FCC TEST REPORT (15.247)

REPORT NO.:	RF110915C27-1
MODEL NO.:	WBR5200MGN
	(Refer to item 3.1 for the more details)
FCC ID:	U2M-WBR5200MGN
RECEIVED:	Sep. 15, 2011
TESTED:	Oct. 3 ~ 5, 2011
ISSUED:	Oct. 19, 2011

APPLICANT:	Senao Networks, Inc.
ADDRESS:	3F, No. 529, Chung Cheng Rd., Hsintien, Taipei, Taiwan, R.O.C.

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB LOCATION:	No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,New Taipei City, Taiwan (R.O.C.)

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF110915C27-1	Original release	Oct. 19, 2011

1. CERTIFICATION

PRODUCT: 802.11abgn Router
BRAND NAME: Senao Networks (Refer to item 3.1 for the more details)
MODEL NO.: WBR5200MGN (Refer to item 3.1 for the more details)
APPLICANT: Senao Networks, Inc.
TEST ITEM: ENGINEERING SAMPLE
TESTED: Oct. 3 ~ 5, 2011
STANDARDS: FCC Part 15, Subpart C (Section 15.247)
ANSI C63.4-2003
ANSI C63.10-2009

The above equipment (model no.: WBR5200MGN) 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 : Celia Chen , DATE: Oct. 19, 2011
(Celia Chen / Senior Specialist)

APPROVED BY : Ken Liu , DATE: Oct. 19, 2011
(Ken Liu / Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**REMARK**
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -9.70dB at 0.158MHz
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 Peak 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 -0.1dB at 4874.00MHz & 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 IPEX 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:

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz~30MHz	2.41 dB
Radiated emissions	30MHz ~ 1GHz	3.87 dB
	Above 1GHz	3.36 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	802.11abgn Router
MODEL NO.	WBR5200MGN (Refer to NOTE for the more details)
FCC ID	U2M-WBR5200MGN
NOMINAL VOLTAGE	12Vdc, 1.25A
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: 2412.0 ~ 2462.0MHz 5.0GHz: 5745.0 ~ 5825.0MHz
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	403.9mW for 2412.0 ~ 2462.0MHz 580.5mW for 5745.0 ~ 5825.0MHz
ANTENNA TYPE	Refer to note below
ANTENNA CONNECTER	Refer to note below
DATA CABLE	NA
I/O PORTS	Refer to User's manual
ACCESSORY DEVICES	Refer to note below

NOTE:

1. The following models are provided to this EUT.

Brand	Model No.
Senao Networks	WBR5200MGN
	WBR4200MGN
LG-ERICSSON	WBR-7070
SITECOM	WLR-6000 v1 001
	WLR-5000 v1 002

For the test, **model: WBR5200MGN** was selected as a representative one and therefore only its test data was recorded in this report.

2. The functions of EUT listed as below:

FUNCTION	TEST STANDARD	REFERENCE REPORT
WLAN 802.11b/g/n	FCC Part 15, Subpart C (Section 15.247)	RF110915C27-1
WLAN 802.11a/n (5745~5825 MHz)		
WLAN 802.11a/n (5180~ 5240MHz)	FCC Part 15, Subpart E (Section 15.407)	RF110915C27

3. 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)	√	√	√

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

MODULATION MODE			TX FUNCTION
2.4GHz	**802.11b**		1TX
	802.11g		1TX
	802.11n (20MHz)	**MCS 0-7**	1TX
		MCS 8-15	2TX
	802.11n (40MHz)	**MCS 0-7**	1TX
		MCS 8-15	2TX
5.0GHz	**802.11a**		1TX
	802.11n (20MHz)	**MCS 0-7**	1TX
		MCS 16-23	3TX
	802.11n (40MHz)	**MCS 0-7**	1TX
		MCS 16-23	3TX

5. The following antennas were applied to the EUT:

Type	Connector	Gain (dBi)	
		2.4GHz	5.0GHz
PIFA	IPEX	4.69	4.64

6. The EUT use following power adapter:

BRAND	DVE
MODEL	DSA-15P-12 US 120150
AC I/P	100-240V~ 50/60Hz, 0.5A
DC O/P	+12V--1.25A
POWER CORD	1.8m, non-shielded, w/o core

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

3.2 DESCRIPTION OF TEST MODES

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 and 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

Power Setting for 802.11b, 802.11g, 802.11n (20MHz), 802.11n (40MHz):

CHANNEL	POWER SETTING				
	802.11b	802.11g	802.11n (20MHz)		
	1TX	1TX	1TX	2TX	
				ANT 0	ANT 1
1	09	12	19	17	17
6	09	12	19	17	18
11	09	0E	14	18	19

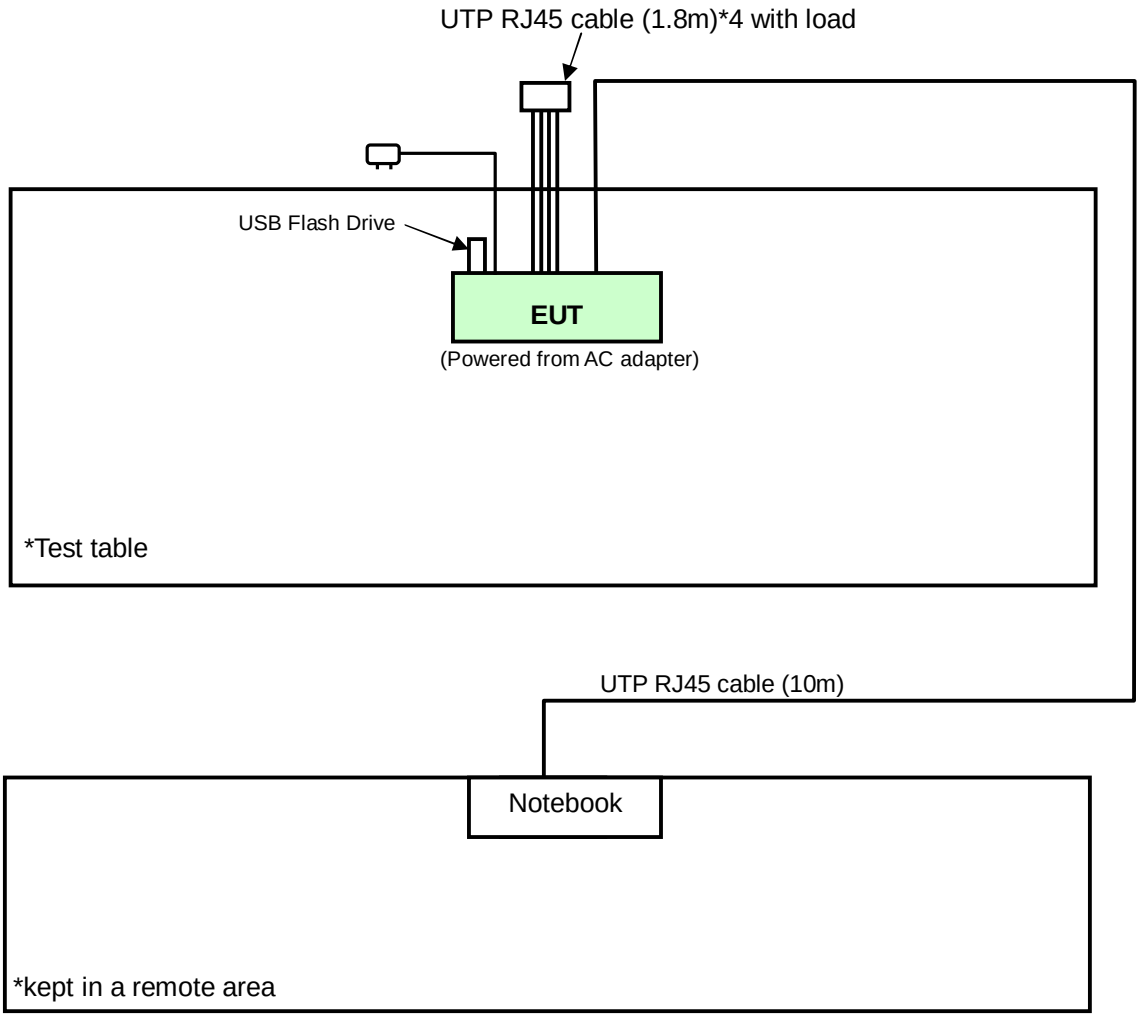
CHANNEL	POWER SETTING		
	802.11n (40MHz)		
	1TX	2TX	
		ANT 0	ANT 1
1	14	17	18
4	19	18	19
7	16	16	18

Power Setting for 802.11a, 802.11n (20MHz), 802.11n (40MHz):

CHANNEL	POWER SETTING				
	802.11a	802.11n (20MHz)			
	1TX	1TX	3TX		
			ANT 0	ANT 1	ANT 2
149	1B	1B	17	15	18
157	1C	1C	18	16	19
165	1D	1D	1F	1F	1F

CHANNEL	POWER SETTING			
	802.11n (40MHz)			
	1TX	3TX		
		ANT 0	ANT 1	ANT 2
151	1B	1B	19	1D
159	1D	1D	1A	1F

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR 2.412 ~ 2.462GHz:

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, XYZ Axis, 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)	AXIS
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0	Z
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	Z
802.11n (20MHz)	1 to 11	1, 6, 11	OFDM	BPSK	13.0	Z
802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	27.0	Z

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ Axis, 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)	AXIS
802.11g	1 to 11	1	OFDM	BPSK	6.0	Z

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	1	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	13.0
802.11n (40MHz)	1 to 7	1, 7	OFDM	BPSK	27.0

ANTENNA PORT CONDUCTED MEASUREMENT:

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

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	13.0
802.11n (40MHz)	1 to 7	1, 4, 7	OFDM	BPSK	27.0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	24deg. C, 75% RH	120Vac, 60Hz	Nick Chen
RE≥1G	23deg. C, 71% RH	120Vac, 60Hz	Nick Chen
RE <1G	23deg. C, 71% RH	120Vac, 60Hz	Nick Chen
APCM	23deg. C, 78% RH	120Vac, 60Hz	Jun Wu

FOR 5.745 ~ 5.825GHz:

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, XYZ Axis, 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)	AXIS
802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0	Z
802.11n (20MHz)	149 to 165	149, 157, 165	OFDM	BPSK	19.5	Z
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	40.5	Z

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ Axis, 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)	AXIS
802.11a	149 to 165	149	OFDM	BPSK	6.0	Z

POWER LINE CONDUCTED EMISSION TEST:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	149 to 165	149	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)
802.11a	149 to 165	149, 165	OFDM	BPSK	6.0
802.11n (20MHz)	149 to 165	149, 165	OFDM	BPSK	19.5
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	40.5

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

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

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

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	19.5
802.11n (40MHz)	151 to 159	151, 159	OFDM	BPSK	40.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	24deg. C, 75% RH	120Vac, 60Hz	Nick Chen
RE[3]1G	23deg. C, 71% RH	120Vac, 60Hz	Nick Chen
RE <1G	23deg. C, 71% RH	120Vac, 60Hz	Nick Chen
APCM	23deg. C, 78% RH	120Vac, 60Hz	Jun Wu

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

NOTE: The product has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

All test items have been performed and recorded as per the above standards.

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 COMPUTER	DELL	PP05L	19227741184	FCC DoC Approved
2	USB Flash Drive	SanDisk	Cruzer Micro Skin	NA	FCC DoC Approved

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

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

(2) Four UTP RJ45 cables (1.8m each) were connected from LAN port of EUT to form an open loop cable, which terminated with load.

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

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 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.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	100276	Dec. 31, 2010	Dec. 30, 2011
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100219	Nov. 24, 2010	Nov. 23, 2011
LISN With Adapter (for EUT)	AD10	C10Ada-001	Nov. 24, 2010	Nov. 23, 2011
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100218	Nov. 24, 2010	Nov. 23, 2011
Software	ADT_Cond_V7.3.7	NA	NA	NA
Software	ADT_ISN_V7.3.7	NA	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	Feb. 22, 2011	Feb. 21, 2012
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Feb. 26, 2011	Feb. 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. The test was performed in Shielded Room No. 10.
3. The VCCI Site Registration No. C-1852.

4.1.3 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.

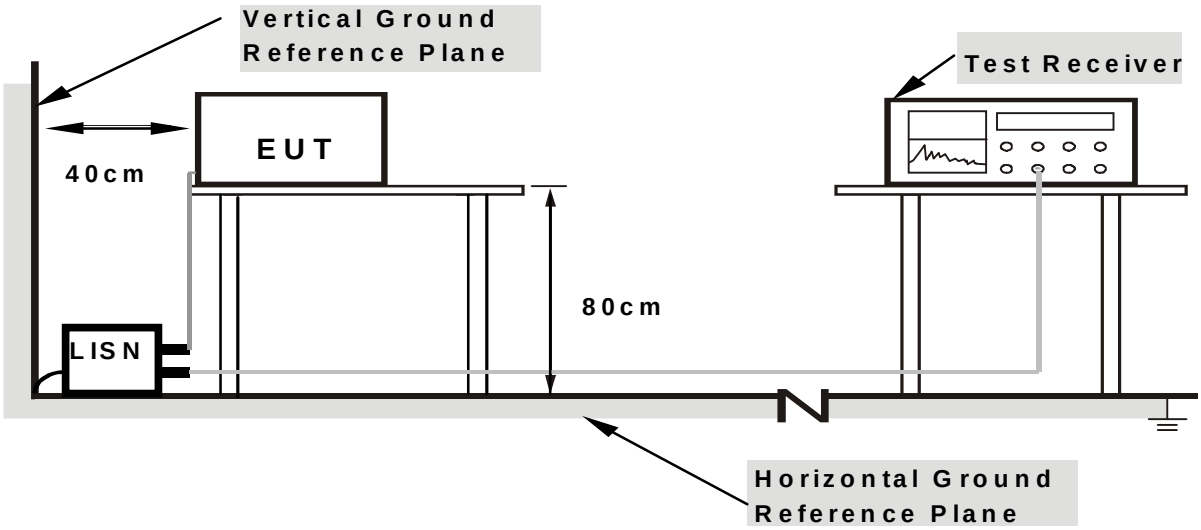
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

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

4.1.6 EUT OPERATING CONDITIONS

a. Turn on the power of all equipment.
b. Notebook PC ran a test program (provided by manufacture) to enable EUT under transmitting condition at specific channel continuously.

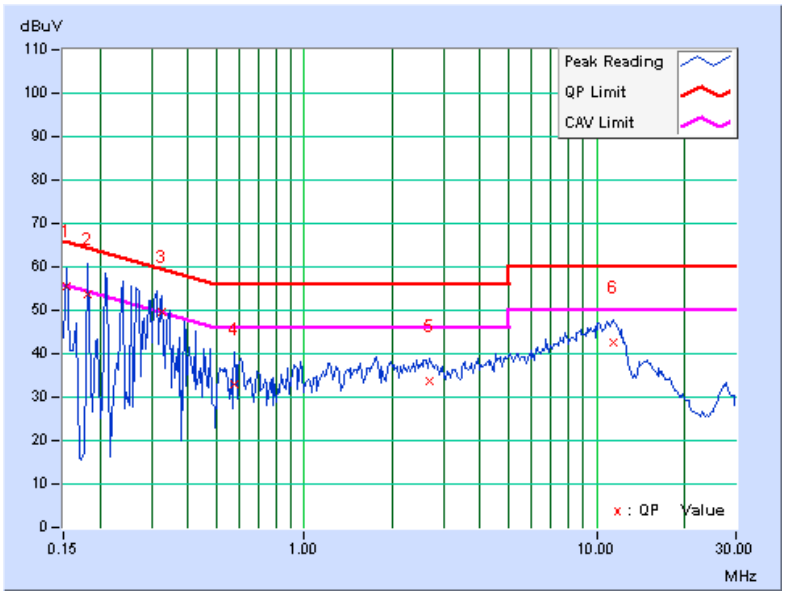
4.1.7 TEST RESULTS

CONDUCTED WORST-CASE DATA： 802.11g

6dB BANDWIDTH	9kHz	PHASE	Line 1
CHANNEL	Channel 1		

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	0.18	55.40	-	55.58	-	65.79	55.79	-10.21	-
2	0.181	0.18	53.35	-	53.53	-	64.43	54.43	-10.90	-
3	0.326	0.22	49.30	-	49.52	-	59.56	49.56	-10.03	-
4	0.580	0.26	32.65	-	32.91	-	56.00	46.00	-23.09	-
5	2.680	0.45	33.13	-	33.58	-	56.00	46.00	-22.42	-
6	11.491	0.98	41.49	-	42.47	-	60.00	50.00	-17.53	-

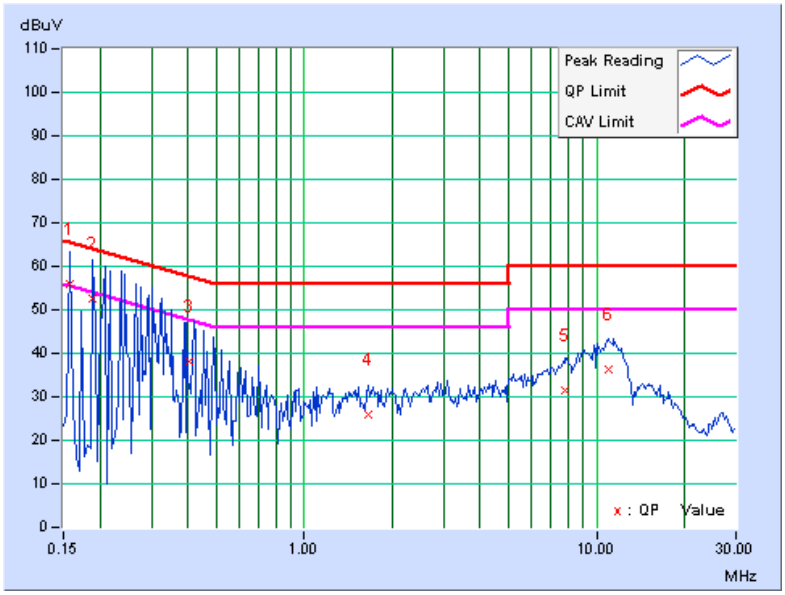
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



6dB BANDWIDTH	9kHz	PHASE	Line 2
CHANNEL	Channel 1		

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	**0.158**	**0.19**	**55.69**	**27.01**	**55.88**	**27.20**	**65.58**	**55.58**	**-9.70**	**-28.38**
2	0.189	0.19	52.58	-	52.77	-	64.08	54.08	-11.31	-
3	0.404	0.27	37.75	-	38.02	-	57.78	47.78	-19.76	-
4	1.664	0.39	25.72	-	26.11	-	56.00	46.00	-29.89	-
5	7.758	0.73	30.93	-	31.66	-	60.00	50.00	-28.34	-
6	10.999	0.84	35.56	-	36.40	-	60.00	50.00	-23.60	-

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.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Mar. 04, 2011	Mar. 03, 2012
HP Preamplifier	8449B	3008A01924	Mar. 04, 2011	Mar. 03, 2012
HP Preamplifier	8449B	3008A01292	Mar. 04, 2011	Mar. 03, 2012
Agilent Spectrum Analyzer	E4446A	MY46180403	Jun. 22, 2011	Jun. 21, 2012
Schwarzbeck Antenna	VULB 9168	137	Apr. 12, 2011	Apr. 11, 2012
Schwarzbeck Antenna	VHBA 9123	480	May 06, 2011	May 05, 2012
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	ADT_Radiated_V 7.6.15.9.2	NA	NA	NA
SUHNER RF cable	SF102	CABLE-CH6	Aug. 19, 2011	Aug. 18, 2012
EMCO Horn Antenna	3115	6714	Oct. 26, 2010	Oct. 25, 2011
EMCO Horn Antenna	3115	9312-4192	Apr. 22, 2011	Apr. 21, 2012
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	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 horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is 447212.

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

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

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

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

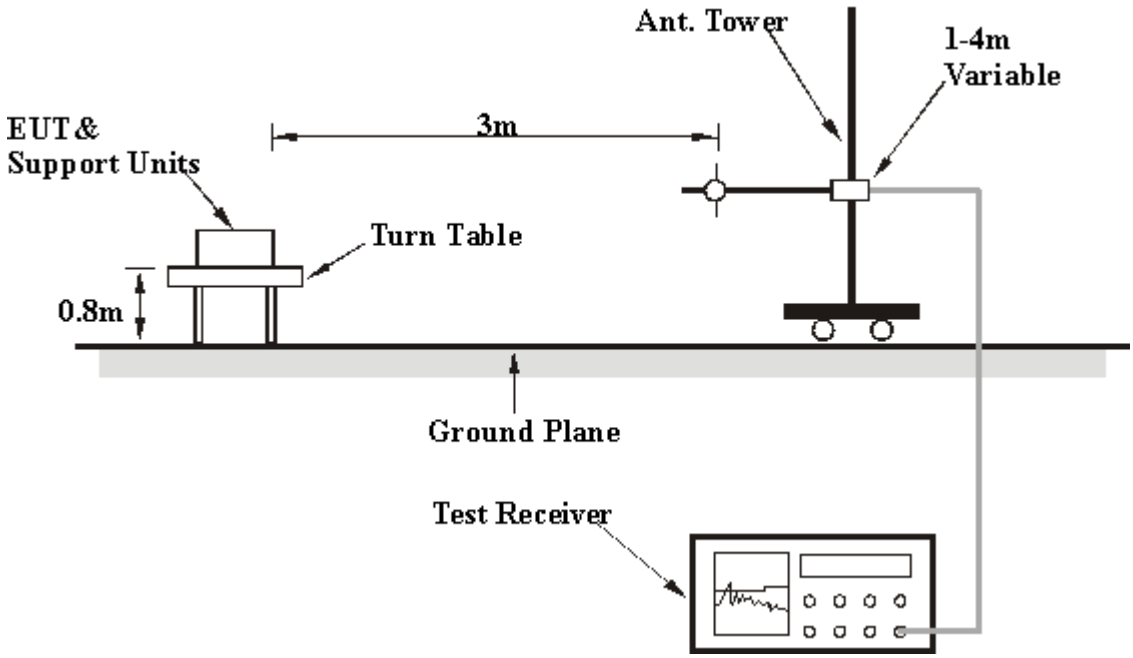
NOTE:

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as item 4.1.6.

4.2.7 TEST RESULTS

802.11b

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	59.1 PK	74.0	-14.9	1.44 H	274	26.96	32.15
2	2390.00	47.2 AV	54.0	-6.8	1.44 H	274	15.03	32.15
3	*2412.00	102.6 PK			1.38 H	83	70.31	32.24
4	*2412.00	98.8 AV			1.38 H	83	66.55	32.24
5	4824.00	51.0 PK	74.0	-23.0	1.10 H	200	12.34	38.66
6	4824.00	45.9 AV	54.0	-8.1	1.10 H	200	7.28	38.66
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.5 PK	74.0	-16.5	1.54 V	9	25.35	32.15
2	2390.00	46.9 AV	54.0	-7.1	1.54 V	9	14.77	32.15
3	*2412.00	97.3 PK			1.54 V	9	65.07	32.24
4	*2412.00	94.1 AV			1.54 V	9	61.83	32.24
5	4824.00	56.1 PK	74.0	-17.9	1.03 V	174	17.46	38.66
6	4824.00	52.6 AV	54.0	-1.4	1.03 V	174	13.91	38.66

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	**TESTED BY**	Nick Chen

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	102.4 PK			1.41 H	121	70.03	32.33
2	*2437.00	98.4 AV			1.41 H	121	66.06	32.33
3	4874.00	55.7 PK	74.0	-18.3	1.10 H	139	16.93	38.78
4	4874.00	52.1 AV	54.0	-1.9	1.10 H	139	13.36	38.78
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	97.0 PK			1.48 V	159	64.67	32.33
2	*2437.00	90.9 AV			1.48 V	159	58.59	32.33
3	4874.00	56.6 PK	74.0	-17.4	1.11 V	153	17.81	38.78
4	**4874.00**	**53.9 AV**	**54.0**	**-0.1**	**1.11 V**	**153**	**15.14**	**38.78**

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	100.8 PK			1.37 H	125	68.41	32.43
2	*2462.00	97.1 AV			1.37 H	125	64.71	32.43
3	2483.50	57.4 PK	74.0	-16.6	1.37 H	125	24.93	32.51
4	2483.50	47.9 AV	54.0	-6.1	1.37 H	125	15.37	32.51
5	4924.00	54.8 PK	74.0	-19.2	1.09 H	197	15.88	38.90
6	4924.00	51.6 AV	54.0	-2.4	1.09 H	197	12.69	38.90
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	*2462.00	97.5 PK			1.56 V	165	65.07	32.43
2	*2462.00	94.2 AV			1.56 V	165	61.80	32.43
3	2483.50	57.3 PK	74.0	-16.7	1.56 V	165	24.77	32.51
4	2483.50	47.2 AV	54.0	-6.8	1.56 V	165	14.69	32.51
5	4924.00	57.4 PK	74.0	-16.6	1.00 V	210	18.54	38.90
6	4924.00	53.7 AV	54.0	-0.3	1.00 V	210	14.83	38.90

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

802.11g

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	61.5 PK	74.0	-12.5	1.31 H	273	29.31	32.15
2	2390.00	47.5 AV	54.0	-6.5	1.31 H	273	15.36	32.15
3	*2412.00	105.8 PK			1.31 H	273	73.59	32.24
4	*2412.00	94.8 AV			1.31 H	273	62.60	32.24
5	4824.00	62.3 PK	74.0	-11.7	1.30 H	201	23.65	38.66
6	4824.00	49.8 AV	54.0	-4.2	1.30 H	201	11.12	38.66
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.7 PK	74.0	-15.3	1.53 V	137	26.58	32.15
2	2390.00	44.4 AV	54.0	-9.6	1.53 V	137	12.24	32.15
3	*2412.00	101.9 PK			1.53 V	137	69.69	32.24
4	*2412.00	92.3 AV			1.53 V	137	60.07	32.24
5	4824.00	67.1 PK	74.0	-6.9	1.16 V	215	28.42	38.66
6	4824.00	52.6 AV	54.0	-1.4	1.16 V	215	13.96	38.66

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	106.6 PK			1.66 H	86	74.26	32.33
2	*2437.00	95.4 AV			1.66 H	86	63.05	32.33
3	4874.00	65.0 PK	74.0	-9.0	1.22 H	137	26.25	38.78
4	4874.00	48.8 AV	54.0	-5.2	1.22 H	137	10.02	38.78
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	105.8 PK			1.55 V	149	73.47	32.33
2	*2437.00	93.7 AV			1.55 V	149	61.39	32.33
3	4874.00	69.4 PK	74.0	-4.6	1.00 V	204	30.61	38.78
4	4874.00	53.1 AV	54.0	-1.0	1.00 V	204	14.27	38.78

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	103.7 PK			1.39 H	124	71.23	32.43
2	*2462.00	94.1 AV			1.39 H	124	61.66	32.43
3	2483.50	73.1 PK	74.0	-0.9	1.39 H	124	40.63	32.51
4	2483.50	52.8 AV	54.0	-1.2	1.39 H	124	20.32	32.51
5	4924.00	65.7 PK	74.0	-8.4	1.00 H	148	26.75	38.90
6	4924.00	48.7 AV	54.0	-5.3	1.00 H	148	9.84	38.90
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	*2462.00	102.9 PK			1.49 V	177	70.51	32.43
2	*2462.00	92.1 AV			1.49 V	177	59.62	32.43
3	2483.50	73.0 PK	74.0	-1.0	1.49 V	177	40.51	32.51
4	2483.50	52.7 AV	54.0	-1.3	1.49 V	177	20.16	32.51
5	4924.00	70.4 PK	74.0	-3.6	1.00 V	197	31.52	38.90
6	4924.00	53.4 AV	54.0	-0.6	1.00 V	197	14.48	38.90

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

802.11n (20MHz): 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.9 PK	74.0	-2.1	1.48 H	234	39.76	32.15
2	2390.00	52.7 AV	54.0	-1.3	1.48 H	234	20.57	32.15
3	*2412.00	106.4 PK			1.48 H	234	74.13	32.24
4	*2412.00	95.1 AV			1.48 H	234	62.88	32.24
5	4824.00	64.4 PK	74.0	-9.6	1.00 H	225	25.76	38.66
6	4824.00	49.3 AV	54.0	-4.7	1.00 H	225	10.64	38.66
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.0 PK	74.0	-5.0	1.00 V	279	36.82	32.15
2	2390.00	51.9 AV	54.0	-2.1	1.00 V	279	19.78	32.15
3	*2412.00	101.1 PK			1.00 V	279	68.88	32.24
4	*2412.00	91.0 AV			1.00 V	279	58.75	32.24
5	4824.00	69.2 PK	74.0	-4.8	1.04 V	177	30.52	38.66
6	4824.00	52.8 AV	54.0	-1.2	1.04 V	177	14.10	38.66

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	**FREQUENCY RANGE**	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	**TESTED BY**	Nick Chen

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	104.3 PK			1.00 H	61	71.97	32.33
2	*2437.00	94.1 AV			1.00 H	61	61.76	32.33
3	4874.00	68.4 PK	74.0	-5.6	1.00 H	192	29.58	38.78
4	4874.00	51.2 AV	54.0	-2.8	1.00 H	192	12.45	38.78
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2437.00	102.6 PK			1.00 V	160	70.25	32.33
2	*2437.00	91.8 AV			1.00 V	160	59.42	32.33
3	4874.00	71.9 PK	74.0	-2.1	1.02 V	195	33.11	38.78
4	**4874.00**	**53.9 AV**	**54.0**	**-0.1**	**1.02 V**	**195**	**15.13**	**38.78**

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	103.1 PK			1.49 H	274	70.64	32.43
2	*2462.00	93.9 AV			1.49 H	274	61.48	32.43
3	**2483.50**	**73.9 PK**	**74.0**	**-0.1**	**1.49 H**	**274**	**41.42**	**32.51**
4	2483.50	53.5 AV	54.0	-0.5	1.49 H	274	20.96	32.51
5	4924.00	65.4 PK	74.0	-8.6	1.00 H	198	26.46	38.90
6	4924.00	47.1 AV	54.0	-6.9	1.00 H	198	8.20	38.90
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	*2462.00	102.1 PK			1.51 V	161	69.65	32.43
2	*2462.00	91.5 AV			1.51 V	161	59.02	32.43
3	2483.50	73.0 PK	74.0	-1.0	1.51 V	161	40.45	32.51
4	2483.50	53.4 AV	54.0	-0.6	1.51 V	161	20.92	32.51
5	4924.00	68.3 PK	74.0	-5.7	1.00 V	210	29.44	38.90
6	4924.00	51.8 AV	54.0	-2.2	1.00 V	210	12.94	38.90

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

802.11n (20MHz): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	73.4 PK	74.0	-0.6	1.00 H	63	41.24	32.15
2	2390.00	52.4 AV	54.0	-1.6	1.00 H	63	20.22	32.15
3	*2412.00	104.6 PK			1.00 H	63	72.37	32.24
4	*2412.00	92.6 AV			1.00 H	63	60.37	32.24
5	4824.00	59.8 PK	74.0	-14.3	1.00 H	198	21.09	38.66
6	4824.00	45.5 AV	54.0	-8.5	1.00 H	198	6.80	38.66
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.5 PK	74.0	-2.5	1.00 V	278	39.31	32.15
2	2390.00	51.4 AV	54.0	-2.6	1.00 V	278	19.21	32.15
3	*2412.00	102.0 PK			1.00 V	278	69.80	32.24
4	*2412.00	89.3 AV			1.00 V	278	57.07	32.24
5	4824.00	65.4 PK	74.0	-8.6	1.17 V	203	26.74	38.66
6	4824.00	49.8 AV	54.0	-4.2	1.17 V	203	11.17	38.66

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 6	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	103.8 PK			1.00 H	75	71.50	32.33
2	*2437.00	91.2 AV			1.00 H	75	58.88	32.33
3	4874.00	61.9 PK	74.0	-12.1	1.00 H	187	23.13	38.78
4	4874.00	46.4 AV	54.0	-7.6	1.00 H	187	7.61	38.78
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	100.9 PK			1.26 V	330	68.53	32.33
2	*2437.00	87.4 AV			1.26 V	330	55.06	32.33
3	4874.00	65.8 PK	74.0	-8.2	1.15 V	204	27.06	38.78
4	4874.00	50.8 AV	54.0	-3.2	1.15 V	204	12.02	38.78

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 11	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	101.6 PK			1.20 H	61	69.12	32.43
2	*2462.00	89.3 AV			1.20 H	61	56.82	32.43
3	2483.50	66.6 PK	74.0	-7.5	1.20 H	61	34.04	32.51
4	2483.50	47.3 AV	54.0	-6.7	1.20 H	61	14.79	32.51
5	4924.00	60.8 PK	74.0	-13.2	1.00 H	193	21.88	38.90
6	4924.00	44.1 AV	54.0	-9.9	1.00 H	193	5.17	38.90
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	*2462.00	98.8 PK			1.00 V	170	66.34	32.43
2	*2462.00	85.9 AV			1.00 V	170	53.48	32.43
3	2483.50	70.7 PK	74.0	-3.3	1.00 V	170	38.20	32.51
4	2483.50	49.7 AV	54.0	-4.3	1.00 V	170	17.17	32.51
5	4924.00	63.6 PK	74.0	-10.4	1.00 V	212	24.72	38.90
6	4924.00	47.7 AV	54.0	-6.3	1.00 V	212	8.84	38.90

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

802.11n (40MHz): 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	73.0 PK	74.0	-1.0	1.23 H	56	40.83	32.15
2	2390.00	53.6 AV	54.0	-0.4	1.23 H	56	21.45	32.15
3	*2422.00	99.7 PK			1.23 H	56	67.42	32.27
4	*2422.00	88.7 AV			1.23 H	56	56.43	32.27
5	4844.00	57.2 PK	74.0	-16.8	1.25 H	213	18.48	38.71
6	4844.00	43.9 AV	54.0	-10.2	1.25 H	213	5.14	38.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.6 PK	74.0	-6.4	1.26 V	331	35.45	32.15
2	2390.00	51.4 AV	54.0	-2.6	1.26 V	331	19.23	32.15
3	*2422.00	97.7 PK			1.26 V	331	65.46	32.27
4	*2422.00	86.8 AV			1.26 V	331	54.54	32.27
5	4844.00	60.9 PK	74.0	-13.1	1.15 V	202	22.19	38.71
6	4844.00	47.1 AV	54.0	-6.9	1.15 V	202	8.36	38.71

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	102.4 PK			1.22 H	47	70.04	32.33
2	*2437.00	91.3 AV			1.22 H	47	59.00	32.33
3	4874.00	63.2 PK	74.0	-10.8	1.12 H	207	24.38	38.78
4	4874.00	49.9 AV	54.0	-4.2	1.12 H	207	11.07	38.78
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	99.8 PK			1.27 V	339	67.42	32.33
2	*2437.00	87.8 AV			1.27 V	339	55.48	32.33
3	4874.00	66.4 PK	74.0	-7.6	1.26 V	204	27.58	38.78
4	4874.00	52.5 AV	54.0	-1.5	1.26 V	204	13.69	38.78

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	98.7 PK			1.43 H	86	66.29	32.39
2	*2452.00	87.7 AV			1.43 H	86	55.33	32.39
3	2483.50	72.2 PK	74.0	-1.8	1.43 H	86	39.69	32.51
4	2483.50	53.4 AV	54.0	-0.6	1.43 H	86	20.87	32.51
5	4904.00	61.2 PK	74.0	-12.8	1.24 H	201	22.38	38.86
6	4904.00	47.3 AV	54.0	-6.7	1.24 H	201	8.40	38.86
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	97.2 PK			1.25 V	333	64.77	32.39
2	*2452.00	85.9 AV			1.25 V	333	53.51	32.39
3	2483.50	62.5 PK	74.0	-11.6	1.25 V	333	29.94	32.51
4	2483.50	48.1 AV	54.0	-5.9	1.25 V	333	15.57	32.51
5	4904.00	64.7 PK	74.0	-9.3	1.00 V	207	25.86	38.86
6	4904.00	50.9 AV	54.0	-3.1	1.00 V	207	12.07	38.86

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): 2TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	73.3 PK	74.0	-0.7	1.00 H	59	41.19	32.15
2	2390.00	52.2 AV	54.0	-1.8	1.00 H	59	20.03	32.15
3	*2422.00	101.2 PK			1.00 H	59	68.94	32.27
4	*2422.00	85.7 AV			1.00 H	59	53.41	32.27
5	4844.00	60.1 PK	74.0	-13.9	1.11 H	188	21.42	38.71
6	4844.00	41.1 AV	54.0	-13.0	1.11 H	188	2.34	38.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.8 PK	74.0	-2.2	1.03 V	157	39.64	32.15
2	2390.00	51.8 AV	54.0	-2.2	1.03 V	157	19.62	32.15
3	*2422.00	99.4 PK			1.03 V	157	67.16	32.27
4	*2422.00	84.1 AV			1.03 V	157	51.82	32.27
5	4844.00	64.1 PK	74.0	-10.0	1.01 V	184	25.34	38.71
6	4844.00	44.6 AV	54.0	-9.4	1.01 V	184	5.87	38.71

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 4	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	101.6 PK			1.14 H	123	69.27	32.33
2	*2437.00	85.1 AV			1.14 H	123	52.78	32.33
3	4874.00	63.1 PK	74.0	-11.0	1.13 H	199	24.27	38.78
4	4874.00	43.9 AV	54.0	-10.1	1.13 H	199	5.12	38.78
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	100.6 PK			1.00 V	154	68.26	32.33
2	*2437.00	85.6 AV			1.00 V	154	53.27	32.33
3	4874.00	66.8 PK	74.0	-7.2	1.00 V	182	28.05	38.78
4	4874.00	47.0 AV	54.0	-7.0	1.00 V	182	8.19	38.78

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

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

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

4. Margin value = Emission level – Limit value.

5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 7	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	100.5 PK			1.24 H	274	68.12	32.39
2	*2452.00	84.0 AV			1.24 H	274	51.63	32.39
3	2483.50	73.6 PK	74.0	-0.4	1.24 H	274	41.13	32.51
4	2483.50	52.9 AV	54.0	-1.1	1.24 H	274	20.36	32.51
5	4904.00	63.9 PK	74.0	-10.1	1.00 H	188	25.01	38.86
6	4904.00	43.9 AV	54.0	-10.1	1.00 H	188	5.06	38.86
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	98.5 PK			1.04 V	158	66.11	32.39
2	*2452.00	82.8 AV			1.04 V	158	50.38	32.39
3	2483.50	70.8 PK	74.0	-3.2	1.04 V	158	38.30	32.51
4	2483.50	51.7 AV	54.0	-2.3	1.04 V	158	19.15	32.51
5	4904.00	68.0 PK	74.0	-6.0	1.00 V	215	29.10	38.86
6	4904.00	47.8 AV	54.0	-6.2	1.00 V	215	8.96	38.86

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 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	39.68	33.1 QP	40.0	-6.9	1.12 H	319	18.86	14.22
2	102.63	30.9 QP	43.5	-12.6	1.32 H	109	21.02	9.85
3	167.19	39.7 QP	43.5	-3.8	1.17 H	94	25.49	14.17
4	289.85	38.3 QP	46.0	-7.7	1.02 H	196	23.10	15.19
5	373.78	44.9 QP	46.0	-1.1	1.12 H	52	26.98	17.90
6	623.94	38.5 QP	46.0	-7.5	1.25 H	190	14.90	23.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	39.68	39.7 QP	40.0	-0.3	1.12 V	334	25.51	14.22
2	80.03	36.3 QP	40.0	-3.7	1.27 V	352	26.05	10.21
3	167.19	36.7 QP	43.5	-6.8	1.03 V	289	22.50	14.17
4	373.78	45.5 QP	46.0	-0.5	1.28 V	352	27.62	17.90
5	499.67	38.0 QP	46.0	-8.0	1.03 V	118	16.86	21.18
6	623.94	33.1 QP	46.0	-12.9	1.00 V	130	9.47	23.61

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

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	FSP 40	100036	Apr. 29, 2011	Apr. 28, 2012

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

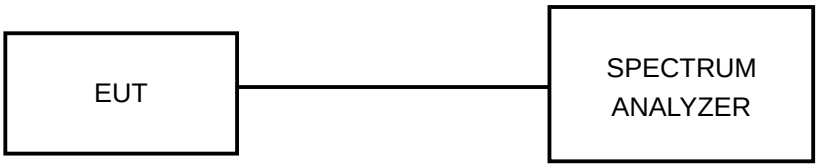
4.3.3 TEST PROCEDURE

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

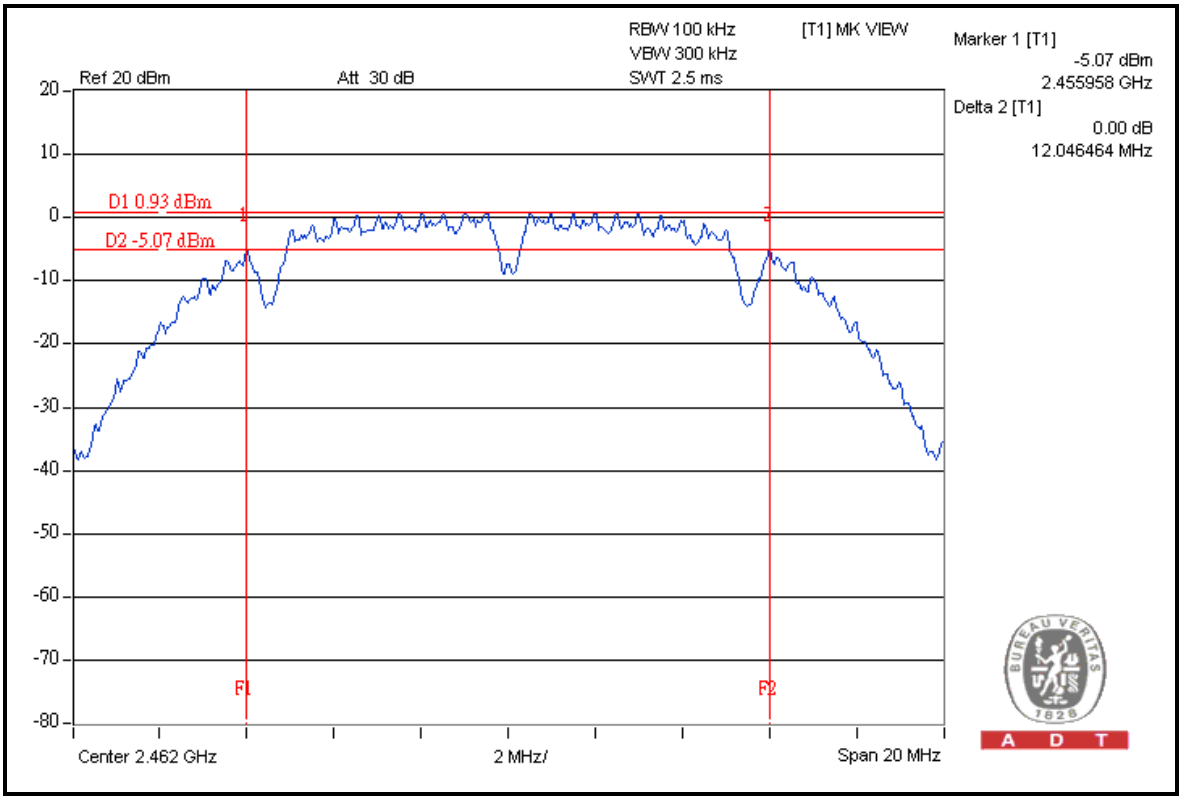
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

802.11b

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	10.19	0.5	PASS
6	2437	11.11	0.5	PASS
11	2462	12.04	0.5	PASS

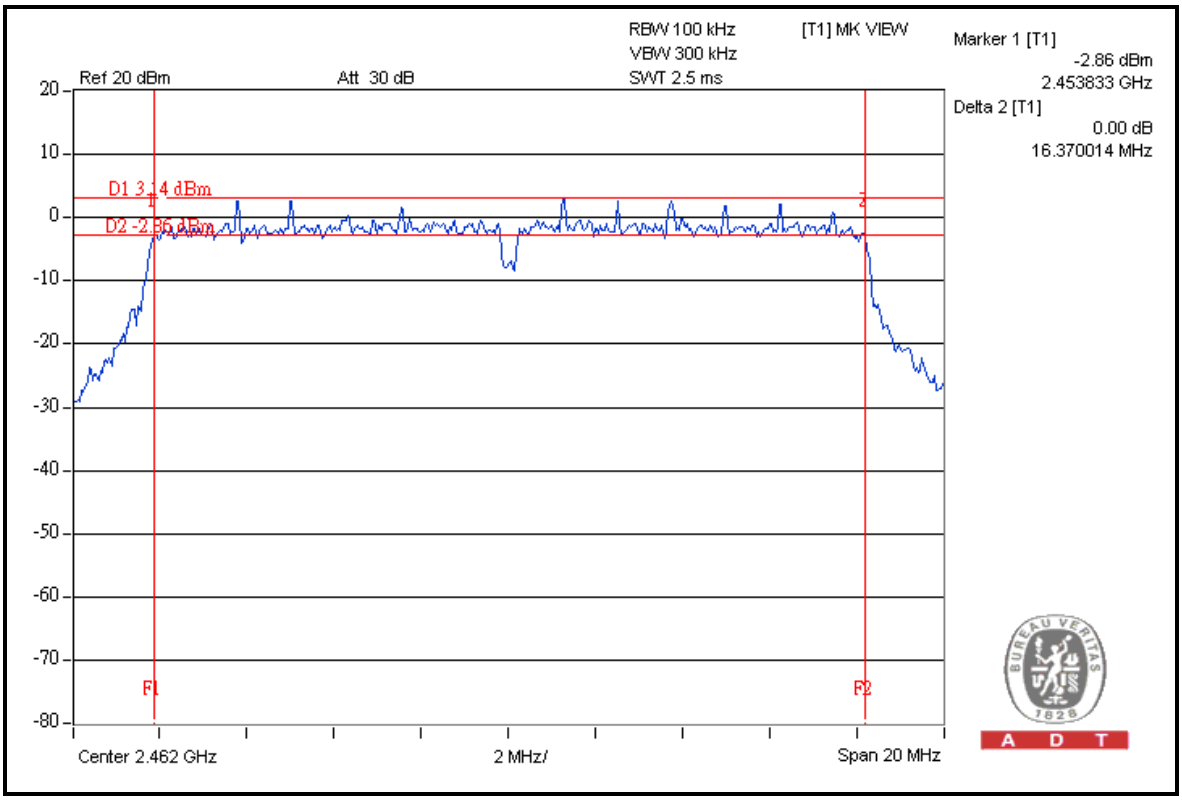
FOR CH 11



802.11g

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.33	0.5	PASS
6	2437	16.35	0.5	PASS
11	2462	16.37	0.5	PASS

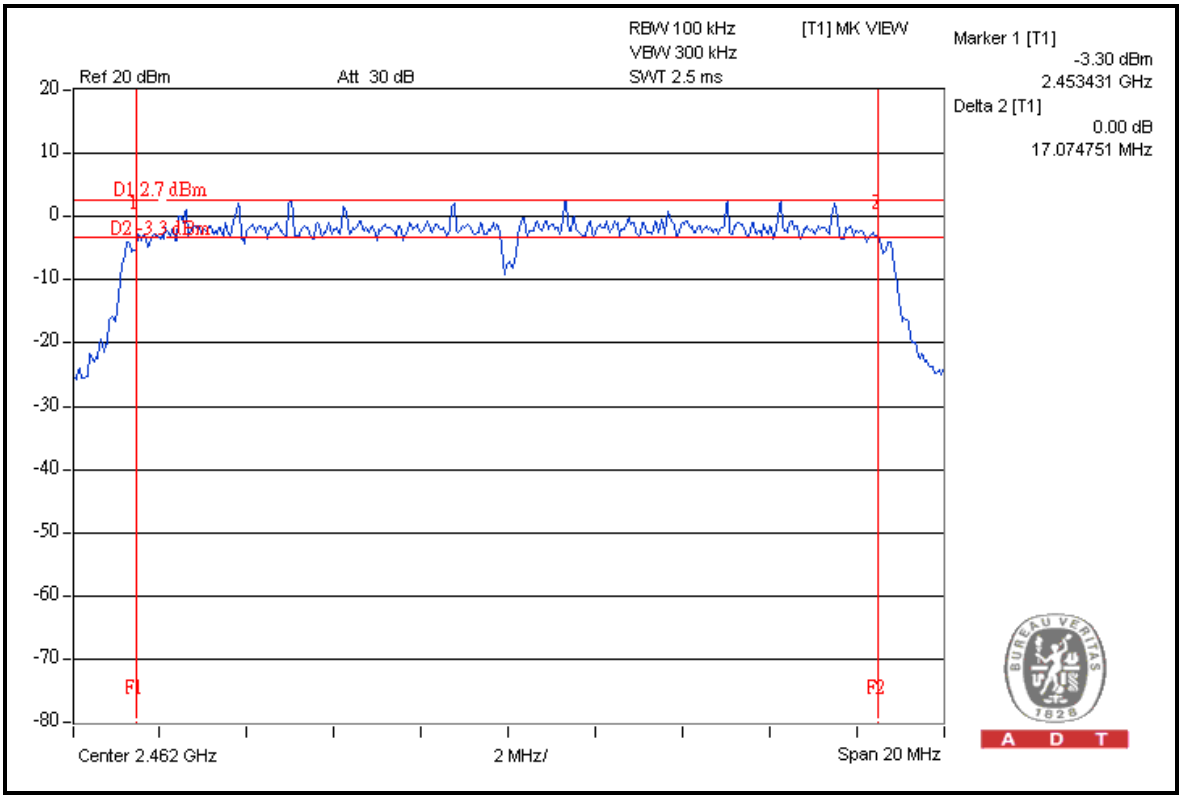
FOR CH 11



802.11n (20MHz): 1TX

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2412	16.67	0.5	PASS
6	2437	16.98	0.5	PASS
11	2462	17.07	0.5	PASS

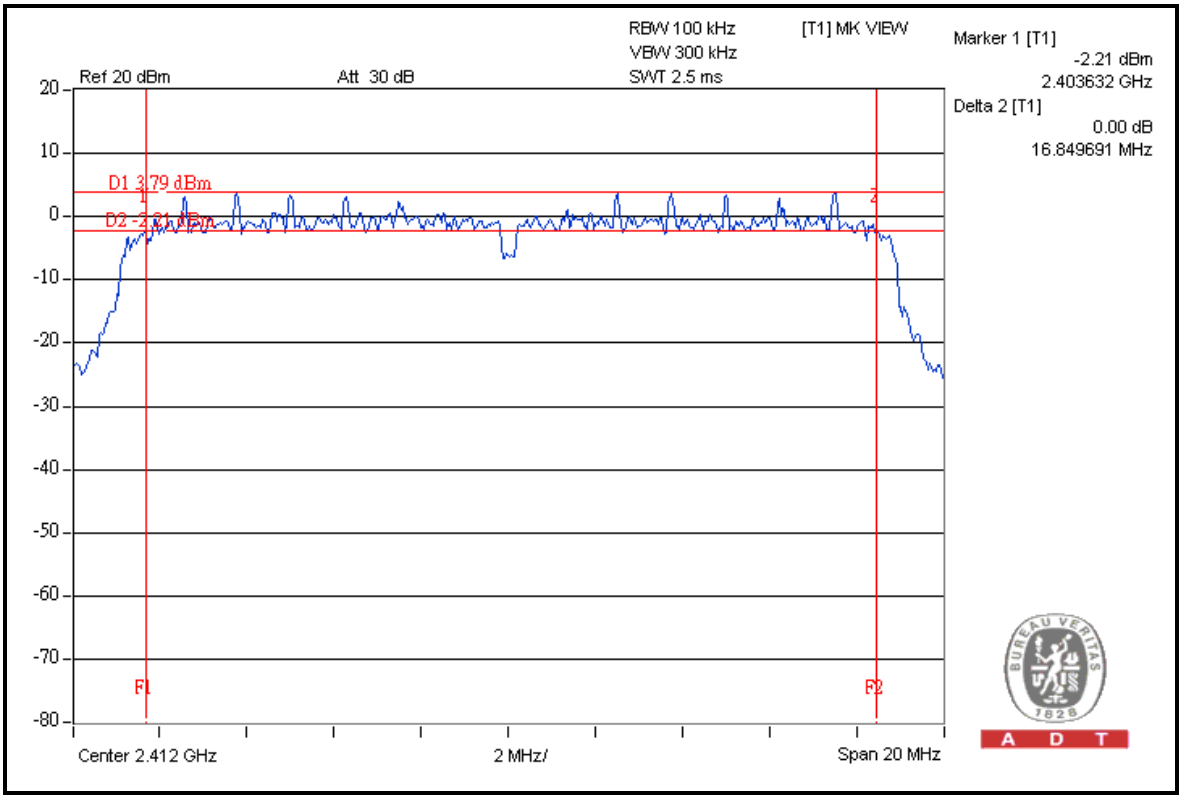
FOR CH 11



802.11n (20MHz): 2TX

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	16.84	16.36	0.5	PASS
6	2437	16.78	16.71	0.5	PASS
11	2462	16.60	16.74	0.5	PASS

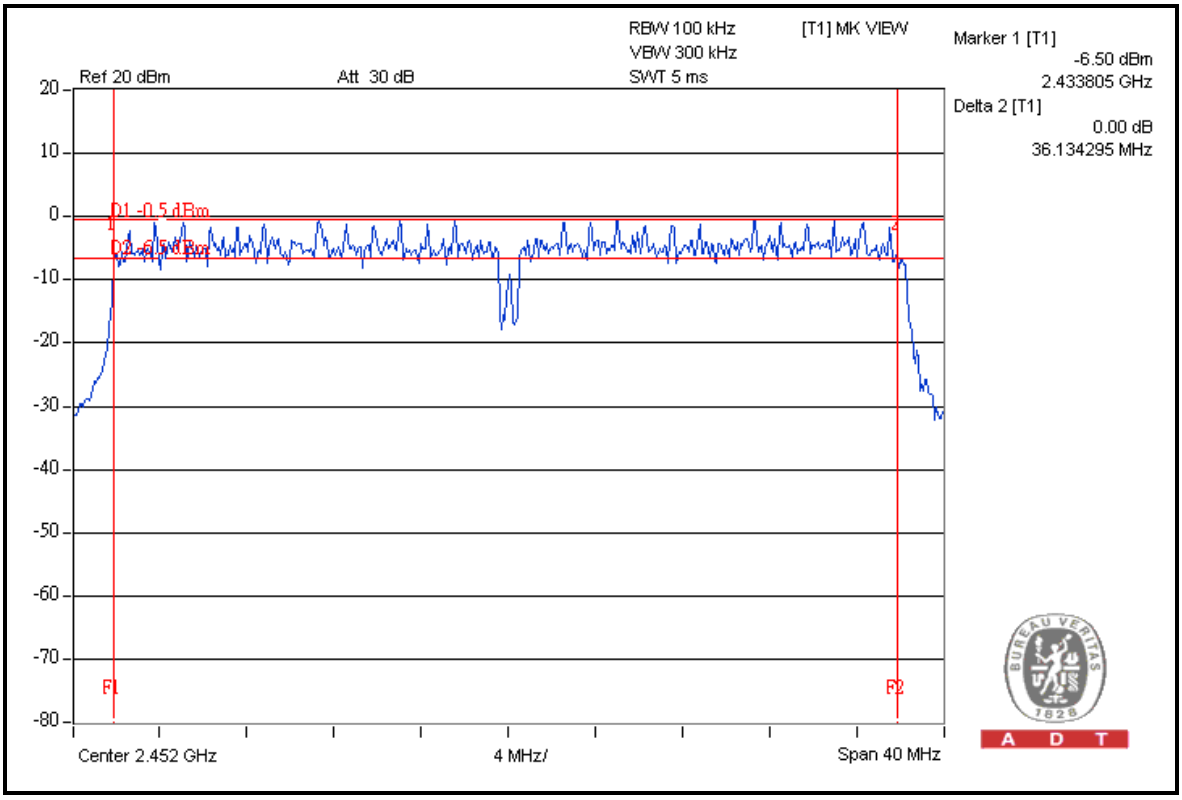
FOR CHAIN 0: CH 1



802.11n (40MHz): 1TX

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
1	2422	35.31	0.5	PASS
4	2437	35.35	0.5	PASS
7	2452	36.13	0.5	PASS

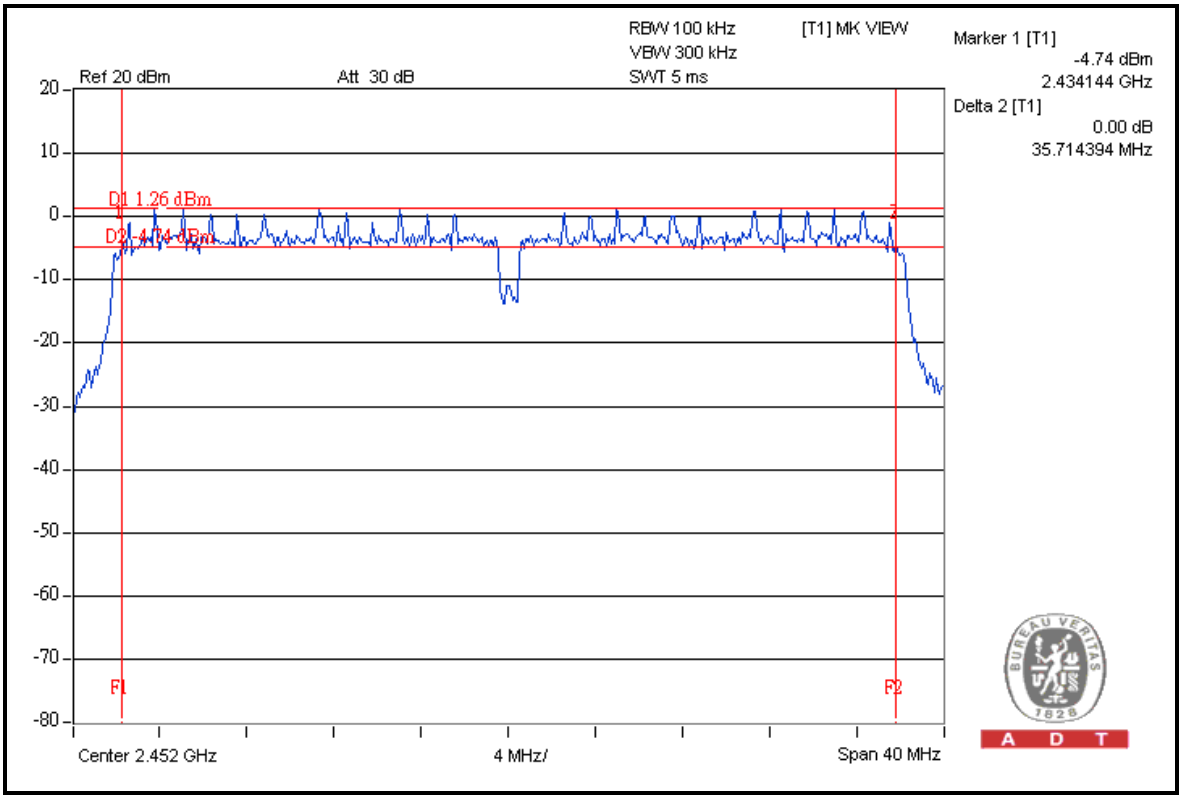
FOR CH 7



802.11n (40MHz): 2TX

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2422	35.26	35.47	0.5	PASS
4	2437	35.31	35.30	0.5	PASS
7	2452	35.71	35.26	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
Anritsu Power Sensor	MA2411B	0738404	Apr. 26, 2011	Apr. 25, 2012
Anritsu Power Meter	ML2495A	0842014	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.

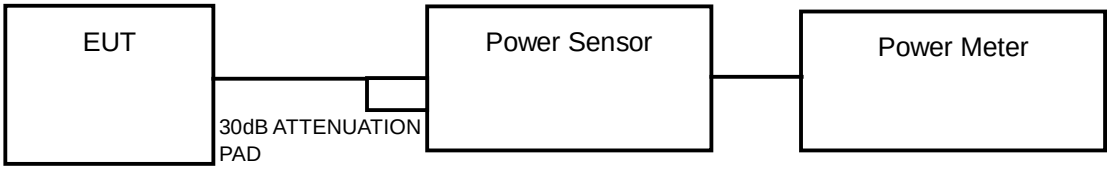
4.4.3 TEST PROCEDURES

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)	PEAK POWER OUTPUT (dBm)	PEAK POWER OUTPUT (mW)	POWER LIMIT (dBm)	PASS / FAIL
1	2412	16.9	49.0	30	PASS
6	2437	16.9	49.0	30	PASS
11	2462	16.7	46.8	30	PASS

802.11g

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER OUTPUT (mW)	POWER LIMIT (dBm)	PASS / FAIL
1	2412	24.5	281.8	30	PASS
6	2437	24.7	295.1	30	PASS
11	2462	23.6	229.1	30	PASS

802.11n (20MHz): 1TX

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER OUTPUT (mW)	POWER LIMIT (dBm)	PASS / FAIL
1	2412	24.4	275.4	30	PASS
6	2437	24.5	281.8	30	PASS
11	2462	22.7	186.2	30	PASS

802.11n (20MHz): 2TX

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2412	22.9	23.2	**403.9**	26.1	30	PASS
6	2437	22.9	22.9	390.0	25.9	30	PASS
11	2462	22.9	22.7	381.2	25.8	30	PASS

802.11n (40MHz): 1TX

CHAN.	CHAN. FREQ. (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER OUTPUT (mW)	POWER LIMIT (dBm)	PASS / FAIL
1	2422	25.0	316.2	30	PASS
4	2437	26.0	398.1	30	PASS
7	2452	25.5	354.8	30	PASS

802.11n (40MHz): 2TX

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
1	2422	22.2	22.4	339.7	25.3	30	PASS
4	2437	22.7	22.6	368.2	25.7	30	PASS
7	2452	22.5	22.4	351.6	25.5	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
SPECTRUM ANALYZER	FSP 40	100036	Apr. 29, 2011	Apr. 28, 2012

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

4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

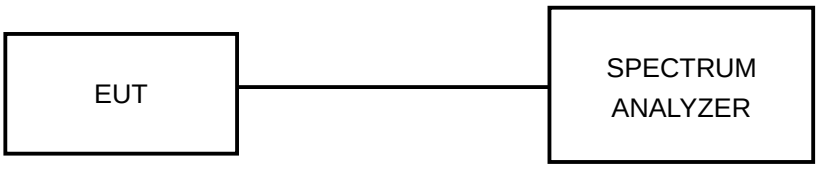
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

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

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITION

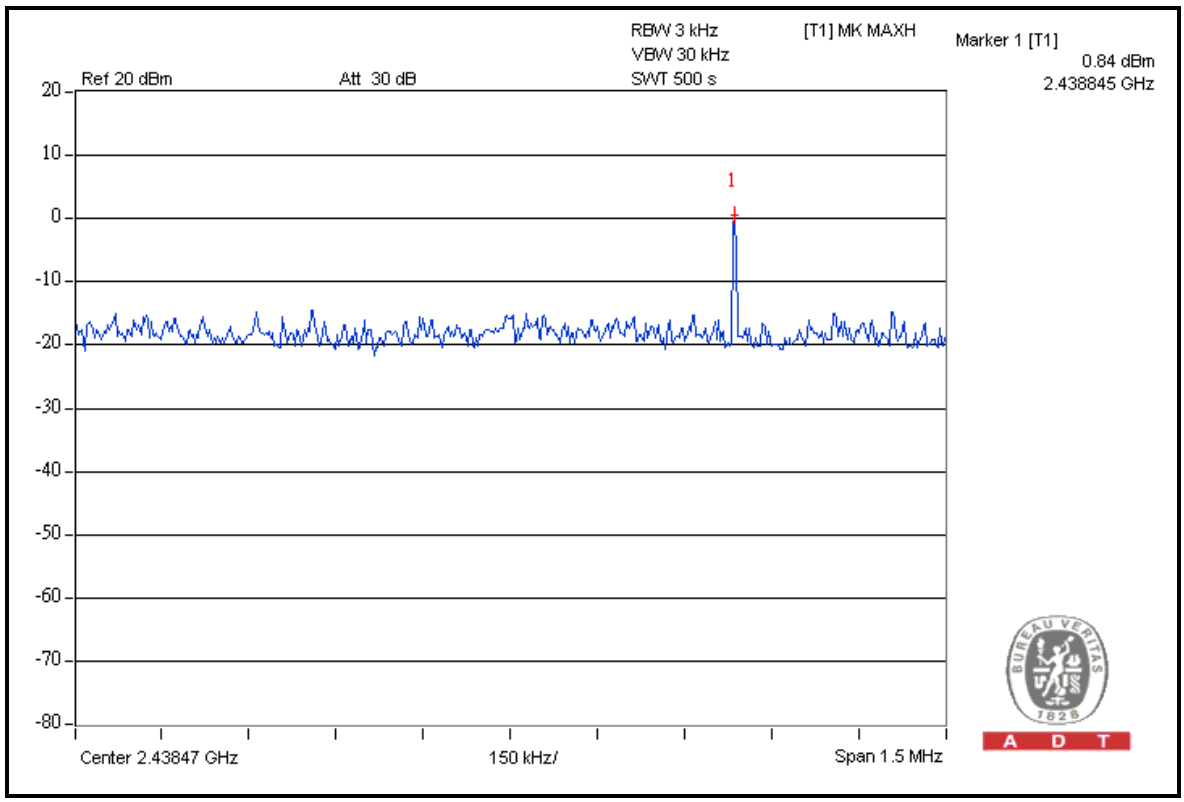
Same as Item 4.3.6

4.5.7 TEST RESULTS

802.11b

CHANNEL	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
1	2412	0.7	8	PASS
6	2437	0.8	8	PASS
11	2462	-1.0	8	PASS

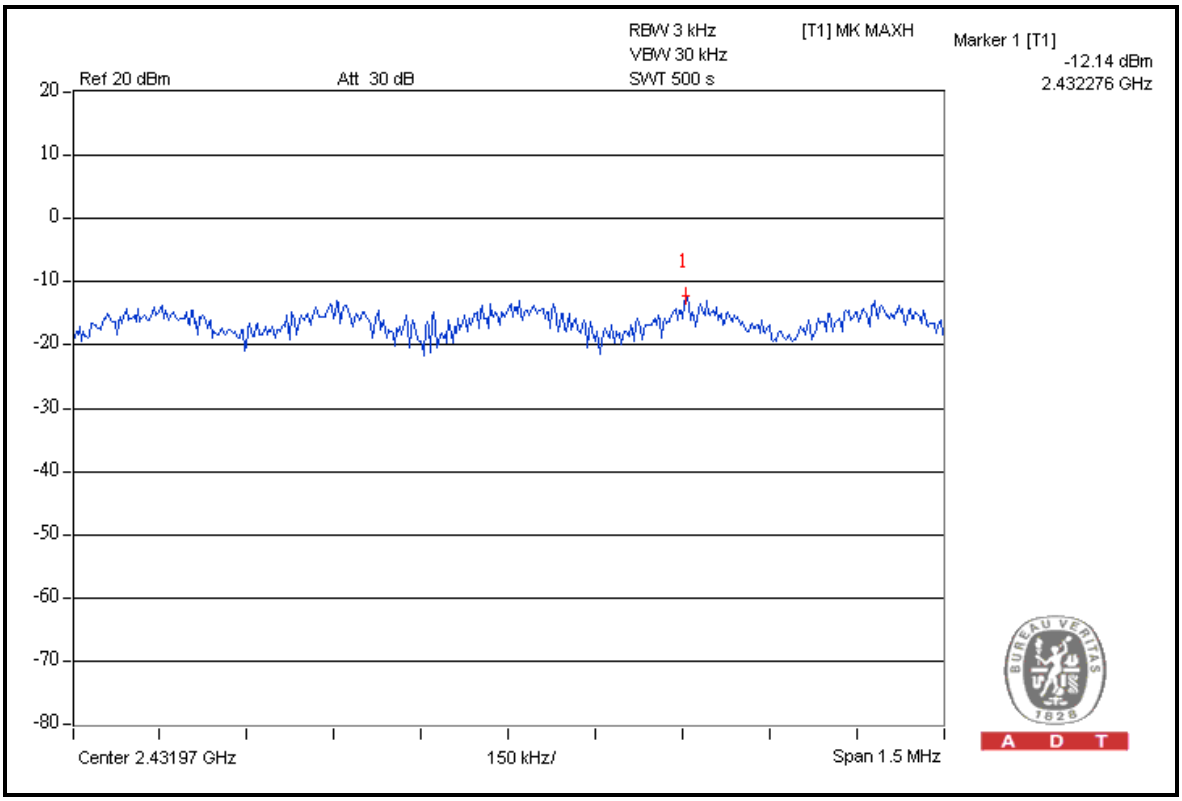
FOR CH 6



802.11g

CHANNEL	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
1	2412	-12.8	8	PASS
6	2437	-12.1	8	PASS
11	2462	-14.6	8	PASS

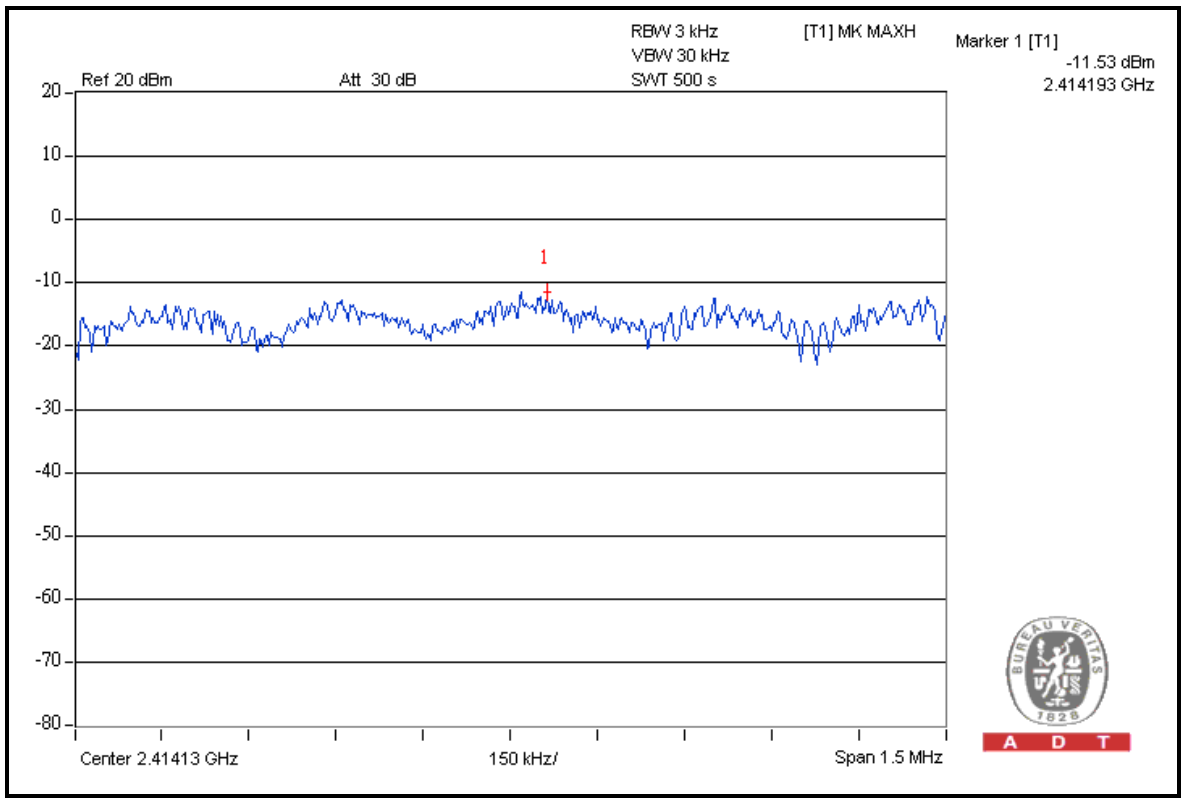
FOR CH 6



802.11n (20MHz): 1TX

CHANNEL	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
1	2412	-11.5	8	PASS
6	2437	-12.2	8	PASS
11	2462	-13.2	8	PASS

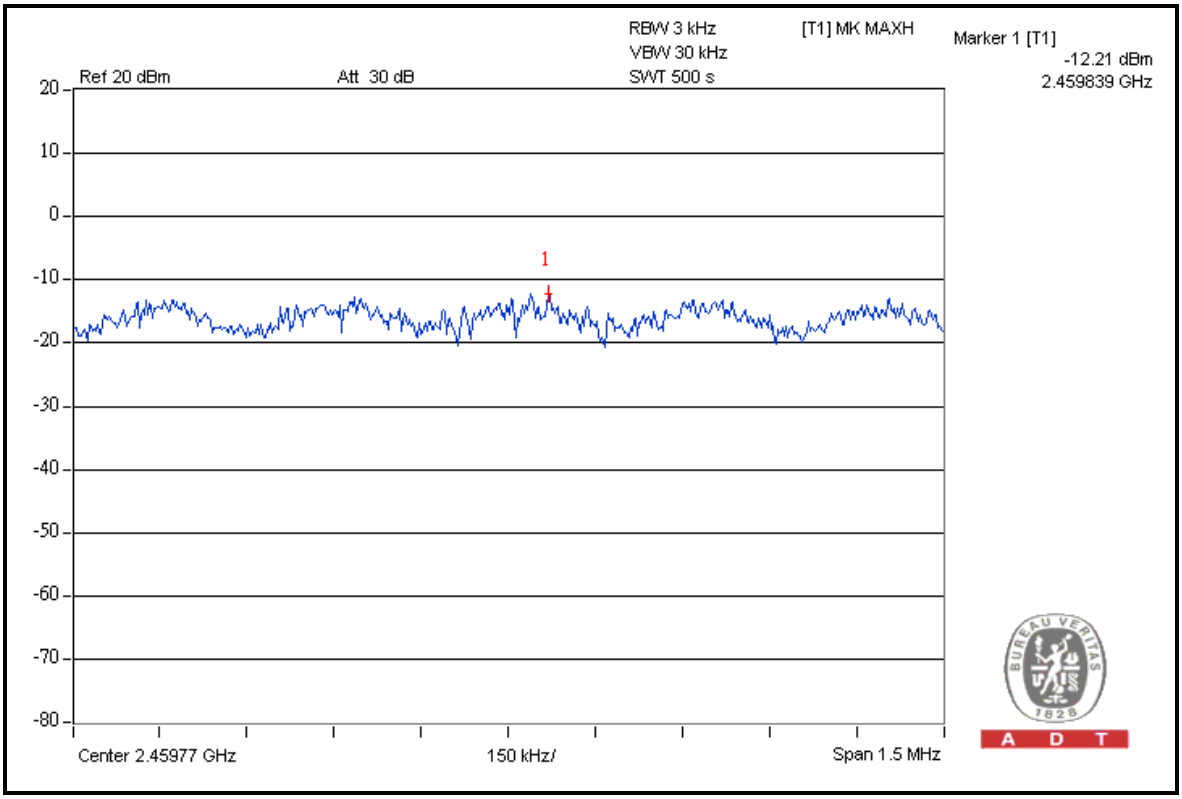
FOR CH 1



802.11n (20MHz): 2TX

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=2) dB			
0	1	2412	-12.8	3.01	-9.8	8	PASS
	6	2437	-12.4	3.01	-9.4	8	PASS
	11	2462	-12.2	3.01	-9.2	8	PASS
1	1	2412	-12.6	3.01	-9.6	8	PASS
	6	2437	-12.8	3.01	-9.8	8	PASS
	11	2462	-12.5	3.01	-9.5	8	PASS

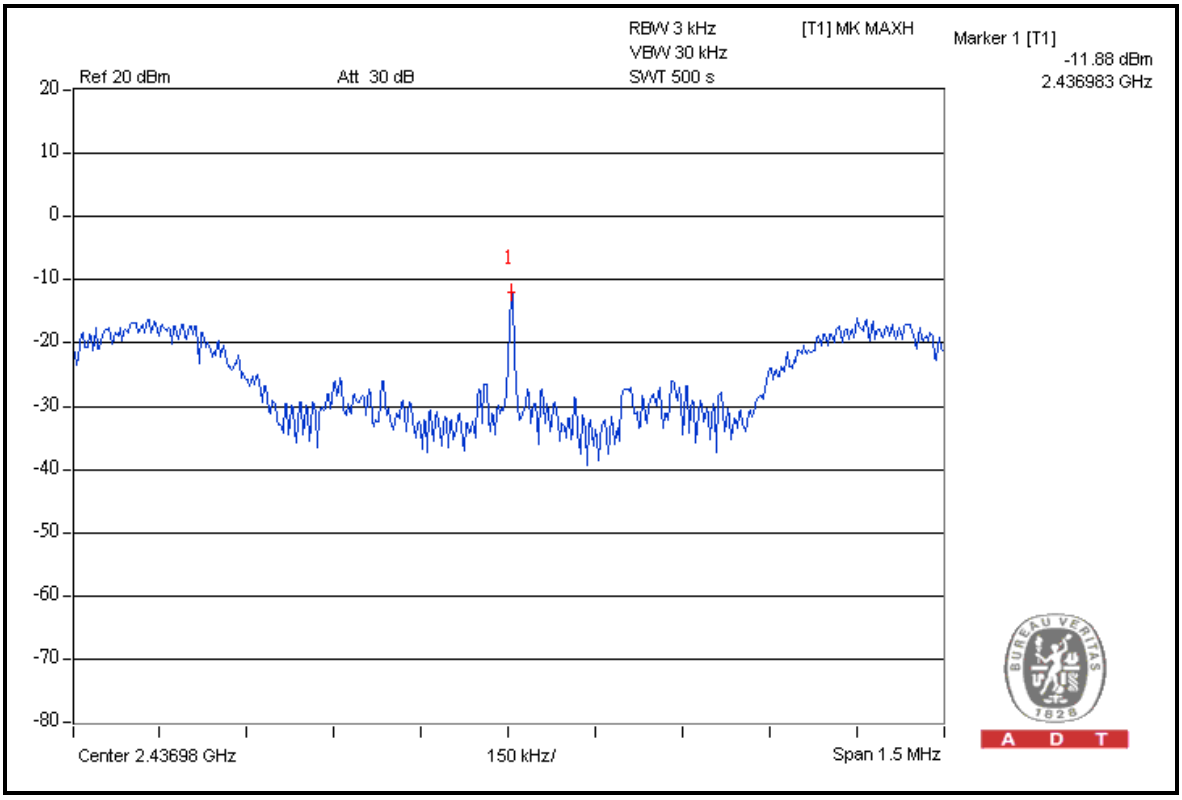
FOR CHAIN 0: CH 11



802.11n (40MHz): 1TX

CHANNEL	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
1	2422	-15.6	8	PASS
4	2437	-11.9	8	PASS
7	2452	-19.0	8	PASS

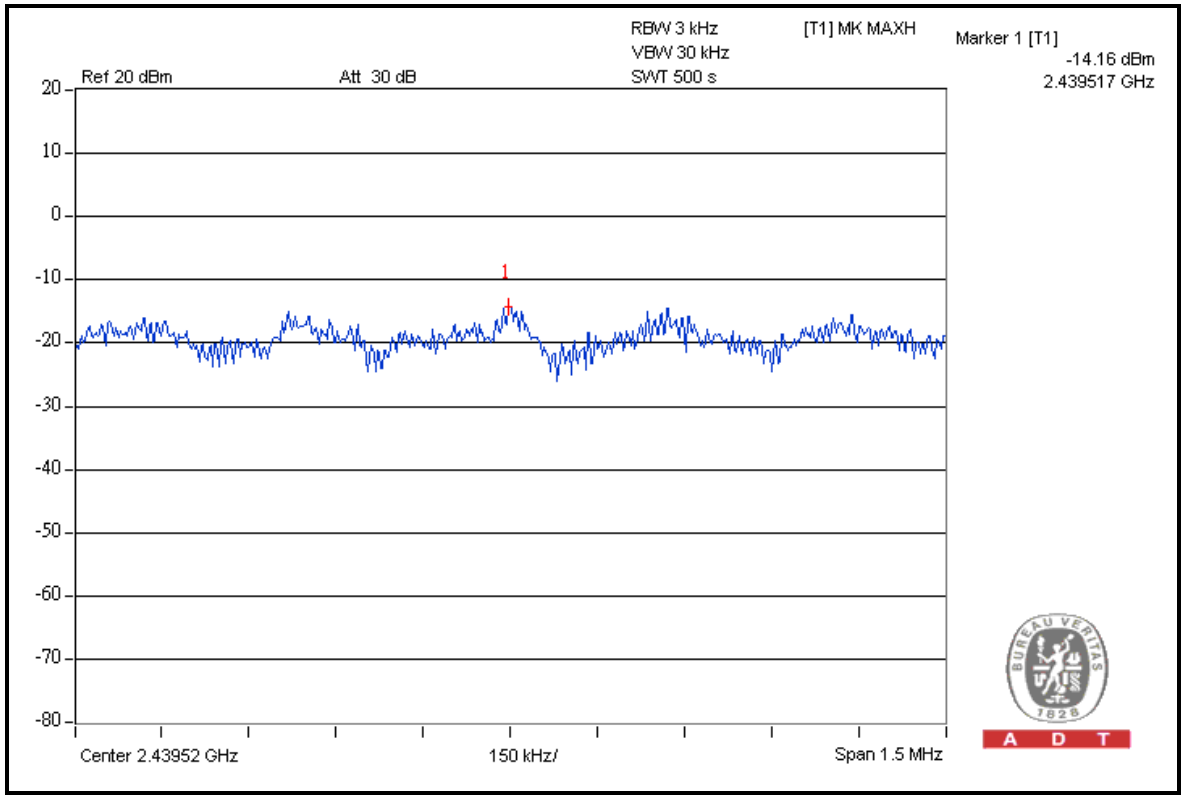
FOR CH 4



802.11n (40MHz): 2TX

CHAIN	CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
			MEASURED	10 log (N=2) dB			
0	1	2422	-16.0	3.01	-13.0	8	PASS
	4	2437	-14.2	3.01	-11.2	8	PASS
	7	2452	-15.0	3.01	-12.0	8	PASS
1	1	2422	-15.0	3.01	-12.0	8	PASS
	4	2437	-14.6	3.01	-11.6	8	PASS
	7	2452	-14.7	3.01	-11.7	8	PASS

FOR CHAIN 0: CH 4



4.6 BAND EDGES MEASUREMENT

4.6.1 LIMITS OF BAND EDGES MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	CALIBRATED UNTIL
FOR CONDUCTED MEASUREMENT:				
SPECTRUM ANALYZER	FSP 40	100036	Apr. 29, 2011	Apr. 28, 2012
FOR RADIATED MEASUREMENT:				
HP Preamplifier	8447D	2432A03504	Mar. 04, 2011	Mar. 03, 2012
HP Preamplifier	8449B	3008A01924	Mar. 04, 2011	Mar. 03, 2012
HP Preamplifier	8449B	3008A01292	Mar. 04, 2011	Mar. 03, 2012
Agilent Spectrum Analyzer	E4446A	MY46180403	Jun. 22, 2011	Jun. 21, 2012
Schwarzbeck Antenna	VULB 9168	137	Apr. 12, 2011	Apr. 11, 2012
Schwarzbeck Antenna	VHBA 9123	480	May 06, 2011	May 05, 2012
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
SUHNER RF cable	SF102	CABLE-CH6	Aug. 19, 2011	Aug. 18, 2012
EMCO Horn Antenna	3115	6714	Oct. 26, 2010	Oct. 25, 2011
EMCO Horn Antenna	3115	9312-4192	Apr. 22, 2011	Apr. 21, 2012
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	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

FOR CONDUCTED MEASUREMENT:

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

FOR RADIATED MEASUREMENT:

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

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

e. Set both RBW and VBW of spectrum analyzer to 1MHz and 3MHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.

4.6.4 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).

The spectrum plots (Peak RBW =100kHz, VBW = 300kHz; Average RBW = 1MHz, VBW = 10Hz) are attached on the following pages.

802.11b

RESTRICT BAND (2310 ~ 2390 MHz)

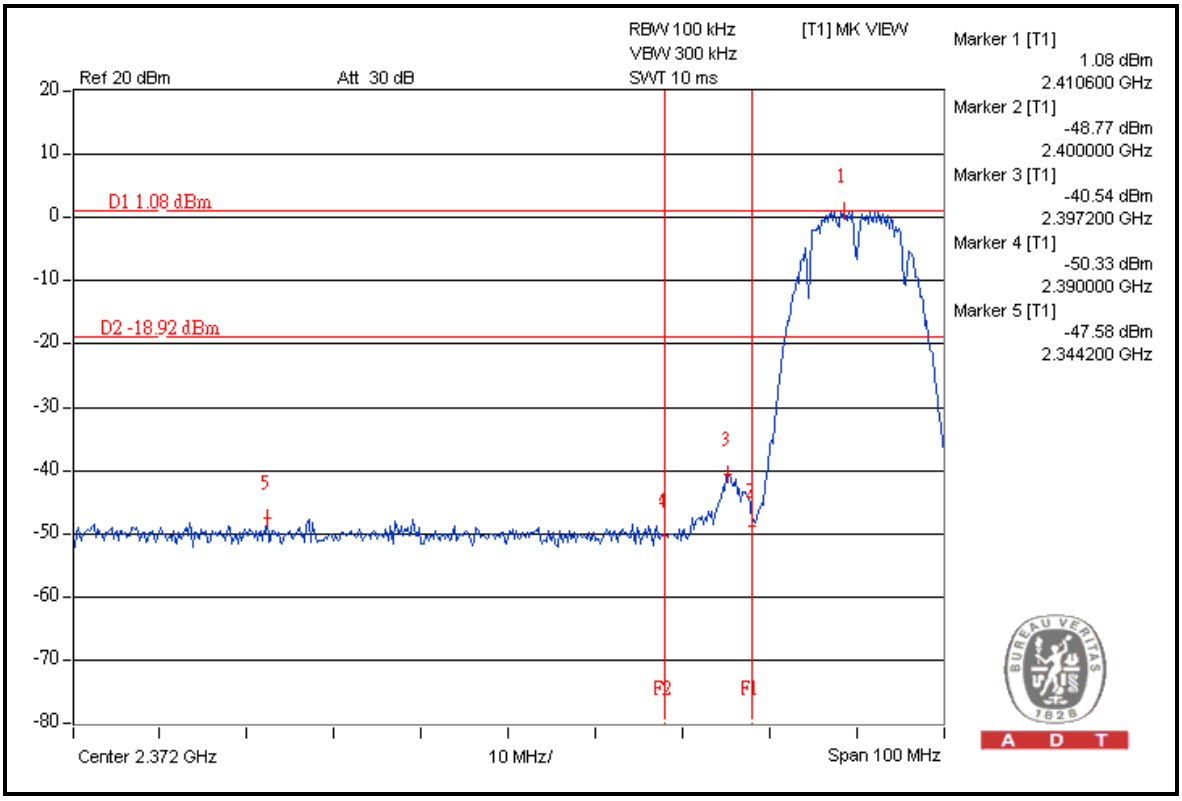
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	102.6	48.7	53.9	74.0
2412.00 (AV)	98.8	57.9	40.9	54.0

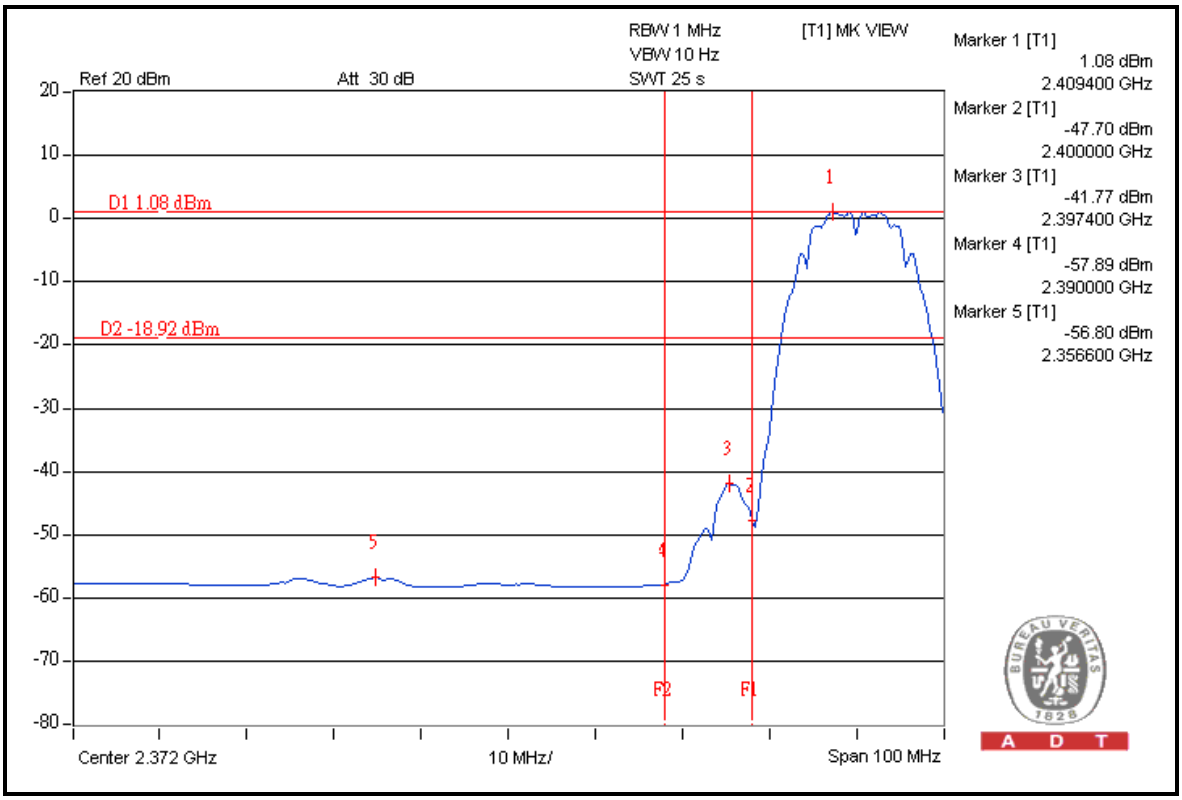
RESTRICT BAND (2483.5 ~ 2500 MHz)

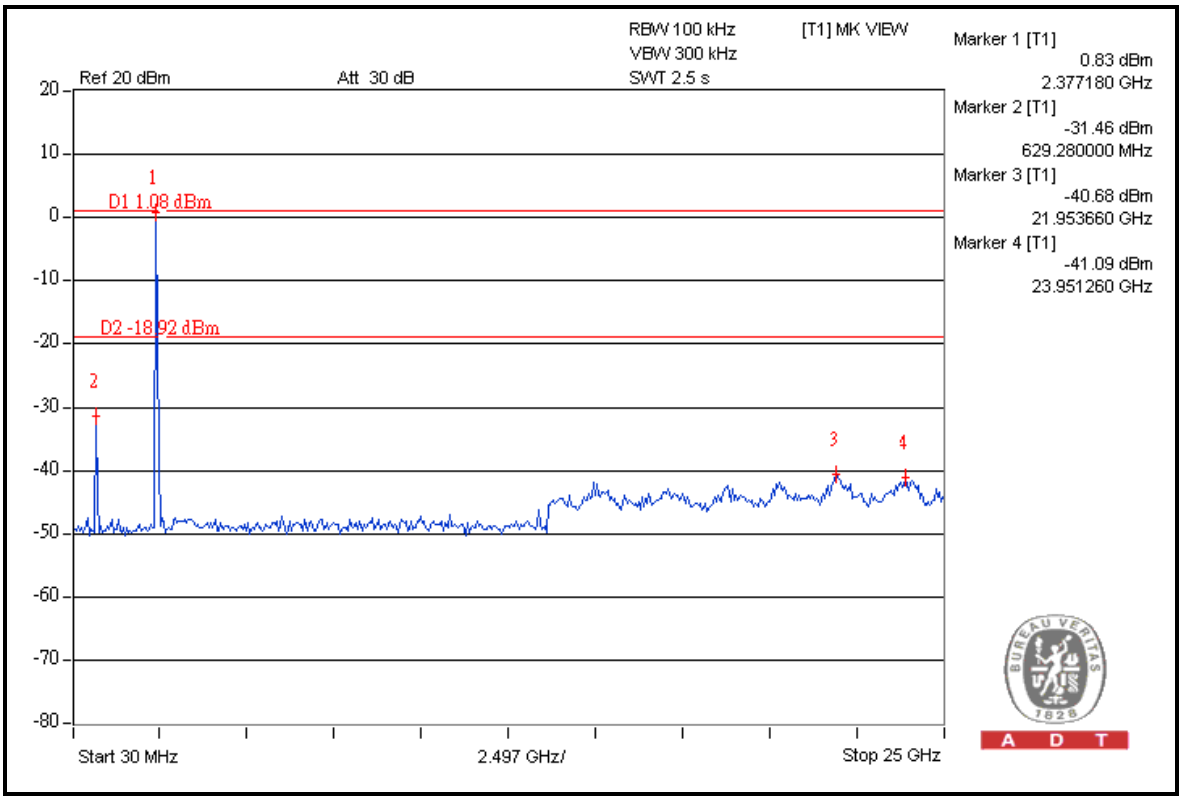
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	100.8	49.4	51.4	74.0
2462.00 (AV)	97.1	58.5	38.6	54.0

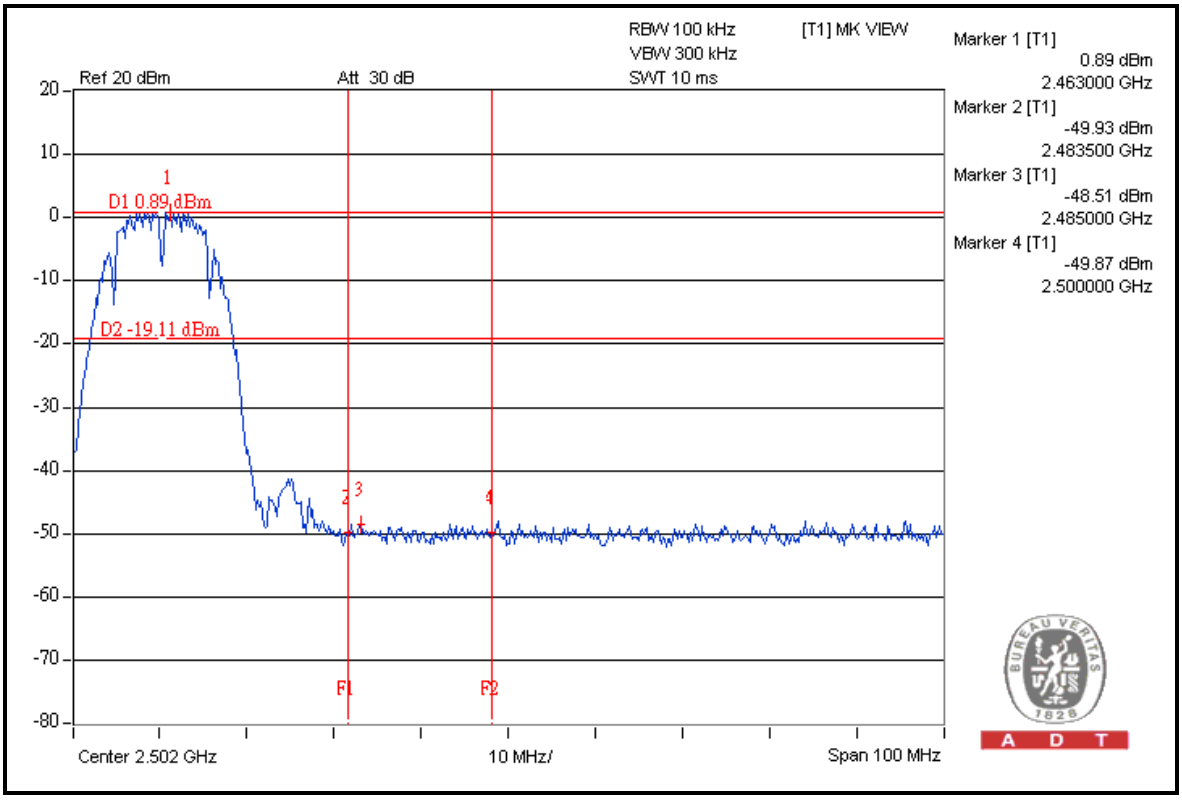
NOTE:

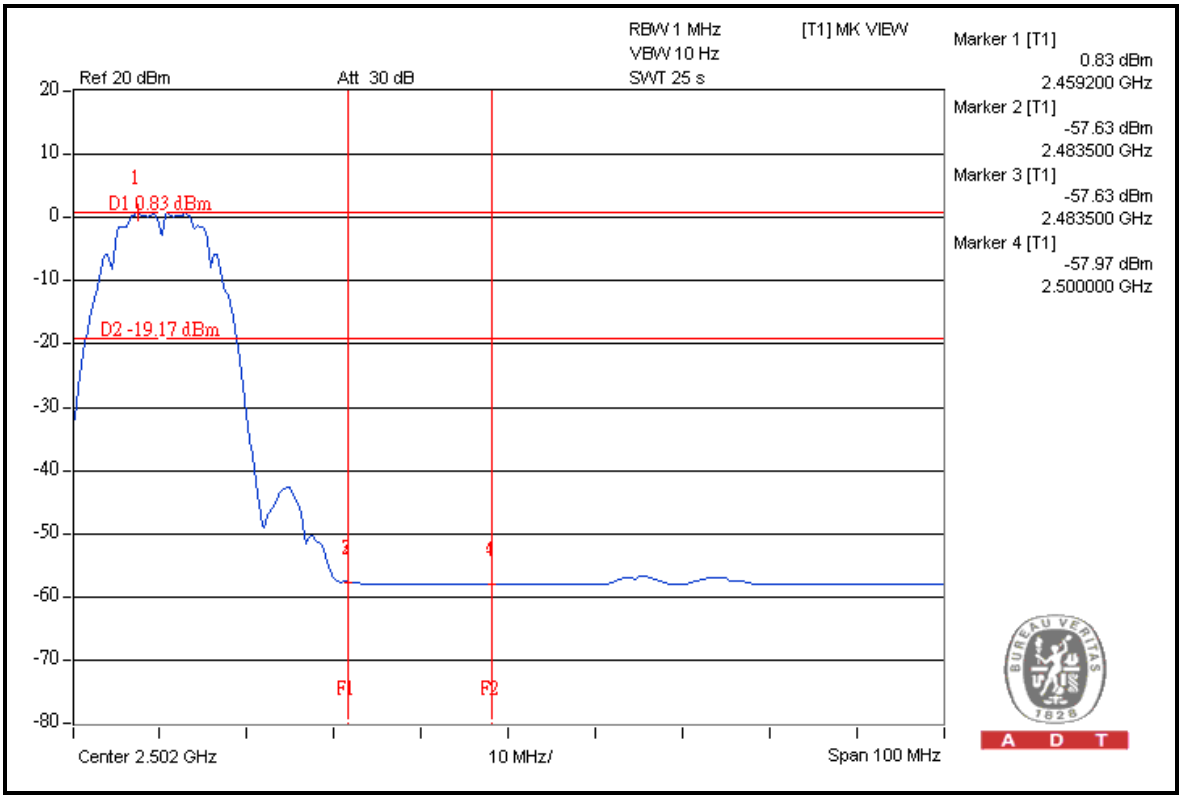
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

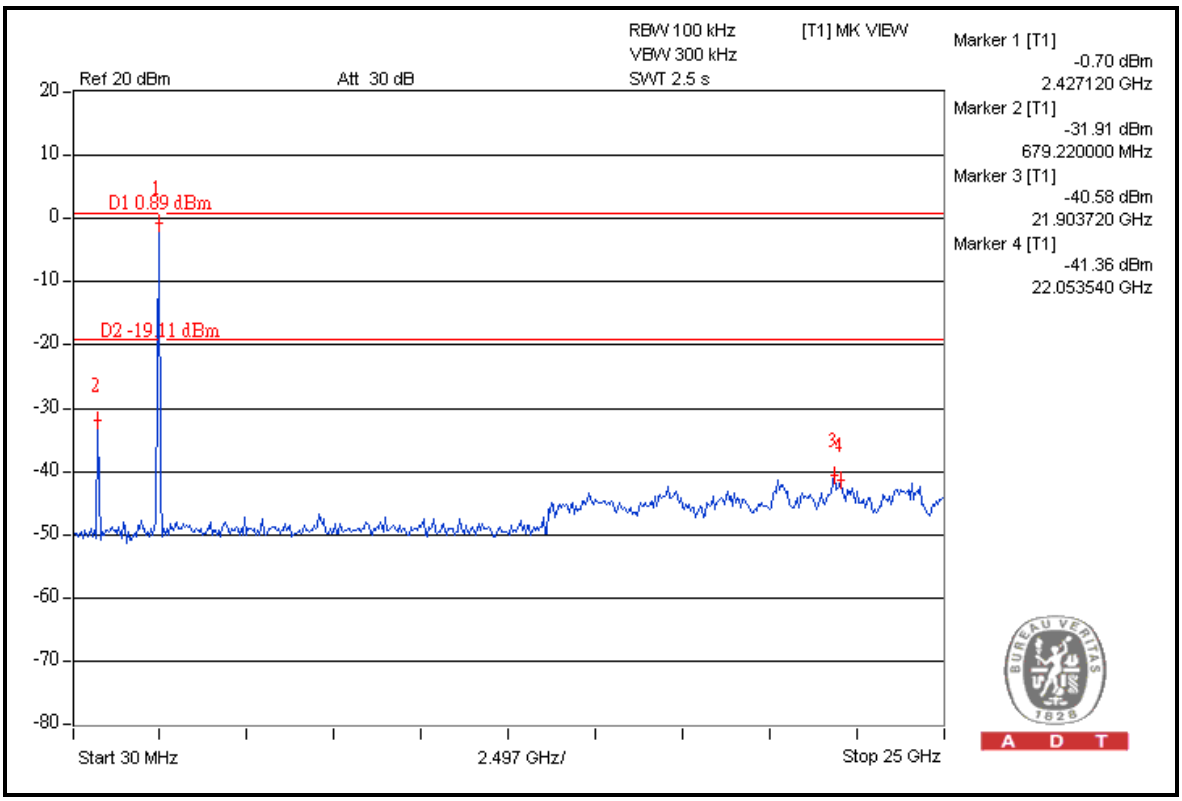

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.08 dBm
D2 -18.92 dBm
Marker 1 [T1]
1.08 dBm
2.410600 GHz
Marker 2 [T1]
-48.77 dBm
2.400000 GHz
Marker 3 [T1]
-40.54 dBm
2.397200 GHz
Marker 4 [T1]
-50.33 dBm
2.390000 GHz
Marker 5 [T1]
-47.58 dBm
2.344200 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.08 dBm
D2 -18.92 dBm
Marker 1 [T1]
1.08 dBm
2.409400 GHz
Marker 2 [T1]
-47.70 dBm
2.400000 GHz
Marker 3 [T1]
-41.77 dBm
2.397400 GHz
Marker 4 [T1]
-57.89 dBm
2.390000 GHz
Marker 5 [T1]
-56.80 dBm
2.356600 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.08 dBm
D2 -18.92 dBm
Marker 1 [T1]
0.83 dBm
2.377180 GHz
Marker 2 [T1]
-31.46 dBm
629.280000 MHz
Marker 3 [T1]
-40.68 dBm
21.953660 GHz
Marker 4 [T1]
-41.09 dBm
23.951260 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.89 dBm
D2 -19.11 dBm
Marker 1 [T1]
0.89 dBm
2.463000 GHz
Marker 2 [T1]
-49.93 dBm
2.483500 GHz
Marker 3 [T1]
-48.51 dBm
2.485000 GHz
Marker 4 [T1]
-49.87 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.83 dBm
2.459200 GHz
Marker 2 [T1]
-57.63 dBm
2.483500 GHz
Marker 3 [T1]
-57.63 dBm
2.483500 GHz
Marker 4 [T1]
-57.97 dBm
2.500000 GHz
D1 0.83 dBm
D2 -19.17 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-0.70 dBm
2.427120 GHz
Marker 2 [T1]
-31.91 dBm
679.220000 MHz
Marker 3 [T1]
-40.58 dBm
21.903720 GHz
Marker 4 [T1]
-41.36 dBm
22.053540 GHz
D1 0.89 dBm
D2 -19.11 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11g

RESTRICT BAND (2310 ~ 2390 MHz)

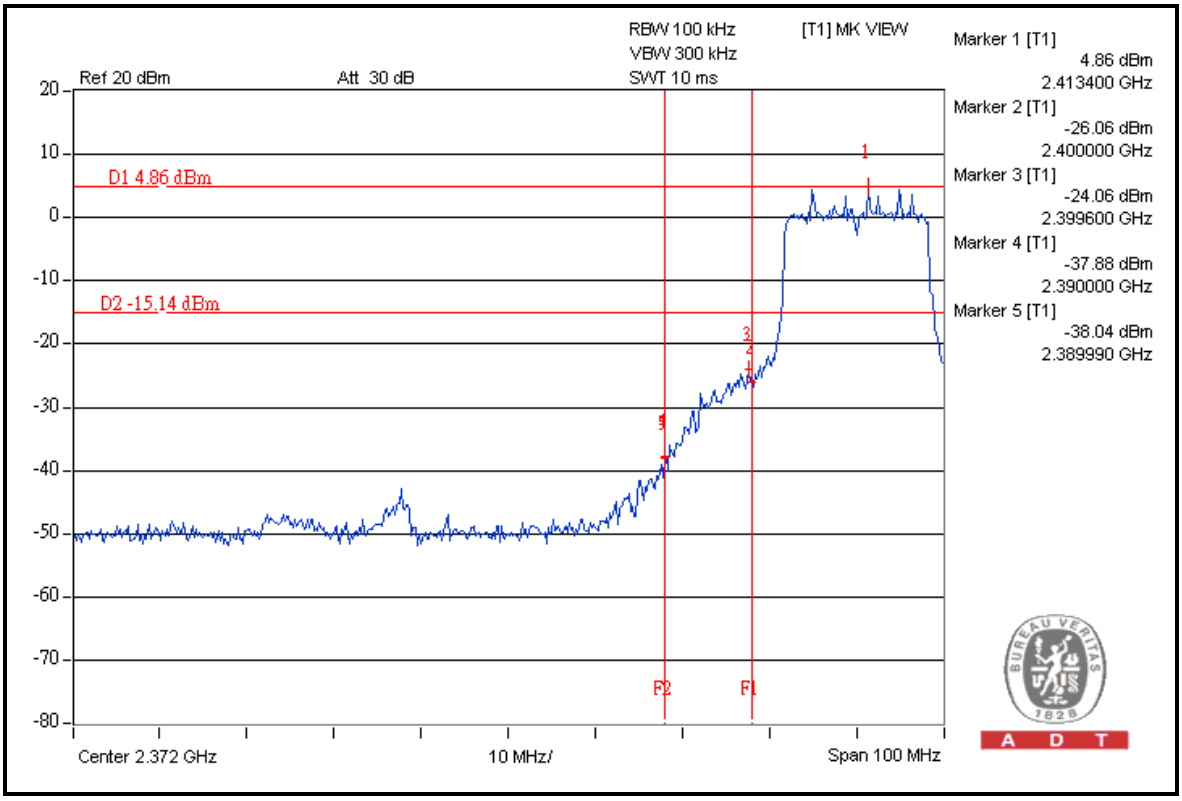
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	105.8	42.7	63.1	74.0
2412.00 (AV)	94.8	44.1	50.7	54.0

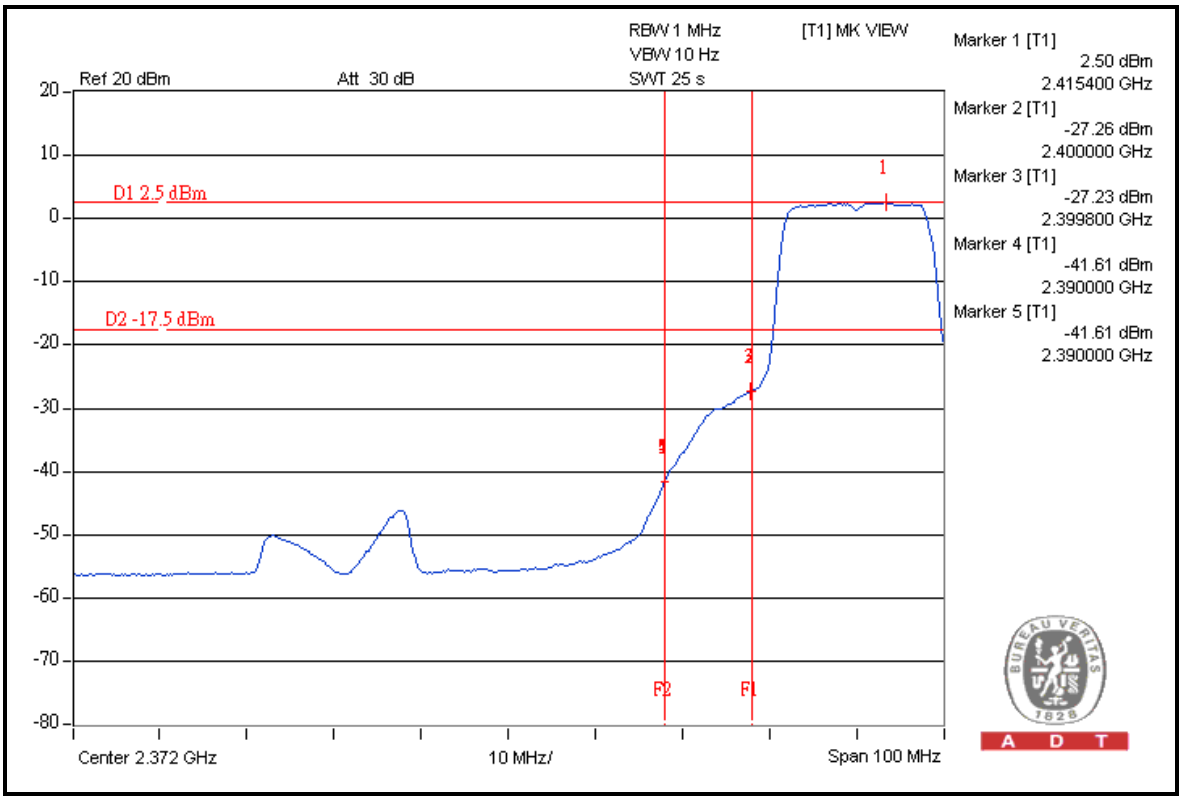
RESTRICT BAND (2483.5 ~ 2500 MHz)

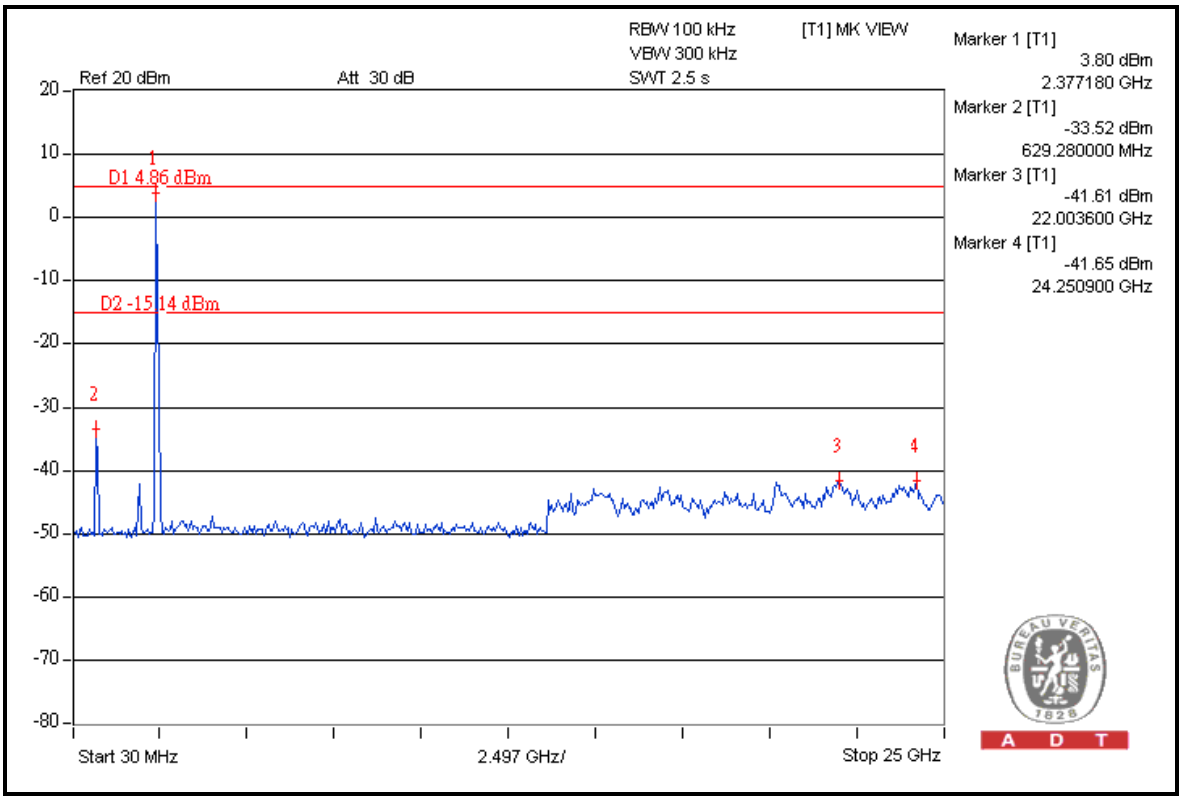
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	103.7	41.1	62.6	74.0
2462.00 (AV)	94.1	45.5	48.6	54.0

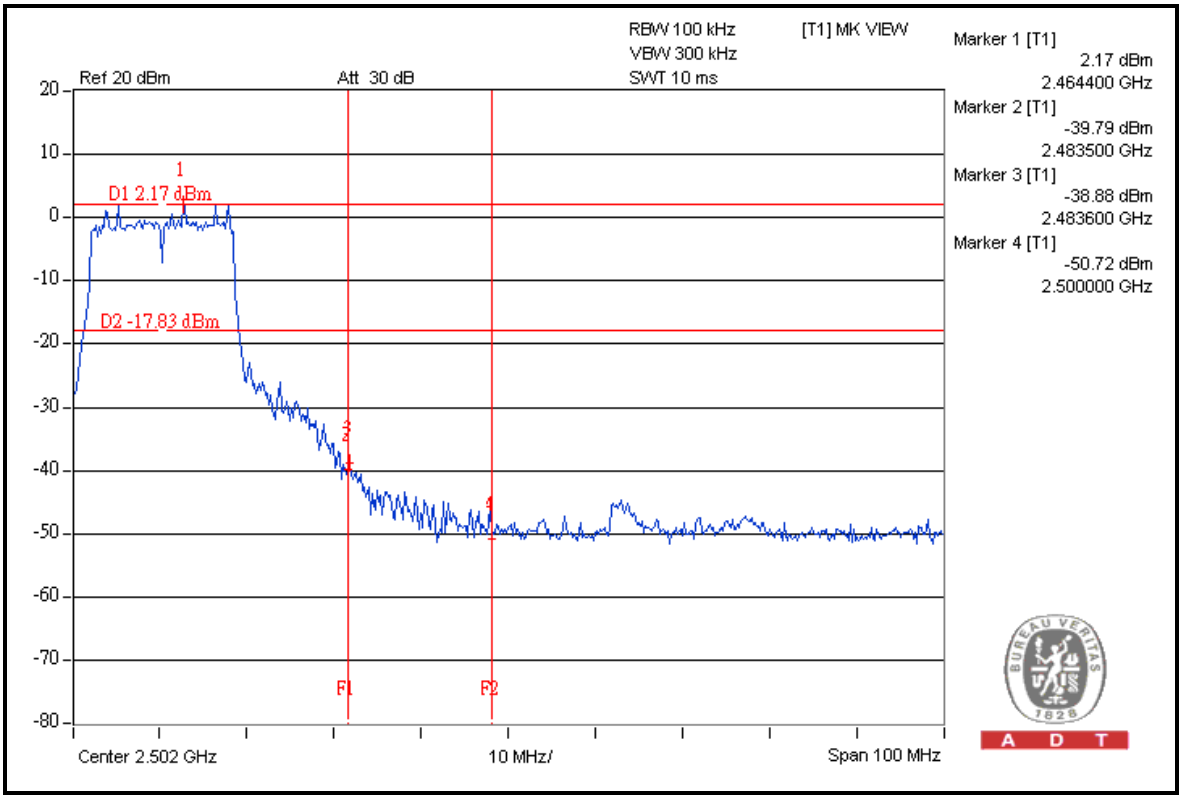
NOTE:

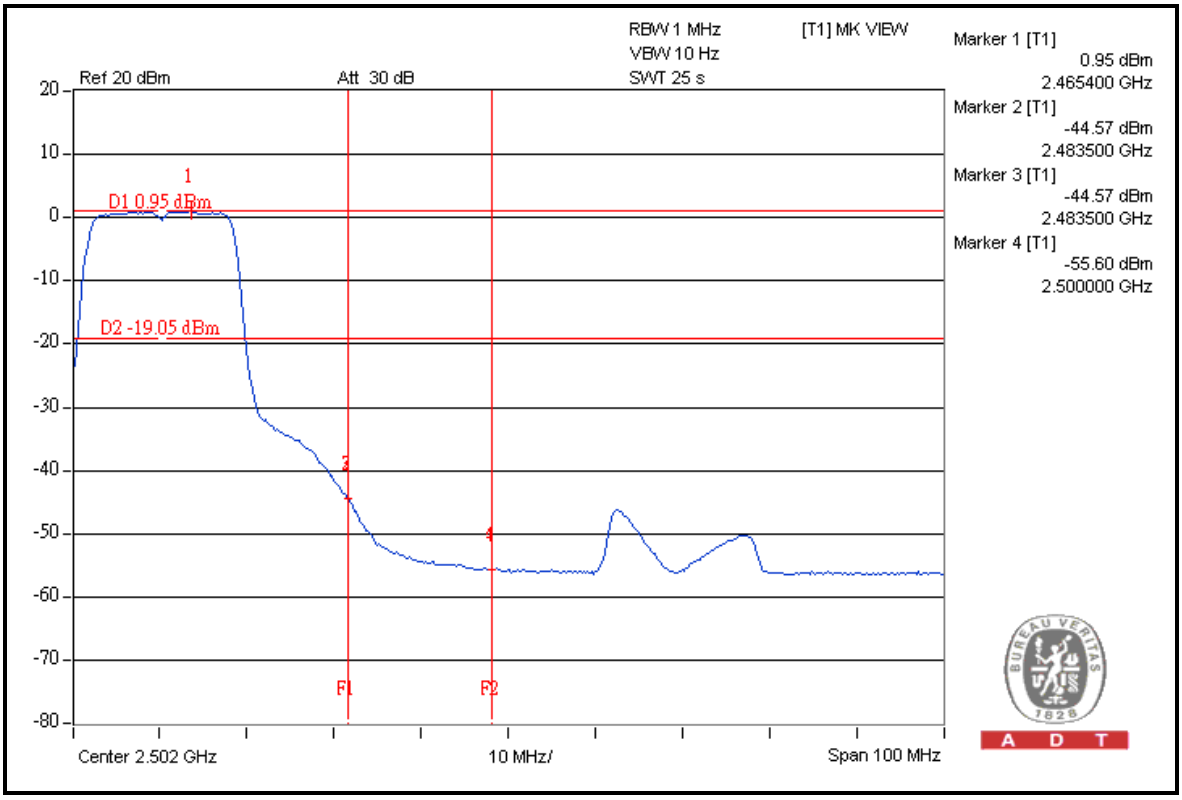
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

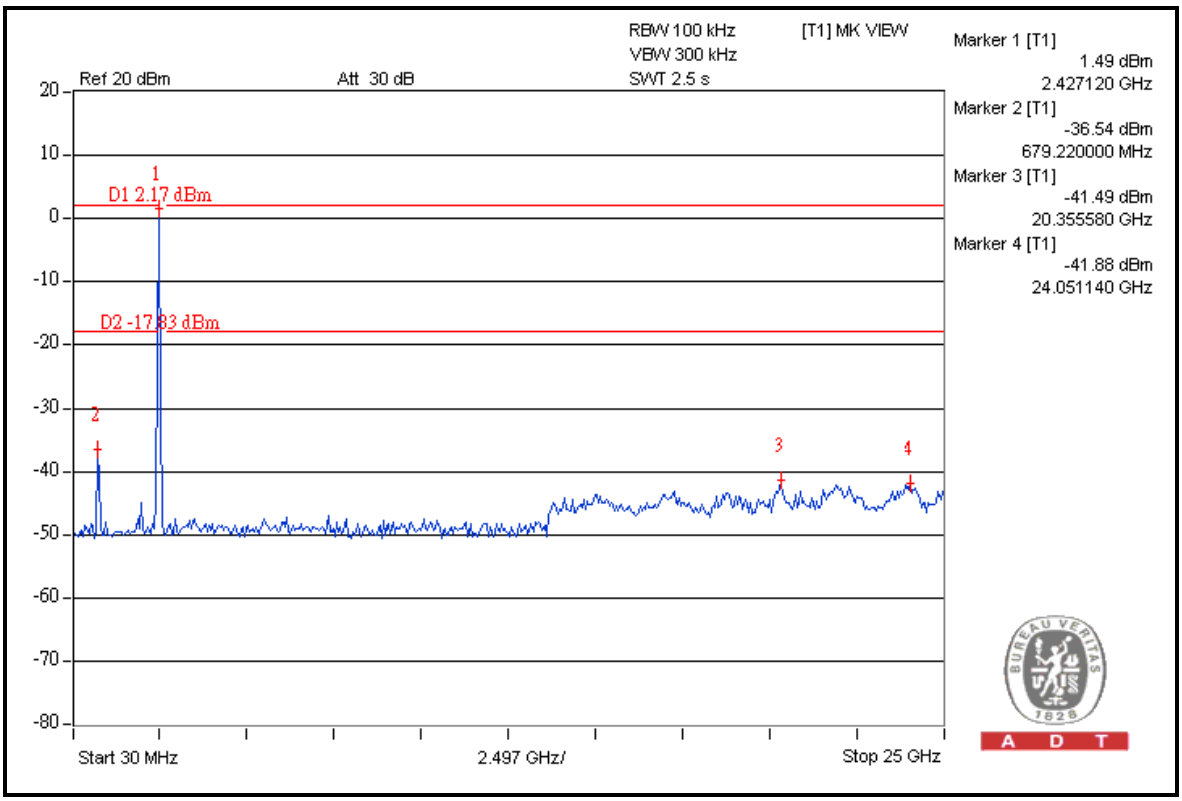

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.86 dBm
D2 -15.14 dBm
Marker 1 [T1]
4.86 dBm
2.413400 GHz
Marker 2 [T1]
-26.06 dBm
2.400000 GHz
Marker 3 [T1]
-24.06 dBm
2.399600 GHz
Marker 4 [T1]
-37.88 dBm
2.390000 GHz
Marker 5 [T1]
-38.04 dBm
2.389990 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.5 dBm
D2 -17.5 dBm
Marker 1 [T1]
2.50 dBm
2.415400 GHz
Marker 2 [T1]
-27.26 dBm
2.400000 GHz
Marker 3 [T1]
-27.23 dBm
2.399800 GHz
Marker 4 [T1]
-41.61 dBm
2.390000 GHz
Marker 5 [T1]
-41.61 dBm
2.390000 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.86 dBm
D2 -15.14 dBm
Marker 1 [T1]
3.80 dBm
2.377180 GHz
Marker 2 [T1]
-33.52 dBm
629.280000 MHz
Marker 3 [T1]
-41.61 dBm
22.003600 GHz
Marker 4 [T1]
-41.65 dBm
24.250900 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.17 dBm
D2 -17.83 dBm
Marker 1 [T1]
2.17 dBm
2.464400 GHz
Marker 2 [T1]
-39.79 dBm
2.483500 GHz
Marker 3 [T1]
-38.88 dBm
2.483600 GHz
Marker 4 [T1]
-50.72 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.95 dBm
D2 -19.05 dBm
Marker 1 [T1]
0.95 dBm
2.465400 GHz
Marker 2 [T1]
-44.57 dBm
2.483500 GHz
Marker 3 [T1]
-44.57 dBm
2.483500 GHz
Marker 4 [T1]
-55.60 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.17 dBm
D2 -17.83 dBm
Marker 1 [T1]
1.49 dBm
2.427120 GHz
Marker 2 [T1]
-36.54 dBm
679.220000 MHz
Marker 3 [T1]
-41.49 dBm
20.355580 GHz
Marker 4 [T1]
-41.88 dBm
24.051140 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11n (20MHz): 1TX

RESTRICT BAND (2310 ~ 2390 MHz)

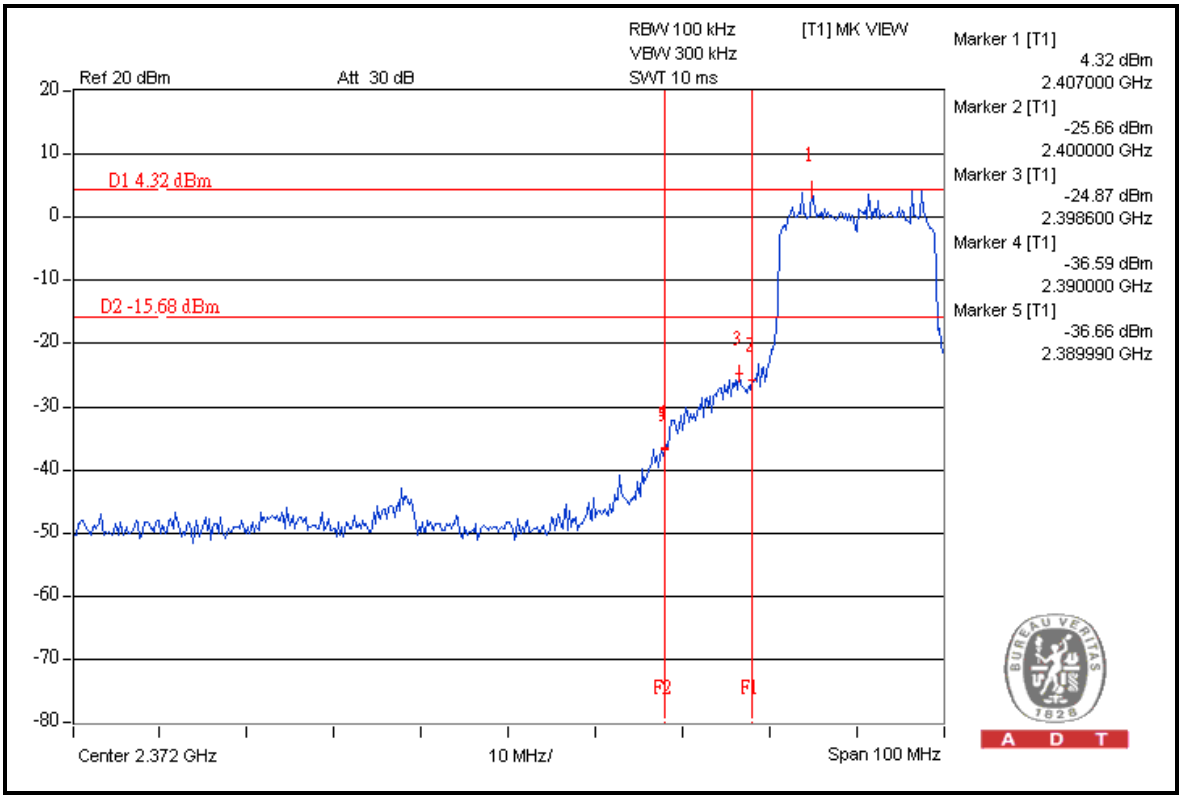
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2412.00 (PK)	106.4	40.9	65.5	74.0
2412.00 (AV)	95.1	41.9	53.2	54.0

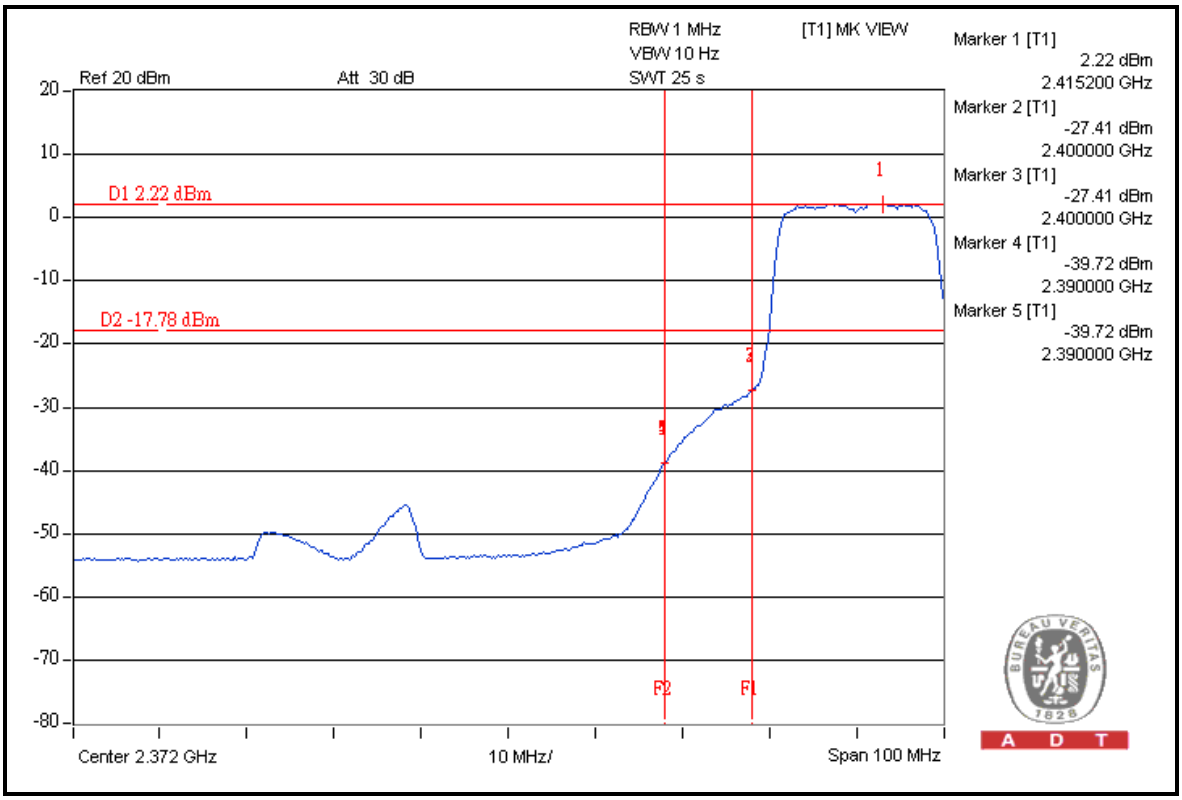
RESTRICT BAND (2483.5 ~ 2500 MHz)

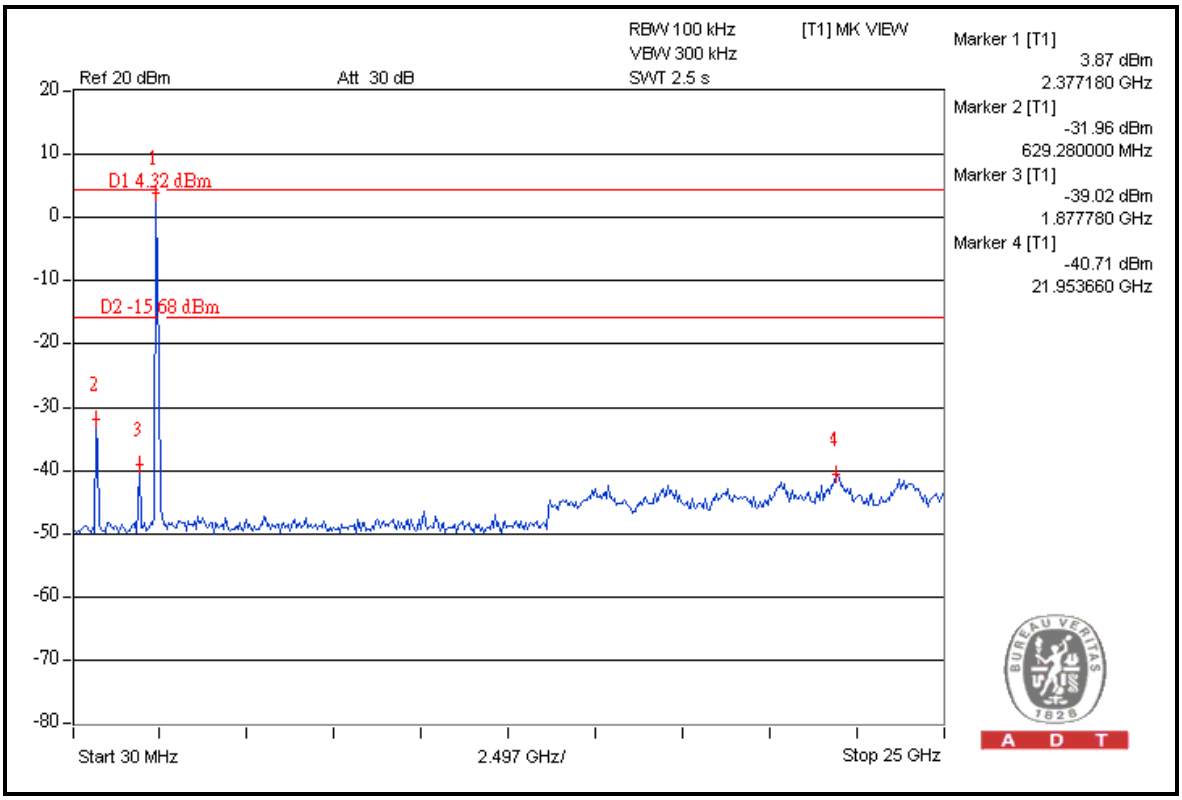
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	103.1	40.1	63.0	74.0
2462.00 (AV)	93.9	43.7	50.2	54.0

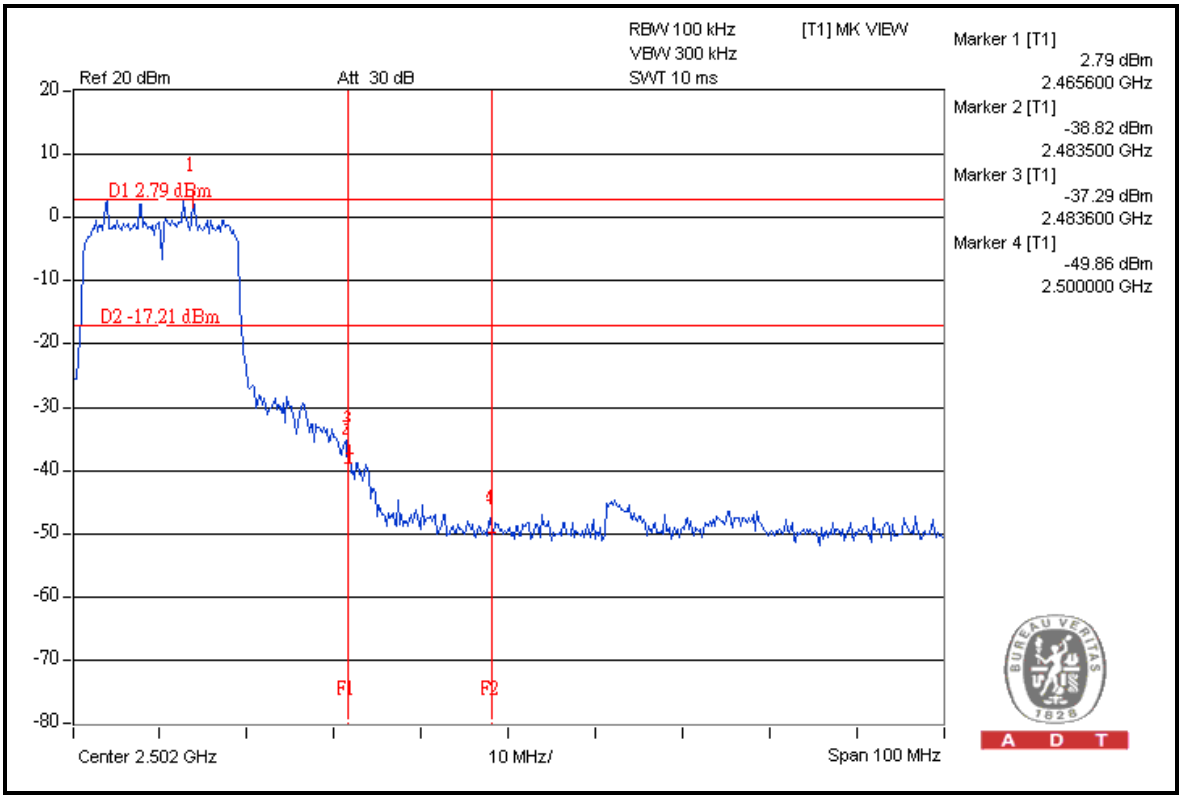
NOTE:

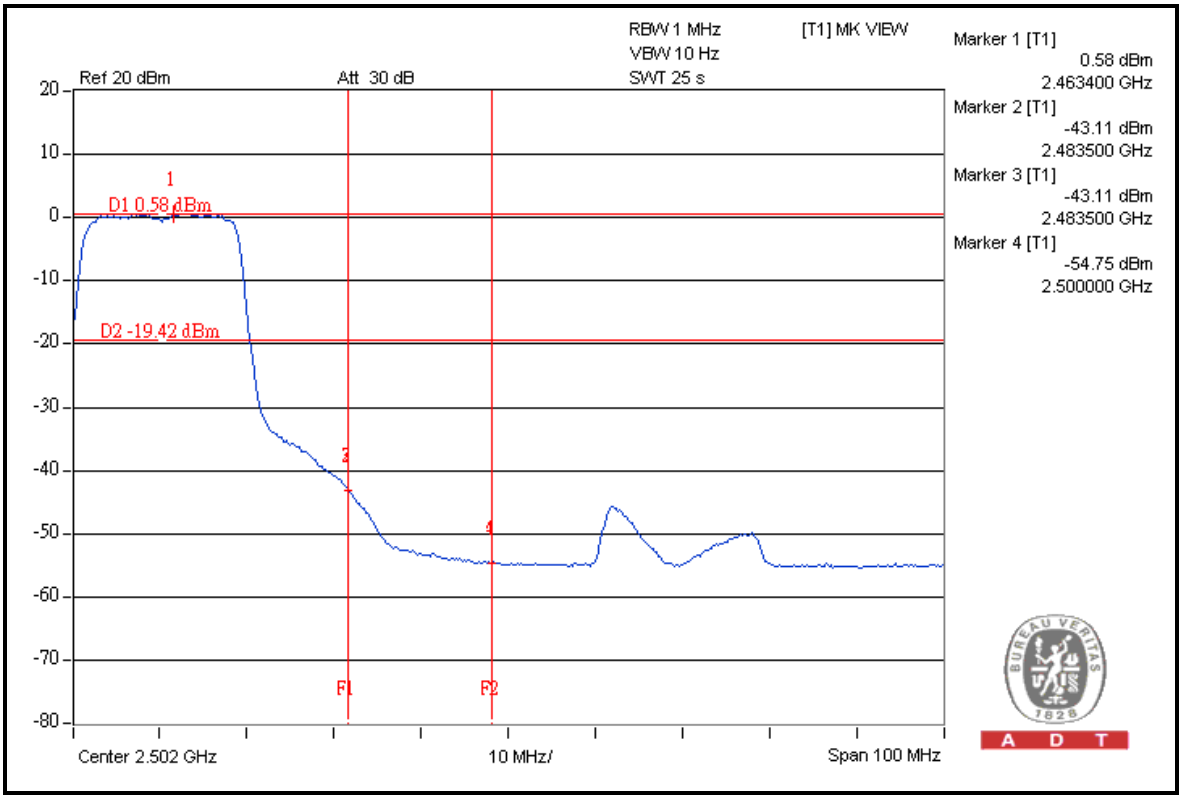
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

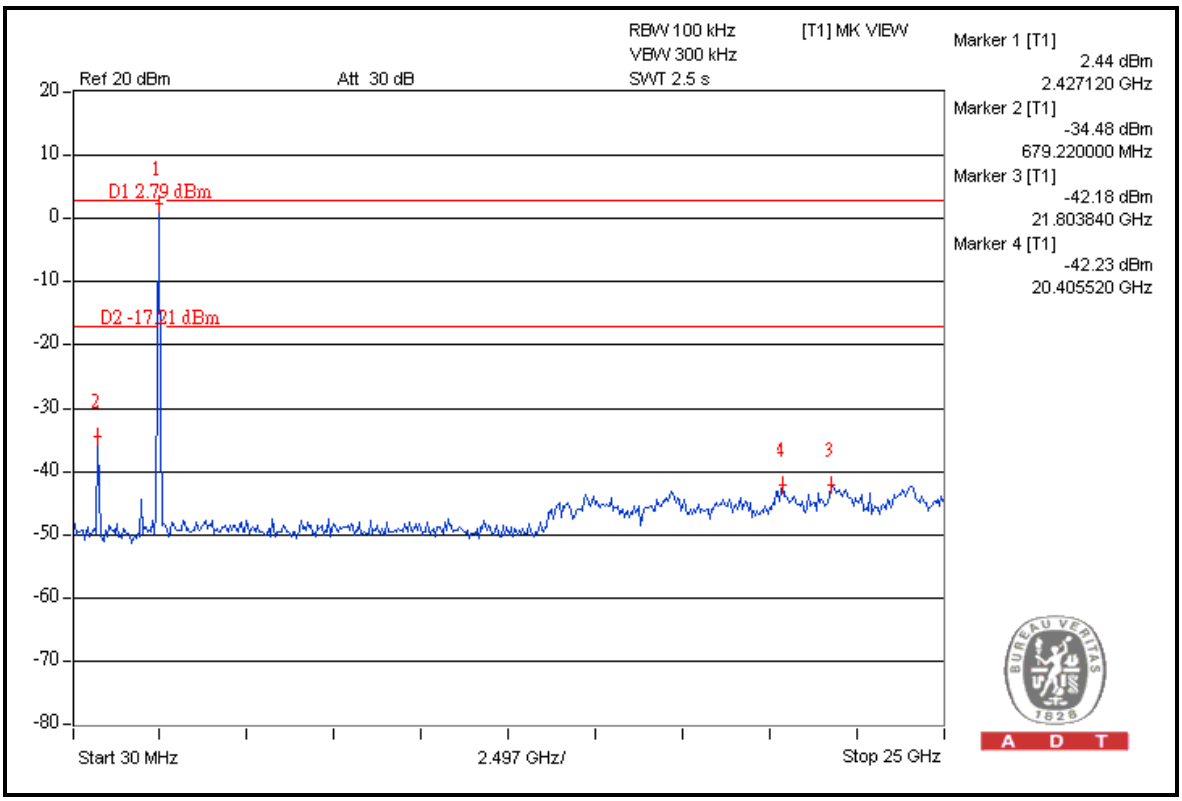

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.32 dBm
D2 -15.68 dBm
Marker 1 [T1]
4.32 dBm
2.407000 GHz
Marker 2 [T1]
-25.66 dBm
2.400000 GHz
Marker 3 [T1]
-24.87 dBm
2.398600 GHz
Marker 4 [T1]
-36.59 dBm
2.390000 GHz
Marker 5 [T1]
-36.66 dBm
2.389990 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.22 dBm
D2 -17.78 dBm
Marker 1 [T1]
2.22 dBm
2.415200 GHz
Marker 2 [T1]
-27.41 dBm
2.400000 GHz
Marker 3 [T1]
-27.41 dBm
2.400000 GHz
Marker 4 [T1]
-39.72 dBm
2.390000 GHz
Marker 5 [T1]
-39.72 dBm
2.390000 GHz
F2
F1
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.32 dBm
D2 -15.68 dBm
Marker 1 [T1]
3.87 dBm
2.377180 GHz
Marker 2 [T1]
-31.96 dBm
629.280000 MHz
Marker 3 [T1]
-39.02 dBm
1.877780 GHz
Marker 4 [T1]
-40.71 dBm
21.953660 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.79 dBm
D2 -17.21 dBm
Marker 1 [T1]
2.79 dBm
2.465600 GHz
Marker 2 [T1]
-38.82 dBm
2.483500 GHz
Marker 3 [T1]
-37.29 dBm
2.483600 GHz
Marker 4 [T1]
-49.86 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.58 dBm
2.463400 GHz
Marker 2 [T1]
-43.11 dBm
2.483500 GHz
Marker 3 [T1]
-43.11 dBm
2.483500 GHz
Marker 4 [T1]
-54.75 dBm
2.500000 GHz
D1 0.58 dBm
D2 -19.42 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.44 dBm
2.427120 GHz
Marker 2 [T1]
-34.48 dBm
679.220000 MHz
Marker 3 [T1]
-42.18 dBm
21.803840 GHz
Marker 4 [T1]
-42.23 dBm
20.405520 GHz
D1 2.79 dBm
D2 -17.21 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11n (20MHz): 2TX

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)	104.6	38.2	66.4	74.0
2412.00 (AV)	92.6	39.9	52.7	54.0

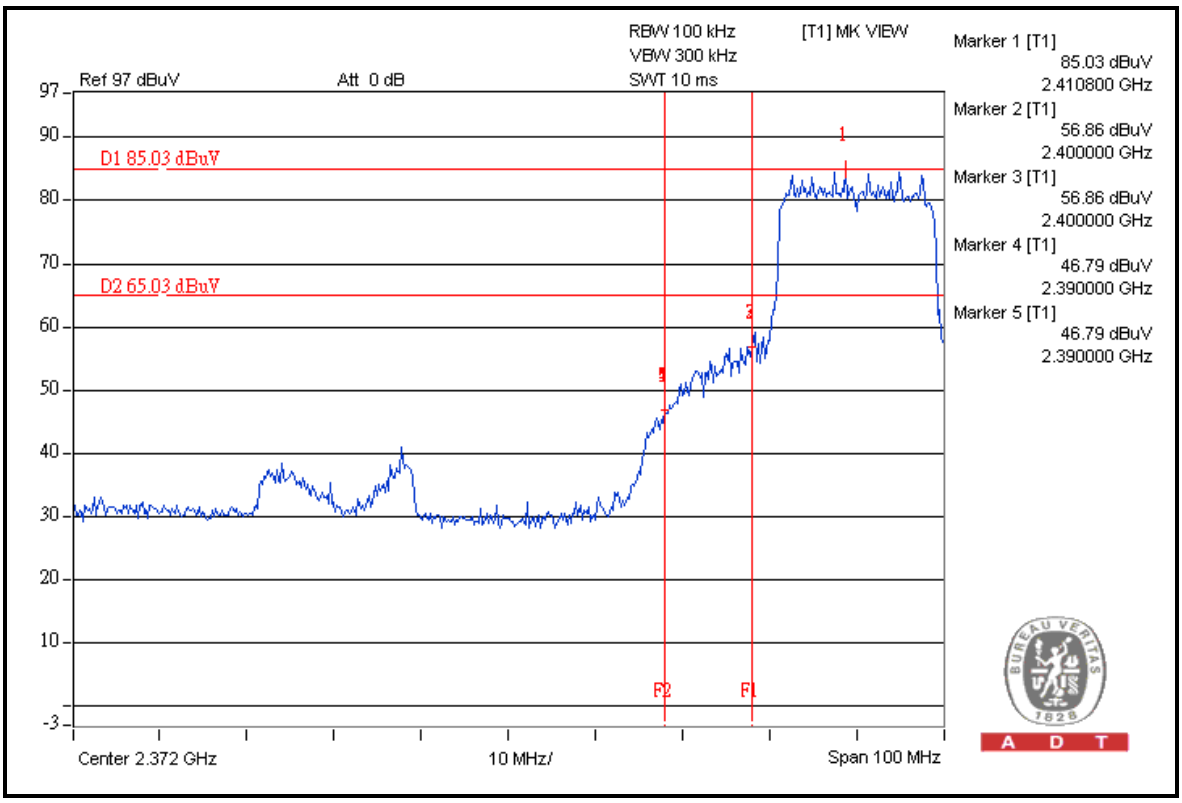
RESTRICT BAND (2483.5 ~ 2500 MHz)

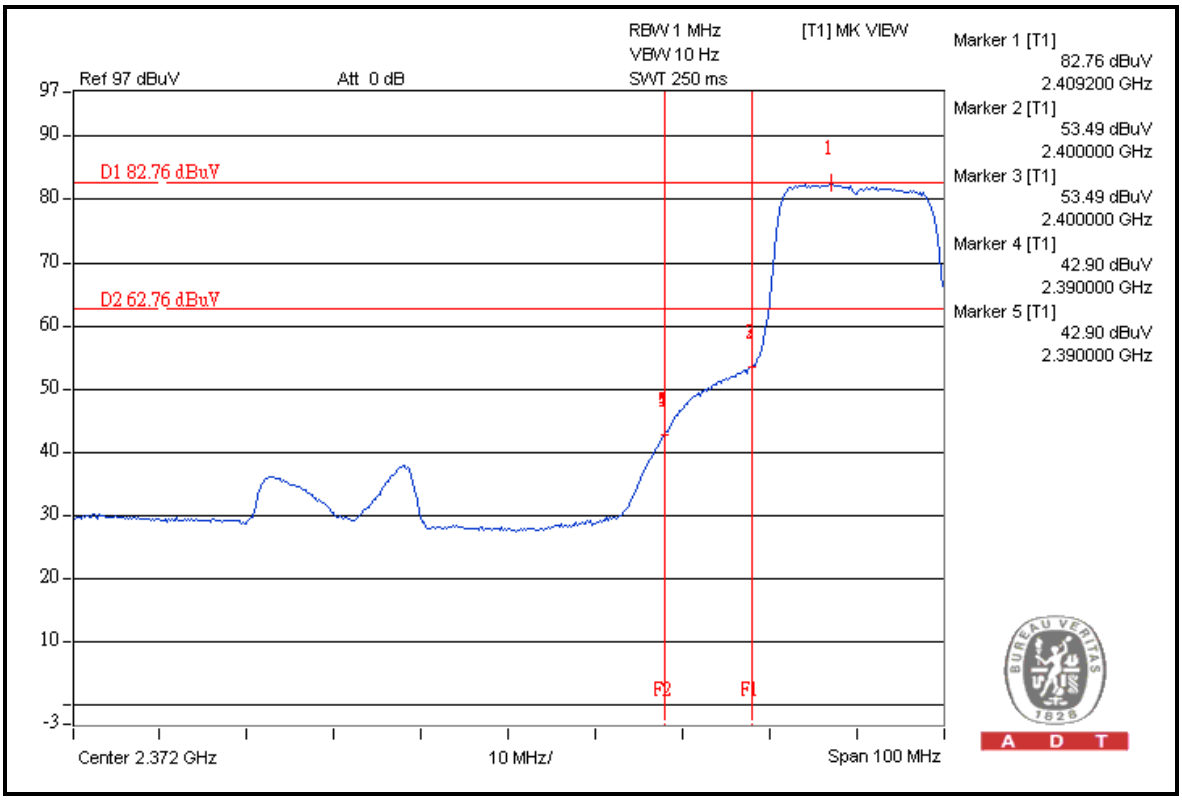
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2462.00 (PK)	101.6	43.7	57.9	74.0
2462.00 (AV)	89.3	43.3	46.0	54.0

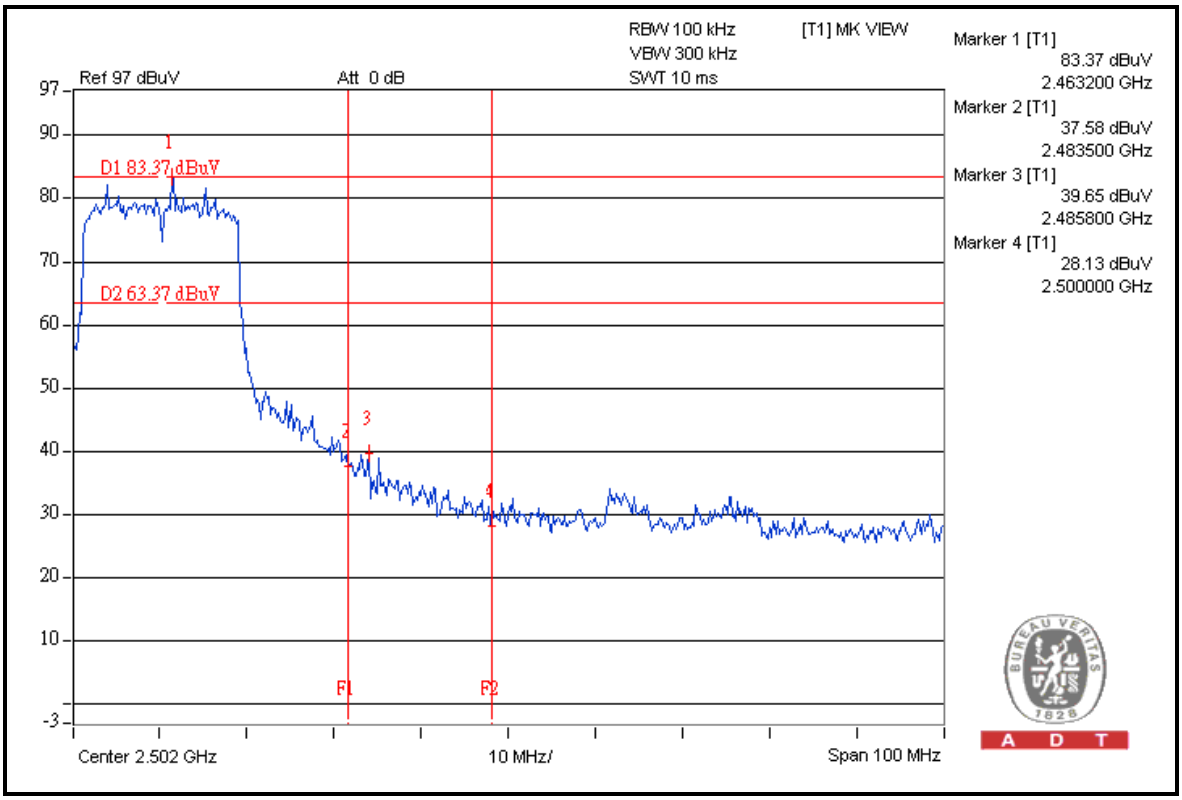
NOTE:

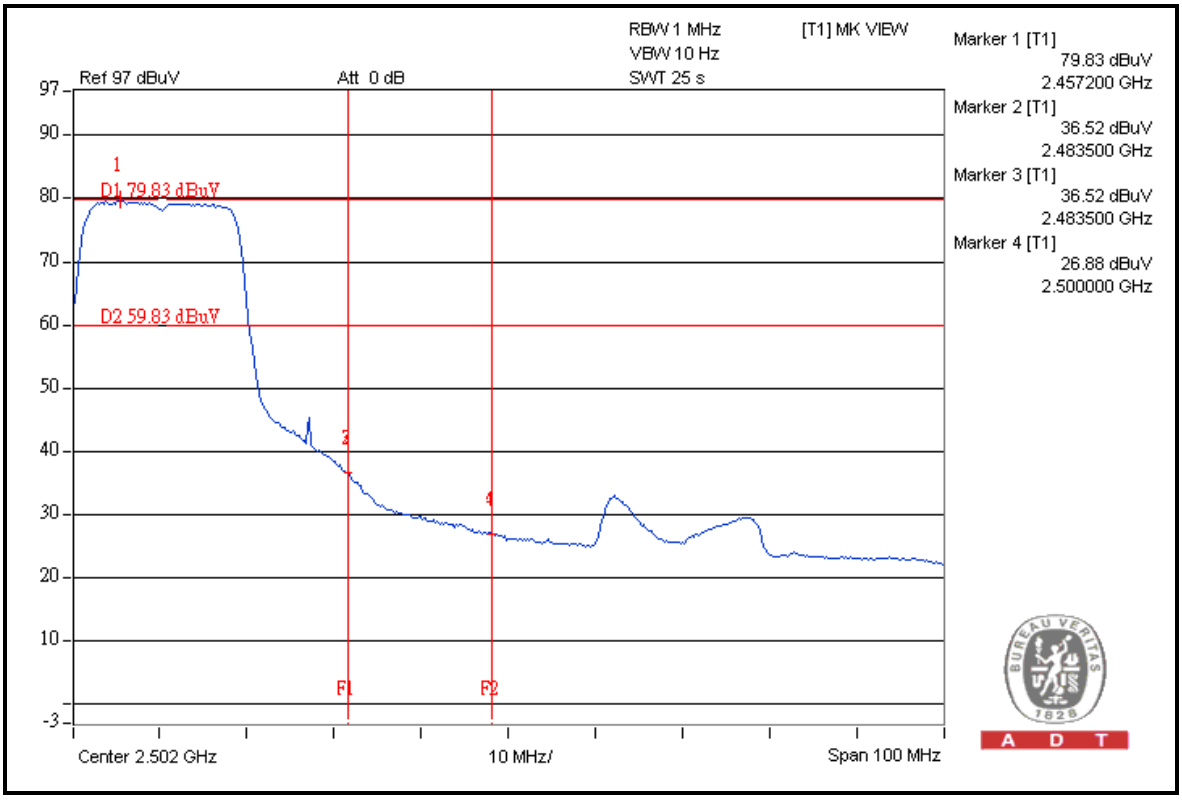
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 2 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (TWO CHAINS ON)



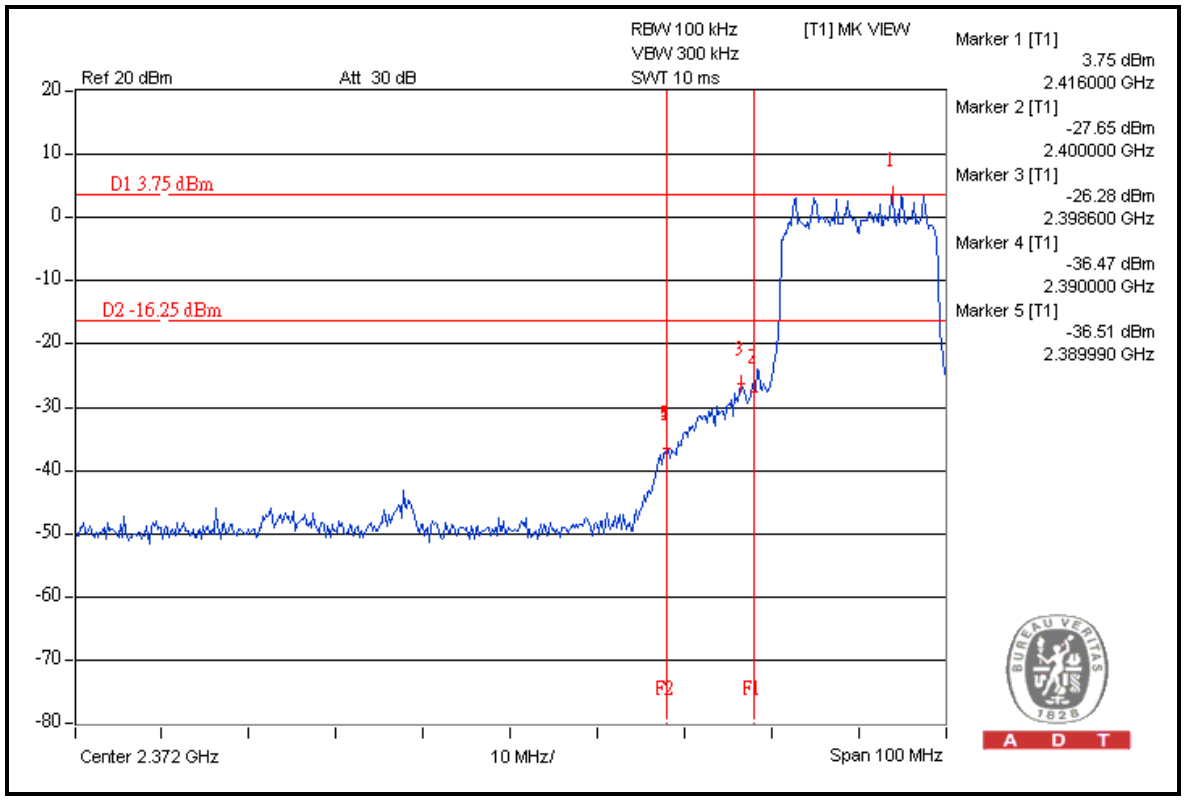


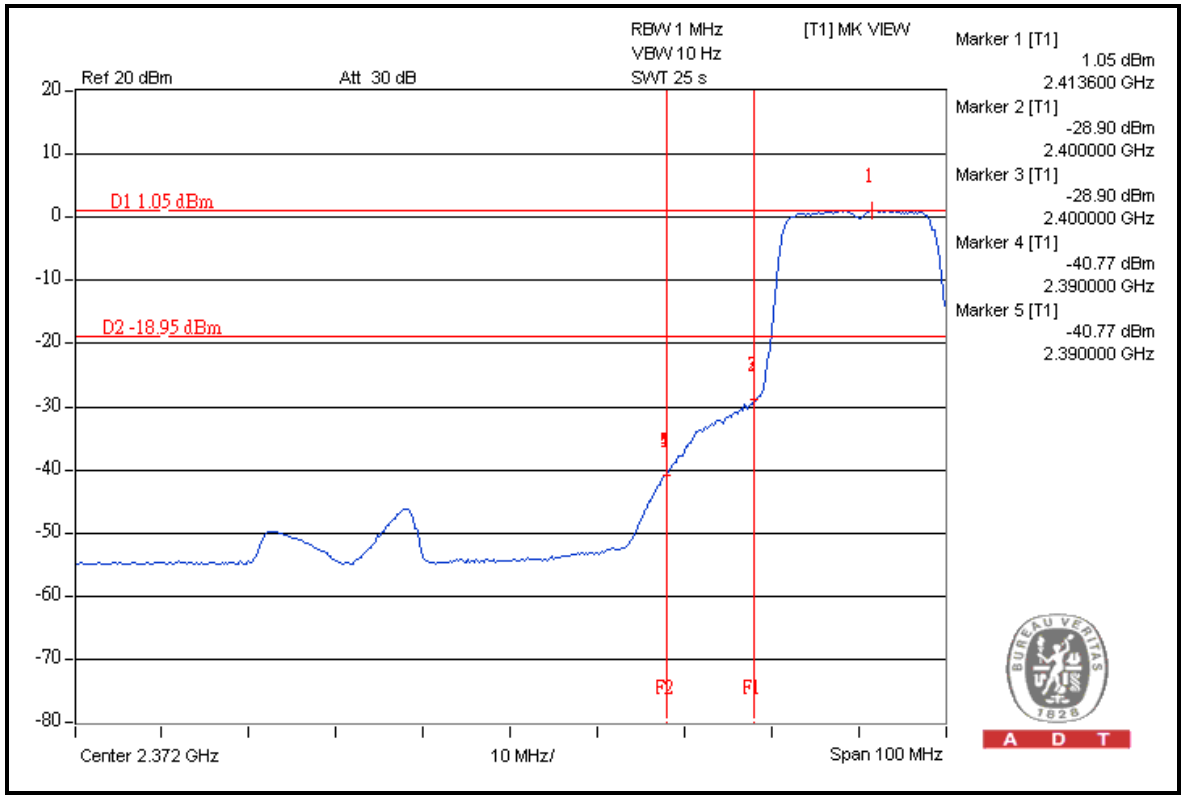

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 83.37 dBuV
D2 63.37 dBuV
Marker 1 [T1]
83.37 dBuV
2.463200 GHz
Marker 2 [T1]
37.58 dBuV
2.483500 GHz
Marker 3 [T1]
39.65 dBuV
2.485800 GHz
Marker 4 [T1]
28.13 dBuV
2.500000 GHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

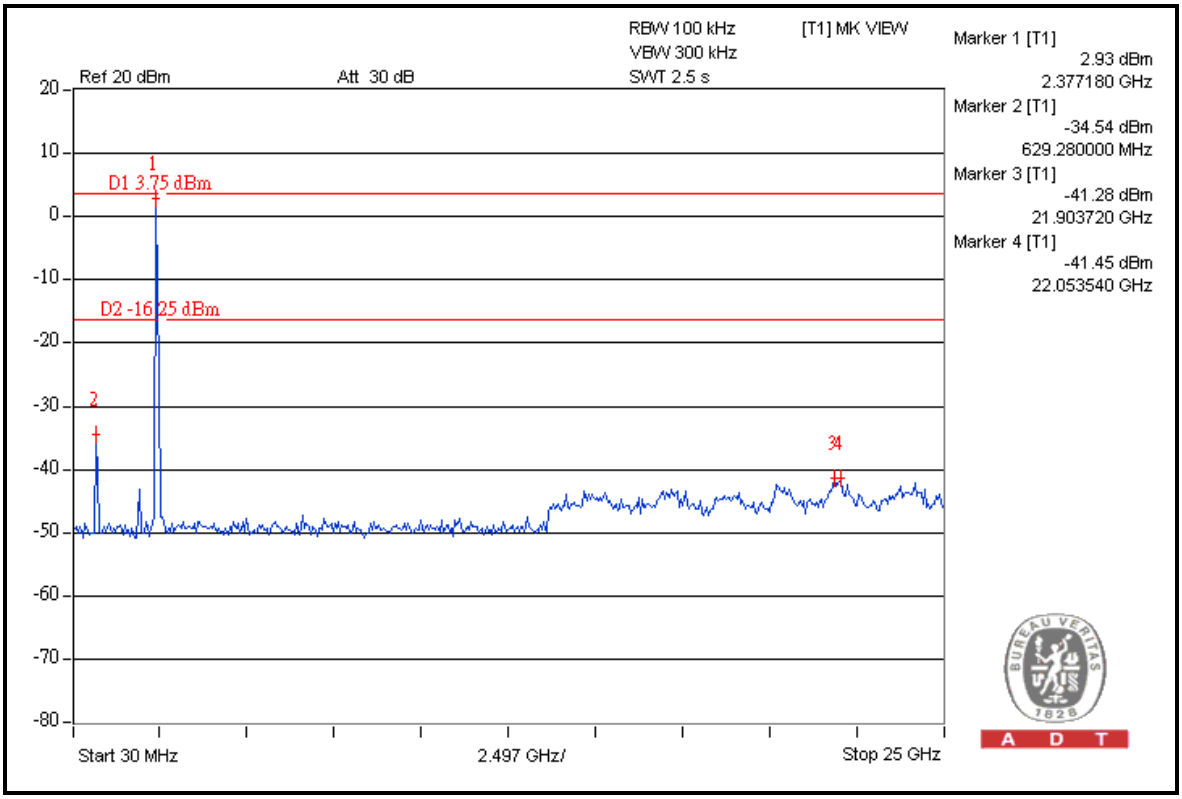

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 79.83 dBuV
D2 59.83 dBuV
Marker 1 [T1]
79.83 dBuV
2.457200 GHz
Marker 2 [T1]
36.52 dBuV
2.483500 GHz
Marker 3 [T1]
36.52 dBuV
2.483500 GHz
Marker 4 [T1]
26.88 dBuV
2.500000 GHz
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz

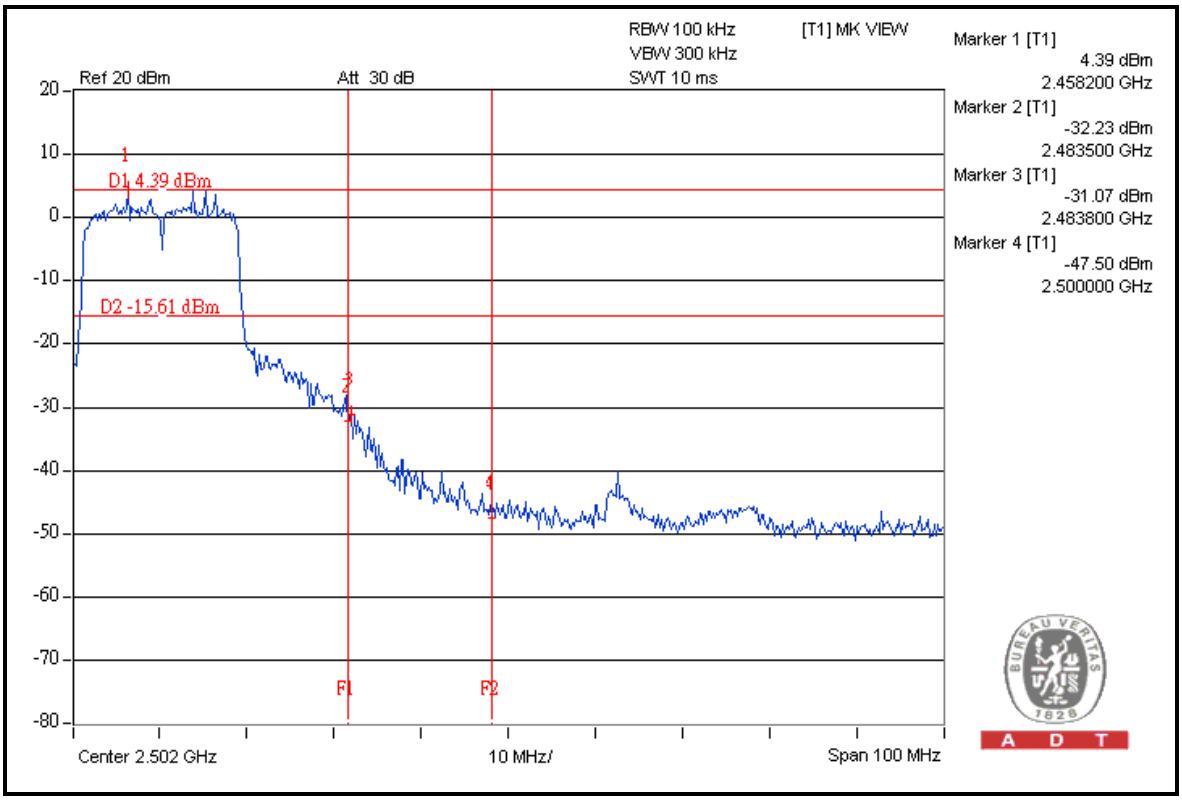
FOR CONDUCTED MEASURED

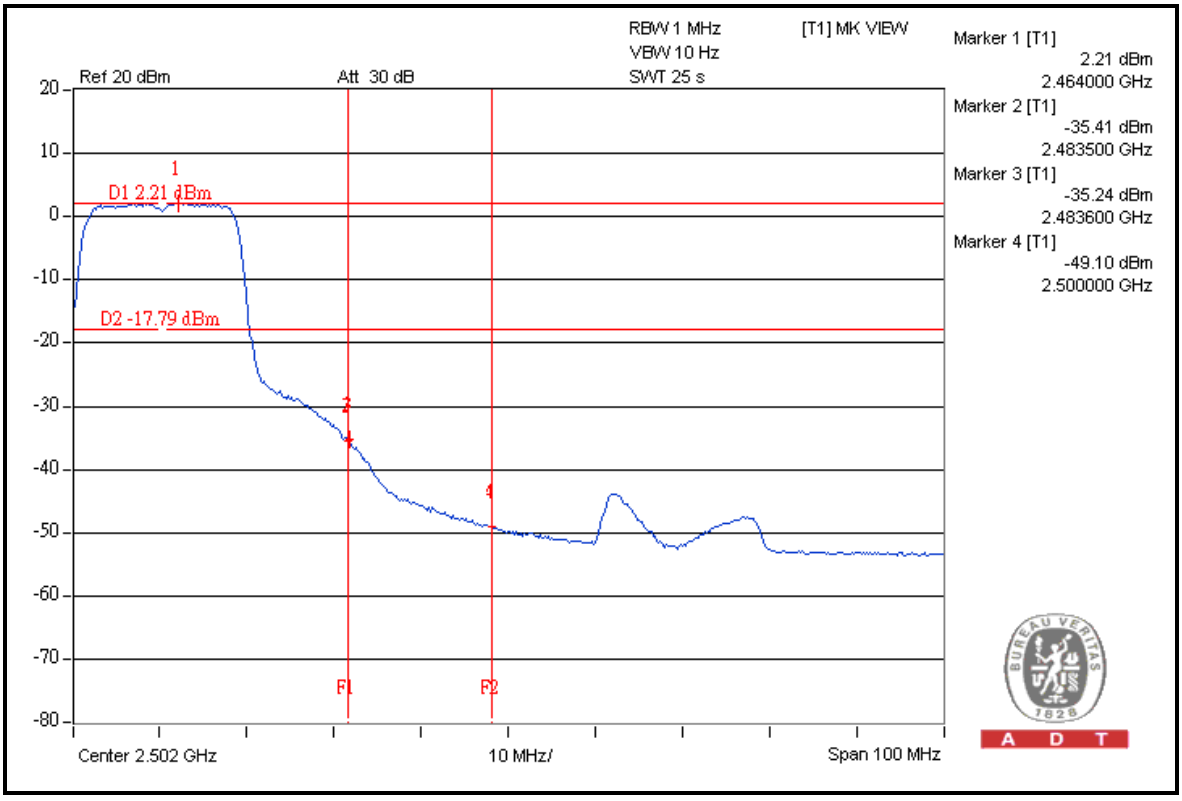
CHAIN 0

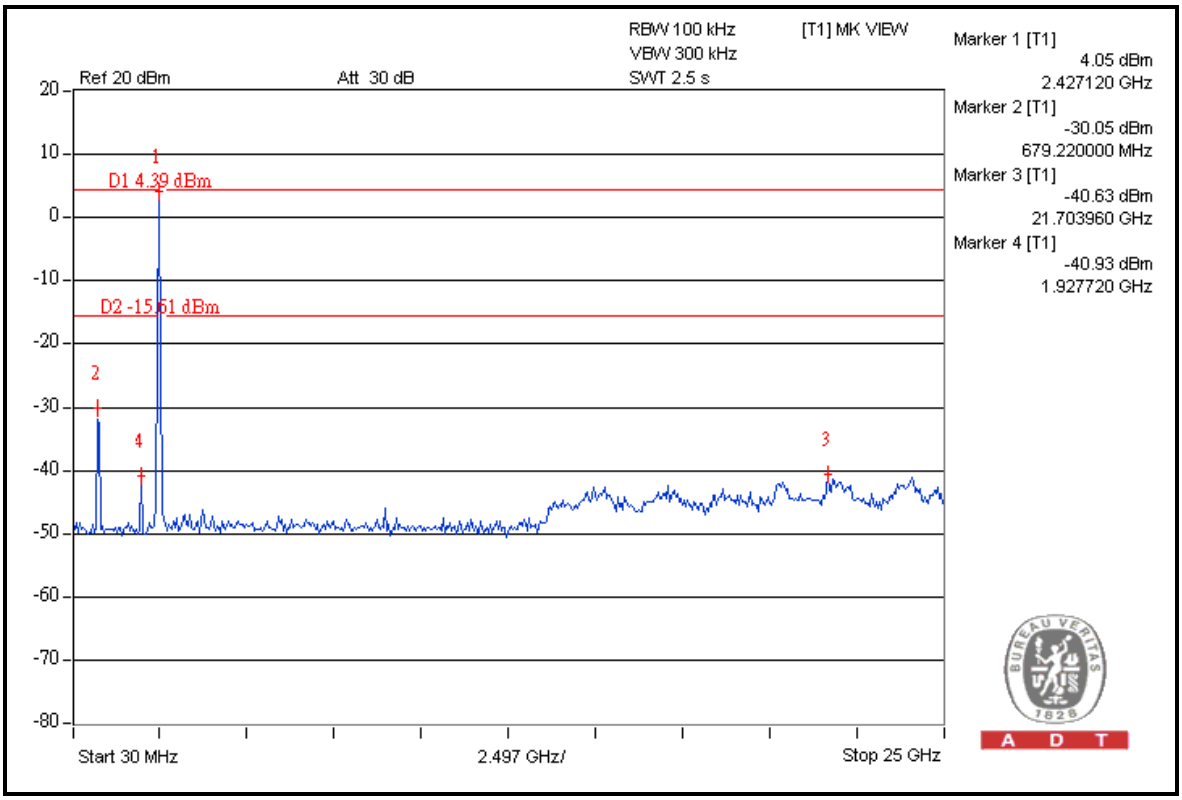




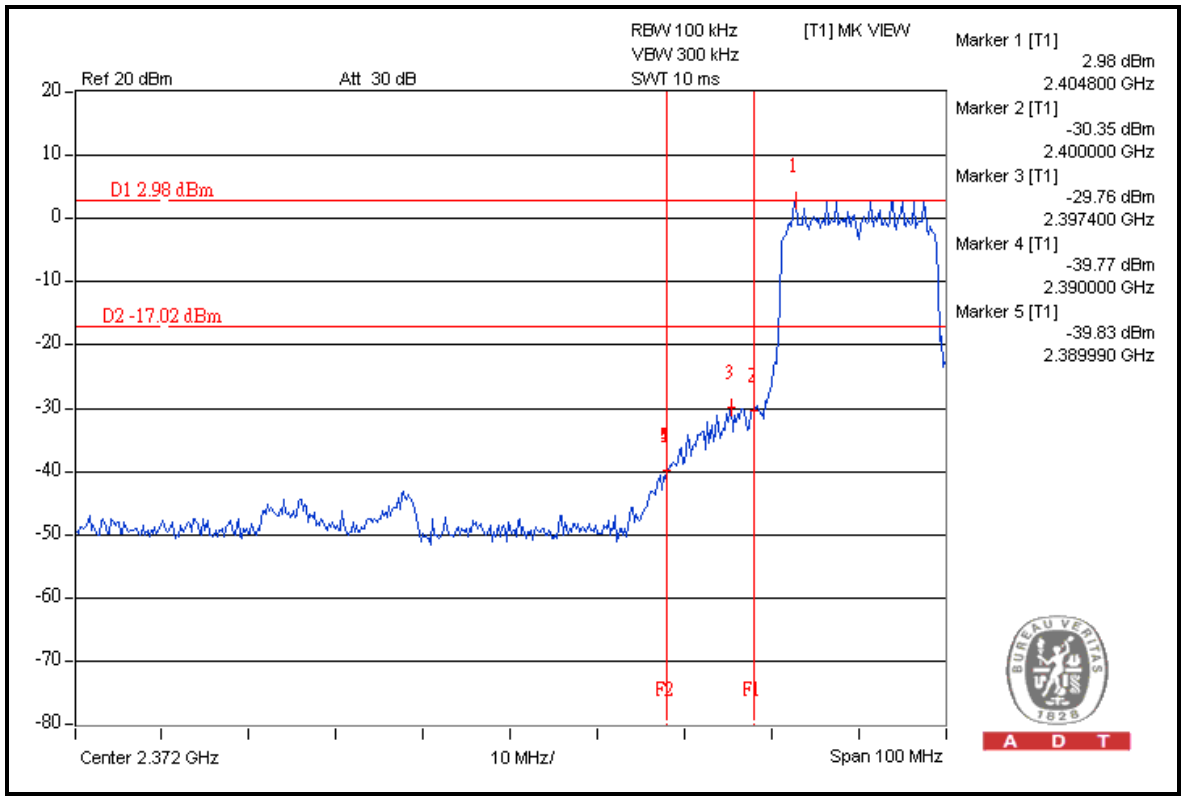

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 3.75 dBm
D2 -16.25 dBm
Marker 1 [T1]
2.93 dBm
2.377180 GHz
Marker 2 [T1]
-34.54 dBm
629.280000 MHz
Marker 3 [T1]
-41.28 dBm
21.903720 GHz
Marker 4 [T1]
-41.45 dBm
22.053540 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

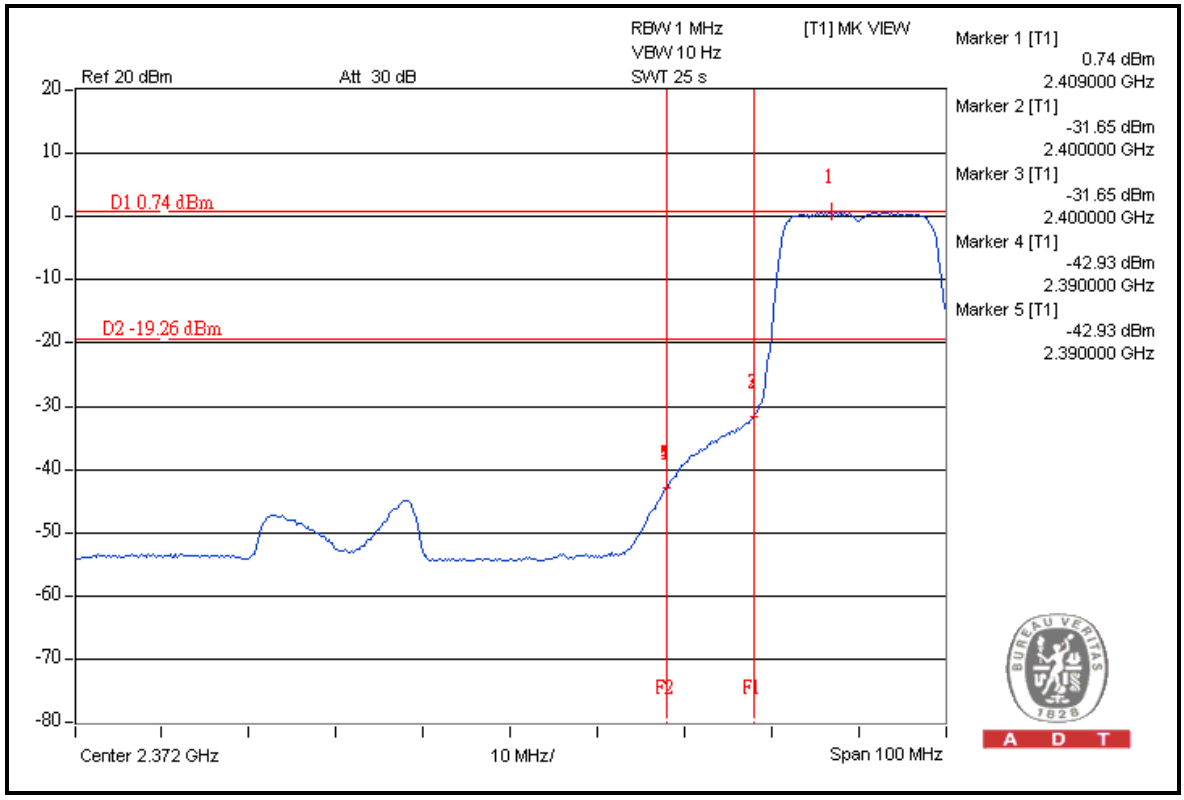

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.39 dBm
D2 -15.61 dBm
F1
F2
Marker 1 [T1]
4.39 dBm
2.458200 GHz
Marker 2 [T1]
-32.23 dBm
2.483500 GHz
Marker 3 [T1]
-31.07 dBm
2.483800 GHz
Marker 4 [T1]
-47.50 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

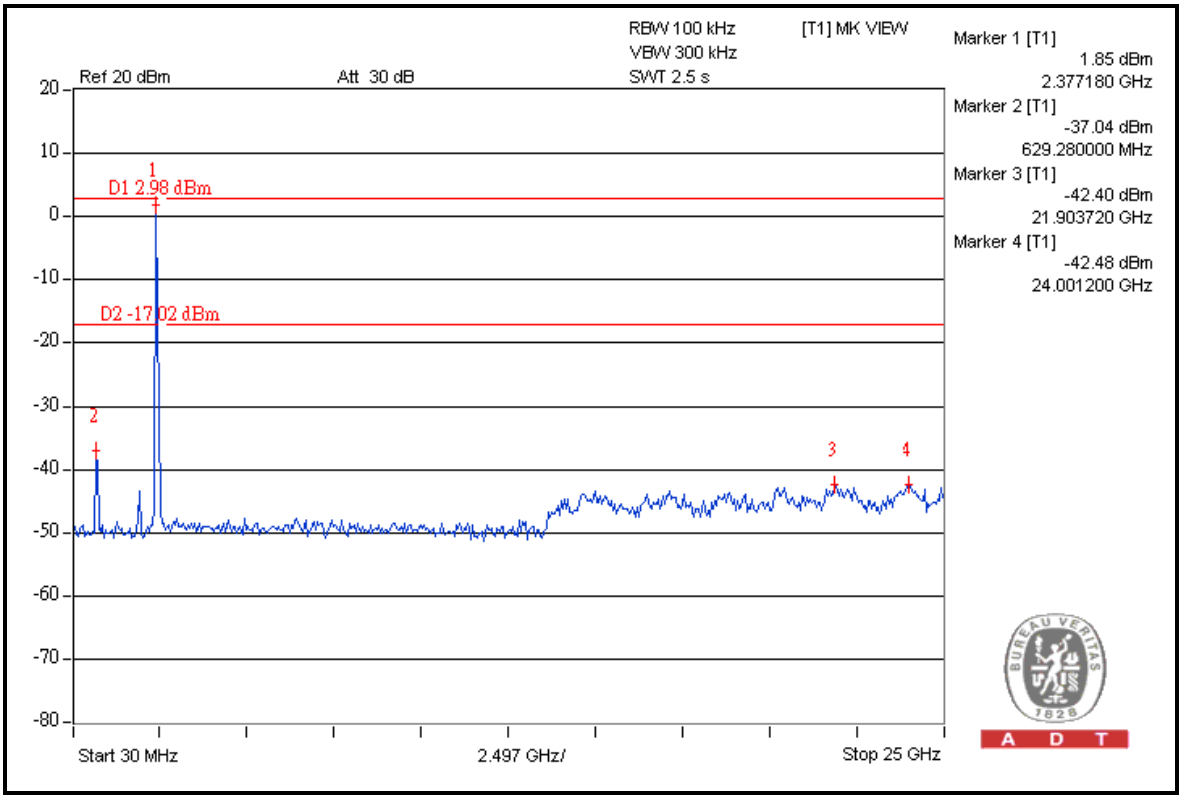

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.21 dBm
D2 -17.79 dBm
Marker 1 [T1]
2.21 dBm
2.464000 GHz
Marker 2 [T1]
-35.41 dBm
2.483500 GHz
Marker 3 [T1]
-35.24 dBm
2.483600 GHz
Marker 4 [T1]
-49.10 dBm
2.500000 GHz
Center 2.502 GHz
10 MHz/
Span 100 MHz

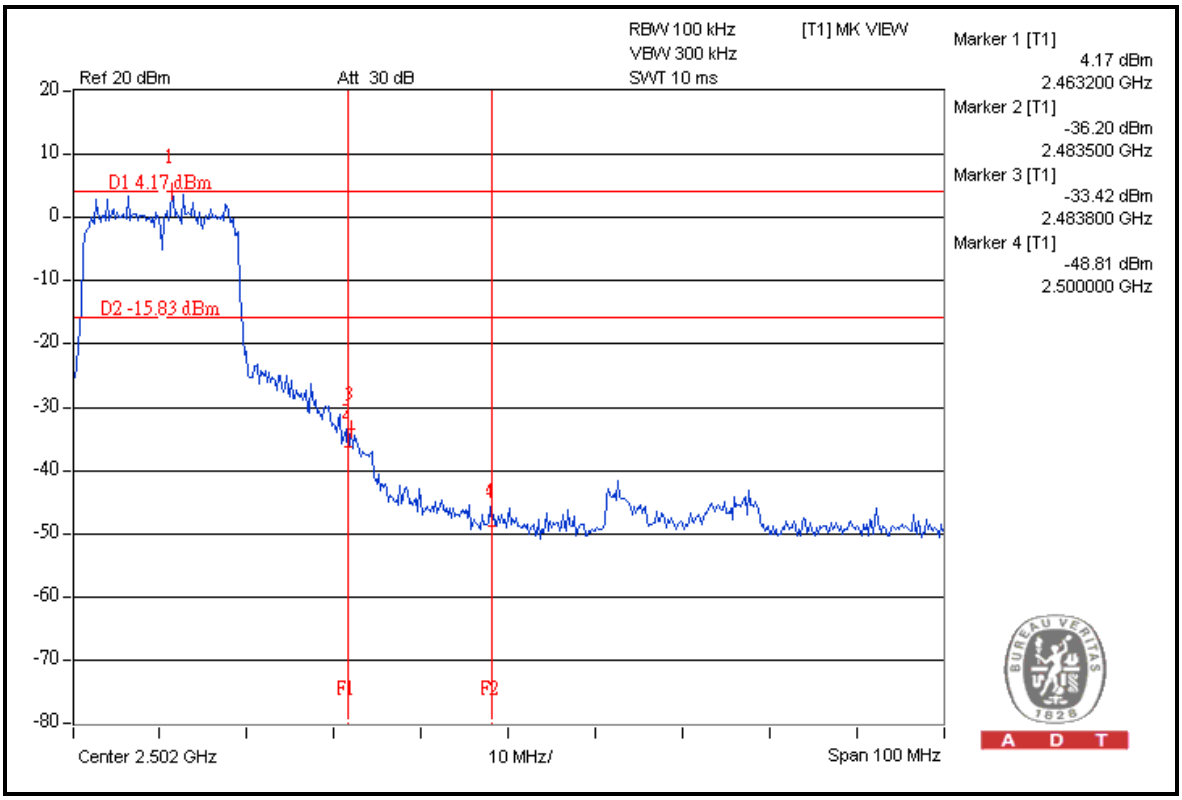

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.39 dBm
D2 -15.61 dBm
Marker 1 [T1]
4.05 dBm
2.427120 GHz
Marker 2 [T1]
-30.05 dBm
679.220000 MHz
Marker 3 [T1]
-40.63 dBm
21.703960 GHz
Marker 4 [T1]
-40.93 dBm
1.927720 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

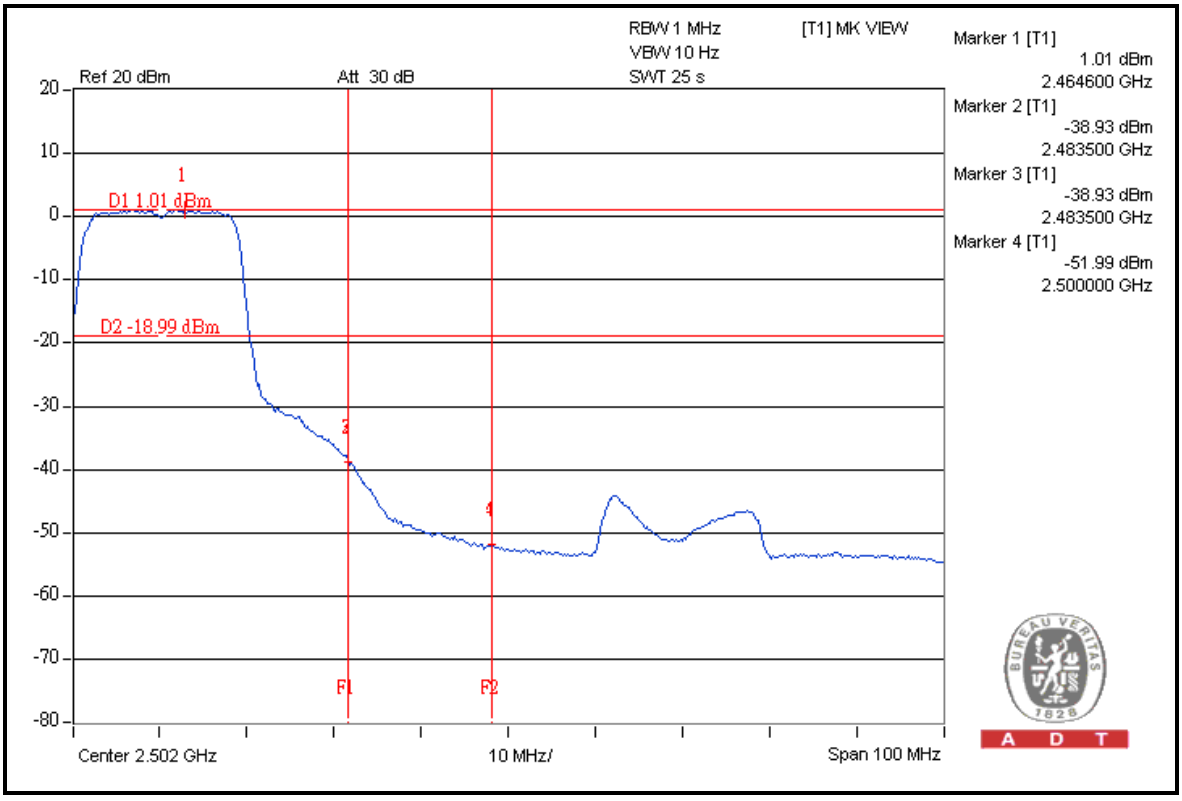
CHAIN 1

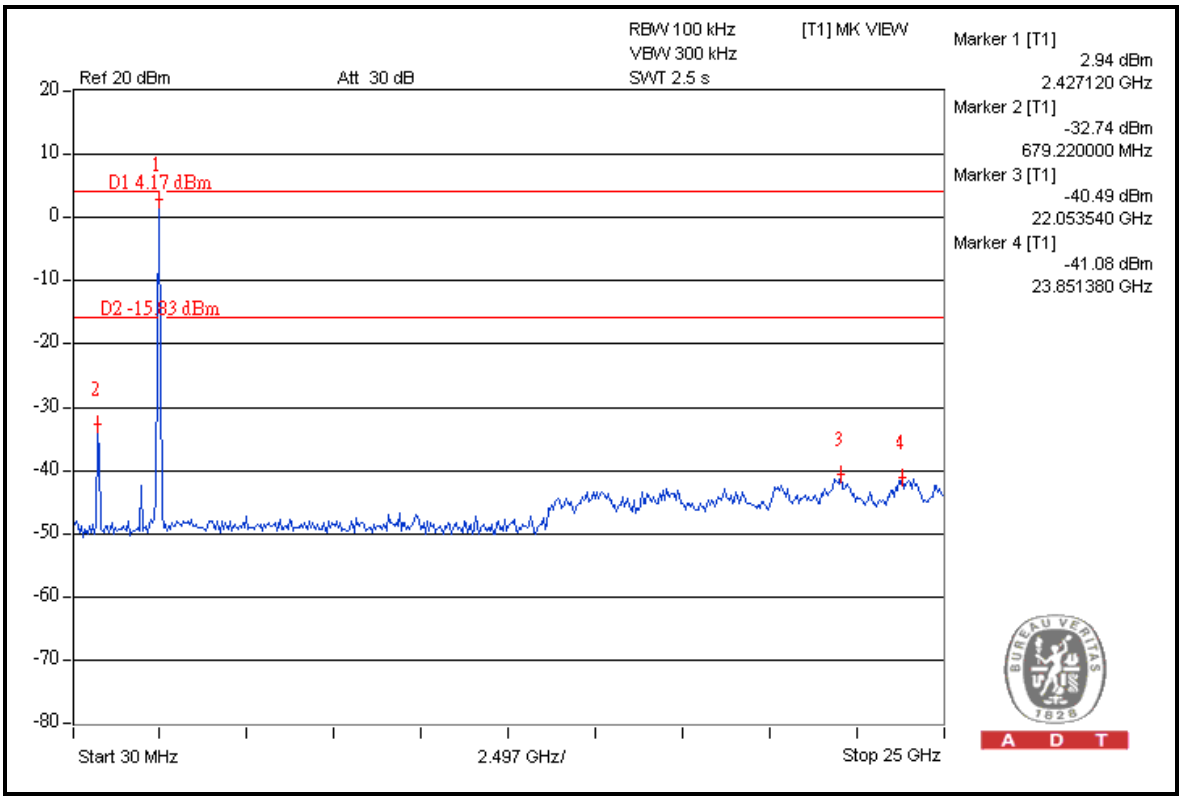

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.98 dBm
D2 -17.02 dBm
Marker 1 [T1]
2.98 dBm
2.404800 GHz
Marker 2 [T1]
-30.35 dBm
2.400000 GHz
Marker 3 [T1]
-29.76 dBm
2.397400 GHz
Marker 4 [T1]
-39.77 dBm
2.390000 GHz
Marker 5 [T1]
-39.83 dBm
2.389990 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 0.74 dBm
D2 -19.26 dBm
Marker 1 [T1]
0.74 dBm
2.409000 GHz
Marker 2 [T1]
-31.65 dBm
2.400000 GHz
Marker 3 [T1]
-31.65 dBm
2.400000 GHz
Marker 4 [T1]
-42.93 dBm
2.390000 GHz
Marker 5 [T1]
-42.93 dBm
2.390000 GHz
Center 2.372 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.98 dBm
D2 -17.02 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
1.85 dBm
2.377180 GHz
Marker 2 [T1]
-37.04 dBm
629.280000 MHz
Marker 3 [T1]
-42.40 dBm
21.903720 GHz
Marker 4 [T1]
-42.48 dBm
24.001200 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.17 dBm
D2 -15.83 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
4.17 dBm
2.463200 GHz
Marker 2 [T1]
-36.20 dBm
2.483500 GHz
Marker 3 [T1]
-33.42 dBm
2.483800 GHz
Marker 4 [T1]
-48.81 dBm
2.500000 GHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.01 dBm
D2 -18.99 dBm
F1
F2
Center 2.502 GHz
10 MHz/
Span 100 MHz
Marker 1 [T1]
1.01 dBm
2.464600 GHz
Marker 2 [T1]
-38.93 dBm
2.483500 GHz
Marker 3 [T1]
-38.93 dBm
2.483500 GHz
Marker 4 [T1]
-51.99 dBm
2.500000 GHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.17 dBm
D2 -15.83 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz
Marker 1 [T1]
2.94 dBm
2.427120 GHz
Marker 2 [T1]
-32.74 dBm
679.220000 MHz
Marker 3 [T1]
-40.49 dBm
22.053540 GHz
Marker 4 [T1]
-41.08 dBm
23.851380 GHz

802.11n (40MHz): 1TX

RESTRICT BAND (2310 ~ 2390 MHz)

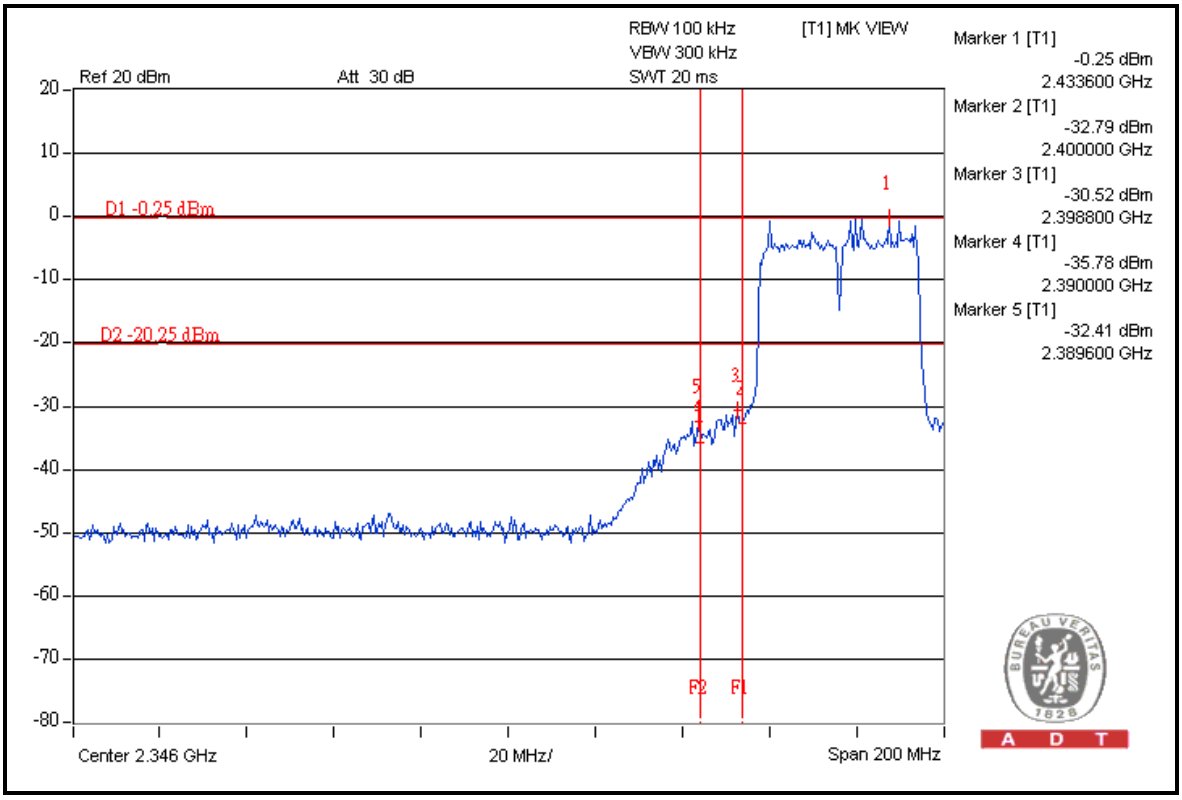
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2422.00 (PK)	99.7	32.2	67.5	74.0
2422.00 (AV)	88.7	35.4	53.3	54.0

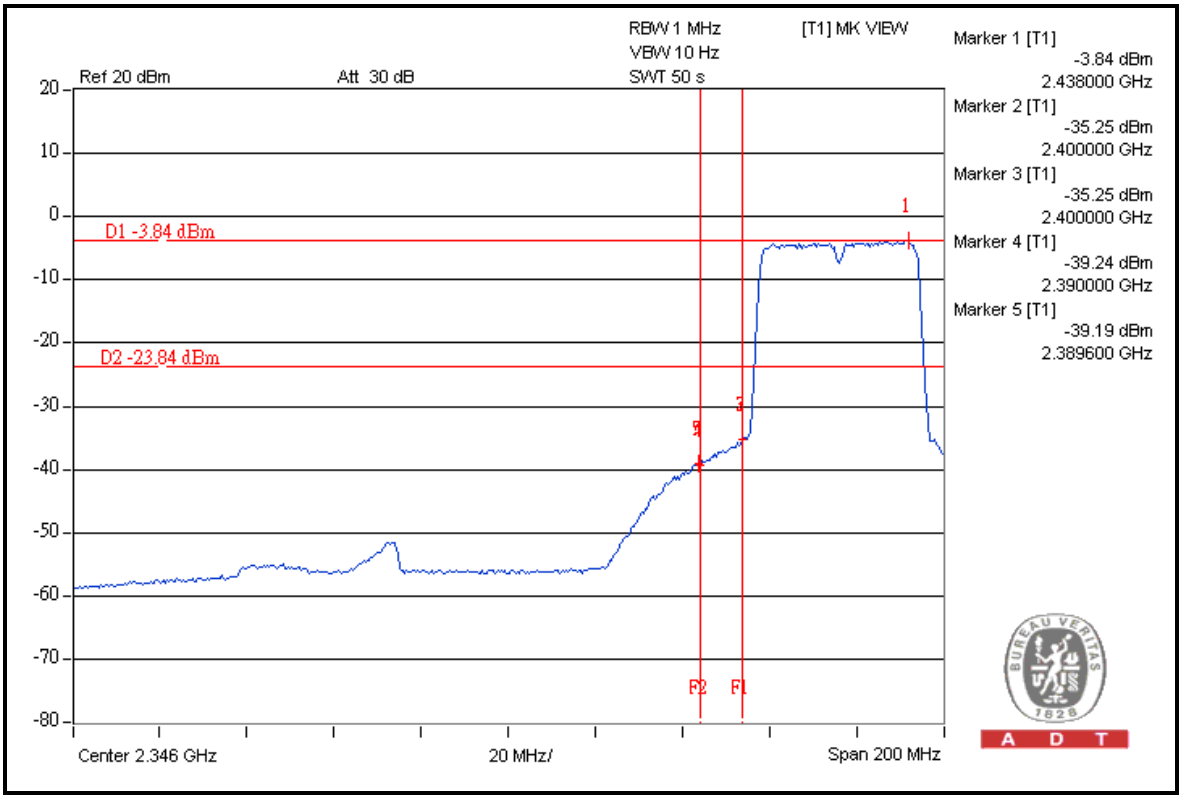
RESTRICT BAND (2483.5 ~ 2500 MHz)

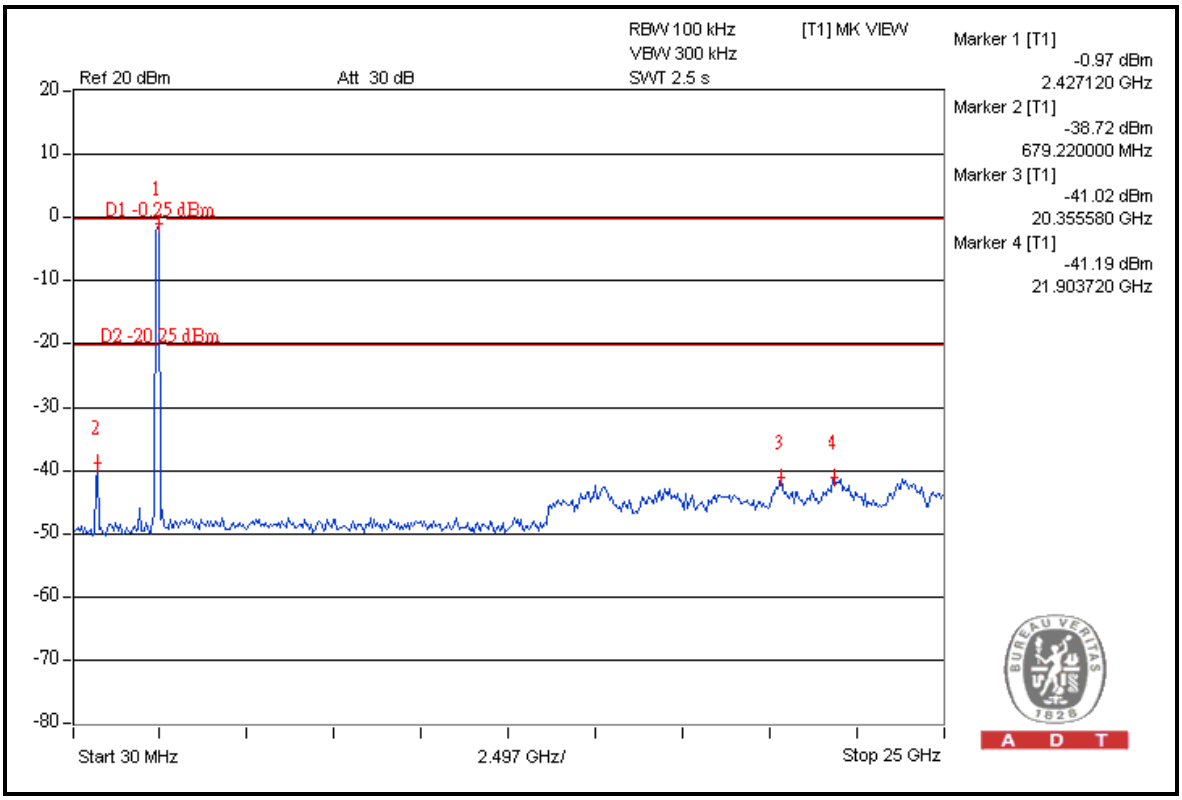
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2452.00 (PK)	98.7	36.4	62.3	74.0
2452.00 (AV)	87.7	34.0	53.7	54.0

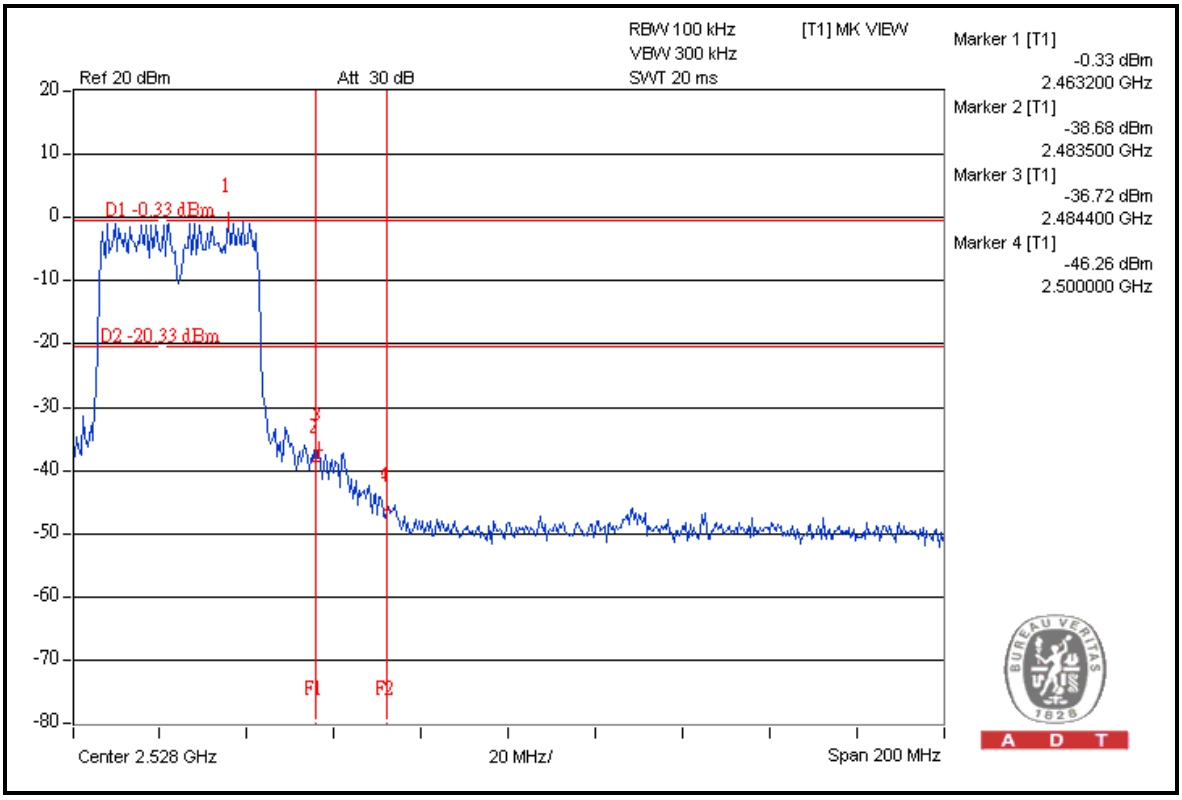
NOTE:

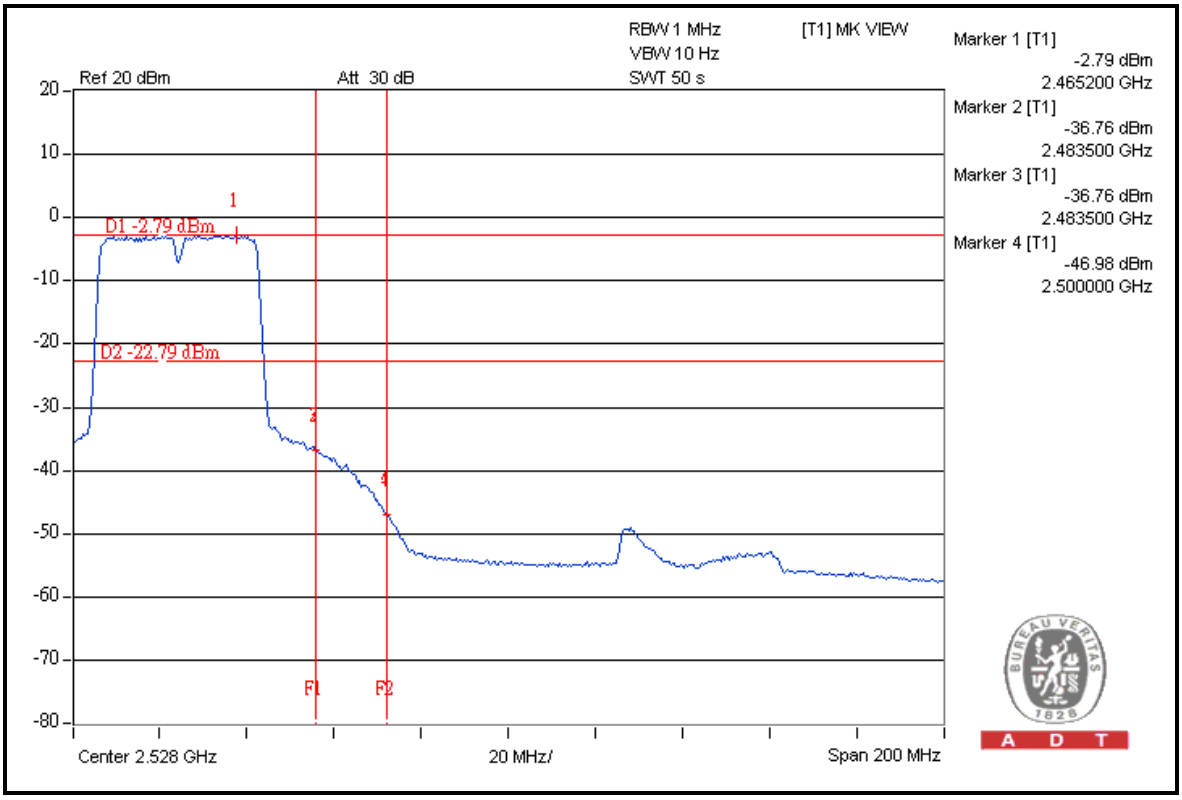
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 3 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

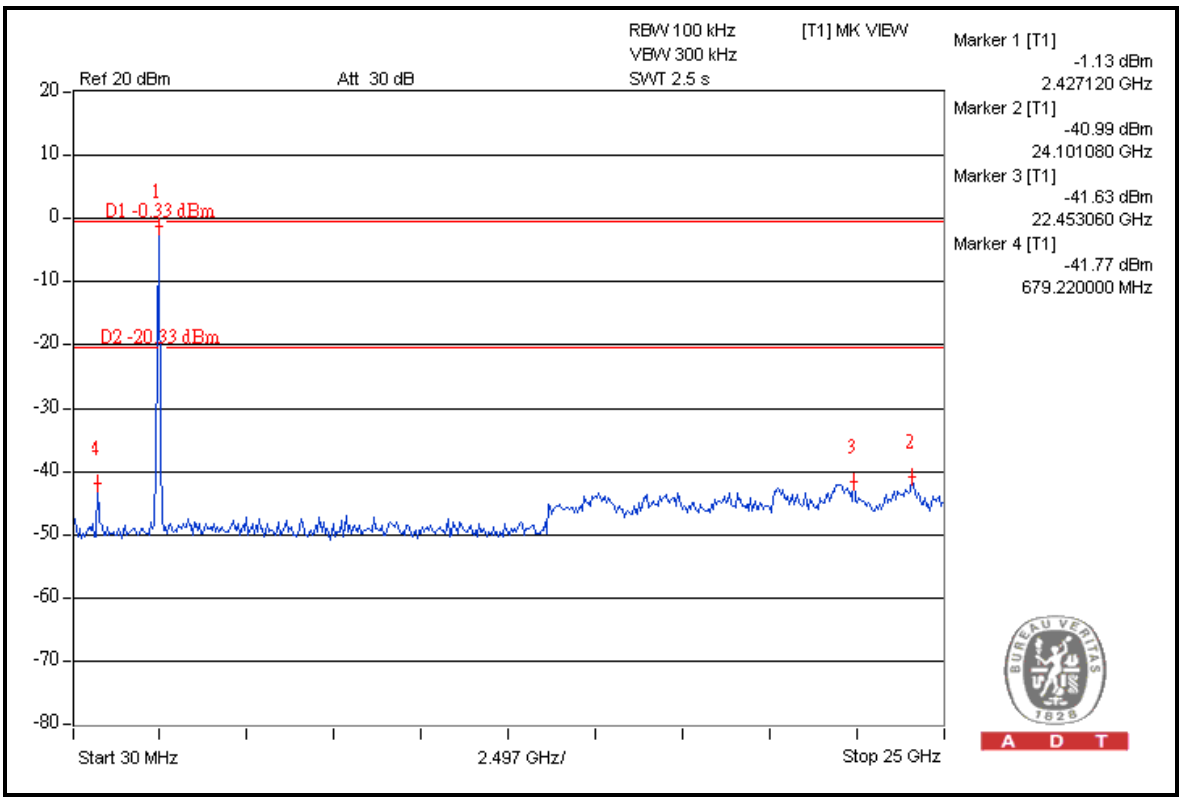

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -0.25 dBm
D2 -20.25 dBm
Marker 1 [T1]
-0.25 dBm
2.433600 GHz
Marker 2 [T1]
-32.79 dBm
2.400000 GHz
Marker 3 [T1]
-30.52 dBm
2.398800 GHz
Marker 4 [T1]
-35.78 dBm
2.390000 GHz
Marker 5 [T1]
-32.41 dBm
2.389600 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -3.84 dBm
D2 -23.84 dBm
Marker 1 [T1]
-3.84 dBm
2.438000 GHz
Marker 2 [T1]
-35.25 dBm
2.400000 GHz
Marker 3 [T1]
-35.25 dBm
2.400000 GHz
Marker 4 [T1]
-39.24 dBm
2.390000 GHz
Marker 5 [T1]
-39.19 dBm
2.389600 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -0.25 dBm
D2 -20.25 dBm
Marker 1 [T1]
-0.97 dBm
2.427120 GHz
Marker 2 [T1]
-38.72 dBm
679.220000 MHz
Marker 3 [T1]
-41.02 dBm
20.355580 GHz
Marker 4 [T1]
-41.19 dBm
21.903720 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -0.33 dBm
D2 -20.33 dBm
Marker 1 [T1]
-0.33 dBm
2.463200 GHz
Marker 2 [T1]
-38.68 dBm
2.483500 GHz
Marker 3 [T1]
-36.72 dBm
2.484400 GHz
Marker 4 [T1]
-46.26 dBm
2.500000 GHz
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-2.79 dBm
2.465200 GHz
Marker 2 [T1]
-36.76 dBm
2.483500 GHz
Marker 3 [T1]
-36.76 dBm
2.483500 GHz
Marker 4 [T1]
-46.98 dBm
2.500000 GHz
D1 -2.79 dBm
D2 -22.79 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-1.13 dBm
2.427120 GHz
Marker 2 [T1]
-40.99 dBm
24.101080 GHz
Marker 3 [T1]
-41.63 dBm
22.453060 GHz
Marker 4 [T1]
-41.77 dBm
679.220000 MHz
D1 -0.33 dBm
D2 -20.33 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

802.11n (40MHz): 2TX

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)	101.2	30.5	70.7	74.0
2422.00 (AV)	85.7	31.9	53.8	54.0

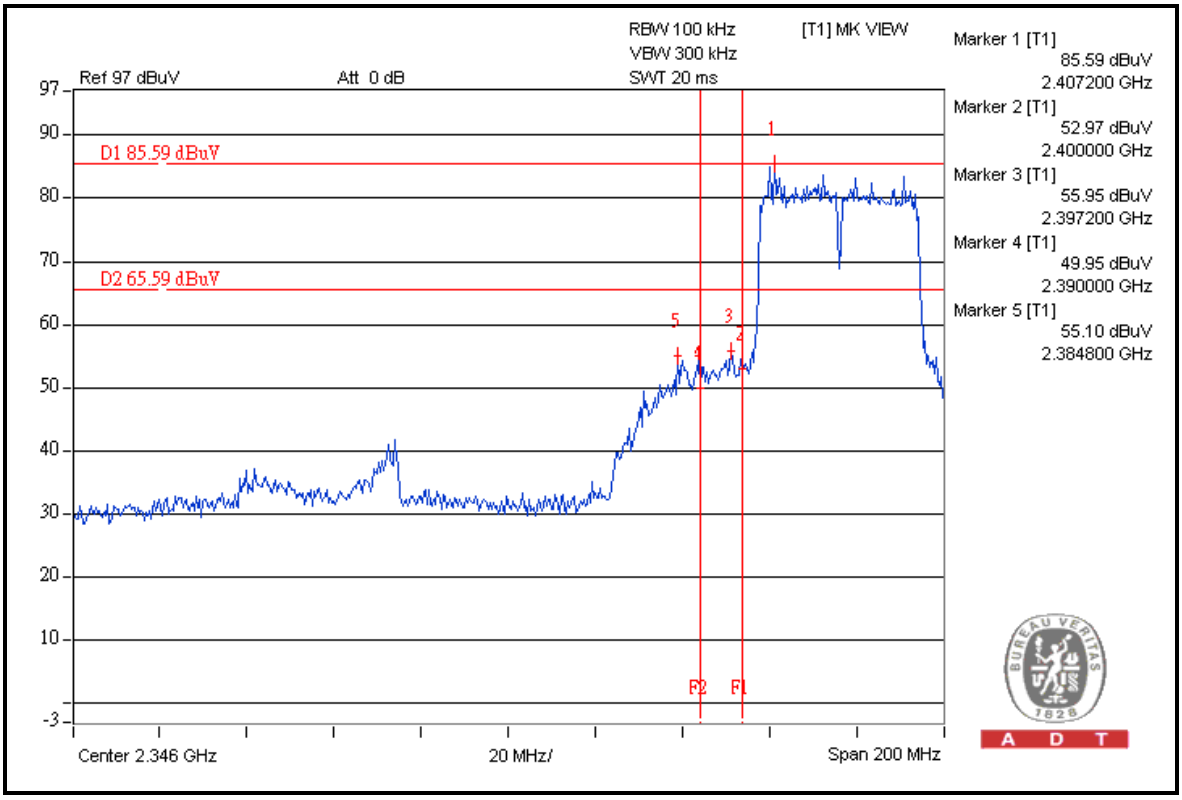
RESTRICT BAND (2483.5 ~ 2500 MHz)

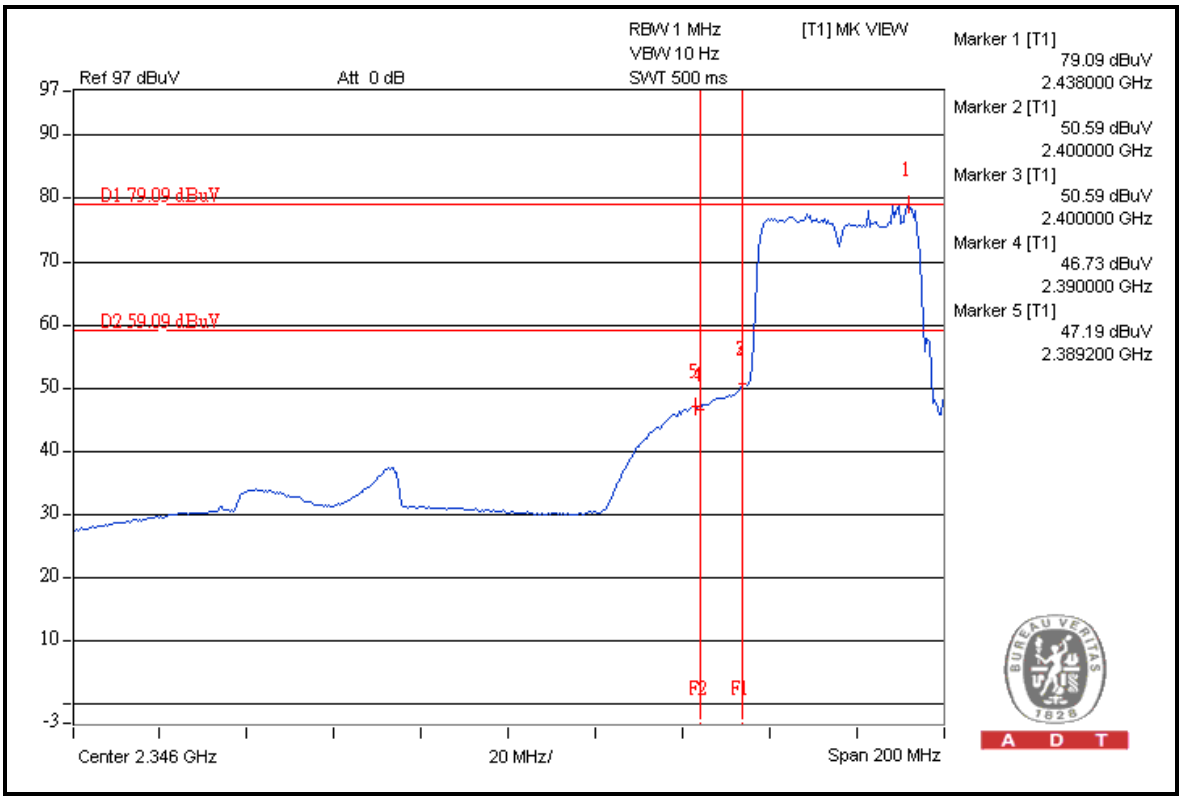
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2452.00 (PK)	100.5	37.4	63.1	74.0
2452.00 (AV)	84.0	38.7	45.3	54.0

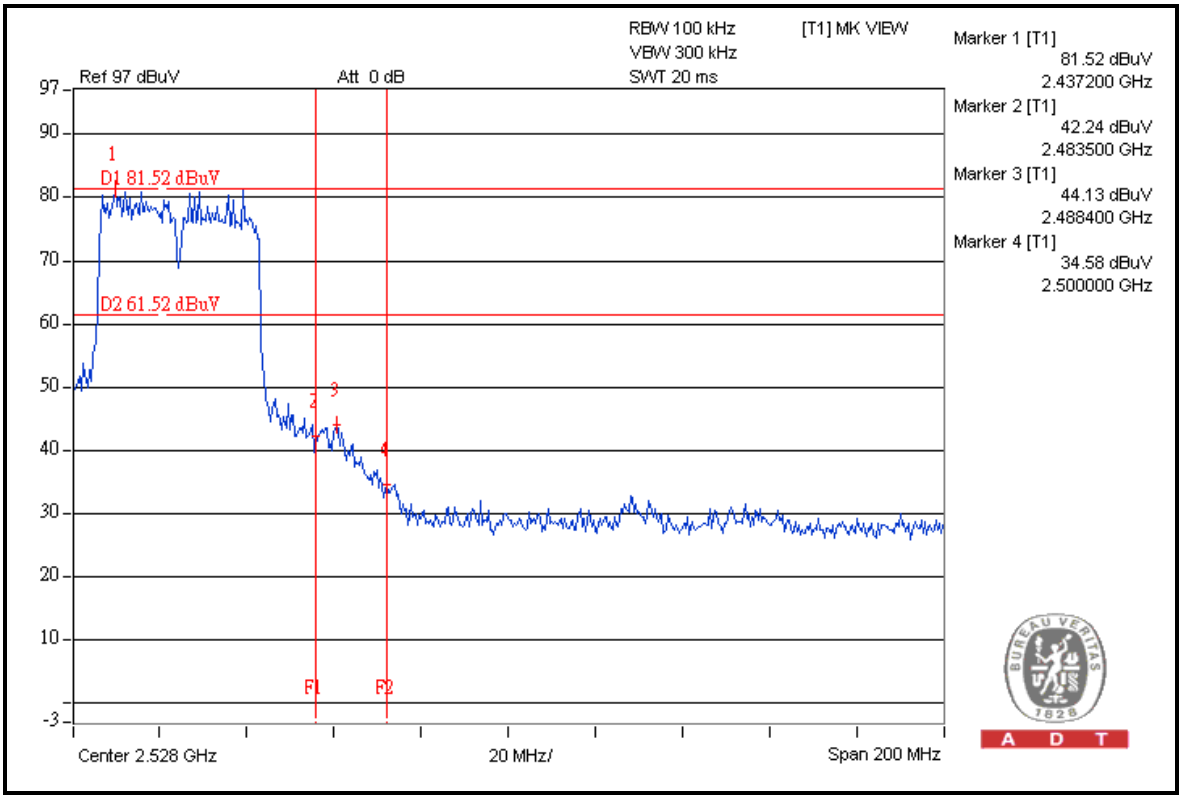
NOTE:

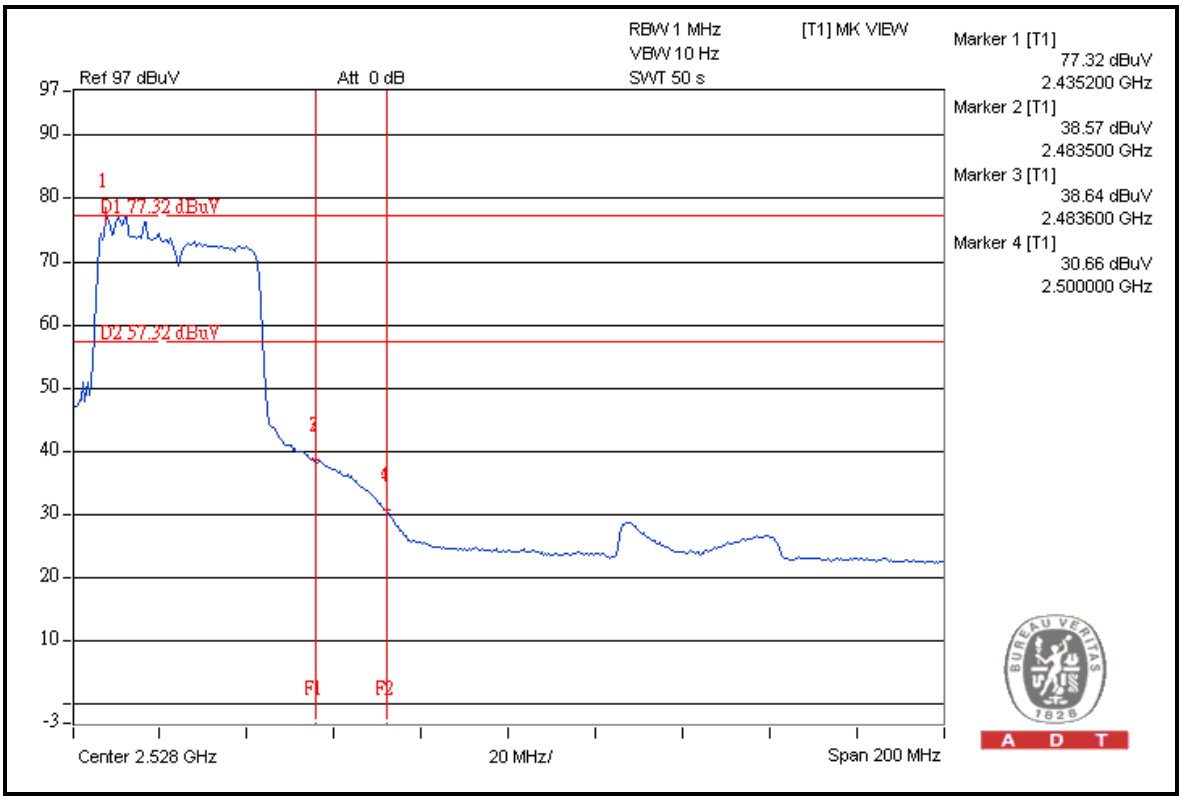
1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 2 pages.
2. Maximum field strength in restrict band = Fundamental emission – Delta.

FOR RADIATED MEASURED (TWO CHAINS ON)



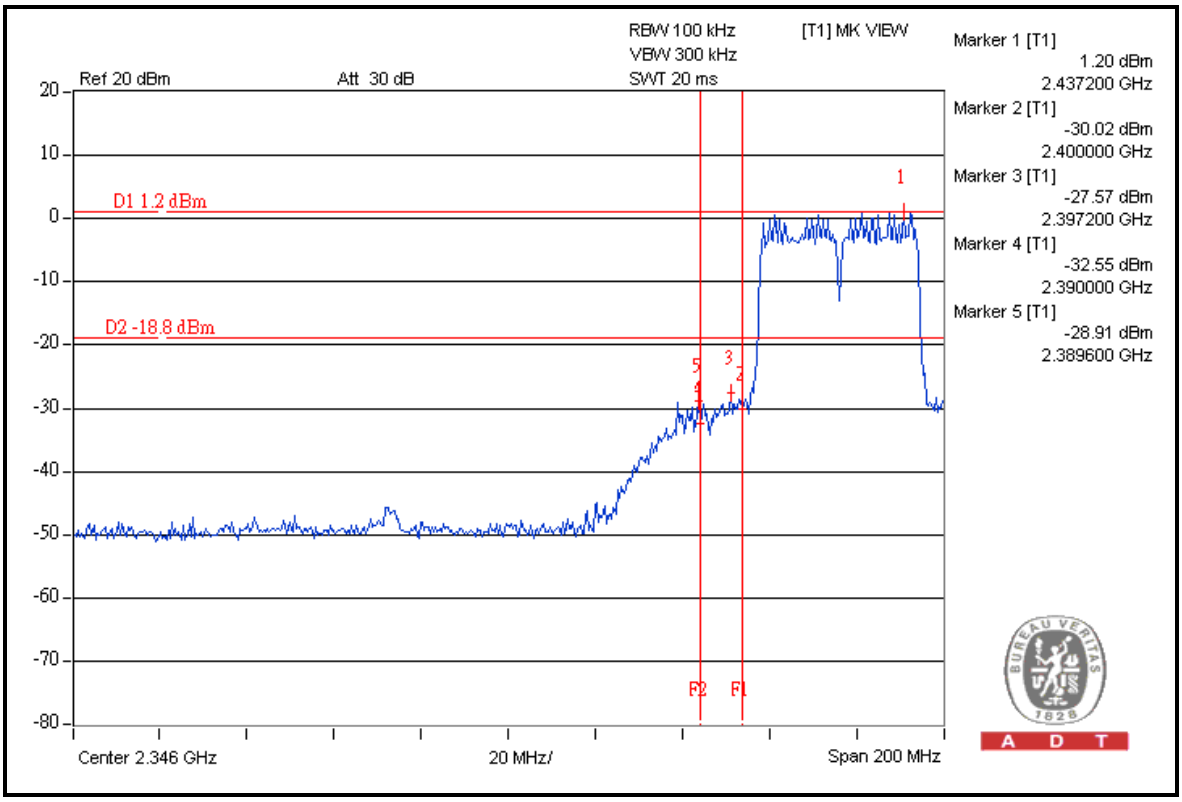


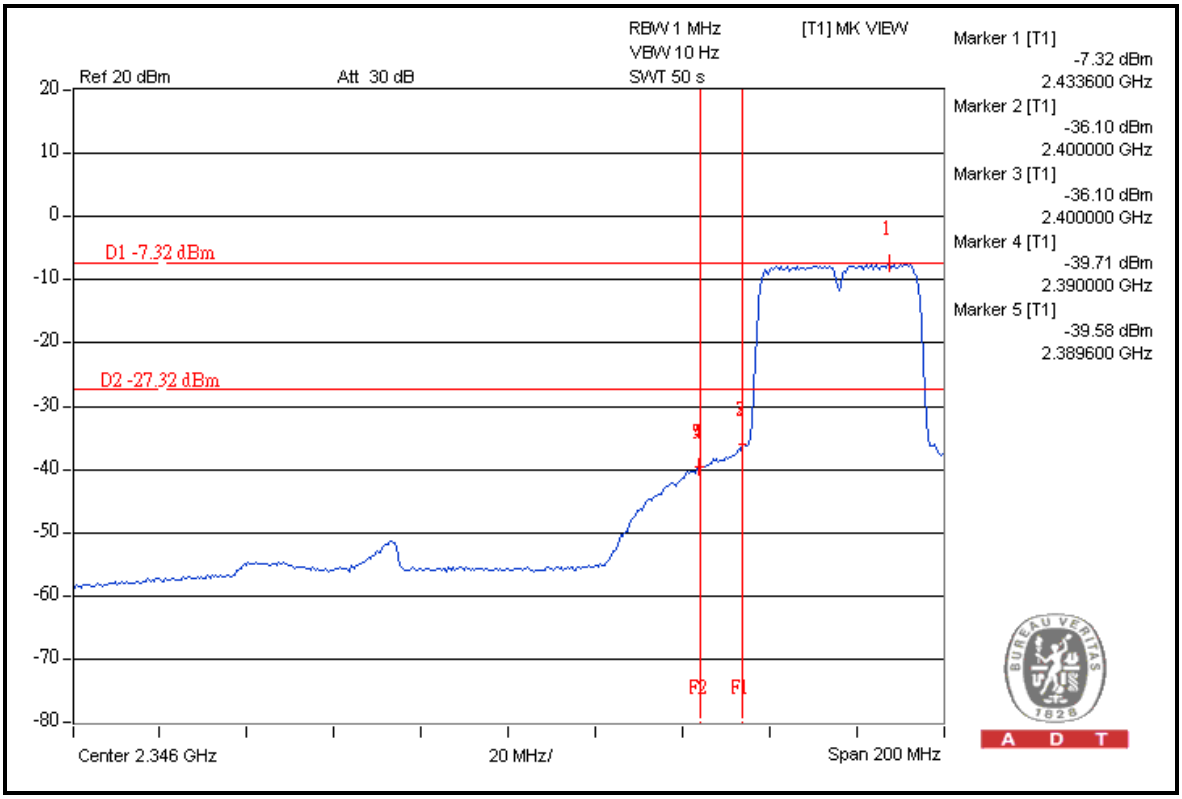

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 81.52 dBuV
D2 61.52 dBuV
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
81.52 dBuV
2.437200 GHz
Marker 2 [T1]
42.24 dBuV
2.483500 GHz
Marker 3 [T1]
44.13 dBuV
2.488400 GHz
Marker 4 [T1]
34.58 dBuV
2.500000 GHz

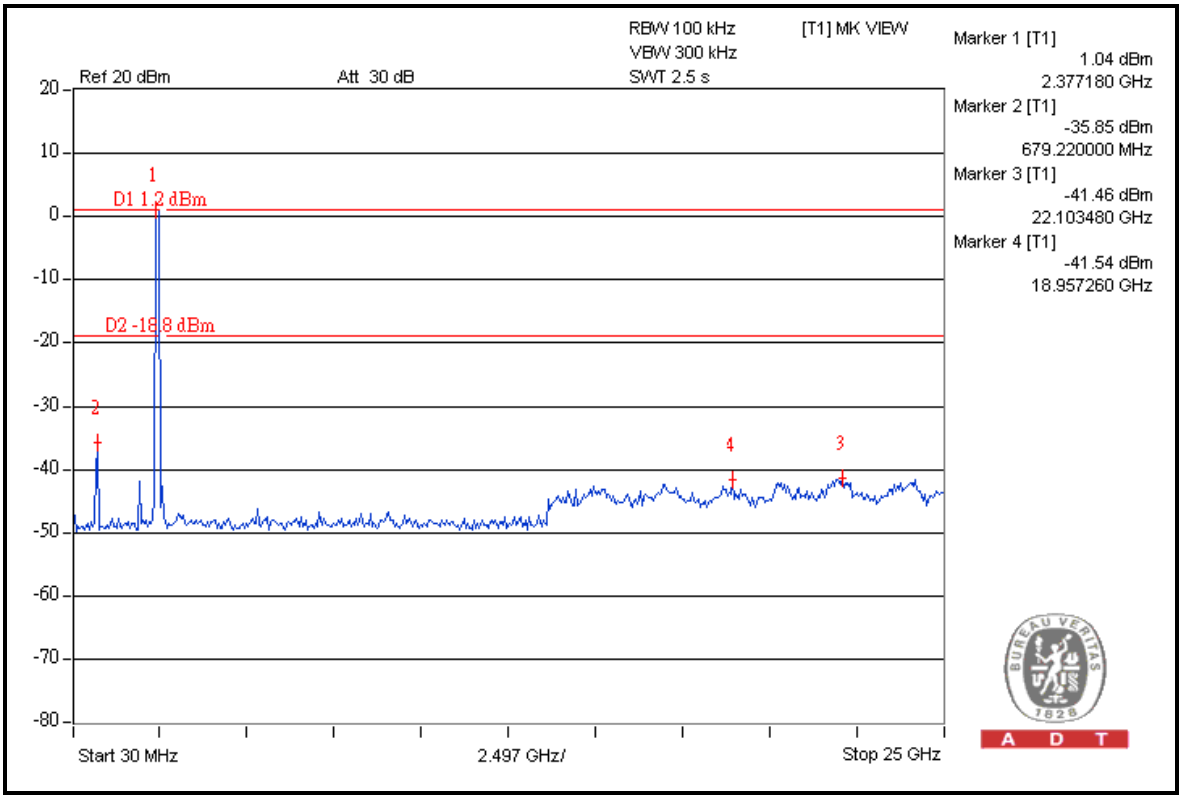

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 77.32 dBuV
D2 57.32 dBuV
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz
Marker 1 [T1]
77.32 dBuV
2.435200 GHz
Marker 2 [T1]
38.57 dBuV
2.483500 GHz
Marker 3 [T1]
38.64 dBuV
2.483600 GHz
Marker 4 [T1]
30.66 dBuV
2.500000 GHz

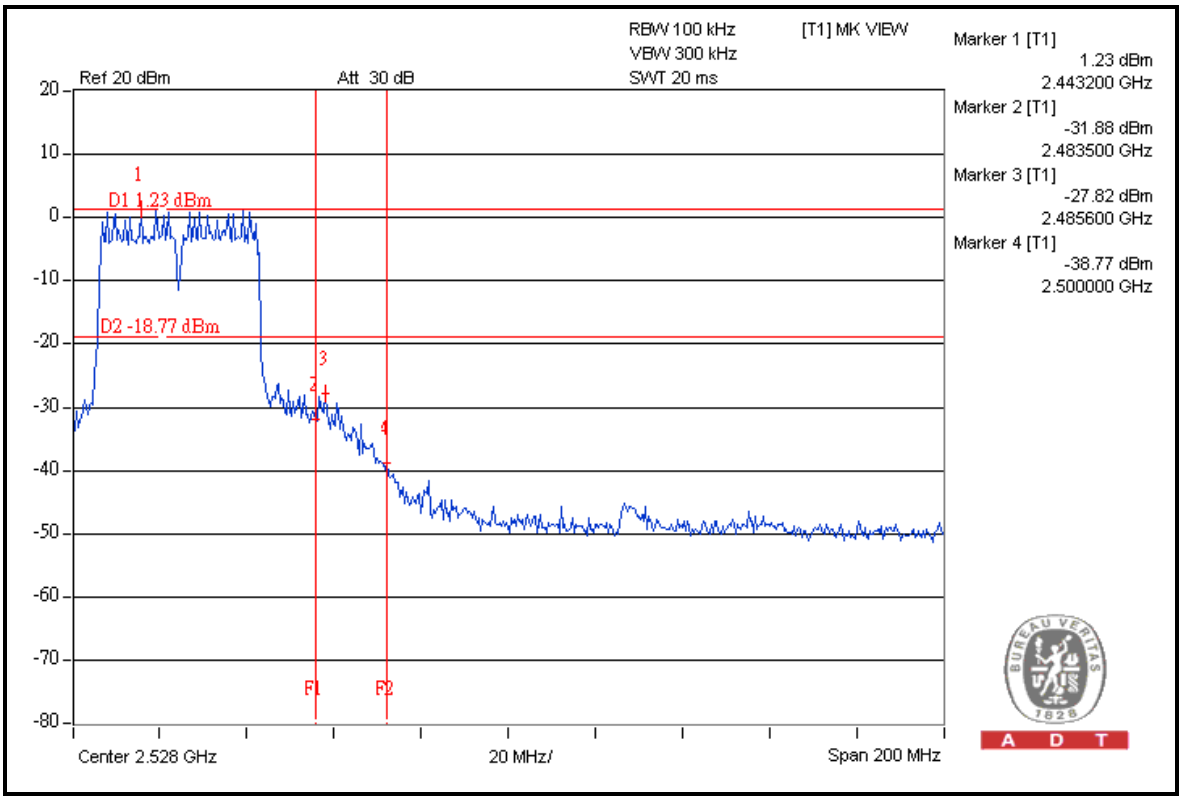
FOR CONDUCTED MEASURED

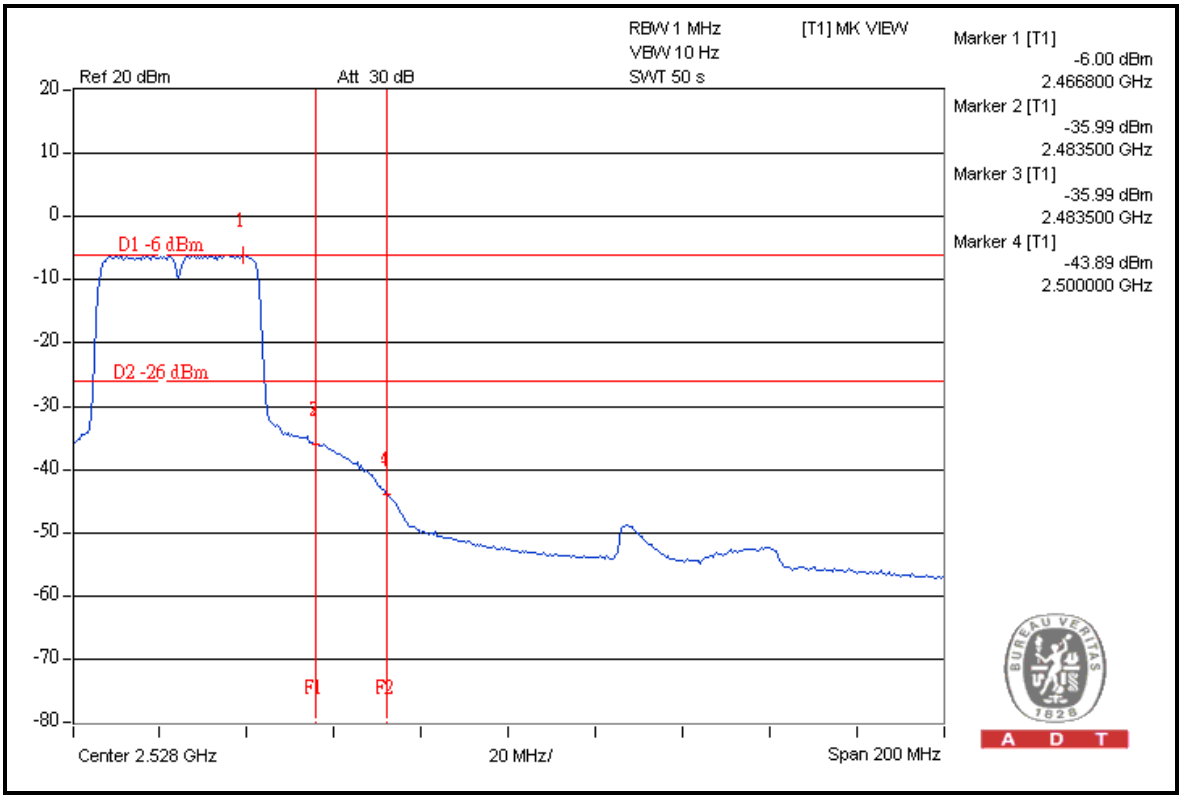
CHAIN 0

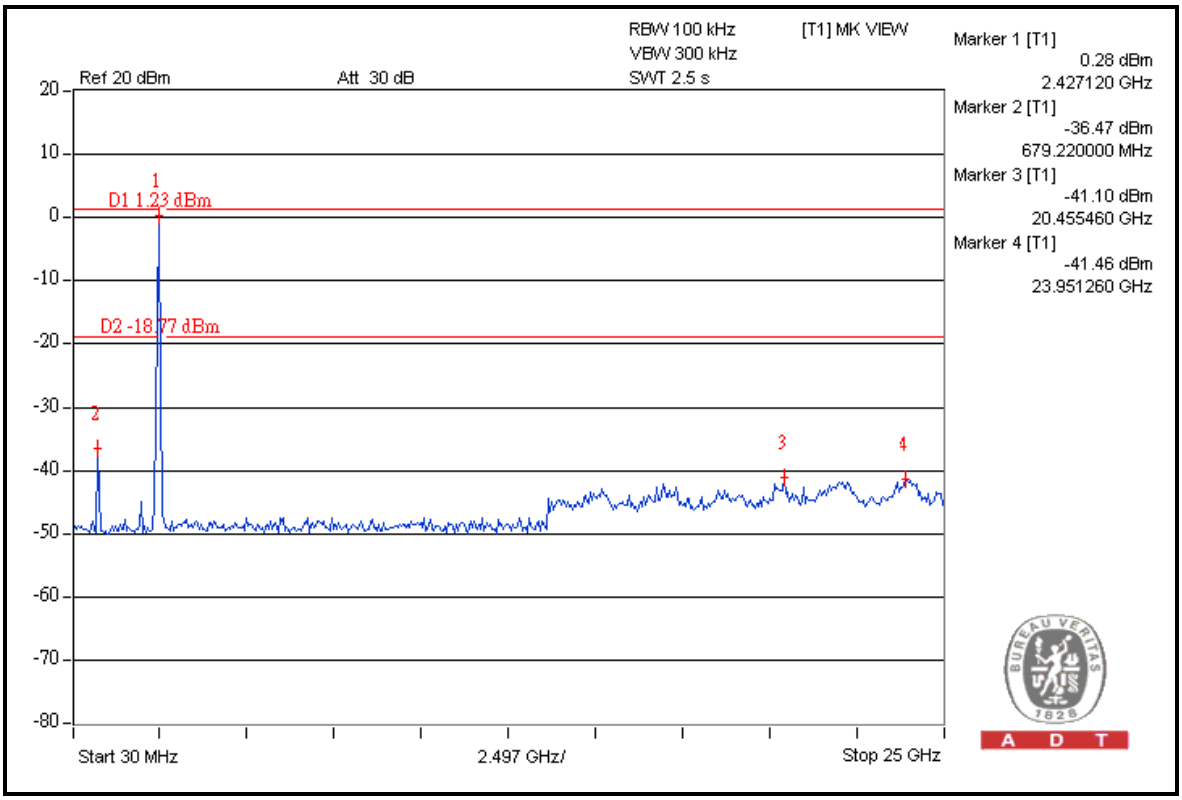




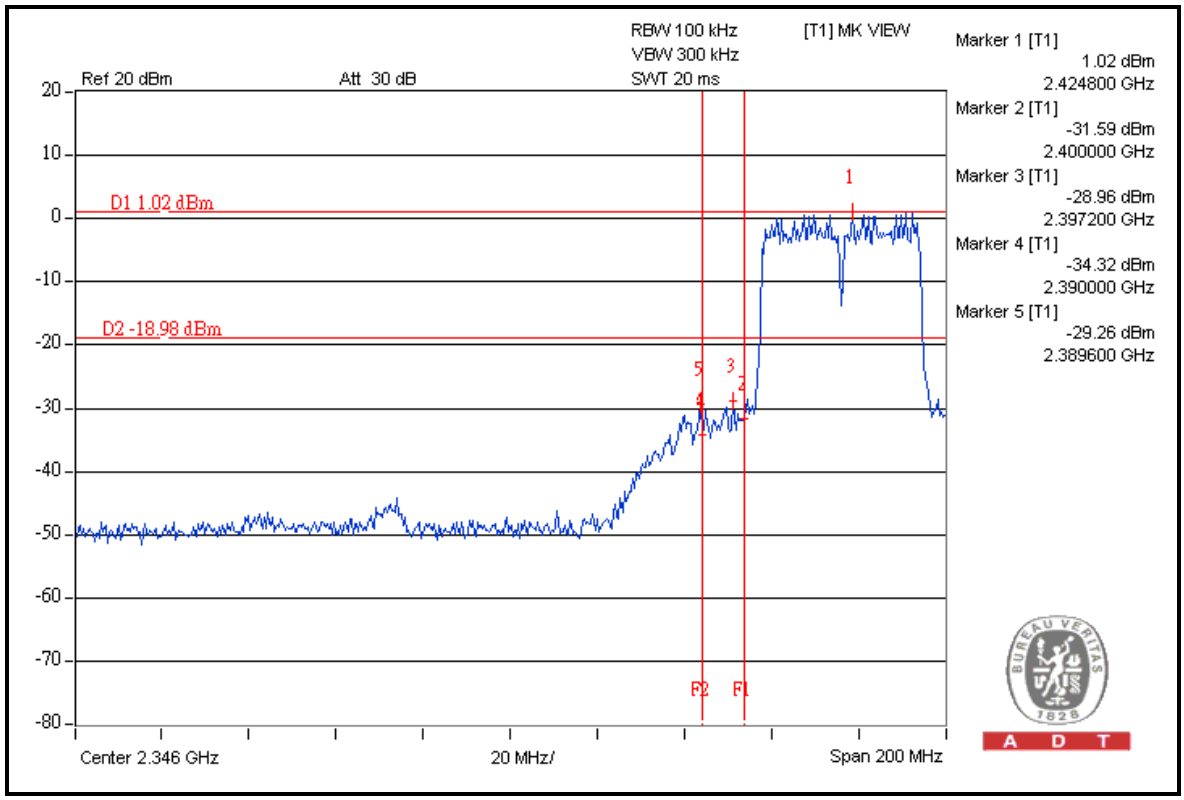

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
1.04 dBm
2.377180 GHz
Marker 2 [T1]
-35.85 dBm
679.220000 MHz
Marker 3 [T1]
-41.46 dBm
22.103480 GHz
Marker 4 [T1]
-41.54 dBm
18.957260 GHz
D1 1.2 dBm
D2 -18.8 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

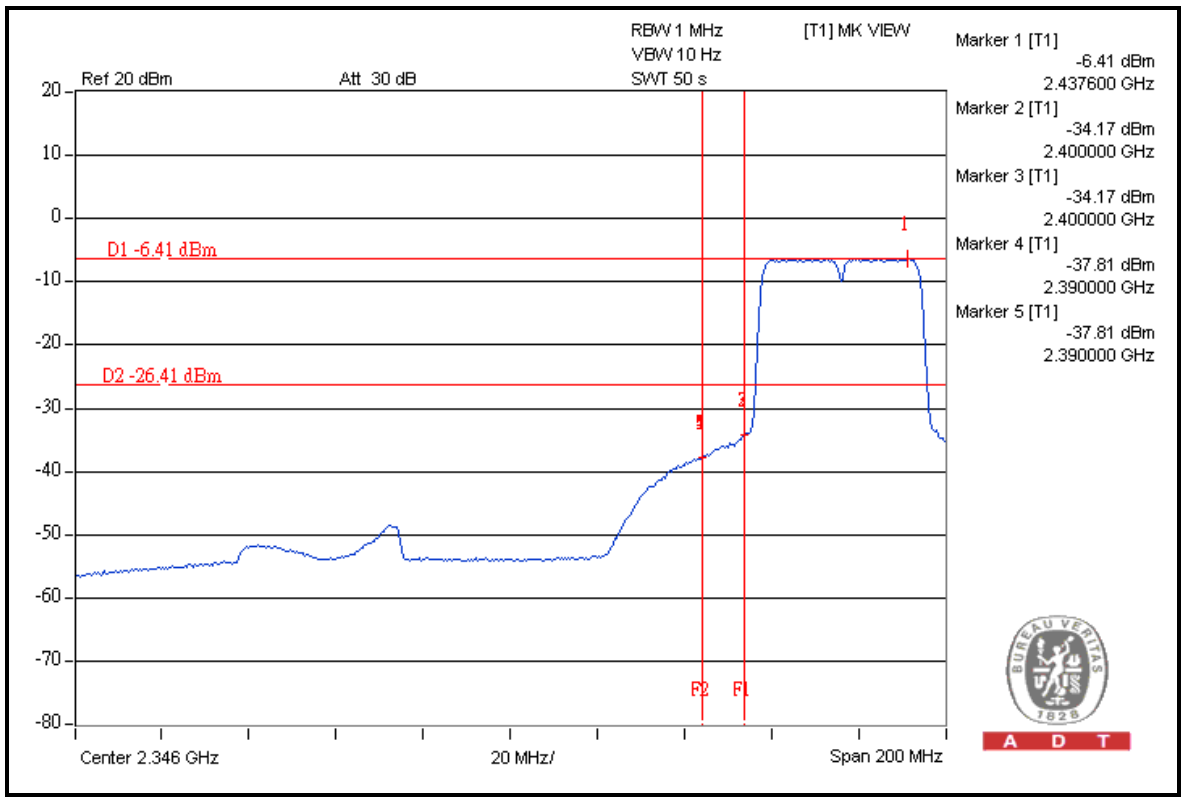

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
1.23 dBm
2.443200 GHz
Marker 2 [T1]
-31.88 dBm
2.483500 GHz
Marker 3 [T1]
-27.82 dBm
2.485600 GHz
Marker 4 [T1]
-38.77 dBm
2.500000 GHz
D1 1.23 dBm
D2 -18.77 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz

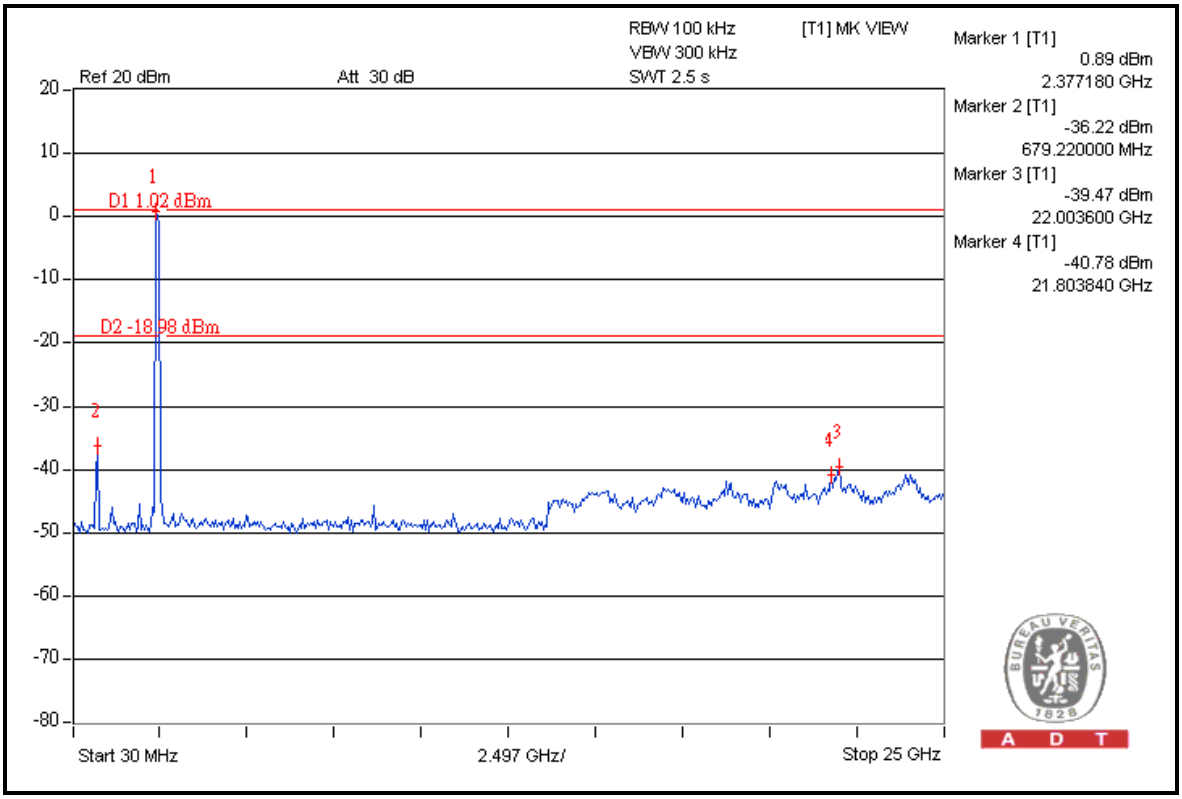

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-6.00 dBm
2.466800 GHz
Marker 2 [T1]
-35.99 dBm
2.483500 GHz
Marker 3 [T1]
-35.99 dBm
2.483500 GHz
Marker 4 [T1]
-43.89 dBm
2.500000 GHz
D1 -6 dBm
D2 -26 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz

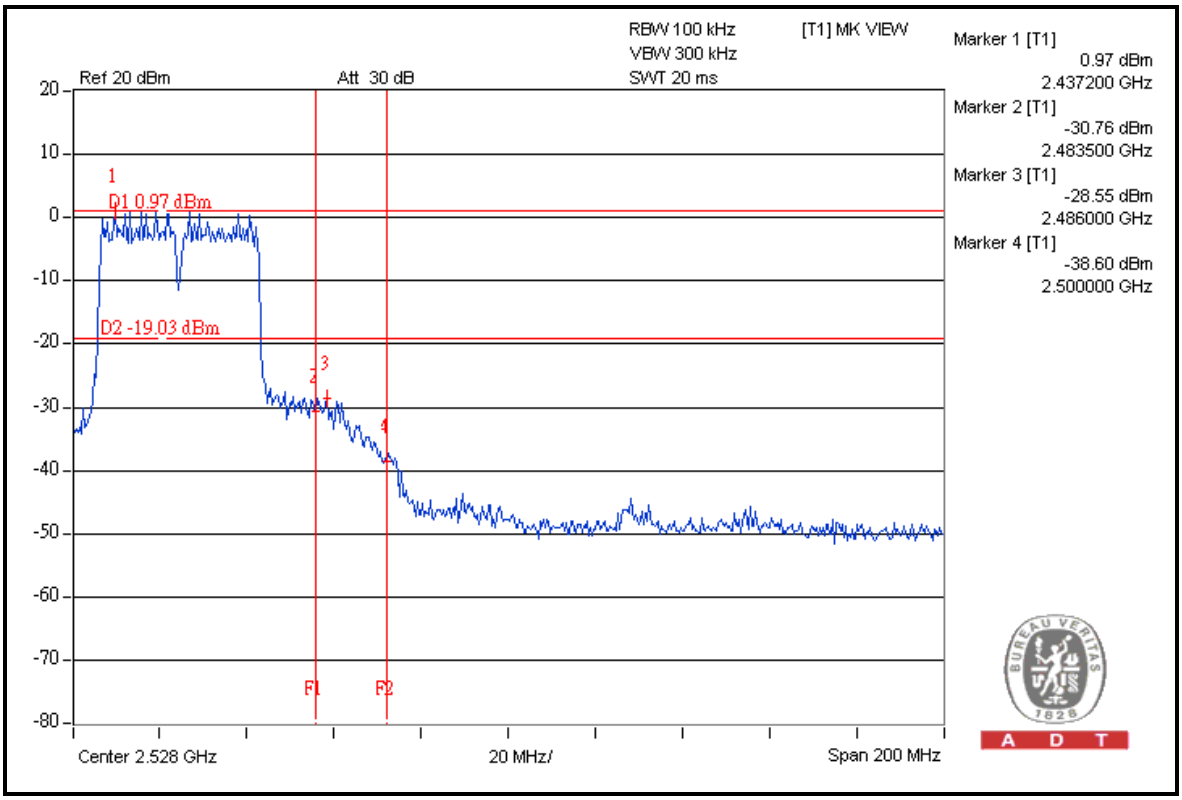

RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.28 dBm
2.427120 GHz
Marker 2 [T1]
-36.47 dBm
679.220000 MHz
Marker 3 [T1]
-41.10 dBm
20.455460 GHz
Marker 4 [T1]
-41.46 dBm
23.951260 GHz
D1 1.23 dBm
D2 -18.77 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

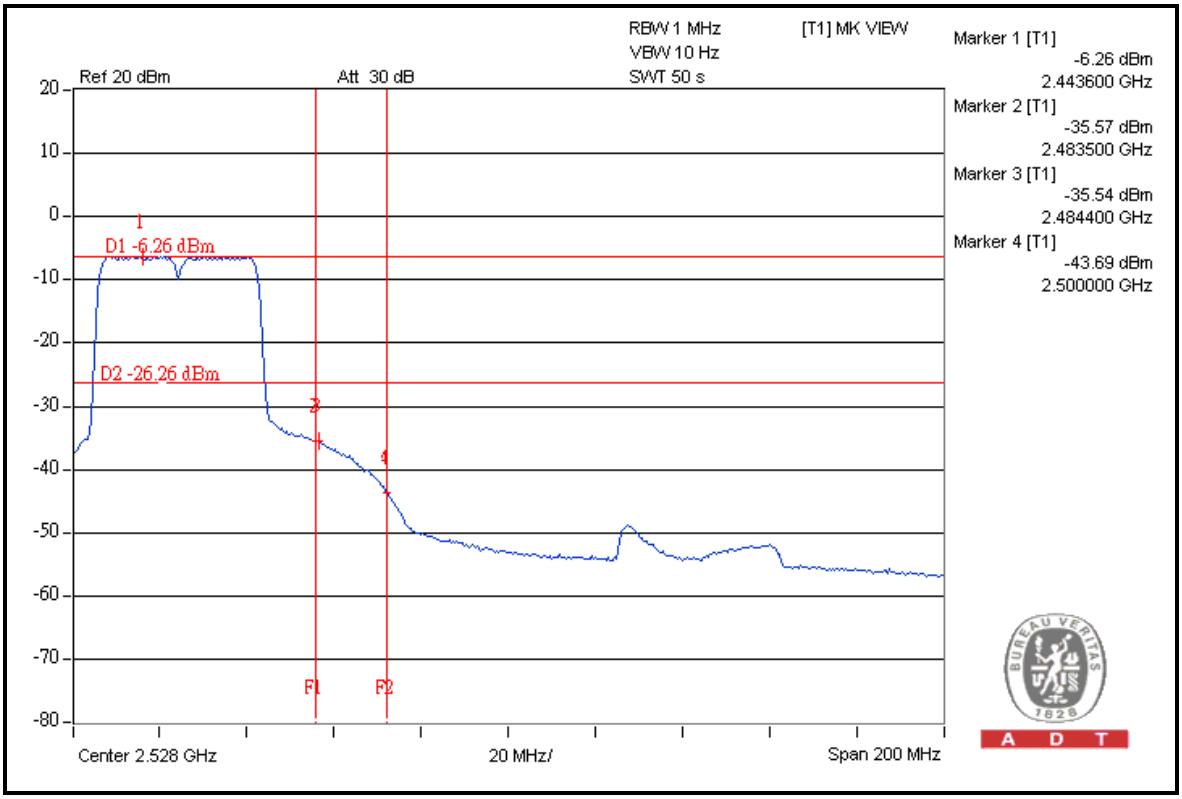
CHAIN 1

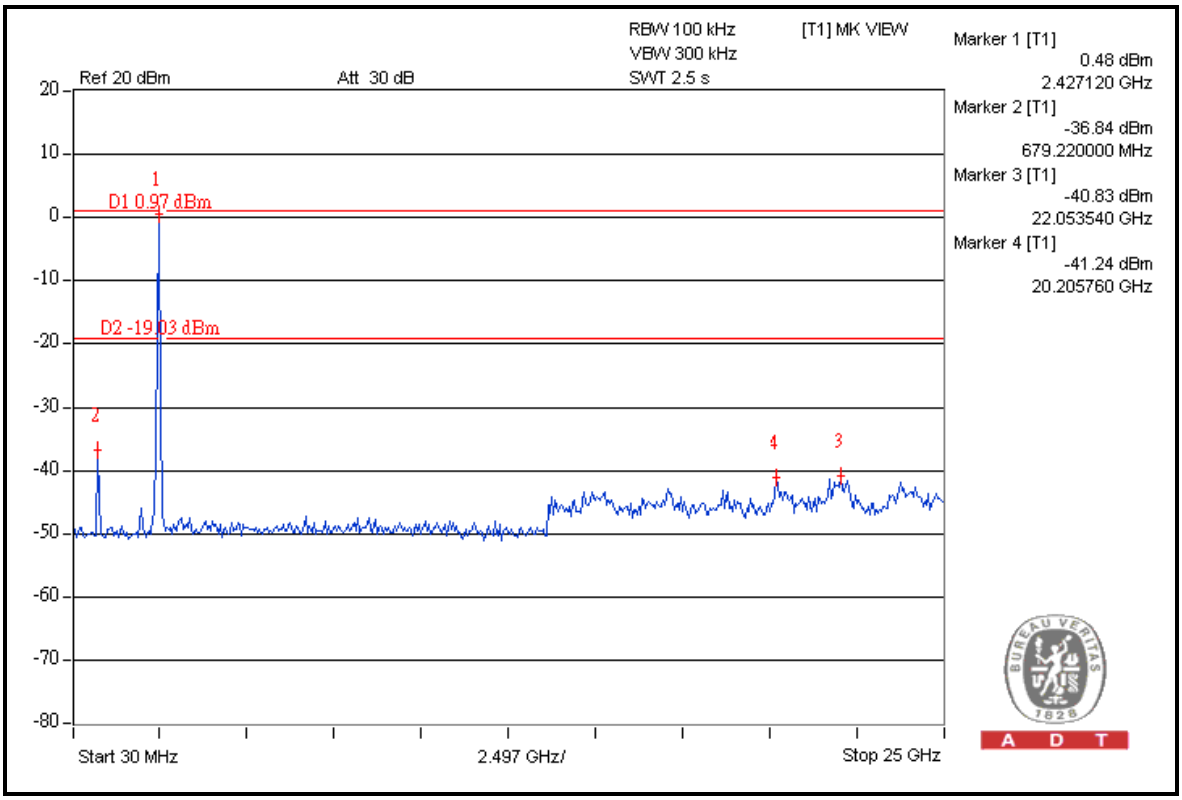

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.02 dBm
D2 -18.98 dBm
Marker 1 [T1]
1.02 dBm
2.424800 GHz
Marker 2 [T1]
-31.59 dBm
2.400000 GHz
Marker 3 [T1]
-28.96 dBm
2.397200 GHz
Marker 4 [T1]
-34.32 dBm
2.390000 GHz
Marker 5 [T1]
-29.26 dBm
2.389600 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 -6.41 dBm
D2 -26.41 dBm
Marker 1 [T1]
-6.41 dBm
2.437600 GHz
Marker 2 [T1]
-34.17 dBm
2.400000 GHz
Marker 3 [T1]
-34.17 dBm
2.400000 GHz
Marker 4 [T1]
-37.81 dBm
2.390000 GHz
Marker 5 [T1]
-37.81 dBm
2.390000 GHz
Center 2.346 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.89 dBm
2.377180 GHz
Marker 2 [T1]
-36.22 dBm
679.220000 MHz
Marker 3 [T1]
-39.47 dBm
22.003600 GHz
Marker 4 [T1]
-40.78 dBm
21.803840 GHz
D1 1.02 dBm
D2 -18.98 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.97 dBm
2.437200 GHz
Marker 2 [T1]
-30.76 dBm
2.483500 GHz
Marker 3 [T1]
-28.55 dBm
2.486000 GHz
Marker 4 [T1]
-38.60 dBm
2.500000 GHz
D1 0.97 dBm
D2 -19.03 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-6.26 dBm
2.443600 GHz
Marker 2 [T1]
-35.57 dBm
2.483500 GHz
Marker 3 [T1]
-35.54 dBm
2.484400 GHz
Marker 4 [T1]
-43.69 dBm
2.500000 GHz
D1 -6.26 dBm
D2 -26.26 dBm
F1
F2
Center 2.528 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.48 dBm
2.427120 GHz
Marker 2 [T1]
-36.84 dBm
679.220000 MHz
Marker 3 [T1]
-40.83 dBm
22.053540 GHz
Marker 4 [T1]
-41.24 dBm
20.205760 GHz
D1 0.97 dBm
D2 -19.03 dBm
Start 30 MHz
2.497 GHz/
Stop 25 GHz

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

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 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.

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	100276	Dec. 31, 2010	Dec. 30, 2011
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100219	Nov. 24, 2010	Nov. 23, 2011
LISN With Adapter (for EUT)	AD10	C10Ada-001	Nov. 24, 2010	Nov. 23, 2011
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100218	Nov. 24, 2010	Nov. 23, 2011
Software	ADT_Cond_V7.3.7	NA	NA	NA
Software	ADT_ISN_V7.3.7	NA	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	Feb. 22, 2011	Feb. 21, 2012
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Feb. 26, 2011	Feb. 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. The test was performed in Shielded Room No. 10.

3. The VCCI Site Registration No. C-1852.

5.1.3 TEST PROCEDURES

d. 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.

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

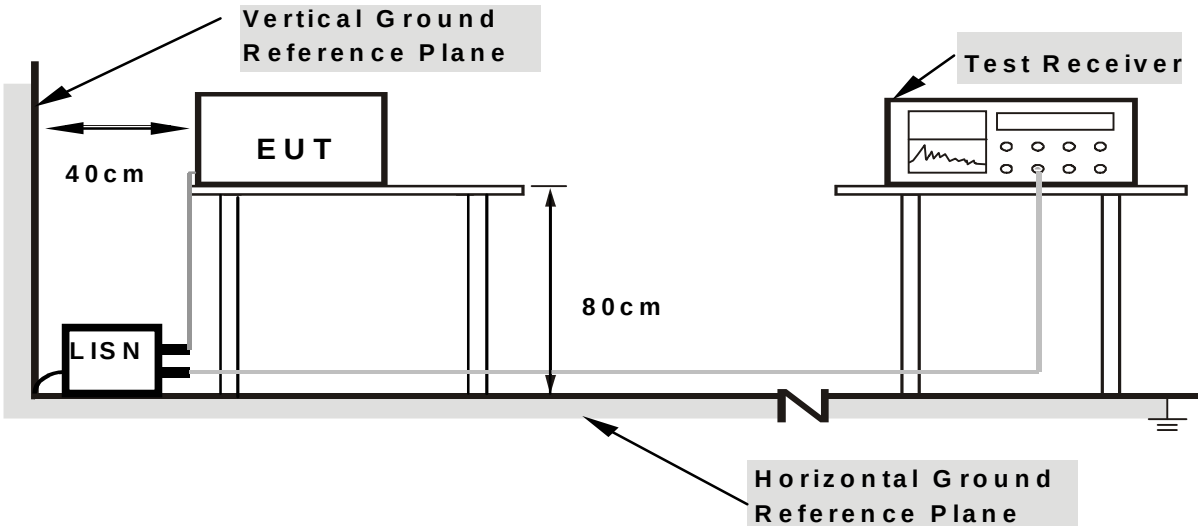
f. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP



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

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

5.1.6 EUT OPERATING CONDITIONS

Same as item 4.1.6.

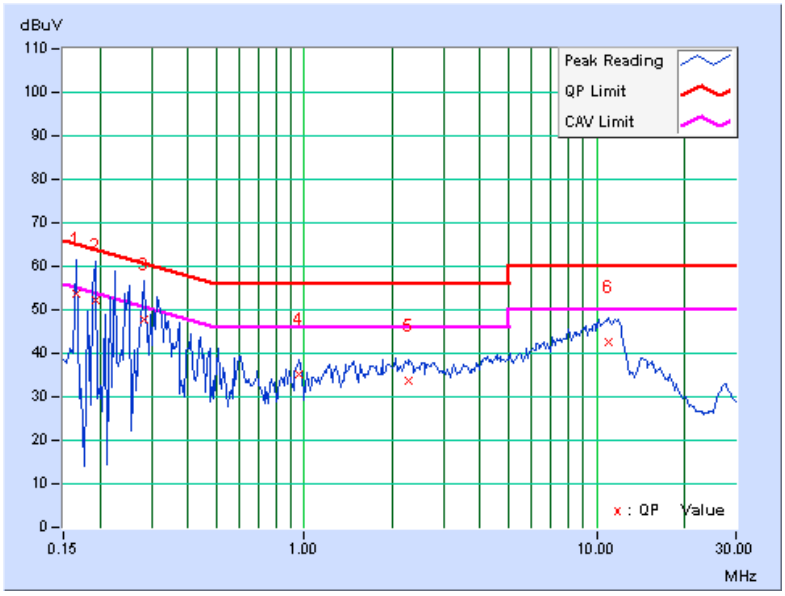
5.1.7 TEST RESULTS

CONDUCTED WORST-CASE DATA： 802.11a

6dB BANDWIDTH	9kHz	PHASE	Line 1
CHANNEL	Channel 149		

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	0.166	0.18	53.42	-	53.60	-	65.18	55.18	-11.58	-
2	0.193	0.18	51.96	-	52.14	-	63.91	53.91	-11.77	-
3	0.283	0.21	47.71	-	47.92	-	60.73	50.73	-12.81	-
4	0.959	0.29	35.05	-	35.34	-	56.00	46.00	-20.66	-
5	2.281	0.41	33.44	-	33.85	-	56.00	46.00	-22.15	-
6	10.965	0.94	41.59	-	42.53	-	60.00	50.00	-17.47	-

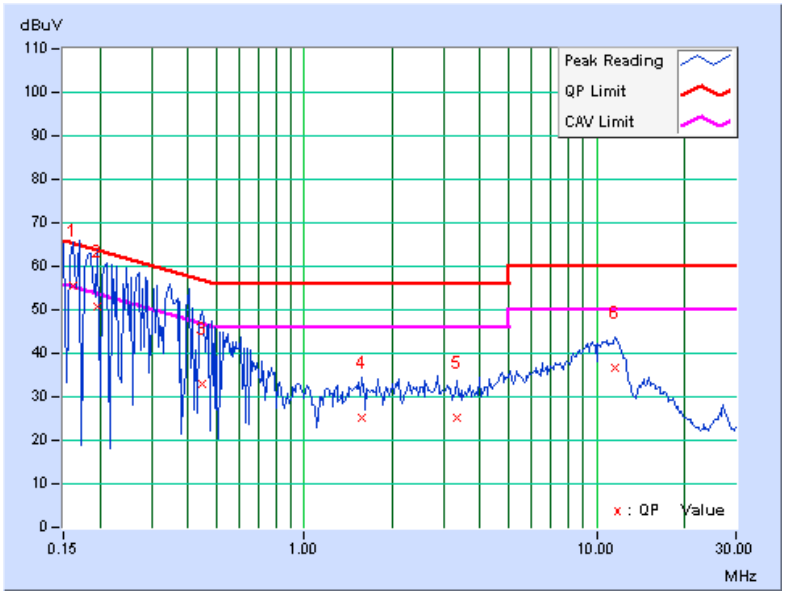
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission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



6dB BANDWIDTH	9kHz	PHASE	Line 2
CHANNEL	Channel 149		

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	0.162	0.19	55.22	26.71	55.41	26.90	65.38	55.38	-9.97	-28.48
2	0.197	0.19	50.72	-	50.91	-	63.73	53.73	-12.82	-
3	0.447	0.27	32.76	-	33.03	-	56.93	46.93	-23.90	-
4	1.570	0.38	24.92	-	25.30	-	56.00	46.00	-30.70	-
5	3.324	0.54	24.55	-	25.09	-	56.00	46.00	-30.91	-
6	11.543	0.86	35.75	-	36.61	-	60.00	50.00	-23.39	-

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.



5.2 RADIATED EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

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

NOTE:

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

5.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Mar. 04, 2011	Mar. 03, 2012
HP Preamplifier	8449B	3008A01924	Mar. 04, 2011	Mar. 03, 2012
HP Preamplifier	8449B	3008A01292	Mar. 04, 2011	Mar. 03, 2012
Agilent Spectrum Analyzer	E4446A	MY46180403	Jun. 22, 2011	Jun. 21, 2012
Schwarzbeck Antenna	VULB 9168	137	Apr. 12, 2011	Apr. 11, 2012
Schwarzbeck Antenna	VHBA 9123	480	May 06, 2011	May 05, 2012
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	ADT_Radiated_V 7.6.15.9.2	NA	NA	NA
SUHNER RF cable	SF102	CABLE-CH6	Aug. 19, 2011	Aug. 18, 2012
EMCO Horn Antenna	3115	6714	Oct. 26, 2010	Oct. 25, 2011
EMCO Horn Antenna	3115	9312-4192	Apr. 22, 2011	Apr. 21, 2012
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	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 horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is 447212.

5.2.3 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.

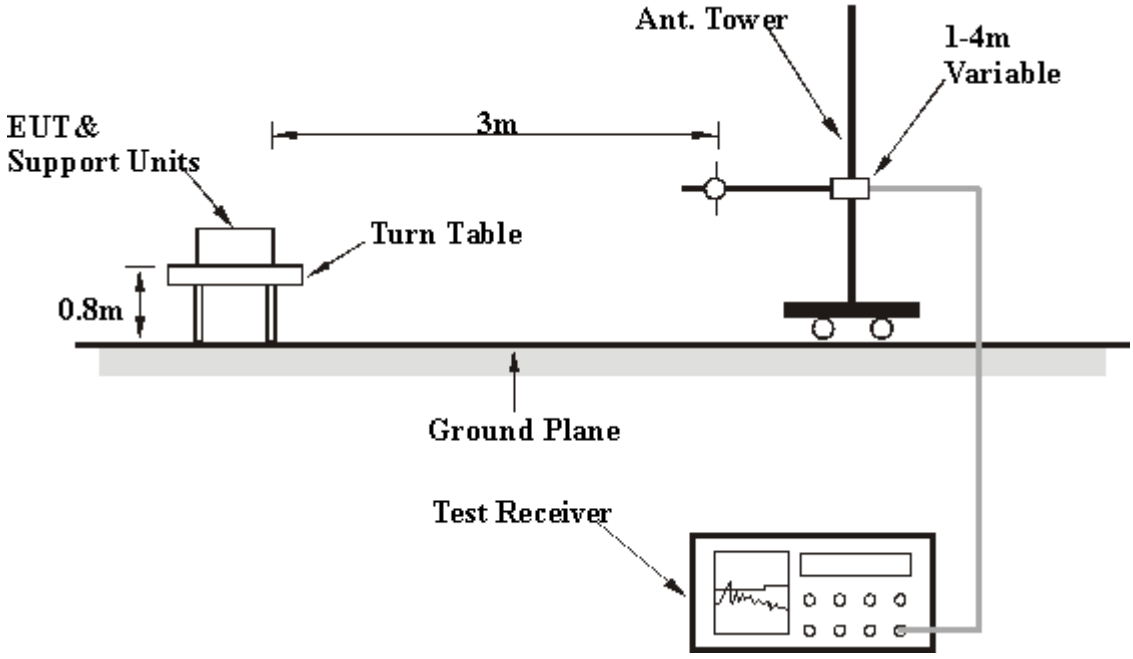
NOTE:

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 10Hz for Average detection (AV) at frequency above 1GHz.
4. 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



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

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	83.8 PK	102.2	-18.4	1.24 H	264	43.62	40.21
2	#5725.00	67.5 AV	91.5	-24.0	1.24 H	264	27.24	40.21
3	*5745.00	122.2 PK			1.24 H	264	81.96	40.23
4	*5745.00	111.5 AV			1.24 H	264	71.25	40.23
5	11490.00	61.5 PK	74.0	-12.5	1.18 H	134	11.26	50.24
6	11490.00	47.9 AV	54.0	-6.1	1.18 H	134	-2.33	50.24
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	80.0 PK	97.8	-17.7	1.00 V	194	39.82	40.21
2	#5725.00	64.8 AV	86.8	-22.1	1.00 V	194	24.57	40.21
3	*5745.00	117.8 PK			1.00 V	194	77.54	40.23
4	*5745.00	106.8 AV			1.00 V	194	66.60	40.23
5	11490.00	60.4 PK	74.0	-13.6	1.21 V	355	10.16	50.24
6	11490.00	46.6 AV	54.0	-7.4	1.21 V	355	-3.65	50.24

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	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	121.2 PK			1.23 H	254	80.93	40.29
2	*5785.00	111.3 AV			1.23 H	254	70.97	40.29
3	11570.00	62.1 PK	74.0	-11.9	1.42 H	224	11.88	50.20
4	11570.00	48.9 AV	54.0	-5.1	1.42 H	224	-1.27	50.20
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	*5785.00	117.4 PK			1.10 V	203	77.14	40.29
2	*5785.00	105.1 AV			1.10 V	203	64.80	40.29
3	11570.00	60.1 PK	74.0	-13.9	1.00 V	189	9.92	50.20
4	11570.00	47.3 AV	54.0	-6.7	1.00 V	189	-2.89	50.20

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	122.4 PK			1.18 H	258	82.07	40.34
2	*5825.00	113.0 AV			1.18 H	258	72.68	40.34
3	#5850.00	75.7 PK	102.4	-26.7	1.18 H	258	35.33	40.38
4	#5850.00	60.5 AV	93.0	-32.6	1.18 H	258	20.07	40.38
5	11650.00	62.6 PK	74.0	-11.4	1.51 H	200	12.48	50.13
6	11650.00	50.2 AV	54.0	-3.8	1.51 H	200	0.08	50.13
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	118.4 PK			1.09 V	198	78.07	40.34
2	*5825.00	107.4 AV			1.09 V	198	67.02	40.34
3	#5850.00	67.8 PK	98.4	-30.7	1.09 V	198	27.38	40.38
4	#5850.00	52.9 AV	87.4	-34.5	1.09 V	198	12.47	40.38
5	11650.00	60.8 PK	74.0	-13.2	1.15 V	343	10.67	50.13
6	11650.00	48.1 AV	54.0	-5.9	1.15 V	343	-2.07	50.13

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): 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	84.0 PK	102.5	-18.5	1.22 H	259	43.82	40.21
2	#5725.00	67.8 AV	91.8	-23.9	1.22 H	259	27.62	40.21
3	*5745.00	122.5 PK			1.22 H	259	82.29	40.23
4	*5745.00	111.8 AV			1.22 H	259	71.53	40.23
5	11490.00	61.8 PK	74.0	-12.2	1.05 H	154	11.58	50.24
6	11490.00	48.3 AV	54.0	-5.7	1.05 H	154	-1.93	50.24
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	80.5 PK	98.0	-17.4	1.00 V	187	40.32	40.21
2	#5725.00	65.0 AV	86.9	-21.9	1.00 V	187	24.78	40.21
3	*5745.00	118.0 PK			1.00 V	187	77.72	40.23
4	*5745.00	106.9 AV			1.00 V	187	66.66	40.23
5	11490.00	60.6 PK	74.0	-13.4	1.19 V	317	10.34	50.24
6	11490.00	46.7 AV	54.0	-7.3	1.19 V	317	-3.53	50.24

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	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	121.7 PK			1.21 H	238	81.43	40.29
2	*5785.00	111.5 AV			1.21 H	238	71.24	40.29
3	11570.00	62.3 PK	74.0	-11.7	1.37 H	211	12.14	50.20
4	11570.00	49.2 AV	54.0	-4.8	1.37 H	211	-0.99	50.20
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	*5785.00	118.0 PK			1.12 V	197	77.72	40.29
2	*5785.00	105.9 AV			1.12 V	197	65.64	40.29
3	11570.00	60.5 PK	74.0	-13.5	1.02 V	194	10.31	50.20
4	11570.00	47.9 AV	54.0	-6.1	1.02 V	194	-2.32	50.20

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	122.5 PK			1.15 H	253	82.19	40.34
2	*5825.00	113.3 AV			1.15 H	253	72.93	40.34
3	#5850.00	75.9 PK	102.5	-26.6	1.15 H	253	35.51	40.38
4	#5850.00	60.8 AV	93.3	-32.5	1.15 H	253	20.39	40.38
5	11650.00	63.0 PK	74.0	-11.0	1.44 H	211	12.90	50.13
6	11650.00	50.8 AV	54.0	-3.2	1.44 H	211	0.69	50.13
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	118.9 PK			1.08 V	205	78.59	40.34
2	*5825.00	107.7 AV			1.08 V	205	67.35	40.34
3	#5850.00	68.0 PK	98.9	-31.0	1.08 V	205	27.58	40.38
4	#5850.00	53.0 AV	87.7	-34.7	1.08 V	205	12.65	40.38
5	11650.00	61.2 PK	74.0	-12.8	1.24 V	322	11.10	50.13
6	11650.00	49.1 AV	54.0	-4.9	1.24 V	322	-1.02	50.13

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): 3TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	69.8 PK	93.4	-23.5	1.00 H	265	29.62	40.21
2	#5725.00	50.4 AV	80.4	-30.0	1.00 H	265	10.20	40.21
3	*5745.00	113.4 PK			1.00 H	265	73.13	40.23
4	*5745.00	100.4 AV			1.00 H	265	60.20	40.23
5	11490.00	58.8 PK	74.0	-15.2	1.07 H	251	8.56	50.24
6	11490.00	46.7 AV	54.0	-7.3	1.07 H	251	-3.55	50.24
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	63.9 PK	89.8	-25.8	1.09 V	207	23.73	40.21
2	#5725.00	48.3 AV	78.2	-29.9	1.09 V	207	8.08	40.21
3	*5745.00	109.8 PK			1.09 V	207	69.53	40.23
4	*5745.00	98.2 AV			1.09 V	207	57.92	40.23
5	11490.00	58.4 PK	74.0	-15.6	1.02 V	183	8.17	50.24
6	11490.00	45.9 AV	54.0	-8.1	1.02 V	183	-4.38	50.24

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	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	112.4 PK			1.40 H	178	72.11	40.29
2	*5785.00	99.6 AV			1.40 H	178	59.27	40.29
3	11570.00	59.1 PK	74.0	-14.9	1.33 H	183	8.92	50.20
4	11570.00	46.7 AV	54.0	-7.3	1.33 H	183	-3.47	50.20
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	*5785.00	109.3 PK			1.10 V	207	68.99	40.29
2	*5785.00	97.0 AV			1.10 V	207	56.75	40.29
3	11570.00	57.4 PK	74.0	-16.6	1.08 V	218	7.23	50.20
4	11570.00	44.3 AV	54.0	-9.7	1.08 V	218	-5.89	50.20

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

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	114.1 PK			1.20 H	255	73.74	40.34
2	*5825.00	100.7 AV			1.20 H	255	60.32	40.34
3	#5850.00	66.1 PK	94.1	-28.0	1.20 H	255	25.73	40.38
4	#5850.00	50.5 AV	80.7	-30.2	1.20 H	255	10.07	40.38
5	11650.00	59.1 PK	74.0	-14.9	1.12 H	168	8.94	50.13
6	11650.00	47.1 AV	54.0	-6.9	1.12 H	168	-3.04	50.13
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	110.4 PK			1.07 V	207	70.02	40.34
2	*5825.00	98.3 AV			1.07 V	207	57.96	40.34
3	#5850.00	61.2 PK	90.4	-29.2	1.07 V	207	20.82	40.38
4	#5850.00	46.3 AV	78.3	-32.0	1.07 V	207	5.92	40.38
5	11650.00	58.0 PK	74.0	-16.1	1.02 V	229	7.82	50.13
6	11650.00	44.7 AV	54.0	-9.4	1.02 V	229	-5.48	50.13

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): 1TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	87.3 PK	96.7	-9.3	1.23 H	260	47.12	40.21
2	#5725.00	67.7 AV	86.3	-18.6	1.23 H	260	27.47	40.21
3	*5755.00	116.7 PK			1.23 H	260	76.40	40.25
4	*5755.00	106.3 AV			1.23 H	260	66.07	40.25
5	11510.00	59.1 PK	74.0	-15.0	1.06 H	299	8.82	50.23
6	11510.00	46.7 AV	54.0	-7.3	1.06 H	299	-3.54	50.23
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	77.0 PK	92.9	-15.9	1.09 V	196	36.81	40.21
2	#5725.00	61.3 AV	81.3	-20.0	1.09 V	196	21.06	40.21
3	*5755.00	112.9 PK			1.09 V	196	72.65	40.25
4	*5755.00	101.3 AV			1.09 V	196	61.01	40.25
5	11510.00	58.1 PK	74.0	-15.9	1.08 V	221	7.86	50.23
6	11510.00	46.4 AV	54.0	-7.7	1.08 V	221	-3.88	50.23

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
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	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	116.3 PK			1.27 H	261	76.03	40.30
2	*5795.00	105.4 AV			1.27 H	261	65.09	40.30
3	#5850.00	67.1 PK	96.3	-29.3	1.27 H	261	26.67	40.38
4	#5850.00	52.8 AV	85.4	-32.6	1.27 H	261	12.41	40.38
5	11590.00	58.9 PK	74.0	-15.2	1.22 H	250	8.66	50.19
6	11590.00	47.0 AV	54.0	-7.0	1.22 H	250	-3.22	50.19
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	113.7 PK			1.17 V	159	73.37	40.30
2	*5795.00	101.4 AV			1.17 V	159	61.08	40.30
3	#5850.00	64.7 PK	93.7	-29.0	1.17 V	159	24.33	40.38
4	#5850.00	49.2 AV	81.4	-32.1	1.17 V	159	8.86	40.38
5	11590.00	58.4 PK	74.0	-15.6	1.02 V	177	8.23	50.19
6	11590.00	46.1 AV	54.0	-7.9	1.02 V	177	-4.13	50.19

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

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

802.11n (40MHz): 3TX

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	78.3 PK	94.8	-16.4	1.24 H	275	38.13	40.21
2	#5725.00	58.8 AV	74.9	-16.1	1.24 H	275	18.61	40.21
3	*5755.00	114.8 PK			1.24 H	275	74.52	40.25
4	*5755.00	94.9 AV			1.24 H	275	54.66	40.25
5	11510.00	58.7 PK	74.0	-15.3	1.20 H	190	8.43	50.23
6	11510.00	45.2 AV	54.0	-8.8	1.20 H	190	-5.04	50.23
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5725.00	74.1 PK	90.9	-16.8	1.09 V	207	33.88	40.21
2	#5725.00	54.7 AV	72.7	-18.1	1.09 V	207	14.46	40.21
3	*5755.00	110.9 PK			1.09 V	207	70.64	40.25
4	*5755.00	92.7 AV			1.09 V	207	52.48	40.25
5	11510.00	58.2 PK	74.0	-15.9	1.07 V	173	7.92	50.23
6	11510.00	44.7 AV	54.0	-9.3	1.07 V	173	-5.53	50.23

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
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	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	114.8 PK			1.22 H	255	74.49	40.30
2	*5795.00	95.1 AV			1.22 H	255	54.81	40.30
3	#5850.00	69.1 PK	94.8	-25.7	1.22 H	255	28.67	40.38
4	#5850.00	49.8 AV	75.1	-25.3	1.22 H	255	9.39	40.38
5	11590.00	58.5 PK	74.0	-15.5	1.10 H	207	8.33	50.19
6	11590.00	45.4 AV	54.0	-8.6	1.10 H	207	-4.81	50.19
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	109.2 PK			1.00 V	204	68.94	40.30
2	*5795.00	90.4 AV			1.00 V	204	50.10	40.30
3	#5850.00	62.0 PK	89.2	-27.2	1.00 V	204	21.62	40.38
4	#5850.00	46.1 AV	70.4	-24.3	1.00 V	204	5.69	40.38
5	11590.00	58.1 PK	74.0	-15.9	1.05 V	185	7.92	50.19
6	11590.00	44.7 AV	54.0	-9.3	1.05 V	185	-5.53	50.19

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

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

BELOW 1GHz WORST-CASE DATA：802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	23deg. C, 71%RH	TESTED BY	Nick Chen

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	39.68	32.6 QP	40.0	-7.4	1.07 H	346	18.38	14.22
2	167.19	38.0 QP	43.5	-5.5	1.00 H	100	23.80	14.17
3	289.85	38.4 QP	46.0	-7.6	1.08 H	190	23.25	15.19
4	373.78	45.6 QP	46.0	-0.4	1.08 H	55	27.74	17.90
5	499.67	38.5 QP	46.0	-7.5	1.23 H	343	17.31	21.18
6	623.94	38.1 QP	46.0	-7.9	1.25 H	166	14.53	23.61
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	39.68	39.0 QP	40.0	-1.0	1.22 V	202	24.82	14.22
2	75.19	35.8 QP	40.0	-4.2	1.39 V	4	24.37	11.39
3	167.19	35.3 QP	43.5	-8.2	1.24 V	265	21.11	14.17
4	373.78	45.3 QP	46.0	-0.7	1.17 V	10	27.42	17.90
5	499.67	37.6 QP	46.0	-8.5	1.03 V	97	16.37	21.18
6	623.94	34.0 QP	46.0	-12.0	1.00 V	133	10.40	23.61

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

5.3 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	FSP 40	100036	Apr. 29, 2011	Apr. 28, 2012

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

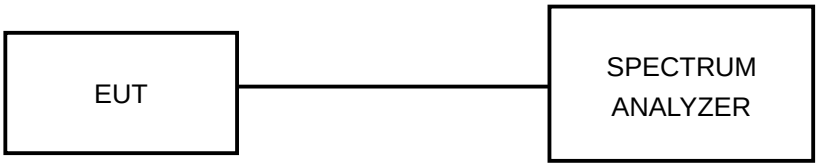
5.3.3 TEST PROCEDURE

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

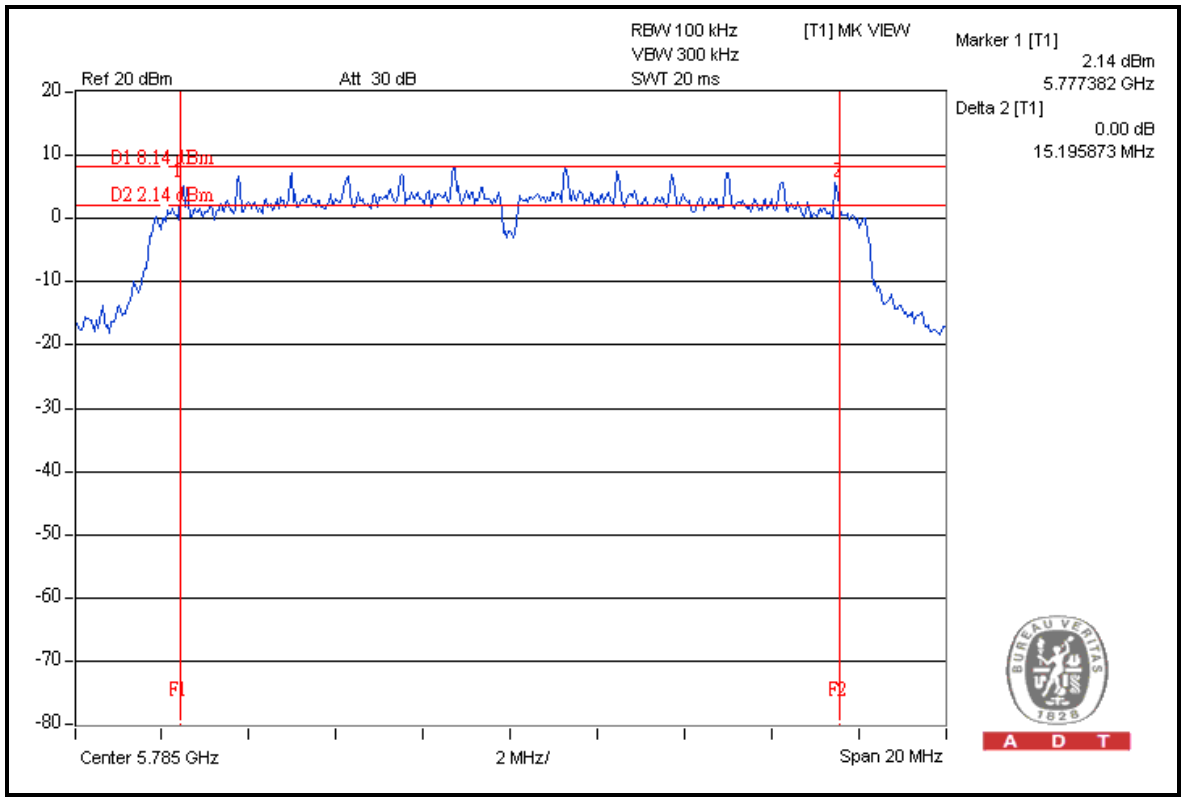
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

5.3.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.12	0.5	PASS
157	5785	15.19	0.5	PASS
165	5825	15.16	0.5	PASS

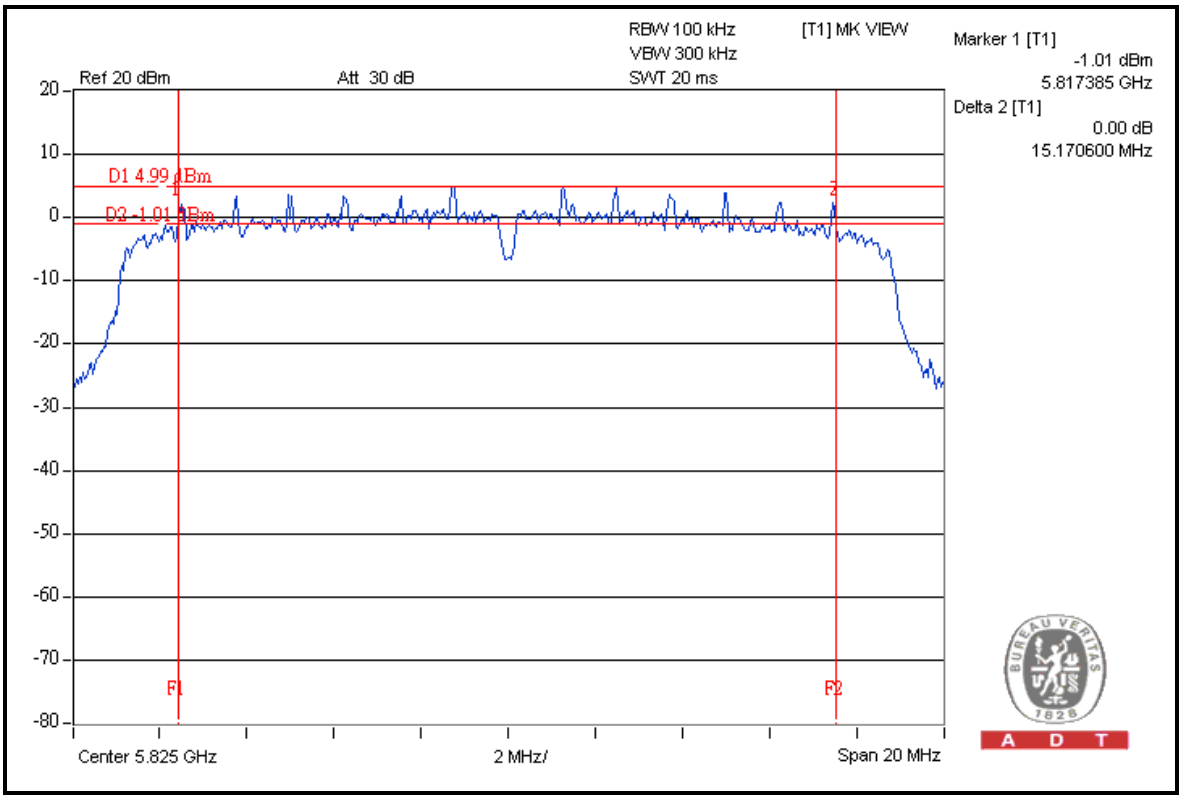
FOR CH 157



802.11n (20MHz): 1TX

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.15	0.5	PASS
157	5785	15.15	0.5	PASS
165	5825	15.17	0.5	PASS

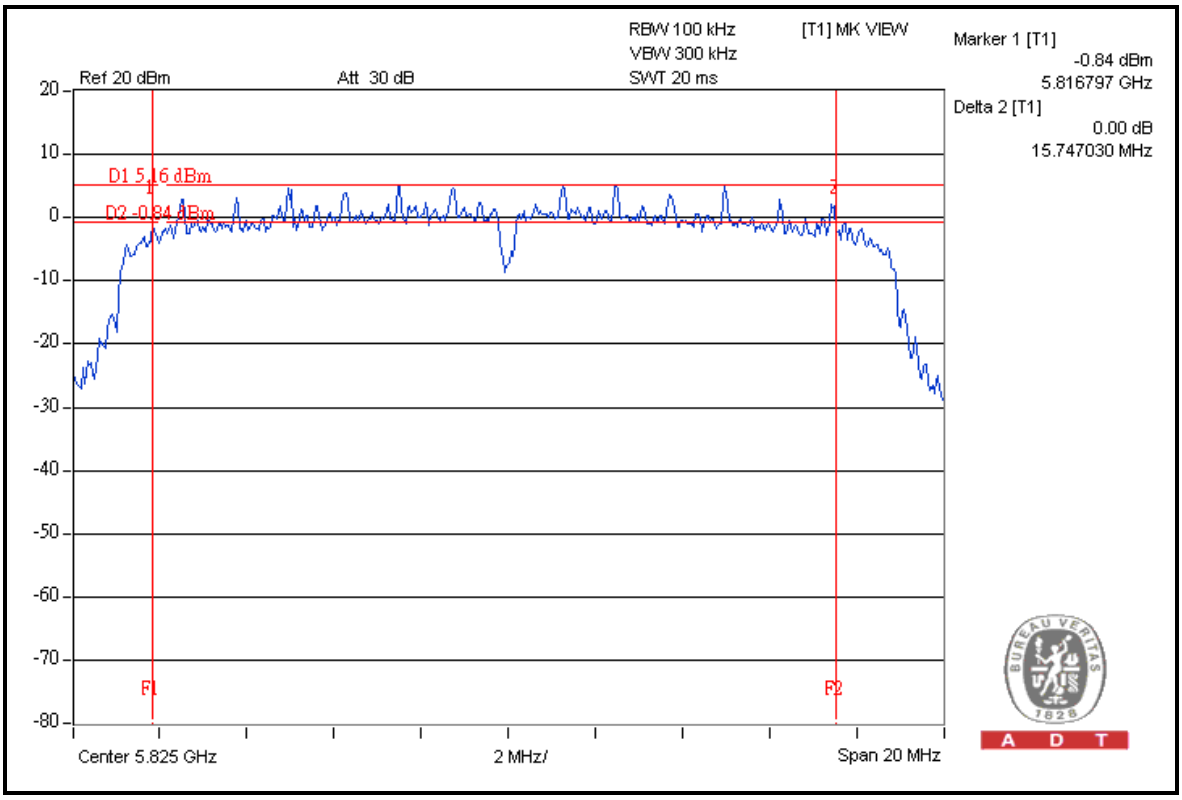
FOR CH 165



802.11n (20MHz): 3TX

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 3		
149	5745	15.16	15.38	15.13	0.5	PASS
157	5785	15.16	15.39	15.18	0.5	PASS
165	5825	15.17	15.74	15.16	0.5	PASS

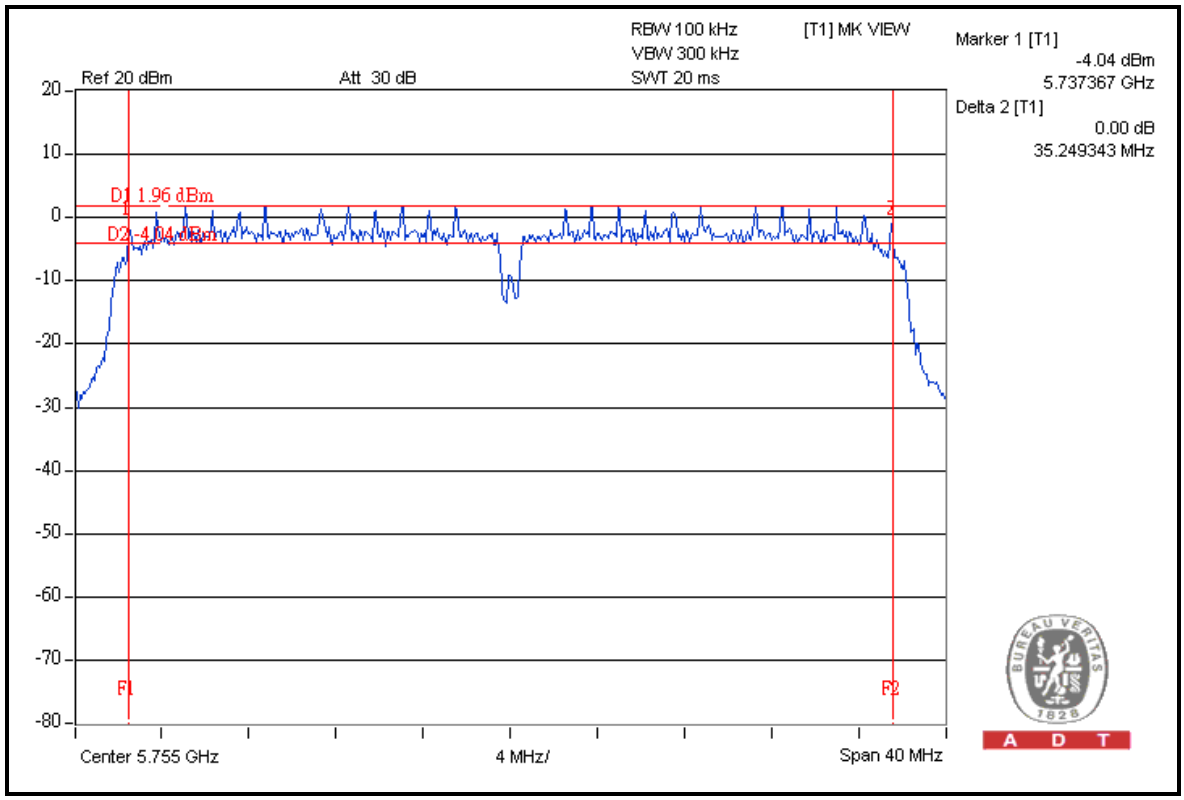
FOR CHAIN 1: CH 165



802.11n (40MHz): 1TX

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	35.24	0.5	PASS
159	5795	35.21	0.5	PASS

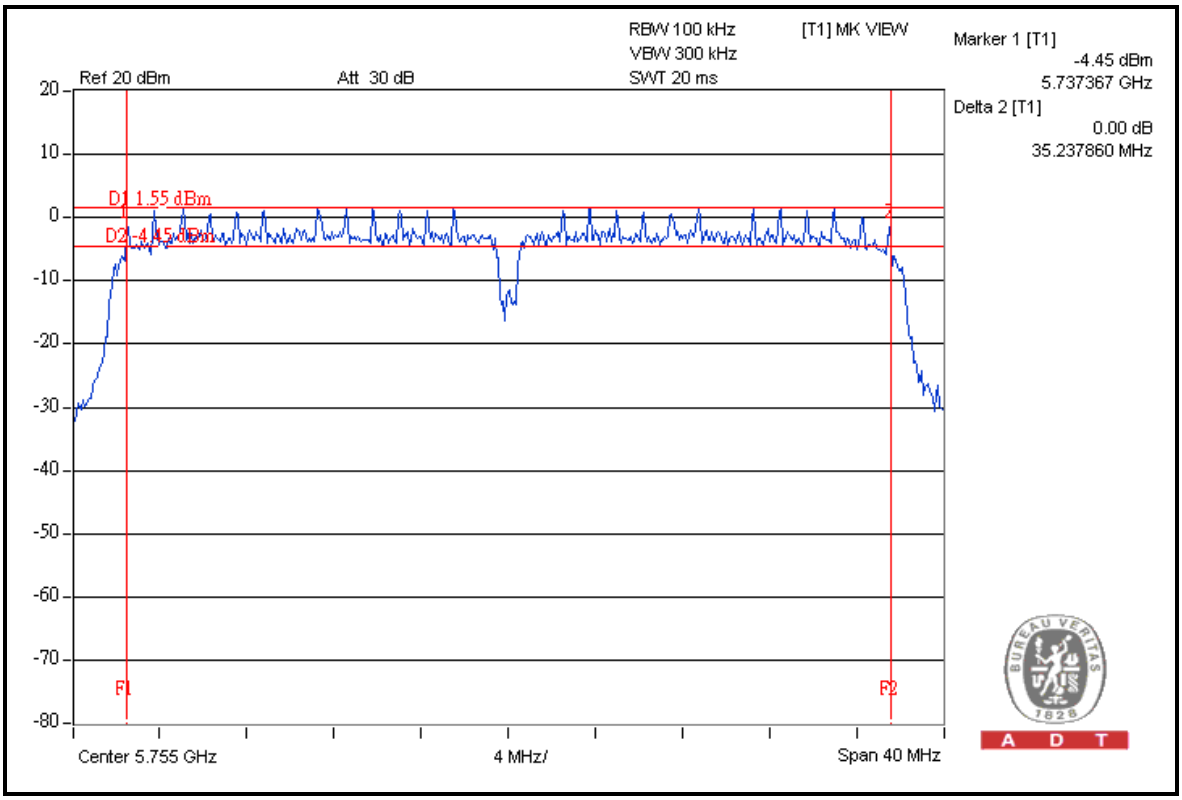
FOR CH 151



802.11n (40MHz): 3TX

CHANNEL	CHANNEL FREQUENCY (MHz)	6dB BANDWIDTH (MHz)			MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2		
151	5755	35.23	35.22	35.15	0.5	PASS
159	5795	35.21	35.20	35.15	0.5	PASS

FOR CHAIN 0: CH 151



5.4 MAXIMUM OUTPUT POWER

5.4.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

5.4.2 INSTRUMENTS

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

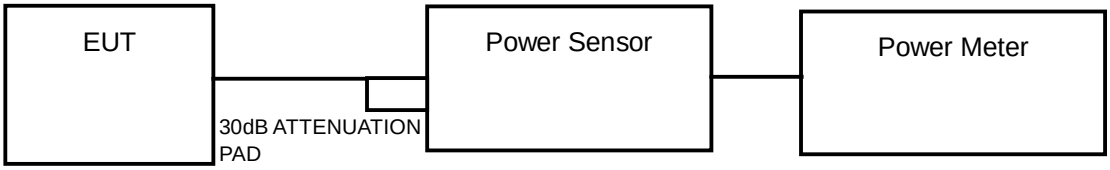
5.4.3 TEST PROCEDURES

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)	POWER OUTPUT (mW)	POWER LIMIT (dBm)	PASS / FAIL
149	5745	23.9	245.5	30	PASS
157	5785	23.9	245.5	30	PASS
165	5825	23.7	234.4	30	PASS

802.11n (20MHz): 1TX

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)	POWER OUTPUT (mW)	POWER LIMIT (dBm)	PASS / FAIL
149	5745	23.8	239.9	30	PASS
157	5785	23.7	234.4	30	PASS
165	5825	23.4	218.8	30	PASS

802.11n (20MHz): 3TX

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	22.3	22.4	22.8	534.2	27.3	30	PASS
157	5785	22.5	22.4	22.6	533.6	27.3	30	PASS
165	5825	22.4	22.6	21.8	507.1	27.1	30	PASS

802.11n (40MHz): 1TX

CHAN.	CHAN. FREQ. (MHz)	POWER OUTPUT (dBm)	POWER OUTPUT (mW)	POWER LIMIT (dBm)	PASS / FAIL
151	5755	24.3	269.2	30	PASS
159	5795	24.7	295.1	30	PASS

802.11n (40MHz): 3TX

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	22.5	22.4	22.9	546.6	27.4	30	PASS
159	5795	22.9	22.8	22.9	**580.5**	27.6	30	PASS

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	FSP 40	100036	Apr. 29, 2011	Apr. 28, 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 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded.

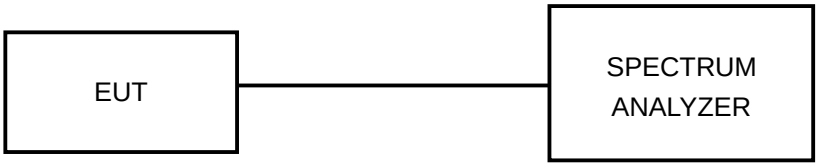
The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

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

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITION

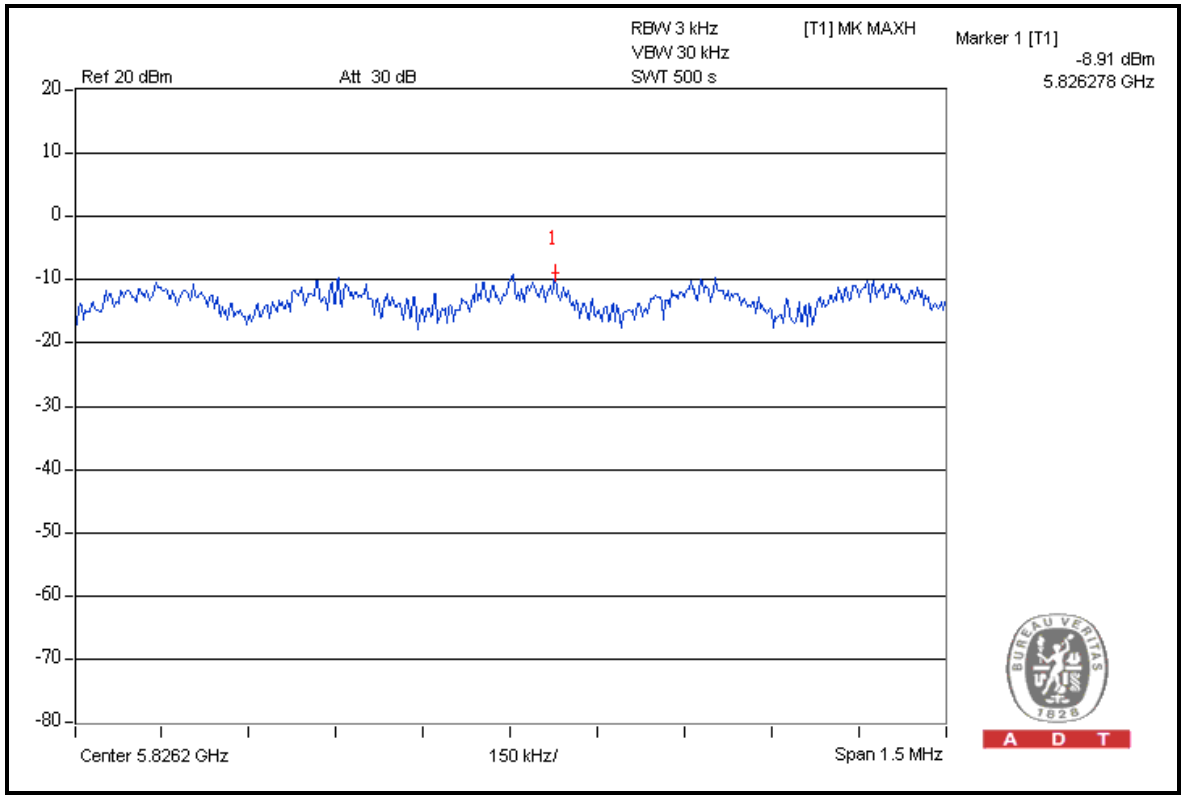
Same as Item 5.3.6

5.5.7 TEST RESULTS

802.11a

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
149	5745	-9.4	8	PASS
157	5785	-9.1	8	PASS
165	5825	-8.9	8	PASS

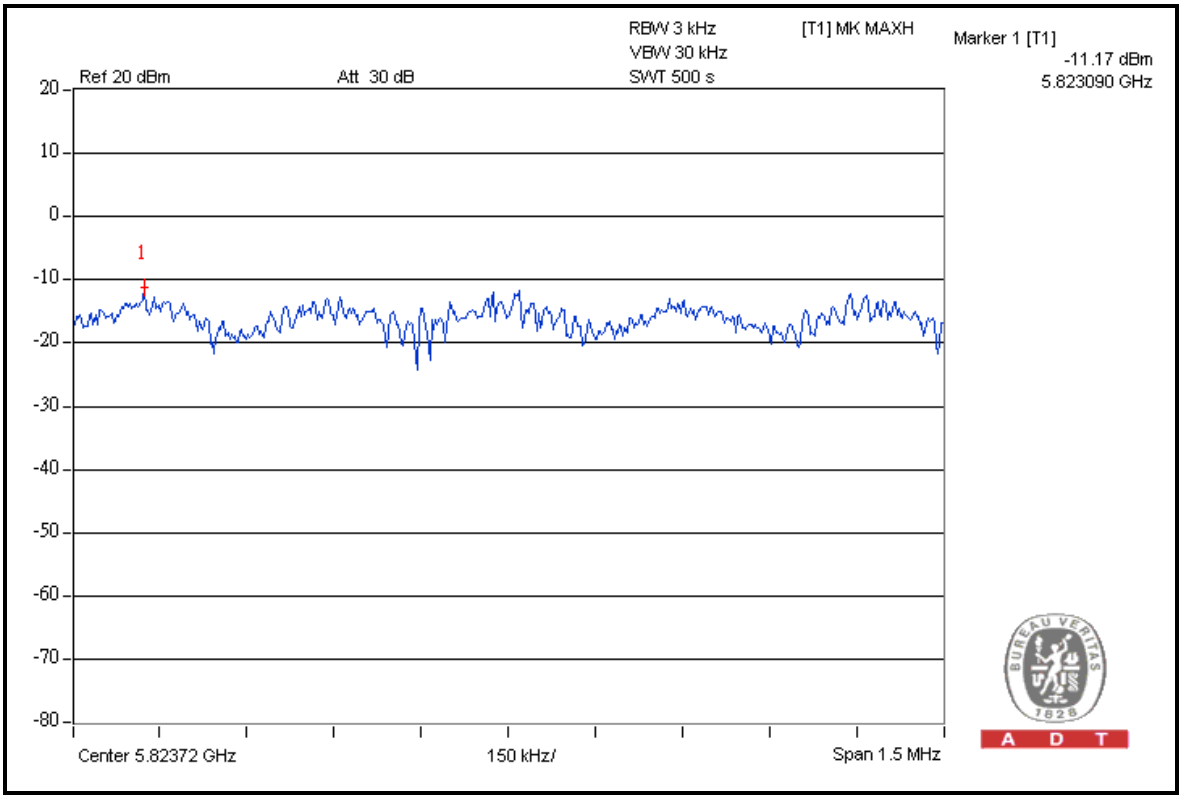
FOR CH 165



802.11n (20MHz): 1TX

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
149	5745	-12.3	8	PASS
157	5785	-11.3	8	PASS
165	5825	-11.2	8	PASS

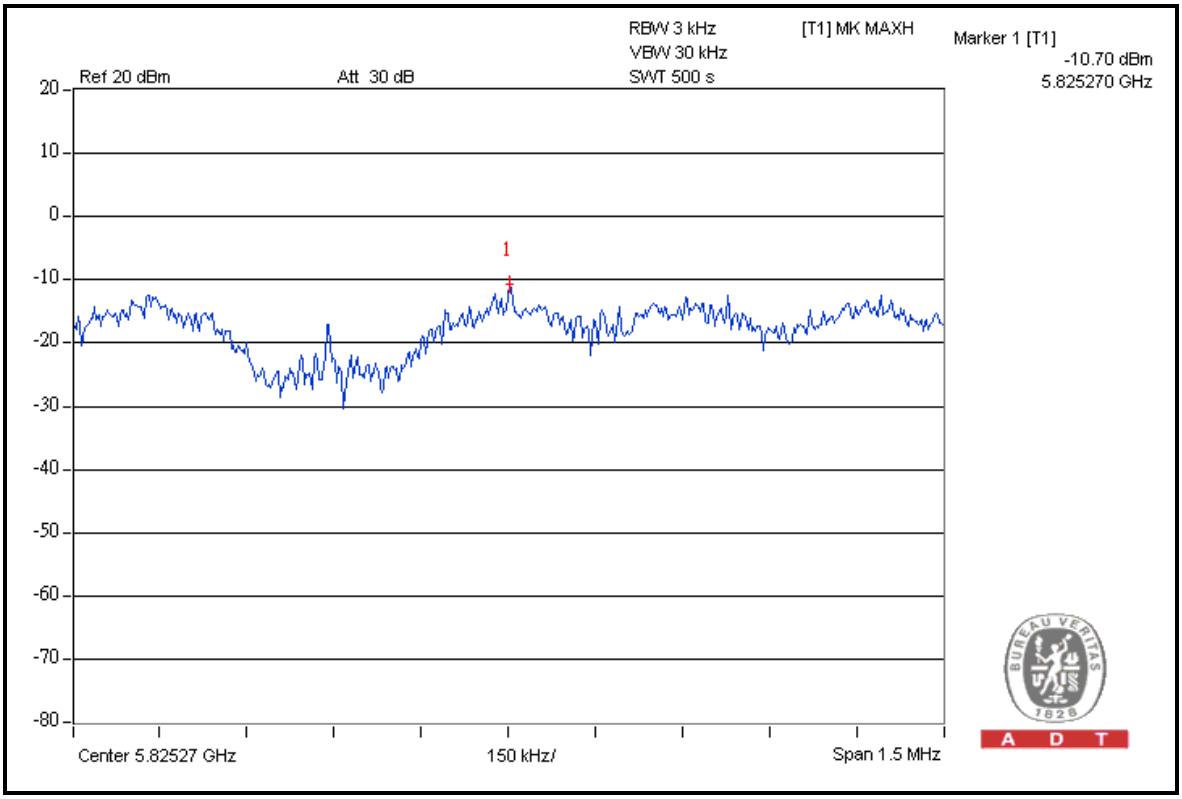
FOR CH 165



802.11n (20MHz): 3TX

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	-14.9	4.77	-10.1	8	PASS
	157	5785	-14.0	4.77	-9.2	8	PASS
	165	5825	-10.7	4.77	-5.9	8	PASS
1	149	5745	-15.4	4.77	-10.6	8	PASS
	157	5785	-14.7	4.77	-9.9	8	PASS
	165	5825	-12.4	4.77	-7.6	8	PASS
2	149	5745	-13.7	4.77	-8.9	8	PASS
	157	5785	-14.0	4.77	-9.2	8	PASS
	165	5825	-12.7	4.77	-7.9	8	PASS

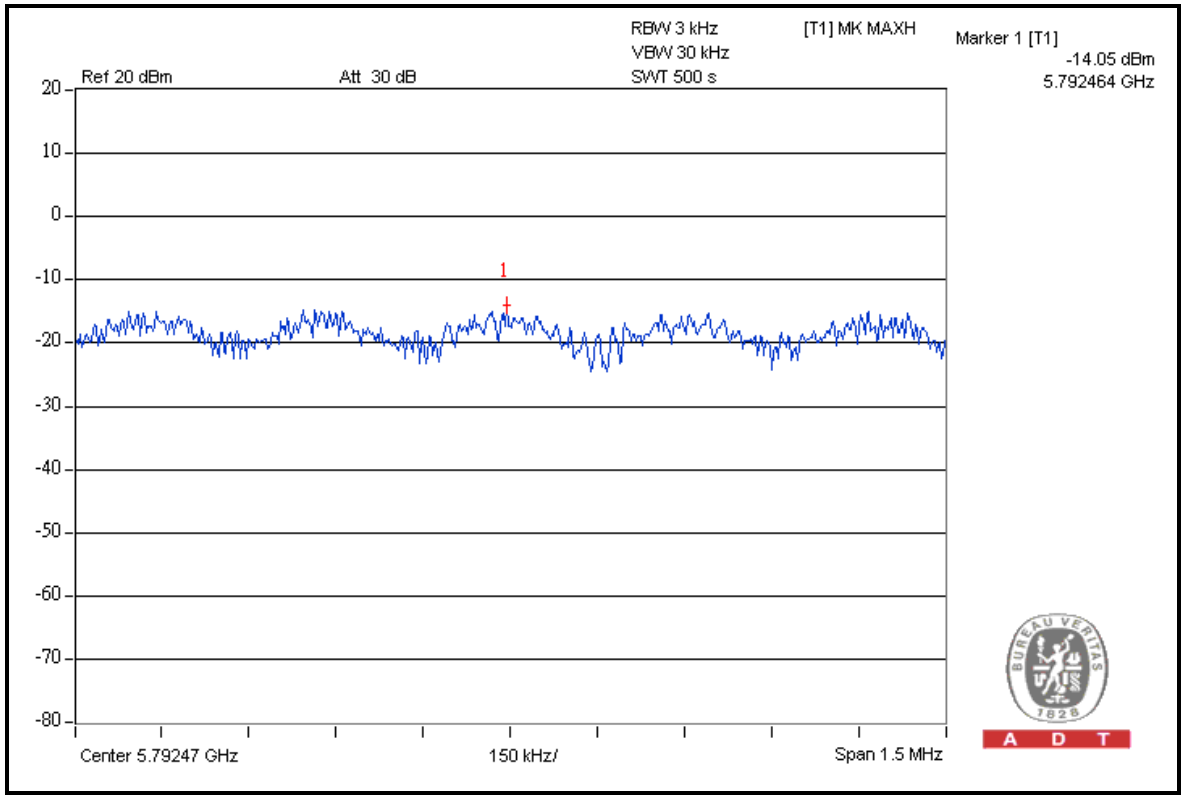
FOR CHAIN 0: CH 165



802.11n (40MHz): 1TX

CHAN.	CHAN. FREQ. (MHz)	RF POWER LEVEL IN 3kHz BW (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
151	5755	-14.3	8	PASS
159	5795	-14.1	8	PASS

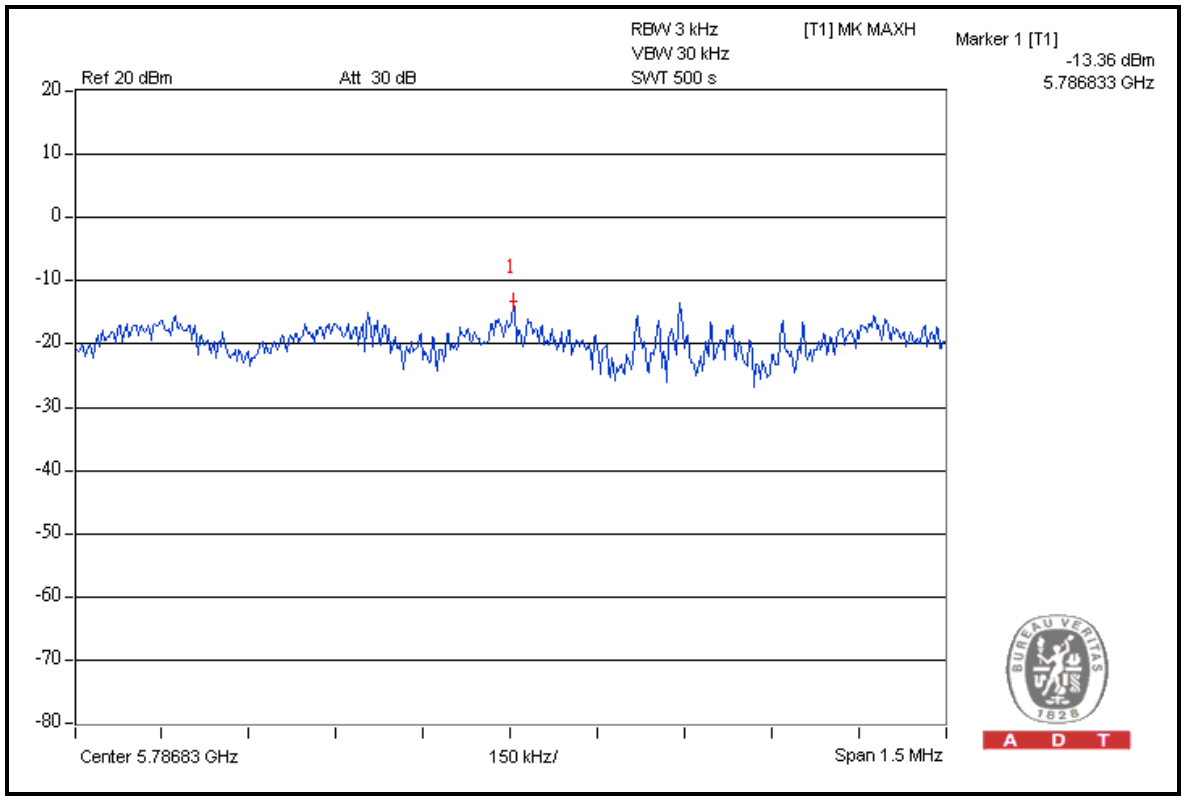
FOR CH 159



802.11n (40MHz): 3TX

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	-14.4	4.77	-9.6	8	PASS
	159	5795	-14.3	4.77	-9.5	8	PASS
1	151	5755	-13.7	4.77	-8.9	8	PASS
	159	5795	-13.4	4.77	-8.6	8	PASS
2	151	5755	-13.8	4.77	-9.0	8	PASS
	159	5795	-14.4	4.77	-9.6	8	PASS

FOR CHAIN 1: 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	CALIBRATED UNTIL
FOR CONDUCTED MEASUREMENT:				
SPECTRUM ANALYZER	FSP 40	100036	Apr. 29, 2011	Apr. 28, 2012
FOR RADIATED MEASUREMENT:				
HP Preamplifier	8447D	2432A03504	Mar. 04, 2011	Mar. 03, 2012
HP Preamplifier	8449B	3008A01924	Mar. 04, 2011	Mar. 03, 2012
HP Preamplifier	8449B	3008A01292	Mar. 04, 2011	Mar. 03, 2012
Agilent Spectrum Analyzer	E4446A	MY46180403	Jun. 22, 2011	Jun. 21, 2012
Schwarzbeck Antenna	VULB 9168	137	Apr. 12, 2011	Apr. 11, 2012
Schwarzbeck Antenna	VHBA 9123	480	May 06, 2011	May 05, 2012
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
SUHNER RF cable	SF102	CABLE-CH6	Aug. 19, 2011	Aug. 18, 2012
EMCO Horn Antenna	3115	6714	Oct. 26, 2010	Oct. 25, 2011
EMCO Horn Antenna	3115	9312-4192	Apr. 22, 2011	Apr. 21, 2012
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA

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

5.6.3 TEST PROCEDURE

FOR CONDUCTED MEASUREMENT:

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

FOR RADIATED MEASUREMENT:

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

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

e. Set both RBW and VBW of spectrum analyzer to 1MHz and 3MHz with suitable frequency span including 100MHz bandwidth from band edge. The band edges was measured and recorded.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 EUT OPERATING CONDITION

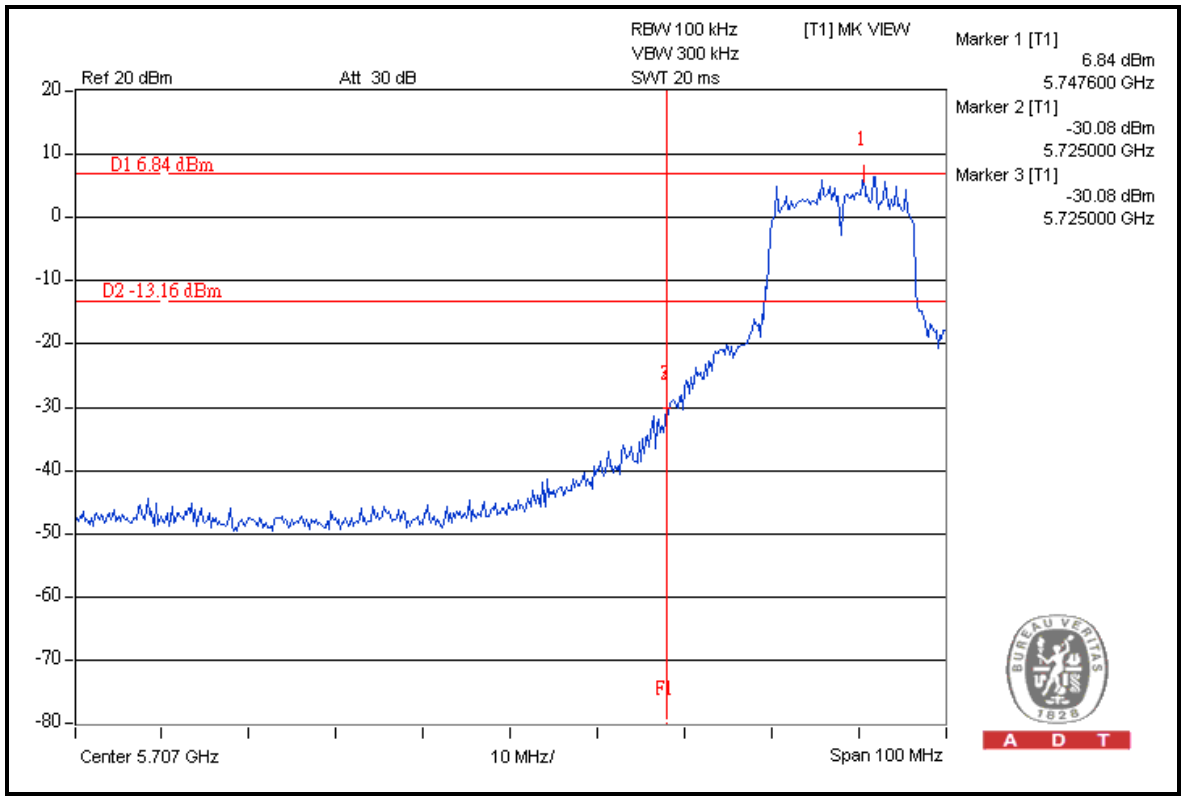
Same as Item 5.3.6

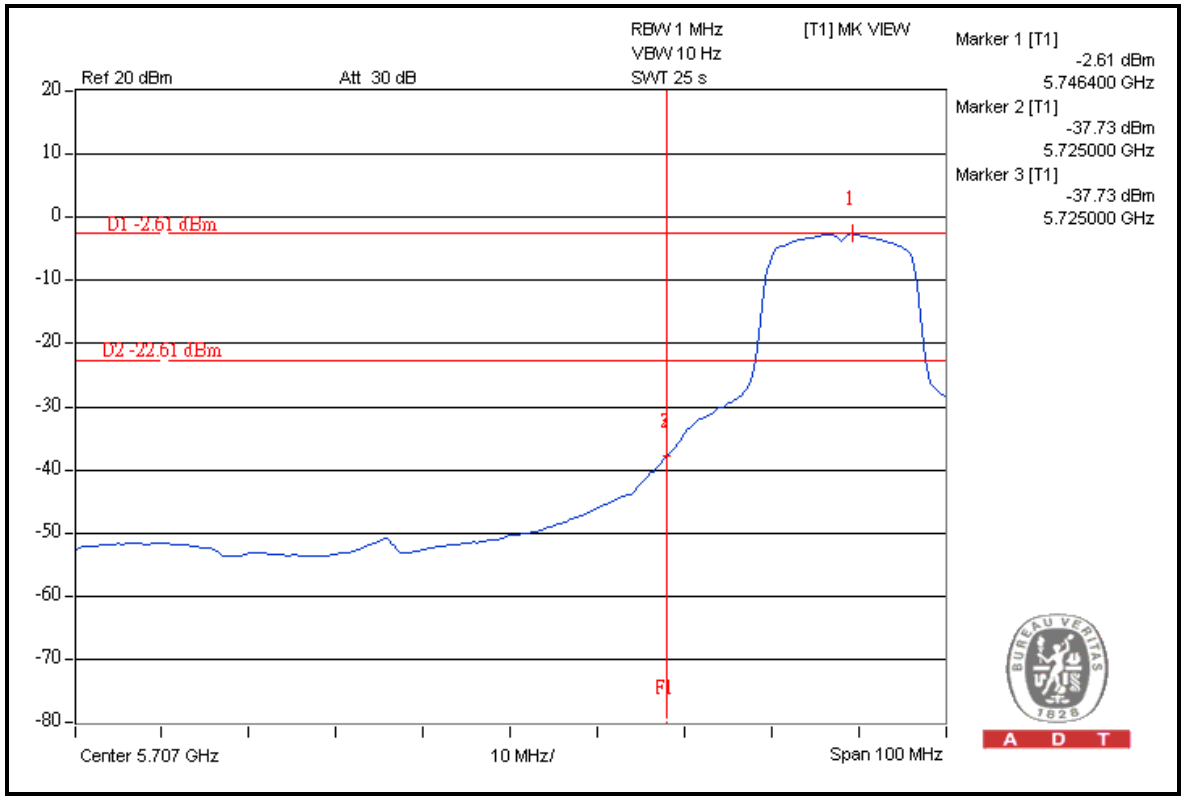
5.6.6 TEST RESULTS

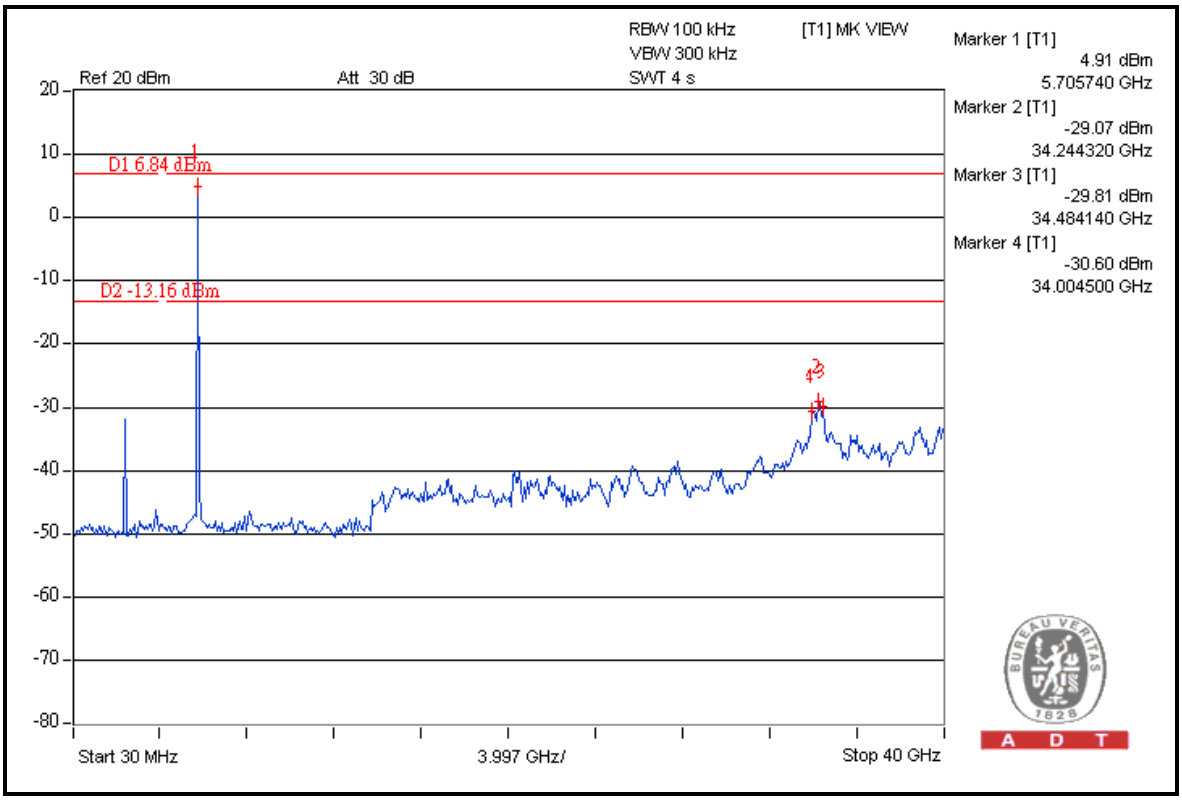
The spectrum plots are attached on the following pages. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

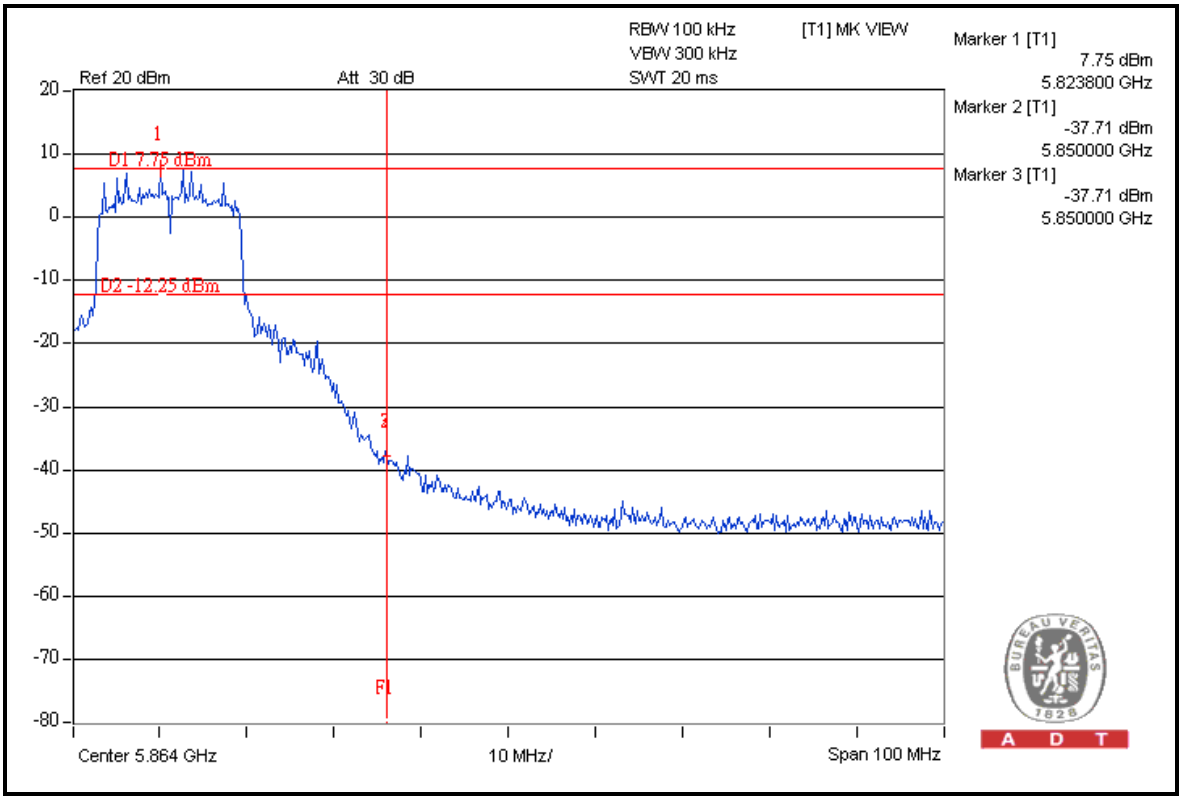
The spectrum plots (Peak RBW =100kHz, VBW = 300kHz; Average RBW = 1MHz, VBW = 10Hz) are attached on the following pages.

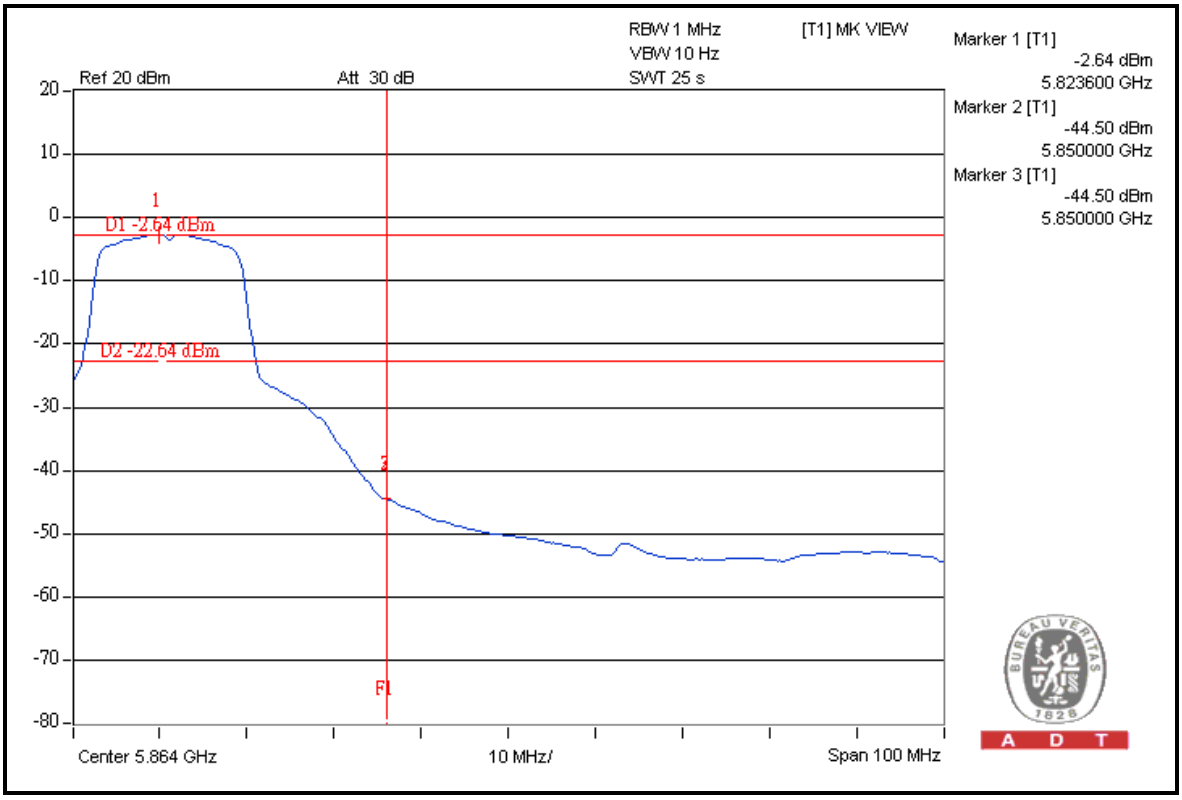
802.11a

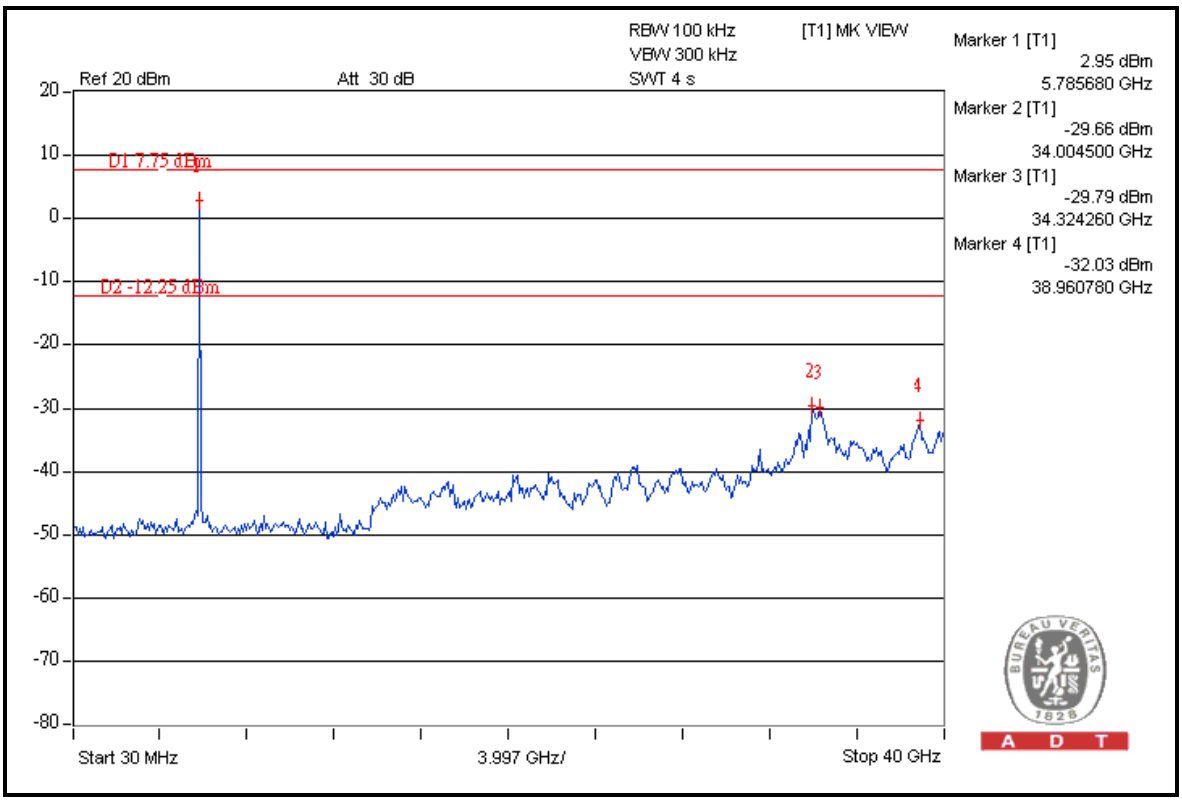

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
6.84 dBm
5.747600 GHz
Marker 2 [T1]
-30.08 dBm
5.725000 GHz
Marker 3 [T1]
-30.08 dBm
5.725000 GHz
D1 6.84 dBm
D2 -13.16 dBm
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-2.61 dBm
5.746400 GHz
Marker 2 [T1]
-37.73 dBm
5.725000 GHz
Marker 3 [T1]
-37.73 dBm
5.725000 GHz
D1 -2.61 dBm
D2 -22.61 dBm
Center 5.707 GHz
10 MHz/
Span 100 MHz

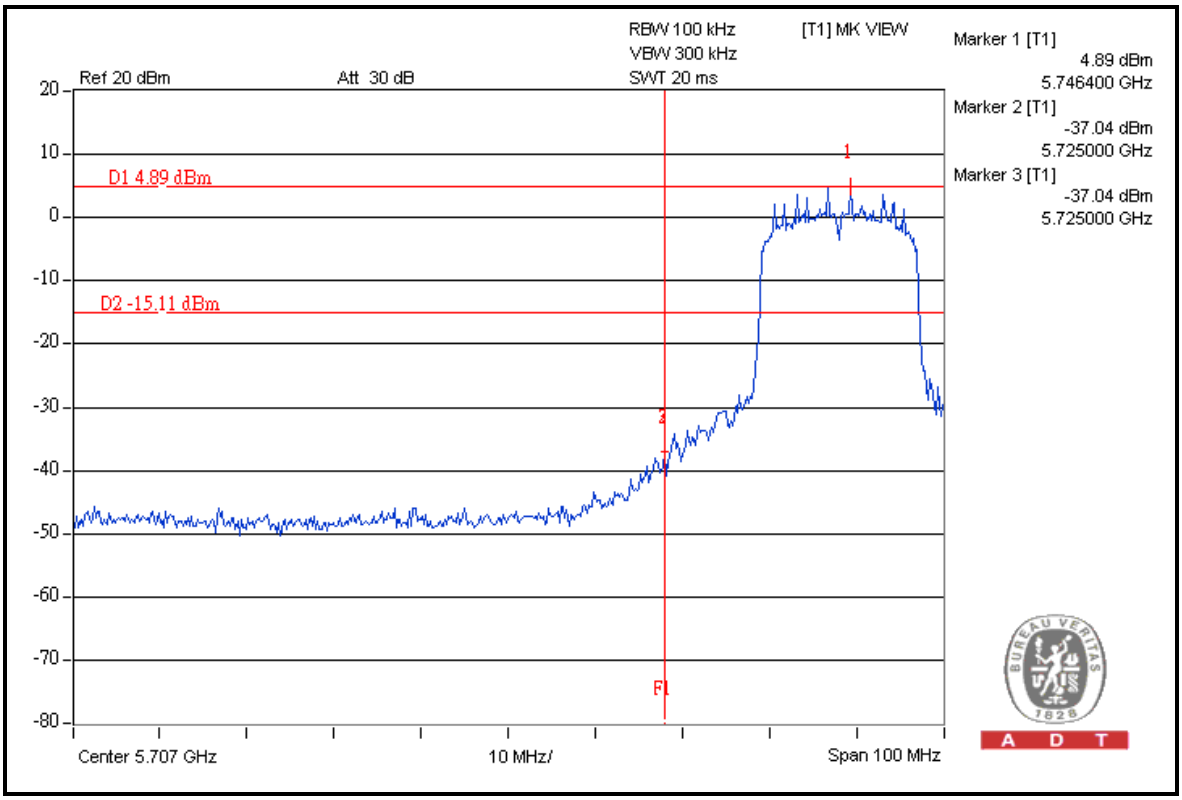

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 6.84 dBm
D2 -13.16 dBm
Marker 1 [T1]
4.91 dBm
5.705740 GHz
Marker 2 [T1]
-29.07 dBm
34.244320 GHz
Marker 3 [T1]
-29.81 dBm
34.484140 GHz
Marker 4 [T1]
-30.60 dBm
34.004500 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

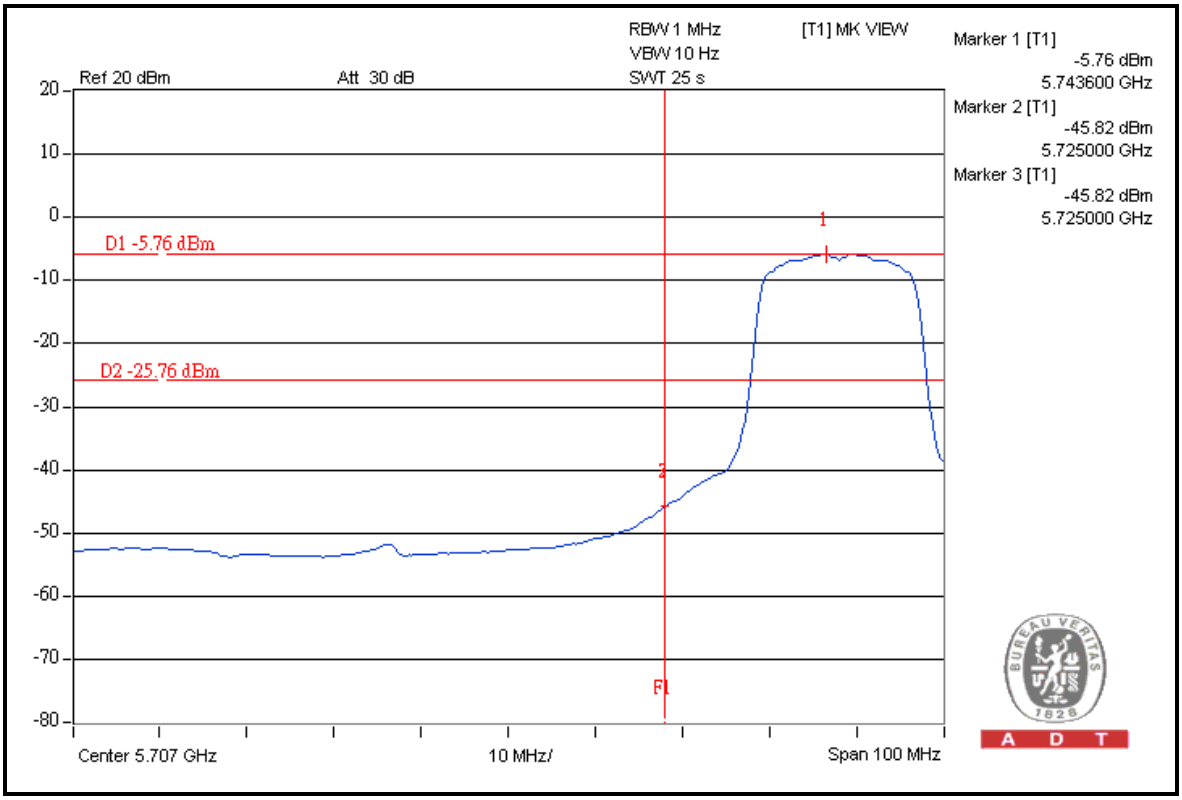

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 7.75 dBm
D2 -12.25 dBm
Marker 1 [T1]
7.75 dBm
5.823800 GHz
Marker 2 [T1]
-37.71 dBm
5.850000 GHz
Marker 3 [T1]
-37.71 dBm
5.850000 GHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

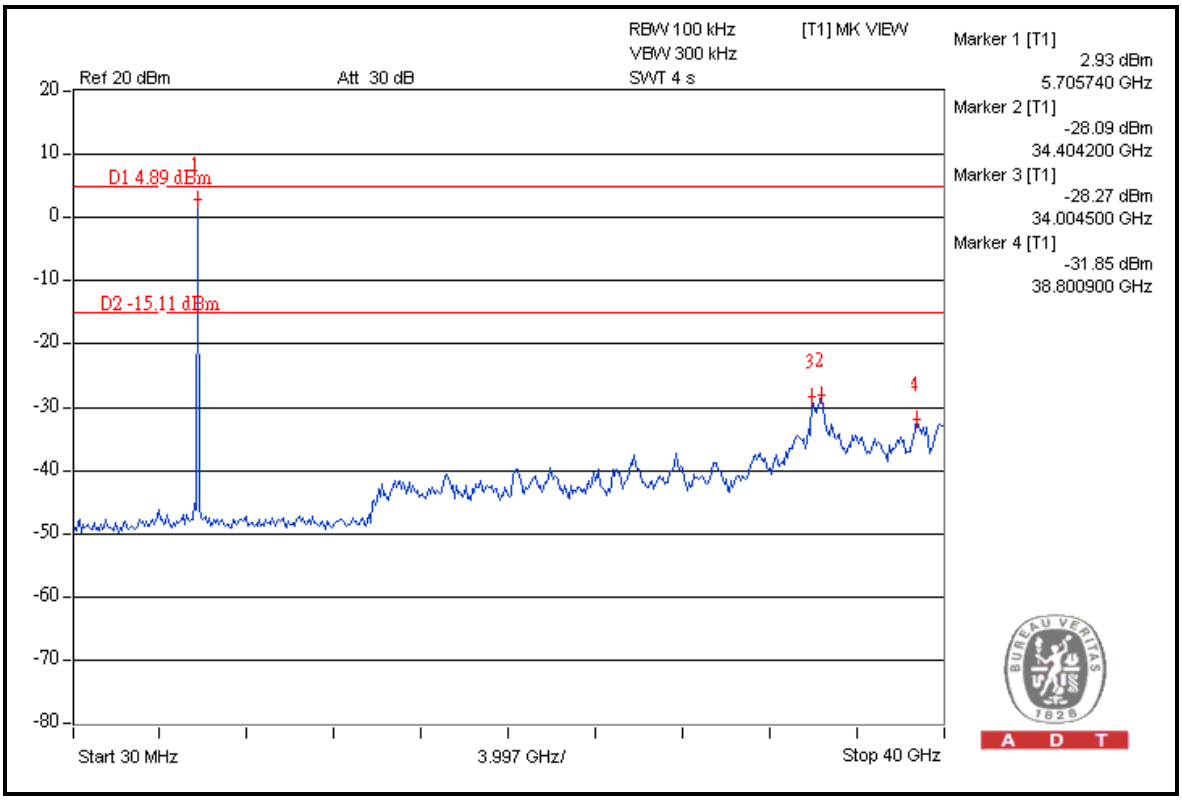

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-2.64 dBm
5.823600 GHz
Marker 2 [T1]
-44.50 dBm
5.850000 GHz
Marker 3 [T1]
-44.50 dBm
5.850000 GHz
D1 -2.64 dBm
D2 -22.64 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz

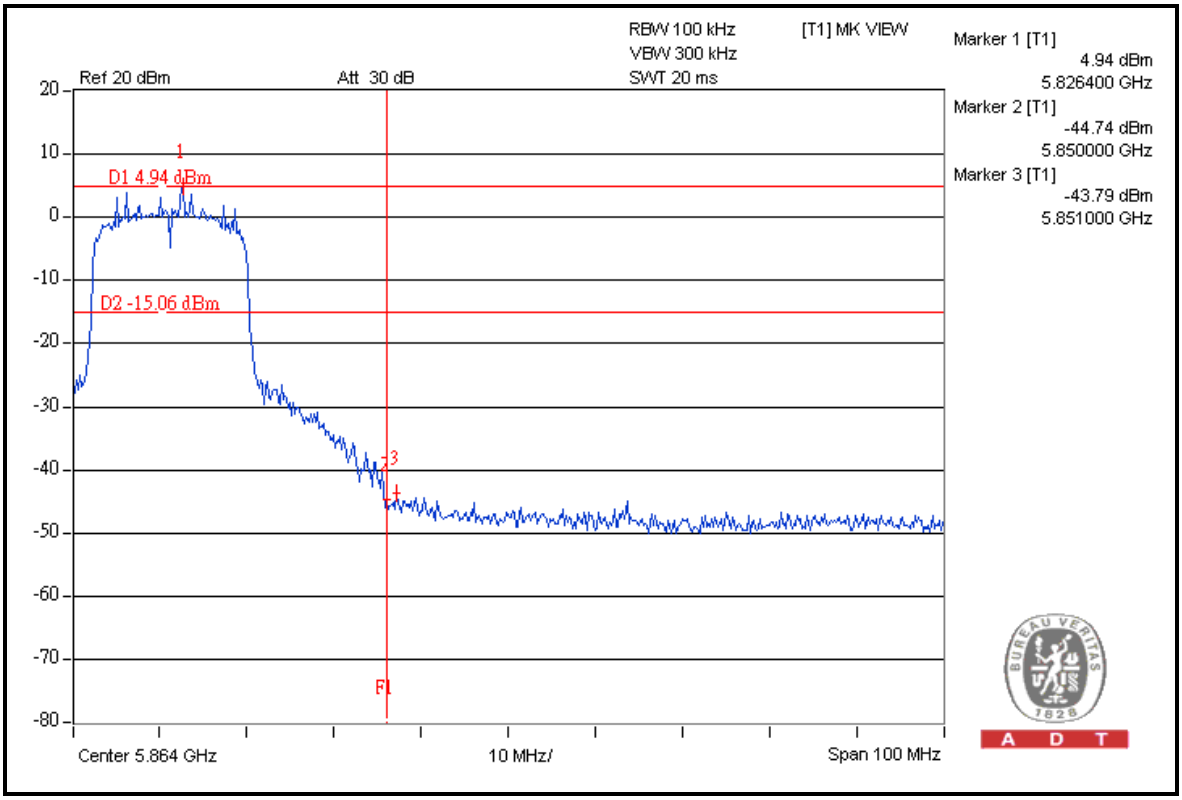

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.95 dBm
5.785680 GHz
Marker 2 [T1]
-29.66 dBm
34.004500 GHz
Marker 3 [T1]
-29.79 dBm
34.324260 GHz
Marker 4 [T1]
-32.03 dBm
38.960780 GHz
D1 7.75 dBm
D2 -12.25 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

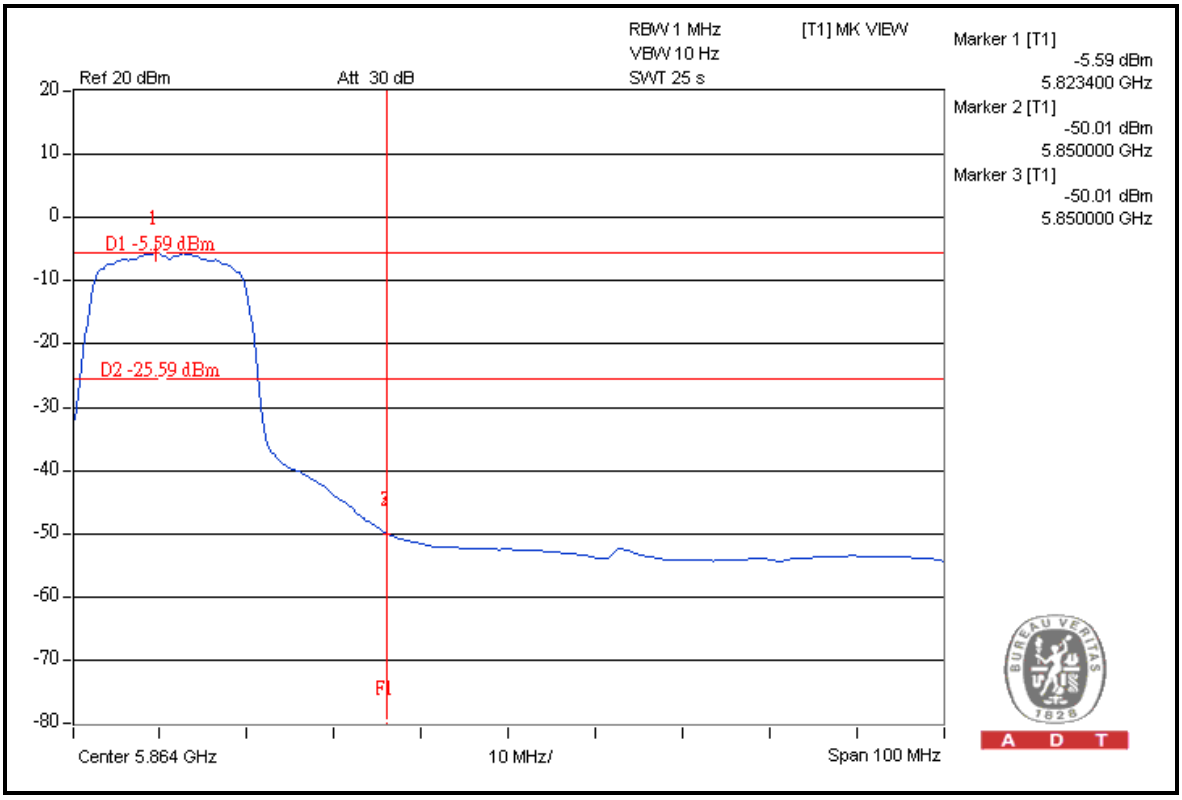
802.11n (20MHz): 1TX

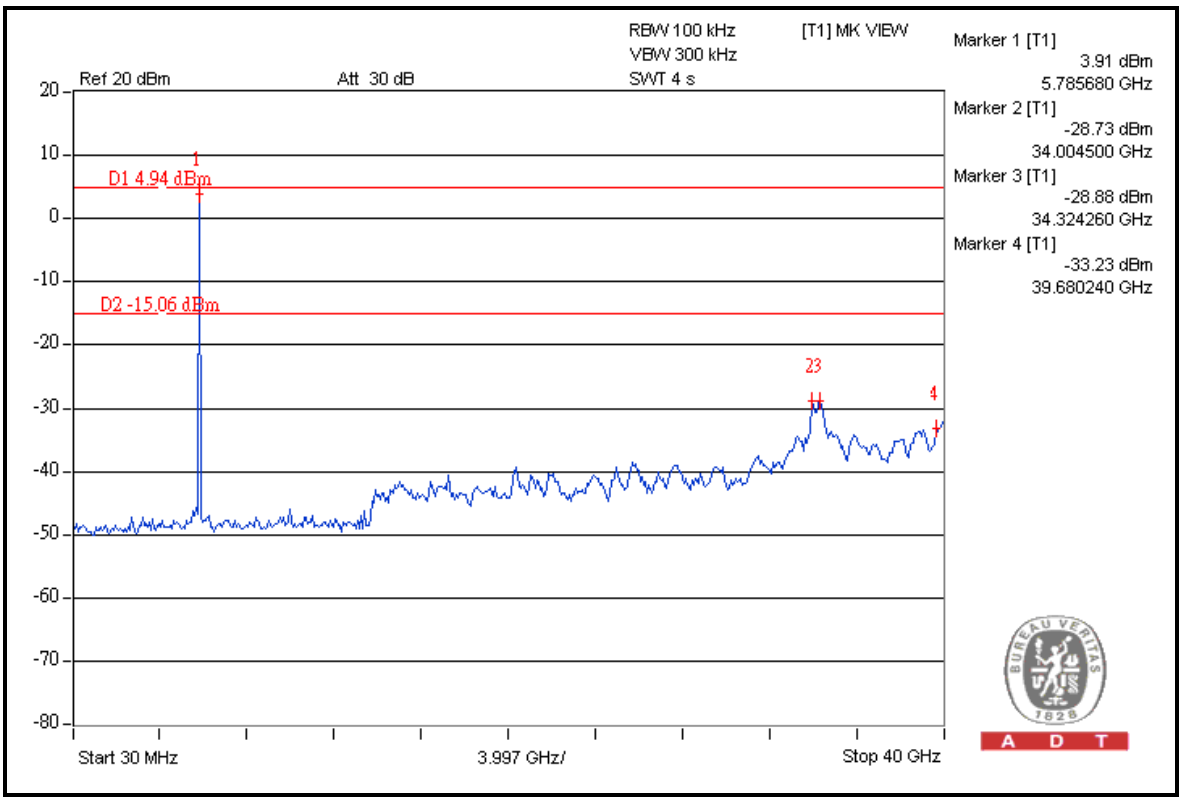





RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.89 dBm
D2 -15.11 dBm
Marker 1 [T1]
2.93 dBm
5.705740 GHz
Marker 2 [T1]
-28.09 dBm
34.404200 GHz
Marker 3 [T1]
-28.27 dBm
34.004500 GHz
Marker 4 [T1]
-31.85 dBm
38.800900 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

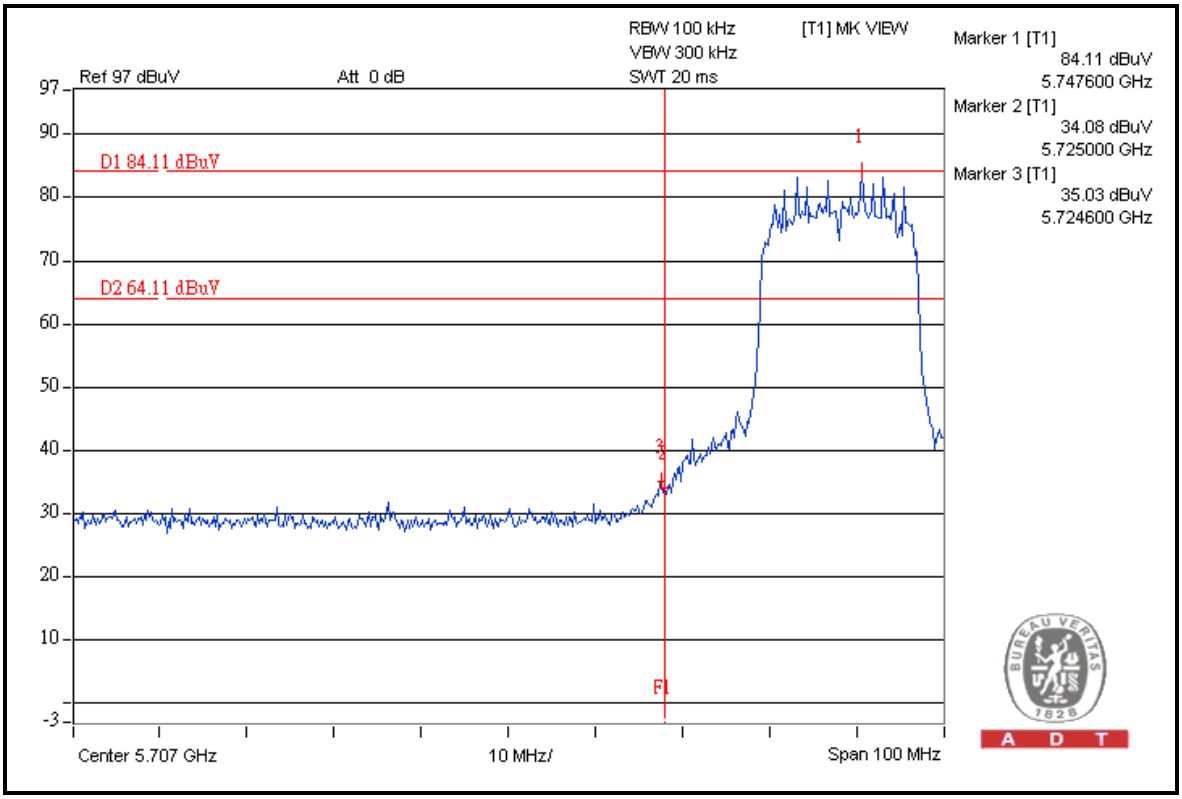

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.94 dBm
D2 -15.06 dBm
Marker 1 [T1]
4.94 dBm
5.826400 GHz
Marker 2 [T1]
-44.74 dBm
5.850000 GHz
Marker 3 [T1]
-43.79 dBm
5.851000 GHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

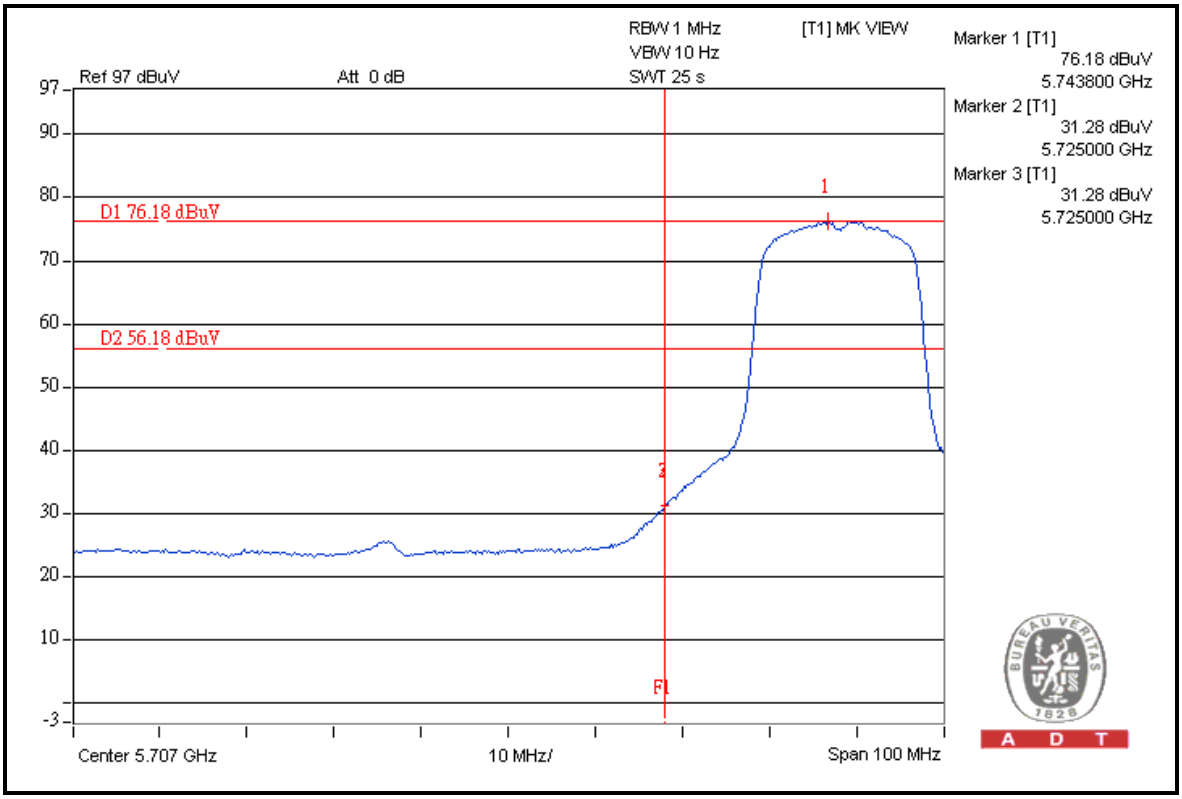

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-5.59 dBm
5.823400 GHz
Marker 2 [T1]
-50.01 dBm
5.850000 GHz
Marker 3 [T1]
-50.01 dBm
5.850000 GHz
D1 -5.59 dBm
D2 -25.59 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz

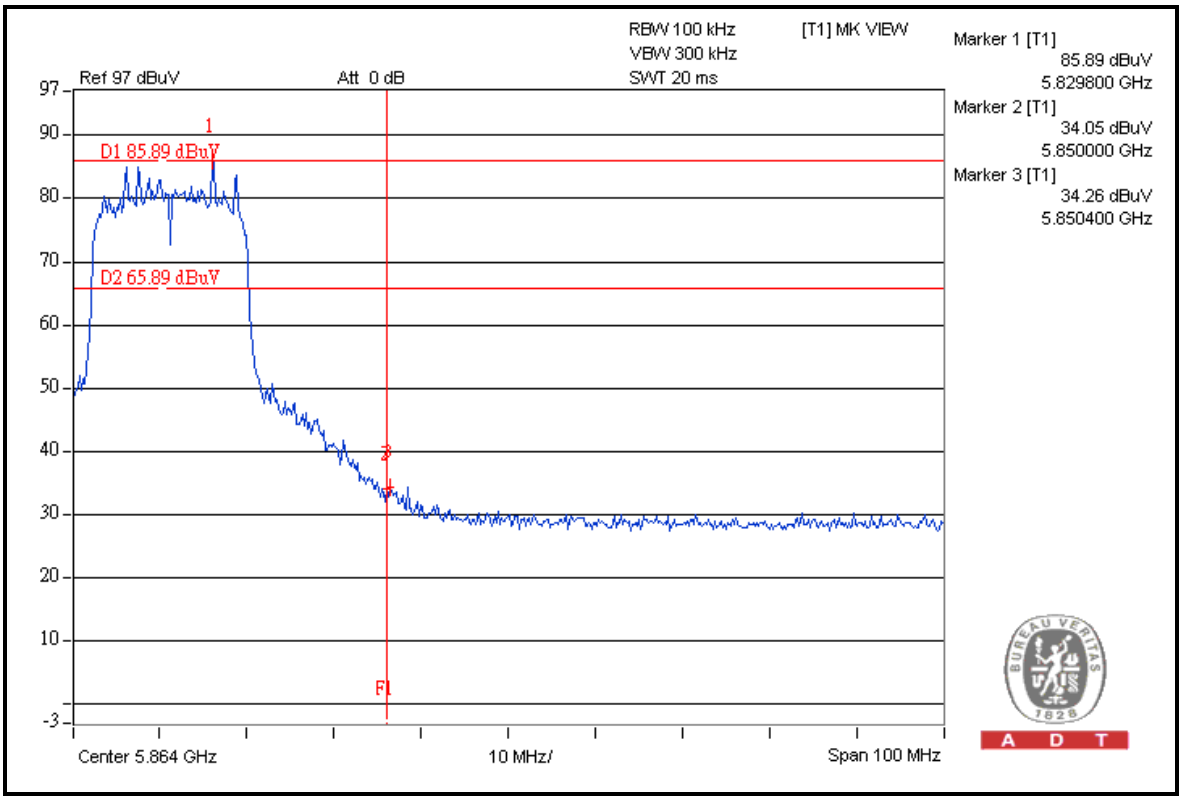

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
3.91 dBm
5.785680 GHz
Marker 2 [T1]
-28.73 dBm
34.004500 GHz
Marker 3 [T1]
-28.88 dBm
34.324260 GHz
Marker 4 [T1]
-33.23 dBm
39.680240 GHz
D1 4.94 dBm
D2 -15.06 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

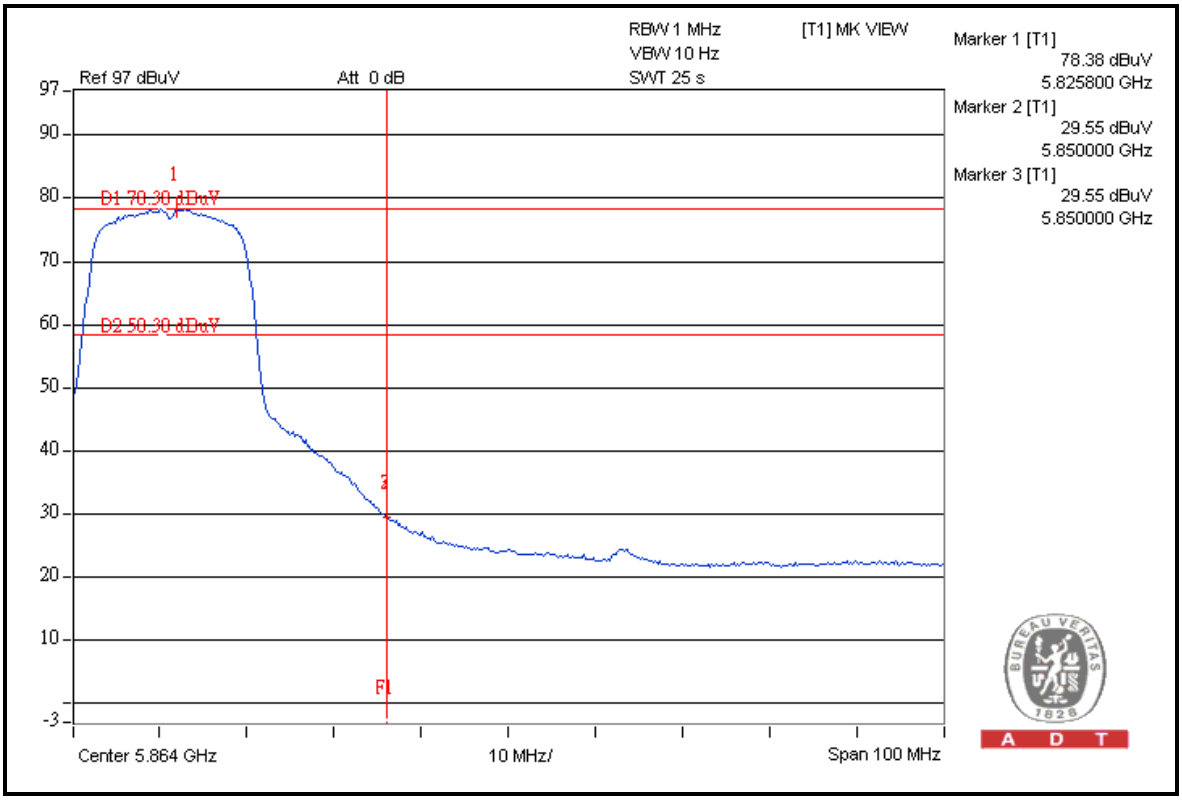
802.11n (20MHz): 3TX

FOR RADIATED MEASURED (THREE CHAINS ON)



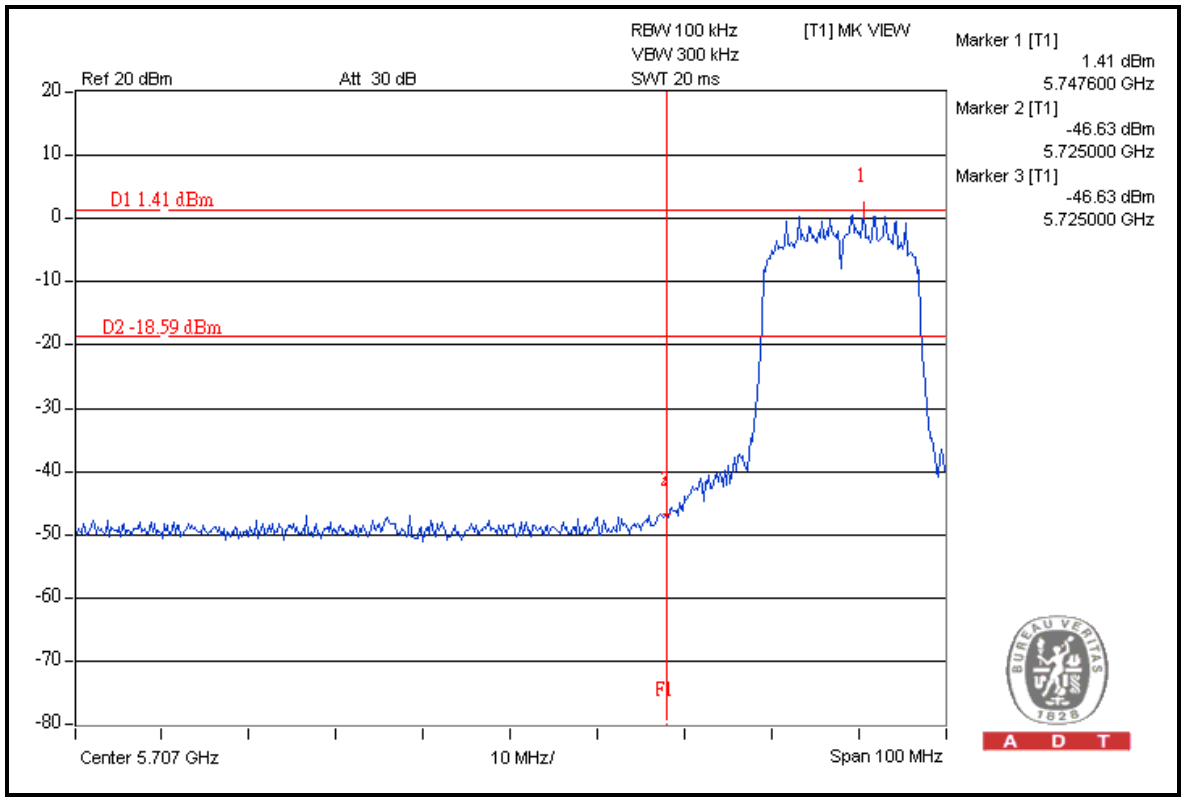


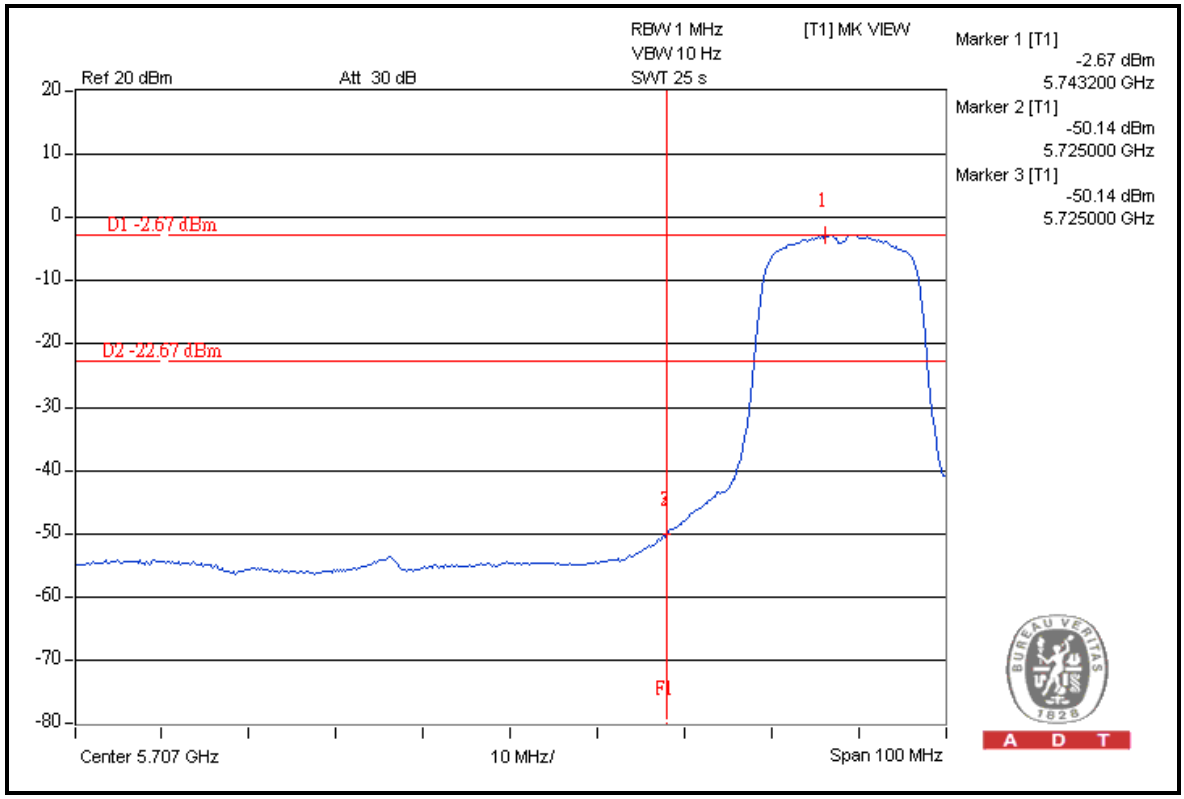

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 85.89 dBuV
D2 65.89 dBuV
Marker 1 [T1]
85.89 dBuV
5.829800 GHz
Marker 2 [T1]
34.05 dBuV
5.850000 GHz
Marker 3 [T1]
34.26 dBuV
5.850400 GHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

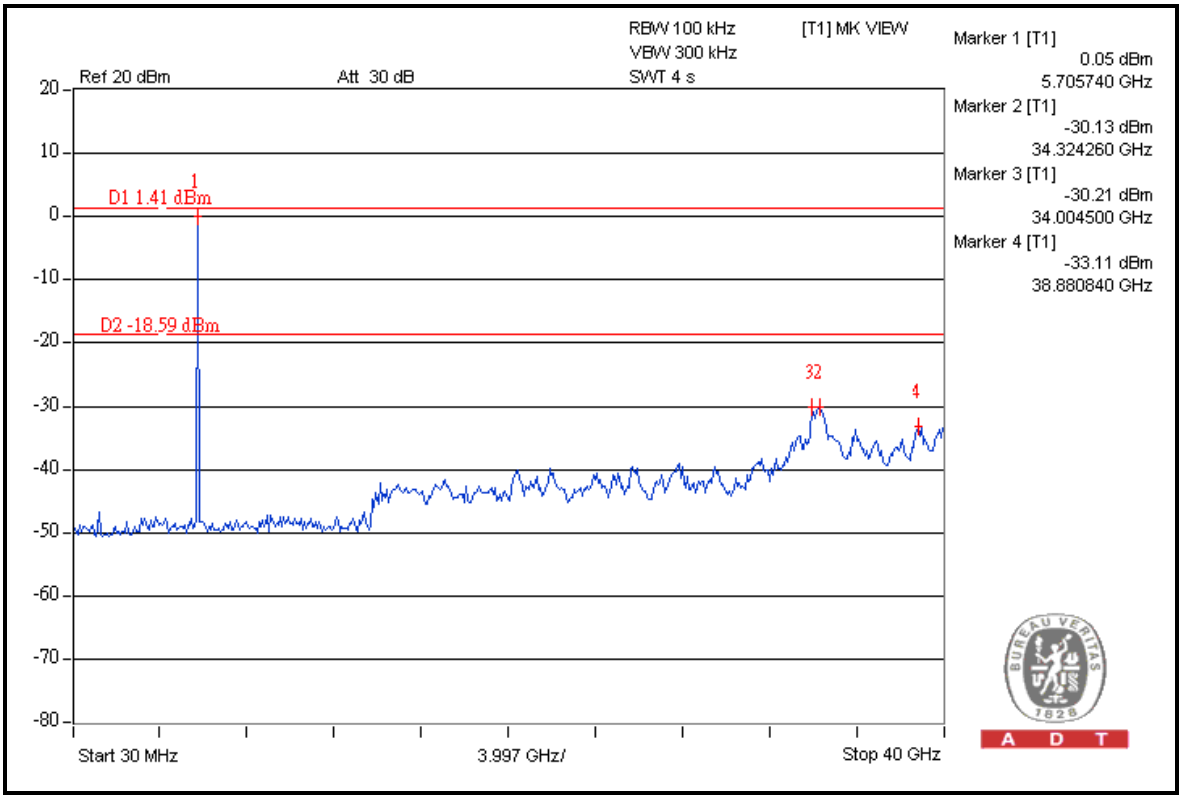

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 70.30 dBuV
D2 50.30 dBuV
Marker 1 [T1]
78.38 dBuV
5.825800 GHz
Marker 2 [T1]
29.55 dBuV
5.850000 GHz
Marker 3 [T1]
29.55 dBuV
5.850000 GHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

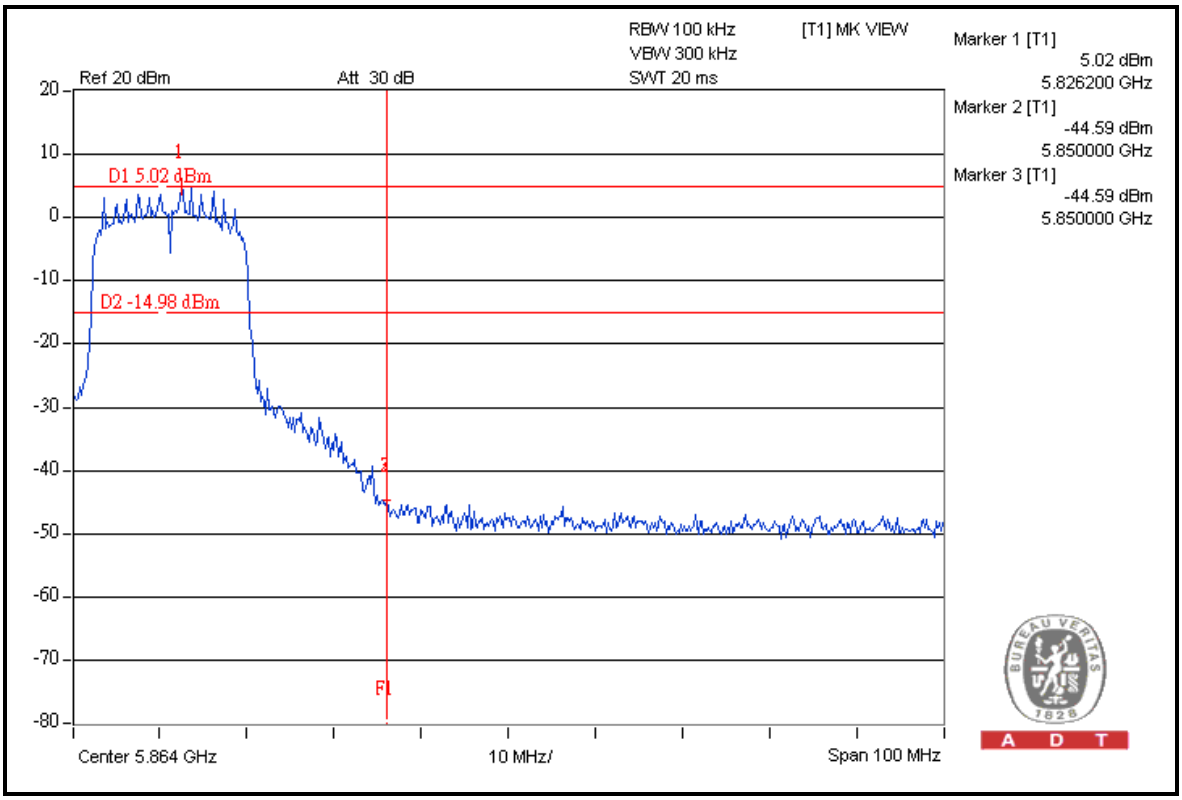
FOR CONDUCTED MEASURED

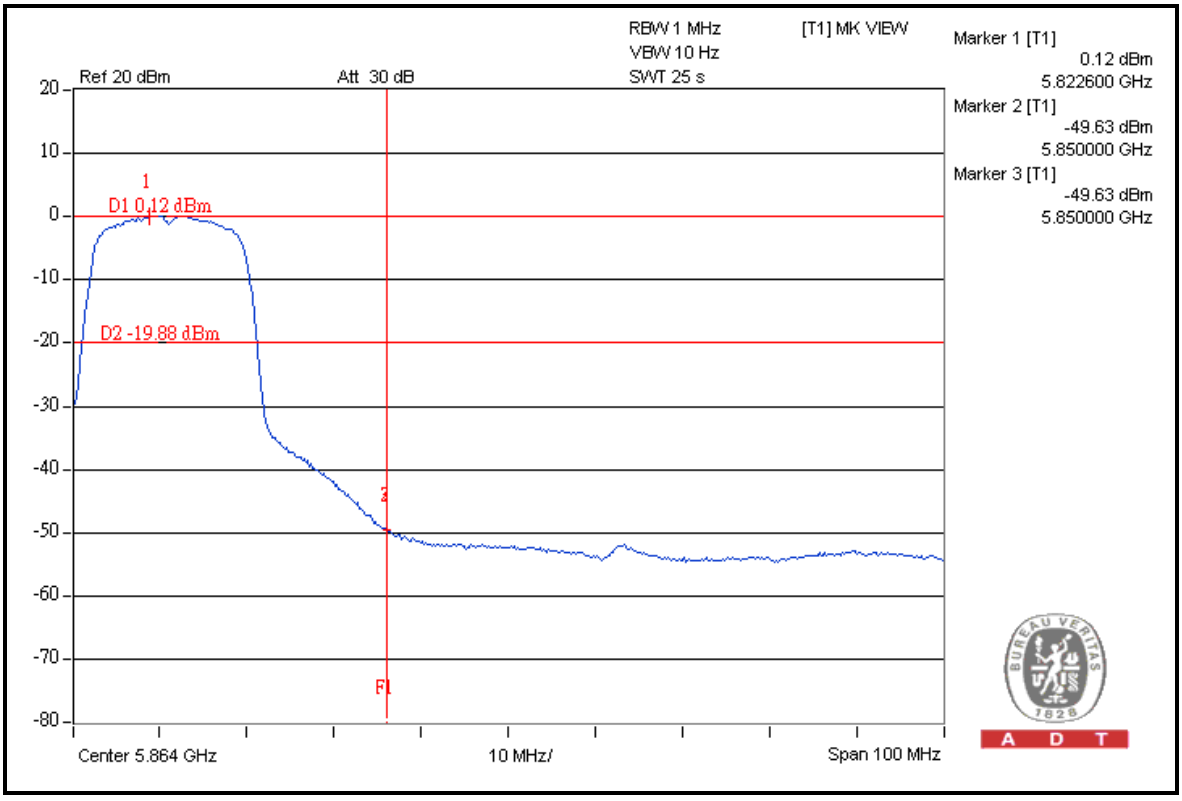
CHAIN 0

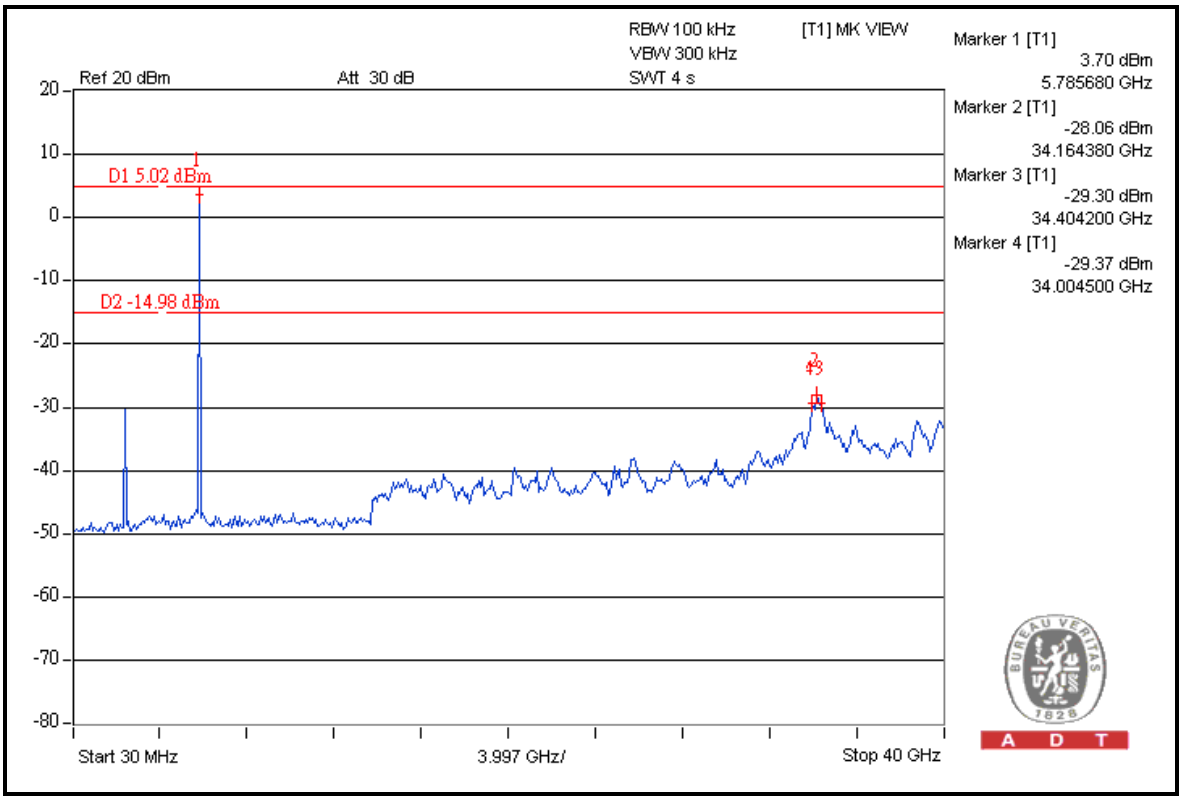




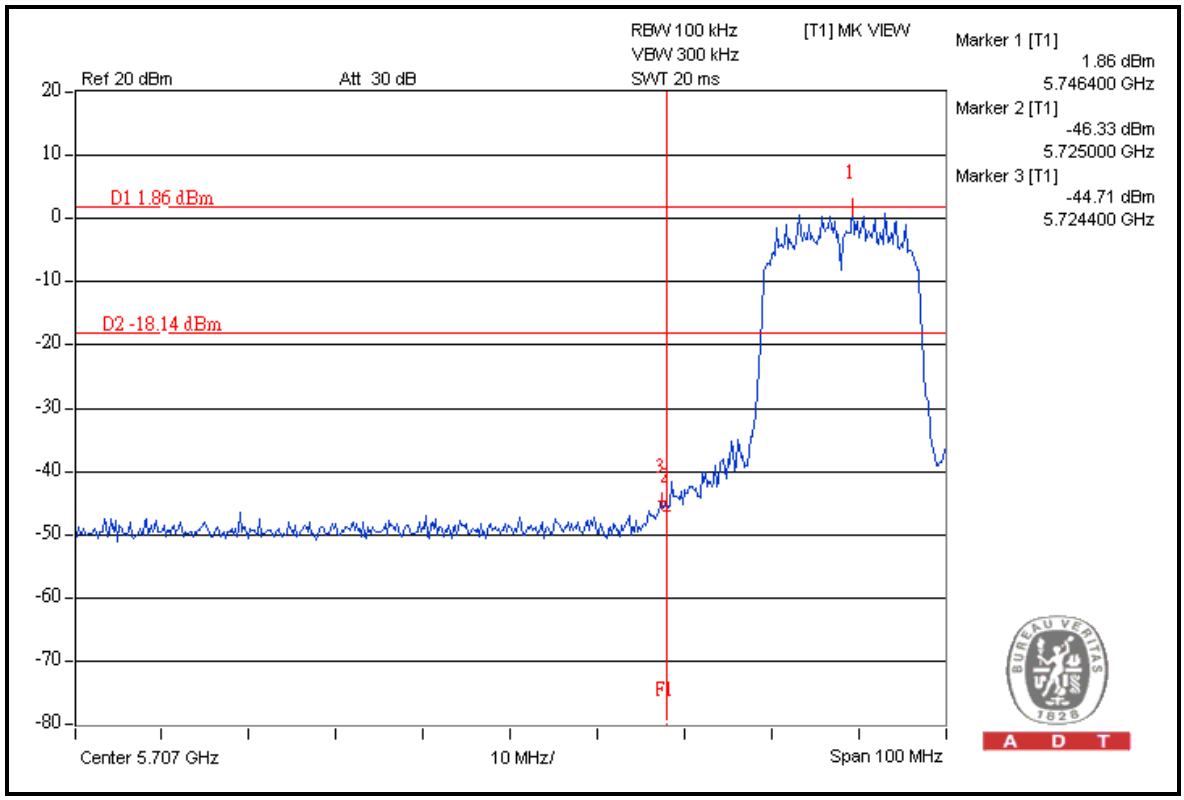

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.41 dBm
D2 -18.59 dBm
Marker 1 [T1]
0.05 dBm
5.705740 GHz
Marker 2 [T1]
-30.13 dBm
34.324260 GHz
Marker 3 [T1]
-30.21 dBm
34.004500 GHz
Marker 4 [T1]
-33.11 dBm
38.880840 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

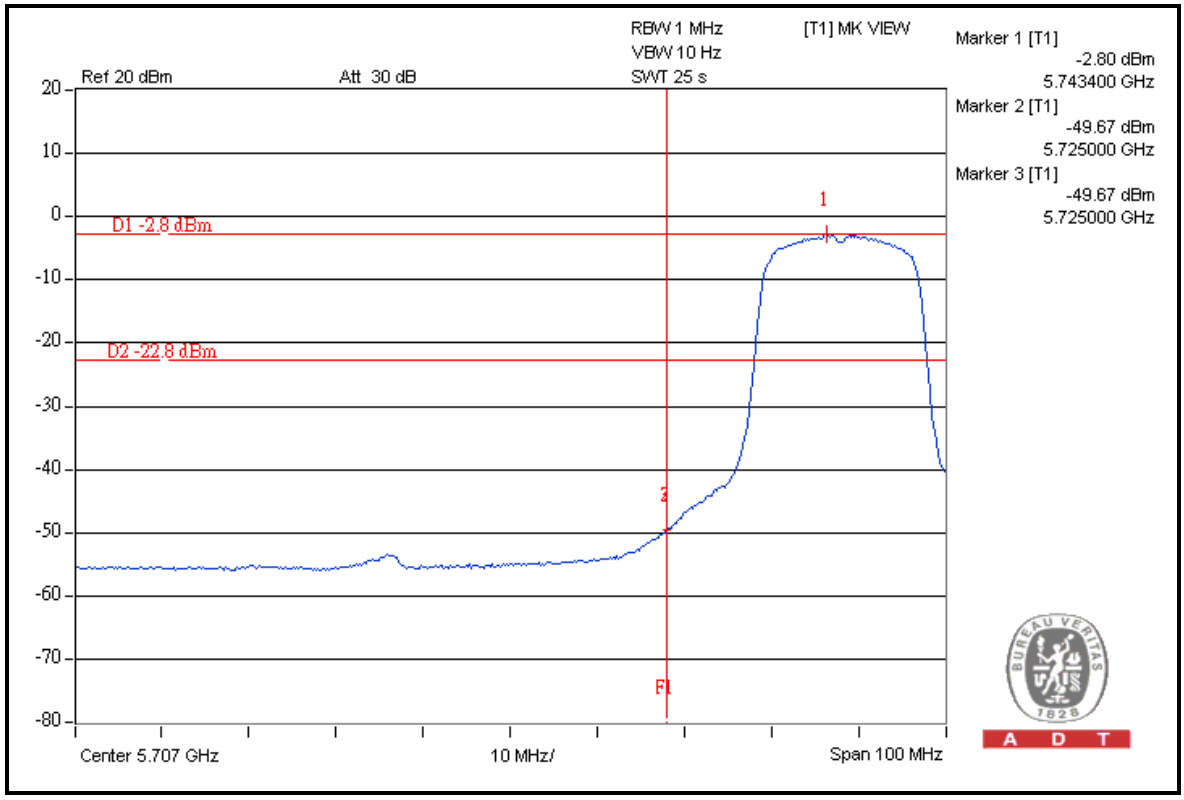

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 5.02 dBm
D2 -14.98 dBm
Marker 1 [T1]
5.02 dBm
5.826200 GHz
Marker 2 [T1]
-44.59 dBm
5.850000 GHz
Marker 3 [T1]
-44.59 dBm
5.850000 GHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

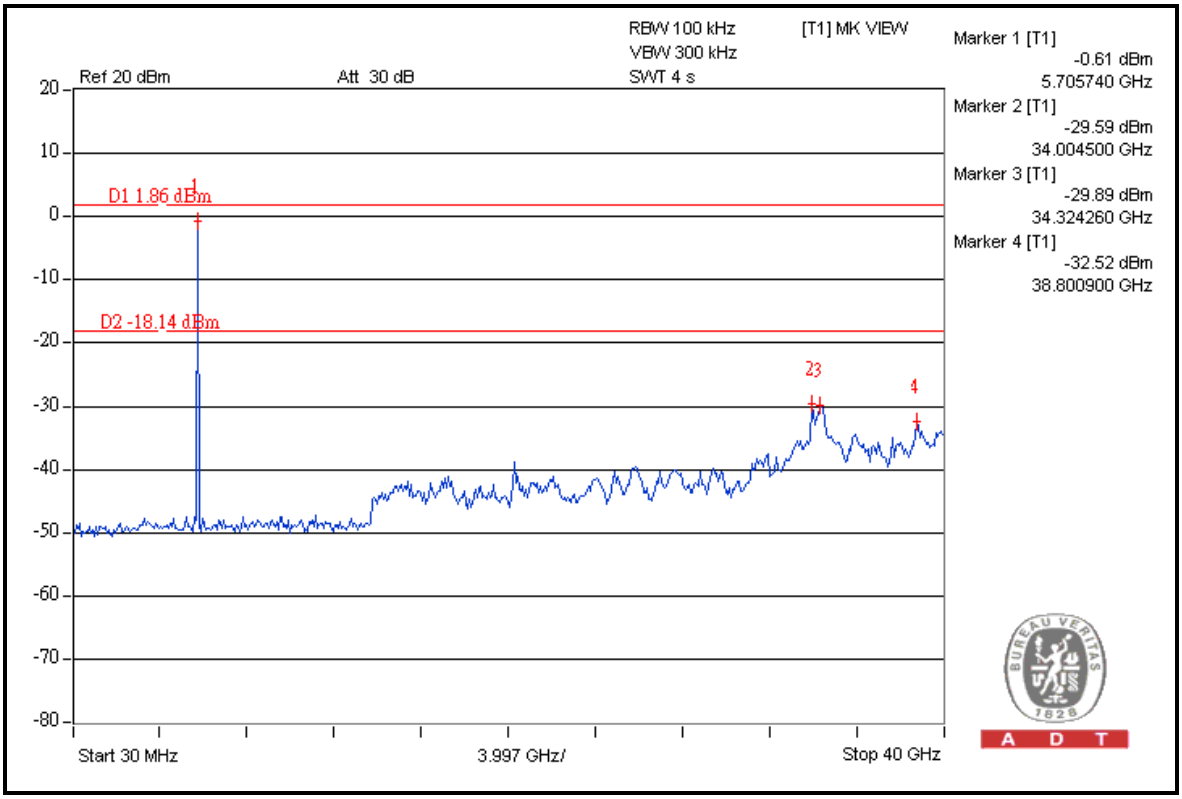

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.12 dBm
5.822600 GHz
Marker 2 [T1]
-49.63 dBm
5.850000 GHz
Marker 3 [T1]
-49.63 dBm
5.850000 GHz
D1 0.12 dBm
D2 -19.88 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz

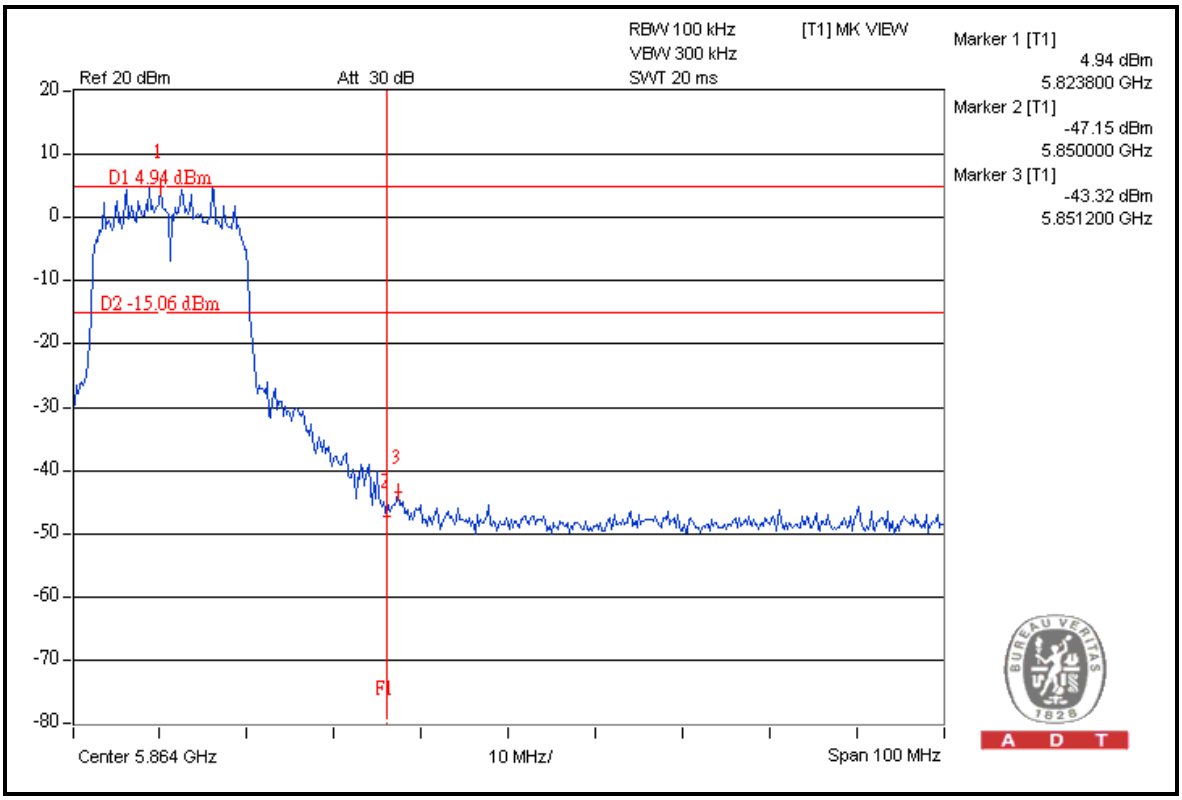

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
3.70 dBm
5.785680 GHz
Marker 2 [T1]
-28.06 dBm
34.164380 GHz
Marker 3 [T1]
-29.30 dBm
34.404200 GHz
Marker 4 [T1]
-29.37 dBm
34.004500 GHz
D1 5.02 dBm
D2 -14.98 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

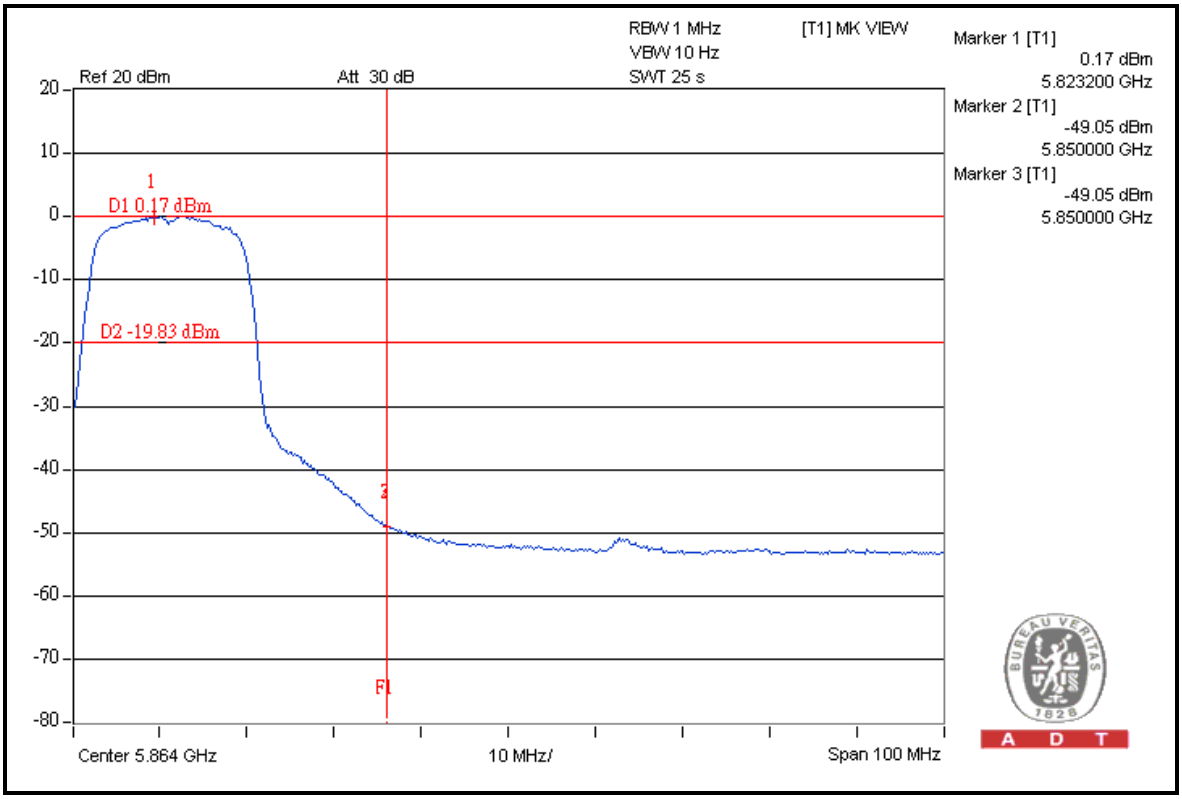
CHAIN 1

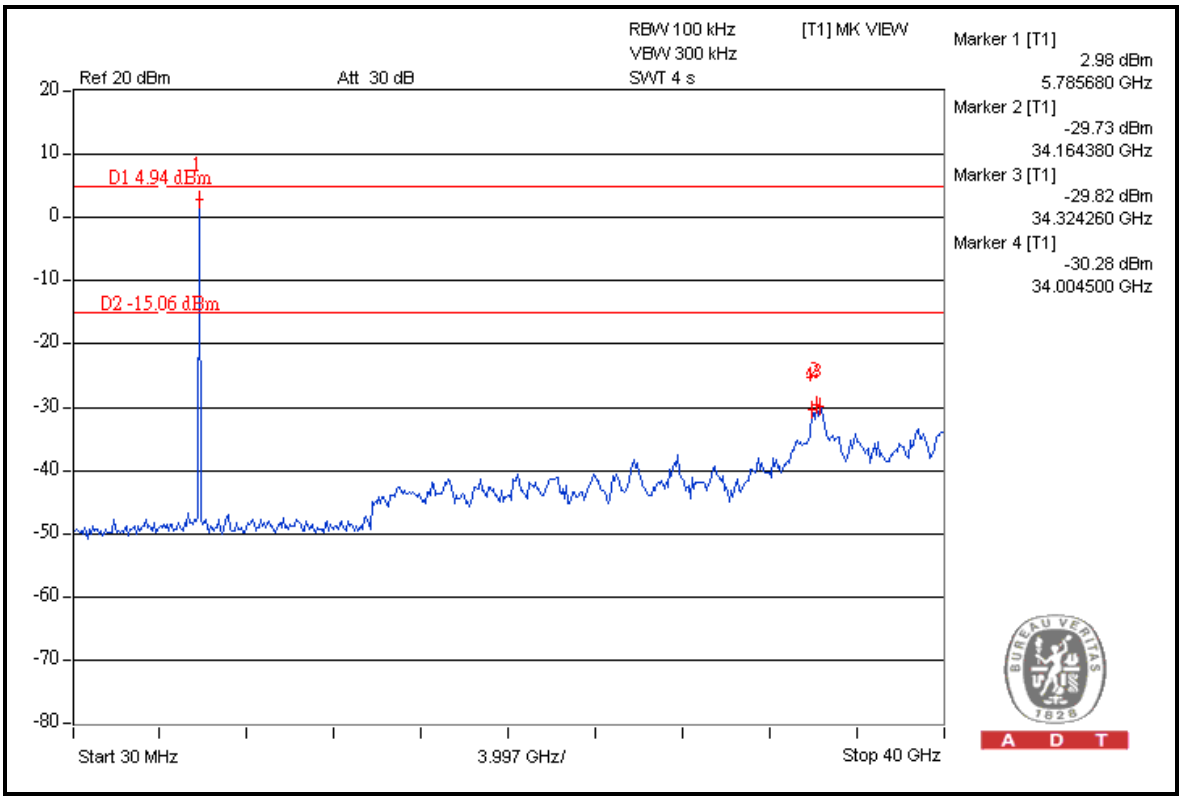

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
1.86 dBm
5.746400 GHz
Marker 2 [T1]
-46.33 dBm
5.725000 GHz
Marker 3 [T1]
-44.71 dBm
5.724400 GHz
D1 1.86 dBm
D2 -18.14 dBm
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-2.80 dBm
5.743400 GHz
Marker 2 [T1]
-49.67 dBm
5.725000 GHz
Marker 3 [T1]
-49.67 dBm
5.725000 GHz
D1 -2.8 dBm
D2 -22.8 dBm
Center 5.707 GHz
10 MHz/
Span 100 MHz

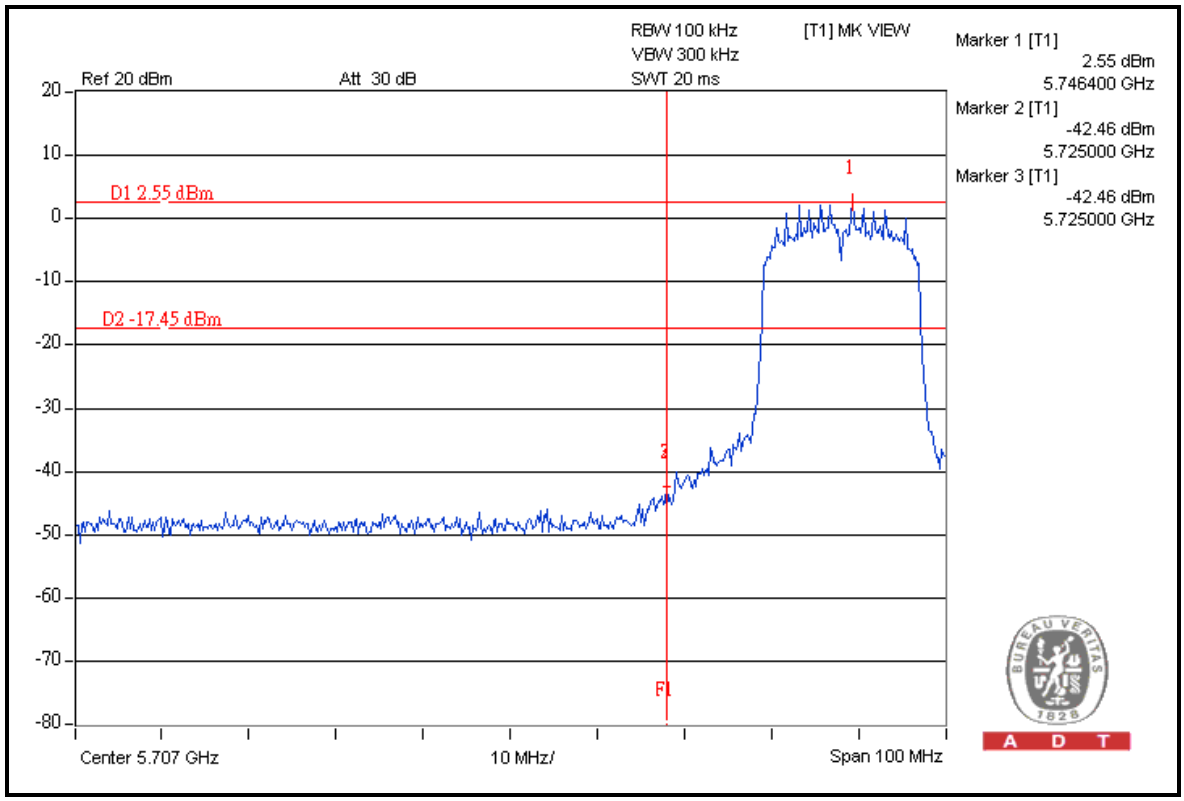

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-0.61 dBm
5.705740 GHz
Marker 2 [T1]
-29.59 dBm
34.004500 GHz
Marker 3 [T1]
-29.89 dBm
34.324260 GHz
Marker 4 [T1]
-32.52 dBm
38.800900 GHz
D1 1.86 dBm
D2 -18.14 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

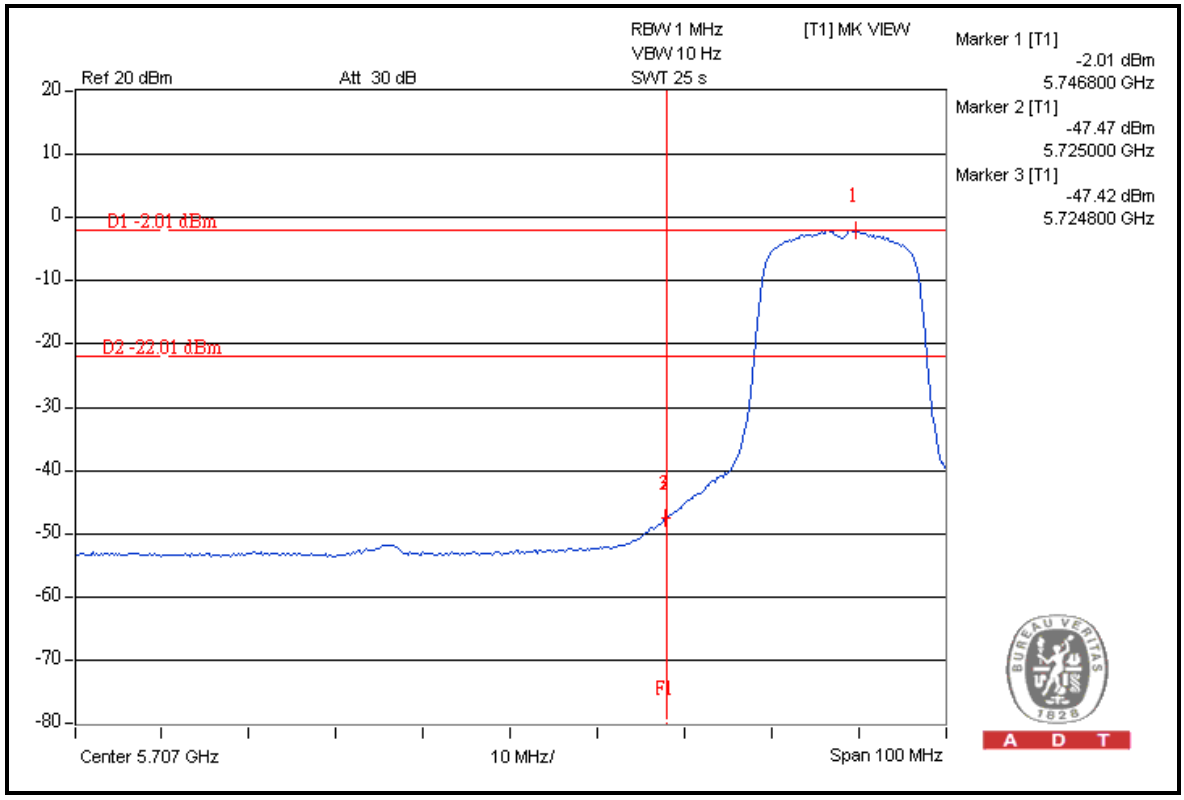

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
4.94 dBm
5.823800 GHz
Marker 2 [T1]
-47.15 dBm
5.850000 GHz
Marker 3 [T1]
-43.32 dBm
5.851200 GHz
D1 4.94 dBm
D2 -15.06 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz

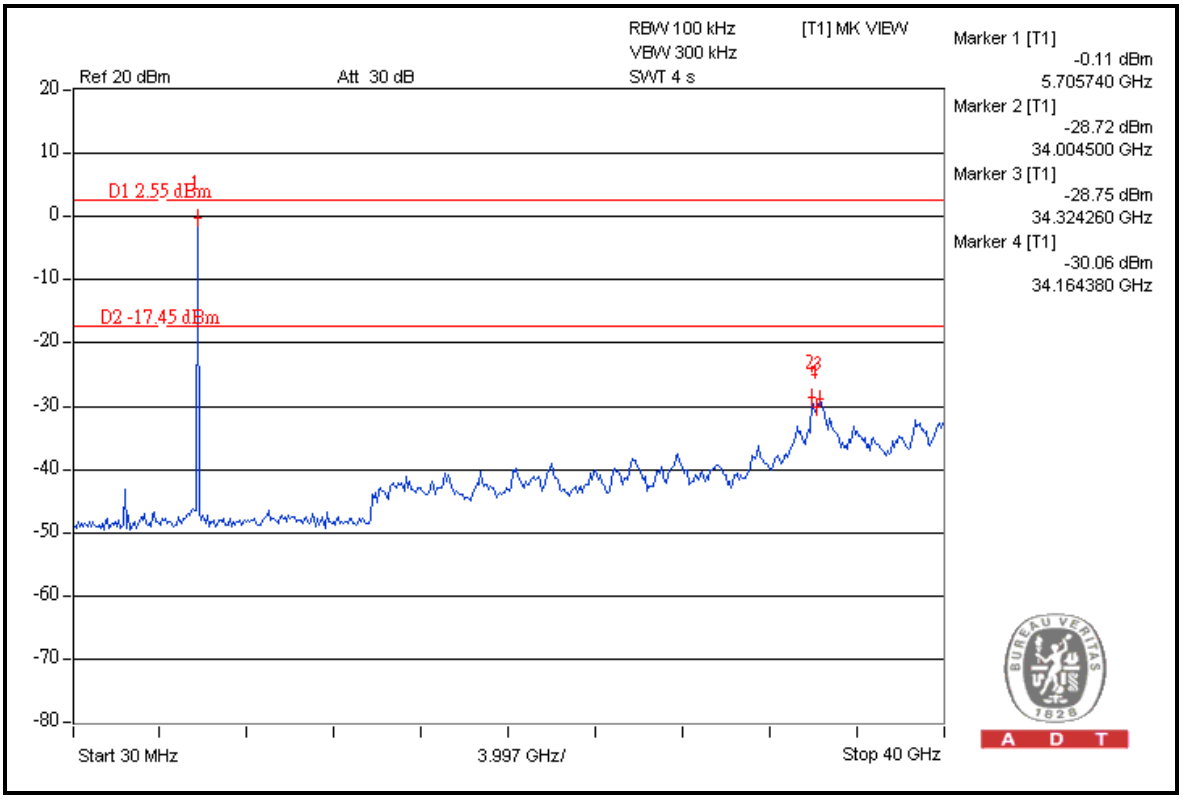

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.17 dBm
5.823200 GHz
Marker 2 [T1]
-49.05 dBm
5.850000 GHz
Marker 3 [T1]
-49.05 dBm
5.850000 GHz
D1 0.17 dBm
D2 -19.83 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz

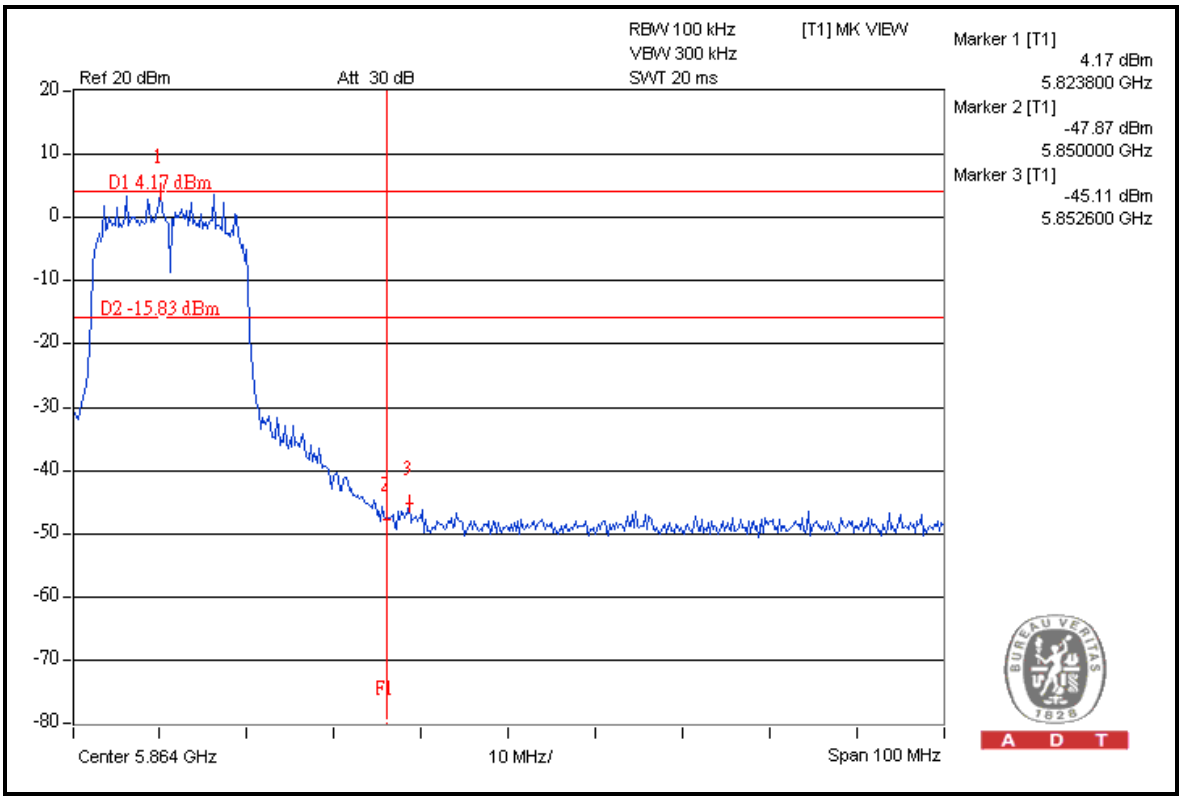

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.98 dBm
5.785680 GHz
Marker 2 [T1]
-29.73 dBm
34.164380 GHz
Marker 3 [T1]
-29.82 dBm
34.324260 GHz
Marker 4 [T1]
-30.28 dBm
34.004500 GHz
D1 4.94 dBm
D2 -15.06 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

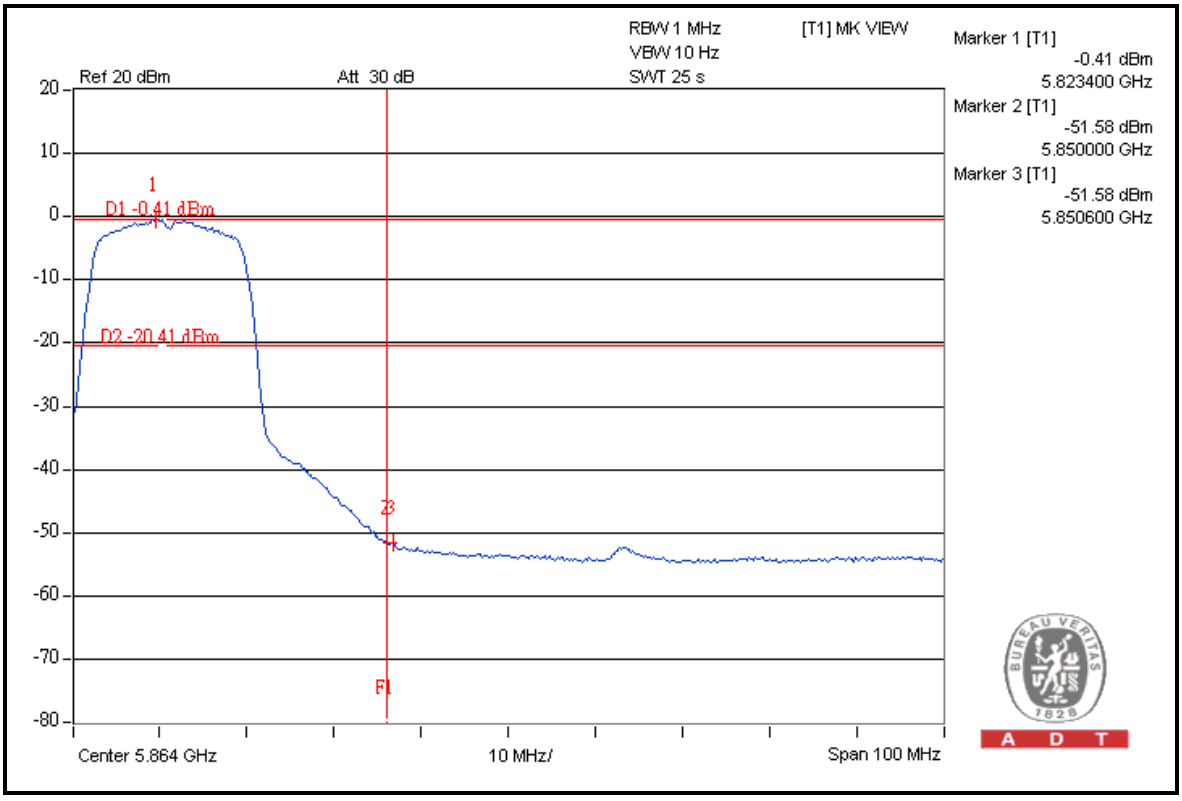
CHAIN 2

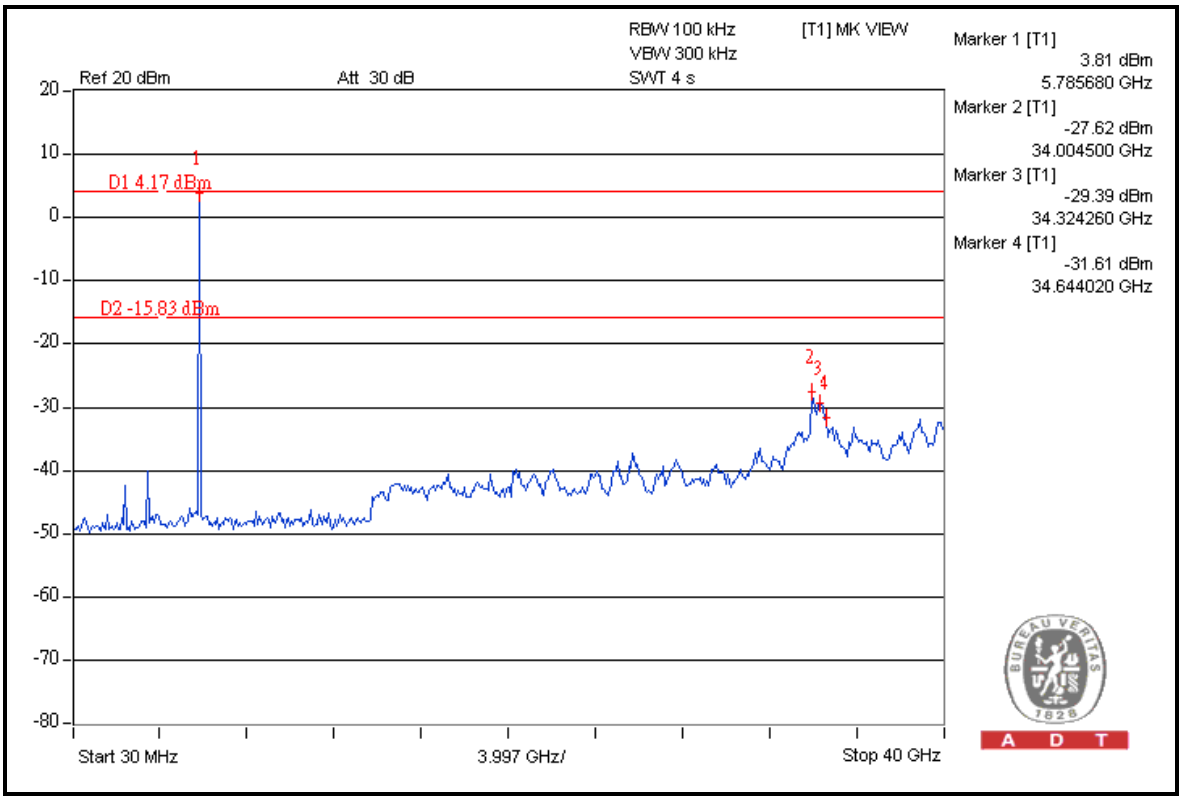

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.55 dBm
5.746400 GHz
Marker 2 [T1]
-42.46 dBm
5.725000 GHz
Marker 3 [T1]
-42.46 dBm
5.725000 GHz
D1 2.55 dBm
D2 -17.45 dBm
Center 5.707 GHz
10 MHz/
Span 100 MHz


RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-2.01 dBm
5.746800 GHz
Marker 2 [T1]
-47.47 dBm
5.725000 GHz
Marker 3 [T1]
-47.42 dBm
5.724800 GHz
D1 -2.01 dBm
D2 -22.01 dBm
Center 5.707 GHz
10 MHz/
Span 100 MHz

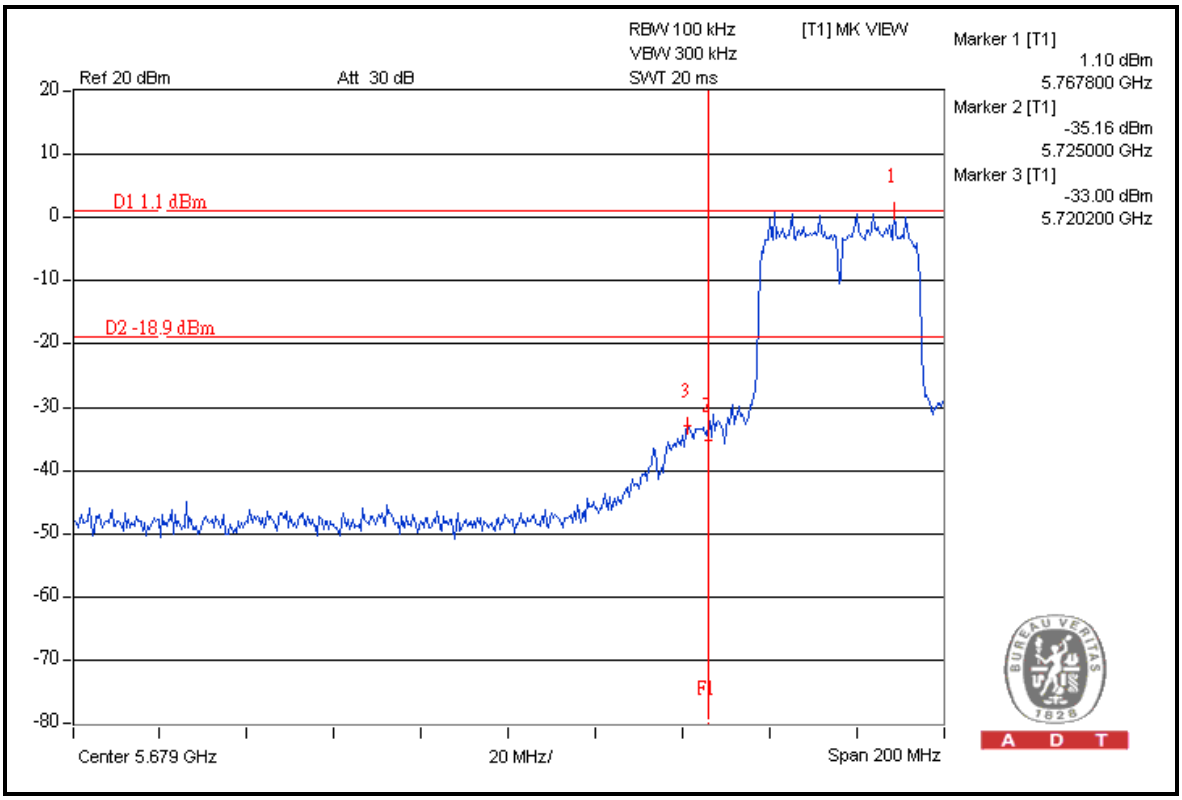

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.55 dBm
D2 -17.45 dBm
Marker 1 [T1]
-0.11 dBm
5.705740 GHz
Marker 2 [T1]
-28.72 dBm
34.004500 GHz
Marker 3 [T1]
-28.75 dBm
34.324260 GHz
Marker 4 [T1]
-30.06 dBm
34.164380 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

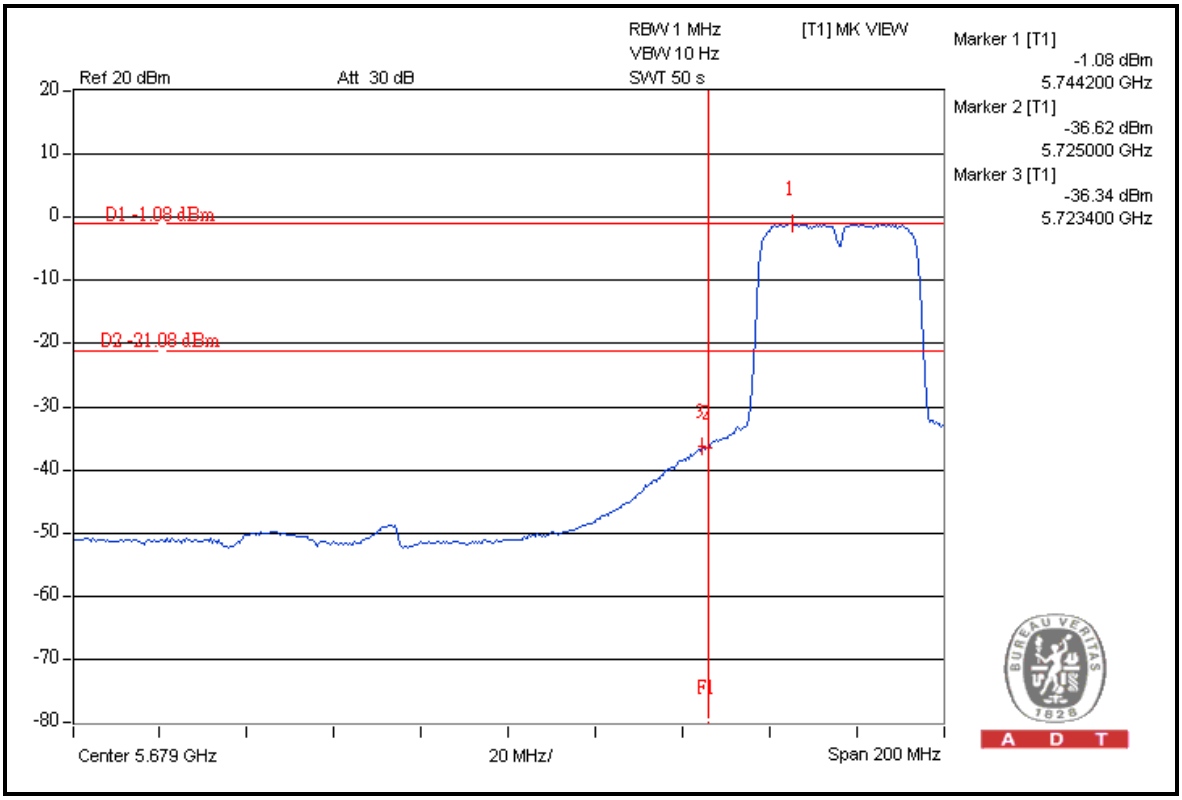

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 4.17 dBm
D2 -15.83 dBm
Marker 1 [T1]
4.17 dBm
5.823800 GHz
Marker 2 [T1]
-47.87 dBm
5.850000 GHz
Marker 3 [T1]
-45.11 dBm
5.852600 GHz
Center 5.864 GHz
10 MHz/
Span 100 MHz

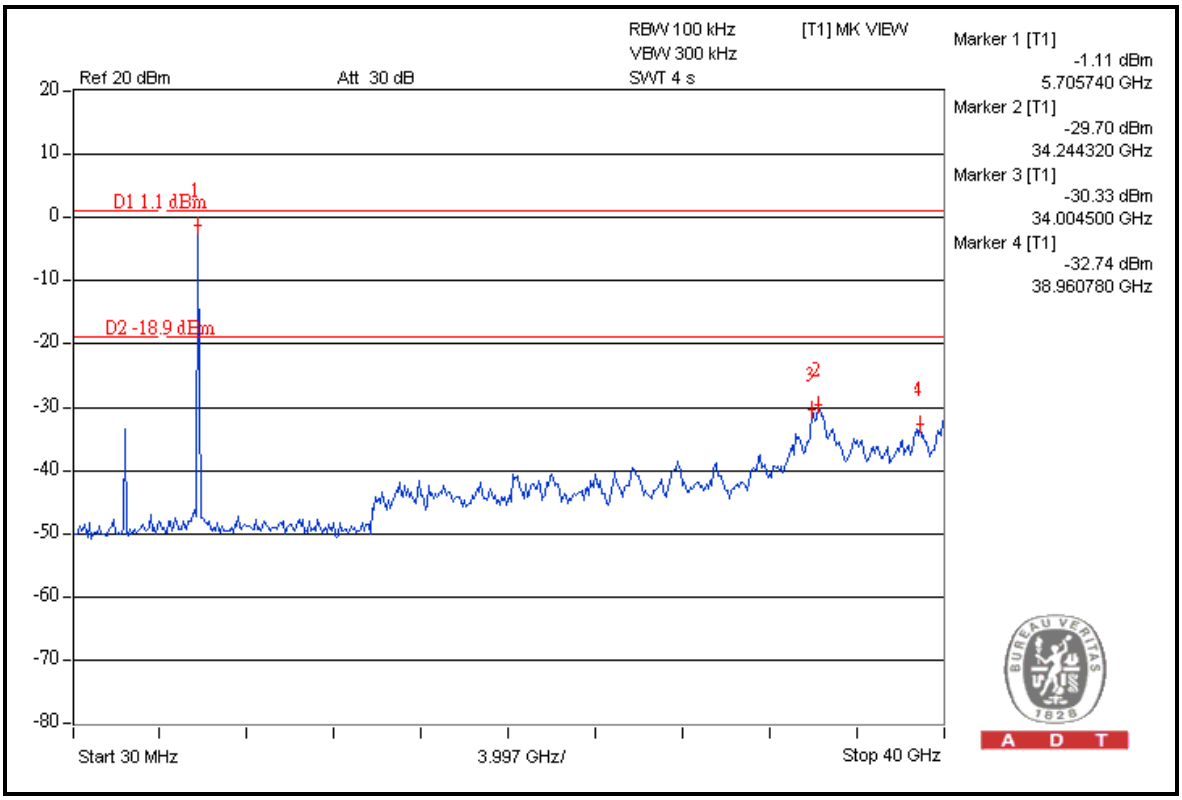

RBW 1 MHz
VBW 10 Hz
SWT 25 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-0.41 dBm
5.823400 GHz
Marker 2 [T1]
-51.58 dBm
5.850000 GHz
Marker 3 [T1]
-51.58 dBm
5.850600 GHz
D1 -0.41 dBm
D2 -20.41 dBm
Center 5.864 GHz
10 MHz/
Span 100 MHz

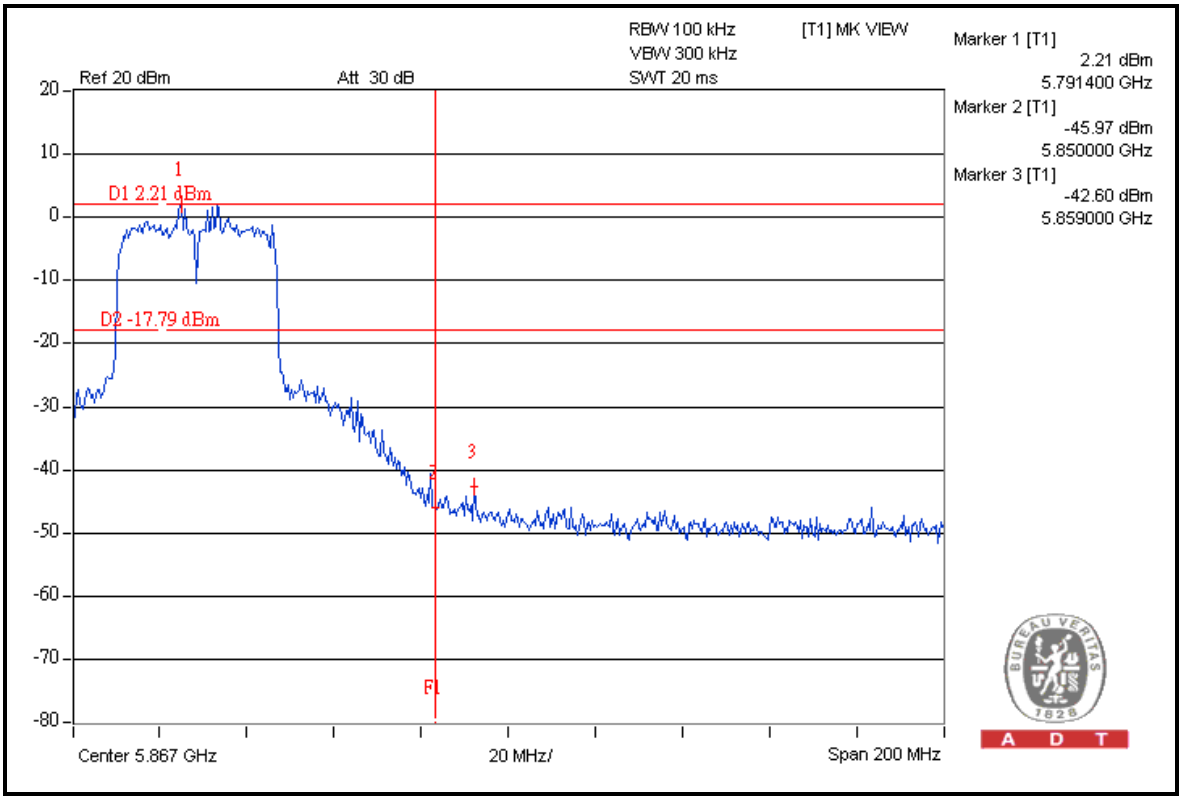

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
3.81 dBm
5.785680 GHz
Marker 2 [T1]
-27.62 dBm
34.004500 GHz
Marker 3 [T1]
-29.39 dBm
34.324260 GHz
Marker 4 [T1]
-31.61 dBm
34.644020 GHz
D1 4.17 dBm
D2 -15.83 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

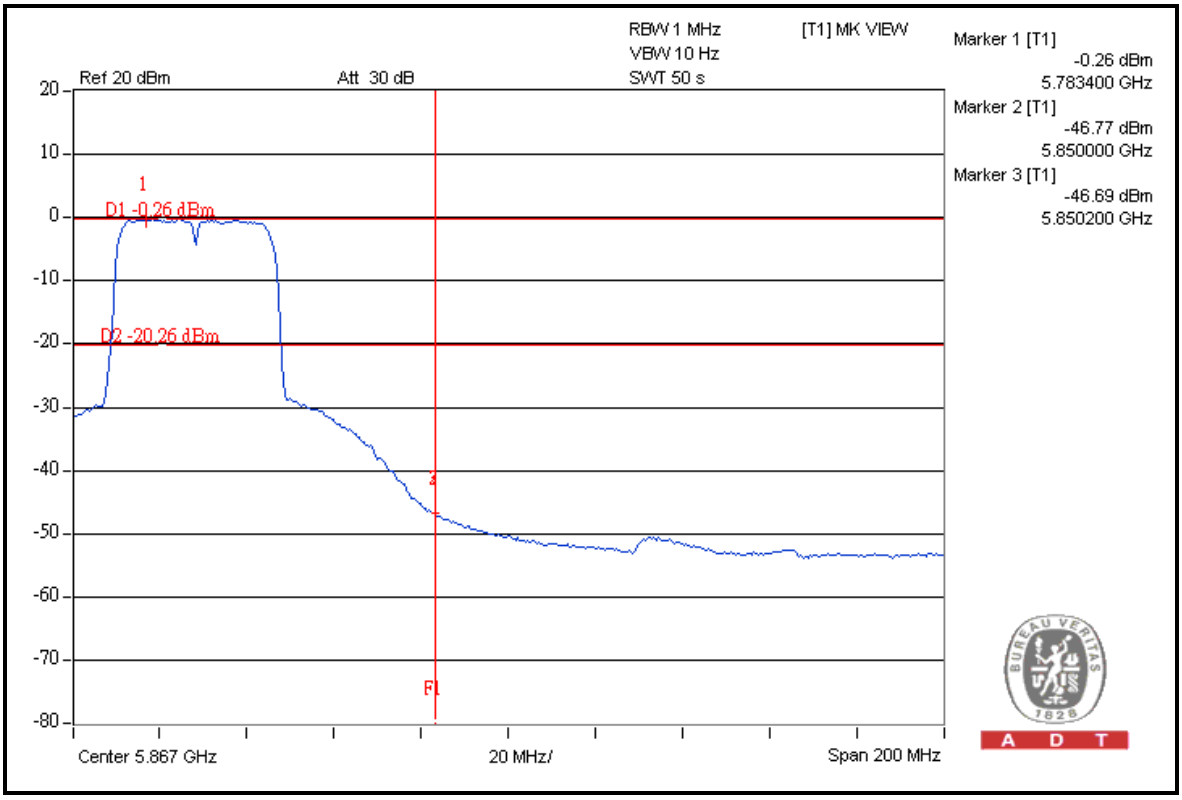
802.11n (40MHz): 1TX

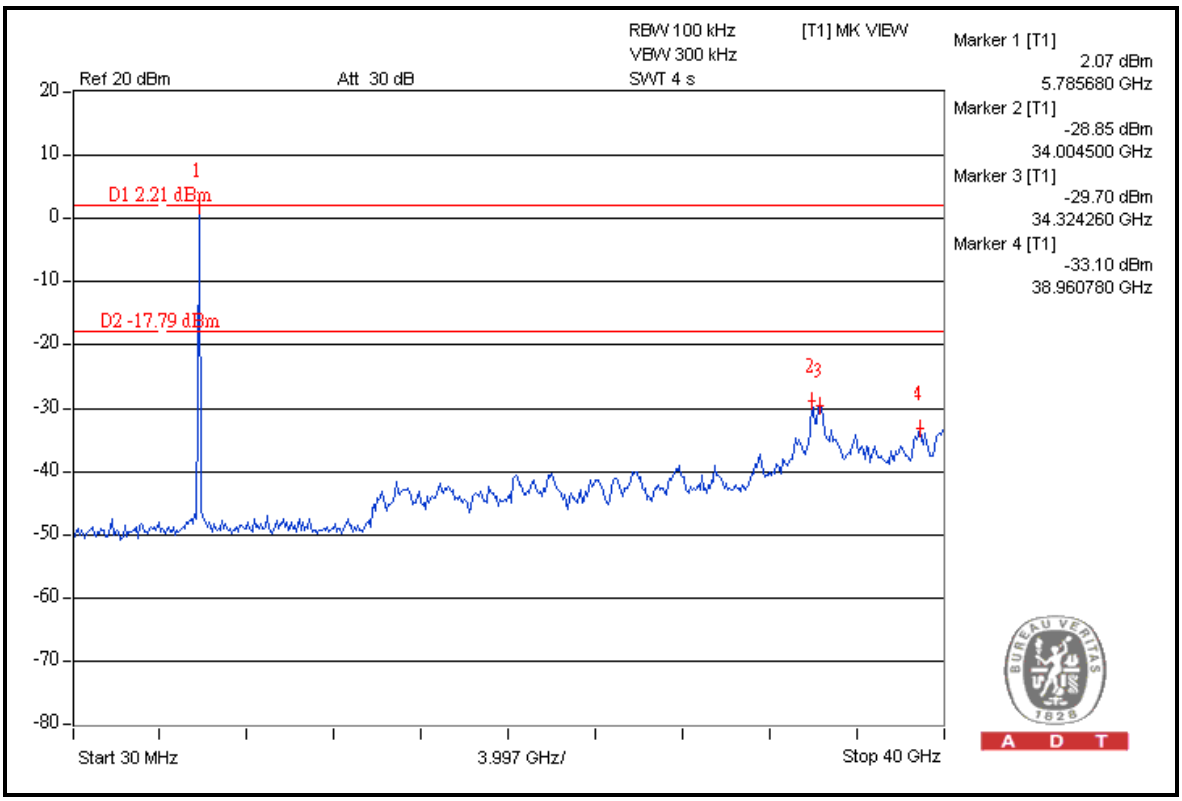





RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 1.1 dBm
D2 -18.9 dBm
Marker 1 [T1]
-1.11 dBm
5.705740 GHz
Marker 2 [T1]
-29.70 dBm
34.244320 GHz
Marker 3 [T1]
-30.33 dBm
34.004500 GHz
Marker 4 [T1]
-32.74 dBm
38.960780 GHz
Start 30 MHz
3.997 GHz/
Stop 40 GHz

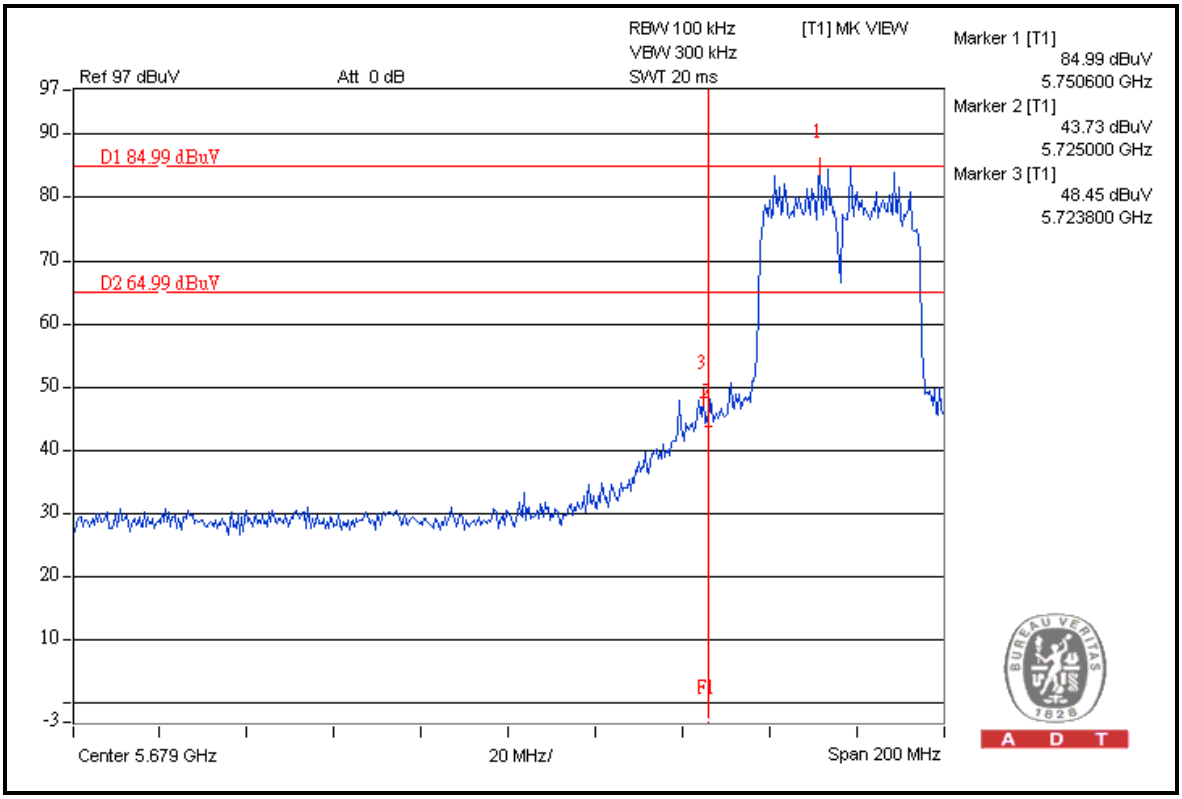

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
D1 2.21 dBm
D2 -17.79 dBm
Marker 1 [T1]
2.21 dBm
5.791400 GHz
Marker 2 [T1]
-45.97 dBm
5.850000 GHz
Marker 3 [T1]
-42.60 dBm
5.859000 GHz
Center 5.867 GHz
20 MHz/
Span 200 MHz

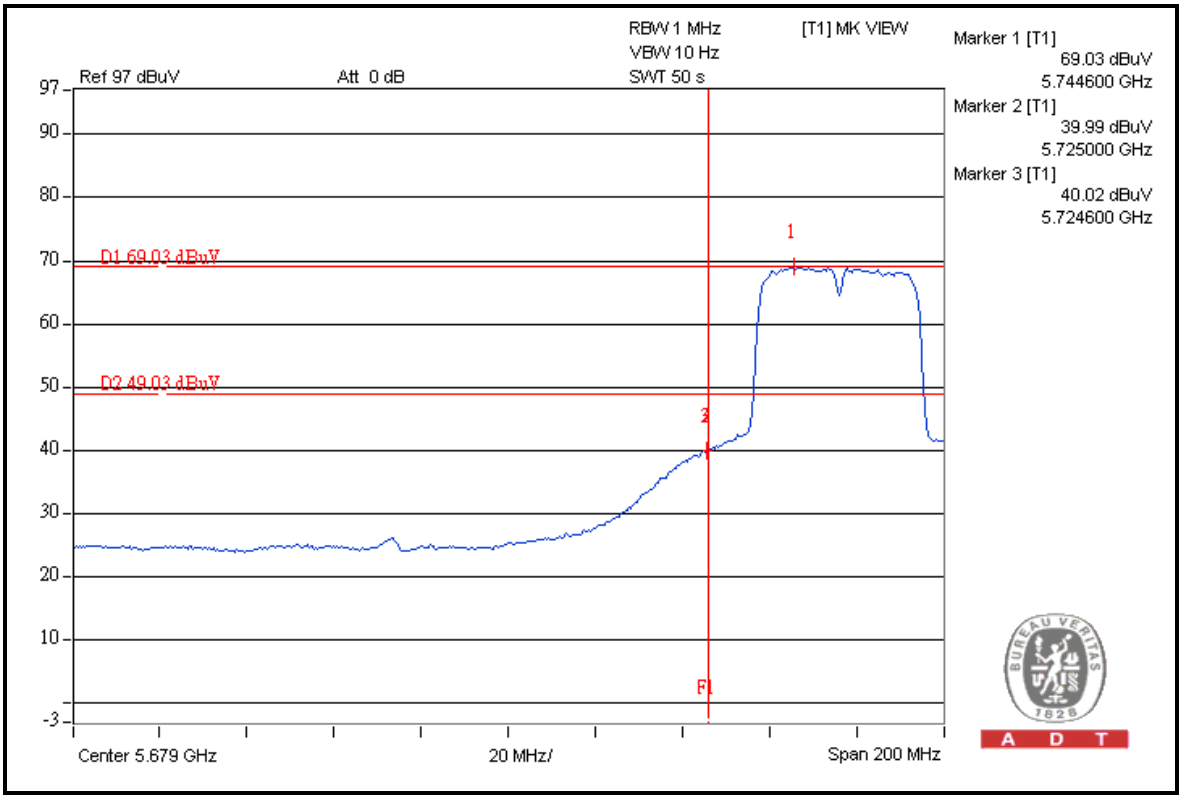

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-0.26 dBm
5.783400 GHz
Marker 2 [T1]
-46.77 dBm
5.850000 GHz
Marker 3 [T1]
-46.69 dBm
5.850200 GHz
D1 -0.26 dBm
D2 -20.26 dBm
Center 5.867 GHz
20 MHz/
Span 200 MHz

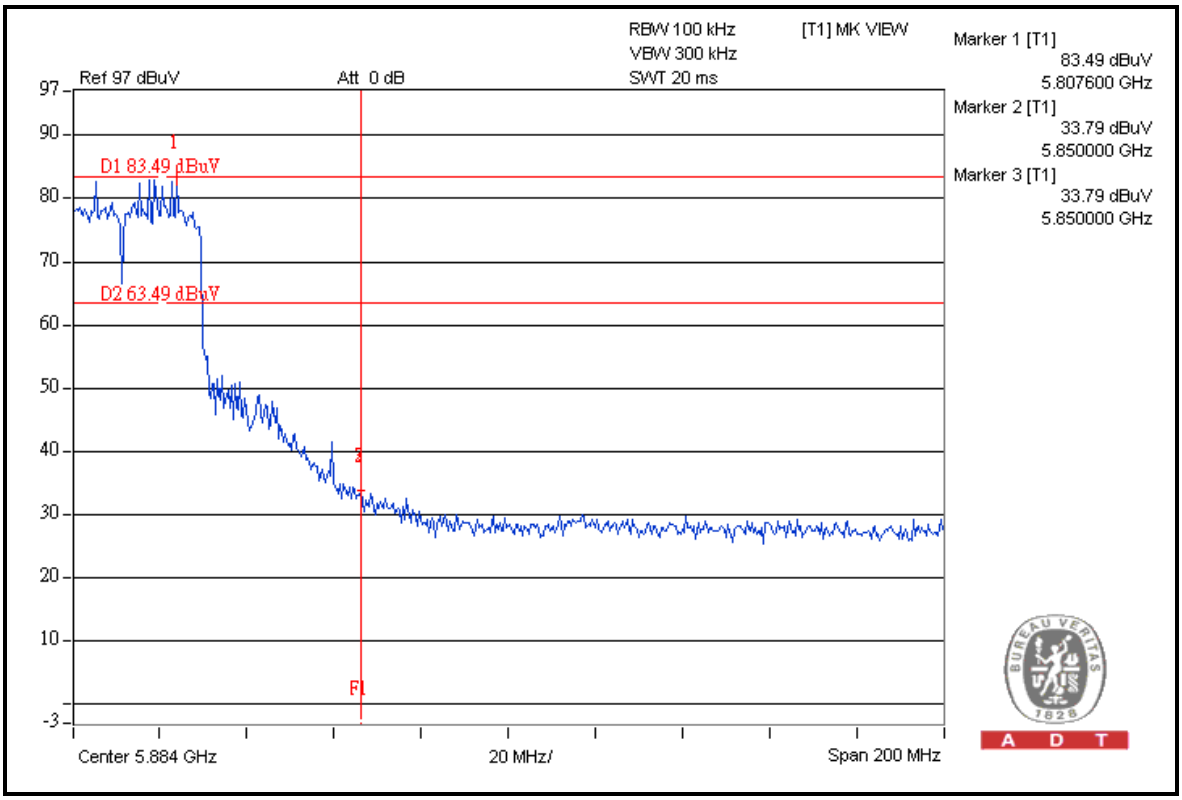

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.07 dBm
5.785680 GHz
Marker 2 [T1]
-28.85 dBm
34.004500 GHz
Marker 3 [T1]
-29.70 dBm
34.324260 GHz
Marker 4 [T1]
-33.10 dBm
38.960780 GHz
D1 2.21 dBm
D2 -17.79 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

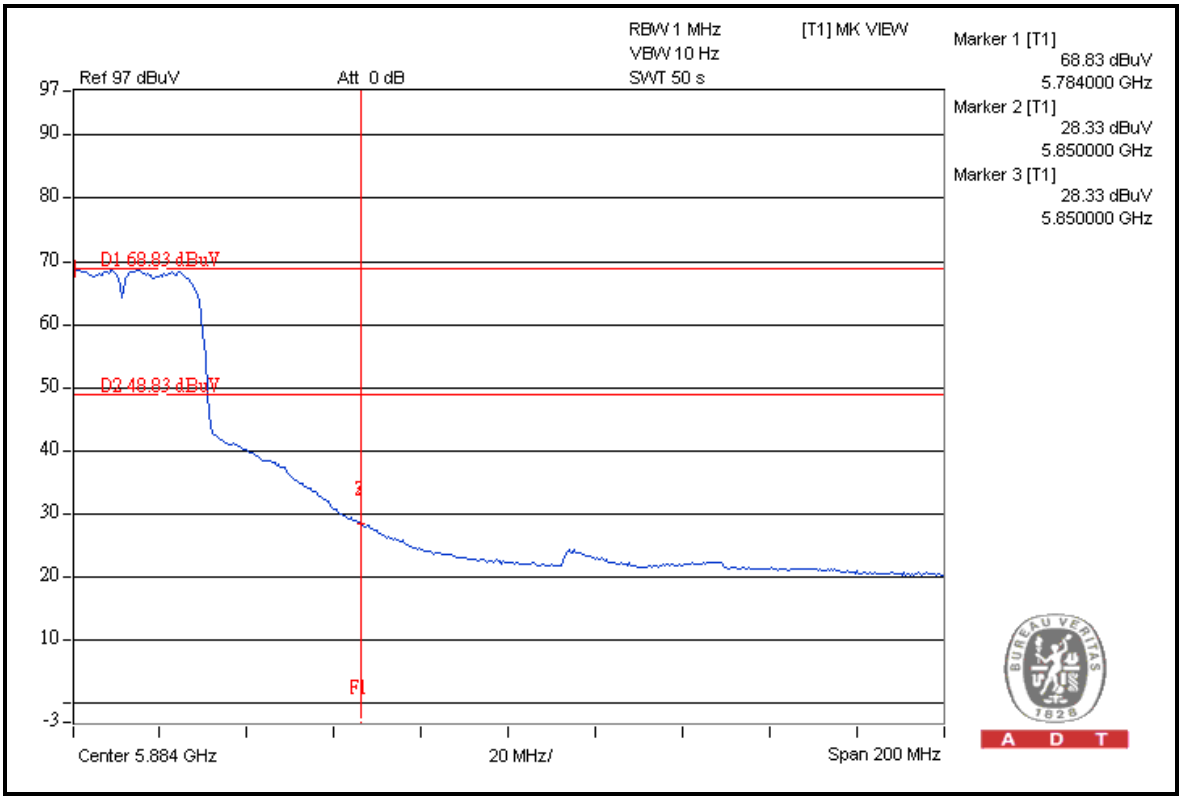
802.11n (40MHz): 3TX

FOR RADIATED MEASURED (THREE CHAINS ON)



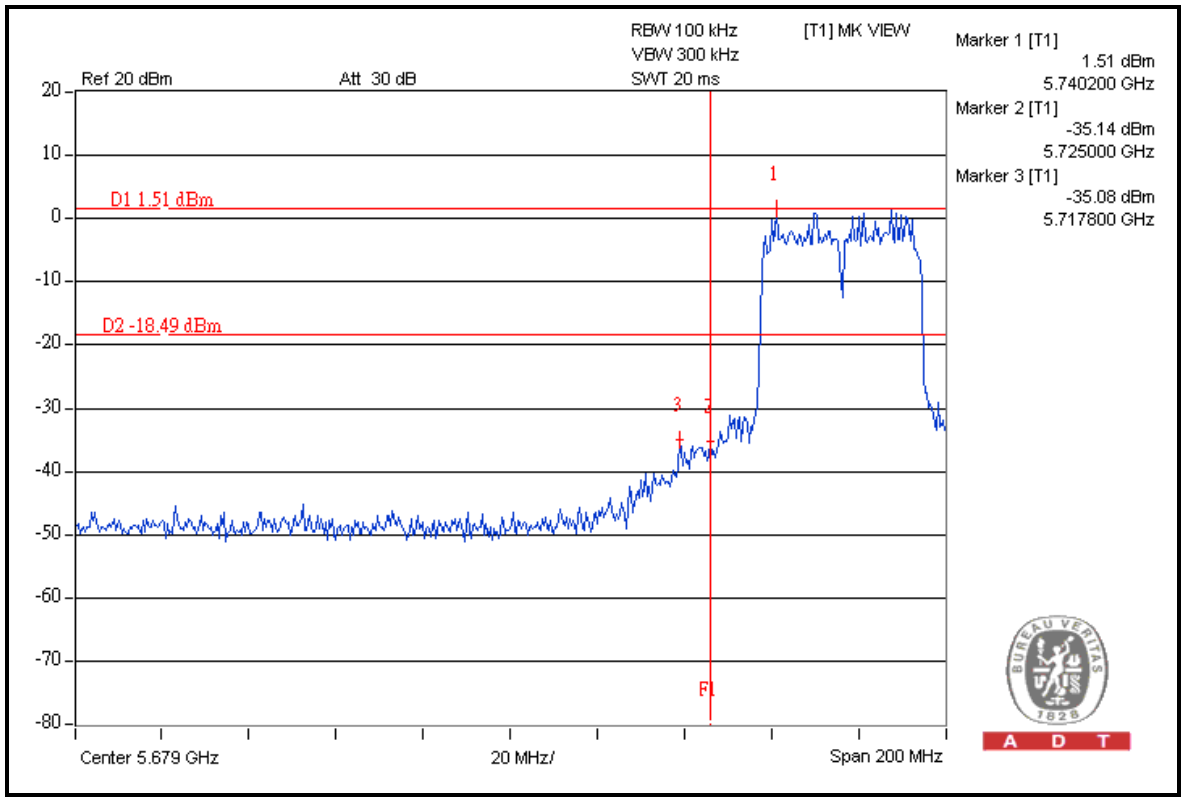


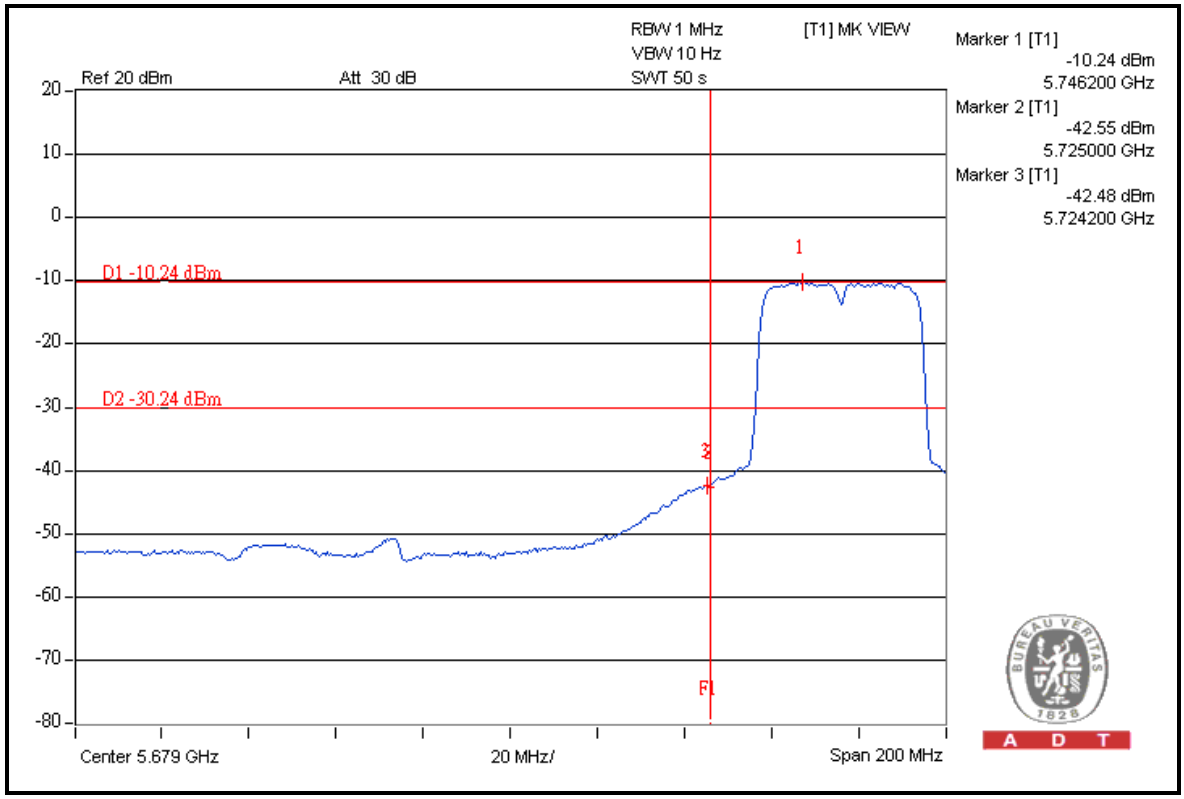

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 83.49 dBuV
D2 63.49 dBuV
Marker 1 [T1]
83.49 dBuV
5.807600 GHz
Marker 2 [T1]
33.79 dBuV
5.850000 GHz
Marker 3 [T1]
33.79 dBuV
5.850000 GHz
Center 5.884 GHz
20 MHz/
Span 200 MHz

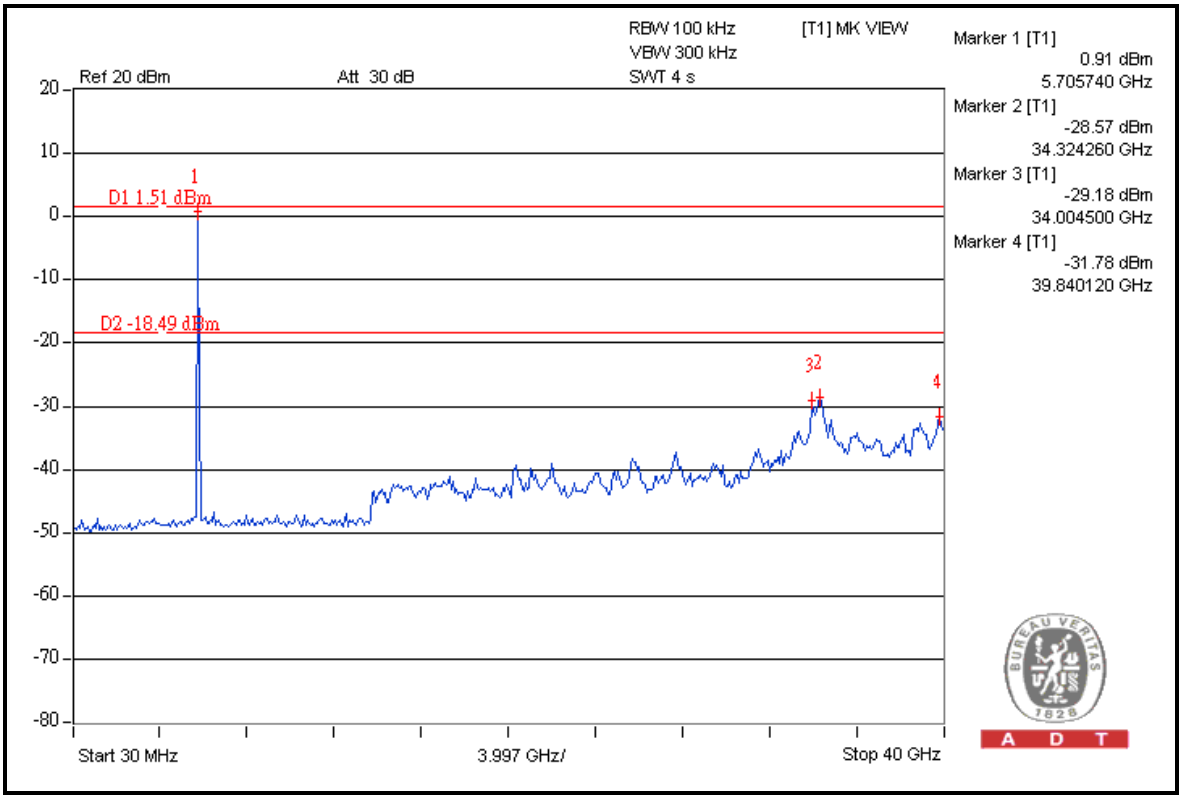

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 97 dBuV
Att 0 dB
D1 68.83 dBuV
D2 48.83 dBuV
Marker 1 [T1]
68.83 dBuV
5.784000 GHz
Marker 2 [T1]
28.33 dBuV
5.850000 GHz
Marker 3 [T1]
28.33 dBuV
5.850000 GHz
Center 5.884 GHz
20 MHz/
Span 200 MHz

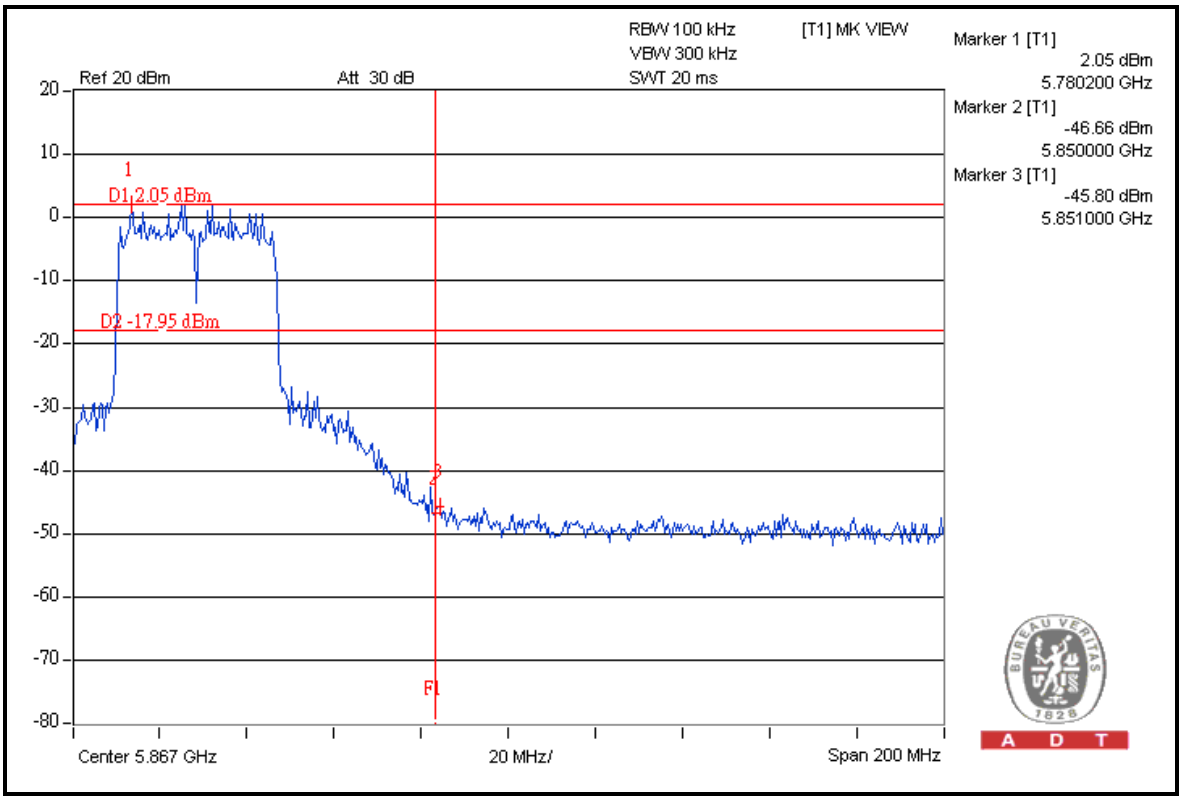
FOR CONDUCTED MEASURED

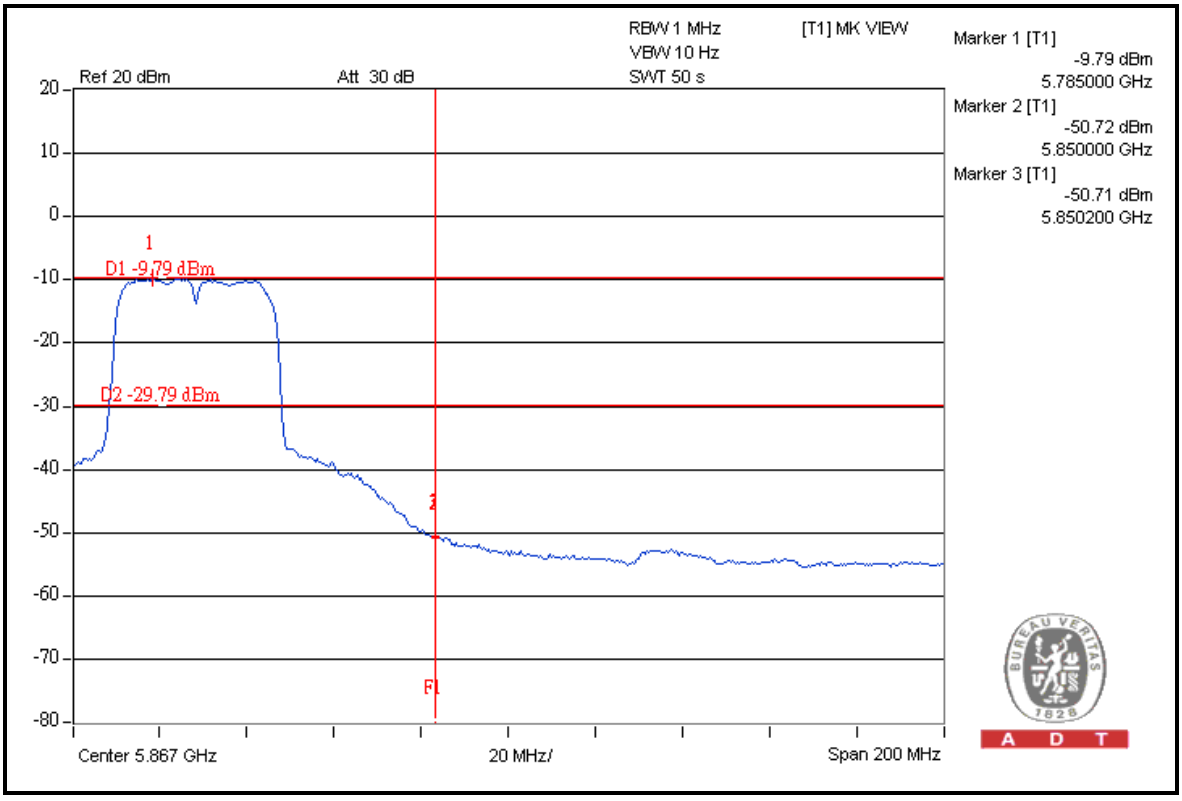
CHAIN 0

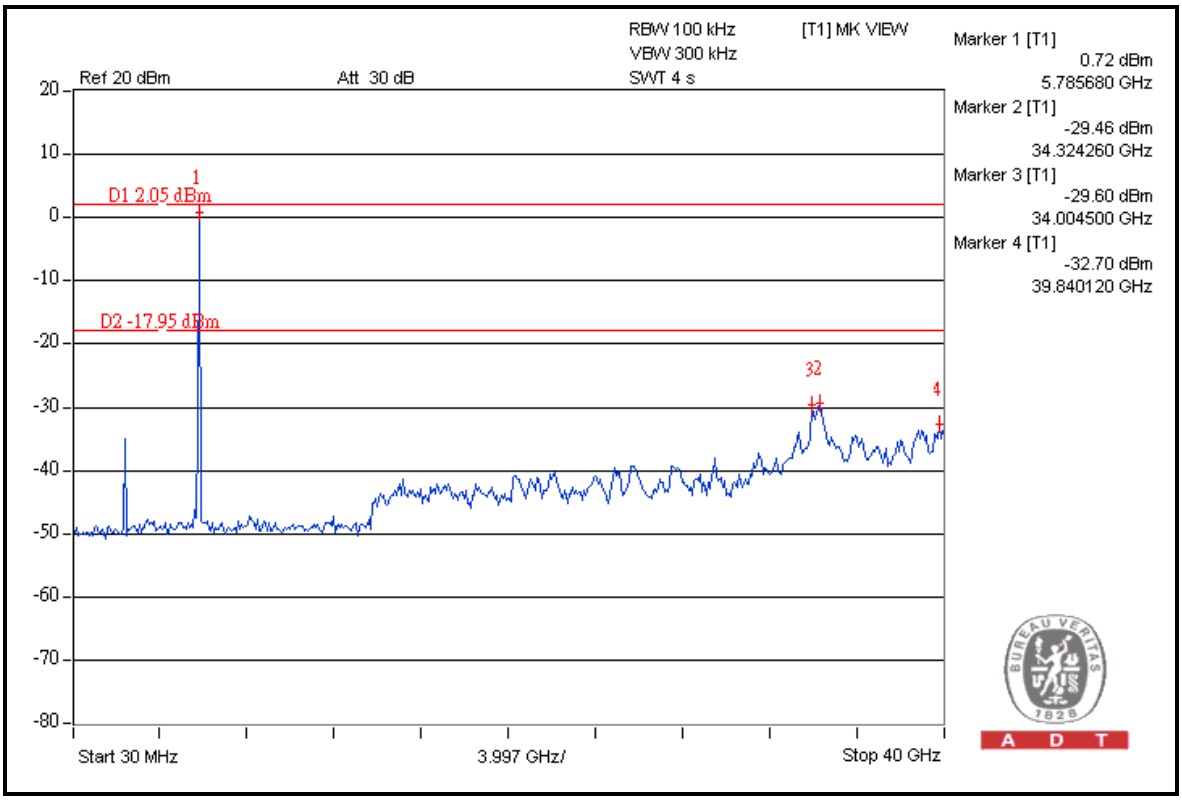




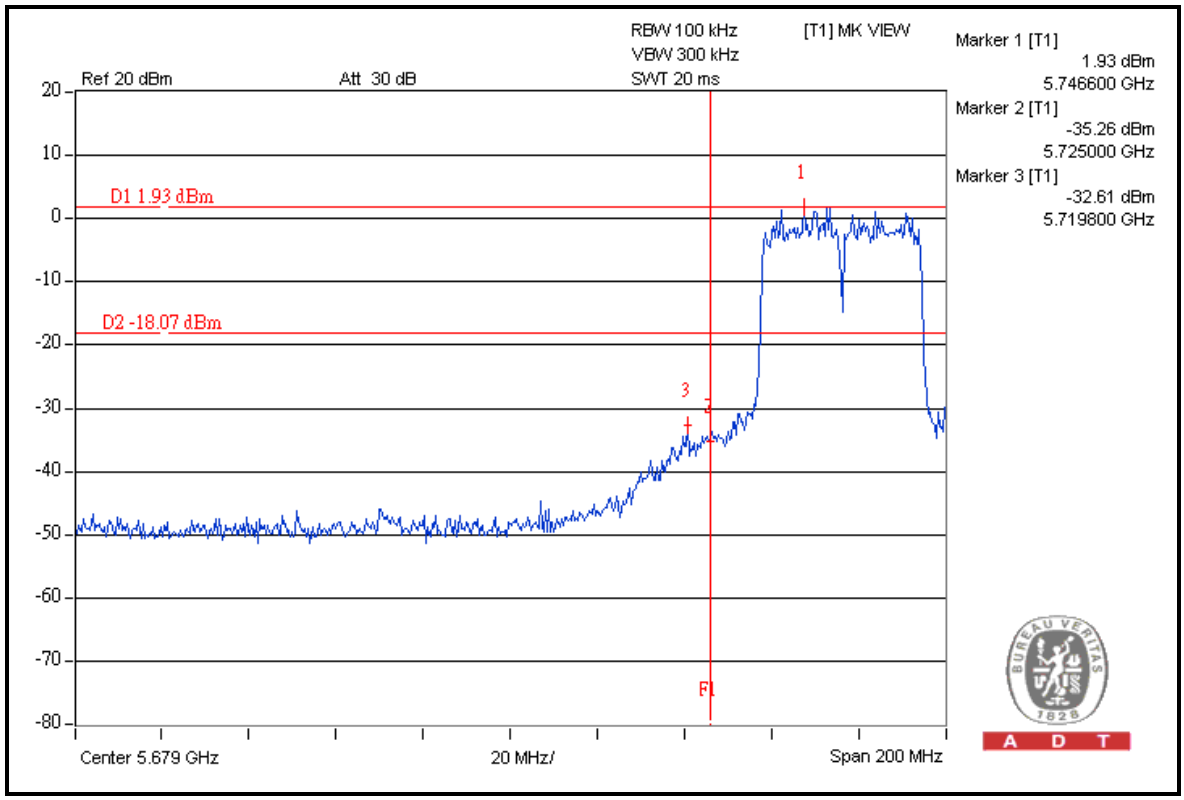

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.91 dBm
5.705740 GHz
Marker 2 [T1]
-28.57 dBm
34.324260 GHz
Marker 3 [T1]
-29.18 dBm
34.004500 GHz
Marker 4 [T1]
-31.78 dBm
39.840120 GHz
D1 1.51 dBm
D2 -18.49 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

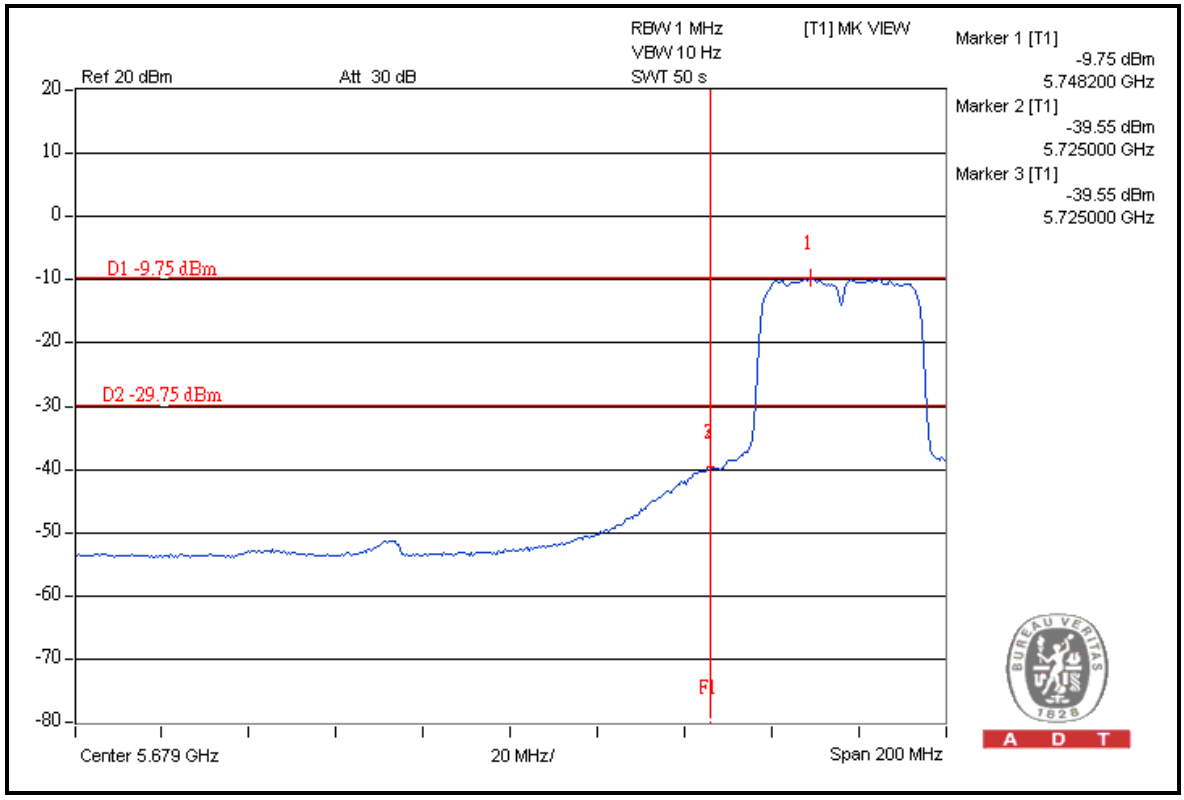

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.05 dBm
5.780200 GHz
Marker 2 [T1]
-46.66 dBm
5.850000 GHz
Marker 3 [T1]
-45.80 dBm
5.851000 GHz
D1 2.05 dBm
D2 -17.95 dBm
Center 5.867 GHz
20 MHz/
Span 200 MHz

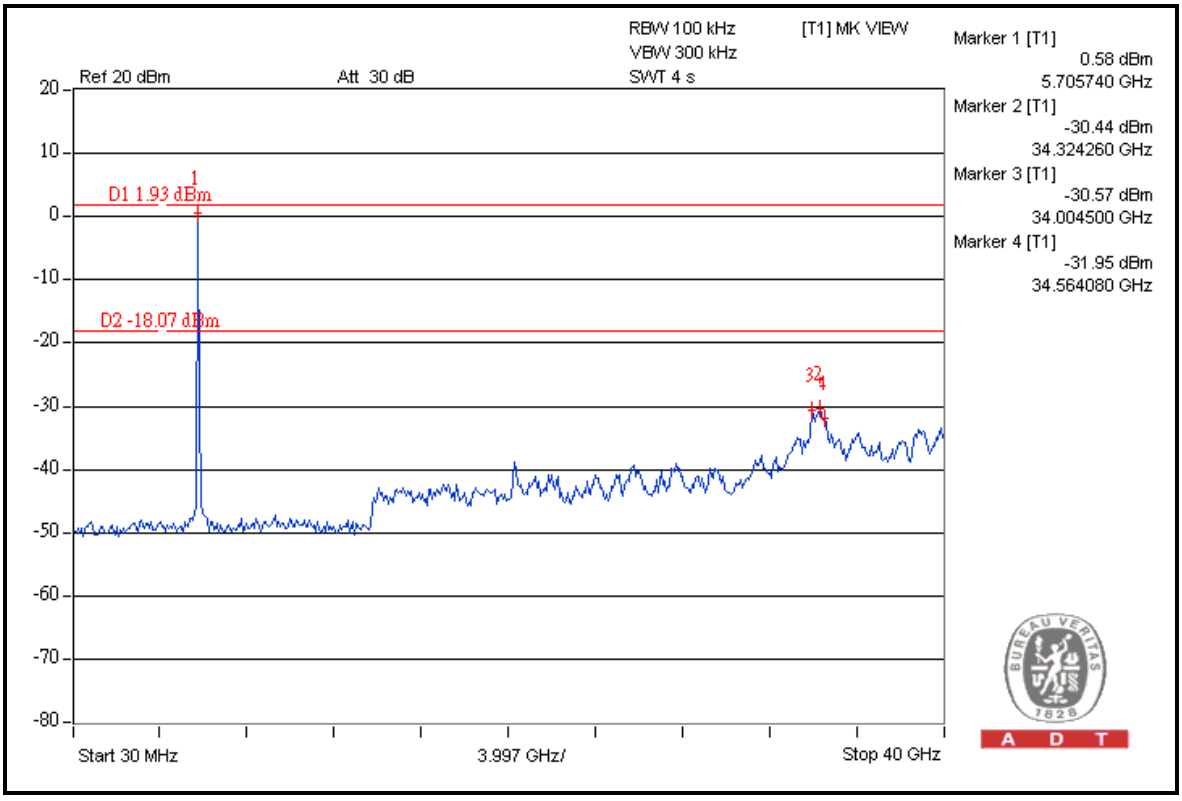

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-9.79 dBm
5.785000 GHz
Marker 2 [T1]
-50.72 dBm
5.850000 GHz
Marker 3 [T1]
-50.71 dBm
5.850200 GHz
D1 -9.79 dBm
D2 -29.79 dBm
Center 5.867 GHz
20 MHz/
Span 200 MHz

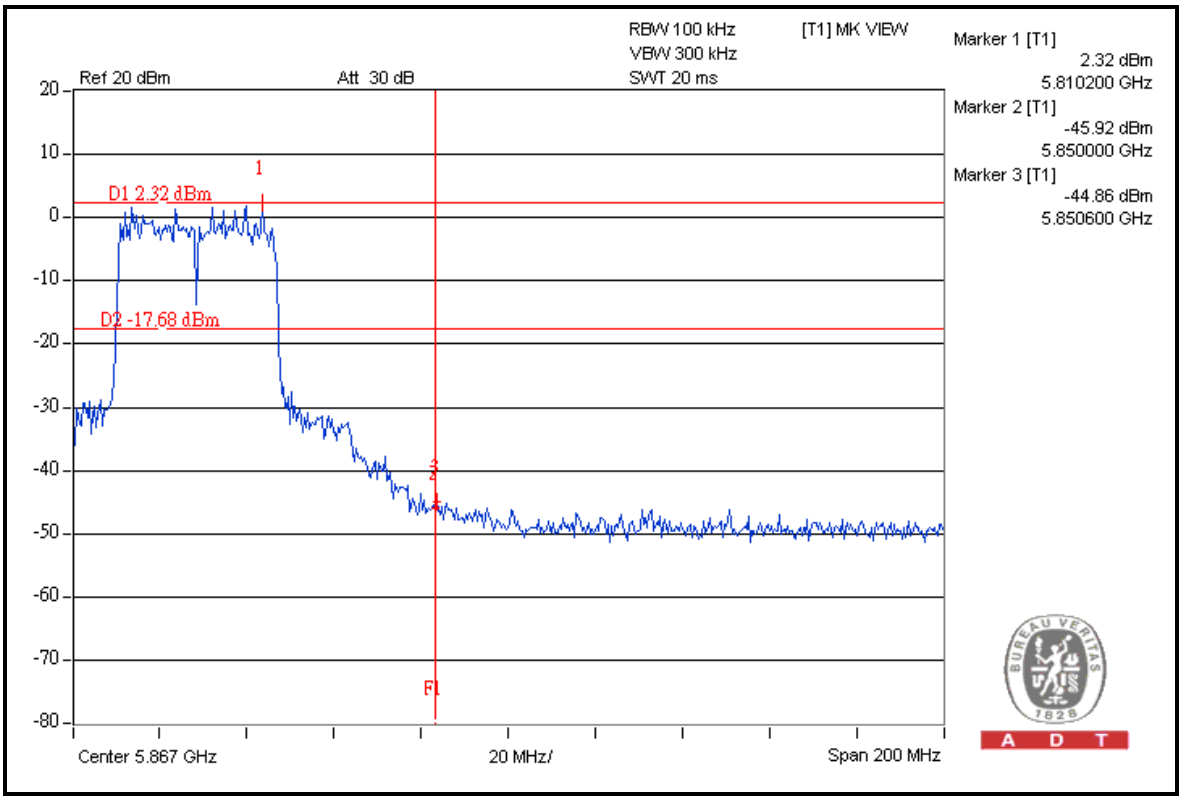

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.72 dBm
5.785680 GHz
Marker 2 [T1]
-29.46 dBm
34.324260 GHz
Marker 3 [T1]
-29.60 dBm
34.004500 GHz
Marker 4 [T1]
-32.70 dBm
39.840120 GHz
D1 2.05 dBm
D2 -17.95 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

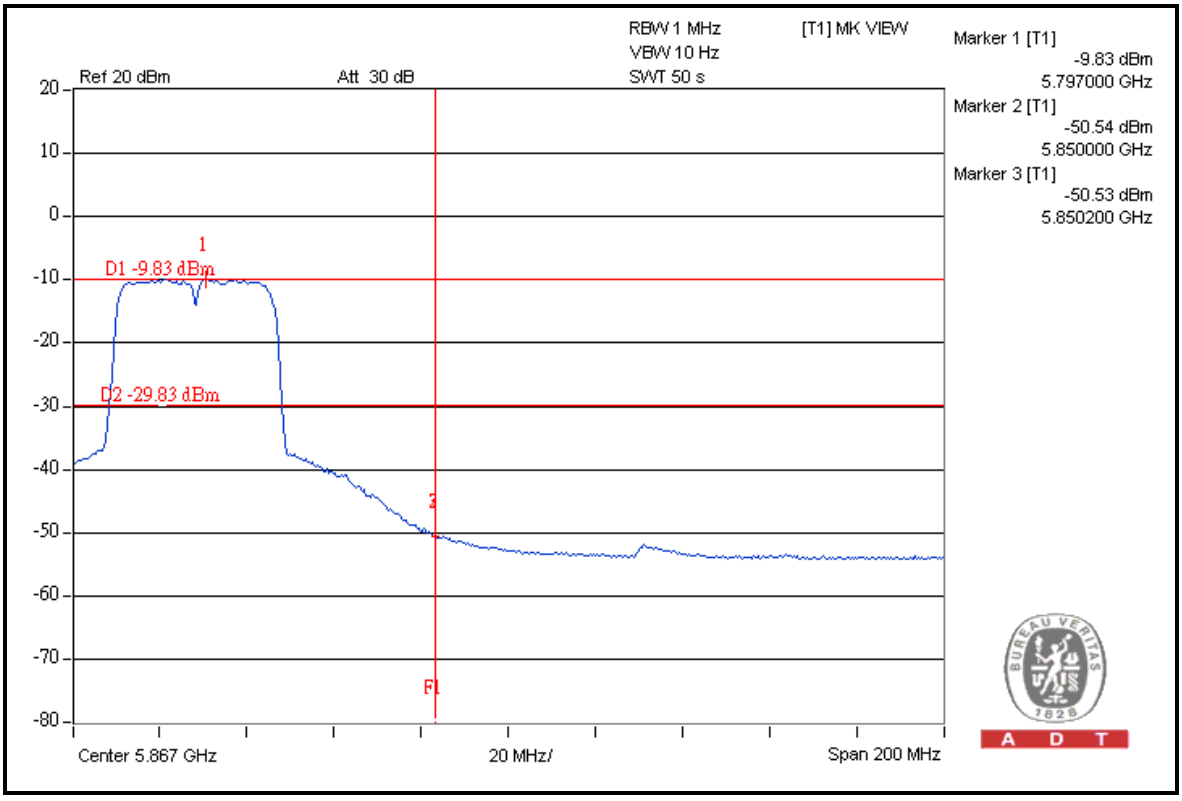
CHAIN 1

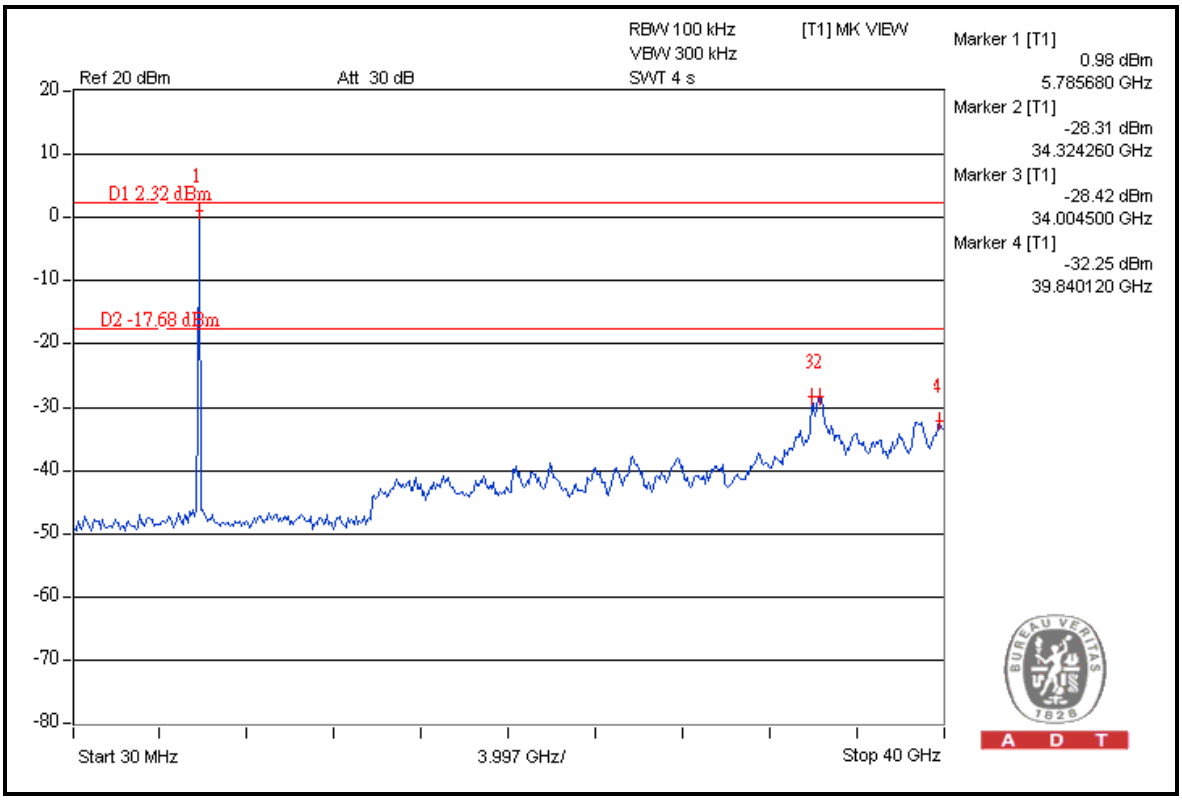

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
1.93 dBm
5.746600 GHz
Marker 2 [T1]
-35.26 dBm
5.725000 GHz
Marker 3 [T1]
-32.61 dBm
5.719800 GHz
D1 1.93 dBm
D2 -18.07 dBm
Center 5.679 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-9.75 dBm
5.748200 GHz
Marker 2 [T1]
-39.55 dBm
5.725000 GHz
Marker 3 [T1]
-39.55 dBm
5.725000 GHz
D1 -9.75 dBm
D2 -29.75 dBm
Center 5.679 GHz
20 MHz/
Span 200 MHz

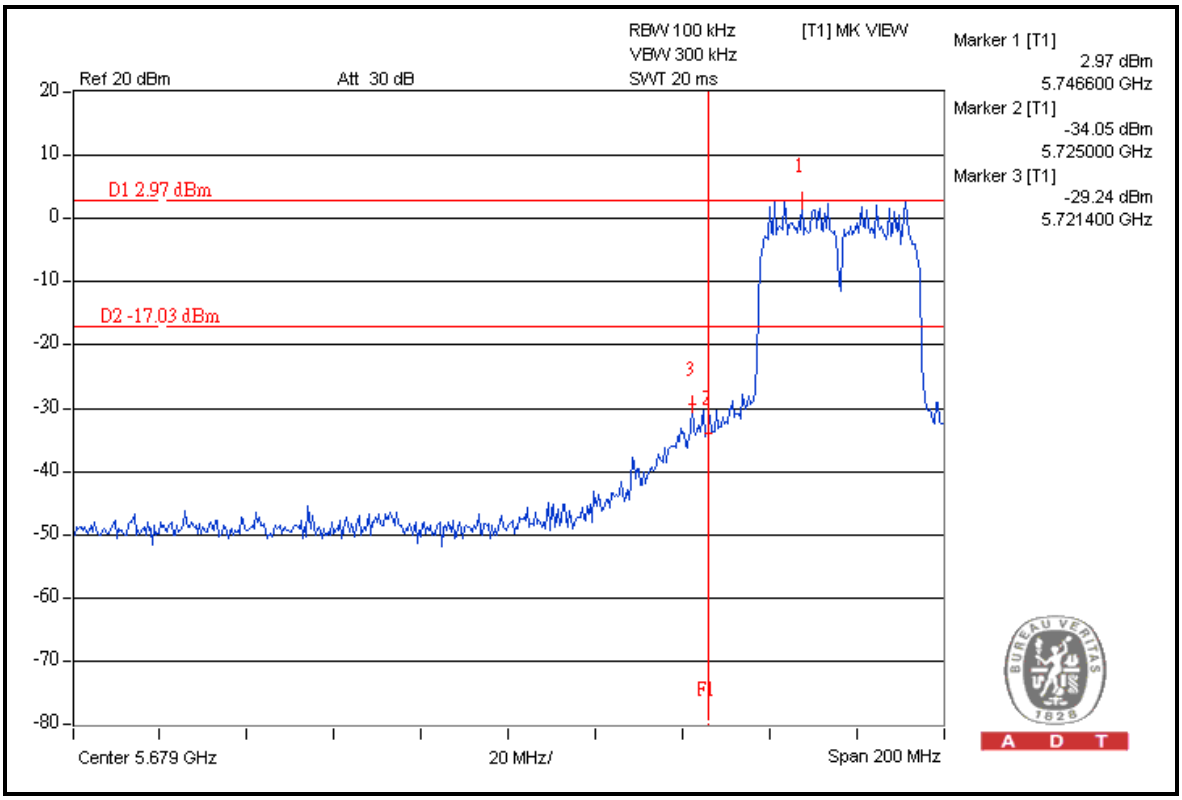

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.58 dBm
5.705740 GHz
Marker 2 [T1]
-30.44 dBm
34.324260 GHz
Marker 3 [T1]
-30.57 dBm
34.004500 GHz
Marker 4 [T1]
-31.95 dBm
34.564080 GHz
D1 1.93 dBm
D2 -18.07 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

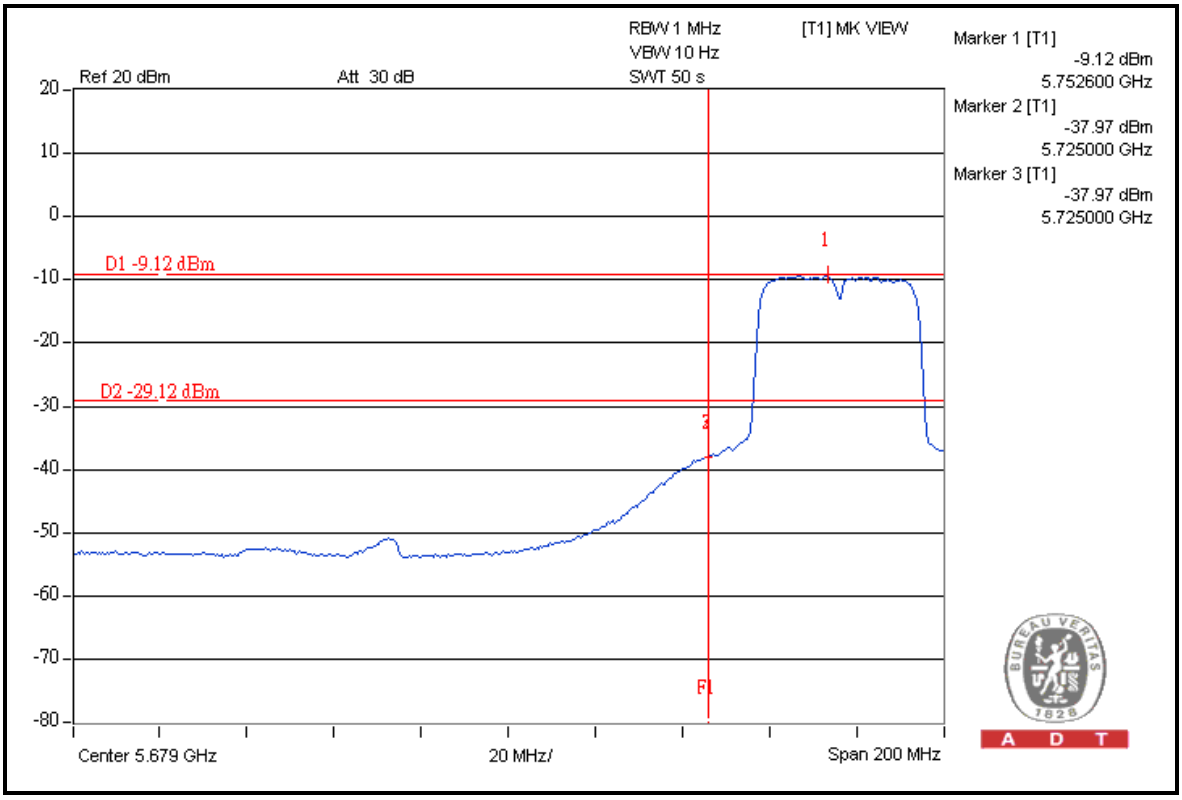

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.32 dBm
5.810200 GHz
Marker 2 [T1]
-45.92 dBm
5.850000 GHz
Marker 3 [T1]
-44.86 dBm
5.850600 GHz
D1 2.32 dBm
D2 -17.68 dBm
Center 5.867 GHz
20 MHz/
Span 200 MHz

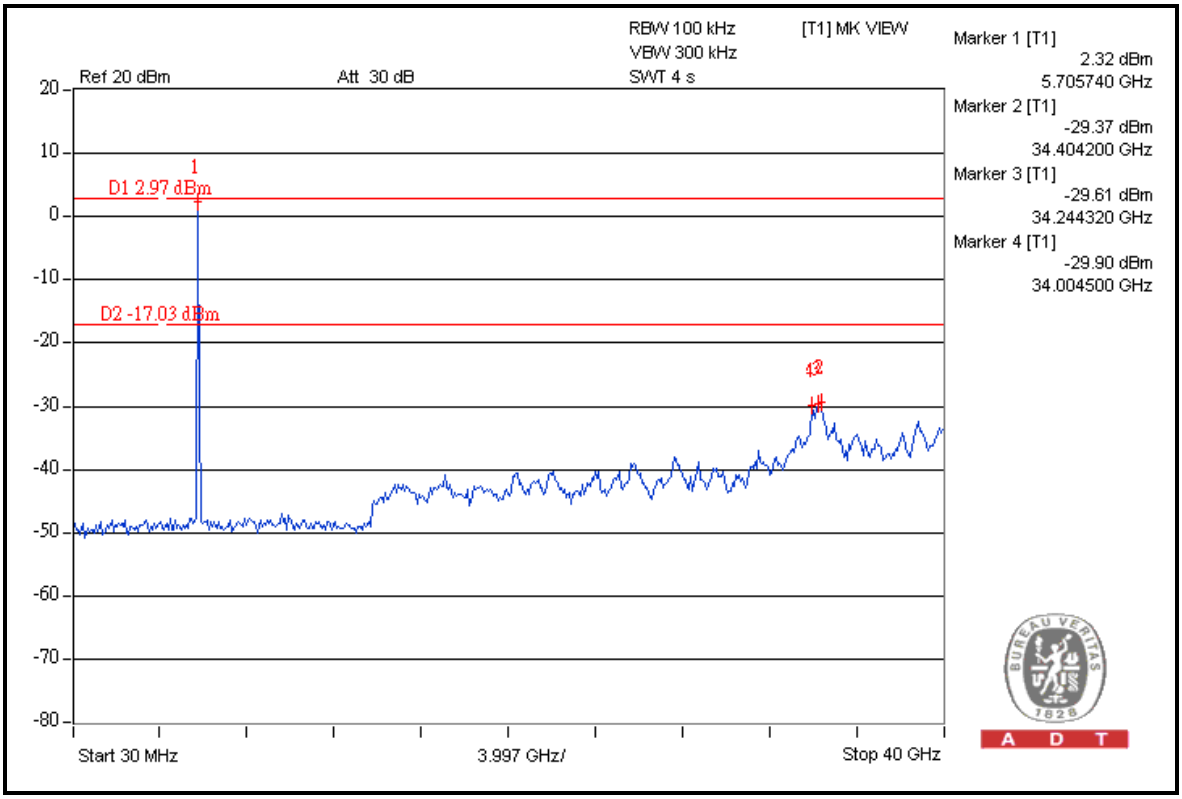

RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-9.83 dBm
5.797000 GHz
Marker 2 [T1]
-50.54 dBm
5.850000 GHz
Marker 3 [T1]
-50.53 dBm
5.850200 GHz
D1 -9.83 dBm
D2 -29.83 dBm
Center 5.867 GHz
20 MHz/
Span 200 MHz

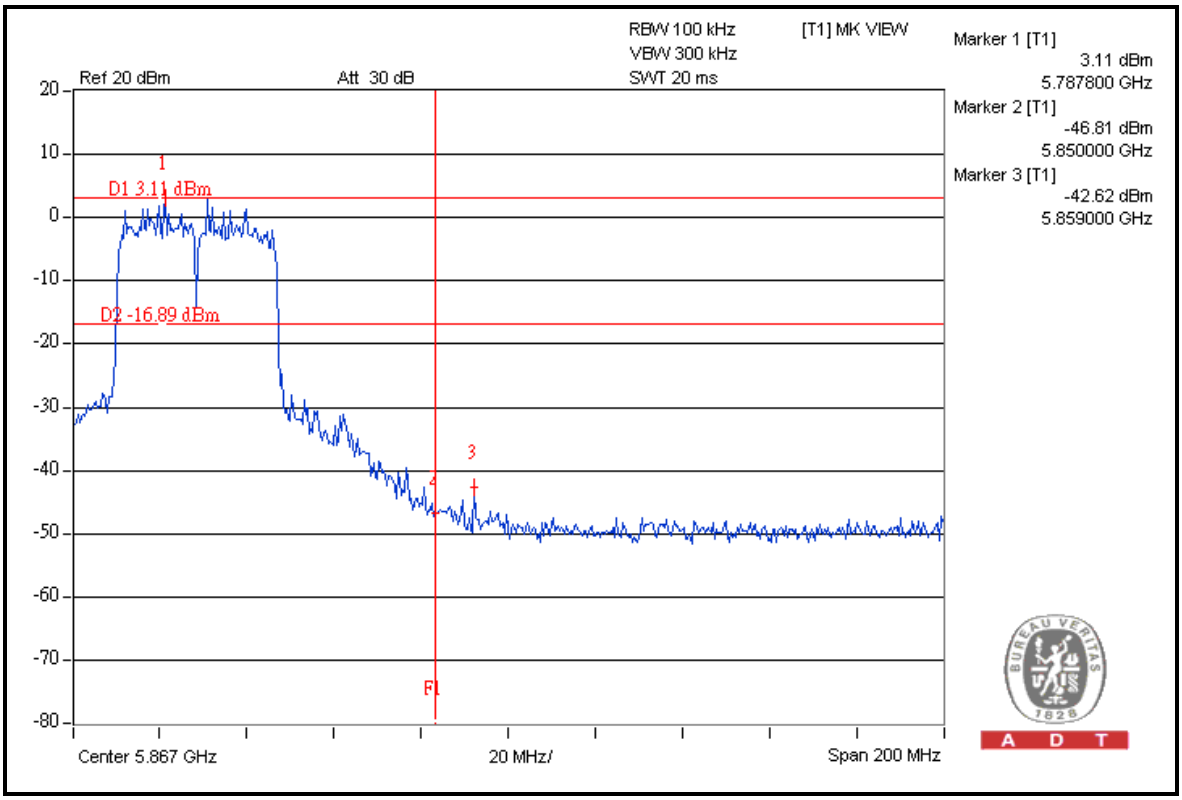

RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
0.98 dBm
5.785680 GHz
Marker 2 [T1]
-28.31 dBm
34.324260 GHz
Marker 3 [T1]
-28.42 dBm
34.004500 GHz
Marker 4 [T1]
-32.25 dBm
39.840120 GHz
D1 2.32 dBm
D2 -17.68 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz

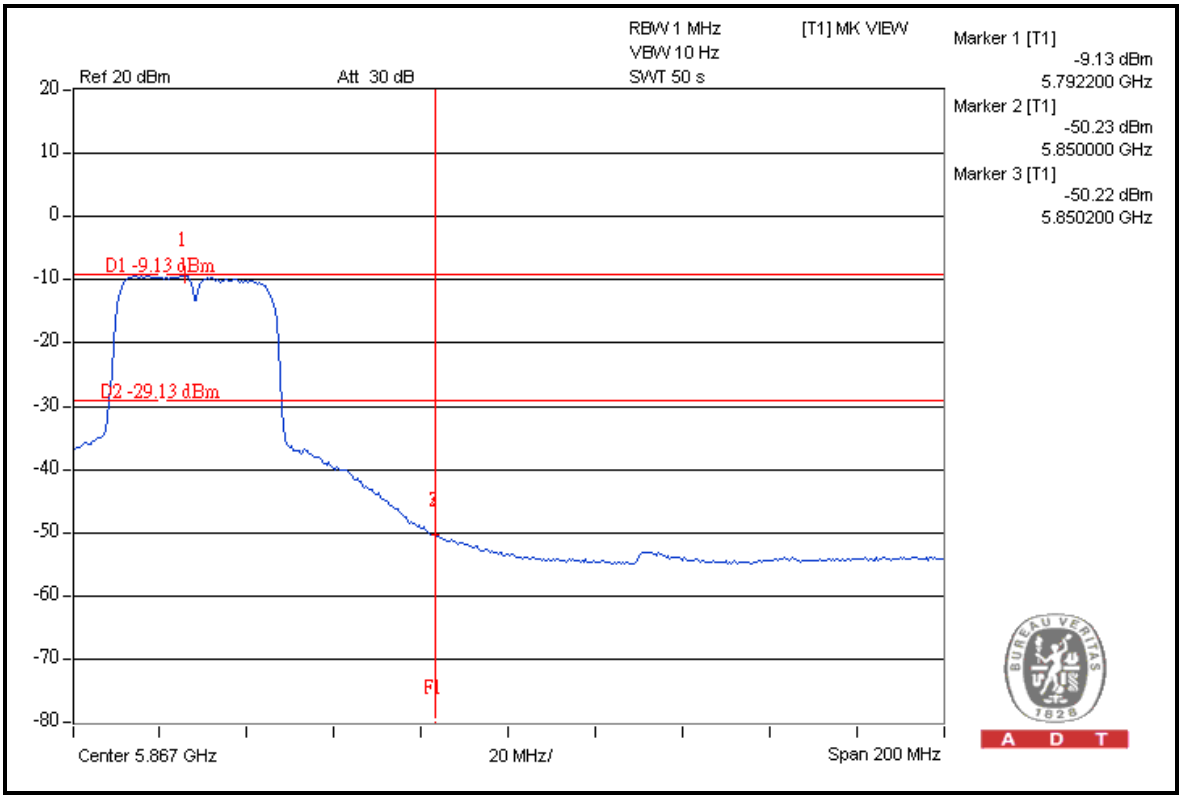
CHAIN 2

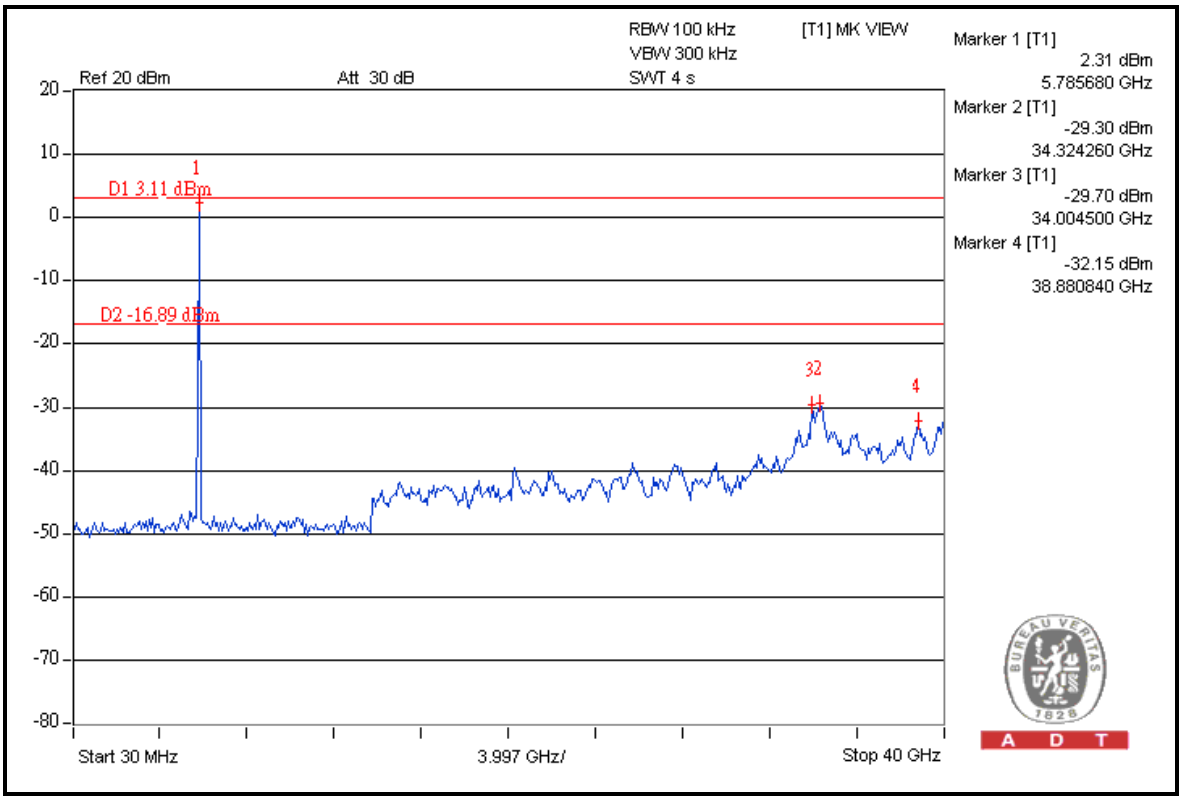

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.97 dBm
5.746600 GHz
Marker 2 [T1]
-34.05 dBm
5.725000 GHz
Marker 3 [T1]
-29.24 dBm
5.721400 GHz
D1 2.97 dBm
D2 -17.03 dBm
Center 5.679 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-9.12 dBm
5.752600 GHz
Marker 2 [T1]
-37.97 dBm
5.725000 GHz
Marker 3 [T1]
-37.97 dBm
5.725000 GHz
D1 -9.12 dBm
D2 -29.12 dBm
Center 5.679 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.32 dBm
5.705740 GHz
Marker 2 [T1]
-29.37 dBm
34.404200 GHz
Marker 3 [T1]
-29.61 dBm
34.244320 GHz
Marker 4 [T1]
-29.90 dBm
34.004500 GHz
D1 2.97 dBm
D2 -17.03 dBm
Start 30 MHz
3.997 GHz/
Stop 40 GHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
3.11 dBm
5.787800 GHz
Marker 2 [T1]
-46.81 dBm
5.850000 GHz
Marker 3 [T1]
-42.62 dBm
5.859000 GHz
D1 3.11 dBm
D2 -16.89 dBm
Center 5.867 GHz
20 MHz/
Span 200 MHz


RBW 1 MHz
VBW 10 Hz
SWT 50 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
-9.13 dBm
5.792200 GHz
Marker 2 [T1]
-50.23 dBm
5.850000 GHz
Marker 3 [T1]
-50.22 dBm
5.850200 GHz
D1 -9.13 dBm
D2 -29.13 dBm
Center 5.867 GHz
20 MHz/
Span 200 MHz


RBW 100 kHz
VBW 300 kHz
SWT 4 s
[T1] MK VIEW
Ref 20 dBm
Att 30 dB
Marker 1 [T1]
2.31 dBm
5.785680 GHz
Marker 2 [T1]
-29.30 dBm
34.324260 GHz
Marker 3 [T1]
-29.70 dBm
34.004500 GHz
Marker 4 [T1]
-32.15 dBm
38.880840 GHz
D1 3.11 dBm
D2 -16.89 dBm
Start 30 MHz
3.997 GHz/
Stop 40 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

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

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

Email: service.adt@tw.bureauveritas.com
Web Site: www.adt.com.tw

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

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---