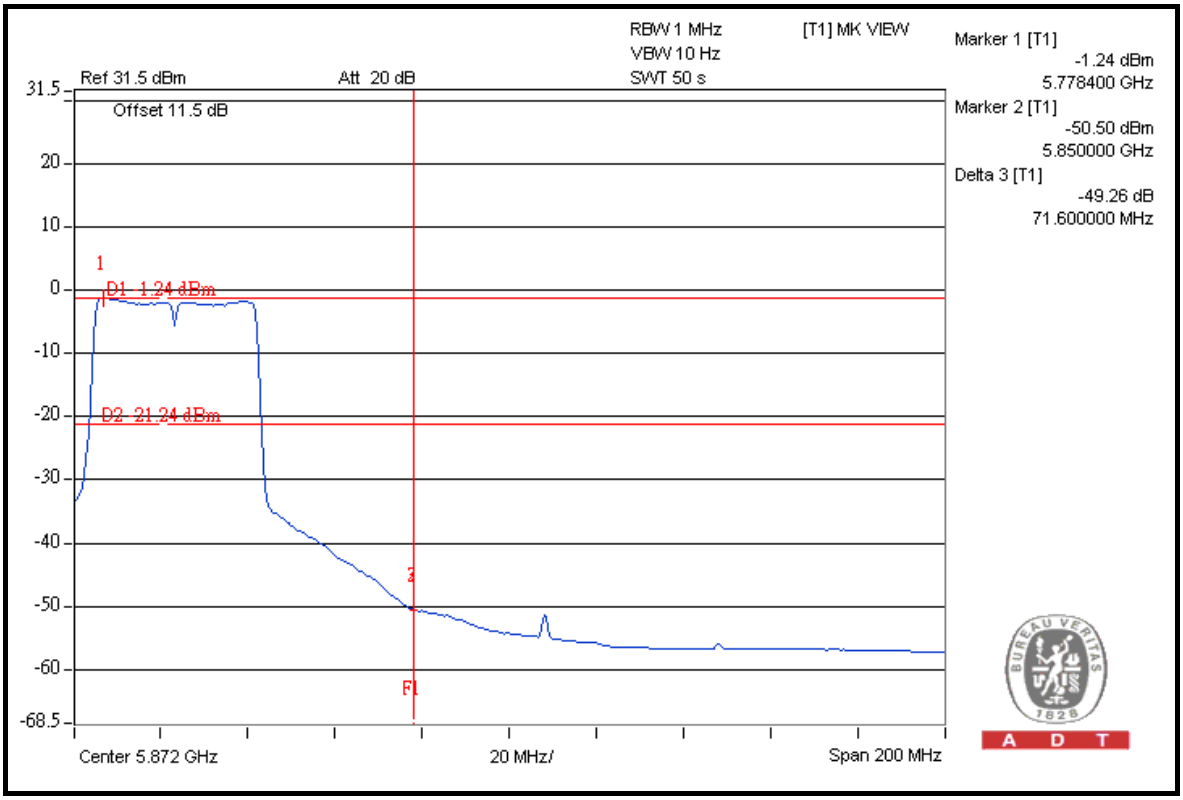
CHAIN 1

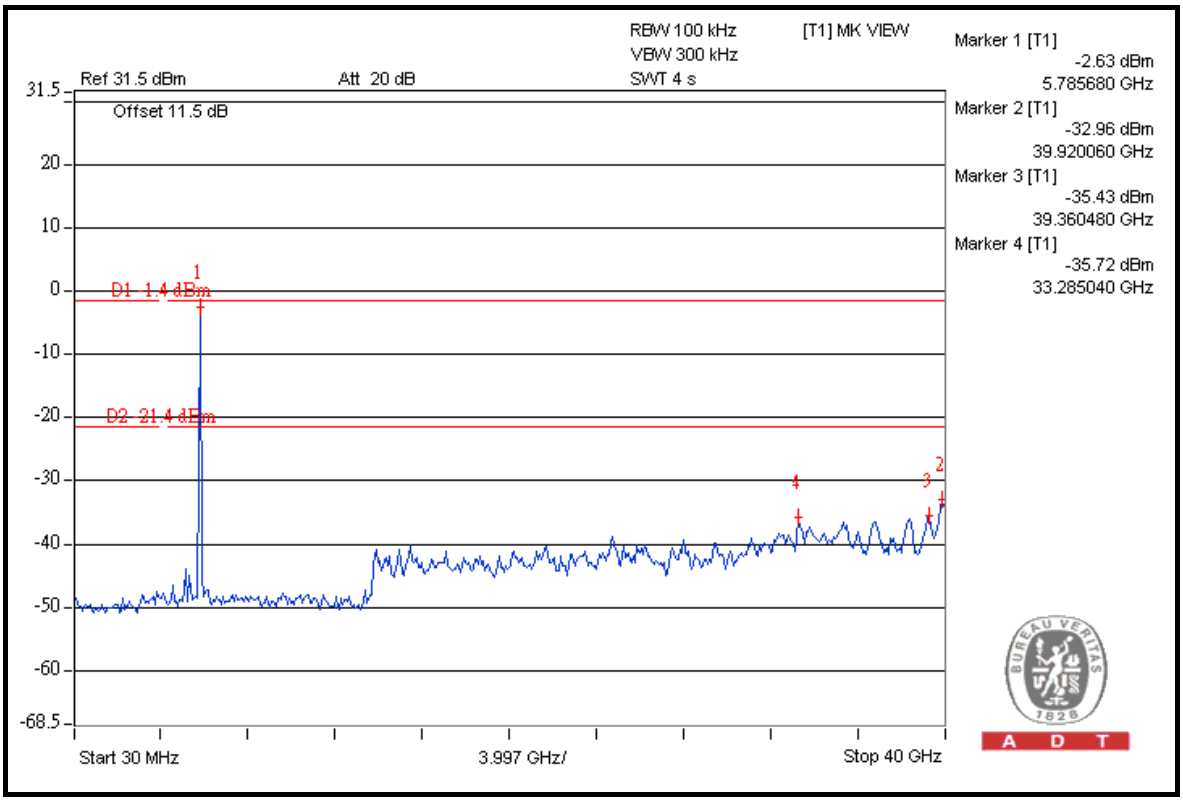

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
-1.29 dBm
5.741600 GHz
Marker 2 [T1]
-34.60 dBm
5.725000 GHz
Delta 3 [T1]
-32.45 dB
-17.200000 MHz
D1 -1.29 dBm
D2 -21.29 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.68 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
-1.40 dBm
5.739600 GHz
Marker 2 [T1]
-37.73 dBm
5.725000 GHz
Delta 3 [T1]
-36.33 dB
-14.600000 MHz
D1 -1.4 dBm
D2 -21.4 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.68 GHz
20 MHz/
Span 200 MHz

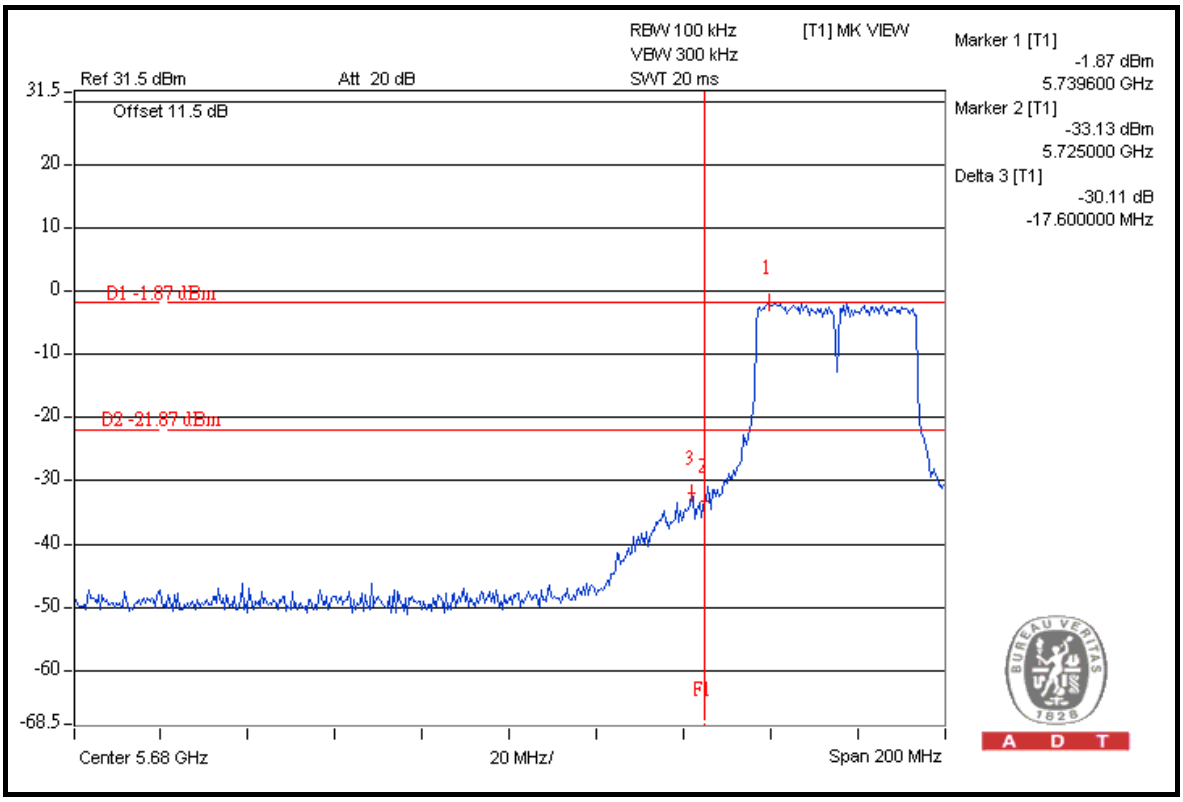

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 1.20 dBm
D2 21.20 dBm
Marker 1 [T1]
-2.92 dBm
5.705740 GHz
Marker 2 [T1]
-35.67 dBm
33.364980 GHz
Marker 3 [T1]
-35.71 dBm
39.280540 GHz
Marker 4 [T1]
-35.90 dBm
38.321260 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

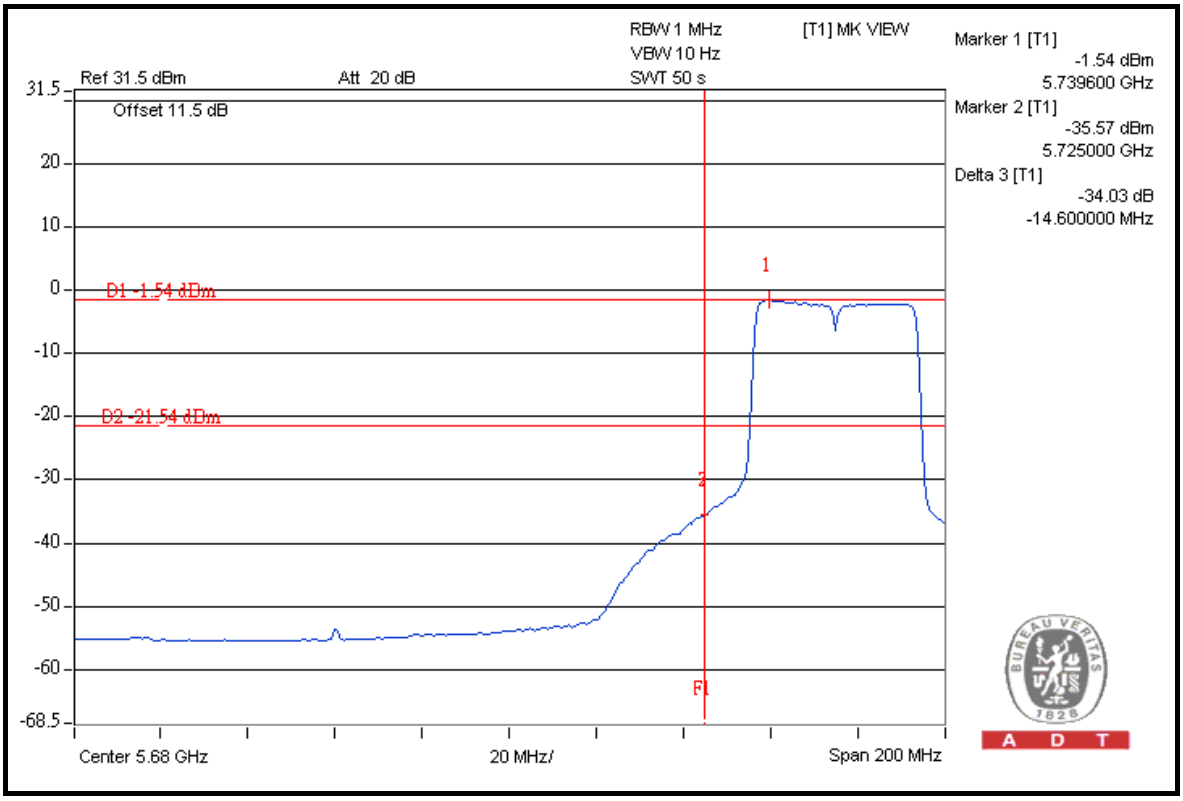

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 1.4 dBm
D2 21.4 dBm
Marker 1 [T1]
-1.40 dBm
5.788400 GHz
Marker 2 [T1]
-45.90 dBm
5.850000 GHz
Delta 3 [T1]
-42.85 dB
66.400000 MHz
Center 5.872 GHz
20 MHz/
Span 200 MHz

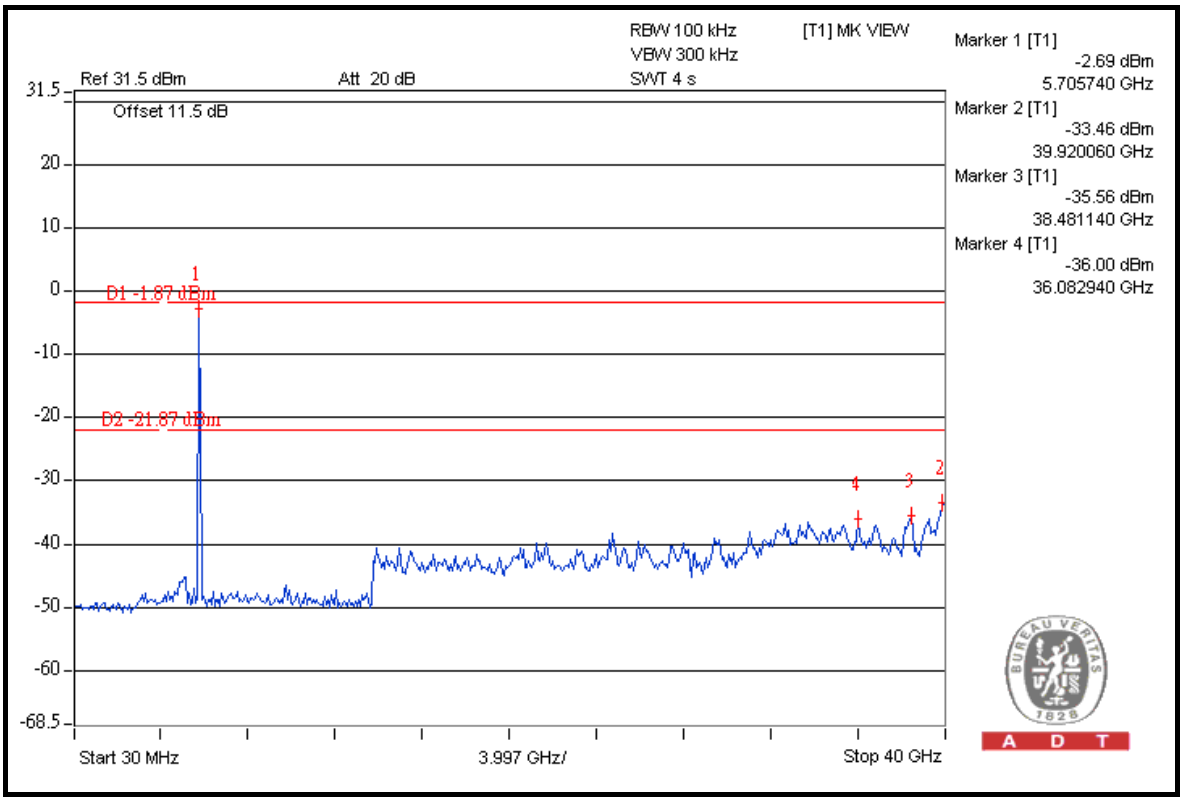

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 -1.24 dBm
D2 -21.24 dBm
Center 5.872 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-1.24 dBm
5.778400 GHz
Marker 2 [T1]
-50.50 dBm
5.850000 GHz
Delta 3 [T1]
-49.26 dB
71.600000 MHz

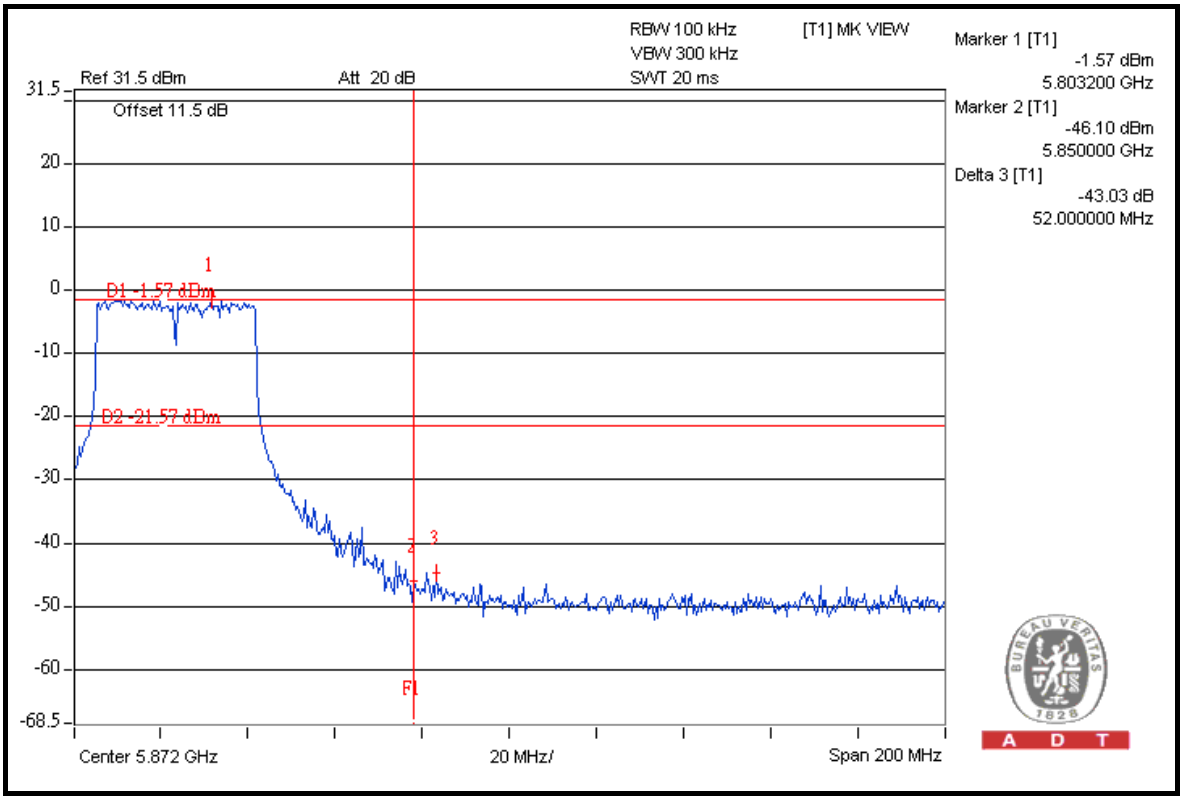

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 -1.4 dBm
D2 -21.4 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
Marker 1 [T1]
-2.63 dBm
5.785680 GHz
Marker 2 [T1]
-32.96 dBm
39.920060 GHz
Marker 3 [T1]
-35.43 dBm
39.360480 GHz
Marker 4 [T1]
-35.72 dBm
33.285040 GHz

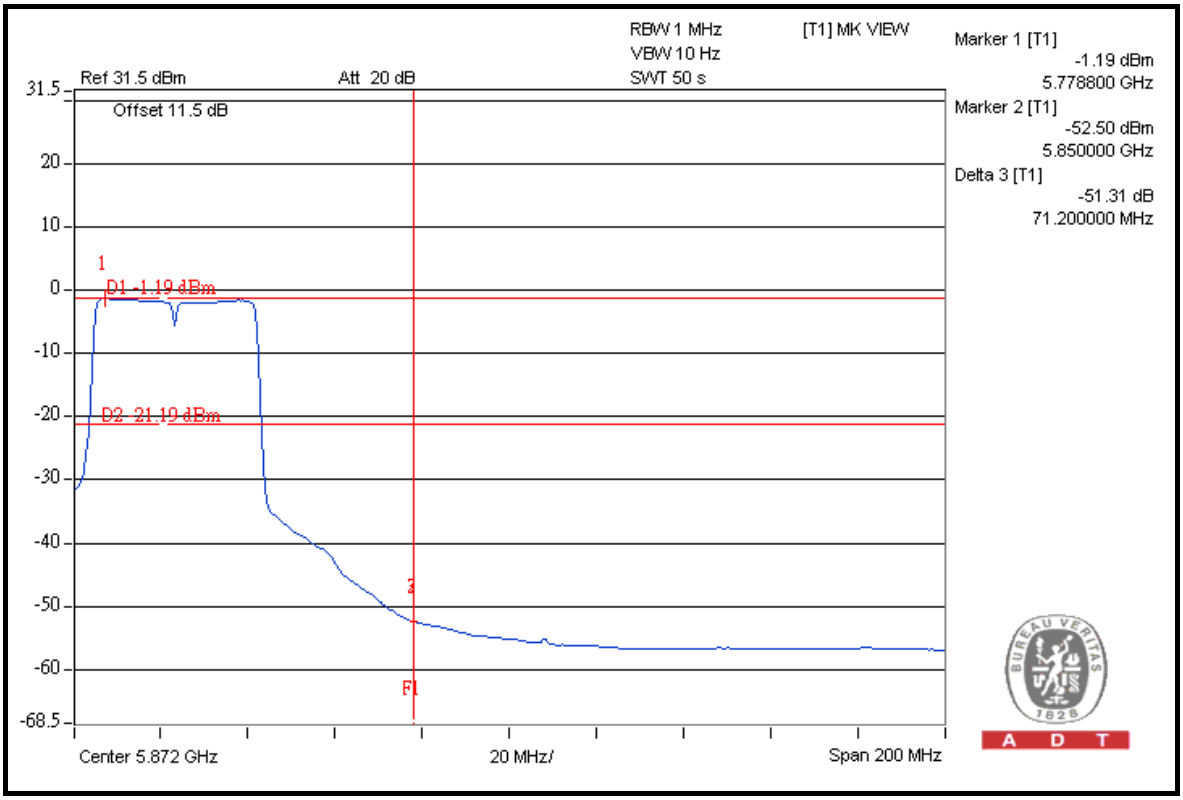
CHAIN 2

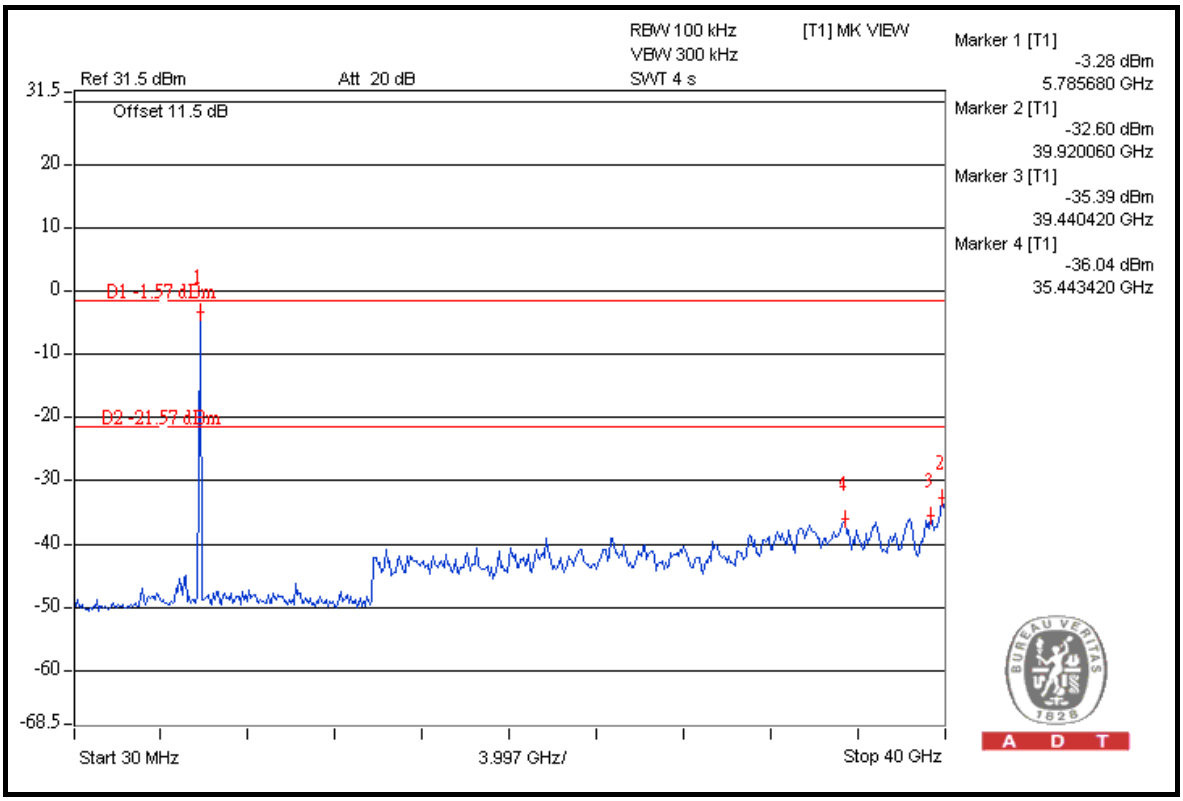

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
-1.87 dBm
5.739600 GHz
Marker 2 [T1]
-33.13 dBm
5.725000 GHz
Delta 3 [T1]
-30.11 dB
-17.600000 MHz
D1 -1.87 dBm
D2 -21.87 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.68 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
-1.54 dBm
5.739600 GHz
Marker 2 [T1]
-35.57 dBm
5.725000 GHz
Delta 3 [T1]
-34.03 dB
-14.600000 MHz
D1 -1.54 dBm
D2 -21.54 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.68 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Marker 1 [T1]
-2.69 dBm
5.705740 GHz
Marker 2 [T1]
-33.46 dBm
39.920060 GHz
Marker 3 [T1]
-35.56 dBm
38.481140 GHz
Marker 4 [T1]
-36.00 dBm
36.082940 GHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 -1.87 dBm
D2 -21.87 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Marker 1 [T1]
-1.57 dBm
5.803200 GHz
Marker 2 [T1]
-46.10 dBm
5.850000 GHz
Delta 3 [T1]
-43.03 dB
52.000000 MHz
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
D1 -1.57 dBm
D2 -21.57 dBm
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
Center 5.872 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 -1.19 dBm
D2 -21.19 dBm
Center 5.872 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
-1.19 dBm
5.778800 GHz
Marker 2 [T1]
-52.50 dBm
5.850000 GHz
Delta 3 [T1]
-51.31 dB
71.200000 MHz


RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 31.5 dBm
Att 20 dB
Offset 11.5 dB
31.5
20
10
0
-10
-20
-30
-40
-50
-60
-68.5
D1 -1.57 dBm
D2 -21.57 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz
Marker 1 [T1]
-3.28 dBm
5.785680 GHz
Marker 2 [T1]
-32.60 dBm
39.920060 GHz
Marker 3 [T1]
-35.39 dBm
39.440420 GHz
Marker 4 [T1]
-36.04 dBm
35.443420 GHz

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

7. INFORMATION ON THE TESTING LABORATORIES

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

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

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

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Web Site: www.adt.com.tw

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

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

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

---END---